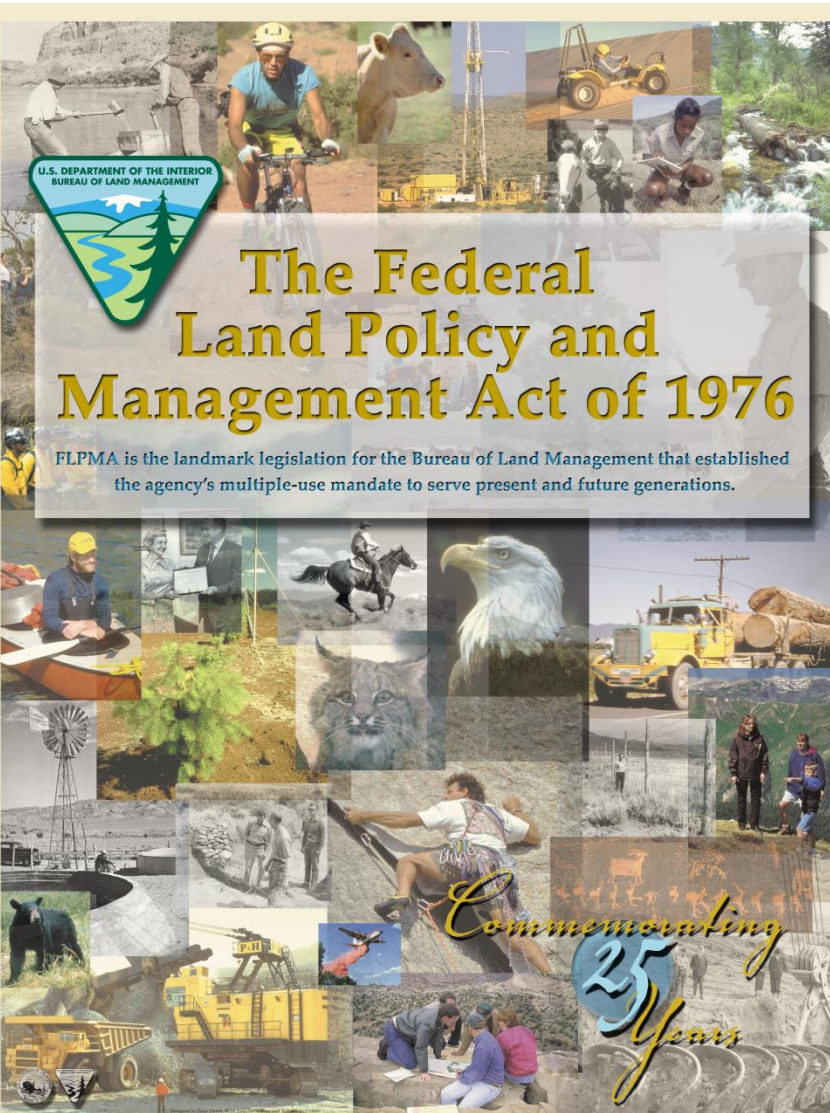


AIM INTRODUCTION: FLPMA, FUNDAMENTALS, AND OTHER DRIVERS



AIM Project Leads Training
2016

FLPMA -- Section 102, Policy



- Periodic and systematic inventory
- Use projected through coordinated land use planning
- Goals and objectives based on multiple use and sustained yield
- Managed in a manner to protect values and provide services

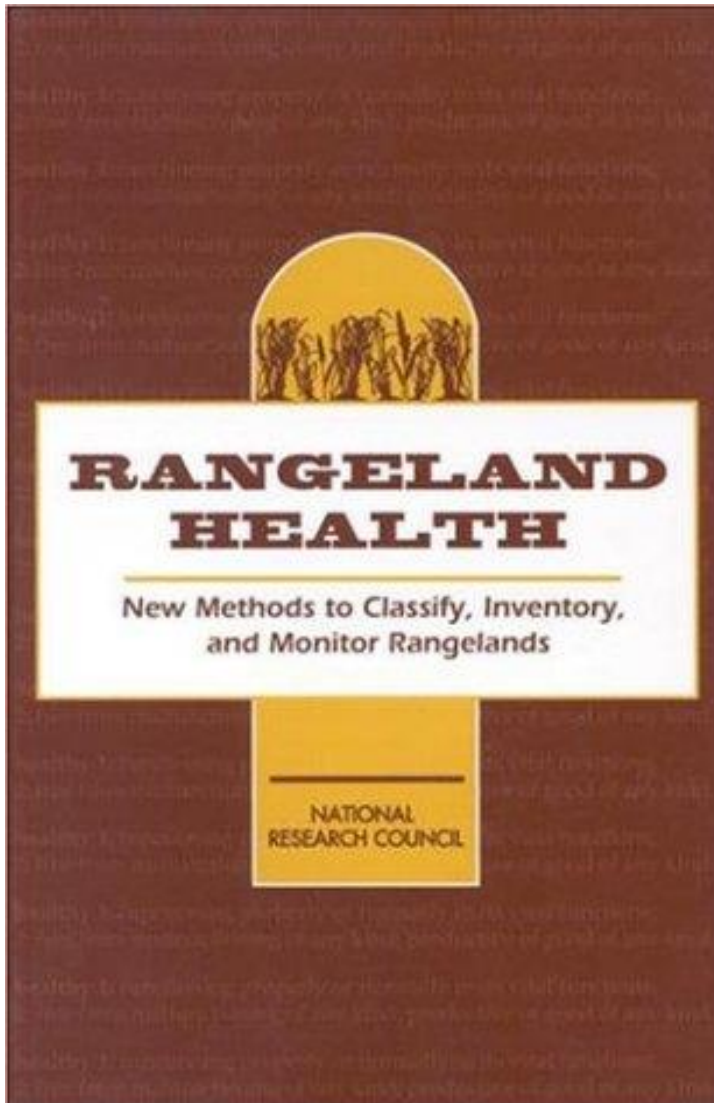
The Federal Land Policy and Management Act of 1976

FLPMA is the landmark legislation for the Bureau of Land Management that established the agency's multiple-use mandate to serve present and future generations.

Commemorating 25 Years

- Prepare and maintain an inventory
 - Resources and values
 - Kept current
 - Reflect changes
 - Identify new and emerging resources and values

The First Step



- “Hampered in the ability to make decisions because of inability to answer questions about the condition or quality of our rangelands”
- Developed criteria
 - Soil stability and watershed function
 - Nutrient cycle and energy flow
 - Presence of recovery mechanism
- Cooperate

The Charge

The committee offers it to the profession of rangeland management and to society as a whole with this challenge: test it and change it, but do it in the same cooperative manner that this committee used to produce the strategy recommended in this report.

Frank E. “Fee” Busby, Chair



Four Fundamentals—CFR 4180

	UNITED STATES DEPARTMENT OF THE INTERIOR BUREAU OF LAND MANAGEMENT	Release 4-110
	MANUAL TRANSMITTAL SHEET	Date 1/16/09
Subject 4180 – Land Health		
1. Explanation of Materials Transmitted: This release transmits a complete revision of Manual 4180, the Land Health Manual for the Bureau of Land Management. This manual establishes policy, provides guidelines, and assigns management structure and responsibilities for conducting land health evaluations. 2. Reports Required: None 3. Materials Superseded: Rangeland Health Manual Section 4180- Release 4-106 4. Filing Instructions: File as directed below		
REMOVE Release 4-106 Dated 01/19/2001 Total 6 pages	INSERT 4180 (total 14 pages)	
 Director, Bureau of Land Management		

- Watersheds, uplands, riparian and aquatic are in properly functioning physical condition
- Ecological processes supporting healthy biota
- Water quality complies with state standards
- Habitats are maintained for threatened and endangered species

Indicators and Measurements



- Attributes
 - Soil and site stability
 - Hydrologic function
 - Biotic integrity
- Qualitative indicators
- Quantitative indicators
- Selected measurements techniques

“The evaluation of rangeland health will require judgments on the significance and meaning of the indicators that are measured. Evaluation of the preponderance of evidence from the evaluation of multiple indicators will be required for a meaningful assessment of rangeland health.”

Assessment, Inventory, and Monitoring Strategy

For Integrated Renewable Resources Management



Produced by
U.S. Department of the Interior



BLM

The AIM Strategy



The goal of the AIM Strategy is to report on the status and trends of public rangelands at multiple scales of inquiry, to report on the effectiveness of management actions, and to provide the information necessary to implement adaptive management.

The Five Principles of AIM

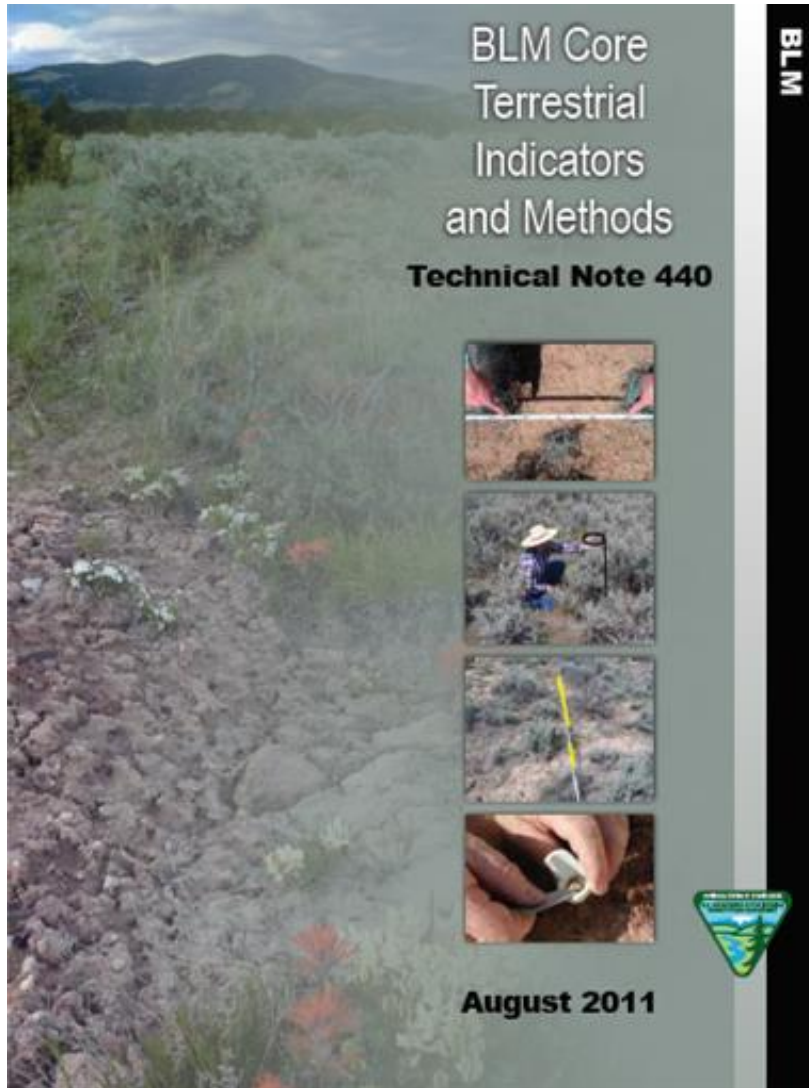
AIM-Monitoring:
A Component of the
BLM Assessment,
Inventory, and
Monitoring Strategy

Technical Note 445
April 2014



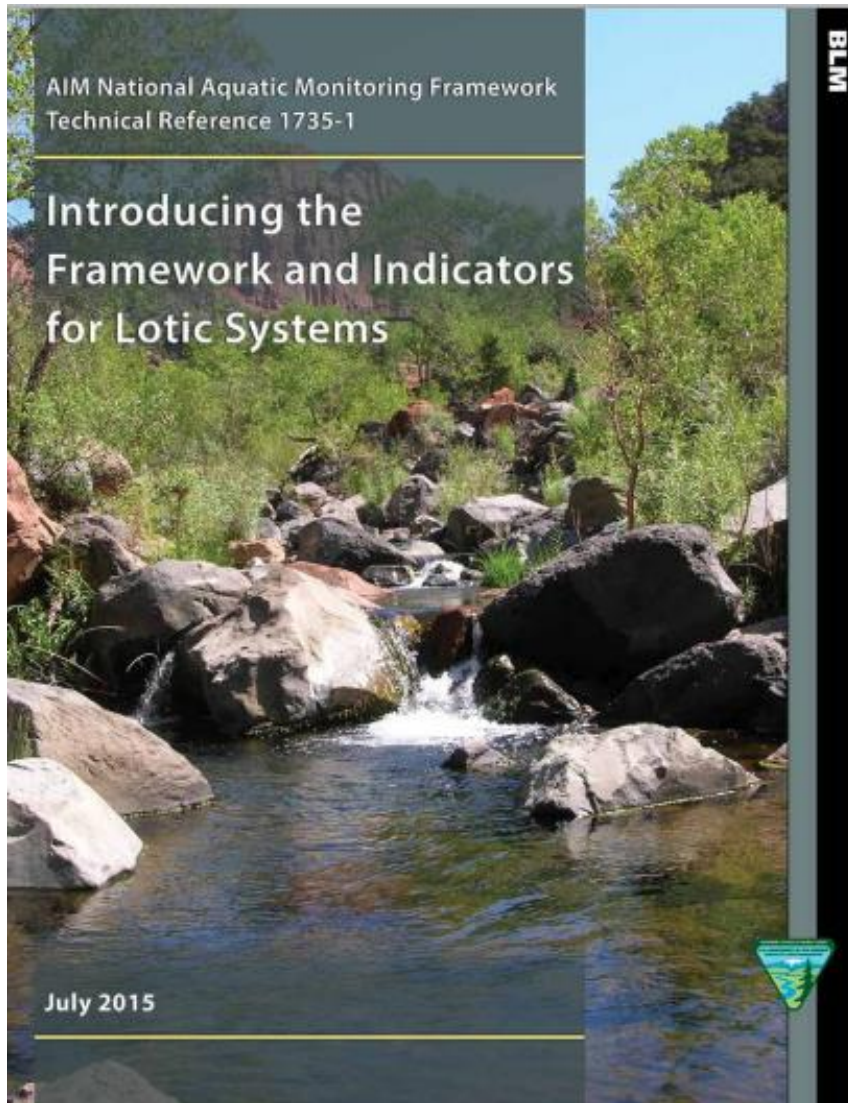
- Core indicators and methods
- Statistically valid sample design
- Integration with remote imagery
- Electronic data capture and management
- Structured implementation - Timely information for adaptive management

Core Indicators--Terrestrial



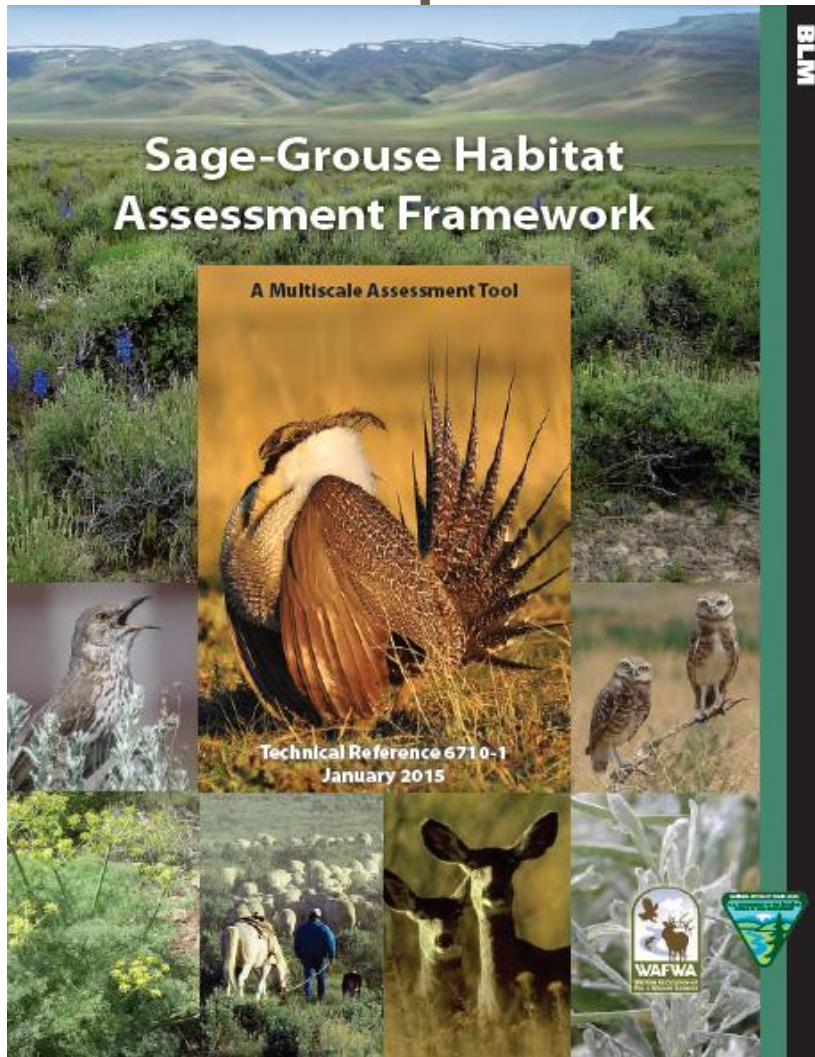
- Bare ground
- Vegetation composition
- Nonnative invasive plant species
- Plant species of management concern
- Vegetation height
- Proportion of soil surface in large intercanopy gaps
- Soil aggregate stability

Core Indicators--Aquatic



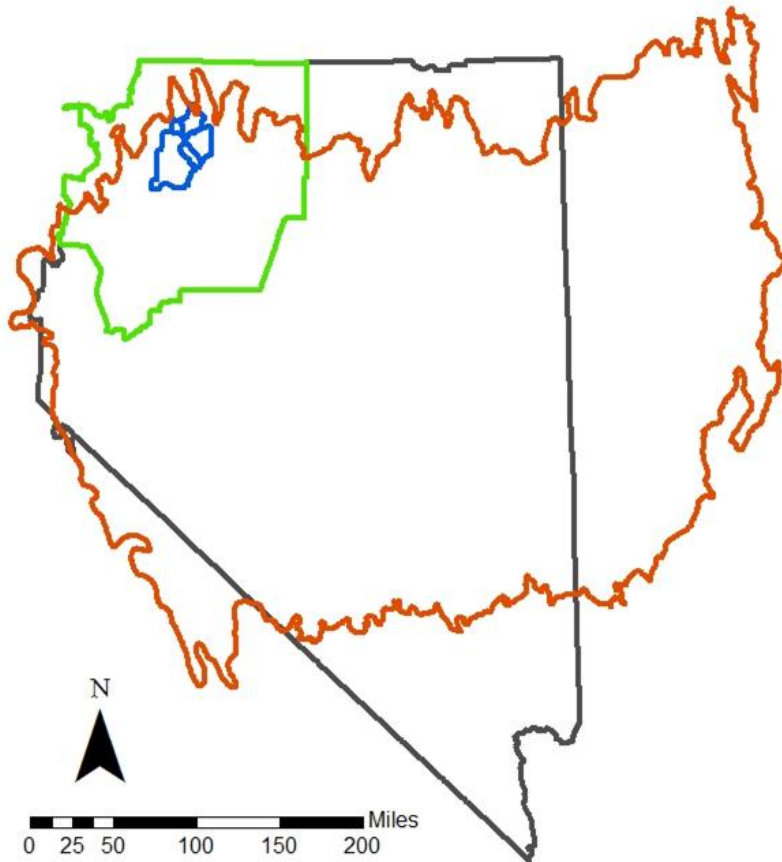
- Acidity
- Salinity
- Temperature
- Residual pools
- Streambed particle size
- Bank stability and cover
- Floodplain connectivity
- Large woody debris
- Macroinvertebrates
- Riparian vegetation
- Canopy cover

Consistent Information for Special Status Species



- Landscape scale questions
- Indicators for four scales
 - Range-wide, broad, fine, and site scales
- Core indicators inform site scale questions
- Site scale indicators inform broad and fine scale questions
- Integration of remote imagery

AIM is...



**...statistically valid,
scalable sampling
design, where
appropriate**

Integration of Remote Imagery

Climate and Land Use Change

Earth Resources Observation and Science (EROS) Center

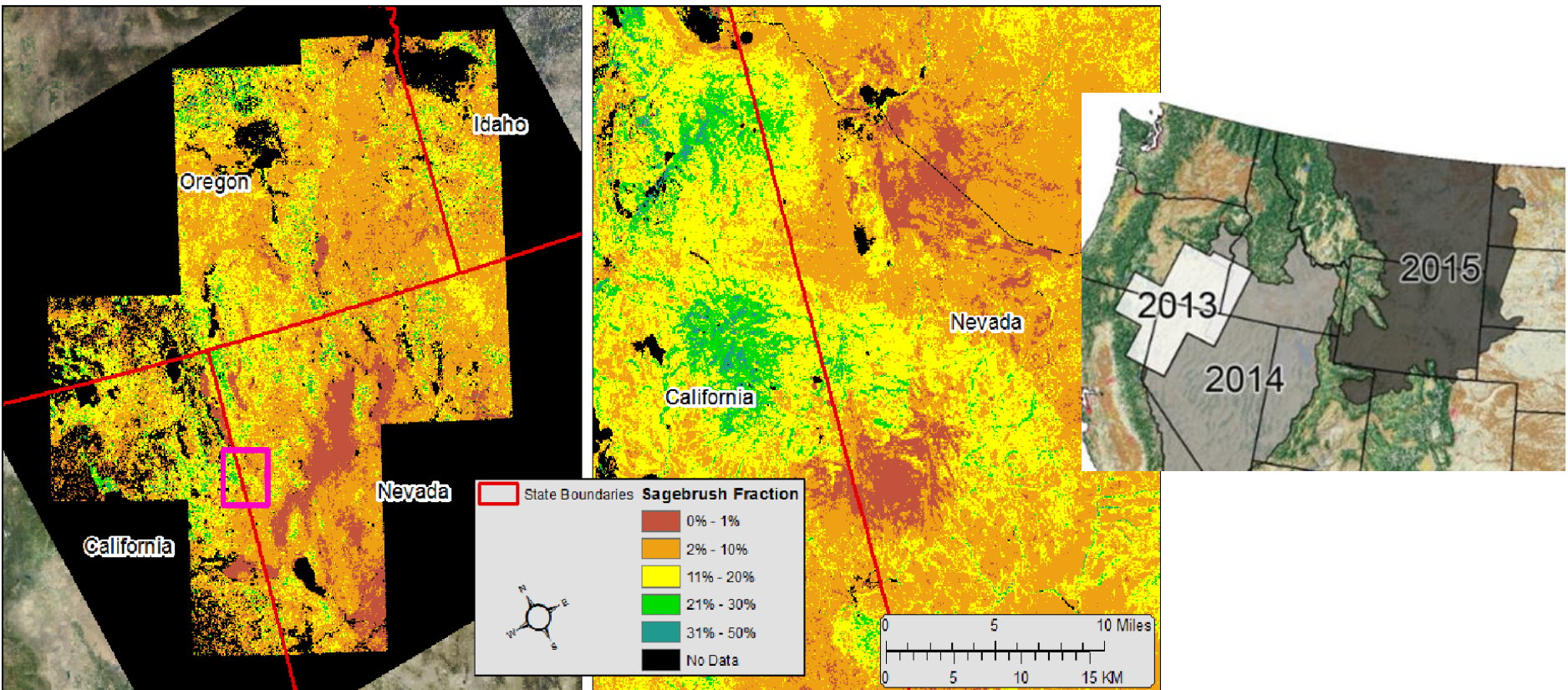
**Developing Fractional Shrub, Bare Ground and
Herbaceous Products as part of the National
Land Cover Database**



**Author Collin Homer,
Date Nov. 2013**

U.S. Department of the Interior
U.S. Geological Survey

Grass-Shrub Stewardship

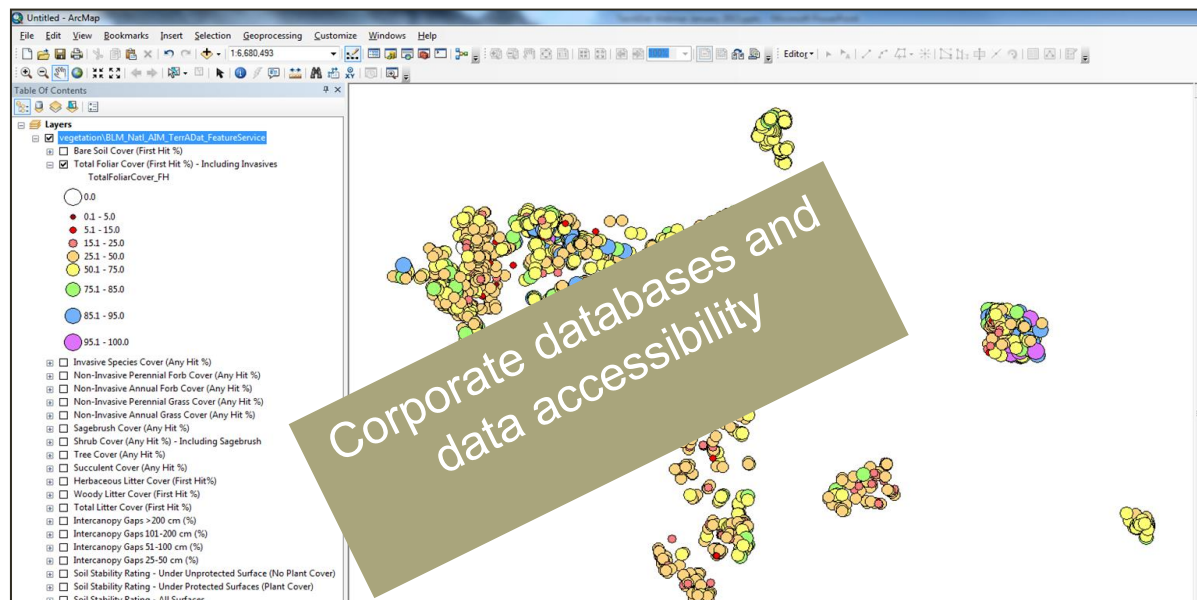
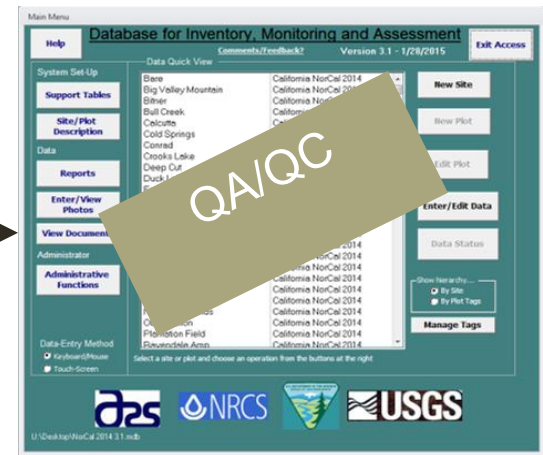
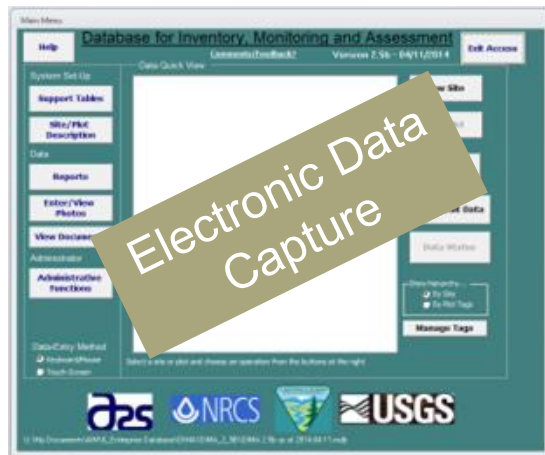


Map Products:

Shrub Cover
Sagebrush Cover
Big Sagebrush Cover
Wyoming Sagebrush Cover

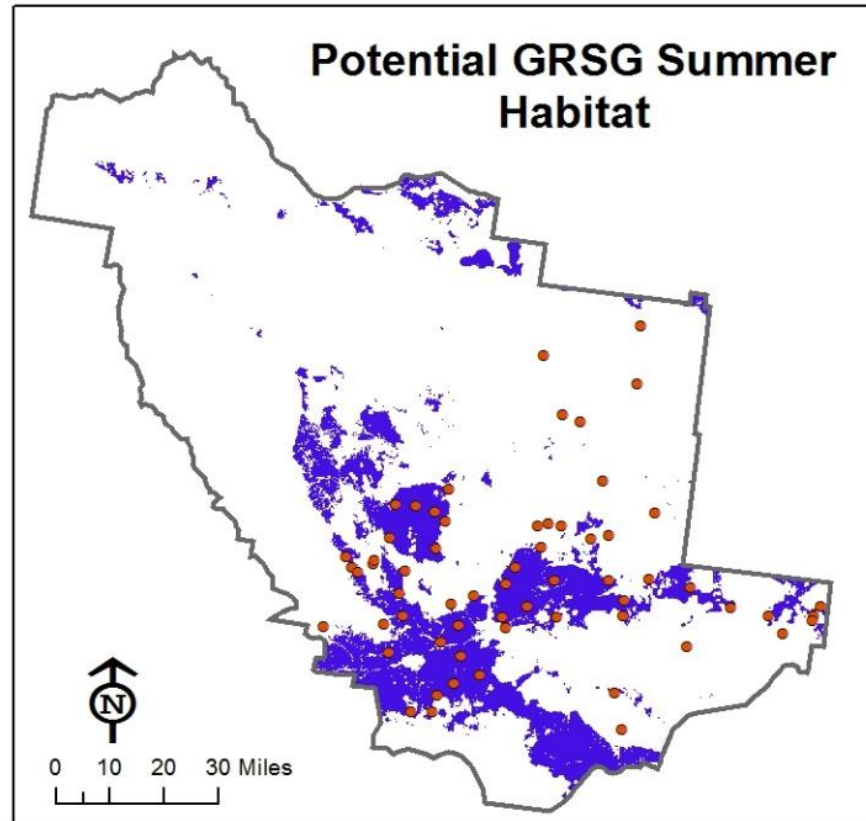
Herbaceous Cover
Shrub Height
Bare Ground
Litter Cover

Data Management



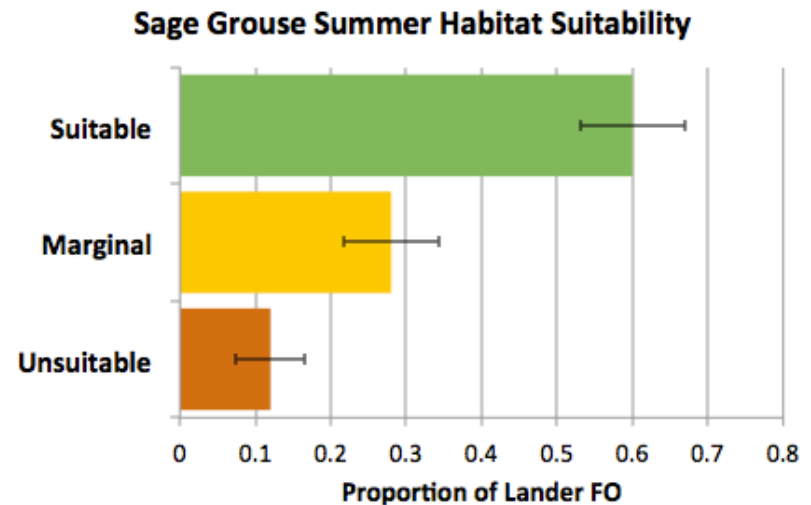
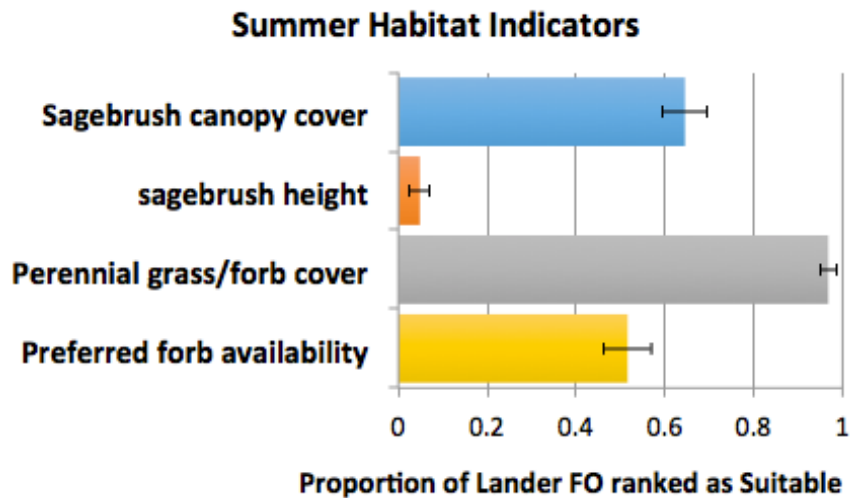
Structured Implementation supporting Adaptive Management

Objective: Greater than 70% of potential summer habitat is suitable or marginal summer habitat for sage-grouse.



Summer Habitat (HAF Assessment)

Objective: Greater than 70% of potential summer habitat is suitable or marginal summer habitat for sage-grouse.



Objective: Achieved.

GRSG Planning Strategy

THE GREATER SAGE-GROUSE MONITORING FRAMEWORK

Bureau of Land Management
U.S. Forest Service

*Developed by
the Interagency
Greater
Sage-Grouse
Disturbance
and Monitoring
Subteam*

May 20, 2014

- Amends or replaces 90 plus Land Use Plans
- Implements the core indicators for Land Health Assessments and Evaluations including HAF
- Integrates remote imagery
- Implements data management plan
- Timely data for adaptive management

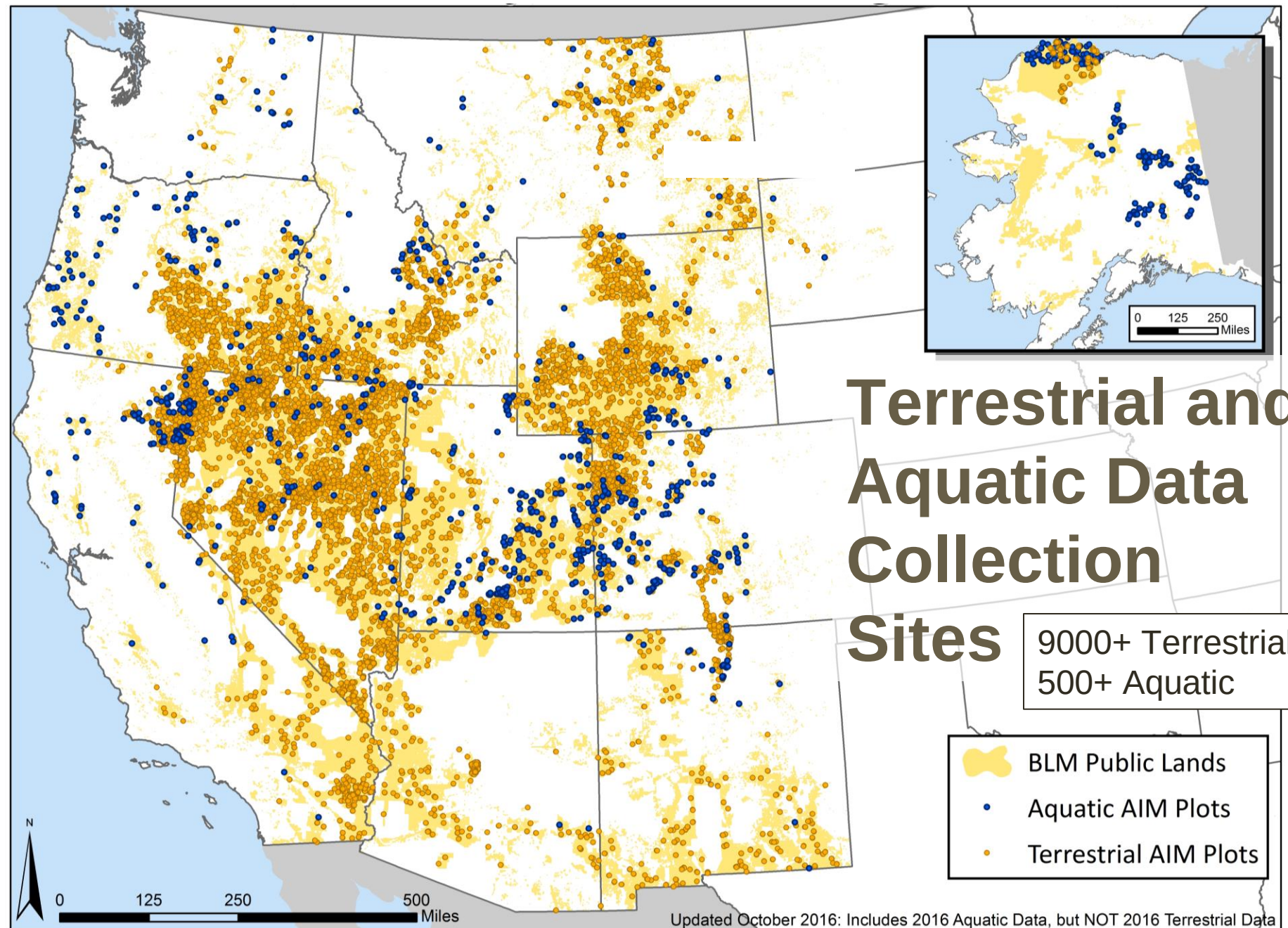
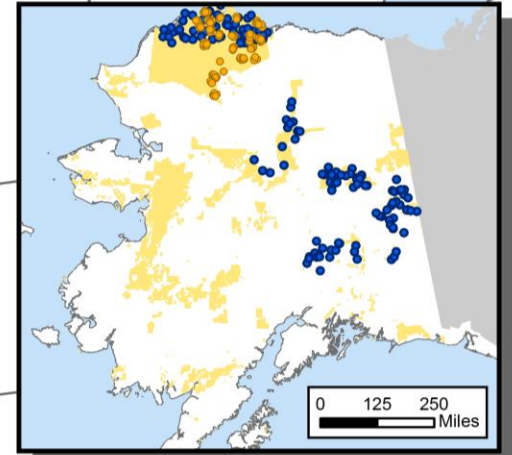
IM's released September 1, 2016

- RMP Effectiveness (all lands)
- Sage-grouse Habitat Assessment
- Adaptive Management
- IM's and questions and answers are available here:
http://www.blm.gov/wo/st/en/prog/more/sagegrouse/documents_and_resources.html

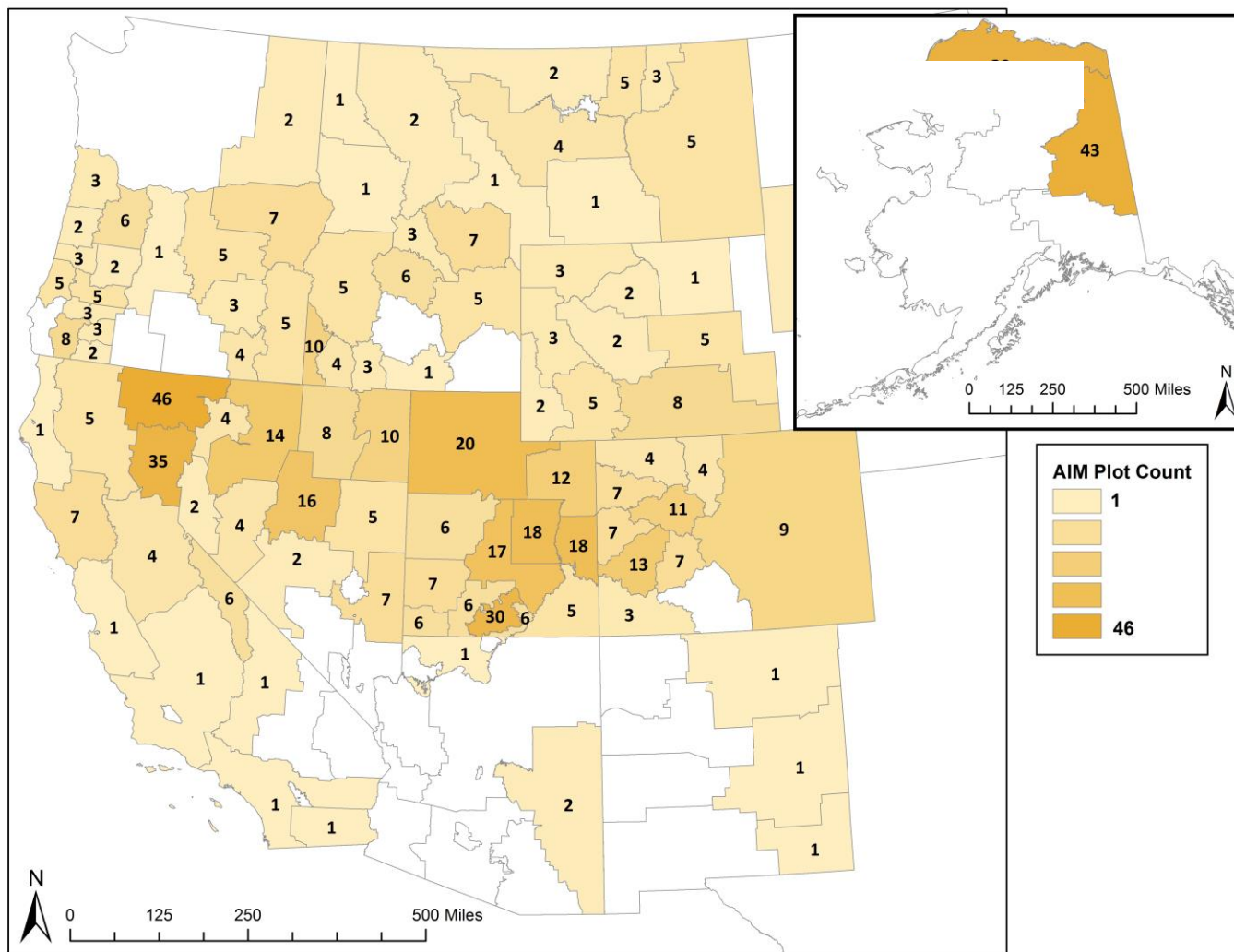
Terrestrial and Aquatic Data Collection Sites

9000+ Terrestrial
500+ Aquatic

- BLM Public Lands
- Aquatic AIM Plots
- Terrestrial AIM Plots



Updated October 2016: Includes 2016 Aquatic Data, but NOT 2016 Terrestrial Data



Aquatic Data Collection Sites by Field Office through 2016

Information for Informed Decisions



Thank you



RMP Effectiveness & GRSG Habitat Monitoring IM

- Applies to all RMPs (not just GRSG plans)
- RMP effectiveness will be determined by the status and trend of terrestrial & aquatic resources **relative to objectives** identified in plans
- **Quantitative data** collected following Assessment, Inventory, & Monitoring (AIM) principles will inform RMP effectiveness

RMP Effectiveness & GRSG Habitat Monitoring IM

- FOs with GRSG Plans will use **AIM** data, methods, data capture, and data management to assess the **status & trend of GRSG habitat**
- AIM data will inform Land Health Assessments
- AIM data will inform RMP effectiveness indicators described in the GRSG **Monitoring Framework**
- FOs will use ePlanning to track & report implementation activities, including those associated with the GRSG plans (e.g. project/site-specific actions & authorizations)

Sage-grouse Habitat Assessment IM

- FOs that manage sage-grouse habitat will use the multi-scale indicators & habitat suitability rating process described in the Habitat Assessment Framework (HAF) to assess condition of sage-grouse seasonal habitat
- FOs will use **habitat indicator values** in the **HAF**, or in Habitat Objectives Table in the **plans** if different, for completing habitat assessments
- FOs are required to use the site-scale HAF suitability rating when evaluating wildlife/SSS habitat quality **land health standard**

Sage-grouse Habitat Assessment IM

- FOs that complete multi-scale sage-grouse assessment are required to compile a Habitat Assessment Summary Report
- Core & supplemental data collected using the **AIM strategy** will inform the **site-scale habitat indicators**. Some additional data may be needed for some site-scale indicators
- Data acquisition & management roles and responsibilities

Adaptive Management IM

- Directs implementation of LUP adaptive management process
- Evaluate (using data) & apply hard and soft triggers and responses detailed in GRSG plans
- Multiple notification/communication steps
- Relationship to **AIM**: Monitoring data can inform whether habitat triggers are tripped, initiating adaptive management.