

IBM U.S. Federal



**Volume I – Technical Proposal
Public Web Hosting: USGS-CIDA Publication Library**

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Department of the Interior (DOI)

Foundation Cloud Hosting Services

In Response to Request for Proposal No. D12PS00316

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List of Acronyms

Acronym	Definition
AGOL	ArcGIS On Line
BCT	Branch Communication Technology
BTS	Branch of Technical Solutions
CCE	Contracting Center of Excellence
CMS	Centers for Medicare and Medicaid Services
COR	Contract Officer's Representative
COTR	Contracting Officer's Technical Representative
DAR	Data at Rest
DoD	Department of Defense
DOI	Department of the Interior
ECOS	Environmental Conservation Online System
ESD	Enterprise Service Desk
ESM	Enterprise Service Management
EUP	Employee User Portal
FDC	Federal Data Center
FDCC	Federal Desktop Core Configuration
FFP	Firm Fixed Price
FPA	Fire Program Analysis
FWS	Fish and Wildlife Service
GBS	Global Business Services
GIS	Geographical Information Service
GSA	General Services Administration
GTS	Global Technology Services
IaaS	Infrastructure-as-a-Service
IAVA	Information Assurance Vulnerability Alert
IRTM	Information Resource and Technology Management
IT	Information Technology
LDT	Landscape Decision Tool
LUA	Least User Access
MCC	Martinsburg Computing Center
OEM	Office of Emergency Management
OMB	Office of Management and Budget
OS	Operating System
PMO	Program Management Office
PMR	Program Management Review
PWS	Performance Work Statement
ROI	Return on Investment



Acronym	Definition
RPO	Recovery Point Objective
RTO	Recovery Time Objective
RUP	Registered User Portal
SCG	SmartCloud for Government
SDLC	System Development Life Cycle
SLA	Service Level Agreement
SMIS	Safety Management Information System
SOC	Security Operations Center
SPOC	Single Point of Contact
ST&E	Security Test and Evaluation
TIC	Trusted Internet Connection
TO	Task Order
TSC	Technical Support Center
USGS	U.S. Geological Survey
USGS	United States Geological Survey
VBA	Veterans Benefits Administration
VM	Virtual Machine
WFDS	Wildland Fire Situation Analysis
WFSS	Wild Land Decision Support Programs
WFIP	Wildland Fire Implementation Plan



1 Public Web Hosting: USGS-CIDA Publication Library

1.1 IBM Cloud-Based Web Hosting

IBM proposes to assist the Department of Interior (DOI) by providing an Infrastructure-as-a-Service (IaaS), web hosting environment to host its United States Geological Survey (USGS) publication, containing its archived electronic and public publications, citations, its database, shopping, sophisticated search engine, delivery service and online store in IBM's SmartCloud for Government (SCG) located in a highly connected, highly available, Federal Government dedicated FISMA-compliant IBM datacenter.

The Environment will be sized per the virtual machine capacity and configurations under Performance Work Statement (PWS) Section J.4.1 and Day 1 operating capability under PWS Section J.4.2 and allows the USGS to fully manage and maintain its provisioned servers, including software installation, patching, and version control.

The environment would initially provide two concurrent virtual machines for the web host and the Oracle database instances. For Day One, IBM will provision the required virtual machines and storage. IBM's SCG Roadmap includes the capability, currently scheduled for availability in 2Q13, for virtual servers to be provisioned/de-provisioned as required by authorized developers as identified by authorized DOI personnel. This is currently scheduled for availability in 2Q 2013. Once this capability is available, IBM will provide a Self-Service Portal that allows DOI (via DOI designated authorized personnel) to provision and manage cloud services as needed to provide processing and storage elasticity. Since this is a production environment, USGS will set up user permissions to allow USGS developers to establish and maintain the environments. Limits will be established in the Portal to set the maximum number of resources configured as specified in this Task Order (TO).

Team IBM understands that surges will be planned and anticipated by USGS and that automatic scaling of resources based on changes in usage patterns or utilization rates will not be required for this environment.

1.2 Advantage of IBM SmartCloud For Government

IBM's SCG infrastructure is hosted in a FISMA-compliant, Government-dedicated datacenter. The SCG is designed to support high-performance, high availability application needs and low-end, cost-efficient demand. The SCG solution enables IBM to support the Service Level Agreement (SLA) enhancement requirements of Portfolio A or Portfolio B, with or without operating systems support, based upon whichever scenario USGS decides.

We have designed the SCG with high connectivity and high availability. IBM achieves network performance with high speed interconnected networks, high speed burstable internet, and dedicated circuits built to order, supporting immediate access and downloading of the USGS content. IBM maintains uptime with redundant power, cooling, and infrastructure, in a multi-datacenter approach.

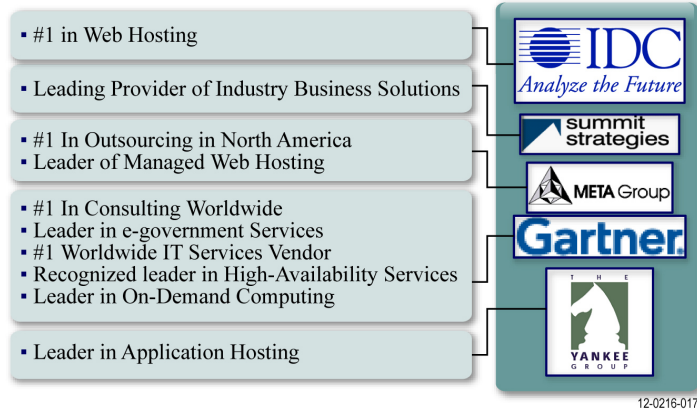
1.3 IBM is Your Cloud Web Hosting Provider

Our cloud offerings include features and functions specifically built to help Federal Government agencies and their partners rethink information technology (IT) and reinvent services. IBM's SCG is based on recognized skills, experience and best practices gained from years of managing

and operating secure, highly reliable data centers and services for enterprises worldwide. An example of Team IBM’s capabilities is shown in **Figure 1-1**.

As the USGS publications portal provides the means to purchase and download Imagery, Maps, Data, Publications, Citations and Reference material to a global audience, USGS can leverage IBM’s deep experience managing large complex portals, including the IRS infrastructure and other Government portal environments, as well as our experience providing commercial high traffic high availability e-commerce web sites.

Figure 1-1: IBM Capabilities
2,500+ hosting clients and 8 years managing IRS EUP/RUP complexities, we are positioned to minimize DOI transition risk.



The USGS site allows both download and order to print services, which requires workflow and supply chain expertise that IBM can assist USGS with in the many stages of operation to leverage new technologies and new methods as they develop. The management of more than 100,000 publications listed in the USGS Portal requires experienced content management processes as well as advanced, sophisticated, searching methods and approaches, IBM can be utilized to enhance USGS’s publication management.

IBM’s lessons learned from our extensive client base enable us to minimize migration risks and provide benefit to DOI. As an example, we used our lessons learned for our extensive client base enables IBM to minimize migration risks to DOI. Using our robust Transition and Transformation Methodology and we recently executed a highly successful transition of our Centers for Medicare and Medicaid Services (CMS) HIGLAS client to IBM.

1.4 Infrastructure as a Service

1.4.1 Overview

IBM has taken DOI’s requirements for IaaS including application configurations, performance and availability characteristics and has estimated the corresponding configurations required to support the implementation in IBM’s SCG. The implementation utilizes configurations that are available in our Services Catalog.

Applied to each of the virtual machine (VM) and storage configurations are the value-added services to account for (not all of the value-added services have been included in our estimates, as noted in each section):

- **VM Availability** – This service area includes the Enhanced Service Level Requirements for Uptime and Availability, Recovery Point Objectives (RPO), and Planned Downtime and Maintenance Windows. IBM’s Service Catalog provides for the flexibility that DOI needs to support both Service Portfolio A and Service Portfolio B as documented in the Performance Work Statement. IBM has assumed Service Band 2 for Service Portfolio A configuration and



Service Band 4 for Service Portfolio B. **Table 1-1** maps the VM Availability requirements as documented in the PWS to the corresponding IBM Service Band.

Table 1-1: VM Availability Requirements

Team IBM's VM availability approach provides a low-risk, cost-effective solution.

	PWS Service Portfolio A	IBM Service Catalog Service Band 2	PWS Service Portfolio B	IBM Service Catalog Service Band 4
Uptime and Availability	>99.99%	>=99.9% to <99.99%	>95%	>=95% to <99%
Recovery Point Objective (RPO)	24 Hours	4 Hours	7 Days	48 Hours
Planned Downtime (Maintenance Windows)	1 Hour/Month	1 Hour/Month	8 Hours/Month	4 Hours/Month

- **Systems Administration Services** – The System Administration Service provides ongoing support of customer servers up to and including the Operating System (OS). This includes keeping the OS up to date and patched from vulnerabilities as well as basic system configuration. For the USGS Web Hosting Solution, IBM has assumed that this service is required for the IBM provided operating system and not required for DOI supplied operating system.
- **Service Desk** – This service area includes the DOI Service level requirements for Recovery Time Objectives (RTO), Backup Requirements: Mean Time to Restore, Service Center Availability (24x7x365/366), Service Level Time-to-Respond (Acknowledge), Mean-Time-to-Resolve (Monthly Average). IBM has grouped these together because the service levels are tied to available support resources and their hours of availability. IBM's Service Desk is priced on a per call basis and factors in both response time and recovery times. IBM has estimated the number of calls per month to be one per VM or two calls per month. For the purposes of estimation, we are assuming they are Severity 2 level calls. Billing will be based on the actual number of calls. **Table 1-2** maps the Service Desk requirements as documented in the PWS to the corresponding IBM Service Band.

Table 1-2: Service Desk Requirements

Team IBM's flexible service desk, bands offering meets the DOI's mission objectives.

	PWS Service Portfolio A	IBM Service Catalog Service Band 1	PWS Service Portfolio B	IBM Service Catalog Service Band 3
Customer Support Availability	24x7x365/366	24x7x365/366	8x5 Mountain	8x5 Mountain
Recovery Time Objective (RTO)	24 Hours	5 Minutes	7 Days	24 Hours
Mean Time to Restore (MTR)	4 Hours	15 Minutes	24 Hours	24 Hours
Maximum Time to Acknowledge (MTA) – Severity 1	15 Minutes	15 Minutes	8 Hours	24 Hours
Mean Time to Resolve or Fix (MTF)	2 Hours	15 Minutes	24 Hours	45 Minutes

- **ESM Services** – This service area includes the core functions for availability, performance, and event management. Enterprise Service Management (ESM) includes 24x7x365/366 automated monitoring of networks, systems and critical business services with real-time

alerting, ticketing, notification and reporting capabilities. For the USGS Web Hosting Solution, IBM has assumed that this service is required for PSW Service Portfolio A only.

- **Security Engineering** – This service covers the Management and Administration of:
 - Dedicated Security Devices and Software
 - Physical and Virtual Firewalls
 - Intrusion Detection Systems
 - Security Zones

For the USGS Web Hosting Solution, IBM has assumed that this additional service is not required.

- **FISMA Services** – This service covers support for Maintaining the management and operational security controls:
 - Document and Reporting Support
 - Working with the customer-designated information system security officer (ISSO) or equivalent to provide documentation maintenance and compliance reporting
 - Maintaining the documentation of the management, operational, and technical security controls
 - Updating, maintaining, and reporting on the Plan of Action and Milestones
 - Test and Audit Support
 - Providing personnel support for two audits (internal or external) or security tests and evaluations for each year.
 - Support for one annual customer-driven test of each of the following processes (not to exceed 2 hours per test):
 - Continuity of Operations Plan or Disaster Recovery Plan
 - Incident Response Plan
 - Providing input on one data call a month (requiring no more than 8 hours of work)
 - Reporting security and privacy incidents to the customer-designated resource

For the USGS Web Hosting Solution, IBM has assumed that this additional service is not required.

- **Security Operations Center (SOC) Services** – The SOC provides 24x7x365/366 monitoring and tuning for intrusion prevention as well as scanning, system log monitoring, anti-malware monitoring, security event and security incident escalation, security incident response support services, and standard reporting. As defined by NIST SP 800-61, a security incident is “A violation or imminent threat of violation of computer security policies, acceptable use policies, or standard security practices.” For the USGS Web Hosting Solution, IBM has assumed that this additional service is not required.

1.4.1.1 VM/Storage Configurations

Table 1-3 documents the VM/Storage configurations that IBM has planned for the Public Web Hosting Solution.



Table 1-3: VM/Storage Configurations

Team IBM's flexible configuration options helps DOI to control costs.

VMs*			Quantity
005AA-Red	Standard	Extra Small	1
0005AG-RED	High Memory	Small	1
Total VMs			2
0001AA	Additional Processing Core	Additional Core	6
0002AD	Additional Processing Memory	8GB	1
0002AA	Additional Processing Memory	1GB	32
Storage			
0004AA	Class A Storage	High Speed {SAN} GB	750

*Note: VMs have been configured both with Red Hat Operating System and without; i.e., Bring Your Own.

1.4.1.2 Bulk Transport

IBM supports several bulk transport options including over the internet, dedicated circuits, through the DOI Trusted Internet Connection (TIC), physical tape, and disk array. To meet the enhanced bulk transport requirements we have identified disk array transport and replication as the most cost-effective method. IBM will support USGS with transporting physical storage to and from the IBM facilities and replicating the storage within the windows identified by the enhanced SLAs.

As documented in the Statement of Work, Team IBM has not included support services, as the Government does not anticipate that support service is necessary for this Task Order. DOI technical staff will install software on the IaaS platform and be responsible for the maintenance of that software.

1.4.1.2.1 Tasks

IBM will review the VM/Storage configurations with the USGS to validate assumptions used in determining the configurations and required value-added services. Changes to the configurations will be documented in a Program Change Request.

Following establishment of the VM/Storage configurations, IBM will provide the following report to DOI on a monthly basis. This will be an automated report pulled on a monthly basis and used to support the invoicing:

- Monthly Service Desk Call Report

1.4.1.2.2 Dependencies

There are no dependencies.

1.4.1.2.3 Deliverables

- Updated pricing based on the revised VM/Storage configurations for the USGS Web Hosting Solution (if required)
- Monthly Service Desk Call Report



1.4.1.2.4 Completion Criteria

Once the VM/Storage configurations have been validated and a Program Change Request has been submitted and approved if required, then the USGS Web Hosting Solution will be configured.

This task is completed at the end of the Period of Performance.

2 Key Assumptions

Team IBM has assumed that (b) (4) [Redacted]

3 Deliverable Schedule and Acceptance Process

Table 3-1 illustrates the deliverables associated with the performance work statement for the USGS Web Hosting Solution. Each deliverable will need to be approved by USGS using a mutually agreed upon deliverable acceptance criteria.

Table 3-1: Deliverables
Team IBM provides deliverables on schedule.

Deliverable	Schedule
Updated VM/Storage Configuration Files	Within 30 calendar days of award
Monthly Service Desk Call Report	Monthly, in support of invoicing

3.1 Deliverable Acceptance Procedure

Each deliverable will be made in accordance within the established deliverable process guidelines. Deliverables will be delivered by close of business, 5 p.m. local time at destination on the business day the deliverable is due.

The Monthly Service Desk Call Report will be deemed accepted upon delivery. Deliverables will be made by close of business, 5 p.m. local time at destination, Monday through Friday. IBM and DOI Program Management Office (PMO) will work together and agree on the layout and content of the deliverable to make sure that a deliverable meets the expected outcome.

For deliverables that are not deemed accepted upon delivery, the agreed-upon deliverables will be accepted by DOI as per the process defined below:

- (b) (4) [Redacted]



- (b) (4)
- [Redacted]
- [Redacted]
- [Redacted]

3.2 Completion Criteria

3.2.1 Project Completion Criteria

IBM's obligations of this work under this work order will be met when one of the following have occurred: (1) IBM has provided IaaS for which the value is equal to the authorized appropriation of funding established by DOI via appropriate commitment documents, (2) the period of performance of this Work Order is reached without an extension, or (3) DOI elects to terminate the Work Order in its entirety.

4 Past Performance References

4.1 IBM – U.S. ArmyGoArmyEd

1. Complete name of Government agency, commercial firm, or other organization: United States Army Contracting Center of Excellence (CCE)	
2. Complete address: 1600 Spearhead Div Ave., Fort Knox, KY 40122-5405	
3. Contract number or other reference: W91WAW-07-D-0010	4. Date of contract: 10/2007 4b. Type of contract: Firm Fixed Price and Time and Materials
5. Date work was begun: 10/2007. The GoArmyEd contract is the follow-on to the eArmyU contract which was awarded in 2000 and had a period of performance that ended in 2007	6. Date work was completed: 03/2017
7. Estimated contract price: (b) (4)	8. Final amount invoiced or amount invoiced to date: \$110M
9a. Technical point of contact (name, title, address, telephone no. and e-mail address): Sam Fagon, Program Manager 1600 Spearhead Div Ave., Fort Knox, KY 40122-5405 502-613-7302 samuel.p.fagone.civ@mail.mil	9b. Contracting or purchasing point of contact (name, title, address, telephone no. and e-mail address): Kelley Mustion, COR 1600 Spearhead Div Ave., Fort Knox, KY 40122-5405 703-545-4322 kelley.mustion@us.army.mil
10. Location of work (country, state or province, county, city): 1600 Spearhead Div Ave., Fort Knox, KY 40122-5405 10b: Key Personnel: N/A	
11. Description of contract work: The Army asked IBM to develop and sustain an innovative solution that would enable soldiers to earn their college degrees while concurrently meeting their Army and family obligations through access to world-class, fully-accredited U.S. colleges and universities at anytime, from anywhere – including during operational deployments in locations such as Kosovo, Iraq, and Afghanistan. IBM designed, built, and operates Army University Access Online (GoArmyEd), an online learning program integrating multiple systems, databases, and business processes to seamlessly deliver more	



than 146 certificate and degree programs offered by 29 colleges and universities. The application is hosted in the IBM Federal Data Center (FDC), which provides a secure data center environment that was specifically engineered for the requirements of the Federal IT environment for Federal Government customers only. The system supports more than 400,000 Soldiers with web-based self-services supported by a contact center. From the portal Soldiers are able to use an integrated online course catalog to enroll in courses, track their education progress, and pay for courses using tuition assistance benefits provided by the Army. The program is highly complex, including a portal and integration with several legacy HR systems and more than 145 university systems. GoArmyEd scope includes requirements management, all aspects of the software development life cycle, program management, system and network engineering, IA, quality management and customer service (Tiers I, II, and III). IBM employs a robust and flexible role-based security model to control user access to system functions, views, and data according to individual and group permissions. IBM performs remote monitoring/intrusion detection and has designed and implemented processes and functionality to make certain the GoArmy Ed system has survivability, secure authentication of users, data integrity, and continuous operations, as well as services in support of the successful certification and accreditation of the GoArmyEd system. The servers are securely configured and key processes that run the applications are monitored for Information Assurance Vulnerability Alert (IAVA) Compliance as well as intrusions or interruptions in service. Combined with a fully redundant solution, this monitoring has contributed to up times of nearly 100%. Moreover, back-up data are stored nightly at an offsite location to enable rapid disaster recovery if situations arise at the main hosting facility. GoArmyEd has developed a Quality Control plan which specifies the overall approach and procedures for meeting each of the Acceptable Quality Levels within the Performance Requirements Summary, communicating with the Government, resolving deficiencies, and identifying potential improvements. IBM uses multiple mechanisms to assess program performance. Team IBM Program Manager leads weekly performance reviews; IBM's Delivery Excellence Team conducts monthly reviews; and annual independent Program Management Reviews include customer interviews to assess whether Team IBM is meeting Conditions of Satisfaction and to determine if any corrective action is required.

11a) Producing high-quality reports and other deliverables; Staying on schedule and within budget: IBM uses proven processes to define, develop, and deliver timely reports that answer the Army's questions and support program control. IBM developed a Program Management Dashboard Report which is provided semi-monthly (formal) which includes key data to help the Army project future costs IBM generates timely invoices and upon task order completion, initiates the formal closeout process with the Army.

Performing under a firm-fixed-price (FFP) contract, IBM commits the resources of the corporation to meet its obligations to deliver the required results at the agreed price. Both the program manager and project executive hold weekly and monthly meetings to make certain all executed, planned, and programmed labor hours are well within contract costs. Additionally, multiple internal documents are produced to make certain of accurate forecasts. Any change requests are fully vetted with the client so that all parties understand how the change will affect scope, as well as costs to the existing contract. IBM has worked aggressively to reduce costs to the Army.

IBM has focused on delivering quality work products on time and within budget. To this end, IBM has invested in a rigorous process related to developing deliverables, which includes a style guide that is maintained to reflect client specific preferences. As an added step, IBM includes a dedicated copy editing cycle, led by a resource that has no affiliation with the subject matter to make certain that the content adheres to our proven project management methodology. The IBM methodology is compliant with ISO 9000 and CMMI Level 5 guidelines for program management. IBM's methodology augments Performance Work Statement (PWS) requirements with additional tools for exercising project controls. IBM has met all schedule requirements on this contract.

11b) Quality of cooperation within your organization and performance between your organization and its customers: IBM uses multiple mechanisms to assess program performance. Team IBM Program Manager leads weekly performance reviews; IBM's Delivery Excellence Team conducts monthly reviews; and annual independent Program Management Reviews (PMRs) include customer interviews to assess whether Team IBM is meeting Conditions of Satisfaction and to determine whether any corrective action is required.



<p>IBM proactively raises issues that could impact the task order schedule and associated cost. A detailed project plan is published at the kickoff meeting for each task order and critical dates are highlighted and discussed. In the event a date can not be met due to unforeseen circumstances, IBM has been quick to develop alternatives and workarounds that aim to keep the project on schedule and on budget, without materially impacting the task order vision.</p> <p>IBM coordinated among multiple business units and practice area for the original implementation of GoArmyEd, (called eArmyU on former contract) to develop this award winning solution. This included IBM Global Business Services (GBS), Global Technology Services and IBM Software Group. The current solution is managed within the Application Innovation Services service line in GBS and hosted in the FDC, with development/test provided from a different FDC location.</p>
<p>11c) Approach to implementing performance measures and for improving system effectiveness over time: IBM has established aggressive SLAs to verify cases were worked in a timely manner and performed extensive analysis on submitted cases to identify trends and concentration of issues. More recently, IBM has completed additional build-out phases to help the Army realize its One Portal vision, in which all three Army components (Army Reserve, National Guard, and Active Duty) leverage GoArmyEd. IBM has been able to support this expansion (annual transactional volume doubling over the past 2 years) with minimal increases (< 5%) to annual O&M costs.</p>
<p>11d) Responsiveness to requests, both scheduled and ad hoc, for services, data, analysis, and additional tasks in a timely and appropriate manner: Customer satisfaction has remained high throughout IBM's period of performance. IBM has always been seen as having outstanding representation with staff, both through professionalism and skill. The satisfaction survey for resolved help desk cases averages above 9 on a 10-point scale. Our ability to immediately respond to ad hoc data requests from Army leadership is another factor that contributes to high customer satisfaction.</p>
<p>12. Current status of contract: Work continuing, on schedule.</p>

4.2 IBM – IRS Web Hosting

<p>1. Complete name of Government agency, commercial firm, or other organization: Internal Revenue Service</p>	
<p>2. Complete address: 5000 Ellin Road, Lanham, MD 20706</p>	
<p>3. Contract number or other reference: TIRNO-09-D-00025</p>	<p>4. Date of contract: 04/01/2004; sole source to IRS 4b. Type of contract: Firm Fixed Price and Time and Material</p>
<p>5. Date work was begun: 06/2001 as sub to CSC; contract was transitioned to the IRS effective 04/2004</p>	<p>6. Date work was completed: 08/31/2013</p>
<p>7. Estimated contract price: Since 06/2001 to date, the estimated contract price is \$(b) (4) CSC=\$(b) (4) and IRS=\$(b) (4)</p>	<p>8. Final amount invoiced or amount invoiced to date: ~\$238M</p>
<p>9a. Technical point of contact (name, title, address, telephone no. and e-mail address): Cecil Hua, Director, Portal Program Management, IT/EOPs Internal Revenue Service 5000 Ellin Road Lanham, MD 20706 202-283-5933/Cecil.T.Hua@irs.gov</p>	<p>9b. Contracting or purchasing point of contact (name, title, address, telephone no. and e-mail address): Tony Colon, Contracting Officer Representative Internal Revenue Service 5000 Ellin Road Lanham, MD 20706 202-283-5786/Tony.W.Colon@irs.gov</p>
<p>10. Location of work (country, state or province, county, city): Sterling, VA; Chicago, IL; Martinsburg, WV; New Carrollton, MD; and Raleigh, NC 10b: Key Personnel: N/A</p>	
<p>11. Description of contract work: The IRS required a web hosting infrastructure for the IRS Business Systems Modernization Program. The IRS needed a secure, reliable web environment for new modernized applications for clients and employees. The environment had to conform to the IRS Enterprise Architecture standards, be scalable, and available 24X7x365. In Spring of 2001, IBM was tasked to build, modify and operate this Registered User Portal (RUP) and an Employee User Portal</p>	



(EUP) for the IRS Modernization.

Designed with three layers, the RUP infrastructure was developed, tested, and implemented at two IBM Hosting Centers, Chicago, IL and Sterling, VA. The EUP was designed, developed, tested, and implemented at the IRS' Martinsburg Computing Center (MCC). IBM provides remote management across all three hosting sites. With both portals operational, IBM is supporting, maintaining, and operating production environments which host more than 15 new IRS Web-based applications. IBM provides 24x7 help desk and delivery account management support to confirm timely response to the IRS in managing portal problems.

IBM uses network and host intrusion detection tools, system scan tools, and system management tools in order to manage the health of the system. For example, if one of the systems has a problem, an agent prompts an alert for staff to respond and fix the problem promptly. IBM also uses tools that measure SLA performance and generate monthly reports.

IBM provides Web hosting services subject to IRS-established SLAs for System and Network Availability, Network Latency, Packet Loss and VPN Availability. IBM is responsible for the infrastructure including the hardware (firewalls, routers, switches, servers, load balancers, SSL Accelerators); Operating System (device OS); and the Network (LAN, VLAN, VPN and circuits to connecting sites).

IBM Web Hosting adheres to the IRS System Development Life Cycle (SDLC) methodology. IBM Web Hosting actively participates in the multiple test phases that include end-to-end infrastructure testing, functional integration testing, system acceptance testing, customer acceptance testing, deployment site readiness testing and security test and evaluation. IBM Web Hosting also plays an active role in the Transition to Support Activities.

The infrastructure was designed to be flexible and scalable, and has been demonstrated in the past with the addition of the IFS Citrix farm to the EUP and the F5 static load balancing devices within the RUP. IBM has recently been tasked to enhance the infrastructure capabilities to support a new ICAS application. In addition, an infrastructure engineering assessment is also underway to support the requirements of several major releases of current applications.

11a) Producing high-quality reports and other deliverables; Staying on schedule and within budget: IBM has delivered on schedule, functional and contractual commitments for Web Hosting services since the initial Ready for Use milestone in February 2002. This includes successful execution of several Security Test and Evaluation (ST&E) cycles, expansion of infrastructure to support new processing needs and support for business applications that have come online. IBM provides all required reporting as per IRS requirements.

11b) Quality of cooperation within your organization and performance between your organization and its customers: IBM support of the IRS Web Hosting project involves a high level of cooperation within our large organization. IBM coordinates support internally through two large business groups within IBM Global Services: Global Business Services (GBS), which provides the PMO and has primary contact with the client; and Global Technology Services (GTS), which actually delivers the services, including system and network administration.

The IT environment at the IRS is very complex. It requires coordination and cooperation among many parties – IRS, CSC, IBM, and other contractors. IBM has built strong relationships among these parties and works proactively and cooperatively to achieve each of the scheduled goals of the program. For example, IBM and the IRS worked cooperatively to achieve the initial security certification and accreditation by phasing in security features over an agreed upon schedule. IBM has continued to provide ongoing support to the IRS through security audits and testing to confirm security compliance. In 2010, IBM invested \$2.5M to improve its Web Hosting environment after an outage. IBM invested \$2.5M to improve its Web Hosting environment after an outage. As a trusted partner, IBM quickly took proactive steps to meet the challenge. This included conducting lessons learned sessions and implementing improvements within the IRS and IBM space.

11c) Approach to implementing performance measures and for improving system effectiveness over time: So that the RUP and EUP development and production environments are kept in synch, changes/fixes are applied and tested in the development environment before being build-promoted into the IBM production environment. Additionally, changes/fixes are vetted through the various IRS control boards (e.g., Web Services Technical Review Board, Release Management Release Readiness Review Board) before being applied to the production environment.



<p>11d) Responsiveness to requests, both scheduled and ad hoc, for services, data, analysis, and additional tasks in a timely and appropriate manner: IBM's RUP infrastructure design allows parts of the system, or entire sites, to be taken off-line without interruption of service. This setup provides opportunities to support application rollouts, address system problems and other special requests while maintaining overall system availability. In addition, while the IRS has dedicated infrastructure at the IBM Web Hosting Centers and MCC, IBM can easily and seamlessly add additional capabilities to this infrastructure.</p>
<p>12. Current status of contract: Work continuing, on schedule.</p>

4.3 IBM – VA Agent Orange Claims Processing System

<p>1. Complete name of Government agency, commercial firm, or other organization: U.S. Department of Veterans Affairs</p>	
<p>2. Complete address: 810 Vermont Avenue, NW Washington, DC 20420</p>	
<p>3. Contract number or other reference: GS-35F-4984H</p>	<p>4. Date of contract: 7/1/2010 4b. Type of contract: Firm Fixed Price</p>
<p>5. Date work was begun: 7/1/2010</p>	<p>6. Date work was completed (end date of contract): 6/30/2013</p>
<p>7. Estimated contract price: \$(b) (4)</p>	<p>8. Final amount invoiced or amount invoiced to date: \$10.9M</p>
<p>9a. Technical point of contact (name, title, address, telephone no. and e-mail address): Mike Davis, Program Manager, Systems Management Veterans Health Administration, Chief Business Office 810 Vermont Avenue, NW, Washington, DC 20420 202-487-3873 Mike.Davis2@va.gov</p>	<p>9b. Contracting or purchasing point of contact (name, title, address, telephone no. and e-mail address): Justin Holloway MBA, MPA OBPI RBPS Project Lead, Program Analyst Veterans Benefits Administration, Office of Business Process Integration (20C) 810 Vermont Avenue, NW, Washington, DC 20420 202-461-1463 Justin.Holloway@va.gov</p>
<p>10. Location of work (country, state or province, county, city): Herndon, VA and Rocket Center, WV 10b: Key Personnel: N/A</p>	
<p>11. Description of contract work: IBM designed, developed, deployed, and now manages and operates the VA Agent Orange Claims Processing system called Fast Track. The system, which was designed to process Veterans' presumptive claims for disability benefits, allows Veterans claiming one or more of the supported presumptive conditions to self register, create a profile and submit a claim thru its web portal. The portal is accessible to Veterans and private physicians as well as an internal VA system for use by the Veterans Benefits Administration (VBA). IBM hosts Fast Track at an IBM multi-purpose hosted data center and operations facility located in Rocket Center, WV. This secure facility meets Department of Defense (DoD), Intelligence Community, NIST, and DHS physical and IT security standards. The same infrastructure is used to manage hundreds of millions of medical records and service treatment records in a secure, HIPAA-compliant environment. The facility includes secure telecommunications 6Mbps bandwidth access over redundant T-1 circuits. The production system is configured for high availability (99.999% uptime, excluding pre-defined maintenance) with primary and secondary servers located at IBM's Rocket Center facility. The solution offers enterprise-level scalability and a FileNet implementation designed to handle or support ingestion volumes as high as 4 million documents per hour, a retrieval rate of more than 6.3 million documents per hour, and a repository with more than 2 billion objects on modest dual-processor servers. IBM utilized an Agile development approach to manage each implementation. We provided a fully functional system for public release 120 days after contract award to comply with VA's aggressive schedule requirements. Our team trained VA representatives who support the claims process and provide ongoing Help Desk support.</p>	



<p>11a) Producing high-quality reports and other deliverables; Staying on schedule and within budget: IBM produced several deliverables to support the Fast Track effort, including a detailed Functional Design that specified use cases, user interface design, reports definition, and processing specification, architecture and technical design specifications, a test plan, test cases, and test report. The team used an Agile approach to manage the development effort, which encourages frequent communication with all team participants and the client, enabling quick identification of potential issues and corrective action. Fast Track was released to the public 120 days after contract award. IBM has met all budget and schedule requirements on this contract.</p>
<p>11b) Quality of cooperation within your organization and performance between your organization and its customers: IBM Global Business Services worked closely with IBM Software Group to design, build, and implement the system. IBM has a close working relationship with several members of the VBA organization, the business organization for Fast Track. VA Fast Track IT PM has been extremely satisfied with the team’s performance, often requesting demos of the system functionality to other groups and looking to leverage Fast Track as a solution for other initiatives.</p>
<p>11c) Approach to implementing performance measures and for improving system effectiveness over time: IBM took a proactive approach to building on the foundation of the Fast Track system. The system was designed to scale to support processing for additional presumptive conditions as well as support Veterans from other conflicts. Due to the aggressive schedule for the first public release, some IBM desired capabilities were added in a subsequent release. For example one of these capabilities “decoupled” the front-end web portal from the back-end repository and processing engine. This allowed for scheduled maintenance on the back-end without disruption to the web site operation. IBM recommended this feature to VA so the web site would be available during database backups and maintenance of the internal system, surpassing the SLAs that VA has put in place for the program.</p>
<p>11d) Responsiveness to requests, both scheduled and ad hoc, for services, data, analysis, and additional tasks in a timely and appropriate manner: IBM worked to support the client’s objectives within the contracted scope and cost as efficiently and expediently as possible. On several occasions IBM responded to last minute requests so the client could meet their immediate objectives. For example, IBM developed a new reporting mechanism for an executive dashboard within a week of the client’s request, which was challenging since it was compiling data from log files.</p>
<p>12. Current status of contract: Work continuing, on schedule.</p>

4.4 (b) (4) – DOI USGS FORT Support

<p>1. Complete name of Government agency, commercial firm, or other organization: Department of the Interior (DOI), United States Geological Survey (USGS), Fort Collins Science Center (FORT)</p>	
<p>2. Complete address: 2150 Centre Ave., Bldg C, Fort Collins, CO 80526</p>	
<p>3. Contract number or other reference: G11PC00019</p>	<p>4. Date of contract: 05/01/2011 4b. Type of contract: IDIQ</p>
<p>5. Date work was begun: 05/01/2011</p>	<p>6. Date work was completed: 04/30/2016</p>
<p>7. Estimated contract price: \$(b) (4)</p>	<p>8. Amount invoiced to date: \$7,700,000</p>
<p>9a. Technical point of contact (name, title, address, telephone no. and e-mail address): Cindy Seebhom, COR USGS Fort Collins Science Center 2150 Centre Ave., Bldg C Fort Collins, CO 80526 970-226-9426 seebohmc@usgs.gov</p>	<p>9b. Contracting or purchasing point of contact (name, title, address, telephone no. and e-mail address): Maureen Corbett USGS OAG Denver Acquisition Branch PO Box 25046 204 Federal Center Denver, CO 80225-0046 303-236-9317 mcorbett@usgs.gov</p>
<p>10. Location of work (country, state or province, county, city): Fort Collins, CO and Dededo, GU (Guam)</p>	
<p>10b: Key Personnel: N/A</p>	

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11. Description of contract work: In order to continue its efforts to address user-identified resource management problems, the FORT requires a wide variety of technical support services. (b) (4) team of 45 professionals is located at USGS offices in Fort Collins, Colorado, and Dededo, Guam. We provide technical support services including administrative (Payroll, Travel, and Credit Card Management) and clerical support; research support; information management; computer systems administration (Desktop and Server Hardware and Software Management), operations and maintenance; geospatial applications, modeling and associated technologies; and web development and database applications support.

11a) Producing high-quality reports and other deliverables; Staying on schedule and within budget: The (b) (4) staff utilizes various mechanisms for delivering reports and deliverables to USGS. Monthly, each employee completes a matrix form (developed by (b) (4) and approved by USGS) which tracks the status of every deliverable on the Task Order. The (b) (4) Program Manager reviews the report with each Task Order Manager prior to delivery to the USGS Contract Officer's Representative (COR). This review confirms task deadlines, accomplishments, and items to be completed are represented correctly. In addition, reports are electronically stored and easily recalled by any Task Order Manager or COR for reference. Reports, Deliverables and presentations are produced on various Microsoft applications including Excel, Word, PowerPoint, and Visio.

11b) Quality of cooperation within your organization and performance between your organization and its customers: By being located onsite at the USGS facility the (b) (4) Program Manager is in constant daily contact with the USGS customers. Twice weekly meetings are held with the USGS Contract Officer's Representative (COR) to review the contract status and address any on-going questions or issues. In addition, at least monthly meetings are held with each USGS Task Order Manager to review Task order status and resolve any concerns. Once each year a Customer Satisfaction Survey is sent to each Task Order Manager to review our performance and provide us with feedback on how we're doing.

11c) Approach to implementing performance measures and for improving system effectiveness over time: At the USGS Fort Collins Science Center (FORT) (b) (4) is contracted to provide Technical Services Support. (b) (4) performs Quality Control in several different ways. For our Web Services Support Team with the majority of our employees (23/45), we use a software tracking and management system named JIRA. USGS Project Managers and (b) (4) Project Coordinators issue work tickets based on individual project requirements. These tickets are assigned to (b) (4) employees detailing a task that needs to be completed or a problem that needs to be solved, and establishes due dates for each ticket. Bi-monthly Sprint meetings are held with USGS Project Managers and project team members to review project status's, project priorities, and project due dates. In addition, there are daily stand up meetings that the (b) (4) Program Manager participates in along with the project team members used to monitor each project's status and individual assignments. The Program Manager reviews the JIRA log files at the end of each month, on an employee by employee basis, to confirm that each employee's individual work tickets are being updated with timely comments reflecting the status of each ticket. This system has improved the quality of our production Web Development by increasing communication and reducing the amount of time it takes to identify, address, and solve problems.

Another method of tracking, that enables good quality and timeliness, involves the employees on our fixed price Task Orders. Every month each employee completes a matrix form which tracks the status of every deliverable on the Task Order. This report is then reviewed by the (b) (4) Program Manager and forwarded to the USGS Task Order Manager. This method of tracking makes sure that the Government receives completed deliverables on schedule and allows for review of any questions or problems to be addressed, by the (b) (4) Program Manager, each month.

Finally, for the remaining Task Orders, each (b) (4) employee provides the Project Manager with a monthly Status Report that details the status of work in progress, and completed, at the end of each month. The Program Manager reviews these monthly reports and then forwards them to the USGS Task Order Manager for review and comment.

11d) Responsiveness to requests, both scheduled and ad hoc, for services, data, analysis, and additional tasks in a timely and appropriate manner: By being located onsite at the USGS facility the (b) (4) Program Manager is in constant daily contact with the USGS customers. The Program Manager has weekly meetings with each Task Order Manager and COR and is readily available for any ad hoc requests which happens frequently. Any Management request is processed immediately and/or



according to the needs of the requester. In addition, the (b) (4) Program Control Analyst is onsite and is available for any Task or financial analysis that is being requested.

12. Current status of contract: Work continuing, on schedule.

4.5 (b) (4) – DOI FWS Environmental Conservation Online System (ECOS) Development

1. Complete name of Government agency, commercial firm, or other organization: Department of the Interior (DOI), Fish and Wildlife Service (FWS)	
2. Complete address: 2150 Centre Avenue, Bldg. C, Fort, Collins, CO 80526	
3. Contract number or other reference: F12PC00125	4. Date of contract: 07/02/2012 4b. Type of contract: T&M Labor Hour
5. Date work was begun: 07/02/2012	6. Date work was completed: 06/30/2017
7. Estimated contract price: \$(b) (4)	8. Final amount invoiced or amount invoiced to date: \$626,613
9a. Technical point of contact (name, title, address, telephone no. and e-mail address): (b) (4)	9b. Contracting or purchasing point of contact (name, title, address, telephone no. and e-mail address): William Fluharty, FWS, Division of Contracts 4301 North Fairfax Drive, Room 7118 Arlington, VA 22203-1610 703-358-2631 william_fluharty@fws.gov
10. Location of work (country, state or province, county, city): Fort Collins, CO 10b: Key Personnel: N/A	
11. Description of contract work: (b) (4) provides on-going operations and maintenance of the ECOS system including full-time system administration and database administration; ECOS User support; security, certification and accreditation; hardware installation, repair, and maintenance; software version updates, patches, licensing; GIS support; Application development support; Project and program management; and Help Desk support. (b) (4) maintains, develops, and improves ECOS, including all the applications of which it is composed and all the data it manages, maintains, or provides. Our projects include (but are not limited to) the improvement of ECOS' existing modules and sub-modules, ECOS redesign and integration, technology update and refresh, and development of new applications. We provide additional support for end-of-year performance reporting and other data calls, system administration, user support and assistance, and technical writing.	
11a. Producing high-quality reports and other deliverables; Staying on schedule and within budget: (b) (4) is producing monthly deliverable reports for our Fish and Wildlife customer with 100% on time performance. Trip reports are submitted within five days of returning home and Weekly status reports are delivered in person by each team lead to the onsite Program Manager.	
11b. Quality of cooperation within your organization and performance between your organization and its customers: Cooperation within the teams is extremely high with a weekly technical meeting where different individuals present new technologies each week. This gives our team members valuable presentation experience and distributes new technical information to other team members. Our FWS customer is extremely happy with our communication between the different development teams and their customers. Quarterly production meetings between (b) (4) Development teams and FWS are typically held at the Fort Collins site with occasional trips to Washington DC.	
11c. Approach to implementing performance measures and for improving system effectiveness over time: Development teams follow and agile development methodology with daily stand up meetings and two week sprint cycles. Sprint cycles are evaluated by the team leads and changes are incorporated into the next Sprint cycle. Currently Team Leads are scheduled for training and certification as Agile development ScrumMasters.	



11d. Responsiveness to requests, both scheduled and ad hoc, for services, data, analysis, and additional tasks in a timely and appropriate manner: (b) (4) staff has been very effective at responding to user requests for both information and support. An onsite help desk is staffed from 6: 00 AM to 5: 00PM M-F (MT) for user support requests and Team Leaders are available through a variety of communication mediums including phone, e-mail, and Webex meetings. Additional tasks are evaluated as to their impact to current development scope of work, and if necessary, recommendations made for modification to the current Task Order.

12. Current status of contract: Work continuing, on schedule.

4.6 (b) (4) – DOC NOAA IT Support

1. Complete name of Government agency, commercial firm, or other organization: Department of Commerce (DOC), National Oceanic and Atmospheric Administration (NOAA)	
2. Complete address: 325 Broadway, Boulder, CO 80305	
3. Contract number or other reference: RA-133R-12-NC-0279	4. Date of contract: 08/23/2009
5. Date work was begun: 08/23/2009	4b. Type of contract: Time and Materials
7. Estimated contract price: \$(b) (4)	6. Date work was completed: 06/30/2012
(b) (4)	8. Final amount invoiced or amount invoiced to date: \$14,391,780
(b) (4)	(b) (4)
9a. Technical point of contact (name, title, address, telephone no. and e-mail address): Phyllis Gunn, COTR 325 Broadway Boulder, CO 80305 (303) 497-6625 phyllis.gunn@noaa.gov	9b. Contracting or purchasing point of contact (name, title, address, telephone no. and e-mail address): Chad Hepp, CO 325 Broadway Boulder, CO 80305 (301) 713-1024 chad.m.hepp@noaa.gov
10. Location of work (country, state or province, county, city): Boulder, CO; Princeton, NJ; and Oak Ridge, TN	
10b: Key Personnel: N/A	
11. Description of contract work: (b) (4) provided IT support at all levels, from desktop and helpdesk support to system administration and architecture, to enable NOAA to meet the key missions described. (b) (4) maintained high level technical staff held to the highest standards to support a large array of processors, data-storage and communication facilities for acquiring and processing a large variety of real-time meteorological data for use by researchers around the country and the world who conduct advanced data analysis, developing prediction models and producing data displays for advanced forecasting workstations. (b) (4) provided complex scientific IT support including systems and network administration, engineering, and architecture; network security; computer facility and operations equipment monitoring; Tier 1-3 support; database management; network engineering; and other IT-related tasks in support of more than 1000 NOAA staff, with products available to the international community of researchers as well as the public at large, millions of whom refer to the weather and climate information provided by NOAA.	
11a) Producing high-quality reports and other deliverables; Staying on schedule and within budget: (b) (4) met and surpassed all deliverable schedules, including providing IT project status reports and custom reporting to each NOAA group including the Earth System Research Laboratory (ESRL), each of the ESRL divisions including Global Systems Division (GSD), Physical Sciences Division (PSD), and Global Monitoring Division (GMD, as well as the Boulder Network Operation Center (BNOC), and the National Weather Service. Each group received Monthly Project Status Reports providing technical reporting tailored to the needs of each group, In addition, special reports were provided as needed. The Scientific Communications Specialist proved more than 500 documents, posters, web site updates and other communications over the course of the contract, on time and at or above requirements. (b) (4) remained provided all services on time and well within budget. One example of a cost efficiency developed by (b) (4) was the expansion of the role of the System Support Group. Originally a narrowly defined group of Computer Operators providing basic IT systems monitoring to prevent and respond IT facility issues and emergencies, the position responsibilities were upgraded and no new cost to NOAA.	



They received Linux RedHat, SANS security training, and desktop systems training. The enhanced team became the System Support Group, made up of System Support Technicians having junior system administration capabilities and responsibilities, allowing them to function as a true Help Desk as well as expanding their responsibilities to directly provide RedHat and other server OS patching, routine server support, and supplemental desktop support. They were also able to personally assist end users during the recent transition to a new e-mail system. This resulted in the delegation of system administration duties such as security patching and response to Help Desk tickets. Response time to customer generated helpdesk tickets improved by more than 50%, and the delegated tasking freed up time for System Administrators to spend less time on routine tasks and focus more on high level tasks, and allowing them to perform projects ahead of schedule.

Overall, the tasks for the entire NOAA contract were performed at almost 10% below the contract estimated cost, saving the Government more than \$1.5 million.

11b) Quality of cooperation within your organization and performance between your organization and its customers: (b) (4) maintained frequent, high-quality communication with both its customers and its staff. NOAA customers and staff prided themselves in working as a group of interlocking teams, unconstrained by obstacles that might otherwise be created by working for more than one organization, while maintain the required professional boundaries necessary when members of different companies work together closely. This approach contributed to the efficient use of resources reflected in the costs savings shown. In addition to regular contact from the onsite Program Manager, the President of (b) (4) as well as the Human Resources Director and other (b) (4) key managers, initiated and responded to customer and employee communications as appropriate. The onsite Program Manager met with the NOAA COTR several times a week and responded quickly to concerns, questions, and identified needs. (b) (4) received the highest level of positive customer reviews for our responsiveness and initiative.

11c) Approach to implementing performance measures and for improving system effectiveness over time: (b) (4) used Project Management Institute (PMI) methodologies to manage and review performance of projects. Four of the (b) (4) contract staff onsite, and three of the offsite executive managers, were certified PMPs (Project Management Professionals). (b) (4) reviewed projects and analyzed the situation to determine the lessons learned, implementing improvements based on these analyses to continuously improve project management and customer support.

11d) Responsiveness to requests, both scheduled and ad hoc, for services, data, analysis, and additional tasks in a timely and appropriate manner: (b) (4) commitment to customer service is born out by response times that meet or surpass NOAA customer requirements more than 95% of the time. IT support staff, including system administrators and helpdesk personnel, handle more than 100 ad hoc service requests each day. Scheduled services such as security patching, data backup, OS and software upgrades, HWSW database updates, password management, and related services are scheduled in coordination in close coordination with NOAA Task Managers, and initiated, monitored, reviewed, modified and rescheduled or terminated as indicated by NOAA IT policies. Data analyses initiated by customer requests are performed intelligently and on time, providing the most relevant information in carefully designed reports that provide the information in useful formats. (b) (4) has received consistently high marks for NOAA evaluators for quality and timeliness of customer response.

12. Current status of contract: Work continuing, on schedule. (b) (4)

4.7 (b) (4) – DOI Landscape Decision Tool

1. Complete name of Government agency, commercial firm, or other organization: The Morris K. and Stewart L. Udall Foundation/U.S. Institute for Environmental Conflict Resolution	
2. Complete address: 130 S. Scott Ave, Tucson, AZ 85701	
3. Contract number or other reference: Contracts 1921 and 1955	4. Date of contract: IDIQ executed 12/21/11 4b: Type of contract: FFP
5. Date work was begun: 12/21/11	6. Date work was completed: 7/2013
7. Estimated contract price: \$(b) (4)	8. Final amount invoiced or amount invoiced to date: Nearly \$125K



9a. Technical point of contact (name, title, address, telephone no. and e-mail address):

(b) (4)

DOI Project Manager:

Larry Sugarbaker, Senior Advisor
12201 Sunrise Valley Drive, Mail Stop 810
Reston, VA 20192-0002
703-648-5741
lsugarbaker@usgs.gov

9b. Contracting or purchasing point of contact (name, title, address, telephone no. and e-mail address):

Phil Lemanski, Deputy Executive Director for
Finance and Education
130 S. Scott Avenue
Tucson, AZ 85701
520-901-8560
lemanski@udall.gov

10. Location of work (country, state or province, county, city): Most work is performed out of (b) (4)

10b. Key Personnel: N/A

11. Description of contract work: The United States Department of the Interior (DOI) collectively manages more than 25% of the land mass of the United States. Management of this land has been divided into traditional silos: National Parks, National Wildlife Refuges, Bureau of Indian Affairs Tribal Lands, Bureau of Land Management, etc.

Recognizing that landscapes don't end at the boundaries of a single department's responsibilities, DOI contracted with (b) (4) to develop a prototype cloud-based Landscape Decision Tool (LDT) to assist executive decision makers in transforming how the Government approaches management of its land resources. (b) (4) is involved in all phases of platform development and implementation. The tool is being implemented as a platform to:

- Improve collaboration across bureau lines by sharing data, maps, ideas, and innovations
- Integrate data from multiple bureaus and display it on maps using intuitive web tools that support the information needs of both executives and technical staff
- Configure and present data-driven dashboards that enable executives to monitor progress and status of bureau activities by means of reports, maps, charts, and graphs
- Empower field workers with mobile access to the same information and maps they use in the office and enable them to add new information to those maps from the field
- Enable visualization of tabular data on a map with "drag and drop" ease
- Engage in a dialog with citizens using social media and web mapping—soliciting input on places they care about, with the convenience of tools they are comfortable with
- Collaborate with partners and share data and knowledge to achieve real results on local Landscapes
- Integrate the DOI's significant existing investments in geospatial technology and data with geospatial information resources and capabilities available via the cloud

The platform leverages ArcGIS Online (AGOL), (b) (4) cloud-based GIS. AGOL's capabilities enable users to store, manage, and host mapping services; easily publish geographic content; and off-load selected processing activities from existing DOI data centers. In addition, it will significantly reduce the technical and workload obstacles for content publishing that currently constrain GIS professionals from sharing and publishing their applications, maps, and data. The Platform Capabilities include:

- **Content Management:** Thousands of analysts within DOI bureaus use (b) (4) ArcGIS desktop tools to manage and integrate maps as well as to perform advanced analysis of geographic relationships and trends. The new platform enables GIS professionals to create and share their maps, data, and GIS services easily through a web browser, mobile device, or custom GIS application. Once shared, the maps, data, and services are discoverable and usable by other web mapping applications without additional programming or web hosting.
- **Mobile Access:** Mobile users will be able to access the platform using the free ArcGIS App for Smartphones and Tablets, which can be downloaded from the Apple App Store, Android Market, or Windows Marketplace. With these devices, users can find and share maps and mobile applications from the platform; use tools to search, identify, measure, and query; and collect, edit, and update GIS features and attributes.



- **Executive Access:** Dashboards that are easily configurable using applications such as Microsoft. SharePoint provides intuitive and easy-to-use methods for managers to quickly find maps and information they need and define map and analysis requests that can be routed to the DOI bureaus for fulfillment.
- **Public Access:** The platform supports creation and publishing of public web maps through the use of application templates. DOI application developers will be able to create DOI-specific templates that will be available to approved users. Published applications will be available as complete web applications and can be embedded in DOI web sites.
- **Collaboration and Workflow Management:** DOI users and managers can use the platform to collaborate on requests for analysis and compare the results of different analysis using web maps. They can also take advantage of standard collaboration tools available from SharePoint.
- **Catalog/Data Discovery:** DOI users can register and share their online content and existing DOI web services within the platform. They will then be able to share their registered content with specific user groups (communities) within the system. Once a user has shared content within the catalog, search tools will help other users to find and use that content.
- **Hosted Web Services:** The platform hosts user-generated web services and applications as well as provides access to the extensive library of hosted web services available in AGOL.
ArcGIS Online Web Services: The platform will leverage a large and growing volume of web services information in AGOL.

There have not been any performance problems or conflicts with the customer in our support of this project.

11a) Producing high-quality reports and other deliverables; Staying on schedule and within budget: (b) (4) has delivered the application within a period of 6 months during which all life cycles of software development (requirements, design, development, testing, and acceptance) have been completed. The project has followed a dynamic and iterative design approach where, after some weeks of development, the direction of the application was changed, and design work restarted to account for this change.

The project was delivered within the FFP budget.

(b) (4) has a successful record of accomplishment assisting Government, commercial, and other types of organizations with their GIS projects and each year (b) (4) Professional Services conducts several hundred projects supporting a diverse group of these organizations. Over the years, (b) (4) has received numerous awards and widespread recognition with local, state, and Federal Government agencies acknowledging (b) (4) as a key provider of critical resources in support of many high-profile events.

11b) Quality of cooperation within your organization and performance between your organization and its customers: (b) (4) has worked closely both with DOI on establishing requirements, acquiring data sources, and designing and implementing information products. During the project several demonstrations have been given to executives at DOI.

(b) (4) has performed this project in collaboration with a team of landscape conservation institutes such as NatureServe, the Trust for Public Land, and Conservation Biology Institute. (b) (4) also subcontracted some of the application development to Blue Raster.

(b) (4) is organized into a number of departments including software products, sales, marketing, educational services, customer service, Professional Services, and many others. The organization is designed to be agile to meet the ever changing and increasing software and services expectations of our users.

11c) Approach to implementing performance measures and for improving system effectiveness over time: One of the main goals of the Landscape Decision Tools is to provide timely, accurate, and useful information regarding the implementation and realization of the DOI Strategic Plan goals and objectives. This goal was realized through an initial set of information products that were defined during the project execution. Based on ArcGIS Online and Microsoft SharePoint, the Landscape Decision Tool has been architected to allow for extending its content and capabilities with additional information products.

11d) Responsiveness to requests, both scheduled and ad hoc, for services, data, analysis, and additional tasks in a timely and appropriate manner: The project work has been performed using a dynamic and iterative development approach. The mid-project demonstrations to DOI leadership have had direct influence on the direction of the project and were accommodated for without affecting the overall budget.

12. Current status of contract: Work continuing, on schedule.



4.8 (b) (4) – (b) (4) IT Services Support

1. Complete name of Government agency, commercial firm, or other organization: (b) (4)	
2. Complete address: 14325 Willard Road, Suite 200, Chantilly, VA 20151-2110	
3. Contract number or other reference: OMB-2011-A0062-01	4. Date of contract: 8/30/2011
5. Date work was begun: 08/31/2011	4b. Type of contract: Time and Materials
7. Estimated contract price: \$(b) (4)	6. Date work was completed: 12/2012
8. Final amount invoiced or amount invoiced to date: \$495K	
9a. Technical point of contact (name, title, address, telephone no. and e-mail address): Chris Musialek, Chief Software Architect – Data.gov Office of Citizen Services and Innovative Technologies, U.S. General Services Administration (GSA) 1275 First Street NE, Rm. 1181D Washington, DC 20417 202-999-0915 christopher.musialek@gsa.gov	9b. Contracting or purchasing point of contact (name, title, address, telephone no. and e-mail address): (b) (4)
10. Location of work (country, state or province, county, city): Remote consulting performed from (b) (4)	
10b. Key Personnel: N/A	
<p>11. Description of contract work: After 8 years of operation, the Geospatial One-Stop Portal has been retired. During the last years of operation, the Federal Government has defined the Geospatial Platform as program to more effectively provide place-based products and services to the American public. The Geospatial Platform will be a managed portfolio of common geospatial data, services, and applications contributed and administered by authoritative sources and hosted on a shared infrastructure, for use by Government agencies and partners to meet their mission needs and the broader needs of the Nation. As a priority Open Government Initiative for President Obama’s administration, Data.gov increases the ability of the public to easily find, download, and use datasets that are generated and held by the Federal Government. Geospatial One-Stop has provided a web service to Data.gov that gave access to some 400,000 geospatial datasets.</p> <p>The aligning goals of both the Geospatial Platform and Data.gov resulted in the decision to migrate the Geospatial One-Stop Portal into the Data.gov environment, resulting in Geo.Data.gov. Another result was the decision to host the new Geospatial Platform web site in the same cloud infrastructure. Finally, the Geo.Data.gov and Geoplatform.gov systems will be tightly integrated.</p> <p>(b) (4) has been contracted by (b) (4), prime system integrator for GSA in support of Data.gov, to support the migration of Geodata.gov to Geo.Data.gov, develop the new Geoplatform.gov web site, and provide continued support to further enhance the two new web sites and integrate them in other parts of Data.gov.</p> <p>The new Geo.Data.gov and Geoplatform.gov are based on the Portal for ArcGIS product and the open source Esri Geoportal Server product.</p> <p>(b) (4) designed the new web sites, configured the products, and supported the creation of the cloud environment that will host these web sites. (b) (4) also provides thought leadership on the further extension of the Geospatial Platform and the use of geospatial information in the broader Data.gov context.</p> <p>There have not been any performance problems or conflicts with the customer in our support of this project.</p>	
<p>11a) Producing high-quality reports and other deliverables; Staying on schedule and within budget: For all work performed to-date, (b) (4) has delivered all deliverable artifacts on-time and within schedule and budget.</p> <p>(b) (4) has a successful record of accomplishment assisting Government, commercial, and other types of organizations with their GIS projects and each year (b) (4) conducts several hundred projects supporting a diverse group of these organizations. Over the years, (b) (4) has received</p>	



<p>numerous awards and widespread recognition with local, state, and Federal Government agencies acknowledging (b) (4) as a key provider of critical resources in support of many high-profile events.</p>
<p>11b) Quality of cooperation within your organization and performance between your organization and its customers: (b) (4) keeps in routine contact jointly with the prime contractor and the Government to maintain close collaboration and coordination on project work. (b) (4) is organized into a number of departments including software products, sales, marketing, educational services, customer service, Professional Services, and many others. The organization is designed to be agile to meet the ever changing and increasing software and services expectations of our users.</p>
<p>11c) Approach to implementing performance measures and for improving system effectiveness over time: (b) (4) worked with (b) (4) and Government to provide advice on optimal system architecture to address performance and reliability goals. (b) (4) supported configuration and analysis of system logs to identify and solve performance issues.</p>
<p>11d) Responsiveness to requests, both scheduled and ad hoc, for services, data, analysis, and additional tasks in a timely and appropriate manner: (b) (4) made staff available at very flexible times, including outside of normal business hours, to verify on-time delivery of project milestones and support for time-critical ad hoc issues.</p>
<p>12. Current status of contract: Work continuing, on schedule.</p>

4.9 (b) (4) – USDA FNS SNAP Deployment

<p>1. Complete name of Government agency, commercial firm, or other organization: U.S. Department of Agriculture Food and Nutrition Service (FNS)</p>	
<p>2. Complete address: 1400 Independence Ave., S.W., Washington, DC 20250</p>	
<p>3. Contract number or other reference: C.14177.A.4110</p>	<p>4. Date of contract: 4/2012 4b. Type of contract: FFP</p>
<p>5. Date work was begun: 5/2012</p>	<p>6. Date work was completed: 8/2013</p>
<p>7. Estimated contract price: \$(b) (4)</p>	<p>8. Final amount invoiced or amount invoiced to date: Nearly \$185K</p>
<p>9a. Technical point of contact (name, title, address, telephone no. and e-mail address): Jonathan Bennett, Program Manager SNAP Retailer Locator and Signage 3101 Park Center Drive, Alexandria, VA 22302 (703) 305-2795 jonathan.bennett@fns.usda.gov</p>	<p>9b. Contracting or purchasing point of contact (name, title, address, telephone no. and e-mail address): David W. Lum, Contracting Officer/Team Lead 3101 Park Center Drive, Room 228 Alexandria, VA 22302 (703) 305-2991 david.lum@fns.usda.gov</p>
<p>10. Location of work (country, state or province, county, city): Work performed from Regional (b) (4)</p>	
<p>10b. Key Personnel: N/A</p>	
<p>11. Description of contract work: Each month, more than 47 million people in the United States receive benefits from the Supplemental Nutrition Assistance Program (SNAP) (formerly the Food Stamp Program). In May 2010, the USDA Food and Nutrition Service launched a dynamic web application to help SNAP recipients find local stores that accept this nutrition assistance benefit. The SNAP Retailer Locator is a user-friendly web application that provides easy access to the location of the nearest SNAP-authorized stores. The SNAP Retailer Locator is hosted by Amazon Web Services in the cloud under an agreement with (b) (4) (b) (4) Managed Services supported the rapid deployment of the SNAP Retailer Locator to the cloud, providing USDA with a scalable, cost-effective alternative to hosting the application internally. (b) (4) Professional Services developed the basic SNAP map viewer using ArcGIS Server and the Flex API and also uploaded existing FNS data, including approximately 230,000 points representing retail stores that accept SNAP benefits. The application uses base maps and geocoding services provided by ArcGIS Online. We provided a query service that allows users to search for nearby SNAP-authorized retailers by typing an address and specifying a maximum drive time. Results are viewable in the map viewer or in a table.</p>	



The SNAP Retailer Locator was officially launched on May 19, 2010. You can access it at <http://www.fns.usda.gov/snap/retailerlocator.htm>. This locator was the first Federal geospatial application hosted in the Amazon cloud.

On February 18, 2011, SNAP released the next version of the SNAP Retailer Locator. This release includes a Spanish language version, allows users to download data by state, and provides users with driving directions to retail locations. In addition, a consumable web service, also accessible through www.data.gov, has been added to automatically link updated SNAP retailer data into other existing geospatial applications.

More information about this project is available at: <http://video.Esri.com/watch/161/cloud-computing-meets-usdas-business-needs->

There have not been any performance problems or conflicts with the customer in our support of this project.

11a) Producing high-quality reports and other deliverables; Staying on schedule and within budget: (b) (4) provides usage reporting to USDA on a monthly basis which provides them with statistics such as number of hits, visits, unique visitors, page views, where end users are located, etc. This data can be used to help USDA FNS determine how popular the site is and visualize growth in usage over time. (b) (4) has offered a service level of 95% under this contract, which is the system availability target uptime percentage. The project is on schedule and within budget.

(b) (4) has a successful record of accomplishment assisting Government, commercial, and other types of organizations with their GIS projects and each year (b) (4) Professional Services conducts several hundred projects supporting a diverse group of these organizations. Over the years, (b) (4) has received numerous awards and widespread recognition with local, state, and Federal Government agencies acknowledging (b) (4) as a key provider of critical resources in support of many high-profile events.

11b) Quality of cooperation within your organization and performance between your organization and its customers: (b) (4) provides USDA FNS with the option to update their retail store location data in the SNAP Retail Locator application every 2 months. (b) (4) works directly with USDA to test their data and deploy. (b) (4) also supplies USDA with monthly usage reporting as well as interacts closely with FNS in the event that there are any issues associated with system availability or performance.

(b) (4) works with USDA FNS on other projects, and also interacts with other agencies within USDA providing a similar type of support.

(b) (4) is organized into a number of departments including software products, sales, marketing, educational services, customer service, Professional Services, and many others. The organization is designed to be agile to meet the ever changing and increasing software and services expectations of our users.

11c) Approach to implementing performance measures and for improving system effectiveness over time: (b) (4) Managed Services is continuously exploring ways to improve system effectiveness and gain operational efficiencies over time. This includes exploring new cloud platforms, defining and refining processes and procedures, researching new ways to improve reporting, monitoring, security and system support.

11d) Responsiveness to requests, both scheduled and ad hoc, for services, data, analysis, and additional tasks in a timely and appropriate manner: The type of requests that would come from USDA would include requests to apply new application and data updates, requests for proposals for new work, etc. All requests are reviewed and assessed by a project manager and technical lead to identify any risks associated with carrying out the request. If the request requires making a change to the hosting environment, (b) (4) would follow its standard change management procedures. This includes verifying all changes in a staging environment before applying updates and modifications to the production hosting environment. All types of requests are handled in a timely manner and assessed by the project manager before they are carried out.

12. Current status of contract: Work continuing, on schedule.



4.10 (b) (4) – DOI FWS Information Resource and Technology Management (IRTM)

1. Complete name of Government agency, commercial firm, or other organization: U.S. Department of Interior (DOI) U.S. Fish and Wildlife Service (FWS)	
2. Complete address: 755 Parfet Street, Suite 349, Lakewood, CO 802015	
3. Contract number or other reference: F11PC00222/IT Support Services – (b) (4)	4. Date of contract: 05/11/2011 4b. Type of Contract: Firm Fixed Price
5. Date work was begun: 05/11/2011	6. Date work was completed: 05/10/2016
7. Estimated contract price: (b) (4)	8. Final amount invoiced or amount invoiced to date: \$22.5M
9a. Technical point of contact (name, title, address, telephone no. and e-mail address): Debra L. Brown, COTR 4401 N. Fairfax Drive, Suite 340 Arlington, VA 22203-1610 703-358-1729; 703-981-8795 (cell) debra_brown@fws.gov	9b. Contracting or purchasing point of contact (name, title, address, telephone no. and e-mail address): Michael Coghill, Team A – Supervisory Contract Specialist Division of Contracting and Facilities Management, Branch of Acquisition Operations 4401 N. Fairfax Drive, MS7118-43 Arlington, VA 22203 703-358-2288 Michael_Coghill@fws.gov
10. Location of work (country, state or province, county, city): Denver, CO and Arlington, VA 10.b. Key Personnel: Randy Bohannon, Program Manager-ITIL and Todd Steffens, Program Manager	
11. Description of contract work: (b) (4) has supported complex projects for the FWS and DOI over the past decade involving the consolidation of IT services, capital planning support, and the merger of business functions. During this time, (b) (4) has met all customer goals and objectives while adhering to DOI directives. In 2011, (b) (4) was awarded its third recompetes as a prime contractor from FWS to provide IT technical services and resources. (b) (4) currently employs 46 full-time contract IT resources on this IT GSA Task Order. Support includes following: (b) (4) supports the upgrade of the USFWS SWAN of 160 Frame Relay and ATM circuits, software development services to clients within USFWS and DOI, including enterprise wide web-based software applications and conversion from major legacy software applications supported include CMT (Corporate Master Table), FMIS (Fire Management Information System), FLERS (Firefighter and Law Enforcement Retirement System), DEAR (DOI Enterprise Architecture Repository) and many others. (b) (4) IT resources also develop end-to-end enterprise wide FWS J2EE web applications, and provide database, application and web site administration support. (b) (4) also provides desktop support, which includes a variety of adjunct tasks oriented toward securing mission-critical data across all technology platforms we service. These activities include supporting and implementing the Symantec Endpoint Protection and Data at Rest (DAR) security initiatives and maintaining Windows and Linux operating systems with application of security patches as released by the manufacturers. (b) (4) personnel currently perform manual antivirus scans of desktop/laptops after malicious incident notifications and notify FWS of any unresolved user problems, outstanding trouble calls, or other areas of concern. We also develop and maintain system and user documentation to assist the engineering teams with the task or researching solutions presenting issues and capturing our lessons learned in troubleshooting documentation for the Helpdesk.	
3.) Branch of Communication Technology (BCT), Data Center Move: Completed October 2009 (b) (4) supported a data center move for Information Resources and Technology Management, BCT, which managed and maintained a data center at 755 Parfet St. Suite 349, Lakewood, CO. This data center supported the infrastructure necessary to facilitate Web and Intranet application hosting, directory services, enterprise Messaging and other network services for the Bureau enterprise network. Based on projected growth, the facility that supported this data center could no longer provide the primary/secondary power requirements and HVAC requirements necessary to maintain uptime for enterprise services. Approximately 150 hardware components were moved to the Enterprise Hosting Center (West) on the Denver Federal Center during a 48-hour window of scheduled downtime. All	

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enterprise services were back on-line with no disruptions upon resumption of normal business on Monday, October 24, 2009. The new data center provides adequate space, power, and HVAC to support the Service's network for the foreseeable future.

4.) Backup and SAN Implementation: Completed June 2009

The (b) (4) staff and FWS evaluated the BCT tape backup and storage environment and determined that the current infrastructure no longer met the needs of the Service. The team designed and implemented a new storage area network and tape backup solution that provides data storage and backup of critical data files for Active Directory, Enterprise messaging (e-mail), Intranet, Internet and all hosted applications. The new tape backup system and Storage Area Network have improved data integrity and availability of critical data files. The new environment offers significantly more storage capacity and backup performance. Savings is realized by cost avoidance (i.e., the tangible and intangible cost of replacing lost data or the cost of forensic recovery of data as a result of failed backup processes. There have not been any performance problems or conflicts with the customer in our support of this contract.

11a) Producing high-quality reports and other deliverables; Staying on schedule and within budget:

(b) (4) provides monthly reports in compliance with FBMS IPP U.S. Fish & Wildlife on-line invoicing. Reports include (b) (4) staff by name, labor category, hourly rate, approved hours by FWS management and location on designated projects plus aggregate billing for the Subcontract/task order in effect and funds remaining on the TO. Additionally, per USFWS IT Support Services SOW; Mindbank notifies the Government when seventy-five percent (75%) of the budgeted amount has been spent. As part of this process, (b) (4) performs monthly review of task order participation with the customer and invoicing to confirm limits are adhered to per the SOW. Any adjustments are discussed with the COTR and actions taken as needed to verify contracting values are in compliance with the contract. Any other performance issues that arise are documented and a corrective action process is discussed, agreed to and documented. (b) (4) PM is accountable for following up on any quality issues to confirm issue close out. (b) (4) has met all schedule and budget requirements for this project.

11b) Quality of cooperation within your organization and performance between your organization and its customers: (b) (4) has worked cooperatively providing FWS IRTM support services since 1999 by:

- Managing various technical resources during project performance using a good understanding of customizations and business needs
- Taking responsibility for change (scope) management of technical changes
- Support of and facilitating meetings with the project team to discuss requirements, design, develop, and issues
- Suggesting alternate solution as required to verify that the technical activities are completed on schedule

• Working closely with functional and business to confirm the FWS mission requirement are met (b) (4) process for problem identification and resolution is a team approach inside a defined structure. We strive to provide uninterrupted support to our customers, with the very best quality and service levels. When problems occur, we recognize them and resolve them immediately.

Our account management approach serves to delegate responsibility and authority to appropriate organizational elements. This approach establishes a fully integrated management team responsive to task performance with the flexibility to adjust processes and resources to maximize performance. To support FWS, we use our WEBPAS database management tool to automate and streamline our recruiting, staffing, and placement process. Our interview techniques include customized, client-specific questions, our own skills assessment questions, skills verification testing software, "Skill Click", and candidate suitability interviews (behavioral interview questioning).

Quality expectations are set with candidates and consultants are asked to sign our Professional Rules of Conduct. Our PM queries FWS on timeliness, actual compared to expected skill level, quality/accuracy of work, and attendance among other factors.

If performance is not sufficient, we initiate a contingency plan. We work with FWS to assess other contingent resources from task orders for the right skills to fill a gap, if needed. During transition, our PM works with FWS management and COTR to decide tasks the non-performer can achieve while replacement preparations are made.



11c) Approach to implementing performance measures and for improving system effectiveness over time: (b) (4) has been able to maintain a knowledge base of employee’s still supporting FWS today, dating back to original contract award in 1999. The result is a team with functional and technical understanding, proven reliability, demonstrated responsiveness, and a commitment to service excellence that USF&W Service expects and deserves of its IRTM supplier. As an ATO (Accredited Training Organization) Mindbank has facilitated ITIL v3 Foundations certifications for our employee’s supporting FWS.

(b) (4) continues to provide solutions to FWS that encompass providing a variety of resources to several different projects due to the flexibility of the Mindbank staff and their creative approach to customer satisfaction in providing a top notch level of service. Equitable and industry-competitive salaries and benefits offerings are required to attract, motivate, and retain essential personnel. To minimize turnover, (b) (4) offers all-inclusive benefit packages that are industry competitive. Extensive training, an education reimbursement program, and career development opportunities are also key components of our employment packages. These investments in people have continually improved our ability to hire and retain a quality workforce.

11d) Responsiveness to requests, both scheduled and ad hoc, for services, data, analysis, and additional tasks in a timely and appropriate manner: Performance Tracking: Mindbank maintains an effective communications plan with FWS IRTM The plan consists of several elements:
 (1) Monthly Report – (b) (4) produces a monthly detailed written status report which is dated the last day of the month and delivered to FWS IRTM on or before the fifth day of each month.
 Detail on the status of work performed during the reporting period
 List of deliverables submitted during the reporting period (including submission date)
 Detail of current and planned work projects (and risk items) for the next reporting period
 List of personnel planned time off (more than one day) forecast for the next 3 months
 (2) Monthly Management Meeting – During the first Wednesday of each month there is a management meeting to include the (b) (4) program manager, FWS branch chiefs and the COTR. The group reviews the monthly report and discusses current and near term needs and tasks.
 (3) Ad Hoc Availability – The (b) (4) program manager is readily available for ad hoc communications and meetings at any time as the needs arise.
 (b) (4) also works with FWS management to incorporate any additional reporting requirements requested by the Government.

12. Current status of contract: Work continuing, on schedule.

4.11 (b) (4) – DOI Safety Management Information System (SMIS)

1. Complete name of Government agency, commercial firm, or other organization: United States Department of the Interior	
2. Complete address: 1849 C Street, NW MS 5558, Washington, DC 20240	
3. Contract number or other reference: D11PD18889	4. Date of contract: July 2010 – Present 4b. Type of contract: T&M
5. Date work was begun: 04/2011	6. Date work was completed: current 04/2016
7. Estimated contract price: (b) (4)	8. Final amount invoiced or amount invoiced to date: \$184K
9a. Technical point of contact (name, title, address, telephone no. and e-mail address): Armando Galindo, Jr. MPH, Assistant Director (Acting), Office of Emergency Management (OEM) SMIS Program Manager (OSH), Office of the Secretary, U.S. Department of the Interior 1849 C Street, NW, Room 3420 Washington, DC 20240 202-208-5673, cell: (202) 904-0008 Armando_Galindo@ios.doi.gov	9b. Contracting or purchasing point of contact (name, title, address, telephone no. and e-mail address): Barry Noll, Contracting Officer 1849 C Street, NW MS 5558, Washington DC 20240 202-208-7702 Barry_Noll@ios.doi.gov
10. Location of work (country, state or province, county, city): Lakewood, CO	
10b. Key Personnel: N/A	



11. Description of contract work: (b) (4) supports the DOI Safety Management Information System (SMIS) for application update and operations and maintenance support. This is DOI wide critical application which records all Safety related incidents SMIS is an automated system for reporting accidents which involve DOI employees, volunteers, contractors or visitors to DOI facilities. The application can only be used by authorized DOI Employees, Supervisors and Safety Managers. The support is provided at the DOI Lakewood center as a direct contract with DOI. The system is hosted at NBC, and we are providing programming support to make modification to the user interface. In addition, we are also providing help desk support for the SMIS system. There have not been any performance problems or conflicts with the customer in our support of this project.

11a) Producing high-quality reports and other deliverables; Staying on schedule and within budget: (b) (4) develops new and maintains existing web functionality for DOI’s Safety Management Information System (SMIS) web site, including: Database and site development for a new Exposure Assessment addition to SMIS. Certain risks are inherent in tasks performed by staff at various facilities operated by different DOI bureaus, such as the National Park Service and Bureau of Land Management. DOI seeks to catalog and present those risks in a cohesive format. Reformatting an existing poorly conceived and developed Inspection and Abatement system written by and for the USGS to a professional system for use by all DOI bureaus. Tasks include normalization of an underlying database of more than 500 tables, simplification of vastly overcomplicated stored procedures, custom functions and web site code, and translation of the site from Visual Basic 6 to ColdFusion 9. The new sites are being built in ColdFusion and CFAJAX, with an underlying SQL Server 2008 database. All the tasks have been performed on schedule and on target cost.

11b) Quality of cooperation within your organization and performance between your organization and its customers: (b) (4) resources work with the DOI staff in the development and support of the SMIS system. We work in close cooperation and progress and reporting visible to the Government team. Our success is due to the close cooperation and relationship and integration with the Government team members.

11c) Approach to implementing performance measures and for improving system effectiveness over time: Our development work and customer service support work is monitored on a monthly basis with reports provided to the Government team members. We constantly review our work, review suggestions for improving system effectiveness and jointly work towards implementing the approved requirements.

11d) Responsiveness to requests, both scheduled and ad hoc, for services, data, analysis, and additional tasks in a timely and appropriate manner: The (b) (4) team performs development and customer service tasks under the contract which requires responding to all technical and support requests on a continuous basis. (b) (4) team members provide such support and work closely with the DOI members in supporting their mission. (b) (4) has met and exceeded all such schedule and ad hoc request for both technical tasks and for customer service related tasks – all performed on a timely basis and meeting the high customer expectation resulting in a high customer satisfaction.

12. Current status of contract: Work continuing, on schedule.

4.12 (b) (4) (Sub to IBM) – USDA FS Fire Program Analysis (FPA) and the Wild Land Decision Support Programs (WFDSS)

1. Complete name of Government agency, commercial firm, or other organization: IBM	
2. Complete address: 6300 Diagonal Highway, Boulder, CO 80302	
3. Contract number or other reference: IBM Subcontract: 5004136064 and 5004025139 For work done to support Forest Service Contract to IBM – AG-24B-C-10-0015	4. Date of contract: 9/2008 4b. Type of contract: Time and Material
5. Date work was begun: 9/2008	6. Date work was completed: 9/2015
7. Estimated contract price: \$(b) (4)	8. Final amount invoiced or amount invoiced to date: \$212K



<p>9a. Technical point of contact (name, title, address, telephone no. and e-mail address): Sudhir Rao, Project Executive IBM, 6300 Diagonal Hwy, Boulder CO 80302 (303) 924-9354 sudrao@us.ibm.com</p>	<p>9b. Contracting or purchasing point of contact (name, title, address, telephone no. and e-mail address): Tom Sermak, Procurement 6300 Diagonal Hwy, Boulder, CO 80302 (303) 924-4168 tsermak@us.ibm.com</p>
<p>10. Location of work (country, state or province, county, city): Boulder, CO 10b: Key Personnel: None</p>	
<p>11. Description of contract work: (b) (4) has provided programming services, GIS, and Fire subject matter consultant, and SharePoint architect support on several USDA Forest Service programs under contract to IBM.</p> <p>Fire programs – under the Fire Program Analysis (FPA) program and the Wild land Decision Support programs (WFDSS) (b) (4) currently provides Geographical Information Service (GIS) programming skill. The FPA project is a software development project to create a web-based application to support the strategic fire budget for the USDA Forest Service and DOI agencies. This enterprise application uses simulation models to support the strategic fire budget development for the coming fiscal years. The simulation models support the preparedness, prevention, initial attack, large fire support and fuels planning simulation for the fire budget development. (b) (4) provides the GIS programming on this project and Fire Subject Matter Expertise as needed.</p> <p>The WFDSS application system is a decision support system that re-engineers the existing Wildland Fire Situation Analysis (WFDS) and Wildland Fire Implementation Plan (WFIP) process and supporting applications. The WFDSS project has created a web-based, GIS extension Java think client application that utilizes fire behavior models of FSPRO, FlamMap, Minimum Travel Time, and behave created by the Forest Service Fire Sciences Lab in Missoula, weather and geo-spatial inputs from multiple data sources to provide decision alternatives during active wild land fire events. (b) (4) supports the WFDSS development with GIS programming resource as needed for development tasks. The WFDSS application is used by both the Forest Service and DOI firefighting resources.</p> <p>(b) (4) has also supported the IBM project in support of the Forest Service SharePoint architecture and development efforts. Our architect worked with Team IBM in collaboration with the Forest Service in SharePoint implementation efforts.</p> <p>The above work demonstrates our knowledge of the Fire applications, and GIS, and SharePoint knowledge which is similar to DOI needs.</p> <p>There have not been any performance problems or conflicts with the customer in our support of this project.</p>	
<p>11a) Producing high-quality reports and other deliverables; Staying on schedule and within budget: We have generated all the GIS and programming deliverables on schedule working in the Agile process. Our deliverables are tied to the incremental development iterations which prioritize the requirements and develop the application code/modification deliverables. We work as part of the integrated product team in coordinating our work and deliverables.</p> <p>All the tasks have been performed on schedule and on target cost.</p>	
<p>11b) Quality of cooperation within your organization and performance between your organization and its customers: (b) (4) resources work as an integral part of the IBM performance team in supporting the Forest Service customers. We work as an integrated project team, with programming and technical tasks, associated with the project schedule in the project performance. We maintain excellent communication and work relationships with the team members and the customers.</p> <p>We maintain excellent communication and work relationships with the team members and the customers. We meet via telecon weekly as part of the team with the client to review progress, define requirements for the next iteration, and discuss issues to provide situational awareness on the work being performed.</p>	
<p>11c) Approach to implementing performance measures and for improving system effectiveness over time: (b) (4) resources work in an Agile process for implementing the programming and technical ask under Team IBM. We work in an integrated team approach with clear incremental iterative development process, and direct performance and reporting as a member of the larger team.</p>	



11d) Responsiveness to requests, both scheduled and ad hoc, for services, data, analysis, and additional tasks in a timely and appropriate manner: Our GIS programming tasks consist of doing GIS analysis, requirement definition, software development, test, integration, and operational implementation. All tasks have been performed on schedule and with quality deliverables.

12. Current status of contract: Work continuing, on schedule.

4.13 (b) (4) – DOI USGS National Geospatial Program

1. Complete name of Government agency, commercial firm, or other organization: U.S. Geological Survey (USGS)	
2. Complete address: 12201 Sunrise Valley Drive, Reston, VA 20192	
3. Contract number or other reference: Xentity has performed work for the USGS on three contracts: GS35F0130U GP10PC00126 G12PC00035	4. Date of contract: 9/30/2008 – 9/29/2010 6/1/2010 – 5/31/2012 6/1/2012 – 5/31/2017 4b. Type of contract: Subcontract with prime vendor, base + 1 8(a) sole source base + 1 8(a) IDIQ base + 4
5. Date work was begun: Began work with DOI/USGS in 10/2007 Cloud specific work began 9/2010	6. Date work was completed: 9/29/2010 5/31/2012 5/31/2017 (ongoing)
7. Estimated contract price: (b) (4)	8. Final amount invoiced or amount invoiced to date: \$320,376.44 \$1,343,551.20 \$174,783.83
9a. Technical point of contact (name, title, address, telephone no. and e-mail address): Kevin Hope, Chief Architect USGS National Geospatial Program 12201 Sunrise Valley Drive Reston, VA 20192 703-648-4543 khope@usgs.gov	9b. Contracting or purchasing point of contact (name, title, address, telephone no. and e-mail address): Lynda McCarthy, Contracting Officer Office of Acquisition and Grants U.S. Geological Survey 12201 Sunrise Valley Drive, Mail Stop 205 Reston, VA 20192 703-648-7394/lmccarthy@usgs.gov
10. Location of work (country, state or province, county, city): Denver, CO; Reston, VA 10b: Key Personnel: N/A	
11. Description of contract work: (b) (4) has been lead architecture and change management consulting support for the United States Geological Survey's National Geospatial Program since 2007. NGP has the largest geospatial responsibility in the Federal Government. Starting in 2010, (b) (4) has acted in lead support of architectural and management analysis for migration to cloud resources via facilitated pilots, prototypes, calculations, and applying architectural principles. The Architecture Proof of Concept prototyping for geospatial product and services stack included: <ul style="list-style-type: none"> • IaaS Pilot Testing – Conducted more than 10 series of 5 tests each for moving terabytes of files, accessing files, testing file redundancy, load testing, large file handling, and 3rd Party file transfer tool testing • PaaS Pilot Testing – Conducted tests for handling NGP service portfolio of viewers, map services, feature services, basemap services, search services, catalog services, and index services. This included testing geospatial software such as ArcGIS (multiple versions), OpenLayers, ESRI GeoPortal Server, GeoServer, and NoSQL Stack solutions with Hadoop/PIG, and SAFE FME. • Amazon Web Service Component Testing – For the above IaaS and PaaS Testing, testing included administration, functionality, stability, ease of procurement, and accessibility testing for multiple AWS components including S3, EC2, Auto Scaling, CloudWatch Monitoring, Elastic MapReduce, SNS (Notifications), SimpleDB (NoSQL), ESRI Cloud Stack, CloudBerry Pro against AWS REST APIs, AWS Import/Export, and public S3. 	



Final Deliverable is described in 11a that included management model, sourcing, cost model, architecture maturity, and recommendation blueprint.

11a) Producing high-quality reports and other deliverables; Staying on schedule and within budget: All activities were performed on-time within a pre-defined schedule. The Proof of Concept Analysis Activities and Deliverable Sections included:

Management Model Analysis – What roles, effective management strategies, investment planning, and performance measurement is appropriate for achieving the touted benefits of cloud models

Sourcing Models – What services with what criteria should look to be provided insourced, outsourced, or hybrid? (i.e., What is private industry better at serving versus the unique service needs for some services for Government?)

Cost Model Analysis – Look at the total cost of ownership for all management and sourcing models – both in the as-is, and target sourcing alternatives, including developing cost models for IaaS and PaaS Architecture Maturity Analysis; and affirm that the Management, Sourcing, and Cost models are balanced and tested with the right level of maturation for the qualities required to deliver cloud models at the suitable availability, reliability, agility, and information assurance/security compliance required. This included leveraging NIST stack, Geospatial Stack, and NGP Services stack and priorities as input. This included the final 50-page whitepaper report on readiness and cloud recommendations to pursue.

Delivery Service Architectural Blueprint – Resulting from a 6-month transformation evaluation of Geospatial product and service delivery for the next 3 to 5 years, there were 6 major cloud recommendations included in just over 100 total delivery service recommendations. Cloud recommendations are slated to start going live in 2013.

All activities stayed within budget of contract. As well, the (b) (4) advisory recommendations for testing access to cloud helped reduce cost significantly while allowing for rapid access to the cloud.

As a related aside, in addition, the testing came during the time of the Government shutdown preparation, which required the Government to not charge on Government credit cards if a shutdown were to incur. Given some cloud testing was performed on micro-purchases, Handled Cloud temporary migration of pilot during a Government shutdown (b) (4) directly supported in preparation activity – which required temporary migration off the cloud buckets and shutdown of EC2 instances to handle additional unallowable charges not to incur during shutdown if it were to occur. This was done in such a way that shutdown was averted. The cloud activities only lost a day for recovering testing.

Since 2008, (b) (4) has completed five projects totaling ~\$2MM with the USGS having achieved all objectives, delivered all requirements on time, and having received excellent performance ratings from all contracting officers and technical leads. (b) (4) has active contracts with the USGS totaling ~\$2.8MM and all are on time and on budget, with all objectives on track for being accomplished.

11b) Quality of cooperation within your organization and performance between your organization and its customers: Results included from the final whitepaper recommendation along with further enterprise architecture blueprint analysis following the OMB FSAM approach, which included direct collaboration with a core team representing all major business, budget, and IT functions in NGP with actual milestones put into the NGP multi-year budget and plans.

By collaboratively working with the multi-disciplinary team in a structured analysis process that flowed into its change management and governance functions, which (b) (4) also lead design for such, the milestones are being implemented and tracked, escalated biweekly and have full sign-off up through the Senior Executive level.

The execution of the plan is based off (b) (4) led architecture blueprint, project solution architecture, milestones, and high-level, mid-level, and Agile tracked JIRA level milestones. The NGP Operation and Data Center team representatives collaborate in weekly scrums and needed design sessions to triage solution understanding, issues, and risks.

As part of the tasks, (b) (4) also collaborated with community of practice discussions and USGS NGP with FGDC, GSA, USDA, EPA, and DOI. As well, activity and outputs from this project became best practices shared across USGS via multiple forums including The National Map Users Conference, activity participation with the USGS Community for Data Integration, active participation in the USGS Cloud Working Group, active discussions and interviews with vendors such as ESRI, AWS, and OpenGeo. This and other architecture successes also led to additional work for additional USGS programs for overall Core Science Systems.



11c) Approach to implementing performance measures and for improving system effectiveness

over time: The IaaS recommended solution is expected to go live in 2013 will be the migration more than 2 million files to AWS S3 with large savings in storage maintenance costs and much increased access throughput for the more than 200,000 online file downloads/month (via 20,000 orders/month).

This not only included implementing cloud technologies, but looking at new patterns for file delivery which will allow for NGP to pre-stage files rather than perform dynamic downloads which removes a potential of 100 servers from the NGP server farm. This also allowed NGP to review its file compression techniques which allowed for more than 5 times storage reduction which adds even more savings on top of S3 savings.

Finally, by also adding in the need to enhance bulk delivery, Move towards leveraging AWS Import/Export capability to replace 80% of all offline download requests and transfer high labor costs. Investigate publishing to the publicly available AWS S3 bucket for more significant cost savings given NGP's datasets are highly sought after high value data assets in The National Map and National Atlas data products. Overall savings have been calculated in the seven-digits/year, but given project phasing is early on specific realization should be made before touting actual numbers.

These cloud deliverables are in addition to (b) (4) past non-cloud architecture and change management results – also delivered on time and on-scope/budget include:

New Delivery stack launched – ArcGIS services farm, viewer API, and download framework – implemented based on (b) (4) Architecture advisory since 2009 which also included migration of 5,000 disparate map services to a core centralized set of 20 services based on downloadable data. This increased downloads and usability and still has near 10% a month since 2009 – more than 18x increase in downloads on average/month.

Improved internal and external communications via new communication strategy, (b) (4) produced Video Series including 4 professionally executed videos for primary NGP products to reduce travel costs and increase market exposure and NGP product relevance. Videos in this series rank in the top 10 most watched videos by USGS all-time.

Support for The National Map User Conference in forms of branding, training, video capture, mashathon execution that resulted in a doubling in usership (post-conference bump).

Completion of 4 architecture blueprints with 200 milestones incorporated into multi-year NGP guidance which each milestone has its specific performance measure benefit in efficiency, cost, output, usership, or satisfaction.

Standing up of multiple governance function for technical/capital review, system design, data life cycle management, business process improvement, and over enterprise architecture PMO for tracking, escalation, and mitigating milestone activity. This has increased risk mitigation thus lowering cost of project or opportunity loss.

Implementation of process improvements in 2 key product lines (Elevation, Orthoimagery), budget codification and tracking, requirements planning, and delivery service management installing initial ITIL and ITSM best practices. These have resulted in major efficiency, cost, and quality gains, as well as new clarity in resulting directives and operational changes.

As NGP is key to cross-cutting DOI initiatives given its role with FGDC, (b) (4) also supported the architecting of both the initial phase and next phases of the Geospatial One-Stop migration to GeoPlatform and data.gov including evaluation of GSA Cloud and DOI Cloud needs. This resulted in Cloud stack recommendations for geoplatform as well as cloud role recommendations for FGDC and DOI (i.e., hosting/operations vs. quality/standard/negotiation role). As well, the legacy geodata.gov shutdown and February 2013 architecture will result in geo.data.gov completely migrated into data.gov re-using the GSA Cloud. Finally, as part of DOI Cloud activities, Geoplatform services will be evaluated for slow rolling out to allow for USGS, FGDC and DOI to achieve needs and affordability.

11d) Responsiveness to requests, both scheduled and ad hoc, for services, data, analysis, and additional tasks in a timely and appropriate manner: All testing was documented, scheduled in batches and performed on schedule as needed. This included all tests described in 11 under activities performed and deliverables noted in 11a.

12. Current status of contract: Work continuing, on schedule.



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