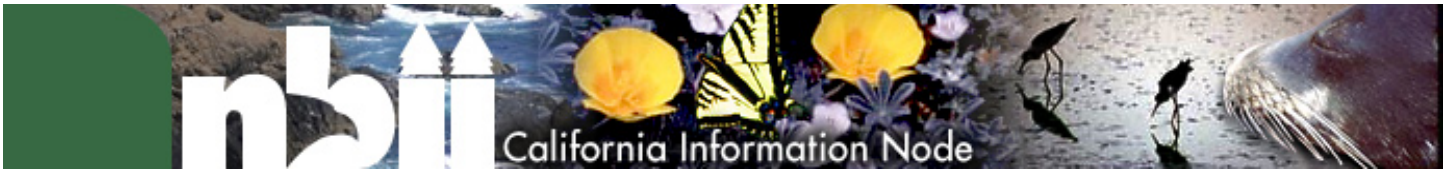
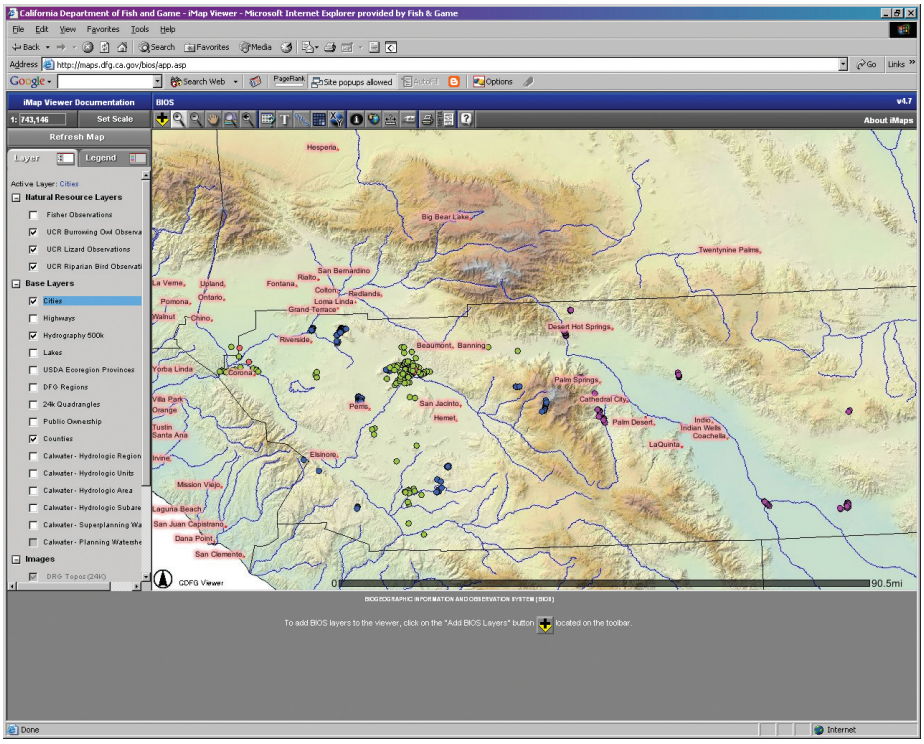


NBII Helps Southern California Data Integration Project Advance

State and federal wildlife agencies need orderly data management and efficient serving of that data and information to meet their mandates.



BIOS ArcIMS data viewer

State Biological Data Needs

California offers one of the nation's premier regions for plant and animal diversity. With more than 7,400 native taxa, it ranks first among the states in total species richness and endemic species. The state's extraordinary biodiversity provides ecological, economic, and aesthetic benefits to both residents and visitors. However, a rapidly growing human population of more than 34 million inhabitants places ever greater pressures on this rich biodiversity. California is second in the nation with over 430 of its nearly 6,000 native species listed under the state and/or U.S. Endangered Species Acts. Efforts to sustain that biodiversity are occurring at several levels.

Among the most important requirements for dealing with these pressures are relevant data and information that can be used by those in the public and private sectors who need to make informed conservation decisions regarding California's biological resources. As the state's trustee agency for managing diverse fish, wildlife, and plant resources as well as the habitats upon which they depend, the California Department of Fish and Game (DFG) <www.dfg.ca.gov> plays a key role in the development of the biological data and tools needed for effective conservation planning.

At the federal level, the National Biological Information Infrastructure (NBII) <www.nbii.gov> is a broad, collaborative program to provide increased access to data and information on the nation's biological resources. Coordinated by the U.S. Geological Survey (USGS), the NBII links high-quality biological databases, information products, and analytical tools maintained by NBII partners and other contributors in government agencies, academic institutions, non-government organizations, and private industry. The NBII has partnered with DFG, and others, to address the biological observation data management challenge in California. NBII efforts in California are spearheaded by the NBII California Information Node (CAIN) <http://cain.nbii.org>. The Information Center for the Environment at the University of California, Davis hosts the main CAIN Web site.

Primary Data Management Issues

Biological and physical data have been collected through the years by federal and state biologists to record animal observations, habitat

conditions, and harvest results. The collectors have been field workers and chair-bound compilers, employees and contractors, individuals making incidental observations, and programs doing focused, long-term monitoring. Some of these observations exist as

Much data that already exist need to be digitized.

hand-written notes on paper while others have been captured in the field digitally, with automated GIS (Geographic Information System) coordinates included.

Unfortunately, most of these data are stored with the data producers in a myriad of formats and locations that are not readily available to end users. Further, while some agencies have systems and staff in place to manage portions of the data, others do not. As a result, much high-quality biological data are not collected and organized so they are available to the broad user community in an efficient, timely manner. Worse still, in many cases, data are lost as organizational missions change, employees move on, or both.

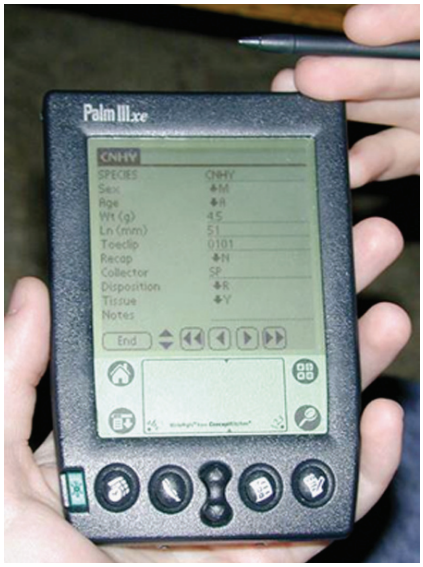
The Solution

The need for orderly data management and efficient serving of that data and information to wildlife agencies is clear. To respond to this need internally, DFG created a Web-based GIS warehouse, called BIOS (Biogeographic Information and Observation System), to manage its own data. BIOS is a strategy for identifying existing biological observation data and spatial information, managing them, and facilitating the sharing of that data and information. BIOS utilized Web, relational database management, and Internet Map Server technologies to create a statewide, integrated information management tool for field observation data.

State and Federal Interagency Collaboration

The NBII, USGS Western Ecological Research Center, and U.S. Fish and Wildlife Service are supporting the use of BIOS as the core for a broad interagency data sharing initiative called the Southern California Data Integration Project. Under this initiative the partner agencies are sharing staff and resources to pool biological data for the areas of Southern California undergoing conservation planning efforts.

The movement of data and information in the Southern California Data Integration Project begins when data enter the system. They are collected either electronically or by "mining" paper archives for valuable observations of species. The data are then processed and stored in BIOS. Next, data are made available for viewing and download either through Web-based map viewers. Non-sensitive data and summarized information will be available to the public through CAIN's Web site. Already the project has demonstrated that it can increase efficiency, improve knowledge, and enhance conservation decision-making.



PDA (personal digital assistant) used to collect data in the field

Partners

Partners in this pilot project include DFG, the NBII, the USGS Western Ecological Research Center, and the U.S. Fish and Wildlife Service.

For More Information

To learn more about the Southern California Data Integration Project and BIOS, including partnership opportunities, contact:

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