

CHAPTER 1

PURPOSE AND VALUE

Mission Statement: *The mission of Hawaii's Statewide Aquatic Wildlife Conservation Strategy is to guide conservation efforts across the State to ensure protection of Hawaii's wide range of aquatic wildlife and the diverse habitats that support them.*

PURPOSE OF HAWAII'S STATEWIDE AQUATIC WILDLIFE CONSERVATION STRATEGY

The purpose of developing Hawaii's Statewide Aquatic Wildlife Conservation Strategy (SAWCS) is to provide the opportunity for aquatic resource managers to develop a comprehensive planning process to help manage Hawaii's unique aquatic wildlife. Hawaii's SAWCS is truly comprehensive in scope recognizing the interconnectedness of Hawaii's diverse aquatic species and creating an integrated, strategic blueprint for the protection and recovery of Hawaii's aquatic biodiversity. Although the magnitude and scope of the work needed to protect Hawaii's aquatic species is challenging, this Strategy will improve the biological, cultural, and economic well-being of the islands and their people.

Legislative Mandate and Guidance

Historically, wildlife funding at the national level has been targeted towards species that were hunted or fished for sport and towards species federally listed as threatened or endangered. Declining populations of non-game, non-endangered species throughout the nation and the lack of stable funding to address the needs of these species led to the creation of the Wildlife Conservation and Restoration Program (WCRP) for fiscal year 2001 and the State Wildlife Grants (SWG) program (2002 to present) by the United States Congress. These programs provide funds to state agencies to begin the work needed to protect and secure viable populations of the full range of wildlife and their habitats in each state. The Hawai'i Department of Land and Natural Resources (DLNR) holds the constitutional and statutory authority to protect wildlife resources and administers the use of these funds.

As a condition for participation in these Federal aid programs, Congress required states to develop a Comprehensive Wildlife Conservation Strategy (CWCS), which includes both aquatic and terrestrial species and habitats, to remain eligible for SWG funding. Hawaii's SAWCS is based on this strategy, but is focused only on aquatic resources conservation and management. Each CWCS, and the SAWCS, must include the following eight elements:

- 1) Information on the distribution and abundance of species of wildlife identified as "species of greatest conservation need," including low and declining populations, as the State fish and wildlife agency deems appropriate, that are indicative of the diversity and health of the State's wildlife;

- 2) Descriptions of the locations and relative condition of key habitats and community types essential to the conservation of species identified in (1);
- 3) Descriptions of problems which may adversely affect species identified in (1) or their habitats, and priority research and survey efforts needed to identify factors which may assist in restoration and improved conservation of these species and habitats;
- 4) Descriptions of conservation actions proposed to conserve the identified species and habitats and priorities for implementing such actions;
- 5) Proposed plans for monitoring species identified in (1) and their habitats, for monitoring the effectiveness of the conservation actions proposed in (4), and for adapting these conservation actions to respond appropriately to new information or changing conditions;
- 6) Descriptions of procedures to review the plan at an interval not to exceed ten years;
- 7) Plans for coordinating the development, implementation, review, and revision of the plan with Federal, State, and local agencies and Indian tribes that manage significant land and water areas within the State or administer programs that significantly affect the conservation of identified species and habitats;
- 8) Provisions to ensure public participation in the development, revision, and implementation of projects and programs.

The Hawai'i DLNR Division of Aquatic Resources (DAR) is leading the effort to collect the best available information from the existing plans and programs and to coordinate with other local, State, and Federal agencies, non-governmental organizations, private landowners, and interested citizens to develop and implement the best approaches to ensure the long-term conservation of Hawaii's aquatic wildlife through Hawaii's SAWCS.

VALUE OF THE SAWCS

The value of Hawaii's SAWCS toward achieving its mission lies in its ability to integrate the needs of the full range of native aquatic species and habitats into a coordinated effort that enhances the effectiveness of broad cooperation among agencies, organizations, and the public toward the conservation of native species and habitats. The benefit of having one document covering the needs of a diverse range of species groups makes Hawaii's SAWCS a historic endeavor. Additionally, by working with and soliciting information from a broad range of governmental agencies, non-governmental organizations, and citizens, Hawaii's SAWCS has helped to create consensus, excitement, support, and momentum to protect our native species.

By identifying important species and habitats, key threats, and objectives and strategies for their conservation, and by creating a framework to measure the effectiveness of these strategies, Hawaii's SAWCS lays the foundation for conservation of native aquatic wildlife and their habitats. By taking a proactive approach, Hawaii's SAWCS takes a fiscally responsible stand. The SAWCS focuses on actions to prevent species from reaching threatened or endangered status, providing a cost-effective alternative to recovering species after they have been listed as threatened or endangered. Additionally, by emphasizing measures that benefit multiple species groups and habitats in which they reside, the SAWCS is a change from single species management. The true challenge, however, will come with the implementation of this SAWCS.

Hawaii's Unique Aquatic Wildlife Resources

A SAWCS is especially important to Hawai'i, the United States, and even the world, because of the unique biology, cultural importance, and economic value of aquatic Hawaiian species. The Hawaiian Islands are the most isolated archipelago in the world, situated in the middle of the Pacific Ocean more than 3,200 kilometers (2,000 miles) from the nearest continent. Because of this extreme isolation, relatively few life forms survived the rigors of the ocean crossing and reached the islands. Fewer still were able to successfully establish populations in the archipelago over its 70 million year history. Those that did, however, found a diversity of climatic and geological features that provided an enormous range of habitat types. With limited gene flow from their distant, original populations, colonists rapidly adapted to their novel environments. The diversity of unique species that have evolved in the islands is nothing less than astounding, with plants and animals that are so distinctive that the archipelago has some of the world's highest endemism for marine species: about 20 percent.

For more than 70 million years, the evolution of new Hawaiian species vastly exceeded losses to extinction. Yet after the arrival of humans to the islands, within what is a blink of an eye in geological time, numerous species began precipitous declines to extinction, especially terrestrial species. Aquatic species faced different pressures, primarily over harvesting and habitat alteration in watersheds and along coastlines. Today, the Hawaiian Islands hold 13 aquatic animals listed by the U.S. Fish and Wildlife Service (USFWS) or National Marine Fisheries Service (NMFS) as endangered or threatened and six species are candidates for listing.

In present day Hawai'i, the link between Native Hawaiian culture and native species has not been lost and continues to be practiced in belief systems as well as traditional practices such as gathering of native plants and animals for hula, traditional medicines, carving, weaving, tool making, jewelry, and ceremonies. The special role and relationship Native Hawaiians have with the native species and ecosystems in the islands is perhaps most reflected in their increasing role in natural resource management in places such as the island of Kaho'olawe and Mo'omomi, Moloka'i where traditional management practices such as *kapu* (taboo) and *ahupua'a* (watershed)-scale thinking predominate.

Native wildlife is also important to all of Hawaii's residents. Based on a 2004 "Wildlife Values in the West" survey, a large majority of Hawaii's residents (71.4%) strongly agree that it is important to take steps to prevent the extinction of endangered species (Teel & Dayer, 2005). Economically, wildlife viewing opportunities are worth hundreds of millions of dollars to the State's \$10 billion a year tourism industry (U.S. Department of Interior, 2003). Hawaii's aquatic wildlife and their habitats also provide hundreds of millions of dollars in important goods and services to residents. A recent University of Hawai'i study of the economic valuation of water quality, in-stream uses, species habitat, hunting, commercial harvest, ecotourism, and climate control estimated the value of services to be between \$7.4 to \$14 billion in the Ko'olau Mountains of O'ahu alone (Kaiser, 1999). Other examples of ecological services provided by native habitats include coral reefs that protect beaches, homes, and businesses from erosion, storms, and tsunami waves, and wetland habitats that filter the water supply. Finally, actions preventing the introduction of invasive species benefit people as well as native wildlife: introduced ungulates (hooved animals) denude native forest, causing soil erosion and sedimentation of streams and nearshore reefs and impacting fishing opportunities, and introduced

plants such as *Miconia calvescens* provide much less erosion control than native trees, threatening billions of gallons of water provided by our watersheds.

REFERENCES

- Kaiser B, Krause N, Roumasset J. 1999. Environmental valuation and the Hawaiian economy. Honolulu: University of Hawai'i Economic Research Organization.
- Teel TL, Dayer AA. 2005. Preliminary state-specific results from the research project entitled "Wildlife values in the west 2004." Fort Collins: Human Dimensions in Natural Resources Unit, Colorado State University.
- U.S. Department of the Interior, Fish and Wildlife Service and U.S. Department of Commerce, U.S. Census Bureau. 2003. 2001 National survey of fishing, hunting, and wildlife-associated recreation. available at: <http://www.census.gov/prod/2003pubs/01fhw/fhw01-hi.pdf> (accessed May 24, 2005).