

Northern Great Plains Inventories

**Status as of
February 10,
2003**



NATIONAL PARKS OMNIBUS MANAGEMENT ACT OF 1998

The Secretary shall undertake a program of inventory and monitoring of National Park System resources to establish baseline information and to provide information on the long-term trends in the condition of National Park System resources. The monitoring program shall be developed in cooperation with other Federal monitoring and information collection efforts to ensure a cost-effective approach.

The trend in the condition of resources of the National Park System shall be a significant factor in the annual performance evaluation of each superintendent of a unit of the National Park System.

National Park Service I&M Networks



12 Basic Inventory Datasets

Natural resource bibliography

Base cartographic data

Geology map

Soils map

Weather data

Air quality

Location of air quality monitoring stations

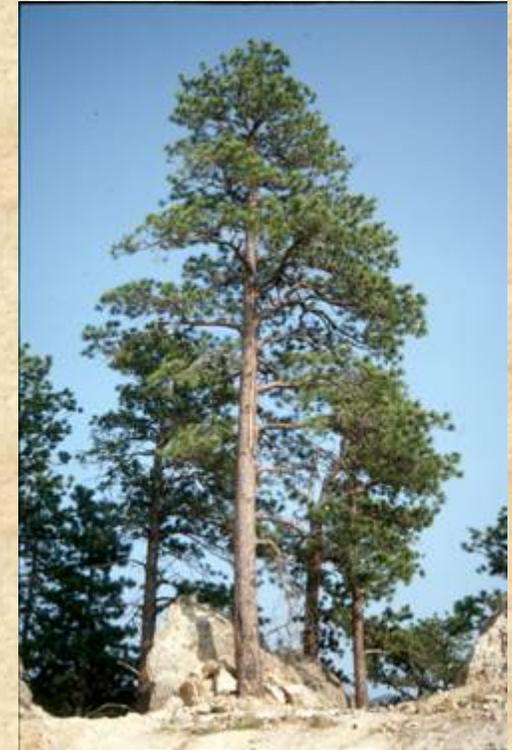
Water body location and classification

Water quality data

Vegetation map

Species list of vertebrates and vascular plants

Species distribution and status of vertebrates and vascular plants of high priority to each park



Integrate data sets and make them more available to managers using GIS data browser.

Natural Resource Bibliography (NatureBib)

- **NatureBib is a merging of air, deer, geology, paleontology, and other databases**
- **Will be linked to NPSpecies and the Water Resources bibliography**
- **Online (to NPS employees only) and local MS Access versions available**
- **Contact is Wendy Schumacher**



The National Park Service Inventory and Monitoring

[Browse the Database](#)

[Add New Citation](#)

[Edit Existing Records](#)

NatureBib



Number of Records in NatureBib

- AGFO = 141
- BADL = 1,155
- DETO = 278
- FOLA = 70
- FOUS = 161
- JECA = 522
- KNRI = 107
- MNRR = 147*
- MORU = 259
- NIOB = 12*
- SCBL = 94
- THRO = 631
- WICA = 546

* NIOB and MNRR category contains 165 records. Will try and have the NatureBib folks assign to specific park.

Base Cartography Inventory

- **Completed for all 13 parks**
- **Includes boundaries, transportation network, and other features**
- **Available online**



Status of Geologic Inventories in NGP Network

- **NGP parks with scoping meetings**
 - **BADL, THRO, WICA, JECA, MORU, DETO**
- **NGP parks with completed bibliography**
 - **all**
- **NGP parks with completed geology map**
 - **BADL (but data refinement in progress)**
 - **in progress at WICA, JECA, THRO, DETO**

Geology Work Scheduled for 03



- Scoping meetings planned for FY03
 - AGFO, FOLA, SCBL
- Work on mapping/digitizing for “scoped” parks
- Work on reports for all “scoped” parks

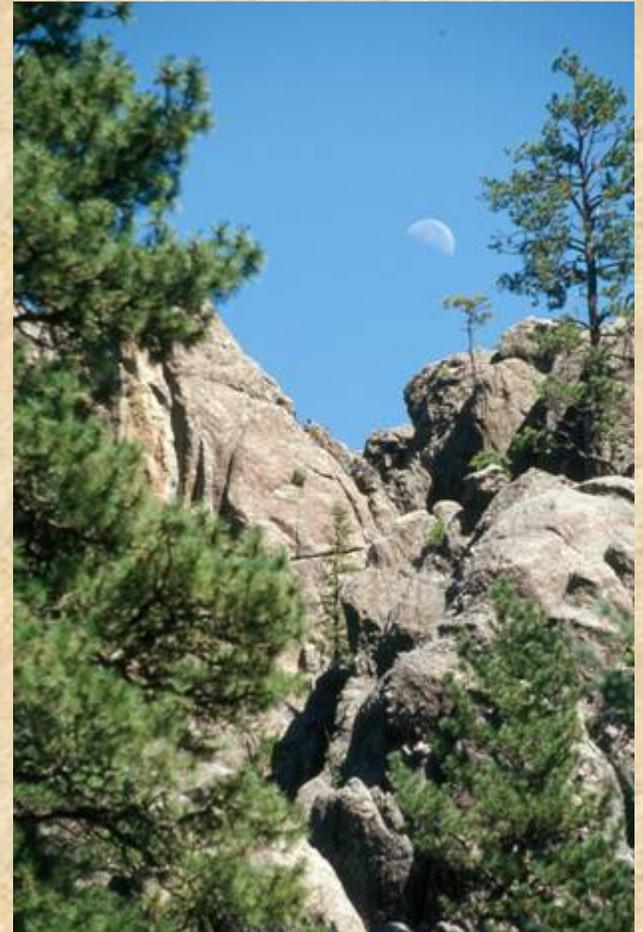
Geology Scoping Meetings



- 1 day in the field with USGS, state, local, or academic experts to showcase park geologic resources
- 1 day round table discussions addressing availability and quality of existing (or non-existing) geologic maps, park specific management, interpretive and research needs specific to geology
- Generation / distribution of scoping session report

Products of the Geological Inventory

- Park-specific geologic bibliography
- Digital geologic map
- Geologic report (including history of geologic exploration, setting, structural geology, paleontological resources, disturbed lands, geologic hazards, unique features and processes, and other sections as needed)



Soils Map Status

- AGFO, JECA, MORU, SCBL, WICA, MORU have maps meeting NPS needs;
 - however may revisit AGFO and SCBL
 - JECA, MORU, and WICA may need updating to new soil system
- BADL originally considered complete but maps not joining properly - may require scoping session this summer
- DETO map may be out of date
- THRO is ? (Biggam doesn't have data)



NPS I&M Soil Survey Products

- Soil Information and Education Products
- Soils map in digital and "hard copy" formats including polygon, linear, and point inferences
- Soil Map Attributes for all soil inferences
- Soil Survey Manuscript with pedon and landscape images (prepared by NRCS)

Weather Data Inventory

- **Inventory considered to be done by the National Weather Service and available from the National Climate Data Center**
- **Some cross-checking may occur and a select number of climate maps made available**

Air Quality

- **Estimated air quality values (in a table) and an “Air Atlas” completed for all I&M parks.**
- **Is available online.**





FAQ

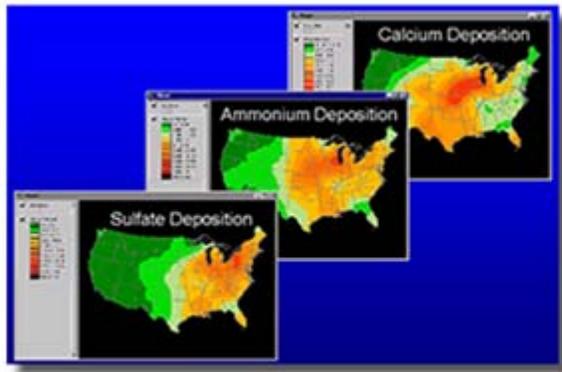
Mapping Resource for Air Quality Information

- [Home](#)
- [Using the map viewer](#)
- [Ozone Mapping](#)
- [Visibility Map - Annual](#)
- [Visibility Map - 5 year average](#)
- [Wet Deposition Mapping](#)
- [Sulfate /nitrate Mapping](#)
- [Download Data](#)
- [Links to related sites](#)
- [GIS projects](#)



This Geographic Information System (GIS) can be used to look at spatially interpolated air pollutant data from the major national monitoring networks in which NPS participates. Park Service units are show on the maps so that estimated values can be obtained for each pollutant. A lookup table is also available that summarizes the estimated pollutant levels from multiple maps.

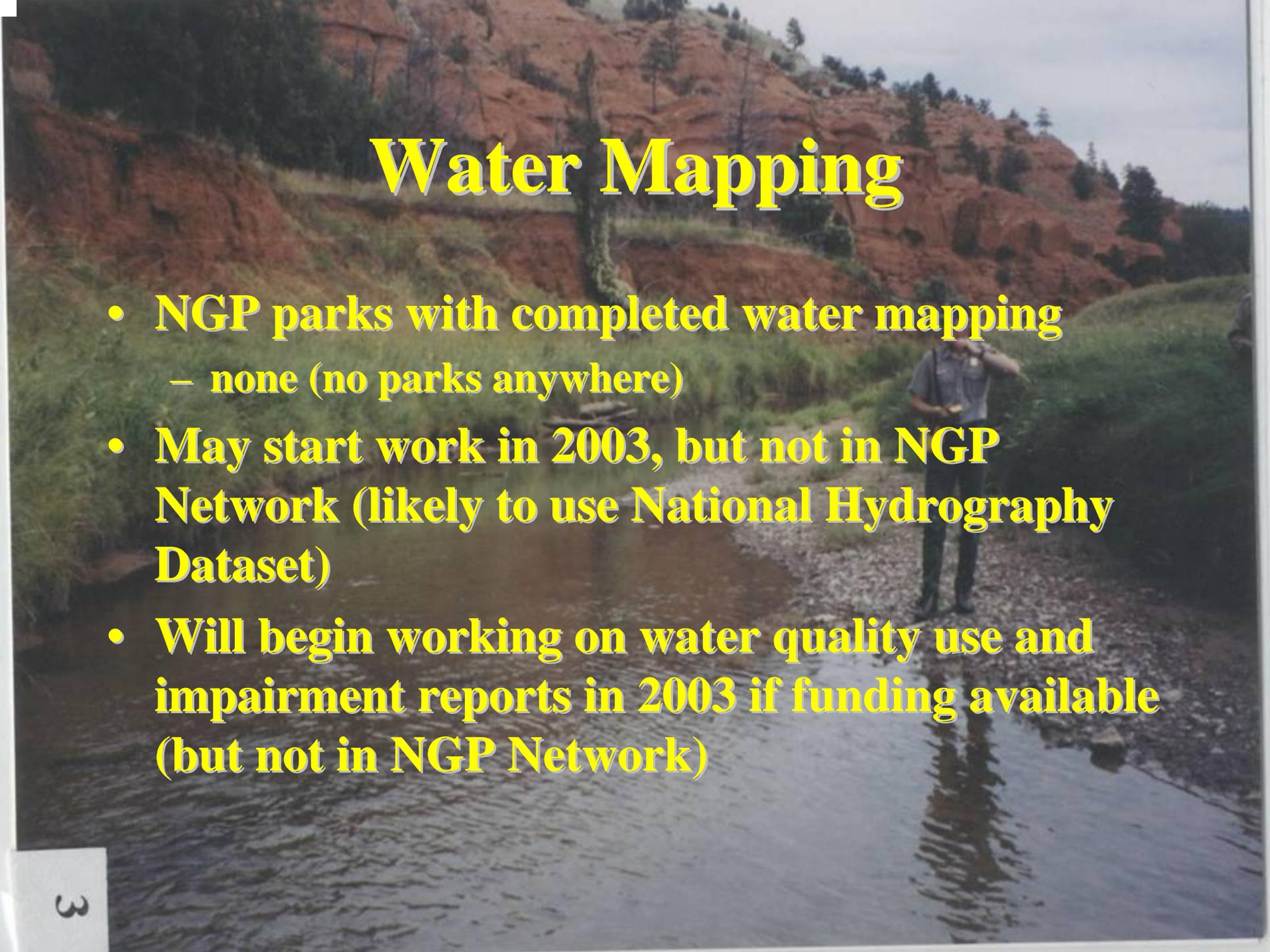
Use the navigation links on the left to get to the pollutant maps and other materials.



All the pollutant maps are presented as 5 or 6 year climatologies to avoid the natural year-to-year variations. The focus is on rural locations; all the monitoring networks, except for ozone, are predominately in non-urban sites. Our experience is that in urban areas and near pollutant sources, specific nearby monitors are more accurate than the interpolations from the rural monitoring networks.

[Info sheet](#)

Water Mapping

A photograph of a person standing in a shallow stream, surrounded by a red rock landscape with sparse vegetation. The person is wearing a light-colored shirt and dark pants, and appears to be looking at something in their hands. The water in the stream is dark and reflects the surrounding environment. The background shows a steep, reddish-brown hillside with some trees and a cloudy sky.

- **NGP parks with completed water mapping**
 - none (no parks anywhere)
- **May start work in 2003, but not in NGP Network (likely to use National Hydrography Dataset)**
- **Will begin working on water quality use and impairment reports in 2003 if funding available (but not in NGP Network)**

Water Quality Data

- **NGP parks with completed Baseline Water Quality Data Inventory and Analysis Report**
 - all parks are completed
- **Reports should be available online by late February**

Vegetation Map

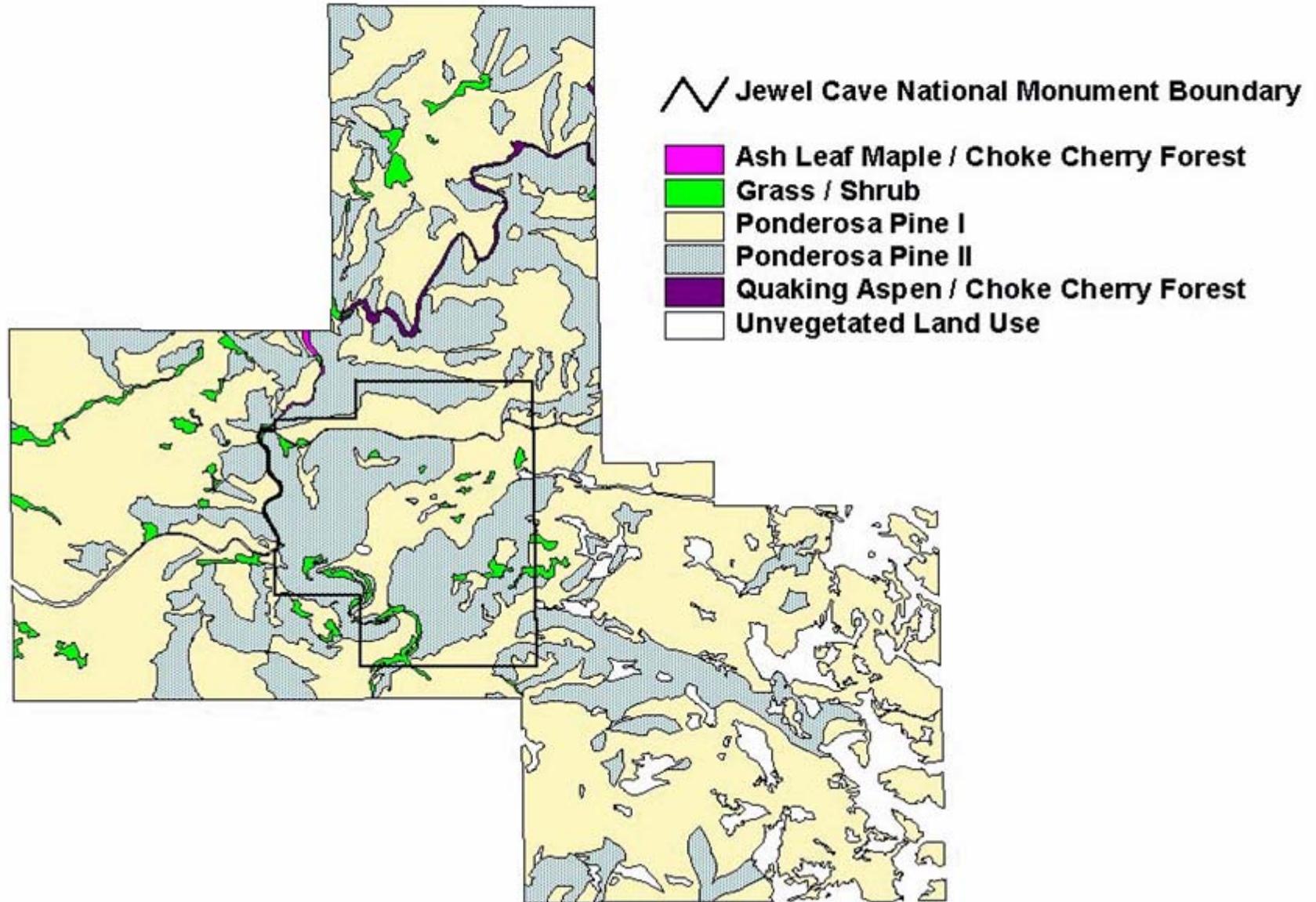
- **NGP parks with completed vegetation map**
 - AGFO, BADL, DETO, FOLA, JECA, MORU, SCBL, THRO, WICA
- **NGP parks near completion**
 - KNRI, FOUS
- **NGP parks to be mapped in the future**
 - MNRR, NIOB

Products from the Vegetation Map Program



- Aerial photography
- Field Data
- Classification Report (Description and Key)
- Accuracy Report
- Vegetation Map Data (digital)

Jewel Cave National Monument Vegetation / Land Use



A photograph of a stream in a wooded area. The stream flows from the left towards the center. On the right bank, a dog is walking away from the camera. A large, corrugated metal pipe lies on the ground near the stream. The background shows bare trees and a hillside. The text "Northern Great Plains Network Biological Inventories" is overlaid in yellow on the image.

Northern Great Plains Network Biological Inventories

1 23 '02



Completed Projects

- Expected plant list by C. Reed (\$2k)
- Literature search by G. Hupton (\$3k)
- Sample design by G. Sargeant (\$2k)
- Fish Inventory by Dr. Bob White of Montana State U. (\$13k) for DETO, FOLA, MORU, SCBL, and WICA



Current Network Field Inventories

- Herpetofauna - Ongoing by Dr. Smith of U. WY and Black Hills State
- Mammals - Ongoing by Dr. Schmidt thru U.S. Forest Service (& D. Licht)
- Birds - Ongoing by Arvind Panjabi of Rocky Mountain Bird Observatory

Other Ongoing Projects



- Search of museums for vertebrate specimens collected from NGP Network parks
 - Principle Investigator is Dr. Hugh Genoways. Being conducted by graduate students.
 - Year 1 of 2-year project. Cost is \$10k plus CESU contribution



Other Ongoing Projects (continued)



- Search of USD herbarium for plant specimens collected from NGP Network parks
 - Sandee Dingman conducted pilot effort
 - In collaboration with Heartlands I&M Network
 - 13% of herbarium reviewed
 - 331 vouchers with possible NPS relevance (most at BADL or MNRR)

Other Activities



- Conducted “data mining” (evidence) visits to AGFO, WICA, THRO, and FOLA
- Entered observation card datasets for BADL, AGFO, FOLA, and WICA
- Entered voucher data for AGFO and WICA
- Entered other reports, observations, vouchers into NPSpecies

Other Activities (continued)

- Tested SYNTHESIS
- Developed MS Access digital image database
- Vital Signs scoping meeting at AGFO



Vouchers



- Last spring the Voucher Committee prepared letter soliciting bids from U. of Nebraska, U. of Kansas, and U. of Minn.
- Received \$5,020 bid from U. of Minn.
- U. of Nebraska declined to bid
- U. of Kansas not part of CESU
- No Final Decision made

2002 Expenditures



- 48% went to agreements for field work
- 39% went to Network personnel
- 12% went to operations/administration/etc.
- 2% went to travel

Personnel for FY2002

Dan Licht - Inventory Coordinator (0.7 FTE)

Dawn Holguin - Tech

John Dalglish - Tech

Will Powers - Tech



FY02





**“VITAL SIGNS”
MONITORING PHASE**

STILL NO MONEY FOR US!!!