

## Appendix B— Policy Foundations for Ecosystem Protection and Restoration

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### The North American Waterfowl Management Plan: Waterfowl Goals

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The North American Waterfowl Management Plan (The Plan) is an international strategy to protect, restore and enhance wetlands in Canada, the U.S., and Mexico for waterfowl through the use of partnerships between public and private organizations called joint ventures. The NAWMP identified 34 major habitats used by waterfowl, one of which is the San Francisco Bay Area.

Specific waterfowl population goals have been developed for North American waterfowl. The Plan's primary goal is to restore and maintain waterfowl diversity and abundance to levels occurring in the 1970s. Population declines observed in the 1980s prompted the development of the Plan. The Plan identifies factors in declines in duck populations. These include habitat loss, land use changes, disease, competition with other ducks, predation, and hunting.

The Plan's first goal is 62 million breeding ducks to support a fall flight of at least 100 million ducks and six million wintering geese and swans under average environmental conditions. Secondly, the Plan's objective is to reach or exceed mid-continent breeding duck population goals for the 10 most common duck species. Since 1986, eight of 10 of these species have seen an increase in their populations, and some have exceeded those goals. Lesser and greater scaup and gadwall are duck species that have not seen an increase since 1986. The Plan also calls for a black duck midwinter population index of 385,000. Black duck population has decreased especially in the Mississippi Flyways. Goals for goose populations aim to bring their populations to sustainable levels. Efforts to reduce Snow goose and Ross' goose populations are being considered.

The Plan was intended to be updated every five years to reassess its targets and strategies. The

recently released 1998 Update to the Plan has three visions for improving the status of North America's waterfowl and the wetlands that support them. These visions consist of:

1. **Enhancing the biological foundation:** This means employing sound biology to plan the enhancement of the landscape's ability to support waterfowl and other wetland species.
2. **Using a landscape approach to sustain species:** Participate in developing conservation, economic, management, and social policies that promote the ecological health of landscapes that sustain and benefit waterfowl and other wetland species.
3. **Collaboration with other partnerships:** Forge a broader alliance with other conservation efforts, such as shorebird and migratory bird initiatives.

### The San Francisco Bay Concept Plan for Waterfowl Habitat Protection

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The Plan called for the development of a concept plan for each of 34 Waterfowl Habitat Areas of Major Concern. The 1989 Concept Plan for Waterfowl Habitat Protection was completed under the guidance of the NAWMP.

The Concept Plan gives primary importance to the restoration and enhancement of waterfowl populations, but also recognizes the significance of non-game species, at least partially in recognition of the loss of wetlands in the region. The Concept Plan notes that, between 1984 and 1989, about 220,000 ducks used San Francisco Bay wetlands, almost eight percent of the total found in California. Most of these

birds use the open water of the Bay or the deeper salt ponds. For example, about 135,000 diving and sea ducks used the Bay, about 67 percent of the total waterfowl seen that year. These birds represent almost 40 percent of the State total. Only about 42,000 dabbling ducks, waterfowl that use tidal and freshwater marshes, were seen that year; these represent somewhat less than three percent of the State total, and may indicate the extent of losses to these habitats in the region.

The Plan also lists and briefly describes the 16 federally listed and 29 candidate species that require wetland habitats. Since the publication of that report, several other species have been listed, and State and regional work has added even more species to those considered of special status. The Concept Plan also notes the importance of the region to shorebirds, wading birds, fish, and shellfish, and describes wetlands as important for flood control, shoreline anchoring and dissipation of erosive forces, maintenance of water quality, and recreational uses.

Based on these factors, the Concept Plan provides the following objectives: (1) protect an existing area of 366,000 acres of wetlands and deep water habitats; (2) increase the acreage of habitat available for waterfowl, endangered species, shorebirds, and other wetland resources, especially seasonal wetlands and tidal salt marshes; and (3) enhance the value and diversity of existing wetlands, at least partially through improvements to habitat and water quality.

## **The San Francisco Bay Area Wetlands Ecosystem Goals Project**

The San Francisco Bay Area Wetlands Ecosystem Goals Project (Goals Project) has spent over three

years developing goals for the numerous wetland habitat types found within the baylands or the lands within the historical and modern boundaries of the tides. Goals Project participants included over 100 scientists from local, state, and federal agencies, nonprofit organizations, private consulting firms, and universities. The Project was sponsored by nine state and federal agencies including the National Marine Fisheries Service, San Francisco Bay Conservation and Development Commission, San Francisco Bay Regional Water Quality Control Board, Coastal Conservancy, Department of Fish and Game, Department of Water Resources, Resources Agency, U.S. Environmental Protection Agency, and the U.S. Fish and Wildlife Service. The San Francisco Bay Joint Venture and many of its partners participated in the Goals Project.

The goals produced by the Goals Project are a vision of the types, amounts, and distribution of wetlands and related habitats needed to sustain diverse and healthy communities of fish and wildlife in the San Francisco Bay Area. The Joint Venture has used these goals as the biological foundation for the development of this Implementation Strategy. The Implementation Strategy has taken the goals, expanded them to incorporate a larger geographic region extending beyond the baylands, and developed specific actions that can be taken to meet the expanded goals of the Joint Venture.

*Habitat Goals* should be considered an appendix to the Joint Venture Implementation Strategy because it contains detailed information about species and habitat needs, and makes specific recommendations for restoration of wetlands sites around the Bay. It also addresses technical considerations for habitat restoration, monitoring, and research and implementation issues. The Joint Venture will look to *Habitat Goals* to guide the restoration activities of its partners.