

Attachment 1:

# Idaho BLM Geospatial Strategic Plan 2009-2011

Idaho Geosciences

BLM

IDAHO BLM GIS  
COORDINATION COMMITTEE  
APRIL 2008

1 - 50  
7/7/2008



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## DRAFT - Idaho BLM Geospatial Strategic Plan

*The Idaho BLM GIS Coordination Committee approves the 2008 – 2010 Idaho BLM Geospatial Strategic Plan and includes:*

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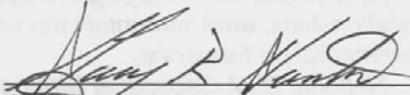


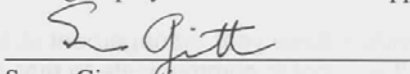
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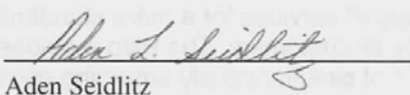
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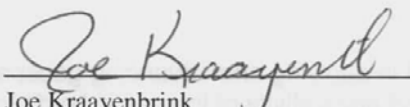
**Authorization Page**

By signing this authorization page, we indicate that we agree with the intent and direction of this Idaho Geospatial Plan. However, we reserve the right to implement the plan subject to funding constraints and staffing limitations.

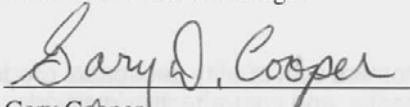
Recommended by:  4-16-08  
Gary Hunter  
Acting Deputy State Director for Support Services  
Date


Concurrence:  4-16-08  
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Date

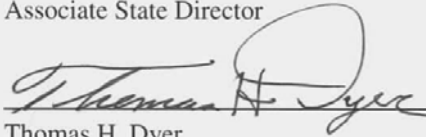
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## I. Executive Summary

### Idaho BLM Geospatial Strategic Plan

January 1, 2008 to December 31, 2010

*Managers, resource specialists, analysts, researchers, and policymakers recognize that geospatial information is critical for managing the public lands—for understanding natural resource relationships, environmental interactions, social and economic impacts, and environmental performance.*

*-National BLM Geospatial Strategic Plan 2007*

#### **Purpose**

The purpose of the Plan is to provide a three year management strategy for the operation of geospatial services. It is a tool to communicate to management, support services, partners and customers what we do and how we do it. It will focus and organize the deployment of the databases, processes and technologies for GIS Staff and support services for a more standardized, efficient and effective use of information by all customers. The Plan provides guidance for local technological implementation of simultaneously emerging geospatial strategies at the Bureau, Department and inter-departmental federal levels.

#### **Mission**

Our mission is to lead Idaho BLM in applying and advancing geospatial services to sustain the health, diversity, and productivity of the public lands for the use and enjoyment of present & future generations.

#### **Vision**

Our vision is to create an Idaho BLM that integrates geographic sciences to support accurate and effective decisions.

#### **Values**

Our core values are to serve customers with quality geospatial products and services by using innovative, scientific, and cost-effective methods.



## Issues and Strategies

The following issues were identified and strategies developed by the Idaho BLM GIS Coordination Committee to meet the desired outcomes:

1. Data Management:
  - Improve data management at all levels to improve data quality, accessibility, consistency and integrity.
  - Clarify and implement standard operating procedures in data management including validation, distribution, creation, update, data stewardship and sensitivity assessment.
2. Enterprise Architecture:
  - Identify and implement the best enterprise architecture for geospatial services in Idaho BLM which includes integration of various softwares, telecommunications and hardware to serve statewide as well as project data and products.
3. Communication:
  - Effectively communicate with all levels of BLM management, all resources and support services, and within the GIS community.
  - Effectively communicate with the public, other agencies, corporations and institutions.
4. Professional Development:
  - Provide quality training to GIS staff and users to increase skill diversity and expertise.
  - Effectively retain and transfer institutional knowledge among BLM Idaho staff to benefit the geospatial program.
  - Identify, develop and maintain career opportunities to retain quality expertise in the BLM.
  - Identify skills and positions necessary to accomplish steadily increasing workload demands and priorities.

## Plan Monitoring and Maintenance

This Plan will be monitored on a monthly, quarterly and annual basis by the Idaho BLM GIS Coordination Committee. The committee will review the Plan and make modifications as needed to ensure that it remains a relevant document.



## II. Description of the Geospatial Information Systems (GIS) Program

### Overview

GIS technology has rapidly expanded in the past 20 years to become a major component of natural resource management. The technology ties a physical location to a vast array of descriptive data. This gives the natural resource specialist, the federal, state or local manager and a member of the public the ability to scientifically evaluate a wide spectrum of data tied to a physical location. This results in better scientific and management decision making for resource-based organizations, while also providing documentation of the processes.

GIS has many components including; spatial data, tabular data, metadata, sophisticated software, expensive hardware, Information Systems support and training. GIS is a rapidly changing technology that is driven by the software developers and emerging technologies. GIS is also dependent on related technologies which include global positioning systems (GPS), remote sensing and mobile computing.



GIS technology now extends beyond traditional users and into the hands of the public through technologies like Google Earth, vehicle tracking and map browsers. This technology is highly pervasive and found in the personal and work environment.

The Bureau of Land Management first

incorporated this technology in the 1980s. Initially, the GIS implementation was nationally funded and directed; however, with declining national funding, the GIS technology and implementation ultimately became dependent on local funding and direction. This has led to a fragmented Bureau implementation in all aspects of the technology including hardware and software, storage capabilities, data standards development, metadata, data distribution and training. To date, all BLM states have implemented GIS technology in different ways.



## Purpose of the Idaho BLM Geospatial Strategic Plan

The Bureau has recognized the importance of a standardized implementation of enterprise GIS, but stable national funding to implement an enterprise solution remains unavailable. The desire among the states is to achieve a standardized implementation, but there are differences in local funding and different requirements for the GIS technology. Within these desires and constraints, the states are working on a National Strategic Plan to address these needs. Meanwhile, Idaho BLM has recognized the need for strategic planning at the local level.

The fundamental precept of the Idaho Strategic Plan is to provide GIS direction to the GIS staff and the GIS user community to maximize their use and analysis of spatial and related tabular data. This Plan recognizes that limited funding will persist into the future yet also acknowledges that direction is needed in the many facets of Idaho GIS. These facets include data management, implementation of an enterprise GIS for Idaho, communication with the user base, improvement of communication and cooperation with Information Systems, and coordination with management to secure professional development.



This Plan will aid GIS staff and users, along with the Idaho BLM managers, to understand the role and capabilities of GIS technology. This Plan will also help management in planning for, and funding, of the technology. GIS technology now permeates all aspects of BLM including natural resource management, fire suppression and rehabilitation, lands and realty, economic development, tourism and recreation, law enforcement and litigation support. This Strategic Plan will assist all Idaho BLM users and managers of GIS to fully and efficiently employ the capabilities of the technology in the next three years.

## Mission, Vision and Values

Our mission is to lead Idaho BLM in applying and advancing geospatial services to sustain the health, diversity, and productivity of the public lands for the use and enjoyment of present & future generations. Our vision is an Idaho BLM that integrates geographic sciences to support accurate and effective decisions. Our core values are to serve customers with quality geospatial products and services by using innovative, scientific and cost-effective methods.



## Governance and Organization

Statewide GIS issues in Idaho are addressed by the Idaho BLM GIS Coordination Committee, which is made up of the BLM Statewide GIS Lead, the four Idaho BLM District Office GIS Coordinators and an Idaho BLM Technical Support Advisor selected by the other members. The purpose of the Idaho BLM GIS Coordination Committee is to develop recommendations and facilitate the implementation of short and long term strategies to promote GIS for planning, analysis and decision making. The Idaho BLM GIS Coordination Committee will serve as the forum to implement national directives from a statewide perspective and to voice unified concerns. Its responsibilities are:

- Provide a forum to share ideas between District offices and the State office to meet goals.
- Plan, design, implement and administer spatial information as it applies to BLM's business processes.
- Cooperatively find resolutions to current issues facing the GIS community.
- In a unified voice, provide informed recommendations regarding the GIS program to Management.

*See Attachment 4, Idaho BLM GIS Coordination Committee Charter*

## Major Services

### Maps and Analysis

Over 80% of BLM daily business has some sort of spatial context. It is our job to ensure that geospatial data and applications are applied in the most efficient and responsible manner to account for this spatial context in providing sound, transparent and defensible decision support. Spatial data, maps and analysis are required when characterizing the existing conditions on the ground or the environmental impacts of a proposed action.

### Data Collection, Access and Maintenance

In addition to the tangible products such as data analysis, maps, and interactive web mapping services, geospatial technologies are used to realize greater efficiencies and standardization for data management. Through the use of GPS, standardized data collection protocols (data dictionaries), and centralized database management systems for data storage and maintenance we continue to minimize the time collecting data in the field and maximize the return on time invested once we are back in the office.

We have a responsibility to meet the data demands of a diverse audience, ranging from resource managers in the field to Washington Office Staff as



well as our interested publics. As we further integrate GPS technologies into our data collection and move towards an enterprise data management architecture we will be able to answer questions from our internal and external audiences more effectively and with greater efficiency.

#### Training

We recognize that geospatial technology is becoming more broadly integrated into BLM's day-to-day business at all levels and across all resources. Thus, we are responsible for ensuring that BLM staff is aware of the tools available to them and adequately trained to use them effectively to help meet objectives more efficiently wherever possible. The Idaho BLM GIS staff currently provides training for over 250 employees annually. As geospatial technologies continues to evolve and as we continue to experience greater reliance on these tools by seasonal employees, we would expect to see continued demand and need for complex training.

#### Technical Support

Fundamentally, the Idaho BLM GIS staff functions in a support capacity, and basic technical support should not be lost in this general summary of services. We are the resident experts immediately available to an increasingly large group of GIS and GPS users who rely on a variety of hardware and software applications that can require a significant amount of time in setup, maintenance and technical support.

#### Support of Workload Measures

We provide unique services which are relatively new to the agency and difficult to quantify through traditional measures of accomplishments. A more realistic, however somewhat less tangible, measure of the value of our contributions could be assessed by considering the degree to which our natural resource managers, Washington Office Staffs and interested publics depend on geospatial technologies to meet their objectives on a regular basis.

#### National Mandates for Services

The Department of the Interior Geospatial Strategic Plan puts great stock in the BLM tasks under Executive Order A-16 with maintaining the geospatial data of cadastre and land ownership for all federal agencies. Currently, Idaho BLM does maintain and distribute the geospatial land ownership data separately from the cadastre and land ownership geospatial data now under construction by the National Integrated Land System (NILS). Additionally, the BLM maintains and distributes over thirty other geospatial datasets to the State of Idaho Geospatial Clearinghouse. In this way, Idaho BLM contributes to the National Spatial Data Infrastructure and to the Geospatial One Stop federal mandates.



### Services Not Currently Included in this Plan

Although Idaho BLM GIS staff supports BLM Cadastral, Engineering and Lands and Realty staff, this particular geospatial plan does not directly address geospatial data not currently collected, used and managed by Environmental Systems Research Institute (ESRI) software or the emerging NILS software application.

## Issues

The following issues were identified by the Idaho BLM GIS Coordination Committee as the major components of the Strategic Plan. Strategies were developed to address the issues which are discussed in more detail in the section following this overview.

1. **Data Management:** How do we improve data management at all levels to improve data quality, accessibility, consistency and integrity? How do we clarify and implement standard operating procedures in data management, including validation, distribution, creation, update, data stewardship and sensitivity assessment?
2. **Enterprise Architecture:** How do we identify and implement the best enterprise architecture for geospatial services in Idaho BLM? An enterprise architecture includes integration of various softwares, telecommunications and hardware to serve statewide as well as project data and products.
3. **Communication:** How will the Idaho BLM GIS Coordination Committee and GIS staff effectively communicate with all levels of BLM management, Resources, Information Resource Management (IRM) and other support services, and within the GIS community? How will the Idaho BLM GIS Coordination Committee and GIS staff effectively communicate with external entities, including interested publics, partner agencies and institutions?
4. **Professional Development:** How can we provide quality training to GIS staff, IRM staff and users to increase skill diversity and expertise? How can we help to effectively retain and transfer institutional knowledge among Idaho BLM staff to benefit the geospatial program? How do we identify skills and positions necessary to accomplish steadily increasing workload demands and priorities? How do we help to identify, develop and maintain career opportunities in order to retain quality expertise in the BLM?



## Strategic Plan Development

The Idaho BLM GIS Coordination Committee agreed in July 2006 to develop a strategic plan. The Plan was developed during two days of meetings in October, a week in November and a week in January, 2007. The Idaho BLM GIS Coordination Committee used Pam Conley, a BLM facilitator, to help them through the strategic planning process. After the face-to-face meetings, the Idaho GIS Coordination Committee made assignments for writing the Strategic Plan document, and came together for a culminating week. The Plan was distributed locally and nationally to resource, information resources and management for internal review prior to approval by the Idaho Leadership Team in FY08.

At a national level, interagency guidelines for a successful geospatial program have been defined and have been considered in the development of the Plan. They are included in Attachment 5.

## Strategic Plan Monitoring

This Plan will be monitored regularly by the Idaho BLM GIS Coordination Committee. The committee will review the Plan and make modifications as needed to ensure that it remains a living document.



### III. Key Issues & Strategies

#### Issue 1 – Data Management

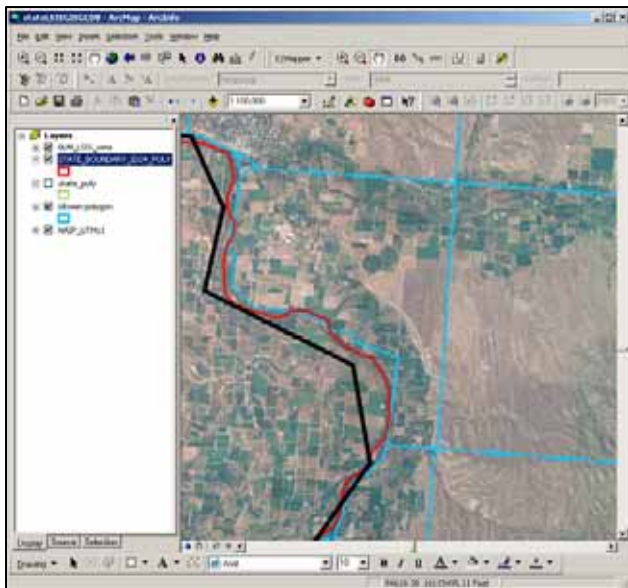
How do we improve data management at all levels to improve data quality, accessibility, consistency and integrity? How do we clarify and implement standard operating procedures in data management including validation, distribution, creation, update, data stewardship and sensitivity assessment?

#### Why is this an issue?

*Geospatial data at BLM is often difficult to find, access and use across administrative boundaries. Spatial information tends to be acquired and/or developed on a State by State basis (at best) and, in many instances, data collected for a program or project is different in neighboring field offices. In some State organizations, field, district and State offices maintain independent geospatial libraries that are not designed in such a way that they can be easily integrated. In addition, network access to geospatial data is difficult and the quality of the data is not well known or communicated since metadata is not always collected correctly or consistently.*

*-National BLM Geospatial Strategic Plan*

#### How Does Idaho Propose to Deal with this Issue?



The Idaho BLM GIS Coordination Committee has tasked the statewide Idaho BLM Geospatial Data Management sub-team to complete the Idaho BLM Geospatial Data Management Plan. The Plan will address data standards, quality control, distribution, work processes, metadata, and sensitivity for statewide implementation, with consideration of national direction. Additionally, data stewards will be integrated and trained in techniques to validate data. Idaho BLM will ensure alignment with national direction.

*See Detailed Strategies in Section IV*

*The three federal GIS layers for state boundaries, i.e. USGS (red), US Census (black) and BLM GCDB (blue), do not match. Idaho and Oregon BLM GIS databases use the USGS layer. OMB Circular A-16 Tasks US Census with maintenance of GIS state boundaries.*

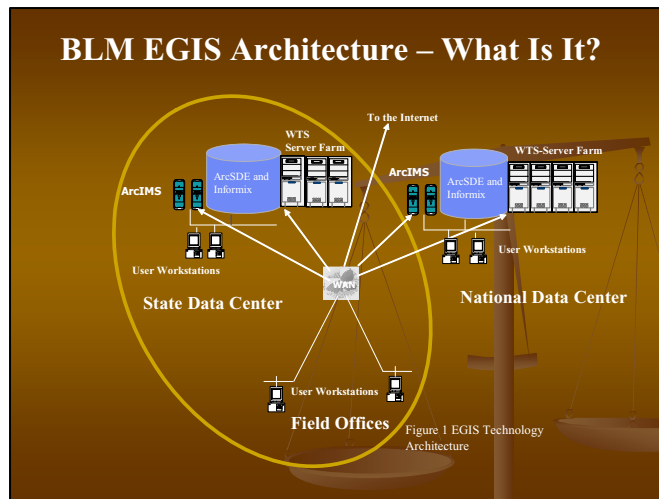


## Issue 2 – Enterprise Architecture

How do we identify and implement the best enterprise architecture for geospatial services in BLM Idaho? An enterprise architecture includes integration of various softwares, telecommunications and hardware to serve statewide and project data and products.

### Why is this an issue?

*BLM’s geospatial activities are currently supported by a diverse array of handheld devices, personal computers, servers, and networks, which were documented in the Geospatial Baseline (2001). BLM’s technical infrastructure was originally designed to support individual and independent applications without considering needs for enterprisewide data exchange. While the current configuration supports many distributed users, BLM State and program offices often have difficulty accessing and sharing data due to limitations in both network configuration and capacity. In some cases, network bandwidth within offices is significantly less than between offices across the country.... In addition, BLM security concerns have created new challenges in sharing data with external partners. Use of Web tools and technologies to deliver GIS and other geospatial products is generally restricted to those offices with significant funding and the ability to navigate difficult technological and administrative hurdles.*



*-National BLM Geospatial Strategic Plan*

### How Does Idaho Propose to Deal with this Issue?

Idaho BLM GIS Coordination Committee will research, develop and implement an Enterprise Geospatial Architecture Plan to integrate and serve GIS data and products across administrative boundaries. The Plan will address hardware, software and telecommunications. The role of IRM in the success of delivering master enterprise data to customers in field, state and national offices is identified as crucial. The current data storage crisis will require a focused resolution.

*See Detailed Strategies in Section IV*



### **Issue 3 – Communication**

How will the Idaho BLM GIS Coordination Committee and GIS staff effectively communicate with all levels of BLM management, resources, information resource management and other support services, and within the GIS community?

How will the Idaho BLM GIS Coordination Committee and GIS staff effectively communicate with external entities, including interested publics, partner agencies and institutions?



#### **Why is this an issue?**

Without good communication, Idaho BLM fails to support resource staff and managers with the full range of geospatial capabilities. Cooperation, coordination and effective outreach at all levels is necessary to facilitate a more informed, responsible and effective use of geospatial data. The technology changes so quickly that communication is required to remain current. Good communication with IRM is critical to integrate GIS technical requirements with BLM security needs and IRM infrastructure.

#### **How Does Idaho Propose to Deal with this Issue?**

- Increase communication with managers.
- Coordinate with program leads and resource coordinators for workload planning and budget, including Planning Target Allocations (PTA), Annual Work Plan (AWP), Budget Planning Systems (BPS) as well as project requests.
- Further develop the internal and external website and support conference calls, conferences and meetings for greater interaction among support, users and customers.
- Support a strong Idaho BLM GIS Coordination Committee
- Make policies more accessible by developing an Idaho supplement to WO BLM Mapping Manual.
- Develop a joint IRM and GIS team to resolve issues.

*See Detailed Strategies in Section IV*



## **Issue 4 – Professional Development**

How can we provide quality training to GIS staff, IRM staff and users to increase skill diversity and expertise? How can we help to effectively retain and transfer institutional knowledge among BLM Idaho staff to benefit the geospatial program? How do we identify skills and positions necessary to accomplish steadily increasing workload demands/priorities? How do we help to identify, develop and maintain career opportunities to retain quality expertise in the BLM?

### **Why is this an issue?**

Technological advances will require more diverse and robust skills of GIS staff, IRM staff and end users. As the technology becomes more broadly integrated into BLM's day-to-day business, we need to ensure GIS specialists and end-users are properly trained to adapt to these changes. To capitalize on investments made in employee training and institutional knowledge, employee retention and advancement needs to be a priority.



### **How Does Idaho Propose to Deal with this Issue?**

- Provide training based on core competencies.
- Work with managers to ensure BLM staffing needs are met statewide.
- Encourage detail assignments to expand specialist skills.

*See Detailed Strategies in Section IV*



## IV. Detailed Strategies

Please note that the budget amounts have been estimated. Specific requests for budget will be made annually through the appropriate processes for operations or above base requests. Although all items pertain to statewide deployment, some items, such as travel for District or Field Office GIS staff, will remain the obligation of the office that employs the staff person.

Furthermore, please note that Issue 1- Data Management Issue and Issue 2- Enterprise Architecture Issue do not specify policies and procedures that have yet to be developed. Detailed plans for both of these issues will be forthcoming and only broad topics and due dates are specified here.

### Issue 1 – Data Management

How do we improve data management at all levels to improve data quality, accessibility, consistency, integrity and storage? How do we clarify and implement standard operating procedures in data management including data stewardship validation, distribution, creation, update, and sensitivity assessment.

**Strategy 1.1** The statewide Geospatial Data Management sub-team of the Idaho GIS Coordination Committee will evaluate the membership of the data management team to ensure that needed skills are represented (consider IRM and Resource Data Steward as well as statewide GIS participation).

Action Plan for Strategy 1.1				
Objectives	Deadline	Responsible party	Budget	Monitor status & date
1.1.1 Evaluate needs of committee.	10/1/08	Data Mgt. Team Chair	\$0	ID GIS Coord monthly
1.1.2 Recruit members as needed.	11/1/08	Data Mgt. Team Chair	\$0	ID GIS Coord monthly
Performance Target: Have needed skills and abilities on the Data Management Team				

**Strategy 1.2** Complete the Idaho Geospatial Data Management Plan to encompass spatially related data management in Idaho BLM.

- 1.) Seek Project Facilitator to work with Data Management team to complete all aspects of the plan.
- 2.) Request funding from the WO/ISO for travel to complete the Idaho Geospatial Data Management Plan.
- 3.) Develop standard operating procedures for the Idaho draft documents:
  - a. Data Acquisition and Creation
  - b. Data Sensitivity - Assessment & Handling

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- c. Metadata creation & maintenance (methods to document procedures used in building data sets prior to creation of metadata)
  - d. Data Integrity & Validation Controls (Create a role/process to constantly run through servers and SDE checking final data, updating Internet, and building statewide datasets)
  - e. Data Maintenance and Update (Create a workflow for each master data layer)
  - f. Work Products
  - g. Data Distribution, Archive & Disposal (SDTS & National Archive)
- 4.) Specify & maintain a consistent statewide data naming convention.
- 5.) Follow statewide directory structure and naming conventions for SDE database design where applicable.
- 6.) Request funding from the WO and/or ISO for travel and contractor completion of the Idaho Geospatial Data Management Plan.

Action Plan for Strategy 1.2				
Objectives	Deadline	Responsible party	Budget	Monitor status & date
1.2.1 Seek Project Facilitator to work with Data Management team to complete all aspects of the plan	10/20/08	Data Mgt. Team Chair & GIS Lead	\$0 (ISO-\$10K WO-\$10K)	ICT decided 7/07 to fund from assignment of current Idaho staff
1.2.2 Request funding from the WO/ISO for travel for members of the Data Management Team for meetings in FY08 and FY09.	10/20/08	GIS Lead	\$0 (WO-\$4K ISO-\$4K)	ICT decided 7/07 that each office will cover necessary travel.
1.2.3 Develop and approve standard operating procedures for Data Integrity & Validation Controls	11/1/08	Data Mgt. Team Chair	\$0	ID GIS Coord monthly
1.2.4 Develop and approve standard operating procedures for Data Sensitivity, Assessment, Distribution & Handling	12/1/08	Data Mgt. Team Chair	\$0	ID GIS Coord monthly

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1.2.5 Develop and approve standard operating procedures for Metadata creation, maintenance & distribution.	12/1/08	CMAT Idaho Rep	\$0	ID GIS Coord monthly
1.2.6 Develop and approve standard operating procedures for Data Acquisition and Creation	3/1/09	Data Mgt Team Chair	\$0	ID GIS Coord monthly
1.2.7 Develop and approve standard operating procedures for Work Products.	5/1/09	Data Mgt Team Chair	\$0	ID GIS Coord monthly
1.2.8 Develop and approve standard operating procedures for Data Maintenance and Update.	6/1/09	Data Mgt. Team Chair	\$0	ID GIS Coord monthly
1.2.9 Develop and approve standard operating procedures for Data Archive & Disposal (SDTS & National Archive).	9/1/09	Data Mgt. Team Chair	\$0	ID GIS Coord monthly
1.2.10 Specify & maintain a consistent statewide directory structure.	10/1/08	GIS Lead	\$0	ID GIS Coord monthly
1.2.11 Specify & maintain a consistent statewide data naming convention.	10/1/08	Data Mgt. Team Chair & GIS Technical Analyst	\$0	ID GIS Coord (completed 12/07)
1.2.12 Approve Data Mgt Plan.	12/15/09	GIS Lead	\$0	ID GIS Coord monthly
Performance Target: Have Data Management Plan approved by the ID GIS Coord by end of 2009.				

**Strategy 1.3** Continue developing and adopting data standards for all Idaho statewide GIS spatial and tabular data. Encourage participation with field resource and GIS staff to create and amend standards.

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- 1.) The Idaho BLM GIS Coordination Committee feels a need to fund and fill the vice-permanent full time Data Standards Developer position (i.e. vice-Schmidt) to continue the Idaho work on data standards.
- 2.) Support efforts of the Data Management Team to develop new standards and amend current standards while writing the Idaho Geospatial Data Management Plan.
- 3.) Create three new geospatial data standards annually in Idaho BLM and receive approval by Data Administrator and management.
  - a. New data standards are usually those created by Idaho staff for the first time as a statewide standard.
  - b. New data standards may include amendment and implementation of WO data standards for layers not previously included in an Idaho standard.
  - c. All standards are to be authorized through the Idaho State Office Instruction Memorandum process until a Manual covers the standard.
- 4.) Amend two existing geospatial data standards annually in Idaho BLM and receive approval by Data Administrator and management.
  - a. Amendment may include edits to an existing standard due to WO creation of a national standard, due to field office request via the Data Management Team or the ID GIS Coordination committee, or due to necessary changes discovered by ISO staff in the implementation of a standard.
  - b. All standard updates are to be authorized through the Idaho State Office Instruction Memorandum process until a Manual covers the standard.
- 5.) Closely coordinate with field users to test and amend data standards by creating the GPS sub-team of the Data Mgt. Team
  - a. Edit and implement the statewide GPS Data Dictionary for transportation management plan data
- 6.) Implement state geospatial data standards when each master Spatial Database Engine statewide datasets is created. Document necessary edits to current standards as datasets are created.
- 7.) Closely coordinate with the National Data Management Team and the Assessment, Inventory and Monitoring Project's direction to ensure compatibility with developing national standards.

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Action Plan for Strategy 1.3				
Objectives	Deadline	Responsible party	Budget	Monitor status & date
1.3.1 Support the Idaho Data Administrator and management in their efforts to fund and fill the vice- permanent full time Data Standards Developer position.	November 1, 2010	ID GIS State Lead and Data Mgt. Team Chair	\$52,912	ID GIS Coord October 2008 quarterly meeting
1.3.2 Support efforts of the Data Management Team to develop new standards and amend current standards.	Ongoing as able	Data Mgt. Team Chair	\$0 See labor costs in 1.3.3 and 1.3.4	ID GIS Coord quarterly meeting
1.3.3 Create three new Idaho data standards and receive approval.	Yearly by September 30	Data Mgt. Team Chair	3 WM GIS	ID GIS Coord monthly
1.3.4 Edit or review two existing Idaho data standards and receive approval.	Yearly by September 30	Data Mgt. Team Chair	3 WM GIS	ID GIS Coord monthly
1.3.5 Create GPS Dictionary sub-team of Data mgt Team.	4/1/09	Data Mgt. Team Chair	\$0	ID GIS Coord monthly
1.3.6 Complete statewide GPS Dictionary for transportation.	5/15/09	GPS Dictionary Sub Team Chair	\$0	ID GIS Coord monthly
1.3.7 Implement state geospatial data standards when each master Spatial Database Engine statewide datasets is created.	20 datasets annually	ID GIS State Lead	\$0	ID GIS Coord October 2008 quarter meeting
1.3.8 Closely coordinate with the National Data Management Team's direction to ensure compatibility	Ongoing	ID GIS State Lead	See Travel costs in 1.5.1	ID GIS Coord October 2008 quarter meeting
Performance Target: Create two new and amend ten existing data standards yearly while implementing, developing and maintaining standards in Idaho master geospatial datasets.				

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**Strategy 1.4.** Support the State Data Administrator in efforts to strengthen the role and fully engage all Data Stewards to assess the completeness, accuracy and sensitivity of geospatial datasets. Coordinate with Resources, Lands, Transportation and Minerals data stewards and other staff to review and maintain geospatial and tabular datasets.

- 1.) Encourage local and state resource staffs to complete the Data Steward training.
- 2.) Bring the data steward training offered by NTC to Idaho.
- 3.) Encourage timely maintenance of data steward list on Idaho intranet. Update themes with identified data stewards to include framework as well as resource datasets.
- 4.) Develop and implement a process to document data steward approval of data as it is created or updated.

Action Plan for Strategy 1.4				
Objectives	Deadline	Responsible party	Budget	Monitor status & date
1.4.1 Encourage Data Stewards attend Data Steward training when offered at NTC or other locations	12/31/08	GIS Lead & Managers	NTC	ID GIS Coord October 2008 quarterly meeting
1.4.2 Support the State Data Administrator to bring the data steward training offered by NTC to Idaho	5/31/09	GIS Lead & Managers	\$5000	ID GIS Coord October 2009 quarterly meeting
1.4.3 Support the State Data Administrator to encourage maintenance of data steward list.	12/31/09	Idaho Data Administrator	\$0	ID GIS Coord March 2010 quarterly meeting
1.4.4 Develop and implement a process to document data steward approval of data as it is created or updated.	12/31/08	Data Mgt Team Chair	\$0	ID GIS Coord March 2009 quarterly meeting
Performance Target: Documentation will be complete for Data Steward validation and approval of all statewide geospatial datasets and all data otherwise shared with the public or shared through agreements with other agencies, private industry, contractors and non-profit organizations.				

**Strategy 1.5** Closely monitor and follow Idaho with the Office of Management and Budget's Geospatial Line of Business, the Department of the Interior's Geospatial Blueprint, the National Bureau of Land Management Geospatial Services Strategic Plan, the Executive Leadership Team's Data Management

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Team, the National Operations Center offices, teams and coordinating councils and the BLM WO Geospatial Senior Manager to ensure that Idaho is in compliance and providing insight into national direction for geospatial data management.

- 1.) Ensure alignment of BLM Idaho geospatial strategy and assist, when requested, with development of geospatial capabilities of national BLM strategy and databases such as:
  - a. National geospatial datasets
  - b. EPlanning
  - c. Facilities Asset Management
  - d. Range Improvement Program
  - e. National Integrated Land System
  - f. Range Assessment System
  - g. Assessment, Inventory and Monitoring Systems (AIMS)
  - h. Remotely sensed data, such as National Agricultural Imagery Program (NAIP) from USDA Farm Service Agency, Light Detection And Ranging (LIDAR) imagery and the DOI "Imagery for the Nation" (IFN) program

Tasks assigned to BLM Idaho to assist with implementation of the national BLM Geospatial Services Strategic Plan (GSSP) include (numbers refer to the BLM GSSP system):

- Action 5.1.1: Work with the BLM Enterprise Architecture Team to ensure that geospatial user needs are addressed as the Bureau's technical infrastructure evolves. OR, ID, NOC Applications, NOC DRS, NOC IRM
  - Cindy Lou McDonald, ID is lead with team of OR, ID, NOC Applications, NOC DRS, NOC IRM
- Action 3.2.2: Work with program managers, the AIM Initiative, and others to ensure key monitoring databases and other data sets (e.g., vegetation, National Hydrography Dataset, Fire Perimeters) contain spatial data adequate for their intended use and where appropriate are based on the PLSS. (NIFC, NOC, WO-200, WO-300 - Ongoing).
  - Mary Wilson, Wyoming is Lead with team of PLSS. NOC DRS, ID, OR, WY
- Action 3.5.1: Initiate and guide efforts to develop national corporate databases and improve the quality and accessibility of geospatial data. (NIFC, NOC – FY2008).
  - Bob Bewley, WO is Lead with team of OR, NOC DM, CA, ID, NOC APP, WO

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- Action 5.1.7: Provide access to equipment and training for on-the-ground staff to help them collect geospatial data in the course of their regulatory and monitoring activities. (NOC, ongoing).
  - Diane Nelson, NTC as lead with team of NTC, NOC IRM, ID
  
- Action 5.2.3: Establish secure Web services to share BLM data and tools with external partners via the Internet and intranet. (NOC, 1<sup>st</sup> quarter FY2008, then ongoing).
  - George Heine, NOC IRM is lead with team of AK, NOC Applications, ID, NM
  
- Action 6.2.3: Provide management guidance to assist states in structuring and deploying their geospatial workforce for maximum benefit.
  - Jack Johnson, Arizona is lead, with team of AZ, NOC DRS, CO, WO, ID

- 2.) Maintain active Idaho participation and ensure compliance with federated geospatial data management programs, such as:
  - a. Federal Geographic Data Committee Standards and other Industry Standards
  - b. National Spatial Data Infrastructure
  - c. Geospatial One Stop Data Distribution Center
    - i. Support improved Data Distribution on the Internet
  - d. Geographic Names Information System
  - e. SSURGO soils data
  - f. Service First
  
- 3.) Support Idaho BLM Management in their participation on national teams and projects that impact geospatial resources
  - a. Provide briefings when requested as they relate to geospatial workflow
  - b. Provide geospatial briefings, documentation, graphics and analysis when requested for litigation, team support, legislative affairs, law enforcement, human resources and other issues as requested.

Action Plan for Strategy 1.5				
Objectives	Deadline	Responsible party	Budget	Monitor status & date
1.5.1 Coordinate with development of geospatial capabilities of national BLM systems and databases from National BLM Geospatial Services Strategic Plan	August 4, 2008 for draft; Oct. 7 for final tasks. Implement FY09	State GIS Lead	\$TBD (WO funding)	ID GIS Coord annually

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1.5.2 Maintain active Idaho participation and ensure compliance with federated geospatial programs	Ongoing	State GIS Lead	\$0	ID GIS Coord annually
1.5.3 Support improved Data Distribution on the Internet	Ongoing	State GIS Lead	\$10K annually	ID GIS Coord annually
1.5.4 Support Idaho BLM Management in their participation on national teams and projects that impact geospatial resources	Ongoing	State GIS Lead	\$0	ID GIS Coord annually
Performance Target: Idaho BLM will assist national BLM efforts while ensuring state compliance with national direction.				

**Issue 2 – Enterprise Architecture**

How do we identify and implement the best enterprise architecture for geospatial services in BLM Idaho? Enterprise architecture includes the integration of various softwares, telecommunications and hardware to serve statewide as well as project data and products.

**Strategy 2.1** Research, develop and write an Enterprise Geospatial Architecture Plan (EGAP) to integrate and serve GIS data and products across administrative boundaries. Plan to include hardware, software and telecommunications requirements.

- 1.) Propose configuration design and components of the Enterprise GIS system. EGIS architecture is to include a system that will allow the building of local, state and national master databases, a system that will allow data update, creation and distribution through the Spatial Database Engine (SDE), the role of the Citrix farm of hardware and software, data storage system for file-based and master Geodatabase data, the capabilities and limitations of network, and the options to provide casual GIS users mapping capabilities through the Map Browser (ArcIMS or ArcServer).
- 2.) Propose options for roles and responsibilities for GIS and IRM Staff locally, statewide, nationally to load, test, evaluate and improve all Enterprise GIS components, including servers, storage, plotters, scanners and software in timely fashion.
- 3.) Propose options for weekly and monthly preventive and troubleshooting maintenance timeframes, as well as staffing roles and responsibilities

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between field, state and national IRM and GIS staff. Goal is to ensure EGIS system and data are fully functional and accessible statewide 6 a.m to 6 p.m. during the work week and around the clock during incident support (if requested).

- 4.) Propose options of timeframes and needs for installation annually of updates and patches for software and hardware in timely fashion.
- 5.) Propose options to address the need for security patches to be tested nationally on EGIS components before deployment. Address need for knowledgeable staff to test EGIS immediately after deployment and resolve any issues within one work day or less.
- 6.) Propose options for GIS staff to develop and monitor the system, given current restrictions due to national BLM security policy.
  - a. Often in BLM, GIS staff has the skills to develop the system but not the permissions to use the software tools and buttons necessary for project development. Specifically, permissions are a problem for accessing tools in ArcIMS Site Administrator and SQL Server Management Studio.
  - b. In some states, GIS staff has been provided limited permissions to access only the tools critical to development and maintenance of the system.
  - c. Determine the options in Idaho, including a potential option for blocks of hours of IRM time to sit and watch GIS staff develop EGIS services. Also include the option of no development of new services within the BLM.
- 7.) Propose guidelines to keep the system running when BLM lacks time or expertise. Address when it is appropriate and the policy, process, supervision and security for hiring private companies or contractors.
- 8.) Determine budget sources, and timelines for identified EGAP needs.

Action Plan for Strategy 2.1				
Objectives	Deadline	Responsible party	Budget	Monitor status & date
2.1.1 Propose configuration design and components of the Enterprise GIS system.	3/1/09	State Technical GIS Analyst and GIS Lead	\$0	ID GIS Coord monthly
2.12 Propose options for roles and responsibilities for GIS and IRM Staff	2/1/09	State Technical GIS Analyst	\$0	ID GIS Coord monthly

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locally, statewide, nationally to load, test, evaluate and improve all Enterprise GIS components		and GIS Lead		
2.1.3 Propose options for weekly and monthly preventive and troubleshooting maintenance timeframes	5/1/09	State Technical GIS Analyst and GIS Lead	\$0	ID GIS Coord monthly
2.1.4 Propose options of timeframes and needs for installation annually of updates and patches for software and hardware in timely fashion.	2/1/09	State Technical GIS Analyst and GIS Lead	\$0	ID GIS Coord monthly
2.1.5 Propose options to address the need for security patches to be tested nationally on EGIS components before deployment.	2/1/09	State Technical GIS Analyst and GIS Lead	\$0	ID GIS Coord monthly
2.1.6 Propose options for GIS staff to develop and monitor the system, given current unclear national BLM security policy.	4/1/09	State Technical GIS Analyst and GIS Lead	\$0	ID GIS Coord monthly
2.1.7 Propose guidelines to keep the system running when BLM lacks time or expertise	5/30/09	State GIS Lead and CIO	\$0	ID GIS Coord monthly
2.1.8 Determine budget sources, and timelines for identified EGAP needs.	5/30/09	State Technical GIS Analyst and GIS Lead	\$0	ID GIS Coord monthly
2.1.9 Idaho BLM GIS Coordination Committee to approve plan.	7/15/09	ID GIS Coord	\$0	ID GIS Coord monthly
2.1.9 Idaho BLM GIS Coordination Committee to coordinate, edit and request approval for EGAP plan through State ITIB Board.	7/31/09	State Technical GIS Analyst and GIS Lead	\$0	ID GIS Coord monthly

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2.1.10 EGAP plan to be approved by Idaho management.	9/31/09	State GIS Lead and CIO	\$0	ID GIS Coord monthly
Performance Target: GIS, IRM and management will agree on the Enterprise Geospatial Plan to be implemented in Idaho by FY09.				

**Strategy 2.2** Implement an enterprise solution to make geospatial services and data accessible statewide. Implementation requires time, cooperation and knowledge by both IRM and GIS staff at the local, state and national levels.

- 1.) Implement preferred options for roles and responsibilities for GIS and IRM Staff locally, statewide, nationally to load, test, evaluate and improve all Enterprise GIS components, including servers, storage, plotters, scanners and software in timely fashion.
- 2.) Install hardware and software of the EGIS system. Currently need production and development SQL Server boxes to be operational, and fully functional in the ISO with the production box placed on a regular backup schedule.
  - a. Determine performance metrics and stability of system.
  - b. Improve performance metrics, if necessary with professional outside assistance.
  - c. Load all statewide final datasets in system.
  - d. Require all ISO edits in final master datasets to be completed in SDE, and the implementation is stable.
- 3.) Test system for national or regional replication using both a one way and two way replication.
  - a. Propose solution to issue of edge matching best practices in cases of gaps or overlaps at state boundaries.
  - b. Propose solution to issue of maintenance of additional attributes at the state level.
  - c. Work with BLM national EGIS and NIRMC to ensure national consistency, and practices.
  - d. Evaluate and ensure that plotting is fully functional locally from state and the national EGIS system.
- 4.) Test system for district replication using both a one way and two way replication.
  - a. Evaluate and recommend method to make SDE database accessible and with equal or better performance in the field as the user's desktop and local server.
  - b. Test proposed solution to issue of edge matching best practices in cases of gaps or overlaps at state boundaries.

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- c. Test proposed solution to issue of maintenance of additional attributes at the state level.
  - d. Evaluate and ensure that plotting is fully functional locally from state and the national EGIS system.
- 5.) Implement preferred options for weekly and monthly preventive and troubleshooting maintenance timeframes, as well as staffing roles and responsibilities between field, state and national IRM and GIS staff. Goal is to ensure EGIS system and data are fully functional and accessible statewide 6 a.m. to 6 p.m. during the work week and around the clock during incident support (if requested).
- 6.) Implement preferred options of timeframes and needs for installation annually of updates and patches for software and hardware in timely fashion.
- 7.) Implement preferred options to address the need for security patches to be tested nationally on EGIS components before deployment. Address need for knowledgeable staff to test EGIS immediately after deployment and resolve any issues within one work day or less.
- 8.) Implement preferred options for GIS staff to develop and monitor the system, given restrictions due to national BLM security policy.
- 9.) Implement preferred guidelines for addressing a shortfall of staff time and expertise to keep the system running. Evaluate Idaho staffing shortfalls, if any, and determine solution to meet any shortcomings.
  - a. Work with BLM national EGIS and NIRMC to provide needed expertise, technical support and system maintenance.
  - b. Implement system to provide just in time support using outside companies if necessary.
- 10.) Continue to develop Map Browser to better serve the needs of the field by streaming, map services, SDE connections, and performance enhancement.
  - a. Address declining capabilities, such as the need for the GIS administrator to hard key paths, rather than browsing to them.
- 11.) Evaluate implementation annually and report to management on progress and issues at least annually.
  - a. Determine budget sources, and timelines for identified EGAP needs.
- 12.) Research capabilities of ArcServer, Image Server and other new technologies for use in Idaho.

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Action Plan for Strategy 2.2				
Objectives	Deadline	Responsible party	Budget	Monitor status
2.2.1 Install production SQL Server box to be fully functional in the ISO and placed on a regular backup schedule.	10/1/09	SQL Server DBA	\$0k	ID GIS Coord
2.2.3 Evaluate performance metrics and stability of system in ISO.	1/31/09	SQL Server DBA and GIS Technical Lead	\$0k	ID GIS Coord
2.2.4 Improve performance metrics, if necessary with professional outside assistance.	3/1/09	SQL Server DBA and GIS State Lead	\$0k	ID GIS Coord
2.2.5 Load all statewide final datasets in system.	5/1/09	GIS Technical Lead	\$0k	ID GIS Coord
2.2.6 Require all ISO edits in final master datasets to be completed in SDE, and the implementation is stable.	8/1/09	GIS State Lead	\$0k	ID GIS Coord
2.2.7 Test system for national or regional replication using both a one way and two way replication.	2/15/09	SQL Server DBA and GIS Technical Lead	\$0k	ID GIS Coord
2.2.8 Propose solution to issue of edge matching best practices in cases of gaps or overlaps at state boundaries.	2/28/09	GIS Technical Lead and GIS State Lead	\$0k	ID GIS Coord
2.2.9 Propose solution to issue of maintenance of additional attributes at the state level.	2/28/09	GIS Technical Lead and GIS State Lead	\$0k	ID GIS Coord

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2.2.10 Work with BLM national EGIS and NIRMC to ensure national consistency, and practices.	Ongoing	GIS Technical Lead and GIS State Lead	\$0k	ID GIS Coord
2.2.11 Evaluate and ensure that plotting is fully functional locally from state and the national EGIS system.	3/30/09	GIS Technical Lead	\$0k	ID GIS Coord
2.2.12 Test system for district replication using both a one way and two way replication.	10/15/09	ID GIS Coord and Statewide IRM	\$0k	ID GIS Coord
2.2.13 Operational dollars to test, monitor, evaluate, troubleshoot and enhance performance of SDE master enterprise database system and the Map Browser Intranet sites.	Ongoing Annual	ISO – State Central	\$25,000	
2.2.14 Test proposed solution to issue of edge matching best practices in cases of gaps or overlaps at boundaries.	11/30/09	ID GIS Coord	\$0k	ID GIS Coord
2.2.15 Test proposed solution to issue of maintenance of additional attributes at the field level.	12/31/09	ID GIS Coord	\$0k	ID GIS Coord
2.2.16 Evaluate and ensure that plotting is fully functional locally from state and the national EGIS system.	1/31/09	ID GIS Coord	\$0k	ID GIS Coord
2.2.17 Implement preferred options for weekly and monthly preventive and troubleshooting maintenance timeframes.	1/30/09	IRM State or NOC	\$0k	ID GIS Coord

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2.2.18 Implement preferred options of timeframes and needs for installation annually of updates and patches for software and hardware in timely fashion.	2/30/09	IRM State or NOC	\$0k	ID GIS Coord
2.2.19 Deploy preferred options to address the need for security patches to be tested nationally on EGIS components before deployment.	3/30/09	ID GIS Coord, IRM State, CIO and/or NOC	\$0k	ID GIS Coord
2.2.20 Implement preferred options for GIS staff to access tools in ArcIMS Site Administrator	5/1/09	ID GIS Coord, IRM State, CIO and/or NOC	\$0k	ID GIS Coord
2.2.21 Implement preferred options for GIS staff to use tools in SQL Server Management Studio	10/1/09	ID GIS Coord, IRM State, CIO and/or NOC	\$0k	ID GIS Coord
2.2.22 Implement preferred options for GIS staff to monitor and develop system for softwares with restricted permissions	5/1/09	ID GIS Coord, IRM State, CIO and/or NOC	\$0k	ID GIS Coord
2.2.24 Evaluate Idaho IRM staffing shortfalls, if any, and determine solution to meet any shortcomings.	Annually	GIS State Lead, Branch Chief and CIO	\$0k	ID GIS Coord
2.2.25 Work with BLM national EGIS and NOC/NIRMC to provide needed expertise, technical support and system maintenance.	4/1/09	GIS State Lead, Branch Chief, DSD and CIO	\$0k	ID GIS Coord
2.2.26 Evaluate implementation annually and report to management on progress and issues at least annually.	Annually in Nov	GIS State Lead and CIO	\$0k	ID GIS Coord

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2.2.27 Determine budget sources, and timelines for identified EGAP needs.	Annually in May	GIS State Lead and CIO	\$0k	ID GIS Coord
2.2.28 Research capabilities of ArcServer, Image Server and other new technologies for use in Idaho.	Ongoing	State Technical GIS Lead	\$0k	ID GIS Coord
Performance Target: Field GIS staff will access and edit master databases using the Spatial Database Engine software on a daily basis by March 2010.				

**Strategy 2.3** Work with IRM staff to identify, seek funding, implement and maintain adequate GIS spatial and tabular data storage for both file based geospatial data (immediate need) and for database storage (unknown need). Storage must be adequate for replication, distribution and archiving requirements. GIS is the largest user of IRM storage space and the lack of space for file based data over the last three years is impacting the standard directory file structure, the ability to implement and use master datasets, data accessibility and the daily workflow. Plan for file based GIS data, and for the master Spatial Data Engine SQL Server database.

1. In consultation with IRM, officially document request to management for 20 Tb storage space for Idaho geospatial file based and SDE data in the Idaho State Office (less than amount available in CASO and ORSO).
  - a. Amount has been requested for three years by IRM but no action
  - b. Develop alternatives for the interim 1 month to five year period in the event the storage is not purchased.
    - i. Agree upon timeline from IRM for removal of four temporary drives from the ISO directory file structure. Drives do not conform with Directory File Structure policy in Idaho
    - ii. Receive Idaho IRM clearance to no longer store statewide GIS data on personal drives due to lack of storage.
    - iii. Both the storage of data on personal drives and the temporary file directories in ISO are doubling workloads (project repair will have to be done) and eliminating possibilities of multiple team members working on projects.
2. Secure IRM proposed annual date for permanent archive so inactive data can be removed from ISO servers.
  - a. Secure and test annual archives from previous years
  - b. When archive is completed, delete inactive data from ISO server annually.

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Action Plan for Strategy 1.6				
Objectives	Deadline	Responsible party	Budget	Monitor status & date
2.3.1 Request 20 Tb storage space physically in Idaho State Office for geospatial data.	10/1/08	ISO/WO/FO	See IRM	ID GIS coord monthly
2.3.3 Secure IRM proposed annual date for permanent archive.	10/1/08	IRM State Lead	\$0k	ID GIS Coord monthly
Performance Target: Idaho will have adequate file-based and database storage for geospatial data in the state, district and field offices in FY08 in a manner that does not violate DFS policy and does not require use of personal drives for storage of statewide GIS data.				

**Issue 3 – Communication**

Internally, how will the Idaho BLM GIS Coordination Committee and GIS staff effectively communicate with all levels of BLM management, with all resources, with information resource management and other support services, and within the GIS community?

Externally, how will the Idaho BLM GIS Coordination Committee and GIS staff effectively communicate with the public, other agencies, corporations and institutions?

**Strategy 3.1** Increase communication with Managers.

- 1.) Identify a method by which the GIS Coordinators can report back to their Managers, GIS and Resources Staff. (Email link to approved minutes, with 1 page summary of decisions/action items).
- 2.) Create time in each agenda for management participation in Coordination Meetings.
- 3.) Continue semi-annual contacts with the Idaho Leadership Committee (ILC) and include District Office reports in each contact.
- 4.) Encourage managers to attend management related tracks at GIS conferences with their Coordination Committee member.
  - a) Distribute flyers and mention it at ILC meetings.
  - b) Send emails.
  - c) Post flyers or links on website.

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Action Plan for Strategy 3.1				
Objectives	Deadline	Responsible party	Budget	Monitor status & date
3.1.1 Identify a method by which the GIS Coordinators can report back to their Managers, GIS and Resources Staff.	8/1/09	GIS Lead	\$0k	ID GIS Coord
3.1.2 Create time in each agenda for management participation in GIS Coord. Meetings.	Ongoing prior to quarterly mtg.	GIS Lead	\$0k	ID GIS Coord
3.1.3 Continue semi-annual contacts with the Idaho Leadership Committee (ILC) and include District Office reports in each contact.	Ongoing Semi-annual from 4/2/09	GIS Lead	\$0k	ID GIS Coord
3.1.4 Encourage managers to attend management related tracks at GIS conferences with their Coordination Committee member.	Ongoing	GIS Lead	\$0k	ID GIS Coord
Performance Target: More contact between management and GIS staff, resulting in better support and understanding by management of the role of GIS in Idaho BLM				

**Strategy 3.2** Work as a statewide team to coordinate annual workload, including geospatial work in the PTA, AWP, and other major management projects. Continue to coordinate work across administrative boundaries to complete projects of the highest priority. When concerns arise from PTA, AWP or other management projects, GIS Coord will prepare a management report/proposal for additional geospatial resources (labor, data or equipment).

Action Plan for Strategy 3.2				
Objectives	Deadline	Responsible party	Budget	Monitor status & date
3.2.1 Dedicate a time slot in quarterly ID BLM GIS Coord. agendas to review and take action on the PTA.	Annually	GIS Lead	\$0k	ID GIS Coord

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3.2.2 Dedicate a time slot in quarterly ID BLM GIS Coord. agendas to review and take action on the AWP.	Annually	GIS Lead	\$0k	ID GIS Coord
3.2.3 GIS Coordinators to provide brief written summary of current projects at each quarterly meeting (to be documented in minutes).	Quarterly	GIS Lead	\$0k	ID GIS Coord
3.2.4 Continue to coordinate work across administrative boundaries to complete projects of the highest priority.	Ongoing	GIS Lead	\$0k	ID GIS Coord
3.2.5 When concerns arise, prepare management report for additional geospatial resources.	As Needed	GIS Lead	\$0k	ID GIS Coord
Performance Target: The managers will receive reports on statewide GIS needs and workload priorities.				

**Strategy 3.3** Revisit ID BLM Geosciences website to ensure a statewide geospatial scope (ID GIS Coord to work with staff to redesign the internal BLM Geosciences website). Revisit external website to ensure it meets the goals of the BLM.

- 1.) Revise IMS team to include overall internal and external website developments
  - a. Internal website
    - i. Keep up-to-date information on the website about upcoming conferences.
    - ii. Add a calendar to the website that includes coordinator meetings, user call numbers, conferences and training.
    - iii. Make layout more similar to Oregon Washington internal GIS home page.
    - iv. Add a gif button to navigate to the IMS site.
    - v. Add a site index with alphabetical list of links and topics.
    - vi. Build and maintain an inventory list of technical skills and phone numbers of BLM Idaho staff needed by the GIS community and post it on the intranet.
    - vii. Ensure scripts, documents (IMs & IBs) and standards are correctly displayed.

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- viii. Add more geospatial tips and tricks, links, and virtual campus links to Idaho BLM Intranet.
- ix. Encourage use of the statewide Geospatial reference library.
- b. External website
  - i. Implement Data Management Plan's data distribution direction, if applicable.
  - ii. Implement other requested external website developments

Action Plan for Strategy 3.3				
Objectives	Deadline	Responsible party	Budget	Monitor status & date
3.3.1 Revise IMS team scope and membership to include staff with skills to develop overall internal and external websites.	3/1/09	GIS Lead	\$0k	ID GIS Coord
3.3.2 Website team will meet with ID GIS Coord to discuss changes of internal website to ensure a statewide geospatial scope.	4/1/09	GIS Lead	\$0k	ID GIS Coord
3.3.3 Geospatial Webmaster will present proposed changes and solicit requests for additional changes of internal GIS website to ensure a statewide geospatial scope.	4/1/09	Website Team Lead/Geospatial Webmaster	\$0k	ID GIS Coord (completed 12/07)
3.3.4 Team to prioritize and assign tasks and timelines to complete the requested changes to internal website.	7/1/09	Geospatial Webmaster	\$0k	ID GIS Coord
3.3.5 Implement requested changes to the internal website.	12/25/09	Website Team Lead	\$0k	ID GIS Coord
3.3.6 Website team will meet with ID GIS Coord to discuss	3/1/10	GIS Lead	\$0k	ID GIS Coord

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changes of external website to ensure a statewide geospatial scope.				
3.3.7 Website team will present and solicit requests for changes of external website to ensure a statewide geospatial scope.	4/1/10	Website Team Lead	\$0k	ID GIS Coord
3.3.8 Team to prioritize and assign tasks and timelines to complete the requested changes to external website.	7/1/10	Website Team Lead	\$0k	ID GIS Coord
3.3.9 Implement requested changes to the external website.	12/25/10	Website Team Lead	\$0k	ID GIS Coord
Performance Target: Internal & External GIS websites will meet the needs of managers and users.				

**Strategy 3.4** Create an Idaho supplement to Manual 9160 or a handbook

Action Plan for Strategy 3.4				
Objectives	Deadline	Responsible party	Budget	Monitor status & date
3.4.1 Combine all IMs into one document.	3/1/11	GIS Lead	\$0k	ID GIS Coord
3.4.2 Research preference of Manual 9160 or handbook.	6/1/11	GIS Lead	\$0k	ID GIS Coord
3.4.3 Approve Manual or handbook by ID GIS Coord.	Not in timeline	GIS Lead	\$0k	ID GIS Coord
Performance Target: Manual or handbook will meet the needs of managers and users to find Idaho BLM geospatial policies and guidelines.				

**Strategy 3.5** Investigate options such as the formation of a GIS & IRM Technical sub team of the Idaho Information Systems Council (or of the Idaho BLM GIS Coordination Committee) with regular, monthly meetings to discuss and resolve ongoing issues. Team includes state CIO, state GIS lead, ISO and field GIS and IRM personnel. When appropriate, provide reports and proposals to the Idaho ITIB.

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1. Insure that the GIS current and future needs are optimized within the constraints of IT security and budget:
  - a) storage capacity
  - b) up to date hardware
  - c) up to date software
  - d) network
  - e) archival
  - f) backup processes
  - g) capability
  - h) system support
  - i) speed
  
2. Document the Idaho Configuration Management process to insure that GIS has access to needed software and current upgrades, while meeting BLM IRM security needs. Coordinate staff assistance to test and approve software installation.
  
3. Request that IRM provided a monthly report to ID GIS coordinators of resolved and unresolved GIS issues submitted to the Idaho Help Desk tracking system (Remedy).
  
4. Work with WO GIS and IRM to provide assistance to push through Bureau/Department national buying programs for data and GIS, GPS, and image processing software.
  
5. Schedule one of the Quarterly GIS Coordinators meetings (or arrange for a local GIS coordinator to attend) to coincide with the annual IRM statewide meeting. Request permission from the supervisory IRM specialist to present or attend a portion of the IRM meeting.

Action Plan for Strategy 3.5				
Objectives	Deadline	Responsible party	Budget	Monitor status & date
3.5.1 GIS Lead to meet with IRM Lead and management to determine feasibility of GIS & IRM Technical sub team options.	3/1/09	GIS Lead	\$0k	ID GIS Coord Monthly
3.5.2 If feasible, choose chair and members of GIS/IRM Tech. Sub Team.	5/1/09	TBD	\$0k	ID GIS Coord Monthly
3.5.3 If not feasible to create GIS/IRM Tech Sub Team, determine Plan B to work on IT issues.	7/1/09	GIS Lead	\$0k	ID GIS Coord Coord Monthly

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3.5.4 Insure that the GIS current and future needs are optimized within the constraints of IT security and budget.	Ongoing	GIS Lead	\$0k	ID GIS Coord Coord Monthly
3.5.5 Document the Idaho Configuration Management (CM) process.	4/1/10	GIS Lead	\$0k	ID GIS Coord Coord Monthly
3.5.6 Request IRM provide a monthly report to ID GIS coordinators of resolved and unresolved GIS/IT issues.	First report 7/1/09	GIS Lead	\$0k	ID GIS Coord monthly
3.5.7 Work with WO GIS and IRM to provide assistance to push through Bureau/Department national buying programs for data and GIS, GPS, and image processing software.	Ongoing	GIS Lead	\$0k	ID GIS Coord monthly
3.5.8 Schedule one of the Quarterly GIS Coord. meeting (or arrange for a local GIS coordinator to attend) to coincide with the annual IRM statewide meeting.	8/1/09	GIS Lead	\$0k	ID GIS Coord monthly
Performance Target: IRM and GIS leads agree that all Idaho geospatial systems meet the needs of BLM geospatial Users.				

**Strategy 3.6** Increase communication with Resource staff to improve our understanding of the data & resources needed for analysis and modeling.

1. Continue to hold the annual Idaho GIS and Resources meeting and identify ways to increase more resource staff participation.
2. Support the national Resources and GIS Tools conference between BLM and USFS every two years.
3. Support the national USFS Remote Sensing conference every two years.
4. Seek opportunities to work with resource staff in the field to:
  - a) streamline data collection
  - b) use technology more efficiently
  - c) improve data standards

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5. Seek opportunities to coordinate with resource staff in the office. Investigate ways to better understand:

- a) resource needs for products and modeling
- b) resource limitations
- c) content & location of important historic geospatial data
- d) capture data, meta data, and knowledge of individual employees.
  - i) Scan and index hard copy resource maps and data in ISO and field offices
- e) data by accompanying Resources staff to meetings (Landfire, RIPS, Historic Trails, etc).
- f) data by building statewide resource base and remotely sensed data, especially NAIP purchase every five years.

Action Plan for Strategy 3.6				
Objectives	Deadline	Responsible party	Budget	Monitor status & date
3.6.1 Operational dollars to support and improve the annual Idaho GIS and Resources meeting.	Annually pre-field season	GIS Lead	\$500	ID GIS Coord
3.6.2 Support the national Resources and GIS Tools conference.	Biennially	GIS Lead	\$0k	ID GIS Coord
3.6.3 Support the national USFS Remote Sensing Conference every two years.	Biennially	GIS Lead	\$0k	ID GIS Coord
3.6.4 Ask to work with resource staff in the field at least once annually for each professional GIS staff.	Ongoing	GIS Lead	\$0k	ID GIS Coord
3.6.5 Ask to coordinate with resource staff in the office on historic hard copy data capture.	Ongoing	GIS Lead	\$0k	ID GIS Coord
3.6.6 Accompany Resources staff to meetings at least once annually (i.e. Landfire, RIPS, Historic Trails).	Ongoing	GIS Lead	\$0k	ID GIS Coord
3.6.7 Scan & Index Statewide Map Library.	Annually	GIS Lead	\$10K total	ID GIS Coord
3.6.8 Develop vector Resource Base Data.	Ongoing	GIS Lead	\$20K annual	ID GIS Coord

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3.6.9 Cost share purchase of statewide, natural color 1m aerial photography (NAIP) data as part of DOI direction (Imagery for the Nation Programs specified new flights every 3-5 years).	3/1/09	NOC DRM and ID GIS Lead	\$100K	ID GIS Coord and NOC DRM
Performance Target: Contacts between Resource and GIS staff will increase and the analysis and modeling products will become more efficient, stronger and more complex.				

**Strategy 3.7** Network within the GIS world (local and national BLM, DOI, state, local Agencies and industries) to remain current with GIS solutions, development, funding, and training. Please note that funding for travel remains the responsibility of the sponsoring office. As such, each District and State Office should plan for budget to support the recommended BLM representation.

- 1) Actively participate on the national BLM State GIS Managers Council
- 2) Maintain Idaho participation on National BLM Geospatial teams, such as (current Idaho representation)
  - a) Metadata Advisory Team
  - b) Remote Sensing Team
  - c) Geospatial Data Management Team
  - d) Corporate Metadata Repository direction
  - e) Geospatial Data Management Team
  - f) Spatial Applications Management Team
  - g) Spatial Technology Investment Management Team
- 3) Maintain active Idaho BLM participation on state geospatial efforts, especially the interagency Idaho Geospatial Council
  - a) Serve regularly as the DOI representative on the Council
  - b) Serve actively on subcommittees and attend quarterly meetings
  - c) Support Idaho BLM Management in their participation on national teams and projects that impact geospatial resources
  - d) Provide briefings when requested as they relate to geospatial workflow
  - e) Provide geospatial briefings, documentation, graphics and analysis when requested for litigation, team support, legislative affairs, law enforcement, human resources and other issues as requested.

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Action Plan for Strategy 3.7				
Objectives	Deadline	Responsible party	Budget	Monitor status & date
3.7.1 Participate in the national GIS managers monthly conference calls and two meetings yearly.	Ongoing	GIS Lead	\$0k	ID GIS Coord
3.7.2 Participate in the Idaho Geospatial Council (currently DOI representative) and its subcommittees.	Ongoing	GIS Lead	\$0k	ID GIS Coord
3.7.3 Participate on national BLM teams	Ongoing	GIS Lead	\$0k	ID GIS Coord
3.7.4 Participate in local GIS meetings and organizations.	Ongoing	TBD	\$0k	ID GIS Coord
3.7.5 Participate in Idaho Geospatial Users meeting (IGUM).	Ongoing	GIS Lead	\$0k	ID GIS Coord
3.7.6 Participate in ESRI NW Users Group meeting.	Ongoing	Managers Statewide	\$1200 one office	ID GIS Coord
3.7.7 Participate in URISA Intermountain GIS meeting.	Ongoing	Managers Statewide	\$1200 one office	ID GIS Coord
3.7.8 Min. Five IRM & GIS Users Statewide attend ESRI International Conference	August 2010	Managers Statewide	\$1200 each District and ISO	ID GIS Coord
3.7.9 Min. Five IRM & GIS Users Statewide at BLM/USFS National Resource Tools Conf.	April 2009 and April 2011	Managers Statewide	\$1200 each District and ISO	ID GIS Coord
Performance Target: Idaho BLM staff will be more knowledgeable and will be able to take advantage of unforeseen opportunities regarding upcoming technologies and funding options.				

**Strategy 3.8** Continue to actively support the Idaho BLM GIS Coordination committee to present clear direction to users and management regarding geospatial technology, data, and services.

1. Support BLM GIS Coordination Committee as outlined in the charter.

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2. Include ID GIS Coordinators participation at monthly and quarterly coordination meetings as a critical element in their EPAP.
3. Invite local GIS staff to attend a portion of the ID GIS Coordination Committee meetings.
4. Request management participation in BLM GIS Coordination Committee.

Action Plan for Strategy 3.8				
Objectives	Deadline	Responsible party	Budget	Monitor status & date
3.8.1 Support BLM GIS Coordination Committee as outlined in the charter.	Ongoing	Data Mgt Team Chair	\$0k	ID GIS Coord
3.8.2 Include ID GIS Coordinator's active participation in the committee as a critical element in their EPAP.	11/1/09	Chief, Engineering and Geographic Sciences, & Coord.'s Supervisor	\$0k	ID GIS Coord
3.8.3 Invite local GIS staff to attend a portion of ID GIS Coordination Committee meetings.	Ongoing	Hosting Coordinator	\$0k	ID GIS Coord
3.8.4 Request management participation in BLM GIS Coordination Committee.	Ongoing	Hosting Coordinator	\$0k	ID GIS Coord
Performance Target: Idaho BLM GIS Coordination committee meets regularly with all members fully participating to provide clear direction to managers and users.				

**Strategy 3.9** Continue to support the monthly GIS users' conference call, expand the participation (IT, Resources, Management) and effectiveness of this call.

- a) Ask for suggestions to improve the agenda (IT, Resources, Management)

Action Plan for Strategy 3.9				
Objectives	Deadline	Responsible party	Budget	Monitor status & date
3.9.1 Ask (IT, Resources, Management) for suggestions to improve the agenda of the GIS Users' monthly conference call.	3/1/08	District Coordinator	\$0k	ID GIS Coord

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3.9.2 Implement at least one of the suggestions received for how to improve the GIS Users' monthly conference call.	6/1/08	GIS Lead	\$0k	ID GIS Coord
Performance Target: Improved attendance and enthusiasm at monthly conference calls.				

### **Issue 4 – Professional Development**

How can we provide quality training to GIS staff, IRM staff and users to increase skill diversity and expertise? How can we help to effectively retain and transfer institutional knowledge among BLM Idaho staff to benefit the geospatial program? How do we accomplish steadily increasing workload demands/priorities with limited staff? How do we help to identify, develop and maintain career opportunities to retain quality expertise in the BLM?

**Strategy 4.1** Identify and provide training in areas where staff may be lacking in Geospatial specific skills

- 1.) Identify core geospatial skills needed for GIS Coordinators, GIS staff and resources staff.
  - a. GIS coordinators skills should include the core classes of Supervision or team coaching, Data stewardship, Estimating and budgeting, project management, communication skills, proposal writing, GIS modeling and analysis.
  - b. Emphasis for Resources Staff is to make their own maps, use GIS tools, data management protocol, etc.
- 2.) Develop core competency class lists to address those needed skills.
  - a. Develop refresher courses and one day classes to assist with training the resource staff.
  - b. Research and use other agency curriculum for our benefit (RSAC, GSTC).
  - c. Develop a mechanism to achieve a technology transfer between more experienced GIS staff and new less experienced GIS Staff.
  - d. Develop and use train the trainer programs, both casually and formally (with developed curriculum).
- 3.) Teach geospatial skills in the field and state office.
  - a. Use Idaho BLM instructors and register through DOI Learn (300 or more students annually).
  - b. Use ESRI virtual campus courses (50 courses).
  - c. Attend conferences.
  - d. Attend other classes through DOI Learn, RSAC and vendors.
  - e. Encourage GIS staff to take resource training (RMPs, S&G, etc) and IRM training.
  - f. Encourage IRM staff to take geospatial support training.

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- 4.) Ensure professional training annually for staff to implement the professional GIS System
- a. Training to be taken annually by twelve GIS professionals statewide
  - b. Training to be taken annually by at least one IRM professional

Action Plan for Strategy 4.1				
Objectives	Deadline	Responsible party	Budget	Monitor status & date
4.1.1 Identify core geospatial skills needed for GIS Coordinators.	4/1/10	State Geospatial Training Coordinator	\$0k	ID GIS Coord
4.1.2 Identify core geospatial skills needed for GIS staff.	4/1/10	State Geospatial Training Coordinator	\$0k	ID GIS Coord
4.1.3 Identify core geospatial skills and training needed for resources staff.	4/1/10	State Geospatial Training Coordinator	\$0k	ID GIS Coord
4.1.4 Develop core competency class lists.	4/1/11	State Geospatial Training Coordinator	\$0k	ID GIS Coord
4.1.5 Teach geospatial skills in the field and state office.	Ongoing	Management and State Geospatial Training Coordinator	\$5K	ID GIS Coord
4.1.6 Identify core skills and training needed for IRM staff to support GIS.	4/1/10	State Geospatial Training Coordinator	\$0k	ID GIS Coord
4.1.7 Ensure professional training annually for staff to implement the professional GIS System.	Ongoing	Management and State Geospatial Training Coordinator	\$15k	ID GIS Coord
Performance Target: Idaho BLM staff will have guidance and the means to develop critical geospatial skills for their Individual Development Plan.				

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**Strategy 4.2** Work with managers to ensure the Management Oversight Implementation Team (MOIT) staffing levels are being implemented. Be involved in developing staffing levels for GIS statewide if there is a problem with the 2010 Table of Organization (TO).

Action Plan for Strategy 4.2				
Objectives	Deadline	Responsible party	Budget	Monitor status & date
4.2.1 Have GIS Coord. Committee review decisions made in the MOIT staffing in light of current staffing levels.	3/1/09	GIS Lead	\$0k	ID GIS Coord
4.2.2 Complete report on staffing and MOIT disparities. Distribute report to management.	April Annually	GIS Lead	\$0k	ID GIS Coord
4.2.3 ID BLM GIS Coordination committee will seek active participation in development of GIS staffing for 2010 Table of Organization.	Ongoing	GIS Lead	\$0k	ID GIS Coord
Performance Target: Management will seek and make progress toward MOIT recommended GIS staffing levels				

**Strategy 4.3:** Work with managers to keep or add GIS experience and/or duties to existing and new staff position descriptions to assist with GIS work.

- 1.) Work with managers and HR to add GIS skills as a preference to targeted PDs for new hires (i.e. resource, law enforcement, dispatchers, IRM, staff assistants, etc.).
- 2.) Work with managers and HR to add GIS duties to targeted PDs for existing and new hires (i.e. resource, dispatchers, IRM, staff assistants etc., also determine if skills should be required as in Service First agreements with USFS).
- 3.) Work with managers and HR to make the current GIS qualification statements for new hires more specific and targeted.

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Action Plan for Strategy 4.3				
Objectives	Deadline	Responsible party	Budget	Monitor status & date
4.3.1 Make initial contacts with managers and HR to add GIS skills as a preference to targeted PDs for new hires.	3/1/09	GIS Lead	\$0k	ID GIS Coord
4.3.2 Add GIS skills as a preference to targeted PDs for new hires.	9/1/10	GIS Lead	\$0k	ID GIS Coord
4.3.3 Work with managers and HR to add GIS duties to targeted PDs for existing and new hires.	9/1/10	GIS Lead	\$0k	ID GIS Coord
4.3.4 Work with managers and HR to make the current GIS qualification statements for new hires more specific and targeted.	12/1/09	GIS Lead	\$0k	ID GIS Coord
Performance Target: The workforce will have recognition and impetus to hire and develop the necessary GIS skills to meet the mission of the BLM.				



## **VI. Acknowledgments**

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