

Natural Resource Stewardship and Science



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NPS Natural Resource Program Center Organization and Functions

National Water Quality Monitoring Council

July 22, 2008



National Park Service

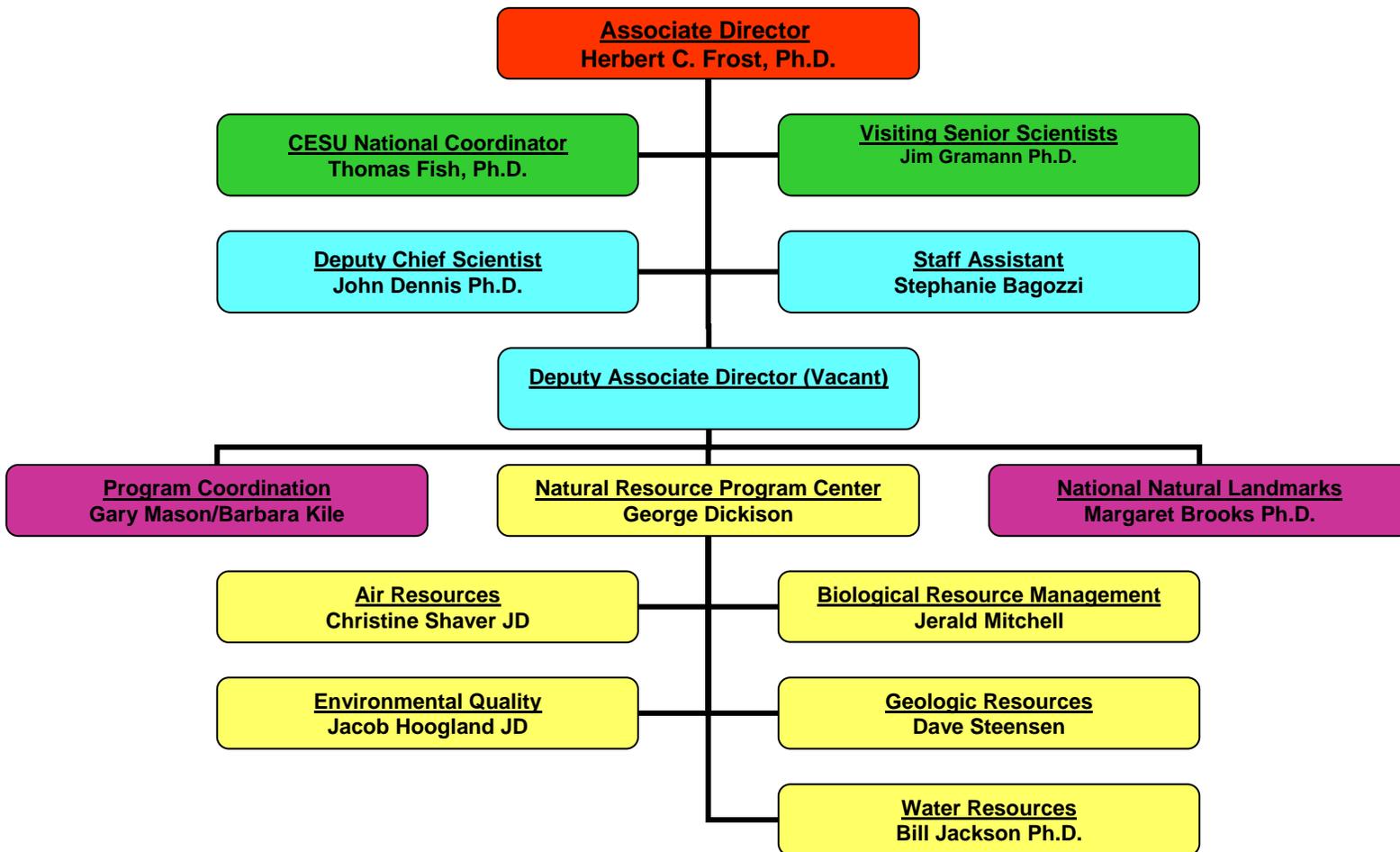
- 393 National Park Units (Parks, Seashores, Recreation Areas, National Rivers, Historic Sites, Battlefields, Cultural Sites, etc.)
- Nation's heritage of special places
- Conserve unimpaired for the enjoyment of future generations.



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Natural Resource Program Center (NRPC)

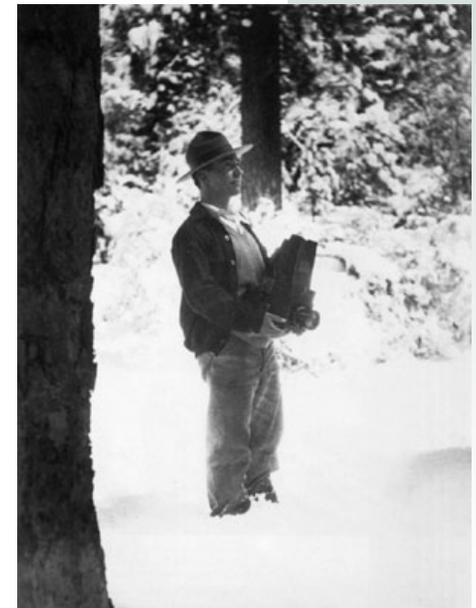
- 3 Locations: Fort Collins, Denver, DC
- 5 Divisions & Office of Center Director
 - Air Resources
 - Biological Resources Management
 - Environmental Quality
 - Geologic Resources
 - Water Resources
- Technical Advisory Groups (TAGS) for cross-cutting issues such as restoration, planning, policy, coastal resources, contaminants, outreach, IT.





Who We Are

- Technical Experts for Park Management
 - Ecologists
 - Geologists
 - Hydrologists
 - Biologists
 - Chemists
 - Geomorphologists
 - Social Scientists
 - Planners
 - Veterinarians – Brucellosis, Chronic Wasting Disease, Hanta Virus, West Nile Virus
- Policy Experts
- Regulatory and Compliance Specialists (Clean Air Act, NEPA, Minerals Management, Water Quality, Water Rights, Endangered Species, etc.)
- Program Managers





What We Do

- Support Director, Regions, and Parks
- Provide Technical Assistance to Parks and Regions
- Oversee Project Funding Programs and Serve as POC on Funded Park Projects
- Enhance Accountability (*Annual Report to Congress*)
- Add Cohesion to Decentralized Agency: Program Area Leadership
- Shape Policy, Provide policy guidance, and Monitor Policy Implementation
- Find and Leverage Resources
 - *Natural Resource Challenge* (to know, understand, and manage resources)
 - Develop Partnerships with NGOs and others
- Partner/Coordinate with USGS and Federal/State Agencies
- Conduct Training



Office of the NRPC Director

- Office of Inventory, Monitoring, and Evaluation (OIME)
- Office of Education and Outreach (OEO)
- Office of Natural Resource Information Systems (ONRIS)
- Climate Change Coordinator





I&M Program Overview

- 12 Basic Inventories - \$11,389,000
- 32 Vital Signs Monitoring Networks,
270 parks - \$26,778,700
- WQ Monitoring: \$2.6 m
- Natural Resource GIS Program
- Program guidance and program
oversite

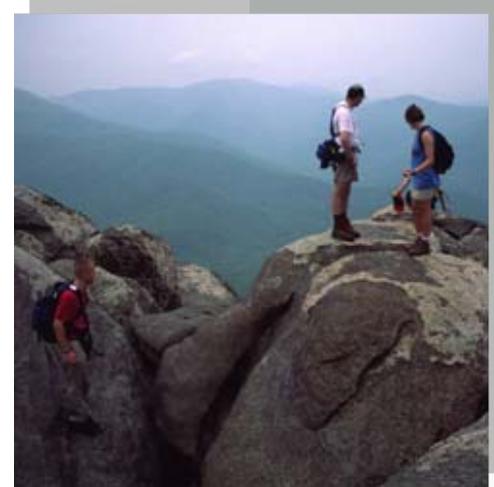




Monitoring Network Status

Vital Signs Identification and Monitoring:

- All 270 parks have now identified their vital signs for monitoring (phase 2)
- A total of 197 parks (23 networks) have completed monitoring plans and implemented monitoring (phase 3)
- A total of 157 parks are now able to report baseline conditions for selected vital signs.



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Air Resources Division



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Air Resources Division

- Three program areas
 - Air quality
 - Monitoring
 - Ozone
 - Visibility
 - Atmospheric Deposition
 - » Sulfate, Nitrate, Ammonium
 - Research
 - New Source Permit Review
 - Natural sounds
 - Night sky
- Western Airborne Contaminants Assessment Project (organics, metals, other chemicals)



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Biological Resource Management Division



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Biological Resources Division

- Endangered Species
- Forest Health
- Human Dimensions
- Integrated Pest Management
- Exotics
- Restoration
- Vegetation Mapping
- Wildlife Health and Management



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Environmental Quality Division

- Environmental Response, Damage Assessment, and Restoration Activity
 - Damage Resource Restoration (19jj)
 - Oil and Hazmat Response
- Emergency Response Planning and Agency Integration
- Environmental Quality Activities
 - NEPA Departmental Manual
 - Ungulate Management
 - ORV, PWC Use
- Planning, Environment, and Public Comment (PEPC)



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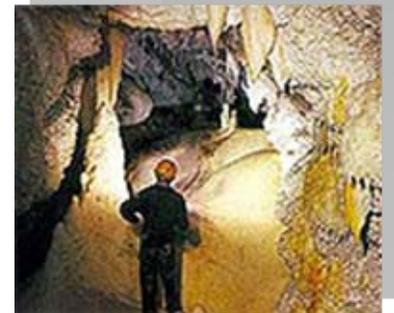
Geologic Resources Division



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Geologic Resources Division

- Paleontological resource protection
- Developing Digital Geologic & Soil Maps & Reports
- Managing Mineral Development
 - Revise NPS Non-Federal Oil and Gas Regulations
 - Represent NPS on issues involving exploration for or development of new energy sources (oil shale, tar sands, coal bed methane, geothermal, oil, gas, LNG, etc.)
- Restoring Disturbed Lands
- Evaluating & Mitigating Geological Hazards
- Coastal Processes, and Coastal Vulnerability
- Cave and Karst Resource Management



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Water Resource Division

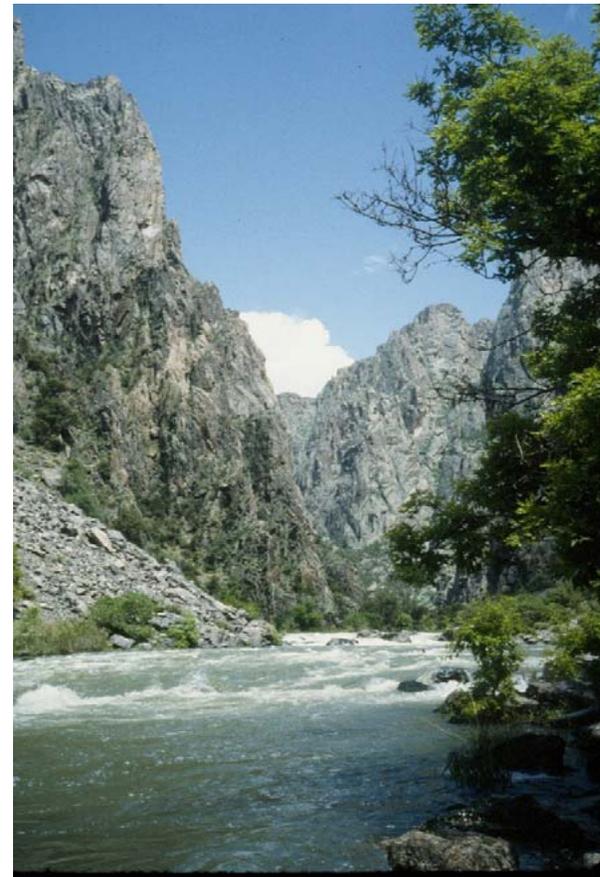
- Water Rights
- Water Quality
 - Vital Signs Water Quality Monitoring
 - USGS-NPS Water Quality Assessment Partnership
- Hydrology Technical Assistance
- Wetland Protection
- Fisheries Management
- Watershed Assessment and Management
- Water Resource Management Planning
- Ocean and Coastal Resource Management
- Wild and Scenic Rivers Management
- USGS Liaison to NPS-WRD (Glenn Patterson)





Water Rights

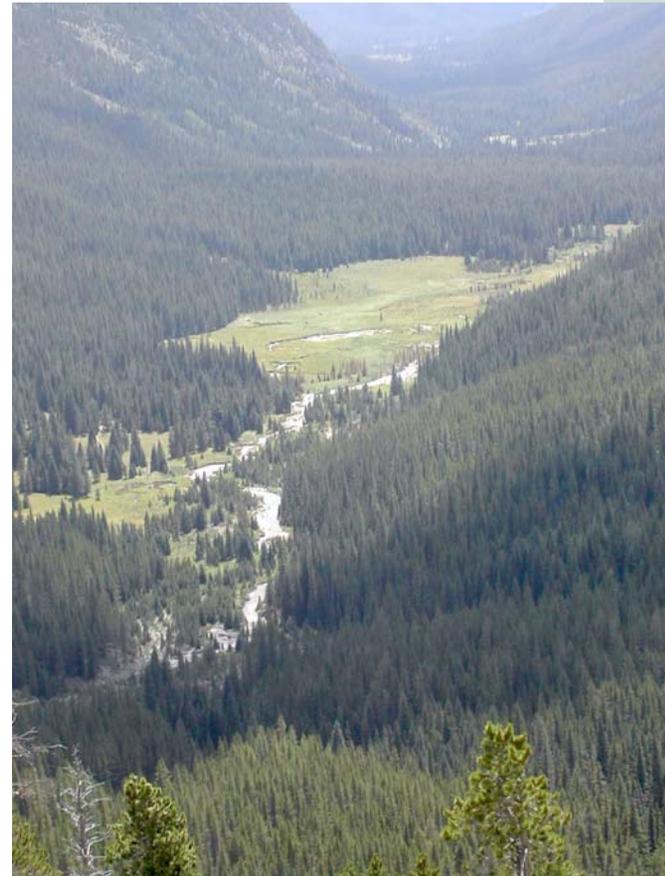
- **Black Canyon NP:** Settlement stipulation/deed of federal reserved water right
- **Great Sand Dunes NP:** Litigation of in-place ground water right application
- Nevada Ground Water protection: Water rights hearing for SNWA applications in Snake Valley – **Great Basin National Park**





Wetland Management

- Wetland Protection Procedural Manual #77-1
- Halstead Meadow Restoration – Sequoia-Kings Canyon NP
- Coastal Wetland Restoration: Point Reyes, Channel Islands, Fire Island, Lewis and Clark NHP
- Grand Ditch Restoration Planning: Rocky Mountain NP





Fisheries Management

- Devil's Hole Pupfish Recovery
- Quagga Mussel Incident Team and Prevention and Response Plan
- Planning and Response Guide: Viral Hemorrhagic Septicemia
- Fisheries Restoration Projects: Big South Fork, Pictured Rocks, Santa Monica Mountains, Point Reyes, North Cascades





Ocean and Coastal Resources

- 53 Parks, 3 million marine acres, 6000 shoreline miles
- Benthic Habitat Inventory Project:
 - Virgin Islands w/ NOAA
 - Gulf Islands w/ USGS
 - Glacier Bay w/ USGS
 - Golden Gate w/ USGS, Cal State U's
 - Dry Tortuga, Biscayne w/ SER I&M Network
- Coastal Park Condition Assessments – 28 park reports completed
- Ocean Park Stewardship Plan
 - Marine protected areas





Wild and Scenic Rivers

- 32 NPS W&S Rivers
- New W&S Rivers Program established in May, 2007 by National Leadership Council
- Interim Management: Steering Committee
- Action Plan Developed: Organizational Home, funding strategies
- Draft Director's Order Completed





Water Resources Resources Planning

- Assist parks in developing park management plans
 - Descriptions of fundamental resources
 - Synthesis of technical scientific information applicable to park planning and management
 - Summary of issues, applicable laws/reg/policies
 - Strategies for management





Hydrology

- Floodplain Management: Delineation, Compliance, Post-event Assessment
- River Management Planning: Dam removals, Bridge design, Erosion assessments, Fluvial processes, Riparian areas
- Ground water protection; water supply development issues
- Watershed management





Natural Resource Condition Assessments

- Synthesize/evaluate existing information in an Ecological Condition Assessment Framework
- Summarize existing conditions for fundamental park resources against reference or modeled conditions
- Stressor evaluation
- Summarize information geospatially
- Use in park management planning and accountability reporting





Water Quality Management

- WQ Vital Signs Monitoring
 - 32 Networks w/ 274 parks
 - \$2.6 m
 - Impaired waters; Pristine waters
 - Core parameters (pH, DO, spec. cond., temp, flow)
 - Nutrients
 - Macroinvertebrates
- USGS-NPS WQ Assessment Partnership
 - \$2.0 m USGS funds
 - 145 Projects completed in 104 Parks
 - 2009 New Projects
 - KAHO – Isotope tracers
 - YOSE, SEKI: Nitrogen deposition
 - Hopewell Furnace: Arsenic/trace metals
 - WICA – Ground water quality impacts
 - EVER: Saline intrusion, Cape Sable
- Technical Assistance in addressing WQ issues





Water Information Management Services

- NPS-STORET
 - Data from 863 projects; 219 parks
 - 3 million data results
- Data synthesis and analysis reports for 274 parks
- National Hydrography Datasets
- Clean Water Act Impairments



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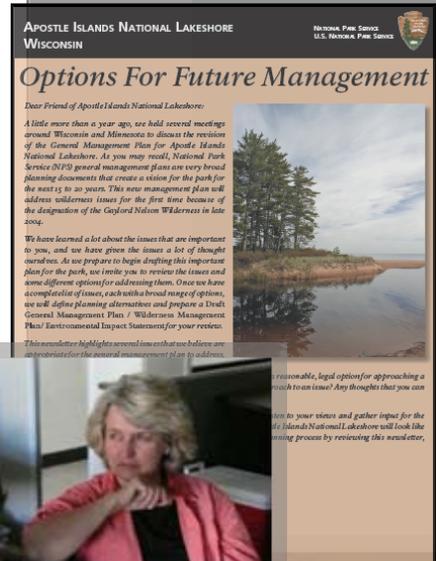
Office of the Center Director – Climate Change



New for 2008: Managing for Climate Change in National Parks

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- New Climate Change Coordinator hired (Leigh_Welling@nps.gov)
- Strategic planning effort underway FY08 – will involve all Divisions
- CC Scenario Planning pilot projects to explore how to plan for uncertainty (GMPs, RSPs, fire, facilities, fleet)
- Support Resiliency and/or Adaptation: Infrastructure, Ecosystems
- Increase resource monitoring, research, and predictive modeling collaborations
- New Policy Advisory Group Established



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