

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.

Vital Signs Monitoring 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

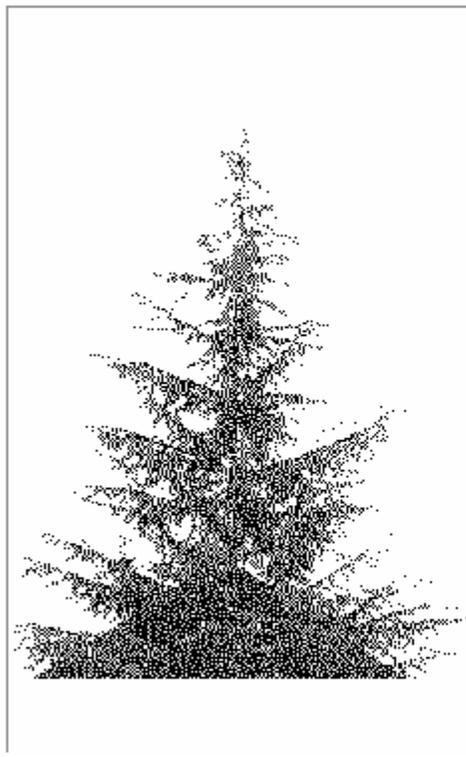
Species list of vertebrates and vascular plants

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 (NPBIB)

- NPBIB is a merging of NRBIB, GeoBIB, and other databases
- Online as of December 6, 2001
- Local MS Access version available
- New NGP Network records to be entered from contractors literature search



 The National Park Service

Natural Resources Bibliography

The new, **NPBIB** site is accessible by password only. If you need a password, contact your network I&M coordinator or the NRBIB coordinator (Marilyn Ostergren at 206-220-4153). This site is still in development.

[search NPBIB](#)

[go the the old NRBIB site](#)

<http://www.nature.nps.gov/nrbib> (last updated August, 2001)

Goals of the Geologic Resources Inventory

- "Scope" each park (~272 Natural Resource areas); involves site visit and round-table meeting
- Produce park specific geologic bibliography
- Deliver digital geologic map (currently using ESRI ArcView / ArcInfo formats)
- Develop encompassing geologic report

Geological Inventory Status

(as of September 2001)

- 56 parks have scoping completed (all CO, UT, NC areas scoped; 12 NCR; 7 Flagstaff area)
- 235 Bibliographies up on web; 162 of those fully validated; GRI staff finishing rest of validations
- 16 parks have digital geologic maps produced. At [ftp://gis01.nature.nps.gov<NPS4>/data/nrdata/geology/](ftp://gis01.nature.nps.gov/NPS4/data/nrdata/geology/)
- 11 geologic reports for UT parks

Geology Mapping in NGP Network

- NGP parks with completed geology map
 - none
- NGP parks to be mapped in 2002
 - WICA, JECA, BADL, THRO
- NGP parks to be mapped in the future
 - all others

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, and park specific management, interpretive and research needs specific to geology
- Generation / distribution of scoping session report

Geologic Report Topics

- History of Geologic Exploration
- Geologic Setting
- Structural Geology (maps, cross sections)
- Paleontological Resources
- Disturbed Lands (abandoned mines, areas needing reclamation)
- Geologic Hazards and Issues
- Geologic Data (references, database links, metadata)
- Unique geologic features and processes
- Other sections as needed (ex. caves, mineral claims, etc.)
- Stratigraphy (including graphic columns, type sections and unit descriptions)

Weather Data Inventory

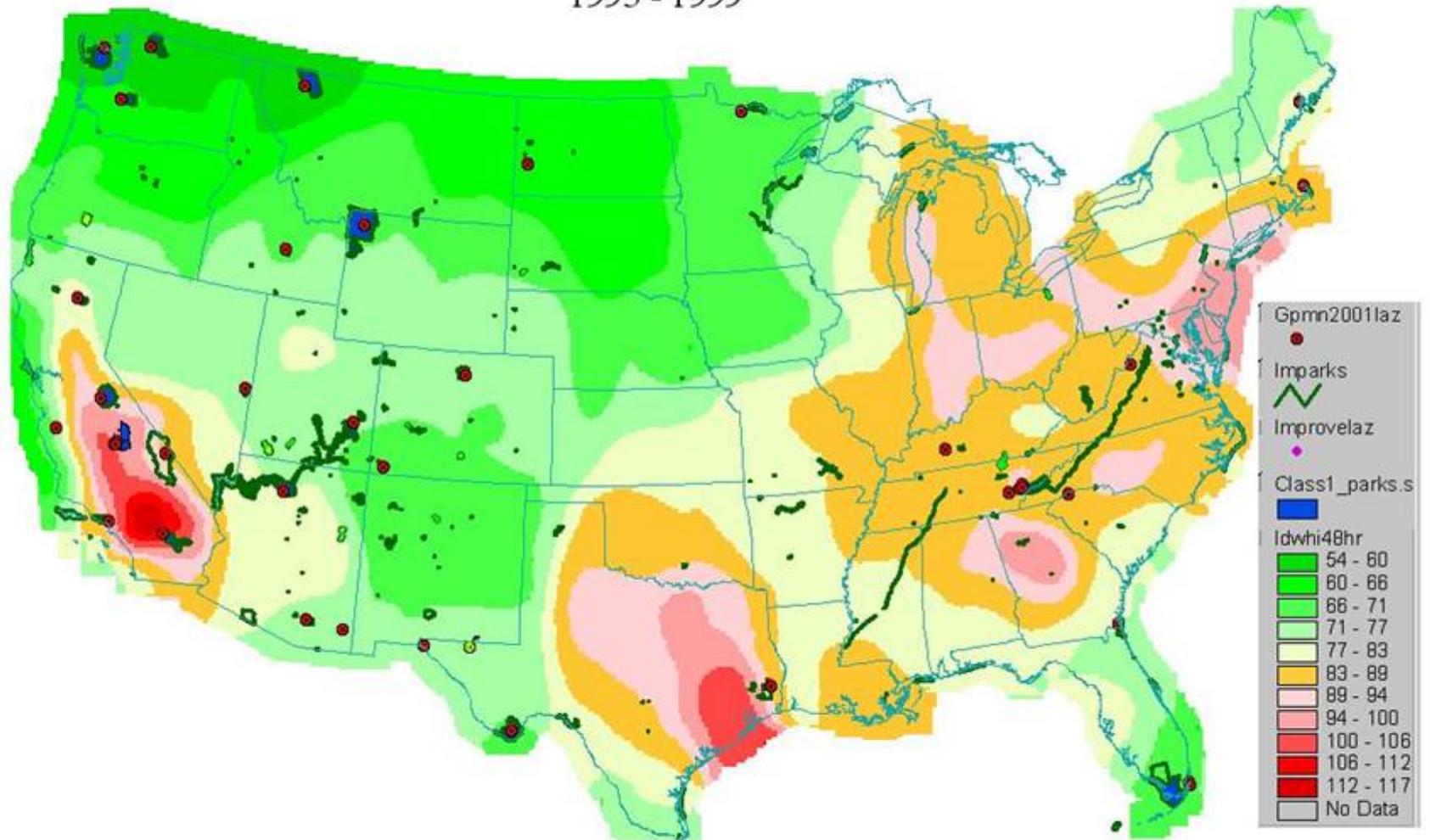
- Inventory considered to be done by the National Weather Service and available from the National Climate Data Center
- Some cross-checking may occur and a select number of climate maps made available

Air Quality

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

4th Highest Daily Max. 8-hr Average Ozone

1995 - 1999



NPS Soils I&M Status



152 Parks have Soils Mapping "complete" at this time

Mapping is in Progress in an additional 35 Units

Soils Scoping Sessions planned for 4 Units

More detailed information to be developed on a Regional level

Soils Map

- NGP parks with completed soils map
 - AGFO, BADL, JECA, SCBL, THRO, WICA, MORU
- NGP parks to update
- DETO, FOLA

- NGP parks to be mapped in the future
 - all others



NPS Soil Survey

The NPS Inventory and Monitoring Program is obtaining soil surveys on Park Units through agreements with other federal agencies such as the Natural Resources Conservation Service (NRCS) and with private contractors



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
- FGDC compliant Metadata
- Soil Survey Manuscript with pedon and landscape images

Soil Data Viewer

The screenshot displays the Soil Data Viewer application interface. The main window, titled "Untitled", shows a map of a region with drainage classes overlaid on a digital orthophoto. The map is color-coded according to the legend, with yellow highlighting "Poorly drained soils".

The interface includes a menu bar (File, Edit, View, Theme, Graphics, Window, Help, ThemeManager) and a toolbar with various navigation and editing tools. The left sidebar contains a list of layers, including "Soil Map Units" and "Digital Orthophoto". The central legend panel, titled "ROMO Soils and Digital Ortho", provides a detailed key for the drainage classes:

- Drain
- Poorly drained soils
- Drainage Class - Dominant Condition
 - Excessively drained
 - Somewhat excessively drained
 - Well drained
 - Moderately well drained
 - Somewhat poorly drained
 - Poorly drained
 - Very poorly drained
- Soil Map Units
- Digital Orthophoto

The bottom status bar shows the system tray with the time 10:20 AM and the taskbar with open applications including "Adobe Photoshop" and "Soil Data Viewer".

Water Mapping

- NGP parks with completed water mapping
 - none (no parks anywhere)
- Still questions about what datasets to use to make maps (likely to use National Hydrography Dataset)
- Will begin working on water quality use classifications in 2002 (not necessarily in NGP Network)

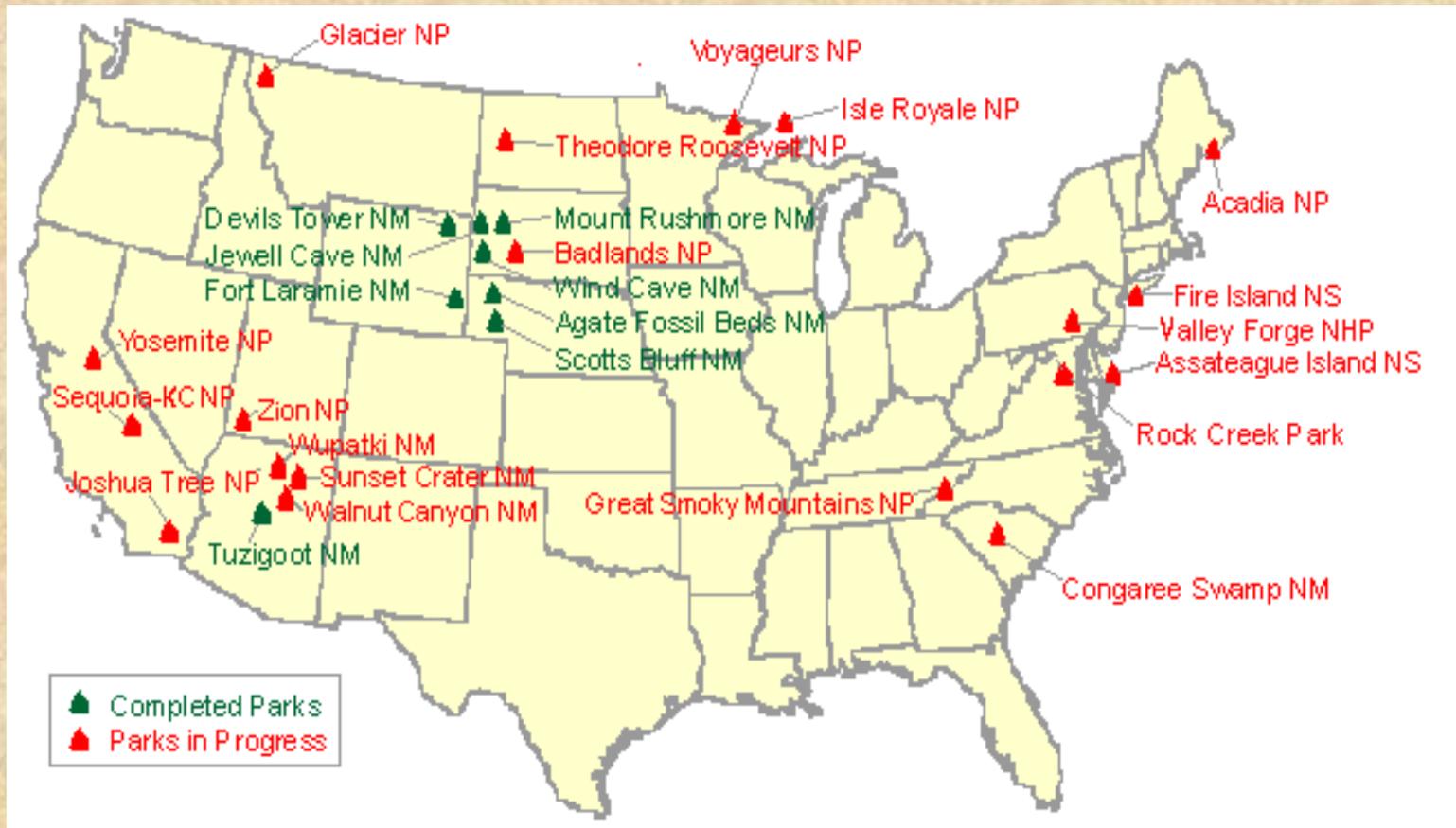
Water Quality Data

- NGP parks with completed Baseline Water Quality Data Inventory and Analysis Report
 - all

Vegetation Map

- NGP parks with completed vegetation map
 - AGFO, BADL, DETO, FOLA, JECA, MORU, SCBL, THRO, WICA
- NGP parks to be completed in 2002
 - KNRI, FOUS
- NGP parks to be mapped in the future
 - MNRR, NIOB

Present Status cont



Products from the Vegetation Map Program

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

Major Steps for each Park

- Scoping meeting
- Data review
- Data acquisition
- Field sampling
- Classification characterization
- Photo interpretation, mapping and automation
- Accuracy assessment
- Final product review

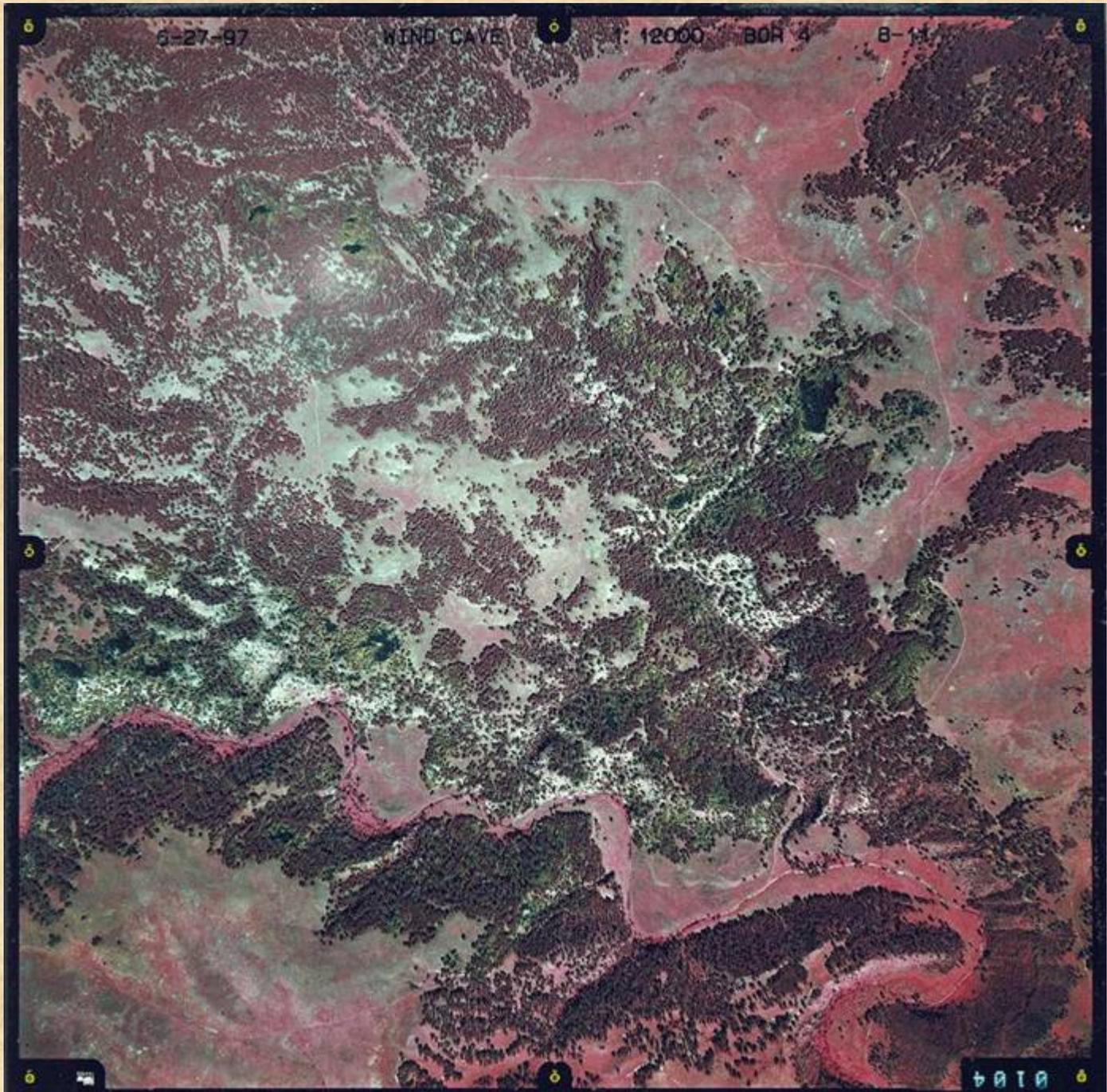
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WIND CAVE

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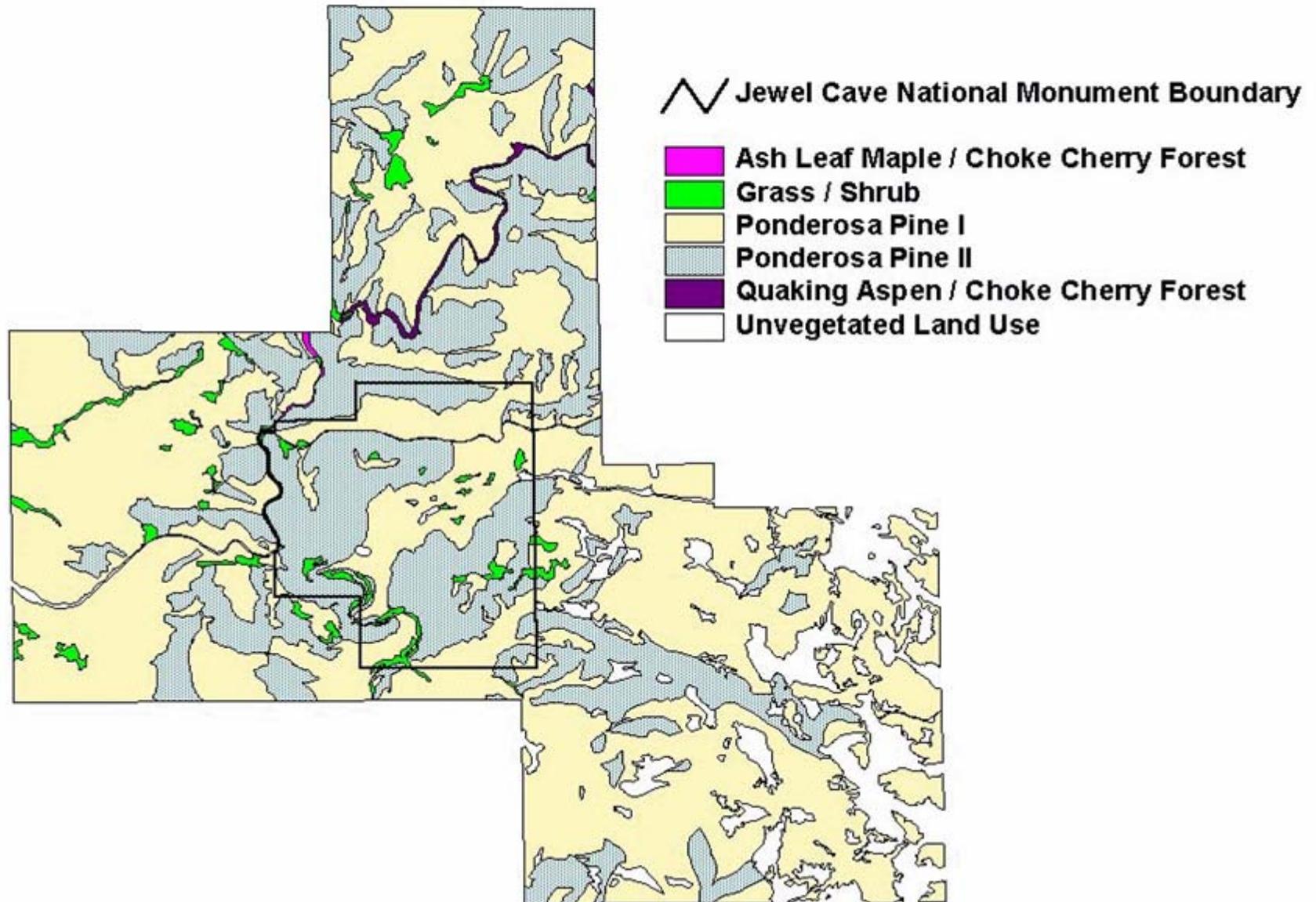
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0104

Jewel Cave National Monument Vegetation / Land Use



Funding for the Program

- Funding from USGS (\$1.2M)
- Funding from NPS I&M (\$1.75M)
- Funding from FIREPRO (\$1.25M)
- Funding from Parks and other sources (varies when available)
- New funding via NPS Natural Resource Challenge in 2001

Information Management Tools

- Synthesis
- GIS Theme Manager
- NR Database Template
- Web-based and MS Access versions of:
 - NPSpecies
 - NP Bibliography
 - Dataset Catalog

See: <http://www.nature.nps.gov/sfancy> for update and overview

MONITORING PHASE

Goals of Vital Signs Monitoring

- Identify status and trends in ecosystem health
- Define normal limits of variation
- Provide early warning of situations that require intervention
- Suggest remedial treatments and frame research hypotheses
- Determine compliance with laws and regulations