

Outreach Tools for Obtaining Park Vital Signs Data and Information

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National Park Service Natural Resource Challenge



Revitalize and expand the natural resource program within the park service and improve park management through greater reliance on scientific knowledge

North Cascades
Reed Glesne

The Inventory & Monitoring Program: What it is



Long-term ecological program designed to:

Routinely collect, manage, analyze, and report data on the condition or “health” of a modest set of natural resources.

Provide some local scientific expertise to all 270+ parks through the use of shared positions.

Maximize the use and relevance of the data for managing parks, and gain efficiencies through collaboration, cost-sharing across NPS programs and with other agencies through a flexible but coordinated approach.

Make data and information more available and useful by promoting good data management/analysis/reporting practices.

Network Concept

The 32 park networks are large enough for efficiencies through sharing staff & funding, and small and local enough to respond to park-level issues and data needs and allow for local cost-leveraging opportunities

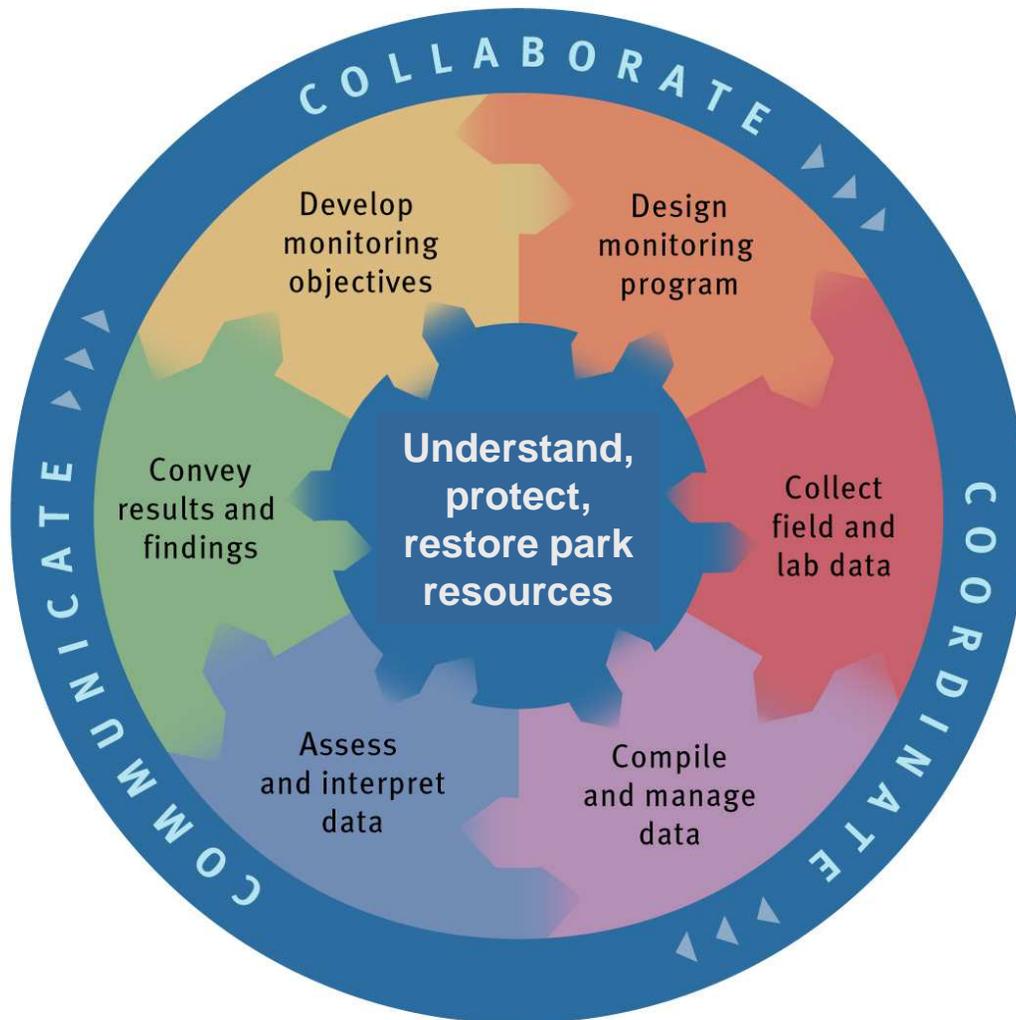


Park Management Informed by Scientific Information – Key Aspects of Network Approach to Monitoring



- Monitoring plays a key, central role in natural resource stewardship, performance management, and meeting the NPS mission for all parks with NR.
- Primary audience: park managers, but results will be used for many other stewardship efforts, such as:
 - Planning (GMPs, RSPs, determining desired conditions)
 - Performance Management (reporting resource condition and demonstrating results at park and national level)
 - Interpretation and building constituencies
- Natural Resource Challenge funding will only build a core program. Use of existing personnel, base funds, and partnerships are critical to success (requires flexibility to allow leveraging through partnerships).
- Network approach increases efficiency. Designed to be relevant, with explicit link to management decision-making and Performance Management at the park and national level.

Park Management Informed by Scientific Information – Integration with other Park Operations



- View monitoring as an information system
- Integrate natural resource information with other park operations
- Make information more useful and available for managers at local level
- Make data available to others for research, education; modeling, more sophisticated analyses

>33% of resources dedicated to data management, analysis, reporting

(Adapted from National Water Quality Monitoring Council)

Why are Protocols Especially Important for Long-term Monitoring?



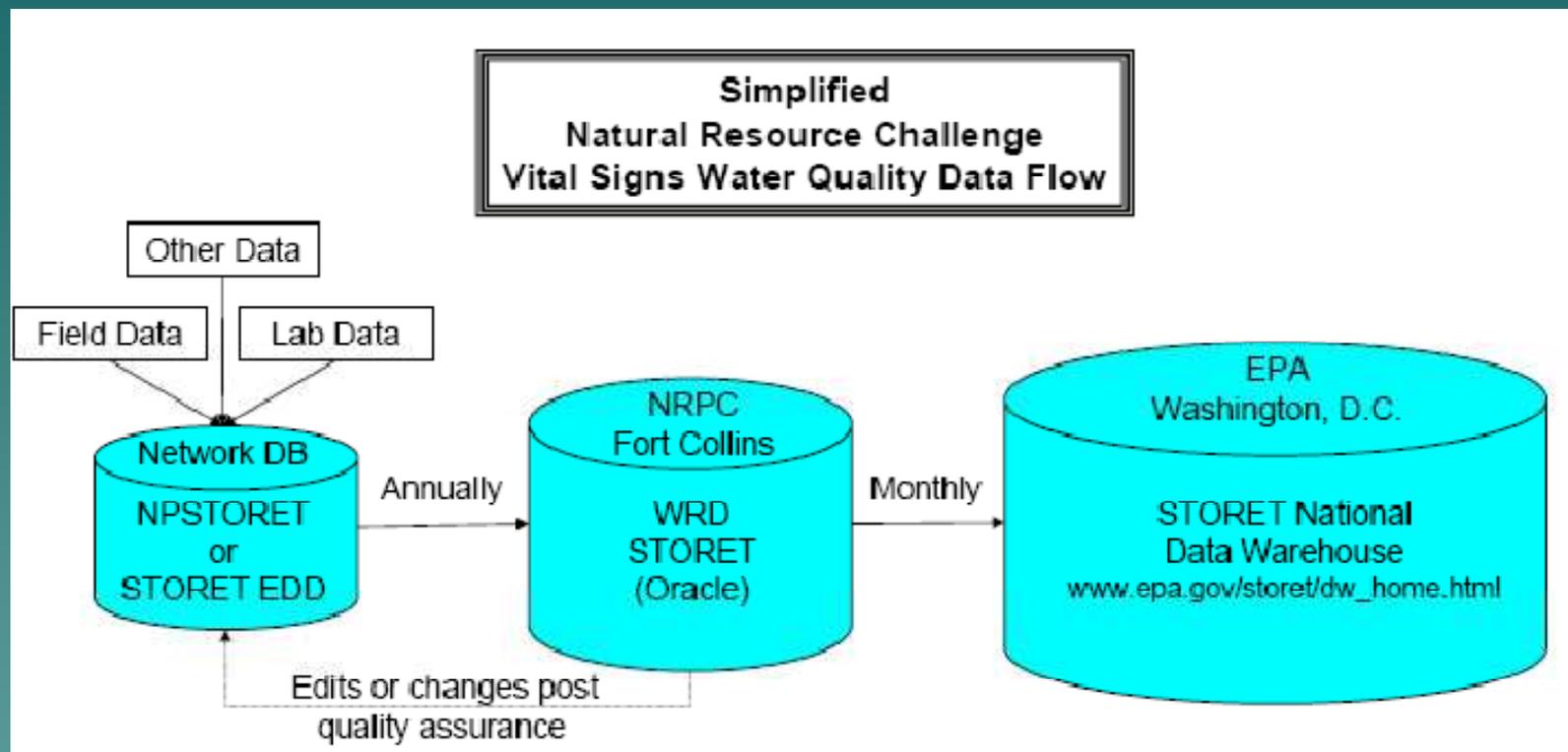
We need to be certain that changes detected by monitoring actually are occurring in nature and not simply a result of measurements being taken by different people or in slightly different ways

- Long-term monitoring; Different people will be doing the monitoring; changeover in personnel is expected.
- Experts that design the protocol and plans for analysis will retire or go away.
- Necessary to share/compare approach and results among different agencies and among sites.

Water Quality Protocols

- ◆ Wadeable Streams
- ◆ Large Rivers
- ◆ Lakes and Ponds
- ◆ Seeps and Springs
- ◆ Wetlands and Wetland Habitats
- ◆ Groundwater
- ◆ Estuaries and Marine Areas
- ◆ Amphibians, Macroinvertebrates & Fish
- ◆ Stream Flow Quantity
- ◆ Nutrients and Toxic Contaminants.

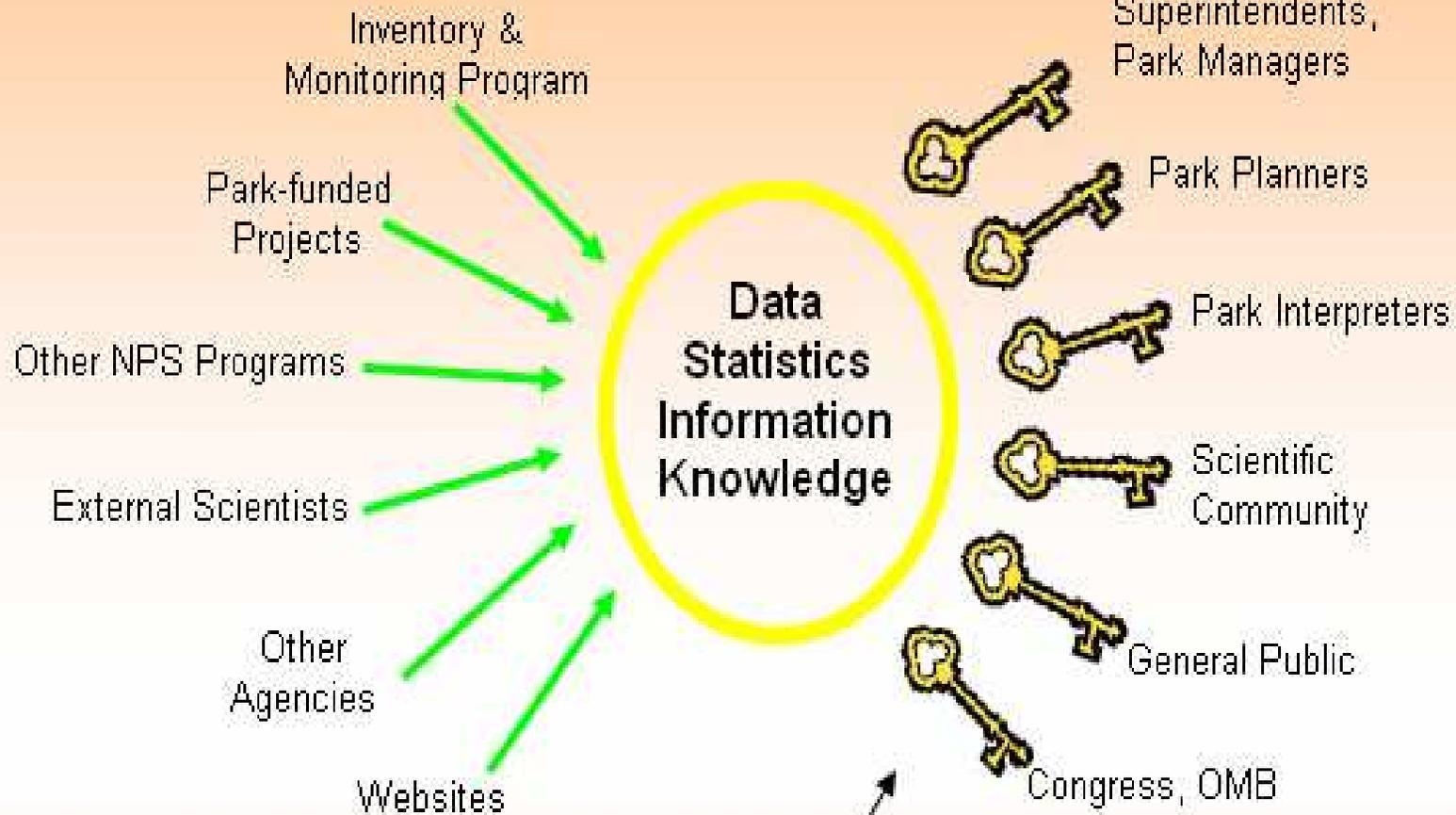
Vital Signs WQ Data Mgt.



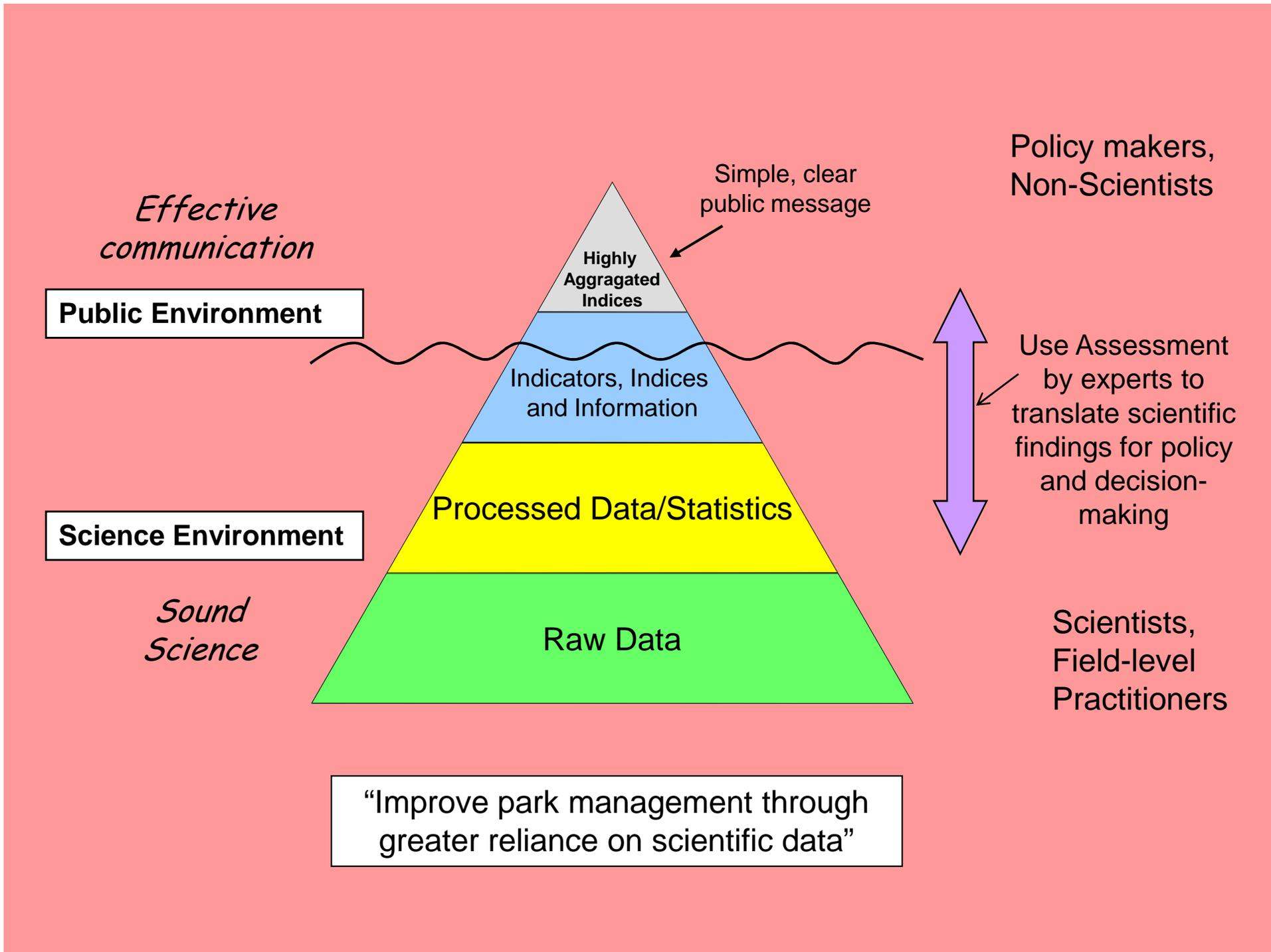
<http://www.nature.nps.gov/water/infoanddata/index.htm>

DATA SOURCES

END USERS



End Users require results in different formats



Reporting the Results of I&M Efforts

Making Data, Information Available for Decision-Makers, Scientists, Educators, and various Constituency Groups

- Annual Administrative Report and Work Plan
- Annual Reports for specific Protocols or Projects
- Inventory Project Reports
- Analysis and Synthesis reports – trends
- Program and Protocol Review reports
- Scientific journal articles and book chapters
- Symposia, workshops and conferences
- National Report - Condition of NR in National Parks
- Websites
- “Science Day” briefings with Park Managers

<http://science.nature.nps.gov/im/index.cfm>



The Inventory and Monitoring Program Site



- Parks and Networks – Map
 - network > vital sign > protocol and data
- Inventories
- Monitoring – Guidance, Plans, and Protocols
- Data Management
- Applications and Databases
- GIS
- Reports
- Standards and Policies
- Contacts

Great Lakes Network

Large Rivers Water Quality Monitoring Protocol

National Park Service
Great Lakes Inventory and Monitoring Network

Version 1.0
January 30, 2007

Prepared by: S. Magdalene, D.R. Engstrom, J. Elias
Version: 1.0

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Suggested citation: Magdalene, S., D.R. Engstrom, and J. Elias. 2007. Large rivers water quality monitoring protocol. Version 1.0. National Park Service, Great Lakes Network, Ashland, Wisconsin.



Northern Colorado Plateau Network

**U.S. Department of the Interior
National Park Service
Inventory and Monitoring Program**

Water Quality Vital Signs Monitoring Protocol for the Northern Colorado Plateau Network

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