Federal Subsistence Board

Fisheries Meeting Materials
December 11-13, 2007

Office of Subsistence Management
3601 C Street, Suite 1030
Anchorage, AK
FEDERAL SUBSISTENCE BOARD
PUBLIC MEETING AGENDA
December 11–13, 2007
8:30 a.m.–5:00 p.m. Daily
Egan Civic and Convention Center, 555 West 5th Avenue
Anchorage, Alaska

1) Call to Order and Introductions

2) Corrections/Additions to the Agenda

3) Board Discussion of Council Topics with Regional Advisory Council Chairs or their Designees

4) Public Comment Period on Non-Agenda Items (This opportunity is available at the beginning of each day)

5) Public Comment Period on Consensus Agenda Items, including both the Fisheries Resource Monitoring Plan and Subpart C&D proposals (This opportunity is available at the beginning of each day)

6) Fisheries Resource Monitoring Plan for 2008 ................................................................. 5
(a) Announcement of Consensus Agenda items
(b) Board deliberation and action on Non-Consensus Agenda items (Process is similar to that outlined for agenda item 7b)
(c) Adoption of Consensus Agenda

7) 2008–2009 Subparts C&D Proposals (Fisheries Regulations) ............................................. 127
(a) Announcement of Consensus Agenda
(b) Board deliberation and action on Non-Consensus Proposals
(c) Adoption of Consensus Agenda

8) Other Business

9) Adjourn

Note: The meeting will be held daily from 8:30 a.m. to 5:00 p.m., or until the Board calls a recess for the day, or completes its work. Daily updates on Board progress through the agenda can be obtained by calling 1-800-478-1456, or in Anchorage at 786-3888.
The following proposals have been included on the consensus agenda. These are proposals for which there is agreement among Federal Subsistence Regional Advisory Councils, the Federal Interagency Staff Committee, and the Alaska Department of Fish and Game concerning Board action. Anyone disputing the recommendation on a proposal may request that the Board remove the proposal from the consensus agenda and place it on the regular agenda. The Board retains final authority for removal of proposals from the consensus agenda. The Board will take final action on the consensus agenda after deliberation and decisions on all other proposals.

<table>
<thead>
<tr>
<th>Management Area</th>
<th>Proposal</th>
<th>Recommendation</th>
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<tr>
<td>Southeast Alaska and Yakutat Areas</td>
<td>FP08-01</td>
<td>Support</td>
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<td>FP08-03</td>
<td>Support with modification¹</td>
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<tr>
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<td>FP08-06</td>
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¹ Season date change would require coordination with the Pacific Salmon Commission process prior to implementation.
FEDERAL SUBSISTENCE BOARD
REGULATORY NON–CONSENSUS AGENDA PROPOSALS

Procedure for considering proposals:
1) Analysis presentation (lead author)
2) Summary of written public comments (Regional Council Coordinator)
3) Open floor to public testimony
4) Regional Council recommendation (Chair or designee)
5) Alaska Department of Fish and Game comments
6) Interagency Staff Committee comments (ISC Chair)
7) Board discussion with Council Chairs and State Liaison
8) Federal Subsistence Board deliberation and action

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<tr>
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\textsuperscript{2} Proposal FP08-10 cannot be acted upon due to change in customary and traditional use determination.

\textsuperscript{3} FP08-13/14 analysis will be provided separately from the Federal Subsistence Board meeting book.
DRAFT

2008

FISHERIES RESOURCE MONITORING PLAN
EXECUTIVE SUMMARY

A total of 43 projects ($3.8 million) previously approved by the Federal Subsistence Board will be funded in 2008.

After accounting for prior funding commitments, $2.1 million is available for the 2008 Monitoring Plan.

A Request for Proposals (RFP) was issued in November 2006. The Office of Subsistence Management (OSM) and the Technical Review Committee (TRC) utilized regional strategic plans to identify priority information needs for each region in the RFP. Through the priority information needs, the most important knowledge gaps for Federal subsistence fisheries management are identified and used to drive proposal submittals. For the 2008 Draft Fisheries Monitoring Plan, OSM was successful in obtaining research proposals addressing most of the highest priority information needs. Twenty-two of the 30 projects being considered for 2008 funding specifically address priority information needs identified in the RFP.

In response to the RFP, 54 proposals ($5.0 million) were received in January 2007.

Proposals were reviewed by OSM fishery biologists and anthropologists and then the TRC using four ranking factors: Strategic Priority, Technical - Scientific Merit, Investigator Ability and Resources, and Partnership - Capacity Building.

Of the 54 proposals, 34 proposals ($3.2 million) were recommended for investigation plan development by the TRC in March 2007.

Of the 34 investigation plans submitted, four were withdrawn, and 30 investigation plans ($2.7 million) were received for consideration in May 2007.

The TRC recommended funding for 23 projects totaling $2.1 million. Regional Advisory Councils supported TRC recommendations for all but two of the Investigation Plans considered for 2008.

The Interagency Staff Committee reviewed both the TRC and Council recommendations in November 2007. The ISC recommends funding all projects supported by the TRC.

The Consensus Agenda includes 22 projects recommended for funding by the TRC, Councils and ISC, and 6 projects not recommended for funding by the TRC, Councils and ISC. The two Non-Concesus Agenda projects are presented on pages 10–11.
## TECHNICAL REVIEW COMMITTEE

### MEMBERSHIP

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<tr>
<th>Name</th>
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<tr>
<td>Steve Klein (Chair), Chief, Fisheries</td>
<td>USFWS, Office of Subsistence Management</td>
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<tr>
<td>Pat Petrivelli, Anthropologist</td>
<td>Bureau of Indian Affairs</td>
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<td>Dennis Tol, Fisheries Program Manager</td>
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<td>Jeff Bromaghin, Fishery Biologist/Biometrician</td>
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<td>Dave Nelson, Fishery Biologist</td>
<td>National Park Service</td>
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<td>Cal Casipit, Subsistence Fishery Biologist</td>
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<td>Gene Sandone, Regional Supervisor, AYK</td>
<td>ADF&amp;G, Division of Commercial Fisheries</td>
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<td>Robert Clark, Senior Fishery Scientist</td>
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<td>Jim Fall, Research Director</td>
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<tr>
<td>Dee Williams, Socio-cultural Specialist</td>
<td>Minerals Management Service</td>
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CONTINUATION PROJECTS

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<td>07-105</td>
<td>North Slope Dolly Varden Genetic Baseline Completion</td>
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<td>Northwest Alaska Subsistence Fish Harvest Patterns and Trends</td>
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<td>07-408</td>
<td>Togiak River Rainbow Smelt Assessment</td>
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<td>Kvichak Watershed Subsistence Fishing Ethnography</td>
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<td>Yukon River Chum Salmon Mixed-stock Analysis</td>
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<td>06-252</td>
<td>Yukon Flats Non-salmon Traditional Ecological Knowledge</td>
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<td>07-202</td>
<td>East Fork Andreatfsky River Salmon Weir</td>
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<td>Lower Kuskokwim River Salmon Inseason Subsistence Catch Monitoring</td>
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<td>Kuskokwim River Salmon Management Working Group Reconstruction</td>
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<td>Kuskokwim River Chum Salmon Run Reconstruction</td>
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<td>Kuskokwim River Salmon Age-Sex-Length Assessment</td>
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<td>Tuluksak River Salmon Weir</td>
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<td>Southeast Alaska Customary Trade of Seafood Products</td>
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<td>Hatchery Creek Sockeye Salmon Assessment</td>
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<td>Hydaburg Sockeye Salmon Customary and Traditional Systems</td>
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TECHNICAL REVIEW COMMITTEE AND REGIONAL ADVISORY COUNCILS RECOMMENDATIONS

Consensus Recommendation: Fund

**Yukon River**
- 08-200 Kaltag Chinook Salmon Sampling
- 08-201 Henshaw Creek Salmon Weir
- 08-202 Anvik River Chum Salmon Sonar Enumeration
- 08-206 Yukon and Kuskokwim Coregonid Strategic Plan
- 08-250 Use of Subsistence Fish to Feed Sled Dogs
- 08-253 Yukon River Teleconferences and Inseason Monitoring

**Kuskokwim River**
- 08-300 Aniak River Rainbow Trout Seasonal Distribution
- 08-302 Lower Kuskokwim Subsistence Chinook Salmon Age-Sex-Length Assessment
- 08-303 George River Salmon Weir
- 08-304 Takotna River Salmon Weir
- 08-351 Tuluksak Subsistence Chinook Salmon Age-Sex-Length Assessment

**Southwest**
- 08-401 Big Creek Coho Salmon Weir, Kodiak
- 08-402 Togiak River Chinook Salmon Radio Telemetry
- 08-405 Lake Clark Sockeye Salmon Counting Towers

**Southcentral**
- 08-501 Copper River Sockeye Salmon Inriver Abundance
- 08-502 Tustumena Lake Coho Salmon Radio Telemetry & Weirs
- 08-503 Kasilof River Steelhead Trout Radio Telemetry
- 08-504 Crooked and Nikolai Creeks Steelhead Trout Weirs & Video

**Southeast**
- 08-600 Karta River Sockeye Salmon Assessment
- 08-607 Unuk River Eulachon Assessment
- 08-650 Prince of Wales Island Steelhead Trout Subsistence Harvest Survey
- 08-651 Maknahti Island Subsistence Herring Fishery Assessment

Consensus Recommendation: Do Not Fund

**Northern**
- 08-106 Unalakleet River Chinook Salmon Age-Sex-Length Determination

**Kuskokwim**
- 08-350 Lower Kuskokwim Whitefish Winter Harvests

**Southwest**
- 08-406 Buskin River Coho Salmon Weir
- 08-451 Lake Clark Whitefish Traditional Ecological Knowledge

**Southcentral**
- 08-550 Copper River Subsistence Salmon Harvest Permit Validation

**Southeast**
- 08-605 Saltery Creek Steelhead Trout Population Assessment

Non-Consent Items

**Northern**
- 08-103 Kobuk River Sheefish Spawning and Run Timing
- 08-150 Nuiqsut Baseline Fish Harvest Assessment
Draft 2008 Fisheries Resource Monitoring Plan

Executive Summary

**NON-CONSENSUS AGENDA ITEM**

**Study Region:** Northern

**Project Title:** Kobuk River Sheefish Spawning and Run Timing

**Project Number:** 08-103

**Technical Review Committee Recommendation:** Fund. The proposed work is technically sound and addresses an important subsistence sheefish fishery associated with Gates of the Arctic National Preserve, Selawik National Wildlife Refuge, Kobuk Valley Wilderness Area and Kobuk Valley National Park. Exploitation of sheefish is poorly understood, yielding incomplete information on stock abundance, stock composition, and annual harvest. Results from this work will describe run timing and spawning frequency, giving fishery managers the context for understanding previously completed stock abundance work. Furthermore, information gained in this project will provide a basis for developing future stock assessment projects. This project provides fundamental information needed to manage and sustain subsistence fisheries that target these stocks.

**North Slope Subsistence Regional Advisory Council Recommendation:** Do not fund. The North Slope Council did not discuss the merits of proposed project 08-103, Kobuk River Sheefish and Run Timing. They voted not to support the TRC recommendation because they wanted the Federal Subsistence Board to support funding project 08-150 Nuiqsut Baseline Fish Harvest Assessment. The North Slope Council members felt that the data needs addressed in project 08-150 were a higher priority for their region.

**Northwest Arctic and Seward Peninsula Subsistence Regional Advisory Council Recommendations:** Fund. Both the Northwest Arctic and Seward Peninsula Regional Advisory Councils voted to support the TRC recommendations for the 2008 Monitoring Program.

**Interagency Staff Committee Recommendation:** Fund. The Technical Review Committee evaluated three projects for funding consideration in 2008 for the Northern Region, and ranked the Kobuk River sheefish project as the highest priority. This project builds upon abundance work completed in the Kobuk and Selawik rivers for this important subsistence resource, and will yield important life history information to better manage these two populations. Although the North Slope Subsistence Regional Advisory Council ranked the Nuiqsut Baseline Fish Harvest Assessment as its highest priority, the Northwest Arctic and Seward Peninsula councils supported the TRC recommendation. The Interagency Staff Committee ranks the Kobuk River sheefish project as the highest priority for the Northern Region.
NON-CONSENSUS AGENDA ITEM

Study Region: Northern
Project Title: Nuiqsut Baseline Fish Harvest Assessment
Project Number: 08-150

Technical Review Committee Recommendation: Do not fund. While project investigators are highly qualified to do the work and they propose a solid collaborative project with a good capacity building component, the research plan has some unresolved technical challenges. Evidence of community support for the project and identification of key project personnel is incomplete. While baseline subsistence harvest information is fundamental information needed for management, it is not clear that management of North Slope subsistence fisheries would benefit from the highly detailed approach proposed by the researchers.

North Slope Subsistence Regional Advisory Council Recommendation: Fund. The North Slope Subsistence Regional Advisory Council voted unanimously in support of this project and recommended funding it in full. Council members described lingering concerns over declining resources, as well as the impacts of development on fisheries resources. Council members asserted that comprehensive studies of this type would be highly beneficial to the resources and the people which depend upon them. Further, Council members frustrated by the Federal Subsistence Board’s decision to not fund projects that focus on development impacts, as the entire North Slope region is affected by development, which in turn is affecting the subsistence resources.

Northwest Arctic and Seward Peninsula Subsistence Regional Advisory Council Recommendations: Do not fund. Both the Northwest Arctic and Seward Peninsula Subsistence Regional Advisory Councils supported the Technical Review Committee’s recommendation to not fund this project.

Interagency Staff Committee Recommendation: Do not fund. Some of the focus of the proposed work continues to be on development impact assessment, which is precluded from funding under the Fisheries Resource Monitoring Program. Given unresolved technical issues and incomplete evidence of community support, the Technical Review Committee ranked the Nuiqsut harvest assessment project third in priority for the Northern Region. The Interagency Staff Committee ranks the Kobuk River sheefish project as the highest priority for the Northern Region, consistent with recommendations from the Technical Review Committee, Northwest Arctic Council and Seward Peninsula Council.
**Table 1.** Number of Investigation Plans (IPs) received for funding consideration in 2008, and number of IPs recommended for funding by the Technical Review Committee (TRC), the Regional Advisory Councils (RAC), and the Interagency Staff Committee (ISC). Project types are stock status and trends (SST) and harvest monitoring and traditional ecological knowledge (HM-TEK).

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<tr>
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*Note: Northwest Arctic and Seward Peninsula RACs supported TRC recommendation. North Slope Council supported a different study for $145,000. North Slope Council supported an HM-TEK study and not the TRC recommended SST study.*
**Table 2.** Total cost of Investigation Plans (IPs) received for funding consideration in 2008, and the cost of those recommended for funding by the Technical Review Committee (TRC), the Regional Advisory Councils (RAC), and the Interagency Staff Committee (ISC). Funding shown in thousands of dollars. Study types are stock status and trends (SST) and harvest monitoring and traditional ecological knowledge (HM-TEK).

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<td><strong>$643</strong></td>
<td><strong>$281</strong></td>
<td><strong>$426</strong></td>
<td><strong>$281</strong></td>
<td><strong>$2,103</strong></td>
<td><strong>$2,628</strong></td>
<td><strong>$2,050</strong></td>
<td><strong>$2,050</strong></td>
</tr>
</tbody>
</table>

b Northwest Arctic and Seward Peninsula RACs supported TRC recommendation. North Slope Council supported a different study for $145,000.
Table 3. Northern Alaska region investigation plans (IPs) submitted for Fisheries Resource Monitoring Program funding consideration in 2008. Funding recommendations by the Technical Review Committee (TRC); North Slope (NS), Northwest Arctic (NWA), and Seward Peninsula (SP) Regional Advisory Councils (RAC); and Interagency Staff Committee (ISC).

<table>
<thead>
<tr>
<th>Study #</th>
<th>Title</th>
<th>TRC</th>
<th>NS</th>
<th>NWA</th>
<th>SP</th>
<th>ISC</th>
<th>2008</th>
<th>2009</th>
<th>2010</th>
<th>2011</th>
</tr>
</thead>
<tbody>
<tr>
<td>08-103</td>
<td>Kobuk River Sheefish Spawning and Run Timing</td>
<td>Yes</td>
<td>No</td>
<td>Yes</td>
<td>Yes</td>
<td>Yes</td>
<td>$87.3</td>
<td>$78.5</td>
<td>$17.0</td>
<td>$17.0</td>
</tr>
<tr>
<td>08-106</td>
<td>Unalakleet River Chinook Salmon ASL Determination</td>
<td>No</td>
<td>No</td>
<td>No</td>
<td>No</td>
<td>No</td>
<td>$62.2</td>
<td>$51.9</td>
<td>$0.0</td>
<td>$0.0</td>
</tr>
<tr>
<td>08-150</td>
<td>Nuiqsut Baseline Fish Harvest Assessment</td>
<td>No</td>
<td>Yes</td>
<td>No</td>
<td>No</td>
<td>No</td>
<td>$145.1</td>
<td>$149.5</td>
<td>$4.9</td>
<td>$0.0</td>
</tr>
<tr>
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<td></td>
<td></td>
<td>$294.6</td>
<td>$279.9</td>
<td>$21.9</td>
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</tr>
</tbody>
</table>

2008 Board Guideline  $103.0

Technical Review Committee Recommendation  $87.3  $78.5  $17.0  $17.0

North Slope Council Recommendation  $145.1  $149.5 $4.9  $0.0

Northwest Arctic and Seward Peninsula Council Recommendations  $87.3  $78.5  $17.0  $17.0

Staff Committee Recommendation  $87.3  $78.5  $17.0  $17.0
Table 4. Yukon region Investigation Plans (IPs) submitted for Fisheries Resource Monitoring Program funding consideration in 2008. Funding recommendations by the Technical Review Committee (TRC); Yukon-Kuskokwim Delta (Y-K), Western Interior (WI), and Eastern Interior (EI) Regional Advisory Councils (RAC); and Interagency Staff Committee (ISC).

<table>
<thead>
<tr>
<th>Study #</th>
<th>Title</th>
<th>TRC</th>
<th>Y-K</th>
<th>WI</th>
<th>EI</th>
<th>ISC</th>
<th>2008</th>
<th>2009</th>
<th>2010</th>
<th>2011</th>
<th>Requested Budget ($000)</th>
</tr>
</thead>
<tbody>
<tr>
<td>08-200</td>
<td>Kaltag Chinook Salmon Sampling</td>
<td>Yes</td>
<td>Yes</td>
<td>Yes</td>
<td>Yes</td>
<td>Yes</td>
<td>$3.7</td>
<td>$4.0</td>
<td>$4.0</td>
<td>$4.0</td>
<td>$329.9</td>
</tr>
<tr>
<td>08-201</td>
<td>Henshaw Creek Salmon Weir</td>
<td>Yes</td>
<td>Yes</td>
<td>Yes</td>
<td>Yes</td>
<td>Yes</td>
<td>$43.9</td>
<td>$43.2</td>
<td>$46.2</td>
<td>$52.3</td>
<td>$376.9</td>
</tr>
<tr>
<td>08-202</td>
<td>Anvik River Chum Salmon Sonar Enumeration</td>
<td>Yes</td>
<td>Yes</td>
<td>Yes</td>
<td>Yes</td>
<td>Yes</td>
<td>$68.7</td>
<td>$71.1</td>
<td>$73.6</td>
<td>$75.9</td>
<td>$174.8</td>
</tr>
<tr>
<td>08-206</td>
<td>Yukon and Kuskokwim Coregonid Strategic Plan</td>
<td>Yes</td>
<td>Yes</td>
<td>Yes</td>
<td>Yes</td>
<td>Yes</td>
<td>$119.7</td>
<td>$175.7</td>
<td>$0.0</td>
<td>$0.0</td>
<td>$183.2</td>
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</tbody>
</table>

<table>
<thead>
<tr>
<th>Study #</th>
<th>Title</th>
<th>TRC</th>
<th>Y-K</th>
<th>WI</th>
<th>EI</th>
<th>ISC</th>
<th>2008</th>
<th>2009</th>
<th>2010</th>
<th>2011</th>
<th>Requested Budget ($000)</th>
</tr>
</thead>
<tbody>
<tr>
<td>08-250</td>
<td>Use of Subsistence Fish to Feed Sled Dogs</td>
<td>Yes</td>
<td>Yes</td>
<td>Yes</td>
<td>Yes</td>
<td>Yes</td>
<td>$42.9</td>
<td>$31.9</td>
<td>$0.0</td>
<td>$0.0</td>
<td>$183.2</td>
</tr>
<tr>
<td>08-253</td>
<td>Yukon River Teleconferences and In-season Monitoring</td>
<td>Yes</td>
<td>Yes</td>
<td>Yes</td>
<td>Yes</td>
<td>Yes</td>
<td>$51.0</td>
<td>$51.0</td>
<td>$51.0</td>
<td>$51.0</td>
<td>$51.0</td>
</tr>
</tbody>
</table>

Total   $329.9 $376.9 $174.8 $183.2

2008 Board Guideline $515.0
Technical Review Committee Recommendation $329.9 $376.9 $174.8 $183.2
Regional Advisory Council Recommendation $329.9 $376.9 $174.8 $183.2
Staff Committee Recommendation $329.9 $376.9 $174.8 $183.2

<sup>c</sup> Total project cost of $111,247 with $67,375 to be funded by Partner's for Fisheries Monitoring Program.
Table 5. Kuskokwim region Investigation Plans (IPs) submitted for Fisheries Resource Monitoring Program funding consideration in 2008. Funding recommendations by the Technical Review Committee (TRC); Yukon-Kuskokwim Delta (Y-K) and Western Interior (WI) Regional Advisory Councils (RAC); and Interagency Staff Committee (ISC).

<table>
<thead>
<tr>
<th>Study #</th>
<th>Title</th>
<th>TRC</th>
<th>Y-K</th>
<th>WI</th>
<th>ISC</th>
<th>2008</th>
<th>2009</th>
<th>2010</th>
<th>2011</th>
</tr>
</thead>
<tbody>
<tr>
<td>08-300</td>
<td>Aniak River Rainbow Trout Seasonal Distribution</td>
<td>Yes</td>
<td>Yes</td>
<td>Yes</td>
<td>Yes</td>
<td>$52.3</td>
<td>$37.2</td>
<td>$0.0</td>
<td>$0.0</td>
</tr>
<tr>
<td>08-302</td>
<td>Lower Kuskokwim Subsistence Chinook Salmon ASL</td>
<td>Yes</td>
<td>Yes</td>
<td>Yes</td>
<td>Yes</td>
<td>$90.9</td>
<td>$112.3</td>
<td>$113.8</td>
<td>$121.9</td>
</tr>
<tr>
<td>08-303</td>
<td>George River Salmon Weir</td>
<td>Yes</td>
<td>Yes</td>
<td>Yes</td>
<td>Yes</td>
<td>$159.0</td>
<td>$167.4</td>
<td>$145.9</td>
<td>$138.2</td>
</tr>
<tr>
<td>08-304</td>
<td>Takotna River Salmon Weir</td>
<td>Yes</td>
<td>Yes</td>
<td>Yes</td>
<td>Yes</td>
<td>$83.0</td>
<td>$79.9</td>
<td>$92.9</td>
<td>$118.4</td>
</tr>
</tbody>
</table>

Total: $559.9 | $493.3 | $387.0 | $378.5

2008 Board Guideline: $515.0

Technical Review Committee Recommendation: $474.9 | $493.3 | $387.0 | $378.5

Regional Advisory Council Recommendation: $474.9 | $493.3 | $387.0 | $378.5

Staff Committee Recommendation: $474.9 | $493.3 | $387.0 | $378.5
Table 6. Southwest Alaska region Investigation Plans (IPs) submitted for Fisheries Resource Monitoring Program funding consideration in 2008. Funding recommendations by the Technical Review Committee (TRC); Bristol Bay-Alaska Peninsula (BB-AP) and Kodiak-Aleutians (K-A) Regional Advisory Councils (RAC); and Interagency Staff Committee (ISC).

<table>
<thead>
<tr>
<th>Study #</th>
<th>Title</th>
<th>TRC</th>
<th>BB-AP</th>
<th>K-A</th>
<th>ISC</th>
<th>2008</th>
<th>2009</th>
<th>2010</th>
<th>2011</th>
</tr>
</thead>
<tbody>
<tr>
<td>08-401</td>
<td>Big Creek Coho Salmon Weir, Kodiak</td>
<td>Yes</td>
<td>-</td>
<td>Yes</td>
<td>Yes</td>
<td>$139.0</td>
<td>$92.2</td>
<td>$0.0</td>
<td>$0.0</td>
</tr>
<tr>
<td>08-402</td>
<td>Togiak River Chinook Salmon Radio Telemetry</td>
<td>Yes</td>
<td>Yes</td>
<td>Yes</td>
<td>Yes</td>
<td>$176.4</td>
<td>$120.7</td>
<td>$0.0</td>
<td>$0.0</td>
</tr>
<tr>
<td>08-405</td>
<td>Lake Clark Sockeye Salmon Counting Towers</td>
<td>Yes</td>
<td>Yes</td>
<td>Yes</td>
<td>Yes</td>
<td>$56.1</td>
<td>$57.0</td>
<td>$58.3</td>
<td>$59.5</td>
</tr>
<tr>
<td>08-406</td>
<td>Buskin River Coho Salmon Weir</td>
<td>No</td>
<td>-</td>
<td>No</td>
<td>No</td>
<td>$52.0</td>
<td>$46.2</td>
<td>$0.0</td>
<td>$0.0</td>
</tr>
<tr>
<td>08-451</td>
<td>Lake Clark Whitefish TEK</td>
<td>No</td>
<td>No</td>
<td>No</td>
<td>No</td>
<td>$10.6</td>
<td>$8.9</td>
<td>$0.0</td>
<td>$0.0</td>
</tr>
</tbody>
</table>

Total $434.1 $325.0 $58.3 $59.5

2008 Board Guideline $240.0

Technical Review Committee Recommendation $371.5 $269.9 $58.3 $59.5

Regional Advisory Council Recommendation $371.5 $269.9 $58.3 $59.5

Staff Committee Recommendation $371.5 $269.9 $58.3 $59.5
Table 7. Southcentral Alaska region Investigation Plans (IPs) submitted for Fisheries Resource Monitoring Program funding consideration in 2008. Funding recommendations by the Technical Review Committee (TRC), Southcentral (SC) Regional Advisory Council (RAC), and Interagency Staff Committee (ISC).

<table>
<thead>
<tr>
<th>Study #</th>
<th>Title</th>
<th>2008 Board Guideline</th>
<th>2008 Requested Budget ($000)</th>
<th>2009 Requested Budget ($000)</th>
<th>2010 Requested Budget ($000)</th>
<th>2011 Requested Budget ($000)</th>
<th>TRC</th>
<th>SC</th>
<th>ISC</th>
</tr>
</thead>
<tbody>
<tr>
<td>08-501</td>
<td>Copper River Sockeye Salmon Inriver Abundance</td>
<td>No</td>
<td>$119.8</td>
<td>$122.0</td>
<td>$0.0</td>
<td>$0.0</td>
<td>$185.8</td>
<td>$205.4</td>
<td>$0.0</td>
</tr>
<tr>
<td>08-502</td>
<td>Tustumena Lake Coho Salmon Radio Telemetry &amp; Weirs</td>
<td>Yes</td>
<td>Yes</td>
<td>Yes</td>
<td>$238.3</td>
<td>$118.4</td>
<td>$44.2</td>
<td>$4.0</td>
<td>$224.2</td>
</tr>
<tr>
<td>08-503</td>
<td>Kasilof River Steelhead Trout Radio Telemetry</td>
<td>Yes</td>
<td>Yes</td>
<td>Yes</td>
<td>$78.9</td>
<td>$62.9</td>
<td>$22.4</td>
<td>$0.0</td>
<td>$45.6</td>
</tr>
<tr>
<td>08-504</td>
<td>Crooked &amp; Nikolai Creeks Steelhead Trout Weirs &amp; Video</td>
<td>Yes</td>
<td>Yes</td>
<td>Yes</td>
<td>$40.0</td>
<td>$45.6</td>
<td>$12.6</td>
<td>$0.0</td>
<td>$40.0</td>
</tr>
<tr>
<td>08-550</td>
<td>Copper River Subsistence Salmon Harvest Permit Validation</td>
<td>No</td>
<td>No</td>
<td>$119.8</td>
<td>$122.0</td>
<td>$0.0</td>
<td>$0.0</td>
<td>$662.8</td>
<td>$554.3</td>
</tr>
<tr>
<td><strong>Total</strong></td>
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<td></td>
<td></td>
<td>$471.0</td>
<td>$543.0</td>
<td>$432.3</td>
<td>$79.2</td>
<td>$543.0</td>
<td>$432.3</td>
</tr>
</tbody>
</table>

Funding Recommendation

- 2008 Board Guideline
- Technical Review Committee Recommendation
- Regional Advisory Council Recommendation
- Staff Committee Recommendation

Funding recommendation for the Copper River Sockeye Salmon Inriver Abundance project was No for all years except 2008, when it was Yes. The requested budget for this project varied from $119.8 to $122.0, with a total of $662.8.
Table 8. Southeast Alaska region Investigation Plans (IPs) submitted for Fisheries Resource Monitoring Program funding consideration in 2008. Funding recommendations by the Technical Review Committee (TRC), Southeast (SE) Regional Advisory Council (RAC), and Interagency Staff Committee (ISC).

<table>
<thead>
<tr>
<th>Study #</th>
<th>Title</th>
<th>TRC</th>
<th>SE</th>
<th>ISC</th>
<th>2008</th>
<th>2009</th>
<th>2010</th>
<th>2011</th>
</tr>
</thead>
<tbody>
<tr>
<td>08-600</td>
<td>Karta River Sockeye Salmon Assessment</td>
<td>Yes</td>
<td>Yes</td>
<td>Yes</td>
<td>$111.6</td>
<td>$123.6</td>
<td>$0.0</td>
<td>$0.0</td>
</tr>
<tr>
<td>08-605</td>
<td>Saltery Creek Steelhead Trout Population</td>
<td>No</td>
<td>No</td>
<td>No</td>
<td>$103.1</td>
<td>$103.1</td>
<td>$103.1</td>
<td>$103.1</td>
</tr>
<tr>
<td>08-607</td>
<td>Unuk River Eulachon Assessment</td>
<td>Yes</td>
<td>Yes</td>
<td>Yes</td>
<td>$34.0</td>
<td>$36.4</td>
<td>$0.0</td>
<td>$0.0</td>
</tr>
<tr>
<td>08-650</td>
<td>POW Island Steelhead Trout Subsistence Harvest Survey</td>
<td>Yes</td>
<td>Yes</td>
<td>Yes</td>
<td>$70.4</td>
<td>$74.0</td>
<td>$0.0</td>
<td>$0.0</td>
</tr>
<tr>
<td>08-651</td>
<td>Maknahti Island Subsistence Herring Fishery Assessment</td>
<td>Yes</td>
<td>Yes</td>
<td>Yes</td>
<td>$27.2</td>
<td>$42.0</td>
<td>$0.0</td>
<td>$0.0</td>
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</tbody>
</table>

Total $346.3 $379.1 $103.1 $103.1

2008 Board Guideline $259.0

Technical Review Committee Recommendation $243.2 $276.0 $0.0 $0.0

Regional Advisory Council Recommendation $243.2 $276.0 $0.0 $0.0

Staff Committee Recommendation $243.2 $276.0 $0.0 $0.0
INTRODUCTION

BACKGROUND

Since 1999, under the authority of Title VIII of ANILCA, the Federal government has assumed management responsibility for subsistence fisheries on Federal public lands in Alaska. Expanded subsistence fisheries management has imposed substantial new informational needs for the Federal system. Section 812 of ANILCA directs the Departments of Interior and Agriculture, cooperating with the State of Alaska and other Federal agencies, to research fish and wildlife and subsistence uses on Federal public lands. To increase the quantity and quality of information available for management of subsistence fisheries, the Fisheries Resource Monitoring Program (Monitoring Program) was created within the Office of Subsistence Management. The Monitoring Program was envisioned as a collaborative inter-agency, inter-disciplinary approach to enhance existing fisheries research, and effectively communicate information needed for subsistence fisheries management on Federal public lands.

The mission of the Monitoring Program is to identify and provide information needed to sustain subsistence fisheries on Federal public lands, for rural Alaskans, through a multidisciplinary, collaborative program.

Original guidance for the Monitoring Program was provided by the Federal Subsistence Board and outlined in the Operational Strategy for Information Management. The Regional Advisory Councils (Councils) have identified important issues and information needs for their regions, with review and update on an annual basis. To ensure that the Monitoring Program addresses the highest priority information needs for Federal subsistence fisheries management, the Office of Subsistence Management began a strategic planning process in 2004 to build on the work done by the Councils. Facilitated workshops for the Southwest, Southcentral, and Southeast regions have been held over the last three years with representatives of Federal and State agencies, academia, Alaska Native and rural organizations, and Councils. Participants at each workshop identified fisheries units for their region; developed goals, objectives, and information needs for each fishery unit; and then prioritized fishery units, goals, objectives and information needs. Final workshop reports for the Southeast, Southcentral and Southwest regions have been completed, and results were used to guide the 2008 Request for Proposals. In addition, issues and information needs for salmon were identified for the Yukon and Kuskokwim regions by interagency strategic planning groups.

To implement the Monitoring Program, a collaborative approach is utilized where five Federal agencies (Fish and Wildlife Service, Bureau of Land Management, National Park Service, Bureau of Indian Affairs, and USDA Forest Service) work with the Alaska Department of Fish and Game, Regional Advisory Councils, Alaska Native organizations, and other organizations. An inter-agency Technical Review Committee provides scientific evaluation of proposals and investigation plans. Public review and recommendations for funding are provided through the Councils. An inter-agency Staff Committee

reviews all recommendations, and reconciles differences between staff and public recommendations. The Federal Subsistence Board (Board) approves annual monitoring plans with the benefit of both a technical recommendation by the Technical Review Committee and public review by the Regional Advisory Councils.

The purpose of this section is to present the Technical Review Committee’s funding recommendations for the 2008 Monitoring Plan.

PROJECT EVALUATION PROCESS

The Technical Review Committee evaluates proposals, and subsequently full investigation plans, and makes recommendations for funding. The committee is chaired by the Chief of the Office of Subsistence Management Fisheries Division, and is composed of representatives from each of the five Federal agencies and three representatives from the Alaska Department of Fish and Game. An additional anthropologist from the Minerals Management Service provides additional social science expertise on the Technical Review Committee and provides a balance of disciplines. Fisheries and social science staff from the Office of Subsistence Management provide support for the committee.

Four factors are used to evaluate studies:

1. **Strategic Priority**
   Proposed projects should address the following and must meet the first criteria to be eligible for Federal subsistence funding.

   - **Federal Jurisdiction**—Issue or information needs addressed in projects must have a direct association to a subsistence fishery within a Federal conservation unit as defined in legislation, regulation and plans.

   - **Conservation Mandate**—Risk to the conservation of species and populations that support subsistence fisheries, and risk to conservation unit purposes as defined in legislation, regulation and plans.

   - **Allocation Priority**—Risk of failure to provide a priority to subsistence uses, and risk that subsistence harvest needs will not be met.

   - **Data Gaps**—Amount of information available to support subsistence management (higher priority given where a lack of information exists).

   - **Role of Resource**—Contribution of a species to a subsistence harvest (e.g., number of villages affected, pounds of fish harvested, miles of river) and qualitative significance (e.g., cultural value, unique seasonal role).

   - **Local Concern**—Level of user concerns over subsistence harvests (e.g., upstream vs. downstream allocation, effects of recreational use, changes in fish abundance and population characteristics).

2. **Technical-Scientific Merit**
   The project must meet accepted standards for design, information collection, compilation, analysis, and reporting. Projects should have clear study objectives, an appropriate sampling
design, correct statistical analysis, a realistic schedule and budget, and appropriate products, including written reports. Projects must not duplicate work already being done.

3. Investigator Ability and Resources

Investigators must have the ability and resources to successfully complete the proposed study. These are evaluated using the following information for each investigator:

<table>
<thead>
<tr>
<th>Ability</th>
<th>Resources</th>
</tr>
</thead>
<tbody>
<tr>
<td>● Education and training</td>
<td>● Office and laboratory facilities</td>
</tr>
<tr>
<td>● Related work experience</td>
<td>● Technical and logistic support</td>
</tr>
<tr>
<td>● Publications, reports, and presentations</td>
<td>● Personnel and budget administration</td>
</tr>
<tr>
<td>● Past or ongoing work on Monitoring Program studies</td>
<td></td>
</tr>
</tbody>
</table>

4. Partnership-Capacity Building

Partnerships and capacity building are priorities of the Monitoring Program. ANILCA mandates that the Federal government provide rural residents a meaningful role in the management of subsistence fisheries, and the Monitoring Program offers tremendous opportunities for partnerships and participation of local residents in monitoring and research. Investigators are requested to include a strategy for integrating local capacity development in their investigation plans. Investigators must complete appropriate consultations with local villages and communities in the area where the project is to be conducted. Letters of support from local organizations add to the strength of a proposal. Investigators and their organizations should demonstrate their ability to maintain effective local relationships and commitment to capacity building.

POLICY AND FUNDING GUIDELINES

Several policies have been developed to aid in implementing funding.

- Studies must be non-duplicative with existing projects. Most Monitoring Program funding is dedicated to non-Federal sources.
- Activities not eligible for funding under the Monitoring Program include: a) habitat protection, restoration, and enhancement; b) hatchery propagation, restoration, enhancement, and supplementation; c) contaminant assessment, evaluation, and monitoring; and d) projects where the primary objective is capacity building (e.g., science camps, technician training, intern programs). These activities would most appropriately be addressed by the land management agencies.
- Proposals may be funded for up to four years duration.

Finances and Guideline Model for Funding

The Monitoring Program was first implemented in 2000, with an initial investment of $5 million. In 2008, a total of $6.05 million will be allocated to the Monitoring Program. The Department of Interior, through the U.S. Fish and Wildlife Service, annually provides $4.25 million. The Department of Agriculture, through the U.S. Forest Service, annually provides $1.8 million. On an annual basis, this budget funds both continuations of existing studies (year 2, 3 or 4 of multi-year projects), and new study starts.
Beginning in 2008, the Office of Subsistence Management will issue future requests for proposals on a biannual basis. The next call will be issued in November 2008 for the 2010–2013 Monitoring Plan. Budget guidelines are established by geographic region and data type, and for 2008, $2.1 million is available for new starts. Proposals are solicited according to the following two data types.

1. **Stock Status and Trends (SST).**
   These projects address abundance, composition, timing, behavior, or status of fish populations that sustain subsistence fisheries with nexus to Federal public lands. The budget guideline for this category is two-thirds of available funding.

1. **Harvest Monitoring and Traditional Ecological Knowledge (HM-TEK).**
   These projects address assessment of subsistence fisheries including quantification of harvest and effort, and description and assessment of fishing and use patterns. The budget guideline for this category is one-third of available funding.

### 2008 FISHERIES RESOURCE MONITORING PLAN

For 2008, a total of 30 investigation plans are under consideration for funding (Table 1). Of these, 21 are SST projects and 9 are HM-TEK projects. The Technical Review Committee recommends funding 23 of these investigation plans.

**Table 1.** Number of investigation plans received for funding consideration in 2008, and number recommended for funding by the Technical Review Committee. Data types are stock status and trends (SST), and harvest monitoring and traditional ecological knowledge (HM-TEK).

<table>
<thead>
<tr>
<th>Geographic Region</th>
<th>Investigation Plans</th>
<th>Technical Review Committee</th>
</tr>
</thead>
<tbody>
<tr>
<td></td>
<td>SST</td>
<td>HM-TEK</td>
</tr>
<tr>
<td>Northern Alaska</td>
<td>2</td>
<td>1</td>
</tr>
<tr>
<td>Yukon</td>
<td>4</td>
<td>2</td>
</tr>
<tr>
<td>Kuskokwim</td>
<td>4</td>
<td>2</td>
</tr>
<tr>
<td>Southwest Alaska</td>
<td>4</td>
<td>1</td>
</tr>
<tr>
<td>Southcentral Alaska</td>
<td>4</td>
<td>1</td>
</tr>
<tr>
<td>Southeast Alaska</td>
<td>3</td>
<td>2</td>
</tr>
<tr>
<td><strong>Total</strong></td>
<td><strong>21</strong></td>
<td><strong>9</strong></td>
</tr>
</tbody>
</table>

Total funding available for new projects in 2008 is $2.1 million while the proposed cost of funding all 30 projects submitted would be $2.6 million. The 23 projects recommended for funding by the Technical Review Committee would have a total cost of $2.0 million. Proposed modifications to 4 projects recommended for 2008 will fully utilize the available funding. The draft 2008 Monitoring Plan recommended by the Technical Review Committee would provide 34% of the funding to Alaska Native organizations, 34% to Federal agencies, 27% to State agencies and 5% to other non-government organizations (Figure 1).
In developing the draft 2008 Monitoring Plan, the Technical Review Committee utilized the regional funding guidelines as initial targets for planning, not as rigid allocations. Then the committee strategically evaluated the priority of projects across regions to develop a scientifically defensible monitoring plan that addresses the highest priorities for Federal subsistence fisheries management. The draft 2008 Monitoring Plan is scientifically sound, addresses management and regulatory priorities, builds capability and expertise in rural Alaska, and promotes partnerships for monitoring valuable subsistence fishery resources critical to rural subsistence fishers.
NORTHERN ALASKA OVERVIEW

Issues and Information Needs

The three Northern Alaska Regional Advisory Councils (Seward Peninsula, Northwest Arctic, and North Slope) have identified important issues and information needs for their regions, with review and update on an annual basis. The Seward Peninsula and Northwest Arctic Councils have identified salmon and char fisheries as being the most important fisheries for their region, and char, whitefish, and Arctic grayling fisheries are of most importance to the North Slope Council. The 2008 Request for Proposals for the Northern Region identified two priorities:

- Baseline harvest assessment and monitoring of subsistence fisheries throughout the North Slope Region.
- Description and analysis of social network underlying the allocation and management of subsistence salmon fisheries in the villages of Stebbins, St. Michael, and Kotlik.

Projects Funded Under the Fisheries Resource Monitoring Program

Since the inception of the Monitoring Program in 2000, 27 projects have been funded in Northern Alaska, and four of these projects are ongoing during 2008 (Tables 1 and 2). Two of these ongoing projects are in the North Slope area: one addresses Dolly Varden aerial monitoring (Project 06-108), and one addresses completion of a genetic baseline for Dolly Varden (Project 06-105). The other two ongoing projects are in the Northwest Arctic sub-region. Project 04-157 explores approaches to harvest assessment in sustainable subsistence fisheries and project 07-151 is focused on subsistence fisheries harvest patterns and trends.

Projects Forwarded for Investigation Plan Development

Seven Northern Alaska proposals were submitted to the Office of Subsistence Management in response to the 2008 Request for Proposals. In March 2007, the Technical Review Committee reviewed these proposals and recommended three for investigation plan development. Investigators responded to Technical Review Committee proposal review comments in developing their investigation plans. Detailed budgets submitted with each investigation plan allowed identification of funds requested by Alaska Native, State, Federal, and other organizations; funds that would be used to hire local residents; and matching funds from investigating agencies and organizations (Tables 3 and 4).

Available Funds

Federal Subsistence Board guidelines direct initial distribution of funds among regions and data types. While regional budget guidelines provide an initial target for planning, they are not rigid allocations. Upon review and evaluation, the Technical Review Committee, Regional Advisory Councils, Interagency Staff Committee and Federal Subsistence Board have the opportunity to address the highest priority projects across regions. For 2008, approximately $103,000 is available for funding new projects in the Northern Alaska Region.

<table>
<thead>
<tr>
<th>Project Number</th>
<th>Project Title</th>
<th>Investigators</th>
</tr>
</thead>
<tbody>
<tr>
<td>00-002</td>
<td>Eastern NS Dolly Varden Spawning and Over-wintering Assessment</td>
<td>ADFG, USFWS</td>
</tr>
<tr>
<td>01-113</td>
<td>Eastern NS Dolly Varden Genetic Stock ID Stock Assessment</td>
<td>ADFG, USFWS</td>
</tr>
<tr>
<td>01-101</td>
<td>Eastern NS (Kaktovik) Subsistence Fish Harvest Assessment</td>
<td>ADFG, KIC</td>
</tr>
<tr>
<td>02-050</td>
<td>NS (Anaktuvuk Pass) Subsistence Fish Harvest Assessment</td>
<td>ADFG, NSB, AKP</td>
</tr>
<tr>
<td>03-012</td>
<td>SST of Arctic Cisco and Dolly Varden in Kaktovik Lagoons</td>
<td>USFWS</td>
</tr>
<tr>
<td>04-103</td>
<td>North Slope Dolly Varden Sonar Feasibility</td>
<td>USFWS</td>
</tr>
</tbody>
</table>

**North Slope**

<table>
<thead>
<tr>
<th>Project Number</th>
<th>Project Title</th>
<th>Investigators</th>
</tr>
</thead>
<tbody>
<tr>
<td>00-001</td>
<td>Northwestern Dolly Varden and Arctic Char Stock Identification</td>
<td>ADFG, USFWS</td>
</tr>
<tr>
<td>00-020</td>
<td>Hotham Inlet Kotzebue Winter Subsistence Sheefish Harvest</td>
<td>ADFG</td>
</tr>
<tr>
<td>01-136</td>
<td>Northwestern Alaska Dolly Varden Genetic Diversity</td>
<td>ADFG, USFWS</td>
</tr>
<tr>
<td>01-137</td>
<td>Northwestern Alaska Dolly Varden Spawning Stock Assessment</td>
<td>ADFG</td>
</tr>
<tr>
<td>02-023</td>
<td>Qaluich Nigingnaquat: Fish That We Eat</td>
<td>AJ</td>
</tr>
<tr>
<td>02-040</td>
<td>Kotzebue Sound Whitefish Traditional Knowledge</td>
<td>ADFG, MQ</td>
</tr>
<tr>
<td>03-016</td>
<td>Selawik River Harvest ID, Spring and Fall Subsistence Fisheries</td>
<td>USFWS</td>
</tr>
<tr>
<td>04-101</td>
<td>Selawik River Inconnu Spawning Abundance</td>
<td>USFWS</td>
</tr>
<tr>
<td>04-102</td>
<td>Selawik Refuge Whitefish Migration and Habitat Use</td>
<td>USFWS</td>
</tr>
<tr>
<td>04-109</td>
<td>Wulik River Dolly Varden Wintering Stocks</td>
<td>USFWS</td>
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</table>

**Northwest Arctic**

<table>
<thead>
<tr>
<th>Project Number</th>
<th>Project Title</th>
<th>Investigators</th>
</tr>
</thead>
<tbody>
<tr>
<td>01-224</td>
<td>Nome Sub-district Subsistence Salmon Survey</td>
<td>ADFG, KI</td>
</tr>
<tr>
<td>02-020</td>
<td>Pikmiktalik River Salmon Site Surveys and Enumeration</td>
<td>USFWS, NPS, STB, KI</td>
</tr>
<tr>
<td>04-105</td>
<td>Pikmiktalik River Chum and Coho Salmon Enumeration</td>
<td>KI</td>
</tr>
<tr>
<td>04-151</td>
<td>Customary Trade of Fish in the Seward Peninsula Area</td>
<td>ADFG, KI</td>
</tr>
<tr>
<td>05-101</td>
<td>Unalakleet River Coho Salmon Distribution and Abundance</td>
<td>ADFG, NVU</td>
</tr>
<tr>
<td>06-101</td>
<td>Pikmiktalik River Chum and Coho Salmon Enumeration</td>
<td>KI</td>
</tr>
</tbody>
</table>

<table>
<thead>
<tr>
<th>Project Number</th>
<th>Project Title</th>
<th>Investigators</th>
</tr>
</thead>
<tbody>
<tr>
<td>01-224</td>
<td>Nome Sub-district Subsistence Salmon Survey</td>
<td>ADFG, KI</td>
</tr>
<tr>
<td>02-020</td>
<td>Pikmiktalik River Salmon Site Surveys and Enumeration</td>
<td>USFWS, NPS, STB, KI</td>
</tr>
<tr>
<td>04-105</td>
<td>Pikmiktalik River Chum and Coho Salmon Enumeration</td>
<td>KI</td>
</tr>
<tr>
<td>04-151</td>
<td>Customary Trade of Fish in the Seward Peninsula Area</td>
<td>ADFG, KI</td>
</tr>
<tr>
<td>05-101</td>
<td>Unalakleet River Coho Salmon Distribution and Abundance</td>
<td>ADFG, NVU</td>
</tr>
<tr>
<td>06-101</td>
<td>Pikmiktalik River Chum and Coho Salmon Enumeration</td>
<td>KI</td>
</tr>
</tbody>
</table>

Table 2. Summary of ongoing 2008 projects funded under the Fisheries Resource Monitoring Program in Northern Alaska. Abbreviations used for investigators are: ADFG=Alaska Department of Fish and Game, MQ=Maniilaq, USFWS=U.S. Fish and Wildlife Service, and KI=Kawarek Inc.

<table>
<thead>
<tr>
<th>Project Number</th>
<th>Project Title</th>
<th>Investigators</th>
<th>2008</th>
<th>2009</th>
</tr>
</thead>
<tbody>
<tr>
<td>06-108</td>
<td>North Slope Dolly Varden Aerial Monitoring</td>
<td>ADFG</td>
<td>$27.7</td>
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</tr>
<tr>
<td>07-105</td>
<td>North Slope Dolly Varden Genetic Baseline Completio</td>
<td>USFWS</td>
<td>$28.3</td>
<td>$15.1</td>
</tr>
<tr>
<td>07-107</td>
<td>Hulahula River Dolly Varden Enumeration</td>
<td>USFWS</td>
<td></td>
<td></td>
</tr>
<tr>
<td>04-157</td>
<td>Exploring Approaches to Sustainable Fisheries Harvest Assesment</td>
<td>ADFG, MQ</td>
<td></td>
<td></td>
</tr>
<tr>
<td>07-151</td>
<td>NW Alaska Subsistence Fish Harvest Patterns and Trends</td>
<td>ADFG, MQ</td>
<td>127.2</td>
<td>78.6</td>
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<tr>
<td>06-101</td>
<td>Pikmiktalik River Chum and Coho Salmon Enumeration</td>
<td>KI</td>
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Total Northern Alaska Monitoring Program

<table>
<thead>
<tr>
<th></th>
<th>Budget ($000)</th>
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<tbody>
<tr>
<td></td>
<td>$183.2</td>
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<tr>
<td></td>
<td>$93.7</td>
</tr>
</tbody>
</table>

Table 3. Northern Alaska project costs, by organization (Alaska Native, State, Federal, other), for investigation plans submitted to the Fisheries Resource Monitoring Program for funding consideration in 2008.

<table>
<thead>
<tr>
<th>Project Number</th>
<th>Title</th>
<th>Alaska Native</th>
<th>State</th>
<th>Federal</th>
<th>Other</th>
</tr>
</thead>
<tbody>
<tr>
<td>08-103</td>
<td>Kobuk River Sheefish Spawning and Run Timing</td>
<td>$74.3</td>
<td>$12.9</td>
<td></td>
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<tr>
<td>08-106</td>
<td>Unalakleet River Chinook Salmon ASL Determination</td>
<td>$26.0</td>
<td>$36.2</td>
<td></td>
<td></td>
</tr>
<tr>
<td>08-150</td>
<td>Nuiqsut Baseline Fish Harvest Assessment</td>
<td>$145.1</td>
<td></td>
<td></td>
<td></td>
</tr>
</tbody>
</table>
Table 4. Northern Alaska local hire and matching funds for investigation plans submitted to the Fisheries Resource Monitoring Program for funding consideration in 2008. Abbreviations used are: ADFG=Alaska Department of Fish and Game, and EDAW=EDAW, Inc.

<table>
<thead>
<tr>
<th>Project Number</th>
<th>Lead Organization</th>
<th>Title</th>
<th>Local Hire</th>
<th>Matching</th>
</tr>
</thead>
<tbody>
<tr>
<td>08-103</td>
<td>ADFG</td>
<td>Kobuk River Sheefish Spawning and Run Timing</td>
<td>$87.3</td>
<td>$17.0</td>
</tr>
<tr>
<td>08-106</td>
<td>ADFG</td>
<td>Unalakleet River Chinook Salmon ASL Determination</td>
<td>$62.2</td>
<td>$0.0</td>
</tr>
</tbody>
</table>

<table>
<thead>
<tr>
<th>Project Number</th>
<th>Lead Organization</th>
<th>Title</th>
<th>Local Hire</th>
<th>Matching</th>
</tr>
</thead>
<tbody>
<tr>
<td>08-150</td>
<td>EDAW</td>
<td>Nuiqsut Baseline Fish Harvest Assessment</td>
<td>$145.1</td>
<td>$4.9</td>
</tr>
</tbody>
</table>

**Stock Status and Trends**

**Harvest Monitoring and Traditional Ecological Knowledge**

Table 5. Funding recommendations by the Technical Review Committee (TRC) for Northern Alaska 2008 Fisheries Resource Monitoring Program.

<table>
<thead>
<tr>
<th>Project Number</th>
<th>Title</th>
<th>TRC 2008</th>
<th>TRC 2009</th>
<th>TRC 2010</th>
<th>TRC 2011</th>
</tr>
</thead>
<tbody>
<tr>
<td>08-103</td>
<td>Kobuk River Sheefish Spawning and Run Timing</td>
<td>Yes</td>
<td>$87.3</td>
<td>$78.5</td>
<td>$17.0</td>
</tr>
<tr>
<td>08-106</td>
<td>Unalakleet River Chinook Salmon ASL Determination</td>
<td>No</td>
<td>$62.2</td>
<td>$51.9</td>
<td>$0.0</td>
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</tbody>
</table>

<table>
<thead>
<tr>
<th>Project Number</th>
<th>Title</th>
<th>TRC 2008</th>
<th>TRC 2009</th>
<th>TRC 2010</th>
<th>TRC 2011</th>
</tr>
</thead>
<tbody>
<tr>
<td>08-150</td>
<td>Nuiqsut Baseline Fish Harvest Assessment</td>
<td>No</td>
<td>$145.1</td>
<td>$149.5</td>
<td>$4.9</td>
</tr>
</tbody>
</table>

**Total**

- **Funding Guideline** $103.0
- **TRC Recommendation** $87.3 $78.5 $17.0 $17.0
Recommendations for Funding

After reviewing the three investigation plans, the Technical Review Committee recommended funding one project (Table 5) and prioritized them in the following descending order:

<table>
<thead>
<tr>
<th>Project Number</th>
<th>Project Description</th>
<th>Funding</th>
</tr>
</thead>
<tbody>
<tr>
<td>08-103</td>
<td>Kobuk River sheefish spawning and run timing</td>
<td>$87,299</td>
</tr>
<tr>
<td>08-106</td>
<td>Unalakleet River Chinook salmon ASL determination</td>
<td>$62,238</td>
</tr>
<tr>
<td>08-150</td>
<td>Nuiqsut baseline fish harvest assessment</td>
<td>$145,057</td>
</tr>
</tbody>
</table>

Due to funding constraints, the two projects below the line are not recommended for funding at this time. Each project proposed for funding in the Northern Alaska region in 2008 is summarized below in priority order (see Executive Summaries for more details).

**08-103 Kobuk River sheefish spawning and run timing.** This project will employ radio telemetry to document spawning frequency, timing and location along with post-spawning migration of sheefish in the Kobuk River. Federal subsistence users harvest sheefish in Hotham Inlet, Selawik Lake and the Kobuk River. These sheefish fisheries are a mixed stock group comprised of two spawning populations, the Selawik and Kobuk River populations. Population monitoring is only feasible within individual rivers, when the Selawik and Kobuk stocks are separated. This project builds on abundance estimate work completed by the Alaska Department of Fish and Game and U. S. Fish and Wildlife Service.

**08-106 Unalakleet River Chinook salmon ASL determination.** This project would collect age, sex and length (ASL) samples from Chinook salmon returning to the Unalakleet River and from subsistence fish harvested in Norton Sound (Subdistrict 6). Age composition information would be used to characterize spawner-recruit relationships and develop escapement goals for the Unalakleet River based on available escapement and harvest data. Currently, ASL information from Chinook salmon escapement has been collected at the Unalakleet River test fishery. This information is likely biased because of gillnet selectivity and possible bank orientation of returning spawners. This proposal seeks funding to collect ASL information using beach seines in the lower river to eliminate mesh size selectivity and bank orientation biases. In addition, samples would also be collected from carcass surveys in the major spawning areas.

**08-150 Nuiqsut baseline fish harvest assessment.** This two-year project aims to collect and synthesize detailed information on the subsistence harvest of all fish by the residents of Nuiqsut. The focus of this study is on fisheries that are not well documented (for example, jigging for burbot in the winter) and on less documented waters (for example, Fish Creek and Judy Creek, and compared with the Colville River). While existing studies evaluate the biological population dynamics and assessments of subsistence fisheries, the degree to which Nuiqsut residents depend on subsistence fisheries resources is unknown. This study will provide in-depth information for one community’s key subsistence use areas, species, general quantities and level of dependence on subsistence fishing harvest in/and adjacent to the National Petroleum Reserve Alaska.

The mission of the Monitoring Program is to identify and provide information needed to sustain subsistence fisheries on Federal public lands for rural Alaskans through a multidisciplinary, collaborative program. It is the responsibility of the Technical Review Committee to develop the strongest possible monitoring plan for each region and across the entire state. Given the limited availability of funding, the Technical Review Committee recommends funding one project, 08-103, which will document spawning frequency, timing and location along with post-spawning migration of sheefish, an important subsistence
resource, in the Kobuk River. In addition, four Monitoring Program projects will be ongoing in Northern Alaska in 2008.
Project Number: 08-103
Project Title: Kobuk River Sheefish Spawning and Run Timing
Geographic Region: Northern Alaska
Data Type: Stock Status and Trends
Principal Investigator: Klaus Wuttig, ADF&G Sport Fish Division
Co-Investigator(s): Randy Brown, USFWS, Fairbanks Fish and Wildlife Field Office


Recommendation: Fund

Issue

The Kobuk River sheefish *Stenodus leucichthys* population supports a very substantial winter subsistence harvest that occurs in Hotham Inlet and Selawik Lake, and significant in-river subsistence and sport fisheries. Most sheefish are harvested in Hotham Inlet and Selawik Lake where the population is comprised of two discrete spawning populations, the Selawik and Kobuk River populations. The exploitation of these stocks is poorly understood due to incomplete estimates of total annual harvest, unknown stock composition in the mixed-stock winter fisheries, and unknown total exploitable stock abundance. An understanding of these basic elements is necessary to begin to describe the population dynamics of these stocks and identify sustainable harvest levels. Population monitoring is only feasible in river on the individual spawning populations, and estimates have been attained in the Kobuk River during 1995-1997, and in the Selawik River during 1995–1996 and 2004–2005. However, these spawning population estimates are problematic because an unknown but potentially significant proportion of mature fish from each population do not spawn annually and are therefore not enumerated. Prior to additional stock assessments, a better understanding of spawning locations, run timing, and particularly spawning frequency is needed. Estimates of spawning frequency are critical in determining whole population sizes based on in-river spawning population estimates (past and future) and precise descriptions of run timing and spawning locations would provide the basis for improving the design of mark-recapture techniques and provide valuable information for assessing the feasibility of using sonar technology for future enumeration work.

Objectives

1. Document spawning locations within the Kobuk River upstream of the village of Kobuk.
2. Describe the timing of spawning migrations (upstream and downstream) for mature sheefish within the Kobuk River drainage.
3. Estimate the proportion of the sheefish spawning population in 2008 and 2009 that returned annually to spawning areas upstream of the village of Kobuk from 2009 to 2013 such that each annual proportion is within 10% percentage points 90% of the time.
4. Identify and characterize different spawning frequency strategies used by adult sheefish in the Kobuk River, estimate the proportion of adults for each strategy, and estimate the potential variation in the proportion of adult sheefish spawning in any one year.
Methods

During 2008 and 2009, 130 sheefish will be surgically implanted with radio tags each year. Deploying tags over two years will guard against potential temporal variation. Because the spawning population returns to a single, discrete spawning area (i.e. hydrologic unit), behavioral-related differences such as spawning frequency and selection of spawning areas is not expected to be a function of run timing. Nevertheless, efforts will be made to distribute radio tags in proportion to run strength to help ensure a more random sample. Sex-related differences in spawning behavior are more likely and therefore attempts will be made to distribute radio tags equally among males and females as the run progresses. Radio tags will be operational annually from mid June to mid November over a five-year period. Data related to movements, run-timing and spawning locations will be collected using a combination of aerial tracking surveys, ground-based receiving stations and boat surveys. At a minimum, each cohort of 130 radio-tagged sheefish will be monitored over a four-year period.

Partnerships/Capacity Building

This project is a cooperative effort between ADF&G, USFWS and the National Park Service (NPS), each providing significant in-kind support. Maniilaq and the villages of Shungnak and Kobuk support this project. At least one local hire will be formally employed by ADF&G to assist with sampling of fish and maintenance of tracking stations, and efforts will be made to utilize and compensate locals for logistical support (e.g. boat rentals, boat drivers, and land leases). Developing a trusting relationship among regional communities is vital for project success and future application of study results in sheefish management. To help establish trust, a long-term (2008–2013) educational program on sheefish will be designed to develop strong community interest/support, educate the students and adults about sheefish and the project, and develop fisheries skills in the community. The program will be administered by the ADF&G Rural Outreach Education Program in Kobuk and Shungnak where students will: 1) learn about sheefish and the project; 2) participate in hands-on activities such as practicing surgeries and maintaining their own tracking station in town; 3) monitor the progression of the spawning migration annually “real-time” using all data collected (i.e. aerial surveys and tracking station data); and 4) develop their own synthesis of what they have learned into a presentation to be shared with their community - locally and regionally.

Justification

The proposed work is technically sound and addresses an important subsistence sheefish fishery associated with Gates of the Arctic National Preserve, Selawik National Wildlife Refuge, Kobuk Valley Wilderness Area and Kobuk Valley National Park. Exploitation of sheefish is poorly understood, yielding incomplete information on stock abundance, stock composition, and annual harvest. Results from this work will describe run timing and spawning frequency, giving fishery managers the context for understanding previously completed stock abundance work. Furthermore, information gained in this project will provide a basis for developing future stock assessment projects. This project provides fundamental information needed to manage and sustain subsistence fisheries that target these stocks.
**Project Number:** 08-106  
**Project Title:** Unalakleet River Chinook Salmon ASL Determination  
**Geographic Region:** Northern Alaska  
**Data Type:** Stock Status and Trends  
**Principal Investigator:** Scott M. Kent, ADF&G Commercial Fisheries Division  
**Co-Investigator(s):** Henry Oyoumick, Native Village of Unalakleet  

**Cost:**  
- **2008:** $62,238  
- **2009:** $51,862  
- **2010:** $0  
- **2011:** $0  

**Recommendation:** Do not fund

**Issue**

The Unalakleet River watershed is the largest producer of Chinook salmon in Norton Sound and supports large subsistence harvests. The majority of the Chinook salmon subsistence harvest occurs in State managed waters, but most Chinook salmon returning to the Unalakleet River drainage spawn within the Federally designated wild and scenic portion of the Unalakleet River. Declines in total run sizes in recent years have led to the closure of the commercial fishery, increased restrictions on the subsistence fishery, and relatively high exploitation rates. Age class data, in conjunction with escapement counts and harvest estimates are needed to construct brood tables that characterize productivity through recruit-per-spawner (R/S) relationships. R/S analyses are in turn used to develop biological escapement goals (BEGs), escapement ranges that provide the greatest potential for maximum sustained yield (MSY). Unalakleet River escapement counts and Unalakleet Subdistrict harvest estimates are of sufficient quantity and quality to establish a Chinook salmon BEG for the drainage. However, previously collected Chinook salmon age, sex, and length (ASL) data are inadequate, and may contain inaccuracies due to net mesh size biases associated with the commercial and test fisheries, small annual sample sizes, and bank orientation bias inherent to the Unalakeet River test net.

The 2008 Request for Proposals seeks projects that quantify and assess subsistence salmon harvest in the region. The continued low abundance of Unalakleet River Chinook salmon and its importance as a primary subsistence resource, as well as the questionable historical ASL data, highlight the need for collecting accurate and precise ASL data for this stock. This proposal seeks funding for a project that will involve collecting un-biased ASL from the Chinook salmon escapement as well as from subsistence harvests. These data will set the foundation for a long-term data set that will be used to construct brood tables and calculate R/S estimates for the purpose of developing a drainage-wide Chinook salmon BEG.

**Objectives**

1. Document the age, sex, and length composition of Chinook salmon escapement into the Unalakleet River drainage.

2. Document and compare the age, sex, and length composition of Chinook salmon harvested in river and Subdistrict 6 marine subsistence fisheries.

3. Compare and investigate differences in the age, sex and length composition between the escapement and in-river and Subdistrict 6 marine subsistence fisheries.
Methods

This study will estimate and compare the age, sex, and length compositions of the escapement and in-river and marine subsistence harvests. ASL proportions derived from the escapement and subsistence catch samples will be compared and expanded to cumulative passage estimates at the North River enumeration tower and subsistence harvests. At no additional cost to the project, tissue samples for genetic stock identification will be collected as a valuable byproduct of collecting the ASL. These data will be paired with age, sex, and length, and location (i.e., in-river subsistence fishery) data. Tissue samples could in turn be used for testing hypotheses related to genetic stock identification analyses and may be used to calculate stock-specific age estimates.

Partnerships/Capacity Building

The ADF&G Commercial Fisheries Division will implement this study in partnership with the Native Village of Unalakleet (NVU), NSEDC, and the BLM. ADF&G will be solely responsible for data processing and reporting. An ADF&G Fisheries Technician III will oversee 3 fisheries technicians hired by NVU, and NSEDC and BLM staff will be contributing man power during the data collection phase of the project. ADF&G has a longstanding productive relationship with these entities and has worked cooperatively on several Norton Sound salmon assessment projects in the area. Data obtained from this study will also be entered in the AYK Salmon Database and will be available to the public and other researchers.

Justification

The proposed work would provide managers with information to characterize spawner/recruit relationships and develop escapement goals for the Unalakleet River Chinook salmon. The Unalakleet River is an important producer of Chinook salmon and supports the largest Chinook salmon fisheries in Norton Sound. Chinook salmon returns into Federal waters represent approximately 40 to 50 percent of the total Unalakleet River escapement. However, given the limited amount of funding available for the Monitoring Program in 2008, sufficient funding is not available to fund this proposed study.
Project Number: 08-150
Project Title: Nuiqsut Baseline Fish Harvest Assessment
Geographic Region: Northern Alaska
Data Type: Harvest Monitoring and Traditional Ecological Knowledge
Principal Investigator: Michael A. Downs, EDAW, Inc.
Co-Investigator(s): Michael S. Galginaitis, Applied Sociocultural Research


Recommendation: Do not fund

Issue

Nuiqsut residents are dependent upon subsistence fishing within the 23.5-million-acre National Petroleum Reserve (NPR-A); however, it is unknown to what degree they depend on these resources. Approximately one-third of a Nuiqsut household’s annual food includes subsistence-caught fish (ADF&G 2001), with most harvesting done along the Colville River, Fish Creek, and other nearby streams. This study will provide information on those fishing species and locations that are of the highest use and the most desired use, those locations that are less common but important as alternative sites, and those species that are less common but still desirable, along with information regarding smaller subgroups of subsistence users.

As petroleum exploration and development continue in the Nuiqsut area, this study will provide tools by which Federal agencies can better determine species and locations that warrant conservation measures or other management actions, especially within the NPR-A. This is especially important when agencies are responding to industry requests for exceptions to stream or river buffer zones, or local proposals for changes in how fish resources are managed. The project builds on an ongoing arctic cisco harvest study of the Colville fishery by focusing on the behavioral aspects of the subsistence fishery, using a methodology allowing for significant local participation over an extended period of time. This study will solicit information particularly for fisheries not well documented and on less documented waters. The North Slope Borough (NSB) Department of Wildlife Management is active in fisheries research but with many pressing needs and finite resources, it is currently focusing its research agenda on areas farther to the west in response to continuing development in the NPR-A at the expense of other priorities in the Nuiqsut area. The project is designed to fill a gap between what researchers are currently doing in the Nuiqsut area, and what the NSB feels must be its immediate in-house fisheries research emphasis farther to the west. It will also be an attempt to help with local (Nuiqsut) capacity building.

Objectives

1. Assess current state of subsistence fishing information with regard to Nuiqsut, and integrate into TEK analysis.
2. Incorporate local collaboration and participation to contribute to increasing local capability to conduct research and influence management decisions affecting Nuiqsut residents.
3. Identify and map key subsistence fishing subsistence use areas, species, general quantities, and the level of dependence on subsistence fishing harvest in/adjacent to the NPR-A.
4. Document areas currently used by Nuiqsut residents for subsistence fishing, and identify significant changes.
5. Identify the normative fishing “seasonal round” for Nuiqsut residents, including species that provide a secondary level of subsistence (e.g., broad white fish, burbot) and estimate harvest level of these species.

6. Design and record information in a geographic information system (GIS) database form, to facilitate its application to land and other resource management decisions.

7. Provide recommendations for the conservation of subsistence fishing populations, based upon TEK findings.

Methods

We will first collect and synthesize available information on Nuiqsut subsistence fisheries harvest. No such readily available summary currently exists, and it is sorely needed. We will then conduct a series of focused interviews to identify and map key fisheries use areas for a number of species, focusing especially on the data gaps evident in our summary data compilation. We will enter this mapped interview information into a GIS database, in a form compatible with the collection of current and future harvest information. The use or publication of this information may be restricted to protect confidentiality of research participants, but the collection and storage of data will preserve all relevant aspects of harvest data. Because Nuiqsut subsistence fishing is a relatively short duration activity, we propose to have a staff researcher in the field for portions of the major fisheries. We plan to hire at least one local long-term part-time research assistant to collect ongoing fishing activity and harvest information and be a contact point for the project.

Partnerships/Capacity Building

This study will be based largely on consultations with local residents of Nuiqsut, elders, ADF&G staff, and local/regional government. Discussions with the NSB Department of Wildlife Management about collaborating on this project are ongoing. A major research and programmatic objectives is to build local capacity. We plan to partner with a local Nuiqsut institution, to provide local support for the project. This will also foster interaction between local residents and project staff on a schedule more attuned to that of local residents rather than the relatively brief field visits by project staff. One of our co-investigators participated in a workshop conducted in Nuiqsut January 16–18, 2007, where one of the goals was the greater coordination of research efforts in Nuiqsut and the fostering of local collaboration and participation in such research. It concluded that Nuiqsut needed a “clearing house” staffed by locals to coordinate local research and disseminate results and conclusions. We will work within the community to strive toward this goal. It appears likely that either the Native Village of Nuiqsut or the Kuukpik Subsistence Oversight Panel has more potential to fulfill this function than would another new and separate entity. Our study team includes a co-investigator with a long and ongoing relationship with residents of Nuiqsut, having conducted over 20 years of local research. This will facilitate the identification of key informants and elders, and otherwise secure local assistance to identify subsistence resource users.

Justification

This proposal is not recommended for funding. While project investigators are highly qualified to do the work and they propose a solid collaborative project with a good capacity building component, the research plan has some unresolved technical challenges. Also, evidence of community support for the project and identification of key project personnel is incomplete. While baseline subsistence harvest information is fundamental information needed for management, it is not clear that management of North Slope subsistence fisheries would benefit from the highly detailed approach included herein.
YUKON REGION OVERVIEW

Issues and Information Needs

The Yukon-Kuskokwim Delta, Western Interior, and Eastern Interior Regional Advisory Councils have identified many issues and information needs for the region, with review and update on an annual basis. The three Councils generally identified Chinook and chum salmon as the highest priority species. Non-salmon species and collection and analysis of traditional knowledge have also been identified as important information needs. The 2008 Request for Proposals for the Yukon Region identified five priorities:

Yukon River Salmon

- Maintain reliable estimates of Chinook and chum salmon escapement over time (i.e., Henshaw Creek weir and Anvik River sonar)
- Assessment of trends in Chinook salmon age, sex and length
- Genetic stock assessment and run timing for Chinook salmon in the lower Yukon River
- Validity of sex identification for Chinook salmon at escapement projects

Yukon River Non-Salmon

- Development of a strategic plan for whitefish (coregonids) for the Yukon and Kuskokwim river drainages, focused on information needs for Federal subsistence management

Projects Funded Under the Fisheries Resource Monitoring Program

Since the inception of the Monitoring Program in 2000, 80 projects have been funded in the Yukon Region. Thirteen of these are continuation projects that will be operating through 2008 (Tables 1 and 2). Sixty-four of the projects have been directed at salmon, and 16 projects have addressed resident fish species, such as whitefish and northern pike. Of the 13 ongoing projects, eleven address salmon and two focus on non-salmon fish species (Table 2).

Projects Forwarded for Investigation Plan Development

Fourteen Yukon Region proposals were submitted to the Office of Subsistence Management in response to the 2008 Request for Proposals. In March 2007, the Technical Review Committee reviewed these proposals and recommended nine for investigation plan development, including five stock status and trends (SST) projects and four harvest monitoring and traditional ecological knowledge (HM-TEK) projects. Subsequent to that meeting, two projects were withdrawn by investigators, and two projects were combined into one investigation plan (08-253), resulting in six investigation plans, total. Investigators responded to Technical Review Committee proposal review comments in developing their investigation plans. Detailed budgets submitted with each investigation plan allowed identification of funds requested by Alaska Native, State, Federal, and other organizations; funds that would be used to hire local residents; and matching funds from investigating agencies and organizations (Tables 3 and 4).

<table>
<thead>
<tr>
<th>Project Number</th>
<th>Project Title</th>
<th>Investigators</th>
</tr>
</thead>
<tbody>
<tr>
<td>00-003</td>
<td>Effects of <em>Ichthyophonus</em> on Chinook Salmon</td>
<td>UW</td>
</tr>
<tr>
<td>00-005</td>
<td>Tanana Upper Kantishna River Fish Wheel</td>
<td>NPS</td>
</tr>
<tr>
<td>00-018</td>
<td>Pilot Station Sonar Upgrade</td>
<td>ADFG</td>
</tr>
<tr>
<td>00-022</td>
<td>Hooper Bay Test Fishing</td>
<td>ADFG, NVHB</td>
</tr>
<tr>
<td>00-024</td>
<td>Pilot Station Sonar Technician Support</td>
<td>AVCP</td>
</tr>
<tr>
<td>00-025</td>
<td>Henshaw Creek Salmon Weir</td>
<td>USFWS</td>
</tr>
<tr>
<td>00-026</td>
<td>TEK Salmon and Other Fish in Circle &amp; Eagle</td>
<td>NVE</td>
</tr>
<tr>
<td>01-014</td>
<td>Yukon River Salmon Management Teleconferences</td>
<td>YRDFA</td>
</tr>
<tr>
<td>01-015</td>
<td>Yukon River Salmon TEK</td>
<td>YRDFA</td>
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<td>01-018</td>
<td>Pilot Station Sonar Technician Support</td>
<td>AVCP</td>
</tr>
<tr>
<td>01-026</td>
<td>East Fork Andreafski River Salmon Weir</td>
<td>BSFA</td>
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<td>01-029</td>
<td>Nulato River Salmon Weir</td>
<td>BSFA</td>
</tr>
<tr>
<td>01-032</td>
<td>Rampart Rapids Tagging Study</td>
<td>USFWS</td>
</tr>
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<td>01-038</td>
<td>Kateel River Salmon Weir</td>
<td>USFWS</td>
</tr>
<tr>
<td>01-048</td>
<td>Innoko River Drainage Weir Survey</td>
<td>USFWS</td>
</tr>
<tr>
<td>01-050</td>
<td>Kaltag Chinook Salmon ASL Sampling</td>
<td>COK</td>
</tr>
<tr>
<td>01-058</td>
<td>E. Fork Andreafsky Weir Panel Replacement</td>
<td>USFWS</td>
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<tr>
<td>01-122</td>
<td>Lower Yukon River Salmon Drift Test Fishing</td>
<td>ADFG, EMV</td>
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<td>01-177</td>
<td>Rampart Rapids Extension</td>
<td>USFWS</td>
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<td>01-197</td>
<td>Rampart-Rapids Summer CPUE Video</td>
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<td>01-199</td>
<td>Tanana Fisheries Conservation Outreach</td>
<td>TTC</td>
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<tr>
<td>01-200</td>
<td>Effects of <em>Ichthyophonus</em> on Chinook Salmon</td>
<td>USGS</td>
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<tr>
<td>01-211</td>
<td>Upper Yukon, Porcupine, &amp; Black River Salmon TEK</td>
<td>CATG</td>
</tr>
<tr>
<td>02-009</td>
<td>Pilot Station Sonar Technician Support</td>
<td>AVCP</td>
</tr>
<tr>
<td>02-011</td>
<td>Rampart Rapids Fall Chum Handling/mortality</td>
<td>USFWS</td>
</tr>
<tr>
<td>02-097</td>
<td>Sex-ratios of Juvenile &amp; Adult Chinook, Kuskokwim &amp; Yukon Rivers</td>
<td>USFWS</td>
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<tr>
<td>02-121</td>
<td>Yukon River Chinook Salmon Genetics</td>
<td>USFWS, ADFG, DFO</td>
</tr>
<tr>
<td>02-122</td>
<td>Yukon River Chinook &amp; Chum Salmon In-season Subsistence</td>
<td>USFWS</td>
</tr>
<tr>
<td>03-009</td>
<td>Tozitna River Salmon Weir</td>
<td>BLG</td>
</tr>
<tr>
<td>03-013</td>
<td>Gisasa River Salmon Weir</td>
<td>USFWS</td>
</tr>
<tr>
<td>03-015</td>
<td>Phenotypic Characterization of Chinook Salmon Subsistence Harvests</td>
<td>YRDFA, USFWS</td>
</tr>
<tr>
<td>03-034</td>
<td>E. Fork Andreafsky River Salmon Weir</td>
<td>USFWS</td>
</tr>
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</table>
### Yukon Region Overview

#### Table 1. continued.

<table>
<thead>
<tr>
<th>Project Number</th>
<th>Project Title</th>
<th>Investigators</th>
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<tbody>
<tr>
<td>03-038</td>
<td>Yukon River Sub-district 5-A Test Fishwheel</td>
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<td>04-206</td>
<td><em>a</em> Tozitna River Salmon Weir</td>
<td>BLM</td>
</tr>
<tr>
<td>04-208</td>
<td><em>a</em> E. Fork Andreafsky River Salmon Weir</td>
<td>USFWS</td>
</tr>
<tr>
<td>04-209</td>
<td><em>a</em> Gisasa River Salmon Weir</td>
<td>USFWS</td>
</tr>
<tr>
<td>04-211</td>
<td><em>a</em> Henshaw Creek Salmon Weir</td>
<td>USFWS</td>
</tr>
<tr>
<td>04-217</td>
<td>Rampart Rapids Fall Chum Salmon Abundance</td>
<td>USFWS</td>
</tr>
<tr>
<td>04-228</td>
<td><em>a</em> Yukon River Chum Salmon Genetic Stock Identification</td>
<td>USFWS</td>
</tr>
<tr>
<td>04-229</td>
<td>Lower Yukon River Salmon Drift Test Fishing</td>
<td>ADFG</td>
</tr>
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<td>04-231</td>
<td>Yukon River Chinook Salmon Telemetry</td>
<td>ADFG</td>
</tr>
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<td>04-234</td>
<td><em>a</em> Kaltag Chinook Salmon ASL Sampling</td>
<td>CATG, ADFG</td>
</tr>
<tr>
<td>04-251</td>
<td>Fort Yukon TEK Camp</td>
<td>TTC, ADFG, CATG</td>
</tr>
<tr>
<td>04-255</td>
<td><em>a</em> Upper Yukon River Salmon Fishery TEK</td>
<td>NPS</td>
</tr>
<tr>
<td>04-256</td>
<td>Tanana Conservation Outreach</td>
<td>TTC, USFWS</td>
</tr>
<tr>
<td>04-263</td>
<td>Yukon River Salmon Management Teleconferences</td>
<td>YRDFA</td>
</tr>
<tr>
<td>04-265</td>
<td>Yukon River TEK of Customary Trade of Subsistence Fish</td>
<td>YRDFA</td>
</tr>
<tr>
<td>04-268</td>
<td>Hooper Bay Subsistence Monitoring</td>
<td>ADFG, HBTC</td>
</tr>
<tr>
<td>05-203</td>
<td>Yukon River Coho Salmon Genetics</td>
<td>USFWS</td>
</tr>
<tr>
<td>05-210</td>
<td>Tanana River Fall Chum Salmon Abundance</td>
<td>ADFG</td>
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<tr>
<td>07-210</td>
<td><em>a</em> Validation of DNA Gender Test Chinook Salmon</td>
<td>USFWS</td>
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#### Yukon River Non-Salmon Projects

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<thead>
<tr>
<th>Project Number</th>
<th>Project Title</th>
<th>Investigators</th>
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<tbody>
<tr>
<td>00-004</td>
<td>Humpback Whitefish/Beaver Interactions</td>
<td>USFWS, CATG</td>
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<td>00-006</td>
<td>TEK- Beaver/Whitefish Interactions</td>
<td>ADFG, CATG</td>
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<tr>
<td>00-021</td>
<td>Dall River Northern Pike</td>
<td>ADFG, SV</td>
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<td>00-023</td>
<td>Upper Tanana River Humpback Whitefish</td>
<td>USFWS</td>
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<td>01-003</td>
<td>Old John Lake TEK of Subsistence Harvests &amp; Fish</td>
<td>ADFG, AV, USFWS</td>
</tr>
<tr>
<td>01-011</td>
<td>Arctic Village Freshwater Fish Subsistence Survey</td>
<td>ADFG, AV, USFWS</td>
</tr>
<tr>
<td>01-100</td>
<td>Koyukuk Non-salmon Fish TEK and Subsistence Uses</td>
<td>ADFG, TCC</td>
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<tr>
<td>01-140</td>
<td>Yukon Flats Northern Pike</td>
<td>ADFG, SV</td>
</tr>
<tr>
<td>01-238</td>
<td>GASH Working Group</td>
<td>USFWS</td>
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<td>02-006</td>
<td>Arctic Village Freshwater Fish Subsistence</td>
<td>ADFG, NVV</td>
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<td>02-037</td>
<td>Lower Yukon River Non-salmon Harvest Monitoring</td>
<td>ADFG, TCC</td>
</tr>
<tr>
<td>02-084</td>
<td>Old John Lake Oral History &amp; TEK of Subsistence</td>
<td>USFWS, AV, ADFG</td>
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<td>04-253</td>
<td><em>a</em> Upper Tanana Subsistence Fisheries TEK Study</td>
<td>USFWS, UAF, ADFG</td>
</tr>
<tr>
<td>04-269</td>
<td><em>a</em> Kanuti NWR Whitefish TEK and Radio Telemetry</td>
<td>USFWS, RN</td>
</tr>
</tbody>
</table>

**Yukon Region Overview**

Table 2. Summary of ongoing 2008 projects funded under the Fisheries Resource Monitoring Program in the Yukon Region. Abbreviations used for investigators are: AC=Alaskan Connections, ADFG=Alaska Department of Fish and Game, BLM=Bureau of Land Management, COK=City of Kaltag, RWA=Robert Wolfe and Associates, TCC=Tanana Chiefs Conference, USFWS=U.S. Fish and Wildlife Service, CATG=Council of Athabascan Tribal Governments, and YRDFA=Yukon River Drainage Fisheries Association.

<table>
<thead>
<tr>
<th>Project Number</th>
<th>Project Title</th>
<th>Investigators</th>
<th>2008</th>
<th>2009</th>
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<tr>
<td>05-208</td>
<td>Anvik River Salmon Sonar Enumeration</td>
<td>ADFG</td>
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<td>05-211</td>
<td>Henshaw Creek Salmon Weir</td>
<td>USFWS, TCC</td>
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<td>05-254</td>
<td>Yukon River In-season Salmon Harvest Assessment</td>
<td>USFWS, YRDFA</td>
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<tr>
<td>06-205</td>
<td>Yukon River Chum Salmon Mixed Stock Analysis</td>
<td>USFWS</td>
<td>$92.2</td>
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<td>07-202</td>
<td>East Fork Andreafsky River Salmon Weir</td>
<td>USFWS</td>
<td>$148.3</td>
<td>$139.2</td>
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<td>07-204</td>
<td>Lower Yukon River Salmon Drift Test Fishing</td>
<td>ADFG</td>
<td>$50.9</td>
<td>$50.9</td>
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<td>07-206</td>
<td>Innoko River Inconnu Radio Telemetry</td>
<td>USFWS, ADFG</td>
<td>$72.7</td>
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<td>07-207</td>
<td>Gisasa River Salmon Weir</td>
<td>USFWS</td>
<td>$127.4</td>
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<td>Tozitna River Salmon Weir</td>
<td>BLM</td>
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<td>07-209</td>
<td>Inseason Salmon Management Teleconference</td>
<td>YRDFA</td>
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<td>07-211</td>
<td>Kaltag Chinook Salmon Sampling</td>
<td>COK</td>
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<td>07-253</td>
<td>Yukon River Salmon Harvest Patterns</td>
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<td>$204.6</td>
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**Yukon River Non-Salmon**

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<tr>
<th>Project Number</th>
<th>Project Title</th>
<th>Investigators</th>
<th>Budget ($000)</th>
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<tbody>
<tr>
<td>06-252</td>
<td>Yukon Flats Non-salmon TEK &amp; Biological Sampling</td>
<td>ADFG, BLM, USFWS, CATG</td>
<td>$33.6</td>
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<td>06-253</td>
<td>Middle Yukon River Non-salmon TEK &amp; Harvest Survey</td>
<td>ADFG, LTC</td>
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**Total Yukon Monitoring Program**

<table>
<thead>
<tr>
<th></th>
<th>Budget ($000)</th>
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<tr>
<td></td>
<td>$841.0</td>
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<td></td>
<td>$512.8</td>
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**Available Funds**

Federal Subsistence Board guidelines direct initial distribution of funds among regions and data types. While regional budget guidelines provide an initial target for planning, they are not rigid allocations. Upon review and evaluation, the Technical Review Committee, Regional Advisory Councils, Interagency Staff Committee and Federal Subsistence Board have the opportunity to address the highest priority projects across regions. For 2008, approximately $515,000 is available for funding new projects in the Yukon Region.

**Recommendations for Funding**

After reviewing the investigation plans, the Technical Review Committee recommended funding all six projects (with Option B for 08-253; Table 5) and prioritized them in the following descending order:

<table>
<thead>
<tr>
<th>Project Number</th>
<th>Project Title</th>
<th>Budget ($000)</th>
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<tbody>
<tr>
<td>08-206</td>
<td>Yukon and Kuskokwim Coregonid Strategic Plan</td>
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<td>08-202</td>
<td>Anvik River Chum Salmon Sonar Enumeration</td>
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<td>08-253</td>
<td>Yukon River Teleconferences and In-season Monitoring</td>
<td>$51,000</td>
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<td>08-250</td>
<td>Use of Subsistence Salmon to Feed Dogs</td>
<td>$42,921</td>
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<td>08-200</td>
<td>Kaltag Chinook Salmon Sampling</td>
<td>$3,750</td>
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<tr>
<td>08-201</td>
<td>Henshaw Creek Salmon Weir</td>
<td>$43,872</td>
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Table 3. Yukon project costs, by organization (Alaska Native, State, Federal, other), for investigation plans submitted to the Fisheries Resource Monitoring Program for funding consideration in 2008.

<table>
<thead>
<tr>
<th>Project Number</th>
<th>Title</th>
<th>Alaska Native</th>
<th>State</th>
<th>Federal</th>
<th>Other</th>
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<td>08-200</td>
<td>Kaltag Chinook Salmon Sampling</td>
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<td>08-201</td>
<td>Henshaw Creek Salmon Weir</td>
<td>$43.9</td>
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<tr>
<td>08-202</td>
<td>Anvik River Chum Salmon Sonar Enumeration</td>
<td>$74.3</td>
<td></td>
<td></td>
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<tr>
<td>08-206</td>
<td>Yukon and Kuskokwim Coregonid Strategic Plan</td>
<td>$88.8</td>
<td>$30.9</td>
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</tr>
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</table>

**Stock Status and Trends Projects**

Table 4. Yukon local hire and matching funds for investigation plans submitted to the Fisheries Resource Monitoring Program for funding consideration in 2008. Abbreviations used are: ADFG=Alaska Department of Fish and Game, COK=City of Kaltag, RN=Research North, TCC=Tanana Chiefs Conference, USFWS=Fish and Wildlife Service, and YRDFA=Yukon River Drainage Fisheries Association.

<table>
<thead>
<tr>
<th>Project Number</th>
<th>Lead Organization</th>
<th>Title</th>
<th>Funding ($000s)</th>
</tr>
</thead>
<tbody>
<tr>
<td>08-200</td>
<td>COK</td>
<td>Kaltag Chinook Salmon Sampling</td>
<td>$12.6</td>
</tr>
<tr>
<td>08-201</td>
<td>TCC</td>
<td>Henshaw Creek Salmon Weir</td>
<td>$12.6</td>
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<tr>
<td>08-202</td>
<td>ADFG</td>
<td>Anvik River Chum Salmon Sonar Enumeration</td>
<td>$83.9</td>
</tr>
<tr>
<td>08-206</td>
<td>USFWS</td>
<td>Yukon and Kuskokwim Coregonid Strategic Plan</td>
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**Stock Status and Trends Projects**

<table>
<thead>
<tr>
<th>Project Number</th>
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<th>Title</th>
<th>Funding ($000s)</th>
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<tr>
<td>08-250</td>
<td>RN</td>
<td>Use of Subsistence Fish to Feed Sled Dogs</td>
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<tr>
<td>08-253</td>
<td>YRDFA</td>
<td>Yukon Salmon Inseason Management Teleconferences and Harvest Monitoring</td>
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Table 5. Funding recommendations by the Technical Review Committee (TRC) for the Yukon 2008 Fisheries Resource Monitoring Program.

<table>
<thead>
<tr>
<th>Project Number</th>
<th>Title</th>
<th>TRC</th>
<th>Requested Budget ($000)</th>
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<td></td>
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<td>2008</td>
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<tr>
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<td>Kaltag Chinook Salmon Sampling</td>
<td>Yes</td>
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<td>Anvik River Chum Salmon Sonar Enumeration</td>
<td>Yes</td>
<td>$68.7</td>
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<td>08-206</td>
<td>Yukon and Kuskokwim Coregonid Strategic Plan</td>
<td>Yes</td>
<td>$119.7</td>
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<td>08-250</td>
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<td>Yes</td>
<td>$42.9</td>
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<td>08-253</td>
<td>Yukon Salmon Inseason Management Teleconferences</td>
<td>Yes</td>
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<td></td>
<td>with Harvest Monitoring</td>
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<td></td>
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<td></td>
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<td></td>
<td><strong>Total</strong></td>
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<td><strong>Funding Guideline</strong></td>
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<td><strong>TRC Recommendation</strong></td>
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Each project proposed for funding in the Yukon region in 2008 is summarized below in priority order (see Executive Summaries for more details).

**08-206 Yukon and Kuskokwim coregonid strategic plan.** The project will develop a strategic plan for whitefish research in the Yukon and Kuskokwim river drainages. Investigators will review available whitefish research and fisheries for the Yukon and Kuskokwim drainages and provide direction for research, identify gaps in biological and life history data, identifying the major whitefish fisheries issues within the two drainages, and define appropriate methods and approaches for research. This effort will be collaborative, including fish biologists and social scientists, and knowledgeable subsistence users who live in these drainages to provide local knowledge.

**08-202 Anvik River chum salmon sonar evaluation.** The Anvik River sonar project was initiated in 1979, and is the longest running summer chum salmon escapement project in the Yukon River. Because of its long funding history by the State (28 years), and the importance of the information to both State and Federally managed fisheries, the State provides a 50% match for the operation of this project. Summer chum is an important subsistence resource. In 2005, the preliminary subsistence harvest in Districts 1–3 totaled 57,738.

**08-253 Yukon River teleconferences and in-season monitoring.** In its review of 08-253 (Yukon River Drainage Fisheries Association (YRDFA) Teleconferences) and 08-254 (Yukon River Inseason Chinook Salmon Harvest Assessment) the Technical Review Committee recommended that investigators consider combining the two projects into one, hence this investigation plan includes Option A and Option B. The teleconference component (Option A) entails facilitation of weekly in-season, river-wide YRDFA teleconference calls between managers and users. These weekly calls have become one of the major lines of communication between fishery managers and the fishing public during the salmon fishing season since their inception in 1994; YRDFA teleconferences have been funded through the Monitoring Program since 2000. The in-season subsistence monitoring component entails reporting by a cadre of trained research assistants to ensure regular and consistent reporting of subsistence harvest activity from ten villages. These research assistants will gather information on village subsistence harvest efforts, and present their reports at the weekly teleconferences. The two components together constitute Option B.

**08-250 Use of subsistence salmon to feed dogs.** This project will update a seminal study conducted in 1992 on the use and feeding of dog teams along the Yukon River. At the time of the original study, approximately 5,000 dog teams in 32 villages were being fed roughly 250,000 fish, primarily salmon. Since then, salmon runs and harvests have declined, and costs associated with mechanized alternatives to sled dogs have increased dramatically. Investigators propose to utilize the same methodology (short surveys and key informant interviews) as in the original study, and to work in the same seven communities (Russian Mission, St. Mary’s, Kaltag, Huslia, Tanana, Manley Hot Springs, and Fort Yukon) so that project data are comparable. Given the potential impact of dogs on subsistence fish harvests, it is timely to understand and evaluate the effects of these changes on subsistence fish harvests, and to understand potential implications for subsistence fisheries management.

**08-200 Kaltag Chinook salmon sampling.** This four-year continuation project will collect 250 age-sex-length (ASL) samples from subsistence caught Chinook salmon from the subsistence harvest downstream from Kaltag in Subdistrict 4A. This project has been funded through the Fisheries Resource Monitoring Program since 2001. This data set provides age-sex-length composition information for an important Chinook salmon subsistence fishery in the middle Yukon River.

**08-201 Henshaw Creek salmon weir.** The Henshaw Creek weir was initiated in the Upper Koyukuk drainage in 2000 after unsuccessful attempts to monitor salmon stocks in the South Fork Koyukuk River.
Yukon Region Overview

The project will provide run timing and age-sex-length information for Chinook and summer chum salmon; identify resident fish; and serve as an outreach platform for a science camp. The data collected provides in-season and post-season information for Federal subsistence management of fisheries in the Yukon River. The science camp, funded through a USFWS challenge cost share grant, will provide educational opportunities for rural students from local villages.

The mission of the Monitoring Program is to identify and provide information needed to sustain subsistence fisheries on Federal public lands for rural Alaskans through a multidisciplinary, collaborative program. It is the responsibility of the Technical Review Committee to develop the strongest possible monitoring plan for each region and across the entire state. The Technical Review Committee recommends funding all six projects (Table 5): they all address information of direct relevance and importance to subsistence fisheries under Federal jurisdiction, are technically sound, include capacity building components, and the investigators are qualified to conduct the work.
Six whitefish species are commonly recognized in the Yukon and Kuskokwim rivers; sheefish *Stenodus leucichthys*, broad whitefish *Coregonus nasus*, humpback whitefish *C. pidschian*, Bering cisco *C. lauricetta*, least cisco *C. sardinella*, and round whitefish *Prosopium cylindraceum*. Major subsistence fisheries take place for sheefish, broad whitefish, humpback whitefish, and Bering cisco at various locations and seasons. Least cisco and round whitefish are also harvested in subsistence fisheries but are generally not as specifically targeted as the others. At this time, no formal monitoring or management programs have been developed in the region for subsistence whitefish fisheries. In fact, our current understanding of whitefish life history and population biology in most areas of the Yukon and Kuskokwim regions is not sufficient to allow monitoring or management programs to be developed.

Geographic distributions of the whitefish species are reasonably well documented in a wide array of formal and informal fish survey reports, and in the general fish guidebooks for the region (McPhail and Lindsey 1970; Morrow 1980; Mecklenberg et al. 2002); however, species and stock-specific data on migrations, spawning habitats, rearing habitats, abundance, harvest levels, and other related information are insufficiently described. A strategic action plan for whitefish species will provide direction for research on these fish important for subsistence by outlining our current understanding of whitefish and whitefish fisheries within the two drainages, identifying information required for monitoring and management, highlighting gaps in biological and life history data, discussing major fisheries issues within the two drainages, and suggesting appropriate methods and approaches for research. Ultimately, an improved understanding of these species will enable the development of effective monitoring and management plans.

Objectives

Develop a strategic plan for research of whitefish species for the Yukon and Kuskokwim river drainages. This plan will include six major components:

1. a review of whitefish fisheries within the two drainages;
2. a review of the biological, life history, and ethnographic studies that have occurred in the region;
3. an assessment of data gaps;
4. a review of methods and approaches that have been used around the world to monitor and manage whitefish species with an assessment of their appropriateness for use in Alaska;
5. a discussion with stakeholders and other interested parties of issues, fisheries, and species of regional concern; and
6. writing and critical review of a strategic plan for whitefish research in the Yukon and Kuskokwim regions.

The plan will aim to provide a region-wide perspective to guide future whitefish research.

Methods

The proposed approach includes several major components, as outlined above. Initially the principal investigators will conduct background research and synthesis of biological and ethnographic studies, documentation of traditional knowledge, harvest data, and management reports. These syntheses will be distributed to a group of delegates with experience in fish biology, anthropology, and fish management, as well as representatives from fishery user groups in the Yukon and Kuskokwim regions. A series of meetings will be convened with these delegates to discuss and debate the information presented in the syntheses, and prioritize critical research needs and approaches. The principal investigators will consider the information from all sources and prepare a strategic plan for research of coregonid species for the Yukon and Kuskokwim river drainages.

Partnerships/Capacity Building

A number of potential participants from several organizations have been contacted to assess the interest level in the proposal project, and responses have been favorable. The contact list includes individuals from the Alaska Department of Fish and Game, the U.S. Fish and Wildlife Service, Alaska Department of Natural Resources, the Association of Village Council Presidents, Tanana Chiefs Conference, the Council of Athabascan Tribal Governments, the Kuskokwim Native Association, and the Yukon River Drainage Fisheries Association. In addition, a representative from the Yukon-Kuskokwim Delta, Western Interior, and Eastern Interior Regional Advisory Councils will be invited to participate in the meetings. Letters of support have been requested from a number of organizations.

Justification

This proposal addresses a priority information need identified in the 2008 Request for Proposals. Subsistence whitefish fisheries are second only to salmon in importance as a food resource for the Yukon and Kuskokwim rivers. With little information available about basic stock structure and life history information, subsistence management for whitefish stocks remains largely passive. The proposed study would identify biological and social science gaps in existing information, and explore appropriate methods for assessment, research, and management. Additionally, the group would develop criteria that could be used to assign relative priority levels among fisheries, species, user-groups, research objectives, and management options. The end product will be a peer reviewed strategic plan for research of whitefish species for the Yukon and Kuskokwim river drainages that can be used to direct future coregonid research and funding.
**Issue**

The Anvik River contributes to the subsistence chum salmon fishery in the lower Yukon River, which is part of the Yukon Delta National Wildlife Refuge. The Anvik River sonar project has provided reliable estimates of chum salmon escapement to the Anvik River since 1979, is one of only two projects in the Yukon River drainage with an established Biological Escapement Goal (BEG) for summer chum salmon, and was identified in the 2008 FRMP as an important priority need in the Yukon Region for maintaining reliable estimates of chum salmon escapement over time. The sonar project’s longevity and the river’s history of being one of the largest producers of summer chum salmon in the Yukon River drainage combine to make this one of the most important projects for escapement monitoring and management of chum salmon in the Yukon Region.

**Objectives**

1. Estimate the daily summer chum salmon escapement passing the Anvik River sonar site.
2. Estimate the age and sex composition of the summer chum salmon spawning escapement.

**Methods**

*Objective 1:* The Anvik River sonar project will transition to operating a Dual Frequency Identification Sonar (DIDSON) in 2007. The DIDSON produces video like images of fish passing the site. Sonar will be deployed on each bank of the Anvik River and sonar data will be collected for 30 minutes of each hour, 24-hours per day, 7 days a week for the duration of the study. This will provide a total of 12 hours of data per day per bank. Counts will be expanded for the fraction of the day sampled to estimate daily passage.

*Objective 2:* For age and sex composition, a sample of 162 summer chum salmon will be collected in each of the following time strata: June 17–30, July 1–7, July 8–14, and July 15–30. Scale sample cards and mark-sense forms will be sent to Anchorage for processing at the conclusion of the season. A field notebook will be maintained recording sex, length, date, and gear type for each fish sampled.

**Partnerships/Capacity Building**

This project provides limited opportunities to develop partnerships and build local capacity. Information from this project is provided to both State and Federal fishery managers and is used in making daily summer chum salmon management decisions. In addition, the data are presented at Yukon River Fisheries Association teleconferences when discussing management actions with subsistence and commercial fishermen.
Draft 2008 Fisheries Resource Monitoring Plan  
Yukon Region Executive Summaries

**Justification**

This project addresses an information need specifically identified in the 2008 Request for Proposals. The Anvik River is one of the top producers of summer chum salmon in the Yukon River accounting for approximately one third of total production. Approximately 74% of the total subsistence harvest for summer chum salmon occurs in the lower Yukon River. The Anvik River Sonar is an important monitoring project for summer chum salmon to assess run strength and meet biological escapement goals. Because of its 28-year funding history by the State, and the importance of the information to both State and Federal managed fisheries, OSM requires a 50% match by the State in the investigation plan, which is covered by 10.8 months of salary per year of three permanent ADF&G Fishery Biologists ($84,000+).
Project Number: 08-253
Project Title: Yukon River Teleconferences and In-season Monitoring
Geographic Region: Yukon
Data Type: Harvest Monitoring and Traditional Ecological Knowledge
Principal Investigator: Jill Klein, Yukon River Drainage Fisheries Association
Co-Investigator: Jonathon Gerken, USFWS Fairbanks Fish and Wildlife Field Office

Cost: 2008: $51,000  2009: $51,000  2010: $51,000  2011: $51,000

Recommendation: Fund with Modification

Issue

The proposed project deals with an important subsistence resource (salmon) in an area with multiple Federal conservation units. Improving management of this resource and finding ways to incorporate users and local knowledge into resource management is a priority for the Yukon-Kuskokwim Delta, Western Interior, and Eastern Interior Regional Advisory Councils, management agencies and tribal organizations. In-season teleconferences and in-season harvest interviewers are a practical method for improving communication and bringing these entities together.

Objectives

1. Maintain and expand communication and information sharing between the Yukon salmon fishery users and agency staff through weekly in-season teleconferences.
2. Promote local involvement in Yukon River fisheries management through capacity building and participation.
3. Promote inter-agency information sharing for Yukon River salmon fisheries with State, Federal and international entities (i.e., ADF&G, U.S. Fish & Wildlife Service, Yukon River Salmon Committee, Canada and Department of Fisheries and Ocean, Canada).
4. Foster increased participation, timely sharing and uniform reporting of in-season information from fishers to managers and vice versa.
5. Document local salmon run timing and perceived abundance of salmon in the Yukon River drainage through summer and fall fishing seasons.
6. Estimate the weekly average subsistence harvest progress for Chinook salmon in 10 communities within the drainage.

Methods

Teleconference calls will be facilitated once a week during the 2008–2011 fishing seasons by the YRDFA Executive Director and/or staff on every Tuesday of the season at 1300 hours (Alaska Time). Following each call YRDFA will distribute a short summary, detailing announcements of the management decisions, management rationale and key points of subsistence users and public.

The inclusion of in-season harvest interviewers as consistent participants in the teleconference calls will provide a greater consistency in reporting subsistence harvest information. Ten interviewers will
be selected and hired by YRDFA from the communities of Emmonak, Marshall, Holy Cross, Kaltag, Huslia, Allakaket, Galena, Beaver, Circle, and Eagle. Interview methodology and information collection will follow the methods outlined by Gerken and Holder (2005). Preseason training will occur to ensure interviewers are collecting information appropriate to the methodology.

**Partnerships/Capacity Building**

Teleconferences are a practical method for bringing together a diverse group of local users that utilize and manage the salmon resource. However, participation in each teleconference call varies dependent upon salmon run timing and management actions. A summary of attendance on the 2006 teleconferences indicated that community attendance declined throughout the season after the historical quarter point of the run, June 15, in the lower river, traditionally the beginning of commercial fishing in the lower river. Similarly, an increase in community attendance was observed prior to the first fall season commercial period occurring on July 28. The use of teleconferences to promote information sharing is a valuable tool if communities participate, but without attendance the utility is diminished.

**Justification**

The Technical Review Committee recommends funding Option B of this project pending modifications as outlined above. Specifically, investigators need to correctly characterize how the information will be used, and also revise objectives to include no more than three. The project addresses an important subsistence resource (salmon) in an area with multiple Federal conservation units. Improving management of this resource and finding ways to incorporate users and local knowledge into the management of this resource has been a priority of the three area Regional Advisory Councils (Western Interior, Eastern Interior and Yukon-Kuskokwim Delta). The project is a collaborative effort, and investigators have the capability to successfully conduct the project. The methods are basic, but overall the project is technically sound and the budget is reasonable.
Project Number: 08-250  
Project Title: Use of Subsistence Fish to Feed Sled Dogs  
Geographic Region: Yukon  
Data Type: Harvest Monitoring and Traditional Ecological Knowledge  
Principal Investigator: David Andersen, Research North  
Co-Investigator: Cheryl Scott, Alaskan Connections  

Cost:  
<table>
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<th>Year</th>
<th>Cost</th>
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<td>2008</td>
<td>$42,921</td>
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<tr>
<td>2010</td>
<td>$0</td>
</tr>
<tr>
<td>2011</td>
<td>$0</td>
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Recommendation: Fund  

Issue  
It has been 16 years since the use and feeding of sled dogs has been systematically examined in the Yukon River drainage. A 1991 ADF&G study found that approximately 5,000 sled dogs in 32 Yukon River communities were being maintained to varying degrees using subsistence-caught fish and that more than 250,000 small salmon were being utilized each year to feed dogs. In the intervening decade and a half, salmon runs and salmon harvests have declined, sometimes dramatically. In 2000, the total subsistence harvest of Yukon River small salmon was estimated at less than 100,000 fish with an estimated 21,000 salmon utilized for dog food. It seems improbable that dog team owners heavily reliant on salmon to feed their dogs could cope with such significant reductions in salmon harvests without reducing kennel size or altering long-standing feeding practices, or both. The effects of these changes on the size, number, and use of dog teams in rural communities are unknown. The baseline data set collected in 1991 provides a rare opportunity to examine the dynamics of one of the more significant uses of subsistence-caught fish in interior Alaska during a time of unprecedented change. This study proposes to update the 1991 data set using the same methods and communities, to understand what changes have occurred with regard to village dog teams and the strategies mushers have utilized to feed them. Current information on this important issue will help Federal managers to be proactive and to better understand factors affecting subsistence fisheries along the Yukon River.

Objectives  
1. Estimate the number of sled dogs in rural Yukon River Communities.
2. Describe contemporary uses of dog teams in Yukon River Communities.
3. Assess the extent to which subsistence-caught fish (salmon and non-salmon) are used to feed dogs.
4. Compare these data with data gathered in 1991 to assess changes and evaluate implications for subsistence management.

Methods  
A two-year project is proposed, sampling the same seven study communities and using the same basic methodology as the 1991 study in order to achieve a comparable data set and assess specific changes. The project will utilize standard ethnographic research methods including face-to-face household surveys conducted with all dog-team owners in each survey community and key respondent interviews with a small subset of dog-team owners. Research practices will adhere to recognized social science ethics standards and principles for the conduct of research in the Arctic. The seven study communities proposed...
for sampling are: Fort Yukon, Huslia, Kaltag, Manley Hot Springs, Russian Mission, St. Marys, and Tanana. Together, these communities are thought to represent the diversity of the Yukon River drainage in terms of geography, Native cultures, fishery resources, and participation in dog mushing activities.

**Partnerships/Capacity Building**

Community partnerships will be encouraged and enhanced through the hiring of local assistants in each community. Local assistants will be instrumental in identifying survey households and will accompany and assist the researcher during survey and interview sessions. Although the duties of each local assistant are expected to involve only 10–15 hours of work over a several day survey period, participation as the local assistant will provide that individual with important insight into social science data collection methods and will build capacity by contributing to the work experience, or expanding the pool, of individuals in rural communities familiarized with this kind of work.

**Justification**

This project is recommended for funding. The investigation plan addresses an important issue for Federal subsistence fisheries management, and will provide a diachronic perspective much needed to understand changing subsistence practices and inform subsistence management in an area with numerous conservation units. The project is technically sound, with solid objectives and proven methodology. The time frame and budget are reasonable. Investigators are uniquely well qualified to conduct the proposed work, as they did the original study 16 years ago.
Knowledge of Chinook salmon mixed stock harvests are a prerequisite to understanding and evaluating changes to stock-specific production. This project helps fulfill the US-Canada Treaty Agreement by estimating the age, sex, length (ASL), and stock composition for the fishery in Subdistrict 4-A. Federal and State managers rate this project as a high strategic priority. The Office of Subsistence Management supported this project in 2001 (01-050), 2004–2006 (04-234) and 2007.

Objectives

1. Collect biological data from 250 Chinook salmon harvested by Kaltag subsistence fishers. These data include scales, sex, length, and an axillary process clip.

2. Record associated data such as date, harvest location, gear type, and mesh size.

Methods

1. Study design: Chinook salmon will be sampled in the round from the Kaltag subsistence harvest as soon after capture as practical. Sampling will occur throughout the duration of the run in proportion to abundance as much as possible. During sampling, all available fish will be sampled for an axillary process clip, scales, sex, and length. Capture method, mesh size, location, date, fish number, scale card number, and genetic vial number will be recorded.

2. Data collection and reduction: ADF&G will send sampling supplies to Kaltag before the field season begins in late May. Sampling technicians will be hired before the field season. Sample collection will begin as soon as subsistence fishers start harvesting salmon, usually early to mid-June.

Three scales are collected from the left side of the fish, two rows above the lateral line on the diagonal from the posterior insertion of the dorsal fin to the anterior insertion of the anal fin, and then mounted on pre-printed gum cards. Length will be measured from mid-eye to fork of tail to the nearest five mm. Sex will be visually determined from external morphological characteristics or from internal examination of the gonads. Approximately ¼-inch of the auxiliary process is clipped, placed in individually numbered vials, and the vial filled with ethanol. Associated data are recorded in field logbooks and later transferred to Opscan forms. After the majority of the Chinook salmon subsistence harvest has occurred, samples and associated data will be will be sent to the ADF&G Anchorage office for processing and database entry.

3. Data reduction: From August through December, samples will be processed, analyzed and summarized by ADF&G. ASL data will be compiled by the Stock Biology Laboratory and the axil-
lary process clips will be compiled by the Genetics Laboratory to estimate stock composition for Canadian- and US-origin fish. Upon completion of sample processing and analysis, ADF&G will forward preliminary results to the principal investigator for inclusion in performance, annual, and final reports. ADF&G final reports, which include data collected by the principal investigator, will be forwarded to the PI when available.

**Partnerships/Capacity Building**

The project directly involves Kaltag residents collecting in-season fisheries data from the subsistence Chinook salmon harvest and is in partnership with the Alaska Department of Fish and Game.

**Justification**

The project addresses an information need identified in the 2008 Request for Proposals. The project supplements the commercial ASL database by providing 250 samples from subsistence caught Chinook salmon in Subdistrict 4A. The scope of work is reasonable and the objectives are clear, measurable, and achievable. The project provides for direct involvement of a local community (two local hire technicians) in the collection of in-season fisheries data on the subsistence harvest. The project is reasonably priced and the information collected benefits the post-season evaluation of Chinook salmon. Federal and State managers have supported, and the Office of Subsistence Management has provided funds for, this continuation project since 2001.
Project Number: 08-201  
Project Title: Henshaw Creek Salmon Weir  
Geographic Region: Yukon  
Data Type: Stock Status and Trends  
Principal Investigator: Brandy Berkbigler, Tanana Chiefs Conference  

Cost:  
2008: $43,872  
2009: $43,215  
2010: $46,230  
2011: $52,280  

Recommendation: Fund  

Issue  
Management of Koyukuk River salmon fishery is complex due to the limited number of escapement studies in the drainage. The Alaska Department of Fish and Game, Commercial Fisheries Division has conducted aerial surveys within this drainage since 1960 but the usefulness and reliability of that information is limited. Due to the mixed stock nature of the Yukon River salmon fishery, management practices are complex and the data needed for management must be collected throughout the drainage. The United States Fish and Wildlife Service (USFWS), Fairbanks Fish and Wildlife Field Office have compiled salmon escapement data from Henshaw Creek since 2000. The information collected (genetic fin clips, age, sex, and length) has allowed Federal and State managers to bridge the information gap between projects on the Koyukuk River. The Henshaw Creek weir is the only upper Koyukuk River drainage escapement project and can be used to compare with lower Koyukuk river escapement projects. Chinook Oncorhyncus tshawytscha and chum O. keta salmon from Henshaw Creek contribute to the subsistence and commercial fisheries harvest occurring in the Yukon River drainage. Subsistence and commercial harvesters along the Yukon and Koyukuk Rivers have identified a concern with the apparent decrease in the size of Chinook salmon. The usefulness in maintaining reliable escapement estimates and continued collection of age, sex and length data at Henshaw Creek will help to assess possible trends in Chinook and summer chum salmon run timing and escapement over time. This project addresses the priority information needs outlined for Yukon River salmon, including maintaining reliable estimates of Chinook and chum salmon escapement over time, and assessment of trends in Chinook age, sex and length. Additionally, with Tanana Chiefs Conference (TCC) as the primary investigator and through the hire of local residents, this project will satisfy the capacity building component addressed in the RFP for Native entities to effectively manage the resources.  

Objectives  
1. Determine daily run escapement and run timing of adult salmon.  
2. Determine age, sex, and length composition of adult salmon.  
3. Determine the number of resident fish passing the weir.  
4. Serve as an outreach platform for Kanuti National Wildlife Refuge (KNWR) staff and TCC Partners Program fisheries biologist to conduct an onsite science camp.  

Methods  
A resistance board weir will be installed and operated on Henshaw Creek each year from 2008–2011. A live trap, installed near mid-channel, will allow salmon and resident species to migrate through the weir, where their passage will be enumerated daily and from where fish will be sampled to collect biological
information. The weir will be operational from approximately the third week of June until the middle of August. A fish trap will be used to collect and sample salmon for age, length, and sex as they migrate upstream as well as document the presence of resident fish. Escapement counts will be forwarded to the USFWS office daily. A camp will be established in association with the weir for the crew. The crew will consist of four people on site for the project duration. There will be high emphasis on local hires, most notably from those villages within the vicinity of the study site (Allakaket, Alatna, Bettles, Hughes, and Huslia). Henshaw Creek will also serve as a platform for a one week science camp with KNWR.

Partnerships/Capacity Building

This project has consulted with the Evansville Tribal Council in Bettles / Evansville to rent vehicles that will provide assistance in pre and post season logistics. There has also been consultation with KNWR to provide, in kind support with over wintering storage facilities for gear and annually being a participant in a science camp hosted at Henshaw Creek weir through a Challenge Cost Share Grant with KNWR. TCC will work with refuge staff, the Western Regional Advisory Council, Allakaket, Alatna, Hughes, and Evansville traditional councils to recruit locals. Local community support will be elicited through members at the annual TCC meeting of delegates. This project has been successful in hiring the required weir staff from the local village of Allakaket and plans to keep hiring locally within the communities of the Koyukuk River Drainage.

Justification

The Henshaw Creek weir is the only upper Koyukuk River drainage escapement project and is valuable in providing data to effectively manage the subsistence Yukon salmon fisheries. It provides an educational opportunity to rural students to learn about fisheries science and careers in natural resource management. The project has reached the highest level of capacity building and is a model for future projects in this arena.
KUSKOKWIM REGION OVERVIEW

Issues and Information Needs

The two Kuskokwim Regional Advisory Councils (Yukon-Kuskokwim Delta and Western Interior), with guidance provided by the Kuskokwim Fisheries Resource Coalition (Kuskokwim Coalition)\(^1\), identified a number of broad categories of issues and information needs for the Kuskokwim Region. These include collection and analysis of traditional ecological knowledge; harvest monitoring; salmon assessment and escapement; non-salmon fish species assessment; and marine/coastal salmon ecology and contaminants. Monitoring Program project selections to date have generally addressed these issues. To ensure that the Monitoring Program addresses the highest priority information needs for Federal subsistence fisheries management, the Office of Subsistence Management funded a strategic planning process in 2004 to build on the work done by the Councils. A strategic salmon plan was completed by the Kuskokwim Coalition for the Kuskokwim Region in 2006; this plan was subsequently used to identify the priority issues for salmon. The 2008 Request for Proposals identified three priorities for the Kuskokwim Region:

- Quantification and assessment of subsistence salmon and non-salmon harvests within the Kuskokwim Drainage (i.e. Bethel Area Post-Season Fishery Household Survey).
- Maintain reliable estimates of Chinook and chum and coho salmon escapement over time (i.e. George and Takotna River weirs).
- Development of a Strategic plan for Coregonids for the Yukon and Kuskokwim River Drainages, focused on information needs for Federal subsistence management.

Proposals and investigation plans submitted to the Monitoring Program for 2008 were reviewed in light of these priorities.

Projects Funded Under the Fisheries Resource Monitoring Program

Since the inception of the Monitoring Program in 2000, 63 projects have been funded in the Kuskokwim Region, and 15 of these will be operating during 2008 (Tables 1 and 2). These projects provide information needed to manage and conserve subsistence fisheries resources, address fisheries issues and priorities identified by the Kuskokwim Regional Advisory Councils, and address regulatory actions. Presently, the Monitoring Program supports over 50% of all fisheries monitoring and research conducted in the Kuskokwim Region.

Projects Forwarded for Investigation Plan Development

Six Kuskokwim Region proposals were submitted to the Office of Subsistence Management. In March 2007, the Technical Review Committee reviewed the proposals and recommended all six for development of investigation plans. Investigators responded to Technical Review Committee proposal review comments in developing their investigation plans, and sometimes worked with Office of

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\(^1\) The Kuskokwim Fisheries Resource Coalition (KFRC), composed of key fisheries staff from the Association of Village Council Presidents (AVCP), Tanana Chiefs Conference (TCC), Orutsararmiut Native Council (ONC), Kuskokwim Native Association (KNA), McGrath Native Village Council (MNVC), Alaska Department of Fish and Game (ADF&G), and the U.S. Fish and Wildlife Service (USFWS) has been instrumental in providing coordination and recommendations for the Kuskokwim Fisheries Resource Monitoring Program. The Office of Subsistence Management, the Technical Review Committee, the Councils, and the Federal Subsistence Board have generally supported the Coalition’s recommendations.
**Draft 2008 Fisheries Resource Monitoring Plan**  
**Kuskokwim Region Overview**

Table 1. Summary of Fisheries Resource Monitoring Program projects completed in the Kuskokwim since 2000. Abbreviations used for investigators are: ADFG=Alaska Department of Fish and Game, AVCP=Association of Village Council Presidents, BSFA=Bering Sea Fisherma'n's Association, KNA=Kuskokwim Native Association, MNVC=McGrath Native Village Council, NPT=Nuniwarmiut Piciryarata Tamaryalkuti, Inc., ONC=Orutsararmiut Native Council, OVK=Organized Village of Kwethluk, TNC=Tuluksak Native Community, USFWS=U.S. Fish and Wildlife Service.

<table>
<thead>
<tr>
<th>Project Number</th>
<th>Project Title</th>
<th>Investigators</th>
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</thead>
<tbody>
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<td>00-007</td>
<td>Tatlawiksuk River Salmon Weir</td>
<td>ADFG, KNA</td>
</tr>
<tr>
<td>00-008</td>
<td>Bethel In-season Salmon Weir</td>
<td>ONC</td>
</tr>
<tr>
<td>00-009</td>
<td>Bethel Post-season Harvest Monitoring</td>
<td>ADFG, ONC</td>
</tr>
<tr>
<td>00-019</td>
<td>Kwethluk River Salmon Weir</td>
<td>USFWS, OVK</td>
</tr>
<tr>
<td>00-029</td>
<td>Documentation/Communication on Floating Weirs</td>
<td>AVCP</td>
</tr>
<tr>
<td>00-030</td>
<td>Kuskokwim Salmon Project Site Surveys</td>
<td>ADFG, USFWS</td>
</tr>
<tr>
<td>01-019</td>
<td>Planning Meetings in AVCP Region</td>
<td>AVCP, KNA</td>
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<tr>
<td>01-023</td>
<td>Upper Kuskokwim River In-season Data</td>
<td>ADFG, MNVC</td>
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<tr>
<td>01-024</td>
<td>Bethel Post-season Fishery Household Surveys</td>
<td>ADFG, ONC</td>
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<tr>
<td>01-053</td>
<td>Tulukasak River Salmon Weir</td>
<td>USFWS, TNC</td>
</tr>
<tr>
<td>01-070</td>
<td>Kuskokwim River Chinook Salmon Genetic Diversity</td>
<td>ADFG, USFWS</td>
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<tr>
<td>01-086</td>
<td>Kuskokwim River Escapement Project Technician</td>
<td>ONC</td>
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<td>01-088</td>
<td>Natural Resource Internship Program</td>
<td>KNA</td>
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<td>01-116</td>
<td>Kuskokwim River Salmon Work Group support</td>
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<td>01-117</td>
<td>Kuskokwim Salmon ASL Assessment</td>
<td>ADFG</td>
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<td>01-132</td>
<td>Bethel In-season Subsistence Salmon Harvest Data</td>
<td>ONC, ADFG</td>
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<td>01-141</td>
<td>Holitna River Chinook, chum &amp; coho telmetry</td>
<td>ADFG</td>
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<td>01-147</td>
<td>Aniak River Sport Fisheries Survey</td>
<td>ADFG, KNA</td>
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<td>01-225</td>
<td>Middle Kuskokwim River In-season Salmon Harvest</td>
<td>KNA, ADFG, USFWS</td>
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<td>01-226</td>
<td>Subsistence Fisheries Research Capacity Building</td>
<td>ADFG</td>
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<td>02-036</td>
<td>Aniak Post-season Subsistence Fishery Surveys</td>
<td>ADFG, KNA</td>
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<td>02-046</td>
<td>Kuskokwim River Chinook Salmon Inriver Abundance</td>
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<td>03-030</td>
<td>Kuskokwim River Salmon Mark-Recapture</td>
<td>ADFG, KNA</td>
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<tr>
<td>03-041</td>
<td>Kuskokwim Coho Salmon Genetics</td>
<td>ADFG, USFWS</td>
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<td>03-931</td>
<td>Kuskokwim Science Plan</td>
<td>BSFA</td>
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<td>04-301</td>
<td>Kwethluk River Salmon Weir</td>
<td>USFWS, OVK</td>
</tr>
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<td>04-302</td>
<td>Tulukasak River Salmon Weir</td>
<td>USFWS, TNC</td>
</tr>
<tr>
<td>04-306</td>
<td>Holitna River Chinook and Chum Salmon Telemetry</td>
<td>ADFG</td>
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<tr>
<td>04-307</td>
<td>Kuskokwim ASL Sampling Program</td>
<td>ADFG</td>
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<td>04-308</td>
<td>Kalskag Salmon Mark-Recapture</td>
<td>ADFG</td>
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<td>04-309</td>
<td>KNA Internship Program</td>
<td>KNA</td>
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<tr>
<td>04-310</td>
<td>Tatlawiksuk River Salmon Weir</td>
<td>ADFG, KNA</td>
</tr>
<tr>
<td>04-311</td>
<td>Kuskokwim Coho Salmon Genetic Mixed Stock Assessment</td>
<td>USFWS</td>
</tr>
<tr>
<td>04-353</td>
<td>Bethel In-season Subsistence Salmon Data Collection</td>
<td>ADFG, ONC</td>
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<tr>
<td>04-359</td>
<td>Kuskokwim Salmon Post-season Subsistence Harvest Surveys</td>
<td>ADFG, KNA, ONC</td>
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<td>05-302</td>
<td>Kuskokwim Chinook Salmon Inriver Abundance</td>
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<td>ADFG</td>
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<td>04-312</td>
<td>Goodnews River Coho Salmon Weir</td>
<td>ADFG</td>
</tr>
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<td>00-028</td>
<td>Kanektok River Salmon Weir</td>
<td>ADFG, USFWS</td>
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<td>01-118</td>
<td>Kanektok River Salmon Weir</td>
<td>ADFG, BSFA</td>
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<td>04-305</td>
<td>Kanektok River Salmon Weir</td>
<td>ADFG, BSFA</td>
</tr>
<tr>
<td>04-351</td>
<td>Kuskokwim Bay TEK and Oral History</td>
<td>USFWS</td>
</tr>
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<td>05-353</td>
<td>Nunivak Island Subsistence Fisheries</td>
<td>NPT</td>
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Resident Species

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<td>01-052</td>
<td>Whitefish Lake Humpback &amp; Broad Whitefish</td>
<td>USFWS, KNA</td>
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<tr>
<td>01-112</td>
<td>Aniak River Subsistence Fisheries Study</td>
<td>ADFG, KNA</td>
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<tr>
<td>01-235</td>
<td>Upper Kuskokwim Community Use Profiles</td>
<td>ADFG</td>
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<td>04-304</td>
<td>Whitefish Lake Whitefish Telemetry</td>
<td>USFWS</td>
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<tr>
<td>05-301</td>
<td>Kuskokwim Whitefish PIT Tags</td>
<td>USFWS</td>
</tr>
</tbody>
</table>


Table 2. Summary of ongoing 2008 projects funded under the Fisheries Resource Monitoring Program in the Kuskokwim by subsistence fishery. Abbreviations used for investigators are: ADFG=Alaska Department of Fish and Game, AVCP=Association of Village Council Presidents, KNA-Kuskokwim Native Association, ONC=Orutsararmiut Native Council, OVK=Organized Village of Kwethluk, TNC=Tuluksak Native Community, USFWS=U.S. Fish and Wildlife Service.

<table>
<thead>
<tr>
<th>Project Number</th>
<th>Project Title</th>
<th>Investigators</th>
<th>Budget ($000)</th>
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<tbody>
<tr>
<td>05-304</td>
<td>George and Takotna River Salmon Weirs</td>
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<td>05-305</td>
<td>Kuskokwim River Chinook Salmon Genetic Stock Identification</td>
<td>ADFG</td>
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<td>05-306</td>
<td>Lower Kuskokwim Salmon Subsistence Harvest ASL Sampling</td>
<td>ADFG, ONC</td>
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<tr>
<td>05-356</td>
<td>Kuskokwim Salmon Post-season Subsistence Harvest Survey</td>
<td>ADFG, ONC, KNA</td>
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<tr>
<td>06-305</td>
<td>Kuskokwim River Inconnu Spawning Distribution</td>
<td>ADFG</td>
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<td>06-306</td>
<td>Lower Kuskokwim River Subsistence Fisheries Catch Monitoring</td>
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<td>06-307</td>
<td>Kuskokwim River Cooperative Salmon Management</td>
<td>ADFG</td>
<td>$33.6</td>
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<td>07-302</td>
<td>Kuskokwim River Chum Salmon Run Reconstruction</td>
<td>BC</td>
<td>$56.9</td>
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<tr>
<td>07-303</td>
<td>Kuskokwim River Salmon Age-Sex-Length Assessment</td>
<td>ADFG</td>
<td>$96.0 $99.5</td>
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<td>07-304</td>
<td>Tatlawiksuk River Salmon Weir</td>
<td>ADFG, KNA</td>
<td>$161.8 $176.1</td>
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<tr>
<td>07-306</td>
<td>Kwethluk River Salmon Weir</td>
<td>USFWS, OVK</td>
<td>$187.9 $190.4</td>
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<tr>
<td>07-307</td>
<td>Tuluksak River Salmon Weir</td>
<td>USFWS, TNC</td>
<td>$159.6 $173.6</td>
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Resident Species

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<tr>
<th>Project Number</th>
<th>Project Title</th>
<th>Investigators</th>
<th>Budget ($000)</th>
</tr>
</thead>
<tbody>
<tr>
<td>06-303</td>
<td>Kuskokwim River Whitefish Migratory Behaviour</td>
<td>USFWS, KNA</td>
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<tr>
<td>06-351</td>
<td>Lower Kuskokwim Non-salmon Harvest and TEK</td>
<td>ADFG, AVCP</td>
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<tr>
<td>07-305</td>
<td>Kanektok-Goodnews River Salmon &amp; Dolly Varden Weirs</td>
<td>ADFG, USFWS</td>
<td>$101.0 $104.6</td>
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</table>

| Total Kuskokwim Monitoring Program | $1,052.1 $744.2 |
Draft 2008 Fisheries Resource Monitoring Plan
Kuskokwim Region Overview

Subsistence Management staff to accomplish this. For Proposal 08-301, the investigators were asked to submit separate investigation plans for the George and Takotna Rivers salmon weirs. Subsequent to its submission, ADF&G withdrew the investigation plan for FIS 08-352 Kuskokwim Salmon Post-Season Subsistence Harvest Survey. Detailed budgets submitted with each investigation plan allowed identification of funds requested by Alaska Native, State, Federal, and other organizations; funds that would be used to hire local residents; and matching funds from investigating agencies and organizations (Tables 3 and 4).

Available Funds

Federal Subsistence Board guidelines direct initial distribution of funds among regions and data types. While regional budget guidelines provide an initial target for planning, they are not rigid allocations. Upon review and evaluation, the Technical Review Committee, Regional Advisory Councils, Interagency Staff Committee and Federal Subsistence Board have the opportunity to address the highest priority projects across regions. For 2008, approximately $515,000 is available for funding new projects in the Kuskokwim Region.

Recommendations for Funding

After reviewing the six investigation plans, the Technical Review Committee recommended funding five of the proposed projects (Table 5) and prioritized them in the following descending order:

<table>
<thead>
<tr>
<th>Proposal</th>
<th>Project Description</th>
<th>Budget</th>
</tr>
</thead>
<tbody>
<tr>
<td>08-303</td>
<td>George River Salmon Weir</td>
<td>$158,982</td>
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<tr>
<td>08-302</td>
<td>Lower Kuskokwim Subsistence Chinook ASL Sampling</td>
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<tr>
<td>08-304</td>
<td>Takotna River Salmon Weir</td>
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<tr>
<td>08-351</td>
<td>Tuluksak Subsistence Chinook Salmon ASL</td>
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<tr>
<td>08-300</td>
<td>Aniak River Rainbow Trout Seasonal Distribution</td>
<td>$52,284</td>
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<tr>
<td>08-350</td>
<td>Lower Kuskokwim Winter Whitefish Harvests</td>
<td>$84,958</td>
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</table>

The project below the line is not recommended for funding. The five projects recommended for funding will provide escapement estimates in the middle and upper Kuskokwim River drainage, characterization of the age, size and length of Chinook salmon harvested in the Lower Kuskokwim subsistence fishery, compare the sex and age composition of Chinook salmon in the Tuluksak River subsistence harvest with the escapement, and document the distribution of rainbow trout stocks in the Aniak River. In addition, a two-year, $295,000, Yukon and Kuskokwim Coregonid Science Plan will be wholly funded out of the Yukon Region. Each of the projects proposed for funding in 2008 are summarized below in priority order.

08-303 George River salmon weir. This project would continue operation of the George River weir. The weir is an established and successful cooperative project operated by the Kuskokwim Native Association (KNA) and ADF&G. Chinook, chum, and coho salmon escapements to the George River weir have been monitored successfully since 1996. The project provides valuable escapement and biological sampling data for salmon stocks in an important sub-basin of the Kuskokwim River, promotes local involvement, and develops the capacity of KNA to monitor fish populations. KNA field technicians would assist in running the project. In addition, the project serves as a training and outreach platform for local high school students, who after training, are given crew assignments to perform through the KNA Natural Resources Internship Program. From 15–20 interns would participate in all aspects of weir operations.

08-302 Lower Kuskokwim subsistence Chinook salmon ASL sampling. This study would provide estimates of the age, sex and length (ASL) composition of the subsistence harvest of Chinook salmon in

<table>
<thead>
<tr>
<th>Project Number</th>
<th>Title</th>
<th>Alaska Native</th>
<th>State</th>
<th>Federal</th>
<th>Other</th>
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<td>Aniak River Rainbow Trout Seasonal Distribution</td>
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<td>08-302</td>
<td>Lower Kuskokwim Chinook Salmon Subsistence ASL</td>
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<td>George River Salmon Weir</td>
<td>$28.6</td>
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<td>08-304</td>
<td>Takotna River Salmon Weir</td>
<td>$5.2</td>
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Stock Status and Trends Projects

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<th>Title</th>
<th>Alaska Native</th>
<th>State</th>
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<tbody>
<tr>
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<td>Lower Kuskokwim Whitefish Winter Harvests</td>
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<td>$39.8</td>
<td>$4.5</td>
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Harvest Monitoring and Traditional Ecological Knowledge Projects

Table 4. Kuskokwim local hire and matching funds for investigation plans submitted to the Fisheries Resource Monitoring Program for funding consideration in 2008. Abbreviations used are: ADFG=Alaska Department of Fish and Game and USFWS=U.S. Fish and Wildlife Service.

<table>
<thead>
<tr>
<th>Project Number</th>
<th>Lead</th>
<th>Title</th>
<th>Funding ($000s)</th>
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</thead>
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<td></td>
<td>Organization</td>
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<td>Local Hire</td>
</tr>
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<td>ADFG</td>
<td>Aniak River Rainbow Trout Seasonal Distribution</td>
<td>$4.4</td>
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<td>ADFG</td>
<td>Lower Kuskokwim Chinook Salmon Subsistence ASL</td>
<td>$14.9</td>
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<td>ADFG</td>
<td>George River Salmon Weir</td>
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<td>ADFG</td>
<td>Takotna River Salmon Weir</td>
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Stock Status and Trends Projects

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Harvest Monitoring and Traditional Ecological Knowledge Projects
Table 5. Funding recommendations by the Technical Review Committee (TRC) for the Kuskokwim 2008 Fisheries Resource Monitoring Program.

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<td>Aniak River Rainbow Trout Seasonal Distribution</td>
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<td>Lower Kuskokwim Chinook Salmon Subsistence ASL</td>
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<td>08-350</td>
<td>Lower Kuskokwim Whitefish Winter Harvests</td>
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<td>Tuluksak Chinook Salmon Subsistence ASL</td>
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the lower Kuskokwim River. Subsistence fishers from Bethel and lower river villages would collect ASL data from their subsistence catches, and information would be applied to the total subsistence Chinook salmon harvest in the lower river. The study is a continuation project that provides data for assessing the majority of the subsistence Chinook salmon harvest occurring in the Kuskokwim River. Collecting this data provides fisheries managers with important data to assess the age and sex composition of the Chinook salmon run, reconstruct the total run, and assess the impact of size selectivity of gill net mesh sizes. The project has been run jointly by ONC and ADF&G. ONC collects ASL samples from subsistence fishermen in the Bethel area, while ADF&G focuses on collections in the remainder of the lower river.

08-304 Takotna River salmon weir. This project would continue operations at the Takotna River weir to enumerate escapements of Chinook, sockeye, chum and coho salmon. Takotna River salmon stocks are harvested by a large lower river subsistence fishery, and pass through a commercial fishing district between the Kuskokwim and the Takotna River mouths. Salmon escapements to Takotna River weir have been monitored successfully since 2000. Information from this project is used by State and Federal managers to evaluate escapement and stock specific run timing of upper river spawning stocks through the fishery. The Takotna River weir has been operated as a partnership between ADF&G and the Takotna Tribal Council (TTC).

08-351 Tuluksak subsistence Chinook salmon ASL. Tuluksak River Chinook salmon escapement typically has a low percentage of females, ranging between 14% and 37% and averaging 26% during 1991–2006. The lowest female percentages recorded correspond with the greatest total subsistence and commercial fishing harvests. This project would allow the USFWS to estimate the age, sex, and length (ASL) composition of the Chinook salmon subsistence harvest in each of three zones near the confluence of the Kuskokwim and Tuluksak rivers. This data would be used to evaluate the effect of subsistence fishing on the ASL composition of the Tuluksak River Chinook salmon escapement. Local hires from the village of Tuluksak would assist with the data collection.

08-300 Aniak River rainbow trout seasonal distribution. Rainbow trout in the Aniak River contribute significantly to the local subsistence harvest of freshwater fish and also supports an increasingly popular sport fishery. There is a strong local concern about an apparent large decline of the rainbow trout population in the Aniak River since the mid 1980s. ADF&G Sport Fisheries Division and KNA would cooperatively conduct the project. The goal of this study is to collect information on the seasonal movements of rainbow trout in the Aniak River to determine if discrete stocks exist within the drainage and which stocks are harvested by the subsistence and sport fisheries. The information obtained from this study would be used to design a mark-recapture experiment to estimate population size to address important management questions.

08-350 Lower Kuskokwim whitefish winter harvests. Communities along the Lower Kuskokwim River are highly dependent upon harvesting whitefish species throughout the year. Little information on harvest amounts, locations, and fishing methods is currently available. Local subsistence fishers have expressed concerns regarding a decrease in the size and numbers of some whitefish species. This pilot study would collect information to describe the winter fishery in the lower river and evaluate methods to estimate total winter harvest. The USFWS working with local communities would identify major areas fished during the winter ice fishery, determine how frequently nets are checked and relocated, and collect data on the species composition and harvest levels in the winter fishery.

The mission of the Monitoring Program is to identify and provide information needed to sustain subsistence fisheries on Federal public lands for rural Alaskans through a multidisciplinary, collaborative
program. It is the responsibility of the Technical Review Committee to develop the strongest possible monitoring plan for each region and across the entire state. The five Kuskokwim Region projects recommended for funding by the Technical Review Committee comprise a strong Monitoring Plan for this region that addresses strategically important informational needs, is scientifically sound, and promotes cooperative partnerships (Table 5). In addition, 15 Monitoring Program projects will be ongoing in the Kuskokwim Region in 2008, and a Yukon-Kuskokwim strategic plan will be developed for whitefish.
**Project Number:** 08-303  
**Project Title:** George River Salmon Weir  
**Geographic Region:** Kuskokwim  
**Data Type:** Stock Status and Trends  
**Principal Investigator:** Doug Molyneaux, ADF&G Commercial Fisheries Division  
**Co-Investigator:** David Orabutt, Kuskokwim Native Association  
Daniel Costello, ADF&G Commercial Fisheries Division

**Cost:**  
2008: $158,982  
2009: $167,394  
2010: $145,864  
2011: $138,163

**Recommendation:** Fund

**Issue**

George River salmon contribute to subsistence, commercial, and recreational fisheries within the Yukon Delta National Wildlife Refuge. Contributing to numerous initiatives that are inclusive of the entire Kuskokwim River drainage, the George River weir is one of several projects used to develop reliable estimates of abundance, run timing, stock structure, productivity, and carrying capacity of salmon stocks over a broad geographic scale in the Kuskokwim Region. The project provides fundamental escapement information necessary to facilitate in-season management decisions and to assess trends in salmon populations. This project incorporates substantial capacity building and outreach components. Natural resource development in nearby drainages is expected to intensify subsistence and recreational use of George River salmon populations, heightening the need for continued monitoring of George River salmon escapements.

Salmon escapements to the George River weir have been monitored successfully since 1996. Information from this project has become integrated into the annual management process, both by providing insights into escapement and stock specific run timing through the fishery. The escapement age, sex, and length information collected at George River provides part of the context needed to assess the impacts of subsistence harvest practices.

**Objectives**

1. Determine daily and annual escapements of Chinook, chum, sockeye, and coho salmon to the George River from 15 June to 20 September.

2. Estimate the age-sex-length (ASL) composition of total Chinook, chum, and coho salmon escapements to the George River from a minimum of three pulse samples, one collected from each third of the run, such that the simultaneous 95% confidence intervals of age composition in each pulse are no wider than 0.20 \((a = 0.05 \text{ and } d = 0.10)\).

3. Serve as platforms to facilitate other fisheries research projects (e.g., tagging studies).

**Methods**

Investigators will install a resistance board weir on the lower George River. Passage chutes in the weir will allow fish to be specieated and counted as the pass upstream, and a live trap will be used to sample salmon for scales, sex and length information, and for tag recovery. ASL data is processed post-season.
under the *Kuskokwim Salmon ASL Assessment Project* (FIS 07-303). Investigators will also record daily water temperature, water level, and weather conditions. A local technician hired by KNA will operate the project along with a lead crew member provided by ADF&G. The project will serve as a platform for several research initiatives proposed to AYK-SSI beginning in 2008, and for continuation of a high school internship program funding which is being sought though separate sources.

**Partnerships/Capacity Building**

ADF&G and KNA operate the George River weir jointly. Planning, operation and data analysis associated with the weir is done jointly by staff from KNA and ADF&G. KNA has a proven track record of effective involvement in weir operation. Past interactions between KNA, ADF&G/CF, and local communities has created a high level of public awareness about salmon management and stock status, and has fostered career interests in fisheries through the student internship program.

**Justification**

Although the cost of this project has increased significantly for the reasons provided by the investigators, the TRC recommends continued funding of this project. The George River weir provides important information to in-season subsistence fishery managers and continuation of the weir is important for monitoring escapement of Chinook, chum and coho salmon in the middle Kuskokwim River. Data from this project is used in-season to assess escapements and postseason for run reconstruction studies currently being developed for Chinook, chum and sockeye salmon stocks in the Kuskokwim River. Salmon produced in the George River provide a clear nexus to large subsistence salmon fisheries in the Yukon Delta NWR. The project is technically sound and the investigators have an excellent record for completing the proposed work and delivering quality work products in a timely manner. A high level of capacity building has been developed between ADF&G and KNA as co-investigators of this project. Public outreach, opportunities for high school and college internships, and a strong sense of community involvement and identification with this project have been accomplished and should continue.
**Project Number:** 08-302  
**Project Title:** Lower Kuskokwim Subsistence Chinook Salmon ASL  
**Geographic Region:** Kuskokwim  
**Data Type:** Stock Status and Trends  
**Principal Investigator:** Doug Molyneaux, ADF&G Commercial Fisheries Division  
**Co-Investigator:** Greg Roczicka, Orutsaramiut Native Council

**Cost:**  
2008: $90,923  
2009: $112,305  
2010: $113,772  
2011: $121,920

**Recommendation:** Fund

**Issue**

About 80% of the Kuskokwim River Chinook subsistence harvest is taken from the lower river, which is within the boundaries of the Yukon Delta National Wildlife Refuge. The 2008 Request for Proposals seeks projects that quantify and assess subsistence salmon harvest in the region, and there is special need to also quantify the annual age, sex, and length (ASL) composition of the subsistence harvest. In addition, managers must consider the ASL composition of the spawning escapement and commercial harvest when formulating fishery management strategies. Chinook salmon mature and return to spawn over a wide range of ages, and the array of age classes span a size range much broader than any other salmon species. Kuskokwim River subsistence fishers harvest a large fraction of the total annual Chinook salmon run, and these fishers commonly employ practices that selectively take the larger and older fish. One of the consequences of this selective harvest practice is that it leaves a higher proportion of smaller Chinook salmon to spawn each year. Managers are concerned about hereditary implications of this practice that could lower the average age and size of maturity of future generations of Chinook salmon returns. In addition, there is concern that selective harvest practices removes a disproportionate fraction of female Chinook and that this removal could result in critically low egg deposition, especially in years of low escapement. Not withstanding these concerns, subsistence fishers clearly prefer to harvest large Chinook.

Also at issue is how the subsistence fishery is impacted by the commercial fishery. The Alaska Board of Fisheries (BOF) reestablished a directed commercial fishery for Chinook in the lower Kuskokwim River during their January 2007 meeting, and gave managers the option to allow use of gillnets with up to 8-inch stretched mesh sizes (large mesh), a practice that has not been allowed since 1984. The default option is to restrict commercial fishers to using 6-inch or smaller mesh size (small mesh). The selectivity of small mesh web in the commercial fishery actually has a strong mitigating effect to the large mesh web preferred by subsistence fishers.

The potential of a commercial fishery with large mesh web has raised concerns among Federal subsistence users that the commercial fishery would directly compete with subsistence fishers for the same segment of the Chinook salmon run—large fish, and would progressively reduce the availability of larger Chinook salmon to upstream subsistence users. A large mesh commercial fishery would also compound the impacts of selective harvest practices described above for the subsistence fishery.

**Objectives**

1. Describe the annual ASL composition of Chinook salmon in the lower Kuskokwim River subsistence harvest.
2. Characterize the annual ASL composition of Chinook salmon in the lower Kuskokwim River subsistence harvest by gear type (i.e., gillnets with mesh of 6 inches or smaller, gillnets with mesh between 6 and 8 inches, gillnets with mesh of 8 inches or larger, and rod and reel).

3. Characterize and compare the annual ASL composition of Chinook salmon in the lower Kuskokwim River subsistence harvest by temporal strata (i.e., fish harvested for the early, middle and late portions of the run).

Methods

This study estimates the ASL composition of the subsistence harvest of Chinook salmon in the lower Kuskokwim River by recruiting subsistence fishers from Bethel and lower river villages to collect ASL data from their subsistence catches, and then applying the findings to the total subsistence Chinook harvest in the lower river. This study is a continuation of FIS 05-306. Lower Kuskokwim River is defined as the portion of the river from Eek Island at the mouth of the Kuskokwim River upstream to Tuluksak (rkm 192).

Partnerships/Capacity Building

ADF&G/CF and ONC will conduct this project in partnership. ADF&G/CF is responsible for data collection from communities outside the Bethel area, for data processing, and reporting. ONC is responsible for data collection from Bethel and fish camps within a few miles of Bethel. ONC has applied for an OSM Partners Biologist position under the 2008 Request for Proposals, and if funded, the ONC Partners Biologist will be involved with data processing and reporting.

Justification

This investigation plan is seeking continuation funding for the collection and analysis of biological age-sex-length (ASL) samples from subsistence caught Chinook salmon harvested in the lower Kuskwim River. Technical questions regarding sampling procedures have been addressed by the investigators. The investigators have demonstrated the ability of conducting this work in a timely and professional manner. Collection of biological samples from the Chinook salmon subsistence harvest have been identified as a high priority by the Kuskokwim Fisheries Resource Coalition (KFRC) and Kuskokwim Salmon Strategic Plan. Collection of samples from subsistence fisheries requires the support and cooperation of subsistence users; consideration of local social and cultural values must be respected when undertaking scientific sampling of subsistence foods. For this reason, ONC, the traditional tribal council for the Bethel area, plays a major role in social/cultural aspects of this project and the successful implementation and community support of this project.
Project Number: 08-304  
Project Title: Takotna River Salmon Weir  
Geographic Region: Kuskokwim  
Data Type: Stock Status and Trends  
Principal Investigator: Doug Molyneaux, ADF&G Commercial Fisheries Division  
Co-Investigator: Carole Absher, Takotna Tribal Council  
Daniel Costello, ADF&G Commercial Fisheries Division

Cost:  
2008: $82,967  
2009: $79,923  
2010: $92,867  
2011: $118,410

Recommendation: Fund

Issue

Takotna River salmon contribute to subsistence, commercial, and recreational fisheries within the Yukon Delta National Wildlife Refuge, and the Takotna River weir contributes to numerous initiatives that are inclusive of the entire Kuskokwim River drainage. As the only ground-based escapement monitoring project in the upper Kuskokwim River drainage, the Takotna River weir is one of several projects used to develop reliable estimates of abundance, run timing, stock structure, productivity, and carrying capacity of salmon stocks over a broad geographic scale in the Kuskokwim Region. The project provides fundamental escapement information necessary to facilitate in-season management decisions and to assess trends in salmon populations. This project is essential as a platform for several other projects and for developing escapement goals.

Salmon escapements to Takotna River weir have been monitored successfully since 2000. Information from this project has become integrated into the annual management process, by providing escapement and stock specific run timing data.

Objectives

1. Determine daily and annual escapements of Chinook, chum, sockeye, and coho salmon to the Takotna River upstream of the village of Takotna from 24 June to 20 September.

2. Estimate the age-sex-length (ASL) composition of total Chinook, chum, and coho salmon escapements to the Takotna River from a minimum of three pulse samples, one collected from each third of the run, such that the simultaneous 95% confidence intervals of age composition in each pulse are no wider than 0.20 ($\alpha = 0.05$ and $d = 0.10$).

3. Serve as platforms to facilitate other fisheries research projects (e.g., tagging studies).

4. Mentor high school students through the TTC high school internship program.

Methods

Investigators will install a resistance board weir on the Takotna River. Passage chutes in the weir will allow fish to be specieated and counted as the pass upstream, and a live trap will be used to sample salmon for scales, sex and length information, and for tag recovery for proposed tagging projects. Investigators will also record daily water temperature, water level, and weather conditions. A local technician hired by TTC will operate the project along with a lead crew member provided by ADF&G.
The project will also serve as a platform for an established high school mentorship program operated by TTC in which local students will assist in weir operations as part-time employees.

**Partnerships/Capacity Building**

Takotna River weir will be operated as a partnership between ADF&G/CF and TTC. ADF&G/CF will provide crew members and biologist support, and TTC will provide crew members and high school interns. TTC will assume primary responsibility for logistic support during the field season, and ADF&G/CF will assume primary responsibility for technical support and post-season data analysis and reporting. Focus areas of both partners differs, but each has equal standing. Decisions as to planning, operations, and data interpretation are derived through joint consultation. Past interactions between TTC, ADF&G/CF, and local communities has created a high level of public awareness about salmon management and stock status, and has fostered career interests in fisheries through the student internship program.

**Justification**

The Takotna River weir provides important information to in-season subsistence fishery managers and continuation of the weirs is important for monitoring escapement of Chinook, chum and coho salmon in the upper Kuskokwim River. The project is also used as a capture site for several mark/recapture studies currently ongoing in the Kuskokwim drainage. The project is technically sound and the investigators have demonstrated the capability to conduct the proposed work in a timely and professional manner. The capacity building elements of this project have been given recognition by educators and community leaders.
Project Number: 08-351
Project Title: Tuluksak Subsistence Chinook Salmon ASL
Geographic Region: Kuskokwim
Data Type: Harvest Monitoring and Traditional Ecological Knowledge
Principal Investigator: Ken Harper, USFWS Kenai Fish and Wildlife Field Office
Co-Investigator: Steve Miller, USFWS Kenai Fish and Wildlife Field Office

Recommendation: Fund

Issue

The Tuluksak River Chinook salmon escapement typically has a low percentage of females, ranging between 14% and 37% and averaged 26% between 1991 and 2006. The lowest female percentages correspond with the highest total harvests of subsistence and commercial fisheries, that occurred in the early 1990s. Direct causal effects from the high utilization years have not been established. In 2006, female Chinook salmon comprised 28% of the escapement in the Tuluksak River, although this number was derived from one of the lowest Chinook salmon escapements documented in the history of the Tuluksak River weir. Heavier than normal harvest pressure on the Tuluksak River natal stock may have occurred. High fuel costs exceeding $5.00 per gallon may have shifted fishing pressure from an active drift gillnet fishery in the main Kuskokwim River to a passive set-net fishery along channels in the Kuskokwim River leading to and channels within the Tuluksak River. An intensive in-river fishery targeting a specific river’s salmon population may negatively affect size, age and sex composition.

Adequate escapements to individual tributaries and main stem spawning areas are required to maintain genetic diversity and sustainable harvests. Stocks or species returning in low numbers, or early and late portions of runs may be incidentally over harvested by intensive fishing pressure on abundant stocks. Data on escapement is lacking for many individual stocks in the Kuskokwim River drainage. It is important to monitor the fish returning to the Tuluksak River for in-season management and to build a database to establish escapement goals. Information on the abundance, run timing and subsistence use of Chinook salmon in the Tuluksak River is needed to ensure its conservation.

Objectives

1. Estimate the age, sex, and length composition of the Chinook salmon subsistence harvest in each of three zones near the confluence of the Kuskokwim and Tuluksak rivers such that simultaneous 95% confidence intervals of 0.20.

2. Test the hypothesis that the age, sex, and length composition of the Chinook salmon harvested in the subsistence fishery does not differ among three zones near the confluence of the Kuskokwim and Tuluksak rivers.

3. Test the hypothesis that the age, sex, and length composition of Chinook salmon harvested in the subsistence fishery near the confluence of the Kuskokwim and Tuluksak rivers does not differ from that of the escapement that passes the Tuluksak River weir, with a probability of at least 0.65 to detect a difference of at least 0.10 between any two sex at age proportions.
Methods

Local residents will be hired through the Tuluksak village council to conduct sampling during the season. The subsistence fishing area around the confluence of the Tuluksak and Kuskokwim rivers will be divided into three zones constructed to capture potential differences in fishing gear and location. The statistical criteria can be satisfied with a sample size of approximately 225 fish from each zone to account for incomplete age and sex information based on 10 sex at age categories (two sexes and ages 1.1, 1.2, 1.3, 1.4, and 1.5). Harvests occur throughout the period from late May to mid-July, though the majority of the harvest will likely be taken in early to mid-June. An attempt will be made to collect ASL data from each Chinook salmon in a catch being sampled to avoid potential bias caused by the selection of individual fish.

Chinook salmon sampled from the Tuluksak River escapement will be pooled into a single sample that will be treated as a simple random sample. A chi-square test of homogeneity will be used to test the hypothesis that the sex at age composition of the resultant harvest and weir samples do not differ. ANOVA will be used to test the hypothesis that mean length does not vary between the harvest and weir, by sex at age category.

Partnerships/Capacity Building

Capacity building will continue, as the USFWS mentors and trains 2 village technicians and high school students. We have developed a formal agreement that has been signed by both parties committing the Service to train village personnel. This will provide an educational basis for employees and the village government to further their understanding of the management of lower Kuskokwim River commercial and subsistence fisheries.

Justification

While not identified as a priority in the Request for Proposals, the issue that would be addressed by this project, a low proportion of females in the Tuluksak River Chinook salmon spawning escapement, is of great concern to fishery managers. This project would provide information that would indicate whether Chinook salmon subsistence fisheries near the Tuluksak River are harvesting a disproportionately high proportion of females. While the investigators successfully addressed the technical issues identified in the TRC proposal review, the following items in the investigation plan need to be addressed and modifications made where needed: 1) participating families should be using gillnet gear representative of that used by most other families in each zone; 2) the field season should be shortened to about 1.5 months to reduce project costs while still obtaining needed information; 3) to further reduce costs, consideration should be given to hiring only one weir technician, if the investigators are successful in hiring a local individual to coordinate and monitor sampling; and 4) consultations need to be held with Tuluksak Native Community to obtain their cooperation and input on the proposed project.
Project Number: 08-300  
Project Title: Aniak River Rainbow Trout Seasonal Distribution  
Geographic Region: Kuskokwim  
Data Type: Stock Status and Trends  
Principal Investigator: Klaus Wuttig, ADF&G Sport Fish Division  
Co-Investigator: Corey Schwanke, ADF&G Sport Fish Division  
                      Dave Orabutt, Kuskokwim Native Association  
                      Derek Radar, Kuskokwim Native Association  


Recommendation: Fund  

Issue  
The rainbow trout *Oncorhynchus mykiss* population in the Aniak River contributes significantly to the local subsistence harvest of freshwater fish and also supports an increasingly popular rainbow trout sport fishery. Customary and traditional use determinations of rainbow trout are in Federal regulation for the nearby communities of Aniak, Chuathbaluk, and Upper and Lower Kalskag. Currently, there is a strong local concern about an apparent large decline in the population of rainbow trout in the Aniak River since the mid 1980s. Historic and baseline information on their life history, abundance, and stock composition does not exist and is needed to formulate and implement regulations to properly manage the rainbow trout for the purpose of satisfying a diversity of user groups while ensuring long-term sustainability. Therefore, the goal of this study is to collect information on the seasonal movements of rainbow trout in the Aniak River to determine if discrete stocks exist within the drainage. In the absence of abundance-based information, quantifying rainbow trout movements will help to identify the distribution(s) of those fish affected by the subsistence and sport fisheries. The telemetric data, survey or catch information attained during radio-tagging operations, and interviews are needed in designing a mark-recapture experiment to estimate population size to address relevant issues such as population closure, timing of sampling, and selection of index areas.

Objectives  
1. Describe the seasonal (summer 2008 to winter 2009/2010) distributions of mature sized rainbow trout ≥420 mm FL in the Aniak River implanted with radio transmitters during the summer feeding period when rainbow trout distributions are most widespread.

2. For each of the four hydrologic units (Salmon River, Kipchuk River, the East Fork Aniak River to the Kipchuk River, and mainstem Aniak River from the Kipchuk River to the Buckstock River) estimate the proportion of radio-tagged rainbow trout that remained in the hydrologic unit where they were tagged. These estimates will be made for each aerial tracking survey and each estimated proportion will be within 25 percentage points of the true value 95% of the time.

Methods  
During the summer of 2008, 125 rainbow trout will be radio-tagged during the peak spawning period of Chinook and chum salmon (late July–early August). Radio tags will be systematically deployed throughout what is believed to most (e.g., >90%) of their summer distribution. These fish will be monitored over an approximately 18-month period and will be used to describe seasonal movement...
patterns, locate significant spawning and overwintering areas, and identify potentially unique stocks within the drainage that may be differentially affected by the subsistence and sport fisheries.

**Partnerships/Capacity Building**

KNA and ADF&G, Sport Fish Division, have developed a meaningful relationship through the Chinook salmon telemetry projects on the Kuskokwim and Holitna Rivers (FIS 02-046 and 05-302). This developing relationship is vital to develop local support for this project, particularly in the interpretation of the data collected for formulating future regulations or management plans. KNA is very supportive of this project, are co-investigators on this project, and will have direct, meaningful participation in field work, project planning, report reviewing, and community outreach. KNA has agreed to provide an intern and technician for the field work, and in communities most affected, to coordinate local outreach efforts including traditional council or community meetings, regional meetings, school visits, and news letters/articles. Consultations with the Yukon Delta National Wildlife refuge are ongoing and the refuge has agreed to provide in-kind support (e.g., use of aircraft for aerial surveys).

**Justification**

This is a well designed study that potentially could address a long term resource issue. The investigators are qualified and experienced in conducting this type of project. The technical merit, investigator ability and partnership and capacity building component of this investigation were all rated high. The investigators addressed study design concerns raised by the TRC in the 2006 IP review. Local concern over stock declines observed by subsistence fishermen raises the potential for regulatory action for the Federal Subsistence Board. Information on basic stock biology of Aniak River rainbow trout will be necessary to evaluate the sustainability of current subsistence harvest levels and the potential harvests from the catch and release sport fishery. Matching funds of over $95,000 by ADF&G make this project very compelling.
Communities along the Lower Kuskokwim River, including those located off of the mainstem Kuskokwim on the Johnson River, Kialik River and the Eek River, are highly dependent upon freshwater fish. Whitefish species are harvested year-round in the lower Kuskokwim River. Total effort and harvest are unknown, though during a recent reconnaissance trip between Bethel and Akiak, over 110 set nets were counted. Comparatively little information on harvest amounts, locations, and methods of fishing for non-salmon species, including broad and humpback whitefish, least cisco, Bering cisco, and sheefish, is available. Local subsistence fishers have expressed concerns regarding a decrease in the size and numbers of some whitefish species. Experimental whitefish commercial fisheries were conducted on the Yukon River in 2005 and 2006. With marketing success of the Yukon River fishery, pressure to expand the existing commercial whitefish fishery to the Kuskokwim River may develop in the future, despite the lack of information on harvest levels and exploitation rates in the existing subsistence fisheries.

Proper management of intensively used fishery resources requires knowledge of the species being harvested, the number of populations subject to exploitation, population abundance, exploitation rates, and productivity. Life history data are currently being collected through radio tagging and other biological studies. This pilot study will collect information required to characterize the winter fishery in the lower river and evaluate strategies to estimate winter harvest. The proposed study would identify areas fished during the winter ice fishery, determine how frequently nets are checked and relocated, and collect preliminary data on the species composition and harvest levels in the winter fishery.

Objectives

1. Identify the geographic locations of set nets used during the winter fishing period on the lower Kuskokwim River from Aniak to Eek.
2. Sample winter harvests to collect data on species composition, maturity, length and condition of fish harvested, and methods which include net mesh and length, and residency of fishers using the nets in the study area.
3. Characterize the spatial and temporal dynamics of the fishery, e.g. the number of nets per location, the frequency with which nets are checked, and net relocation in the study area.
4. Determine the feasibility of estimating winter harvest.

Methods

Refuge aircraft and snow machines will be used to identify fishing areas. Refuge information technicians (RITs) that are residents from villages along the lower Kuskokwim River and staff will receive training.
Draft 2008 Fisheries Resource Monitoring Plan
Kuskokwim Region Executive Summaries

needed to conduct the surveys. On each survey, from Bethel to Akiak or Bethel to Eek, locations of individual nets will be stored as a waypoint in a portable GPS unit. Waypoints will be cross-referenced to subsequent surveys and determine movement of major fishing effort.

During weekly surveys, harvests will be sampled to collect data on species composition, numbers and methods (including net mesh and length), condition of fish harvested, and age, sex and length data (ASL) length of time between net checks and home village. With each visit, net density and site movements will be recorded. Fishers will also be asked when they fish, whether or not they fish the same general area or move their nets during the winter. This information will be used to characterize the spatial and temporal dynamics of the winter fishery. Fishers will also be asked their opinions on the feasibility of recording catches on calendars, similar to the system used to estimate salmon harvests. At the end of the pilot survey, investigators will determine the feasibility of estimating the winter harvest by employing a creel or exit survey or a program similar to the salmon catch calendars.

Partnerships/Capacity Building

This project will continue the partnership development between the Service and the locally hired refuge information technicians and subsistence users on the Kuskokwim River. In addition information from this project will be provided to the regional advisory councils and village councils.

Justification

While the issue identified is an important one that probably merits further study, there is only a limited amount of funding available for the Monitoring Program in 2008 and sufficient funding is not available to fund this proposed study. For a future submission, the investigators would need to make the following modifications: 1) better define some of the objectives, 2) provide more details on sampling design and methods, 3) clearly define each investigator’s duties and responsibilities, and 4) consult with communities in the study area to obtain their cooperation and input on the proposed project.
SOUTHWEST ALASKA OVERVIEW

Issues and Information Needs

The two Southwest Regional Advisory Councils, the Bristol Bay and Kodiak-Aleutians Councils, identified important issues and information needs for their regions, with annual reviews and updates. To ensure that the Monitoring Program addresses the highest priority information needs for Federal subsistence fisheries management, two strategic plans were developed for the Southwest Region: the Bristol Bay-Chignik strategic plan was completed in October 2005 and the Kodiak-Aleutians strategic plan was completed in October 2006. Strategic plans are reviewed and updated each succeeding year to ensure that the highest priority information needs are identified for each Request for Proposals. The 2008 Request for Proposals for the Southwest Region focused on prioritized lists from the two strategic plans:

Bristol Bay Salmon

- Obtain reliable estimates of spawning escapement, abundance of total run, and smolt and adult production over time for Lake Clark sockeye salmon.
- Obtain reliable estimates of spawning escapement over time, identify critical factors, and describe timing and migration patterns for Togiak River Chinook salmon. [The Monitoring Program will only provide up to 50% of the total cost for a Togiak River escapement estimation project.]

Bristol Bay-Chignik Non-Salmon

- Document trends in whitefish harvest and use from Lake Clark communities.

Kodiak-Aleutians Salmon

- Estimate escapement and abundance of total run for coho salmon in Kodiak river systems.

Projects Funded Under the Fisheries Resource Monitoring Program

Since the inception of the Monitoring Program in 2000, 40 projects have been funded in the Southwest Region, and seven will be operating during 2008 (Tables 1 and 2). One ongoing project addresses Chignik salmon, three address Bristol Bay-Chignik freshwater species, and three address salmon assessment in the Kodiak-Aleutians region.

Projects Forwarded for Investigation Plan Development

Ten proposals for research in the Southwest Region were submitted to the Office of Subsistence Management for funding consideration in 2008. In March 2007, the Technical Review Committee reviewed these proposals and recommended five projects for development of investigation plans, including four stock status and trends projects and one harvest monitoring and traditional ecological knowledge project. Investigators responded to the Technical Review Committee proposal review comments in developing their investigation plans. Detailed budgets submitted with each investigation plan allowed identification of funds requested by Alaska Native, State, Federal, and other organizations; funds that would be used to hire local residents; and matching funds from investigating agencies and organizations (Tables 3 and 4).
Table 1. Summary of Fisheries Resource Monitoring Program projects completed in Southwest Alaska since 2000. Abbreviations used for investigators are: ADFG=Alaska Department of Fish and Game, APIA= Aleutian-Pribilof Islands Association, BBNA=Bristol Bay Native Association, ISU= Idaho State University, KANA=Kodiak Area Native Association, NTC= Nondalton Tribal Council, NPS=National Park Service, USFWS=U.S. Fish and Wildlife Service, USGS=U.S. Geological Survey, UW=University of Washington.

<table>
<thead>
<tr>
<th>Project Number</th>
<th>Project Title</th>
<th>Investigators</th>
</tr>
</thead>
<tbody>
<tr>
<td><strong>Bristol Bay Salmon</strong></td>
<td></td>
<td></td>
</tr>
<tr>
<td>00-010</td>
<td>Togiak River Salmon Weir</td>
<td>USFWS</td>
</tr>
<tr>
<td>00-031</td>
<td>Alagnak River Sockeye Salmon Escapement</td>
<td>ADFG, NPS, BBNA</td>
</tr>
<tr>
<td>00-033</td>
<td>Alagnak River Angler Effort Index</td>
<td>ADFG</td>
</tr>
<tr>
<td>00-042</td>
<td>Lake Clark Sockeye Salmon Assessment</td>
<td>USGS</td>
</tr>
<tr>
<td>01-047</td>
<td>Togiak River Subsistence Harvest Monitoring</td>
<td>BBNA, ADFG, USFWS</td>
</tr>
<tr>
<td>01-075</td>
<td>Nondalton Sockeye Salmon TKE of Harvest Patterns</td>
<td>NPS, NTC</td>
</tr>
<tr>
<td>01-095</td>
<td>Lake Clark Sockeye Salmon Escapement</td>
<td>USGS, UW</td>
</tr>
<tr>
<td>01-173</td>
<td>Alagnak River Harvest Assessment of Recreational Fishery</td>
<td>ADFG</td>
</tr>
<tr>
<td>01-204</td>
<td>Ugashik Lakes Coho Salmon Escapement Estimation</td>
<td>USFWS, ADFG, BBNA</td>
</tr>
<tr>
<td>03-046</td>
<td>Fisheries Biotechnician Training Program</td>
<td>NPS</td>
</tr>
<tr>
<td>04-411</td>
<td>Lake Clark Sockeye Salmon Run Timing</td>
<td>ADFG</td>
</tr>
<tr>
<td>04-454</td>
<td>Bristol Bay Sharing, Bartering, and Trade of Subsistence Resources</td>
<td>ADFG, BBNA</td>
</tr>
<tr>
<td>05-402</td>
<td>Lake Clark Sockeye Salmon Escapement</td>
<td>NPS, USGS</td>
</tr>
<tr>
<td><strong>Chignik Salmon</strong></td>
<td></td>
<td></td>
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<tr>
<td>02-098</td>
<td>Kametalook River Coho Salmon Escapement &amp; Carrying Capacity</td>
<td>USFWS, BBNA</td>
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<tr>
<td>02-099</td>
<td>Clark River Estimation of Sockeyee and Coho Salmon Escapement</td>
<td>USFWS, BBNA</td>
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<td>03-043</td>
<td>Perryville Coho Salmon Escapement</td>
<td>USFWS</td>
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<tr>
<td>05-405</td>
<td>Perryville-Chignik Coho and Sockeye Salmon Aerial Surveys</td>
<td>USFWS</td>
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<tr>
<td><strong>Bristol Bay-Chignik Freshwater Species</strong></td>
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<tr>
<td>00-011</td>
<td>Togiak River Dolly Varden Genetic Baseline Development</td>
<td>USFWS</td>
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<tr>
<td>00-012</td>
<td>Bristol Bay Traditional Knowledge of Fish</td>
<td>ADFG</td>
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<tr>
<td>02-034</td>
<td>Kvichak River Resident Species Subsistence Fisheries Assessment</td>
<td>ADFG, BBNA</td>
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<tr>
<td>04-401</td>
<td>Ungalikthlik and Negukthlik Rivers Rainbow Trout Assessment</td>
<td>USFWS</td>
</tr>
<tr>
<td>04-415</td>
<td>Tazimina Rainbow Trout Assessment</td>
<td>ADFG</td>
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<tr>
<td><strong>Kodiak-Aleutians</strong></td>
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<tr>
<td>00-032</td>
<td>Buskin River Sockeye Salmon Assessment</td>
<td>ADFG</td>
</tr>
<tr>
<td>01-059</td>
<td>McLees Lake Sockeye Salmon Escapement</td>
<td>USFWS</td>
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<tr>
<td>01-206</td>
<td>Mortenson Creek Sockeye and Coho Salmon Escapement</td>
<td>USFWS</td>
</tr>
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<td>02-032</td>
<td>Lower AK Peninsula/Aleutians Subsistence Fish Harvest Assessment</td>
<td>ADFG, APIA, ISU</td>
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<td>03-047</td>
<td>Afognak Lake Sockeye Salmon - Smolt Enumeration Feasibility</td>
<td>ADFG</td>
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<tr>
<td>04-402</td>
<td>Mortenson Creek Sockeye and Coho Salmon Escapement</td>
<td>USFWS</td>
</tr>
<tr>
<td>04-403</td>
<td>McLees Lake Sockeye Salmon Escapement</td>
<td>USFWS</td>
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<tr>
<td>04-412</td>
<td>Afognak Lake Sockeye Salmon Stock Assessment</td>
<td>ADFG</td>
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<tr>
<td>04-414</td>
<td>Buskin River Stock Sockeye Salmon Assessment</td>
<td>ADFG</td>
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<tr>
<td>04-457</td>
<td>Kodiak Subsistence Fisheries Harvest Assessment and TEK</td>
<td>ADFG, KANA</td>
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<tr>
<td><strong>Alaska Peninsula</strong></td>
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<tr>
<td>01-109</td>
<td>Alaska Peninsula Traditions, Knowledge and Customs</td>
<td>ADFG, BBNA</td>
</tr>
</tbody>
</table>

\(^a\) Final Report in preparation.
Table 2. Summary of ongoing 2008 projects funded under the Fisheries Resource Monitoring Program in Southwest Alaska. Abbreviations used for investigators are: ADFG=Alaska Department of Fish and Game, BBNA=Bristol Bay Native Association, NPS=National Park Service, USFWS=U.S. Fish and Wildlife Service, and QT=Qawalangin Tribe.

<table>
<thead>
<tr>
<th>Project Number</th>
<th>Project Title</th>
<th>Investigators</th>
<th>2008 Budget ($000)</th>
<th>2009 Budget ($000)</th>
</tr>
</thead>
<tbody>
<tr>
<td>07-404</td>
<td>Perryville-Clark River Coho and Sockeye Salmon Aerial Surveys</td>
<td>USFWS</td>
<td>$31.0</td>
<td>$31.0</td>
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<tr>
<td>07-403</td>
<td>Lake Clark Whitefish Assessment</td>
<td>ADFG, BBNA</td>
<td></td>
<td></td>
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<tr>
<td>07-408</td>
<td>Togiak River Rainbow Smelt Assessment</td>
<td>USFWS, BBNA</td>
<td>$78.4</td>
<td>$31.8</td>
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<tr>
<td>07-452</td>
<td>Kvichak Watershed Subsistence Fishing Ethnography</td>
<td>ADFG, BBNA, NPS</td>
<td>$110.2</td>
<td>$41.5</td>
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</table>

**Chignik Salmon**

07-404 Perryville-Clark River Coho and Sockeye Salmon Aerial Surveys
USFWS $31.0 $31.0

**Bristol Bay-Chignik Freshwater Species**

07-403 Lake Clark Whitefish Assessment
ADFG, BBNA

07-408 Togiak River Rainbow Smelt Assessment
USFWS, BBNA

07-452 Kvichak Watershed Subsistence Fishing Ethnography
ADFG, BBNA, NPS

**Kodiak-Aleutians**

07-401 Afognak Lake Sockeye Salmon Smolt Assessment
ADFG

07-402 Buskin River Sockeye Salmon Weir
ADFG

07-405 McLees Lake Sockeye Salmon Weir
ADFG, QT

Total Southwest Alaska Monitoring Program

$450.3 $342.5

Table 3. Southwest Alaska project costs, by organization (Alaska Native, State, Federal, other), for investigation plans submitted to the Fisheries Resource Monitoring Program for funding consideration in 2008.

<table>
<thead>
<tr>
<th>Project Number</th>
<th>Project Title</th>
<th>Alaska Native</th>
<th>State</th>
<th>Federal</th>
<th>Other</th>
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<tbody>
<tr>
<td>08-401</td>
<td>Big Creek Coho Salmon Weir, Kodiak</td>
<td>$103.7</td>
<td>$35.3</td>
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<td>08-402</td>
<td>Togiak River Chinook Salmon Radio Telemetry</td>
<td>$26.1</td>
<td>$150.0</td>
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<tr>
<td>08-405</td>
<td>Lake Clark Sockeye Salmon Counting Towers</td>
<td>$15.4</td>
<td>$38.4</td>
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<tr>
<td>08-406</td>
<td>Buskin River Coho Salmon Weir</td>
<td>$52.0</td>
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</tbody>
</table>

**Stock Status and Trends Projects**

**Harvest Monitoring and Traditional Ecological Knowledge Projects**

08-451 Lake Clark Whitefish TEK

$10.6
Table 4. Southwest Alaska local hire and matching funds for investigation plans submitted to the Fisheries Resource Monitoring Program for funding consideration in 2008. Abbreviations used are: ADFG=Alaska Department of Fish and Game, NPS=National Park Service, and USFWS=U.S. Fish and Wildlife Service.

<table>
<thead>
<tr>
<th>Project Number</th>
<th>Organization</th>
<th>Title</th>
<th>Local Hire ($000s)</th>
<th>Matching ($000s)</th>
</tr>
</thead>
<tbody>
<tr>
<td>08-401</td>
<td>USFWS</td>
<td>Big Creek Coho Salmon Weir, Kodiak</td>
<td>$35.8</td>
<td>$49.6</td>
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<tr>
<td>08-402</td>
<td>USFWS</td>
<td>Togiak River Chinook Salmon Radio Telemetry</td>
<td>$111.9</td>
<td></td>
</tr>
<tr>
<td>08-405</td>
<td>NPS</td>
<td>Lake Clark Sockeye Salmon Counting Towers</td>
<td>$10.6</td>
<td>$45.4</td>
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<tr>
<td>08-406</td>
<td>ADFG</td>
<td>Buskin River Coho Salmon Weir</td>
<td>$21.6</td>
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</table>

Harvest Monitoring and Traditional Ecological Knowledge Projects

<table>
<thead>
<tr>
<th>Project Number</th>
<th>Organization</th>
<th>Title</th>
<th>Matching ($000s)</th>
</tr>
</thead>
<tbody>
<tr>
<td>08-451</td>
<td>NPS</td>
<td>Lake Clark Whitefish TEK</td>
<td>$9.7</td>
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</table>

Table 5. Funding recommendations by the Technical Review Committee (TRC) for Southwest Alaska, 2008 Fisheries Resource Monitoring Program.

<table>
<thead>
<tr>
<th>Project Number</th>
<th>Title</th>
<th>TRC</th>
<th>2008</th>
<th>2009</th>
<th>2010</th>
<th>2011</th>
</tr>
</thead>
<tbody>
<tr>
<td>08-401</td>
<td>Big Creek Coho Salmon Weir, Kodiak</td>
<td>Yes</td>
<td>$138.9</td>
<td>$92.2</td>
<td>$0.0</td>
<td>$0.0</td>
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<tr>
<td>08-402</td>
<td>Togiak River Chinook Salmon Radio Telemetry</td>
<td>Yes</td>
<td>$176.4</td>
<td>$120.7</td>
<td>$0.0</td>
<td>$0.0</td>
</tr>
<tr>
<td>08-405</td>
<td>Lake Clark Sockeye Salmon Counting Towers</td>
<td>Yes</td>
<td>$56.1</td>
<td>$57.0</td>
<td>$58.3</td>
<td>$59.6</td>
</tr>
<tr>
<td>08-406</td>
<td>Buskin River Coho Salmon Weir</td>
<td>No</td>
<td>$52.0</td>
<td>$46.2</td>
<td>$0.0</td>
<td>$0.0</td>
</tr>
</tbody>
</table>

Harvest Monitoring and Traditional Ecological Knowledge Projects

<table>
<thead>
<tr>
<th>Project Number</th>
<th>Title</th>
<th>TRC</th>
<th>2008</th>
<th>2009</th>
<th>2010</th>
<th>2011</th>
</tr>
</thead>
<tbody>
<tr>
<td>08-451</td>
<td>Lake Clark Whitefish TEK</td>
<td>No</td>
<td>$10.6</td>
<td>$8.9</td>
<td>$0.0</td>
<td>$0.0</td>
</tr>
</tbody>
</table>

Total $434.0 $325.0 $58.3 $59.6
Funding Guideline $240.0
TRC Recommendation $371.4 $269.9 $58.3 $59.6
Available Funds

Federal Subsistence Board guidelines direct initial distribution of funds among regions and data types. While regional budget guidelines provide an initial target for planning, they are not rigid allocations. Upon review and evaluation, the Technical Review Committee, Regional Advisory Councils, Interagency Staff Committee and Federal Subsistence Board have the opportunity to address the highest priority projects across regions. For 2008, approximately $240,000 is available for funding new projects in the Southwest Alaska Region.

Recommendations for Funding

After reviewing the five investigation plans, the Technical Review Committee recommended three projects (Table 5) and ranked them in the following descending order:

<table>
<thead>
<tr>
<th>Project Code</th>
<th>Project Description</th>
<th>Budget Request</th>
</tr>
</thead>
<tbody>
<tr>
<td>08-405</td>
<td>Lake Clark Sockeye Salmon Counting Towers</td>
<td>$56,052</td>
</tr>
<tr>
<td>08-402</td>
<td>Togiak River Chinook Salmon Radio Telemetry</td>
<td>$176,376</td>
</tr>
<tr>
<td>08-401</td>
<td>Big Creek Coho Salmon Weir, Kodiak</td>
<td>$138,972</td>
</tr>
<tr>
<td>08-406</td>
<td>Buskin River Coho Salmon Weir</td>
<td>$52,000</td>
</tr>
<tr>
<td>08-451</td>
<td>Lake Clark Whitefish TEK</td>
<td>$10,564</td>
</tr>
</tbody>
</table>

Projects below the line are not recommended for funding at this time. Each project proposed for funding in the Southwest Alaska region in 2008 is summarized below in priority order (see Executive Summaries for more details).

08-405  **Lake Clark sockeye salmon counting towers.** This project would continue to estimate sockeye salmon escapement into Lake Clark based on visual counts from a tower on the Newhalen River. Sockeye salmon passing the tower site would also be sampled to obtain age, size, and sex data. This information has been used by State and Federal fishery managers for making and evaluating in-season decisions, and would be added to the existing database to assess production and spawning goals. Sockeye salmon is the most important subsistence fishery resource for rural residents of this area, and although escapements during 2004–2006 have improved, they are still much less than escapements during the 1980s. Sockeye salmon returning to spawn in Lake Clark are harvested in Federal subsistence fisheries as well as in State managed subsistence, commercial and sport fisheries.

08-402  **Togiak River Chinook salmon radio telemetry.** This project would provide mark-recapture estimates of Chinook salmon abundance in the Togiak River watershed. Chinook salmon would be captured and marked with radio transmitters in the lower 5 km in the mainstem of the Togiak River. The recapture event would consist of a fixed receiver station co-located with a video equipped weir on Gechiak Creek. Chinook salmon are an important subsistence resource for most residents of the communities within and adjacent to the Togiak National Wildlife Refuge. Most subsistence harvest of Chinook salmon occurs within the lower two to three miles of the Togiak River within the Refuge. The investigators have included a substantial match of $112,000 for project operations.

08-401  **Big Creek coho salmon weir, Kodiak.** This project would monitor coho salmon escapement into the Big Creek system through operation of a weir with an associated underwater video camera system. Coho salmon escapement information is not currently available for Big Creek, so management agencies have been unable to determine spawning goals or describe stock productivity. Big Creek provides the second largest harvest of Federal subsistence coho salmon in the Kodiak Area. The recent five year average harvest (2001–2005) was 1,620 coho salmon. The project includes a strong capacity building component with Old Harbor Tribal Council.
08-406  **Buskin River coho salmon weir.** This project would support operation of a weir to enumerate coho salmon on the Buskin River. The Buskin River coho salmon run provides a significant harvest opportunity to Federal subsistence as well as State sport fishers in the Kodiak area. Coho salmon subsistence harvests from the Buskin River fishery averaged more than 40% of the Kodiak annual reported subsistence coho salmon harvest from 2001 to 2005, and 60% of subsistence permits issued to Kodiak Federal subsistence fishers were used to harvest Buskin River coho salmon. The State has operated a weir to count Buskin River coho salmon since 1985, and this project is currently funded through 2007 using a combination of Federal Aid and ADF&G funds. Federal Aid funds may be redirected from this project after 2007, and ADF&G is requesting that the Monitoring Program cover operating costs and provide funding for weir improvements.

08-451  **Lake Clark whitefish TEK.** This two-year study would provide information on whitefish biology, conservation practices, and harvest locations through interviews with knowledgeable Dena’ina elders and active fishers in Lime Village and Nondalton. Whitefish are an important subsistence fish resource, and local concerns about declines in this resource prompted development of this project. The project would complement project 05-403, *Lake Clark Whitefish biology* (the co-investigator is principal investigator on that project). Investigators propose to provide training in collecting traditional ecological knowledge to three village youths in each community. Students would be trained to conduct interviews in compliance with local school district cultural awareness standards.

The mission of the Monitoring Program is to identify and provide information needed to sustain subsistence fisheries on Federal public lands for rural Alaskans through a multidisciplinary, collaborative program. It is the responsibility of the Technical Review Committee to develop the strongest possible monitoring plan for each region and across the entire state. The Technical Review Committee recommends funding three of the five projects under consideration in the Southwest Alaska Region. The three projects recommended for funding by the Technical Review Committee comprise a strong Monitoring Plan for the region by addressing strategically important information needs based on sound science and by promoting cooperative partnerships.
Project Number: 08-405
Project Title: Lake Clark Sockeye Salmon Escapement and Population Monitoring
Geographic Region: Southwest Alaska
Data Type: Stock Status and Trends
Principal Investigator: Dan Young, National Park Service
Co-Investigator: Carol Ann Woody, US: Science and Education
Robbin LaVine, Bristol Bay Native Association


Recommendation: Fund

Issue

This project continues monitoring sockeye salmon escapement to the Lake Clark drainage in southwest Alaska. Escapement monitoring on the Newhalen River has been funded by OSM since 2000 to provide a reliable estimate of escapement to Lake Clark. Obtaining reliable estimates of spawning escapement over time is the number one priority identified in the Bristol Bay-Chignik Strategic Plan and was specifically identified in the 2008 request for proposals. This project will provide information on daily and annual Lake Clark escapement estimates, run timing, and salmon age, sex and length composition, which will aid in assessing whether escapement is adequate to meet subsistence needs and evaluating current stock status and trends. The Lake Clark drainage is located within the Federally managed Lake Clark National Park and Preserve.

Since 1996, sockeye salmon returns to the Kvichak River and Lake Clark watersheds have declined for unknown reasons. The Kvichak River escapement has been below the minimum escapement goal in five of the last seven years and the average escapement of sockeye salmon to Lake Clark during 2000–2006 has been about 68% lower than the documented escapements in 1980–1984. Concurrent with declines in escapement, subsistence harvest in the Kvichak River drainage has declined from an average of about 60,000 fish harvested annually to 38,000 fish harvested in 2004.

Objectives

1. Estimate sockeye salmon escapement to Lake Clark.
2. Determine age, sex and length composition of the Lake Clark escapement

Methods

Sockeye salmon will be counted and sampled as they ascend the Newhalen River. Standard ADF&G counting tower protocols will be used to enumerate fish. Age, sex and length data will be collected from sockeye salmon in collaboration with the subsistence communities of Newhalen/Iliamna and Nondalton. Locally hired technicians will assist with escapement monitoring and sampling the age composition of the subsistence catch.
Partnerships/Capacity Building

This project has an established history of partnerships and capacity building. The USGS and NPS have successfully administered FIS 01-095 *Population monitoring of sockeye salmon from Lake Clark and the Tazimina River*, FIS 00-042 *Population assessment of Lake Clark sockeye salmon*, and FIS 05-402 *Lake Clark sockeye salmon escapement and population monitoring* in collaboration with the Kijik Corporation, Nondalton Tribal Council and Villagers, Iliamna/Newhalen Villagers, and the Universities of Alaska and Montana. Local youth have been trained as biotechnicians and future project leaders through an intern program initiated in 2000.

A partnership with Bristol Bay Native Association has been added to this project to formalize partnering between NPS and local Native organizations and to assist with hiring local residents.

Justification

Lake Clark sockeye salmon escapement monitoring has been identified as a high priority information need in the strategic plan for this area as well as by the Regional Advisory Council. This project will continue monitoring efforts previously funded through Monitoring Program since 2000. There continues to be strong community support for continuing this project, and past efforts by investigators have been highly successful in hiring, training, and mentoring local high school and college students. The investigators have included a substantial match of $45,420, providing an 81% match to requested funds. Finally, the investigators and their agencies are well qualified to conduct and administer this work.
Chinook salmon *Oncorhynchus tshawytscha* are important for subsistence, sport, and commercial harvest in the Togiak River. The Alaska Department of Fish and Game (ADF&G) has established an escapement goal in the watershed of 10,000 Chinook salmon based on aerial surveys. Average estimated Chinook salmon spawning escapement from 1995 to 2004 was 13,134 fish, with an average harvest of 10,282 fish, representing a 44% exploitation rate. In 2005 9,500 Chinook salmon were harvested with escapement estimated at 10,188, representing a 48% exploitation rate (Westing et al. 2006). The Office of Subsistence Management, through its strategic planning process, has identified the need to obtain reliable escapement estimates for Chinook salmon in the Togiak River (OSM 2005). The Bristol Bay Regional Advisory Council has also identified the need for improved monitoring of salmon escapement in the Togiak River (OSM 2003). The USFWS will use mark-recapture methods to estimate the total abundance of Chinook salmon and to investigate the effectiveness of aerial surveys to monitor Chinook salmon escapement in the Togiak River watershed.

**Objectives**

1. Estimate the proportion of Chinook salmon migrating past a weir on Gechiak Creek;
2. Estimate the abundance of Chinook salmon escaping into the Togiak River watershed such that the estimate will have a 90% probability of being within 25% of the true abundance;
3. Estimate the weekly age and sex composition of spawning Chinook salmon in Gechiak Creek, such that simultaneous 90% confidence intervals have a maximum width of 0.20;
4. Estimate the mean length of Chinook salmon by sex and age;
5. Document Chinook salmon spawning locations in the Togiak River watershed; and
6. Evaluate the effectiveness of aerial spawning ground surveys for monitoring Chinook salmon abundance in the Togiak River watershed.

**Methods**

The USFWS will conduct a mark-recapture experiment to estimate the abundance of Chinook salmon in the Togiak River watershed. Fish will be captured and marked with radio transmitters in the lower 5 km in the mainstem of the Togiak River. The marking location is upriver from the majority of the harvest, so estimates of abundance will be related to the escapement. Capture effort will be controlled to deploy tags...
in proportion to abundance. Chinook salmon will also be tagged with colored spaghetti tags to test the feasibility of identifying the presence of spaghetti tagged fish at the Gechiak Creek weir using underwater video. These tags will serve as a secondary mark to determine loss of radio tags. The recapture event will consist of a fixed receiver station co-located with a video equipped weir on Gechiak Creek. Additional receiver stations will be placed at strategic locations within the watershed. Multiple searches from a fixed-wing aircraft will be conducted to locate marked fish in other areas of the Togiak River watershed, verify accuracy of fixed telemetry stations, and to document Chinook salmon spawning activity and locations.

**Partnerships/Capacity Building**

The USFWS Anchorage Fish and Wildlife Field Office will be responsible for the day-to-day operations at the project sites and will provide biological expertise and training to conduct the study, a crew leader, a technician, and two volunteers. BBNA will work with the Village of Togiak to provide one local hire to work with the weir crew and one local hire to work with the gillnetting and tagging crew. Togiak NWR will conduct aerial surveys and provide logistical support.

**Justification**

Obtaining reliable estimates of spawning escapement over time, identifying critical factors, and describing timing and migration patterns for Togiak River Chinook salmon is a high priority information need identified in the 2008 Request for Proposals. Togiak River Chinook salmon provide an important fishery for subsistence, sport and commercial harvesters. Improved information on Chinook salmon spawning escapement will provide for better management and will help evaluate the effectiveness of aerial surveys. The investigators have been responsive to the TRC comments in developing the investigation plan and have included a substantial match of $112,000 in 2008 and $96,000 in 2009, providing greater than a 50% match as requested in the RFP.
Project Number: 08-401  
Project Title: Big Creek Coho Salmon Weir, Kodiak  
Geographic Region: Southwest Alaska  
Data Type: Stock Status and Trends  
Principal Investigator: Jeffry Anderson, USFWS Anchorage Fish and Wildlife Field Office  
Co-Investigator: Kevin VanHatten, USFWS Kodiak National Wildlife Refuge  
Al Cratty, Old Harbor Tribal Council  
Glenn Chen, Bureau of Indian Affairs  

Cost: 2008: $138,972  
2009: $92,216  
2010: $0  
2011: $0  

Recommendation: Fund  

Issue  
The Big Creek watershed, located adjacent to the village of Old Harbor, has long supported a substantial coho salmon _Oncorhynchus kisutch_ subsistence fishery for the residents of this community. Big Creek is a major producer of coho salmon; observations by local residents suggest that adult returns are in the tens of thousands (C. Christianson, personal communication 2006). In recent years, sport fishing pressure on this stock has also increased due to the expanded activities from nearby lodges. Old Harbor residents have begun to express concerns about the potential for conflicts between subsistence and sport users in Big Creek. However, a population assessment for coho salmon on this system has not been conducted. Without information on abundance, managers are unable to develop escapement goals and other management strategies that would enable them to better address these issues. This project addresses subsistence fisheries monitoring issues that have been identified under the Stock Status and Trends portion of the Kodiak/Aleutians Region Information and Needs Assessment, as well as the ongoing Strategic Planning efforts being conducted by the Office of Subsistence Management, Fisheries Information Service, (OSM/FIS) during 2005–2007. It also addresses a priority fisheries monitoring issue that has been continuously identified by the Kodiak/Aleutians Subsistence Regional Advisory Council during their fall and winter meetings (2002–present).

Objectives  
1. Enumerate the daily passage of coho salmon past a weir on Big Creek.  
2. Describe the run-timing of coho salmon through the Big Creek weir.  
3. Estimate sex and age composition of coho salmon such that simultaneous 90% confidence intervals have maximum width of 0.20.  
4. Estimate the mean length of coho salmon by sex and age.  
5. Provide an opportunity for capacity building, by training Old Harbor Villagers (over the duration of the study) to assume responsibility for full operation of the proposed project.  

Methods  
The USFWS and Old Harbor Village Council will operate a resistance board floating weir coupled with an underwater video monitoring station to enumerate the daily passage and seasonal escapement of coho.
salmon in Big Creek. The weir will be operated from approximately 30 August to 15 November during each year of the project. Coho salmon age, sex, and length data will also be collected. Data will be used to make possible in-season management decisions for the Old Harbor subsistence fishery, and to determine if the coho salmon population in Big Creek can maintain current harvest levels by all user groups.

Partnerships/Capacity Building

This project has a high potential for capacity building. Our goal is that the field crew (including crew leader) will ultimately consist of people hired from the community of Old Harbor. AFWFO, KNWR, and BIA staff will provide all necessary training, and will do everything necessary to provide Tribal council members and/or villagers with the opportunity to have local ownership of the project. This project will be used as a learning platform for the AFWFO, KNWR, and BIA Subsistence Branch staff to teach biologists and technicians from Old Harbor in methods for sampling salmon from Big Creek. The AFWFO, KNWR, and BIA propose to provide oversight to Old Harbor Tribal Council staff, which will be responsible for day-to-day operations at the weir and video monitoring station on Big Creek and the video review station in Old Harbor.

Justification

The Big Creek coho salmon run is the second largest subsistence coho salmon harvest in the Kodiak Area and the primary source of subsistence salmon harvested by residents of Old Harbor. Much of the fishing occurs within the Kodiak National Wildlife Refuge. To date, no population assessment of this run has been conducted. Old Harbor residents are concerned about effects of increased sport fishing activities on the health of the run. This project would address a high priority information need for this region, is technically sound, and has a strong capacity building component. The investigators are well qualified to conduct and administer this work. The budget is reasonable and contains $50,000 in matching funds. The project would provide important information on abundance and run timing that could be used by Federal and State fishery managers to regulate harvests and maintain the health of this run. If this project is funded, the Technical Review Committee will assess the need for long-term monitoring after two years of project results.
Project Number: 08-406  
Project Title: Buskin River Coho Salmon Weir  
Geographic Region: Southwest Alaska  
Data Type: Stock Status and Trends  
Principal Investigator: Donn Tracy, ADF&G Sport Fish Division  

Cost:  
2008: $52,000  
2009: $46,200  
2010: $0  
2011: $0  

Recommendation: Do not fund  

Issue  
Investigators will annually enumerate coho salmon escapement in the Buskin River drainage for in-season management of subsistence, sport and commercial fisheries. Annual weir counts are needed to ensure the escapement goal is achieved and harvest opportunities for subsistence users are sustained. Total return estimates and age data will be used for continued development of brood tables and comprehensive analysis of stock productivity.  

Objectives  
This project is being proposed as a two-year (2008–2009) study. Overall objectives during the study period are as follows:  
1. Census the coho salmon escapement into the Buskin River from August 1 to October 1.  
2. Estimate the age composition of coho salmon in the Buskin River escapement.  
3. Estimate the age composition of coho salmon in the Buskin River subsistence and sport harvests.  
4. Construct a brood table to evaluate the coho salmon escapement goal.  
5. Provide education and career development opportunity for local residents.  

Methods  
In-river escapement of coho salmon will be censused annually through a weir at the lower Buskin River between August 1 and October 1 and through a weir at the Lake Louise tributary stream through September 15. Fishery management actions taken in season affecting sport, commercial and subsistence fisheries will be based on comparison of cumulative weir counts to historic time of entry. Additionally, coho salmon will be sampled at the weirs and/or from the sport harvest as well as from the subsistence harvest for age, sex and length (ASL). Analyses of the return and age data collected since 1989 have allowed development of a brood table with estimates of total return having a relative precision of about 10%. Continued collection of adult salmon return and age data at this level of sampling will allow for expansion of the brood table and, subsequently, re-evaluation of the current BEG.  

Partnerships/Capacity Building  
During the first year of the project, ADF&G will establish a formalized cooperative agreement with the Kodiak Island Borough School District to annually utilize the weir project as a student learning platform for compliance with State of Alaska Elementary Grade Level Expectation Standards. Through
regularly scheduled field trips to the weir site and/or classroom lectures participating students will gain fundamental knowledge of fisheries biology and general principles of the aquatic sciences. Effectiveness of this education curriculum program component will be measured by standardized testing and reporting from the school district to the State Board of Education. Additionally, ADF&G and the Kodiak National Wildlife Refuge office of the U.S. Fish and Wildlife Service (USFWS) will maintain a cooperative agreement to utilize the Buskin River during August as an educational tool for the service's Summer Science and Salmon Camp program, which provides a science-based forum for local youths to learn the importance of salmon for subsistence and other uses. ADF&G is committed to employing local residents whenever possible to provide personnel for the proposed coho salmon project.

Justification

Kodiak area coho salmon escapement monitoring has been identified as a priority in the 2008 Monitoring Program Request for Proposals, and assessing and monitoring coho salmon runs has been identified as a strategically important information need in both the strategic plan for this area and by the Regional Advisory Council. The Buskin River supports the largest subsistence salmon fishery in the Kodiak area, and all fishing occurs within the Alaska Maritime National Wildlife Refuge. This project serves as the only source of information on the abundance, as well as the age, sex, and length composition of the coho salmon escapement into Buskin River. Given limited funding for the 2008 Monitoring Program, there is insufficient funding for consideration of even all of the highest priority information needs identified in the Request for Proposals. Several other projects addressing high priority information needs in this region are also competing for Monitoring Program funds.
Project Number: 08-451
Project Title: Lake Clark Whitefish TEK
Geographic Region: Southwest Alaska
Data Type: Harvest Monitoring and Traditional Ecological Knowledge
Principal Investigator: Michelle Ravenmoon, National Park Service
Co-Investigator: Dan Young, National Park Service


Recommendation: Do not fund

Issue

This project addresses the following monitoring issues identified by the Federal Subsistence Regional Advisory Councils in the Southwest region:

1. Long-term trends in whitefish populations and potential causes for abundance variations.
2. Seasonal patterns of movement and life history of whitefish.
3. Traditional conservation measures and management approaches.

Objectives


Methods

We will review existing literature for information on traditional ecological knowledge of whitefish in the Lake Clark region. The primary data collection method will be through interviews with knowledgeable individuals in the study communities. In two selected communities (Nondalton and Lime Village), we will interview a total of 16 people about their knowledge of whitefish, including life history, ecology, seasonal patterns of movement, Dena’ina taxonomies, long-term trends in abundance harvest and use, and traditional conservation practices. Up to 3 students from each community will be recruited and trained in conducting interviews and collecting data. The students work will be in compliance with local school districts standards. Interview topics will include whitefish life history, ecology, seasonal patterns of movement, taxonomy, trends in abundance, and traditional conservation practices. Interviews will be recorded when possible and when agreed to by the respondent. Maps will be utilized during interviews to record locations of spawning areas, key whitefish harvesting areas, and other relevant information. Respondents will be paid for their time. In addition, we will map key habitat and subsistence fishing areas for whitefish in the vicinity of study communities. To the extent possible, researchers will travel by boat or by ATV with key respondents to observe and map key whitefish habitat and fishing areas. Mapped information will be compiled into a Geographical Information System database.
Partnerships/Capacity Building

This project has received support from the Lake and Peninsula School District, Nondalton School, and Nondalton Tribal Council. In addition, this project is supported by the Lime Village Traditional Council. Lake Clark National Park will partner with Nondalton and Lime Village tribal councils for administrative support.

Justification

Most of the technical issues raised in the review of the proposal have been addressed, but the data analysis methods are vague and not well articulated. Of particular concern is how the data are to be compiled and analyzed, as that determines how useful the information will be for management purposes. The project addresses an information need identified as high priority in the 2008 Request for Proposals, and focuses on an important subsistence resource in an area under Federal jurisdiction. The request is modest, and includes a good matching component. Investigators are encouraged to address the data analysis component in more detail, and re-submit at a future time.
SOUTHCENTRAL ALASKA OVERVIEW

Issues and Information Needs

To ensure that the Monitoring Program addresses the highest priority information needs for Federal subsistence fisheries management, a strategic plan for the Southcentral Region was completed in 2005. Information for Copper River salmon was identified as the highest priority, particularly estimation of Chinook and sockeye salmon in-river abundance and the collection of subsistence harvest data by location, gear type and species. Due to the potential for new subsistence fisheries on the Kenai Peninsula and the resultant need for information on fisheries resources, the 2008 Request for Proposals for the Southcentral Region was limited to salmon stocks in the Copper River and fishery resources on the Kenai Peninsula, as described below:

Copper River Salmon

- Determine validity and reliability of permit estimates of subsistence harvests from the Copper River. Of particular interest is a 1 to 2 year pilot study that focuses on harvest reporting from no more than two communities.
- Mainstem assessment of sockeye salmon including further validation of sonar estimates of abundance and distribution and timing of spawning stocks.

Cook Inlet

- Assessment of late run Chinook salmon and coho salmon in the upper Kasilof River and Tustumena Lake to make recommendations for sustained yield. Will consider projects that provide estimates of abundance, spawning distribution, migratory timing and patterns, and age-sex-length structure.
- Assessment of resident species including Dolly Varden, lake trout, and rainbow trout; in the upper Kasilof River and Tustumena Lake to make recommendations for sustained yield. Will consider projects that provide estimates of spawning abundance, spawning distribution, migratory timing and patterns, population structure, age-sex-length composition, and natural and fishing mortality.
- Assessment of coho salmon during their adult residence in the mainstem Kenai River four miles below Skilak Lake to the upper confluence of the Killey River, Skilak Lake and Kenai Lake to make recommendations for sustained yield. Will consider projects that provide estimates of abundance, spawning distribution, migratory timing and patterns, age-sex-length composition, and natural and fishing mortality.
- Assessment of resident species including Dolly Varden, lake trout, and rainbow trout; during their adult residence in the mainstem Kenai River four miles below Skilak Lake to the upper confluence of the Killey River, Skilak Lake, Kenai Lake, Hidden Lake, and Crescent Lake to make recommendations for sustained yield. Will consider projects that provide estimates of spawning abundance, spawning distribution, migratory timing and patterns, population structure, age-sex-length composition, and natural and fishing mortality.

Projects Funded Under the Fisheries Resource Monitoring Program

Since the inception of the Monitoring Program in 2000, 36 projects have been funded in the Southcentral Alaska Region, and eight of these projects are ongoing during 2008 (Tables 1 and 2). Four ongoing projects are directed at Copper River salmon assessment and enumeration. The remaining four ongoing
Table 1. Summary of completed projects under the Fisheries Resource Monitoring Program in Southcentral Alaska since 2000. Abbreviations for investigators are: ADFG=Alaska Department of Fish and Game, CNTC=Cheesh'na Tribal Council, CRNA=Copper River Native Association, CRRC=Chugach Regional Resources Commission, CRWP=Copper River Watershed Project, FS=USDA Forest Service, Karie=Dr. Karie, LGL=LGL Ltd, NPS=National Park Service, NVE=Native Village of Eyak, and USFWS=U.S. Fish and Wildlife Service.

<table>
<thead>
<tr>
<th>Project Number</th>
<th>Project Title</th>
<th>Investigators</th>
</tr>
</thead>
<tbody>
<tr>
<td>00-013</td>
<td>Tanada Creek Salmon Escapement</td>
<td>NPS</td>
</tr>
<tr>
<td>00-034</td>
<td>Miles Lake Sonar Improvement</td>
<td>FS, ADFG</td>
</tr>
<tr>
<td>00-040</td>
<td>Copper River Salmon Subsistence Fishery Evaluation</td>
<td>ADFG, CRNA</td>
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<tr>
<td>01-020</td>
<td>Copper R Chinook Salmon Feasibility of Abundance Estimate</td>
<td>NVE, LGL</td>
</tr>
<tr>
<td>01-021</td>
<td>Lower Copper River In-season Abundance Estimate</td>
<td>NVE, LGL, ADFG</td>
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<tr>
<td>01-217</td>
<td>Copper River Groups Capacity Building Workshop</td>
<td>CRNA, LGL</td>
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<tr>
<td>02-015</td>
<td>Copper River Chinook Salmon Radio Telemetry</td>
<td>ADFG, NVE</td>
</tr>
<tr>
<td>03-010</td>
<td>Upper Copper River C&amp;T Subsistence Fish Harvests GIS Atlas</td>
<td>CRNA, LGL</td>
</tr>
<tr>
<td>04-501</td>
<td>Long Lake Sockeye Salmon Escapement</td>
<td>NPS, CRWP</td>
</tr>
<tr>
<td>04-502</td>
<td>Tanada Creek Salmon Escapement</td>
<td>NPS</td>
</tr>
<tr>
<td>04-503</td>
<td>Copper River Chinook Salmon Abundance Estimate</td>
<td>NVE, LGL</td>
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<tr>
<td>04-506</td>
<td>Lower Copper River In-season Abundance Estimate</td>
<td>NVE, LGL, ADFG</td>
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<td>04-507</td>
<td>Copper River Chinook Salmon Genetics</td>
<td>ADFG, NVE, NPS</td>
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<td>04-553</td>
<td>Copper R Salmon Runs Traditional Knowledge of Long Term Changes</td>
<td>ADFG, NVE</td>
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<tr>
<td>06-502</td>
<td>Copper River Sockeye Salmon Inriver Abundance</td>
<td>NVE, ADFG</td>
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<td>01-148</td>
<td>Copper River Steelhead Stock Status</td>
<td>ADFG, CRNA, USFWS</td>
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<tr>
<td>01-035</td>
<td>Copper River Steelhead Harvest Monitoring</td>
<td>NPS, CRNA</td>
</tr>
<tr>
<td>03-001</td>
<td>Copper River Steelhead Population Biology</td>
<td>ADFG</td>
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<td>01-110</td>
<td>Copper River Non-Salmon Species Harvest and Use</td>
<td>CRNA, ADFG, CHVC, CNTC, Karie, MTC</td>
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<tr>
<td>02-077</td>
<td>Copper River Increasing GIS Capabilities</td>
<td>CRNA</td>
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<tr>
<td>02-075</td>
<td>Eulachon Subsistence Harvest Opportunities</td>
<td>NVE, FS, ADFG</td>
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<td>00-035</td>
<td>Coghill Coho Salmon Weir</td>
<td>ADFG, FS</td>
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<td>02-028</td>
<td>Chugach Region TEK Mapping</td>
<td>CRRC</td>
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<tr>
<td>03-033</td>
<td>Billy's Hole, PWS Salmon Stock Assessment</td>
<td>ADFG, CRRC, FS</td>
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<td>00-038</td>
<td>Cooper Creek Dolly Varden Assessment</td>
<td>ADFG</td>
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<tr>
<td>00-041</td>
<td>Turnagain Arm Eulachon Subsistence Use &amp; Assessment</td>
<td>FS</td>
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<td>03-045</td>
<td>Cook Inlet Subsistence Fisheries Harvest Assessment</td>
<td>ADFG</td>
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<tr>
<td>07-506</td>
<td>Tustumena Lake Coho Salmon Spawning Assessment</td>
<td>USFWS</td>
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</tbody>
</table>

projects address Copper River steelhead and burbot, and Kenai Peninsula coho salmon and steelhead trout.

**Projects Forwarded for Investigation Plan Development**

Six proposals for research in the Southcentral Region were submitted to the Office of Subsistence Management for funding consideration in 2008. In March 2007, the Technical Review Committee reviewed these proposals and recommended all but one for development of investigation plans. Investigators used comments from the Technical Review Committee review of proposals to develop investigation plans. Detailed budgets submitted with each investigation plan allowed identification of funds requested by Alaska Native, State, Federal, and other organizations; funds that would be used to hire local residents; and matching funds from investigators (Tables 3 and 4).

**Available Funds**

Federal Subsistence Board guidelines direct initial distribution of funds among regions and data types. While regional budget guidelines provide an initial target for planning, they are not rigid allocations. Upon review and evaluation, the Technical Review Committee, Regional Advisory Councils, Interagency Staff Committee and Federal Subsistence Board have the opportunity to address the highest priority projects across regions. For 2008, approximately $471,000 is available for funding new projects in the Southcentral Alaska Region.

<table>
<thead>
<tr>
<th>Project Number</th>
<th>Title</th>
<th>Alaska Native</th>
<th>State</th>
<th>Federal</th>
<th>Other</th>
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<td>08-501</td>
<td>Copper River Sockeye Salmon In-River Abundance</td>
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<tr>
<td>08-502</td>
<td>Tustumena Lake Coho Salmon Radio Telemetry &amp; Weirs</td>
<td>$238.3</td>
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<tr>
<td>08-503</td>
<td>Kasilof River Steelhead Trout Radio Telemetry</td>
<td>$78.9</td>
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<td></td>
<td></td>
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<tr>
<td>08-504</td>
<td>Crooked &amp; Nikolai Creeks Steelhead Trout Weirs &amp; Video</td>
<td>$40.0</td>
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<td></td>
</tr>
</tbody>
</table>

Table 4. Southcentral Alaska local hire and matching funds for investigation plans submitted to the Fisheries Resource Monitoring Program for funding consideration in 2008. Abbreviations used are: ADFG=Alaska Department of Fish and Game, NVE=Native Village of Eyak, and USFWS=U.S. Fish and Wildlife Service.

<table>
<thead>
<tr>
<th>Project Number</th>
<th>Lead Organization</th>
<th>Funding ($000s)</th>
<th>Local Hire</th>
<th>Matching</th>
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<tr>
<td>08-501</td>
<td>NVE</td>
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<td>08-502</td>
<td>USFWS</td>
<td>$52.5</td>
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<td>08-503</td>
<td>USFWS</td>
<td>$17.4</td>
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<td>08-504</td>
<td>USFWS</td>
<td>$40.0</td>
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<tr>
<td>08-550</td>
<td>ADFG</td>
<td>Copper River Salmon Subsistence Harvest Permit Validation</td>
<td>$107.3</td>
<td>$12.5</td>
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<tr>
<td>Project Number</td>
<td>Title</td>
<td>TRC</td>
<td>2008</td>
<td>2009</td>
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<tr>
<td>08-501</td>
<td>Copper River Sockeye Salmon In-River Abundance</td>
<td>Yes</td>
<td>$205.4</td>
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<td>08-502</td>
<td>Tustumena Lake Coho Salmon Radio Telemetry &amp; Weirs</td>
<td>Yes</td>
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<td>08-503</td>
<td>Kasilof River Steelhead Trout Radio Telemetry</td>
<td>Yes</td>
<td>$78.9</td>
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<td>Crooked &amp; Nikolai Creeks Steelhead Trout Weirs &amp; Video</td>
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<td>Copper River Subsistence Salmon Harvest Permit Validation</td>
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**Table 5. Funding recommendations by the Technical Review Committee (TRC) for Southcentral Alaska, 2008 Fisheries Resource Monitoring Program.**

- **Stock Status and Trends Projects**
- **Harvest Monitoring and Traditional Ecological Knowledge Projects**

Total $662.8 $554.3 $79.2 $0.0

<table>
<thead>
<tr>
<th>Requested Budget ($000)</th>
<th>Guideline</th>
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<tbody>
<tr>
<td>TRC Recommendation</td>
<td>$543.0</td>
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</table>

Draft 2008 Fisheries Resource Monitoring Plan
Southcentral Region Overview
Recommendations for Funding

After reviewing the five investigation plans, the Technical Review Committee recommended funding four of the proposed projects (Table 5) and ranked them in the following descending order:

<table>
<thead>
<tr>
<th>Project Number</th>
<th>Project Description</th>
<th>Funding Amount</th>
</tr>
</thead>
<tbody>
<tr>
<td>08-501</td>
<td>Copper River Sockeye Salmon In-River Abundance</td>
<td>$185,809</td>
</tr>
<tr>
<td>08-502</td>
<td>Tustumena Lake Coho Salmon Radio Telemetry and Weirs</td>
<td>$238,250</td>
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<tr>
<td>08-504</td>
<td>Crooked and Nikolai Creeks Steelhead Weir and Video</td>
<td>$39,965</td>
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<tr>
<td>08-503</td>
<td>Kasilof River Steelhead Trout Radio Telemetry</td>
<td>$78,860</td>
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<tr>
<td>08-550</td>
<td>Copper River Subsistence Salmon Harvest Permit Validation</td>
<td>$119,774</td>
</tr>
</tbody>
</table>

The one project below the line is not recommended for funding at this time. Each project proposed for funding in the Southcentral region in 2008 is summarized below in priority order (see Executive Summaries for more details).

08-501 Copper River sockeye salmon in-river abundance. This project will continue estimation of in-river abundance of Copper River sockeye salmon through a tagging study. The sockeye salmon abundance estimate generated from the mark-recapture experiment will independently verify the abundance estimates derived from sonar counts at Miles Lake. This proposal builds upon funding commitments in 2006 and 2007 to assess Copper River sockeye salmon. In total, the strategic objective is to provide 3 years of independent validation estimates for comparison to Miles Lake.

08-502 Tustumena Lake coho salmon radio telemetry and weirs. Feasibility work for this project was funded in out-of-cycle proposals 07-506 Coho salmon spawning assessment in Tustumena Lake tributaries and 07-507 Run timing, abundance, and distribution of coho salmon in the Kasilof River watershed. This radio tagging study will build on the information collected during the 2007 pilot studies. The project will also operate four weirs to monitor coho salmon abundance and run timing. The investigation plan is responsive to a Federal Subsistence Board adopted regulatory proposal to increase the subsistence rod and reel harvest limits and establish a subsistence dip net fishery for coho salmon in the Kasilof River watershed. Little is known about abundance and distribution of coho salmon returning to spawn in the upper Kasilof River watershed, and this project will help address this knowledge gap.

08-504 Crooked and Nikolai creeks steelhead trout weirs and video. This project will continue operation of an existing weir on Nikolai Creek, a tributary to the Kasilof River. The weir has been operated by the U.S. Fish and Wildlife Service since 2005. It is equipped with an underwater camera and video system to record fish passage 24 hours per day seven days each week. In addition, age, sex, and length samples and genetic tissue will be sampled from adult steelhead at Crooked and Nikolai creeks. Nikolai Creek is one of two tributaries in the Kasilof River watershed known to support steelhead. It is entirely within the Kenai National Wildlife Refuge and any subsistence fisheries occurring on these stocks will be under Federal jurisdiction. Annual steelhead returns number in the low hundreds so liberalization of the existing fishery would need to be closely monitored given the small population size. Information collected from this project will assist the Board in making future regulatory decision concerning steelhead trout.

08-503 Kasilof River steelhead trout radio telemetry. Feasibility work for this project was funded in an out-of-cycle Proposal 07-509 Spawning and seasonal distribution of steelhead trout in the Kasilof River watershed. This project will provide for one year of radio tagging and two years of monitoring. In concert with Project 08-502, tagging efforts for steelhead will be combined with those for coho salmon, which will allow tagging and monitoring to be conducted at reduced cost. Little is known about
abundance and distribution of steelhead returning to spawn in the upper Kasilof River watershed, and this project will help to address that knowledge gap.

08-550 Copper River subsistence salmon harvest permit validation. The goal of this two year collaborative project is to understand how fish wheel owners control or manage the use of their fish wheels, and in turn, how this affects the reliability of the subsistence salmon permit data. Based on the assumption that sharing of fish wheels is a source of under-reporting harvest, the project proposes to combine key respondent interviews and ethnographic research methods to collect and evaluate subsistence salmon harvest data for two locations within the Copper River Basin: Copperville and Chitina/McCarthy Bridge.

The mission of the Monitoring Program is to identify and provide information needed to sustain subsistence fisheries on Federal public lands for rural Alaskans through a multidisciplinary, collaborative program. It is the responsibility of the Technical Review Committee to develop the strongest possible monitoring plan for each region and across the entire state. The four Southcentral Region projects recommended for funding by the Technical Review Committee comprise a strong Monitoring Plan for this region that addresses strategically important informational needs, is scientifically sound, and promotes cooperative partnerships (Table 5).
Project Number: 08-501

Project Title: Copper River Sockeye Salmon In-river Abundance

Geographic Region: Southcentral Alaska

Data Type: Stock Status and Trends

Principal Investigator: Keith van den Broek, Native Village of Eyak

Co-Investigator: Michael Link, Jason Smith, Guy Wade, LGL AK Research Assoc.


Recommendation: Fund

Issue

Copper River sockeye salmon sustain large and important subsistence fisheries under Federal jurisdiction; and subsistence, commercial and sport harvests are significant in comparison to abundance. Management of Copper River sockeye salmon is complex due to inter-annual variation in the size and timing of stocks, fisheries that target a mixture of stocks and difficulties in estimating abundance due to the physical characteristics of the drainage. Recently, returns of sockeye salmon to several tributaries of the upper Copper River basin (e.g., Gulkana Hatchery, Tanada Creek weir) have been lower than expected given the acoustic-based estimates of abundance obtained from the Miles Lake sonar site. To further confound certainty in the abundance estimates provided by the Miles Lake sonar, the Alaska Department of Fish and Game (ADF&G) is close to completion in upgrading their Bendix acoustic system with a newer and much different acoustic system (dual frequency identification sonar—DIDSON). The management system and management plans for Copper River sockeye salmon have been built around the old Bendix sonar counts. The degree of comparability of the old and new acoustic systems is uncertain and the efficacy of the original Bendix acoustic counter has never been independently validated with an alternative technique.

We propose to use an independent technique to validate estimates provided by the new acoustic system and to the extent it remains, the Bendix-based estimates at Miles Lake. The purpose of this project is to use mark-recapture methods to estimate the weekly abundance of sockeye salmon returning to the Copper River above Miles Lake and compare these estimates to those provided by the Miles Lake sonar. The information collected from this project can be used by fishery managers to better manage the subsistence fishery for individual stocks, which ultimately could lead to increased subsistence harvest opportunities.

Objectives

To estimate the annual in-river abundance of sockeye salmon returning to the Copper River in 2008 and 2009 such that the estimates are within 25% of the true values 95% of the time.

Methods

This project will use two-event mark-recapture methods to estimate the weekly abundance of sockeye salmon at Baird Canyon in 2008–09. For the first event, sockeye salmon will be TBA-PIT tagged daily at three fishwheels operated in Baird Canyon (rkm 66) from mid May to late August. These fishwheels will be located upstream of the Miles Lake sonar site and downstream of any in-river fisheries and major spawning tributaries. The second event will consist of fish examined for tags at two fishwheels located near Canyon Creek (rkm 157), located 12 km downstream of Chitina, AK. The fishing sites at Baird
Canyon and Canyon Creek have been used successfully by the project team for these purposes since 2002. Data at both camps will be recorded electronically using FS2001 PIT scanners and PDA handheld computers. Data will be stored in a Microsoft Access database, and analyzed using Microsoft Excel and the computer program SPAS.

**Partnerships/Capacity Building**

This project gives NVE an opportunity for meaningful inclusion in the research and long-term management of Copper River sockeye salmon. NVE will oversee all aspects of the project and provide critical logistical, technical and field assistance, thereby acquiring the array of skills needed to carry out major fisheries assessment projects. NVE fishery technicians will acquire the necessary skills and experience required for this and other fisheries research jobs. This project will allow NVE to further develop the skills of its members via local training, hiring for key positions in future fisheries assessment projects, and recruiting and encouraging young people to get an education in fisheries and natural resource management. This project will also promote interaction between a major subsistence group (NVE) and fisheries management agencies (ADF&G Commercial Fisheries Division). Finally, the overall study design will engage tribal organizations from different regions of the Copper River drainage in discussions on the project and promote interactions amongst subsistence users.

NVE will continue to work with the Tribal Council, staff, consultants and government agencies to identify key personnel to help carry on a long-term program. NVE will also actively participate in the workshop held at the end of each field season to review the project and discuss future refinements. These consultations will culminate in the overall assessment of the project that will drive the development of a long-term program, if deemed necessary.

**Justification**

Assessment of in-river abundance of Copper River sockeye salmon was identified as a high priority information need in the 2008 Request for Proposals. Sockeye salmon sustain a large and important subsistence fishery in the Copper River. In 2006, a total of 18,000 fish were harvested by Federal subsistence fishers. Currently, in-river abundance is estimated using sonar at Miles Lake. Independent estimation of sockeye salmon abundance would provide important verification of sonar passage estimates and help resolve whether offshore distribution and species apportionment significantly bias sonar assessment of sockeye salmon.
Project Number: 08-502  
Project Title: Tustumena Lake Coho Salmon Radio Telemetry and Weirs  
Geographic Region: Southcentral Alaska  
Data Type: Stock Status and Trends  
Principal Investigator: Douglas Palmer, USFWS Kenai Fish and Wildlife Field Office  
Co-Investigator: Kenneth Gates, USFWS Kenai Fish and Wildlife Field Office  

Cost: 2008: $238,250  
2009: $118,360  
2010: $44,236  
2011: $0  

Recommendation: Fund  

Issue  
The Federal Subsistence Board granted Ninilchik residents customary and traditional use for all fish species on Federal waters within the Kasilof River watershed in January 2006. Several proposals are currently under consideration that would liberalize methods and means, seasons, and harvest limits for salmon and trout. Liberalization of existing Federal subsistence regulations within the Kasilof River watershed could have adverse impacts on some fish populations, especially coho salmon, for which we lack basic population size and distribution information. The development of new Federal subsistence fisheries has triggered a need for information on the abundance, run-timing and distribution of coho salmon in the Kasilof River watershed.  

Objectives  
1. Determine the abundance and run-timing of adult coho salmon entering Glacier, Indian, Nikolai, and Shantatalik creeks.  
2. Detect the ultimate spawning destination upstream of Silver Salmon rapids (rkm 24), via the presence of at least two tagged fish, of a population comprising 10% or more of all the coho salmon passing the capture site during each temporal stratum with probability 0.8.  
3. Test the hypothesis that the distributions of spawners among strata are equal.  

Methods  
Feasibility work for this proposal was funded in out-of-cycle proposals 07-506 Coho salmon spawning assessment in Tustumena Lake tributaries and 07-507 Run timing, abundance, and distribution of coho salmon in the Kasilof River watershed. This proposal will build on information collected during these initial investigations.  

Fish weirs equipped with underwater video equipment will be used to determine the run-timing and abundance of adult coho salmon in four tributaries of Tustumena Lake; Glacier, Indian, Nikolai, and Shantatalik creeks. These four streams are currently considered the primary contributors to the upper Kasilof River coho salmon population based on aerial and ground surveys and conversations with area residents. We will also deploy up to 150 radio transmitters in adult coho salmon to identify other potential spawning areas in the upper Kasilof River watershed.
Partnerships/Capacity Building

This project has been discussed with the Kenai National Wildlife Refuge and Alaska Department of Fish and Game. Consultations are currently ongoing with the Department and will continue throughout the project. We also plan to advertise and hopefully recruit qualified seasonal fishery technicians from the community of Ninilchik to assist with field operations.

Justification

This project is of the highest strategic importance for Federal subsistence management in the Southcentral region, and directly addresses data needs for assessing possible changes to coho salmon harvest guidelines. Currently, the Federal Board has expanded subsistence fishing opportunities in the Kasilof River drainage. Information from this project would provide more accurate spawning abundance estimates than are currently available through ground and aerial surveys. Information from this project would increase the chances of correctly determining and meeting spawning escapement needs and making correct management decisions for this emerging subsistence fishery. If this project is funded, the Technical Review Committee will assess the need for long-term monitoring after two years of project results.
Draft 2008 Fisheries Resource Monitoring Plan
Southcentral Region Executive Summaries

Project Number: 08-504
Project Title: Crooked and Nikolai Creeks Steelhead Trout Weirs and Video
Geographic Region: Southcentral Alaska
Data Type: Stock Status and Trends
Principal Investigator: Kenneth Gates, USFWS Kenai Fish and Wildlife Field Office
Co-Investigator: Douglas Palmer, USFWS Kenai Fish and Wildlife Field Office


Recommendation: Fund

Issue

The Federal Subsistence Board granted Ninilchik residents customary and traditional use for all fish species on Federal waters within the Kasilof River watershed in January 2006. Several proposals are currently under consideration that would liberalize methods and means, seasons, and harvest limits for salmon and trout. Liberalization of existing Federal subsistence regulations within the Kasilof River watershed could have adverse impacts on the small populations of steelhead trout which are minimally understood. Crooked and Nikolai creeks are the only two streams within the Kasilof River watershed known to support steelhead trout. Annual returns to each stream are typically a few hundred fish. Adult steelhead trout which spawn or over-winter in the upper Kasilof River watershed could be targeted directly or harvested incidentally in Federal subsistence fisheries. Annual escapement monitoring in Crooked and Nikolai creeks will be necessary to ensure conservation of these small populations.

Objectives

1. Determine the abundance and run-timing of adult steelhead trout entering Crooked and Nikolai creeks.
2. Estimate the age, sex and length of adult steelhead trout entering Crooked and Nikolai creeks.
3. Determine if the steelhead trout spawning in Crooked and Nikolai creeks are genetically distinct from one another and, if so, estimate the level of genetic differentiation.

Methods

Weirs equipped with underwater video systems will be used to determine the run-timing and abundance of adult steelhead trout returning to Crooked and Nikolai creeks during 2008 and 2009. Each weir and video system will be installed by April 20 and will operate through May 31 each year. The weirs and video systems will be unmanned except during times of maintenance and sampling. Sampling will be conducted weekly at each weir to estimate age and length composition of the return. Sex composition of the return to each stream will be determined using video images. Fin tissue will be collected from a sample of 50 adult steelhead trout at each weir. Genetic samples will be forwarded to the Conservation Genetics Laboratory in Anchorage for processing and analysis.

Partnerships/Capacity Building

This project has been discussed with the Kenai National Wildlife Refuge and Alaska Department of Fish and Game. Consultations are currently ongoing with the Department and will continue throughout the
project. We also plan to advertise and hopefully recruit qualified seasonal fishery technicians from the community of Ninilchik to assist with field operations.

Justification

At this time Nikolai Creek is one of only two tributaries in the Kasilof River watershed known to support steelhead. Continued assessment of abundance in Nikolai Creek is needed for responsible management of a subsistence steelhead fishery. Little is known about abundance and distribution of steelhead trout in the Kasilof River watershed. Information gained from the combination of this project and FIS Project 08-503 *Spawning and seasonal distribution of steelhead trout in the Kasilof River* will help evaluate the effectiveness of using Crooked and Nikolai creeks as long-term monitoring tools. The investigator will also monitor abundance of Crooked Creek steelhead trout. The Technical Review Committee will assess the need for long-term monitoring after two years of project results.
**Draft 2008 Fisheries Resource Monitoring Plan**  
*Southcentral Region Executive Summaries*

**Project Number:** 08-503  
**Project Title:** Kasilof River Steelhead Trout Radio Telemetry  
**Geographic Region:** Southcentral Alaska  
**Data Type:** Stock Status and Trends  
**Principal Investigator:** Kenneth Gates, USFWS Kenai Fish and Wildlife Field Office  
**Co-Investigator:** Douglas Palmer, USFWS Kenai Fish and Wildlife Field Office


**Recommendation:** Fund

**Issue**

The Federal Subsistence Board granted Ninilchik residents customary and traditional use for all fish species on Federal waters within the Kasilof River watershed in January 2006. Several proposals are currently under consideration that would liberalize methods and means, seasons, and harvest limits for salmon and trout. Liberalization of existing Federal subsistence regulations within the Kasilof River watershed could have adverse impacts on small populations of steelhead trout which are minimally understood. Adult steelhead trout which spawn or over-winter in the upper Kasilof River watershed could be targeted directly or harvested incidentally in Federal subsistence fisheries. A better understanding of movement patterns and over-wintering and spawning locations is needed to ensure conservation of steelhead trout in the Kasilof River watershed.

**Objectives**

1. Describe the freshwater migratory patterns and over-wintering distribution of radio-tagged adult steelhead trout which enter the Kasilof River during the fall.
2. Identify spawning areas selected by radio-tagged steelhead trout.

**Methods**

Feasibility work for this proposal was funded in out-of-cycle proposal 07-509 *Spawning and seasonal distribution of steelhead trout in the Kasilof River watershed*. This proposal requests funding for one additional year of radio tagging and follow-up monitoring to build on information collected during the initial radio-tagging effort in 2007.

Radio telemetry will be used to uniquely identify and track individual steelhead trout in the Kasilof River watershed. A target goal of 80 radio transmitters will be surgically implanted in steelhead trout captured in the mainstem Kasilof River between September and freeze-up. A variety of gear types will be used to capture fish for radio-tagging, including nets and sport fishing gear. Freshwater migratory patterns and over-wintering and spawning locations of radio-tagged steelhead will be determined throughout the fall, winter, spring, and early summer using a combination of fixed data-logging receiver stations and mobile tracking.
Partnerships/Capacity Building

This project has been discussed with the Kenai National Wildlife Refuge and Alaska Department of Fish and Game. Consultations are currently ongoing with the Department and will continue throughout the project. We also plan to advertise and hopefully recruit qualified seasonal fishery technicians from the community of Ninilchik to assist with field operations.

Justification

Assessment of steelhead distribution in the Kasilof River is a priority information need specifically identified by the Federal Subsistence Board. Little is known about distribution of steelhead in the Kasilof River watershed. Currently, the known population of steelhead trout is a few hundred fish. The combination of this proposed project and Investigation Plan 08-502 on coho salmon will allow steelhead spawning and distribution to be evaluated at less cost than a stand alone project. Knowledge gained in this project would help guide the Board in making regulatory decisions and help Federal managers develop effective long term monitoring tools.
Project Number: 08-550
Project Title: Copper River Subsistence Salmon Harvest Permit Validation
Geographic Region: Southcentral Alaska
Data Type: Harvest Monitoring and Traditional Ecological Knowledge
Principal Investigator: William Simeone, ADF&G Subsistence Division
Co-Investigator: Erica McCall Valentine, Ecotrust Alaska


Recommendation: Do not fund

Issue

Reliable annual estimates of subsistence harvests of salmon in the Copper River are necessary for fisheries management and for providing adequate subsistence fishing opportunities. The thoroughness of harvests reported on permit returns is important to verify because permit records are the sole basis for generating the subsistence harvest estimate. This project responds to a priority information need identified by the Office of Subsistence Management, to determine validity and reliability of permit estimates of subsistence harvests from the Copper River.

Objectives

1. Understand how the use and sharing of fish wheels influences the way harvests are recorded on permits at the locations of Copperville and the Chitina/McCarthy Bridge.
2. Describe and analyze the relationship between fish wheel owners, fish wheel users, the number of permits issued, and harvest reporting.
3. Estimate levels of participation and harvest in the subsistence salmon fishery of the Copper River District in 2007 and 2008 for fish wheel owners and users at Copperville and the Chitina Bridge.
4. Compare levels of participation and harvests in the subsistence salmon fishery at the locations of Copperville and the Chitina/McCarthy Bridge in 2007 and 2008 and over the last 5 years as estimated by permit returns (for 2004–2008) and by interviews with fish wheel owners and users (for 2007 and 2008).
5. Estimate the levels of participation and harvests in the subsistence salmon fishery of the Copper River District in 2009 for fishers at Copperville and the Chitina Bridge.
6. Develop a set of recommendations for improving the Copper River subsistence salmon harvest monitoring program based on the study findings.

Methods

The research will employ five social science research gathering methods: 1) literature review; 2) analysis of the Sport Fish Division permit database; 3) systematic preseason surveys with fish wheel owners and users; 4) in-season key respondent interviews with fish wheel owners and users; and 5) post-season interviews with fish wheel owners and users. In spring 2008, project researchers will conduct preseason interviews with a sample of fish wheel owners and other users. In-season key respondent interviews will take place at the fish wheel sites during in summer 2008. At the conclusion of subsistence salmon fishing, follow-up interviews will take place with all fish wheel owners and users that were first interviewed the previous spring. Topics will include: a) if the household subsistence fished in 2008; if not, why not; b)
their harvests; and c) other sources of salmon used by the household. An estimate of subsistence salmon harvests for each location will be developed based upon these survey results, and will be compared to estimates developed from permit returns. A final set of household surveys will take place in August 2009 with all fish wheel owners and users that were interviewed in 2008.

Partnerships/Capacity Building

There may be an opportunity for the Partners for Fisheries Monitoring Program social scientist with the Native Village of Eyak to participate in the field research.

Justification

This proposal addresses an information need specifically identified as a high priority in the 2008 Request for Proposals for the Southcentral Alaska region. However, the Technical Review Committee has a number of concerns with the technical and scientific merit of the proposed project. Given these concerns, and the other high priority projects in the Southcentral Alaska region for the Monitoring Program in 2008, sufficient funding is not available to fund this proposed study.
Southeast Region Overview

SOUTHEAST ALASKA OVERVIEW

Issues and Information Needs

A strategic plan was completed for the Southeast Region to ensure that the Monitoring Program addresses the highest priority information needs for Federal subsistence fisheries management over the next 3–5 years. The 2008 Request for Proposals for the Southeast Alaska Region is focused on the prioritized lists from the 2006 strategic plan and includes the following:

Prince of Wales Steelhead

- Validity and reliability of subsistence harvest data for Prince of Wales Island steelhead
- Research and development of cost-effective methodology to estimate steelhead abundance on Prince of Wales Island

Non-Salmon

- Abundance of Unuk River eulachon

Salmon

- Escapement assessment for sockeye salmon stocks that sustain subsistence fisheries. Of particular concern are sockeye salmon stocks for which subsistence exploitation is high or unknown; management or regulatory action is under consideration; or some or the entire subsistence fishery occurs on Federal public lands. Sockeye salmon stocks that meet most of these criteria include Sitkoh, Gut Bay, Karta, Hoktaheen, and Sarkar Lakes.

Projects Funded Under the Fisheries Resource Monitoring Program

Since the inception of the Monitoring Program in 2000, 44 projects have been funded in Southeast Alaska, and eleven of these projects will be operating during 2008 (Tables 1 and 2). Eight of the ongoing projects address assessment of sockeye salmon escapement, and one is directed at Behm Canal eulachon genetics. One project is documenting subsistence use patterns for salmon, and another is documenting traditional knowledge of sockeye salmon in and around Hydaburg.

Projects Forwarded for Investigation Plan Development

Eleven proposals for research in Southeast Alaska were submitted to the Office of Subsistence Management in response to the 2008 Request for Proposals. In March 2007, the Technical Review Committee reviewed these proposals and recommended six projects for investigation plan development. One recommended proposal, Kanalku and Sitkoh lakes sockeye salmon assessment, was not developed into an investigation plan. For the remaining five projects, investigators responded to Technical Review Committee proposal review comments in developing their investigation plans. Detailed budgets submitted with each investigation plan allowed identification of funds requested by Alaska Native, State, Federal, and other organizations; funds that would be used to hire local residents; and matching funds from agencies and organizations (Tables 3 and 4).
Table 1. Summary of Fisheries Resource Monitoring Program projects completed in Southeast Alaska since 2000. Abbreviations used by investigators are: ACA=Angoon Community Association, ADFG=Alaska Department of Fish and Game, CCTHITA=Central Council of Tlingit & Haida Indian Tribes of Alaska, HCA=Hydaburg Cooperative Association, HIA=Hoonah Indian Association, KCA=Klawock Cooperative Association, OVK=Organized Village of Kake, STA=Sitka Tribe of Alaska, TST=Third Sector Technologies, USFS=USDA Forest Service, WCA=Wrangell Cooperative Association, and YTT=Yakutat Tlingit Tribe.

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<tr>
<th>Project Number</th>
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<th>Investigators</th>
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<td>Klawock Lake Sockeye Salmon Assessment</td>
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<td>00-044</td>
<td>Falls Lake Sockeye Salmon Stock Assessment</td>
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<td>Gut, Kook, and Hoktaheen L Sockeye Salmon Escapement Index</td>
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<td>Falls, Gut, Kutlaku Sockeye Salmon Subsistence Stock Assessment</td>
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<td>Klag Bay Sockeye Salmon Stock Assessment</td>
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**Documentation of Subsistence Use Patterns for Salmon**

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<td>SE Alaska Subsistence Fisheries Database Development</td>
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<td>00-045</td>
<td>SE Tribes Traditional Subsistence Territory Mapping</td>
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<td>Kake Sockeye Salmon Subsistence Harvest Use Pattern</td>
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<td>Klawock River and Sarkar L Sockeye Salmon Harvest Use Patterns</td>
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<td>Wrangell Salmon Subsistence Harvest Use Pattern</td>
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<td>Hoonah and Klawock Salmon Survey</td>
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<td>04-652</td>
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**Prince of Wales Island Steelhead**

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<td>POW Island Steelhead/Rainbow Trout Harvest Use Pattern</td>
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Table 2. Summary of ongoing 2008 projects funded under the Fisheries Resource Monitoring Program in Southeast Alaska. Abbreviations used by investigators are: ACA=Angoon Community Association, ADFG=Alaska Department of Fish and Game, CCHITA=Central Council of Tlingit & Haida Indian Tribes of Alaska, HCA=Hydaburg Cooperative Association, OVK=Organized Village of Kake, OVKa=Organized Village of Kassan, PVT=Private, STA=Sitka Tribe of Alaska, and USFS=USDA Forest Service.

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<td>06-601</td>
<td>Neva Lake Sockeye Salmon Stock Assessment</td>
<td>USFS</td>
<td>31.9</td>
</tr>
<tr>
<td>07-601</td>
<td>Hatchery Creek Sockeye Salmon Assessment</td>
<td>OVK, USFS</td>
<td>123.2 122.9</td>
</tr>
<tr>
<td>07-604</td>
<td>Klag Lake Sockeye Salmon Assessment</td>
<td>STA</td>
<td>109.1 109.8</td>
</tr>
<tr>
<td>07-606</td>
<td>Hetta Lake Sockeye Salmon Assessment</td>
<td>ADFG</td>
<td>161.3 153.9</td>
</tr>
<tr>
<td>07-607</td>
<td>Ksalaku Lake Sockeye Salmon Assessment</td>
<td>ADFG, ACA</td>
<td>161.0 164.4</td>
</tr>
<tr>
<td>07-608</td>
<td>Klawock Lake Sockeye Salmon Assessment</td>
<td>ADFG, KCA</td>
<td>74.8 75.9</td>
</tr>
<tr>
<td>07-609</td>
<td>Falls Lake Sockeye Salmon Assessment</td>
<td>ADFG, OVK</td>
<td>89.8 92.0</td>
</tr>
<tr>
<td>07-610</td>
<td>Behm Canal Eulachon Genetics</td>
<td>USFWS</td>
<td>34.3</td>
</tr>
<tr>
<td></td>
<td><strong>Estimation of Sockeye Salmon Escapement</strong></td>
<td></td>
<td></td>
</tr>
<tr>
<td>06-651</td>
<td>Southeast Alaska Survey of Customary Trade in Seafood</td>
<td>CCHITA</td>
<td>222.6 108.6</td>
</tr>
<tr>
<td>07-651</td>
<td>Hydaburg Sockeye Salmon Customary &amp; Traditional Sys</td>
<td>HCA, PVT</td>
<td>38.7</td>
</tr>
<tr>
<td></td>
<td><strong>Documentation of Subsistence Use Patterns for Salmon</strong></td>
<td></td>
<td></td>
</tr>
<tr>
<td>05-604</td>
<td>Prince of Wales Island Steelhead</td>
<td>ADFG, OVKa</td>
<td></td>
</tr>
<tr>
<td></td>
<td><strong>Prince of Wales Island Steelhead</strong></td>
<td></td>
<td></td>
</tr>
<tr>
<td></td>
<td><strong>Total Southeast Monitoring Program</strong></td>
<td></td>
<td>1,046.7 827.5</td>
</tr>
</tbody>
</table>

*Note: The values 123.2 and 122.9 are likely meant to be $123,200 and $122,900, respectively.*
Table 3. Southeast Alaska project costs, by organization (Alaska Native, State, Federal, other), for investigation plans submitted to the Fisheries Resource Monitoring Program for funding consideration in 2008.

<table>
<thead>
<tr>
<th>Project Number</th>
<th>Title</th>
<th>Alaska Native</th>
<th>State</th>
<th>Federal</th>
<th>Other</th>
</tr>
</thead>
<tbody>
<tr>
<td>08-600</td>
<td>Karta River Sockeye Salmon Assessment</td>
<td>$111.6</td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>08-605</td>
<td>Saltery Creek Steelhead Trout Population Assessment</td>
<td>$96.9</td>
<td>$6.2</td>
<td></td>
<td></td>
</tr>
<tr>
<td>08-607</td>
<td>Unuk River Eulachon Assessment</td>
<td>$34.0</td>
<td></td>
<td></td>
<td></td>
</tr>
</tbody>
</table>


<table>
<thead>
<tr>
<th>Project Number</th>
<th>Lead Organization</th>
<th>Title</th>
<th>Local Hire</th>
<th>Matching</th>
</tr>
</thead>
<tbody>
<tr>
<td>08-600</td>
<td>OVK</td>
<td>Karta River Sockeye Salmon Assessment</td>
<td>$58.6</td>
<td>$82.3</td>
</tr>
<tr>
<td>08-605</td>
<td>HCA</td>
<td>Saltery Creek Steelhead Trout Population Assessment</td>
<td>$51.1</td>
<td>$244.2</td>
</tr>
<tr>
<td>08-607</td>
<td>USFWS</td>
<td>Unuk River Eulachon Assessment</td>
<td>$4.0</td>
<td></td>
</tr>
</tbody>
</table>

<table>
<thead>
<tr>
<th>Project Number</th>
<th>Lead Organization</th>
<th>Title</th>
<th>Local Hire</th>
<th>Matching</th>
</tr>
</thead>
<tbody>
<tr>
<td>08-650</td>
<td>OVK</td>
<td>POW Island Steelhead Trout Subsistence Harvest Survey</td>
<td>$46.9</td>
<td>$9.6</td>
</tr>
<tr>
<td>08-651</td>
<td>STA</td>
<td>Maknahti Island Subsistence Herring Fishery Assessment</td>
<td>$20.2</td>
<td>$30.7</td>
</tr>
</tbody>
</table>
Available Funds

Federal Subsistence Board guidelines direct initial distribution of funds among regions and data types. While regional budget guidelines provide an initial target for planning, they are not rigid allocations. Upon review and evaluation, the Technical Review Committee, Regional Advisory Councils, Interagency Staff Committee and Federal Subsistence Board have the opportunity to address the highest priority projects across regions. For 2008, approximately $259,000 is available for funding new projects in the Southeast Alaska Region.

Recommendations for Funding

After reviewing the investigation plans, the Technical Review Committee recommended funding four of the projects (Table 5) and prioritized them in the following descending order:

<table>
<thead>
<tr>
<th>Project</th>
<th>Description</th>
<th>Funding</th>
</tr>
</thead>
<tbody>
<tr>
<td>08-600</td>
<td>Karta River Sockeye Salmon Assessment</td>
<td>$104,218</td>
</tr>
<tr>
<td>08-607</td>
<td>Unuk River Eulachon Assessment</td>
<td>$ 34,030</td>
</tr>
<tr>
<td>08-651</td>
<td>Maknahti Island Subsistence Herring Fishery Assessment</td>
<td>$ 27,162</td>
</tr>
<tr>
<td>08-650</td>
<td>POW Island Steelhead Trout Subsistence Harvest Survey</td>
<td>$ 65,093</td>
</tr>
<tr>
<td>08-605</td>
<td>Saltery Creek Steelhead Trout Population Assessment</td>
<td>$103,140</td>
</tr>
</tbody>
</table>

The project below the line is not recommended for funding at this time. Each project proposed for funding in the Southeast Alaska Region in 2008 is summarized below in priority order (see Executive Summaries for more details).

08-600 Karta River sockeye salmon assessment. This project estimates the annual escapement of sockeye salmon into the Karta River in years 2008 and 2009. The Karta River is a primary sockeye salmon subsistence system for the residents of Kasaan. In 2004, the Kasaan Bay Watershed Committee identified the suspected decline of sockeye salmon returns to the Karta River as a major issue in Kasaan. However, the lack of reliable escapement estimates makes it difficult to assess the status of this stock. This project involves counting sockeye salmon through a weir and validating these counts with a weir-to-lake/spawning area mark-recapture study. The age, sex, and length composition of the sockeye salmon run will also be estimated. There are two principal lakes (Karta and Salmon) and several inlet streams in the Karta system and sockeye salmon spawn in several locations. The project is technically sound; a weir and weir mark-recapture project is the only way to directly and reliably estimate the annual escapement of sockeye salmon into such a complex system.

08-607 Unuk River eulachon assessment. This project will provide a qualitative index of eulachon returns to the Unuk River and other rivers which flow into Behm Canal. Eulachon returns in recent years have been virtually non-existent, and subsistence fishing has been closed. Past assessments have been limited to non-standardized, poorly documented, presence or absence surveys, and there is strong reason to think that this stock has been severely over-exploited.

08-651 Maknahti Island subsistence herring fishery assessment. This two year collaborative project will document and describe the customary and traditional herring egg fishery in Federal waters near Maknahti Island, and will determine the effort directed at such harvest in this area. Herring eggs from the waters near the Maknahti Island area are an important subsistence resource to the residents of Sitka Sound and to date there has been no specific study of subsistence harvest of herring eggs in Maknahti Island waters. While Sitka Tribe of Alaska and ADF&G have conducted surveys of subsistence harvest of herring eggs in Sitka Sound waters since 2002, the resulting harvest information is not site specific,
Table 5. Funding recommendations by the Technical Review Committee (TRC) for Southeast Alaska, 2008 Fisheries Resource Monitoring Program.

<table>
<thead>
<tr>
<th>Project Number</th>
<th>Title</th>
<th>TRC</th>
<th>Requested Budget ($000)</th>
</tr>
</thead>
<tbody>
<tr>
<td></td>
<td></td>
<td></td>
<td>2008</td>
</tr>
<tr>
<td></td>
<td><strong>Stock Status and Trends Projects</strong></td>
<td></td>
<td></td>
</tr>
<tr>
<td>08-600</td>
<td>Karta River Sockeye Salmon Assessment</td>
<td>Yes</td>
<td>$111.6</td>
</tr>
<tr>
<td>08-605</td>
<td>Saltery Creek Steelhead Trout Population Assessment</td>
<td>No</td>
<td>$103.1</td>
</tr>
<tr>
<td>08-607</td>
<td>Unuk River Eulachon Assessment</td>
<td>Yes</td>
<td>$34.0</td>
</tr>
<tr>
<td></td>
<td><strong>Harvest Monitoring and Traditional Ecological Knowledge Projects</strong></td>
<td></td>
<td></td>
</tr>
<tr>
<td>08-650</td>
<td>POW Island Steelhead Trout Subsistence Harvest Survey</td>
<td>Yes</td>
<td>$65.1</td>
</tr>
<tr>
<td>08-651</td>
<td>Maknahti Island Subsistence Herring Fishery Assessment</td>
<td>Yes</td>
<td>$27.2</td>
</tr>
<tr>
<td></td>
<td><strong>Total</strong></td>
<td></td>
<td>$341.0</td>
</tr>
<tr>
<td></td>
<td>Funding Guideline</td>
<td></td>
<td>$259.0</td>
</tr>
<tr>
<td></td>
<td>TRC Recommendation</td>
<td></td>
<td>$237.9</td>
</tr>
</tbody>
</table>
and it does not document effort. This project proposes to achieve both of these objectives, and to describe customary and traditional practices surrounding herring egg harvest and use.

08-650  POW Island steelhead trout subsistence harvest survey. This two year collaborative project will determine the validity and reliability of subsistence harvest data for Prince of Wales steelhead by comparing permit data to data collected through household surveys. A comparison of the two types of information will allow for a measure of the disparity (assuming that there is one); this measure can subsequently be applied to the permit data to achieve a more accurate measure of subsistence steelhead harvests. Household surveys will be conducted in all of the communities on Prince of Wales Island; these will be followed up with key informant interviews with harvesters about their participation in the steelhead permitting process. Investigators anticipate that the results of this study will provide an evaluation of the permitting process to improve the accuracy and reliability of information about steelhead subsistence use on Prince of Wales Island.

08-605  Adult steelhead population assessments, Saltery Creek, Prince of Wales Island. This project will assess the return of steelhead to Saltery Creek, on Prince of Wales Island over a four year period using a weir. Concern about the harvest vulnerability of Prince of Wales Island steelhead stocks is higher than the remainder of Southeast Alaska, and additional population information would be valuable to managers.

The mission of the Monitoring Program is to identify and provide information needed to sustain subsistence fisheries on Federal public lands for rural Alaskans through a multidisciplinary, collaborative program. It is the responsibility of the Technical Review Committee to develop the strongest possible monitoring plan for each region and across the entire state. The Technical Review Committee recommends funding four of the five projects (Table 5): they all address information of direct relevance and importance to subsistence fisheries under Federal jurisdiction, are technically sound, include a capacity building component, and the investigators are qualified to conduct the work.
Project Number: 08-600  
Project Title: Karta River Sockeye Salmon Assessment  
Geographic Region: Southcentral Alaska  
Data Type: Stock Status and Trends  
Principal Investigator: Cathy Needham and Lisa Lang, Organized Village of Kasaan (OVKa)  
Co-Investigator: Jan Conitz and Scott Host, ADF&G Commercial Fisheries Division  
Susan Howell and Delilah Brigham, US Forest Service  
Glenn Chen, Bureau of Indian Affairs  

Cost:  
2008: $104,218  
2009: $116,217  
2010: $0  
2011: $0  

Recommendation: Fund with Modification  

Issue  
This project will assess the sockeye population for the Karta River, the traditional and current subsistence use area for the Tribe. In reference to the 2008 Request for Proposals and the Strategic Plan for the Subsistence Fisheries Resource Monitoring Program, Southeast Region (2006), this proposal addresses the highest priority species (sockeye salmon) and information need (estimate the current escapement). In addition, the Karta Lake system is ranked sixth on the list of prioritized systems.  

Objectives  
1. Count the number of sockeye salmon into the Karta River using a weir.  
2. Estimate the number of sockeye salmon into the Karta River using mark-recapture methods with a coefficient of variation less than 10%.  
3. Estimate the age, length, and sex composition of returning sockeye salmon into the Karta River system, based on a sample size equivalent to 6% of the number returning, with an estimated coefficient of variation for the two major age classes of 10% or less.  

Methods  
A 200 foot channel-spanning aluminum bipod weir will be constructed across the Karta River. On one section of the weir, an entrance cone leading into an 8’ x 8’ trap will be constructed to capture fish migrating upstream to spawn. The weir will operate from early June through September of each year, and all fish crossing the weir will be identified and counted. Approximately 15% of the sockeye salmon that cross the weir will be marked with a fin clip. Towards the end of the field season, crews will fly into the known sockeye spawning grounds and attempt to recapture fish that were marked at the weir. Mark-recapture data will be sent to the Alaska Department of Fish and Game (ADF&G) for data analysis, to provide a secondary escapement estimate to compare back to the real number of fish counted across the weir. In addition, approximately 600 sockeye, distributed across the entire run for each year, will be sampled for age, sex and length data. Sampled fish will be measured and sexed on site. Scales will be removed and sent to ADF&G to be read to determine age.
Partnerships/Capacity Building

The Organized Village of Kasaan has been working with a team of cooperating agencies on Prince of Wales Island since the beginning of 2005 on fisheries projects with steelhead and sockeye. A strong partnership between Federal, State and Tribal government has been established, with key players working together across projects.

This project will continue to rely on the strong partnerships built with local agencies, and will assist OVKa in continuing to build its Fisheries program so that the Tribe can address subsistence issues important to its Tribal members. In addition the project offers local hiring opportunities for field crews. Some crew have been trained under other projects and this project secures position over time, and offers the opportunity for new Tribal members to be trained and employed by the Tribe.

Justification

This is a proven weir project which will provide reliable estimates of the annual escapement and age composition of sockeye salmon into the Karta Lake system which is an important subsistence resource for the community of Kasaan. Project costs are reasonable and all project funds go directly to OVKa. There is some question regarding the current status of this stock — recent estimates of escapements and subsistence harvests are less than they were 20 years ago. This project must make better use of the foot survey counts and mark-recapture data collected by ADF&G from 1995 to 2003; doing so will yield annual estimates of escapement for 19 of the past 27 years. The Technical Review Committee requests a revised investigation plan to incorporate both a mark-recapture estimate of the abundance of sockeye salmon in McGilvery and Andersen Creeks and a basic assessment of the current status of the stock based on historical escapement and harvest estimates. A moderate increase in project costs and involvement by the ADF&G co-investigators are expected in the revised investigation plan.
Issue

Eulachon production from the Unuk River area is important ecologically and to subsistence and personal use fishermen in Ketchikan and Metlakatla. The harvest of eulachon in the Unuk River takes place in waters under Federal jurisdiction. The Unuk eulachon run has declined in recent years and very few eulachon returned to spawn in 2004, 2005, 2006, and 2007. The fishery was closed in 2006 and 2007. Reliable assessments of the annual abundance of eulachon in the area are needed to understand the status of the stock and responsibly manage the Federal subsistence fishery. This was identified as a priority information need in the 2006 Southeast Alaska Strategic Plan and in the 2008 Request for Proposals.

Objectives

1. Describe the timing, distribution, and abundance of eulachon returning to the Unuk River area.
2. Estimate the age, sex, length and weight composition of eulachon spawning in the Hooligan River, Landing Slough, and lower Unuk mainstem areas so that the estimated coefficient of variation for the principal age class is less than 15%.
3. Assess the status and management options for Unuk eulachon.

Methods

Surveys will be done each spring to assess the timing, distribution, abundance, and age, sex, and size composition of eulachon in the Unuk River area. The goal of this project is to make consistent, observer-independent, qualitative and quantitative assessments of the abundance of eulachon in the Unuk River area. All the main locations where eulachon have been observed in the past will be surveyed so we can best monitor their annual distribution and abundance. Records will be kept on survey conditions, the abundance of live and dead eulachon, the abundance of eulachon eggs, and the number and activity of birds and mammals in the area. During the month of March, project personnel will do daily foot and boat surveys of the six main eulachon spawning locations in the lower Unuk River area—Hooligan River, Upper Landing Slough, Lower Landing Slough, Side Channel, Matney Slough, and Lower Unuk mainstem. Survey routes and data collection methods will be standardized for each location. Numbers of small and large schools will be counted when counting individual fish is impossible. In three principal spawning locations, Hooligan River, Side Channel, and Matney Slough, the abundance of live eulachon in will be measured as a percentage of the stream bottom covered with fish (or eggs) at each of the 6 to 11 numbered stations in each location. The Unuk estuary, upper Burroughs Bay, Klahini River, and Chickamin River will also be surveyed but less intensively. Photos will be used to document survey conditions and eulachon abundance. If Federal subsistence fishing is allowed, fishing activities will be
closely monitored and the harvest will be sampled to estimate the number and pounds of the harvest and the age, sex, and size composition of the fish.

There is very little stock assessment and management information for Borroughs Bay and Chickamin River eulachon. However, the available information needs to be compiled and summarized along with the information collected by this project. The emphasis will be to develop the best time series of annual abundance estimates and look at relationships among harvests, escapements, and returns. Finally, we will compare this information with that for other eulachon runs along the coast to assess the status of Unuk eulachon and propose a management plan for restoring and maintaining this run and a subsistence fishery.

**Partnerships/Capacity Building**

The Forest Service has been working with the local eulachon fishers, the communities of Metlakatla, Ketchikan, and Saxman, and biologists with ADF&G, Forest Service, Canadian Department of Fisheries and Oceans, and others to better understand the use, status, and management of Unuk eulachon. This project promotes this information sharing. Project funds will employ local residents and benefit the local economy. The Forest Service will solicit bids from local property owners for the field housing.

**Justification**

This project addresses an issue specifically identified in the 2008 Request for Proposals. The project has high strategic value since eulachon returns to the Unuk River have been dismal in recent years, and there is a severe conservation issue. There is also a fundamental lack of knowledge regarding population dynamics of this stock. The investigation plan describes a very workable and repeatable methodology and will greatly improve the documentation over past surveys. The information will be used to evaluate the stock status to ensure appropriate harvest levels.
Project Number: 08-650
Project Title: POW Island Steelhead Trout Subsistence Harvest Survey
Geographic Region: Southcentral Alaska
Data Type: Harvest Monitoring and Traditional Ecological Knowledge
Principal Investigator: Cathy Needham, Organized Village of Kasaan
Tony Christianson, Hydaburg Cooperative Association
Co-Investigator: Pat Petrivelli, Bureau of Indian Affairs
Jeff Reeves, US Forest Service


Recommendation: Fund with modification

Issue

The disparity between steelhead harvests recorded in confidential surveys and steelhead harvests reported in the permitting process has been documented in a previous FIS study (Turek 2005). This project will collect and analyze data through a confidential harvest survey in all Prince of Wales Island communities and compare this information with the reported harvests to provide a direct measure of the level of disparity. Follow-up interviews with steelhead harvesters will elicit the rationale for their level of participation in the Federal subsistence fishing permitting process. The information collected by this research project addresses the validity and reliability of subsistence harvest data for Prince of Wales steelhead, an information need for Southeast Alaska.

Objectives

1. Accurately estimate the subsistence steelhead harvests on Prince of Wales Island by conducting household surveys in all the communities and compare these harvests with the harvests reported by Federal permit holders.
2. Describe the factors affecting participation in the permitting process.

Methods

This project will gather data on steelhead harvest levels through confidential household surveys in each community on Prince of Wales Island. These data will be summarized and compared with data reported through the permitting process. Interviews will be conducted with subsistence steelhead harvesters identified from the household harvest surveys about the level of their participation in the Federal permitting process. The reasons and constraints for their participation from the first year of the study will be used to construct an ethnographic decision model. This model will be field tested on the key interviews conducted during the second year of the study. Findings from the household harvest surveys and the key interviews will be analyzed and included in the final report which will be reviewed during a community meeting on Prince of Wales Island.

Partnerships/Capacity Building

The Hydaburg Cooperative Association and Organized Village of Kasaan will lead this project, in collaboration with the other two Tribes on Prince of Wales Island (Craig Community Association and
Klawock Cooperative Association), the Bureau of Indian Affairs Subsistence Branch and the U.S. Forest Service staff in Craig responsible for implementing the subsistence steelhead permitting on Prince of Wales Island. Preliminary discussions with all collaborators started in early in 2006, and phone calls and a teleconference have occurred more recently to formulate this proposal.

This project continues to develop upon relationships between the Prince of Wales Tribes and the Federal government, in working together to address subsistence priorities important to the communities. Through continued partnerships, HCA and OVKa can maintain their capacity building for the development of their fisheries programs.

**Justification**

This project is recommended for funding with modification. The project addresses a high priority issue for the Federal Subsistence Program, in an area with considerable Federal jurisdiction. Investigators have performed well on previous Monitoring Program projects. The collaborative nature of the project and the strong capacity building component greatly strengthen the proposal. However, some technical issues need to be addressed in a revised investigation plan before the project moves forward.
In 2006, 610 acres of submerged lands around Makhnati Island were included in the Federal Subsistence Management area. The Federal Subsistence Board has deferred a proposal to close this area to all non-Federal subsistence users. To understand the importance of the customary and traditional herring egg fishery in the Makhnati Island waters, Sitka Tribe seeks to gather historical and contemporary subsistence fishing information related to efforts made and harvests received in this area.

Objectives

Document and describe the customary and traditional herring egg fishery in Maknahti Island Federal waters, including harvest, effort, and customary and traditional practices.

To achieve this objective, Sitka Tribe of Alaska will:

1. Gather and analyze contemporary information on the subsistence harvest and use of herring eggs in Maknahti Island Federal waters

2. Gather and analyze historical Information on subsistence harvest and use of herring eggs in Maknahti Island Federal waters.

Methods

1. Contemporary Data Collection: Companion herring egg harvest survey

STA proposes to develop a number of survey questions to supplement the Herring egg Harvest Survey in 2008 and 2009, focusing specifically on harvest and use of the Maknahti area. The existing survey instrument was developed in consultation with ADF&G. Under this project, additional questions will be asked to get at site specific locations of harvest, and effort directed at harvest in this area. The harvest survey is administered to about 150 households, based on the most recent census of subsistence harvesting households in the Sitka Sound subsistence herring fishery. The sample surveyed includes routine and high harvesting households. The additional questions will be asked of all survey participants, although responses will not be included for ADF&G analysis due to local concerns about the site specific information being used against subsistence users.

2. Historical Information Collection

Sitka Tribe of Alaska will work in coordination with Dr. Thomas Thornton, who is currently applying for a grant from North Pacific Research Board to document the historic herring egg spawning and massing areas in Southeast Alaska and how those areas relate to historic subsistence and non-subsistence herring
uses in Southeast Alaska. This study will use archaeological, historical, and environmental records as well as ethnographic interviews with contemporary local experts involved with herring fisheries. A key objective of Dr. Thornton’s project is to understand changes in herring stocks, spawning and massing patterns, and uses over long time scales, as complement to more detailed recent records kept by ADF&G since 1980.

Partnerships/Capacity Building

Sitka Tribe of Alaska has been collaborating with ADF&G from 2002–2006 on an annual customary and traditional herring egg harvest survey. This project will build upon that collaboration. STA has been working with USFS Sitka District Ranger Office on herring issues for the past year, since the Makhnati Island Federal waters were identified. Because Sitka’s subsistence herring egg harvest is the last of its kind through the State, STA works with Alaska Natives around the state who either harvest or receive eggs from the Sitka subsistence herring egg fishery.

Justification

This project is recommended for funding. The project addresses a high priority information need specifically identified by the Federal Subsistence Board at its January 2007 meeting. The project appears to be a good collaborative effort between Sitka Tribe of Alaska and Portland State University, with some consultation on the part of the USDA Forest Service. The study design has some minor technical issues that investigators need to address or clarify. The budget is reasonable, and includes a significant match ($61,416). The project includes a good capacity building effort, and the investigators are qualified to do the work.
Steelhead trout (*Oncorhynchus mykiss*) comprise an important subsistence fishery for rural residents of the southeast Alaska region. Subsistence users have traditionally harvested steelhead from the region’s streams during fall through spring. Nearly all of these systems are located within the Federal Conservation Unit boundaries of the Tongass National Forest. Regulations that established a limited Federal subsistence fishery for this species on Prince of Wales Island were approved by the Federal Subsistence Board in 2002; these regulations have recently been expanded to the Federal waters across the entire southeast Alaska Region (2006).

Little historical information is available to document population sizes, age/sex/length characteristics, run timing, and/or spatial distribution of steelhead on the majority of southeast Alaska streams. At present, these systems are being managed by the Federal Subsistence program according to categories of “small” (less than 150 fish) or “large” (greater than 150 fish) numbers of adult spawners, and accessibility (“road accessible”, versus “remote” locations). Lack of more accurate data has hampered efforts to assess the potential effects of subsistence fishing and/or catch-and-release sport angling, and prevents the refinement of regulations that would ensure adequate conservation of steelhead, while allowing for expanded harvest opportunities.

This project is being proposed as a 4-year study (FY 2008–2011) to continue with the collection of accurate, quantitative information on the abundance of spring adult steelhead on Prince of Wales Island. The site selected for study is Saltery Creek, a freshwater stream system on the southwestern part of Prince of Wales Island, adjacent to the community of Hydaburg. This selection was based upon evaluations of data from returned subsistence fishing permits, and the importance of this fishery, based on discussions with managers, biologists, and resource specialists from the State, Federal, and Tribal agencies/organizations on the Island.

**Objectives**

1. Estimate the abundance of adult spring-run steelhead returning annually to Saltery Creek.
2. Determine the temporal variability in the abundance of adult steelhead annual returns in Saltery Creek.
3. Quantitatively estimate the sex and length compositions of spring-run adult steelhead in Saltery Creek.

Methods

To enumerate adult upstream migrating steelhead, a weir will be operated in the study stream for a time period corresponding to the main run timing for spring returning adult steelhead. A channel-spanning, aluminum and steel bipod weir with fixed center panel sections will be constructed in Saltery Creek during the first week of March. The weir will be installed at a location approximately 200 meters upstream of Saltery Creek’s confluence with tidewater. It will then be operated for 10 weeks, to enumerate upstream migrating steelhead spawners. Upstream migrating adult steelhead will be counted and passed each day. A minimum of one daily counting session will be employed, with the frequency of additional sessions dependent on the number of fish passing through the weir. To assess the levels of temporal variability in the abundance of spring run adult steelhead in the Saltery Creek system, the counting weir will be operated during the same time period, each season, for the duration of the project. This will yield a continuous data set that encompasses four consecutive years, which will be utilized in analysis to ascertain the magnitude of such variation in the numbers of returning adult fish. Data on adult steelhead sex, length, and incidence of repeat spawning will be collected from a sub-set of adult steelhead captured in the study streams.

Partnerships/Capacity Building

This project will promote and enhance working relationship among the State and Federal agencies, and the local communities on Prince of Wales Island. Priority will be given to local hire of qualified personnel from the Alaska Native organizations, and non-Natives from these rural communities, to fill the field technician positions. The interagency cooperation needed to plan, implement, and report on this project will continue to expand the capacity of HCA and OVK. The Organized Village of Kasaan, the Hydaburg Cooperative Association, and the Craig Community Association were consulted, along with Line officers and natural resources staff from the U.S. Forest Service. All have expressed their support for this project. This cooperative sharing will improve management of southeast Alaska steelhead.

Justification

This project addresses an issue specifically identified in the 2008 Request for Proposals. The need for steelhead population estimates on Prince of Wales (POW) Island is also listed as a priority in the 2006 Southeast Alaska Strategic Plan. Gathering baseline information on steelhead escapement in the Hydaburg area would be beneficial for evaluating the Federal management strategy on POW Island. The Hydaburg Cooperative Association is the lead contractor with support from the Organized Village of Ka’saan. This project would promote and enhance working relationships among State and Federal agencies, and the local communities on POW Island. The investigators responded well to the proposal review comments of the TRC, but then dropped the weir validation portion of the project. The investigators need to explore methods of determining escapement which include a validation component. The project should only be funded with the following modifications: (1) a validation component is added to the population assessment, and (2) a lead is assigned for report submission. Given limited funding for the 2008 Monitoring Program, there is insufficient funding for consideration of even all of the highest priority information needs identified in the Request for Proposals (RFP). Several other projects addressing high priority information needs in this region are also competing for Monitoring Program funds. Investigators are encouraged to resubmit this project in response to the 2010 RFP.
### FP08-01 Executive Summary

<table>
<thead>
<tr>
<th>General Description</th>
<th>Proposal FP08-01 would rescind the closure and allow non-Federally qualified users to harvest sockeye salmon from streams draining into the Bay of Pillars (Kutlaku Lake and Creek). <em>Submitted by the Organized Village of Kake and the Alaska Department of Fish and Game.</em></th>
</tr>
</thead>
<tbody>
<tr>
<td>Proposed Regulation</td>
<td>§ 0.27(i)(13) (xvii) Only Federally qualified subsistence users may harvest sockeye salmon in streams draining into Falls Lake Bay or Gut Bay, or Bay of Pillars.</td>
</tr>
<tr>
<td>Southeast Alaska Regional Council Recommendation</td>
<td>Support Proposal FP08-01</td>
</tr>
<tr>
<td>OSM Conclusion</td>
<td>Support Proposal FP08-01</td>
</tr>
<tr>
<td>Interagency Staff Committee Comments</td>
<td>See comments following analysis.</td>
</tr>
<tr>
<td>ADF&amp;G Comments</td>
<td>Support Proposal FP08-01</td>
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<tr>
<td>Written Public Comments</td>
<td>None</td>
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</table>
REGIONAL ADVISORY COUNCIL RECOMMENDATION
FP08-01

SOUTHEAST ALASKA SUBSISTENCE REGIONAL ADVISORY COUNCIL

Support Proposal FP08-01

Justification

The Council agreed with the staff analysis which recommended removing the closure. There was consensus between the Organized Village of Kake, the Alaska Department of Fish and Game and the USFS staff that the magnitude of the returns of Sockeye into Pillar Bay was indicative of a healthy sockeye population. Stock assessment studies have been conducted in the primary spawning tributary of Kutlaku Lake (the sockeye spawning system in Pillar Bay) during the past five years. A weir project in 2006 counted 10,600 sockeye salmon passing into Kutlaku Lake. Rescinding the closure would benefit federally qualified and nonqualified users by removing an unnecessary jurisdictional boundary.
ISSUES

Proposal FP08-01, jointly submitted by the Organized Village of Kake (OVK) and the Alaska Department of Fish and Game (ADF&G), would rescind the closure and allow non-Federally qualified users to harvest sockeye salmon from streams draining into the Bay of Pillars (Kutlaku Lake and Creek).

DISCUSSION

The Federal Subsistence Board (Board) limited the harvest of sockeye salmon in the waters of the Kutlaku Creek drainage to Federally qualified users in 2000 (effective for the 2001 season). The Board justified this action as being necessary to protect the health of the sockeye salmon resource and for the continuation of subsistence uses. The State submitted RFR01-01 in 2001 to reconsider and rescind that decision. The Board did not rescind the closure and asked for additional information regarding this stock.

The majority of subsistence sockeye harvest in the Bay of Pillars occurs in marine waters under State jurisdiction. Harvests are reported on State subsistence fishery permits. To accommodate the needs of Federally qualified users (residents of Kake), ADF&G has made a number of changes in the management of sockeye at Kutlaku. Changes include: specifying an annual harvest limit while increasing the possession limit to match the annual limit; eliminating the closed waters at the mouth of the stream; and increasing the length of the fishing season to allow continuous fishing throughout the entire time of the return. To assist in defining the scope of the conservation issue, the Forest Service, U.S. Department of Agriculture (USFS), through the Fisheries Resource Monitoring Program, contracted with OVK and ADF&G to conduct sockeye salmon stock assessment studies at Kutlaku Lake during the 2002 through 2006 seasons. Based on the results of the population assessment studies, the local USFS Federal fisheries staff, OVK and ADF&G believe the sockeye population at Kutlaku is healthy. The OVK Tribal Council, the ADF&G and the USFS agree that rescinding the closure at Kutlaku would not result in a conservation concern.

Decreased logging in recent years has reduced the numbers of non-Federally qualified users that have ready access to the Bay of Pillars. Since 2001, there have been no reports of user conflicts between Federal and non-Federally qualified users in either waters under Federal jurisdiction or in the adjacent marine waters under State jurisdiction.

Existing Federal Regulation

For the Southeastern Alaska Area:

§___.27(i)(13)(xvii) Only Federally qualified subsistence users may harvest sockeye salmon in streams draining into Falls Lake Bay, Gut Bay, or Bay of Pillars.

(Readers please note that the original proposal uses text from an outdated version of the regulations; “In the Falls Lake Bay and Gut Bay drainages, the possession limit is 10 sockeye salmon per household.” It is not the intent of the proponents to establish a harvest limit for these streams with this proposal and this language is not included in the proposed regulation.)
Proposed Federal Regulation

§___.27(i)(13) (xvii) Only Federally qualified subsistence users may harvest sockeye salmon in streams draining into Falls Lake Bay or Gut Bay, or Bay of Pillars.

Existing State Regulation

Sport fishing for sockeye, coho, pink and chum salmon is allowed in State regulations as part of the general harvest regulations for the Southeast Alaska area. Subsistence fishing permits are issued for the Bay of Pillars with an annual harvest limit of 50 sockeye salmon. The State sockeye salmon season, which normally closes July 31, was changed to close August 15 in 2007 to provide more opportunity for subsistence users to harvest Kutlaku sockeye salmon.

Extent of Federal Public Waters

For purposes of this discussion, the phrase “Federal public waters” is defined as those waters described under 50 CFR 100.3.

The Bay of Pillars is located within the Tongass National Forest on the northwest shore of Kuiu Island. All fresh waters within the exterior boundaries of the Tongass National Forest are considered Federal public waters for the purposes of Federal subsistence fisheries management.

Customary and Traditional Use Determinations

Kake is the only community with a positive customary and traditional use determination for sockeye salmon in streams draining into the Bay of Pillars.

Regulatory History

The Board adopted a modification to Proposal FP01-31 that prohibited the harvest of sockeye salmon by non-Federally qualified subsistence users at three locations (Falls Lake, Gut Bay Lake and Pillar Bay drainages). Request for Reconsideration RFR01-01 was submitted by ADF&G to rescind that action. The Board heard conflicting testimony from ADF&G and OVK regarding the health of the sockeye salmon stock at Kutlaku Lake and the difficulty subsistence users experienced in harvesting sockeye salmon. The Board determined that there was insufficient assessment information and rejected the RFR. The Board asked the USFS to develop additional information for a subsequent evaluation.

Sockeye salmon Federal harvest and possession limits were adopted from State of Alaska subsistence and personal use permit conditions in effect during the 2000 season. The State adopted a new possession and annual harvest limit (50 per household) in 2002 for the Bay of Pillars (Kutlaku Lake) after a request by local residents to make the fishery more efficient. The Board adopted Proposal FP05-24 that set Federal limits, if not specified in regulation, be the same as State subsistence or personal use harvest limits. The Board also adopted Proposal FP06-25 to abolish the Federal harvest limit for Pillar Bay (Kutlaku Lake). The effect was that the State annual and possession limit of 50 sockeye became the Federal harvest and possession limit. Justification for that action was that the State harvest and possession limit better met the needs of subsistence users without any negative effect on the stock. The current regulation relevant to sockeye salmon harvest limits at Kutlaku reads:

§___.27(i)(13) (xii) If a harvest limit is not otherwise listed for sockeye in this §ll.27(i)(13), the harvest limit for sockeye salmon is the same as provided for in adjacent State subsistence or
personal use fisheries. If a harvest limit is not established for the State subsistence or personal use fisheries, the possession limit is 10 sockeye and the annual harvest limit is 20 sockeye per household for that stream.

The Board approved a request by ADF&G for a special action (FSA07-02) to allow non-Federally qualified users to harvest sockeye at Kutlaku Lake during the 2007 season. The special action was effective for 60 days beginning July 6, 2007.

Biological Background

Limnological studies were initiated at Kutlaku Lake in 2001. In 2002, 2003, 2004 and 2005 mark-recapture studies were conducted to estimate the number of sockeye salmon using the primary spawning ground. These studies showed that an unknown number of sockeye salmon spawn in the lake and in several small tributary streams separate from the primary spawning ground. Visual estimates were made to account for the unknown proportion of sockeye spawning in areas separate from the study site. However, there was no mechanism in place to validate the visual estimates. In 2006, a weir was used to count fish entering the lake and systematically mark sockeye salmon for the mark-recapture portion of the study. The weir was necessary to provide the information needed for the direct comparison between the number of sockeye salmon estimated by the mark-recapture study in the main spawning tributary and the actual total escapement. The 2006 weir count was 10,600 sockeye salmon. An escapement of 10,600 sockeye salmon in Kutlaku Lake is indicative of a healthy population (Bergmann 2007, pers. comm.). A number of methods can be employed to use the tributary mark-recapture estimates of the main tributary and visual estimate data to generate a total sockeye salmon escapement estimate for the years prior to 2006. However, additional data are needed to adequately describe the confidence in those estimates. Using a combination of the index mark-recapture results and visual estimates, the whole lake total escapement estimate for 2002 to 2005 was likely in the range of 8,500 to 12,000 sockeye salmon (Table 1; Conitz 2006).

Table 1. Estimates of sockeye salmon spawner abundance, Kutlaku Lake, 2002-2006. Mark-recapture estimates (MR) from the inlet stream spawning tributary were combined with a visual estimate of other sockeye salmon spawning distributions to derive the MR+Visual estimate.

<table>
<thead>
<tr>
<th>Year</th>
<th>MR+Visual Estimate</th>
<th>Weir</th>
<th>MR Whole Lake Estimate</th>
<th>MR Inlet Stream Estimate</th>
</tr>
</thead>
<tbody>
<tr>
<td>2002</td>
<td>10,600</td>
<td>na</td>
<td>na</td>
<td>1,354</td>
</tr>
<tr>
<td>2003</td>
<td>8,500</td>
<td>na</td>
<td>na</td>
<td>3,500</td>
</tr>
<tr>
<td>2005</td>
<td>12,000</td>
<td>na</td>
<td>na</td>
<td>4,530</td>
</tr>
<tr>
<td>2006</td>
<td>na</td>
<td>10,600</td>
<td>16,600</td>
<td>6,800</td>
</tr>
</tbody>
</table>

Harvest History

Subsistence fishing occurs in the Bay of Pillars with State subsistence fishing permits. There have not been any sockeye salmon reported on Federal permits from the waters under Federal jurisdiction (Kutlaku Lake and Creek). Reporting is voluntary for State permits and is thought to reflect a minimum harvest. The average annual subsistence harvest reported on returned subsistence fishing permits from 1985 to 1994 was 843 sockeye taken by 38 fishermen. From 1995 to 2005, the reported average annual harvest was 455 sockeye salmon taken by 21 fishermen (Table 2; Conitz 2006). Sockeye salmon returning to Kutlaku Lake are caught incidentally in the Chatham Strait commercial purse seine fishery which targets...
pink and chum salmon. The number of Kutlaku Lake origin sockeye salmon caught is not known. The sport fish harvest is unknown, but thought to be low, and not detectable with the Statewide Mail-Out Harvest Survey.

**Effect of the Proposal**

This proposal would rescind the restriction for non-Federally qualified users to harvest sockeye in the waters under Federal jurisdiction at Kutlaku Creek and Lake. All users would be able to harvest sockeye salmon under the appropriate Federal and State regulatory programs. Allowing Federally and non-Federally qualified users to harvest sockeye salmon in drainages into the Bay of Pillars would not produce a conservation concern.

**OSM CONCLUSION**

**Support** Proposal FP08-01.

---

**Table 2.** Annual fishing effort (number of permits reporting) and subsistence harvest of sockeye salmon from the Bay of Pillars, as reported by subsistence permit holders.

<table>
<thead>
<tr>
<th>Year</th>
<th>Number of Permits Reporting</th>
<th>Total Reported Sockeye Harvest</th>
<th>Mean Number of Sockeye Per Permit</th>
</tr>
</thead>
<tbody>
<tr>
<td>1985</td>
<td>38</td>
<td>812</td>
<td>21</td>
</tr>
<tr>
<td>1986</td>
<td>32</td>
<td>750</td>
<td>23</td>
</tr>
<tr>
<td>1987</td>
<td>50</td>
<td>1,312</td>
<td>26</td>
</tr>
<tr>
<td>1988</td>
<td>48</td>
<td>969</td>
<td>20</td>
</tr>
<tr>
<td>1989</td>
<td>36</td>
<td>634</td>
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</tr>
<tr>
<td>1990</td>
<td>27</td>
<td>618</td>
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<td>1991</td>
<td>37</td>
<td>813</td>
<td>22</td>
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<td>1992</td>
<td>63</td>
<td>1,375</td>
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<td>1993</td>
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<td>1999</td>
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<td>2003</td>
<td>22</td>
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<tr>
<td>2004</td>
<td>16</td>
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<tr>
<td>2005</td>
<td>6</td>
<td>114</td>
<td>19</td>
</tr>
<tr>
<td>2006</td>
<td>&lt;3 confidential</td>
<td>NA</td>
<td>NA</td>
</tr>
</tbody>
</table>

**Averages**

<table>
<thead>
<tr>
<th>Year</th>
<th>Number of Permits Reporting</th>
<th>Total Reported Sockeye Harvest</th>
<th>Mean Number of Sockeye Per Permit</th>
</tr>
</thead>
<tbody>
<tr>
<td>1985–1994</td>
<td>38</td>
<td>843</td>
<td>23</td>
</tr>
<tr>
<td>1995–2005</td>
<td>21</td>
<td>455</td>
<td>21</td>
</tr>
</tbody>
</table>
Justification

The Kutlaku Lake sockeye salmon stock has been the subject of five years of population assessment surveys. The number of non-Federally qualified users harvesting sockeye from this area has been reduced due to closure of the nearby logging camp. There is consensus among management agencies and users that the stock of sockeye salmon is healthy and the closure to non-Federally qualified users is no longer necessary. Adopting this proposal allows both Federally and non-Federally qualified users the opportunity to fish for sockeye salmon in the Bay of Pillars without concern for the Federal jurisdictional boundary.

LITERATURE CITED


The Interagency Staff Committee found the staff analysis to be a complete and accurate evaluation of the proposal, and the recommendation of the Regional Advisory Council to be consistent with ANILCA Section 805(c).
Alaska Department of Fish and Game
Comments to the Federal Subsistence Board

FP08-01 Bay of Pillars, Kutlaku Creek

Introduction: The Organized Village of Kake (Kake) and the Alaska Department of Fish and Game (Department) submitted proposal FP 08-01 to the Federal Subsistence Board (Board) to rescind the Board’s closure in the Bay of Pillars subsistence fishery to non-federally qualified users. Salmon stock returning to the Kutlaku watershed is not a conservation concern, and the return provides a harvestable surplus available to all users. Special Action Request FSA 07-02, approved by the Board on July 5, 2007, temporarily lifted the closure of sockeye salmon fishing in streams draining into Bay of Pillars (Kutlaku Lake and stream) to non-federally qualified users for 60 days effective Friday, July 6, 2007.

Impact on Subsistence Use: During the six years that the federal closure was in effect, no sockeye salmon were ever reported harvested on Federal permits. Reopening the freshwaters of Kutlaku drainage to non-federally qualified users will have no impact on subsistence use by federally-qualified users and will improve opportunity for all subsistence and other users, while reducing unnecessary conflicting federal and State of Alaska (State) regulations. Data collected from joint Forest Service and Department projects at Kutlaku Lake indicate that harvest from federal subsistence and other uses is proportionally low relative to escapement and well within the range of sustainable use, including a potential small increase in harvest that may result from reopening these freshwaters to non-federally qualified users. Department statewide harvest surveys for the Bay of Pillars indicates very low angler effort has been expended in recent years. Information collected in the mandatory freshwater sport fishing guide logbook program (required beginning in 2005) indicated no sockeye salmon were harvested during 2005 or 2006 by guided anglers. The Department will continue to monitor harvest information by all users.

Opportunity Provided by State: Subsistence fishing occurs in marine and inland waters of Kutlaku Lake drainage and Bay of Pillars. On December 5, 2000, the federal Board closed the freshwaters to non-federally eligible users and established a federal possession limit of 15 sockeye salmon per individual and 25 per household. These limits mirrored harvest limits already in place on Department subsistence permits for all subsistence users in fresh and marine waters. Federal and State analyses at the time found no evidence of a conservation concern. In response to a March 5, 2002, request by Kake community representatives, the Department increased daily and annual sockeye salmon harvest limits to 50 sockeye salmon on State subsistence salmon permits for the Bay of Pillars area prior to the 2002 season. All harvest in the area by both federally qualified and State subsistence users was taken under State fishing permits in marine waters. No harvest was reported under federal subsistence permit in freshwaters of Kutlaku Lake drainage. State subsistence regulations in this area provide for harvest of salmon with gaffs, spears, beach seines, dip nets, drift gillnets, and cast nets. Under the State permit system, managers have the authority to establish or change open fishing periods, possession limits, and annual limits each year, and legal gear configuration or type (5AAC 01.720 and 730 (e)(2)), as well as take in-season actions to open and close time and areas by emergency order to provide for escapement as a basis for sustainable harvest of surplus returns. The harvestable surplus of sockeye salmon available in recent years warranted a liberalization of
the State subsistence fishery, so in 2007 the Department extended the sockeye season for Kutlaku Creek and Bay of Pillars 15 days through August 15 by permit.

The following table lists the number of State reporting permits and harvest of sockeye salmon in the Bay of Pillars/Kutlaku Lake system.

Table 1. Annual fishing effort (number of permits reporting) and subsistence harvest of sockeye salmon from the Kutlaku Lake system, as reported by State subsistence permit holders.

<table>
<thead>
<tr>
<th>Year</th>
<th>Number of permits reporting</th>
<th>Total reported sockeye harvest</th>
<th>Mean number sockeye per permit</th>
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</thead>
<tbody>
<tr>
<td>1985</td>
<td>38</td>
<td>812</td>
<td>21</td>
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<tr>
<td>1986</td>
<td>32</td>
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\(^1\)Data remains confidential if three or less individuals participate.

Department Recommendation: Support.
<table>
<thead>
<tr>
<th><strong>FP08-02 Executive Summary</strong></th>
</tr>
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<tr>
<td><strong>General Description</strong></td>
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<td><strong>Proposed Regulation</strong></td>
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</tr>
<tr>
<td><strong>Written Public Comments</strong></td>
</tr>
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</table>
SOUTHEAST ALASKA SUBSISTENCE REGIONAL ADVISORY COUNCIL

Support Proposal FP08-02

Justification

The Council agreed with the staff analysis which recommended removing the closure at Falls Lake. The staff analysis did not recommend rescinding the closure at Gut Bay Lake due to lack of information regarding the magnitude of returns at Gut Bay Lake. The Council did not see sufficient evidence that indicated a conservation problem at Gut Bay Lake. If there were no conservation concerns with rescinding the closure at Falls and Kutlaku Lakes; there was likely not a conservation concern with that same action at Gut Bay Lake. The rationale was that lakes in close proximity to each other would likely react similarly to common environmental factors and fishery interception rates. Rescinding the closures would benefit Federally qualified and nonqualified users by removing unnecessary jurisdictional boundaries.
ISSUES

Proposal FP08-02, submitted by the ADF&G, requests that the closures to non-Federally qualified subsistence users be rescinded at three locations (Falls Lake, Gut Bay Lake and Pillar Bay drainages) in Southeast Alaska. This document addresses rescinding the closures at Falls and Gut Bay Lakes. The closure at Pillar Bay (Kutlaku) is addressed by FP08-01. The staff analysis presented to the Southeast Regional Advisory Council was to support this proposal with modification to rescind the closure at Falls Lake and maintain the closure at Gut Bay Lake. In addition, the staff analysis requested that the Council provide additional local information on uses and stock status on Gut Bay Lake sockeye salmon that would be included in the subsequent staff analysis presented to the Federal Subsistence Board.

DISCUSSION

ADF&G states that it is not necessary to retain closures at Falls and Gut Bay Lakes to the harvest of sockeye salmon by non-Federally qualified users to ensure the continued viability of these sockeye salmon populations. In addition, ADF&G states that the small amount of additional sockeye harvest that would result from rescinding the closure at these two locations would have little, if any, effect on the health of the sockeye salmon populations at both locations. While there is information on the stock status of sockeye salmon at Falls Lake, ADF&G has provided no data concerning the stock status of the Gut Bay Lake sockeye salmon population. No community discussions regarding the use and status of sockeye salmon at Falls Lake or Gut Bay Lake, such as occurred for Kutlaku Lake in 2006, have occurred for these locations.

Existing Federal Regulation

§ 100.27 (c) (1) (xvii) Only Federally qualified subsistence users may harvest sockeye salmon in streams draining into Falls Lake Bay, Gut Bay, or Bay of Pillars.

Proposed Federal Regulation

§ 100.27 (c) (1) (xvii) Only Federally qualified subsistence users may harvest sockeye salmon in streams draining into Falls Lake Bay, Gut Bay, or Bay of Pillars.

Extent of Federal Public Waters

For purposes of this discussion, the phrase “Federal public waters” is defined as those waters described under 50 CFR 100.3.

All fresh waters in the Falls Lake and Gut Bay Lake drainages are within the exterior boundaries of the Tongass National Forest and are considered Federal public waters for the purposes of Federal subsistence fisheries management (Map 1).
Proposal FP08-02
Map 1: Falls and Gut Lakes
Customary and Traditional Use Determinations

The community of Kake has a positive customary and traditional use determination for sockeye salmon in Falls and Gut Bay Lakes.

Regulatory History

Federal Regulatory History

The Board adopted a modification to Proposal FP01-31 (submitted by the Organized Village of Kake (OVK) and the City of Kake) that prohibited the harvest of sockeye salmon by non-Federally qualified subsistence users at three locations (Falls Lake, Gut Bay Lake and Pillar Bay drainages). OVK staff expressed local knowledge to the Southeast Alaska Regional Advisory Council (Council) that sport fishers at Falls Lake, Gut Bay and Kutlaku were adversely affecting subsistence users from Kake. During its October 11–13, 2000 meeting in Hydaburg, the Council recommended support for the proposal with a modification to retain the current State subsistence possession limits (SERAC 2000). The Council’s rationale was that the Falls, Gut Bay, and Kutlaku (referenced as Pillar Bay drainage in the regulation) Lakes sockeye salmon runs may have a conservation concern and should be protected for subsistence use. In addition, the Council hoped to protect opportunities for subsistence fishing in these systems before there was an allocation conflict. The Federal Subsistence Board (Board) voted unanimously to adopt the recommendation of the Council, and closed the Federal waters of Falls, Gut, and, Kutlaku Lakes systems to the harvest of sockeye salmon by non-Federally qualified subsistence users. The Board Chair reasoned that few sport fishers would be displaced, and while “it’s not going to change subsistence users harvest... it is a little step that we can do to conserve stocks that are in trouble while we are getting the information necessary....”(FSB 2000).

During an August 2001 public meeting in Kake, one of the original authors of the proposal explained there was a consensus among Kake residents that the total harvest from all fisheries was causing the fishermen to “eat themselves,” meaning there was over harvest of the stocks. He also believed sport fishing at Falls Lake, Gut Bay, and Pillar Bay was adversely affecting the ability of subsistence users in Kake to get the fish they need. He explained that the physical presence of other users disrupted the subsistence fishery because other users were anchoring vessels in productive fishing locations, which interfered with normal subsistence fishing activities (Jackson 2001, pers. comm.).

The State of Alaska submitted Request for Reconsideration FRFR01-01, which sought to reverse the Board’s December 2000 closure decision. The staff analysis indicated there were conservation concerns for Falls and Gut Bay Lake sockeye salmon runs. The Board heard conflicting testimony from ADF&G and OVK regarding the health of the sockeye salmon stock at Kutlaku Lake and the difficulty subsistence users experienced in harvesting sockeye salmon. The Board rejected the State’s request for reconsideration noting: 1) uncertainty in escapement data, 2) potential for interference with subsistence fishing activities by other users, and 3) opposition to removal of closures by the Council, OVK, and the City of Kake (FSB 2001). The Board clearly expected that the affected agencies would act to develop new information for a subsequent evaluation.

During the Council meeting held in Haines, Alaska on Sept. 25, 2007 the Council voted to support this proposal. Their reasoning was that there was no conservation concern at either Falls or Gut Bay Lakes, there is little if any non-Federally qualified users fishing in Federal jurisdiction in those locations, and escapement and harvest use conditions at Falls and Kutlaku lakes trend with escapement and harvest uses at Gut Bay lake.
Table 1. In-season and Pre-season actions taken by ADF&G at Falls Lake and Gut Bay (ADF&G 2007)

<table>
<thead>
<tr>
<th>Location</th>
<th>Year</th>
<th>Action</th>
<th>Effective Date</th>
<th>Rationale</th>
</tr>
</thead>
<tbody>
<tr>
<td>Gut Bay</td>
<td>1996</td>
<td>Closed Season</td>
<td>7/26/1996</td>
<td>Low Returns of Adults</td>
</tr>
<tr>
<td>Gut Bay</td>
<td>1999</td>
<td>Reduced Season (6/1–7/20)</td>
<td>Pre-season permit change</td>
<td>Ensure escapements</td>
</tr>
<tr>
<td>Gut Bay</td>
<td>2001</td>
<td>Increased Season (6/1–8/15)</td>
<td>Pre-season permit change</td>
<td></td>
</tr>
<tr>
<td>Gut Bay</td>
<td>2002</td>
<td>Reduced season (6/1–7/20, 50 yard mouth closure, 10 possession / 20 annual limit)</td>
<td>Pre-season permit change</td>
<td>Ensure escapements</td>
</tr>
<tr>
<td>Falls Lake</td>
<td>1999</td>
<td>Reduced season on permit (6/1–7/20)</td>
<td>Pre-season permit change</td>
<td>Ensure escapement, increasing harvests and public complaints</td>
</tr>
<tr>
<td>Falls Lake</td>
<td>2001</td>
<td>Increased season on permits (6/1–8/15)</td>
<td>Pre-season permit change</td>
<td></td>
</tr>
<tr>
<td>Falls Lake</td>
<td>2002</td>
<td>Reduced season on permit, 50 yard mouth closure, 50 in possession / 50 annual limit</td>
<td>Pre-season permit change</td>
<td>Ensure escapement, provide better subsistence opportunity</td>
</tr>
<tr>
<td>Falls Lake</td>
<td>2002</td>
<td>In-season closure (EO 1 S 4602)</td>
<td>7/24/02</td>
<td>Subsistence catch estimate of 2000 fish, while weir count was 25 fish at 25% of run</td>
</tr>
<tr>
<td>Falls Lake</td>
<td>2003</td>
<td>Split season on permit 6/1–7/6, 7/14–7/20</td>
<td>Pre-season permit change</td>
<td>Ensure escapement</td>
</tr>
<tr>
<td>Falls Lake</td>
<td>2004</td>
<td>Opened season after permit closed season (EO 1 S 5304)</td>
<td>8/20/04</td>
<td>Adequate escapement, provide additional subsistence opportunity</td>
</tr>
<tr>
<td>Falls Lake</td>
<td>2005</td>
<td>New split season (6/1–7/13, 7/23–8/15)</td>
<td>Pre-season permit change</td>
<td>Ensure escapement, provide subsistence opportunity</td>
</tr>
</tbody>
</table>

State Regulatory History

Table 1 (ADF&G 2007) displays pre-season or in-season actions that were taken by ADF&G at Falls and Gut Bay lakes in recent years. In 2002, in response to increasing subsistence harvest and uncertainty about escapement levels at Falls Lake, and because of the Fisheries Resource Monitoring Program (FRMP) funded project there, ADF&G managers agreed to increase harvest limits and institute annual limits along with a small closed area off the stream mouth to help ensure escapements were met and provide for more subsistence opportunity. At the same time, conservative management measures were continued at Gut Bay Lake where escapement and harvests are not monitored. No in-season or pre-season actions have been taken in the past two years.

Biological Background

There is a lack of sockeye salmon stock assessment data for Gut Bay Lake. In 2002, an attempt was made to generate a spawning grounds mark and recapture estimate in Gut Bay Lake. That effort was unsuccessful due to the physical characteristics of the lake and the investigators’ inability to capture
sockeye salmon spawning and milling in the lake, even though many sockeye salmon were present (Van Alen 2007, pers. comm.). It appears that a weir is the only technique that would generate a reliable escapement estimate, but due to the remoteness of the site, cost, and other considerations, the Technical Review Committee of the FRMP has not recommended funding the project. Little subsistence or sport fishing occurs in areas under Federal jurisdiction (freshwater) in the Gut Bay Lake area (Van Alen 2007, pers. comm.)

A weir was operated by the USFS and ADF&G at Falls Lake from 1981 to 1989. From 2001 to the present, Falls Lake sockeye salmon escapement has been estimated using mark-recapture methods and subsistence harvest data. This work is funded through the FRMP and is a cooperative effort of USFS, OVK, and ADF&G. Currently there is an FRMP funding commitment for that project through FY 2009. Sockeye salmon escapements have ranged from 1,100 to 7,000 during 1981–2006 (Table 2; Pappas 2007, pers. comm.). In 2006, Falls Lake had a large return of sockeye salmon, and the subsistence harvest rate was not excessive for that level of escapement (Table 3). USFS staff has evaluated recent escapements and harvest levels at Falls Lake, and feel that the Falls Lake sockeye salmon stock is healthy.

Harvest History

Subsistence Fishery

The reported subsistence sockeye catch from 2001 to 2006 for Falls Lake and Gut Bay Lake has averaged 1,720 and 414 sockeye salmon per year, respectively (Table 3; Pappas 2007, pers. comm.). Annual subsistence use has generally been increasing at Falls Lake and stable at Gut Bay Lake. There is a general increasing trend in subsistence harvests at Gut Bay since 2002. Most of the subsistence harvest that occurs at Falls and Gut Bay Lakes is taken by residents of Kake.

Commercial Fishery

Although there is not a directed commercial sockeye salmon fishery in marine waters near the Falls and Gut Bay drainages, the largest harvest of sockeye salmon in these areas is taken in the commercial fishery (FWS 2001). It is impossible to determine stock component contributions to the commercial harvest. There has been an increase in total numbers of sockeye harvested in recent years in the areas nearest to Falls Lake and Gut Bay. The average annual sockeye harvest for the Falls and Gut Bay areas (Subdistricts 109-20, 112-11, 112-21 and 112-22) has increased from 1,113 sockeye in the 1970s, to 2,508 in the 1980s, and to 11,146 in the 1990s. Most of the increased harvest is not due to fishermen targeting sockeye, but results from ADF&G allowing increased harvesting opportunities due to the success of nearby chum

### Table 2. Falls Lake Escapement Estimates (Conitz et al 2002; Conitz and Cartwright 2005; Pappas 2007)

<table>
<thead>
<tr>
<th>Year</th>
<th>Weir Count</th>
<th>Mark / Recapture Estimate</th>
</tr>
</thead>
<tbody>
<tr>
<td>1981</td>
<td>1,278</td>
<td>NA</td>
</tr>
<tr>
<td>1982</td>
<td>1,687</td>
<td>NA</td>
</tr>
<tr>
<td>1983</td>
<td>1,658</td>
<td>NA</td>
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<tr>
<td>1984</td>
<td>3,622</td>
<td>NA</td>
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<tr>
<td>1985</td>
<td>2,612</td>
<td>NA</td>
</tr>
<tr>
<td>1987</td>
<td>6,081</td>
<td>NA</td>
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<tr>
<td>1988</td>
<td>2,174</td>
<td>NA</td>
</tr>
<tr>
<td>1989</td>
<td>2,165</td>
<td>NA</td>
</tr>
<tr>
<td>2001</td>
<td>NA</td>
<td>2,600</td>
</tr>
<tr>
<td>2002</td>
<td>NA</td>
<td>1,100</td>
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<td>2003</td>
<td>NA</td>
<td>5,700</td>
</tr>
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<td>2004</td>
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<td>3,100</td>
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<tr>
<td>2005</td>
<td>NA</td>
<td>3,400</td>
</tr>
<tr>
<td>2006*</td>
<td>NA</td>
<td>7,000</td>
</tr>
</tbody>
</table>

* Escapement estimate for 2006 is preliminary
Table 3. Reported Subsistence Sockeye Salmon harvest for Falls Lake and Gut Bay Lake (Pappas 2007)

<table>
<thead>
<tr>
<th>Year</th>
<th>Falls Lake Permits Reporting</th>
<th>Falls Lake Reported Harvest</th>
<th>Gut Bay Lake Permits Reporting</th>
<th>Gut Bay Lake Reported Harvest</th>
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</thead>
<tbody>
<tr>
<td>1985</td>
<td>2</td>
<td>17</td>
<td>37</td>
<td>339</td>
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<td>1986</td>
<td>3</td>
<td>30</td>
<td>59</td>
<td>572</td>
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<tr>
<td>1987</td>
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<tr>
<td>1988</td>
<td>24</td>
<td>338</td>
<td>39</td>
<td>419</td>
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<tr>
<td>1989</td>
<td>26</td>
<td>350</td>
<td>29</td>
<td>572</td>
</tr>
<tr>
<td>1990</td>
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<td>1991</td>
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<tr>
<td>1992</td>
<td>34</td>
<td>550</td>
<td>46</td>
<td>765</td>
</tr>
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<td>1993</td>
<td>51</td>
<td>1002</td>
<td>52</td>
<td>795</td>
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<td>1994</td>
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<td>32</td>
<td>422</td>
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<td>1995</td>
<td>56</td>
<td>976</td>
<td>38</td>
<td>490</td>
</tr>
<tr>
<td>1996</td>
<td>70</td>
<td>1229</td>
<td>41</td>
<td>488</td>
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<td>1997</td>
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<td>987</td>
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<td>1998</td>
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<td>732</td>
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<td>1999</td>
<td>75</td>
<td>1020</td>
<td>26</td>
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<td>2000</td>
<td>59</td>
<td>798</td>
<td>37</td>
<td>419</td>
</tr>
<tr>
<td>2001</td>
<td>84</td>
<td>1290</td>
<td>47</td>
<td>577</td>
</tr>
<tr>
<td>2002</td>
<td>62</td>
<td>1795</td>
<td>12</td>
<td>121</td>
</tr>
<tr>
<td>2003</td>
<td>63</td>
<td>2434</td>
<td>20</td>
<td>245</td>
</tr>
<tr>
<td>2004</td>
<td>67</td>
<td>2164</td>
<td>31</td>
<td>468</td>
</tr>
<tr>
<td>2005</td>
<td>44</td>
<td>1134</td>
<td>36</td>
<td>512</td>
</tr>
<tr>
<td>2006</td>
<td>47</td>
<td>1507</td>
<td>32</td>
<td>563</td>
</tr>
</tbody>
</table>

salmon hatcheries, and the general long-term trend of increasing abundance of pink and sockeye salmon in the region (FWS 2001; ADF&G 2007).

**Sport Fishery**

The harvest of sockeye salmon at Falls Lake and Gut Bay by sport fishers cannot be determined. The Statewide Sport Harvest Survey, the primary tool used to determine sport harvest by ADF&G, is not designed to provide effort and harvest information on the scale needed to obtain estimates of use at these two systems. Based on data collected by the weir crew at Falls Lake, sport harvests are likely low at that location, and competition between subsistence and sport users does not appear to be a problem in marine waters (Conitz et al. 2002; Conitz and Cartwright 2005).
Effects of the Proposal

Adopting this proposal would allow the retention of sockeye salmon by non-Federally qualified users in the Federal public waters of the Falls Lake and Gut Bay Lake watersheds. No adverse affects to subsistence users from sport fishers are expected at Falls and Gut Lakes since very few sport fishers have been observed in those locations.

OSM CONCLUSION

Support Proposal FP08-02.

Justification

The stock status of sockeye salmon at Gut Bay Lake is unknown, and subsistence harvests are low compared to Falls Lake. No stock status information has been collected for Gut Bay Lake. It appears that in 2006, Falls Lake had the greatest return of sockeye salmon recorded for this system (about 7,000). While the reported subsistence harvest was substantial (1,467 sockeye salmon), it was not the greatest recorded and did not appear to be excessive in relation to the escapement. There is a general increasing trend in subsistence harvests at Gut Bay since 2002. There has been a long term FRMP funded study in cooperation with the USFS, OVK, and ADF&G at Falls Lake that provides estimates of escapement and subsistence harvest. Currently, there is a funding commitment for this project through FY 2009. This information allows fishery resource managers to avoid conservation issues and provide harvest opportunities for all users. Based on observations by the field crew at Falls Lake weir, there appears to be little or no competition in marine waters between sport and subsistence users at Falls Lake.

The Council found that there was no conservation concern at either Falls or Gut Lakes, there is little if any non-Federally qualified users fishing in Federal jurisdiction in those locations and that conditions at Falls and Kutlaku Lakes trend with conditions at Gut Bay Lake.

LITERATURE CITED


The Interagency Staff Committee found the staff analysis for proposal FP08-02 to be a complete and accurate evaluation of the proposal. Some items the Board may wish to consider in their proposal deliberation include:

- The State of Alaska’s Department of Fish and Game (ADF&G) and the Organized Village of Kake (OVK) closely coordinated on the proposed removal of the Federal closure for Kutlaku - Bay of Pillars (proposal FP08-01), including jointly submitting the proposal. In the case of Falls Lake and Gut Bay, as far as we know, ADF&G and OVK did not engage in discussions concerning lifting those closures.

- The original closures were based on user knowledge of these systems, given the lack of stock assessments. There is now assessment information available for Falls Lake Bay but not for Gut Bay. For Falls Lake, there does not appear to be a conservation concern. There may or may not be parallel conservation considerations between these two lakes.

- It is not clear whether subsistence uses/needs are being met. OVK, in a letter to the Southeast Alaska Subsistence Regional Advisory Council (Council), wrote: “The populations of the three Sockeye Lakes are not adequate for the Kake people.” However, subsistence harvest data suggests that harvest has not varied much in Gut Bay Lake over the past 20 years.

- As described in the analysis, all, or almost all, sockeye fishing occurs in marine waters outside of Federal subsistence jurisdiction.

- The Board should consider its closure policy and the requirements of 805(c) and 815 in its deliberation on maintaining the Falls Lake and Gut Bay closures.
Alaska Department of Fish and Game
Comments to the Federal Subsistence Board

FP08-02 Bay of Pillars, Gut Bay, and Falls Lake Bay

Introduction: The Organized Village of Kake (Kake) and Alaska Department of Fish and Game (Department) submitted proposals FP08-01 and part of FP08-02 to rescind the closure for non-federally qualified users in the Bay of Pillars subsistence fishery.1 The Department also requests the Federal Subsistence Board (Board) to rescind the fisheries closure for non-federally qualified users in freshwaters draining into Falls Lake Bay and Gut Bay. The intent of this proposal is to re-open these areas to other users because information confirms that a conservation issue for sockeye salmon does not exist. In addition, the fact that few, if any, sockeye salmon are harvested from freshwaters in these areas by federally qualified subsistence users, despite the closure to non-federally qualified users, confirms the closure is not and was not necessary in order to continue subsistence uses. The Department supports federal actions to rescind unnecessary closures of fisheries to other user groups, consistent with Section 815 of ANILCA.

Background: On December 5, 2000, the Board closed freshwaters at Falls Lake Bay and Gut Bay on Baranof Island and at Bay of Pillars on Kuiu Island to the harvest of sockeye salmon by non-federally qualified users in response to proposal FP01-31. FP01-31, submitted by the Organized Village of Kake and City of Kake, requested the closure due in part to conservation concerns. The Southeast Regional Advisory Council supported the closure to non-federally qualified users. The Federal Interagency Staff Committee (Staff) recommended rejecting Proposal FP01-31 on the basis that sport harvests constitute a small portion of the total harvest in waters where federal regulations are claimed to apply. Federal Staff at the Board meeting cited a lack of substantial evidence to support closing waters to non-federally qualified users and stated that such a closure was unnecessary (December 05 Transcripts, RFR 2001). Despite lack of substantial evidence of a conservation concern, the Board adopted the federal closure to non-federally eligible users and established a federal possession limit of 15 sockeye salmon per individual and 25 per household annual limit. These limits mirrored harvest limits in place on Department subsistence permits at the time.

In April 2001, the Department submitted Request for Reconsideration (RFR) 01-01 of Board action taken with respect to Proposal FP 01-31. The RFR claimed that the Board violated ANILCA and its implementing regulations by enacting an unnecessary closure that did not follow its own regulations and acted arbitrarily and capriciously when it closed areas to other users based on an ill-defined conservation concern and not supported by substantial evidence. The State requested the Board reverse its action, rescind the regulation, and postpone further regulatory action until the proponents provided substantial evidence in support of the request. The Board rejected the RFR despite Federal Staff analysis indicating there was no clear evidence of a conservation concern.

1 Concerning the Bay of Pillars portion of FP08-02, the Department submitted actions identical in intent through Request for Reconsideration 01-01 during 2001, proposal FP05-25 during 2004, Request for Reconsideration 06-06 in 2006, FP08-01 in 2007, and a Special Action Request filed on June 14, 2007 (FSA 07-02).
Proponents of the original proposal indicated harvest and activities of unguided and guided sport anglers was largely the source of competition, and anglers would displace or interfere with federally qualified subsistence users. Statewide harvest surveys for the Falls Lake Bay and Gut Bay areas indicate very low angler effort in recent years and no sport harvest of sockeye salmon in either location. Historically, the number of sockeye salmon harvested in the sport fishery is small and, due to limitations in the statewide harvest survey, cannot be reported separately for Falls Lake Bay and Gut Bay drainages. Average estimated Falls Lake Bay marine sport harvest from the onsite creel project for the years 2001-2005 was 54 sockeye salmon per year (Table 1). Saltwater guided angler logbook data also indicate that sport fishery harvest in marine waters in District 109-20, which includes both Falls Lake Bay and Gut Bay, have averaged less than a dozen sockeye salmon annually in recent years.

Table 1. Falls Lake Bay sport sockeye salmon harvests, 1999-2005.

| Year | Estimated Sport Harvest | Reported Charter Harvest (All District 109-20) | Estimated Escapement
<table>
<thead>
<tr>
<th></th>
<th></th>
<th></th>
<th></th>
</tr>
</thead>
<tbody>
<tr>
<td>1999</td>
<td>3</td>
<td></td>
<td></td>
</tr>
<tr>
<td>2000</td>
<td>7</td>
<td></td>
<td></td>
</tr>
<tr>
<td>2001</td>
<td>42</td>
<td>0</td>
<td>2,633</td>
</tr>
<tr>
<td>2002</td>
<td>6</td>
<td>2</td>
<td>1,090</td>
</tr>
<tr>
<td>2003</td>
<td>90</td>
<td>22</td>
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<td>2004</td>
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<td>32</td>
<td>3,300</td>
</tr>
<tr>
<td>2005</td>
<td>66</td>
<td>-</td>
<td>3,400</td>
</tr>
<tr>
<td>Average</td>
<td>54</td>
<td>11</td>
<td>3,225</td>
</tr>
</tbody>
</table>

Table notes:

- Estimated Sport harvest is based on an onsite creel census.
- Reported Charter Harvest is from logbook entries. This area covers all waters of district 109-20 which includes both Falls and Gut.
- Values of charter logbooks only available through 2004.
- Estimated escapement is based on weir counts and mark recapture experiments at Falls Lake.
- 2005 Falls Lake Report is in draft form.

Number of sockeye harvested and effort in the Falls Lake Bay State subsistence fishery increased slightly over the last 20 years, though the effort and harvest for the Gut Bay fishery during the same years remained steady (Table 2).
Table 2. Falls Lake Bay and Gut Bay State permits, sockeye salmon subsistence harvests, 1985-2006.

<table>
<thead>
<tr>
<th>Falls Lake Bay Permits Reported</th>
<th>Sockeye harvest</th>
<th>Gut Bay Permits Reported</th>
<th>Sockeye Harvest</th>
</tr>
</thead>
<tbody>
<tr>
<td>1985</td>
<td>2</td>
<td>17</td>
<td>37</td>
</tr>
<tr>
<td>1986</td>
<td>3</td>
<td>30</td>
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</tr>
<tr>
<td>1987</td>
<td>3</td>
<td>30</td>
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<td>1988</td>
<td>24</td>
<td>338</td>
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<tr>
<td>1992</td>
<td>34</td>
<td>550</td>
<td>46</td>
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<tr>
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<td>1994</td>
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<tr>
<td>1995</td>
<td>56</td>
<td>976</td>
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<td>1996</td>
<td>70</td>
<td>1229</td>
<td>41</td>
</tr>
<tr>
<td>1997</td>
<td>69</td>
<td>987</td>
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</tr>
<tr>
<td>1998</td>
<td>62</td>
<td>1101</td>
<td>53</td>
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<tr>
<td>1999</td>
<td>75</td>
<td>1020</td>
<td>26</td>
</tr>
<tr>
<td>2000</td>
<td>59</td>
<td>798</td>
<td>37</td>
</tr>
<tr>
<td>2001</td>
<td>84</td>
<td>1290</td>
<td>47</td>
</tr>
<tr>
<td>2002</td>
<td>62</td>
<td>1795</td>
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<td>63</td>
<td>2434</td>
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<td>2004</td>
<td>67</td>
<td>2164</td>
<td>31</td>
</tr>
<tr>
<td>2005</td>
<td>44</td>
<td>1134</td>
<td>36</td>
</tr>
<tr>
<td>2006</td>
<td>47</td>
<td>1507</td>
<td>32</td>
</tr>
<tr>
<td>85-06</td>
<td>Average</td>
<td>44</td>
<td>906</td>
</tr>
<tr>
<td>97-06</td>
<td>Average</td>
<td>63</td>
<td>1423</td>
</tr>
</tbody>
</table>

Note: Data is for Permits Reported and not “Permits Issued.” Due to under-reporting and non-returned harvest reports, the harvest numbers in this table are conservative estimates of harvest and effort, but may indicate trends.

Opportunity Provided by State: Current state subsistence regulations in this area provide for harvest of salmon with gaffs, spears, beach seines, dip nets, drift gillnets, and cast nets. Harvest limits for Falls Lake Bay are similar to those at Bay of Pillars, allowing limits of 50 sockeye salmon, both in possession and annually (individual and/or household). At Gut Bay, the harvest limits are more restrictive and allow possession of 10 sockeye salmon and annual limits (individual and/or household) of 20 sockeye salmon. Under current permit conditions, there are sufficient opportunities for harvest of salmon for subsistence purposes in this area. State managers also have authority to establish or change open fishing periods, possession and annual limits, gear types and specifications, and inseason actions to open and close time and areas. The purpose of such management actions is to provide for escapement as a basis for sustainable harvest of surplus returns when they occur. The 2001-2006 State subsistence harvest from Falls Lake Bay averaged approximately 1,700 sockeye salmon per year. An average 40 sockeye salmon were taken annually in Gut Bay. An average of 61 State subsistence permits were
reported in the Falls Lake Bay fishery, and an average of 30 State subsistence permits were reported for the Gut Bay subsistence fishery during the same years.

**Conservation Issues:** The Falls Lake weir project contributes substantially to answering current questions about the Falls Lake sockeye salmon stock. From 2002-2006, an average of approximately 4,000 sockeye salmon entered the Falls Lake system. The Falls Lake sockeye salmon stock is healthy, the stock productivity appears to be consistent with the size of the lake, and there is enough escapement information to manage this system to avoid conservation issues and provide appropriate harvest limits for all users.

Gut Bay drainage does not currently have an accurate stock assessment program, but recent subsistence harvest levels have been moderate and steady. It is unlikely that a significant increase in harvest will result in the Gut Bay drainage if this proposal is adopted.

The State approaches these situations conservatively and will continue to monitor harvest information by all users, as well as to coordinate with federal land managers.

**Jurisdiction Issues:** Currently, the State’s subsistence fishery harvest in these areas occurs within marine waters not subject to federal regulations. If this proposal is adopted, State fisheries would resume in freshwaters currently closed where the federal government claims jurisdiction. However, most fishing occurs in marine waters.

**Department Recommendation:** Support.
WRITTEN PUBLIC COMMENT

Oppose. The Organized Village of Kake is opposed to FP08-02 for three reasons: 1) the proponent, ADF&G, has not discussed the merits of this proposal with the residents of Kake, 2) they are not convinced there is adequate escapement of sockeye salmon into Falls and Gut Bay Lakes, 3) subsistence needs are not being met because the household possession limit is too small.

Nick Davis
Organized Village of Kake
**FP08-03 Executive Summary**

| General Description | Proposal FP08-03 requests two changes to the management of the Stikine River subsistence salmon fishery: 1) allow subsistence fishing between August 1 and August 14, and 2) make subsistence fishing permits valid for the fishing season. Submitted by Mr. John Murgas |
| Proposed Regulation | §27(c)(1) (xix) You may take Chinook, sockeye, and coho salmon in the mainstem of the Stikine River only under the authority of a Federal subsistence fishing permit. Each Stikine River permit will be issued to a household and will be valid for 15 days. Permits may be revalidated for additional 15-day periods. Only dipnets, spears, gaffs, rod and reel, beach seine, or gillnet not exceeding 15 fathoms in length. The maximum gillnet mesh size is 5 1/2 inches except during the Chinook season when the maximum gillnet mesh size is 8 inches. (A) You may take chinook salmon from May 15 through June 20. The annual limit is 5 chinook salmon per household. (B) You may take sockeye salmon from June 21 through [July 31-August 15]. The annual limit is 40 sockeye salmon per household. (C) You may take coho salmon from August 1 through October 1. The annual limit is 20 coho salmon per household. (D) You may retain other salmon taken incidentally by gear operated under terms of this permit. The incidentally taken salmon must be reported on your permit calendar. (E) The total annual guideline harvest level for the Stikine River fishery is 125 chinook, 600 sockeye, and 400 coho salmon. All salmon harvested, including incidentally taken salmon, will count against the guideline for that species. |
| Southeast Alaska Regional Council Recommendation | Support Proposal FP08-03 with modification to move the starting date of the subsistence coho season to August 1 and remove the 15-day permit requirement. Adoption of the amended proposal would require approval of the Pacific Salmon Commission. |
| OSM Conclusion | Support Proposal FP08-03 with modification to move the starting date of the subsistence coho season to August 1 and remove the 15-day permit requirement. Adoption of the amended proposal would require approval of the PSC. |
| Interagency Staff Committee Comments | See comments following analysis. |
| ADF&G Comments | See comments following analysis. |
| Written Public Comments | None |
SOUTHEAST ALASKA SUBSISTENCE REGIONAL ADVISORY COUNCIL

Support Proposal FP08-03 with modification to move the starting date of the subsistence coho season to August 1 and remove the 15-day permit requirement. Adoption of the amended proposal would require approval of the Pacific Salmon Commission.

Justification

Starting the subsistence coho salmon fishing season August 1 instead of August 15 benefits subsistence users by allowing continuous subsistence fishing on the Stikine River between the start of the Chinook salmon season and the end of the coho salmon season. As noted in the staff analysis, sockeye, pink, chum, and coho salmon would be available for harvest during this time. A two-week subsistence fishing permit is not necessary for management of the fisheries. A two-week permit is an unnecessary burden to subsistence users and a seasonal permit is adequate for management and reporting obligations. Adopting this proposal would not change the Federal subsistence program’s obligation to provide a weekly catch and effort report to the Canadian and ADF&G fishery managers. There is no effect on nonqualified subsistence users and will not cause a conservation concern. The Council felt the proponent had a very good idea of conditions on the river and agreed with his justification. Record high river levels prevented subsistence users from fishing during the normal time period in 2007.
ISSUES

Proposal FP08-03, submitted by Mr. John Murgas, requests two changes to the management of the Stikine River subsistence salmon fishery: 1) allow subsistence fishing between August 1 and August 14, and 2) make subsistence fishing permits valid for the fishing season.

DISCUSSION

Subsistence fishing seasons on the Stikine River for Chinook, sockeye, and coho salmon are the result of proposals submitted to the Federal Subsistence Board (Board) and coordinated with the Pacific Salmon Commission (PSC) through the Transboundary River Panel. Since the original Stikine River subsistence fishery was approved for sockeye salmon in 2004, the Chinook and coho fisheries were added and the starting date of the sockeye salmon season was moved forward from July 1 to June 21. The change in season starting date allowed continuous fishing between the Chinook and sockeye salmon fisheries. The proponent believes the present August 1–14 fishing closure is unnecessary and does not allow subsistence fishermen the opportunity to harvest the later portion of the sockeye return or the early portion of the coho salmon return. Eliminating the closure would provide subsistence fishermen an opportunity for continuous fishing during a time when sockeye, pink, chum, or coho salmon may be present. The preference of the proponent is to change the opening date of the subsistence coho salmon season to August 1 rather than change the season dates for the sockeye salmon season.

Currently, subsistence fishing permits are valid for only one of eight two-week fishing periods. This provision was originally implemented in Federal regulations to provide Federal fishery managers a mechanism to track participation and obtain in-season harvest estimates for a subsistence fishery of unknown size. Due to the relatively low levels of effort and harvest observed during the past three years, there is a very low probability of the subsistence fishery exceeding the guideline harvest for any species. Adopting this proposal would not change the requirement contained within the US/Canada Pacific Salmon Treaty that directs the Federal program to submit weekly subsistence harvest reports to State of Alaska and Canadian fishery managers.

Existing Federal Regulation

§14§.27(c)(1) (xix) You may take Chinook, sockeye, and coho salmon in the mainstem of the Stikine River only under the authority of a Federal subsistence fishing permit. Each Stikine River permit will be issued to a household and will be valid for 15 days. Permits may be revalidated for additional 15-day periods. Only dipnets, spears, gaffs, rod and reel, beach seine, or gillnet not exceeding 15 fathoms in length. The maximum gillnet mesh size is 5 1/2 inches except during the Chinook season when the maximum gillnet mesh size is 8 inches.

(A) You may take chinook salmon from May 15 through June 20. The annual limit is 5 chinook salmon per household.

(B) You may take sockeye salmon from June 21 through July 31. The annual limit is 40 sockeye salmon per household.
(C) You may take coho salmon from August 15 through October 1. The annual limit is 20 coho salmon per household.

(D) You may retain other salmon taken incidentally by gear operated under terms of this permit. The incidentally taken salmon must be reported on your permit calendar.

(E) The total annual guideline harvest level for the Stikine River fishery is 125 chinook, 600 sockeye, and 400 coho salmon. All salmon harvested, including incidentally taken salmon, will count against the guideline for that species.

Proposed Federal Regulation

§___.27(c)(1) (xix) You may take Chinook, sockeye, and coho salmon in the mainstem of the Stikine River only under the authority of a Federal subsistence fishing permit. Each Stikine River permit will be issued to a household and will be valid for 15 days. Permits may be revalidated for additional 15-day periods. Only dipnets, spears, gaffs, rod and reel, beach seine, or gillnet not exceeding 15 fathoms in length. The maximum gillnet mesh size is 5 1/2 inches except during the Chinook season when the maximum gillnet mesh size is 8 inches.

(A) You may take chinook salmon from May 15 through June 20. The annual limit is 5 chinook salmon per household.

(B) You may take sockeye salmon from June 21 through July 31. The annual limit is 40 sockeye salmon per household.

(C) You may take coho salmon from August 15 through October 1. The annual limit is 20 coho salmon per household.

(D) You may retain other salmon taken incidentally by gear operated under terms of this permit. The incidentally taken salmon must be reported on your permit calendar.

(E) The total annual guideline harvest level for the Stikine River fishery is 125 chinook, 600 sockeye, and 400 coho salmon. All salmon harvested, including incidentally taken salmon, will count against the guideline for that species.

Existing State Regulation

There is not a Stikine River Chinook sport fishery because Southeast Alaska sport fishing regulations prohibit fishing for Chinook salmon in freshwater. The Stikine River and tributaries are open to sport fishing for sockeye, pink, chum, and coho salmon with a harvest limit of 6 fish daily and 12 in possession. The State has made a positive customary and traditional use determination for salmon in the Stikine River but no subsistence fishery is authorized.

Extent of Federal Public Waters

For purposes of this discussion, the phrase “Federal public waters” is defined as those waters described under 50 CFR 100.3.

All waters of the Stikine River downstream from the Canadian border are within the exterior boundaries of the Tongass National Forest and are considered Federal public waters for the purposes of Federal
subsistence fisheries management. For the Stikine River, fresh waters include all portions of the Stikine River inland from the point of Federal jurisdiction at Point Rothsay to the Canadian border (Maps 1 and 2). All portions of the Stikine watershed in the United States are part of the Stikine-LeConte Wilderness Area.

Customary and Traditional Use Determinations

The Stikine River drains into commercial fishing District 8. Residents of drainages flowing into District 6 north of the latitude of Point Alexander (Mitkof Island); residents of drainages flowing into Districts 7 and 8, including the communities of Petersburg and Wrangell; and residents of the community of Meyers Chuck have a positive customary and traditional use finding for salmon, Dolly Varden, trout, smelt and eulachon.

Regulatory History

The PSC, established by treaty between the United States and Canada in 1985, and its Panels, address the management of transboundary salmon stocks, including those of the Stikine River. The Transboundary River Panel approves a joint management plan for enhancement and harvest of Chinook, sockeye, and coho salmon populations. Each year, the Transboundary Technical Committee meets prior to the season to update joint management and enhancement plans, develop run forecasts, and determine new parameters for input into the in-season run forecast model, referred to as the Stikine Management Model. Regulations for fisheries targeting Stikine River salmon stocks are contained in Annex IV of the U.S.-Canada Treaty.

The original proposal to establish a Federal subsistence salmon fishery on the Stikine River, (FP01-27) was submitted in 2000. That proposal specified a Chinook salmon fishery from June 1 to August 1, a sockeye salmon fishery from June 15 to September 1, and a coho salmon fishery from July 15 to October 1. The Board deferred action, to allow the opportunity for more coordination with the PSC.

The Board made a positive customary and traditional use determination for salmon, Dolly Varden, trout, smelt and eulachon for residents living in or near the communities of Wrangell, Petersburg and Meyers Chuck (FP04-29). The Board also adopted methods, a season, and guideline harvest limits for Chinook, sockeye, and coho salmon (FP04-40). The PSC concurred with the sockeye salmon fishery in 2004, but with a season starting date of July 1 instead of June 15, and concurred with the Chinook and coho salmon fisheries in 2005.

There was a midseason change to the maximum gillnet mesh size in the Chinook salmon fishery in 2005 through a Special Action by the Board. Canadian and State of Alaska fisheries managers concurred with this action, which increased the maximum mesh size from 5-1/2 inches to 8 inches, effective June 4 through June 20. This increase in mesh size was designed to enhance the opportunity for subsistence harvest of Chinook salmon. The Board, with PSC concurrence adopted a modification to Proposal FP06-27 to allow the use of 8” mesh gillnets during the Chinook salmon season. The Board also approved Proposal FP06-28, which moved the start date of the Stikine River sockeye fishery from July 1 to June 21.

Biological Background

The Stikine River has escapement goals for Chinook, sockeye and coho salmon and a clearly defined harvest sharing arrangement between the United States and Canada. Stocks of salmon are healthy and support commercial and subsistence fisheries in both the United States and Canada. For example, the 2006 preseason Chinook salmon forecast to the terminal area was 60,000 fish which would provide a U.S. harvest of approximately 26,000 Chinook salmon. The coho salmon escapement goal is 30,000 to 50,000
FP08-03 Map 1

The Stikine River with Principal Alaskan and Canadian Communities
FP08-03 Map 2

Extent of Federal Jurisdiction in the Stikine River

Federal Subsistence Fisheries Jurisdictional Map
Stikine River
(Wrangell Ranger District)

Approved by:
James Caplan
Deputy Regional Forester
Federal Subsistence Board

Marine Waters Boundary

1 0 1 2 3 4 5 6 Miles
coho salmon to the river (PSC 2007). The sockeye return is reconstructed after the season. In 2004, the total return to the Stikine River was 307,414 sockeye salmon which was composed of 106,814 fish escapement, 86,110 fish Canadian harvest and 114,071 fish U.S. (including 243 fish subsistence) harvest (PSC 2006).

**Harvest History**

Between 1995 and 2001, ADF&G authorized an in-river personal use fishery for sockeye salmon in the Stikine River. Participation in the personal use fishery was minimal, and only 28 sockeye salmon were reported harvested in 2001. The personal use fishery was not opened in 2002 due to conservation concerns for the Tahltan stock, a Canadian tributary to the Stikine River. Currently, there is not a personal use or subsistence fishery authorized in State regulations for the Stikine River.

Federal permits are required for subsistence fishing on the Stikine River. These permits are valid for only one of eight 2-week time periods. Harvest information must be reported prior to having the permit revalidated for a different 2-week time period. Short-term permits and in-season reporting are designed to provide fishery managers with real-time harvest estimates. However, administration of the permit program is time consuming for USFS staff and burdensome for subsistence users. Effort and harvest patterns observed during the past few years indicate a very low probability of the harvest of any one species ever approaching the guideline harvest limit. There have not been any in-season special actions to curtail harvests.

Sport fishing for Chinook salmon is prohibited on the Stikine River. There is a small harvest of sockeye and coho salmon by U.S. sport fishers in tributaries to the Stikine River, but harvest numbers are too low to be included in any site-specific sport fishing harvest estimates (Fleming 2003, pers. comm.). A small, but unknown number of sockeye, coho, and steelhead are harvested by sport fishers in Canada.

The first harvests under Federal subsistence management regulations occurred in 2004. Since then, an average of 41 permit holders have participated each year with a peak harvest of 37 Chinook and 390 sockeye salmon during the 2006 season, and 53 coho salmon during the 2005 season (Table 1). Chinook and sockeye salmon are harvested in May, June, and July. Coho salmon become available in August, but most of the harvest occurs in September. During the 2006 season, five sockeye salmon were harvested after August (Table 2).

**Effects of the Proposal**

The U.S.-Canada Pacific Salmon Treaty and its annexes do not specifically address Federal fishery management restrictions included in the subsistence fishing permit. The two-week permit is only required by the Federal Subsistence Management Program. Annex IV of the Treaty specifies guideline harvests, seasons, and a weekly and annual reporting requirement. However, the Annex regarding salmon fisheries on the Stikine River requires any changes to the Federal fishery regulations be reviewed by the Transboundary River Panel and the Pacific Salmon Commission.

> **Annex IV, Chapter I, Paragraph 3(a)(3)(vi) “d. Any proposed regulatory changes to the fishery during the remaining years of this annex would need to be reviewed by the bilateral Transboundary River Panel and approved by the Pacific Salmon Commission.”**

If the proposal is adopted, there would be no requirement to revalidate permits every two weeks, and subsistence fishing permits would need to be returned only at the end of the season. Currently, harvest is reported when the permit is revalidated and at the end of the season. The proposed reporting at the end
Table 1. Summary of Subsistence Salmon Harvest by Year for the Stikine River.

<table>
<thead>
<tr>
<th>Year</th>
<th>Permits Issued</th>
<th>Chinook</th>
<th>Chum</th>
<th>Coho</th>
<th>Pink</th>
<th>Sockeye</th>
</tr>
</thead>
<tbody>
<tr>
<td>2004</td>
<td>40</td>
<td>12</td>
<td>11</td>
<td>1</td>
<td>22</td>
<td>243</td>
</tr>
<tr>
<td>2005</td>
<td>35</td>
<td>15</td>
<td>22</td>
<td>53</td>
<td>69</td>
<td>252</td>
</tr>
<tr>
<td>2006</td>
<td>48</td>
<td>37</td>
<td>20</td>
<td>21</td>
<td>23</td>
<td>390</td>
</tr>
</tbody>
</table>

Table 2. Weekly harvest for the Stikine River subsistence fishery, 2006 season.

<table>
<thead>
<tr>
<th>Week Ending</th>
<th>Chinook</th>
<th>Chum</th>
<th>Coho</th>
<th>Pink</th>
<th>Sockeye</th>
</tr>
</thead>
<tbody>
<tr>
<td>20-May</td>
<td>2</td>
<td>0</td>
<td>0</td>
<td>0</td>
<td>0</td>
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<tr>
<td>27-May</td>
<td>0</td>
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<td>0</td>
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<td>3-Jun</td>
<td>0</td>
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<td>0</td>
<td>0</td>
<td>0</td>
</tr>
<tr>
<td>10-Jun</td>
<td>1</td>
<td>0</td>
<td>0</td>
<td>0</td>
<td>1</td>
</tr>
<tr>
<td>17-Jun</td>
<td>0</td>
<td>0</td>
<td>0</td>
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<td>0</td>
</tr>
<tr>
<td>24-Jun</td>
<td>24</td>
<td>1</td>
<td>0</td>
<td>0</td>
<td>22</td>
</tr>
<tr>
<td>1-Jul</td>
<td>4</td>
<td>6</td>
<td>0</td>
<td>12</td>
<td>41</td>
</tr>
<tr>
<td>8-Jul</td>
<td>3</td>
<td>2</td>
<td>0</td>
<td>0</td>
<td>101</td>
</tr>
<tr>
<td>15-Jul</td>
<td>1</td>
<td>4</td>
<td>0</td>
<td>0</td>
<td>126</td>
</tr>
<tr>
<td>22-Jul</td>
<td>2</td>
<td>0</td>
<td>0</td>
<td>4</td>
<td>72</td>
</tr>
<tr>
<td>29-Jul</td>
<td>0</td>
<td>0</td>
<td>0</td>
<td>0</td>
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<tr>
<td>5-Aug</td>
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<td>0</td>
</tr>
<tr>
<td>19-Aug</td>
<td>0</td>
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<td>0</td>
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</tr>
<tr>
<td>26-Aug</td>
<td>0</td>
<td>0</td>
<td>0</td>
<td>0</td>
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<td>2-Sep</td>
<td>0</td>
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<td>0</td>
</tr>
<tr>
<td>9-Sep</td>
<td>0</td>
<td>0</td>
<td>2</td>
<td>0</td>
<td>5</td>
</tr>
<tr>
<td>16-Sep</td>
<td>0</td>
<td>0</td>
<td>19</td>
<td>0</td>
<td>0</td>
</tr>
<tr>
<td>23-Sep</td>
<td>0</td>
<td>0</td>
<td>0</td>
<td>0</td>
<td>0</td>
</tr>
<tr>
<td>30-Sep</td>
<td>0</td>
<td>0</td>
<td>0</td>
<td>0</td>
<td>0</td>
</tr>
<tr>
<td>Total</td>
<td>37</td>
<td>20</td>
<td>21</td>
<td>23</td>
<td>390</td>
</tr>
</tbody>
</table>

of the season is not appreciably different than the current situation because subsistence users usually do not revalidate permits (provide in-season harvest reports) once fishing efforts have concluded for the season. Based on recent fishery performance, guideline harvest limits are not likely to be reached, and end of season harvest reports are adequate for management. This proposal does not request a change in the obligation by Federal subsistence fisheries managers to provide a weekly effort and harvest report to Canadian and ADF&G fishery managers. Alternate, and possibly more accurate, methods of estimating harvests in-season may include but are not limited to telephone interviews, volunteer reporting or field observations.
Adopting this proposal would also eliminate the August 1–14 closed season and allow a continuous subsistence salmon season for the Stikine River between May 15 and October 1. Any change to the dates of the coho salmon season will require amending the Treaty Annex. The current Annex is due to expire after the 2008 season and is currently the subject of negotiations between the US and Canada. Amending the Annex to start the coho season on August 1 will be part of the negotiations and will require coordination and cooperation between the Board and the PSC. The letter sent to Mr. Bedford, of the PSC, seeking direction on this issue, and Mr. Bedford’s reply, are included as appendices (Appendix A and B).

Table 3. Weekly salmon catch in the Alaskan District 108 commercial drift gillnet fishery, 2003.

<table>
<thead>
<tr>
<th>Week</th>
<th>Date</th>
<th>Chinook</th>
<th>Sockeye</th>
<th>Coho</th>
<th>Pink</th>
<th>Chum</th>
</tr>
</thead>
<tbody>
<tr>
<td>28</td>
<td>6-Jul</td>
<td>104</td>
<td>11,224</td>
<td>1,209</td>
<td>10,578</td>
<td>5,141</td>
</tr>
<tr>
<td>29</td>
<td>13-Jul</td>
<td>50</td>
<td>10,581</td>
<td>1,049</td>
<td>15,959</td>
<td>4,252</td>
</tr>
<tr>
<td>30</td>
<td>20-Jul</td>
<td>108</td>
<td>14,545</td>
<td>2,906</td>
<td>29,636</td>
<td>18,746</td>
</tr>
<tr>
<td>31</td>
<td>27-Jul</td>
<td>39</td>
<td>4,048</td>
<td>733</td>
<td>7,622</td>
<td>4,850</td>
</tr>
<tr>
<td>32</td>
<td>3-Aug</td>
<td>5</td>
<td>1,231</td>
<td>1,090</td>
<td>6,930</td>
<td>2,687</td>
</tr>
<tr>
<td>33</td>
<td>10-Aug</td>
<td>3</td>
<td>284</td>
<td>621</td>
<td>2,353</td>
<td>1,527</td>
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Eliminating the August 1–14 closed period allows subsistence fishers the flexibility to fish according to individual preferences, respond to variable river conditions, and increase opportunities to harvest sockeye, pink, chum, and coho salmon. There is some variability in the timing of both sockeye and coho salmon returns to the Stikine River, but we expect that the last portion of the sockeye salmon run and the first portion of the coho salmon run would be available for harvest. Stock proportions are evident in the 2003 harvests from the Stikine River terminal (District 8) commercial fishery (Table 3). These data are the most recently available (PSC, 2005). The staff analysis for Proposal FP01-27 included a discussion of the potential harvest of dark and unwanted Chinook, sockeye, pink and chum salmon in the subsistence fishery during the late summer. That issue does not appear to be a concern because subsistence users are able to fish during times and in locations where the harvest of non-target species would be minimized. There would not be a waste of salmon if the fishery was open between August 1 and August 15 (McKibben 2007, pers. comm.).
OSM CONCLUSION

Support Proposal FP08-03 with modification to move the starting date of the subsistence coho season to August 1 and remove the 15-day permit requirement. Adoption of the modified proposal would require approval of the PSC.

The modified proposed regulation should read:

§___.27(c)(1) (xix) You may take Chinook, sockeye, and coho salmon in the mainstem of the Stikine River only under the authority of a Federal subsistence fishing permit. Each Stikine River permit will be issued to a household and will be valid for 15 days. Permits may be revalidated for additional 15-day periods. Only dipnets, spears, gaffs, rod and reel, beach seine, or gillnet not exceeding 15 fathoms in length. The maximum gillnet mesh size is 5 1/2 inches except during the Chinook season when the maximum gillnet mesh size is 8 inches.

(A) You may take chinook salmon from May 15 through June 20. The annual limit is 5 chinook salmon per household.

(B) You may take sockeye salmon from June 21 through July 31. The annual limit is 40 sockeye salmon per household.

(C) You may take coho salmon from August 1 through October 1. The annual limit is 20 coho salmon per household.

(D) You may retain other salmon taken incidentally by gear operated under terms of this permit. The incidentally taken salmon must be reported on your permit calendar.

(E) The total annual guideline harvest level for the Stikine River fishery is 125 chinook, 600 sockeye, and 400 coho salmon. All salmon harvested, including incidentally taken salmon, will count against the guideline for that species.

Justification

Amending the starting date of the coho salmon fishing season to August 1 from August 15 benefits subsistence users by allowing continuous subsistence fishing on the Stikine River. Sockeye, pink, chum, and coho salmon would be available for harvest during this time. Any harvest of sockeye salmon would be recorded on subsistence fishing permits and reported. Adoption of this regulatory change would satisfy the intent of the U.S./Canada treaty process by promoting efficiency in the U.S. subsistence fishery while providing for a manageable fishery. There are no conservation or fisheries management concerns with this regulatory change. Adopting this proposal would not change the overall guideline harvest for each species (125 chinook, 600 sockeye, and 400 coho salmon). Changing the date of the coho salmon season would require approval by the Transboundary River Panel and the Pacific Salmon Commission.

A two-week subsistence fishing permit is not necessary for conservation of the stocks or management of the fisheries. A two-week permit is an unnecessary burden to subsistence users and is costly to administer by Federal subsistence fishery managers. The two-week permitting and reporting requirement was designed to allow in-season managers an opportunity to identify unanticipated large increases in effort and harvests. However, observations of fishing effort and harvest patterns have indicated a very low probability of exceeding the guideline harvest of any species. In-season harvest information for the interagency weekly catch and effort report can be obtained by alternative methods. Fishing effort would
indicate the intensity of in-season monitoring. The Federal Subsistence Program remains committed to maintaining adequate in-season reporting. Monitoring of the Federal subsistence fishery could include, but not be limited to, telephone interviews or field observations. Adopting this proposal would not change the Federal subsistence program’s obligation to provide a weekly catch and effort report to the Canadian and ADF&G fishery managers. The Federal Subsistence Board has the authority to change the permit requirements without formal concurrence of the Transboundary River Panel and the Pacific Salmon Commission.

LITERATURE CITED


Mr. David Bedford  
Pacific Salmon Commissioner for Alaska  
Alaska Department of Fish and Game  
Office of the Commissioner  
P.O. Box 115526  
Juneau, Alaska 99811  

Dear Mr. Bedford:

The spirit of cooperation that we have mutually brought to addressing issues associated with the transboundary Stikine River salmon fishery over the last several years has served the resource and stakeholders well. We share your interest in maintaining that cooperative approach, including coordination with the bilateral Pacific Salmon Commission process, when appropriate.

I wanted to inform you that the Federal Subsistence Board received a proposal for the 2008/09 regulatory cycle that seeks an adjustment in the regulations for the Stikine River subsistence salmon fishery, and would appreciate your perspective in relation to the bilateral process. Specifically, FP08-03 (enclosed) requests that the 1-14 August regulatory closure between the targeted sockeye and coho salmon subsistence fisheries be eliminated, and that the 15-day reporting and permit validation requirement be rescinded and replaced with an end-of-season reporting requirement. Permit and overall fishery harvest limits would remain unchanged.

Staff analysis of the proposal is underway, and will be presented to the Southeast Alaska Subsistence Regional Advisory Council at its October 2007 meeting, after initial Federal and State staff review. The proposal is then scheduled to be addressed by the Federal Subsistence Board at its public meeting in Anchorage in December 2007. Although we cannot presuppose the outcome of the deliberative process, we need to plan ahead to allow for appropriate coordination should the Board move to adopt regulatory changes.

The 2005 Treaty annex includes the following clause: “Any proposed regulatory changes to the fishery during the remaining years of this annex would need to be reviewed by the bilateral TBR Panel and approved by the Pacific Salmon Commission.” As in the past, we could take the approach of working through the Federal Subsistence Management Program process on the subject proposal, and if the Board moves to adopt the changes, or some modification, the Board could do so contingent upon further coordination with the Pacific Salmon Commission process.

If that is the approach you advise, we would request that the Transboundary River Panel and the
Mr. David Bedford

Pacific Salmon Commission be notified soon of this potential agenda item following the December 2007 Federal Subsistence Board meeting, but preceding the 2008 fishing season. If the proposed changes could instead be seen as minor adjustments within the existing framework of the fishery as encompassed by the Treaty Annex, perhaps this could be done more informally as an informational item for the bilateral process.

Once again, thank you for your continued expert assistance in coordination with the Pacific Salmon Commission and its Panels.

Sincerely,

/S/ Pete J. Probasco

Peter J. Probasco,
Assistant Regional Director

Enclosure

cc:  Bert Adams, Chair, Southeast Alaska Subsistence Regional Advisory Council
Denny Bschor, USDA Forest Service
Interagency Staff Committee
Tina Cunning, ADF&G
Federal Subsistence Board
July 13, 2007

Mr. Peter J. Probasco
Assistant Regional Director
U.S. Fish and Wildlife Service
Office of Subsistence Management
3601 C Street, Suite 1030
Anchorage, AK 99503

Dear Mr. Probasco:

Thank you for notifying me of the proposal that has been submitted to the Federal Subsistence Board (board) to modify management of the federal subsistence salmon fishery on the Stikine River. Because the fishery is regulated under the Pacific Salmon Treaty (treaty), action by the Pacific Salmon Commission (commission) is a precondition to modification of many of the regulatory features of the federal subsistence fishery. I appreciate the opportunity to comment on means to coordinate the board’s decision-making process involved with implementing the federal subsistence program with negotiation of the terms of the treaty.

As you noted, the treaty specifically requires that changes to regulations of the Stikine subsistence salmon fisheries are to be reviewed by the Transboundary River Panel of the Pacific Salmon Commission (panel). This requirement is repeated in the provisions applying to each of the subsistence sockeye, coho and Chinook fisheries. We have, to date, dealt with in-season management issues in discussion with the Whitehorse office of the Canadian Department of Fisheries and Oceans (DFO). In the event that the DFO has no significant concern with the change at issue, it can be implemented without formal consideration by the panel and the commission. As you are aware, we dealt with changes to the mesh size employed in the fishery using this procedure.

In contrast, proposed changes to management that diverge from the express terms of the treaty are appropriately dealt with in the commission negotiations, since in the absence of explicit changes to the text of the treaty the management action under consideration would be contrary to the provisions of the treaty. The appropriate course of action for changes of this type would be 1) discussion of the issue by the U.S. Section of the panel; 2) with the concurrence of the U.S. Section of the panel, addition of the issue in the annual work plan for the bilateral panel; 3) discussion of the issue in the January meeting of the bilateral panel; and 4) consideration of the issue in the annual meeting of the commission in February. This would mirror the process used in the past working with the Office of Subsistence Management and the Southeast Regional Advisory Council to move proposals through the commission’s formal negotiating process.
Mr. Peter J. Probasco

2

July 13, 2007

The proposals that you describe would call for changes to the text of the treaty annex governing transboundary river fisheries. The text concerning each of the sockeye, coho and Chinook fisheries requires weekly reporting of catches, including incidentally caught fish. Because this is a requirement of the treaty it would be appropriate to raise the issue of catch reporting with the U.S. Section of the panel and, subject to its concurrence, we would propose to Canada that it be included in the annual work plan.

Similarly, the proposal to change the dates during which the fishery may be conducted implicates the explicit provisions of the treaty. As you are aware, the treaty currently calls for a hiatus between the end of the sockeye fishery on July 31 and the onset of the coho fishery on August 15. Because this proposed change to the federal subsistence fishery would authorize continuous fishing, it contrasts with the terms of the treaty, and it is appropriate to present the issue to the U.S. Section of the panel for consideration under the commission’s formal processes.

You may be aware that the United States and Canada have initiated discussions to address several of the chapters of the treaty which expire at the end of 2008. Canada has stated its intent that resolution of the numerous issues pertinent to these chapters be comprehensive and as such has stated its reluctance to finalize any specific issue until the entire package is complete. Consequently, a proposal to change management of the Stikine subsistence fishery may be considered in a broader context than has applied in the past. It is not possible to determine whether there will be interest in linking the proposals for the Stikine subsistence fishery with negotiation of terms applicable to other fisheries.

I recognize that the Federal Subsistence Board has in the past addressed proposals that require action by the commission by adopting a regulation authorizing the proposed action with implementation made contingent on specified action by the commission. Given the complexity of the current negotiations, it may be advisable for the Federal Subsistence Board to consider action on the proposals for management of the Stikine fisheries following the commission’s annual negotiating session in February.

Please feel free to contact me if I can be of further assistance.

Sincerely,

/S/ David Bedford

David Bedford
Deputy Commissioner
The Interagency Staff Committee (ISC) found the staff analysis for proposal FP08-03 to be a complete and accurate evaluation of the proposal. As described in the analysis, there are two parts to the proposal.

The first part, changing the coho salmon season date, is contingent on approval by the Pacific Salmon Commission prior to implementation. Due to Pacific Salmon Treaty timing considerations, that part of the proposal is currently being worked through the bilateral treaty process and assumes the Board will adopt the Southeast Alaska Subsistence Regional Advisory Council’s recommendation. If the Board were to reject the Council’s recommendation, a request would need to be made to stop consideration of this change.

The second part of the proposal, changing the reporting requirements for fishermen, is internal to the Federal subsistence program and does not require changes to the Pacific Salmon Treaty. This provision can be implemented without formal concurrence of the parties to the treaty. Changing the permit reporting requirements does not change the Federal program’s commitment to maintain in-season harvest reporting to the Canadian and Alaskan fisheries managers.
FP08-03 Stikine River

Introduction: This proposal requests elimination of the August 1-14 federal subsistence fishing closure window and of the requirement to revalidate the federal permit every 15 days. The change to fishing periods will necessitate review by the Transboundary River Panel and action by the Pacific Salmon Commission⁴ to change the text of the annex of the international treaty between the United States and Canada governing the transboundary Stikine river salmon stocks. The change in reporting requirement raises a question regarding how data will be collected to support weekly harvest reporting consistent with treaty requirements and should be preceded by notice to the United States Section of the Transboundary River Panel describing the procedures that will be used.

The Stikine salmon stocks are fully utilized and their management is conservation based and highly complex. The August 1-14 federal subsistence fishery closure was incorporated into the initial proposal for the subsistence fishery developed by the Southeast Alaska Regional Advisory Council (RAC) and was responsive to concerns raised at that time by Canada regarding implementing the fishery. The federal permit revalidation requirement is used to collect inseason federal subsistence harvest information in order to provide weekly reporting required by the treaty. Federal staff supported the closure window and revalidation requirement adopted by the federal board in 2000 for conservation and fishery management purposes. Federal staff supports the proposed change to the reporting requirement for administrative convenience and does not expect increased harvests of the small stocks.

Impact on Subsistence Users: Current restrictions on open fishing periods are not likely to restrict opportunity because the majority of targeted subsistence fish stocks pass before the closure window; extending the fishery through the early part of August does not pose any apparent significant problems. Revalidation does not significantly burden subsistence users because it only requires a simple contact, such as phone, VHF or SSB radio, e-mail, or fax. The revalidation requirement was implemented for conservation and management purposes, but these may be met through other means.

Opportunity Provided by State: Personal use and subsistence fishery harvest are allowed under permit. Permits are not issued for Chinook salmon or steelhead and rainbow trout, although these species may be retained as incidental catch. Subsistence permits may be issued throughout the Southeast region for directed harvest of coho salmon. Annual harvest reporting is required. State permits are available to subsistence fish for salmon in marine waters near the Stikine River. Under the permit system, state managers have authority to establish or change open fishing periods, possession and annual limits, gear type or gear configuration, and to open and close time and areas in order to provide escapement and harvest as part of sustainable fisheries management.

¹ See (p. 76-77) July 13, 2007, letter from David Bedford, Deputy Commissioner, who recommends the Board take action on this proposal after the commission’s annual negotiating session in February 2008.
Conservation Issues: The federal staff analysis in 2000 supported the August 1-14 closure window for conservation reasons, and it was adopted by the Federal Subsistence Board (Board).\textsuperscript{2} In contrast, federal staff concluded in the “2006 Season Summary, Stikine River Subsistence Salmon Fishery,” December 8, 2006: “There is no management or conservation issue that requires this closure and it is not to the benefit of subsistence users.” The federal staff analysis for the RAC book (p. 72) similarly stated “There are no conservation or fisheries management concerns with this regulatory change.” The Department agrees that the fishery as conducted and with the proposed change in fishing periods is not likely to pose a conservation concern. However, with any substantive change in regulation, the need for effective reporting may increase.

Any changes to the Stikine subsistence fishery which implicate the text of the current Transboundary Rivers Annex must be presented to the Transboundary River Panel of the Pacific Salmon Commission. Provisions of the treaty annex state: “(a) any proposed regulatory changes to the fishery during the remaining years of this annex would need to be reviewed by the bilateral TBR Panel and approved by the Pacific Salmon Commission.” The current reporting requirement in the Transboundary River Panel and Pacific Salmon Commission treaty specifically requires: “b. Catches will be reported weekly, including all incidentally caught fish. All tags recovered shall be submitted to the Alaska Department of Fish and Game.”

In the “2006 Season Summary, Stikine River Subsistence Salmon Fishery,” December 8, 2006, federal staff states that 48 permits were issued and that inseason reporting from the 26 who did not fish and the 22 federal subsistence fishery permit holders that harvested salmon, many of whom keep on renewing, is burdensome to administer. They imply that the Stikine River federal subsistence fishery does not need inseason management through this method of harvest reporting.\textsuperscript{3} Revalidation of a federal permit for the Stikine River subsistence fishery is completed by contacting federal staff to indicate intent to continue fishing for an additional two weeks. The revalidation requirement keeps track of federal subsistence cumulative harvest and effort. Fisheries management agencies utilize inseason reporting as one of the primary tools to set limits and ensure that escapement goals are achieved. The harvest levels and management constraints included in the treaty for the subsistence fishery were the consequence of extended and careful negotiation. Hence, effective reporting is a factor in fulfilling the obligations created by the agreement. In the federal analysis to the RAC, federal staff indicated (p. 65) no change in the current pattern of harvest is expected and that this proposal will not lead to overharvest:

Due to the relatively low levels of effort and harvest observed during the past three years, there is a very low probability of the subsistence fishery exceeding the guideline harvest for any species. Adopting this

\textsuperscript{2} Federal Staff Analysis for proposal FP01-27, p. 109-111, Fisheries Materials Book, December 5-7, 2000, Board Meeting: “Few sockeye are available after July 31, while there are many dark pink and chum salmon. This creates the potential for people fishing during August to catch large numbers of poor quality pink and chum salmon to get a few sockeye. If the poor quality fish are discarded, it would be a waste. Likewise, very few coho salmon are available prior to August 15 and fisheries for coho salmon earlier might catch large numbers of poor quality pinks and/or chum salmon.

\textsuperscript{3} The second issue is rescinding the requirement that permits must be validated for each two-week open fishing period. This requirement is difficult to administer for both management staff and subsistence users, and is not necessary for management of the fishery. The two week fishing requirement was designed to allow in-season managers an opportunity to identify unanticipated large increases in effort and harvests. Observations of fishing effort and harvest patterns have shown that the fishery can be managed with a seasonal fishing permit.”
proposal would not change the requirement contained within the US/Canada Pacific Salmon Treaty that
directs the Federal program to submit weekly report to State of Alaska and Canadian fishery managers.

These “alternative methods” are not identified for use by federal staff to recognize unexpected
increases in harvests before the quota is exceeded in the absence of inseason harvest reporting.

The preliminary federal staff conclusion (p. 72) supports modifying only the start of the coho
season and not the end date of the sockeye season. However, since the federal subsistence user
is allowed to keep incidental catch of sockeye salmon, the resulting regulation would have the
same effect as that proposed by the proponent to change both season dates.

Jurisdiction Issues: The treaty describes where the federal subsistence fishery is authorized as:

a. The fishing area will include the main stem of the Stikine River, downstream of the international border,
   with the exception that fishing at stock assessment sites identified prior to each season is prohibited unless
   allowed under specific conditions agreed to by both Parties’ respective managers.

Maps 1 and 2 contained in the federal analysis illustrate the boundaries claimed by the Forest
Service to be under federal subsistence fisheries jurisdiction. The state disputes that federal
jurisdiction exists for all waters, including marine waters, that are depicted to be within federal
claims of jurisdiction on Map 2. The Department requests an explanation for the basis of each
claim. The boundary line drawn on Map 2 to depict the mouth of the Stikine River for purposes
of federal subsistence jurisdiction incorporates waters below the line of mean high tide, which is
the boundary of Tongass National Forest. In fact, the line is seaward of low tide and navigated
by marine vessels. The federal permit and maps need to clarify that persons participating in
federal subsistence fisheries cannot do so while standing on state or private land (e.g., setnets
from shore must be located on federal land within the Tongass boundary). The federal staff
analysis needs to clarify that only federal lands are included in the portion of the Tongass that the
analysis describes as: “all portions of the Stikine watershed in the United States are part of the
Stikine-LeConte Wilderness Area.” Congressional “wilderness” does not apply to non-federal
lands, such as private inholdings and state navigable waters.

Department Recommendations: First, the Department recently submitted language to the
bilateral Transboundary River Panel and the Pacific Salmon Commission to bring the season
date changes proposed in FP08-03 forward for consideration in 2008. By submitting the
language, the Department facilitated advancement of this issue. If the Federal Subsistence Board
adopts this proposal, the Department recommends including language in the final decision
regarding FP08-03 which states that this proposal cannot be implemented unless and until the
bilateral Transboundary River Panel and the Pacific Salmon Commission approve the changes to
the Transboundary River Annex of the treaty, and the governments of Canada and the United
States concur in appropriate amendments to the treaty.

Second, the Department requests documentation that describes how weekly reporting will be
provided if the annual permit is used. Sufficient description is needed of the means which will
be used to collect accurate and timely data necessary to produce the required weekly report of the
federal subsistence fishery’s catch and effort to the Canadian and Department’s fishery
managers.
**FP08-04 Executive Summary**

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<th>General Description</th>
<th>Proposal FP08-04 requests that a fisheries “no Federal subsistence priority” customary and traditional use determination be made for the Juneau road system area (all waters crossed by roads connected to the City and Borough of Juneau road system). Submitted by the Alaska Department of Fish and Game</th>
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<td><strong>Southeastern Alaska Area</strong>—All fish—Customary and traditional use determinations</td>
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<td><strong>Remainder of the Southeastern Alaska Area</strong> Dolly Varden, trout, smelt, and eulachon Residents of Southeastern Alaska and Yakutat areas.</td>
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<td><strong>Remainder of the Southeastern Alaska Area</strong> All other fish All Rural Residents</td>
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<td>Written Public Comments</td>
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SOUTHEAST ALASKA SUBSISTENCE REGIONAL ADVISORY COUNCIL

Oppose Proposal FP08-04

Justification

The Council determined that there was no information presented that indicated that subsistence fishing in the Juneau area waters was inappropriate or would necessarily result in a conservation concern for any species. The Council supports the OSM preliminary conclusion and the associated justification as written in the staff analysis. No need was seen to make a location-specific customary and traditional use determination for the Juneau road system. Qualified rural residents should be able to use Districts 11 and 15 to continue their subsistence priority, and to fish in Federal public waters; if desired, under Federal regulations as provided by ANILCA, Title VIII. The existing determination, made by the Federal Subsistence Board, was intentionally made to include the Federal public waters of the Juneau road system among areas open to subsistence. The Council sees no reason to change the Board’s earlier decision. The proposal would not affect nonsubsistence users but would not benefit subsistence users. There is no evidence that a conservation concern exists.
ISSUES

Proposal FP08-04, submitted by the State of Alaska, Department of Fish and Game (ADF&G), requests that a fisheries “no Federal subsistence priority” customary and traditional use determination be made for the Juneau road system area (all waters crossed by roads connected to the City and Borough of Juneau road system).

DISCUSSION

Proposal FP08-04 requests a “no Federal subsistence priority” customary and traditional use determination for all fish for the Juneau road system. The Juneau road system is within Fishing Districts 11 and 15 (Map 1). Currently Districts 11 and 15 have no community specific customary and traditional use determinations for fish, falling as they do within the “Remainder of the Southeastern Alaska Area.” The populated area of the Juneau road system is designated as nonrural under the Federal Subsistence Management Program, therefore, Juneau residents are not eligible to harvest fish under Federal subsistence regulations. There are no rural communities on the Juneau road system. However, the proponent is concerned that fish stocks in Juneau area streams could be impacted if even a few Federally qualified rural residents choose to travel to Juneau and subsistence fish on the Juneau road system. Dolly Varden, trout, smelt, and eulachon are the only fish species in this area that have a positive customary and traditional use determination. That determination is for all rural residents of the Southeastern Alaska and Yakutat Areas. Since there is no customary and traditional use determination for all other fish in Districts 11 and 15, all rural Alaska residents are eligible to harvest them.

Existing Federal Regulation

Southeastern Alaska Area—All fish—Customary and traditional use determinations*

|remainder of the southeastern   | dolly varden, trout, smelt, and eulachon | residents of southeastern alaska and yakutat areas. |
|remainder of the southeastern   | all other fish                              | no determination—all rural alaska residents** |
|alaska area                    |                                            |                                              |

Notes: *The proposal book did not list the customary and traditional use determinations for the “Remainder of the Southeastern Alaska Area,” thus they are listed here.
** A “no determination” provides eligibility for all Federally qualified rural Alaska residents (36 CFR 241.24(a) and 50 CFR 100.24(a)).
Proposed Federal Regulation

Southeastern Alaska Area—All fish—Customary and traditional use determinations

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<tr>
<td>District 15—Juneau Road System Area</td>
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</tbody>
</table>

Note: * A “no determination” provides eligibility for all Federally qualified rural Alaska residents (36 CFR 241.24(a) and 50 CFR 100.24(a)).

Background

When the Federal Subsistence Board (Board) makes a customary and traditional use determination, the uses of the resource in the area are described and analyzed. In this case, the specific locale raised as a concern by the proponent is the Juneau road system, an area situated within Fishing Districts 11 and 15. Fishing Districts are the typical geographic descriptor for which the Board generally makes determinations in the Southeastern Alaska Area (36 CFR 242.24(a)(2) and 50 CFR 100.24(a)(2)). The Juneau road system is estimated to be less than 10 percent of the area of these fishing districts. The location-specific customary and traditional use determinations for fish in Southeast were all adopted from State regulations (e.g., in Districts 1 and 12).

The Board made a determination for certain fish species in the past for these broader areas—Districts 11 and 15—and did not make a specific determination for the Juneau road system, which is a subset of Districts 11 and 15. ANILCA only applies to residents determined to be rural, thus the nonrural residents of Juneau are not affected by Federal subsistence regulations. A customary and traditional use determination for resources on Federal public lands and waters is a separate determination only made for Federally designated rural communities, and not affected by rural/nonrural status determinations of communities and areas nearby or distant to those Federal public lands or waters.

Regulatory History

The current customary and traditional use determinations for fish in the “Remainder of the Southeastern Alaska Area,” which includes Districts 11 and 15, are the result of proposals submitted by Southeast Alaska residents since Federal management of subsistence fisheries began in 1999. The impetus behind these proposals was that many Southeast communities whose customary and traditional uses had not been recognized under the State subsistence program had been struggling to “subsist” under State regulations. A common theme throughout Southeast Alaska Subsistence Regional Advisory Council (Council) transcripts from 2000 to the present has been that “rural residents throughout Southeast Alaska continue
to be able to practice customary and traditional harvests and use of all available species of salmon, trout, char... from waters both close and distant to their communities within their region” (SERAC 2000). Review of the Council and Board transcripts and Council recommendations indicate that the Council consciously included the Federal public waters of the Juneau road system with the “Remainder of the Southeastern Alaska Area,” in the determination for the subsistence harvest of Dolly Varden, trout, eulachon and smelt. It was not an incidental inclusion.

In the late 1980s, the State of Alaska Joint Board made customary and traditional use determinations that applied to individual communities and specific fish species in particular geographic areas. At that time, 12 Southeast communities, Angoon, Craig, Haines, Hoonah, Hydaburg, Kake, Kasaan, Klawock, Klukwan, Saxman, Sitka, and Yakutat, were identified as having customary and traditional uses of various fish species. The Joint Board did not make positive determinations for 17 other rural communities: Coffman Cove, Edna Bay, Elfin Cove, Gustavus, Hollis, Hyder, Meyers Chuck, Pelican, Petersburg, Point Baker, Port Alexander, Port Protection, Skagway, Tenakee Springs, Thorne Bay, Whale Pass and Wrangell, or for any residents of the region living outside the boundaries of any organized community. In 1992, the Federal Subsistence Management Program adopted the State’s customary and traditional use determinations with some modifications to include, at the request of the Council, all species of salmon. Federal customary and traditional use determinations were made in all or portions of Districts 1, 2, 3, 5, 9, 10, 12, 13, and 14, but no community specific determinations were made for Districts 11 and 15. The Federal Program adopted the State’s customary and traditional use determinations, and also adopted the gaps in these State determinations that excluded some districts and communities.

In 2000, Proposal FP01-22 requested a customary and traditional use determination for cutthroat trout, rainbow trout, and Dolly Varden, as well as changes to methods, seasons and harvest limits for these species for rural residents of Southeast Alaska. The proposal was divided into two parts: FP01-22(a) for a revised customary and traditional use determination and FP01-22(b) for more liberal methods, seasons, and harvest limits. Staff recommended a provision for Federal subsistence fishing permits for rainbow trout, cutthroat trout, and Dolly Varden in the Southeastern Alaska Management Area. Permits were required for cutthroat trout on the following waters only: Baranof Lake on east Baranof Island; Florence Lake on west Admiralty Island; Hasselborg Lake and Hasselborg River on east Admirality Island; Virginia Lake near Wrangell; and Mirror Lake and Wilson Lake near Ketchikan.1

The customary and traditional use determinations carried over from the State included “no determinations,” thus, under Federal regulation, allowing all Federally qualified rural residents of Alaska to be eligible to harvest fish in the area. The Council recommended that the Board support a modified version of Proposal FP01-22(a) that would recognize a customary and traditional use determination for residents of the Yakutat Area and the remainder of rural residents of the Southeastern Area for trout, Dolly Varden, smelt, and eulachon. The Council modification was to limit the customary and traditional use determinations in all Southeast communities (those with and without prior State customary and traditional use determinations) to rural residents of the Southeastern and Yakutat areas only, from all rural residents of Alaska. The Council also recommended rod and reel with any bait or lure and no size or harvest limit and omitted the restriction of the fishery to the six lakes proposed by staff (SERAC 2000:44).

At the Federal Subsistence Board meeting in December 2000, the Interagency Staff Committee (ISC), contrary to the Council recommendation, recommended maintaining the customary and traditional use

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1 Staff noted that the conditions of the permits should include: 1) retention of up to 10 Dolly Varden with no minimum size; 2) retention of six cutthroat trout or rainbow trout in combination, with a size slot limit of 11 inches to 22 inches, using a rod and reel with no bait; 3) no season restrictions. The permit also should require harvest reporting to include, at least, the number and size of harvested fish, the location and date of harvest.
determinations carried over from the State, adding “remainder” areas for the Yakutat and Southeastern areas, and including all rural Southeastern communities that did not have customary and traditional use determinations (carried over from the State). The effect of the ISC recommendation was that the customary and traditional use determinations were for all rural residents of Alaska, not just rural residents of Southeast Alaska. The ISC stated that retention of the existing customary and traditional use determinations would maintain opportunity for eligible subsistence users while the addition of the remainder areas would recognize other eligible subsistence users until a review of existing information could be conducted to further refine relationships between communities or areas and their use of fish stocks (FSB 2000). The ISC rationale for this recommendation was that there was a lack of substantial evidence to show that the communities in the region have customarily and traditionally harvested and used all the stocks of rainbow trout, cutthroat trout, and Dolly Varden in the Southeastern Area. In relation to Proposal FP01-22(b), the ISC recommended not adopting the Council’s modifications of harvest limits, size restrictions, and bait. The ISC supported the use of a Federal subsistence fishery permit, noting that the requirement of a Federal subsistence fishing permit would provide a means to obtain information on the subsistence fishing of the named species. The restriction of the fishery to the six lakes recommended by staff also was included in the ISC recommendation.

The Board discussed the lack of data and considered the “broad brush” approach for “remainder areas” as a preliminary step. Several Board members commented that future research would help to better define customary and traditional uses for the communities that did not have State customary and traditional use determinations. The Board adopted the ISC recommendation, which the State also supported. In the eight factor analysis in Proposal FP01-22(a), it was noted that,

> Not all of the streams that were traditionally used were adjacent to villages, and historically people sometimes traveled quite far to get fish or they acquired fish while engaged in hunting or trapping. As people throughout Southeast Alaska began taking part in commercial fisheries, subsistence fishing often took place immediately before, during or after commercial openings. This pattern of harvest, including fishing in streams closely accessible and those in different parts of the region, persists in contemporary life (FSB 2000:20).

In 2001, Proposal FP02-36 requested all Federal public waters in the Southeastern Area be closed except by Federally qualified subsistence users to the taking of Dolly Varden, cutthroat trout, and rainbow trout, with the exception of Baranof Lake, Florence Lake, Hasselborg Lake and River, Mirror Lake, Virginia Lake, and Wilson Lake. The proponent suggested this closure remain in effect until it could be proven that sport harvest would not create conservation concerns in the fish populations when coupled with the Federal subsistence fishery approved the previous year (SERAC 2001:82). The motivation behind the proposal was that the proponent felt that specific Federal subsistence fishery regulations only for six specific lakes and State sport fishing regulations for remaining Southeast waters did not provide a reasonable subsistence opportunity or a priority. He said that the six specific lakes were difficult to access. He also stated that this approach was not in line with subsistence harvest practices that include the circumstantial harvest of fish and wildlife species. He noted,

> When I’m deer hunting, I might be on an island and there’s a beaver pond and I’ll take my trout. I just felt that last year when we were allowed an increase in subsistence and then to deny it in the vast majority of Southeast Alaska, but to still allow a two-fish sport limit showed there was fish available and if there wasn’t an increased limit for me then the sport fishery should be curtailed (SERAC 2001:90).
The Council recommended that the Board oppose the proposal and instead provide alternative regulatory language. The language the Council suggested was, “You may take trout in Southeast Alaska waters under Federal jurisdiction under the terms of a Federal subsistence fishing permit” (SERAC 2000:94). The Council intentionally did not include steelhead as “trout” in this proposal (SERAC 2000:98).

At its 2001 meeting, the Board adopted the Council recommendation to oppose Proposal FP02-36 and inserted the language recommended by the Council.

Salmon/trout permits have been in place since 2002 and steelhead permits were instituted in 2005. These permit conditions address conservation concerns and provide for a subsistence priority for Federally qualified subsistence users. The fishery is closely monitored and no issues have arisen that have required changes to seasons, harvest limits, or methods and means for any users. (There are, however, closures to sockeye fisheries for nonsubsistence users at Kutlaku Lake on west Kuiu Island; and Gut Bay and Falls Lake Bay on southeast Baranof Island.2) The conditions of permits in systems to receive special protection are determined by the local Federal fisheries manager in consultation with ADF&G (SERAC 2005:290). No fish have been reported harvested from the Juneau road system in Districts 11 and 15 in the Federal subsistence harvest database (Larson 2007, pers. comm.).

In 2005, Proposal FP06-31 was submitted to remove the Board’s current area-wide Federal subsistence fishing regulations for steelhead, cutthroat trout, and Dolly Varden in streams on or adjacent to the Juneau road system and replace them with State of Alaska sport fishing regulations. The impetus for the proposal was conservation concerns. The Council and the ISC recommended that the Board reject the proposal (SERAC 2005:304).

At its January 2006 meeting, the Board voted to reject the proposal. The ISC justification to reject the proposal noted that:

Streams on or adjacent to the Juneau road system are Federal public waters to which the Federal Southeastern Alaska Area subsistence fishing regulations apply. The regulations apply to Federally qualified subsistence users who, although they do not reside in non rural Juneau, do live elsewhere in rural parts of Southeast. They have a right to take fish in Juneau-area Federal public waters (ANILCA, Title VIII). There is no substantial evidence of a need to change Federal regulations because of fish conservation concerns. Adopting the proposed regulatory change would result in few or no fish available for harvest by Federally qualified subsistence users on the Juneau road system and therefore could be detrimental to the satisfaction of their subsistence needs (FSB 2006:393).

Part of the testimony included comments from Council Chair Littlefield:

If you look back at history, we’ve done these things in the past and that’s what I’m telling you and we continue to do them now. I don’t know whether they did them under the table. This gentleman said he stopped when the State instituted those measures. He said he stopped when he lived in Juneau but before that he was able to participate. So, I think opportunity is tied in there and without an opportunity you can’t have a meaningful priority (FSB 2006:578).

2 These closures are under review in Proposal FP08-01 and 02.
Extent of Federal Public Waters

For purposes of this discussion, the phrase “Federal public waters” is defined as those waters described under 50 CFR 100.3.

Federal public waters comprise all fresh waters draining into fishing District 11 and those fresh waters draining into fishing District 15 south of the Chilkat Peninsula (near Haines), but also including the eastern side of Chilkoot Inlet north to Skagway, all within the exterior boundaries of the Tongass National Forest (Map 1). These waters include all streams crossed by roads connected to the City and Borough of Juneau road system.

Community Characteristics

The communities with documentation from subsistence use studies of subsistence harvests of fish in Districts 11 and 15 are, from north to south, Skagway, Klukwan, Haines, Tenakee Springs, Petersburg, and Wrangell (Maps 1, 2, and 3). A summary of these communities is presented in Table 1.

Nearby communities, such as Hoonah, Gustavus, Excursion Inlet near Gustavus, and Angoon, have no records of harvest for subsistence use studies in Districts 11 or 15, although it is possible that fish harvests have occurred.

Limited data are available from the Statewide Sport Fish Harvest Survey, a mail out survey conducted by ADF&G. The survey was designed to provide statewide and regional estimates of effort and harvest of fish by sport fish license holders using sport fish gear under sport fish regulations. The Statewide Sport Fish Harvest Survey is not designed to provide detailed harvest and effort estimates for individual streams in areas with very low participation or expand effort and harvest estimates for small sub-samples of anglers responding to the survey. From 1996 - 2006, there were 107 entries from responses to the statewide harvest survey from rural residents of Southeast Alaska who sport fished in Districts 11 and 15. Of these 107 entries, 32 fished in freshwaters. A further examination of which streams were fished found that 24 of these entries were for the Juneau road system, including fishers from the communities of Skagway, Sitka, Wrangell, Pelican, Haines and Gustavus. Each entry from respondents to the survey

<table>
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<tr>
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</thead>
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<td>Traditional Tlingit</td>
<td>862</td>
<td>854</td>
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<tr>
<td>Klukwan CDP1</td>
<td>Traditional Tlingit</td>
<td>139</td>
<td>112</td>
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<tr>
<td>Haines Borough2</td>
<td>Traditional Tlingit</td>
<td>2,392</td>
<td>2,241</td>
</tr>
<tr>
<td>Tenakee Springs City</td>
<td>Settled in 1916</td>
<td>104</td>
<td>109</td>
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<tr>
<td>Juneau City and Borough</td>
<td>Settled in 1880</td>
<td>30,711</td>
<td>30,650</td>
</tr>
<tr>
<td>Petersburg City</td>
<td>Settled in 1899</td>
<td>3,224</td>
<td>3,129</td>
</tr>
<tr>
<td>Wrangell City</td>
<td>Traditional Tlingit</td>
<td>2,308</td>
<td>1,911</td>
</tr>
</tbody>
</table>

1 CDP = Census Designated Place. The U.S. Census Bureau creates CDPs as counterparts of incorporated places. The boundaries of a CDP usually follow visible features or the boundary of an adjacent incorporated place.

2 The City of Haines dissolved in October 2003 in favor of a boroughwide government.
Map represents community use areas up to 1988 from key respondent interviews. See Tongass Resource Use Cooperative Survey 1988 Reports to Communities for background on sample sizes and mapping methods (Kruse and Frazier 1988).
Map represents community use areas up to 1988 from key respondent interviews. See Tongass Resource Use Cooperative Survey 1988 Reports to Communities for background on sample sizes and mapping methods (Kruse and Frazier 1988).
indicated that at least one angler from a household sport fished in an identified stream within Districts 11 and 15. It is possible that a household response provided more than one of the 107 entries listed in the survey results. During one year, sport anglers from one household may have fished in more than one stream within Districts 11 and 15, thus the 107 entries included in the data request response may represent effort from some unknown number of households less than 107. The low number of survey responses from anglers who reside in these rural communities are too small to apply an expansion factor to accurately estimate effort and harvests for all anglers by rural community that sport fished in Districts 11 and 15 from 1996-2006. Most of the freshwater sport fishing effort within Districts 11 and 15 by Southeast Alaska residents was exerted by the residents of Juneau (identified as survey responders who reside within zip codes 99801, 99802, 99803, 99812, 99824, 99850). Roughly 5,000 entries of anglers fishing in Districts 11 and 15 were from Juneau residents fishing in salt water and 1,200 entries were from Juneau residents fishing in freshwater (Pappas 2007, pers. comm.).

Brief History of the Region

The area around each community in the region was originally occupied by Tlingit, either in established villages, semi-permanent villages, or seasonal camps (Map 4). In the eighteenth century, Russian explorers and colonizers entered Alaska from the west establishing settlements in the Aleutian and Kodiak Islands. The first Russian settlement in Southeast was the outpost at Yakutat in 1795, followed by the major settlement at Sitka in 1799 (Langdon 1983 in Schroeder and Kookesh 1988:15). Attracted by the sea otter trade, they had limited influence on the Tlingit largely because Russians were unable to conquer them outside of Sitka (Langdon 1983 in Schroeder and Kookesh 1988:15). Sea otters were reaching depletion at the time of the sale of Alaska to the U.S. in 1867 (Roderick 1983 in George and Bosworth 1988:15).

Other settlers began arriving in the region for the purposes of mining, missionary work, and whaling (Roderick 1983 in George and Bosworth 1988:15). When gold was discovered in the Klondike, Yukon Territory, in the 1890s, Skagway was at a major route into the Interior and the gold fields. Settlers began arriving in large numbers beginning in the 1880s with the establishment of salmon canneries in Southeast Alaska. The commercial salmon fishing industry continues to be the economic mainstay of the regional economy. When a salmon cannery was constructed, people from established communities often stayed at sites near canneries seasonally in temporary structures, some of which became permanent communities (Smythe 1988:21). Communities also came together around established schools. Fox farming added to the economy beginning in the 1920s and continued into the 1940s, when demand dropped off after Word War II (Smythe 1988:26). Large scale logging began in the 1960s (Smythe 1988:21).

In the 1880s, canneries often acknowledged Tlingit clan rights in some drainages, and some canneries made payment for the right to fish in owned streams, but this practice was discontinued early in the history of the industry (George and Bosworth 1988:29–30). Eventually, severe over-harvesting with seines and fish traps eliminated many runs by the late 1930s. Commercial salmon traps, fisheries, and canneries were followed by fisheries for halibut, herring for bait and later salted herring, red king crab beginning in the 1950s, and black cod in the 1930s and 1950s. In 1925 there was a commercial fishery for Dolly Varden (Smythe 1988:25). The introduction of large cold storage facilities at communities with room for large buying scows, in Petersburg for example, further expanded fisheries.

Brief Community Descriptions

This section provides brief descriptions of a number of communities harvesting fish in Districts 11 and 15, as documented in subsistence use studies (Betts et al. 1994, Goldschmidt and Haas 1998, and Betts
FP08-04 Map 4
Tlingit and Haida territory, Southeast Alaska.
(Goldschmidt and Haas 1998)
1994 in Paige 2002). Information on these communities’ use areas are provided in the section on Use Areas.

**Skagway**

Skagway, located in District 15, is situated on the mainland at the extreme northern end of Lynn Canal, where the Skagway and Taiya rivers enter Taiya Inlet, approximately 15 miles north of Haines (Map 1) (Paige 2002). According to Betts (1994 in Paige 2002), Skagway occupies a location that was once a Chilkat Tlingit village (including Chilkat, Chilkoot, Klukwan, and Haines groups), at the mouth of the Taiya River (see Map 5). Other seasonal camps and smoke houses existed along the Skagway River, an area encompassed by District 15. Chilkat controlled the area that includes what is known today as the Chilkoot Trail, a major trade route over Chilkoot Pass to the Canadian Interior. Eulachon oil was a major item for the Chilkoot to trade with Interior Athabascans. Chilkat encountered Vancouver’s expedition in 1794 when it arrived at Lynn Canal, and trading ships increasingly frequented the area. However, trade with the Canadian Interior continued to be supervised by Tlingit. Gold was discovered in the Klondike, Yukon Territory, in 1897, and the Chilkoot Trail was the most easily accessible route to the gold fields, attracting many miners, and a wave of settlement began in 1887 when a town site was established at the mouth of the Skagway River. Soon a railway over White Pass superseded the trail. Skagway became Alaska’s first incorporated city in 1900. After the gold rush waned, other industries replaced it, such as independent, local mining and tourism. Tourism has become an increasingly important factor in Skagway’s economy (Betts 1994 in Paige 2002).

**Klukwan**

Klukwan is situated on the north bank of the Chilkat River, 22 miles north of Haines at the northern end of Lynn Canal (Map 1) (Paige 2002). Klukwan is a Chilkat Tlingit village of long standing and the principle town of the Chilkat Tlingit, whose territory generally includes the Chilkat River and its upper drainages, and western Lynn Canal area (Map 5) (Betts et al. 2004 in Paige 2002). Several salmon canneries were located in Chilkat Inlet, beginning in 1882. The Dalton Trail was a route to the Interior, used by many during the Klondike gold rush. White settlement in the village has remained minimal. In 1942 the Haines Highway was completed into the Interior, which connected Klukwan to this road system. The Chilkat Bald Eagle Preserve was established nearby, drawing tourists to the area (Betts et al. 2004 in Paige 2002).

**Haines**

Haines, located in District 15, is situated at the mouth of the Chilkat River at the northern end of Lynn Canal (Map 1). It was a trading post for both the Chilkat and Interior Athabascans. The communities of Haines and nearby Klukwan were once a single unit with villages located throughout the area. People from Haines and Klukwan shared land and waterway ownership in the Chilkat territory, which includes the shores of Lynn Canal and its tributaries south to Berners Bay, in District 15, at the northern terminus of the Juneau road system (Map 5).

**Tenakee Springs**

Tenakee Springs, a small community noted for its natural hot spring, is located along Tenakee Inlet on the east side of Chichagof Island (Map 1). It is in the traditional territory of Angoon Tlingit (Map 6). Betts (1994 in Paige 2002) notes that the community is situated on the location of historical Tlingit settlements. From here exists an overland route to Hoonah. In the late 1800s prospectors and miners began living at this location seasonally. A permanent community of new settlers developed as salmon and crab canneries
FP08-04 Map 5
Chilkat (Klukwan-Haines) Tlingit territory, showing use and ownership, pre-1946.
(Goldschmidt and Haas 1998)
FP08-04 Map 6
Angoon Tlingit territory, showing use and ownership, pre-1946.
(Goldschmidt and Haas 1998)
began to operate in the Tenakee area, in 1916; the economy of the community continues to be dominated by the commercial fishing industry and, to a lesser extent, logging (Betts 1994 in Paige 2002).

Juneau Area

The Juneau Area is not under consideration in this analysis because it is nonrural and residents are not eligible to harvest fish under Federal subsistence regulations. It should be noted, however, that prior to the establishment of the community of Juneau, Auk and Taku clans (Tlingit) resided in the area that now includes the Juneau road system and whose traditional territory stretches from the mainland at Berners Bay to portions of Admiralty Island and Lynn Canal to the north (Map 7). Both groups resided in numerous camps and villages in the Juneau area. One, in particular, located at Swanson Harbor, at the confluence of Icy Strait and Lynn Canal, was apparently a village jointly used by the Chilkat, Auk, and Hoonah people as a trading center. Taku also traveled inland up the Taku River. Various clans held ownership of resource harvest areas. Many within the Auk and Taku clans moved into the developing town of Juneau once gold was discovered there in 1880 (Goldschmidt and Haas 1998:37). Thus, it is clear that prior to the establishment of the town of Juneau, the Juneau Area was used by the Tlingit for harvesting subsistence resources.

Petersburg

Petersburg is situated at the north end of Mitkof Island on Wrangell Narrows (Map 1). The town of Petersburg grew up around a cannery established in 1899, on the northwest shore of Mitkof Island on Wrangell Narrows. The community was established predominantly by immigrants who had come directly from Europe, particularly Norwegians. Prior to Petersburg’s development by homesteaders and fishermen at the turn of 20th century, Tlingit use of the area occurred at many small settlements. As fish camps or seasonal harvest and production sites, they were part of the traditional land use pattern of Tlingit society. Along with the evolution of the commercial fishing industry, in which Petersburg has always been a leader in Southeast Alaska, a larger Tlingit community developed in the expanding town. This Indian community has been a permanent and stable component of the town throughout its development. Prior to the founding of the cannery, the Wrangell Tlingit shared control of Frederick Sound with Kake Tlingit (Map 8). Salmon were harvested at a creek across from present-day Petersburg, which belonged to a Wrangell clan (see description of the Wrangell territory below). Commercial fishing dominates the local economy (Goldschmidt and Haas 1998:73; Betts et al. 1994:1–2).

Wrangell

Wrangell is located on the north end of Wrangell Island on Zimovia Strait, and near the mouth of the Stikine River, which reaches into the Canadian Interior (Map 1). According to Betts (1994 in Paige 2002), the town dates from the construction of the Russian-American trading post in 1836. Two large villages of Wrangell existed at the locations of present-day Wrangell and Deserted Village located on Zimovia Strait (Map 8) (Goldschmidt and Haas 1998:73). Wrangell territory extended along the mainland approximately to Cape Fanshaw, across to Kupreanof Island, extending to just south of Etolin Island, areas not in Districts 11 or 15. Descended from the Stikine clans, a riverine people with villages and camps that extended 160 miles up the Stikine River, they controlled the trade network that developed around this drainage. After the Cassiar gold rush in the 1860s permanent settlers began to arrive at Wrangell to fish and log. Both industries continue to dominate the local economy.
FP08-04 Map 7
Juneau-Douglas Tlingit territory, showing use and ownership, pre-1946.
(Goldschmidt and Haas 1998)
FP08-04 Map 8
Wrangell Tlingit territory, showing use and ownership, pre-1946.
(Goldschmidt and Haas 1998)
**Eight Factors for Determining Customary and Traditional Uses**

A community or area’s customary and traditional use is generally exemplified through the following eight factors: (1) a long-term, consistent pattern of use, excluding interruptions beyond the control of the community or area; (2) pattern of use recurring in specific seasons for many years; (3) a pattern of use consisting of methods and means of harvest which are characterized by efficiency and economy of effort and cost, conditioned by local characteristics; (4) the consistent harvest and use of fish or wildlife as related to past methods and means of taking: near, or reasonably accessible from the community or area; (5) a means of handling, preparing, preserving, and storing fish or wildlife which has been traditionally used by past generations, including consideration of alteration of past practices due to recent technological advances, where appropriate; (6) a pattern of use which includes the handing down of knowledge of fishing and hunting skills, values, and lore from generation to generation; (7) a pattern of use in which the harvest is shared or distributed within a definable community of persons; (8) a pattern of use which relates to reliance upon a wide diversity of fish and wildlife resources of the area and which provides substantial cultural, economic, social, and nutritional elements to the community or area.

The Federal Subsistence Board makes customary and traditional use determinations based on a holistic application of these eight factors (50 CFR 100.16(b) and 36 CFR 242.16(b)). In addition, the Board takes into consideration the reports and recommendations of any appropriate Regional Advisory Council regarding customary and traditional use of subsistence resources (50 CFR Part 100.16(b) and 36 CFR 242.16(b)).

**Long-Term, Consistent Pattern of Use**

Salmon, trout, char, smelt, and eulachon have been seasonally harvested and used by Tlingit communities in Southeast Alaska since well before historic contact and continue to the present. Non-Natives throughout the region have also established long-term patterns of harvest and use of these fish in the streams, lakes, and marine waters where they are found. Variation from traditional patterns stem from, at least: (1) regulatory restrictions on eligibility, seasons, daily and annual harvest limits, gear types, and bait; (2) increased competition from out-of-state and nonrural residents; (3) variations in resource availability for reasons, including, changes in abundance related to habitat change, over harvesting, and commercial harvesting; and (4) changes in available technology. Where not restricted, rural residents of the region have adopted enhanced harvest technologies, such as outboard boat motors and mechanical rod and reel gear, in addition to traditional techniques such as the use of nets, gaffs, and spears. Many patterns of use, including uses of resources obtained through gifting and exchange, remain the same throughout the region, when access to those resources has not been restricted. Other patterns of use include various kinds of processing and preservation of fish for household consumption and customary trade, involving the gifting and sharing of fish, fresh and processed, with individuals and groups of Natives and non-Natives. Tlingit are dependent on wild resources, and their harvest and use have continued into the modern era. The harvest and use of wild fish is a way of practicing and teaching to young people important cultural values and customary rules, such as harvesting only what is needed and not wasting (Newton and Moss 2005:2).

Fish have been consistently used by residents of communities harvesting wild fish for home use from District 11 and District 15 waters (Maps 2 through 8). Community-based studies by ADF&G have documented the harvest and use of these resources, as presented in Tables 2 to 4. The information in these tables exists in the ADF&G's Community Subsistence Information System (CSIS) (ADF&G 2007). These tables indicate the estimated harvests, if harvests during the study year were reported, of chum, coho, Chinook, pink, and sockeye salmon, as well as nonsalmon species eulachon, Dolly Varden, cutthroat.
Table 2. The estimated harvest and use of salmon for home use, by community, most recent harvest survey (ADF&G 2007).

<table>
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<th>Species</th>
<th>Estimated Total</th>
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<td>Number</td>
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<tr>
<td>Klukwan 1996</td>
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</tr>
<tr>
<td>Salmon</td>
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<td>3,753</td>
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<tr>
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<td>154</td>
<td>1,958</td>
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<tr>
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<td>20,463</td>
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</tr>
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<td></td>
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<td></td>
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</tr>
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<td>106.2</td>
</tr>
<tr>
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<tr>
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<tr>
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</tr>
<tr>
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<td>358</td>
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<td>0.9</td>
<td>8.1</td>
</tr>
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<td>177,210</td>
<td>23.5</td>
<td>8.6</td>
<td>165.6</td>
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<tr>
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<td>31,214</td>
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<tr>
<td>Chinook Salmon</td>
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<td>106,222</td>
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<td>3.1</td>
<td>99.3</td>
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<tr>
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<td>12,018</td>
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<td>1.6</td>
<td>11.2</td>
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<td>Sockeye Salmon</td>
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</tr>
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<td>50,022</td>
<td>9.4</td>
<td>3.6</td>
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</tr>
<tr>
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</tr>
<tr>
<td>Coho Salmon</td>
<td>1,753</td>
<td>9,185</td>
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<td>0.9</td>
<td>12.3</td>
</tr>
<tr>
<td>Chinook Salmon</td>
<td>2,424</td>
<td>28,430</td>
<td>3.2</td>
<td>1.2</td>
<td>38.1</td>
</tr>
<tr>
<td>Pink Salmon</td>
<td>389</td>
<td>968</td>
<td>0.5</td>
<td>0.2</td>
<td>1.3</td>
</tr>
<tr>
<td>Sockeye Salmon</td>
<td>2,172</td>
<td>9,694</td>
<td>2.9</td>
<td>1.1</td>
<td>13.0</td>
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</table>
Table 3. The estimated harvest and use of eulachon, Dolly Varden, cutthroat trout, rainbow trout, and steelhead\(^1\) for home use, by community, most recent harvest survey (ADF&G 2007).

<table>
<thead>
<tr>
<th>Species</th>
<th>Percent of Households</th>
<th>Estimated Amount Harvested</th>
<th>Estimated Pounds Harvested</th>
</tr>
</thead>
<tbody>
<tr>
<td></td>
<td>Used</td>
<td>Harv’d</td>
<td>Rec’d</td>
</tr>
<tr>
<td><strong>Skagway 1987</strong>(^1)</td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Eulachon(^2)</td>
<td>8.1%</td>
<td>5.5%</td>
<td>3.1%</td>
</tr>
<tr>
<td>Dolly Varden</td>
<td>38.9%</td>
<td>23.8%</td>
<td>16.1%</td>
</tr>
<tr>
<td><strong>Klukwan 1996</strong></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Eulachon(^3)</td>
<td>80.6%</td>
<td>61.3%</td>
<td>58.1%</td>
</tr>
<tr>
<td>Dolly Varden</td>
<td>61.3%</td>
<td>58.1%</td>
<td>35.5%</td>
</tr>
<tr>
<td>Cutthroat Trout</td>
<td>16.1%</td>
<td>16.1%</td>
<td>9.7%</td>
</tr>
<tr>
<td>Rainbow Trout</td>
<td>16.1%</td>
<td>12.9%</td>
<td>9.7%</td>
</tr>
<tr>
<td>Steelhead</td>
<td>6.5%</td>
<td>3.2%</td>
<td>3.2%</td>
</tr>
<tr>
<td><strong>Haines 1996</strong></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Eulachon(^4)</td>
<td>39.8%</td>
<td>29.0%</td>
<td>14.0%</td>
</tr>
<tr>
<td>Dolly Varden</td>
<td>47.3%</td>
<td>36.6%</td>
<td>14.0%</td>
</tr>
<tr>
<td>Cutthroat Trout</td>
<td>18.3%</td>
<td>17.2%</td>
<td>1.1%</td>
</tr>
<tr>
<td>Rainbow Trout</td>
<td>3.2%</td>
<td>2.2%</td>
<td>1.1%</td>
</tr>
<tr>
<td>Steelhead</td>
<td>7.5%</td>
<td>5.4%</td>
<td>2.2%</td>
</tr>
<tr>
<td><strong>Tenakee Springs 1987</strong></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Dolly Varden</td>
<td>38.7%</td>
<td>32.2%</td>
<td>9.7%</td>
</tr>
<tr>
<td><strong>Petersburg 2000</strong></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Dolly Varden</td>
<td>16.8%</td>
<td>15.2%</td>
<td>3.2%</td>
</tr>
<tr>
<td>Cutthroat Trout</td>
<td>16.8%</td>
<td>15.2%</td>
<td>3.2%</td>
</tr>
<tr>
<td>Steelhead</td>
<td>3.2%</td>
<td>1.6%</td>
<td>2.4%</td>
</tr>
<tr>
<td><strong>Wrangell 2000</strong></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Eulachon</td>
<td>5.1%</td>
<td>1.0%</td>
<td>4.1%</td>
</tr>
<tr>
<td>Dolly Varden</td>
<td>9.2%</td>
<td>7.1%</td>
<td>2.0%</td>
</tr>
<tr>
<td>Cutthroat Trout</td>
<td>29.6%</td>
<td>23.5%</td>
<td>9.2%</td>
</tr>
<tr>
<td>Rainbow Trout</td>
<td>10.2%</td>
<td>8.2%</td>
<td>3.1%</td>
</tr>
<tr>
<td>Steelhead</td>
<td>16.3%</td>
<td>4.1%</td>
<td>13.3%</td>
</tr>
</tbody>
</table>

\(^1\)The 1987 household harvest surveys for Skagway and Tenakee Springs did not collect information on cutthroat trout, rainbow trout, or steelhead (Betts et al. 1994 in Paige 2002).

\(^2\)Using a conversion factor of 8 fish/lb, 189 lbs = 1,512 eulachon total; 7.4 per/hh; 2.59 per capita.

\(^3\)Using a conversion factor of 72 fish/gal, 2,932 gal = 211,104 eulachon total; 5,861 per/hh; 1,951 per capita.

\(^4\)Using a conversion factor of 72 fish/gal, 11,930 gal = 858,960 eulachon total; 1,094.4 per/hh; 396 per capita.
Table 4. The estimated harvest and use of wild resource for home use, by resource category and community, most recent harvest survey (ADF&G 2007).

<table>
<thead>
<tr>
<th>Resource Category</th>
<th>Total Pounds Harvested</th>
<th>Mean Pounds Per Household</th>
<th>Pounds Per Person</th>
</tr>
</thead>
<tbody>
<tr>
<td><strong>Skagway 1989</strong></td>
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<td></td>
<td></td>
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<tr>
<td>All Resources</td>
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<td>137.5</td>
<td>48.1</td>
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<tr>
<td>Fish</td>
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<tr>
<td>Salmon</td>
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<td>50.5</td>
<td>17.7</td>
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<tr>
<td>Non-Salmon Fish</td>
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<td>15.5</td>
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<tr>
<td>Land Mammals</td>
<td>2,123</td>
<td>10.4</td>
<td>3.6</td>
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<tr>
<td>Marine Mammals</td>
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<td>0</td>
<td>0</td>
</tr>
<tr>
<td>Birds and Eggs</td>
<td>207</td>
<td>1.0</td>
<td>0.4</td>
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<td>Marine Invertebrates</td>
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<td>25.6</td>
<td>9.0</td>
</tr>
<tr>
<td>Vegetation</td>
<td>1,151</td>
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<td>2.0</td>
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<tr>
<td><strong>Kluikan 1996</strong></td>
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<tr>
<td>All Resources</td>
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<tr>
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<td>Birds and Eggs</td>
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<td>1.0</td>
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<td>Vegetation</td>
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<td>14.5</td>
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<td><strong>Tenakee Springs 1987</strong></td>
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<td>329.9</td>
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<td>10.6</td>
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<tr>
<td><strong>Petersburg 2000</strong></td>
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<tr>
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<tr>
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<tr>
<td>Non-Salmon Fish</td>
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<td>42.2</td>
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<tr>
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<td>0</td>
<td>0</td>
</tr>
</tbody>
</table>
trout, rainbow trout, and steelhead. The data present a one-year snapshot. Harvest patterns for fish species vary annually due to a number of factors, such as weather conditions and the availability of these and other species.

Seasons of Use

Community studies, survey research, and permit information indicate that peak harvests of fish tend to occur during the peak of spawning runs. This is especially true for anadromous species such as salmon. However, some species are stream resident and taken year-round, or at specific times of year. This varies by locality somewhat because of the availability of other resources, the timing of the harvest in conjunction with other activities, and local custom. Steelhead are generally harvested in the spring (mid-March to mid-June), though some communities reported harvest of steelhead over a much longer time period (ADF&G 1989; ADF&G 1991). Data collected in previous research is somewhat inconsistent in reporting harvest seasons for specific species, but it is clear that many communities have a long history of harvesting Chinook salmon year-round. Chum, coho, pink, and sockeye salmon are harvested in slightly staggered and overlapping spring and summer seasons. Some areas are used for longer harvest periods, with considerable variation in effort within those longer periods. Traditionally, whole families moved to their fish streams where intense harvesting and processing of salmon, meat, other fish, and berries took place (Newton and Moss 2005:36). Fish were dried in September and October (Goldschmidt and Haas 1998:114). Currently, this practice is continued by some, while many choose to harvest fish, particularly salmon, on day or overnight trips.

The seasonal patterns of use of smelt and eulachon are not documented in the same manner as salmon, trout and char. However, it is clear from ethnographic sources and technical papers (such as Betts 1994) that harvest and use of eulachon was, and continues to be, an integral part of the subsistence round of the Tlingit living in communities in proximity to the principal contemporary eulachon runs in the Southeast region.

Methods and Means

Before European contact and in historic times, technologies used in harvesting finfish included, at least: weirs, spears, traps, gaff hooks, set hooks, trolling hooks, and throat gorges (Stewart 1977; Newton and Moss 1993). Later gear included gill nets, seine nets, long line, and rod and reel gear. All of these were efficient methods of harvest. Current subsistence regulations allow retention of fish caught incidental to the catch of fish for which permits are required, which fits with traditional values of using all of the resources harvested, including incidental catches.

Areas of Use

People in Southeast Alaska took fish from bays and streams that they either traditionally owned or had permission to use. Traditional clans owned specific streams and clan leaders controlled access and use of the resources there. Infringement on streams was a serious offense and could result in retribution. These clan-owned areas are documented in Goldschmidt and Haas’s report Haa Aani, Our Land (1998) and other sources. Not all streams traditionally used were adjacent to villages, and people sometimes traveled long distances to get fish. Some acquired fish while engaged in hunting or trapping. As people in Southeast Alaska began participating in commercial fisheries in the 19th century, subsistence fishing often took place immediately before, during, or after commercial openings. This pattern of harvest in streams closely accessible as well as farther away in conjunction with commercial fishing persists in contemporary life.
All five salmon species are found in the region, but their spawning streams are not distributed uniformly. For instance, some residents travel 20 or 30 miles, or more, to harvest sockeye salmon at stream sites. Similarly, Chinook salmon spawning is limited to a few mainland rivers and one stream on Admiralty Island (ADF&G 1989). Local knowledge of fish behavior and life cycles and the ability to use specialized harvest methods are important for successful harvest.

People continue to harvest and use trout as a subsistence resource, even though in some locations it may only be harvested under sport regulations. The ADF&G studies indicate considerable variation in percentages of households using char and trout. In recent surveys the portion ranged from 17 to 61 percent of households using char and trout, and from 15 to 58 percent of households harvesting char and trout, in six communities included in this analysis (Table 3). Considerable variation also exists among communities in the amount of char trout harvested (Table 3).

Eulachon runs occur in specific areas and are targeted for their oil for use and trade by those communities closest to those areas, including, from north to south: Situk River and Dry Bay near Yakutat; Chilkat River in District 15; Taku Harbor in District 11; Excursion Inlet near Gustavus; Stikine River near Wrangell; Chickamin River and Unuk River near Ketchikan; and others (Goldschmidt and Haas 1998). Eulachon are targeted by residents of communities living in the vicinity of large runs. Eulachon oil is rendered and traded.

Harvest of nonsalmon and salmon species in Districts 11 and 15 generally occurs in lakes, creeks, and rivers nearest to communities, unless associated with hunting or other harvesting activities. This use pattern—where multiple activities occur, such as fishing and berry picking while hunting—is likely practiced by many subsistence users of these communities and these areas. Specific use areas for each community with fish harvests in Districts 11 and 15, indicated in subsistence use studies, are discussed in the following sections. The State’s Subsistence/Personal Use Salmon Permit system indicates some use of Districts 11 and 15 by residents of other communities, however, use levels and harvest numbers are very low (Fall, Caylor, Brown, Coffing et al. 2003; Fall, Caylor, Brown, Georgette, et al. 2003).

Skagway

Skagway residents generally prefer to harvest fish close to the community, but there are harvests that occur farther from the community. The 1987 and 1988 Tongass Resource Use Cooperative Survey (TRUCS) and subsequent reviews of mapped data by community residents in 1992 and 1993 (1991 in Petersburg and Haines; 1987 in Tenakee Springs) indicated that residents of Skagway identified salmon fishing areas (Map 2) within Districts 11 and 15 in Lynn Canal from Seduction Point to Sullivan Island, including waters around the Chilkat Islands as well as the waters around Lincoln, Shelter, and Douglas Islands near Juneau (Paige 2002:296). Dolly Varden and eulachon contributed to the fish harvested for home use in Skagway in 1987. The 1987 household harvest and use survey for Skagway did not collect information on cutthroat or rainbow trout, or steelhead. Residents identified nonsalmon harvest areas (Map 3) including waters of Lynn Canal at Sullivan and Chilkat Islands, and off the mouth of Endicott River in District 15 (Paige 2002:299).

Klukwan

The Chilkat River, from its mouth to headwaters, and its tributaries constituted the main salmon harvest area for Klukwan residents, however, salmon were also harvested in: 1) Chilkat Inlet from Seduction Point to the mouth of the Chilkat River; 2) at Klukwan; 3) several locations upriver from Klukwan; 4) Portions of Big Boulder Creek and the Kelsall River; 5) Tsirku River outlet; 6) the head of Lutak Inlet, the Chilkoot River, and Chilkoot Lake; 7) Chilkat Lake; 8) the Klehini River for king, coho, and chum
salmon; 9) a larger extent of Lutak Inlet, as well as Lynn Canal as far south as Bridget Cove (for rod and reel trolling); and 10) William Henry Cove (for rod and reel trolling). The heaviest levels of use are adjacent to the community, at the mouth of the Tsirku River, the Chilkat River, the Chilkat Inlet, Lynn Canal, Pyramid Harbor, and Letnikof Cove. The additional area of upper Lynn Canal not shown should reflect a high level of use as well (Betts et al. 1994 cited in Paige 2002).

The nonsalmon harvest area mapping had some inadequacies and only included one or two household’s use areas and did not include many areas used by the community. Reviews with the community of the maps noted that Klukwan harvested nonsalmon in the Chilkat River at four, six, seven, and nine mile for hooligan, trout, and char; Tsirku River outlet for trout and char; and Chilkat Lake for trout and char (Betts et al. 1994 cited in Paige 2002).

Haines

The Chilkat territory (Map 5) includes Federal lands and waters within District 15 as far south as Berners Bay. This area has been used by residents of Haines to harvest wild resources (Goldschmidt and Haas 1998:99). The Chilkat Islands located to the northwest of Sullivan Island are located within the boundaries of District 15 and were used for trolling for nonsalmon fish (Goldschmidt and Haas 1998:34–35).

During update and review sessions held with local residents in 1992 and 1993, following the initial TRUCS study, Haines respondents reported using areas (Map 2) in District 15 including: 1) Berners Bay for coho, by rod and reel; 2) Chilkat Lake for sockeye and coho; 3) the Klehini River up to Big Boulder Creek, and tributaries of the Klehini River including Herman Creek for chum salmon; 4) Taiya Inlet; and 5) St. James Bay for chum, pink, and coho, by rod and reel (Paige 2002:82).

Tenakee Springs

Tenakee Springs households identified areas used for salmon fishing on maps as part of the Division’s 1984 household harvest survey project, but none showed use in Districts 11 and 15 (Map 2) (Paige 2002:306). However, according to 1991 Subsistence/Personal Use Salmon Permits, Tenakee Springs’ sockeye salmon harvest area included the Taku River area in District 11 and pink and chum salmon were harvested in streams within the Juneau Management Area except along the Juneau road system (Betts et al. 1992:29). Nonsalmon fish harvest areas have not been mapped by ADF&G (Betts et al. 1992:29; Paige 2002:307–308).

Petersburg

Only a small portion of the Petersburg use area for fish is in District 11 (Map 3). A baseline harvest survey conducted in 1987 indicated that fish other than salmon were harvested by Petersburg residents in Seymour Canal in District 11, east of Admiralty Island off of Stephens Passage. No mention was made regarding what kinds of fish were harvested (Smythe 1988:87).

Wrangell

Wrangell households identified areas used for salmon fishing on maps as part of the ADF&G Subsistence Division’s 1987 household harvest survey project (Map 2). Wrangell residents primarily harvested fish in areas closer to the community, but they harvested salmon in Stephen’s Passage near Auke Bay in District 11 (Betts et al. 1992:28). Nonsalmon fish were harvested in Taku Harbor in District 11 and St. James Bay,
Sullivan and Chilkat Island areas, Chilkat Inlet, and Lutak Inlet in Lynn Canal in District 15 (Map 3) (Betts et al. 1992:31).

Handling, Preparing, Preserving, and Storing

Fish are handled, prepared, preserved, and stored using methods common throughout Southeast Alaska. These include: drying, smoking, canning, salting, pickling, freezing, and sometimes fermenting. Occasionally subsistence products may be preserved in seal or eulachon oil. Traditional means of taking care of fish are practiced extensively today. For instance, salmon are cut and scored for efficient drying much as they were in the past. The fish are smoked in wooden smokehouses or metal smokers, air dried, canned, frozen, refrigerated, and cooked freshly caught. Although the use of fermented salmon heads and eggs is not as common as it once was, salmon heads and roe are still aged and fermented in some communities, often by traditional methods of burying the eggs or heads in containers on the beach below high tide (ADF&G 1989).

Late runs of salmon were frozen historically, but depended on cold weather instead of electric freezers. People throughout Southeast Alaska still harvest some of their fish after they have spawned because their low fat content makes them the best for dry fish. Tlingit people of the communities in Districts 11 and 15 continue to fish for eulachon on the Chilkat River and render the fish into oil in traditional ways (ADF&G 1989).

Handing Down of Knowledge of Fishing

Knowledge of fishing skills, values, and lore are transmitted from generation to generation in ways common throughout southeast Alaska. Among Native residents, clan and family ties continue to provide important vehicles for transmission of knowledge. The learning of skills associated with harvesting and preparing fish generally derives from a process of observation and participation with elder relatives or community residents, as well as listening to stories describing fish lore and skills. Trout, in particular, are used to teach young children and grandchildren how to fish. Small children lack the coordination to use lures and flies (FSB 2000 Southeast Area:9). Traditionally the new generation learns subsistence methods from key matrilineal kinsmen. In traditional Tlingit culture, young boys learn virtually all lore and economic skills from their mother’s brothers (Oberg 1973 in ADF&G 1989). In District 11 and 15, amongst the Tlingit today, fishing skills and locations continue to be learned from uncles as well as other relatives and elders. Techniques and harvesting equipment are still generally shared among households (ADF&G 1989). Many rural communities in Southeast Alaska are characterized by large extended families with long history and experience in their local areas. Residents of rural communities in Southeast Alaska possess considerable depth of knowledge regarding resource skills, values, and cultural connections to salmon, trout, char, smelt and eulachon. Important learning about subsistence takes place at potlatches and other traditional celebrations where subsistence foods figure importantly.

Sharing

Giving, receiving, trading, and selling fish is ubiquitous among the Native peoples of Southeast. This tradition of distribution and exchange continues as part of the great giveaways associated with elaborate feasts and ceremonies such as the potlatch, and between individuals and families at the everyday level. Sharing occurs throughout all of the Southeast Alaska communities, and fish is one of the main elements. This pattern continues, as is shown in household survey data (Table 3). These sharing practices are a major element of the cultures of these communities. Communities often have primary providers for particular resources, the designated hunters or fishers for sometimes large groups of relatives or socially important people. Other sharing, whether in gifting or exchange, is accomplished by individuals with
immediate family, extended relatives, or specific trading partners in the same community or from different communities.

Reliance Upon a Wide Diversity of Fish and Wildlife Resources

Salmon were, and continue to be, the mainstay of the economy and the most important group of subsistence species for Southeast communities. Salmon fishing has been augmented by, and is complementary to, the seasonal round of collecting other kinds of fish, hunting for terrestrial and marine mammals, collecting intertidal resources, and harvesting plants from beaches, forests, and elsewhere. The harvest and use of cutthroat trout, rainbow/steelhead trout, and Dolly Varden is widespread across the region and similarly fits in the seasonal round of subsistence activities (ADF&G 1989; ADF&G 1991). Communities harvesting fish in Districts 11 and 15 harvested significant quantities of fish and wildlife according to comprehensive household surveys. Virtually all households use some subsistence resources, and almost all households harvest some subsistence resources for their own use. Overall harvest levels vary across the resources utilized. Table 4 shows estimated per capita subsistence harvest levels by community, based on the most recent household surveys conducted between 1987 and 2000. These studies, some of which were part of the Tongass Resource Use Cooperative Study, show significant harvests of salmon and other finfish for the communities harvesting fish in Districts 11 and 15.

Effects of the Proposal

If adopted, the proposal would apply to all roads connected to the City and Borough of Juneau road system. There could be effects on subsistence users because a “no Federal subsistence” determination specifically for the Juneau area would not provide Federally qualified subsistence users the ability to harvest fish from Federal waters along the Juneau-connected road system. This is not consistent with ANILCA Title VIII, Section 804, which provides that “the taking on public lands of fish and wildlife for nonwasteful subsistence uses shall be accorded priority over the taking on such lands of fish and wildlife for other purposes.” Data presented in the analysis show that there are Federally qualified subsistence users harvesting or attempting to harvest fish in Districts 11 and 15 from the Juneau road system. However, it is unknown how much use there is as the data cannot be expanded. Thus, if this proposal is adopted, fish could no longer be harvested by Federally qualified rural residents in fresh waters in the Juneau road system area if they choose to harvest under Federal subsistence regulations.

If this proposal is adopted, it would mean making a specific customary and traditional use determination for a portion of Districts 11 and 15—the Juneau road system. Residents of the Juneau area already are ineligible to harvest fish under Federal subsistence regulations.

If this proposal is not adopted, effects on fish stocks and populations are not anticipated based on the assumption that no change in subsistence harvests is anticipated. Permits are required for Federal subsistence salmon and trout harvests in Districts 11 and 15, including the Juneau road system. Permits are currently used to effectively address any conservation concerns.

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3 A road to connect Juneau to the continental road system has been proposed for decades. An Environmental Impact Statement and Record of Decision (ROD) were signed on April 3, 2006 (ADOT&PF 2007). The ROD proposes a highway north from Echo Cove in Berners Bay at the end of the current Juneau road system, through Berners Bay, to terminate at the Katzehin River, just a few miles east of Haines on the east side of Lynn Canal (all District 15) (Map 1). This road would be within areas used by residents of Haines and Skagway (Maps 2 and 3) to harvest resources.
OSM CONCLUSION

Oppose Proposal FP08-04.

Justification

Proposal FP08-04 requests a “no Federal subsistence priority” customary and traditional use determination for the Juneau road system. When the Board makes a customary and traditional use determination, the uses of the resource in the area are analyzed. In this case, the specific locale raised as a concern by the proponent is the Juneau road system, situated within Fishing Districts 11 and 15. Districts are the typical geographic descriptor for which the Board has made customary and traditional use determinations in the Southeastern Alaska Area. The Juneau road system is estimated to be less than 10 percent of the area of these Fishing Districts. The location-specific customary and traditional use determinations for fish in Southeast were all adopted from State regulations (e.g. in Districts 1 and 12).

Districts 11 and 15 currently have a positive customary and traditional use determination of all rural residents of the Southeastern Alaska and Yakutat Areas for Dolly Varden, trout, smelt, and eulachon. By regulation, since no specific customary and traditional use determination has been made for all other fish, all Federally qualified rural residents in Alaska are eligible to harvest all other fish in the Federal public waters of Districts 11 and 15.

Residents of the Juneau road-connected area live in an area determined to be nonrural by the Federal Subsistence Board, and therefore are not Federally qualified subsistence users. Although Juneau residents do not have eligibility under ANILCA Title VIII to fish under Federal subsistence regulations due to their nonrural status, other Federally qualified rural residents do. Data presented in the analysis show that there is use of fish in Districts 11 and 15 by Federally qualified subsistence users, including at least users from the nearby communities of Klukwan, Haines, Skagway, Tenakee Springs, Petersburg, and Wrangell.

Review of Council and Board transcripts, regulatory proposals, and Council recommendations, indicate that the Council consciously included the Federal public lands and waters of the Juneau road system among other remainder areas open to subsistence for Federally qualified rural residents of Southeast Alaska for Dolly Varden, trout, smelt and eulachon; it was not an incidental inclusion. ANILCA Title VIII, Section 804, provides that “the taking on public lands of fish and wildlife for nonwasteful subsistence uses shall be accorded priority over the taking on such lands of fish and wildlife for other purposes” so long as it is a customary and traditional use (meeting the definition of subsistence). Information in the analysis addressing the “eight factors” shows that use of fish by some communities in Districts 11 and 15 is customary and traditional.

There is no apparent benefit to management by making a customary and traditional use determination in a subportion of a district when there has been little or no subsistence harvest by Federally qualified users fishing under Federal regulations. If Federal subsistence harvests were to increase on the Juneau road system, permit reporting will capture that change. There also currently are no conservation concerns. If concerns arise, permit stipulations can be added or modified on the Federally required permit to address them. Furthermore, conservation concerns are not a reason to modify a customary and traditional use determination.

This proposal should be opposed to allow eligible rural residents using Districts 11 and 15 to continue their subsistence priority, and to fish from Federal public waters, if desired, under Federal regulation as provided by ANILCA Title VIII.
LITERATURE CITED


Paige, A. 2002. Subsistence harvest and use of salmon and selected non-salmon species: Southeast Alaska community summaries. ADF&G, Division of Subsistence, Juneau, AK.

Pappas, G. 2007. Program coordinator, subsistence liaison team. Personal communication: email. ADF&G, Anchorage, AK.


The Interagency Staff Committee found the staff analysis to be a complete and accurate evaluation of the proposal, and the recommendation of the Regional Advisory Council to be consistent with ANILCA Section 805(c).
Introduction: The Alaska Department of Fish and Game (Department) submitted proposal FP08-04 to remove the federal subsistence priority for the streams crossing the Juneau road system within the City and Borough of Juneau. In 2005, the Department submitted FP06-31 requesting the Federal Subsistence Board (Board) to not authorize federal subsistence fisheries in freshwaters along the road system within the Juneau City and Borough boundary due to conservation concerns on these small streams. These small stocks are already restrictively managed or closed due to intensive fishing pressure by Juneau area residents. The Federal Subsistence Board (Board) analysis of FP06-31 in January of 2006 and the threshold analysis of the Board’s denial of the Department’s Fisheries Request For Reconsideration (FRFR) 06-05, dated August 22, 2006, suggested that, instead of changing the federal regulation for taking fish on the Juneau road system, it is more appropriate for the Board to adopt a determination of “no federal subsistence priority” for the area within the City and Borough of Juneau along the road system. Based on the federal Board’s suggestion, the Department submitted proposal FP08-04 to make an area-specific or community-based customary and traditional use determination. No federal subsistence permits have been requested and no harvests by rural residents have been documented for subsistence use in the freshwaters of the road system within the Juneau City and Borough boundary.

Impact on Subsistence Users: There is no evidence of a customary and traditional use of fish stocks for subsistence by any rural resident in the freshwaters that cross the road system within the Juneau City and Borough boundary. As documented in the federal staff analysis, most fishing in the Juneau area occurs within marine waters, just as most fishing occurs in marine waters throughout southeast Alaska. The existing federal subsistence fishery within streams crossed by the Juneau road system requires a permit, and no federal subsistence permit has ever been issued. Meaningful subsistence fishing opportunity for rural resident is provided in streams and marine areas that are closer to their respective communities. Eligible rural residents would have to travel substantial distances by boat or airplane in order to fish on Juneau roads. Rural residents may have to travel some distances from their communities to subsistence fish, but they have more readily accessible fish without traveling to the freshwaters of the road system within the Juneau City and Borough boundary to obtain subsistence fish. Though daily air and ferry service exists, the Juneau area is not near or reasonably accessible to residents of communities in Southeast Alaska for the purpose of subsistence fishing. (In fact, only two responses by rural residents of southeast Alaska over the last three years even reported sport fishing in two freshwater systems on the Juneau road system in the Statewide Sport Fish Harvest Survey.)

No evidence has been provided that shows steelhead, trout, and char in the freshwaters of the Juneau road system area have been customarily and traditionally used for subsistence by rural residents living outside the Juneau area. No evidence indicates that subsistence opportunity along the Juneau road system has been or would be needed for subsistence by rural residents living outside the City and Borough boundary. Without such documentation of customary and traditional use of fish stocks for the streams crossing the Juneau road system within the City and Borough of Juneau, the Department submits proposal FP08-04 to remove the federal subsistence priority for the streams crossing the Juneau road system within the City and Borough of Juneau.

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1 The Juneau area has been determined a non-rural area by the Federal Subsistence Board (Board) according to federal regulations and a non-subsistence use area by the State according to specific regulatory criteria.
traditional use, the Board should exempt the Juneau City and Borough from the region-wide regulations, and this action would have no impact on federally qualified rural subsistence users.

Opportunity Provided by State: State regulations provide for a variety of sport fishing opportunities in the freshwaters and adjacent saltwater shoreline areas of the Juneau road system. The Department sport fisheries website for the Juneau road system lists 15 fresh water streams and numerous salt water shoreline areas for anglers to fish. Nearly all of the fresh water sport fishing activity (roughly 80%) along the Juneau road system takes place in four primary streams (Cowee Creek, Montana Creek, Peterson Creek, Fish Creek). The fish populations in these four streams are relatively small, and, given Juneau’s relatively large human population and road access, the potential exists for over harvesting local fish resources. As such, several small roadside streams are closed to sport fishing altogether and others are closed to salmon or Dolly Varden fishing. Restrictive bag and possession limits are in effect for several species as well. Juneau roadside bag and possession limits and size requirements differ in several respects from regional regulations. Bag and possession limits have been reduced for coho salmon, sockeye salmon, and Dolly Varden and cutthroat trout size limits are more restrictive.

Because Juneau is a non-rural area, residents of Juneau, who historically used fish stocks in the area, are ineligible to participate in the federal subsistence fishery and cannot qualify for a federal customary and traditional use determination. Additionally, residents of Juneau could be displaced from their local fisheries by rural residents from distant areas if a conservation concern arises for any of the District 11 fish stocks and preferences are provided to federally-eligible rural residents through special action in times of shortage. Thus, the existing federal subsistence regulations could lead to restrictions on Juneau residents of the non-rural area along the Juneau road system. This would also impact opportunities of previously-rural residents who move to Juneau and rely upon opportunity in the Juneau area to continue their fishing activities.

Conservation Issues: The Department continues to have concerns about the sustainability of highly accessible and liberal federal subsistence fisheries on the Juneau road system. The federal steelhead 32” size limit allows a harvest rate that is unsustainable. The Federal Staff Analysis for proposal FP 06-31 at the January 2006 Federal Subsistence Board meeting (pages 395-400 in the meeting materials book) provided no biological justification for the size limit other than to state “the size limit was set less than the state sport fish limit of 36” to give federally qualified users a subsistence priority.”2 The state’s 36” size limit and other regulations were adopted to rebuild depleted stocks and biological standards to achieve a sustainable harvest rate. The Department’s sport fishing cutthroat regional minimum size limit of 11” in length was established to protect about 60% of the trout populations until they can spawn at least once. The 14” minimum size limit for cutthroat trout was established for high use waters, such as the Juneau road system, to allow all female cutthroat trout to spawn at least one time. The federal regulations allow retention of cutthroat trout less than 14” in length, which may lead to the harvest of juvenile cutthroat trout in areas of high use.

The State fishing regulations in place for “near or within highly populated areas of Alaska for fish stocks exposed to elevated exploitation pressures” were developed to conserve and rebuild a variety of fish stocks. The current regulations in place that protect such stocks were successfully

2 A federal regulation that is an exact duplicate of a State regulation provides a subsistence priority because in any time of a shortage, non-federally qualifying users are restricted first.
developed through utilizing the most current scientific knowledge and management methods. When all of the required data needed to manage a fishery are not available or if a fish stock has been identified as finite, fragile, or of concern, the fisheries are managed conservatively through restrictive regulations. In the absence of critical information about the stocks’ sizes and harvest rates, the State regulations should be used to help ensure sustainability of the resource. The federal regulations could jeopardize fish stocks because the harvest limits are excessive for the size of streams, and the damage would not be evident until after it is reported. The federal subsistence permit appears to be the foundation for federal stock conservation, but the reporting requirement is actually ‘too little, too late’ for small stocks.

Juneau area streams support small populations of fish and can be easily accessed from the local road system. Under federal subsistence fishing regulations, these fish stocks could be impacted if even a few eligible rural residents chose to subsistence fish while visiting Juneau. These federal regulations apply to the area where non-federally qualified Juneau residents and other users are subject to State sport fishing regulations. The current federal regulations provide an exemption from State sport fish license requirements, allow liberalized gear, and allow liberalized size limits. In summary, streams that cross the road system within the City and Borough of Juneau are relatively accessible, support small fish stocks, and receive increasing pressure by the residents of the area, thus necessitating increasing restrictions on size, gear, and limits in order to assure sustainability of those stocks while also retaining an opportunity for the residents of the area to participate in fishing.

JURISDICTION ISSUES: According to the Department’s Fish Distribution Database, the majority of fish habitat and documented fish observations in these streams are not within federal lands. Some streams have relatively inaccessible headwaters on federal land, but they flow through State, private, and other land ownership that are not within the Tongass Forest boundary prior to crossing Juneau roads to enter marine waters. Other streams along the Juneau road system flow entirely on non-federally owned land. However, the federal analysis in the September RAC Fisheries Meeting Materials book page 84 incorrectly states:

Federal waters comprise all fresh waters draining into fishing District 11 and those fresh waters draining into fishing District 15 south of the Chilkat Peninsula (near Haines) . . . all within the exterior boundaries of the Tongass National Forest (Map 1). These waters include all streams crossed by roads connected to the City and Borough of Juneau road system.

In order for the rural residents and enforcement personnel to know where they can legally participate in federal subsistence fisheries, we request detailed land status maps showing the areas and specific boundaries of waters claimed to be within federal subsistence jurisdiction and the basis for those claims. The map included within the RAC meeting materials is insufficient to provide this information. Significant portions of the lands surrounding the Juneau road system are bordered by state or private lands, where there either is no federal jurisdiction or where persons cannot participate in federal subsistence fisheries while standing on non-federal lands.

DEPARTMENT RECOMMENDATION: Support

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3 The Juneau area was specifically excluded from the Tongass Forest prior to statehood.
# FP08-05 Executive Summary

## General Description
Proposal FP08-05 seeks to clarify the times and places when Federal subsistence users may harvest salmon when there are commercial set gillnet openings in Yakutat-area rivers and bays. The proposal specifically seeks to remove the prohibition against subsistence fishing 48 hours before and after commercial fishing periods. *Submitted by the Southeast Alaska Subsistence Regional Advisory Council*

## Proposed Regulation

<table>
<thead>
<tr>
<th>Section</th>
<th>Text</th>
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<tbody>
<tr>
<td>§27(i)(12)(ii)</td>
<td>You may not take salmon during the period commencing 48 hours before a State opening of commercial salmon net fishing season and ending 48 hours after the closure. This applies to each river or bay fishery individually.</td>
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<tr>
<td>§27(i)(12)(iii)</td>
<td>When the length of the weekly State commercial salmon net fishing period exceeds two days in any Yakutat Area salmon net fishery, the subsistence fishing period is from 6 a.m. to 6 p.m. on Saturday in that location.</td>
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## Southeast Alaska Regional Council Recommendation
Support Proposal FP08-05

## OSM Conclusion
Support Proposal FP08-05

## Interagency Staff Committee Comments
See comments following analysis.

## ADF&G Comments
Oppose Proposal FP08-05

## Written Public Comments
1 Support
SOUTHEAST ALASKA SUBSISTENCE REGIONAL ADVISORY COUNCIL

Support Proposal FP08-05

Justification

Almost all subsistence fishing in Yakutat is conducted in State waters under a State subsistence fishing permit. In 2006, there were only 57 sockeye caught under Federal regulations out of the 3,500 sockeye total subsistence harvest. The Council determined the area that would be impacted by this regulatory change is confined to small areas on the Dangerous River and the Alsek River, and would not effect State regulations that prevent commercial fishermen from subsistence fishing 48 hours prior or post commercial fishing in waters under Federal or State jurisdiction. The proposal retains the requirement of fin clipping to prevent introduction of subsistence caught fish into a commercial market. Adopting this proposal would benefit subsistence users by removing unnecessary language from Federal regulations and would not cause a conservation concern. Adopting this proposal would have no effect on nonqualified users.
ISSUES

Proposal FP08-05, submitted by the Southeast Regional Advisory Council, Bertrand Adams, Sr. chair, seeks to clarify the times and places when Federal subsistence users may harvest salmon when there are commercial set gillnet openings in Yakutat-area rivers and bays. The proposal specifically seeks to remove the prohibition against subsistence fishing 48 hours before and after commercial fishing periods.

DISCUSSION

Federal subsistence users, managers, and enforcement officers have been uncertain how to interpret and comply with the Federal subsistence regulation “§____.27(i)(12)(ii) You may not take salmon during the period commencing 48 hours before a State opening of commercial salmon net fishing season and ending 48 hours after the closure. This applies to each river or bay fishery individually.” and the associated regulation “§____.27(i)(12)(iii) When the length of the weekly State commercial salmon net fishing period exceeds two days in any Yakutat Area salmon net fishery, the subsistence fishing period is from 6 a.m. to 6 p.m. on Saturday in that location.” These Federal regulations were copied from, and are nearly identical to, the State regulations that restrict subsistence fishing where and when there are commercial set gillnet openings. Both State and Federal subsistence fishing regulations prohibit the commercial sale of salmon taken in subsistence fisheries and offsetting the subsistence and commercial fishing times reduces the likelihood that this will occur. Neither Federal nor State regulations restrict subsistence fishing in other parts of the river during commercial openings, but few subsistence fishers have chosen to subsistence fish anywhere in a system when part of it is closed due to a commercial opening.

There are several Federal subsistence fishing regulations that are also intended to minimize the commercial sale of subsistence-taken salmon. General provision regulation §____.27(a)(13), directly prohibits the sale or purchase of subsistence-taken fish by fisheries businesses. In Federal regulations for the Yakutat area, “§____.27(i)(12)(x) You must immediately remove both lobes of the caudal (tail) fin from subsistence-caught salmon when taken.” is intended to identify subsistence-taken salmon and keep them from being sold commercially. The State also has a similar regulation, “5AAC 01.690. MARKING OF SUBSISTENCE-TAKEN SALMON. Subsistence fishermen must remove the dorsal fin from subsistence-caught salmon when taken.” The risk of being cited and fined has effectively kept subsistence fishers from trying to sell their subsistence-taken fish and processors from knowingly buying marked subsistence-taken fish. These regulations have worked as they were intended in the Yakutat area and there have not been recurring problems with subsistence salmon being sold commercially or with conflicts between commercial and subsistence users.

State subsistence regulations apply to both marine and fresh waters while Federal subsistence regulations apply only to fresh (Federal public) waters. Nearly all the subsistence-take of salmon in the Yakutat area is done on the authority of a State subsistence fishing permit and in State marine (bay/estruary) waters where commercial set gillnet fishing is also done. Subsistence fishing in the Yakutat area is usually done with the same gear, at the same locations, and by the same individuals that commercial fish for salmon. Thus, the 48 hours of separation between subsistence fishing and commercial fishing reduces the likelihood that subsistence taken fish will be sold commercially. State subsistence regulations also allow subsistence fishing in the freshwater portions of the rivers, but this is seldom done in the Situk or
other rivers along the foreland. Subsistence fishers have followed the 48-hours-before-till-48-hours-after subsistence closure even when they are not subsistence fishing in a commercial set gillnet fishing area. There has been a long history of local users respecting the 48-hour separation between subsistence and commercial fishing and they have chosen not to subsistence fish in other parts of a system when the 48-hour restriction would apply in any part of the system.

Prior to 2006, all subsistence fishing for salmon in the Yakutat area was done on the authority of a State permit. Last year, 2006, was the first year Federal subsistence salmon fishing permits were requested, issued, and fished in Yakutat. The reported harvest was 59 sockeye salmon from the Situk River by two permit holders (29 with gillnet and 30 with rod and reel). The State subsistence harvest is typically around 3,000 sockeye salmon from the Situk and 3,500 sockeye salmon in the whole Yakutat area and the average take of sockeye salmon per permit (household) is about 22 fish. Concerns that these Federal permit holders were fishing during closed periods were resolved when it was understood that Federal (and State) regulations only close subsistence fishing in commercial fishing areas and not in other fishing parts of a system. In this case the commercial fishing was done in State waters in the Situk-Ahrnklin estuary and the Federal subsistence fishing was done upstream in fresh water (Federal public waters). This uncertainty in the application of Federal regulations raises the question of the need for the 48-hour subsistence closure language in Federal regulations since these fishing areas seldom overlap. However, there is commercial set gillnet fishing in fresh (Federal public) waters in the Dangerous River, Alsek River, and other locations where this 48-hour subsistence closure would be directly applicable to avoid overlapping commercial and subsistence fishing.

Lastly, Federally qualified subsistence users need to get a Federal permit to subsistence fish for salmon in Yakutat only if they want to use rod and reel gear. Subsistence users typically fish for sockeye salmon and harvest them with nets so there is little need for Federal permits. Having subsistence users fish under the authority of a single permit, the State permit, simplifies harvest reporting.

**Existing Federal Regulation**

\[\text{§ 102.27(i)(12)(ii) You may not take salmon during the period commencing 48 hours before a State opening of commercial salmon net fishing season and ending 48 hours after the closure. This applies to each river or bay fishery individually.} \]

\[\text{§ 102.27(i)(12)(iii) When the length of the weekly State commercial salmon net fishing period exceeds two days in any Yakutat Area salmon net fishery, the subsistence fishing period is from 6 a.m. to 6 p.m. on Saturday in that location.} \]

**Proposed Federal Regulation**

\[\text{§ 102.27(i)(12)(ii) You may not take salmon during the period commencing 48 hours before a State opening of commercial salmon net fishing season and ending 48 hours after the closure. This applies to each river or bay fishery individually.} \]

\[\text{§ 102.27(i)(12)(iii) When the length of the weekly State commercial salmon net fishing period exceeds two days in any Yakutat Area salmon net fishery, the subsistence fishing period is from 6 a.m. to 6 p.m. on Saturday in that location.} \]
Existing State Regulation

5 AAC 01.660. FISHING SEASONS AND PERIODS. (b) Salmon may not be taken during the period commencing 48 hours before an opening until 48 hours after the closure of an open commercial salmon net fishing season. This applies to each river or bay fishery individually.

5 AAC 01.660. FISHING SEASONS AND PERIODS. (d) When the length of the weekly commercial salmon net fishing period exceeds two days in any Yakutat Area salmon net fishery, the subsistence fishing period is from 6:00 a.m. to 6:00 P.M. on Saturday in that location, unless extended by emergency order.

Extent of Federal Public Waters

For purposes of this discussion, the phrase “Federal public waters” is defined as those waters described under 50 CFR 100.3. §__.27(i)(12) defines the Yakutat area as “all waters and drainages of Alaska between the longitude of Cape Suckling and the longitude of Cape Fairweather.” Federal public waters in the Yakutat area includes inland (fresh) waters within or adjacent to the Tongass National Forest, the Wrangell-St. Elias National Park and Preserve, and the Glacier Bay National Preserve (Glacier Bay National Park is closed to subsistence fishing).

Customary and Traditional Use Determinations

Federal regulations state that “Residents of the area east of Yakutat Bay, including the islands within Yakutat Bay, west of the Situk River drainage, and south of and including Knight Island.” have a positive customary and traditional use determination for salmon in “Fresh water upstream from the terminus of streams and rivers of the Yakutat Area from the Doame River to the Tsiu River”. These residents also have a positive customary and traditional use determination for Dolly Varden, steelhead trout, and smelt in “Fresh water upstream from the terminus of streams and rivers of the Yakutat Area from the Doame River to Point Manby.” Residents of Southeastern Alaska and Yakutat Areas also have a positive customary and traditional use determination for Dolly Varden, trout, smelt, and eulachon in the remainder of the Yakutat Area.

The State has the same customary and traditional use areas defined for freshwater and also includes the marine waters of Yakutat Bay and Russell Fjord inside of a line from the westernmost point of Point Manby to the southernmost point of Ocean Cape. The State allows subsistence fishing in these areas by any Alaskan resident. Federal regulations do not restrict access to only “Federally qualified users.”

Regulatory History

Federal regulations pertaining to the subsistence harvest of salmon, trout, Dolly Varden, and smelt in the Yakutat area were adopted directly from State regulations when the Federal government assumed management of subsistence fisheries resources on Federal Public Lands and Waters on October 1, 1999.

The U.S. Forest Service has had Federal subsistence fishing permits available for steelhead in the Situk and Ahrnklin rivers since 2002 and for salmon, trout, and char in the Yakutat area since 2003. A Federal permit is specifically needed for the legal use of rod and reel gear. There have not been any special conditions put on these permits governing the subsistence take of salmon and trout in the Yakutat area.
Biological Background

ADF&G biologists have used historical escapement, harvest, and age composition data to set the biological escapement goals for Chinook salmon in the Situk and Alsek rivers (McPherson et al. 2004), sockeye salmon in the Situk, Lost, Akwe, Klukshu, and East Alsek-Doame rivers (Geiger et al. 2004), coho salmon in the Lost, Situk, and Tsiu rivers (Shaul et al. 2004), and pink salmon in Situk River and Humpy Creek (Zadina et al. 2004). ADF&G’s escapement-based management program has kept the annual escapements within or above goal ranges for nearly all species, systems, and years.

Harvest History

In 2006, Forest Service personnel issued three salmon, trout, and char permits; two permits were fished and 59 sockeye salmon were harvested with gillnet and rod and reel gear from the Situk River (U.S. Forest Service 2007). This was the first year that subsistence salmon fishing has been done using Federal subsistence salmon permits.

Effect of the Proposal

This proposal would eliminate Federal subsistence fishing regulations that close Federal subsistence fishing for specific periods of time or days in locations that the State opens for commercial set gillnet fishing. Federal subsistence users would not be affected by State commercial fishery openings and associated closed waters or times. There is not a problem now with the illegal commercial sale of subsistence-taken salmon and this regulation change is not likely to cause illegal sales to occur. Other Federal subsistence fishing regulations directly prohibit the commercial sale or purchase of subsistence-taken fish and the regulation requiring subsistence-caught salmon to be finclipped limits the mixing of subsistence, commercial (and sport) taken fish. The State commercial set gillnet fishing occurs mostly in State (marine) waters and Federal subsistence fishing only occurs in Federal (fresh) waters. This 48 hour closure regulation does not apply to fisheries in different locations and is confusing to users, managers, and enforcement. Lastly, this proposal would keep Federal subsistence fishing regulations from being more restrictive than State subsistence regulations.

OSM CONCLUSION

Support Proposal FP08-05.

Justification

Adopting the proposal will simplify Federal subsistence fishing regulations and remove an unnecessary restriction on Federal subsistence users. There is no pattern of subsistence-caught fish being sold commercially now and it is unlikely that eliminating the 48-hour closure regulations from Federal regulations will increase illegal sales of subsistence-caught salmon in the future. There is little overlap in Federal subsistence and State commercial fishing locations and few Federal subsistence permits are issued and few salmon are harvested. Other Federal regulations directly prohibit the commercial sale and purchase of subsistence-taken fish and require subsistence fishers to immediately mark their subsistence-caught salmon so they are not easily mixed with commercial-caught salmon.
LITERATURE CITED


The Interagency Staff Committee found the staff analysis to be a complete and accurate evaluation of the proposal, and the recommendation of the Regional Advisory Council to be consistent with ANILCA Section 805(c).
FP08-05
ADF&G Comments

Alaska Department of Fish and Game
Comments to the Federal Subsistence Board

FP08-05 Removal of 48-hour closure before and after commercial net fishery in Yakutat

Introduction: This proposal is intended to eliminate the prohibition on taking salmon for subsistence with nets during the 48-hour period before and after each State commercial salmon net fishing period. If adopted, the prohibition would no longer apply to federal subsistence fishing with nets in freshwaters above mean high tide within federal land but would remain in effect for all state subsistence fisheries in freshwaters and for all subsistence fisheries in marine waters (below mean high tide). The present 48-hour prohibition has been in effect throughout most of Southeast Alaska since long before statehood to prevent user group conflicts, illegal sale of subsistence caught salmon, and “prospecting” prior to a commercial salmon fishery opening under the guise of subsistence. The proponent desires to “separate” the federal and state subsistence fisheries “by space” (location). However, the 48-hour prohibition would still apply in marine waters. The prohibition would also still apply to use of state-owned submerged lands in freshwaters within federal land.

Enforcement Issues: If adopted, the inability to determine where the boundary is above mean high tide in estuarine areas where most commercial fisheries occur will increase user conflicts. If adopted, there will also be potential migration of subsistence-caught fish into commercial markets, which has been a recurring problem in many of Alaska’s fisheries where subsistence and commercial users target the same stock in the same approximate location with the same gear in relatively close or concurrent fishery time periods. Enforcement efforts to prevent the migration of subsistence-caught salmon into commercial markets can be very difficult as many subsistence users are also commercial users. Frequently, these users are utilizing the same boat and gear to fish in the same approximate area for both fisheries or regularly travel between areas or fisheries in the same boat, the same fishing gear, and same fishing crewmembers on board. Local residents often have a fish camp either up a river or near the river mouth and travel back and forth to participate in the subsistence and commercial fisheries.

The fact that no pattern of subsistence caught fish being sold commercially currently exists is due to the 48-hour subsistence fishery closure regulation, which specifically was enacted long before statehood to effectively prevent this migration into the commercial market. The federal staff analysis incorrectly assumes the removal of the 48-hour subsistence fishery closure will not increase the illegal sales of subsistence catch because of the prohibition on the sale of subsistence-caught salmon and current marking requirements for subsistence caught salmon enacted to prevent commercial fish buyers from purchasing marked fish. The low enforcement presence, plus the ease of transporting harvest that has not been properly marked, to commercial buyers when subsistence fisheries are conducted in close geographical and temporal proximity to commercial fisheries is not addressed within the federal analysis.

If this proposal is adopted, a federally qualified fisherman that is also a licensed commercial fisherman could fish in freshwater federal subsistence fisheries under the guise of subsistence, move into adjacent waters open to commercial fishing, continue to fish during the commercial fishing period, and deliver the blended catch to the commercial market. Illegal “prospecting”
prior to a commercial fishing period has significant financial incentives for commercial fishermen to “find the fish” and reduce the amount of time necessary to search for productive fishing sites. In addition, the 48-hour closure window following a commercial fishing period prevents commercial fishermen from illegally harvesting more fish under the guise of subsistence fishing and blending the illegal catch with a load of market-bound commercial catch. If this proposal is adopted, additional regulation will be needed to distinguish federal subsistence fishermen from commercial fishermen (e.g., marked gear or registration) in order to make the regulations enforceable.

**Opportunity Provided by State:** The State subsistence fishery regulations in the Yakutat area are some of the more liberal in the State of Alaska. State subsistence regulations in this area provide for harvest of salmon with gear types listed in 5AAC 39.105, which include: gillnet, purse seine, beach seine, hand purse seine, power gurdy troll gear, hand troll gear, fish wheel, and trawl unless restricted under a subsistence permit. Current state permit conditions do not establish a daily or annual limit for subsistence harvest of sockeye salmon. Many subsistence fishing households in Yakutat are also commercial fishing households, and fishers have the option to retain fish taken during commercial periods for personal use or to share their harvest.

**Jurisdiction Issues:** The Department requests detailed maps showing the boundaries where this federal regulation would apply in freshwaters, particularly those at the mouths of rivers above mean high tide in order that federally-eligible fishers will know where they cannot subsistence fish in adjacent waters that are closed under state regulation before and after a commercial opening. This will be very important for enforcement of federal and state regulations where fisheries occur in estuarine areas.

**Other Comments:** Most Yakutat commercial fisheries are open by regulation for 2 ½ days: 6 AM Sunday through 6 PM Tuesday. State regulation 5AAC 01.660 precludes subsistence fishing for 48 hours before and 48 hours after each commercial fishery opening for each river or bay fishery individually. When the commercial fishery is open longer so that the 48-hour closure overlaps the commercial openings, subsistence fishing has a guaranteed opening 6 AM to 6 PM on Saturday (12 hours). During years when abundant runs allow longer commercial fishing openings, state officials modify the 48-hour closure regulation by Emergency Order. For the past 3 years due to abundant salmon returns, the Department commercial fisheries managers have written Emergency Orders to extend the period from 6 AM Friday to 6 PM Saturday (2 days). When escapement goals are met and there are no conservation concerns, commercial fisheries are extended to 7 days, and subsistence fishing is similarly extended. The user groups in Yakutat area would likely support an additional moderate liberalization to the subsistence fisheries by reducing the 48-hour subsistence closure to 24-hour. Less than a 24-hour closure to subsistence fishing before and after commercial fishing periods is not enforceable, according to enforcement personnel. The Department would consider supporting regulatory changes proposed to the Alaska Board of Fisheries in order to reduce the State subsistence fishery closure period to 24 hours before and following a commercial fishery. The proponent is encouraged to submit such a proposal to the Alaska Board of Fisheries to reduce the closure window to 24-hours before and after the commercial fishery opening so that the closure would apply to all fishers in all waters in the Yakutat area.
Department Recommendation: Oppose. This proposal is fraught with enforcement problems and would only apply to federal subsistence fishermen in freshwaters within federal lands. The federal Board should instead support a proposal to the Alaska Board of Fisheries that would apply to all subsistence fishermen in all waters to reduce the closure period before and after commercial fishing periods.
WRITTEN PUBLIC COMMENT

Support. This proposal would benefit subsistence users by simplifying Federal subsistence regulations and providing additional subsistence opportunity.

Bert Adams
Suzanne McCarthy
Sue Entsminger
Robert Fithian
### General Description
Proposal FP08-06 requests a 10 fish daily possession limit and no annual limit per household on the subsistence harvest of sockeye salmon in Neva Creek. *Submitted by Mr. Thomas Mills, Sr.*

### Proposed Regulation

<table>
<thead>
<tr>
<th>Section</th>
<th>Description</th>
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<tbody>
<tr>
<td>§___.27(i)(13)(xii)</td>
<td>If a harvest limit is not otherwise listed for sockeye in this §___.27(i)(13), the harvest limit for sockeye salmon is the same as provided for State subsistence or personal use fisheries. If a harvest limit is not established for the State subsistence or personal use fisheries, the possession limit is 10 sockeye and the annual harvest limit is 20 sockeye per household for that stream.</td>
</tr>
<tr>
<td>§___.27(i)(13)(xxv)</td>
<td>For sockeye salmon in Neva Creek, the daily possession limit is 10 and there is no annual limit per household.</td>
</tr>
</tbody>
</table>

### Southeast Alaska Regional Council Recommendation
**Oppose** Proposal FP08-06

### OSM Conclusion
**Oppose** Proposal FP08-06

### Interagency Staff Committee Comments
See comments following analysis.

### ADF&G Comments
**Oppose** Proposal FP08-06

### Written Public Comments
None
REGIONAL ADVISORY COUNCIL RECOMMENDATION
FP08-06

SOUTHEAST ALASKA SUBSISTENCE REGIONAL ADVISORY COUNCIL

Oppose Proposal FP08-06

Justification

Adopting this proposal would reduce opportunity for subsistence fishing for residents of Hoonah and Gustavus due to the travel distances involved and the change from 40 sockeye daily and annual harvest limit to 10 sockeye daily harvest limit. The Council determined the proposal is not beneficial to subsistence users and would result in a diversion between State and Federal regulations. The proposal will have no adverse affects to nonqualified or non-subsistence users.
ISSUES

Proposal FP08-06, submitted by Mr. Thomas Mills, Sr. of Hoonah, requests a 10 fish daily possession limit and no annual limit per household on the subsistence harvest of sockeye salmon in Neva Creek.

DISCUSSION

There are daily and annual harvest limits on the subsistence-take of sockeye salmon in all other Southeast Alaska streams. State permits currently allow a daily and annual harvest of 40 sockeye salmon in the Neva area. Federal subsistence harvest limits default to the limits on the State permits.

The proponent, Mr. Mills, was contacted to get a better understanding of the intent of his proposal. In the discussions with Mr. Mills, he expressed that he believes having a 10-fish daily possession limit and no annual harvest limit on sockeye salmon at Neva Creek will not result in an appreciable increase in the subsistence effort and harvest. In addition, he believes that few fishers would be prepared to travel to Excursion Inlet, walk in and out of Neva Creek, or be able to efficiently harvest sockeye salmon when they are there. He assumes that most subsistence-take will continue to be by State permit holders fishing nets from boats in marine waters immediately adjacent to the outlet of South Creek. He considers the Neva sockeye run healthy enough to support a moderate increase in harvest and subsistence users responsible enough to only harvest what they need and what the stock can support.

Existing Federal Regulation

§ 127(i)(13)(xii) If a harvest limit is not otherwise listed for sockeye in this § 127(i)(13), the harvest limit for sockeye salmon is the same as provided for State subsistence or personal use fisheries. If a harvest limit is not established for the State subsistence or personal use fisheries, the possession limit is 10 sockeye and the annual harvest limit is 20 sockeye per household for that stream.

Proposed Federal Regulation

§ 127(i)(13)(xii) If a harvest limit is not otherwise listed for sockeye in this § 127(i)(13), the harvest limit for sockeye salmon is the same as provided for State subsistence or personal use fisheries. If a harvest limit is not established for the State subsistence or personal use fisheries, the possession limit is 10 sockeye and the annual harvest limit is 20 sockeye per household for that stream.

§ 127(i)(13)(xxv) For sockeye salmon in Neva Creek, the daily possession limit is 10 and there is no annual limit per household.

Extent of Federal Public Waters

For purposes of this discussion, the phrase “Federal public waters” is defined as those waters described under 50 CFR 100.3. All fresh waters in the Neva Creek area are within the exterior boundaries of the
Tongass National Forest and are considered Federal public waters for the purposes of Federal Subsistence Fisheries management.

Customary and Traditional Use Determinations

Before this year, 2007, only residents of Hoonah had positive customary and traditional use of salmon, Dolly Varden, trout, smelt, and eulachon in Sections 14B and 14C of District 14 which includes the Excursion Inlet/Neva area. In 2007, the Federal Subsistence Board extended the customary and traditional use determination to include all fish to all residents of drainages flowing into Sections 12A, 13A, and District 14 (Map 14 in subsistence management regulation booklet for April 1, 2007 –March 31, 2008).

Regulatory History

Federal regulations pertaining to the subsistence harvest of salmon, trout, Dolly Varden, and smelt in the Southeast Alaska area were adopted directly from State regulations when the Federal government expanded management of subsistence fisheries resources on Federal public lands and waters on October 1, 1999.

During the 2006 fisheries regulatory cycle, the Federal Subsistence Board adopted the regulatory language detailed in the “Existing Federal Regulation” section above. This effectively placed a daily possession and annual limit on the subsistence take of sockeye salmon at all locations in Southeast Alaska.

Biological Background

Neva Creek is the outlet stream from Neva Lake and is a tributary to South Creek which empties into the ocean immediately south of the fish processing plant (Ocean Beauty) in Excursion Inlet (Map 1). Hoonah is across Icy Strait approximately 20 miles (32 km) to the south and Gustavus is approximately 14 miles (20 km) to the west. There are no roads into Excursion Inlet but there is a dirt road that parallels South Creek and Neva Creek in route from the cannery to the lake.

Neva Lake is a relatively small 64.5 acre (26.1 ha) lake, but the Neva sockeye run has certainly been larger than expected in recent years. A Fishery Resource Monitoring Program-funded weir/mark-recapture project estimated the annual escapement of sockeye salmon into Neva Lake from 2002 to 2006 (Van Alen 2004, 2005). Sockeye escapements were 5,003 in 2002, 11,393 in 2003, 9,513 in 2004, 5,263 in 2005 and 6,936 in 2006. Most sockeye salmon smolt after spending a year rearing in the lake (smolt at age 1.) and there is a good distribution of one-, two-, or three-ocean age fish in the escapements. The adult sockeye salmon enter the lake from June through October. The earlier running fish spawn in the main inlet stream in August and September and the later running fish spawn on lake beaches from mid-September to December. The migration of salmon into the lake is often delayed by low flow conditions in early/mid summer. Fish held back by low flow conditions are more susceptible to harvest or dying from warm water and lack of oxygen.

Harvest History

The Excursion Inlet/Neva area is in the traditional subsistence fishing area used by the Huna Tlingit (Goldschmidt and Haas 1946, 1998; Schroeder and Kookesh 1990). Mr. Mills was born in Excursion Inlet and his family has a long history of subsistence fishing, hunting, and gathering in the area (Langdon 2006). In particular, Mr. Mills and his family have a long history of subsistence fishing for sockeye salmon in Neva Creek. Using a hand made gaff, he can efficiently harvest sockeye (and coho) salmon.
from pools in lower Neva Creek (Langdon 2006). He takes great pride in providing for the subsistence needs of his family and great interest in maintaining healthy runs of salmon in this system.

State Subsistence Harvest

The reported subsistence and personal use harvest of Neva sockeye salmon has ranged from 0 to 411 from 1985 to 2005. The three highest harvests reported on State permits were 348 in 1992, 411 in 1996, and 397 in 2004. Personnel working on the Neva weir project observed subsistence harvests of 44, 278, 312, and 590 sockeye salmon in 2002, 2003, 2004, and 2005, respectively.

Annual harvest limits on State subsistence/personal use permits were 10 fish through 2002 and the subsistence sockeye fishing season was open from June 1 through July 31. The annual limit was increased to 25 fish in 2003 then 40 fish in 2004 after the weir project documented larger runs than expected. The subsistence fishing period was also extended to August 15 in 2004 when State managers recognized that the Neva sockeye run extends from June through October with inlet stream spawners running before lake spawners.

Federal Subsistence Harvest

Thirty-four sockeye salmon were harvested under authority of Federal subsistence salmon fishing permits from Neva Creek in 2005 (U.S. Forest Service 2007). This was the first year that any subsistence salmon fishing has been done using Federal subsistence salmon permits in the Neva area. No Federal subsistence permits were fished in 2006.

Commercial Harvest

The commercial harvest of Neva sockeye salmon is unknown and probably negligible in years when there is little or no purse seine fishing in the northern half of 14B or 14C (Map 14 in subsistence management regulation booklet for April 1, 2007 –March 31, 2008). Trap fishing was prohibited at Statehood and purse seine fishing in Icy Strait was dramatically reduced in the late 1970s.

Sport Harvest

The ADF&G Sport Fish Division estimates sport effort, catch, and harvest from an annual statewide mail survey (Mills and Howe 1992). Twelve or more responses are needed for estimates to be useable. There have been too few responses to estimate effort or harvests of salmon in the Neva Lake system, but the sport fish harvest of sockeye salmon in the entire Excursion Inlet area (excluding the Excursion River) averaged only 34 fish from 1984 to 1999 (Van Alen 2005).

Effect of the Proposal

Adopting the proposal would make an unusual Federal regulation that singles out a specific location, Neva Creek, where there is no annual harvest limit for sockeye salmon. There would be annual harvest limits on the subsistence-take of sockeye salmon in other parts of the system and there are harvest limits for sockeye salmon in all other systems in Southeast Alaska. There would also be different daily possession limits for the subsistence-take of sockeye salmon from different parts of the Neva system. This proposed regulation would further differences in State and Federal subsistence fishing regulations. Singling out Neva Creek in Federal regulations could unnecessarily increase the effort and harvest of Neva sockeye salmon. This might increase the number of users choosing to fish with a Federal subsistence fishing permit in Neva Creek. However, having the 10-fish daily possession limit of sockeye
salmon may also discourage people not living close to Excursion Inlet from participating in the fishery. The subsistence harvest limits put on each stock reflects the amounts considered to best meet subsistence and escapement needs.

OSM CONCLUSION

Oppose Proposal FP08-06.

Justification

The current harvest limits on State permits are relatively high at 40 fish per year. State managers have the authority to increase (or decrease) harvest limits in future years depending on the status of the stock and intensity of use. Local State and Federal managers also have the authority to modify conditions on individual permits if special accommodations are needed. The proponent did not specifically say that his subsistence needs were not being met. It is likely that having no annual limit will increase the subsistence effort and harvest. It is likely that increases in subsistence effort and harvest will require harvest limits in the future and a need to rescind this regulation. Increased effort and harvests, combined with natural variability in the run might result in fishing into escapement needs. There is also concern about specifying conditions (no annual limit) for a specific location (Neva Creek) in Federal subsistence regulations. Federal subsistence fisheries seem to be best served when regulations address general terms and conditions (i.e., salmon, trout, and char may be harvested, that a permit is needed, that the permit will list any special harvest conditions, and that you must report harvests on the permit and return it).

LITERATURE CITED


The Interagency Staff Committee found the staff analysis to be a complete and accurate evaluation of the proposal, and the recommendation of the Regional Advisory Council to be consistent with ANILCA Section 805(c).
Alaska Department of Fish and Game  
Comments to the Federal Subsistence Board

FP08-06, NEVA CREEK SOCKEYE SALMON HARVEST LIMITS

Introduction: This proposal as published\(^1\) would decrease the federal subsistence daily limit from 40 to 10 sockeye salmon and eliminate the annual household limit in Neva Creek. As a result, Neva Creek would be the only stream in Southeast Alaska exempt from a federal annual household limit (50 CFR 100.27(j)(13)(xii)). The federal sockeye salmon limit is the same as the state subsistence or personal use fisheries limit throughout Southeast Alaska unless a limit is not established, then the federal limit is 10 sockeye salmon in possession and 20 annually per household for that stream. Current state limits for Neva Creek are 40 sockeye salmon per day and a 40 sockeye salmon annual household limit. State officials have discretion to authorize additional harvest on an individual household permit to accommodate extenuating circumstances. The proponent thought he was unable to replace fish stolen by a bear after the end of the harvest season, but the proponent’s desire for additional harvest is already permissible under State regulations.

Impact on Subsistence Users: If adopted, the proposal would reduce the current federal subsistence daily possession limit from 40 to 10 sockeye per day, significantly reducing the opportunity for efficient and cost effective harvest for federal subsistence users who travel to Neva Creek. Elimination of the 40 sockeye salmon annual harvest limit for all federally qualified users in small salmon producing systems like Neva Creek could result in additional fishing pressure and overharvest that would not be detected until after the season, thus impacting future returns and harvests. Also, adoption of conflicting federal and state harvest limits for user groups in the same watershed can create confusion for the users and enforcement.

Opportunity Provided by State: Subsistence fishing occurs in marine and fresh waters under permits issued by the state. All state residents can fish in both fresh and marine waters under these limits unless the federal subsistence program closes federal lands to non-federally qualified subsistence users. Relatively high daily harvest limits which also serve as seasonal limits for a particular system help to disperse fishing effort and prevent overexploitation of small stocks while still allowing efficient harvest. Current state sockeye salmon harvest limits for Neva Creek are part of the conditions placed on state subsistence permits and are currently 40 sockeye salmon in possession per day with an annual household limit of 40 sockeye salmon. Other salmon may also be taken from Neva Creek, and sockeye salmon may be taken from other streams as well. Under the state permit system, managers have inseason authority to establish or change open fishing periods, possession limits, annual limits, gear types and gear configuration, and to open and close time and areas by emergency order. The purpose of such management

\(^1\) The proposal published for public comment bears no resemblance to the originally submitted proposal, which requested “the harvest season should be as long as fish are alive in the creek,” “natives only fishing in Excursion Inlet,” and liberalization of fishery regulations in marine waters. Nowhere did the proponent suggest the changes in daily and annual harvest limits that were published in the proposal book. After close of the proposal period, federal staff collaborated with the proponent, which resulted in the significantly revised proposal for no annual household limit and a reduced daily limit that was published for public comment.
authority is to allow managers to provide for escapement as a basis for sustainable harvest while liberalizing harvests of surplus returns when they occur. The State area management biologist also has discretion to authorize additional take where unusual conditions warrant.

Conservation Issues: The Fisheries Resource Monitoring Program-funded weir/mark-recapture projects operated on Neva Creek have produced escapement estimates of approximately 5,000-11,000 sockeye salmon annually between 2002 and 2006. It appears that the sockeye salmon stock returning to Neva Creek is currently healthy and can provide for a harvestable surplus for all users if the number of users and amount of harvest does not increase significantly. The total subsistence harvest from this area has ranged from 25 to 411 sockeye salmon per year (Table 1.).

<table>
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<td>1998</td>
<td>4</td>
<td>25</td>
</tr>
<tr>
<td>1999</td>
<td>5</td>
<td>50</td>
</tr>
<tr>
<td>2000</td>
<td>22</td>
<td>197</td>
</tr>
<tr>
<td>2001</td>
<td>7</td>
<td>157</td>
</tr>
<tr>
<td>2002</td>
<td>6</td>
<td>36</td>
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<tr>
<td>2003</td>
<td>6</td>
<td>87</td>
</tr>
<tr>
<td>2004</td>
<td>23</td>
<td>397</td>
</tr>
<tr>
<td>2005</td>
<td>14</td>
<td>276</td>
</tr>
<tr>
<td>2006</td>
<td>11</td>
<td>140</td>
</tr>
</tbody>
</table>

Jurisdiction Issues: Most subsistence harvest in this area occurs within marine and freshwaters, not subject to federal regulations. The Department requests detailed maps showing the boundaries and areas where federal regulations are claimed to apply and the justification for claiming those boundaries. While standing on state and private lands, persons must comply with state law and cannot harvest under conflicting federal regulations. Most land surrounding South Creek, the outlet of Neva Creek, and the shoreline of Neva Lake are state or private lands. In addition, Neva Lake is a navigable waterway so ownership of land under the lake transferred to the state with statehood. Enforcement difficulties and user confusion concerning where federal regulations apply that are different than state regulations will result unless detailed maps and explanations specific to the area are provided.

Department Recommendation: Oppose.
### FP08-07 Executive Summary

<table>
<thead>
<tr>
<th>General Description</th>
<th>Proposal FP08-07 would close the Federal subsistence steelhead fishery on Admiralty, Baranof and Chichagof (ABC) Islands in the Southeastern Alaska Federal subsistence fishing area. Submitted by Mr. Eric Morisky of Sitka</th>
</tr>
</thead>
<tbody>
<tr>
<td>Proposed Regulation</td>
<td>§<em><strong>.27(i)(13)(xxii) Unless otherwise specified in this §</strong></em>.27(i)(13), you may take steelhead under the terms of a subsistence fishing permit except on Admiralty, Baranof, and Chichagof islands. The open season is January 1 through May 31. The daily household harvest and possession limit is one with an annual household limit of two. You may only use a dip net, gaff, handline, spear, or rod and reel. The permit conditions and systems to receive special protection will be determined by the local Federal fisheries manager in consultation with ADF&amp;G.</td>
</tr>
</tbody>
</table>

<table>
<thead>
<tr>
<th>Southeast Alaska Regional Council Recommendation</th>
<th>Oppose Proposal FP08-07</th>
</tr>
</thead>
<tbody>
<tr>
<td>OSM Conclusion</td>
<td>Oppose Proposal FP08-07</td>
</tr>
<tr>
<td>Interagency Staff Committee Comments</td>
<td>See comments following analysis.</td>
</tr>
<tr>
<td>ADF&amp;G Comments</td>
<td>Support Proposal FP08-07</td>
</tr>
<tr>
<td>Written Public Comments</td>
<td>None</td>
</tr>
</tbody>
</table>
SOUTHEAST ALASKA SUBSISTENCE REGIONAL ADVISORY COUNCIL

Oppose Proposal FP08-07

Justification

The participation and reported harvest of steelhead is very low on the ABC Islands, and there is no evidence of a conservation issue. A Federal subsistence steelhead fishery closure on the ABC Islands, while other steelhead fisheries remain open, would not provide for a meaningful subsistence priority. Catch and release mortality in the sport fishery is a concern of the Council. The Council suggested this mortality should be accounted for in State management and if it is in excess to maximum exploitation rates, the ADF&G should close streams prior to Federal closures.
ISSUES

Proposal FP08-07, submitted by Mr. Eric Morisky of Sitka, would close the Federal subsistence steelhead fishery on Admiralty, Baranof and Chichagof (ABC) Islands in the Southeastern Alaska Federal subsistence fishing area.

DISCUSSION

The proponent believes that the Federal subsistence fishery for steelhead will lead to over-fishing and extinction of small steelhead stocks on the ABC Islands. He believes that subsistence needs are adequately met by other species of fish such as Chinook and sockeye salmon and that steelhead should be left for sport fishing.

Existing Federal Regulation

§__.27(i)(13)(xxii) Unless otherwise specified in this §__.27(i)(13), you may take steelhead under the terms of a subsistence fishing permit. The open season is January 1 through May 31. The daily household harvest and possession limit is one with an annual household limit of two. You may only use a dip net, gaff, handline, spear, or rod and reel. The permit conditions and systems to receive special protection will be determined by the local Federal fisheries manager in consultation with ADF&G.

Proposed Federal Regulation

§__.27(i)(13)(xxii) Unless otherwise specified in this §__.27(i)(13), you may take steelhead under the terms of a subsistence fishing permit except on Admiralty, Baranof, and Chichagof islands. The open season is January 1 through May 31. The daily household harvest and possession limit is one with an annual household limit of two. You may only use a dip net, gaff, handline, spear, or rod and reel. The permit conditions and systems to receive special protection will be determined by the local Federal fisheries manager in consultation with ADF&G.

Extent of Federal Public Waters

For purposes of this discussion, the phrase “Federal public waters” is defined as those waters described under 50 CFR 100.3.

All fresh waters on the ABC Islands are within the exterior boundaries of the Tongass National Forest and are considered Federal public waters for the purposes of Federal subsistence fisheries management (Map 1).

Customary and Traditional Use Determinations

The ABC Islands contain streams that flow into Fishing Districts 9 through 14. The customary and traditional use determinations for steelhead in those districts apply and are listed in Table 1.
Proposal FP08-07
Map 1: A B C Islands
<table>
<thead>
<tr>
<th>AREA</th>
<th>SPECIES</th>
<th>DETERMINATIONS</th>
</tr>
</thead>
<tbody>
<tr>
<td>District 9</td>
<td>Salmon, Dolly Varden, trout, smelt and eulachon</td>
<td>Residents of the City of Kake and in Kupreanof Island drainages emptying into Keku Strait south of Point White and north of the Portage Bay boat harbor</td>
</tr>
<tr>
<td>Section 9A</td>
<td></td>
<td></td>
</tr>
<tr>
<td>District 9</td>
<td>Salmon, Dolly Varden, trout, smelt and eulachon</td>
<td>Residents of the City of Kake and in Kupreanof Island drainages emptying into Keku Strait south of Point White and north of the Portage Bay boat harbor</td>
</tr>
<tr>
<td>Section 9B north of the latitude of Swain Point</td>
<td></td>
<td></td>
</tr>
<tr>
<td>District 10</td>
<td>Salmon, Dolly Varden, trout, smelt and eulachon</td>
<td>Residents of the City of Kake and in Kupreanof Island drainages emptying into Keku Strait south of Point White and north of the Portage Bay boat harbor</td>
</tr>
<tr>
<td>West of a line from Pinta Point to False Point Pybus</td>
<td></td>
<td></td>
</tr>
<tr>
<td>District 12</td>
<td>Salmon, Dolly Varden, trout, smelt and eulachon</td>
<td>Residents of the City of Angoon and along the western shore of Admiralty Island north of the latitude of Sand Island, south of the latitude of Thayer Creek, and west of 134° 30′ West Longitude, including Killisnoo Island</td>
</tr>
<tr>
<td>South of a line from Fishery Point to south Passage Point and north of the latitude of Point Caution</td>
<td></td>
<td></td>
</tr>
<tr>
<td>District 12</td>
<td>All fish</td>
<td>Residents of drainages flowing into Districts 12 and 14</td>
</tr>
<tr>
<td>Section 12A, excluding the area south of a line from Fishery Point to South Passage Point Section 12B</td>
<td></td>
<td></td>
</tr>
<tr>
<td>District 13</td>
<td>Salmon, Dolly Varden, trout, smelt and eulachon</td>
<td>Residents of the City and Borough of Sitka in drainages which empty into Section 13B north of the latitude of Dorothy Narrows</td>
</tr>
<tr>
<td>Section 13A south of the latitude of Cape Edward</td>
<td></td>
<td></td>
</tr>
<tr>
<td>District 13</td>
<td>All fish</td>
<td>Residents of drainages flowing into Districts 13A, 13B and 14</td>
</tr>
<tr>
<td>Section 13A, excluding the area south of the latitude of Cape Edward</td>
<td></td>
<td></td>
</tr>
<tr>
<td>District 13</td>
<td>Salmon, Dolly Varden, trout, smelt and eulachon</td>
<td>Residents of the City and Borough of Sitka in drainages which empty into Section 13B north of the latitude of Dorothy Narrows</td>
</tr>
<tr>
<td>Section 13B north of the latitude of Redfish Cape</td>
<td></td>
<td></td>
</tr>
<tr>
<td>District 13</td>
<td>Salmon, Dolly Varden, trout, smelt and eulachon</td>
<td>Residents of the City and Borough of Sitka in drainages which empty into Section 13B north of the latitude of Dorothy Narrows</td>
</tr>
<tr>
<td>Section 13C</td>
<td></td>
<td></td>
</tr>
<tr>
<td>District 13</td>
<td>Salmon, Dolly Varden, trout, smelt and eulachon</td>
<td>Residents of the City of Angoon and along the western shore of Admiralty Island north of the latitude of Sand Island, south of the latitude of Thayer Creek, and west of 134° 30′ West Longitude, including Killisnoo Island</td>
</tr>
<tr>
<td>Section 13C east of the longitude of Point Elizabeth</td>
<td></td>
<td></td>
</tr>
<tr>
<td>District 14</td>
<td>All fish</td>
<td>Residents of drainages flowing into Districts 12A, 13A and 14</td>
</tr>
<tr>
<td>All fish</td>
<td></td>
<td></td>
</tr>
<tr>
<td>Remainder of the Southeastern Alaska Area</td>
<td>Dolly Varden, trout, smelt and eulachon</td>
<td>Residents of Southeastern Alaska and Yakutat Areas</td>
</tr>
</tbody>
</table>
Regulatory History

State Regulatory History

Prior to the Federal subsistence fishery for steelhead that was created in 2005, all steelhead harvest (excluding Prince of Wales and Kosciusko islands) occurred under State of Alaska sport fish regulations or incidental to subsistence or commercial fisheries.

In Southeast Alaska, State regulations prohibit issuing subsistence permits for steelhead, but steelhead taken incidentally under the terms of a subsistence permit for salmon may be legally retained. Permit holders are required to report any steelhead incidentally taken.

From 1978 through 1992, the sport fishing daily harvest and possession limit was one steelhead per day. During the 1993/1994 regulatory cycle for Southeast Alaska, the Alaska Board of Fisheries modified sport and commercial fishing regulations. Region-wide sport fishing regulations were changed to allow a harvest of one fish per day and two fish per year, 36 inches or greater in length to reduce the harvest. However, the daily harvest limit is two fish if at least one has a clipped adipose fin, as evidenced by a healed scar. There is no size limit for steelhead with a clipped adipose fin. A clipped adipose fin identifies a hatchery produced steelhead. The Alaska Board of Fisheries also prohibited the use of bait from November 16 through September 14. Lastly, the Alaska Board of Fisheries prohibited the sale of steelhead caught in commercial net fisheries. In commercial purse seine and gillnet fisheries of Southeast Alaska, Commercial Fisheries Entry Commission permit holders may now retain steelhead for personal use, but not sell them. Steelhead caught in the commercial troll fishery may be sold.

During the 2003 Alaska Board of Fisheries cycle, the region-wide sport regulation for steelhead was revised. The revision was a regulatory “housekeeping” action, submitted by ADF&G, to specify that the two fish daily harvest limit would only apply to the Klawock River and Ketchikan Creek: the only two locations where adipose clipped steelhead are found.

In January 2006, the Alaska Board of Fisheries adopted a regulation (5AAC 33.395) that gave authority to the Commissioner of ADF&G to require steelhead harvested in the commercial salmon fisheries and retained for personal use to be reported on fish tickets. The intent of the regulation is to account for the harvest of all steelhead trout. To date, the Commissioner has not implemented this requirement in Districts 9–14 (ABC Islands area).

Federal Regulatory History

The Federal Subsistence Board adopted FP05-28 resulting in a Federal subsistence fishery for steelhead in Southeast Alaska in 2005 (excluding Prince of Wales and Kosciusko Islands where there was an existing Federal subsistence fishery.)

Federal fisheries management staff implemented these regulations by applying stipulations to Federal subsistence fishing permits. In-season management authority required for conservation, and the ability to set permit conditions, is delegated to local area fishery managers. Local Federal managers restricted harvest in 16 steelhead streams near Petersburg, Ketchikan, Wrangell, Sitka and Juneau for the spring 2005 Federal fishery based on concerns of Federal and ADF&G Division of Sport Fish managers. Restrictions ranged from no retention of steelhead to a 30 or 32 inch minimum size limit with mandatory 24 hour reporting of harvest. Harvest reports are due by June 15, or within 15 days after the harvest of the second steelhead.
2005 Federal Steelhead Permit Conditions

Permit conditions for the ABC Islands in 2005 prohibited retention of subsistence steelhead for streams crossed by the Sitka road system on Baranof Island. There was also a requirement to report harvest of steelhead from Sitkoh Creek on Chichagof Island, to the on-site ADF&G weir crew, which is conducting steelhead research. All other streams on the ABC Islands had no additional permit restrictions and were managed under the general steelhead regulation §27(i)(13)(xxii).

2006 and 2007 Federal Steelhead Permit Conditions

Permit conditions for the ABC Islands in 2006 and 2007 set a minimum size limit for steelhead of 36” and limited gear to rod and reel without bait for streams crossed by the Sitka road system on Baranof Island. There was also a requirement to report harvest of steelhead from Sitkoh Creek on Chichagof Island, to the on-site ADF&G weir crew, which is conducting steelhead research. All other streams on the ABC Islands had no additional permit restrictions and were managed under the general steelhead regulation §27(i)(13)(xxii).

Biological Background

The ABC Islands contain at least 41 steelhead streams: 14 on Admiralty Island, 13 on Baranof Island and 14 on Chichagof Island. The largest run of steelhead occurs in Sitkoh Creek on Chichagof Island. A steelhead weir has been operated at Sitkoh Creek in 1936, 1937, 1982, 1990, 1993, 1996 and 2003–2005. Escapement counts have ranged from 520 to 1,108 with an average run size of 738 steelhead (Harding et al. 2006). The other streams on the ABC Islands have no formal escapement estimates, but run sizes are believed to range from 10 to 200 fish, with most streams in the lower end of that range.

Harvest History

Goldschmidt and Haas (1998) documented use of trout by Tlingit all the way from Skagway to Saxman. The Tlingit name for steelhead is Aashat (written ah shut in Emmons [1991]). Trout fishing occurred at least in the winter, spring, and fall and was accomplished using a variety of gear, including weirs, spears, baskets/traps, lines with small wooden hooks, and nets (Emmons 1991; Goldschmidt & Haas 1998).

State Subsistence Harvest

There are no directed State subsistence fisheries for steelhead in the Southeastern Alaska Area. Steelhead incidentally harvested while subsistence fishing for salmon must be recorded on the State subsistence and personal use salmon permit; however, no harvest was reported from 1985 to 2001 (Zadina 2002).

2005 Federal Subsistence Steelhead Harvest

In 2005, 36 Federal Southeastern Alaska Area subsistence steelhead permits were issued (other than for Prince of Wales Island) and 100% of harvest reports were returned. The four communities most likely to fish streams on the ABC Islands are Angoon, Hoonah, Kake and Sitka. No permits were issued in Angoon. In Hoonah, 5 permits were issued but no harvest was reported. In Kake, 6 permits were issued and 4 steelhead were reported harvested; however, none of those fish were harvested from streams on the ABC Islands. In Sitka, 17 permits were issued and 2 steelhead were harvested: one from Sitkoh Creek and one from Lake Eva (Forest Service 2007). Sitkoh Creek is on Chichagof Island and Lake Eva is on Baranof Island. In summary, two steelhead were reported harvested from the ABC Islands in 2005 (Table 2).
2006 Federal Subsistence Steelhead Harvest

In 2006, 42 Federal Southeastern Alaska Area subsistence steelhead permits were issued (other than for Prince of Wales Island) and 100% of harvest reports were returned. No permits were issued in Angoon or Kake. In Hoonah, 14 permits were issued and 6 steelhead were reported harvested. All steelhead harvest by Hoonah residents occurred on Chichagof Island. Two steelhead were harvested from Spasski Creek, 2 from Game Creek, 1 from Freshwater Creek and 1 from Suntahheel Creek. In Sitka, 13 permits were issued and 3 steelhead were harvested: two from Salmon Lake, on Baranof Island, and one from Lake Leo on Chichagof Island (Forest Service 2007). In summary, 9 steelhead were reported harvested from the ABC Islands in 2006 (Table 2).

2007 Federal Subsistence Steelhead Harvest

In 2007, 24 Federal Southeastern Alaska Area subsistence steelhead permits were issued (other than for Prince of Wales Island) and 100% of harvest reports were returned. No permits were issued in Angoon or Kake. In Hoonah, 8 permits were issued and 2 steelhead were reported harvested. All steelhead harvest by Hoonah residents occurred on Chichagof Island. One steelhead was harvested from Mud Bay Creek and 1 from Game Creek. In Sitka, 16 permits were issued and 4 steelhead were harvested: three from Salmon Lake, on Baranof Island, and one from Ford Arm Creek on Chichagof Island (Forest Service 2007). In summary, 6 steelhead were reported harvested from the ABC Islands in 2007 (Table 2).

State of Alaska household survey harvest data

Household survey information, gathered by ADF&G for the 1996 harvest year, indicated that 650 steelhead were used in the community of Sitka (ADF&G 2006). ADF&G believes that the 1996 survey overestimated the actual number of steelhead used. In the random selection of households, several households were selected which reported using steelhead, when harvests were expanded to all households this resulted in the estimate that 650 steelhead were used (Turek 2006 pers. comm.). The household survey also indicated the use of 4 steelhead in the community of Angoon, 29 by residents of Hoonah and 24 by residents of Kake (ADF&G 2006). The study did not indicate the source of the steelhead.

Sport Harvest

Since the more restrictive sport fishing regulations went into effect in 1994 the reported harvest of steelhead in the sport fishery on the ABC Islands has been low. Statewide Harvest Survey Data indicate the reported harvest from streams on the ABC Islands from 1996 to 2005 has averaged 13 steelhead per year. From 2003 to 2005, 4 steelhead per year have been reported in the harvest. From 1995–2005 there has been no reported harvest from streams on Admiralty Island. Reported harvest from streams on Baranof Island, from 1995 to 2005, has averaged 7 steelhead per year. Reported harvest from streams on Chichagof Island from 1995 to 2005 has averaged 6 steelhead per year. These estimates most likely overstate the harvest due to limitations in expanding low numbers of responses (ADF&G 2007).

Commercial Harvest

There is no directed commercial fishing for steelhead. Nevertheless, incidental harvest in commercial salmon fisheries occurs, and has ranged from a low of 533 in 1975 to a high of 11,540 in 1986 for all of

Table 2. Reported harvest in the Federal steelhead fishery on Admiralty, Baranof and Chichagof Islands.

<table>
<thead>
<tr>
<th>Year</th>
<th>Admiralty</th>
<th>Baranof</th>
<th>Chichagof</th>
<th>Total</th>
</tr>
</thead>
<tbody>
<tr>
<td>2005</td>
<td>0</td>
<td>1</td>
<td>1</td>
<td>2</td>
</tr>
<tr>
<td>2006</td>
<td>0</td>
<td>3</td>
<td>6</td>
<td>9</td>
</tr>
<tr>
<td>2007</td>
<td>0</td>
<td>3</td>
<td>3</td>
<td>6</td>
</tr>
</tbody>
</table>
Southeast Alaska. The majority of the catch (65%) has occurred in the gillnet fisheries and the least (1%) in the troll fisheries (PSCNBTC 1991, Lynch 2002).

**Effects of the Proposal**

This proposal would eliminate the Federal subsistence harvest of steelhead on the ABC Islands in Southeastern Alaska. The reported Federal steelhead harvest for streams on the ABC Islands was 2 in 2005, 9 in 2006 and 6 in 2007. Given the low participation and reported harvest in this fishery, a conservation based closure is not warranted at this time. Closing the Federal subsistence fishery for steelhead on the ABC Islands, while other steelhead fisheries remain open, does not recognize subsistence uses as a priority over other uses as required in ANILCA.

Local Federal managers have delegated authority from the Federal Subsistence Board to specify permit stipulations. Permit stipulations can be applied to specific streams to reduce harvest for conservation reasons as needed. If harvest increases to the point where a reduction is needed, either in a particular stream or an area, in-season action can be taken to address the situation. The proposal would create an unnecessary regulation.

**OSM CONCLUSION**

Oppose Proposal FP08-07.

**Justification**

The participation and reported harvest of steelhead is very low on the ABC Islands, and a conservation based closure is not warranted at this time. Closing the Federal subsistence fishery for steelhead on the ABC Islands, while other steelhead fisheries remain open, does not recognize subsistence uses as a priority over other uses as required in ANILCA. Local Federal managers have the authority to manage the Federal subsistence steelhead fishery by permit stipulations and in-season action. The proposal would create an unnecessary regulation.

**LITERATURE CITED**


ADF&G. 2007. Statewide Harvest Survey Database. ADF&G, Sport Fish Division, Anchorage, AK.


INTERAGENCY STAFF COMMITTEE COMMENTS
FP08-07

The Interagency Staff Committee found the staff analysis to be a complete and accurate evaluation of the proposal, and the recommendation of the Regional Advisory Council to be consistent with ANILCA Section 805(c).
FP08-07 ADF&G Comments

Alaska Department of Fish and Game
Comments to the Federal Subsistence Board

FP08-07 ADMIRALTY, BARANOF, AND CHICHAGOF ISLANDS STEELHEAD

Introduction: This proposal would eliminate the federal subsistence harvest of steelhead trout in freshwaters within federal lands on Admiralty, Baranof, and Chichagof Islands, but steelhead trout could continue to be retained under State of Alaska sport fishing regulations.

Impacts to Subsistence Users: The federal staff analysis to the Regional Advisory Council (RAC) (p. 126-127) reported only 17 steelhead were harvested under federal subsistence permits in the past three years. Adoption of this proposal will have no impact on subsistence since the low level of participation indicates the communities do not exhibit a pattern of customary and traditional use of steelhead and the subsistence priority for fish is already provided by other fisheries.

Opportunity Provided by State: Steelhead trout taken incidentally by gear operated under terms of a state subsistence permit for salmon may be legally harvested and possessed for subsistence purposes, although the Department cannot issue a permit for subsistence harvest of steelhead trout. The holder of a state subsistence salmon permit must report any steelhead incidentally taken in this manner on his or her permit calendar. The state has a comprehensive package of sport, personal use, commercial, and subsistence regulations that work together to conserve steelhead and provide for subsistence harvest. These include a 36” size limit, bait and snagging prohibitions, restrictions on harvest in net fisheries that reduce bycatch of steelhead, and authority to require commercial catch reporting through emergency order. This spring a statewide regulation was adopted that requires reporting of steelhead retained but not sold. The state’s regulations successfully reversed the early 1990s decline in steelhead populations.

Conservation Issues: The proponent accurately recognizes current federal subsistence regulations and permit conditions are not conservative enough to ensure conservation of steelhead trout stocks in Southeast Alaska freshwater systems, especially “smaller” easily accessible systems that may receive more intensive pressure. Steelhead fisheries with less conservative regulations than current region wide sport fishery steelhead regulations are not sustainable. Population declines were evident in Southeast Alaska prior to 1994 under sport fishing regulations, which were similar to current federal subsistence regulations. In 1994, the Alaska Board of Fisheries enacted conservative regulations for steelhead in Southeast Alaska, which helped rebuild depressed stocks and created a sustainable steelhead fishery.

Most steelhead populations contain 200 or fewer spawning adults with only a handful of systems regularly receiving annual escapements of over 500 adults. Most of these steelhead populations are extremely difficult or impossible to assess and monitor on a regular basis. Steelhead populations in Southeast Alaska can be sustained only with very low harvest rates of 10 percent or less. History has shown that the level of harvest opportunity provided by the federal regulations cannot be sustained in the absence of an intensive stock assessment program.
The Department urges the federal Board to respect the Department’s concerns for stock conservation. Federal subsistence limits and regulations are creating the potential to unnecessarily impact the sustainability of steelhead. Stock assessment and stock status data for the numerous small steelhead stocks are necessary before authorizing federal subsistence use. For example, in the case of Baranof Island, three streams containing steelhead runs are crossed by the Sitka road system. With the exception of a few isolated steelhead escapement surveys, no consistent escapement information and no population estimates have been generated for these streams. Forest Service staff believes that escapements to these systems range from 10 to 200 fish per stream. As another example, one of the more extensively studied steelhead systems of larger than average run size in Southeast Alaska is Sitkoh Creek located on Chichagof Island. Adult steelhead returning to Sitkoh Creek were counted through a weir on the creek during 11 years, and escapement counts ranged from 395 to 1,108, with an average run size of 705 fish. A preliminary estimate of 460 fish, which falls below the average run size, migrated into Sitkoh Creek during 2007. Any targeted subsistence harvest on these fish would significantly impact its sustainability and would not be reported until after the fact.

The federal authorized opportunity for subsistence use of steelhead should only be authorized in waters with stock assessment programs and a documented ability to withstand increased harvest using the best available estimates of harvest inseason. The federal authorization to use bait for steelhead, and requirement to retain steelhead caught with bait, effectively results in there being no minimum size limit. Use of bait may also significantly increase the harvest of steelhead smolt as they emigrate to salt water in contrast to State regulations that protect nearly all of the steelhead smolt under the minimum size limit (11 inches), and incidental mortality is low because no bait is allowed. Although federal officials are currently attaching stipulations to permits that match state regulations concerning size limits and prohibiting use of bait, the regulation itself is inconsistent with sound management of fish populations and will eventually result in unnecessary restrictions on other uses.

Enforcement issues often create conservation issues, and there remains a question whether the federal permit system reflects actual participation and harvest of steelhead throughout Southeast Alaska. Low numbers of permits issued may be due to lack of compliance with permit requirements, and permit stipulations do not address the biological concerns related to the many small populations of steelhead. Data from recent studies indicate that not all subsistence users are obtaining permits, so permit stipulations, even if they were well designed, may not be effective. The permit stipulations and restrictions are, and will continue to be, ineffective until a concerted effort is exercised to issue permits to all active subsistence users and ensure stipulations are followed.

**Jurisdiction Issues:** There is a large amount of non-federal land on Admiralty, Baranof, and Chichagof Islands. Many streams on these islands that support steelhead runs flow through this non-federal land. In addition, the state disputes that federal reserved water rights exist for all these waters and therefore disputes federal subsistence jurisdiction over these streams. Detailed maps are needed of lands where federal jurisdiction is claimed and the basis of each claim. In addition, fishermen need these detailed maps because they cannot participate in federal subsistence fisheries while standing on nonfederal land.
Other Comments: There are competing purposes of ANILCA, such as conservation of fish and wildlife, rural subsistence preference, and recreation. The responsibility of the Board is to balance those competing purposes. Given the extremely low participation levels and harvest reported by the federal subsistence program for the Admiralty, Baranof, and Chichagof Islands area, it is obvious that use of steelhead is not customary and traditional and is recreational. Subsistence priority uses are provided by other fisheries without endangering the small, less productive steelhead stocks and potentially causing unnecessary restrictions to other uses.

The federal staff recommendation is to oppose the proposal based upon the belief that a conservation based closure in regulation is not warranted due to the reported low participation and harvest levels. The federal Board needs to support adoption of this proposal in order to be consistent with the authorities and responsibilities under ANILCA to balance competing purposes, such as conservation of fish and wildlife, rural subsistence preference, and recreation. State and federal regulations are providing a preference for subsistence uses, and there is no need to authorize federal subsistence use of steelhead that jeopardizes the sustainability of these stocks.

Department Recommendation: Support.
## FP08-18 Executive Summary

### General Description
Proposal FP08-18 is the result of the Federal Subsistence Board (Board) deferring action at its January 2007 meeting on Proposal FP07-18 which was submitted by the Southeast Alaska Subsistence Regional Advisory Council. The Board took no action on an identical Proposal, FP07-19, which was submitted by the Sitka Tribe of Alaska. Both proposals asked to close the Federal public waters in the Makhnati Island area near Sitka to commercial herring fishing during the months of March and April.

### Proposed Regulation
§___.27(i)(13)(xxv) The Federal public waters in the Makhnati Islands area near Sitka as described in 36 CFR 242.3(b)(5) and 50 CFR 100.3(b)(5) are closed to commercial herring fishing during March and April.

### Southeast Alaska Regional Council Recommendation
Support Proposal FP08-18 with modification

### OSM Conclusion
Oppose Proposal FP08-18

### Interagency Staff Committee Comments
See comments following analysis.

### ADF&G Comments
Oppose Proposal FP08-18

### Written Public Comments
None
REGIONAL ADVISORY COUNCIL RECOMMENDATION
FP08-18

SOUTHEAST ALASKA SUBSISTENCE REGIONAL ADVISORY COUNCIL

Support Proposal FP08-18 with modification

Justification

The Council concluded that the proposed regulation would conserve herring and benefit subsistence users by providing a meaningful subsistence priority for the waters under Federal jurisdiction. This action will have no effect on non-subsistence users as the area under consideration is a very small fraction of the total herring spawning area within Sitka Sound. The Council thought there was substantial evidence regarding the importance of this area to the subsistence fishery and the need to conserve herring in this area to identify and justify the need for this action.

The modified proposed regulation should read:

§__.27(i)(13)(xxv) The Federal public waters in the Makhnati Islands area near Sitka, as described in 36 CFR 242.3(b)(5) and 50 CFR 100.3(b)(5), are closed to the harvest of herring and herring spawn except for subsistence harvests by Federally qualified subsistence users when the forecast spawning biomass for the Sitka Sound herring spawning area is less than 35,000 tons or when the Amounts Necessary for Subsistence, as established by the Alaska Board of Fisheries, was not reached in the two prior consecutive years.

The Council will coordinate an appropriate proposal and procedure to enable the Federal management program to become a signatory of a Memorandum of Agreement with the State of Alaska and the Sitka Tribe of Alaska in management of herring in the Makhnati Island waters under Federal jurisdiction. This item will be added to the agenda for the February Council meeting with the intention of formulating a proposal to the Alaska Board of Fisheries.
ISSUES

Proposal FP08-18 is the result of the Federal Subsistence Board (Board) deferring action at its January 2007 meeting on Proposal FP07-18 which was submitted by the Southeast Alaska Subsistence Regional Advisory Council (Council). The Board took no action on an identical Proposal, FP07-19, which was submitted by the Sitka Tribe of Alaska (Sitka Tribe). Both proposals asked to close the Federal public waters in the Makhnati Island area near Sitka (Maps 1 and 2) to commercial herring fishing during the months of March and April. The Board also directed staff to work with the Council to form a work group to study the situation and report their findings to the Board in December 2007.

DISCUSSION

The proponent believes that a regulatory change is needed to ensure that subsistence needs for herring and herring roe are met. The proponent feels that commercial fishing activities displace subsistence users from traditional harvesting sites, may disrupt herring spawning such that good quality deposition of herring eggs does not take place at traditional sites, may cause herring to spawn away from subsistence sites, and may seriously reduce the biomass of spawning herring upon which subsistence users depend. The proponent feels that closing Federal marine waters to commercial harvesting during March and April will be a constructive step in ensuring that subsistence needs may be met.

Existing Federal Regulation:

Under existing Federal regulations, all rural residents of Alaska are eligible to harvest herring, herring roe on *Macrocystis* kelp, herring roe on hemlock, and herring roe on other substrates from Federal waters in southeast Alaska. There are no season or harvest limits in regulation.

Proposed Federal Regulation

§___.27(i)(13)(xxv) The Federal public waters in the Makhnati Islands area near Sitka as described in 36 CFR 242.3(b)(5) and 50 CFR 100.3(b)(5) are closed to commercial herring fishing during March and April.

Extent of Federal Public Waters

For purposes of this discussion, the phrase “Federal public waters” is defined as those waters described under 50 CFR 100.3.

Federal subsistence management jurisdiction was established in the marine waters of the Makhnati Island area as described in the Federal Register in August 2006. The Makhnati area is described as follows:

*Southeastern Alaska—Makhnati Island Area: Land and waters beginning at the southern point of Fruit Island, 57°21’35" north latitude, 135°21’07" west longitude as shown on United States Coast and Geodetic Survey Chart No. 8244, May 21, 1941; from the point of beginning, by metes and bounds; S. 58° W., 2500 feet, to the southern point of Nepavorotni Rocks; S. 83° W., 5600 feet, on a line passing through...*
Proposal FP08-18

Map 1: Sitka Sound and Vicinity
Proposal FP08-18
Map 2: Makhnati Federal Public Waters Area

Makhnati Federal Public Waters

Map Scale 1:25,000
the southern point of a small island lying about 150 feet south of Makhnati Island; N. 6° W., 4200 feet, on a line passing through the western point of a small island lying about 150 feet west of Makhnati Island, to the northwestern point of Signal Island; N. 24° E., 3000 feet, to a point, 57°03'15" north latitude, 135°23'07" west longitude; East, 2900 feet, to a point in course No. 46 in meanders of U.S. Survey No. 1496, on west side of Japonski Island;

Southeasterly, with the meanders of Japonski Island, U.S. Survey No. 1496 to angle point No. 35, on the Southwestern point of Japonski Island; S. 60° E., 3300 feet, along the boundary line of Naval reservation described in Executive order No. 8216, July 25, 1939, to the point beginning.

Customary and Traditional Use Determinations

The Board has not addressed a customary and traditional use determination for herring in this area; therefore, all rural residents of Alaska may harvest herring and herring eggs in this area.

Regulatory History

See attached staff analysis for FP07-18 (Appendix A)

Biological Background

See attached staff analysis for FP07-18 (Appendix A)

Harvest History

See attached staff analysis for FP07-18 (Appendix A)

Subsistence Harvest

The Alaska Department of Fish and Game (ADF&G) Division of Subsistence conducted research on the subsistence harvest of herring eggs in Sitka Sound as part of household harvest surveys conducted in Sitka in 1997. These studies included herring egg harvest estimates (ADF&G 2003). At the January 2002 meeting, the Alaska Board of Fisheries requested that ADF&G Division of Subsistence work with the Sitka Tribe and conduct harvest surveys for the Sitka Sound herring egg fishery. In 2002 and 2003, the ADF&G provided field survey and interview project support, and data analysis. The Sitka Tribe, working with ADF&G staff conducted interviews in person with harvesters and provided harvest data to ADF&G for analysis in 2002 and 2003. Research conducted by ADF&G and the Sitka Tribe in 2002 and 2003 produced harvest estimates of the total pounds of herring eggs-on-hemlock-branches and the total pounds of herring eggs harvested on Macrocystis, hair seaweed and other substrate. The Sitka Tribe also collected harvest data in 2004 and 2005 (Turek 2006). The total harvest results are displayed in Table 1.

Commercial Harvest:

See attached staff analysis for FP07-18 (Appendix A)

Table 2 displays the fisheries statistics for the Sitka Sound commercial sac roe herring fishery from 1978 through 2006 (Davidson et al. 2006, Gordon 2006).
Effect of the Proposal

The intent of the proposal is to ensure that subsistence needs are met for herring spawn. The intent of a closure is to protect herring that spawn in this area of Federal public waters from commercial harvest. The proponent stated that excluding this area from commercial fishing would provide a refuge for herring in Sitka Sound which would increase the number of herring produced in this area and ultimately increase the population of herring within Sitka Sound. Subsistence users in the area would be protected from competition from commercial activities both for herring and space to conduct harvest activities.

The Federal public waters near Makhnati Island comprise a small part of the spawning area for herring in Sitka Sound and also make up a small part of where subsistence herring eggs are gathered. Evaluating the effect of a closure in a small area of Federal public waters is extremely difficult due to the large yearly fluctuations in the intensity and location of herring spawning activity in Sitka Sound. From 1978 to 2007, the nautical miles of beach on which herring spawn has varied from 13 to 104 nautical miles per year and are not in the same areas every year. Some areas are more consistent than others, but spawn is not guaranteed in any area every year. Spawn and subsistence harvest occurs in most years within Federal public waters, but there is no way to know how much of the harvest comes from only Federal public waters. The traditional harvest of eggs on substrates is affected by many natural factors such as weather, where and when and how much the herring spawn. Subsistence users are allowed to harvest herring and herring eggs anywhere in and around Sitka Sound. Establishing a small area for only subsistence use may not provide additional benefit to subsistence users if herring lack spawning fidelity and simply do not spawn there in a given year. Where people harvest herring eggs is ultimately determined by where the herring spawn.

The area where the commercial sac roe herring fishery occurs also varies widely from year to year. From 1992 to 2007, the Federal public waters near Makhnati Island have made up part of the areas open to commercial sac roe herring fishing 6 out of 16 years (1993, 1999, 2001, 2003, 2005 and 2006). In 1993, the entire area was part of a larger commercial open area. In 1999, 2001 and 2005, only the Whiting Harbor side (north side) was included and in 2003 and 2006, only the Nepovorotni side (south side) was included. No commercial herring harvest occurred in the Federal Public waters in 2007. Since the area of Federal public waters has been a part of larger areas open to commercial fishing, there is no way to apportion harvest from only Federal public waters. A closure of a relatively small area of Federal jurisdiction would probably not affect whether the commercial quota is reached, but it will reduce the area available for commercial fishing and may increase the chance of commercial fishing taking place in better traditional egg harvesting areas.

In-season action by Federal managers would be difficult to implement in a timely manner, but if subsistence needs were not being met or a conservation concern was identified in the Makhnati area, Federal managers have been delegated the authority to close or modify fisheries in-season.

In 2002 a Memorandum of Agreement was signed between the Sitka Tribe and ADF&G in response to poor spawn harvest in 2001. Since the Agreement was signed, ANS, as determined by the Alaska Board

Table 1. Subsistence harvest of herring roe on all substrates, Sitka Sound (STA 2006).

<table>
<thead>
<tr>
<th>Year</th>
<th>Roe Harvested (lbs)</th>
</tr>
</thead>
<tbody>
<tr>
<td>1997</td>
<td>127,174</td>
</tr>
<tr>
<td>2002</td>
<td>151,177</td>
</tr>
<tr>
<td>2003</td>
<td>278,799</td>
</tr>
<tr>
<td>2004</td>
<td>293,579</td>
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<tr>
<td>2005</td>
<td>75,572</td>
</tr>
<tr>
<td>2006*</td>
<td>219,356</td>
</tr>
<tr>
<td>2007*</td>
<td></td>
</tr>
</tbody>
</table>

*The estimate for 2006 is in draft form as of 10-23-06 (Turek 2006 pers. comm.) The estimate for 2007 is pending from the Sitka Tribe.
<table>
<thead>
<tr>
<th>Year</th>
<th>Forecast Biomass (tons)</th>
<th>Quota (tons)</th>
<th>Harvest (tons)</th>
<th>Spawn Deposition Estimate (tons)</th>
<th>Catch + Esc = Return (tons)</th>
<th>Roe Percent</th>
<th>Date First Opened</th>
<th>Date of First Spawn</th>
<th>Nautical Miles Spawn</th>
</tr>
</thead>
<tbody>
<tr>
<td>1978</td>
<td>4,500</td>
<td>250</td>
<td>175</td>
<td>2,700</td>
<td>2,875</td>
<td>11</td>
<td>5-Apr</td>
<td>8-Apr</td>
<td>13</td>
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<td>1979</td>
<td>20,300</td>
<td>2,000</td>
<td>2,250</td>
<td>17,750</td>
<td>20,000</td>
<td>9.3</td>
<td>12-Apr</td>
<td>13-Apr</td>
<td>41</td>
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<tr>
<td>1980</td>
<td>39,500</td>
<td>4,000</td>
<td>4,385</td>
<td>35,100</td>
<td>39,485</td>
<td>10.8</td>
<td>4-Apr</td>
<td>3-Apr</td>
<td>63</td>
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<td>1981</td>
<td>27,000</td>
<td>3,000</td>
<td>3,506</td>
<td>30,000</td>
<td>33,506</td>
<td>11</td>
<td>24-Mar</td>
<td>22-Mar</td>
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<tr>
<td>1982</td>
<td>30,000</td>
<td>3,000</td>
<td>4,363</td>
<td>29,700</td>
<td>34,063</td>
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<td>41</td>
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<td>5,000</td>
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<td>21-Mar</td>
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<td>1984</td>
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<td>5,000</td>
<td>5,830</td>
<td>38,500</td>
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<td>7,700</td>
<td>7,475</td>
<td>30,950</td>
<td>38,425</td>
<td>11.3</td>
<td>29-Mar</td>
<td>29-Mar</td>
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<tr>
<td>1986</td>
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<td>5,029</td>
<td>5,443</td>
<td>24,750</td>
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<td>11.9</td>
<td>2-Apr</td>
<td>27-Mar</td>
<td>52</td>
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<td>1987</td>
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<td>3,600</td>
<td>4,216</td>
<td>46,050</td>
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<td>21-Mar</td>
<td>86</td>
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<td>1988</td>
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<td>9,575</td>
<td>58,650</td>
<td>68,225</td>
<td>9.5</td>
<td>4-Apr</td>
<td>23-Mar</td>
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<td>12,135</td>
<td>27,200</td>
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<td>3,804</td>
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<td>10.6</td>
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<td>39</td>
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<td>3,200</td>
<td>1,908</td>
<td>23,450</td>
<td>25,358</td>
<td>8.9</td>
<td>10-Apr</td>
<td>1-Apr</td>
<td>45</td>
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<td>1993</td>
<td>48,500</td>
<td>9,700</td>
<td>10,186</td>
<td>35,500</td>
<td>45,686</td>
<td>10.7</td>
<td>27-Mar</td>
<td>24-Mar</td>
<td>55</td>
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<td>1994</td>
<td>28,450</td>
<td>4,432</td>
<td>4,758</td>
<td>14,026</td>
<td>18,784</td>
<td>11</td>
<td>29-Mar</td>
<td>28-Mar</td>
<td>58</td>
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<tr>
<td>1996</td>
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<td>8,144</td>
<td>8,144</td>
<td>36,372</td>
<td>44,516</td>
<td>9.6</td>
<td>23-Mar</td>
<td>22-Mar</td>
<td>46</td>
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<tr>
<td>1997</td>
<td>54,500</td>
<td>10,900</td>
<td>11,147</td>
<td>27,126</td>
<td>38,273</td>
<td>11.5</td>
<td>18-Mar</td>
<td>19-Mar</td>
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<tr>
<td>1998</td>
<td>39,200</td>
<td>6,900</td>
<td>6,705</td>
<td>34,943</td>
<td>42,223</td>
<td>10.2</td>
<td>16-Mar</td>
<td>19-Mar</td>
<td>65</td>
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<tr>
<td>1999</td>
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<td>9,136</td>
<td>44,610</td>
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<td>10.7</td>
<td>22-Mar</td>
<td>22-Mar</td>
<td>60</td>
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<td>2000</td>
<td>33,365</td>
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<td>19-Mar</td>
<td>19-Mar</td>
<td>55</td>
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<td>51,000</td>
<td>62,972</td>
<td>10.9</td>
<td>22-Mar</td>
<td>23-Mar</td>
<td>61</td>
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<td>2002</td>
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<td>9,789</td>
<td>39,719</td>
<td>49,508</td>
<td>10.9</td>
<td>27-Mar</td>
<td>24-Mar</td>
<td>43</td>
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<td>2003</td>
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<td>6,969</td>
<td>7,051</td>
<td>54,875</td>
<td>61,926</td>
<td>10.7</td>
<td>22-Mar</td>
<td>23-Mar</td>
<td>47</td>
</tr>
<tr>
<td>2005</td>
<td>55,962</td>
<td>11,192</td>
<td>11,366</td>
<td>101,305</td>
<td>112,671</td>
<td>11.4</td>
<td>23-Mar</td>
<td>24-Mar</td>
<td>40</td>
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<tr>
<td>2006</td>
<td>52,059</td>
<td>10,412</td>
<td>10,070</td>
<td>65,126</td>
<td>75,196</td>
<td>10.5</td>
<td>24-Mar</td>
<td>23-Mar</td>
<td>57</td>
</tr>
</tbody>
</table>

Long-Term Avg | 37,071 | 6,476 | 6,704 | 38,826 | 45,500 | 10.6 | 9-Apr | 25-Mar | 55.9

5-Year Avg | 51,127 | 10,047 | 9,753 | 65,681 | 75,434 | 10.9 | 23-Mar | 22-Mar | 53.4
of Fisheries, were met in 2003, 2004 and 2006, but not in 2005 (Sitka Tribe 2006) (2007 harvest data is pending). A Federal closure of a fishery may only be exercised when it is necessary to conserve fish stocks or to continue subsistence uses. In most years subsistence needs for herring spawn on substrates were met. Even in years when subsistence needs were not met it is unclear whether a closure to other users in Federal public waters would have made a difference.

Federal managers will continue to support the coordination between ADF&G and the Sitka Tribe. During the 2007 herring harvest, the communication between the Sitka Tribe and ADF&G was largely successful in ensuring that subsistence harvests was as successful as possible.

During the Council meeting in Haines on September 25th, the Council received the subcommittee report (Appendix B) and accepted it. The Council used the recommendations in the report to formulate regulatory recommendations along with non-regulatory recommendations.

**OSM CONCLUSION**

**Oppose** Proposal FP08-18.

**Justification**

In most years subsistence needs for herring spawn on substrates have been met. Even in years when subsistence needs were not met it is unclear whether a closure to other users in Federal public waters would have made a difference. Federal managers will continue to support the coordination between ADF&G and the Sitka Tribe in their effort to ensure that subsistence harvests are as successful as possible.

**LITERATURE CITED**


ISSUES

FP07-18 was submitted by the Southeast Alaska Subsistence Regional Advisory Council (Council). FP07-19 was submitted by the Sitka Tribe of Alaska (Sitka Tribe). Both proposals would close the Federal public waters in the Makhnati Island area near Sitka (Map 1 and Map 2) to commercial herring fishing during the months of March and April. The proposals are nearly identical and will be analyzed together.

DISCUSSION

The Council and the Sitka Tribe believe that a regulatory change is needed to ensure that subsistence needs for herring and herring roe are met. The proponents feel commercial fishing activities displace subsistence users from traditional harvesting sites, may disrupt herring spawning such that good quality deposition of herring eggs does not take place at traditional sites, may cause herring to spawn away from subsistence sites, and may seriously reduce the biomass of spawning herring upon which subsistence users depend. The proponents feel that closing Federal marine waters to commercial harvesting during March and April will be a constructive step in ensuring that subsistence needs may be met.

Existing Federal Regulation:

Under existing Federal regulations, all rural residents of Alaska are eligible to harvest herring, herring roe on Macroystis kelp, herring roe on hemlock, and herring roe on other substrates from Federal waters in southeast Alaska. There are no season or harvest limits in regulation.

Proposed Federal Regulation

§___.27(i)(13)(xxv) The Federal public waters in the Makhnati Islands area near Sitka as described in 36 CFR 242.3(b)(5) and 50 CFR 100.3(b)(5) are closed to commercial herring fishing during March and April.

Extent of Federal Public Waters

A rule establishing Federal subsistence management jurisdiction in the marine waters of the Makhnati Island area was published in the Federal Register in August 2006. The Makhnati area is described in the final rule as follows:

Southeastern Alaska—Makhnati Island Area: Land and waters beginning at the southern point of Fruit Island, 57°21'35" north latitude, 135°21'07" west longitude as shown on United States Coast and Geodetic Survey Chart No. 8244, May 21, 1941; from the point of beginning, by metes and bounds; S. 58° W., 2500 feet, to the southern point of Nepovorotni Rocks; S. 83° W., 5600 feet, on a line passing through the southern point of a small island lying about 150 feet south of Makhnati Island; N. 6° W., 4200 feet, on a line passing through the western point of a small island lying about 150 feet west of Makhnati Island,
Proposal FP07-18 and 19
Map 1: Sitka Sound and Vicinity

Salisbury Sound
Kruzof Island
Kasiana Island
Makhnati Island
Sitka Sound
Sitka Road System
Halibut Point Road
SITKA
BARANOF ISLAND

Map scale 1:350000
Proposal FP07-18 and 19
Map 2: Makhnati Federal Public Waters Area
to the northwestern point of Signal Island; N. 24° E., 3000 feet, to a point, 57°03'15" north latitude, 135°23'07" west longitude; East, 2900 feet, to a point in course No. 46 in meanders of U.S. Survey No. 1496, on west side of Japonski Island;

Southeasterly, with the meanders of Japonski Island, U.S. Survey No. 1496 to angle point No. 35, on the Southwestern point of Japonski Island; S. 60° E., 3300 feet, along the boundary line of Naval reservation described in Executive order No. 8216, July 25, 1939, to the point beginning.

For purposes of this discussion, the phrase “Federal public waters” is defined as those waters described under 50 CFR 100.3.

Customary and Traditional Use Determinations

The Federal Subsistence Board has not made a customary and traditional use determination for herring in this area; therefore, all rural residents of Alaska may harvest herring and herring eggs in this area.

Regulatory History

State Regulatory History

In response to a poor subsistence herring egg harvest in 2001, the Sitka Tribe submitted a proposal to the Alaska Board of Fisheries in 2002. The proposal requested that the herring sac roe fishery be dispersed avoid concentrating the commercial harvest in traditional subsistence egg harvesting areas. The Alaska Board of Fisheries amended the proposal by removing a suggested requirement for a subsistence permit in favor of face to face surveys to estimate subsistence herring egg harvest. The Alaska Board of Fisheries also established the amount necessary for subsistence (ANS) herring roe in Sitka Sound, Section 13A and 13B north of the latitude of Aspid Cape at 105,000 to 158,000 pounds (Turek 2003). In November of 2002, a Memorandum of Agreement (MOU) was signed by the Chair of the Alaska Board of Fisheries, the Commissioner of ADF&G, and the Chair of the Sitka Tribe. The State and the Sitka Tribe agreed to collaborate, communicate, and collect and share data (STA 2006). The MOU contains provisions for in-season collaboration, which includes daily contact between the Sitka Tribe and ADF&G, and stipulates that the Sitka Tribe will be consulted whether a proposed commercial opening might affect subsistence opportunity. If the Sitka Tribe concludes there is potential for the subsistence fishery to be negatively impacted by a proposed opening, the Sitka Tribe will provide this conclusion and reasoning to ADF&G verbally and in writing. While a formal objection to a proposed opening does not necessarily result in a commercial closure, ADF&G maintains discretion whether or not to open the commercial fishery.

ADF&G is required to “distribute the commercial harvest by fishing time and area if the department [ADF&G] determines that is necessary to ensure that subsistence users have a reasonable opportunity to harvest the amount of herring spawn necessary for subsistence uses” (5 AAC 27.195(a)(2)). Additionally, commercial herring vessels, permit holders, and crew members may not take or possess herring for subsistence 72 hours prior to or following a commercial herring fishing period.

Current State regulations allow the subsistence harvest of herring and herring spawn with an ANS finding of 105,000 – 158,000 pounds of herring spawn in Districts 13A and 13B north of the latitude of Aspid Cape (5 AAC 01.716(7)(b)). Regulations also limit customary trade in herring roe on kelp (5 AAC 01.717 and 5 AAC 01.730(g)). Other than spawn on kelp, there are no harvest limits for herring or herring spawn. When issuing a herring spawn on kelp subsistence fishing permit, the annual possession limit for herring spawn on kelp is 32 pounds for an individual or 158 pounds for a household of two or more
persons. There are no regulations regarding subsistence reporting requirements, or specific allocations for subsistence (Turek 2006).

**Biological Background**

Excerpted from the ADF&G Wildlife Notebook Series (Funk 2000):

Pacific herring generally spawn during the spring. In Alaska, spawning is first observed in the southeastern archipelago during mid-March. Spawning is confined to shallow, vegetated areas in the intertidal and subtidal zones.

The eggs are adhesive, and survival is better for those eggs which stick to intertidal vegetation than for those which fall to the bottom. Milt released by the males drifts among the eggs and fertilizes them. The eggs hatch in about two weeks, depending on the temperature of the water.

Herring spawn every year after reaching sexual maturity at 3 or 4 years of age. The number of eggs varies with the age of the fish and averages 20,000 annually. Average life span for these fish is about 8 years in Southeast Alaska.

Mortality of the eggs is high. Young larvae drift and swim with the ocean currents and are preyed upon extensively by other vertebrate and invertebrate predators. Following metamorphosis of the larvae to the juvenile form, they rear in sheltered bays and inlets and appear to remain segregated from adult populations until they are mature.

Herring are located in distinctly different environments during different periods of the year. After spawning, most adults leave inshore waters and move offshore to feed primarily on zooplankton such as copepods and other crustaceans. They are seasonal feeders and accumulate fat reserves for periods of relative inactivity. Herring schools often follow a diel vertical migration pattern, spending daylight hours near the bottom and moving upward during the evening to feed.

**Harvest History**

*Subsistence Harvest Methods:*

The following was excerpted from Schroeder and Kookesh (1989):

**Timing of Harvest**

Seal, sea lion, and sea gull feeding activity are indicators for the subsistence harvester that the herring have arrived to Sitka Sound. Regular monitoring of the traditional herring spawn areas is necessary to anticipate when the herring will spawn. Active harvesters drive out on Halibut Point Road to check for spawn daily or use skiffs to cruise the islands in Sitka Sound looking for schooled herring close to the beach. In recent years, ADF&G has monitored the herring roe percent as part of its management of the commercial herring roe fishery in Sitka Sound. Subsistence users follow ADF&G herring roe percent estimates. When the roe count reaches about 10 percent, the herring are ready to spawn. In most years, Sitka herring spawn in April. In the current year, however, first herring spawn appeared on March 26.
Selection and Placement of Hemlock Branches and Trees

Sitka’s most active harvesters, those who supply many people with herring eggs, set 60 to 80 small hemlock trees about 15 to 20 feet long in sets of 2 to 10 trees. In contrast, less-active harvesters may set a small number of hemlock branches in one or two sets. Branches are much easier to handle. Egg laden trees can be so heavy that harvest from a small skiff is difficult. The most active harvesters prepare well in advance so they are able to have their sets in place at the optimal time and place.

Young hemlock trees are selected for use as herring egg strata. Elder informants told us there are two types of young hemlock. The first type has small ridges running parallel on the tree. The second and preferred tree is smooth round. This was confirmed by active harvesters who told us they do not harvest the trees with the ridges because they have moss growing in the ridges. The harvesters do not like moss peeling off on the eggs when they are cooked; therefore, round hemlocks are the preferred tree. Trees with full branches are preferred because they provide more area for egg deposition. Informants told us they used to be able to cut trees right at the spawning beaches, but they currently have to go further afield to find good trees. Trees are cut along the Sitka road system and transported by skiff to harvest sites. They are also cut from areas closer to the shoreline and spawning sites, particularly by the most active harvesters. Some harvesters go to more isolated areas in Sitka Sound for good trees. Trees are cut and trimmed with chain saws, handsaws, and axes.

High harvesters told us they were putting out more sets in recent years and modified the way they make their sets. They have come to anticipate some of their sets will be stolen and put in enough sets to cover this expected loss. As much as possible, subsistence harvesters hide their set locations so they will not be found by others. Harvesters stopped using buoys to mark their sets and stopped using heavy rope to tie their trees or branches together. When they use heavy rope, seine boats are able to use their blocks and winches to hoist whole sets on deck. Tying off sets to the beach was also discontinued because the shoreline would also be covered with spawn and show as a thick white line running to the beach from the set. Harvesters are able to find their hidden sets by remembering shore features.

Hemlock trees and branches are usually set such that they will just be submerged at low tide. Sets we observed were in water from about 10- to 30-feet deep. Rocks or construction bricks were tied to the butt end of trees and bunches of branches with pieces of web or seine twine. The trees or branches were set such that they would float perpendicular in the water. Trees in skates were tied together with heavy twine or pieces of round line and separated about 20 feet from one another. The most active harvesters try to get their sets in the water before spawning occurs and have found that good deposition of eggs will not occur if sets are made after the water is milky.

Subsistence harvesters think herring spawn best at mean low water; however, the spawn fluctuates with flood and ebb tides. One respondent said he has noticed that herring usually start spawning at small tides. Herring trees and branches are left to soak for 2-4 days after the spawn has begun depending on the amount of spawn in an area.

This year saw an early false spawn in some areas. A false spawn occurs where male herring are releasing sperm with very few females releasing eggs. When this happens, subsistence harvesters may pull their sets and move them to another area. Although, it is possible to wait for another herring spawn to set on top of the thin false spawn, the resulting subsistence product will not be high quality; the inner herring eggs from the false spawn will mature under the fresh new eggs.
Matured herring eggs start turning brown, and small eyes become visible. When the color of eggs has changed from white to brown, the eggs are of lower quality for eating. When eyes have formed, they are no longer used. The preferred quality eggs are white deposited about an inch thick on the branches.

In addition to the setting methods described above, some branches are set directly from the beach at low tide. We also noted that about three branches were set from the float at Sandy Cove. We also heard reports that blueberry bushes, wire mesh screen, cheese cloth, and plastic tarp were occasionally used as deposition strata.

Harvesting Herring Eggs on Hemlock Branches

Small skiffs and runabouts are the most common vessels used by Sitka residents for harvesting herring eggs. We saw 14- to 18-foot aluminum skiffs with small outboards, open Boston Whalers of various sizes, and 23-foot cabin cruisers, and other similar small vessels being used for herring egg harvest.

Harvesters using sunken and unmarked sets get in the vicinity of their set by locating shore landmarks. They then drag a grappling hook through the water to snag either the egg-laden branches or the ground line connecting individual trees. The roe covered trees and branches that have been snagged are then pulled to the skiff. Although smaller branches may then be pulled directly into a skiff, branches and trees are more commonly cut into manageable pieces before they are loaded. Based on our observations, a fully laden tree can hold more than 1,000 lbs. of quality eggs. Much more than can be handled in a small skiff. Cut branches are placed in plastic totes, pails, and garbage cans or loaded directly into the harvesting skiff. Before the eggs are put in the boat, they are usually dipped 2-3 times to rinse both the milt or sperm and to wash out any sand or foreign matter from the branches. Sand or other material lowers the quality of the herring eggs, and they stay fresh longer if milt is washed out.

If trees and branches are thickly covered with spawn, the harvesting vessel can be quickly filled to capacity. Eggs are brought home for processing and distribution. While harvesters of small amounts of eggs may carry them up from any docking location, high harvesters prefer docks with loading ramps that facilitate transfer of eggs to the bed of a pickup. One enterprising harvester loaded eggs directly from his 17-foot Boston Whaler to the lined bed of his pickup. A boatload of eggs, estimated at 1,000 to 1,500 lbs. could be quickly loaded this way.

In addition to having sets stolen or ruined by false spawn, sets may not be harvested for other reasons. Spawn might be too thin in a particular location resulting in a low quality subsistence product. Rough weather might wash sand and debris into the eggs. Because of weather or other reasons, the harvester may not be able to get back to his sets until eggs have developed. Trees and branches may also be left in the water because the harvester has fulfilled his or her subsistence needs. The eggs left in the water are thought to develop normally.

Harvesting Herring Eggs on Hair Seaweed

Harvestable hair seaweed grows just below lowest low water. A subsistence harvester wanting this product pays attention to where his seaweed grows and whether or not the area usually receives a good herring spawn. When minus tides coincide with good spawn deposition, as they did in 1989, ne (herring eggs on hair seaweed) can be harvested in quantity by hand by a person wearing waders or rubber boots. This variety of seaweed breaks off easily, especially then thickly covered...
with herring eggs. Ne can quickly be gathered by the arm load. At higher tides, ne is gathered with
rakes and grappling hooks. Ne beds can be extremely productive under good conditions. In 1989,
we observed the harvest by hand of about 500 lbs. of ne by two people from a 10-foot-by-10-foot
area in about 20 minutes at a minus tide. As with haaw or herring eggs on branches, ne are taken
home for processing.

Harvesting Herring Eggs on *Macrocystis* Kelp
Egg-covered fronds of *Macrocystis* kelp are selected by subsistence harvesters from kelp beds
where herring have spawned. Fronds are pulled into the harvesting vessel by hand or with a rake
or grapple and cut in containers for transport. Based on interview reports, 1989 was a poor year
for harvest of herring eggs on *Macrocystis* kelp. A number of our informants stated they usually
harvested on this strata, but did not find good spawn in their usual harvest locations. We were not
able to observe this harvest.

In terms of overall harvest of herring eggs, eggs on *Macrocystis* kelp is harvested by fewer
subsistence users and in much smaller quantity than ne and haaw.

Herring roe on *Macrocystis* was not frequently mentioned in our interviews with elders
centering early herring egg harvesting practices, and few informants referred to the Tlingit word
daaw (*Macrocystis* kelp) as an important herring egg stratum. This indicated that harvest on daaw
has been of less importance in Sitka Sound than harvest on the other two strata for some time.

Preparing, Preserving, and Packing Herring Eggs
Food preparation follows the traditional cooking methods. Herring roe, both ne and haaw, is
dipped in boiling water once or twice. Eggs become unpalatable if they are cooked too long.
Overcooked eggs turn dull white, and they become quite rubbery in texture and loose their flavor.
Properly cooked bunches of eggs are barely warmed and retain some translucence. Cooked roe is
eaten with seal oil or hooligan oil. Soy sauce, butter, mayonnaise, honey, vinegar, salt, and pepper
are also used. Herring roe may also be eaten fresh or uncooked.

Preservation starts as soon as possible after harvest. Although some eggs are dried or salted,
freezing is the most common method of home preservation. Haaw are cut into suitable pieces and
placed in zip-lock bags for freezing. Ne is treated similarly. Some people are experimenting with
vacuum packing as a new method for preservation. Frozen eggs can be used until the next year’s
harvest, although quality declines, as with other frozen products.

Eggs harvested for customary trade and barter are shipped out of town fresh with haaw
predominating. Eggs are shipped out of town by Alaska Airlines, local air taxis, private boats and
Alaska Marine Highway.

High Harvesters
Based on subsistence survey data for the 1987 harvest year, a relatively small number of
households in Sitka account for a large portion of the total harvest of herring eggs taken for
subsistence use. Field work in 1989 confirmed earlier survey results. Through interviews with
ADF&G, staff and Sitka residents and examination of shipping records, we found that about 20
households fall into the high harvesting group. For our purposes a high harvester was a household
that was known to supply many households with herring eggs. Although systematic measurement
was not attempted in 1989, we estimate that households in this group harvested about 300 lbs. of
eggs or more. We also found all of the identified high harvesters were Alaska Native residents of
Sitka. While there is non-Native participation in this fishery, non-Natives are not known to harvest
in quantity or to participate as major suppliers of herring eggs to non-harvesting households. . . .

Distribution and Exchange

A number of high harvesters assisted us by providing detailed description of their
harvesting, trade, and barter of herring eggs during the 1989 season. Except among
the closest of family members, fairly direct reciprocity is expected for the exchange
of herring eggs. This often takes the form of barter where a different, similarly valued,
subsistence food is returned for herring eggs received. When the receiver has nothing to
offer in return for herring eggs, cash may be the medium of exchange with the receiver
paying the giver some amount to cover the expenses and time involved in harvesting,
packing and sending this highly prized food. . . .

Subsistence Harvest

The ADF&G Division of Subsistence conducted research on the subsistence harvest of herring eggs in
Sitka Sound as part of household harvest surveys conducted in Sitka in 1997. These studies included
herring egg harvest estimates (ADF&G 2003). At the January 2002 meeting, the Alaska Board of
Fisheries requested that ADF&G Division of Subsistence work with the Sitka Tribe and conduct harvest
surveys for the Sitka Sound herring egg fishery. In 2002 and 2003, the ADF&G provided field survey
and interview project support, and data analysis. The Sitka Tribe, working with ADF&G staff conducted
interviews in person with harvesters and provided harvest data to ADF&G for analysis in 2002 and 2003.
Research conducted by ADF&G and the Sitka Tribe in 2002 and 2003 produced harvest estimates of
the total pounds of herring eggs-on-hemlock-branches and the total pounds of herring eggs harvested on
Macrocystis, hair seaweed and other substrate. The Sitka Tribe also collected harvest data in 2004 and
2005 (Turek 2006). The total harvest results are displayed in Table 1.

Table 1. Subsistence Harvest of Herring Roe on All Substrates, Sitka Sound (STA 2006)

<table>
<thead>
<tr>
<th>Year</th>
<th>Total Roe Harvest (Lbs.)</th>
</tr>
</thead>
<tbody>
<tr>
<td>1997</td>
<td>127,174</td>
</tr>
<tr>
<td>2002</td>
<td>151,717</td>
</tr>
<tr>
<td>2003</td>
<td>278,799</td>
</tr>
<tr>
<td>2004</td>
<td>293,579</td>
</tr>
<tr>
<td>2005</td>
<td>75,572</td>
</tr>
<tr>
<td>2006*</td>
<td>219,356</td>
</tr>
</tbody>
</table>

The estimate for 2006 is in draft form as of 10-23-06 (Turek 2006 pers. comm.)

Commercial Harvest

The following is excerpted from Woodby et al. 2005:

Alaska has a colorful history of herring fisheries beginning with its earliest aboriginal inhabitants
who depended on herring for food. Southeast Alaska Natives still savor herring eggs which they
obtain by allowing herring to spawn on hemlock boughs that have been placed in the water during
the spring.
Early European settlers in the Pacific Northwest caught herring and preserved them with salt, as they had done with herring from the North Sea. Salted and pickled herring production peaked after World War I, when about 14,000 tons (12,700 mt) were harvested annually. During the 1920s herring became increasingly valued for oil and meal. Reduction plants to “reduce” herring to meal and oil sprang up all over Alaska from Craig to Kodiak. Harvests during the 1920s and 1930s, as high as 125,000 tons (113,400 mt), were probably too high and may have caused the stocks and fisheries to decline. During the 1950s, lower cost Peruvian anchoveta severely impacted the oil and meal markets. The last Alaska herring reduction plant closed in 1966.

When their herring stocks declined during the 1960s, Japan began importing herring roe from other countries. A lucrative market for herring eggs and eggs on kelp prompted the development of Alaska’s roe herring fisheries and remain the principle utilization of herring at present.

Sac roe fisheries harvest herring just before spawning using either purse seine or gillnet. The roe is salted and packaged as a product that sometimes sells for over $100/lb ($220/kg) in Japan. In recent years the Alaska sac roe harvest has averaged about 50,000 tons (45,500 mt), almost all of which ends up in the Japanese marketplace.

In general, Alaska herring fishery quotas are based on a variable exploitation rate harvest policy. The Alaska Board of Fisheries has established a maximum exploitation rate (fraction of the spawning population removed by the fishery) of 20%. Fisheries are closed if stock size falls below the threshold level — the minimum stock size thought necessary to guarantee sustained yield from the stock. Lower exploitation rates are usually used when herring stocks decline to near-threshold levels.

The Alaska Board of Fisheries also enacts regulations that control the types and amounts of fishing gear that may be used, allocate the allowable harvest among user groups, and determine the range of dates allowed for fisheries. ADF&G determines the exact opening and closing times each season. For sac roe fisheries, openings are timed to occur when herring have produced the maximum amount of roe. The duration of openings is also set to achieve harvest quotas as closely as possible. Entry into most herring fisheries in Alaska has been limited under the authority of the Commercial Fisheries Entry Commission (CFEC).

Aside from establishments of annual catch quotas and allocations, several issues affect herring fisheries. In recent years, herring roe markets have begun to deteriorate as the consumption of herring roe declines in Japan.

With the degradation of herring roe markets, herring processors have been increasingly concerned about product quality. Recently, fishermen, ADF&G, and the processing industry have renewed efforts to increase roe percentages and reduce the length of time herring are held before processing. Roe percentages have improved in some areas. Managers also are attempting to better match the rate of harvesting with the rate of processing so that herring can be more quickly frozen to prevent product deterioration.

Most herring spawning habitat in Alaska is undeveloped and has not been degraded by human activities. However, there are occasional concerns about the impact of herring roe fishing vessels on herring spawning activities.

Because herring are an important food source for other species, commercial utilization of herring has always been controversial. In Southeast Alaska, halibut and salmon fishermen began
vociferously objecting to herring fisheries early in the 20th century. Their objections continue to be heard by the Alaska Board of Fisheries and have been one of the principle reasons for the conservative herring harvest policies adopted by the Board.

Table 2 displays the fisheries statistics for the Sitka Sound commercial sac roe herring fishery from 1978 through 2005 (Davidson et al. 2006, and Gordon 2006).

<table>
<thead>
<tr>
<th>Year</th>
<th>Forecast Biomass (tons)</th>
<th>Quota (tons)</th>
<th>Harvest Deposition (tons)</th>
<th>Spawn Estimate (tons)</th>
<th>Catch + Return (tons)</th>
<th>Roe %</th>
<th>Date of Roe First Opened</th>
<th>Date of Roe First Return</th>
<th>Nautical Miles Spawn</th>
</tr>
</thead>
<tbody>
<tr>
<td>1978</td>
<td>4,500</td>
<td>250</td>
<td>175</td>
<td>2,700</td>
<td>2,875</td>
<td>11</td>
<td>05-Apr</td>
<td>08-Apr</td>
<td>13</td>
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<tr>
<td>1979</td>
<td>20,300</td>
<td>2,000</td>
<td>2,250</td>
<td>17,750</td>
<td>20,000</td>
<td>9.3</td>
<td>12-Apr</td>
<td>13-Apr</td>
<td>41</td>
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<tr>
<td>1980</td>
<td>39,500</td>
<td>4,000</td>
<td>4,385</td>
<td>35,100</td>
<td>39,485</td>
<td>10.8</td>
<td>04-Apr</td>
<td>03-Apr</td>
<td>63</td>
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<tr>
<td>1981</td>
<td>27,000</td>
<td>3,000</td>
<td>3,506</td>
<td>30,000</td>
<td>33,506</td>
<td>11</td>
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<td>22-Mar</td>
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<tr>
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<td>5,830</td>
<td>38,500</td>
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<td>21-Mar</td>
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<tr>
<td>1985</td>
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<td>7,475</td>
<td>30,950</td>
<td>38,425</td>
<td>11.3</td>
<td>29-Mar</td>
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<tr>
<td>1986</td>
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<td>5,443</td>
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<tr>
<td>1987</td>
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<td>4,216</td>
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<td>9.9</td>
<td>31-Mar</td>
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<tr>
<td>1988</td>
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<td>1989</td>
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<td>8,144</td>
<td>36,372</td>
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<td>22-Mar</td>
<td>46</td>
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<tr>
<td>1997</td>
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<td>11.5</td>
<td>18-Mar</td>
<td>19-Mar</td>
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<tr>
<td>1998</td>
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<td>6,705</td>
<td>34,943</td>
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<td>10.2</td>
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<td>9,136</td>
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<tr>
<td>2000</td>
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<td>4,813</td>
<td>54,399</td>
<td>59,212</td>
<td>9.9</td>
<td>19-Mar</td>
<td>19-Mar</td>
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<tr>
<td>2001</td>
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<td>11,972</td>
<td>51,000</td>
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<td>10.9</td>
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<td>23-Mar</td>
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<td>2005</td>
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<td>11,366</td>
<td>101,305</td>
<td>112,671</td>
<td>11.4</td>
<td>23-Mar</td>
<td>24-Mar</td>
<td>40</td>
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<tr>
<td>Longterm Avg</td>
<td>36,535</td>
<td>6,335</td>
<td>6,584</td>
<td>37,887</td>
<td>44,440</td>
<td>10.6</td>
<td>28-Mar</td>
<td>15-Mar</td>
<td>56</td>
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<tr>
<td>5-Year Avg</td>
<td>51,313</td>
<td>10,084</td>
<td>10,134</td>
<td>62,856</td>
<td>72,989</td>
<td>10.9</td>
<td>23-Mar</td>
<td>22-Mar</td>
<td>54</td>
</tr>
</tbody>
</table>

Effects of the Proposal

The intent of the proposal is to ensure that subsistence needs are met for herring spawn. The intent of a closure is to protect herring that spawn in this area of Federal public waters from commercial harvest. The proponent stated that excluding this area from commercial fishing would provide a refuge for herring in Sitka Sound which would increase the number of herring produced in this area and ultimately increase the population of herring within Sitka Sound. Subsistence users in the area would be protected from competition from commercial activities both for herring and space to conduct harvest activities.

The Federal public waters near Makhnati Island comprise a small part of the spawning area of herring in Sitka Sound and also make up a small part of where subsistence herring eggs are gathered. Evaluating the effect of a closure in a small area of Federal public waters is extremely difficult due to the large yearly fluctuations in the intensity and location of herring spawning activity in Sitka Sound. From 1978 to 2006, the nautical miles of beach on which herring spawn has varied from 13 to 104 nautical miles per year and are not in the same areas every year. Some areas are more consistent than others, but spawn is not
guaranteed in any area every year. Spawn and subsistence harvest occurs in most years within Federal public waters, but there is no way to know how much of the harvest comes from only Federal public waters. The traditional harvest of eggs on substrates is affected by many natural factors such as weather, where and when and how much the herring spawn. Subsistence users are allowed to harvest herring and herring eggs anywhere in and around Sitka Sound. Establishing a small area for only subsistence use may not provide additional benefit to subsistence users if herring lack spawning fidelity and simply don’t spawn there in a given year. Where people harvest herring eggs is ultimately determined by where the herring spawn.

The area where the commercial sac roe herring fishery occurs also varies widely from year to year. From 1992 to 2006, the Federal public waters near Makhnati Island have made up part of the areas open to commercial sac roe herring fishing 6 out of 15 years (1993, 1999, 2001, 2003, 2005 and 2006). In 1993, the entire area was part of a larger commercial open area. In 1999, 2001 and 2005, only the Whiting Harbor side (north side) was included and in 2003 and 2006, only the Nepovorotni side (south side) was included. Since the area of Federal public waters has been a part of larger areas open to commercial fishing, there is no way to apportion harvest from only Federal public waters. A closure of a relatively small area of Federal jurisdiction would probably not affect whether the commercial quota is reached, but it will reduce the area available for commercial fishing and may increase the chance of commercial fishing taking place in better traditional egg harvesting areas.

In 2002 a Memorandum of Agreement was signed between the Sitka Tribe and ADF&G in response to poor spawn harvest in 2001. Since the Agreement was signed, ANS, as determined by the Alaska Board of Fisheries, were met in 2003, 2004 and 2006, but not in 2005 (STA 2006). A Federal closure of a fishery may only be exercised when it is necessary to conserve fish stocks or to continue subsistence uses. In most years subsistence needs for herring spawn on substrates have been met. In years where subsistence needs are met a permanent closure in regulation would not be necessary.

An alternative to a “permanent” regulatory closure would be for Federal managers to closely coordinate with ADF&G and the Sitka Tribe. During the 2006 herring harvest, the coordination and communication between the Sitka Tribe and ADF&G was successful. Supporting and building upon this success is key to ensuring subsistence harvests are as successful as possible.

In-season action by Federal managers would be difficult to implement in a timely manner, but if subsistence needs were not being met or a conservation concern was identified in the Makhnati area, Federal managers have been delegated the authority to close or modify fisheries in-season.

LITERATURE CITED


Turek, M. F., 2006. Personal communication. ADF&G Div. of Subsistence, Douglas, AK.


SUMMARY OF THE MAKHNAI ISLAND HERRING SUBCOMMITTEE PROCESS AND COUNCIL REPORT

At the request of the Federal Subsistence Board (Board), the Southeast Alaska Subsistence Regional Advisory Council (Council) established a subcommittee to discuss issues related to the commercial sac roe herring fishery and subsistence egg harvest in the Makhnati Federal waters near Sitka, as raised in proposals to the Board (FP07-18 and FP07-19). The subcommittee met in Sitka on September 5, 2007, and then again via a brief teleconference on September 19. Subcommittee members and others meeting attendees were as follows:

Subcommittee members
Bert Adams, Sr., Southeast Alaska Subsistence Regional Advisory Council (Sept. 5 & 19)
Harvey Kitka, Southeast Alaska Subsistence Regional Advisory Council (Sept. 5 & 19)
Mike Miller, Sitka Tribe of Alaska (Sept. 5 & 19)
Ron Porter, Sac Roe Seiners (Sept. 5 & 19)

Other meeting attendees
Chuck Ardizzone, BLM, Subsistence Coordinator (Sept. 5 & 19)
Bill Davidson, ADF&G, Commercial Fisheries Division, Fisheries Biologist (Sept. 5)
Eric Coonradt, ADF&G, Commercial Fisheries Division (Sept. 5)
Steve Kessler, USFS, Regional Subsistence Program Leader (Sept. 19)
Robert Larson, USFS, Subsistence Coordinator (Sept. 5 & 19)
George Oviatt, BLM, Deputy State Director, Division of Resources, Lands & Planning (Sept. 5 & 19)
Terry Suminski, USFS, Sitka Area Subsistence Fisheries Biologist (Sept. 5)
Nancy Swanton, National Park Service, Subsistence Manager (Sept. 5)

Meeting Facilitator
Jan Caulfield, Sheinberg Associates, Juneau (www.sheinbergassociates.com) (Sept. 5)

Agency Presentation of Relevant Information and Data
Terry Suminski summarized background information relevant to the Makhnati Island proposals from the January 2007 Board meeting materials.

Bill Davidson presented data from the commercial and subsistence herring fisheries in Sitka Sound.

Recommendations
The subcommittee discussed the issues, concerns and information presented by all parties, and reached consensus on three recommendations. These recommendations were adopted by the Council for presentation to the Board.

1. The Federal government should become a party to the MOA that provides for in-season consultation between fishery managers and harvesters.

2. Fishery managers and participants in the MOA need timely annual data on the subsistence egg harvest in Sitka Sound.
3. Agency fishery managers and biologists, the Sitka Tribe, representatives of the commercial seine fleet, and others with knowledge of the Sitka Sound herring population and fisheries should work together to determine what may have been the cause of low subsistence harvests in three of the past seven years.

The subcommittee also discussed an alternative to the regulatory proposals at their September 5 meeting. This alternative would provide specific criteria to guide a Federal decision to close the area to commercial and non-Federally qualified subsistence users. This topic was further considered by teleconference on September 19; there was no consensus to support this alternative.

The proposed regulatory language that was discussed, but not adopted follows.

Proposed Regulatory Language

§___.27(i)(13)(xxv) The Federal public waters in the Makhnati Islands area near Sitka, as described in 36 CFR 242.3(b)(5) and 50 CFR 100.3(b)(5), are closed to the harvest of herring and herring spawn when the forecast spawning biomass for the Sitka Sound herring spawning area is less than xx,xxx tons, except for subsistence harvests by Federally qualified subsistence users.

The final subcommittee report was presented to the Council at their meeting in Haines on September 25, 2007. The Council accepted it without modification, made it their own, and distributed it to the public.
The Interagency Staff Committee (ISC) found the staff analysis for proposal FP08-18 to be a complete and accurate evaluation of the proposal.

In its review of the Southeast Alaska Regional Advisory Council’s (Council) recommendation, the ISC discussed the Federal Subsistence Board’s (Board) purpose for deferring the proposal. The primary reason was to have local users and managers suggest criteria which could be used by the Federal in-season manager to trigger a closure, consistent with conservation of the resource or for the continuation of subsistence uses. The Council believes that the forecasted herring biomass and non-attainment for two consecutive years of the State’s Amounts Necessary for Subsistence (ANS) were two such criteria. The Council’s recommendation is to place those two criteria into formal regulation.

The ISC discussed those criteria and the difficulty justifying the Council’s recommendation under the Board’s Closure Policy and ANILCA Sections 805(c) and 815. Currently, a successful subsistence harvest is not guaranteed even at a high biomass level. For instance, in 2005, there was a poor subsistence harvest, however the spawn deposition was one of the highest in the last 25 years and the forecasted biomass was 55,962 tons, well above the 35,000 ton threshold recommended by the Council. There are also no apparent correlations between ANS not being met in one year and the following year’s subsistence harvest.

The ISC discussed the need for regulatory action. Some of the ISC felt that there is no reason regulatory action should be taken, since the forecasted biomass is usually determined in February and the subsistence harvest from the previous year is reported before the sac roe fishery occurs in March/April. Currently, the in-season manager has the delegated authority to close the area around Makhnati Island to non Federally qualified uses before the season, for conservation reasons or for the continuation of subsistence uses. However, the Federal program does not currently have conservation criteria other than the State fishery threshold. Such a closure could also be considered by the Board if a special action were submitted prior to the season.

Conservation of herring was also discussed. It has been mentioned that the area around Makhnati Island, if closed, could provide a sanctuary for spawning herring. There are data on herring spawning site fidelity. Washington State recognizes this and provides marine sanctuaries for herring by closing areas to protect herring spawning habitat and to preclude disturbance to the herring, which can effect spawn deposition. It should be noted, however, that there has been no proposal to limit subsistence take of herring or herring roe in the suggested closure area. It was also mentioned that the Sitka Sound fishery is managed as one stock, but more than one stock may be present. Currently, a study is being conducted by Sitka Tribe of Alaska to try to determine whether there are distinct Sitka Sound herring stocks.

The State’s management threshold of 20,000 tons seems to take into consideration conservation of the resource as well as some level of subsistence herring roe harvest. The State also tries to disperse the commercial fishery to minimize the impacts on subsistence users. The ISC discussed whether or not it was reasonable to have a higher threshold than the State’s to close the Makhnati Island area to non-Federally qualified subsistence users. Consistent with the Council’s recommendation, some of the ISC felt that having a higher threshold to trigger a closure to non Federally qualified users in waters under Federal jurisdiction would provide a meaningful subsistence preference and a higher standard for protection of the resource for subsistence use in that area.
Finally, the Makhnati Island area under Federal jurisdiction is approximately 610 acres. Of that, approximately 537 acres are water, with a lesser amount suitable for herring spawning. The ISC discussed the effects of closing this small area, and whether it would actually make a difference to the resource, or to commercial or subsistence users.
Alaska Department of Fish and Game

Preliminary Comments to the Federal Subsistence Board

FP08-18 MAKHNATI ISLAND AREA HERRING

Introduction: Proposal FP07-18 was deferred by the Federal Subsistence Board (Board) at the January 2007 meeting. That proposal has been renumbered and resubmitted for consideration to close marine waters in the Makhnati Island and Whiting Harbor area, which are subject to federal claims of jurisdiction. The closure would apply to commercial herring fishing during March and April and only allow subsistence herring fishing by those federally-qualified. Commercial harvest rarely occurs in the proposed closure area, and the area is not the primary subsistence herring fishing area used by federally-qualified local residents. The Southeast Regional Advisory Committee (RAC) supported modification to proposal FP08-18. These modifications included closing the harvest of herring and herring spawn except for subsistence harvests by federally qualified subsistence users when the forecast spawning biomass for the Sitka Sound herring spawning area is less than 35,000 tons or when the Amounts Necessary for Subsistence (ANS), was not reached in the two prior consecutive years.

Impact on Subsistence Users: Adoption of this proposal could be detrimental to both subsistence and commercial fisheries, depending upon where and when herring spawn in a given year. The commercial fishery is managed to minimize commercial harvests near heavily used subsistence harvest areas but is a very short and fast fishery, so effective actions must be taken in a timely manner. The proposed closure would limit the options for where a commercial fishery could occur, potentially resulting in a commercial fishery in higher subsistence use areas. The proposed closure would also prohibit subsistence harvest in this area by non-federally qualified individuals. A closure in this small area (560 acres) is expected to have little or no impact on the total commercial or subsistence harvests.

If this proposal, as modified by the RAC, is adopted, non-federally qualified users could be prohibited from participating in the Makhnati Island and Whiting Harbor area herring fisheries if the ANS was not met the two prior years due to factors that are not based on the health of the herring stock or for reasons of conservation. The 2007 season is an example where the herring stocks were considered healthy, the core herring spawning areas were observed to be in the vicinity of the Sitka road system, but the timing of the event and the unfortunate pursuing bad weather likely prevented subsistence users from collectively achieving the ANS. During the 2007 herring fishing season, the Alaska Department of Fish and Game (Department) commercial fisheries managers widely distributed the commercial herring fishing fleet which effectively reduced competition with subsistence users.

Opportunity Provided by State: For the vast majority of the subsistence herring egg harvest, the Department does not restrict fishing periods or seasons and does not restrict amounts of herring harvested by individuals for subsistence purposes in this area. The harvest of spawn on hemlock boughs or spawn on hair kelp is unrestricted, and no state permit is required. Post season evaluation of the subsistence harvest is accomplished by a harvest monitoring program conducted by the Sitka Tribe of Alaska (STA) in cooperation with the Division of Subsistence in
the Alaska Department of Fish and Game (Department). The Alaska Board of Fisheries has found that 105,000 to 158,000 pounds of herring spawn is the amount reasonably necessary for subsistence uses (ANS) in Section 13-A and Section 13-B north of Aspid Cape.

The Department does require a permit that may limit harvest of spawn on kelp and requires harvest reporting following the season. (See 5 AAC 01.730(g)) The harvest of spawn on kelp accounts for an average of only 2% of the subsistence harvest on all substrate types, so state requirements for spawn on kelp harvest is not a significant limitation.

The limited, non-commercial exchange for cash of subsistence-harvested herring roe on kelp, legally taken in Districts 1-16 under terms of a permit, is permitted as customary trade. The annual possession limit for spawn-on-kelp is 32 pounds for an individual and 158 pounds for a household of two or more people. The Department has authority to issue additional permits for herring spawn-on-kelp above the annual possession limit if harvestable surpluses are available. Commercial herring vessels, permit holders, and crew members may not take or possess herring in the 72 hours prior to or following a commercial herring fishing period.

**Conservation Issues:** There currently are no conservation or management concerns for these healthy stocks. From 1979 through present, with only one exception, the Sitka Sound herring resource has been above the current 20,000 ton threshold, and the run has averaged 71,000 tons in the past five-year period. Herring are managed under a conservative management strategy that sets threshold biomass levels below which commercial harvest does not occur and limits harvest rates to 10-20% of the total mature spawning biomass. This is a time-proven strategy that provides for conservation of the resource. The area proposed for closure is so small that it is unlikely to provide conservation benefits above the threshold and harvest rate, especially given the highly variable nature of herring spawning behavior.

**Jurisdiction Issues:** The Board does not have authority to close this area solely to commercial herring fishing as suggested by the proposal. Instead, the federal Board would have to close the area to herring harvest by all non-federally qualified users, which would include all subsistence, commercial, or other harvests occurring under state regulations. In this case, such a closure is not necessary to provide for continued federal subsistence and would violate section 815 of ANILCA. Such a closure may also be detrimental to subsistence uses by unnecessarily limiting options for management of commercial fisheries and thereby increasing the likelihood of impacts to higher subsistence use areas.

**Other Issues:** Management of the commercial fishery involves a Memorandum of Agreement (MOA) between STA, the Alaska Board of Fisheries, and the Department. The MOA provides inseason collaboration that includes: 1) daily contact between STA and the Department; 2) Department consultation with STA regarding whether a proposed opening might affect subsistence opportunity; and 3) verbal and written communication from STA explaining its reasoning to the Department if STA concludes there is potential for a proposed opening to negatively impact the subsistence fishery. A formal objection by STA to a proposed opening does not necessarily result in a commercial closure, and the Department maintains discretion regarding whether or not to open the fishery. However, STA’s objections are thoroughly considered by the Department. The in-season consultative process provides STA an opportunity
to provide input for consideration by the Department and may affect the decision regarding whether to open an area for a commercial fishery. Any changes to the MOA would require approval by all of the signatories, including the Alaska Board of Fisheries.

The state’s regulatory management plan for the Section 13-B sac roe fishery is: “distribute the commercial harvest by time and area if the Department determines that it is necessary to ensure subsistence users have a reasonable opportunity to harvest....” Closing a fixed area will provide less opportunity for the Department to distribute the harvest and “may increase the chance of commercial fishing taking place in [the vicinity of] better traditional egg harvesting areas.” Since the management plan has been in effect (2002 – 2006), subsistence ANS was not met in 2005. Preliminary information recently provided to the Department indicates subsistence harvest in 2007 again was below the ANS range. Reasons that cumulative harvests may be below ANS are only partly understood as described below.

Herring biomass in Sitka Sound has shown a long-term increase and is considered healthy. In 2005 (the year that ANS was not met) the biomass was at record, or near record, levels since biomass estimates were first reported in 1978. The commercial sac roe harvest of 11,366 tons in 2005 was around 14% of the total estimated spawning biomass, a very conservative harvest rate. Difficulty in meeting subsistence needs that year was primarily due to a large portion of the herring biomass spawning in an area inaccessible to subsistence fishermen. The estimated 50.2 total nautical miles of spawn in Sitka Sound in 2007 was close to the average range (short-term 53.4 nm and long-term 55.9 nm) averages. The spawning biomass after the fishery, as estimated by spawn deposition surveys, remained at a high level of an estimated 84,501 tons (1997-2006 average = 54,321 tons, 2001-2006 average = 65,116 tons). Severe weather occurred during the peak of the spawning event in 2007, which likely limited many subsistence harvesters access to the spawning grounds during that critical time.

Collective harvest success can be diminished during any particular season when one or more factors do not favor subsistence users, including: inclement weather, spawn timing, spawn location, loss or theft of sets, subsistence harvesters’ schedules, and the amount of participation by a limited number of individuals known as “high harvesters” who harvest for distribution to others. If one or more of these factors is unfavorable, the amount harvested can drastically fluctuate and remain below ANS. It is important to note that how the commercial fishery is managed, either inside or outside of the Makhnati Island area, may be less of a factor for the subsistence fishery than these other factors.

**Department Recommendation:** Oppose.
<table>
<thead>
<tr>
<th>General Description</th>
<th>Proposal FP08-08 requests that the salmon dip net/rod and reel fishery be allowed to occur from shore as well as from boats within the Moose Range Meadows area of the Kenai River. Submitted by Ninilchik Traditional Council</th>
</tr>
</thead>
<tbody>
<tr>
<td>Proposed Regulation</td>
<td>§ 27(i)(10)(iv)(D)(1)(i) On the Kenai River Moose Range Meadows site, dip netting will be allowed only from the bank or a boat, from regulatory markers on both banks of the Kenai River at about river mile 29 downstream about 2.5 miles to regulatory markers on both banks of the Kenai River at about river mile 26.5. Residents using rod and reel gear at this fishery site may fish with up to 2 baited single or treble hooks from 15 June through 31 August.</td>
</tr>
<tr>
<td>Southcentral Alaska Regional Council Recommendation</td>
<td>Support Proposal FP08-08</td>
</tr>
<tr>
<td>OSM Conclusion</td>
<td>Oppose Proposal FP08-08</td>
</tr>
<tr>
<td>Interagency Staff Committee Comments</td>
<td>See comments following analysis.</td>
</tr>
<tr>
<td>ADF&amp;G Comments</td>
<td>Oppose Proposal FP08-08</td>
</tr>
<tr>
<td>Written Public Comments</td>
<td>3 Oppose</td>
</tr>
</tbody>
</table>
SOUTHCENTRAL ALASKA SUBSISTENCE REGIONAL ADVISORY COUNCIL RECOMMENDATION

Support Proposal FP08-08. The Council decided that allowing subsistence dip net fishing from shore as well as from a boat would provide more of a subsistence preference in this area of the Kenai River. Limiting the dip net fishery at Moose Range Meadows to boats would limit participation by Federally qualified subsistence users without access to a boat. While there are habitat and private property concerns in this area, it should be possible to allow some subsistence fishing from shore on Federal public lands that can be accessed without use of a boat.

The modified proposed regulation should read:

§ ___.27(i)(10)(iv)(D)(1)(i) On the Kenai River Moose Range Meadows site, dip netting will be allowed only from the bank or a boat, from regulatory markers on both banks of the Kenai River at about river mile 29 downstream about 2.5 miles to regulatory markers on both banks of the Kenai River at about river mile 26.5. Residents using rod and reel gear at this fishery site may fish with up to 2 baited single or treble hooks from 15 June through 31 August.
STAFF ANALYSIS
FP08-08

ISSUES

Proposal FP08-08, submitted by Ninilchik Traditional Council, requests that the salmon dip net/rod and reel fishery be allowed to occur from shore as well as from boats within the Moose Range Meadows area of the Kenai River.

DISCUSSION

The proponent states that fishing from the bank could provide a more effective means of harvesting fish than fishing from a boat, as provided under current regulations for the dip net/rod and reel fishery at the Moose Range Meadows site of the Kenai River. The proponent states that not all subsistence users have access to boats, so not all Federally qualified subsistence users are able to participate in the dip net/rod and reel fishery at this site. Also, the river is difficult to navigate in much of this area since it is very rocky and fast flowing. While acknowledging that social conflicts could arise by allowing dip net users to fish from existing fish platforms used by sport fishers, the proponent emphasizes that subsistence use is a mandated priority, and opportunities provided need to be meaningful. Under existing Federal subsistence regulations, Federally qualified rural residents can use these platforms when using a rod and reel, but not when using a dip net.

Existing Federal Regulation

§___.27(i)(10)(iv)(D)(1)(i) On the Kenai River Moose Range Meadows site, dip netting will be allowed only from a boat, from regulatory markers on both banks of the Kenai River at about river mile 29 downstream about 2.5 miles to regulatory markers on both banks of the Kenai River at about river mile 26.5. Residents using rod and reel gear at this fishery site may fish with up to 2 baited single or treble hooks from 15 June through 31 August.

Additionally, for public access of Kenai National Wildlife Refuge lands and waters:

50 CFR 36.39(i)(vii)(B) From July 1 to August 15 the public may not use or access any portion of the 25-foot wide public easements along both banks of the Kenai River within the Moose Range Meadows area; or along the Homer Electric Association Right-of-Way from Funny River Road and Keystone Drive to the downstream limits of the streamside easements. You may obtain maps showing these closed areas from the Refuge Manager by referring to Sections 1, 2, and 3 of Township 4 North, Range 10 West, Seward Meridian.

Proposed Federal Regulation

§___.27(i)(10)(iv)(D)(1)(i) On the Kenai River Moose Range Meadows site, dip netting will be allowed only from the bank or a boat, from regulatory markers on both banks of the Kenai River at about river mile 29 downstream about 2.5 miles to regulatory markers on both banks of the Kenai River at about river mile 26.5. Residents using rod and reel gear at this fishery site may fish with up to 2 baited single or treble hooks from 15 June through 31 August.
Existing State Regulations

The following State regulations protect riparian habitat in the Moose Range Meadows areas by prohibiting or restricting sport fishing at certain times of the year:

5 AAC 57.180. Riparian Habitat Fishery Management Plan

(d) From July 1 through August 15, the following Kenai River riparian habitats are closed to all fishing, except fishing from a boat that is located more than 10 feet from shore and not connected to the shore or any riparian habitat:

(15) on the south bank of the Kenai River, between ADF&G regulatory markers located at river mile 26.4 and river mile 30.0;

(16) on the north bank of the Kenai River from an ADF&G regulatory marker located at the upstream edge of the boat ramp at the end of Keystone Drive at approximately river mile 27.3, upstream to ADF&G regulatory markers located at the Kenai National Wildlife Refuge boundary delineated by the power line at river mile 28.0;

(e) For purposes of this section, “riparian habitat” means all areas within 10 feet in either direction from the Kenai River waterline.

Extent of Federal Public Waters

Federal public waters in the Kenai River drainage are defined and described under 50 CFR 100.3. For the Moose Range Meadows portion of the Kenai River, Federal public waters under consideration for this proposal analysis include all waters within and adjacent to the exterior boundaries of the Kenai National Wildlife Refuge from about river mile 29 downstream to about river mile 26.5 (Map 1).

While all the land in this area of the Kenai River was set aside for the Kenai National Moose Range in 1941, much of it was conveyed to Salamatof Native Corporation in the 1980s under the Alaska Native Claims Settlement Act. As part of the negotiated settlement agreement, Salamatof received a smaller amount of fee title acreage that they were allowed to subdivide and develop in exchange for public access easements, which are not Federal public land. The Federal government retained ownership of the river bed and islands in this area. There are now many homes and business establishments in this area, and public easements allowed development of an extensive sockeye salmon sport fishery in this area. This caused social conflicts between fishers and private property owners, as well as extensive bank trampling. In 1995, flooding resulted in the loss of large sections of river bank in this area, and the Refuge Manager instituted emergency closures to prevent access and avoid further damage. These emergency, seasonal access closures were placed into regulation after completion of an Environmental Assessment. They complement seasonal bank closures to sport fishing made by the State in this area. The Refuge reacquired some parcels from Salamatof Corporation using Exxon Valdez Oil Spill funds (Weiner 2000). These funds were to be used to “restore and protect fish habitat on the Kenai River”, and “improve existing recreation access to the Kenai River watershed in a manner that restores and protects riparian fish and wildlife habitat”. Platforms were built on north bank parcels to accommodate sport fishing, while still protecting riparian vegetation. Conservation covenants were placed on other parcels to preclude development, including construction of trails, walkways, and fishing platforms.
FP08-08 Map 1
Moose Range Meadows

Legend
- Road
- Refuge boundary
- Public easement
- PWS lands

Closed to Bank Fishing
July 1 - August 15

Public Access Easements
Closed July 1 - August 15

River mile data courtesy ADF&G, 2007
Customary and Traditional Use Determinations

Residents of the communities of Ninilchik have a positive customary and traditional use determination for salmon in the Kenai River, while Cooper Landing and Hope have positive customary and traditional use determinations for all fish in the Kenai River.

Regulatory History

Pre- and Early Statehood Fisheries

Until 1952 freshwater streams in the Kenai Peninsula were open to subsistence fishing, but poorly regulated commercial fisheries decimated salmon runs. In 1952, as part of efforts to rebuild salmon runs, all streams and lakes of the Kenai Peninsula were closed to subsistence fishing under Territory of Alaska regulations. Only rod and reel fishing was allowed for “personal use” (Fall et al. 2004).

Contemporary State Fisheries

A State regulatory management plan for Upper Cook Inlet salmon (5 AAC 21.363) provides Alaska Board of Fisheries guiding principles and provisions to use when adopting management plans for specific stocks. The State classified most of the Cook Inlet Area, including the Kenai and Kasilof River drainages, as a nonsubsistence area in 1992 (5AAC 99.015(3)). The only State subsistence fisheries in Cook Inlet occur in areas that are not accessible from the road system, including the Tyonek, Windy Bay, Port Chatham, Kyuktolik, and Port Graham subdistricts, as well as portions of Seldovia Bay and the Yentna River drainage. Only State sport fisheries occur in the Moose Range Meadows area. From July 1 through August 15, as per the Riparian Habitat Fishery Management Plan for the Kenai River drainage (5 AAC 57.180 (d)(16)), people sport fishing for salmon in this area must do so either from a boat that is located more than 10 feet from shore and not connected to the shore or any riparian habitat, or the north bank fishing platforms.

Federal Subsistence Fisheries in Cook Inlet

Federal subsistence fisheries regulations were first established in 1999. Initially, there were no specific customary and traditional use determinations for fish in the Cook Inlet Area. Therefore, all rural residents of Alaska qualified. In 2002, Federal subsistence regulations for harvest in the Cook Inlet Area were established for salmon, trout, and Dolly Varden and other char. A permit was required and seasons, harvest and possession limits, and methods and means for take were the same as those in Alaska sport fishing regulations. This fishery was established as an interim measure to provide some subsistence opportunity in the Cook Inlet Area for Federally qualified rural residents, but few people participated. Only 17 permits were issued (2 in 2002, 9 in 2003, 3 in 2004, 3 in 2005, and 0 in 2006), resulting in a reported total harvest of 22 sockeye salmon from the Kenai River drainage (5 in 2002, 3 in 2003, and 14 in 2004), and 31 coho salmon from Pincher Creek, north of Point Possession, in 2002 (Sonnevil 2007, pers. com.).

The Federal Subsistence Board (Board) recognized that additional information was needed on community- and area-specific harvest patterns before decisions could be made concerning customary and traditional use determinations and harvest regulations. Making these decisions was challenging due to the unique attributes of the Kenai Peninsula. Federally qualified rural communities are interspersed among much larger nonrural communities, and freshwater subsistence fisheries have not been allowed to operate for over 50 years.
In 2005, the Board revisited customary and traditional use determinations for the Kenai Peninsula, using information gathered by Fall et al. (2004), but continued to defer proposals requesting methods and means, and seasons. In January 2006, the Board made positive customary and traditional use determinations for Hope and Copper Landing residents for all fish in the Kenai River, and for Ninilchik residents for all fish in the Kasilof River. In November 2006, the Board, acting upon a reconsideration request, made a positive customary and traditional use finding for Ninilchik residents for all fish in the Kenai River.

During their May 2007 meeting, the Board adopted proposals that established dip net/rod and reel salmon fisheries on the Kasilof and Kenai rivers; increased previously established harvest, possession, and annual limits for salmon and selected resident species for existing rod and reel fisheries on the Kasilof and Kenai River drainages; and allowed use of up to two single or treble hooks and bait for rod and reel fishing during specified dates for both systems. The dip net fishery on the Kenai River was allowed at three sites: Russian River Falls, River Mile 48, and Moose Range Meadows. Dip netting is only allowed from a boat at Moose Range Meadows, is allowed from either a boat or while standing in the river at River Mile 48, and is allowed while standing in the river or from the bank at Russian River Falls.

Through August 21, 2007, a total of 191 Federal subsistence fishing permits were issued to 108 individuals. About 80% of the permits were issued for the Kenai River (106 salmon and 47 resident species permits), with the remaining 20% issued for the Kasilof River (24 salmon and 14 resident species permits). About 66% (71) of the individuals that obtained permits are Cooper Landing residents, about 27% (29) are Ninilchik residents, and about 7% (8) are Hope residents (Sonnevil 2007, pers. com.).

Biological Background and Harvest History

Salmon populations in the Kenai River are healthy, and harvests, while large, have been within sustainable limits. The proponent is not requesting changes to household or annual total harvest limits for the Kenai River subsistence dip net salmon fishery. An extensive portion of the staff analyses for the dip net/rod and reel fishery regulations adopted by the Board in May 2007 was devoted to the biological status and harvest history of salmon species in the Kenai River (FWS 2007a). No additional biological information or State fisheries harvest information on these species is currently available. However, Federal subsistence fisheries harvest information was available due to the 72 hour reporting requirement for the dip net fisheries.

Through August 21, 2007, 33 Federal subsistence dip net fishery permit holders reported a total harvest of 462 sockeye salmon from the Kenai River; and 2 permit holders reported a total harvest of 30 sockeye salmon from the Kasilof River (Sonnevil 2007, pers. com.). Of the 33 permit holders fishing the Kenai River, 27 were from Cooper Landing, 3 were from Hope, and 3 were from Ninilchik. Two of the Ninilchik permit holders fished the Moose Range Meadows site, while the third fished the Russian River Falls site. About 99% (446) of the Kenai River dip net sockeye salmon harvest was taken at the Russian River Falls site, and the remaining 1% (4) was taken at the Moose Range Meadows site. Although inseason reporting is not required for the salmon rod and reel fishery, 12 sockeye salmon were reported taken above Skilak Lake near the Russian River confluence. About 61% (282) of the reported total Kenai River sockeye salmon harvest was taken from the early run (June 15–July 14).

Other Alternatives Considered

The staff and Council considered, but did not recommend, allowing dip net use from fishing platforms. While this would prevent bank trampling, it would also place two different gear-type groups in direct competition with each other. These platforms were originally built and designed to help replace lost sport
fishing opportunities for sockeye salmon resulting from the 1989 Exxon Valdez oil spill, and up to 30,000 people use these fishing platforms each year (West 2007, pers. com.). Under existing Federal subsistence regulations, platforms can be used by Federally qualified subsistence fishers using rod and reel gear, but not by those using dip net gear. Allowing rod and reel and dip net users to concurrently fish from these platforms could cause social conflicts, and the platform within the dip netting site is currently not useable as a result of ice damage during the winter of 2006/2007 (West 2007, pers. com.). Users could potentially be separated from each other by time or area restrictions, but neither the staff nor the Council could reach a consensus on the necessity or feasibility of developing such an approach. If funding were available, the platform destroyed during the winter of 2006/2007 could be rebuilt on its former site to accommodate dip netting. Alternatively, since other Federal public lands within the Moose Range Meadows fishing site have conservation covenants that preclude development, a private land parcel could be purchased and a new platform could be built for subsistence uses.

The staff and Council also considered, but did not recommended, allowing dip netting from shore only prior to and after the sport fishing bank closure period that extends from July 1 through August 15. Some staff and Council members felt that the potential for riparian habitat damage was not justified in relation to the actual subsistence fishing opportunities that would be provided. Other Council members were not convinced that dip net fishing from shore would damage riparian habitat, and should be allowed during the entire season, particularly since this method would be most effective in harvesting sockeye rather than Chinook or coho salmon.

Effects of the Proposal

Allowing dip netting from shore in the Moose Range Meadows area could provide some increased fishing opportunity for Federally qualified subsistence users. While the Refuge has maintained ownership of the river bed and islands in this area, much of the surrounding land was conveyed to Salamatof Native Corporation in the 1980s under the Alaska Native Claims Settlement Act. Public access easements obtained from the corporation are not Federal public land. These easements allow access to the river bed for fishing but not use of the shoreline, which remains private property. Federal public lands on the north shore are more easily accessed without a boat than Federal public lands on the south shore. Fishing platforms were built on north bank Federal public lands to accommodate sport fishing while still protecting riparian vegetation. Under existing Federal subsistence regulations, fishing platforms can be used by Federally qualified subsistence fishers using rod and reel gear, but not by those using dip net gear.

For the Moose Range Meadows area from July 1 through August 15, the peak period for sockeye salmon sport fishing, existing Federal regulations prohibit all public access to the river through private lands. Additionally, the Kenai National Wildlife Refuge accepts State regulations that prohibit sport fishing from the river bank on Federal public lands in this area. The purpose of these closures is to protect sensitive riparian areas, which provide important rearing habitat for juvenile salmonids, from human use. Once the vegetative cover is destroyed, bank areas are thought to be more prone to erosion and sloughing due to flooding, as occurred in 1995 when large portions of river bank were carried away by the river, as well as to ice floes and boat wakes. Potential subsistence use would be much less than past sport fishing use that resulted in habitat damage. However, even low levels of use could be detrimental to riparian habitat over time.
**OSM CONCLUSION**

**Oppose** proposal FP08-08.

**Justification**

Restricting dip netting at the Moose Range Meadows site to boats may make it difficult or impossible for some subsistence users to fish at this site with dip nets. However, much of the riparian zone in the Moose Range Meadows site provides rearing habitat for juvenile salmonids, and can be degraded through continued use. To avoid damaging this habitat during the period of greatest sockeye salmon sport fishing activity, July 1 through August 15, the Kenai National Wildlife Refuge closes public easements through private lands, which prohibit public access to the shoreline and river bed, and recognizes Alaska Department of Fish and Game sport fishing closures of river banks on Federal public lands. During this time period, all sport fishing occurs either from boats, the north bank fishing platforms, or private lands. While the number of Federally qualified subsistence users that might choose to dip net from shore at this site would be much less than the number of sport fishers that used and damaged the banks at this site prior to bank closures, even moderate bank trampling, over time, could result in riparian habitat damage and decreased survival of salmonids, particularly Chinook salmon. Additionally, Moose Range Meadows has few good dip netting areas due to deep water and fast currents; much of the land in this area is private and heavily developed; and there is limited public access to the river bank. The public cannot fish from the river bank on private lands, and the river bank on most Federal public lands is difficult to access since conservation covenants prohibit development of trails and walkways. Two small Federal public land parcels on the north bank were purchased and developed as recreational fishing sites, and fishing platforms were constructed for public use to protect riparian habitat. These platforms are heavily used for sport fishing. At the present time only one of these has been rebuilt after extensive ice damage that occurred during the 2006/2007 winter, and this platform is outside of the dip netting site. Federally qualified subsistence users can fish from the remaining platform when participating in the salmon rod and reel fishery. Allowing concurrent use of dip nets and rod and reel gear on platforms could create social conflicts. Separating the two gear types by time or area was discussed by Federal staff and the Council, but neither group could reach consensus on the necessity or feasibility of such a management approach. While fishing platform designated for dip net use could be constructed, considerable funding would be needed to either rebuild the destroyed platform for this use or to purchase an additional private land parcel and build a new platform. Platforms cannot be built on other existing Federal public land parcels in this area due to conservation covenants.

Under existing regulations, Federally qualified subsistence users can dip net from a boat at the Moose Range Meadows site; while standing in the river or from a boat at the Kenai River Mile 48 site; and from the bank or standing in the river at the Russian River site. They can use rod and reel gear at all three Kenai River dip net sites to fill their annual household salmon limits. Federally qualified subsistence users can also participate in the salmon rod and reel fishery that has greater daily and annual harvest limits than those allowed for the sport fishery, and can occur throughout a much larger proportion of Kenai River drainage Federal public waters. Salmon harvested in the salmon rod and reel fishery are not included as part of household limits for the dip net/rod and reel salmon fishery. Taken as a whole, existing Federal subsistence salmon fisheries provide a meaningful preference for Federally qualified subsistence users, while also conserving healthy fish populations. If adopted by the Board, Federally qualified subsistence users would also be allowed to participate in a temporary fish wheel fishery to harvest salmon from the Kenai River (FWS 2007 b and c).
LITERATURE CITED


The Interagency Staff Committee (ISC) found the staff analysis for Proposal FP 08-08 to be a thorough and accurate evaluation of the proposal and provides sufficient factual basis for the Regional Council recommendation and Federal Subsistence Board action on the proposal.

The ISC noted that adopting this proposal would allow the dip net/rod and reel salmon fishery to occur from shore, which could lead to damage of critical shoreline rearing habitat for salmon. Although the alternative view is that there would not be enough subsistence use in the area to warrant a concern for such damage.
FP08-08 Allow shore-based dip nets and rod & reel at Moose Range Meadows

Introduction: This proposal would allow federally-qualified subsistence users to stand on shore in waters that flow through Moose Range Meadows area while fishing with dip nets and rod and reel. Current federal regulations authorize fishing from boats-only in this area due to the following reasons discussed at the May 2007 Federal Board meeting:

1. The entire shore of federal land identified as the Moose Range Meadows area is closed to all fishing within 10 feet of the waterline from July 1 – August 15.¹
2. Lands in which there is a federal interest, including trails, banks, and catwalks, have legal easements that preclude these activities to protect riparian habitat; participants could be cited under both state and federal² law.
3. Private lands in the area are not subject to federal subsistence fishery jurisdiction.

Adoption of the proposal would create conservation, enforcement, and confusion issues.

Opportunity Provided by the State: Kenai River is located in the Anchorage-MatSu-Kenai-Nonsubsistence area designation under state law. The State provides a broad array of personal use, recreational, and educational fisheries to meet needs for personal and family consumption as well as cultural purposes. The personal use and educational fisheries provide more opportunity to harvest salmon more efficiently and closer to home than is used, and adequate opportunities for harvest of rainbow/steelhead trout, lake trout, and Arctic char/Dolly Varden occur under State recreational fishing regulations.

Conservation Issues: Adoption of this proposal would result in impacts on fish and their habitat in two ways.

(1) Allowing fishing from shore will impact the riparian habitat closure areas: From July 1 – August 15, the shoreline, which is defined to include 10 feet into the water and upland measured from the river waterline, is closed to any fishing activity in order to protect riparian habitat. These dates were selected to protect the shore from human impact during the majority of the sockeye salmon return to the Kenai River and the late Chinook salmon run. Also, this time period may be the most important part of the vegetation growing season. Fishing-related activities include storage of equipment related to fishing that a person carries and uses to fish. The riparian habitat zone is important to the productivity and health of the anadromous river ecosystem. The regulations developed to protect this fragile zone from

¹ The entire section of south shore line from River Mile 26.4-30.0 (entire federal dip net fishery area) is seasonally closed from July 1 – August 15. The section of the north shore line from River Mile 27.3-28 is also seasonally closed from July 1 — August 15. Federal closures apply to “the 25-foot wide public easements along both banks of the Kenai River within Moose Rage Meadows area; or along the Homer Electric right-of-way from Funny River Road and Keystone Drive to the downstream limits of the streamside easements.”
² These easement closures are reflected in federal regulations at 50 CFR 36.39(i)(7)(viii)(B).
trampling and long-term damage due to concentrated and repetitive impacts to the vegetation and soils.

An assessment of the fish habitat in the Kenai River was conducted by the Department in 1994 (Liepitz; 1994\(^3\)). This study identified and evaluated a variety of Kenai River habitat types and conditions. The study concluded that the riparian habitat zone from river mile 17.5 – 39.5, which includes the Moose Range Meadows area, contains the greatest amount (42.3% of total mainstem) of overhanging vegetation and under cut banks of the Kenai River. Testimony given by staff from the Office of Subsistence Management and Fish and Wildlife Service at the October 2007 meeting of the Southcentral Regional Advisory Committee (RAC) indicated the riparian habitat within the Moose Range Meadows area is significant and is of the highest quality for the rearing of juvenile Chinook and coho salmon in the Kenai River watershed. Additionally, the study concluded the river substrate between river miles 17.5-39.5 contains the greatest amount of gravel and cobble material within the entire mainstem, which supports the greatest opportunity for spawning and provides ample cover habitat in the crevices between the cobbles for juveniles to rest, feed, and rear.

(2) There would be an increased potential over-exploitation of Kenai River fish stocks, which is inconsistent with conservation purposes of federal lands and state management for sustainability of fish: The Department is concerned that the federal subsistence harvest levels are not commensurate with the availability of fish and their ability to withstand harvest. In particular, the harvest levels for late-run Kenai Chinook salmon and coho are quite high compared to their abundance in that area. No stock assessment information exists for lake trout or Dolly Varden, and information has not been collected recently for rainbow trout below Skilak Lake. Given the lack of ongoing stock assessment programs, stock declines could not be identified in a timely enough fashion to prevent serious, possibly irretrievable depletion of the stocks.

Jurisdiction Issues: All of the shore line on both sides of the Kenai River in the area proposed for the federal dip net and rod and reel fishery is either closed to fishing within 10 feet of shore from July 1 – August 15 (including standing in the water) or is not federal land. The areas in which there is federal interest that are not closed to fishing within 10 feet of shore\(^4\) have existing public easements which do not allow fishing activities. No fishing is allowed from a 17(b) easement on private land granted for public access. Fishing under federal regulations cannot occur while the user is standing on State or private land. Federal subsistence users can access the river through Kenai Borough Property Parcel # 13526401 up river of the boat launch but can neither legally fish while standing on the easement nor can they store tackle or equipment used to fish on the easement. The Kenai River shoreline from River Mile 28-29 is private property and is downstream of refuge lands, so no claim to federal reserved water rights can exist in this stretch, and the Secretary of the Interior would have to impose extraterritorial jurisdiction for federal subsistence use in that portion of the river and shoreline. The Department requests

\(^3\) Liepitz, Gary S. An assessment of the cumulative impacts of development and human uses on fish habitat in the Kenai River. Technical report no. 94-6. Alaska Dept. of Fish and Game, Habitat and Restoration Division, Anchorage, Alaska.

\(^4\) Kenai Peninsula Borough Property Parcels # 13526221, 13526024, and 13526025
detailed maps showing the boundaries within which federal regulations would apply and the justification for claiming those boundaries to be clearly provided.

Other Comments: The mixing of gear types and user groups would likely cause elevated social conflicts, enforcement issues, and current user displacement. Two small sections of shoreline in the Moose Range Meadows area identified in the Federal Staff Analysis that could be used to conduct a Federal subsistence fishery from shore are also currently used by thousands of anglers annually.

Department Recommendation: Oppose.
WRITTEN PUBLIC COMMENTS

**Oppose.** The proposal seeks to allow federal subsistence dip netting and angling from shore in the fishery within the waters that flow through the Moose Range Meadows area. At the present time the Federal subsistence fishery users are restricted to fishing in this area from boats only. FP08-08 seeks to allow Federal subsistence fishery users to use a dip net or rod and reel to fish from shore in the Moose Range Meadows area.

The issue was considered at the May 2007 Federal Subsistence Board (FSB) meeting and was not adopted for a variety of reasons, including specific legal and land status concerns. As there has been no change in the legal considerations that the FSB stated prevented the establishment of a Federal subsistence fishery use from shoreline in this region of the Kenai River, FP08-08 does not warrant further consideration.

*Kenai River Sportfishing Association*

**Oppose.** Hours, days of public discussion transpired prior to the FSB action to adopt subsistence fisheries regulations on the Kenai River. Much of the discussion before the Southcentral Alaska Subsistence Regional Advisory Council (RAC) and the FSB revolved around how to minimize the impact of providing some Alaskan residents a fishery priority to a fish stock that was already fully allocated. The subcommittee created by the FSB to address the creation of a federal subsistence fishery on the Kenai Peninsula discussed the consequences of allowing some privileged individuals to displace bank anglers fishing under State regulations. The Moose Range Meadows area was mentioned specifically as an area of high angler use. Adoption of this proposal will escalate user conflicts. The notion made by the proposer that Section 804 of ANILCA makes consideration of sport/commercial use of fisheries resources “not applicable” for consideration by the FSB is good reason for the Board to reconsider the Rural Determination status of the Kenai Peninsula.

*Alaska Outdoor Council*

**Oppose**

*First Email.* My name is Ed Moeglein and I am the Subsistence representative for the Kenai-Soldotna Fish and Game advisory committee. I spoke at the South Central RAC in Anchorage this past March concerning Subsistence methods and means for this area. We requested and was accepted the dip netting be done from boats not to mix gear types of Subsistence with sport fishing gear. A study was also initiated for using a fish wheel in this location as an alternative. A lot of the embankments are wet lands or the front lawn of private homeowners. This was the main reason for keeping the gear types separate and keeping subsistence users from trampling the bank or trespassing over private property! What is left of the boardwalks after winter would have mixed gear types and visiting sports anglers might try to use Subsistence means and methods! A fish wheel could accomplish the same advantage of dip netting from a boat as far as giving a preferential or priority preference allowing them to use a net. Any other way could create a mixed gear fishing location making for more friction or law violations by visiting anglers. How about the Hidden creek study to enhance runs for Subsistence? This was another fishery that was intended not to mix subsistence and sport anglers. The Subsistence priority has been met by seasons, methods and means, locations on Federal waters-land, and given a more than ample limit of all species of fish to give subsistence a meaningful preference in an over and fully utilized, allocated fishery.

*Second Email.* I hit a bunch of the key points of FP08-08 (bank dipping in the Moose Range Meadows) on this issue but missed the big one. 99% of the property in that area is either closed from June 1–August 15 to protect riparian habitat. Thus the only legal place a person could dip is from the board walks with 20K anglers. Not a good mix! Or from a boat as originally proposed to give subsistence users priority. To
me, fish wheels are the only other alternative to benefit subsistence users. This would be a huge mistake to mix subsistence users with dip nets on the board walks with 20,000 sport anglers with rod and reel.

Ed Moeglein
Kenai/Soldotna Fish and Game Advisory committee
FP08-09 Executive Summary

General Description
Proposal FP08-09 requests that temporary community fish wheel salmon fisheries be established on the Kenai and Kasilof Rivers. The proponent also requests that: 1) the number of fish wheels be limited; 2) permits, use of live boxes, monitoring, fish marking, and detailed reporting be required; 3) the same seasons and harvest limits used for the newly established dip net/rod and reel fisheries be adopted; and 4) incidentally caught rainbow/steelhead trout on both rivers in addition to Dolly Varden and early-run Chinook salmon on the Kenai River be released. Submitted by the Southcentral Alaska Subsistence Regional Advisory Council

Proposed Regulation
§___27(i)(10)(iv) You may only take salmon, trout, Dolly Varden, and char under authority of a Federal subsistence fishing permit. Seasons, harvest and possession limits, and methods and means for take are the same as for the taking of those species under Alaska sport fishing regulations (5 AAC 56) unless modified herein. Additionally for Federally managed waters of the Kasilof and Kenai River drainages:

(A) through (G)

(H) Residents of Ninilchik may harvest sockeye, Chinook, coho, and pink salmon through temporary fish wheel fisheries in the Federal waters of the upper mainstem of the Kasilof River. Residents of Ninilchik, Cooper Landing, and Hope may harvest sockeye, Chinook, coho, and pink salmon through a temporary fish wheel fishery in the Federal waters of the mainstem Kenai River below Skilak Lake. Residents of Ninilchik may retain other species incidentally caught in the Kasilof River except for steelhead/rainbow trout, which must be released. Residents of Hope and Cooper Landing may retain other species incidentally caught in the Kenai River except for early-run Chinook salmon, rainbow trout, and Dolly Varden/Arctic char, which must be released. Before leaving the fishing site, all retained fish must be recorded on permits and marked by removing their dorsal fin. Harvests must be reported within 72 hours to the Federal fisheries manager.

(1) Only one fish wheel can be operated on the Kasilof River, and only one fish wheel can be operated on the Kenai River. Each fish wheel must have a live box, be continuously monitored when fishing, have a means to stop it from fishing when it is not being monitored or used, and be installed and operated in compliance with any regulations and restrictions for its use within the Kenai National Wildlife Refuge.

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<td>(2) One permit will be available for each river, and will be awarded on the merits of the operating plan. Each permit will be issued to an organization that will administer its construction, installation, operation, use, and removal. As part of the permit, the organization must provide:</td>
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<td>(i) Prior to the season, a written operating plan including a description of how fishing time and fish will be offered and distributed among households and residents of the community it represents; and</td>
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<td>(ii) After the season, written documentation of required evaluation information including, but not limited to, persons or households operating the gear, hours of operation, number of each species caught and retained or released, and habitat effects.</td>
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<td>(3) Fishing will be allowed from June 16 through September 30 on the Kenai River and from June 16 through October 31 on the Kasilof River unless closed or otherwise restricted by Federal special action.</td>
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<td>(4) Salmon taken in the temporary fish wheel fisheries will be included as part of dip net/rod and reel fishery annual total harvest limits for the river in which they are taken and as part of dip net/rod and reel household annual limits for participating households.</td>
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<td>(5) Fishing for each salmon species will end and the fishery will be closed by Federal special action prior to regulatory end dates if the annual total harvest limit for that species is reached.</td>
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<th>Southcentral Alaska Regional Council Recommendation</th>
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<td>Support Proposal FP08-09 with modification to 1) omit the requirement for continuously monitoring fish wheels while they were being used; 2) omit the requirement for fish wheel owners to list all households and household members for whom the fish wheel is being operated on the fishing permit; 3) require fish wheel owners to provide all Federally qualified subsistence users the opportunity to participate in the fishery; and 4) change the regulation so that it expires three years from the date each fish wheel is installed instead of December 31, 2010.</td>
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<th>OSM Preliminary Conclusion</th>
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<td>Support Proposal FP08-09 with modification</td>
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### FP08-09 Executive Summary

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<tr>
<th>OSM Conclusion</th>
<th>Support Proposal FP08-09 with modification as recommended by the Council and with further modifications to clarify the need to release early-run Chinook salmon and to stop fish wheels from operating when they are not monitored or used.</th>
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<td>Interagency Staff Committee Comments</td>
<td>See comments following analysis.</td>
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<td>ADF&amp;G Comments</td>
<td>Oppose Proposal FP08-09</td>
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Federal Subsistence Board Meeting 293
SOUTHCENTRAL SUBSISTENCE REGION ADVISORY COUNCIL RECOMMENDATION

**Support Proposal FP08-09 with modification.** The Council modified the OSM Preliminary Conclusion to 1) omit the requirement for continuously monitoring fish wheels while they were being used; 2) omit the requirement for fish wheel owners to list all households and household members for whom the fish wheel is being operated on the fishing permit; 3) omit the requirement for fish wheel owners to document habitat effects; 4) require fish wheel owners to provide all Federally qualified subsistence users the opportunity to participate in the fishery; and 5) change the regulation so that it expires three years from the date each fish wheel is installed instead of December 31, 2010.

Fish wheel fisheries could provide an effective means of harvesting salmon while conserving healthy fish populations by keeping harvests within sustainable levels; avoiding excessive mortality of non-target species; and allowing for species, stock, and size selective management. Temporary fisheries would allow subsistence users and resource managers an opportunity to explore the use of fish wheels in the Kasilof and Kenai Rivers as well as to develop community-based fisheries.

Prior to the season, the organization seeking a permit will need to submit a written operating plan to the Federal fishery manager for approval prior to being issued a permit to operate a fish wheel during the season. One of the key provisions of any plan would be the ability of the organization to ensure that all Federally qualified subsistence users are included or at least given the opportunity to participate in the fishery. The Council considered but voted not to have three fish wheels, one for each community on the Kenai River. Allowing only one fish wheel on each river is consistent with the temporary nature of these fisheries, and would simplify situating and monitoring the gear as well as administering the fisheries.

The Southcentral Alaska Subsistence Regional Advisory Council modified proposed regulation was based on the OSM Preliminary Conclusion and should read:

\[\text{§ 27(i)(10)(iv) You may only take salmon, trout, Dolly Varden, and char under authority of a Federal subsistence fishing permit. Seasons, harvest and possession limits, and methods and means for take are the same as for the taking of those species under Alaska sport fishing regulations (5 AAC 56) unless modified herein. Additionally for Federally managed waters of the Kasilof and Kenai River drainages:}\]

\[(A)\] through \[(G)\]

\[(H)\] Residents of Ninilchik may harvest sockeye, Chinook, coho, and pink salmon through temporary fish wheel fisheries in the Federal waters of the upper mainstem of the Kasilof River. Residents of Ninilchik, Cooper Landing, and Hope may harvest sockeye, Chinook, coho, and pink salmon through a temporary fish wheel fishery in the Federal waters of the mainstem Kenai River below Skilak Lake. Residents of Ninilchik may retain other species incidentally caught in the Kasilof River except for steelhead/rainbow trout, which must be released. Residents of Hope and Cooper Landing may retain other species incidentally caught in the Kenai River except for early-run Chinook salmon, rainbow trout, and Dolly Varden/Arctic char, which must be released.
(1) Only one fish wheel can be operated on the Kasilof River, and only one fish wheel can be operated on the Kenai River. Each fish wheel must have a live box, be continuously monitored when fishing, have a means to stop it from fishing when it is not being monitored or used, and be installed and operated in compliance with any regulations and restrictions for its use within the Kenai National Wildlife Refuge.

(2) One registration permit will be available for each river, and will be awarded by the Federal fishery manager, in consultation with the Kenai Wildlife Refuge manager, on the merits of the operating plan. Each registration permit will be issued to an organization that, as the fish wheel owner, will be responsible for its construction, installation, operation, use, and removal in consultation with the Federal fishery manager. The owner may not rent or lease the fish wheel for personal gain. As part of the permit, the organization must:

(i) Prior to the season, provide a written operating plan to the Federal fishery manager including a description of how fishing time and fish will be offered and distributed among households and residents of the community it represents;

(ii) During the season, mark the fish wheel with a wood, metal, or plastic plate at least 12 inches high by 12 inches wide that is permanently affixed and plainly visible, and that bears the following information in letters and numerals at least one inch high: registration permit number; organization’s name and address; and primary contact person name and phone number;

(iii) After the season, provide written documentation of required evaluation information to the Federal fishery manager including, but not limited to, persons or households operating the gear, hours of operation, and number of each species caught and retained or released, and habitat effects.

(3) People operating the fish wheel must:

(i) Have a valid Federal subsistence fishing permit in their possession;

(ii) If they are not the fish wheel owner, attach an additional wood, metal, or plastic plate at least 12 inches high by 12 inches wide to the fish wheel that is plainly visible and that bears their fishing permit number, name, and address in letters and numerals at least one inch high;

(iii) Remain on site to continuously monitor the fish wheel and remove all fish at least every two hours;

(iv) Before leaving the site, mark all retained fish by removing their dorsal fin and record all retained fish on their fishing permit; and

(v) Within 72 hours of leaving the site, report their harvest to the Federal fisheries manager.

(4) The fish wheel owner (organization) may operate the fish wheel for subsistence purposes on behalf of members of the communities it represents by requesting subsistence fishing permit that:
(i) Lists all households and household members for whom the fish wheel is being operated;

(ii) Identifies a person who will be responsible for operating the fish wheel;

(iii) Includes provisions for recording daily catches, the household to whom the catch was given, and other information determined to be necessary for effective resource management by the Federal fishery manager.

(5) Fishing will be allowed from June 15 through September 30 on the Kenai River and from June 16 through October 31 on the Kasilof River unless closed or otherwise restricted by Federal special action.

(6) Salmon taken in the temporary fish wheel fisheries will be included as part of dip net/rod and reel fishery annual total harvest limits for the river in which they are taken and as part of dip net/rod and reel household annual limits for participating households.

(7) Fishing for each salmon species will end and the fishery will be closed by Federal special action prior to regulatory end dates if the annual total harvest limit for that species is reached or superseded by Federal special action.

(8) This regulation expires December 31, 2010 on the Kasilof and Kenai Rivers three years from the date the fish wheel is first installed in each river unless renewed by the Federal Subsistence Board.
ISSUES

Proposal FP08-09, submitted by the Southcentral Regional Advisory Council, requests that temporary community fish wheel salmon fisheries be established on the Kenai and Kasilof Rivers. The proponent also requests that: 1) the number of fish wheels be limited; 2) permits, use of live boxes, monitoring, fish marking, and detailed reporting be required; 3) the same seasons and harvest limits used for the newly established dip net/rod and reef fisheries be adopted; and 4) incidentally caught rainbow/steelhead trout on both rivers in addition to Dolly Varden and early-run Chinook salmon on the Kenai River be released.

DISCUSSION

The proponent states that fish wheels could provide a more effective means for Federally qualified subsistence users to harvest salmon from the Kenai and Kasilof Rivers, and requests establishment of temporary community fisheries to examine the feasibility of operating this type of gear in these rivers. The proposed fisheries would be temporary in nature and used to determine the feasibility of using fish wheels to harvest salmon on the Kasilof and Kenai Rivers. Rather than allow all residents the opportunity to operate their own fish wheel, only one fish wheel would be allowed to operate on each river by an organization that would provide opportunities to all Federally qualified residents to use the wheel and to distribute harvests within their communities. The Federal Subsistence Management Program provides for community harvests in other areas, and regulations must also provide subsistence opportunity for all Federally qualified rural residents unless restricted under §___.17.

Fish wheels were not requested as a method and means of fishing in any 2007/2008 regulatory proposals. Prior to the 2007 Board meeting, however, a Southcentral Regional Advisory Council subcommittee asked Office of Subsistence Management staff to prepare comments on using fish wheels as a subsistence fishing method and means in Federal public waters of the Kenai Peninsula. Based on this information, the Southcentral Regional Advisory Council requested assistance from Office of Subsistence Management staff in drafting a 2008/2009 regulatory proposal to establish temporary fish wheel salmon fisheries on the Kasilof and Kenai Rivers so that use of this type of gear could be explored. The area addressed in this proposal includes Federal public waters of the mainstem Kasilof and Kenai Rivers within and adjacent to the Kenai National Wildlife Refuge (Maps 1 and 2).

Existing Federal Regulation

\(\S\)__.27(i)(10)(iv) You may only take salmon, trout, Dolly Varden, and char under authority of a Federal subsistence fishing permit. Seasons, harvest and possession limits, and methods and means for take are the same as for the taking of those species under Alaska sport fishing regulations (5 AAC 56) unless modified herein. Additionally for Federally managed waters of the Kasilof and Kenai River drainages:

(A) through (G)

Proposed Federal Regulation

\(\S\)__.27(i)(10)(iv) You may only take salmon, trout, Dolly Varden, and char under authority of a Federal subsistence fishing permit. Seasons, harvest and possession limits, and methods and means for take are the same as for the taking of those species under Alaska sport fishing
Kasilof River Drainage

Map 2
regulations (5 AAC 56) unless modified herein. Additionally for Federally managed waters of the Kasilof and Kenai River drainages:

(A) through (G)

(H) Residents of Ninilchik may harvest sockeye, Chinook, coho, and pink salmon through temporary fish wheel fisheries in the Federal waters of the upper mainstem of the Kasilof River. Residents of Ninilchik, Cooper Landing, and Hope may harvest sockeye, Chinook, coho, and pink salmon through a temporary fish wheel fishery in the Federal waters of the mainstem Kenai River below Skilak Lake. Residents of Ninilchik may retain other species incidentally caught in the Kasilof River except for steelhead/rainbow trout, which must be released. Residents of Hope and Cooper Landing may retain other species incidentally caught in the Kenai River except for early-run Chinook salmon, rainbow trout, and Dolly Varden/Arctic char, which must be released. Before leaving the fishing site, all retained fish must be recorded on permits and marked by removing their dorsal fin. Harvests must be reported within 72 hours to the Federal fisheries manager.

(1) Only one fish wheel can be operated on the Kasilof River, and only one fish wheel can be operated on the Kenai River. Each fish wheel must have a live box, be continuously monitored when fishing, have a means to stop it from fishing when it is not being monitored or used, and be installed and operated in compliance with any regulations and restrictions for its use within the Kenai National Wildlife Refuge.

(2) One permit will be available for each river, and will be awarded on the merits of the operating plan. Each permit will be issued to an organization that will administer its construction, installation, operation, use, and removal. As part of the permit, the organization must provide:

(i) Prior to the season, a written operating plan including a description of how fishing time and fish will be offered and distributed among households and residents of the community it represents; and

(ii) After the season, written documentation of required evaluation information including, but not limited to, persons or households operating the gear, hours of operation, number of each species caught and retained or released, and habitat effects.

(3) Fishing will be allowed from June 15 through September 30 on the Kenai River and from June 16 through October 31 on the Kasilof River unless closed or otherwise restricted by Federal special action.

(4) Salmon taken in the temporary fish wheel fisheries will be included as part of dip net/rod and reel fishery annual total harvest limits for the river in which they are taken and as part of dip net/rod and reel household annual limits for participating households.

(5) Fishing for each salmon species will end and the fishery will be closed by Federal special action prior to regulatory end dates if the annual total harvest limit for that species is reached.
Extent of Federal Public Waters

Federal public waters are defined and described under 50 CFR100.3, and include portions of both the Kenai and Kasilof Rivers.

For the Kenai River, Federal public waters under consideration for this proposal analysis include all waters within and adjacent to the exterior boundaries of the Kenai National Wildlife Refuge (Map 1). This includes all waters from the outlet of Skilak Lake downstream to the confluence of the upper branch of the Killey River, and approximately 2 miles of the mainstem Kenai River from approximately river mile 26.5 to river mile 29 (known locally as Moose Range Meadows).

For the Kasilof River, Federal public waters under consideration for this proposal analysis include all waters of the Kasilof River within and adjacent to the exterior boundaries of the Kenai National Wildlife Refuge (Map 2). This includes approximately the upper 7 miles of the Kasilof River from the outlet of Tustumena Lake downstream to Silver Salmon Rapids as well as a portion of the river in the vicinity of Hongkong Bend.

Customary and Traditional Use Determinations

Residents of the community of Ninilchik have a positive customary and traditional use determination for all fish in the Kasilof River and salmon in the Kenai River, while residents of the communities of Hope and Cooper Landing have positive customary and traditional use determinations for all fish only in the Kenai River.

Regulatory History

Pre- and Early Statehood Fisheries

Until 1952 freshwater streams in the Kenai Peninsula were open to subsistence fishing, but poorly managed commercial fisheries decimated salmon runs. In 1952, as part of efforts to rebuild salmon runs, all streams and lakes of the Kenai Peninsula were closed to subsistence fishing under Territory of Alaska regulations. Only rod and reel fishing was allowed for “personal use” (Fall et al. 2004).

Contemporary State Fisheries

A State regulatory management plan for Upper Cook Inlet salmon (5 AAC 21.363) provides Alaska Board of Fisheries guiding principles and provisions to use when adopting management plans for specific stocks. The State classified most of the Cook Inlet Area, including the Kenai and Kasilof River drainages, as a nonsubsistence area in 1992 (5AAC 99.015(3)). The only State subsistence fisheries in Cook Inlet occur in areas that are not accessible from the road system, including the Tyonek, Windy Bay, Port Chatham, Kyuktolik, and Port Graham subdistricts, as well as portions of Seldovia Bay and the Yentna River drainage.

Commercial and sport fisheries are complex and intensively managed. There are three main management plans that apply to Kenai and Kasilof river salmon stocks: Upper Cook Inlet Management Plan (5 AAC 21.363), Kenai River and Kasilof River Early-Run King Salmon Conservation Management Plan (5 AAC 57.160), and Kasilof River Salmon Management Plan (5 AAC 21.365). These plans provide goals for sustained yield, guidance for mixed-species and mixed-stock fisheries, and instructions for allocation between competing fisheries.
The State also has a regulatory management plan for Upper Cook Inlet personal use salmon fisheries (5 AAC 77.540). This plan established four personal use fisheries in Cook Inlet: Kasilof River dip net, Kasilof River set gillnet, Kenai River dip net, and Fish Creek dip net. Unlike subsistence fisheries, personal use fisheries do not have a priority over other existing uses. Personal use fisheries are open to all residents of Alaska, require a household permit, and occur in marine and intertidal waters outside of Federal public lands. These fisheries target sockeye salmon, the species of greatest abundance and for which the best stock assessment information is available. Annual harvest limits are 25 salmon and 10 flounder for the head of each household and 10 salmon for each additional household member. Incidentally caught coho, pink, and chum salmon may be retained as part of the annual limit. Each household is limited to one Chinook salmon in the Kenai River dip net fishery. No retention of Chinook salmon is allowed in the Kasilof River dip net fishery, but any Chinook salmon caught in the Kasilof River set gillnet fishery may be retained as part of the annual limit.

Finally, the State administers several educational fisheries in Cook Inlet under the provisions of 5 AAC 93.200 - 93.235 (Nelson et al. 1999, Fall et al. 2004, and Shields 2006). Educational fishery permits are only available in nonsubsistence areas. The purpose of educational fisheries is to allow groups to practice traditional harvest and use methods so that these practices and knowledge are not lost. Educational fisheries, unlike subsistence fisheries, do not have priority over other fisheries. Therefore, during times of resource shortages, educational fisheries could be restricted before commercial and sport fisheries are restricted.

Only the Kenaitze Tribe has been issued educational permits for both the Kenai and Kasilof Rivers (Gilbertson 2006, pers. com). The Kenaitze Tribe has participated in a Kenai River educational fishery since 1993 and is currently allowed to harvest up to 8,000 salmon annually. Of these, no more than 300 Chinook salmon or 2,000 sockeye salmon may be taken prior to July 1; no more than 500 coho salmon may be taken during July and August; and no more than 500 coho salmon may be taken after September 1. The tribe has participated in a Kasilof River educational fishery since 1991, and is allowed to harvest up to 50 Chinook salmon prior to July 1; 50 Chinook salmon after July 1; and no more than 200 coho salmon.

For the Ninilchik area, three organizations have been issued educational permits to harvest salmon from the Ninilchik River mouth: Ninilchik Traditional Council, Ninilchik Native Descendants, and Ninilchik Emergency Services. While some of the sockeye salmon harvested by these organizations are probably bound for the Kasilof River, other salmon species harvested are probably migrating to the Ninilchik and other rivers. Ninilchik Traditional Council has participated in an educational fishery since 1993 and is currently permitted to harvest up to 850 salmon annually. Of these, 75 can be Chinook salmon taken through July 20; 25 can be Chinook salmon taken after July 20 (only upon authorization of ADF&G); and 100 can be coho salmon. Ninilchik Native Descendants has participated since 1998 and is currently allowed to harvest the same annual limits as Ninilchik Traditional Council. Ninilchik Emergency Services participated from 2004 through 2006, and was allowed to harvest up to 250 salmon. Of these, 50 could be Chinook salmon taken through July 20 (unless otherwise authorized by ADF&G), and 25 could be coho salmon.

**Federal Subsistence Fisheries in the Cook Inlet Area**

Federal subsistence fisheries regulations were first established in 1999. Initially, there were no specific customary and traditional use determinations for fish in the Cook Inlet Area. Therefore, all rural residents of Alaska qualified. In 2002, Federal subsistence regulations for harvest in the Cook Inlet Area were established for salmon, trout, and Dolly Varden and other char. A permit was required and seasons, harvest
and possession limits, and methods and means for take were the same as those in Alaska sport fishing regulations. This fishery was established as an interim measure to provide some subsistence opportunity in the Cook Inlet Area for Federally qualified rural residents, but few people participated. Only 17 permits were issued (2 in 2002, 9 in 2003, 3 in 2004, 3 in 2005, and 0 in 2006), resulting in a reported total harvest of 22 sockeye salmon from the Kenai River drainage (5 in 2002, 3 in 2003, and 14 in 2004), and 31 coho salmon from Pincher Creek, north of Point Possession, in 2002 (Sonnevil 2007, pers. com.).

The Federal Subsistence Board (Board) recognized that additional information was needed on community and area-specific harvest patterns before decisions could be made concerning customary and traditional use determinations and harvest regulations. Making these decisions was challenging due to the unique attributes of the Kenai Peninsula. Federally qualified rural communities are interspersed among much larger nonrural communities, and freshwater subsistence fisheries have not been allowed for over 50 years.

In 2005, the Board revisited customary and traditional use determinations for the Kenai Peninsula, using information gathered by Fall et al. (2004), but continued to defer proposals requesting methods and means, and seasons. In January 2006, the Board made positive customary and traditional use determinations for Hope and Copper Landing residents for all fish in the Kenai River, and for Ninilchik residents for all fish in the Kasilof River. In November 2006, the Board, acting upon a reconsideration request, made a positive customary and traditional use finding for Ninilchik residents for all fish in the Kenai River.

During their May 2007 meeting, the Board adopted proposals that established dip net/rod and reel salmon fisheries on the Kasilof and Kenai Rivers; increased previously established harvest, possession, and annual limits for salmon and selected resident species for existing rod and reel fisheries on the Kasilof and Kenai River drainages; and allowed use of up to two single or treble hooks and bait for rod and reel fishing during specified dates for both systems.

Through August 21, 2007, a total of 191 Federal subsistence fishing permits were issued to 108 individuals. About 80% of the permits were issued for the Kenai River (106 salmon and 47 resident species permits), with the remaining 20% issued for the Kasilof River (24 salmon and 14 resident species permits). About 66% (71) of the individuals that obtained permits are Cooper Landing residents, about 27% (29) are Ninilchik residents, and about 7% (8) are Hope residents (Sonnevil 2007, pers. com.).

Community Fisheries and Hunts under the Federal Subsistence Management Program

The request for a community fishery has precedence elsewhere under the Federal Subsistence Management Program; however, several characteristics make implementation problematic on the Kenai Peninsula.

A provision for community fisheries in the Prince William Sound Area allows village councils (or other similarly qualified organizations) to operate fish wheels for subsistence purposes on behalf of members of its village or organization. Permits must list all households and household members operating or receiving fish from the fish wheel. The allowable harvest may not exceed the combined seasonal harvest limit for the households listed on the permit. Eligible rural residents have the choice of either participating in the community subsistence fishery or individually operating their own fish wheel.

There are also several community hunts in the Federal Subsistence Management Program. Community harvest permits are provided for certain communities for black bears in Unit 25D; sheep in Anaktuvuk Pass in Units 24 and 26B; and both caribou and moose for Lime Village in Unit 19. Regulations for these
units provide Federally qualified rural residents the option to subsistence hunt individually, or through the use of a community permit.

**Biological Background and Harvest History**

Salmon populations in the Kenai and Kasilof Rivers are healthy, and harvests, while large, have been within sustainable limits. Temporary fish wheel fisheries would share household and annual total harvest limits for all species with the dip net/rod and reel fisheries in the Kenai and Kasilof Rivers. An extensive portion of the staff analyses for the dip net/rod and reel fishery regulations adopted by the Board in May 2007 was devoted to the biological status and harvest history of salmon species in the Kenai and Kasilof Rivers (FWS 2007a and b). No additional biological information or State fisheries harvest information on these species is currently available. However, Federal subsistence fisheries harvest information was available due to the 72 hour reporting requirement for the dip net fisheries.

Through August 21, 2007, 33 Federal subsistence dip net fishery permit holders reported a total harvest of 462 sockeye salmon from the Kenai River; and 2 permit holders reported a total harvest of 30 sockeye salmon from the Kasilof River (Sonnevil 2007, pers. com.). Of the 33 permit holders fishing the Kenai River, 27 were from Cooper Landing, 3 were from Hope, and 3 were from Ninilchik. Two of the Ninilchik permit holders fished the Moose Range Meadows site, while the third fished the Russian River Falls site. About 99% (446) of the Kenai River dip net sockeye salmon harvest was taken at the Russian River Falls site, and the remaining 1% (4) was taken at the Moose Range Meadows site. Although inseason reporting is not required for the salmon rod and reel fishery, 12 sockeye salmon were reported taken above Skilak Lake near the Russian River confluence. About 61% (282) of the reported total Kenai River sockeye salmon harvest was taken from the early run (June 15-July 14).

**Effects of the Proposal**

Federal regulations define a fish wheel as “a fixed, rotating device, with no more than four baskets on a single axle, for catching fish, which is driven by river current or other means”. Fish wheels are usually anchored to the bank and are used to harvest fish migrating upstream in turbid or glacially occluded rivers. While primarily used to harvest salmon, resident fishes are also sometimes caught. Fish wheels with a well-designed live box and monitored regularly can keep fish mortality at a low level, and most incidentally-caught fish can be released unharmed. ADF&G operates fish wheels in both the Kasilof and Kenai Rivers to sample fish for research and monitoring projects. Fish wheels may be an effective subsistence fishing method and means for salmon in both rivers. However, several issues need to be resolved before fish wheels were adopted as a routine method and means for subsistence fishing on the Kasilof and Kenai Rivers, including 1) their effectiveness in harvesting salmon in Federally managed waters; 2) their impact on existing uses and riparian habitat; and 3) the number to be permitted. Allowing use of fish wheels on a temporary basis would provide information to address these issues.

The proposed temporary fish wheel fisheries would be expected to have few effects on existing fisheries or fishery resources. One fish wheel on the Kasilof River and another on the Kenai River would share total season harvest limits for salmon species with the dip net/rod and reel fisheries on these rivers. Fish wheels with a well-designed live box that is monitored regularly should allow most incidentally-caught fish to be released unharmed. ADF&G operates fish wheels on both the Kasilof and Kenai Rivers to sample fish at adult salmon enumeration sonar sites and to capture coho salmon below the outlet of Skilak Lake for research and monitoring projects. The purpose of temporary Federal subsistence fish wheel fisheries is to allow subsistence users and fishery managers to determine the feasibility of operating this gear in these rivers and to identify potential problems, including impacts on existing uses and effects on riparian habitat. Additionally, the same problems identified with developing community-
based gillnet fishing (FWS 2007a and b) would still apply to fish wheels, since fish wheel use, if allowed on a permanent basis, could not necessarily be limited to communities, and would have to be available to individual households. Fish wheel numbers would be limited by site requirements in addition to the expense and effort required to build, install, and maintain them. Fishing areas would need to be determined, and requests for specific fish wheel sites approved, by the Federal fishery manager in consultation with the Kenai National Wildlife Refuge manager. Each fish wheel, as well as its associated cables and anchoring devices, would need to be situated and visibly marked so that they did not constitute a navigational hazard to boats.

**OSM PRELIMINARY CONCLUSION**

**Support** Proposal FP08-09 with modification to more clearly describe Federal fishery manager, fish wheel owner, and fish wheel operator responsibilities; to indicate that fish wheel fisheries would be closed if superseded by Federal special action; and to define the duration (three years) of the temporary fish wheel fisheries.

The modified proposed regulation should read:

§___.27(i)(10)(iv) You may only take salmon, trout, Dolly Varden, and char under authority of a Federal subsistence fishing permit. Seasons, harvest and possession limits, and methods and means for take are the same as for the taking of those species under Alaska sport fishing regulations (5 AAC 56) unless modified herein. Additionally for Federally managed waters of the Kasilof and Kenai River drainages:

(A) through (G)

(H) Residents of Ninilchik may harvest sockeye, Chinook, coho, and pink salmon through temporary fish wheel fisheries in the Federal waters of the upper mainstem of the Kasilof River. Residents of Ninilchik, Cooper Landing, and Hope may harvest sockeye, Chinook, coho, and pink salmon through a temporary fish wheel fishery in the Federal waters of the mainstem Kenai River below Skilak Lake. Residents of Ninilchik may retain other species incidentally caught in the Kasilof River except for steelhead/rainbow trout, which must be released. Residents of Hope and Cooper Landing may retain other species incidentally caught in the Kenai River except for early-run Chinook salmon, rainbow trout, and Dolly Varden/Arctic char, which must be released.

(1) Only one fish wheel can be operated on the Kasilof River, and only one fish wheel can be operated on the Kenai River. Each fish wheel must have a live box, be continuously monitored when fishing, have a means to stop it from fishing when it is not being monitored or used, and be installed and operated in compliance with any regulations and restrictions for its use within the Kenai National Wildlife Refuge.

(2) One registration permit will be available for each river, and will be awarded by the Federal fishery manager, in consultation with the Kenai Wildlife Refuge manager, on the merits of the operating plan. Each registration permit will be issued to an organization that, as the fish wheel owner, will be responsible for its construction, installation, operation, use, and removal in consultation with the Federal fishery manager. The owner may not rent or lease the fish wheel for personal gain. As part of the registration permit, the organization must:
(i) Prior to the season, provide a written operating plan to the Federal fishery manager including a description of how fishing time and fish will be offered and distributed among households and residents of the communities it represents;

(ii) During the season, mark the fish wheel with a wood, metal, or plastic plate at least 12 inches high by 12 inches wide that is permanently affixed and plainly visible, and that bears the following information in letters and numerals at least one inch high: registration permit number; organization’s name and address; and primary contact person name and phone number.

(iii) After the season, provide written documentation of required evaluation information to the Federal fishery manager including, but not limited to, persons or households operating the gear, hours of operation, number of each species caught and retained or released, and habitat effects.

(3) People operating the fish wheel must:

(i) Have a valid Federal subsistence fishing permit in their possession;

(ii) If they are not the fish wheel owner, attach an additional wood, metal, or plastic plate at least 12 inches high by 12 inches wide to the fish wheel that is plainly visible and that bears their fishing permit number, name, and address in letters and numerals at least one inch high;

(iii) Remain on site to continuously monitor the fish wheel and remove all fish at least every two hours;

(iv) Before leaving the site, mark all retained fish by removing their dorsal fin and record all retained fish on their fishing permit; and

(v) Within 72 hours of leaving the site, report their harvest to the Federal fisheries manager.

(4) The fish wheel owner (organization) may operate the fish wheel for subsistence purposes on behalf of members of the communities it represents by requesting subsistence fishing permit that:

(i) Lists all households and household members for whom the fish wheel is being operated;

(ii) Identifies a person who will be responsible for operating the fish wheel;

(iii) Includes provisions for recording daily catches, the household to whom the catch was given, and other information determined to be necessary for effective resource management by the Federal fishery manager.

(5) Fishing will be allowed from June 15 through September 30 on the Kenai River and from June 16 through October 31 on the Kasilof River unless closed or otherwise restricted by Federal special action.
(6) Salmon taken in the temporary fish wheel fisheries will be included as part of dip net/rod and reel fishery annual total harvest limits for the river in which they are taken and as part of dip net/rod and reel household annual limits for participating households.

(7) Fishing for each salmon species will end and the fishery will be closed by Federal special action prior to regulatory end dates if the annual total harvest limit for that species is reached or superseded by Federal special action.

(8) This regulation expires December 31, 2010 unless renewed by the Federal Subsistence Board.

Justification

Fish wheels are among the types of gear suggested for potential Federal subsistence fisheries by a contracted Office of Subsistence Management study on past, present, and potential noncommercial harvests and uses of fish in Cook Inlet communities (Fall et al. 2004). Fish wheel fisheries could provide an effective means of harvesting salmon while conserving healthy fish populations by keeping harvests within sustainable levels; avoiding excessive mortality of nontarget species; and allowing for species, stock, and size selective management. Temporary fisheries would allow subsistence users and resource managers an opportunity to explore the use of fish wheels in the Kasilof and Kenai Rivers as well as to develop community-based fisheries. The information collected and experience gained while conducting these temporary fisheries would allow management agencies to determine whether continued use of this type of gear would allow them to meet conservation requirements as well as to provide for subsistence uses. Establishment of permanent subsistence fish wheel fisheries, including community-based fisheries, would depend on results obtained from conducting these temporary fisheries. The modified regulation would more clearly describe the responsibilities of the Federal resource managers, fish wheel owners, and fish wheel operators, which would be similar to those adopted for Copper River fish wheel fisheries. The modified regulation would also more clearly specify when the fish wheel fisheries may be closed during the season; and it would sunset these fisheries after three years to provide fish wheel owners, fish wheel operators, and Federal resource managers sufficient time to become fully acquainted with and be able to thoroughly evaluate these temporary fisheries. At the end of the three-year period, the Board would be able to make a well informed decision on whether these fisheries should be continued on a temporary or permanent basis or be allowed to end.

LITERATURE CITED


Effects of the Proposal

Adopting the recommendation of the Council would more clearly describe the responsibilities of the Federal fishery manager, fish wheel owners, and fish wheel operators; indicate that fish wheel fisheries would be closed if superseded by Federal special action; and set the duration of the temporary fish wheel fisheries at three years, unless extended by the Board. These modifications to the original proposal would improve the Federal manager’s ability to administer these fisheries, give fish wheel owners and operators a better understanding of their roles in these temporary fisheries; and provide a reasonable period of time for subsistence users, Federal agencies, the Council, and the Board to evaluate the use of fish wheels for harvesting salmon on the Kasilof and Kenai Rivers. Allowing use of only one fish wheel on each river is consistent with the temporary nature of these fisheries, and would simplify situating and monitoring the gear as well as managing these fisheries. However, the Kenai fish wheel owner would have a more difficult task in administering fish wheel use than the Kasilof fish wheel owner because residents of three communities would have to be provided the opportunity to participate in the Kenai fishery, while residents of only one community would participate in the Kasilof fishery.

OSM CONCLUSION

Support Proposal FP08-09 with modification as recommended by the Council and with further modifications to clarify the need to release early-run Chinook salmon and to stop fish wheels from operating when they are not monitored or used.

The modified proposed regulation should read, where underlines show recommended additions to and strikethroughs show recommended deletions from modified proposed language recommended by the Council:

§____.27(i)(10)(iv) You may only take salmon, trout, Dolly Varden, and char under authority of a Federal subsistence fishing permit. Seasons, harvest and possession limits, and methods and means for take are the same as for the taking of those species under Alaska sport fishing regulations (5 AAC 56) unless modified herein. Additionally for Federally managed waters of the Kasilof and Kenai River drainages:

(A) through (G)

(H) Residents of Ninilchik may harvest sockeye, Chinook, coho, and pink salmon through temporary fish wheel fisheries in the Federal waters of the upper mainstem of the Kasilof River. Residents of Ninilchik, Cooper Landing, and Hope may harvest sockeye, late-run Chinook, coho, and pink salmon through a temporary fish wheel fishery in the Federal waters of the mainstem Kenai River below Skilak Lake. Residents of Ninilchik may retain other species incidentally caught in the Kasilof River except for steelhead/rainbow trout, which must be released. Residents of Hope and Cooper Landing may retain other species incidentally caught in the Kenai River except for early-run Chinook salmon, rainbow trout, and Dolly Varden/Arctic char, which must be released. Residents of Ninilchik,
Hope, and Cooper Landing must release all Chinook salmon caught in the Kenai River prior to July 16.

(1) Only one fish wheel can be operated on the Kasilof River, and only one fish wheel can be operated on the Kenai River. Each fish wheel must have a live box, be monitored when fishing, have a means to stop it from fishing when it is not being monitored or used, and be installed and operated in compliance with any regulations and restrictions for its use within the Kenai National Wildlife Refuge.

(2) One registration permit will be available for each river, and will be awarded by the Federal fishery manager, in consultation with the Kenai Wildlife Refuge manager, on the merits of the operating plan. Each registration permit will be issued to an organization that, as the fish wheel owner, will be responsible for its construction, installation, operation, use, and removal in consultation with the Federal fishery manager. The owner may not rent or lease the fish wheel for personal gain. As part of the permit, the organization must:

(i) Prior to the season, provide a written operating plan to the Federal fishery manager including a description of how fishing time and fish will be offered and distributed among households and residents of the communities it represents;

(ii) During the season, mark the fish wheel with a wood, metal, or plastic plate at least 12 inches high by 12 inches wide that is permanently affixed and plainly visible, and that bears the following information in letters and numerals at least one inch high: registration permit number; organization’s name and address; and primary contact person name and phone number;

(iii) After the season, provide written documentation of required evaluation information to the Federal fishery manager including, but not limited to, persons or households operating the gear, hours of operation, and number of each species caught and retained or release.

(3) People operating the fish wheel must:

(i) Have a valid Federal subsistence fishing permit in their possession;

(ii) If they are not the fish wheel owner, attach an additional wood, metal, or plastic plate at least 12 inches high by 12 inches wide to the fish wheel that is plainly visible and that bears their fishing permit number, name, and address in letters and numerals at least one inch high;

(iii) Remain on site to monitor the fish wheel and remove all fish at least every two hours;

(iv) Before leaving the site, mark all retained fish by removing their dorsal fin and record all retained fish on their fishing permit; and

(v) Within 72 hours of leaving the site, report their harvest to the Federal fisheries manager.
(4) The fish wheel owner (organization) may operate the fish wheel for subsistence purposes on behalf of members of the communities it represents by requesting subsistence fishing permit that:

(i) Identifies a person who will be responsible for operating the fish wheel;

(ii) Includes provisions for recording daily catches, the household to whom the catch was given, and other information determined to be necessary for effective resource management by the Federal fishery manager.

(5) Fishing will be allowed from June 15 through September 30 on the Kenai River and from June 16 through October 31 on the Kasilof River unless closed or otherwise restricted by Federal special action.

(6) Salmon taken in the temporary fish wheel fisheries will be included as part of dip net/rod and reel fishery annual total harvest limits for the river in which they are taken and as part of dip net/rod and reel household annual limits for participating households.

(7) Fishing for each salmon species will end and the fishery will be closed by Federal special action prior to regulatory end dates if the annual total harvest limit for that species is reached or superseded by Federal special action.

(8) This regulation expires on the Kasilof and Kenai Rivers three years from the date the fish wheel is first installed in each river unless renewed by the Federal Subsistence Board.
The Interagency Staff Committee (ISC) found the staff analysis for Proposal FP 08-09 to be a thorough and accurate evaluation of the proposal and provides sufficient factual basis for the Regional Council recommendation and Federal Subsistence Board action on the proposal.

The ISC identified additional considerations relative to requiring an organization to plan and coordinate the use of a single fish wheel for up to three communities on the Kenai River. This is a task that could be extremely complex and which could be considered detrimental to subsistence uses. The proposed operational plan would need to provide details of how all three communities would be able to participate using one fish wheel. This would include coordination of building, deploying, operating, and scheduling of fishing time for anyone interested in using a fish wheel from all three communities. One alternative would be to limit the use of fish wheels to only the Kasilof River, since Ninilchik is the only community with a positive customary and traditional use determination on the Kasilof River and residents of Ninilchik have been the ones requesting to try this gear type. Another possible alternative would be to expand the area where fish wheels could be used to include the upper Kenai River and allow up to three fish wheels, one per community. This would decrease the coordination required by any one community, reduce the possibility of conflicts and should provide more locations for possible fish wheel sites.
FP08-09 Allow Fish wheels in the Kenai and Kasilof Rivers

Introduction: Adoption of this proposal would create a temporary fish wheel subsistence fishery on the Kenai and Kasilof Rivers. The proposal would allow for one “community” operated fish wheel in the Kenai River mainstem for Cooper Landing, Hope, and Ninilchik and one “community” operated fish wheel for the community of Ninilchik in the upper Kasilof River mainstem. The proposed fish wheel fisheries would take place from June 16 – September 30 in the Kenai River and from June 16 – October 31 in the Kasilof River. A live box, continuous monitoring, harvest reporting, and marking was required in the original proposal, but the continuous monitoring and other requirements that address conservation issues are removed in the modification adopted by the Southcentral Regional Advisory Council (RAC). All harvest must be recorded on permits and all harvest must be marked by removing the lobes of the caudal fin before the harvest leaves the fishery. The proposal requires the reporting of harvest within 72 hours of fishing to the designated Federal officials. An organization would receive a permit to be responsible for each wheel, preparing an operational plan to identify distribution of usage and harvest among households in Ninilchik, Cooper Landing, and Hope, and requires a post season report on usage, harvest, and participation; the RAC modification removes the requirement to report on impact of the wheel on the habitat. The proposed annual limits would be part of the total limits of the proposed dip net and/or rod and reel subsistence fisheries and the total harvest limit from the fish wheels would not be in addition to other proposed subsistence fisheries or State of Alaska sport fishery harvest limits. The RAC modifications also changed the start date of the proposed three year regulation to three years from the date the fish wheel is installed and eliminated the requirement for listing all household and household members for whom the fish wheel is being operated.

Opportunity Provided by the State: The Kenai River is located in the Anchorage-MatSu-Kenai-Nonsubsistence area designation under state law. The State provides a broad array of personal use, recreational, and educational fisheries that provide more opportunity than is used by these communities to meet needs for personal and family consumption and cultural purposes.

Conservation Issues: The Department continues to express serious conservation concerns about the fish stocks in both the Kasilof and Kenai rivers. In addition, locating a fish wheel near river mile 46, which is a major late-run Chinook salmon spawning area, will necessitate the Alaska Board of Fisheries evaluating whether changes to the late-run management plan are needed. Placing a fish wheel near the vicinity of any tributary to the Kenai River may focus harvest on a particular stock and should be prohibited. The Department currently has little data about the stock contribution by tributary of the Kenai River with the exception of the Russian River watershed.

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1 See comments contained in the May 8-10, 2007 Federal Subsistence Board Meeting Materials starting on page 231-235 and 264-281
Incidental handling of rainbow/steelhead trout, Arctic char/Dolly Varden, lake trout, and other resident species is a serious concern. Although harvest of rainbow/steelhead trout will be prohibited in the fish wheels, handling mortality of resident species caught and released from a fish wheel may be greater than that caused in the sport fishery.

The Department is particularly concerned about the modification made to proposal FP08-09 by the RAC that would eliminate the requirement to continuously monitor the fish wheels. Continuous monitoring reduces the potential damage/injury larger fish inflict upon smaller fish held in a live box prior to harvest or release and reduces damage/injury larger fish inflict upon each other. A Southcentral RAC member suggested fish wheel design modification can effectively reduced the bycatch of smaller sized fish in fish wheel use in the Copper River. If the proposal is adopted, installation of such modifications to a fish wheel should be required so only salmon are retained in the fish wheel boxes. The requirement in the modified proposal to empty the fish wheel live boxes every two hours does not address the Department’s experience with fish wheels on the Kenai River, which indicates hundreds of fish could be damaged or sustain lethal injuries in a short time during high salmon escapement periods. Fish wheels operated by the Department can and have caught over 1,000 fish in one hour per fish wheel. Continuous monitoring of fish wheels is also important to address serious safety concerns due to the need to remove heavy debris loads (e.g., objects as large as 75 foot cottonwood or spruce trees with root wad.)

Adding to our conservation issues, there is a potential of handling mortality caused by the catch and release of captured rainbow/steelhead trout during the migration timing of steelhead trout in the Kasilof River. Operation of a fish wheel for six weeks after the proposed season closure for the retention of Chinook salmon may induce unnecessary handling mortality of incidentally captured weakened Chinook salmon well into their spawning phase. The reporting of the number of Chinook salmon released during the spawning season needs to be a permit stipulation. Department staff are currently conducting fisheries research projects on the Kasilof River. Requiring the reporting of captured tagged fish would assist the agencies with understanding the impacts a new fishery will have on populations of fish about which little is known.

Jurisdiction Issues: The Department requests detailed maps showing the boundaries within which federal regulations would apply and the justification for claiming those boundaries. A detailed land status map is needed that distinctly illustrates land ownership, easements, and exact boundaries of legal federal jurisdiction. Portions of both the upper and lower Kenai River are bordered by state or private lands where there federal claims of jurisdiction in those areas. If this proposal is adopted, subsistence users will have to know exactly where federal regulations apply to install a fish wheel and to keep from violating state regulations.

Other Comments: The use of community fish wheels raises a number of issues in addition to conservation and jurisdiction. For example, coordination between operators of the community fish wheels and households receiving the fish will have to be carefully planned to prevent harvesting more fish than needed at a given time and to ensure that individuals do not exceed household limits. Ensuring that the overall community limits are not exceeded may be difficult even though the rod and reel and dipnet fishermen are required to report harvests in a timely manner. If this proposal is adopted, individuals catching and receiving the fish should be issued
a federal fish wheel permit to identify them as federally qualified subsistence users. Frequent catch reporting must be required; 72 hours is not sufficient. Given the lack of stock status information and the harvest potential of this fishery, if this proposal is adopted the Department recommends a 24-hour reporting requirement to ensure compliance with established limits. A reporting period longer than 48-hours could result in significant overharvest.

Operating a fish wheel on the Kenai River requires permitting and/or written permission by the Kenai National Wildlife Refuge, Alaska Department of Natural Resources Divisions of Parks and Recreation and Office of Habitat and Permitting. Installing and operating a fish wheel for the specific purpose of subsistence fishing would be illegal if done from non-federal properties or on 17(b) easements. Fish wheels should not be allowed within areas identified as critical habitat and closed to fishing within ten feet of the shore line.

There is a need to better define cumulative harvest limits between the subsistence fisheries gear types. The proposal presents challenges to a Federal Designated Individual regarding the ability to manage multiple gear types with specific harvest limits in a timely manner. The RAC recommendation to eliminate the requirement to maintain a record of all federally-qualified users who will use the fish wheels will further exacerbate the challenge of ensuring the harvest limits are not exceeded.

The Department recommends that language be inserted into the regulation which would prohibit the installation of a fish wheel within 500 yards down stream of a Department fish wheel. The Department is concerned that if a fish wheel is installed within 500 yard down stream of a research fish wheel, fish migration patterns may be altered which would impact project results and disrupt long term data sets.

Department Recommendation: Oppose. Use of a fish wheel in the Kenai and/or Kasilof River could create serious conservation problems, social conflicts, and enforcement problems.
WRITTEN PUBLIC COMMENTS

Oppose. The issue of single-site (per drainage) community based Federal subsistence fisheries on the Kenai and Kasilof Rivers was considered at the May 2007 FSB meeting and was rejected for a variety of reasons, including significant fishery conservation and logistical concerns. FP 08-09 basically repackages the community based proposal wherein fish wheels are substituted for gill nets. In light of the fact that the same fishery conservation and logistical concerns still remain compelling for rejecting single-site (per drainage) community based Federal subsistence fisheries on the Kenai and Kasilof Rivers, FP 0809 does not merit modification or approval.

Specifically, a most important concern brought up at every level of discussion for rejecting the single-site (per drainage) community based gill net subsistence fishery was that it opened the door to future widespread use of gill nets in both drainages, since there is no legal basis available to restrict a gear type amongst users. While it may start as a single-site community based subsistence fishery, the allowance of fish wheels as a method and means for one group of individuals, even one on a “community” basis, opens the door for its widespread use by any and all future users who want to make use of this same method and means.

Thus, for the very reasoning that formed the consensus against allowing gill nets as a methods and means for subsistence fisheries in the Kenai and Kasilof River drainages, KRSA does not now support fish wheels as a method and means, as such adoption would in due course allow widespread use of fish wheels as a subsistence harvest method and means on the Kenai and Kasilof Rivers. Whereas fish wheels have never been a customary and traditional harvest method in either drainage and the FSB in May 2007 provided for a subsistence priority through the use of individual and household methods and means of subsistence fisheries in the Kenai and Kasilof River drainages—there is no basis for the adoption of FP 08-09.

Kenai River Sportfishing Association

Oppose. The Kenai and Kasilof Rivers are not suffering from a lack fish stock, opportunity to harvest salmon species abound. A temporary fish wheel fishery would only increase the divisiveness among those Alaskan’s living in federally qualified subsistence areas on the Kenai Peninsula and those who don’t. The SC RAC has proposed one fish wheel permit be made available for the Kenai River and one for the Kasilof River. These two permits would be issued to an “organization” that would then be responsible for determining who among all the federally qualified Alaskan residents living in the areas could use it. The FSB could not delegate the authority of who can participate in a fish wheel fishery to one organization when the federal subsistence priority is afforded to all federally qualified Alaskan residents.

Alaska Outdoor Council

Oppose. Fish Wheels on the Upper Kenai, starring: Ninilchik residents; coming to a river near you!! Why don’t you just let them use dynamite and get it over with!!!!

Keith Phillips
ISSUES

Proposal FP08-10, submitted by Ninilchik Traditional Council, requests that Ninilchik residents be allowed to take resident fish species in the Kenai River drainage during both the dip net/rod and reel and rod and reel fisheries.

DISCUSSION

The proponent states that Ninilchik residents have a positive customary and traditional use determination for all fish in Federal public waters of the Kenai River, but regulations do not allow them to take resident species from this drainage. Since the time Proposal FP08-10 was submitted (March 2007), the community of Ninilchik’s customary and traditional use finding has come under further consideration by the Federal Subsistence Board (Board) on a procedural point of order brought forward by the State of Alaska (June 2007). This issue was addressed by the Board at its September 13, 2007 work session. The Board held a new vote to correct procedural errors in previous voting and finalize a customary and traditional use determination for Ninilchik residents in the Federal waters of the Kenai River area, which includes the waters north of and including the Kenai River drainage within the Kenai National Wildlife Refuge and the Chugach National Forest. The Board voted to recognize only the customary and traditional use of salmon, not other fish species, by Ninilchik residents in the Kenai River area. Without a positive customary and traditional use determination for fish species other than salmon in this area, Ninilchik Traditional Council’s request to harvest resident fish species in the Kenai River drainage cannot be considered.
SOUTHCENTRAL ALASKA SUBSISTENCE REGIONAL ADVISORY COUNCIL

No action taken on FP08-10

Justification

Since the time Proposal FP08-10 was submitted (March 2007), the community of Ninilchik’s customary and traditional use finding was changed by the Federal Subsistence Board on a procedural point of order brought forward by the State of Alaska (June 2007). This issue was addressed by the Board at its September 13, 2007 work session. The Board voted to recognize only the customary and traditional use of salmon, not other fish species, by Ninilchik residents in the Kenai River area. Without a positive customary and traditional use determination for fish species other than salmon in this area, Ninilchik Traditional Council’s request to harvest resident fish species in the Kenai River drainage cannot be considered.
FP08-10 Allow Ninilchik Residents to Retain Resident Species in the Kenai River

Introduction: Proposal FP08-10 originally was submitted by the proponent prior to resolution of the Federal Subsistence Board’s decision process regarding customary and traditional use of resident species by residents of Ninilchik in the Kenai River. On September 13, 2007, the Federal Subsistence Board determined that Ninilchik does not have a customary and traditional use of resident species in the entire Kenai River drainage within the Kenai National Wildlife Refuge and Chugach National Forest. Thus, no retention of resident species in the Kenai River by residents of Ninilchik can be authorized.

Opportunity Provided by the State: Kenai River is located in the Anchorage-MatSu-Kenai-Nonsubsistence area designation under state law. The State provides a broad array of personal use, recreational, and educational fisheries to meet needs for personal and family consumption as well as cultural purposes. While personal use and educational fisheries target salmon, adequate opportunities for harvest of rainbow/steelhead trout, lake trout, and Arctic char/Dolly Varden occur under State recreational fishing regulations.

Conservation Issues: Use of dip nets and multiple baited treble hooks to harvest resident species raises conservation issues. Effects on individual stocks vary, but a fishery that does not possess daily, annual, or cumulative limits for the number of resident species under 18” is not sustainable. Without good stock assessment information and reporting, excessive harvest may not be detected in time to prevent stocks from being depleted. Most trout sport fishermen practice catch and release and the proportion of rainbow trout that are harvested in the state fishery is only about 2.4%. Trout and similar resident species are easily over-harvested, and a conservative management approach has been developed to assure harvest opportunity while sustaining stocks. Any significant increase in harvest or fishery-related mortality may not be sustainable.

The Department recommends that any consideration of subsistence fisheries that target trout or permit the harvest of trout incidentally be done consistent with these policies as found in 5 AAC 75.220 (Statewide management standards for wild trout) and 5AAC 75.222 Policy for the management of sustainable wild trout fisheries (Wild Trout Policy). Harvesting resident species for subsistence with dip nets and rod and reel in the Kenai River is not, and cannot be configured to be, consistent with these policies. The daily harvest and possession limits currently in federal regulation for these vulnerable resident species are also not consistent with these policies.

Department Recommendation: Oppose.
WRITTEN PUBLIC COMMENTS

Oppose. Until such time as the FSB addresses the myriad of legal and process issues brought forth in the multiple requests for reconsideration by KRSA, the Alaska Outdoor Council (AOC), Safari Club International (SCI), the Alaska Flyfishers Association, and the State of Alaska with regard to FSB actions on rural / non-rural findings and customary and traditional use determinations for the Kenai Peninsula, action on FP 08-10 is not warranted and KRSA is opposed to the proposal.

Before further consideration is given to FP 08-10, KRSA requests that the FSB (with deliberations by the actual FSB appointees) in an open and public process fully address the issues and concerns brought forth in the multiple requests for reconsideration by the various parties noted above.

Kenai River Sportfishing Association

Oppose. Resident fish stocks in the Kenai and Kasilof Rivers are managed conservatively by the Alaska Department of Fish & Game for good reason; they are highly sought after and greatly prized. Again this is good reason for the FSB to reconsider the Rural Determination for the Kenai Peninsula; there is no justification for adding an additional fishery in a road connected area of southcentral Alaska that is currently accessible to over 450,000 residents living in the Cook Inlet drainage Under the title General Descriptions in the summary of proposals for the 2008/09 Fisheries Proposals two topics other then the incidental catch of resident species are listed; 2) Fish wheels 3) USF&WS test gillnet fishery I see no mention of these topics on page 11 for PF08-10. Should these two topics be before the FSB in the form of a 2008-09 Fisheries proposal AOC would like the opportunity to submit written comment prior to Board deliberations.

Alaska Outdoor Council
<table>
<thead>
<tr>
<th><strong>General Description</strong></th>
<th>Proposal FP08-11 requests the addition of snagging to the legal methods of harvesting salmon for the Alaska Peninsula and Chignik Areas. Submitted by the Aniakchak Subsistence Resource Commission</th>
</tr>
</thead>
</table>
| **Proposed Regulation** | Alaska Peninsula Area Salmon  
§.27 (i)(7)(vi): You may take salmon by seine, gillnet, rod and reel, or with gear specified on subsistence fishing permit. **You may also take salmon by snagging.**  
Chignik Area Salmon  
§.27 (i)(8)(vi): You may take salmon by seines, gillnets, rod and reel, or with gear specified on a subsistence fishing permit, except that in Chignik Lake, you may not use purse seines. **You may also take salmon by snagging.** |
| **Kodiak/Aleutians Regional Council Recommendation** | No action taken on Proposal FP08-11. |
| **Bristol Bay Regional Council Recommendation** | **Support** Proposal FP08-11 with modification to allow harvest of salmon without a permit and also by means of spear, bow and arrow, or capturing by bare hand. |
| **OSM Conclusion** | **Support** Proposal FP08-11 with modification to allow harvest of salmon without a permit and also by means of spear, bow and arrow, or capturing by bare hand. |
| **Interagency Staff Committee Comments** | See comments following analysis. |
| **ADF&G Comments** | **Oppose** Proposal FP08-11 |
| **Written Public Comments** | None |
KODIAK/ALEUTIANS SUBSISTENCE REGIONAL ADVISORY COUNCIL

No action taken on Proposal FP08-11.

Justification

Council members stated that it is hard to make a recommendation that would affect people within the region when there is not enough information available.

BRISTOL BAY SUBSISTENCE REGIONAL ADVISORY COUNCIL

Support Proposal FP08-11 with modification to allow harvest of salmon without a permit and also by means of spear, bow and arrow, or capturing by bare hand.

The modified proposed regulation should read:

**Alaska Peninsula Area Salmon**

§__.27 (i)(7)(vi): You may take salmon by seine, gillnet, rod and reel, or with gear specified on subsistence fishing permit.

(A) You may also take salmon without a permit by snagging (by handline or rod and reel), using a spear, bow and arrow, or capturing by bare hand.

**Chignik Area Salmon**

§__.27 (i)(8)(vi): You may take salmon by seines, gillnets, rod and reel, or with gear specified on a subsistence fishing permit, except that in Chignik Lake, you may not use purse seines.

(A) You may also take salmon without a permit by snagging (by handline or rod and reel), using a spear, bow and arrow, or capturing by bare hand.

Justification

The Council commented that there had not been any abuses by local subsistence users to justify not passing the motion. The Council has approved subsistence rainbow trout seasons and harvest limits, customary trade of salmon and snagging was allowed last year in Lake Clark. If there are reported cases of abuse such as over harvest, the Council could take steps to have those stopped.

It was also reported by a current Council and SRC member that the intent of the proposal is not to go out and harvest a large amount of salmon. The regulation would align with the Lake Clark area which currently allows snagging for salmon in Lake Clark. The Council also concurred with the staff analysis that other methods such as spear, handline, rod and reel, bow and arrow and capturing by hand are customary and traditional methods utilized by local residents for many years.
STAFF ANALYSIS  
FP08-11

ISSUES

Proposal FP08-11, submitted by the Aniakchak Subsistence Resource Commission (ASRC), requests the addition of snagging to the legal methods of harvesting salmon for the Alaska Peninsula and Chignik Areas.

DISCUSSION

The proponent states that snagging would provide an efficient and selective method for the harvest of individual salmon. The practice of harvesting of individual salmon at varying spawning stages for immediate use is widespread throughout south coastal Alaska. Often these are salmon taken for a “camp meal” while out hunting or berry picking. This proposal is not intended to replace net fisheries in which a bulk harvest occurs.

A similar proposal, FP07-06, was approved with modification by the Federal Subsistence Board (Board) in January 2007. Proposal FP07-06 requested the legalization of snagging (by handline or rod and reel), spear or arrow, and hand capture as legal methods and gear types used to harvest salmon in Lake Clark and its tributaries by Federally qualified subsistence users. The Lake Clark area is adjacent to the Alaska Peninsula and Chignik Areas.

The intent of Proposal FP08-11, like FP07-06, is to legalize a traditional method of harvesting salmon. As described by the proponent, snagging is an effective and efficient method for harvesting a specific salmon. Targeting specific salmon at specific life stages in fresh water for a specific food preparation is a customary and traditional practice.

While it is not standard procedure for an analysis to expand upon a proposal request, consultation with four of the proponents, members of the Aniakchak Subsistence Resource Commission (ASRC), (the proponent of the proposal), confirmed that the intent of FP08-11 and FP06-07 is the same. They agreed that modification to include the same types of harvest methods that were adopted through FP06-07 is consistent with the intent of FP08-11.

These modifications were to be reviewed by the entire Aniakchak SRC at its September 24, 2007 meeting but a quorum was not present. The SRC members who were present stated they would prefer to snag salmon with a rod and reel and a single hook with one barb. The Bristol Bay Subsistence Regional Advisory Council (BBRAC) supported the proposal as modified at its October 1, 2007 meeting in Naknek.

Existing Federal Regulation

Alaska Peninsula Area Salmon

§ _27 (i)(7)(vi): You may take salmon by seine, gillnet, rod and reel, or with gear specified on subsistence fishing permit.
Chignik Area Salmon
§__.27 (i)(8)(vi): You may take salmon by seines, gillnets, rod and reel, or with gear specified on a subsistence fishing permit, except that in Chignik Lake, you may not use purse seines.

Proposed Federal Regulation

Alaska Peninsula Area Salmon
§__.27 (i)(7)(vi): You may take salmon by seine, gillnet, rod and reel, or with gear specified on subsistence fishing permit. You may also take salmon by snagging.

Chignik Area Salmon
§__.27 (i)(8)(vi): You may take salmon by seines, gillnets, rod and reel, or with gear specified on a subsistence fishing permit, except that in Chignik Lake, you may not use purse seines. You may also take salmon by snagging.

Existing State Regulation

Alaska Peninsula Area
5 AAC 01.420. Lawful Gear and Gear Specifications.

(a) Salmon may be taken only by seine and gillnet, or with gear specified on a subsistence fishing permit.

Chignik Area
5 AAC 01.470. Lawful Gear and Gear Specifications

(a) Salmon may be taken by seines and gillnets, or with gear specified on a subsistence fishing permit, except that in Chignik Lake salmon may not be taken with purse seines.

Extent of Federal Public Waters

For purposes of this discussion, the phrase “Federal public waters” is defined as those waters described under 50 CFR 100.3.

The areas affected by this proposal include the Federal public waters within the Alaska Peninsula and Chignik Areas. Federal jurisdiction includes all navigable and non-navigable waters within the exterior boundaries of the Aniakchak National Monument and Preserve and the Alaska Peninsula National Wildlife Refuge and inland waters adjacent to the exterior boundaries of the Aniakchak National Monument and Preserve and the Alaska Peninsula National Wildlife Refuge.

Customary and Traditional Use Determinations

Residents of the Alaska Peninsula area have a positive customary and traditional use determination for trout and char, salmon and other freshwater fish in the Alaska Peninsula and Chignik Areas. Communities in these areas include: Chignik, Chignik Lagoon, Chignik Lake, Port Heiden, Perryville, Ivanof Bay, Meshik, Sand Point, Port Moller, Nelson Lagoon, False Pass Cold Bay, and King Cove.
Regulatory History

The regulatory framework for subsistence fisheries management was adopted from State subsistence regulations in 1999 by the Board.

Subsistence salmon harvests are monitored by subsistence fishing permits issued by the Alaska Department of Fish and Game (ADF&G). In the Chignik Area, subsistence fishing permits are administered by the ADF&G, Division of Subsistence, local vendors, public offices and businesses. (ADF&G 2005: 89, 214). In the Alaska Peninsula Area, permits are administered by the ADF&G, Division of Commercial Fisheries. According to regulations, no more than 250 salmon may be taken for subsistence purposes, per household, unless otherwise specified by a local representative of ADF&G on the subsistence fishing permit [5AAC 01.430.(b)]. This regulation is different for Mortensens Lagoon (accessible by road from Cold Bay) where there is a 50 salmon per permit limit [5 AAC 01.423 (a)(1)(B)]. According to Fall et al. (2007: 96), “most non-local residents fish at Mortensens Lagoon on the Cold Bay road system.” Current State subsistence fishery regulations specify that salmon may be taken only by seine and gillnet in both areas (except seines may not be used in Chignik Lake), or with gear specified on a subsistence fishing permit. Gear specified on the permit is only gear that is legal according to State regulations. The only legal gear for State subsistence fisheries in the Alaska Peninsula and Chignik areas is seine and gillnet. Rod and reel is not recognized as legal subsistence gear under State subsistence regulations in this part of the state. Rod and reel is recognized as legal subsistence gear under State subsistence regulations on part of the Kuskokwim River [5AAC 01.270.(l)(1)]. Rod and reel is recognized as legal subsistence gear in Federal subsistence fishery regulation.

At its January 2007 meeting, the Board adopted Proposal FP07-06, with modification, to allow the taking of salmon without a permit by snagging (by handline or rod and reel), spear, bow and arrow, and capture by hand in Lake Clark and its tributaries by residents of Nondalton, Port Alsworth, Pedro Bay, Iliamna, Newhalen, and Lime Village (FSB 2007:91–92).

National Park Service regulations identify subsistence users within Alaska National Parks by: 1) identifying communities or areas—commonly referred to as resident zone communities—which include a significant concentration of rural residents who have customarily and traditionally engaged in subsistence uses within a park, preserve or monument, and 2) identifying and issuing subsistence eligibility permits (36 CFR 13.44 permits) to individuals who reside in rural areas outside of a resident zone but who have a personal or family history of use of the park or monument. Resident zone communities for Aniakchak National Monument and Preserve include: Chignik, Chignik Lagoon, Chignik Lake, Meshik, and Port Heiden.

Biological Background

The area covered by this proposal includes two fishery management areas, the Alaska Peninsula Area and the Chignik Area. ADF&G Division of Commercial Fisheries 2006 season summary memoranda for the Alaska Peninsula and Chignik Areas do not specify any conservation concerns in these salmon fisheries (Murphy et al. 2006 and Stichert 2006). Commercial fisheries predominate in these areas. The subsistence salmon harvest is a small fraction of the total salmon harvested in the area. For example, in 2004, the combined commercial salmon harvest total for the Alaska Peninsula and Chignik Areas was 12,407,419 fish (Murphy and Tschersich 2007: 17, Poetter et al. 2007: 30). The 2004 combined subsistence salmon harvest for both areas was 25,396 fish (Fall et al. 2007: 90,98), 0.2% of the commercial harvest.
Alaska Peninsula Area—North

The primary species targeted in the North Alaska Peninsula fishery is sockeye salmon. However, “directed” Chinook, coho, pink and chum salmon fisheries occur in response to market demands (Murphy et al. 2006: 11). In 2006, the estimated escapement for sockeye salmon was 1,157,546 fish. Estimated escapements of other salmon species included: 32,173 Chinook; 229,440 coho; 252,463 pink; and 576,043 chum. All species met or exceeded escapement goals (Murphy and Tschersich 2007: 5–6).

The 2006 commercial harvests of all salmon species in the North Alaska Peninsula fishery were above 1996–2005 average harvests (Murphy et al. 2006: 12). In 2006, the commercial salmon harvest from the North Alaska Peninsula was 2,735,158 sockeye; 93,955 coho; 131,718 chum; and 7,637 Chinook (Murphy and Tschersich 2007: 1–4). Some of the reasons provided for harvests lower than preseason harvest estimates were low effort, participation in other fisheries and severe weather (Murphy and Tschersich 2007: 7–8, 10). It was noted that the number of permit holders who participated in the North Alaska Peninsula fisheries between 2004 to 2006 is significantly lower than the “historic numbers” of participants during the 1990s (Murphy et al. 2006: 11).

Alaska Peninsula Area—South

In 2006, the estimated escapement for sockeye salmon was 87,783 fish. Estimated escapements of other salmon species included: coho, 196,758; pink, 3,102,445; and chum, 785,485. All species met or exceeded escapement goals (Murphy et al. 2006: 8). Although they are harvested in the area, there are no known Chinook salmon spawning streams in the South Peninsula (Poetter et al. 2007: 1). The sockeye salmon runs were above the lower end of escapement goals and the escapements of the other species were near the upper ends of their goal ranges (Murphy et al. 2006: 8). In their 2007 report, ADF&G managers noted that “Historically, South Peninsula salmon production has fluctuated dramatically for all species” since 1908 when recordkeeping began for this area (Poetter et al. 2007: 3). However, it was also noted that, statewide, salmon production in Alaska was low in the 1960s and 1970s but Alaska Peninsula stocks had recovered by 1977 (Poetter et al. 2007: 14).

In 2006, the commercial salmon harvest from the South Alaska Peninsula was 5,400 Chinook; 1,835,218 sockeye; 164,692 coho; 4,261,230 pink; 1,175,843 chum (Poetter et al. 2007: 1).

Chignik Area

All five species of salmon are harvested in this Area; sockeye is the most important for subsistence and commercial users (Stichert 2007: 1). Escapement goals for sockeye salmon primarily represent the Chignik River runs. The 2005 sockeye escapement for the Chignik River was 580,457 in 2005 and was 200,000 fish lower that the 20 year escapement average (Stichert 2007: 12). Chignik River sockeye salmon are managed on interim escapement goals which include 50,000 sockeye for late season subsistence needs. The escapement for this goal was below the twenty year average (Stichert 2007: 12). The coho salmon escapement was slightly higher than 10 year averages at 18,206 (Stichert 2007: 12). The pink salmon escapement, 16,000,000 and the chum salmon escapement, 309,000 were among the largest escapements on record for both species (Stichert 2007: 12). The Chignik River is the only notable stream with Chinook salmon production in this area. The Chinook salmon escapement for the Chignik River in 2005 was 6,486 salmon, higher than average escapements.

In the Chignik Management Area report, “home pack” is reported along with commercial harvests. Home pack is fish removed from the commercial catch for home use. Sockeye salmon harvests were below 10 year and 20 year average harvests at 1,152,133 salmon. In 2006, fishermen retained 1,364 sockeye salmon.
for home pack. Commercial coho salmon harvests in 2005, 6,956 fish, were also below 10 and 20 year averages. In 2005, 3,408 Chinook salmon were harvested and 271 fish were retained as home pack. This salmon harvest is reported as greater than 10 year average harvests (Stichert 2007: 13). There were no directed markets for pink and chum salmon in 2005 and these two salmon harvests were also below 10 and 20 year averages. The total pink salmon harvest was 194,045 with no salmon home pack reported. The total chum salmon harvest for 2005 was 8,821 with 115 used for home pack (Stichert 2006: 14).

**Harvest History**

Commercial fisheries represent the largest percentage of harvests in the Alaska Peninsula and Chignik Areas. Commercial harvest data is presented above along with escapement data for comparison purposes. There do not appear to be any sport fish harvest data specific to the Alaska Peninsula and Chignik Areas (ADF&G 2007). In 2004, the estimated subsistence salmon harvest in both the Alaska Peninsula and Chignik Areas was 25,396 fish (Fall et al. 2007: 90, 98).

In 2004, the total estimated subsistence salmon harvest in the Alaska Peninsula Area was 15,049 fish. Sockeye salmon comprise the highest percentage of this harvest, 9,484 followed by 3,787 coho salmon. Much smaller harvests of other salmon species were reported, 951 chum, 609 pink and 218 Chinook (Fall et al. 2007: 98). Fall et al. (2007: 98) provide subsistence salmon harvest estimates for the Alaska Peninsula area from 1985–2004. The highest estimated subsistence harvest occurred in 1997 when 26,096 salmon were reported harvested and the lowest in 1986 when 11,727 salmon were harvested (Fall et al. 2007: 98). Fall et al. note that the estimated number of subsistence permits issued has been declining. Since 1985, the average number of subsistence salmon permits issued was 202 per year. In 2004, 147 subsistence salmon permits were issued (Fall et al. 2007: 96).

In 2004, the total estimated subsistence salmon harvest in the Chignik Area was 10,347 fish. Sockeye salmon comprise the highest percentage of this harvest, 7,029 followed by 1,981 coho, and 1,047 pink salmon. Much smaller harvests of Chinook salmon, 88, and chum salmon, 202 were reported (Fall et al. 2007: 90). Fall et al. (2007: 90) provide harvest estimates for the Chignik Area from 1976–2004: the highest estimated harvest occurred in 1993 when 20,503 salmon were reported harvested and in 1981 when only 2,049 sockeye salmon were harvested. Fall et al. also note that since 1980, the average number of subsistence salmon permits issued was 102 per year. It appears that the number of permits issued has been increasing. In 2004, 147 subsistence salmon permits were issued (Fall et al. 2007: 96). The report notes that the estimated subsistence salmon harvest for this area has been declining. Some of this decline may be attributed to lack of participation in the permit program. However, subsistence users notified ADF&G that they were not able to meet their subsistence needs in 2004. This inability was related to the opening of the Co-op fishery during the optimal fly-free period for fish smoking. Because many subsistence users are also commercial users, they had to wait until after the commercial fishery to smoke subsistence fish when the flies were present and ruined fish (Fall et al. 2007: 87).

The Alaska Peninsula and Chignik areas are part of the Alutiiq culture area which includes Kodiak Island, the Alaska Peninsula (north of Ivanof Bay), Prince William Sound and the southern part of the Kenai Peninsula. Alutiiq is the name of the indigenous inhabitants of these areas much like Yup’ik is the self-designator for the indigenous inhabitants of the Yukon-Kuskokwim Delta or Athabascan for the indigenous people of interior Alaska and Canada.

Alutiiq culture is maritime-focused; subsistence pursuits include harvesting marine mammals and open ocean fishing. The near shore zone is heavily utilized. The primary summer and fall subsistence activity is the salmon harvest although salmon are harvested virtually year-round (Clark 1984:186). It is important to note that prior to European arrival and subsequent commercial fisheries, much of the salmon harvested in
the Alutiiq and other areas of coastal Alaska were harvested from creeks, streams and rivers, not the open ocean (Cooley 1963:16, Price 1990:52). Historic and prehistoric salmon camps were located up from the mouths of creeks, rivers and streams, “salmon fishing was concentrated at spawning streams where, at weirs, salmon were speared, gaffed, or harpooned (Clark 1984:186, 190–191).

Snagging with a rod and reel or handline is a contemporary method for harvesting individual salmon similar to that described above with spears, gaffs and harpoons. These methods are practiced throughout the Alutiiq culture area where people harvest individual salmon through a variety of means for immediate use. Documentation of these types of practices for the Kodiak Alutiiq area is available although this is not the case for the Alaska Peninsula. However, given that extensive kinship and cultural ties exist throughout the Alutiiq culture area, especially between Kodiak Island and the Alaska Peninsula. Similar subsistence practices are shared throughout both areas.

Prehistoric salmon preservation methods led to pursuit of salmon that is quite different from that of contemporary fishers. Today, the fat or oil content of salmon is considered prime when the fish are ocean bright. In the past, when there were no freezers or vacuum sealers, one of the most common methods of salmon preservation was drying. According to many Alutiiq people, the best salmon to dry were those with the least amount of fat. Hence, many salmon-dependent people, including the Alutiiq, developed a preference for salmon that had spent time in fresh water and had lost most of their fat (Williams 2003–2004, Morseth 2003:64). Consequently, in Kodiak, and throughout the Alutiiq culture area, an Alutiiq taxonomy of salmon based on different life cycle stages in fresh water developed along with year-round harvests. Today, people use a variety of harvest and preservation methods to obtain salmon, bright and beyond, for specific food preparations. Many of these preparations are made from spontaneously harvested individual salmon harvested at specific freshwater stages.

Ethnographic research by Williams (2003–2004) in Kodiak Island villages indicates that innovative means are continuously incorporated into the traditional practice of the selective harvest of individual fish. Many people said they prefer the taste of lean salmon from creeks and some said the oilier sockeye and Chinook salmon upset their stomachs because of their oiliness.

The use of a rod and reel or handline to “snag” or target a specific salmon is not well documented in the ethnographic literature likely because it is a relatively new practice and because it is currently illegal. In contemporary Kodiak Island villages, people seek salmon at varying life or spawning stages in fresh water. They harvest specific salmon by snagging with rod and reel or handline, crook (stick with a hook on the end), hand capture or whatever else may be convenient. These salmon are caught for consumption, usually immediate.

Opposite ends of the Island have different words for these types of fish; the colors and markings of salmon skins are read like a recipe by many Island residents. Tumuluk fish (salmon) are described as fresh fish in spawning colors with white meat. A tumuluk fish may be processed in a variety of ways, dried, boiled, fried. A kinowuk fish (salmon) is like a tumuluk fish but it is specifically for boiling within two hours of harvest; it cooks almost instantly. Qazuk is the Alutiiq word for raw fish. These words are used by Alutiiq speakers in the Chigniks. Many Alutiiq people enjoy the raw hump (qazuk) of a pink salmon that is completely black. Most people have very specific standards for blackness and hump development. Different people prefer different species of salmon eggs and different skein conditions for different preparations. These qualities are easily recognized by trained eyes through skin colors and markings of salmon in creeks. All of the above are harvested for specific purposes. These harvests are selective, very small and spontaneous. Many Kodiak subsistence users consider snagging, spear, bow and arrow, and
hand capture as the most efficient methods of harvesting; a person can get the fish they need quickly and not bother the others.

Board discussions regarding Proposal FP07-06 acknowledge that in the adjacent area of Lake Clark and its tributaries, snagging is a customary and traditional method that is used for spontaneous, limited, incidental harvests (FSB 2007:40, 49, 51–53). Members of the ASRC and the BBRAC verified that the intent of FP08-11 is the same as that of FP07-06. They confirmed that residents of the Alaska Peninsula and Chignik areas opportunistically harvest individual salmon by various methods similar to those described for Kodiak and by the same methods adopted by the Board for the adjacent Lake Clark area (Proposal FP07-06) including snagging (with handline or rod and reel), spear or arrow, and hand capture.

**Effects of the Proposal**

In past discussions of proposals involving snagging, concern over mortality of or injury to fish as an unintended result of snagging has been expressed. Since the intent of this proposal is to legalize snagging as a means of catching fish for consumption, concern over mortality or injury to large numbers of fish is not warranted. This proposal would allow for a focused fishery, the goal of which would be to efficiently harvest small numbers of salmon to eat. With regard to the issue of snagging and mortality, it is interesting to note that snagging was a legal method of sockeye harvest on the Kenai River until the 1970s when the number of anglers sky-rocketed. Nelson (1999:76) notes that “When the number of anglers was relatively small, snagging posed neither a biological or social problem.”

If the proposal is adopted, federally qualified subsistence users could legally engage in snagging and thus harvest fish in a more efficient and selective manner. “New” gear types may affect the efficiency of harvest, but would not necessarily increase the total subsistence harvest.

When the Board approved FP07-06, ADF&G stated their inability to allow harvest by these methods to be reported on the state subsistence fishing permit because these methods of harvest are illegal under state law. As previously noted, this proposal is very similar to the Lake Clark proposal (FP07-06). For this reason, the language the Board used in the regulations for FP06-07 may be appropriate if Proposal FP08-11 is adopted. In response to ADF&G concerns about the permit, the Board decided that, “salmon may also be taken…without a permit in Lake Clark and its tributaries by snagging (by handline or rod and reel) using a spear, a bow and arrow, or capturing by bare hand” (FSB 2007: 89).

The proponent noted that this proposal may impact recreational anglers who want to fish in areas where snagging may also occur. Because of diverse cultural ethics regarding harvest of salmon, some may find this traditional practice disturbing.

The boundaries of the Alaska Peninsula National Wildlife Refuge straddle the boundaries of the Kodiak Aleutians Subsistence Regional Advisory Council (KARAC) and the BBRAC and the boundaries of the Alaska Peninsula and Chignik Areas (Maps 1 and 2). The Eastern Aleutian Island communities of Sand Point, Port Moller, Nelson Lagoon, False Pass, Cold Bay, and King Cove are included in the Alaska Peninsula Area. For this reason, these communities, though not part of the Alutiiq culture area, would also fall under the proposed regulations if this proposal is adopted by the Board. These communities have not requested these regulations. Currently there is a not a representative from these communities on the Kodiak Aleutians Subsistence Regional Advisory Council. However, if these regulations are not agreeable to these communities, they do not have to participate in the type of fisheries proposed. The regulations will apply only to residents of the Alaska Peninsula and Chignik Areas. If adopted, these new regulations should not result in an influx of new fishers to the affected Eastern Aleutian communities.
OSM CONCLUSION

Support Proposal FP08-11 with modification to allow harvest of salmon without a permit and also by means of spear, bow and arrow, or capturing by bare hand.

The modified proposed regulation should read:

Alaska Peninsula Area Salmon
§__.27 (i)(7)(vi): You may take salmon by seine, gillnet, rod and reel, or with gear specified on subsistence fishing permit.

(A) You may also take salmon without a permit by snagging (by handline or rod and reel), using a spear, bow and arrow, or capturing by bare hand.

Chignik Area Salmon
§__.27 (i)(8)(vi): You may take salmon by seines, gillnets, rod and reel, or with gear specified on a subsistence fishing permit, except that in Chignik Lake, you may not use purse seines.

(A) You may also take salmon without a permit by snagging (by handline or rod and reel), using a spear, bow and arrow, or capturing by bare hand.

Justification

It is not standard procedure for the analysis to expand upon a proposal request. However, consultation with members of the ASRC and the BBRAC indicated that the intent of FP08-11 and FP06-07 is the same. Members of the ASRC agreed that the modification to include the same types of harvest methods that were adopted through FP06-07 is consistent with the intent of FP08-11.

The Board has previously recognized the importance of limited, selective, spontaneous subsistence salmon harvests by snagging (by handline or rod and reel), using a spear, bow and arrow, or capturing by bare hand in the adjacent area of Lake Clark and its tributaries (FSB 2007:91–92). These are traditional harvest practices; they are specific, selective, very small and spontaneous. Adoption of these regulations will legalize additional methods for take of salmon in the Chignik and Alaska Peninsula Areas.

The addition of these gear types and methods should not increase the salmon harvest.

LITERATURE CITED


The Interagency Staff Committee found the staff analysis to be a complete and accurate evaluation of the proposal, and the recommendation of the Regional Advisory Councils to be consistent with ANILCA Section 805(c).
Alaska Department of Fish and Game
Comments to the Federal Subsistence Board

FP 08-11 Snagging in Chignik Area, Alaska Peninsula National Wildlife Refuge, and Aniakchak National Monument and Preserve

Introduction: This proposal would add snagging with a hook and line as a legal means to harvest all species of salmon in freshwaters in the state’s Alaska Peninsula and Chignik Fishery Management Areas. Federal staff recommends the proposal be expanded to include additional methods and means recently adopted in Lake Clark. Federal staff also recommends expanding the original proposal to include communities and areas which have not requested liberalization of the federal subsistence fisheries. The Alaska Board of Fisheries recently considered and decided not to allow snagging as a means of harvest in freshwaters of Alaska. If this proposal is adopted, a separate federal permit will be required because this method is not allowed by the state.

Impact to Subsistence Users: Federally-qualified subsistence users would be required to use a separate federal permit to use this method because it cannot be authorized by the State permit. Rod and reel, bow and arrow, spear, bare-hand capture, and snagging are not legal methods on state or private lands, so federally-qualified subsistence users would also have to be sure they are standing on federal land or in a boat if they use those methods. (See attached maps of land status.) Travel to use this method on federal lands would be costly. Liberal state subsistence fisheries are allowed on all lands, so this method is not needed for meaningful subsistence harvest and would be confusing for the users and complicated for enforcement personnel.

Opportunity Provided by State: Salmon may be harvested under Alaska Board of Fisheries regulations using gillnets and purse seines. The State provides a subsistence preference on all lands, and liberal state subsistence fisheries for salmon are provided on the Alaska Peninsula. For example, the subsistence fisheries in Chignik and Alaska Peninsula (including Sand Point, Port Moller and Cold Bay) Areas have a liberal household limit of 250 fish, and subsistence fishermen can be authorized to take more if they need it. Legal gear types allowed for the Chignik and Alaska Peninsula Areas subsistence fishery include gill nets and seines, except that in Chignik Lake purse seines may not be used. Additional gear types can be specified and added to the state subsistence permit (5 AAC 01.470).

Each management area has specific stipulations on the respective area’s subsistence permits, e.g., timing restrictions to separate subsistence and commercial fishing, gillnet length limits in areas open to commercial fishing, closed waters. A commercial salmon license holder or a Commercial Fisheries Limited Entry Salmon Permit holder may subsistence fish for salmon during a commercial salmon fishing period (5 AAC 01.485) but may not subsistence fish 12 hours before or 12 hours after each commercial fishing period. If a commercial salmon license holder or a Commercial Fisheries Limited Entry Salmon Permit holder in the Chignik Management Area goes fishing in Chignik Lagoon, Lake, or River, they are required to contact Department staff at the Chignik weir in order to separate subsistence and commercial harvests. Additional State subsistence fishery restrictions exist on the Alaska Peninsula to conserve small and accessible streams. These restrictions include reduced annual limits of harvest in particular areas and reduced net length restrictions. The Alaska Board of Fisheries established the
combined Amounts Necessary for Subsistence for the communities in the Alaska Peninsula area, which is 34,000-56,000 salmon annually. The Amounts Necessary for Subsistence for the Chignik Area (Chignik Bay, Central, and Eastern Districts of the Chignik Management Area) is 5,900 – 14,250 salmon annually.

Conservation Issues: No salmon runs on the Alaska Peninsula are currently listed as “a stock of concern” by the Alaska Board of Fisheries. Use of snagging as a legal method may increase harvest and incidental mortality of salmon throughout the drainages on the Alaska Peninsula by an unknown amount. It is not known whether such harvest would be large enough to raise any conservation issues on individual tributaries or in creeks and streams with small salmon populations. The Department agrees with the Bristol Bay Regional Advisory Council comments on October 2-3, 2006:

“The proposed use of snagging (with rod and reel) as a means of harvest is a cause for concern. Given the likelihood that not all fish hooked by snagging will be landed, this method will potentially result in a number of fish being injured, and depending on the severity of the injury, may not successfully spawn. Additionally, the injury rate could be very high as there is the potential of the fisher to continue snagging until successful. Therefore, snagging with rod and reel in Lake Clark or its tributaries should not be considered a biologically sound method of harvest.”

Jurisdiction Issues: Under Sections 102 and 103(c) of ANILCA, federal regulations do not apply to state or private lands and do they apply to validly selected, but not yet conveyed lands. Detailed maps of where federal jurisdiction is claimed need to be provided to the users, and the state continues to request an explanation of the basis of each claim.

Other Comments: If the Federal Subsistence Board allows snagging, the federal agencies will be responsible for permitting, reporting, and monitoring of the fishery. Issuing multiple permits and requiring separate reporting would be confusing and cumbersome for federally qualified subsistence users. Discussions at the Regional Council level indicate that if this proposal is adopted, federal subsistence permits would not be required for federally-qualified users who chose to snag, spear, use bow and arrow, or use hand capture as methods for harvest. If federal staff are not going to require permits, there will be no mechanism to advise federally eligible users where they can fish under the federal regulations, no information will be available on effort, and annual harvest information would not be collected.

The proposed usage of snagging as a means of harvest creates social and enforcement problems. Establishing freshwater snag fisheries that target unmonitored wild stocks is not consistent with principles of sound management and conservation of fish and wildlife resources. Current State regulation and subsistence permit stipulations do not allow use of rod and reel as a legal gear type (SAAC 01.470), but federal subsistence regulations instruct federal subsistence fishery participants to use the State issued subsistence permits to record their harvest. If this proposal is adopted, federally-qualified subsistence users participating in a federal subsistence rod and reel fishery will not be able to use a State subsistence permit.

Department Recommendation: Oppose.
Although extensive effort has been made to produce error free and complete data, all geographic information has limitations due to the scale, resolution, date and interpretation of the original source materials. 

You should consult available data documentation (metadata) for these particular data to determine their limitations and the precision to which they depict distance, direction, location or other geographic characteristics.

These data may be subject to periodic change without prior notification.

You should consult available data documentation (metadata) for these particular data to determine their limitations and the precision to which they depict distance, direction, location or other geographic characteristics.

* Liability: the user assumes the entire risk as to the results of the use of these data.
* The Department of Fish and Game is not responsible for any interpretation or conclusions based on these data made by those who acquire or use it.
* The Department of Fish and Game does not provide a warranty, express or implied, as to the performance, merchantability, or fitness for any particular purpose.
* The Department of Fish and Game shall not be liable for any direct, indirect, incidental, compensatory or consequential damages from the use of these data, even if the Department of Fish and Game has been aware of the possibility of such potential loss or damage.
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No Warranty: These data are provided as is, without warranty of any kind, including but not limited to any warranty as to their performance, merchantability, or fitness for any particular purpose.

Liability: The user assumes the entire risk as to the results of the use of these data.

The ADF&G is not responsible for any interpretation or conclusions based on these data made by those who acquire or use it.

The ADF&G shall not be liable for any direct, indirect, incidental, special, compensatory or consequential damages or third-party claims resulting from the use of these data, even if the ADF&G has been advised of the possibility of such potential loss or damage.
### General Description
Proposal FP08-12 requests the addition of traditional small scale subsistence fish traps and weirs made of wooden stakes to the list of legal subsistence fishing gear listed in 50 CFR 100.27 (2)(c)(1) in the Naknek-Kvichak District (Kvichak/Iliamna-Lake Clark drainage) of the Bristol Bay Area, specifically in Lake Clark and its tributaries. Submitted by the Lake Clark Subsistence Resource Commission.

### Proposed Regulation

<table>
<thead>
<tr>
<th>Section</th>
<th>Description</th>
</tr>
</thead>
<tbody>
<tr>
<td>§ 100.27(c)(1)</td>
<td>Unless otherwise specified in this section or under terms of a required subsistence fishing permit (as may be modified by this section), you may use the following legal types of gear for subsistence fishing:</td>
</tr>
<tr>
<td>(i)</td>
<td>A set gillnet;</td>
</tr>
<tr>
<td>(ii)</td>
<td>A drift gillnet;</td>
</tr>
<tr>
<td>(iii)</td>
<td>A purse seine;</td>
</tr>
<tr>
<td>(iv)</td>
<td>A hand purse seine;</td>
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<tr>
<td>(v)</td>
<td>A beach seine;</td>
</tr>
<tr>
<td>(vi)</td>
<td>Troll gear;</td>
</tr>
<tr>
<td>(vii)</td>
<td>A fish wheel;</td>
</tr>
<tr>
<td>(viii)</td>
<td>A trawl;</td>
</tr>
<tr>
<td>(ix)</td>
<td>A pot;</td>
</tr>
<tr>
<td>(x)</td>
<td>A longline;</td>
</tr>
<tr>
<td>(xi)</td>
<td>A fyke net;</td>
</tr>
<tr>
<td>(xii)</td>
<td>A lead;</td>
</tr>
<tr>
<td>(xiii)</td>
<td>A herring pound;</td>
</tr>
<tr>
<td>(xiv)</td>
<td>A dip net;</td>
</tr>
<tr>
<td>(xv)</td>
<td>Jigging gear;</td>
</tr>
<tr>
<td>(xvi)</td>
<td>A mechanical jigging machine;</td>
</tr>
<tr>
<td>(xvii)</td>
<td>A handline;</td>
</tr>
<tr>
<td>(xviii)</td>
<td>A cast net;</td>
</tr>
<tr>
<td>(xix)</td>
<td>A rod and reel; and</td>
</tr>
<tr>
<td>(xx)</td>
<td>A spear.</td>
</tr>
<tr>
<td>(xxi)</td>
<td>A fish trap or weir made from wood stakes</td>
</tr>
</tbody>
</table>

§ 100.27(c)(xxi). All fish traps or weirs made from wood stakes must be attended at all times while in use.

§ 100.27(5)(vii). Outside the boundaries of any district, you may take salmon by set gillnet only, except that you may also take salmon by spear in the Togiak River, excluding its tributaries. You may also take salmon by beach seine* or with a fish trap or weir made from wood stakes in Lake Clark and its tributaries.

§ 100.27(5)(x). You must have your first initial, last name, address, and subsistence permit number plainly and legibly inscribed on a sign at or near your wood stake fish trap or weir.

Continued on next page
FP08-12 Executive Summary

*NOTE: The original proposal contained an incorrect regulation. The current regulation allowing the use of beach seines was omitted. It reads: § ____ .27(i)(5)(vii)(D) You may also take salmon by beach seines not exceeding 25 fathoms in length in Lake Clark excluding its tributaries.

<table>
<thead>
<tr>
<th>Bristol Bay Regional Advisory Council Recommendation</th>
<th>Support Proposal FP08-12 with modification to specify regulations for the use of fyke nets and leads in tributaries of Lake Clark and in Sixmile Lake.</th>
</tr>
</thead>
<tbody>
<tr>
<td>OSM Conclusion</td>
<td>Support Proposal FP08-12 with modification to specify regulations for the use of fyke nets and leads in tributaries of Lake Clark (within the Bristol Bay Area), but not to add fish trap or weir to the list of potentially allowable gear types in the general provisions and not to specify the materials used in their construction</td>
</tr>
<tr>
<td>Interagency Staff Committee Comments</td>
<td>See comments following analysis.</td>
</tr>
<tr>
<td>ADF&amp;G Comments</td>
<td>Oppose Proposal FP08-12</td>
</tr>
<tr>
<td>Written Public Comments</td>
<td>1 Support</td>
</tr>
</tbody>
</table>
REGIONAL ADVISORY COUNCIL RECOMMENDATION
FP08-12

BRISTOL BAY SUBSISTENCE REGIONAL ADVISORY COUNCIL

Support Proposal FP08-12 with modification to specify regulations for the use of fyke nets and leads in tributaries of Lake Clark and in Sixmile Lake.

The modified proposed regulation should read:

Bristol Bay Area – All Fish

§ _____.27(i)(5)(vii): Outside the boundaries of any district, you may take salmon by set gillnet only, except that you may also take salmon by spear in the Togiak River, excluding its tributaries.

(D) You may also take salmon by beach seines not exceeding 25 fathoms in length in Lake Clark, excluding its tributaries.

(E) You may also take fish (except rainbow trout) with a fyke net and lead in tributaries of Lake Clark and Sixmile Lake unless otherwise prohibited.

(i) You may only use a fyke net and lead with a permit issued by the Federal in-season manager. You must be present when the fyke net is actively fishing.

(ii) All fyke nets and leads must be attended at all times while in use.

(iii) All materials used to construct the fyke net and lead must be removed from the water when the fyke net and lead is no longer in use.

(iv) The use of a fyke net and lead would be allowed for use in Sixmile Lake.

The addition of the Federal permit requirement for fyke net and lead necessitates a change in several other Bristol Bay regulations:

§ _____.27 (i)(5) (xiv) You may take salmon only under authority of a State subsistence salmon permit (Permits are issued by ADF&G) except when using a Federal permit for fyke net and lead.

§ _____.27 (i)(5)(xv) Only one State subsistence fishing permit for salmon and one Federal permit for use of a fyke net and lead for all fish (except rainbow trout) may be issued to each household per year.

Justification

The Council supported the proposal because it is one more method that can be utilized to harvest fish in Lake Clark, Sixmile Lake, and their tributaries. The use of a fyke net and leads are customary and traditional; and have been utilized by the residents for many years. The required permits for use of fyke net and leads issued by the in-season manager will ensure conservation of fishery resources and timely harvest reports.
ISSUES

Proposal FP08-12, submitted by the Lake Clark Subsistence Resource Commission (LCSRC), requests the addition of traditional small scale subsistence fish traps and weirs made of wooden stakes to the list of legal subsistence fishing gear listed in 50 CFR 100.27 (2)(c)(1) in the Naknek-Kvichak District (Kvichak/Iliamna-Lake Clark drainage) of the Bristol Bay Area, specifically in tributaries of Lake Clark.

DISCUSSION

At the September 21, 2007 LCSRC meeting, the proponents explained that small scale weirs and traps are a customary and traditional method of harvesting fish. The proponents explained that they would like the use of small scale weirs and traps legalized to allow them to teach younger generations how to construct and use weirs and traps and the conservation ethic involved in their use. As used historically, weirs allowed for the selective harvest of some fish and for the release of other fish unharmed. Because they can be constructed quickly and with readily available materials, small scale weirs can be used to procure food in emergency situations. The proponents explained that this is an additional reason for legalizing this method.

In the original proposal, the proponent listed target species as salmon, grayling and whitefish. Communication with the LCSRC indicated that the target species are suckers, whitefish, grayling, Dolly Varden, pike, “a few” salmon and no rainbow trout. The LCSRC stated that harvests with weirs and traps would only be for a few fish for one or two meals. The LCSRC emphasized that, unlike fish wheels, the proposed weirs and traps are temporary, one-time use devices.

The Federal definition of fyke net and lead includes fish traps and fences or weirs. This is illustrated by Federal Subsistence Board (Board) deliberations regarding Proposal FP06-22 (SCRAC 2005:186–189, FSB 2006:70, 78) (See Figures A & B)1. Additionally, in 2003 Proposal FP03-17, which requested the addition of a definition of fish trap and its inclusion in the list of allowable methods, was withdrawn by the proponent after being advised that fish traps were already included in the definition of fyke nets and leads. While fyke nets and leads are allowed in the general Federal subsistence fishery methods, means and restrictions statewide, it is not a legal gear type in the Bristol Bay Area. Because the definitions of fyke net and lead do not include any specifications for materials used in fyke nets or leads, there is no need to add specifications such as “wood” to regulation.

Existing Federal Regulation

§ 100.27(i)(5) Bristol Bay Area

§ 100.27(i)(5)(vii): Outside the boundaries of any district, you may take salmon by set gillnet only, except that you may also take salmon by spear in the Togiak River, excluding its tributaries.

§ 100.27(i)(5)(vii)(D) You may also take salmon by beach seines not exceeding 25 fathoms in length in Lake Clark, excluding its tributaries.

1 Figures A and B were adapted from hand drawings using Adobe Illustrator. The hand drawings were made by members of the Lake Clark Subsistence Resource Commission at their September 2007 meeting in Nondalton. The drawings were made to illustrate the type of fyke net and lead proposed for use in tributaries of Lake Clark.
Figure A. FP08-12, proposed fyke net and lead for tributaries of Lake Clark.

Fyke net is 300 ft from the mouth of the stream.
Net obstructs less than half the width of the stream.

Tributary

Lead

Fyke net is 300 ft from the mouth of the stream.

Lake Clark
Figure B. FP08-12, proposed fyke net and lead for tributaries of Lake Clark.
NOTE: The proposal/book included general statewide Federal subsistence fishery regulations, not those specific to the Bristol Bay Area.

Proposed Federal Regulation

§___.27(c)(1): Unless otherwise specified in this section or under terms of a required subsistence fishing permit (as may be modified by this section), you may use the following legal types of gear for subsistence fishing:

(i) A set gillnet;
(ii) A drift gillnet;
(iii) A purse seine;
(iv) A hand purse seine;
(v) A beach seine;
(vi) Troll gear;
(vii) A fish wheel;
(viii) A trawl;
(ix) A pot;
(x) A longline;
(xi) A fyke net;
(xii) A lead;
(xiii) A herring pound;
(xiv) A dip net;
(xv) Jigging gear;
(xvi) A mechanical jigging machine;
(xvii) A handline;
(xviii) A cast net;
(xix) A rod and reel; and
(xx) A spear.

(xxi) A fish trap or weir made from wood stakes

§___.27(c)(__). All fish traps or weirs made from wood stakes must be attended at all times while in use.

§___.27(5)(vii). Outside the boundaries of any district, you may take salmon by set gillnet only, except that you may also take salmon by spear in the Togiak River, excluding its tributaries. You may also take salmon by beach seine* or with a fish trap or weir made from wood stakes in Lake Clark and its tributaries.

§___.27(5)(__). You must have your first initial, last name, address, and subsistence permit number plainly and legibly inscribed on a sign at or near your wood stake fish trap or weir.

*NOTE: The original proposal contained an incorrect regulation. The current regulation allowing the use of beach seines was omitted. It reads: §___.27(i)(5)(vii)(D) You may also take salmon by beach seines not exceeding 25 fathoms in length in Lake Clark excluding its tributaries.

Related Regulations

Several general and Bristol Bay area Federal subsistence fishery regulations are relevant if regulations regarding the use of fyke nets and leads in tributaries of Lake Clark are made.
§ .25(a) Definitions
Fyke net means a fixed, funneling (fyke) device used to entrap fish.

Lead means either a length of net employed for guiding fish into a seine, set gillnet, or other length of net, or a length of fencing employed for guiding fish into a fish wheel, fyke net, or dip net.

§ .27(c)(4) Except as otherwise provided for in this section, you may not obstruct more than one-half the width of any stream with any gear used to take fish for subsistence uses.

Bristol Bay Area Fish

§ .27 (i)(5)(i) Unless restricted in this section, or unless under the terms of a subsistence fishing permit, you may take fish at any time in the Bristol Bay area.

§ .27 (i)(5)(iv) You may not take fish from waters within 300 feet of a stream mouth used by salmon.

§ .27 (i)(5)(vi) Within any district, you may take salmon, herring, and capelin by set gillnets only.

§ .27 (i)(5)(vii) Outside the boundaries of any district, unless otherwise specified, you may take salmon by set gillnet only.

§ .27 (i)(5)(vii)(C) You may also take salmon without a permit in Lake Clark and its tributaries by snagging (by handline or rod and reel) using a spear, bow and arrow, or capturing by bare hand.

§ .27 (i)(5)(vii) (D) You may also take salmon by beach seines not exceeding 25 fathoms in length in Lake Clark excluding its tributaries.

§ .27 (i)(5) (xiv) You may take salmon only under authority of a subsistence salmon permit. (Permits are issued by ADF&G).

§ .27 (i)(5)(xv) Only one subsistence fishing permit for salmon may be issued to each household per year.

§ .27 (i)(5)(xviii) If you take rainbow trout incidentally in other subsistence net fisheries, or through the ice, you may retain them for subsistence purposes.

Existing State Regulation

5 AAC 01.320 (b)(5) Lawful gear and gear specifications
(A) gillnets may not exceed five fathoms in length and may not be anchored or tied to a stake or peg;
(B) the permit holder must be present at the net while the net is being fished;
(6) by spear in Lake Clark, excluding its tributaries;
(7) by gillnet and beach seine in Iliamna Lake, Six Mile Lake, and Lake Clark.
(c) Except as specified in (b) of this section, the maximum lengths for gillnets and beach seines used to take salmon are as follows:
(2) in the remaining waters of the area, gillnets may not exceed 25 fathoms in length;
(3) beach seines may not exceed 25 fathoms in length.
(d) No part of a set gillnet may be operated within 300 feet of any part of another set gillnet, except that
(e) No set gillnet may obstruct more than one-half the width of a stream.
(f) Each set gillnet must be staked and buoyed. Instead of complying with 5 AAC 01.010(h), a subsistence fisherman may plainly and legibly inscribe that person’s first initial, last name, and subsistence permit number on a sign at or near the set gillnet.
(g) No person may operate or assist in operating subsistence salmon net gear while simultaneously operating or assisting in operating commercial salmon net gear.
(h) Fish, other than salmon, herring, capelin, and halibut, may be taken by gear listed in 5 AAC 01.010(a) unless restricted under the terms of a subsistence fishing permit.

Extent of Federal Public Waters

The areas affected by this proposal include the Federal public waters within the Bristol Bay Area that are in the Kvichak/Iliamna-Lake Clark drainage. Federal jurisdiction includes all navigable and non-navigable waters within the exterior boundaries of the Lake Clark National Park and Preserve and inland waters adjacent to the exterior boundaries of the Lake Clark National Park and Preserve.

For purposes of this discussion, the phrase “Federal public waters” is defined as those waters described under 50 CFR 100.3.

Customary and Traditional Use Determinations

Residents of the Kvichak/Iliamna-Lake Clark drainage have a positive customary and traditional use determination for rainbow trout, salmon and other freshwater fish in the Naknek-Kvichak District (Kvichak/Iliamna-Lake Clark drainage).

Regulatory History

The current regulatory framework for the Bristol Bay Management Area was adopted from existing State subsistence regulations in 1999 by the Federal Subsistence Board.

National Park Service regulations identify subsistence users within Alaska National Parks by: 1) identifying communities or areas—commonly referred to as resident zone communities—which include a significant concentration of rural residents who have customarily and traditionally engaged in subsistence uses within a park, preserve or monument, and 2) identifying and issuing subsistence eligibility permits (36 CFR 13.44 permits) to individuals who reside in rural areas outside of a resident zone but who have a personal or family history of use of the park or monument. Resident zone communities for Lake Clark National Park are Iliamna, Lime Village, Newhalen, Nondalton, Pedro Bay, and Port Alsworth.

In 2001, the National Park Service instituted a prohibition on subsistence fishing with nets in Lake Clark National Park and Preserve except by Federally qualified rural residents (ADF&G 2005:73)

At its January 2007 meeting, the Board adopted a regulation to legalize taking of salmon without a permit by snagging (by handline or rod and reel), spear, bow and arrow and capture by hand in Lake Clark and tributaries by residents of Nondalton, Port Alsworth, Pedro Bay, Iliamna and Newhalen.
At the same meeting, the Board adopted a regulation to allow the use of 25 fathom beach seines in Lake Clark, but not its tributaries, by residents of the communities and areas listed above.

Non-salmon subsistence fish harvests are not monitored annually. Subsistence salmon harvests are monitored through a subsistence salmon permit administered by ADF&G, Division of Subsistence and local vendors in some communities.

**Biological Background**

The use of fyke nets and leads are proposed for all fish except rainbow trout. The primary target is non-salmon fish but the proponents stated that “a few” salmon may be harvested. The only species about which there appear to be biological concerns is Kvichak River sockeye salmon.

In 2003, the Alaska Board of Fisheries elevated the Kvichak River sockeye salmon to a stock of “management concern” due to its chronic inability to meet management objectives (Salomone et al. 2007:6). During its December 2006 meeting, the Alaska Board of Fisheries reaffirmed the stock of management concern classification for the Kvichak River sockeye salmon stock.

The average sockeye salmon escapement for the Kvichak River from 2000 to 2005 was approximately 2.1 million sockeye salmon while the average escapement for the Newhalen River (Lake Clark) was 310,616 sockeye salmon during the same time period (Young and Woody in press).

The 2006 total run forecast for the Kvichak River was below the minimum 2.6 million necessary to open the Naknek/Kvichak District commercial fishery. The district remained closed on the usual opening date of June 1 (Salomone et al. 2007:7). In 2006, the estimated commercial sockeye harvest for the Naknek-Kvichak District was 2,736,218 fish, the estimated escapement was 3,068,226 fish and the estimated total run was 5,804,444 fish (Salomone et al. 2007:40).

**Harvest History**

Subsistence fishers typically harvest fish by a variety of methods for different purposes, depending on circumstances. Many people in the Bristol Bay area harvest the bulk of their fish, salmon, with nets. They may also obtain some of their fish for home use from commercial catches. While camping or for a quick meal of fish, they may use a spear or rod and reel for directed harvests of specific individual fish at varying life stages. This proposal for this gear type is not intended to supplant the use of other legal gear types; rather, the intent is to legalize a more complete repertoire of gear types used to harvest fish. Incorporation of more recent methods and means, such as rod and reel, as part of this repertoire reflects the use of new methods often required by current regulations.

In 2003, ADF&G Division of Subsistence conducted household subsistence harvest surveys in some of the villages affected by this proposal. Freshwater fish harvests were reported for Iliamna, Newhalen, Nondalton, Pedro Bay and Port Alsworth. The amounts of freshwater fish harvested were reported in pounds, not numbers of fish and represent only one year of harvest information. Krieg et al. (2005:150–156) reported: in Iliamna in 2003, the community harvested 170 pounds of grayling and 20 pounds of whitefish; in Newhalen in 2003, the community harvested 498 pounds of grayling and 401 pounds of whitefish; in Nondalton in 2003, the community harvested 347 pounds of grayling and 238 pounds of whitefish. In Pedro Bay in 2003, no harvests of grayling or whitefish were reported but quantities were reported received. In Port Alsworth in 2003, one pound of grayling was reported harvested and no whitefish were reported harvested however residents received quantities of both species from other communities.
Grayling is a popular sport fish species. Data for the Bristol Bay Sport Fish Management Area indicate that the sport harvest of grayling has declined in recent years (Dye et al. 2006: 8). The 1977–1993 sport grayling harvest average is 4,831 fish; the 2000–2004 average sport harvest is 2,461 fish (Dye et al. 2006:8). There was a high sport harvest of 6,879 grayling in 1997. The estimated harvest for 2005 was 839 grayling (Dye et al. 2006:8).

Sockeye salmon is the primary subsistence fish resource used in the Bristol Bay area (ADF&G 2003). The total estimated subsistence salmon harvest for the Naknek-Kvichak District in 2006 was 72,302 fish. This included an estimated 49,390 subsistence salmon (48,263 sockeye) harvested from the Kvichak River/ Iliamna Lake drainage (Salomone et al. 2007:74). The total subsistence salmon harvest for the Naknek-Kvichak District was 74,300 fish; 71,110 of these were sockeye salmon (Fall et al. 2007: 78)

Harvest data for the sport fishery in 2005 indicate sport anglers harvested 9,952 sockeye salmon in the eastern part of the Bristol Bay Sport Fish Management Area which includes the Kvichak, Newhalen and Lake Clark drainages. The 2000–2004 sport angler average harvest for this area is 9,599 sockeye salmon (Dye et al. 2006:27). Dye et al. note that the commercial fleet harvests approximately half of the Kvichak River sockeye run, “and until 1995 the subsistence fishery took an average of nearly 75,000 fish annually, or about 1% of the total run. Since 1995, the annual subsistence harvest has declined to less than 60,000” (2006:28). According to Dye et al. (2006:28), the sport harvest of sockeye in the Kvichak drainage has risen from an annual average of 300–600 fish “until 1984” to a 2001–2005 average harvest of 1,225 sockeye.

There is a long history of use of fish traps and weirs (fyke nets and leads) used to harvest non-salmon fish and salmon in the Lake Clark/Iliamna area (Stickman et al. 2003:11–22; Ellanna and Balluta 1992:27, 145, 150; Osgood 1976:28, 99–101). Some rural Alaskans lament the loss of the “fish trap” because, in their view, it was a traditional method that lent itself to a communal subsistence fishery and was a traditional method of conservation (Williams et al. 2005: 31, 39, 41; Stickman et al. 2003:22). In several ethnographic sources, the reason cited for no longer using the subsistence fish trap (fyke net and or lead) is that it was outlawed after Statehood (Stickman et al. 2003: 20; Stokes 1982:20).

The ban on commercial fish traps that occurred shortly after Alaska statehood is often cited as the legislation that led to the subsistence fish trap being outlawed. This is mentioned in at least two ethnographic sources (Stickman et al. 2003 and Stokes 1982). However, Section 1 of Chapter 17, State Legislature of Alaska (SLA) 1959, the legislation that led to the prohibition of commercial fish traps in Alaska, includes the following amendment:

Nothing in this section shall prevent the maintenance, use or operation of small, hand-driven fish traps of the type ordinarily used on rivers of Alaska which are otherwise legally maintained and operated in or above the mouth of any stream or river in Alaska.

Colt (1999), however, cites the White Act as Federal legislation that “further hurt Natives by prohibiting subsistence fishing within streams” (Colt 1999:13). The intent of the White Act, passed by Congress in 1924, was for the protection of Alaska salmon fisheries from over harvest by commercial interests. The Act mandated a fifty percent escapement for all salmon streams. Many of the early regulatory prohibitions on the blocking or barricading of creeks appear to be derived from this Act. Section 3 of the Act specified that no “dam, barricade, fence, trap, fish wheel or other fixed or stationary obstruction” could be installed:

…in any of the waters in Alaska where the distance from shore to shore is less than one thousand feet or within five hundred yards of the mouth of any creek, stream or river into which salmon run… with the purpose of impeding their ascent to the spawning grounds the Secretary of
Commerce is hereby authorized and directed to have any and all such unlawful obstructions removed or destroyed.

The quote below indicates that it is doubtful that there was any intent within the White Act to prohibit local, small subsistence fisheries by fish trap or weir:

Sec. 4…It shall be unlawful to fish for, take, or kill any salmon of any species or by any means except by hand rod, spear, or gaff in any of the creeks, streams of rivers of Alaska; or within five hundred yards of the mouth of any such creek, stream, or river over which the United States has jurisdiction, …Provided, That nothing contained herein shall prevent the taking of fish for local food requirements or for use as dog feed.

**Effects of the Proposal**

The use of fyke nets and leads (fish traps and weirs) would allow subsistence users to harvest a “few fish” in a more selective manner in tributaries of Lake Clark. It is not expected that the use of fyke nets and leads would increase the overall harvest, but rather would allow for a selective harvest. Different gear types may affect the efficiency of harvest, but they do not necessarily increase the total subsistence harvest. The use of fyke nets and leads in tributaries of Lake Clark will allow subsistence users to harvest only selected non-salmon fish and/or salmon, would reduce by catch, and could provide a higher quality catch than that obtained from a seine or a set gillnet.

It should be noted that all general Federal subsistence fishery provisions apply to the Bristol Bay Area. The regulation below that prohibits the obstruction of more than one-half the width of any stream with any gear will apply to the use of fyke nets and leads if this proposal is adopted.

\[\text{\$\,27(c)(4) Except as otherwise provided for in this section, you may not obstruct more than one-half the width of any stream with any gear used to take fish for subsistence uses.}\]

The following, from the Bristol Bay Area regulations, will also apply to fyke nets and leads if this proposal is adopted:

\[\text{\$\,27 (i)(5)(iv) You may not take fish from waters within 300 feet of a stream mouth used by salmon.}\]

Lake Clark has numerous tributaries each of which hosts a variety of fish including non-salmon and salmon species. In order to maintain all fish populations, a permit from the Federal in-season manager will be required if the proposal for the use of fyke nets and leads is adopted. This is similar to the communication required between subsistence fishers and the in-season manager for the Batzulnetas fishery. This permit could also be used to report harvests which could be shared with ADF&G to add to their subsistence salmon harvest database.

Subsistence harvest reporting for the Bristol Bay region is outstanding, averaging 85–90% return on permits (ADF&G 2003). This high return rate is a result of ADF&G’s Subsistence Division spending considerable effort, time, and resources implementing the permitting program.

The proponent noted that this proposal may impact recreational users who want to fish in areas where fyke nets and leads are in use. Recreational anglers and subsistence users may target the same areas. Young (2005) reports overlap in area use by both groups.
OSM CONCLUSION

Support Proposal FP08-12 with modification to specify regulations for the use of fyke nets and leads in tributaries of Lake Clark (within the Bristol Bay Area), but not to add fish trap or weir to the list of potentially allowable gear types in the general provisions and not to specify the materials used in their construction.

The modified proposed regulation should read:

**Bristol Bay Area – All Fish**

§ 100.27(i)(5)(vii): Outside the boundaries of any district, you may take salmon by set gillnet only, except that you may also take salmon by spear in the Togiak River, excluding its tributaries.

(D) You may also take salmon by beach seines not exceeding 25 fathoms in length in Lake Clark, excluding its tributaries.

(E) You may also take fish (except rainbow trout) with a fyke net and lead in tributaries of Lake Clark unless otherwise prohibited.

(i) You may only use a fyke net and lead with a permit issued by the Federal in-season manager.

(ii) All fyke nets and leads must be attended at all times while in use.

(iii) All materials used to construct the fyke net and lead must be removed from the water when the fyke net and lead is no longer in use.

The addition of the Federal permit requirement for fyke net and lead necessitates a change in several other Bristol Bay regulations:

§ 100.27 (i)(5) (xiv) You may take salmon only under authority of a State subsistence fishing permit (permits are issued by ADF&G) except when using a Federal permit for fyke net and lead.

§ 100.27 (i)(5)(xv) Only one State subsistence fishing permit for salmon and one Federal permit for use of a fyke net and lead for all fish (except rainbow trout) may be issued to each household per year.

Justification

The Federal definitions of fyke net and lead include fish traps and fences or weirs. The use of fyke nets and leads is a customary and traditional practice. The required permits for use of fyke nets and leads issued by the Federal in-season manager will ensure conservation of fishery resources and timely harvest reports.

LITERATURE CITED


The Interagency Staff Committee (ISC) found the staff analysis for proposal FP08-12 to be complete and accurate. The ISC discussion centered on the proponent’s request that fish traps and weirs be specified in regulation. Some of the ISC felt since the definitions of fyke nets and leads (which are equivalent to fish traps and weirs) are broad and ANILCA allows advances in gear and techniques, there is no need to be specific for this proposal. Others on the ISC felt that specification of materials was a well-considered provision of the original proposal and, therefore, should be thoughtfully considered. The proponent, the Lake Clark National Park Subsistence Resource Commission (SRC), specified that the requested gear type be made from wooden stakes and reiterated that request at its September 21, 2007, meeting. The gear type is a traditional one, use of it would likely be low and a primary intent of the proponent in requesting this gear type appears to be educational (i.e., to teach the younger generation how to construct and use this gear and about the conservation ethic involved). Natural materials would be more environmentally compatible with the surroundings and more compatible with park purposes. In addition, at the Bristol Bay Regional Advisory Council meeting on October 1, 2007, Council members spoke favorably about the benefits of using wooden stakes but, for reasons not made clear, the Council did not include this provision as part of its recommendation.

The ISC also discussed the recommendation of the Council to support the proposal with modification to add the tributaries of Sixmile Lake to the proposal. At its September 21, 2007, meeting, the Lake Clark National Park SRC (the proponent) expressed a desire to add Sixmile Lake to the proposal for consideration by the Council and the Federal Subsistence Board. The OSM analysis does not address Sixmile Lake, as it was not included in the initial proposal, and the Board did not extend a different proposed action for Lake Clark to Sixmile Lake in the prior regulatory cycle. Since the Council is recommending that the tributaries of Sixmile Lake be included, the Board will need to consider the recommendation and respond consistent with ANILCA 805(c).
Introduction: This proposal allows use of fish traps or weirs\(^1\) constructed of wooden stakes as an additional method for take of all species of salmon by federally qualified subsistence users in Lake Clark and its tributaries. Both the Alaska Board of Fisheries and the Federal Subsistence Board (Board) recently took actions to liberalize methods used in subsistence fisheries in Lake Clark. The federal Board approved use of spears, snagging, hand lines, drift gillnets, and beach seining at the January 2007 Board meeting. Discussion at the winter 2007 Bristol Bay Regional Advisory Council (RAC) meeting focused on the RAC’s concerns about improving the overall health of Kvichak River and Lake Clark area sockeye salmon, which was determined by the Alaska Board of Fisheries to be a stock of concern in 2003. Use of a fish weir or trap as harvest methods may increase harvest in small tributaries on discrete stocks, compounding current conservation concerns. Adoption of this proposal would be inconsistent with concerns for sockeye salmon stocks previously expressed by the RAC and the State.

In addition, if adopted, federally qualified fishers would need to use a separate federal subsistence permit and be certain they are standing on federal lands to operate fish traps and weirs (including fyke nets and lead), because these methods are prohibited by State statute.\(^2\) At the urging of federal staff during the fall 2007 meeting, the Lake Clark Subsistence Resource Commission recommended expanding the area that this proposal would apply to include Sixmile Lake and its tributaries. Sixmile Lake is outside of the park boundary and is not adjacent to any park lands, so subsistence users cannot participate in those waters under federal regulations.

Opportunity Provided by State: Salmon may be harvested under state regulations using set gillnets and beach seines with no limit on the amount harvested. To provide additional subsistence opportunity, the Alaska Board of Fisheries liberalized gear types for subsistence harvest beginning in the 2007 season to allow use of spears and beach seines. In 2000 through 2003, the Kvichak River drainage escapement goals were not met and the Amounts Necessary for Subsistence, as determined by the Alaska Board of Fisheries, were not met. During years of poor returns, people may fish more intensively in the Lake Clark area and also in other areas.

Conservation Issues: The Kvichak River sockeye salmon stock was determined by Alaska Board of Fisheries to be a stock of management concern in 2003 and previously as a stock of yield concern in 2000. Such harvest by fish weir or trap could be large enough to raise conservation concerns on individual tributaries because the complete stock status is unknown for all of the tributaries of Lake Clark. The one stock assessment project that estimates passage of

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\(^1\) The proponent originally requested fish traps and weirs. Authorization of a modified proposal is suggested by federal staff in order to allow fyke nets and lead instead, but the federal definition of fyke net and lead includes fish traps and fences or weirs. Thus, if fyke net and lead are allowed, the designated federal official would have to limit the federal permit in order to not allow traps and weirs as a stipulation.

\(^2\) Use of traditional basket traps is currently allowed under state regulations in the form of an educational fishery permit in the Swanson River of Cook Inlet, and fyke nets are allowed as a gear type for subsistence and personal use to target species “other than salmon” in some parts of Alaska.
salmon near the Lake Clark watershed is the counting tower project on the Newhalen River at the outlet of Lake Clark watershed. The 2000-2006 average passage estimate for sockeye salmon entering into Lake Clark is approximately 366,000 fish. The destination, run timing, and spawning distribution of these salmon is unknown. Though the recent average harvest for all subsistence users upstream of the counting towers is about 10,000-20,000 salmon (about 3%-5%), the Department has serious concerns about focused exploitation on any particular components of the Lake Clark watershed. Conservation issues will exist if fish traps or weirs are installed to specifically target salmon in tributaries or lakes that do not have established escapement goals, stock assessment projects, estimated exploitation rates, or established abundance based harvest limits per body of water. Installation of site-specific harvest gear types, which could harvest most or all salmon migrating into a small tributary, is not sound fisheries management. Weirs and fish traps with attached leads that obstruct the navigation channels would likely be the most effective gear types that a user could install in a small tributary, but strategic design and installation of such gear types could effectively limit salmon migration in specific tributaries.

This proposal indicates a weir or trap would be operated to select the best fish for harvest but does not consider potential impacts this sorting will have on fish. Trapping, crowding, and holding fish causes injuries and stress if fish are left in a fish trap for any amount of time, especially in small shallow tributaries where water temperatures may be elevated. Injuries induced by being passed through a trap may result in decreased spawning success depending on the frequency of occurrence. If a trap or weir is installed in an area where the stream constricts, the flow/channel of the stream is concentrated, or at the base of a rapids or a current obstruction, the vast majority of fish attempting to migrate upstream likely could be handled by the federal subsistence users while sorting the weir/traps catch. Also, serial installation of weirs and fish traps in a concentrated area or tributaries may cause localized depletion. Small tributaries likely could not support significant and concentrated harvests. Even moderate harvests from small tributaries with small or unknown salmon returns could result in localized depletion issues. If adopted despite these serious conservation concerns, the Board will need to limit the number of weirs or traps operated on a single stream, establish how this limit among users will be implemented, and determine the number of households that could use a weir or fish trap. Harvest limits by species are needed for each tributary where weirs or fish traps would be operated, based on the best scientific assessment information available for each tributary, and should not be allowed in tributaries where recent stock assessment information is not available.

The Department also has concerns about the impacts weirs and fish traps may have on the habitat of a salmon stream. Driving stakes into the bed of a creek or stream to trap and handle salmon and other species of fish will disturb riparian and river bottom habitat. Installing a weir can cause significant scouring and alter the river channel during high water events. Habitat damage may also occur if fish traps and weirs (including fyke nets) are authorized for use by multiple households.

**Jurisdiction Issues:** Under Section 103(c) of ANILCA, federal regulations do not apply to state or private lands within the exterior boundaries of federal conservation system units. Further, the State owns nearly all submerged lands in navigable waters. Less than 40% of the Lake Clark shoreline is non-federal ownership, including virtually all of the shoreline from Port Alsworth
south along both shores to the Lake’s outlet, along with much of the northwestern shoreline. The State requests that the Office of Subsistence Management provide detailed maps of specifically where federal subsistence users can fish and where federal jurisdiction is claimed and the basis of each claim. These requests for clarification of ownership were most recently documented in the January 2007 Board meetings materials book on page 324 and in the Request for Reconsideration of proposals FP07-06 and FP07-07 submitted to the Board on May 15, 2007. Federal subsistence users who install and operate fish traps in Lake Clark while standing on property that is not federally owned could be cited for violation of State regulations that do not authorize fish traps or weirs.

The Department objects to the proposed expansion to apply this proposal to include Sixmile Lake and its tributaries. Little, if any, of the land or waters are under federal ownership or adjacent to federal land. See attached map. Expanding the application of this proposal to a large area outside of federal jurisdiction will result in federal subsistence users being unnecessarily subject to citation under State regulations with little or no added subsistence harvest benefit.

Other Comments: The Department agrees with the proponent that the proposed usage of a weir or fish trap may impact other user groups. Allowing the installation of a weir or trap for the purpose of harvest will create significant social conflict and allocation issues. Installing a structure such as a weir or trap will preempt other user groups wishing to fish in the vicinity or upstream of the structure. State regulations prohibit fishing within 100 yards of a weir. If consecutive weirs or traps are installed, all accessible and preferred fishing sites may be occupied and prevent other users from fishing in a creek or along the Lake Clark shoreline. This would be especially true if weirs or fish traps are installed in small tributaries which possess limited sections of water where anglers may successfully target and harvest fish.

Fish weirs have been documented to become an attractant to bears. A fish weir or trap that successfully captures, holds, or concentrates salmon in a small tributary could likely be considered a productive feeding ground that will attract bears over time. If this proposal is adopted, there is a great potential to increase interaction with bears.

In addition to displacing other users, altering fish behavior through holding, crowding, and handling trapped fish may impact the success of other users. Weirs and traps do alter fish behavior to different degrees. Weirs that are opened for fish passage for short periods of time tend to make fish congregate and build up behind a weir. Fish passing through a weir or passed by hand out of a fish trap have been observed to be “spooked” and/or stressed. Angler success will likely be impacted if the behavior of the fish they are targeting is altered. Anglers tend to sport fish in the most productive area available which will likely be down stream of a weir or trap. If an angler fishes down stream of a weir or fish trap and his location is deemed too close to the weir or trap by the federal subsistence users, social conflict will likely ensue.

Department Recommendation: Oppose. This proposal further exacerbates conservation concerns, necessitates new federal permits, will intensify needed federal drainage-by-drainage limits and monitoring, and causes subsistence users unnecessary complications due to federal-state jurisdictional claims, without providing a use that is necessary to provide the federal subsistence priority.
Support Proposal FP08-12 with modification. The Lake Clark National Park Subsistence Resource Commission supports the proposal with modifications suggested by the Office of Subsistence Management. As modified, the proposal will allow subsistence fishers to use fykes made from wood stakes in tributaries of Lake Clark and Sixmile Lake.

Lake Clark National Park SRC
FP08-13/14 analysis will be provided separately from the Federal Subsistence Board meeting book.
## FP08-15/16 Executive Summary

### General Description

Proposal FP08-15 requests an expansion of fishing time for the Federal drift gillnet fishery in Subdistricts 4-B and 4-C of the Yukon/Northern Federal Subsistence Fishery Management Area to include the entire weekly regulatory opening(s), instead of just the last 18 hours of each.

*Submitted by: Louden Tribal Council of Galena*

Proposal FP08-16 requests the elimination of the Federal drift gillnet fishery in Subdistricts 4-B and 4-C of the Yukon/Northern Federal Subsistence Fishery Management Area.

*Submitted by: Alaska Department of Fish and Game*

### Proposed Regulation

**FP08-15**

**Yukon-Northern Area—Salmon**

§ 17.27(i)(3)(xv) In Districts 4, 5, and 6, you may not take salmon for subsistence purposes by drift gillnets, except as follows:

(A) In Subdistrict 4-A upstream from the mouth of Stink Creek, you may take king salmon by drift gillnets less than 150 feet in length from June 10 through July 14, and chum salmon by drift gillnets after August 2;

(B) In Subdistrict 4-A downstream from the mouth of Stink Creek, you may take king salmon by drift gillnets less than 150 feet in length from June 10 through July 14.

(C) In the Yukon River mainstem, Subdistricts 4-B and 4-C, with a Federal subsistence fishing permit, you may take Chinook salmon during the last 18-hour period of the weekly regulatory opening(s) by drift gillnets no more than 150 feet long and no more than 35 meshes deep, from June 10 through July 14.

**FP08-16**

**Yukon-Northern Area—Salmon**

§ 17.27(i)(3)(xv) In Districts 4, 5, and 6, you may not take salmon for subsistence purposes by drift gillnets, except as follows:

(A) In Subdistrict 4-A upstream from the mouth of Stink Creek, you may take king salmon by drift gillnets less than 150 feet in length from June 10 through July 14, and chum salmon by drift gillnets after August 2;
## FP08-15/16 Executive Summary

(B) In Subdistrict 4-A downstream from the mouth of Stink Creek, you may take king salmon by drift gillnets less than 150 feet in length from June 10 through July 14.

(C) In the Yukon River mainstem, Subdistricts 4-B and 4-C, with a Federal subsistence fishing permit, you may take Chinook salmon during the last 18-hour period of the weekly regulatory opening(s) by drift gillnets no more than 150 feet long and no more than 35 meshes deep, from June 10 through July 14.

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<th>Support Proposal FP08-15</th>
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<td>Yukon-Kuskokwim Delta Regional Advisory Council Recommendation</td>
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YUKON-KUSKOKWIM DELTA SUBSISTENCE REGIONAL ADVISORY COUNCIL

Oppose Proposal FP08-15

Justification

Creation of this new fishery in Districts Y4-B and Y4-C could negatively impact the lower Yukon fishers over time. The Yukon River Chinook fishery is already fully allocated.

Support Proposal FP08-16

Justification

This is not a traditional fishery and could negatively impact the lower Yukon fishers over time.

WESTERN INTERIOR ALASKA SUBSISTENCE REGIONAL ADVISORY COUNCIL

Support Proposal FP08-15

Justification

Additional time is needed to allow local fishers to explore, find, and utilize viable drift gillnet sites within Federal waters of Subdistricts 4-B and 4-C. There would be no additional harvest because it would be the same qualified fishers fishing meeting their subsistence needs over a wider area. Passage of this proposal would spread the subsistence harvest, reduce the over crowding and combat fishing situation in the areas across from the village of Koyukuk. The window schedule in place provided the necessary passage of salmon for escape and border passage with Canada. The Federal permit system for this fishery provides the necessary harvest monitoring for management. Passage of this proposal would allow qualified customary and traditional users to harvest returning salmon for their subsistence needs.

Oppose Proposal FP08-16

Justification

Based on the Council’s actions on FP08-15, the Council opposes this proposal.

SEWARD PENINSULA SUBSISTENCE REGIONAL ADVISORY COUNCIL

Support Proposal FP08-15

Oppose Proposal FP08-16
Justification

To support the subsistence users in the region.

EASTERN INTERIOR ALASKA SUBSISTENCE REGIONAL ADVISORY COUNCIL

Support Proposal FP08-15

Justification

The Council has addressed conservation concerns in the previous proposals (FP08-13 and FP08-14). People have been using Chinook salmon in this area since people first lived in this area. This is a fair treatment issue; drift gillnets are used already for both commercial and subsistence fisheries in the lower Yukon River. Drift gillnet depth and lengths are already limited in District 4-B and 4-C subsistence fishery. People of 4-B and 4-C need to have the opportunity to explore for fishing sites and save gas money. The Council supports OSM’s staff analysis and preliminary conclusions on this proposal. The Council does not believe that the 4-B and 4-C subsistence fishery with drift gillnets will negatively impact the resource or subsistence users in other areas.

Oppose Proposal FP08-16

Justification

Based on the Council’s action on FP08-15, the Council unanimously rejected this proposal. Please reference the Council’s justification on FP08-15 for the Council’s reasoning.
ISSUES

Proposal FP08-15, submitted by the Louden Tribal Council of Galena, requests an expansion of fishing time for the Federal drift gillnet fishery in Subdistricts 4-B and 4-C of the Yukon/Northern Federal Subsistence Fishery Management Area to include the entire weekly regulatory opening(s), instead of just the last 18 hours of each.

Proposal FP08-16, submitted by the Alaska Department of Fish and Game, requests the elimination of the Federal drift gillnet fishery in Subdistricts 4-B and 4-C of the Yukon/Northern Federal Subsistence Fishery Management Area.

DISCUSSION

The proponent for FP08-15 states that adoption of the proposal would reduce competition for Federal subsistence drift gillnet fishing sites across from the village of Koyukuk in Subdistrict 4-A; allow Federally qualified users from Subdistricts 4-B and 4-C more time to explore; find and utilize viable drift gillnets sites as “the time period is too short” with the current 18-hour openings; and reduce fuel consumption, costs, and safety concerns by traveling shorter distances.

The proponent for FP08-16 claims that 1) the drift gillnet fishery in Subdistricts 4-B and 4-C is not a traditional fishery and 2) not consistent with the definition of customary and traditional use in regulations, namely: “Customary and traditional use means a long-established, consistent pattern of use, incorporating beliefs and customs which have been transmitted from generation to generation. This use plays an important role in the economy of the community” (50 CFR 100.4). The proponent made similar claims when opposing Proposal FP05-04, claims which the Federal Subsistence Board considered and rejected when it established the fishery in January 2005, as under the Federal Subsistence Management Program, it is the use of a resource that is determined to be customary and traditional, not the method or means of harvest. Residents (and their antecedents) of Subdistricts 4-B and 4-C have customarily and traditionally used salmon for generations, and this is recognized through a positive customary and traditional use finding for salmon by residents of the Yukon River drainage and Stebbins.

The proponent also states that the low level of participation in this fishery in 2005 and 2006 is further justification for its elimination.

Existing Federal Regulation

Yukon-Northern Area—Salmon

§ .27(i)(3)(xv) In Districts 4, 5, and 6, you may not take salmon for subsistence purposes by drift gillnets, except as follows:

(A) In Subdistrict 4-A upstream from the mouth of Stink Creek, you may take king salmon by drift gillnets less than 150 feet in length from June 10 through July 14, and chum salmon by drift gillnets after August 2;
(B) In Subdistrict 4-A downstream from the mouth of Stink Creek, you may take king salmon by drift gillnets less than 150 feet in length from June 10 through July 14.

(C): In the Yukon River mainstem, Subdistricts 4-B and 4-C, with a Federal subsistence fishing permit, you may take Chinook salmon during the last 18-hour period of the weekly regulatory opening(s) by drift gillnets no more than 150 feet long and no more than 35 meshes deep, from June 10 through July 14.

Proposed Federal Regulation: FP08-15

Yukon-Northern Area—Salmon

§.27(i)(3)(xv) In Districts 4, 5, and 6, you may not take salmon for subsistence purposes by drift gillnets, except as follows:

(A) In Subdistrict 4-A upstream from the mouth of Stink Creek, you may take king salmon by drift gillnets less than 150 feet in length from June 10 through July 14, and chum salmon by drift gillnets after August 2;

(B) In Subdistrict 4-A downstream from the mouth of Stink Creek, you may take king salmon by drift gillnets less than 150 feet in length from June 10 through July 14.

(C): In the Yukon River mainstem, Subdistricts 4-B and 4-C, with a Federal subsistence fishing permit, you may take Chinook salmon during the last 18-hour period of the weekly regulatory opening(s) by drift gillnets no more than 150 feet long and no more than 35 meshes deep, from June 10 through July 14.

Proposed Federal Regulation: FP08-16

Yukon-Northern Area—Salmon

§.27(i)(3)(xv) In Districts 4, 5, and 6, you may not take salmon for subsistence purposes by drift gillnets, except as follows:

(A) In Subdistrict 4-A upstream from the mouth of Stink Creek, you may take king salmon by drift gillnets less than 150 feet in length from June 10 through July 14, and chum salmon by drift gillnets after August 2;

(B) In Subdistrict 4-A downstream from the mouth of Stink Creek, you may take king salmon by drift gillnets less than 150 feet in length from June 10 through July 14.

(C): In the Yukon River mainstem, Subdistricts 4-B and 4-C, with a Federal subsistence fishing permit, you may take Chinook salmon during the last 18-hour period of the weekly regulatory opening(s) by drift gillnets no more than 150 feet long and no more than 35 meshes deep, from June 10 through July 14.
Relevant State Regulations

5 AAC 01.220. LAWFUL GEAR AND GEAR SPECIFICATIONS. (a) Salmon may be taken only by gillnet, beach seine, a hook and line attached to a rod or pole, handline, or fish wheel, subject to the restrictions set out in this section, 5 AAC 01.210, and 5 AAC 01.225 – 5 AAC 01.249...

(d) In District 4, commercial fishers may not take salmon for subsistence purposes during the commercial salmon fishing season by gillnets larger than six-inch mesh after a date specified by emergency order issued between July 10 and July 31.

(e) In Districts 4, 5, and 6, salmon may not be taken for subsistence purposes by drift gillnets, except as follows:

1) In Subdistrict 4-A upstream from the mouth of Stink Creek, king salmon may be taken by drift gillnets from June 10 through July 14, and chum salmon may be taken by drift gillnets after August 2;

2) In Subdistrict 4-A downstream from the mouth of Stink Creek, king salmon may be taken by drift gillnets from June 10 through July 14;

3) No person may operate a drift gillnet that is more than 150 feet in length during the seasons described in (1) and (2) of this section.

Extent of Federal Public Lands/Waters

For purposes of this discussion, the phrase “Federal public waters” is defined as those waters described under 50 CFR 100.3. The Federal public waters addressed by this proposal are those portions of the Yukon River located within, or adjacent to, the external boundaries of the Nowitna National Wildlife Refuge (NWR) and the northern unit of the Innoko NWR within fishing Subdistricts 4-B and 4-C of the Yukon/Northern Federal Subsistence Fishery Management Area, including approximately 74 river miles of the Nowitna NWR and 16 river miles of the Innoko NWR (Map 1).

Customary and Traditional Use Determination

The customary and traditional use determination for Yukon River drainage salmon is:

Salmon, other than fall chum salmon – residents of the Yukon River drainage and the community of Stebbins.

Regulatory History

In March 2003, the Western Interior Alaska Regional Advisory Council submitted fisheries proposal FP04-05 (FWS 2003) to the Federal Subsistence Board (Board), which requested that the subsistence drift gillnet fishery on the Yukon River include Subdistricts 4-B and 4-C. The proposal requested that regulations allow Chinook salmon to be harvested by drift gillnets less than 150 feet in length from June 10 through July 14, and chum salmon to be harvested by drift gillnets after August 2. The subsistence drift gillnet fishing area in Subdistrict 4-A is about 30 miles downriver from Galena and is primarily utilized by the residents of the village of Koyukuk. However, fishers from Huslia, Galena, and Ruby also travel to Subdistrict 4-A to drift gillnet fish because of the lack of legal drift gillnet fishing opportunities near their communities. The Western Interior Alaska Regional Advisory Council argued that spreading the fishing
Subdistricts 4B and 4C

Location of Federal Drift Gillnet Fishery

Federally Managed Waters

State Waters

Innoko National Wildlife Refuge

Nowitna National Wildlife Refuge

Yukon River

Koyukuk

Nulato

Galena

Ruby

Drift Gillnet Fishing Allowed

No Drift Gillnet Fishing

FP08-15/16 Map 1

Federal Subsistence Board Meeting
pressure to other areas would help relieve the competition for the few desirable fishing sites in Subdistrict 4-A, especially near the village of Koyukuk, without increasing the harvest of Chinook salmon. Federal and State fisheries managers expressed concerns that establishing a Subdistrict 4-B and 4-C drift gillnet fishery had the potential for harvest expansion beyond the historic level and could lead to a shift in the stocks harvested (i.e. more Canada-bound fish). During deliberation at its Fall 2003 meeting, the Western Interior Alaska Regional Advisory Council supported its proposal, with modification, to include the conservation measure of limiting nets used for subsistence salmon fishing to a maximum of 7-inch stretch mesh, no deeper than 35 meshes. The Eastern Interior Alaska and Yukon-Kuskokwim Delta Regional Advisory Councils opposed the original proposal to expand the use of drift gillnets. The proposal and the Western Interior Alaska Regional Advisory Council’s recommendation were considered, but rejected, by the Board in December 2003.

In March 2004, the Western Interior Alaska Regional Advisory Council submitted a similar fisheries proposal (FP05-04) to the Board, which again requested expansion of the subsistence drift gillnet fishery on the Yukon River to include Subdistricts 4-B and 4-C, as well as District 5 (FWS 2005). At its Fall 2004 meeting, the Western Interior Alaska Regional Advisory Council recommended that the proposal only apply to Subdistricts 4-B and 4-C; that it be limited to the harvest of Chinook salmon from June 10 through July 14; the harvest of chum salmon after August 2; and that drift gillnets could only be used during the final 18 hours of the Federal subsistence fishing periods. The Western Interior Alaska Regional Advisory Council reduced what they initially sought in their proposal to alleviate some of the concerns of Federal and State fisheries managers and the Eastern Interior Alaska Regional Advisory Council.

In January 2005, the Board adopted FP05-04 with modification to allow the harvest of only Chinook salmon (and not chum salmon) by drift gillnet in the Federal public waters of Subdistricts 4-B and 4-C during the final 18 hours of the weekly regulatory openings under a Federal subsistence fishing permit.

Current Events/Harvest History

The drift gillnet fishery in 4-B and 4-C has been in place since 2005. In 2005, 70 permits were issued and 9 permit holders fished for a total of 60 hours, resulting in a total harvest of 54 Chinook salmon (Table 1). The catch per hours fished for Chinook salmon was 0.9 (Holder et al. 2006). Feedback from Federal subsistence fishers indicated that productive drifting spots had not yet been located within the Federal public waters of Subdistricts 4-B and 4-C, but fishing effort would likely increase if productive drift sites were found. The 2005 Chinook salmon harvest in the Federal drift gillnet fishery in 4-B and 4-C was not sufficient for ADF&G to conduct a special genetic sampling program which had been planned.

Table 1. Subdistricts 4-B and 4-C summary of Federal permits issued, permittee post-season reporting, effort and harvest, 2005.

<table>
<thead>
<tr>
<th>Residence</th>
<th>Number of permits issued</th>
<th>Number of permits returned</th>
<th>Total permits fished</th>
<th>Total hours fished</th>
<th>Harvest</th>
</tr>
</thead>
<tbody>
<tr>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td>Chinook salmon</td>
</tr>
<tr>
<td>Galena</td>
<td>51</td>
<td>47</td>
<td>5</td>
<td>33</td>
<td>33</td>
</tr>
<tr>
<td>Ruby</td>
<td>13</td>
<td>12</td>
<td>3</td>
<td>22</td>
<td>21</td>
</tr>
<tr>
<td>Tanana</td>
<td>5</td>
<td>4</td>
<td>1</td>
<td>5</td>
<td>0</td>
</tr>
<tr>
<td>Koyukuk</td>
<td>1</td>
<td>1</td>
<td>0</td>
<td>0</td>
<td>0</td>
</tr>
<tr>
<td>Total</td>
<td>70</td>
<td>64</td>
<td>9</td>
<td>60</td>
<td>54</td>
</tr>
</tbody>
</table>

Source: Holder, R. et al., 2006
For 2005, the preliminary ADF&G Chinook salmon post-season subsistence harvest estimates, encompassing all gear types, included 2,864 by Galena residents and 1,193 by Ruby residents for a total of 4,057 salmon (Busher et. al. 2007). A high proportion of the Galena harvest came from Subdistrict 4-A drift gillnetting. The 54 Chinook salmon harvested by Galena and Ruby Federally qualified subsistence users with drift gillnets in Subdistricts 4-B and 4-C represented only 1.33% of the total estimated harvest.

In 2006, interest in this Federal subsistence fishing opportunity declined. Only 18 permits were issued: 16 to Galena residents, one to a Ruby resident, and one to a Koyukuk resident (Table 2). Of the 18 permittees who reported their fishing activity, 13 people did not fish; and five fished approximately 18 hours, resulting in the harvest of 19 Chinook and 11 chum salmon. The catch per hours fished for Chinook salmon was 1.7 (Holder et al., 2007).

<table>
<thead>
<tr>
<th>Residence</th>
<th>Number of permits issued</th>
<th>Number of permits returned</th>
<th>Total permits fished</th>
<th>Total hours fished</th>
<th>Chinook salmon</th>
<th>Chum salmon and other spp.</th>
</tr>
</thead>
<tbody>
<tr>
<td>Galena</td>
<td>16</td>
<td>16</td>
<td>4</td>
<td>10</td>
<td>4</td>
<td>0</td>
</tr>
<tr>
<td>Ruby</td>
<td>1</td>
<td>1</td>
<td>1</td>
<td>8</td>
<td>15</td>
<td>11</td>
</tr>
<tr>
<td>Koyukuk</td>
<td>1</td>
<td>1</td>
<td>0</td>
<td>0</td>
<td>0</td>
<td>0</td>
</tr>
<tr>
<td>Total</td>
<td>18</td>
<td>18</td>
<td>5</td>
<td>18</td>
<td>19</td>
<td>11</td>
</tr>
</tbody>
</table>

Source: Holder, et al., 2007

For 2006, the preliminary ADF&G Chinook salmon post-season subsistence harvest estimates, encompassing all gear types, included approximately 2,380 by Galena residents and 304 by Ruby residents for a total of 2,694 salmon (Busher pers. comm.). The 19 Chinook salmon harvested by Galena and Ruby Federally qualified subsistence users with drift gillnets in Subdistricts 4-B and 4-C represented only 0.7% of the total estimated harvest.

In 2007, the State and Federal regular subsistence fishery in Subdistricts 4-B and 4-C was liberalized from two 48-hour openings per week to one 5-consecutive days opening per week beginning on July 1. In response, the Federal in-season manager liberalized the Federal drift gillnet fishing time (final 18 hours of the weekly regulatory openings) by a similar, pro-rated amount to two 22-hour periods per opening. Effective July 6, the State and Federal regular subsistence fishery in Subdistricts 4-B and 4-C was liberalized to 7 days per week and the Federal drift gillnet fishing time was liberalized by a similar pro-rated amount to two 31-hour periods for the week of July 8.

In 2007, the interest in this Federal subsistence fishing opportunity continued to be exploratory. A total of 12 permits were issued (8 Galena, 1 Koyukuk, and 3 Ruby) with 6 permits returned as of the end of July, with a reported harvest of 13 Chinook salmon in 8.5 hours of fishing. The low harvest numbers and the reality that not all drift gillnet caught salmon are bound for Canada, minimized any preconceived notions about the impact of this fishery on U.S./Canada treaty obligations.

The preliminary 2007 ADF&G Chinook salmon post-season subsistence harvest estimates will not likely be available until mid-summer 2008.
In 2007, ADF&G conducted a directed commercial fishery for Yukon River Chinook salmon (which has been designated as a stock of yield concern since 2000) with a harvest of approximately 33,600 Chinook salmon through August 5.

**Effects of the Proposals**

**FP08-15**

Adopting this proposal would provide additional harvest opportunities to Federally qualified subsistence users by giving them additional time to explore, find, and utilize productive drift gillnet fishing sites. It would also align the subsistence drift gillnet fishing time period to be the same as other legal subsistence gear fishing times in Subdistricts 4-B and 4-C.

Drift gillnet fishing times would increase by 60 hours per week (from 36 to 96 hours) in Subdistricts 4-B and 4-C under the current windowed subsistence fishing schedule. However, no increase is anticipated in the combined harvest of Chinook salmon in Subdistricts 4-A, 4-B and 4-C, as Federally qualified users would likely only be changing the location(s) of where they fish, and not the amount of Chinook needed and harvested.

Should (more) viable sites for drift gillnet fishing be found in Subdistricts 4-B and 4-C, fishing pressure and competition for the few desirable fishing sites near, and downstream of, the village of Koyukuk in Subdistrict 4-A, may decrease. Federally qualified subsistence users from, and fishing in, Subdistricts 4-B and 4-C would be able to utilize their time and resources more efficiently by being able to use drift gillnets closer to their own communities and, in so doing, consume less fuel due to shorter trips. In addition, safety concerns of 4-B and 4-C subsistence fishers associated with the time and distance required traveling to productive sites in District 4-A would be reduced by being able to fish closer to their home villages.

Aligning the drift gillnet fishing time with the other legal subsistence gear fishing times will likely result in less confusion by fishers and less administrative actions by the Federal In-season Manager.

The Federal In-season Manager will continue to have the authority to make in-season adjustments in fishing time and gear types in response to Chinook salmon run strength.

**FP08-16**

Adopting this proposal would eliminate the Federal subsistence drift gillnet fishery in Subdistricts 4B and 4-C, and negate the Board’s January 2005 action establishing the fishery. Federally qualified subsistence users in Subdistricts 4-B and 4-C would no longer be able to use fishing gear that is legal to use in Districts 1, 2 and 3 and adjoining Subdistrict 4-A.

**OSM CONCLUSIONS**

**Support** Proposal FP08-15

**Oppose** Proposal FP08-16
Justification

FP08-15

The Chinook salmon subsistence harvest in the Federal drift gillnet fishery in Subdistricts 4-B and 4-C was extremely low in both the 2005 and 2006 seasons. The primary management concerns with the expansion of the drift gillnet fishery into Subdistricts 4-B and 4-C: a significant potential for harvest expansion beyond the historic level and the potential shift of stocks harvested (i.e. more Canada-bound fish) have not materialized. Aligning the drift gillnet fishing time with the other legal subsistence gear fishing times reduces confusion and provides additional harvest opportunities to Federally qualified subsistence users. It also provides additional time to explore for, find and utilize viable drift gillnets sites. No increase is anticipated in the combined harvest of Chinook salmon in Subdistricts 4-A, 4-B and 4-C. The Federal manager will continue to have the authority to make in-season adjustments in fishing time and gear types in response to Chinook salmon run strength.

FP08-16

Eliminating the Federal subsistence drift gillnet fishery in Subdistricts 4-B and 4-C is not justified. The proponent’s two claims that 1) the drift gillnet fishery in Subdistricts 4-B and 4-C is not a traditional fishery and 2) not consistent with the definition of customary and traditional use in regulations (50 CFR 100.4), were considered and rejected by the Federal Subsistence Board when it established the fishery in January 2005, as it is the use of a resource that is determined to be customary and traditional, not the method or means of harvest. The low participation rate by Federally qualified users in 2005 and 2006 is not a valid reason to eliminate the fishery.

LITERATURE CITED


Bushier, William H., 2007. Personal communication: email. ADF&G, Anchorage, AK.


The Interagency Staff Committee found the OSM staff analysis to be a complete and accurate evaluation of the proposals and the recommendations of the Western Interior, Eastern Interior and Seward Peninsula Regional Advisory Councils to be consistent with ANILCA 805(c). However, the recommendation of the Yukon-Kuskokwim Delta Council on these proposals could be considered inconsistent with ANILCA 805(c) in terms of being detrimental to the continuation of subsistence uses.
Alaska Department of Fish and Game
Comments to the Federal Subsistence Board

FP08-15 & FP08-16 YUKON GILLNET MESH AND GILLNET DEPTH RESTRICTIONS

Introduction: FP08-15 would liberalize hours allowed for the federal subsistence drift gillnet fishery in Subdistricts 4-B and 4-C of the Yukon River. The intent of proposal FP08-15 is to allow more federal subsistence fishermen to fish closer to home and alleviate competition between user groups and gear types through expanding the number of hours to fish. The proponent of the proposal states allowing more time to fish will allow people to explore, find, and utilize viable drift gillnet sites.

FP08-16 would eliminate the recently implemented federal subsistence drift gillnet fishery in Subdistricts 4-B and 4-C of the Yukon River because it was not a traditional fishery, was not “[a] long-established, consistent pattern of use, incorporating beliefs and customs which have been transmitted from generation to generation,” and did not play “an important role in the economy of the community.” State regulations allowed a similar fishery to take place in the early 1970s but were repealed because there was little to no participation.

Impact on Subsistence Users. The creation in 2005 of the federal subsistence drift gillnet fishery in Subdistricts 4-B and 4-C of the Yukon River by the Federal Subsistence Board (Board) incorrectly expanded fishing opportunity on a fully utilized stock classified as a yield concern. The Alaska Board of Fisheries recently reviewed this stock of concern designation and extended it. Additional liberalization of the federal subsistence drift gillnet fishery could increase competition with traditional subsistence users and customary fishing sites. State and federal subsistence fisheries harvests may move between districts and between drift gillnets, set gillnets, and fish wheels in State waters and waters under federal subsistence jurisdiction. Continuing this unnecessary divergence and liberalization of state regulations creates confusion for users, administrative and enforcement burdens, regulatory complexity, and complicates management. Experience with the fishery has shown that drift gillnets are not efficient or practical to use in this area, and allowing the use of set nets and fish wheels amply provides a meaningful federal subsistence priority. Concerns for potential impacts to other users, Canadian Chinook salmon stocks, and fisheries management appear to be the reasons the Y-K Delta and Eastern Interior RACs, Alaska Board of Fisheries, YRDFA, and the Department originally opposed this fishery. The federal Board made restrictive modifications to address some of the voiced concerns at the 2005 federal Board meeting. Further liberalization of this fishery will be in conflict with the concerns addressed during the federal Board’s modifications made in 2005.

Opportunity Provided by State: Salmon may be harvested under state subsistence regulations throughout Subdistricts 4-B and 4-C in the Yukon River during two 48-hour periods per week from June 15 through September 30 as established by emergency order. In addition to the 48-hour State subsistence fishing periods, the State subsistence fishery is open during commercial fishing periods but not during the 24 hours prior to the opening of the commercial fishing season. The State subsistence fishing periods are normally linked to abundance or commercial fishing periods and are conducted based on a schedule implemented chronologically, which is consistent with migratory timing as the salmon run progresses upstream.
The legal gear for the State subsistence salmon fishery in Subdistricts 4-B and 4-C include fish wheels, hand line, gillnet, and beach seine. There are no household harvest limits for the State subsistence fisheries. Amounts reasonably necessary for subsistence (5AAC 01.236 (b)), as determined by the Alaska Board of Fisheries, have been met for Chinook salmon in the Yukon River drainage for 8 of the last 10 years (below ANS in 2000 and 2002). The Alaska Department of Fish and Game (Department) recognizes that some members of the public and one Regional Advisory Council have expressed their interest in developing the drift gillnet fishery on at least three occasions.

Conservation Issues: The State is very concerned about potential biological impacts caused by changes in stock composition of harvests taken by a new gear type. The 98 salmon harvested (86 Chinook and 12 chum salmon) during the 2005 through 2007 federal subsistence drift gillnet fishery in 4-B and 4-C likely did not impact any particular stock nor the overall health of the Yukon River Chinook salmon resource. The 9 federally-permitted drift gillnets fished in the Subdistricts 4-B and 4-C during 2005 spent a total of 60 hours to harvest 55 salmon. The 5 federally-permitted drift gillnets fished in the Subdistricts 4-B and 4-C during 2006 spent a total of 18 hours to harvest 30 salmon. The 6 federally-permitted drift gillnets fished in the Subdistricts 4-B and 4-C during 2007 spent a total of 8.5 hours to harvest 13 salmon. Although, this fishery is new, full development of this fishery could potentially impact Chinook salmon stocks, and these concerns were presented on the record by the Department and the Board at the 2004 and 2005 Board meeting.

Use of drift gillnets may not increase the overall subsistence harvest, but this gear type could eventually change the composition of stocks harvested. Stationary set gillnet and fish wheel gear likely harvest more local Chinook salmon stocks, while mobile drift gillnet gear will likely harvest more Canadian origin Chinook salmon stocks. This observation is common Traditional Ecological Knowledge along the Yukon River and should be appropriately accepted as the best available information. Drift gillnet gear may also shift the timing of harvest to earlier in the run than traditional gear currently in use, thus increasing the harvest of Canadian bound Chinook salmon. In addition, federal regulations allowing the sale of subsistence caught salmon may result in increased harvest using a new gear type. Therefore, this fishery continues to be inconsistent with conservation of natural and healthy populations of fish and wildlife and increases complexity of the regulations. While there is little hard information or specific data upon which to judge the potentially significant effect of proposal FP08-15 due to harvest expansion beyond the historical level and potential shift of stocks harvested, there is no basis for a conclusion that no future impacts will develop if this fishery is liberalized.

Although poor runs occurred from 1998-2000, the Yukon River Chinook salmon stocks are not classed as either a conservation concern or a management concern. The Yukon River Chinook salmon stock is designated as a stock of yield concern. In all years, except for the very poor Chinook salmon run in 2000, there has been reasonable opportunity for subsistence fishers to meet amounts necessary for subsistence. A majority of the Yukon River Chinook salmon escapement goals have been met or exceeded since 2000. Specifically, the agreed-to escapement objective for the Canadian mainstem has been met every year since 2000, except for 2007, with 2001, 2003 and 2005 being the three highest spawning escapement estimates on record. Escapement goals in the Chena and Salcha rivers have been met or exceeded annually since 2000.
with escapement levels twice that of the upper end of the goals in the Chena River in 2003 and in the Salcha River in 2001, 2003 and 2004.

**Jurisdiction Issues:** Maps are needed to show the boundaries within which federal regulations are claimed to apply, and we request the justification for claiming those boundaries. A large percentage of the lands adjacent to the Yukon River are state or private lands, on which federal subsistence users cannot stand to participate in federal fisheries. The Department continues to request correction of the general map of the Yukon River contained in the federal staff analysis which is labeled “Federally Managed Waters.” This label incorrectly implies the federal government manages more than federal subsistence fisheries. The State of Alaska manages for the sustainability of fish, including subsistence, commercial, sport, and personal use fisheries, in all waters except where waters are closed to nonfederally qualified subsistence users. The State also manages other uses of and activities in these waters.

**Other Issues for Users and Management.** The proponent of FP08-15 indicates adoption of this proposal will reduce fuel consumption and competition among subsistence users near the village of Koyukuk located in Subdistrict 4-A. Depending on where drift areas may be found in waters applicable to this regulation, there may be little reduction in fuel usage. There may also still be “crowding” where a good fishing site is found, contrary to the intent of FP08-15 to reduce crowding issues near a community. Numerous subsistence salmon fishers utilizing a specific portion of a river near their home is not unique. There are several locations from the mouth into Canada where drift gillnet, set gillnet, and fish wheel sites are limited and entire villages take turns fishing these sites. Eliminating this fishery will assist in simplifying regulations which will reduce confusion among subsistence fishermen and enforcement.

The federal Board and the Alaska Board of Fisheries carefully considered proposals to develop similar drift gillnet fisheries in Subdistricts 4-B and 4-C in 2003 and 2004 and opposed them based on many concerns, including those described above. There is nothing new that justifies increasing the fishery time by 166%. The intent of FP08-15 (same fishing periods as other subsistence fishing gear types) has been before the federal Board twice before in previous proposals FP04-05 and FP05-04 and was clearly rejected.

Liberalizing this fishery may increase user conflicts, contribute to further development of patchwork regulations that are only applicable to scattered stretches of Yukon River waters, increase difference in federal and state regulations which impacts management coordination, increase risk of reallocation of harvests between users, and may have negative impacts to existing fisheries including subsistence fishers farther upriver and on other user groups along the river.

Eliminating this fishery would result in little to no change to the subsistence fishery. Based on permits issued and reports prepared by the federal program, very few people make use of this fishery and very few fish are harvested. Interest in the fishery has declined rapidly, almost certainly as a result of the difficulties and low catch rates involved in the fishery. This is an extremely difficult area to fish and most fishers find it preferable to fish at the upper end of District 4-A where drift gillnetting is legal. Most stationary gear sites are already occupied by set nets and fish wheels. While the drift gillnet gear in this area might provide some opportunity
for new fishers or transient fishers with a shorter history of participation in subsistence fishing in Subdistricts 4-B and 4-C, it does not provide an opportunity for efficient and cost effective participation characteristic of subsistence use, and elimination of the drift gill net fishery will not impact the established subsistence fishery.

Elimination of this fishery will also address concerns for expanding a fishery using a new gear type into other areas or long established fishing sites which could result in direct competition with other subsistence gear types and social conflict. Fishing a drift gillnet downriver of a productive traditional set gillnet or fish wheel site will likely result in a reallocation of fish from one gear type to another.

Current regulations are based on traditional fishing patterns and gear types used; and subsistence fishing time is based on the historical gear types utilized. Within a fully allocated resource, if one fishery user group receives a significant liberalization or if one fishery user group significantly increases harvest potential, fishery managers must consider decreasing overall subsistence fishing time to account for increased efficiency and changes in stocks harvested. Reallocating harvest potential to a new gear type may change traditional fishing patterns. If participation and harvest levels remain near the 2005-2007 levels, it is unlikely the impacts of the drift gillnet fishery will impact other users or the resource.

**Department Recommendation:** Oppose FP08-15, which would liberalize this fishery. Support FP08-16, which would eliminate this fishery.
FP08-15

**Oppose.** The Lower Yukon Fish and Game Advisory Committee opposes the proposal because of additional pressure on the fishery and impact on the lower river users.

*Lower Yukon Fish and Game Advisory Committee*

**No Action.** (OSM Note: Without consensus, the YRDFA Board does not take action.) Some people felt that expanding the time for drift gillnets in 4-B and 4-C would not be fair to other users in the lower river who have less time to fish. Others felt that fishers in regions such as this where it is hard to fish should be allowed additional time, as in Koyukuk and Eagle, and that this would allow fishers additional time to locate fishing locations, which people have had great difficulty doing so far.

*Yukon River Drainage Fisheries Association*

FP08-16

**Support.** The Lower Yukon Fish and Game Advisory Committee supports the proposal because this was not a traditional fishery.

*Lower Yukon Fish and Game Advisory Committee*

**Oppose.** The Yukon River Drainage Fisheries Association opposes this proposal [FP08-16]. People should be allowed to use the most efficient gear – drift gillnets – in areas where it is more difficult to fish to allow for a reasonable subsistence opportunity. Since the number of fish harvested has been low, this does not pose a conservation concern.

*Yukon River Drainage Fisheries Association*
### FP08-17 Executive Summary

#### General Description
Proposition FP08-17 requests that in the Yukon River drainage community elders 60 years of age and older who are participating in salmon fishing not be subject to the windowed subsistence fishing schedules and therefore be able to subsistence fish 24 hours per day, 7 days per week. The proposal also includes the provision that the elder may be assisted by one individual less than age 60.

Submitted by: Yukon River Drainage Fisheries Association

#### Proposed Regulation

**Yukon-Northern Area—Salmon**

§ ___.27 (i)(3)(ii) For the Yukon River drainage, Federal subsistence fishing schedules, openings, closings, and fishing methods are the same as those issued for the subsistence taking of fish under Alaska Statutes (AS 16.05.060), unless superseded by a Federal Special Action.

(A) Elders who are age 60 or older and are participating in the fishing activity themselves are not subject to the windowed fishing schedule, as set out in the Alaska Administrative Code (5 AAC 01.210(b')). One individual less than age 60 may assist one or more elders age 60 or older with their fishing activity.

*Note: The reference to the Alaska Administrative Code in the original YRDA proposal was not specific to subsection (b), but conversations with the proponent have further clarified that the intent of the proposal was to exempt elders from the windowed fishing schedule and not from other fishing closures around commercial openings (Robbins-Gisclair 2007, pers. comm.).

#### OSM Preliminary Conclusion
Following the Council meetings, the OSM Preliminary Conclusion was revised. See the OSM Conclusion below and the addendum following the analysis.

#### OSM Conclusion
Support Proposal FP08-17 with modification to include the following provisions: 1) the exemption may be discontinued through Federal Special Action by the Federal in-season manager; 2) only apply to fishing with set gillnets; 3) require that the elder and the assistant be Federally qualified subsistence users; 4) the elder must be in the boat when the net is being set, checked, or retrieved; 5) elders must have identification indicating their age and residency in their possession; 6) assistants must have identification in their possession indicating residency; and 7) the set gillnet must be labeled with the elder’s first initial, last name, and address.

#### Yukon-Kuskokwim Delta Regional Advisory Council Recommendation
Support Proposal FP08-17 with modification to eliminate reference to the allowance of only one assistant less than age 60 and add that the exemption may be temporarily discontinued by the Federal in-season manager if there were substantial concerns raised by real-time, in-season run returns.

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YUKON-KUSKOKWIM DELTA SUBSISTENCE REGIONAL ADVISORY COUNCIL

Support Proposal FP08-17 with modification to eliminate reference to the allowance of only one assistant less than age 60 and add that the exemption may be temporarily discontinued by the Federal in-season manager if there were substantial concerns raised by real-time, in-season run returns.

The modified regulation should read:

(A) Elders who are age 60 or older and are fishing under Federal regulations themselves, and those directly assisting the Elders are not subject to the windows fishing schedule as set out in Alaska Administrative Code (5AAC 01.21(b^)). This exemption may be temporarily discontinued by the Federal In-season manager only if warranted through substantial concerns raised by real-time, In-season run returns.

Justification

One of the greatest concerns often expressed to the RAC is the loss of cultural integrity brought about by the increasing level and complexity of rules and regulations being put into place on our people, especially the Elders, to personally engage in customary and traditional subsistence use(s), and is increasingly conducive to inhibiting the passing of their knowledge of this use to the younger generation. The extra conditions listed by the OSM review committee in their modification reflect additional burden, are unnecessary, or redundant.

Federal subsistence regulations are supposed to (or should) work towards conserving and encouraging these inter-generational interactions, rather than promote higher levels of cultural assimilation. Providing this exemption would be a large step towards reversing this trend, give Elders a level of respect and recognition they deserve, and promote the passing on of subsistence use knowledge between elders and youth of the Yukon River drainage.

WESTERN INTERIOR ALASKA SUBSISTENCE REGIONAL ADVISORY COUNCIL

Oppose Proposal FP08-17.

Justification

The Council opposed the proposal because: (1) current subsistence needs and physical support is already being provided the elders who want to fish, (2) the proposal with modifications from the Yukon-Kuskokwim Delta and Eastern Interior Regional Councils would do away with the windowed schedule, (3) passage of this proposal would be difficult and burdensome for law enforcement, and (4) it may increase animosity between fishers across the drainage. With the growing concern over the Yukon River salmon stocks, the Council feels the window schedule is one of the few management tools to address this concern. Allowing elders across the drainage to ignore the window schedule, could potentially do further damage to the salmon stocks. The initial concept was based on good intentions but a closer look and
the proposed modifications, passage of this proposal would open Pandora’s Box and possible abuse of resource.

SEWARD PENINSULA SUBSISTENCE REGIONAL ADVISORY COUNCIL

Support Proposal FP08-17 with modification to eliminate reference to the allowance of only one assistant less than age 60 and add that the exemption may be temporarily discontinued by the Federal in-season manager if there were substantial concerns raised by real-time, in-season run returns.

The modified regulation should read:

(A) Elders who are age 60 or older and are fishing under Federal regulations themselves, and those directly assisting the Elders are not subject to the windows fishing schedule as set out in Alaska Administrative Code (5AAC 01.21(b)). This exemption may be temporarily discontinued by the Federal In-season manager only if warranted through substantial concerns raised by real-time, In-season run returns.

Justification

One of the greatest concerns often expressed to the RAC is the loss of cultural integrity brought about by the increasing level and complexity of rules and regulations being put into place on our people, especially the Elders, to personally engage in customary and traditional subsistence use(s), and is increasingly conducive to inhibiting the passing of their knowledge of this use to the younger generation. The extra conditions listed by the OSM review committee in their modification reflect additional burden, are unnecessary, or redundant.

Federal subsistence regulations are supposed to (or should) work towards conserving and encouraging these inter-generational interactions, rather than promote higher levels of cultural assimilation. Providing this exemption would be a large step towards reversing this trend, give Elders a level of respect and recognition they deserve, and promote the passing on of subsistence use knowledge between elders and youth of the Yukon River drainage.

EASTERN INTERIOR ALASKA SUBSISTENCE REGIONAL ADVISORY COUNCIL

Support Proposal FP08-17 with modification to include the following provisions: 1) the exemption may be discontinued through Federal Special Action by the Federal in-season manager; 2) only apply to fishing with set gillnets and fishwheels; 3) require that the elder and the assistant be Federally qualified subsistence users; 4) the elder must be in the boat when the net is being set, checked, or retrieved; 5) elders must have identification indicating their age and residency in their possession; 6) assistants must have identification in their possession indicating residency; and 7) the set gillnet must be labeled with the elder’s first initial, last name, and address.

The modified regulation should read:

(A) Elders who are Federally qualified subsistence users, age 60 or older, and are participating in set gillnet, or fishwheel fishing themselves are not subject to the windows fishing schedule, as set out in the Alaska Administrative Code (5 AAC 01.210(b)). One Federally qualified subsistence user less than age 60 may assist one or more elders age 60 or older with their
fishing activity. The elder must be in the boat when the set gillnet or fishwheel is set (or started turning in the case of a fishwheel), checked, or retrieved. Elders and their assistants must have identification in their possession to verify age (for elders) and residency. The set gillnet must have a label with the elder’s first initial, last name, and address. This exemption may be allowed or discontinued by Federal Special Action by the Federal in-season manager.

Justification

There are only a few fishwheels (maybe three) that would qualify for the elders’ exemption. The Council agrees with the modification proposed by OSM staff for the reasons presented in the analysis in the Council meeting booklet: (1) Set net fishing is a traditional method of taking salmon in the Yukon River with productive set net sites limited river-wide; (2) the age exemption for elders would only be a significant physical advantage with set net fishing; (3) the elder be actually participating in the harvest; (4) Labeling the set nets would address some of the law enforcement concerns; and (5) the proposed exemption for elders would not exempt elders from closures before, during, and after commercial fishing periods.
STAFF ANALYSIS
FP08-17

ISSUES

Proposal FP08-17, submitted by the Yukon River Drainage Fisheries Association (YRDFA), requests that in the Yukon River drainage community elders 60 years of age and older who are participating in salmon fishing not be subject to the windowed subsistence fishing schedules and therefore be able to subsistence fish 24 hours per day, 7 days per week. The proposal also includes the provision that the elder may be assisted by one individual less than age 60.

DISCUSSION

The Yukon River subsistence fishing schedule requires fishers to stop fishing and remove their gear from the water at the end of every subsistence period and that gear be redeployed no earlier than at the beginning of each subsistence period. This can be a physical hardship for elders when fishing with a set gillnet if they do not have someone to assist them.

Additionally, there is a concern about decreased opportunity caused by the fishing schedule: poor weather conditions during subsistence periods can impair the ability to harvest an adequate amount of salmon; not being able to fish when fish are available in abundance increases both time and associated fishing costs; and having to fish on a calendar schedule is inconsistent with traditional and cultural pattern of fishing whenever they chose to. Therefore, the proponent requests that elders 60 years of age or older be exempt from the regulatory subsistence fishing windows, and be allowed to harvest subsistence salmon 24 hours per day, seven days per week. Eliminating the subsistence windows schedule for elders would be consistent with traditional fishing practices—that is, people would have the opportunity to fish when the fish are present and they could decide for themselves when to fish rather than following a calendar regulatory schedule. Deference also would be given to elders.

The proponent did not identify the fishing gear in the proposal, but referred to “fishing activity.” Providing additional fishing time for elders would allow them more time to catch fish for subsistence with whatever gear type they are using. Allowable gear types under Federal subsistence regulations for harvesting salmon in the Yukon River Area include drift and set gillnets, beach seines, fish wheel, and rod and reel. Rod and reel fishing is already allowed 24 hours a day, 7 days a week. Beach seining is not a method commonly used for taking salmon in this area. Set net fishing is a method of taking salmon throughout the river, although it is more common in the lower Yukon River. Set net sites are found throughout the Yukon River.

There are no limits on the harvest of salmon for subsistence in the Yukon River drainage although there are subsistence fishing permits required for the following areas: 1) from the mouth of Hess Creek to the mouth of the Dall River and upstream from the mouth of 22 Mile Slough to the U.S. Canada border; 2) in the Tanana River drainage, above the mouth of the Wood River; and 3) in the Yukon River main stem, in Subdistricts 4B and 4C from Cone Point to near the west bank of Kala Sough and upstream from Ruby to Illinois Creek.

This proposal would not apply to subsistence fishing closures before, during, and after commercial openings.
Existing Federal Regulation

Yukon-Northern Area—Salmon
§ ___.27 (i)(3)(ii) For the Yukon River drainage, Federal subsistence fishing schedules, openings, closings, and fishing methods are the same as those issued for the subsistence taking of fish under Alaska Statutes (AS 16.05.060), unless superseded by a Federal Special Action.

Proposed Federal Regulation

Yukon-Northern Area—Salmon
§ ___.27 (i)(3)(ii) For the Yukon River drainage, Federal subsistence fishing schedules, openings, closings, and fishing methods are the same as those issued for the subsistence taking of fish under Alaska Statutes (AS 16.05.060), unless superseded by a Federal Special Action.

(A) Elders who are age 60 or older and are participating in the fishing activity themselves are not subject to the windows fishing schedule, as set out in the Alaska Administrative Code (5 AAC 01.210(b’)). One individual less than age 60 may assist one or more elders age 60 or older with their fishing activity.

Note: The reference to the Alaska Administrative Code in the original YRDFA proposal was not specific to subsection (b), but conversations with the proponent have further clarified that the intent of the proposal was to exempt elders from the windows fishing schedule and not from other fishing closures around commercial openings (Robbins-Gisclair 2007, pers. comm.).

Relevant State of Alaska Regulation

5 AAC 01.210 Fishing seasons and periods [Yukon-Northern Area]

(a) Unless restricted in this section, or in 5 AAC 01.220 – 5 AAC 01.249, salmon may be taken in the Yukon-Northern Area at any time.

(b) When there are no commercial salmon fishing periods, the subsistence fishery in the Yukon River drainage will be based on a schedule implemented chronologically, consistent with migratory timing as the salmon run progresses upstream. The commissioner may alter fishing periods by emergency order if the commissioner determines that preseason or inseason run indicators indicate it is necessary for conservation purposes. The fishing periods for subsistence salmon fishing in the Yukon River drainage will be established by emergency order as follows:

(1) Coastal District, Koyukuk River, Kantishna River, and Subdistrict 5-D: seven days per week;

(2) Districts 1 - 3: two 36-hour fishing periods per week;

(3) District 4, and Subdistricts 5-A, 5-B, and 5-C: two 48-hour fishing periods per week;

(4) District 6: two 42-hour fishing periods per week; and

(5) Old Minto Area: five days per week.

5 AAC 01.310 Fishing seasons and periods [Bristol Bay Area]
On the north shore of the Naknek River, from an ADF&G regulatory marker located approximately 300 feet upstream from the north commercial fishing section boundary marker of the ADF&G regulatory marker located approximately 1,300 feet upstream from the north commercial fishing section boundary marker, salmon may be taken only by a person 60 years of age or older during the periods described in (e) of this section, except that a person authorized to take salmon under this subsection may not authorize a proxy to take or attempt to take salmon on behalf of the person under AS 16.05.405 or 5AAC 01.011.

Relevant Federal Regulation

Yukon-Northern Area—Salmon

§ 27 (i)(3)(xx) In Districts 1, 2, and 3, you may not possess Chinook salmon taken for subsistence purposes unless the dorsal fin has been removed immediately after landing.

Extent of Federal Public Waters

Federal public waters in the Yukon River watershed includes all navigable and non-navigable waters located within and adjacent to the exterior boundaries of the Innoko, Kanuti, Koyukuk, Nowitna, Tetlin, and Yukon Flats National Wildlife Refuges (NWR); Yukon-Charley Rivers National Preserve; the Steese National Conservation Area; the White Mountains National Recreation Area; and those segments of the National Wild and Scenic River system, of the Yukon River drainage, located outside the boundaries of these Federal conservation units (i.e., portions of Beaver and Birch Creeks and the Delta, and the Fortymile Rivers). Additionally, those navigable and non-navigable waters of the Yukon River drainage, within and adjacent to the exterior boundaries of the Arctic NWR, the Denali National Preserve, the 1980 additions to the Denali National Park, the Gates of the Arctic National Park and Preserve, the Wrangell-St. Elias National Park and Preserve, and the Yukon Delta NWR are within Federal jurisdiction for purposes of Federal subsistence fisheries management. Federal public waters include all Yukon commercial fishing Districts Y1-Y3; parts of Subdistricts 4A and 4C; most of Subdistrict 5D; and part of Subdistrict 6C.

For purposes of this discussion, the phrase “Federal public waters” is defined as those waters described under 50 CFR 100.3.

Customary and Traditional Use Determinations

Yukon River Drainage

Salmon, other than Fall Chum Salmon  Residents of the Yukon River drainage and the community of Stebbins.

Fall Chum Salmon  Residents of the Yukon River drainage and the communities of Chevak, Hooper Bay, Stebbins, and Scammon Bay.
Regulatory History

Prior to 1993, subsistence fishing was managed and regulated to coincide with commercial fishing periods when the commercial fishing season was open. State regulations adopted in 1993 and 1994 separated subsistence and commercial fishing periods in Districts 1, 2, 3, and Subdistrict 4-A. In 1993, subsistence fishing regulations changed and required the subsistence fishery to close 12 hours before and during a commercial opening and 18 hours after a commercial opening (Bergstrom et al. 1996:10).

In 1998, 1999, and 2000 there were poor salmon returns to the Yukon River. In response to these poor runs, in January 2001, the Alaska Board of Fisheries modified the Yukon River King Salmon Management Plan to add the fishing schedule to allow for periodic closures of the subsistence salmon fishery. This “windowed” subsistence fishing schedule is typically initiated early in the season to help conserve the salmon runs, by providing closed periods when salmon are not harvested in sections of the river. The intent of this schedule is to distribute the harvest throughout the run, reducing the impact on any particular run component, and to spread the harvest opportunity among subsistence users. A provision also was added to the plan in 2001 that stipulated the State would relax the schedule if in-season run strength indicates a sufficient abundance of Chinook salmon to allow for a commercial fishery. The Federal Subsistence Board has agreed to the subsistence fishing schedule through adoption of the management plan and Memorandum of Understanding with the State, although the schedule does not appear in Federal subsistence regulations.

In December 2002, the Federal Subsistence Board added § 18.27 (i)(3)(ii) to the Federal subsistence regulations for the 2003 fishing season. This was the product of a statewide proposal, FP03-28, that was only adopted for the Yukon and Kuskokwim rivers. This regulation allows for openings, closings, and fishing methods to be the same as those issued for the subsistence taking of fish under Alaska Emergency Orders (Sec. 16.06.060), unless superseded by a Federal Special Action. Adding this regulation allows the in-season manager to concur with in-season changes through a memo to the file rather than issuing a special action each time the State issues an Emergency Order.

Age-related regulations

There has never been an age-exemption proposal in the Yukon-Northern Area in the Federal Subsistence Management Program and there are no age related fisheries regulations in the Federal Subsistence Management Program. The only age-related regulations in the Federal Subsistence Management Program are in Units 11 and 12 for a sheep hunt for elders. Elders 60 years of age or older may hunt sheep by registration permit from September 21st to October 20th. The season closes one month later than the general hunt. The elder must be accompanied by a minor aged 8 to 15 years old.

The only other age-related reference is that hunters, age 60 or older, may get a free permanent identification card issued by the ADF&G. Under State regulations, no hunting or fishing license is required for residents 60 years of age or older, or under 16.

The State legislature gave authority to the Alaska Board of Fisheries in 1988 to promulgate subsistence, personal use, and sport fishing regulations for persons over 60 and under 16 years of age noting that people 60 years of age and older may need separate seasons and areas in order to continue sport, personal use, or subsistence fishing because they are generally less able to gain access to fishing areas that may be open to all age groups” (Cunning 2007, pers. comm.).
Current Events

The proponent of this proposal has heard complaints that requiring elders to adhere to the subsistence window fishing schedule causes physical difficulties and undue hardships. Some believe that elders need more time than the windows allow for them to meet their subsistence needs. As a result of these complaints, the YRDFA passed a resolution February 28, 2007 at its annual meeting that would exempt elders 65 years of age or older from adhering to the subsistence windows schedule and would allow elders to fish 24 hours a day, 7 days a week in the Yukon River Drainage. The YRDFA Board, which consists of 16 members and 14 alternates from throughout the Yukon River drainage, supported this resolution by consensus. The resolution was the impetus for submitting this proposal to the Federal Subsistence Board. While the YRDFA resolution is for an exemption for elders 65 years of age or older, the YRDFA proposal is for an exemption for elders 60 years of age or older. While crafting the Federal proposal, the YRDFA Board members decided that the “limited physical capabilities” requirement would be incredibly difficult to define in regulation. Therefore, YRDFA lowered the age to 60 to attempt to accommodate people that would fall under the limited physical capabilities category via the age cut-off (Robbins-Gisclair 2007, pers. comm.). YRDFA also chose to include the provision that the elder may be assisted by one individual less than age 60 as a safety measure because it already is a practice that people generally do not fish alone.

The resolution also noted that:

...Whereas subsistence windows require fishermen and women to pull their gillnets at the end of every subsistence opening and reset them at the beginning of every subsistence opening; and

Whereas community elders with limited physical capabilities and/or of age 65 and older require more time than currently allowed to meet their subsistence needs; and

Whereas these subsistence windows create undue physical and subsistence hardships for elder community members;

Be it resolved that YRDFA does not support current regulations requiring elder subsistence users to adhere to the subsistence windows schedule, and YRDFA supports creating an exemption to allow elders to fish 24 hours a day, 7 days a week in the Yukon River drainage (YRDFA 2007).

Effects of the Proposal

If this proposal is adopted, it is not expected to significantly increase subsistence harvests, but rather the harvest is expected to follow traditional practices for elderly participants, a key aspect of which is to harvest only what is needed.

Adopting this proposal would provide an advantage to set net fishers. By not requiring elders to stop fishing nor remove their set nets from the water at the end of each subsistence period, and then resetting the nets at the beginning of the next subsistence period, fishing would be less physically demanding. The elders would also be able to fish, including processing the fish, when they wanted and felt up to fishing and not be driven by the window schedule. It is unknown how many elders who set net fish would take advantage of the age exemption.

While there would be an expanded harvest opportunity if this proposal is adopted, the proposal would not provide an advantage to elders fishing with drift gillnets or fish wheels. Drift gillnets must be deployed and retrieved when being fished, thus there is minimal physical advantage to the proposed exemption for
elders when drift gillnet fishing. The proposal would not offer any physical advantage to those using fish wheels.

Adopting this proposal is not expected to affect commercial or sport harvests, since no significant increase in subsistence harvests is anticipated. Adopting this proposal also would not affect Federal subsistence regulations in Districts 1-3 which requires that subsistence caught Chinook salmon must be marked by removing the dorsal fin.

Adopting this proposal could potentially increase the workload for law enforcement officers, as they could not assess from the air whether nets were legally or illegally in the water. More time would likely be spent verifying whether the fishers were elders or not and/or fishing under Federal regulations. It should also be noted that fishers can already use four inch mesh gear during windows, thus there already is a fishery in place that requires on-the-ground law enforcement effort. Law enforcement would be made easier if the age exemption regulation were limited to set gillnet fishing because it wouldn’t be necessary to travel on the river to locate the fishers with drift gillnets—which is much more difficult than finding a stationary set net site. Therefore, challenges associated with enforcing this regulation would be lessened if the proposed regulation were only applied to set gillnet fishing.

If this proposal is adopted, law enforcement could be made easier if a modification were added to require elders and the assistant to carry identification to verify the age of the elder and residency to determine if the fisher and the assistant are Federally qualified subsistence users. It is already a regulation that unattended gear must be marked, but for clarification, a requirement should be added that the nets need to identify the first initial and last name and address of the elder on the net.

There is no available information regarding how many fishers this regulatory change might affect (Robbins-Gisclair 2007, pers. comm.). However, it is probable that a large percentage of extended families may have at least one elder who would be exempt from the windowed subsistence fishing schedule. If every extended family had a Federally qualified elder who was exempt from the windows schedule, this proposed regulation could seriously decrease the effectiveness of the windows schedule as a management tool. Limiting the gear to only set nets would help to minimize the effects. Set nets are not used extensively, thus this exemption is not expected to have a significant effect on Yukon River salmon stocks. This might not be as much of a concern in years when the run is average or better, but in years when the run is poor, there could be more of an effect. The Federal Subsistence Board may consider allowing discontinuation of this exemption at the discretion of the Federal in-season manager.

Adopting this proposal would likely have a greater value on Districts 1 through 3 than the upriver fishing Districts 4 through 6 because the lower river is subject to more limited windows (due to a higher volume of fish passing through).

The proposed regulatory change may be moot in the near-future, as the in-season managers are evaluating not using the windows schedule at the beginning of the season when the preseason outlook is for an average salmon return or better (Holder 2007, pers. comm.). The implementation or relaxation of the windows schedule could be done by State Emergency Order and Federal Joint Streamlining memorandum.

This proposal would not apply to subsistence fishing closures before, during, and after commercial openings, thus these would not be affected.
OSM PRELIMINARY CONCLUSION

Support Proposal FP08-17 with modification to include the following provisions: 1) the exemption may be discontinued through Federal Special Action by the Federal in-season manager; 2) only apply to fishing with set gillnets; 3) require that the elder and the assistant be Federally qualified subsistence users; 4) the elder must be in the boat when the net is being set, checked, or retrieved; 5) elders must have identification indicating their age and residency in their possession; 6) assistants must have identification in their possession indicating residency; and 7) the set gillnet must be labeled with the elder’s first initial, last name, and address.

The modified regulation should read:

Yukon-Northern Area—Salmon
§ ___27 (i)(3)(ii) For the Yukon River drainage, Federal subsistence fishing schedules, openings, closings, and fishing methods are the same as those issued for the subsistence taking of fish under Alaska Statutes (AS 16.05.060), unless superseded by a Federal Special Action.

(A) Elders who are Federally qualified subsistence users, age 60 or older, and are participating in set gillnet fishing themselves are not subject to the windows fishing schedule, as set out in the Alaska Administrative Code (5 AAC 01.210(b)). One Federally qualified subsistence user less than age 60 may assist one or more elders age 60 or older with their fishing activity. The elder must be in the boat when the set gillnet is set, checked, or retrieved. Elders and their assistants must have identification in their possession to verify age (for elders) and residency. The set gillnet must have a label with the elder’s first initial, last name, and address. This exemption may be allowed or discontinued by Federal Special Action by the Federal in-season manager.

Justification

Adoption of this proposal would provide deference to elder fishers and is not anticipated to change harvest amounts significantly. It is unknown how many elders would take advantage of the age exemption. It is possible that many families would have a qualifying elder, thus the extended family would have the ability to harvest fish 24 hours a day, 7 days a week (except for closures before and after commercial fishing periods), however, limiting it to set gillnet fishing would limit the number of elders able to participate. No data are currently available to indicate what the effects on the subsistence harvest might be, but none are anticipated other than a more efficient and culturally consistent harvest.

Set net fishing is a traditional method of taking salmon and is more common in the lower Yukon River. Productive set net sites are limited river-wide. The age exemption for elders would only be a significant physical advantage when set net fishing. The YR DFA resolution also appears to refer to set gillnet fishing. Providing an exemption for elders 60 years and older to the subsistence windows schedule would no longer require them to stop fishing and remove their set nets from the water at the end of every subsistence period and reset them at the beginning of every subsistence period. Challenges associated with enforcing this regulation would be lessened if the age exemption regulation is limited to set gillnet fishing (because it wouldn’t be necessary to travel on the river to locate fishers with drift gillnets).

There is no physical advantage to elders fishing with drift gillnets because the drift gillnets are put out and taken in regularly with or without the proposed regulation—that is, the physical demands exist with or without the proposed regulation. This proposal also would offer no physical advantage to fishing with a fish wheel. Rod and reel fishing is already allowed 24 hours a day, 7 days a week, so this method, too,
would not have any advantage. Beach seining is not commonly a method used for taking salmon. Thus, the only fishing method where there would be a significant physical advantage for elders with an age exemption is with set net fishing.

If the proposal is adopted, it is recommended it be modified to require the elder to be in the boat when the net is set, checked, or retrieved in order to assure that the elder is actually participating in the harvest. Identification of the elder to verify age and residency, as well as identification of the assistant to verify residency, should also be included in the modification in order to ensure that only those fishers 60 and over and people who do have a customary and traditional use determination to take salmon in the Yukon River drainage participate in the fishery. Law enforcement also would be made easier if the set nets are clearly labeled with the elders first initial, last name, and address. It should also be noted that fishers can already use four inch mesh gear during windows 24/7, thus there already is a fishery that requires on the ground law enforcement effort.

The proposed exemption for elders would not exempt elders from closures before and after commercial fishing periods and the Federal regulation requiring that subsistence caught Chinook salmon be marked by removing the dorsal fin in Districts 1-3.

LITERATURE CITED


Holder, R. 2007. Yukon River drainage In-Season Manager. Personal communication (email). USFWS. Fairbanks, AK.


Effects of the Proposal

If this proposal is adopted, it is not expected to significantly increase subsistence harvests, but rather the harvest is expected to follow traditional practices for elderly participants, a key aspect of which is to harvest only what is needed. However, it could condense the harvest into a shorter time frame, thus hitting a portion of the run harder. This goes against the intent of the windowed schedule.

Adopting this proposal would provide a physical advantage to set net fishers. Not requiring elders to stop fishing and remove and reset their nets as fishing periods open and close would make fishing with set nets less physically demanding. The elders would also be able to harvest and process fish when they wanted and felt up to fishing and not be driven by the windowed schedule. It is unknown how many elders who use set nets would take advantage of the age exemption. Limiting the exemption to set net fishers would give an advantage to lower river fishers, as that gear type is more common in the lower portion of the river than in the middle and upper portion where fewer set net sites are available.

While there would be an expanded harvest opportunity if this proposal is adopted, the proposal would not provide a physical advantage to elders fishing with drift gillnets or fish wheels. Drift gillnets must be deployed and retrieved when being fished and the proposal would have no bearing on those using fish wheels, aside from providing additional time.

Adopting this proposal is not expected to affect commercial or sport harvests, since no significant increase in subsistence harvests is anticipated. Adopting this proposal also would not affect Federal subsistence regulations in Districts 1-3 which requires that subsistence caught Chinook salmon must be marked by removing the dorsal fin.

Adopting this proposal could potentially increase the workload for law enforcement officers, as they could not assess from the air whether nets were legally or illegally in the water. More time would likely be spent verifying whether the fishers were elders or not and/or fishing under Federal regulations. It should also be noted that fishers can already use four inch mesh gear during windows, thus there already is a fishery in place that requires on-the-ground law enforcement effort. Law enforcement would be made easier if the age exemption regulation were limited to set gillnet fishing because it wouldn’t be necessary to travel on the river to locate the fishers with drift gillnets—which is much more difficult than finding a stationary set net site. Therefore, challenges associated with enforcing this regulation would be lessened if the proposed regulation were only applied to set gillnet fishing.

If this proposal is adopted, law enforcement could be made easier if a modification were added to require elders and the assistant to carry identification to verify the age of the elder and residency to determine if the fisher and the assistant are Federally qualified subsistence users. It is already a regulation that unattended gear must be marked, and, for clarification, that the first initial and last name and address of the fisher must be on the net.

It is not known how many fishers this regulatory change might affect (Robbins-Gisclair 2007, pers. comm.). However, it is probable that a large percentage of extended families may have at least one elder who would be exempt from the windowed subsistence fishing schedule. If every extended family had a
Federal qualified elder who was exempt from the windows schedule, this proposed regulation could decrease the utility of the windowed schedule as a management tool. Limiting the gear to only set nets would help to minimize the effects. Set nets are not used extensively, thus this exemption is not expected to have a significant effect on Yukon River salmon stocks. This might not be as much of a concern in years when the run is average or better, but in years when the run is poor, there could be more of an effect. The Federal Subsistence Board may consider allowing discontinuation of this exemption at the discretion of the Federal in-season manager.

Adopting this proposal would likely provide a greater benefit to fishers in Districts 1 through 3 than to those in the upriver fishing Districts 4 through 6 because the lower river is subject to more limited windows (i.e. two 36 hour openings per week in Y1-Y3) due to a higher volume of fish passing through and the greater harvest efficiency in the lower river fishery.

The proposed regulatory change may be moot in the near-future, as the in-season managers are evaluating not using the windows schedule at the beginning of the season when the preseason outlook is for an average salmon return or better (Holder 2007, pers. comm.). The implementation or relaxation of the windows schedule could be done by State Emergency Order which is then automatically adopted into Federal regulation, unless superseded by the in-season manager.

This proposal would not apply to subsistence fishing closures before, during, and after commercial openings, thus these would not be affected.

**OSM CONCLUSION**

**Oppose** Proposal FP08-17

**Justification**

While the OSM supports the concept of providing an exemption to elders, it appears that at this time the proposal needs to be refined to address Council concerns and potential conservation concerns. The affected Councils were not in agreement as to whether or not to support this proposal or what the modifications, if any, should be. The Yukon-Kuskokwim and Seward Peninsula Councils recommended that the proposal be supported with modifications that would further expand the opportunity and without the limitation of only allowing one assistant less than age 60. These Councils also wanted the elder exemption for any gear type and did not support the modifications suggested in the OSM preliminary staff conclusion. The Eastern Interior Council supported the OSM preliminary staff conclusion, but with modification that would further expand the opportunity to include the addition of fish wheels. The Western Interior Council opposed the proposal.

The proponent of the proposal, the YRDFA Board, met November 1, 2007 and could not come to consensus on supporting its proposal. Discussion centered on whether or not the proposal should include all gear types, what ages, or whether or not the elder had to be disabled. After a motion to support the proposal failed, YRDFA Board members agreed that they would like to re-craft the proposal and iron out some of the issues in the proposal. They discussed withdrawing the proposal, but were told that once the proposal is acted on by a Council, the Federal Subsistence Board hears the proposal. (It should be noted that this advice is in error; the correct information is that once a Council recommendation has been made on a regulatory proposal, only the Federal Subsistence Board can withdraw the proposal. Such withdrawal has been done by polling of the Federal Subsistence Board in the past, without “hearing” the proposal. Since this is not what the YRDFA Board understood at the time of their vote, their vote may have been
different). Nonetheless, in lieu of withdrawal, the YRDFA Board voted to ask the Federal Subsistence Board to take no action on the proposal, but lacking consensus, the motion failed.

Discussion at the Eastern Interior Council meetings pointed out that if this proposal is adopted as proposed without limitation on gear types, it would essentially mean the removal of the windowed fishing schedule since almost every family has an elder who would be eligible for the proposed exemption. Council members stated that the windowed schedule is one of the few management tools available to protect salmon stocks, and doing away with it could adversely affect the runs, potentially creating a conservation concern. Other concerns raised were that limiting the proposal to set net fishing would give the lower river an advantage as set nets are more common on the lower river, and that exempting elders from the windowed schedule could concentrate the harvest into one time period, which could also create a conservation concern. The Eastern Interior Council was still concerned that there would be conservation concerns even with the provision that the exemption may be discontinued through Federal Special Action by the Federal in-season manager because it was feared that the action would occur too late.

Other discussion focused on not wanting there to be such a high degree of law enforcement, and not liking the proposed modification that the elder would have to be in the boat because some elders are disabled and would not be physically capable of being in the boat.

Given the lack of consensus on the YRDFA Board as to the appropriate content and disposition of its proposal, and its desire to revisit the proposal and work out some of the outstanding issues, as well as the widely divergent Council opinions about this proposal, the OSM preliminary staff conclusion is to oppose this proposal. This would give YRDFA the opportunity to revisit its proposal and decide if it would like to modify it and resubmit it at another time.
INTERAGENCY STAFF COMMITTEE COMMENTS

The Interagency Staff Committee considered this proposal, and based on comments by the proponent and positions taken by the Councils, the ISC agreed that it is not appropriate to take positive action at this time. In considering the proposal, the proponent could not agree on various issues raised by the proposal, nor could the affected Councils. The issues and the degree to which all parties diverged in their consideration of them are covered in the addendum provided by OSM. The Interagency Staff Committee found that the level of divergence over unresolved issues strongly suggests that this proposal is not ripe for consideration at this time.
FP08-17 ESTABLISH ELDER FISHERY ON THE YUKON RIVER

Introduction: Proposal FP 08-17 would eliminate the subsistence fishery closure windows for all federally qualified subsistence users age 60 or older in the Yukon River drainage, allowing elder federal subsistence users to subsistence fish 24 hours per day, seven day per week, using all legal gear types, and assisted by one individual less than 60 years old. Currently, all subsistence users are required to remove their salmon fishing gear from the water during established fishery closure windows. Currently, during salmon fishing closures, non-salmon species may be harvested for subsistence with 4-inch mesh size gillnets no longer than 60 feet.

Impacts on Subsistence Users: This proposal was intended to help elders to subsistence fish in the Yukon River. However, providing a super-priority for elders at all sites and boats on the Yukon River, and allowing assistance by another fisher, effectively eliminates closures for conservation and management purposes, undermining windows management for passing fish upriver, because every family could try to fish with an available elder. Adoption of this proposal would also effectively reallocate available subsistence harvest between federal and state subsistence fisheries, between 60-and-older subsistence users and those under 60, between state waters and those claimed under federal jurisdiction, and between upriver and downriver users. If adopted, all subsistence and other fisheries along the Yukon could be impacted as this fishery develops because most subsistence users will no longer have period, time, and gear restrictions so long as they find an elder to go with them. Allowing federal subsistence users to fish 24/7 during years when the Yukon River salmon runs are below average or weak could impact spawning escapements and future productivity and stability of these stocks. This proposal could qualify the vast majority of federal subsistence users on the Yukon River to fish 24/7 as most extended families have at least one elder that is age 60 or older. A large proportion of the commercial fishing permit holders in both the lower and upper Yukon areas are over 60 years of age. There is an increased conservation concern if increased legal and/or illegal sales of subsistence harvest, especially during years of poor salmon returns coupled with a high commercial value.

Opportunity Provided by State: During 1988, legislation was adopted into Alaska statute, which allows for separate sport, personal use, and subsistence fishing areas and seasons for people 60 years and older. The intent of the statute is to provide for elder fishermen who may need separate seasons and areas in order to continue sport, personal use, or subsistence fishing because they are generally less able to gain access to fishing areas that may be open to all age groups. An example of a “separate area” for elder fishermen can be found at the mouth of the Naknek River under regulation 5AAC 01.310 (h). This regulation allows for a State subsistence fishery for residents of Alaska 60 years old and older to subsistence fish within a 1,000 foot long section just inside the mouth of the Naknek River. This regulation also prohibits other subsistence users from harvesting fish for any elder by proxy, which ensures that fish are only being taken by elders in this restricted area. The regulation does not prohibit other Alaska residents from assisting elders to harvest their fish in this fishery if the elder wants or needs assistance operating their fishing gear. The Naknek River elder-only State subsistence fishery area is managed under the identical season and fishing period restrictions as the remaining State subsistence fisheries in the Naknek area. Another type of “elders” only State fishery is located near the mouth of the Situk River in the Yakutat area. The
 regulation, 5AAC 47.023 (b)(6)(C), establishes a “separate season and area” for sport fishing anglers 60 years old or older from June 15 – October 14. Though all anglers may sport fish in this area from October 15 – June 14, the sport fishery is restricted to “senior citizens only” from June 15 - October 14.

Salmon may be harvested under State regulations throughout the majority of the Yukon River watershed, and the State provides a liberal subsistence fishery throughout the Yukon River. Gear types allowed are gillnet, beach seine, a hook and line attached to a rod or pole, hand line, or fish wheel. All gear types are not used or allowed in all portions of the Yukon River drainage. Drift and set gillnets and fish wheels are used to harvest the majority of fish taken for subsistence uses. Under State regulations, subsistence is the priority consumptive use so State subsistence fishing opportunity is directly linked to abundance and is not restricted unless run size is not adequate to meet escapement goals. However, when run size is below average, the State subsistence fishing periods may be conducted based upon a schedule implemented chronologically throughout the Alaska portion of the drainage which is consistent with migratory timing as the salmon run progresses upstream.

The proposed age limit of 60 years old in the federal proposal does reflect the permissible age for eligibility for special restricted seasons and areas that may be adopted under State of Alaska statute. Unfortunately, the federal proposal goes beyond a simple age and area limitation. It is also not possible to determine how many elders who participate in the federal subsistence fisheries would be affected if this proposal were adopted. The only age based information the Department can collect for “elders” fishing in the Yukon River is for the age of fishermen who were issued a Commercial Fisheries Entry Commission (CFEC) commercial salmon fishing permit for the Yukon River. A notable percentage of commercial salmon fishermen in the Yukon commercial fisheries are 60 years old or older. A total of 876 CFEC permanent permits were issued for the Yukon River during 2006. Of these total permits, 160 (18.3%) were issued to fishermen 60 years old or older and 90 (10.3%) permits were issued to fishermen 65 years old or older.

In addition, a large difference in the median age of CFEC salmon gillnet permit holders exists between the Lower Yukon salmon gillnet permits and the Upper Yukon salmon gillnet permits. The median age of a CFEC permit holder in the Upper Yukon River salmon gillnet fishery is 59 years of age (48.5% are 60 years old or older and 37.9% are 65 years old or older). The median age of a CFEC permit holder in the Lower Yukon River salmon gillnet fishery is 46 years of age (13.2% are 60 years old or older and 5.6% are 65 years old or older). These data are included in the Department’s comments to provide insight to the Board regarding the numbers of “elder” commercial fishermen participating in the commercial salmon gillnet fisheries who are 60 and 65 years old and older. These “elders” of the commercial fleet are required to operate their nets in all types of conditions during even shorter time limits than the subsistence windows schedule. Total removal of the fisheries closure windows without installing safeguards in place to address the concerns stated above may not be considered sound fisheries management practice. The Department is willing to discuss establishing triggers or thresholds, which would have to be met prior to liberalizing the federal and State subsistence fisheries. Under current management practices, if run abundance is average or better, the subsistence fishery is liberalized for all users.

If the proponent wishes to pursue this idea, the proponent should be directed to submit the proposal to the Alaska Board of Fisheries to consider establishing “elder only” subsistence fishing times or
areas in specific locations within the drainage. Such areas could be considered on a case-by-case basis depending on local needs, usage patterns, and available fishing sites. Such a proposal would also lead to a thorough discussion of the overall need for subsistence fishing windows in the various Yukon River districts. If adopted by the State, it would apply to all subsistence fishers in all waters.

**Jurisdiction Issues:** (1) Nothing in ANILCA authorizes the federal Board to discriminate among federally-qualified subsistence users based on age. (2) Detailed maps are needed to show the boundaries and areas where federal regulations are claimed to apply and the justification for claiming those boundaries. A large percentage of the lands bordering the Yukon River are state or private lands where federal subsistence regulations do not apply. The largest amount of set gillnet usage is along the coast and just inside the mouth of the Yukon River. Thus, a fair amount of water is only managed by the State, where this regulation would not apply (for example, the coastal area outside of the River). It is not clear how this regulation would apply in areas such as Black River below the Yukon River mouth. Most people there fish in the ocean, where this regulation would not apply. Adding this regulatory complexity seems counterproductive and calls into question the utility of regulations affecting stationary gear and traditional sites, where one fisher could claim to fish under this proposed regulation and the next fisher could not, thus creating a conflicting patchwork of jurisdictional claims on water. This situation would also greatly complicate enforcement efforts.

**Conservation Issues:** Yukon River Chinook salmon stock were designated as a stock of yield concern in 2000 based on poor runs from 1998-2000. The general definition provided in the Sustainable Salmon Fisheries Policy (SSFP) 5AAC 39.222 (f) (42) of a stock of “yield concern” means a concern arising from a chronic inability, despite use of specific management measures, to maintain expected yields, or harvestable surpluses, above a stock’s escapement needs. A yield concern designation is less severe than a designation of management concern, which is less severe than a designation of conservation concern. In all years, except for the very poor Chinook salmon run in 2000, there has been reasonable opportunity for subsistence fishers to meet amounts necessary for subsistence. The subsistence fishing schedule was adopted to allow for periods of time when salmon could migrate through a district or subdistrict with no harvest. If this proposal is adopted, the effectiveness of subsistence windows will be substantially decreased and the effectiveness of windows as a management tool will be significantly undermined. The escapement objective for the Canadian mainstem was not met in 2007.

**Fall chum** salmon run strength was poor from 1998-2002. During several of those years, subsistence fishing time was restricted or the fishery closed according to the fall chum salmon management plan in order to meet escapement goals. If this proposal was adopted and the subsistence fishing schedule or further subsistence fishing restrictions were established because of low run abundance as per the management plan, would elders and their helpers still be allowed to fish seven days per week? This proposal may impact management for conservation of salmon resources.

Total Alaskan subsistence harvest of Yukon River Chinook salmon has remained stable at about 50,000 fish per year. While the average Yukon summer chum salmon subsistence harvests have decreased in recent years, significant amounts of chum salmon, surplus to escapement needs, have been available for subsistence harvest. Several factors causing the decline in the subsistence harvest of chum salmon include recent changes in subsistence fishing harvest patterns and lack of a market.
for chum salmon roe. Commercial chum salmon roe fisheries provided substantial numbers of
carcasses for subsistence use in the 1980s and 1990s. Fall chum salmon subsistence harvests have
begun to rebound since the poor returns years of 1998-2002, but remain below the average harvest
levels of 1993-1997.

Other Comments: If this proposal were adopted, enforcement of all fishing regulations in the
Yukon River would likely be reduced and negatively impacted, as the workload per officer would
increase. A reduction in the range of officers’ patrol areas would also likely be necessary. If any
significant percentage of the extended families along the Yukon River were to take advantage of the
ability to fish in the federal subsistence fishery 24/7 as long as an elder was present, the work load
of enforcement officers would likely significantly increase as law enforcement officers would be
unable to assess from the air whether nets were legally or illegally being fished. The increase in
frequency of law enforcement officers being required to land and contact the net operators during
normal fishery closures would seriously reduce the range and effectiveness of enforcement patrols.

Enforceability of regulations is the foundation of sustainable fisheries management. Enforcement
of regulations would be difficult if subsistence set net users are allowed to fish all day and 7 days
per week throughout the season. This is particularly true during the lower Yukon commercial
Chinook salmon season when these fish sell for about $4.00 per pound. Enforcement cases
involving the sale of fish in the commercial markets which were harvested in the federal subsistence
fishery could significantly increases, if a large proportion of subsistence users fish prior to and up to
the start of all commercial fishing periods.

Adoption of this proposal would lead to further regulatory complexity and divergence between State
and federal regulations and the results could impact neighboring fishing sites along the Yukon River
differently.

Historically, subsistence fishing has been more or less scheduled through most of the drainage
because of commercial fishing periods and regulatory fishing schedules. For example, in District 4
and Subdistricts 5-A, 5-B and 5-C, the historical schedule since 1976 consisted of two 48-hour
fishing periods for most of the year. This changed in Subdistrict 4-A in 1994 when subsistence
fishing closed before, during, and after commercial periods. In many areas there have always been
windows of time or interruptions when the subsistence fishery was closed. Prior to the windows
schedule, the lower Yukon was open 7-days per week before commercial fishing started, but once
the commercial season opened, subsistence fishing occurred during relatively short scheduled
periods.

Department Recommendation: Oppose
WRITTEN PUBLIC COMMENTS

Oppose. The Lower Yukon Fish and Game Advisory Committee opposes the proposal even if it seems to be a nice guy proposal. If an age exemption was warranted, the Advisory Committee should put in their own proposal or it should come from the tribe, if needed. When the commercial fishery opens, subsistence needs have been met in the Lower Yukon area.

Lower Yukon Fish and Game Advisory Committee

No Action. (OSM Note: Without consensus, the YRDFA Board does not take action.) The Yukon River Drainage Fisheries Association Board did not have consensus as to what age and gear types this applied, and if or how elders with physical disabilities would be included. The YRDFA Board hopes to be able to further refine this concept and potentially resubmit to the Federal Subsistence Board in the future.

Yukon River Drainage Fisheries Association