A DATABASE FOR TRACKING POPULATIONS OF ENDANGERED, THREATENED, PROPOSED AND CANDIDATE SPECIES IN NATIONAL PARKS

Problems:

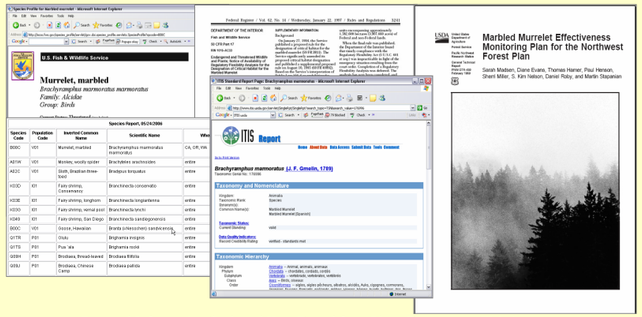
- To annually track the extant and historic occupancy, status and trend, and associated expenditures for 453 species listed under the Endangered Species Act (ESA) on 193 units of National Park Service (NPS).
- To design and implement a data flow for these data that not only facilitates annual review and updating of the information by park biologists and NPS upper management, but also data sharing among parks, NPS regions, other federal agencies, and the public.
- To effectively provide park superintendents and natural science staff with concise information on how to recover federally listed species.

Solutions:

- Initiate regular communication between the Chief of Natural Resources at NPS units, the Regional Endangered Species Coordinators, and the Endangered Species Program Manager at the Washington Office.
- Implement a database system that tracks the status, expenditures, and recovery information for each federally listed or proposed species in a way that NPS personnel can review data reported in previous years.

Methods:

The selected method is an implementation of a combination of Microsoft Excel spreadsheets at the individual NPS land units and a Microsoft Access database at the Regional and Washington offices described in the Data Flow Overview below.

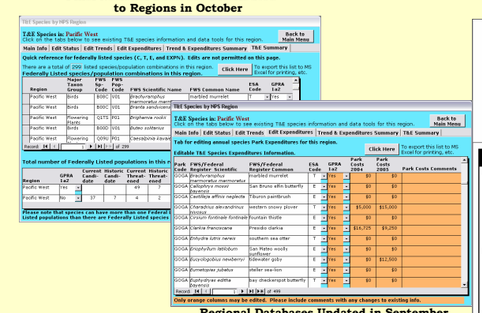


External Information Gathered Year-Round from Lists, Documents, Websites, etc.

Annual Expenditure Report Sent out to USFWS in October

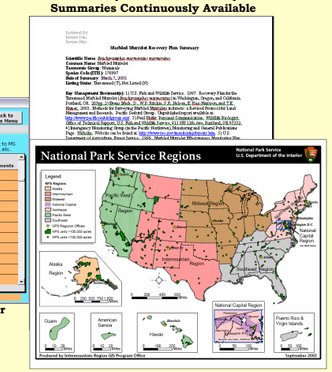
	A	B	C	D	E
1	Spcode	VipCode	General_Expenditure	Land_Expenditure_Value	Comments
2	A000	V01	$5,400.00	0	NERI
3	A000	V01	$0.00	0	ELRI
4	A000	V01	$11,000.00	0	GOAR
5	A000	V01	$760.00	0	NATR
6	A000	V01	$10,000.00	0	MACA
7	A000	V01	$651.00	0	INDU
8	A000	V01	$7,000.00	0	GRSM
9	A000	V01	$2,000.00	0	CUVA
10	A000	V01	$1,500.00	0	CUGA
11	A000	V01	$1,400.00	0	CHOH
12	A000	V01	$3,000.00	0	BUFF
13	A000	V01	$0.00	0	SHIL
14	A000	V01	$0.00	0	YUHO
15	A001	V01	$0.00	0	ROMO
16	A001	V01	$0.00	0	LARO
17	A001	V01	$0.00	0	MEVE
18	A001	V01	$0.00	0	MORA
19	A001	V01	$0.00	0	NABR
20	A001	V01	$7,500.00	0	NOCA
21	A001	V01	$0.00	0	ORCA

Final National Database Distributed to Regions in October



Regional Databases Updated in September with Preliminary Information

Preliminary and Final Recovery Summaries Continuously Available



External Data Sources (e.g., USFWS, NMFS, USDA)

NPS ESA Coordinators

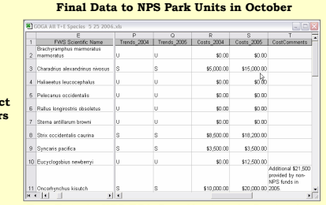
NPS Endangered Species Program and the Colorado Natural Heritage Program

Final Products Only

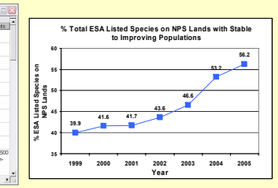
Continuously Available

ESA Coordinators Are the Primary Contact and Data Distributors for NPS Units

Final Data to NPS Park Units in October

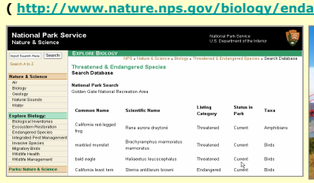


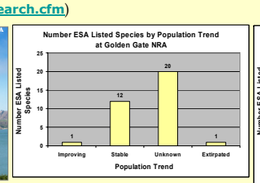
Raw Data to NPS ESA Coordinators in September

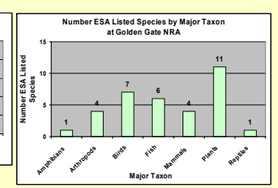


Public Website and Online Database

(http://www.nature.nps.gov/biology/endangeredspecies/database/search.cfm)

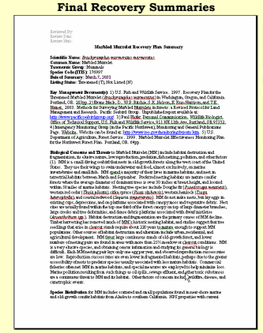




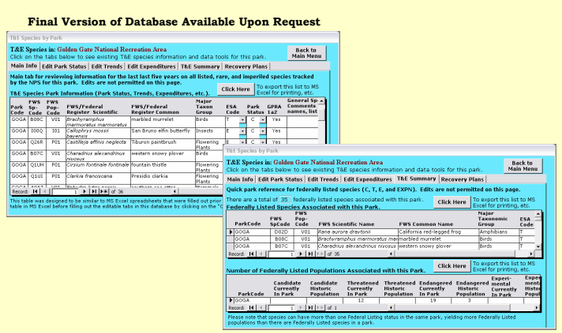


Individual NPS Park Units

Final Recovery Summaries



Final Version of Database Available Upon Request



Results

- Empowers the NPS Endangered Species Program to develop nation-wide recovery strategies and to prioritize recovery efforts.
- Ease of Use
  - Works across a wide-range of end-user expertise levels and internet access speeds and reliability.
  - Requires minimal investment through the use of standardized off-the-shelf software, Microsoft Office Suite.
  - Accommodates data transfer across multiple data delivery routes (FTP, email, CD/floppy disk via regular mail).
- Data Quality
  - Facilitates accurate reporting of information on extant and historic occupancy, expenditures, and biological stability for listed and proposed species.
  - Promotes data quality assessment through the capture of the confidence with which the status of individual species is reported.
  - Enables Regional ES Coordinators to perform data accuracy checks for all NPS unit within each region.
  - Updates to the federally listed ESA species list are made as appropriate.
  - Supports reconciliation of the species nomenclature used by the U.S. Fish and Wildlife Service (USFWS) and the National Marine Fisheries Service (NMFS) with the standardized nomenclature employed by the NPS.
- Recovery Planning and Implementation
  - Lists all recovery plan tasks assigned to NPS.
  - Provides simple tools to assist NPS managers with recovering listed species.
  - Facilitates access to electronic Species Recovery Plan documents library (available via FTP, email, CD/floppy disk via regular mail).
- Compliance and Reporting
  - Expedites data analysis by providing NPS leadership with the ability to quickly produce data summaries in the Access version through pre-determined queries such as:
    - Total number of ESA listed species on NPS managed lands by major taxon (amphibians, flowering plants, insects, etc.) and ESA listing status.
    - NPS-wide expenditures by species or ESA listing status.
    - NPS regional summary of the biological trends within that region by species or ESA listing status.
  - Facilitates the annual reporting of ESA goal and expenditure information from the NPS to DOI, USFWS, and the public.
- Public Education
  - Allows public access to these data through an online database searchable by ESA Listed Species or NPS Unit Name.

Conclusions

The NPS ESA database has been in existence since 2000, and continues to evolve to meet the reporting needs of the Park Service. Using existing technology to be accessible to end-users with a wide-range of computer equipment and expertise has been the key to its usefulness and success. The flexible design of this system could support a future development of a web-based system with password access, which would enable remote access from all parks.

Acknowledgements and Contacts

Johnson, Fagan (1), Peter Dratch (2), Loyal Mehrhoff (3). 1) Colorado Natural Heritage Program, 254 General Services Building, Colorado State University, Fort Collins, CO 80526-8002, faganj@lamar.colostate.edu. 2) National Park Service, Biological Resource Management Division, 1201 Oakridge Drive, Suite 200, Fort Collins, CO 80525, peter_dratch@nps.gov. 3) National Park Service. Biological Resource Management Division, 1201 Oakridge Drive, Suite 200, Fort Collins, CO 80525, loyal_mehrhoff@nps.gov.

Other ESA Listed Species Associated with Nearby Golden Gate National Recreation Area