

North American Bird Conservation Initiative and Other International Partnerships

Within Canada, Mexico, and the U.S., implementation of the Plan will be accomplished to the extent possible and appropriate within the structure and philosophy of NABCI. The Plan has adopted NABCI BCRs and related PBCRs as its basic planning units. Plan representatives will participate in NABCI activities as invited, and serve as members of committees and subcommittees, as needed.

Continental implementation requires cooperation and coordination beyond, as well as within, the artificial boundaries of the Plan. There are many international partnerships that benefit waterbird conservation and with which the Plan should link, especially associated with conservation in the Asian and Central Pacific, Bering Sea, and circumpolar Arctic areas. Alliances with national and international conservation entities in South America should also be fostered.

National Waterbird Conservation

Planning and implementing waterbird conservation on the national level is crucial to the success of waterbird conservation. However, the exact strategy taken to work towards national conservation will vary among countries, depending on the governmental structure and conservation entities within the country and the availability of resources. Flexibility in how countries both plan and implement waterbird conservation is a desirable part of the multinational Waterbird Initiative. National planning, for example, may be the responsibility of biological staff of the national wildlife or natural resource agency, a non-governmental organization (NGO), or a combination of national stakeholders brought together for the purpose.

National plans and strategies can be important and valuable options in national scale conservation. Frameworks for national waterbird conservation are presently developed for Canada, Mexico, and the U.S. as discussed



Arctic Tern
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below. Other nations will be taking other approaches to planning and implementing waterbird conservation that they find appropriate. It is hoped that national strategies will, to the extent possible, take into consideration and be mutually consistent with the continental Plan.

There are many potential elements of a national waterbird conservation strategy:

- ❖ A national waterbird conservation plan or strategy, including an assessment of species conservation status using the continental-scale status assessment as a starting point
- ❖ A national waterbird coordinator, a professional biologist preferably in a national agency
- ❖ A national inventory of waterbird colonies and breeding sites, important roost sites, and feeding areas linked to other national inventories
- ❖ A national monitoring scheme for waterbirds and their habitats linked to other national schemes via partnerships
- ❖ Summary of available information on waterbirds and their habitats
- ❖ Identification and management of key sites for waterbirds, including IBAs in partnership with BirdLife International
- ❖ Identification and management of important habitats
- ❖ Ongoing inventory of information gaps
- ❖ A system for technical assistance to national agency staff and other stakeholders in waterbird conservation
- ❖ Nationally coordinated communication strategy, linking education and public awareness programs featuring waterbird conservation
- ❖ Communication network among waterbird stakeholders in the country.

Canada

Within Canada, waterbird conservation will be organized and facilitated through a National Waterbird Working Group in conjunction with NABCI Canada Council. Canada is preparing a national plan for the conservation of all waterbirds entitled *Wings Over Water*¹, through a partnership of national, provincial and territorial wildlife agencies, environmental NGOs, and other specialists. Developed concurrently with the continental Plan, the two plans are

Tahiti Petrel ➤ Fiji Petrel ➤ Black-winged Petrel ➤ White-necked Petrel ➤ Mottled Petrel ➤ Bonin Petrel ➤



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Dredged Sand Island

consistent in goals and approach. Additional planning will occur at regional levels with coordinated implementation at appropriate levels. As work evolves there should be increasing opportunities for broader continental planning and implementation.

An important element of waterbird conservation in Canada is the NABCI goal to integrate bird conservation across species groups and national boundaries. Cross-border integration for areas that encompass parts of the U.S. and Canada will occur first in joint planning regions where there are species and issues of common concern. Most implementation will occur at regional and local levels with various partners and will include evaluation to ensure appropriate results and national consistency.

United States

In the U.S., bird conservation is a partnership among local, state, and federal agencies and NGOs. A distinct U.S. waterbird conservation plan will not be developed, since finer-scale regional and state strategies will be used to deliver on-the-ground conservation.

State governments are a principal force in waterbird conservation; coordination among state governments occurs through the International Association of Fish and Wildlife Agencies (IAFWA). Representatives of the Waterbird initiative will participate in the committee system organized by IAFWA, particularly the Shorebird and Waterbird Working Group, the Migratory Shore

and Upland Game Bird Working Group, and Bird Conservation Committee. The Shorebird and Waterbird Working Group has as its particular charge the support of the Waterbird initiative.

Desirable state roles and actions include:

- ❖ Creating a state waterbird conservation strategy, using the continental Plan as a starting point, which includes population and habitat goals
- ❖ Maintaining an inventory of waterbird nesting sites and important nonbreeding habitats
- ❖ Assisting in identifying and managing important areas for waterbirds
- ❖ Monitoring waterbirds and their habitats in cooperation with other parties through the Waterbird Monitoring Partnership at USGS Patuxent
- ❖ Continuing colony site protection and management programs
- ❖ Providing technical assistance to other stakeholders in waterbird conservation
- ❖ Supporting education and awareness programs focusing on waterbird conservation
- ❖ Participating in the continent-wide communication network, and defining research and monitoring and other information needs

As stated above, each state is urged to create a waterbird conservation strategy and to appoint a member of their technical staff to have primary responsibility for the waterbird strategy within the state. This staff person would be responsible within the state for overseeing waterbird inventory and monitoring, protecting colony/breeding and feeding areas, identifying priority research needs, identifying Important Bird Areas, and implementing other conservation measures for waterbirds within the state.

States should encourage and support local conservation efforts on behalf of waterbirds. The state coordinators are encouraged to participate in JVs within their boundaries and facilitate the sharing of data with national data management networks. Each state is encouraged to organize and/or conduct a monitoring program for waterbird populations and, as reasonable, habitat and demographic parameters within the state. The monitoring program should follow the protocols of this plan and participate in the continental data management program.

Each state is encouraged to carry out an environmental education program that reaches into the school system, teaching the conservation of waterbirds in ways appropriate for the region. Each state is encouraged to set up a mechanism to facilitate communication and support from individuals and organizations monitoring, managing, and protecting waterbird sites.

Management of migratory birds is also the responsibility of numerous federal agencies, especially the U.S. Fish and Wildlife Service. Migratory birds are also a focus of many NGOs, whose activities include advocacy, education, research, fund-raising, and habitat acquisition. The facilitation of the partnership of states, federal entities, and NGOs is also a goal of the NABCI U.S. Committee.

Mexico

In Mexico, waterbird conservation will be focused on planning and conservation action at AICAs. Waterbird planning and implementation in Mexico will occur under the auspices of the NABCI Mexico Council, with the important involvement of international and national NGOs. It is hoped that in planning and implementation, Mexico will take into consideration and be mutually consistent with the continental Plan, where possible.

Countries of the Caribbean and Central America

In the Caribbean and Central America, planning efforts should identify the resources necessary in each nation to make waterbird conservation a priority. The continental waterbird conservation community should share responsibility in assisting to secure these resources. It is recommended that countries develop national waterbird strategies and plans, incorporating all species of birds using aquatic habitats. It is hoped that in each country at least a part-time position be designated to lead the national waterbird conservation program.



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Laughing Gull

Regional Waterbird Conservation

Conservation action in many cases is most effectively planned and carried out on a regional basis with special consideration to both political realities and ecological zones. The strategies and goals set forth on the continental scale by the Plan must be supplemented by more precise goals set at subcontinental scales. To carry out regional planning, sixteen waterbird conservation planning regions have been established that together cover the Plan area. The Plan also recognizes the critical role played by Habitat Joint Ventures (JVs), established regional entities formed under the North American Waterfowl Management Plan in Canada, the U.S. and parts of Mexico. JVs are positioned to perform on-the-ground habitat protection and restoration, and they are expanding beyond the traditional focus on waterfowl. The relationships among regional planning and implementation units are shown in Table 3. This information will be modified as regional working groups refine or adjust their boundaries and compile regional data.

Habitat Joint Ventures

JVs consist of voluntary organizational and agency partners working together to conserve bird habitat, especially wetlands of importance to waterfowl. JVs set habitat goals and mobilize partners to achieve these goals. Since wetlands are important to other aquatic birds, integration of the habitat needs of waterbirds into JV planning and implementation is important for waterbird conservation. Every effort should be made to identify areas of overlap between habitat needs for various bird groups.

The Plan suggests that each JV include strategies for waterbird conservation and undertake explicit planning, habitat and population goal setting, habitat acquisition and protection, and management for waterbirds. Some JVs have already begun this process. Specifically, they are urged to protect and manage

Hawaiian Petrel ➤ *Kermadec Petrel* ➤ *Juan Fernandez Petrel* ➤ *Murphy's Petrel* ➤ *Bermuda Petrel* ➤

TABLE 3. The Relationship of Waterbird Planning Regions to Other Planning and Implementation Units

Waterbird Conservation Planning Region	Overlapping Provinces or States or Countries ^a	Composite NABCI Bird Conservation Regions ^b	Composite Pelagic Bird Conservation Regions ^b	Overlapping Habitat Joint Ventures and Other BCR-Based Partnerships
Alaska/Bering/Yukon	Alaska, British Columbia, Yukon Territory, Northwest Territories	1,2,3 (Alaska and Yukon only) 4	68,69, 70	None
Pacific Coast	Yukon,Alaska, British Columbia, Washington, Oregon,California, Baja California	5,32	71	Pacific Coast, Central Valley Habitat, San Francisco Bay
Mexico– Southwest U.S.	California, Nevada,Arizona, New Mexico, Texas, Aguascalientes, Baja California, Baja California Sur, Campeche, Chiapas, Chihuahua, Coahuila, Colima,Distrito Federal, Durango, Guerrero, Guanajuato, Hidalgo, Jalisco, México, Michoacán, Morelos, Nayarit, Nuevo León, Oaxaca, Puebla,Querétaro, Quintana Roo, Sinaloa, San Luis Potosí, Sonora, Tabasco, Tamaulipas, Tlaxcala, Veracruz, Yucatán,Zacatecas	33,34, 35,38, 39, 40, 41,42, 43,44, 45, 46, 47,48, 49,50, 51, 52, 53,54, 55,56, 57, 58, 59,60, 61,62, 63, 64,65, 66	71,72, 73,74	Sonoran Desert
Intermountain West	Idaho, Utah,Nevada, Colorado, Arizona, New Mexico, Wyoming, British Columbia,Alberta	9,10, 15, 16	None	Intermountain British Columbia,Intermountain West, Sonoran Desert
Boreal	Northwest Territories, Alberta, Saskatchewan, Manitoba, Ontario, Quebec, Newfoundland, Nunavut, St. Pierre et Miquelon (France)	6,7, 8	75	None
Arctic Canada	Northwest Territories, Nunavut, Quebec, Newfoundland	3 (except Alaska and Yukon)	76,84, 85	None
Northern Prairie and Parkland	Alberta, Saskatchewan,Manitoba, Montana,North Dakota, South Dakota, Minnesota,Iowa	11	None	Prairie Habitat, Prairie Pothole
Central Prairies	Montana, Wyoming, Colorado, New Mexico, Texas, North Dakota, South Dakota, Nebraska,Kansas, Oklahoma	17,18, 19	None	Playa Lakes, NE Rainwater Basin,Northern Great Plains
Upper Mississippi Valley/Great Lakes	Manitoba, Ontario, Quebec, Minnesota, Illinois, Kansas, Wisconsin,Indiana,Oklahoma, Michigan, Iowa,Arkansas, Ohio, Nebraska,Missouri,Alabama, Tennessee, New York, Kentucky, Vermont, Pennsylvania	12,13, 22,23, 24	None	Upper Mississippi Valley and Great Lakes Region, Central Hardwoods, Eastern Habitat, Atlantic Coast
Southeast U.S.	Texas, Oklahoma, Mississippi, Kentucky, Arkansas, Missouri, Tennessee, Louisiana, North Carolina, Virginia, Maryland,Ohio, Pennsylvania, New York, South Carolina,Alabama, Florida, West Virginia,Georgia	20,21, 25,26, 27, 28,29, 31,36, 37	74,77	Atlantic Coast,Lower Mississippi Valley, Gulf Coast
Mid Atlantic/ New England/ Maritimes	Delaware, Rhode Island, Vermont, New Jersey, Maryland,New York, Connecticut, Maine, Massachusetts, New Hampshire, New Brunswick, Nova Scotia,Prince Edward Island, Quebec	14,30	78,79	Eastern Habitat, Atlantic Coast
Pacific Islands	Hawaii,American Samoa,Northern Mariana Islands, Marshall Islands, Federated States of Micronesia,Baker and Howland Islands, Commonwealth of Guam, Jarvis Island, Johnston Atoll, Cocos, Kingman Reef, Midway Atoll, Palmyra Atoll, Wake Island	67	80	None

Black-capped Petrel ➤ *Bulwer's Petrel* ➤ *Jouanin's Petrel* ➤ *Parkinson's Petrel* ➤ *Cory's Shearwater* ➤

Waterbird Conservation Planning Region	Provinces or States or Countries	NABCI Bird Conservation Regions ^a	Pelagic Bird Conservation Regions ^b	Habitat Joint Ventures and Other BCR-Based Partnerships
Caribbean	Bermuda, Bahamas, Jamaica, Cuba, Haiti, Dominican Republic, Anguilla, Antigua & Barbuda, St. Kitts & Nevis, Dominica, St. Lucia, St. Vincent & the Grenadines, Barbados, Granada, Trinidad & Tobago, the Dutch islands of Aruba, Bonaire, Curacao, Saba, St. Eustatius, and St. Maarten, the French islands of Martinique, Guadeloupe, St. Martin, and St. Barthelemy, the British islands of Turks & Caicos, Caymans, British Virgin Islands, and Montserrat, the U.S. islands of Puerto Rico, U.S. Virgin Islands, and Navassa, and the Venezuelan islands in the Caribbean	n/a	81	None
Central America	Guatemala, Belize, Honduras, El Salvador, Nicaragua, Costa Rica, Panama	n/a	72	None
Pacific	n/a	n/a	82	None
Atlantic	n/a	n/a	83	None

^a Subject to change as regional plans are developed.
^b See Figure 2.

nesting and roosting sites located within and near important waterbird feeding habitats. The Plan urges JVs to create mechanisms, such as waterbird advisory committees, to bring together all local partners in aquatic bird conservation for waterbird conservation goal setting within the context of goals for other aquatic species. JVs and other regional partners are urged to engage waterbird specialists with responsibilities for developing and carrying out conservation strategies and for working with regional waterbird working groups to formulate population and habitat goals and implementation projects. Regional waterbird working groups will assist JVs in implementing projects by providing expertise and perspective on the needs of waterbirds in the region.

Waterbird Conservation Planning Regions

The waterbird planning regions are shown in Figure 1. Regional plans will step down the goals of the continental Plan to smaller scales, and it is expected that regional waterbird conservation plans will identify priority species, habitat and species goals, IBAs, and prioritize implementation projects for its composite units. Regional conservation plans will be developed first for

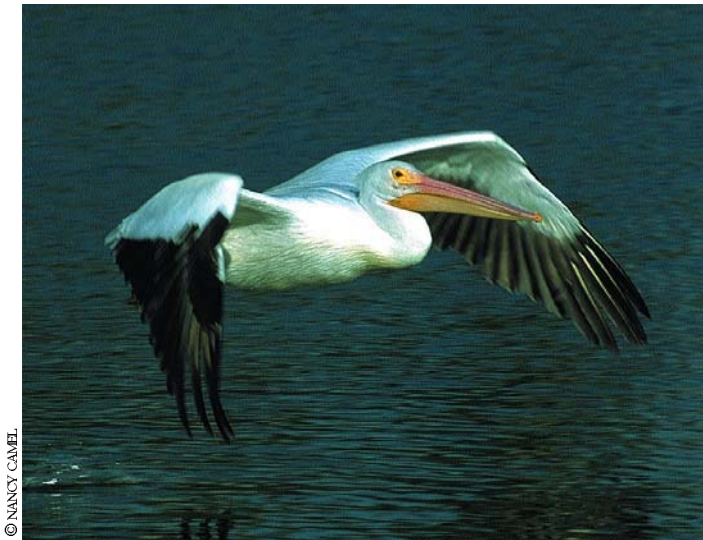
those regions that have the knowledge and expertise base sufficient for planning. Many, but not all of the waterbird planning regions already have voluntary regional working groups dedicated to producing a comprehensive plan. Other regions have groups planning for some subset of species or a particular geographic



Sandhill Cranes

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Streaked Shearwater ➤ *Wedge-tailed Shearwater* ➤ *Buller's Shearwater* ➤ *Flesh-footed Shearwater* ➤



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American White Pelican

area within the region—efforts that will hopefully be merged into a comprehensive plan in the future. Finally, some regions, such as the Boreal, Arctic Canada, Central Atlantic, and Central Pacific, will need further consideration by partners to clarify how planning will proceed.

As discussed previously, the regions include land-based planning units and/or pelagic areas established to enable conservation planning for seabirds. BCRs and PBCRs are visualized as the principal way to plan waterbird conservation within the context of all bird habitat conservation. It should be noted that the Plan does not view planning units such as BCRs and PBCRs as being implementation units, with independent structure or staff. Implementation should draw on many units, including, but not limited to, political entities at every scale, and partnership-based implementation bodies.

The distribution of waterbird species in the planning units is shown in Appendix 3. In order to categorize the conservation status of species occurring in their region, regional working groups will implement a process appropriate to their needs. The continental colonial breeding species status data are available to each working group (Appendix 1). These data, along with a consideration of the importance of a geographic area to the continental population, can be used to determine regional species conservation status. Where possible, approaches should be used that are compati-

ble with multiple bird conservation initiatives. Regional working groups should also consider special populations or subspecies when determining priority species within the region as appropriate. Regional planning efforts should include solitary nesting waterbirds (e.g., marshbirds) from the onset along with colonial-nesting waterbirds.

Regional working groups should also identify key sites for waterbirds in their region. Specifically, it is expected that groups will compile information that would allow an assessment of key sites against IBA criteria at global, continental, and/or national levels of significance, drawing on the criteria identified by IBA Programs in relevant countries. Additionally, in the U.S., National Audubon Society will partner with relevant regional waterbird working groups to identify state-level IBAs. Key sites that do not meet IBA criteria may also be identified within a region, and regional working groups will take these sites into account in planning and conservation action.

Alaska/Bering/Yukon

This region includes large interior portions of Canada's western provinces, all of Alaska to the tip of the 1,100 mile Aleutian Chain, as well as the surrounding pelagic areas. It is characterized by a wide diversity of physical features, including open ocean, seaside cliffs, coastal plains and tundra, mountain ranges, and diverse forest. The region's extensive coastlines and nutrient rich waters host some of the largest seabird colonies in the world, including those of the Black-legged Kittiwake, Common Murre, and Pelagic Cormorant. In summer, the world's populations of breeding Red-legged Kittiwake, Least Auklet, and Whiskered Auklet are found here, and Southern Hemisphere albatrosses and petrels forage offshore. Inland are found tremendously large, undisturbed areas inhabited by a small suite of waterbirds such as loons and cranes. All of the bird species found in this region benefit from the extended opportunities to feed and reproduce during the region's long—sometimes continual—periods of summer daylight. Despite low-density human populations, the region's waterbirds face a number of human-related threats, including introduced predators, fisheries mortality, oil spills and other contamination, global climate change affecting ice and ocean regimes, and development for lumber, mining, and oil exploration.

Pacific Coast

The Pacific Coast region stretches from the Kenai Peninsula in Alaska through British Columbia and California coasts to include the northern portion of Baja California. Its diverse habitats include the coastlines and highly productive offshore marine areas, the largely coniferous coastal rainforests of its northern half, low coastal mountains of mixed chaparral vegetation towards the south, and the wetlands and lowlands of the expansive Central Valley of California. Each of these habitats hosts an array of waterbird species subject to varying threats. The northern coastlines include large proportions of the global breeding populations of a number waterbirds including Ancient Murrelet, Cassin's Auklet, Rhinoceros Auklet, Glaucous-winged Gull, and Leach's Storm-Petrel, while rocky islands off the southern coast support many or most of the world's

breeding Ashy Storm-Petrel, Brandt's Cormorant, Western Gull and Xantus's Murrelet. The region's pelagic waters provide habitat for large numbers of shearwaters, storm-petrels, alcids, and albatrosses. The major threats to these coastal and pelagic species include introduced mammalian predators, bycatch in fisheries operations, contaminants, oiling, climate change, and lack of formal protection for several key breeding colonies and their associated marine foraging areas. The threats to Marbled Murrelets from timber harvest in the coastal rainforests are well known but this activity also impacts the waterbirds utilizing the associated river deltas and pockets of wetlands. Much of the depressional wetland and riparian habitats of the Central Valley, lying between the coastal and Sierra Nevada mountain ranges, have been lost to agriculture and other development, but large populations of waterbirds breed and winter here. The southern marshes and beaches of the region provide critical habitat for endangered populations of Clapper Rail and Least Tern. These habitats are threatened by development, as are all habitats in this rapidly developing region. Because of the tremendous diversity of populations, habitats, and threats, planning in the Pacific Coast region will be multi-faceted, including on-going scientific study, monitoring, management, education and outreach.

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Green Heron

Mexico–Southwest U.S.

The Mexico region includes all of Mexico's lands, ocean waters and islands, as well as dry, often mountainous portions of southern California, Nevada, Arizona, New Mexico and Texas. From its northern edge, the region makes a transition from a temperate to tropical climate, and mountain ranges running almost the length of the region define the interior regions that separate the Pacific and Atlantic coastal plains. The region's complex topography results in a diverse array of aquatic habitats and waterbird species, and often localized bird distributions. The Mexican islands in the Pacific, Gulf of Mexico, and Caribbean (the Campeche Bank) support important seabird and coastal waterbird breeding colonies. Pacific offshore waters host non-breeding pelagic species, notably those ranging from their nesting islands in central and south Pacific, and the Gulf of Mexico provides foraging habitat for both locally nesting seabirds and wintering migrants. On the mainland, shallow bays, mangroves, coastal lagoons, and marshes frequented by wading birds are scattered along the

Christmas Shearwater  *Manx Shearwater*  *Newell's Shearwater*  *Townsend's Shearwater* 

Pacific coast. On the Atlantic slope, the remaining mangrove-fringed lagoon complexes provide nesting areas and migratory bird wintering areas, and the low-lying area from southern Veracruz to the boundary with Belize offers extensive freshwater marshes and lagoons, hosting large colonies of wading waterbirds. The lagoons stretch to the north coast of the Yucatan, while the Yucatan's southern coasts are sparsely occupied by coastal species in winter. Important waterbird habitats in the region's interior include interior river drainages, the Salton Sea, lakes on the Mexican Plateau, and Central Volcanic Belt marshes, all providing refuge in an otherwise arid landscape.

The Mexico region's waterbirds and their habitats face numerous threats directly and indirectly resulting from human activity. In Mexico, conservationists are particularly challenged by a lack of information and resources, yet can draw on an emerging environmental awareness. Moreover, the network of Mexican AICAs provides a strong foundation from which to launch waterbird conservation in concert with conservation action for other aquatic species. As discussed previously, it is envisioned that the NABCI Mexico Council will oversee waterbird conservation planning and implementation in Mexico, working with planners in the U.S. portions of the region.

Intermountain West

The Intermountain West Region, as its name implies, is bounded by the Sierra Nevada and Cascade mountains on the west, and the Rocky Mountains on the east. It includes the extensive Great Basin, Columbia Basin, Colorado Plateau, and the Wyoming Basin. Characterized by diverse basin and range topography, the region provides a variety of habitats for waterbirds including high mountain lakes, rivers and streams, both fresh and brackish basin wetlands, and large alkaline lakes. Due to the arid climate—a result of the rainshadow cast by the mountains to the west—the wetlands of the Inter-

mountain West serve as life-giving, yet transient, oases for aquatic birds. The region's dispersed lakes, marshes and riparian zones host about 40 waterbird species, including many or most of world's Eared Grebes, American White Pelicans, White-faced Ibises, and California Gulls. The competing demands for human uses of water, such as agriculture, development, and recreation pose the greatest threat to waterbird populations. The presence of contaminants (e.g., mercury, DDT and its breakdown products) is also a significant regional threat. Because of the West's feast-or-famine water regime, the Intermountain West regional plan will stress the necessity of conserving a network of high-quality wetland habitats with secure water sources in order to provide options for waterbirds during drought and flood cycles.

Boreal

This immense region arches across the length of Canada. It includes the tundra of the low arctic and the forests of the subarctic, as well as the boreal forest. Dominant features include, from west to east, the Mackenzie River and its tributaries, the softwood forests of the boreal transition zone, the Hudson Plains (the largest extensive area of wetlands in the world), and eastern seacoasts. Glacially carved, low lying wetlands cover a large percentage of the region and widespread permafrost results in lowlands being waterlogged or wet for prolonged periods of time. Several major river deltas occur in the central portion of the region, including the Saskatchewan River delta, Peace-Athabasca River delta, and Slave River delta, all of which are critically important to migrating and breeding

waterbirds. Coastal marshes and extensive tidal flats are present at Hudson Bay and on the Atlantic shorelines. This region provides extensive breeding habitats for large populations of waterbirds. Other breeding marshbirds include four species of grebes, American Bittern, Sora, Yellow Rail, as well as the American White Pelican and a variety of gulls and terns. An abun-



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Virginia Rail

dance of seabirds, including a number of alcid species, utilize the shorelines and open oceans on the Atlantic coast. Most waterbird habitats in the region are in a comparatively pristine state relative to those in more southern regions. However, the cumulative impacts of developing forestry, fisheries, mining, hydroelectric, oil and gas development, transportation infrastructure, and other industrial activities in the north are resulting in degradation of habitats. As well, the impacts of climate change may be a more immediate and larger concern at higher latitudes than elsewhere. Finally, regard-

less of breeding area affiliations, all migrants to the region are exposed to a wide array of environmental hazards during migration and on wintering areas. Planning in the Boreal region will focus first on gaining a better understanding of populations, particularly the least abundant and most poorly understood. Some of the research and monitoring challenges facing planning efforts in the Boreal region are common everywhere, while others are unique to the northern situation.

Arctic Canada

This region includes low-lying, coastal tundra and drier uplands of the Arctic mountains across the entire northern edge of Canada. Because of thick and continuous permafrost, surface water dominates the landscape (20-50 percent of the coastal plain). Freezing and thawing form a patterned mosaic of polygonal ridges and ponds, and many rivers bisect the plain and flow into the Arctic Ocean. The open seawaters of the Beaufort Sea, Chukchi Sea, Arctic Ocean, and Hudson Bay are frozen much of the year, and the ice pack is never far from shore. Breeding species include a variety of larids (jaegers, gulls, terns), alcids (guillemots, auklets, murre, puffins, and murrelets), loons and Sandhill Cranes. Few bird species of any type winter in the region.

Northern Prairie and Parkland

The Northern Prairie and Parkland region, extending



Black Guillemots

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from the southern edge of prairie Canada's boreal forest, across the international border, and south to the banks of the Missouri, is an area composed primarily of mixed-grass prairie. Aspen poplar woods form a belt of "parklands" along the region's northern boundary. The region offers waterbirds a tremendous variety and often high density of small wetlands or "potholes", ranging from wet meadows and shallow water ponds, to saline lakes, marshes and fens. Oxbow wetlands created by the changing flow of small prairie rivers and streams, and human created reservoirs dot the landscape. Widely regarded as the most important waterfowl production area in North America, the region hosts twenty-four colonial and fifteen non-colonial species of breeding waterbirds including the endangered interior Least Tern. A number of species reach their highest densities or have breeding ranges contained largely within the region, notably the American White Pelican, Eared Grebe, California Gull, Black Tern, Forster's Tern and Franklin's Gull. The challenge for the Northern Prairie and Parkland regional plan is operating in a landscape significantly affected by agriculture, oil/gas and other human development activities which factor immensely in the region's conservation issues. Wetland loss and deterioration tops the list, which is further influenced by the region's natural cycles of drought and inundation. The widespread and uncertain ramifications of global warming will affect the regional plan's strategies

Short-tailed Albatross ➤ *Black-footed Albatross* ➤ *Laysan Albatross* ➤ *Black-browed Albatross* ➤

to combat wetland loss and properly manage associated upland habitats for the benefit of waterbirds and other bird species.

Central Prairies

The Central Prairies region, stretching across the U.S. heartland, is characterized by a semi-arid climate and consists of rolling plains vegetated with shortgrass and mixed-grass prairie. Native grassland vegetation exists in many areas, especially in the north and west, and ranching is a dominant land use. Rowcrop agriculture is a more prevalent land use in the eastern parts of the region. Wetland resources are relatively sparse and consist mostly of river-associated wetlands, playas and depressional wetlands. The region supports significant breeding populations of interior Least Terns, Black Terns, Eared Grebes, Black-crowned Night-Herons, American Bitterns, and Virginia Rails. Additionally, critical migratory stopover habitat for Mid-continent Sandhill Cranes and Whooping Cranes is found along the Platte River in Nebraska and in other wetland complexes in the region. There is lack of adequate information on habitat use, and population sizes and trends for many waterbirds in this region. Primary threats to waterbirds in the Central Prairies region include unpredictable rainfall patterns, and habitat loss or degradation due to agricultural activity and urban development. The Central Prairies regional plan will focus on documenting critical waterbird sites/landscapes and identifying information gaps which may hinder the effective monitoring and management of waterbird populations.



Least Terns

Upper Mississippi Valley/Great Lakes

The Upper Mississippi Valley/Great Lakes (UMVGL) region is a diverse area lying in the middle of North America. About 40 species of waterbirds occur in the region, and among the priority species there are Least, Common, Black, and Forster's Terns; Black-crowned and Yellow-crowned Night-Herons; American and Least Bitterns; Yellow, Black, and King Rails; and Common Loons. Superabundant species that are causing human conflicts include Double-crested Cormorants and Ring-

billed Gulls. The UMVGL region provides a variety of waterbird nesting, roosting, and foraging habitats, including islands, natural and managed wetlands, lakes and lake shorelines, reservoirs, rivers and floodplains, sand and gravel bars, beaches, and Great Lakes coastal estuaries. The Great Lakes and "big rivers" (Mississippi, Illinois, Ohio, and Missouri Rivers) provide a foundation for much of the important waterbird habitat in the region. Parts of the region are heavily forested or have rugged terrain with few wetlands, and these support little waterbird use. Wetland losses from urban development, river dredging and diking, and agricultural drainage have reduced the amount of waterbird habitat in the region, and water quality has been impacted by agricultural and industrial runoff. Dredged material island creation, wetland creation and restoration activities, and water control structures have provided new

waterbird habitat in some areas. Fluctuating water levels in the Great Lakes have reduced habitat for some species and enhanced habitat for others. A primary goal of the UMVGL regional plan is to ensure the availability of waterbird nesting and foraging sites by protecting, restoring, and managing a variety of habitat types throughout the region. Other limiting factors

to UMVGL waterbirds include human disturbance, predation, nest-site competition, altered food base, contaminants, and conflicts with humans.

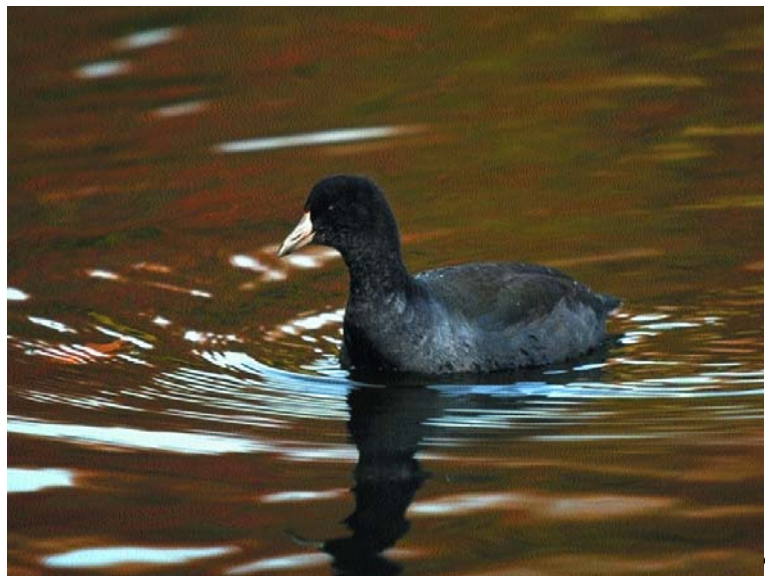
Southeast U.S.

This Southeast region borders the southeastern U.S., stretching from eastern Texas and Oklahoma, capturing the Florida peninsula, and extending northward into eastern North Carolina and Virginia. It extends into the Gulf of Mexico and pelagic areas off both the Atlantic and Gulf coasts. Particularly important waterbird habitats in the region include pelagic areas, marshes, forested wetlands, and barrier and sea island complexes. The Southeast U.S. region is particularly critical to 15 species of waterbird. Federally listed taxa include breeding populations of Wood Stork, the Mississippi subspecies of Sandhill Crane, Whooping Crane, interior Least Tern, and Gulf coast populations of Brown Peli-

can. The population trends for the long-legged wading species in the region vary and are of great interest, as these birds are important ecological indicators for restoring the Everglades and for identifying environmental problems elsewhere (e.g., Okefenokee Swamp). Among concerns requiring region-wide attention are mortality of waterbirds associated with various fisheries (“waterbird bycatch,” depredation control at aquaculture ponds and other facilities), loss and deterioration of habitat, disturbance of nesting areas (particularly those of beach-nesting terns and skimmers), and effects from contaminants. A key objective of the Southeast regional plan is the standardization of data collection efforts and analysis procedures across the region. This will allow better tracking of regional movements and the association of these movements with environmental or land use changes to better recommend effective conservation measures.

Mid-Atlantic/New England/Maritimes

Stretching from the southern end of the Chesapeake Bay to the Gulf of St. Lawrence, this region offers a great variety of coastal habitats. The islands and shores of the Chesapeake and Delaware Bays host large mixed colonies of coastal and wading waterbirds, as do the estuaries and embayments formed behind mid-Atlantic barrier islands. Most of the world’s population of Roseate Tern nests on the islands of southern New England, as do large numbers of other terns and gulls. Sandy shores give way to the rocky or muddy intertidal shorelines of northern New England and Canada’s maritime provinces. Here, Black Guillemots breed on the coast, while Leach’s Storm-Petrel, gulls, terns, and the southern-most populations of breeding alcids nest on offshore islands. The inland ponds, lakes, and river valleys often offer more isolation for waterbirds than coastal habitats, though they freeze earlier and easier. Development pressure is a critical issue for this region, which hosts tremendously dense human populations, especially in its southern end. Overexploitation of coastal resources and contamination are also key threats. The planning effort for the Mid-Atlantic/New England/Maritimes region has the advantage of being able to draw on the knowledge and expertise of a number of locally based waterbird working groups.



American Coot

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Pacific Islands

The Pacific Islands waterbird planning region extends across a vast area of the north and central Pacific Ocean encompassing numerous islands and island groups under U.S. jurisdiction. The region stretches 5,000 miles from east to west and 3,000 miles from north to south and includes some of the most isolated islands in the world. The physical geography ranges from mountainous, alpine environments to low-lying tropical atolls just a few feet above sea level. This region is of international importance for both endemic species (an evolutionary result of island isolation) and migratory waterbirds capable of crossing great distances of open ocean. This region supports millions of breeding seabirds representing 30 species, including the entire global population of Hawaiian Dark-rumped Petrel and Newell’s Shearwater and greater than 98% of the world populations of Laysan and Black-footed Albatross. Unfortunately, the small size and isolation of these islands increases the vulnerability of individual species and their habitats. Rails, coots, and gallinules (several of which are endemic) are at risk of becoming endangered or are already extinct. Habitat loss and degradation associated with human development and invasive species have devastated native flora and fauna, especially on the more developed islands. Introduced species (predators, herbivores, insects, plants, etc.), introduced diseases, contaminants, and mortality resulting from interactions with commercial fisheries pose serious threats to waterbirds, both on land and at sea. The U.S.

White-faced Storm-Petrel ➤ *Polynesian Storm-Petrel* ➤ *European Storm-Petrel* ➤ *Least Storm-Petrel* ➤

Pacific Islands regional plan will synthesize the conservation issues of the region and prioritize management efforts to address them.

Caribbean

This region includes Bermuda, the islands and waters of the Caribbean Basin, and the islands and waters off the northern coast of South America. The majority of these islands are of volcanic origin, thus dispersal of species from surrounding continents and subsequent evolution in isolation have shaped the region's avifauna and produced a number of endemic species. Breeding residents and local migrants, wintering or migrating neotropical migrants, and non-breeding austral migrants can all be found in the region. The waterbirds occurring on each particular island are dependent on its size (ranging from Cuba's 110,860 km² to tiny rocky islets) and topography and the resulting suite of marine and freshwater habitats. Coastline extension and shelf width affect the presence and nature of beaches, estuaries, mud flats and mangroves. Mangroves provide foraging habitat for waterbirds seeking fish and invertebrates, and Brown Pelicans, as well as many species of herons and egrets, roost and nest in the mangrove canopy. Sandy and rocky coasts, as well as offshore rocks and

reefs, are also routinely used as nest locations and roosts by shorebirds, gulls, terns and wading birds. Saltwater ponds and lagoons, formed as a result of the growth of corals across the mouth of an indented shoreline, can provide an important prey base for waders. Artificial spoil islands formed from dredging are used by several species of birds. Artificial freshwater habitats can also be very important, as Caribbean islands often have few natural inland bodies of fresh water. Reservoirs constructed for the purposes of potable water, irrigation, power, and flood control; ponds for irrigation, livestock, or aesthetic reasons; and irrigation canals can all serve as waterbird habitat. Where rivers, streams, or creeks occur, they range from rapid flows in the steep mountains to slower and more winding courses across the lowlands. Habitat destruction and disturbance associated with a growing human population are the principal threats in the Caribbean, notably deforestation, destruction of mangroves and other wetlands, hunting, and the introduction of exotic predators. Water pollution, siltation of water bodies, and excessive withdrawals of fresh water are also problems. These threats have caused declines in a number of waterbird and other aquatic bird species, including the globally threatened Bermuda Petrel, Black-capped Petrel, West Indian



Anhinga

Wedge-rumped Storm-Petrel *Band-rumped Storm-Petrel* *Leach's Storm-Petrel* *Tristram's Storm-Petrel*

Whistling-Duck and Zapata Rail.

The Caribbean region's island nations for the most part have limited capacity for conservation action. Moreover, these nations share an ecological identity not reflected by political boundaries. Thus, a multinational conservation planning and implementation effort is required to effect conservation action in this region. This effort should address the needs of all aquatic birds, including seabirds, coastal birds, wading birds, marshbirds, shorebirds, and waterfowl, in order to make the most effective use of resources. As an important first step, the Society for the Conservation and Study of Caribbean Birds has formed a Waterbirds Task Force for the Caribbean region. It is proposed that this working

group conduct workshops to bring together stakeholders in aquatic bird conservation to enable them to define and coordinate regional conservation action. The group will determine and document regional and national population goals, habitat management goals, avian (waterbird) monitoring goals and techniques, and important aquatic bird areas (IBAs); identify needs and develop training and educational materials; and develop and implement priority conservation projects. It is hoped that Caribbean planning will foster waterbird interests in the Caribbean, generate additional species-based working groups, secure increased funding for aquatic bird conservation projects, and surmount political obstacles to access and collaboration.

Central America

The Central America region is defined by the seven nations of Central America and adjacent ocean areas. The region has 6,603 km of coast (approximately 12% of the Latin American and Caribbean coastline), with



Wood Stork

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approximately 567,000 hectares of mangroves (8% of world's total), plus 1,600 km of coral reef. The low-lying coastal zones include many estuaries and extensive lagoons, important as waterbird habitat. The Gulf of Fonseca, a natural, shallow Pacific harbor shared by El Salvador, Honduras, and Nicaragua, is similar to the Gulf of California, with estuaries, marshes, rocky coastline, and islets. On the Atlantic side, the Honduras Bay islands and reefs host local colonies of seabirds while offshore waters in the Caribbean serve as foraging grounds for locally nesting seabirds and migrants. The region also contains the huge Isabel Lake (Guatemala) and Nicaragua and Managua Lakes (Nicaragua), and a regional system of volcanic lakes, such as Ilopango (El

Salvador); Amátitlan and Atitlán (Guatemala); and the Arenal reservoir (Costa Rica). Extensive flood plains are found along the Mosquitia (Nicaragua and Honduras); the Belize River (Belize), and La Pasion, Polochic and Cahabon rivers (Guatemala).

Central America's coasts and wetlands contribute greatly to local, national and regional economies, but their importance is not always recognized and protection and management are often lacking. Conservation action in the region should include the promotion of greater awareness of these important ecosystems, primarily via local projects to demonstrate the feasibility of sustainable resource use. A process similar to that being developed for the Caribbean is suggested for the region. The first step would be to assemble those individuals willing to work towards developing a regional waterbird conservation plan into a working group. This working group, starting with identification of core participants, would conduct workshops to facilitate planning; devel-

Markham's Storm-Petrel ➤ *Black Storm-Petrel* ➤ *Ashy Storm-Petrel* ➤ *Fork-tailed Storm-Petrel* ➤



© TONY PALISER

Sooty Shearwater

op population and habitat goals; determine monitoring needs and approaches; support identification, protection and management of waterbird IBAs; create training and education materials; and identify and implement model conservation projects. Integration across national borders and of the needs of all aquatic birds (i.e., waterbirds, shorebirds, and waterfowl) is suggested as the most efficient approach to conservation, though the development of conservation strategies and monitoring could be done on a subregional basis, along the Pacific slope, Atlantic slope and interior lakes. It is recognized that funding is critical for this region to move forward with waterbird planning and conservation.

Pacific and Atlantic

These regions refer to the high seas of the Pacific and Atlantic, which are regularly utilized by the pelagic seabirds considered in the Plan, including shearwaters, petrels, storm-petrels, puffins, fulmars, gannets, skuas, kittiwakes, jaegers, and auks. Though consisting entirely of open water, these regions offer habitat of varying quality, depending on distance from land, latitude and the shifting character of the water (i.e., temperature, salinity, nutrients, and biological communities). Because of fluctuations in weather and food supply, and because food often has a patchy distribution, most pelagic seabirds must travel constantly and over enormous areas. Information on the movements and distribution is lacking for many pelagic seabird species, in part because of their extensive movements. It is known that after nesting in very crowded colonies, many species continue to congregate outside the breeding season in areas of high productivity, such as upwellings. Huge flocks of Sooty and Greater Shearwaters have been seen in these

areas. The major threats to waterbirds on the high seas are oil and other contaminant spills, discarded plastics and other pollution, fisheries conflicts and the unknown impacts of altered ocean cycles. Activities on the continental shelves, such as ocean dumping and sand mining, can also directly or indirectly impact pelagic birds. Seabird conservation planning for the Pacific and Atlantic Regions will call for continued research and additional monitoring, and will explore how policy changes, enforcement, and alleviation of threats can be accomplished via international communication and cooperation.

Local Waterbird Conservation

Conservation planning at the local level is essential. Many waterbirds are part of the local communities that humans inhabit and survive within the human-dominated landscape. Local action and community-based conservation may well be the most important level of implementation. Many different locally-based agencies or groups share responsibilities for the management of birds and their habitats with national governments. The Plan recognizes and encourages a diversity of local conservation efforts on behalf of waterbirds.

The approaches that local governments and organizations use for planning and conservation action for waterbirds will differ markedly depending on local conditions, resources, opportunities, needs and interests. These should enhance, rather than weaken, overall conservation success. Not only will a diversity of approaches allow conservation to fit to the local situation but will provide experiments in conservation, the results of which can inform actions elsewhere.

Despite the necessity and desirability of flexibility, it does remain important that local planning and implementation of waterbird conservation be connected to continental, national, state and regional goals, programs and opportunities. This will ensure the availability of information, ideas, planning assistance and resources as well as use of common protocols, such as those developed for monitoring. Mechanisms used should bring partners together to conserve birds and habitats on a landscape level. Cooperation among state and provincial biologists, non-government organizations, especially community-based organizations, is essential.

Particular progress towards goals identified in this Plan could be made at the local level by identifying key local sites. Imbedding waterbird conservation in special site management is particularly well situated to engage local stakeholders in site monitoring and protection, while at the same time serving as a vehicle to address research, education and outreach, and coordination and integration priorities.

Possible elements of a local conservation program:

- ❖ Set goals to achieve waterbird conservation,
- ❖ Collaborate with regional waterbird conservation working groups to assess waterbird status and local conservation needs,
- ❖ Become familiar with regional scale assessments of waterbird status, habitat priorities and other needs and opportunities, but do not be limited by them,
- ❖ Develop programs to manage waterbirds and their habitats at local sites, including parks and preserves, for multiple purposes, including public involvement,
- ❖ Identify waterbird biologists able to facilitate, guide and manage local waterbird conservation,
- ❖ Monitor waterbird colony sites, breeding populations,



© WALKER COLLIER

Lea Island, North Carolina

wintering numbers (where appropriate), and habitats and link to the continent-wide monitoring partnership,

- ❖ Develop programs, methods and protocols to protect, conserve and manage habitat used by waterbirds,
- ❖ Identify candidate sites for IBAs for waterbirds; help evaluate status, and ensure adequate protection of sites selected for conservation,
- ❖ Identify colonies or important wetlands that may not meet IBA criteria but serve to educate and increase public awareness of waterbirds,
- ❖ Secure protection of important colony sites, breeding sites, habitats and IBAs for waterbirds, and manage these sites for waterbirds,
- ❖ Develop broad-base partnerships among government, business, and local conservationists for waterbird conservation,
- ❖ Develop an information and education strategy including “how-to” publications for managers and the public, and provide mechanisms to incorporate waterbirds in local education and outreach programs,
- ❖ Assure consideration of waterbird conservation needs in land acquisition, land management, regulation, planning and zoning, and
- ❖ Identify scientific and management information needs, and secure resources through partnerships to fill these needs.

The Bottom Line

The Plan does not propose the creation of a stand-alone delivery infrastructure for waterbirds. To the contrary, waterbird conservation should be accomplished, to the extent possible, within existing structures, agencies and organizations. With a few exceptions, such as the Waterbird Monitoring Partnership and a waterbird conservation communication strategy, the Plan does not advocate new programs dedicated to waterbirds. Alternatively, the Plan advocates the inclusion of waterbird conservation action within existing programs, and where appropriate, refocusing or expanding programs to enhance their abilities to achieve waterbird conservation.

Although largely imbedded within existing structures and organizations, waterbird conservation requires staff and program support. Staff needs include positions and support funds dedicated at least in part to waterbirds. Program support includes the delivery mechanisms for waterbird conservation. At this time, existing staff size

TABLE 4. Resources Needed for Waterbird Conservation in the Americas

Programs	Waterbird Positions	Lead and Participating Organizations	No. of Positions/ Annual Funding (x \$1000)
Waterbird Conservation for the Americas initiative		Waterbird Conservation Council (volunteer representatives for the range of partners and interests)	0/10
Waterbird Monitoring Partnership	Waterbird Monitoring Coordinator	USGS Patuxent Wildlife Research Center, national, state, local partners	1/2,200
Waterbird conservation communication program	Waterbird Communication and Outreach Coordinator	NGO	1/150
Waterbird IBA identification and conservation	IBA coordinators	National Audubon Society, and other BirdLife International partners	1+/2,000
Seabird population monitoring and fisheries issues programs	Seabird conservation coordinators	Pacific Seabird Group, other NGOs, conventions, national and state agencies	1+/4,000
Priority research projects		National agencies and NGOs	?/1,000
Habitat restoration and conservation programs		National agencies and NGOs	?/20,000
National waterbird conservation:			
Canada	National waterbird coordinator	Canadian Wildlife Service	1/200
U.S.	National waterbird coordinator	U.S. Fish and Wildlife Service	1/200
	National waterbird coordinator	Other national natural resource agencies in U.S.	26/2,600
Mexico	National waterbird coordinator	NABCI Mexico Council	1/200
Nations of Central America and Caribbean	National waterbird coordinators and specialists	Wildlife agencies and NGOs	30/300
NGO waterbird programs	Organization waterbird specialists	NGOs	?/?
Regional waterbird conservation:			
North American regions		Regional waterbird conservation working groups	0/250
Caribbean and Central America regions:			?/200
planning/coordination		Caribbean and Central American working groups, Society for the Conservation and Study of Caribbean Birds, BirdLife International, other NGOs	
surveys, monitoring, conservation action and site programs		National agencies, Ducks Unlimited, other NGOs, site-based partnerships, other partnerships	?/1,000
Local waterbird conservation and site-based programs		Community-based organizations	?/1,000

and resources are inadequate to carry out the work that must be done to assure waterbird conservation in the Plan area. Resources needed to accomplish further planning and implementation are shown in Table 4.

Partners in Implementation

At this point in time it is possible to recognize many of the partners that will be called upon in implementing waterbird conservation as outlined in this Plan. It is hoped and anticipated that additional organizations, as well as new innovative approaches to waterbird conservation, will be incorporated into this Plan in subsequent versions.

The Waterbird Conservation for the Americas Initiative

Implementation of the Plan, especially in the form of on-the-ground conservation action, is the purpose of the Waterbird initiative. As previously described, the Council will serve as the keeper of the Plan and the initiator and facilitator of conservation action at all levels by setting continental goals, seeking funding, and developing infrastructure, partnerships, and communication linkages. Improving information through monitoring is the core function of the Waterbird Monitoring Partner-

ship, made up of an array of partners throughout North America, Central America, and the Caribbean. Dissemination of information, as well as education and public awareness will be directed by the waterbird conservation communications program. In Canada, U.S., and Mexico, regional waterbird working groups, and other entities formed under the Waterbird Initiative will integrate, where possible, with the other bird initiatives and NABCI.

Other International Coalitions

Key to waterbird implementation is the formation of networks between the Waterbird initiative and other international coalitions. These include, but are not limited to, the Central American Biological Conference, Mesoamerican Biological Corridor Project, American Pacific Flyway Initiative, Asia Pacific Migratory Waterbird Conservation Strategy, Central Pacific Flyway Initiative, the North American Flyway Councils, Circumpolar Seabird Working Group, Conservation of Arctic Flora and Fauna (CAFF), and Beringian Seabird Working Group. These networks should also connect to parties established under relevant conventions and treaties, for example, the Convention on Migratory Species (Bonn Convention), Convention on Wetlands of International Importance (the Ramsar Treaty), and North



Red-billed Tropicbird

American Marine Protected Areas Network, a project of the North American Commission for Environmental Cooperation (CEC).

Professional Societies

Professional societies are important partners in implementation of the Plan, as they can take the lead in addressing the scientific and technical needs described in the Plan. In some areas, societies can also provide leadership in developing conservation strategies. Notable partners include the Pacific Seabird Group, Waterbird Society, Society for the Conservation and Study of Caribbean Birds, MesoAmerican Society for Conservation Biology, and CIPAMEX.

Environmental Nongovernmental Organizations

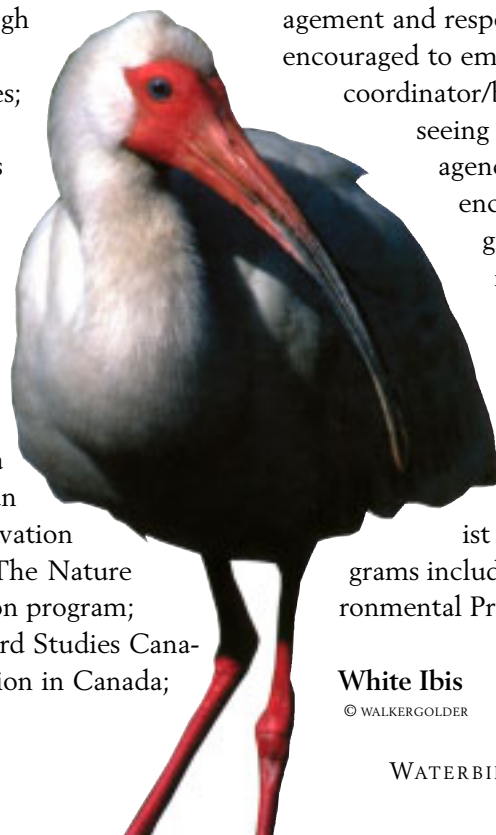
NGOs, many of which operate internationally, are also critical partners in waterbird implementation. NGOs with interests and missions compatible with the conservation of waterbirds should consider the needs and opportunities to deliver waterbird conservation within their conservation activities. The Waterbird Initiative especially urges the continued engagement in waterbird conservation by its current special partners: National Audubon Society via the U.S. and State IBA programs; Ducks Unlimited through monitoring and cooperative habitat work in Canada, the U.S. and Latin America; Pronatura and CIPAMEX as advocates for waterbird partnerships in Mexico; Manomet Center for Conservation Sciences for its long-term, parallel interests in shorebird and wading bird conservation; Point Reyes Bird Observatory through its work on Marine Protected Areas and other seabird conservation issues; Wildlife Management Institute through flyway management and its interests in marshbird conservation; International Association of Fish and Wildlife Agencies via its facilitation of state implementation; National Fish and Wildlife Foundation and its networks in Central America and Caribbean; BirdLife International, Americas Division via the Central American and Caribbean IBA programs and waterbird conservation partnerships in member countries; The Nature Conservancy via its bird conservation program; Canadian Nature Federation and Bird Studies Canada for their IBA program coordination in Canada;

American Bird Conservancy through its PanAmerican program; and Wetlands International in developing an international waterbird census and flyway initiatives.

Government Agencies

Governmental bodies at all scales are key partners in implementing waterbird conservation strategies. The Trilateral Committee, representing national wildlife agencies in Canada, U.S. and Mexico, facilitates cooperation for conservation of wildlife and habitat common to the three countries. In Canada, the Canadian Wildlife Service will work with NABCI Canada Council and federal, provincial and territorial natural resource management agencies, non-government conservation organizations, and other specialists as determined through the development of *Wings Over Water: Canada's National Waterbird Conservation Plan*. The structure of bird conservation in Mexico centers on the NABCI Mexico Council. In the U.S., migratory bird management is one of the principal responsibilities of the U.S. Fish and Wildlife Service. The U.S. Fish and Wildlife Service is encouraged to appoint and support a permanent waterbird coordinator within the Division of Migratory Bird Management. This person should concentrate on assisting regional planning efforts and implementation, facilitate functioning of the Council, and be a spokesperson for waterbird conservation in the U.S. This individual should have a budget sufficient to support travel, facilitation and small grants.

Other U.S. federal agencies concerned with land management and responsible for bird conservation are also encouraged to employ and support national waterbird coordinator/biologists whose responsibility is overseeing waterbird management within their agencies. The U.S.D.A. Forest Service is encouraged to employ waterbird biologists at all organizational levels, including the national and international level, in order to address waterbird conservation needs within the Taking Wing Program and other bird conservation initiatives. Additional U.S. agencies called upon to create waterbird coordinator/ specialist positions within their national programs include: National Park Service, USGS, Environmental Protection Agency, U.S Department of



White Ibis

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Agriculture Wildlife Services, Bureau of Land Management, Bureau of Indian Affairs, National Oceanic and Atmospheric Administration's National Marine Fisheries Service, Bureau of Reclamation, Natural Resources Conservation Service, Mineral Management Service, and Department of Defense's Services and Army Corps of Engineers.

Regional and Taxonomic Working Groups

Regional waterbird working groups and the strategies they develop are central to future planning efforts and implementation of waterbird conservation actions. Regionally, implementation will occur through many different entities including, but not limited to, federal agencies, states, provinces, industry groups, species interest groups, local entities, and individuals. State and provincial governments include and partner with people whose engagement is critical to long-term conservation of waterbirds. IAFWA's Shorebird and Waterbird Working Group, Migratory Shore and Upland Game Bird Working Group, and Bird Conservation Committee are venues where state agencies interface with waterbird conservation interests. The partners in JVs are specifically focused on wetland and associated upland habitat acquisition, protection, restoration, and management. The Gulf of Maine Seabird Working Group and the North Pacific Albatross Working Group are examples of integral special interest stakeholders.

Community-based Organizations

Given the need to affect waterbird conservation at all geographic scales, it must be emphasized that one of

the principal means of implementing waterbird conservation is through local action. Cities, towns, villages, islands, local governmental organizations, and NGOs should be involved. To the extent that "all conservation is local," waterbirds must be protected, conserved, monitored, and managed by people with the wisdom gained by their intimate knowledge of the local situation. The superstructure of continental waterbird planning should be designed to support local waterbird conservationists and natural resource managers as they implement conservation actions at local colonies, breeding, roosting, and feeding sites, at local parks, refuges, and sanctuaries, and at local patches of aquatic habitat or adjacent pelagic conservation regions. Each colony or breeding site and important feeding site should have its advocate and guardian, backed by legislation from local and state governments.

Additional Partners

It cannot be overemphasized that waterbird conservation will benefit from the participation of additional partners. Anyone interested in waterbirds can contribute to their conservation. Moreover, contribution at all scales—be it management at a local sanctuary or international policymaking—is welcome and important. Additional partners will be recognized in subsequent versions of the Plan.

¹ Canadian Wildlife Service. In prep. *Wings Over Water: Canada's National Waterbird Conservation Plan*. Environment Canada, Ottawa, Canada

ACHIEVING the VISION: SUMMARY of STRATEGIES and OUTCOMES

Vision

The vision of the Waterbird Conservation for the Americas initiative is that the distribution, diversity, and abundance of populations and habitats of breeding, migratory, and nonbreeding waterbirds are sustained or restored throughout the lands and waters of North America, Central America, and the Caribbean.

Species and Population Goal

GOAL: *To ensure sustainable distributions, diversity and abundance of waterbird species throughout each of their historical or naturally expanding ranges in the lands and waters of North America, Central America, and the Caribbean.*

Strategies

- ❖ Determine population status for all species of waterbirds throughout North America, Central America, and the Caribbean.
- ❖ Institute a large scale, dispersed, partnership-based population monitoring system.
- ❖ Initiate monitoring of demography, habitats, wintering range, and important threats, such as seabird bycatch, as appropriate for species and areas.
- ❖ Develop analytical tools and analytical schemes to determine and assess population trends against trend thresholds for each species.
- ❖ Define sustainable population goals for all species, at regional scales as possible and as needed, and eventually at the continental scale.
- ❖ Determine the extent and root causes of public perception of waterbirds, particularly locally abundant species, and develop programs that help bring public perception in line with scientific and economic findings.
- ❖ Energize JVs and agencies to take responsibility for setting and achieving population goals through appropriate management.
- ❖ Develop a global perspective on populations to aid in interpretation of population trends.
- ❖ Synthesize information to identify key factors affect-



Blue-footed Booby

ing populations in order to take appropriate conservation action.

Desired Results

- ❖ Waterbirds, their habitats, and threats are monitored with sufficient intensity and coordination to accurately determine population size, trend, causes for trends and distribution changes.
- ❖ Factors influencing waterbird populations are sufficiently understood to take conservation action.
- ❖ The influence of wetland complexes at different spatial scales on breeding and dispersal dynamics is better understood.
- ❖ Public perception is coherent with scientific and economic findings on waterbird impacts.
- ❖ Management plans are in accord with technical findings.
- ❖ Habitat sources and sinks are recognized.
- ❖ Species of concern are identified, status assessments

conducted, sustainable goals developed, management plans enacted, and populations restored to appropriate sustainable levels.

Habitat Goal

GOAL: *To protect, restore, and manage sufficient high quality habitat and key sites for waterbirds throughout the year to meet species and population goals.*

Strategies

- ❖ Identify key marine, freshwater, and terrestrial habitats for waterbirds, including breeding, wintering, migratory, roosting, and foraging habitats.
- ❖ Implement conservation and management actions that secure important habitats.
- ❖ Increase understanding of waterbird habitat requirements, threats to habitat quality, and habitat interaction at different scales.
- ❖ Develop and implement habitat management plans for waterbirds for each planning unit.
- ❖ Identify, inventory and document key sites that potentially qualify as global, continental, national, or state IBAs and other key sites for waterbirds.
- ❖ Refine and continually update the list and description of IBAs for waterbirds.

- ❖ Develop and maintain a communication network among habitat managers, including IBAs for waterbirds.

Desired Results

- ❖ Important waterbird habitats are secured and habitat programs are properly managed.
- ❖ Important marine areas are identified and fisheries managed at levels that promote sustainable seabird populations.
- ❖ Key factors affecting waterbird habitat requirements are understood.
- ❖ Best practices are identified to integrate waterbird habitat needs with other uses of the landscape/seascape and with other bird conservation initiatives.
- ❖ New programs are developed and implemented to protect and manage important waterbird habitats at multiple scales.
- ❖ IBAs and other key sites for waterbirds are identified and catalogued.
- ❖ IBAs and other key sites are secured through stakeholder engagement, legislation and/or site management programs.
- ❖ Threats affecting IBAs and other key sites are documented, understood and managed and a network of area managers exists.



Little Blue Herons

Education and Information Goal

GOAL: *To ensure that information on the conservation of waterbirds is widely available to decision makers, the public, and all those whose actions affect waterbird populations.*

Strategies

- ❖ Ensure that information on waterbird conservation is available in a form that is useful for planning, implementation, and management purposes.
- ❖ Increase effectiveness of communication by partnering with outreach activities for other birds and for other environmental programs.
- ❖ Develop relationships with educators of all levels and participate in programs that increase awareness and improve education.
- ❖ Develop and widely distribute educational information on habitat conservation strategies.
- ❖ Work with users of waterbird habitats to promote practices and policies that reduce impacts on the birds.

Desired Results

- ❖ Decision makers and regional planners incorporate waterbird needs into their plans and actions.
- ❖ Citizens, conservationists, and resource managers are made more aware of conservation problems relating to waterbirds.
- ❖ Increased public awareness and appreciation of waterbirds is generated.
- ❖ Best practices and policies for the conservation of waterbirds are known, accepted and widely used.

Coordination and Integration Goal

GOAL: *To ensure that coordinated conservation efforts for waterbirds in the Americas continue, are guided by common principles, and result in integrated and mutually supportive waterbird conservation actions.*

Strategies

- ❖ Establish cooperative actions with organizations concerned with the conservation, research, and management of waterbirds and their habitats.
- ❖ Establish cooperative actions with other bird conservation initiatives, particularly through common goal setting, and multispecies approaches such as advocated by NABCI.



Yellow-crowned Night-Heron

- ❖ Establish cooperative linkages with other bird conservation initiatives concerned with aquatic habitats.
- ❖ When initiatives for other aquatic bird groups are not underway, catalyze simultaneous planning and conservation of all water-dependent bird species.
- ❖ Seek to achieve integrated bird conservation action that incorporates the needs of waterbirds.
- ❖ Exchange information and expertise with international, national, regional state/provincial and local partners, and establish networks between conservationists, scientists, and habitat managers.
- ❖ Develop waterbird plans, where appropriate, at national, regional, JV, and state/provincial levels.
- ❖ Influence environmental policies and programs to positively affect waterbird conservation.
- ❖ Participate in international programs in ways that enhance the conservation of waterbirds.
- ❖ Increase human and financial resources available for waterbird conservation.

Desired Results

- ❖ Waterbird conservation plans are in place and coordinated at the continental, national, regional, state/provincial, and local levels as appropriate.
- ❖ Common principles that support waterbird conservation are incorporated into international, national and state/provincial legislation, agreements and partnerships.
- ❖ Waterbirds are fully integrated into all bird conservation programs continentally, nationally, regionally, state/provincially and locally.
- ❖ Non-government groups play an active role in promoting and implementing waterbird conservation activities.
- ❖ Priority conservation action is not hindered through lack of human or financial resources.

APPENDICES



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Horned Grebe

APPENDIX 1 Names, Estimated Population Sizes, and Conservation Status of Waterbirds

COLONIAL OR SEMI-COLONIAL BREEDERS														
S/M#	AOU#	Scientific Name	English Name ^b	French Name ^b	Spanish Name ^b	Estimated Population in Plan Area	PT	PS	TB	TN	BD	ND	Category	Rule
3179	35	<i>Stercorarius skua</i>	Great Skua	Grand Labbe	Pagalo grande	Insufficient information	3	4	na	2	na	3	Moderate	3c
3183	35.2	<i>Stercorarius macrorhynchos</i>	South Polar Skua	Labbe antarctique	Pagalo sureno	Insufficient information	3	4	na	2	na	1	Moderate	3c
3184	36	<i>Stercorarius pomarinus</i>	Pomarine Jaeger	Labbe pomarin	Estercario pomarino	20,000 - 40,000 breeders	3	3	3	2	1	1	Low	4a
3185	37	<i>Stercorarius parasiticus</i>	Parasitic Jaeger	Labbe parasite	Salteador parasito	Insufficient information	3	3	3	2	1	1	Low	4a
3186	38	<i>Stercorarius longicaudus</i>	Long-tailed Jaeger	Labbe à longue queue	Salteador colilargo	>150,000 individuals (?)	3	2	3	2	1	1	Low	4a
3187	80	<i>Rynchops niger</i>	Black Skimmer	Bec-en-oiseau noir	Rayaador	65,000 - 70,000 breeders	4	2	4	3	3	3	High	2a
3196	57	<i>Larus heermanni</i>	Heermann's Gull	Coeländ de Heermann	Gaviota de Heermann	350,000 breeders	3	2	4	5	5	4	Moderate	3b
3199	55	<i>Larus canus</i>	Mew Gull	Coeländ cendré	Gaviota piquiamarilla	160,000 - 240,000 breeders	4	2	1	1	2	2	Not currently at risk	5
3201	54	<i>Larus delawarensis</i>	Ring-billed Gull	Coeländ a bec corcé	Apiyiza punta	~1,700,000 breeders	1	1	1	1	2	2	Not currently at risk	5
3202	53	<i>Larus californicus</i>	California Gull	Coeländ de Californie	Gaviota Californiana	>414,000 breeders	3	2	5	2	2	3	Moderate	3b
3203	47	<i>Larus marinus</i>	Great Black-backed Gull	Coeländ marin	Gaviota	121,430 breeders	2	2	2	2	3	2	Not currently at risk	5
3205	44	<i>Larus glaucescens</i>	Glaucous-winged Gull	Coeländ à ailes grises	Gaviota de alas graucas	380,000 breeders	3	2	2	2	3	3	Low	4a
3206	49	<i>Larus occidentalis</i>	Western Gull	Coeländ d'Audubon	Gaviota occidental	>77,000 breeders	2	2	2	2	4	4	Low	4b
3207	49.1	<i>Larus livens</i>	Yellow-footed Gull	Coeländ de Cortez	Gaviota de Patas Amanillas	40,000 breeders	3	3	3	3	5	5	Moderate	3b
3208	42	<i>Larus hyperboreus</i>	Glaucous Gull	Coeländ bourgmaestre	Gaviota blanca	169,200 breeders	3	2	1	1	1	1	Not currently at risk	5
3209	43	<i>Larus glaucooides</i>	Iceland Gull	Coeländ arctique	Gaviota blanca	>100,000 individuals	3	2	3	3	3	2	Low	4a
3209.1	43.1	<i>Larus thayeri</i>	Thayer's Gull	Coeländ de Thayer	Gaviota de Thayer	<10,000 individuals in Canada	3	3	3	3	5	3	Moderate	3c
3210	51	<i>Larus argentatus</i>	Herring Gull	Coeländ argenté	Gaviota plateada	>246,000 breeders	3	2	3	2	1	1	Low	4a
3212	48	<i>Larus schistisagus</i>	Slaty-backed Gull	Coeländ a manteau ardoise	Insufficient information	Insufficient information	-----	-----	-----	-----	-----	-----	Insufficient information available to assess risk	-----
3214	50	<i>Larus fuscus</i>	Lesser Black-backed Gull	Coeländ brun	Insufficient information	Insufficient information	3	4	5	na	3	na	Moderate	3c
3215	50	<i>Larus ridibundus</i>	Black-headed Gull	Mouette rieuse	Gaviota dorsinera menor	40 breeders, 400 non-breeders	3	5	3	3	4	3	Moderate	3d
3225	60	<i>Larus philadelphia</i>	Bonaparte's Gull	Mouette de Bonaparte	Gaviota encapuchada	Insufficient information	?	3	3	3	1	2	Moderate	*
3231	58	<i>Larus atrifila</i>	Laughing Gull	Mouette à tête noir	Gaviota de Bonaparte	528,000 - 538,000 breeders	2	2	2	2	3	2	Not currently at risk	5
3232	59	<i>Larus pipitca</i>	Franklin's Gull	Mouette de Franklin	Gaviota de Franklin	315,608 - 990,864 breeders	3	1	2	4	3	2	Moderate	3b
3233	60.1	<i>Larus minutus</i>	Little Gull	Mouette pygmée	Gaviota minima	100-200 breeders	4	5	3	1	5	4	High	2a
3234	39	<i>Reggiphila aearna</i>	Ivory Gull	Coeländ senateur	Gaviota marfil	>2,400 breeders	3	4	3	3	4	1	Moderate	3b
3235	61	<i>Rhodostethia rosea</i>	Ross's Gull	Mouette rosée	Insufficient information	<200 breeders	?	5	2	3	4	1	High	**
3236	62	<i>Xema sabini</i>	Sabine's Gull	Mouette de Sabine	Gaviota de Sabine	200,000 - 400,000 breeders	2	2	2	4	2	1	Low	4b
3238	40	<i>Rissa tridactyla</i>	Black-legged Kittiwake	Mouette tridactyle	Gaviota patine-gra	3,126,000 breeders	3	1	2	2	2	1	Not currently at risk	5
3239	41	<i>Rissa brevirostris</i>	Red-legged Kittiwake	Mouette des brumes	Insufficient information	160,000 - 180,000 individuals at breeding colonies	4	2	4	2	5	3	High	2a
3240	63	<i>Sterna nikotica</i>	Gull-billed Tern	Sterne hansel	Pico de gaviota	6,000 - 8,000 breeders	4	3	4	2	3	2	High	2a
3241	64	<i>Sterna caspia</i>	Caspian Tern	Sterne Caspienne	Chaman caspia	66,000 - 70,000 breeders	2	3	4	2	2	2	Low	4b
3243	65	<i>Sterna maxima</i>	Royal Tern	Sterne royale	Golondrina-marina real	100,000 - 150,000 breeders	3	2	4	3	3	3	Moderate	3b
3244	66	<i>Sterna elegans</i>	Elegant Tern	Sterne elegante	Golondrina-marina elegante	34,000 - 60,000 breeders	3	3	4	4	4	3	Moderate	3b
3246	65.2	<i>Sterna bergii</i>	Great Crested Tern	Sterne caugek	Insufficient information	Few	3	5	?	2	5	4	Moderate	3c
3248	67	<i>Sterna sandvicensis</i>	Sandwich Tern	Sterne caugek	Sterna sandvicensis	75,000-100,000 breeders (probably close to 10,000)	2	2	3	2	3	3	Not currently at risk	5
3249	72	<i>Sterna dougalli</i>	Roseate Tern	Sterne de Dougall	Chaman Rosada	16,000 breeders	4	3	5	5	3	3	High	2a
3253	70	<i>Sterna hirundo</i>	Common Tern	Sterne pierregarin	Sterna h. hirundo	300,000 breeders	2	2	5	4	2	1	Low	4b
3254	71	<i>Sterna paradisaea</i>	Arctic Tern	Sterne arctique	Sterna paradisaea	Insufficient information	4	3	4	2	1	1	High	3a
3257	69	<i>Sterna forsteri</i>	Forster's Tern	Sterne de Forster	Gaviota de Forster	47,000 - 51,500 breeders	4	3	3	2	2	2	Moderate	3b
3259	74.1	<i>Sterna albobifrons</i>	Little Tern	Petite Sterne	Chaman mimimo	Few	2	5	4	2	5	5	High	2b
3261	74	<i>Sterna anillarum</i>	Least Tern	Sterne laeuste	Chaman mimimo	60,000 - 100,000 breeders	4	2	5	4	3	2	High	2a
3268	73	<i>Sterna alantica</i>	Aleutian Tern	Sterne Aleoutie	Chaman de las Aleutianas	14,594 breeders	4	3	4	2	4	3	High	2a
3269	76.1	<i>Sterna lunata</i>	Gray-backed Tern	Sterne a dos gris	Golondrina-marina dorsigris	72,000 - 104,000 breeders	3	2	4	2	4	3	Moderate	3c
3270	76	<i>Sterna anaethetus</i>	Bridled Tern	Sterne a collier	Chaman embricado	8,700 - 14,700 breeders	4	3	4	3	3	3	High	2a
3271	75	<i>Sterna hispidula</i>	Black Tern	Sterne fuligineuse	Golondrina-marina oscura	>3,360,000 - 4,380,000 breeders	3	1	4	2	3	2	Moderate	3c
3275	77	<i>Chlidonias niger</i>	Black Tern	Guifette noire	Gaviotin negro	100,000 - 500,000 breeders	3	2	4	3	2	2	Moderate	3b
3277	79	<i>Anous stolidus</i>	Brown Noddy	Noddi niats	Golondrina-boba café	286,000 - 298,000 breeders	2	2	2	2	3	2	Not currently at risk	5
3278	79.1	<i>Anous minutus</i>	Black Noddy	Noddi noir	Golondrina-boba negra	>86,400 breeders >250,000 total	3	2	4	2	3	2	Moderate	3c
3280	79.2	<i>Procelsterna cerulea</i>	Blue-gray Noddy	Noddi gris	Insufficient information	Insufficient information	3	4	4	2	4	3	High	2b
3281	79.3	<i>Cygys alba</i>	White Tern	Cygys blanche	Chaman blanco	30,000 breeders; total N.A. population - 80,700	3	3	2	2	4	3	Moderate	3c

3284	34	<i>Alle alle</i>	Dovekie	Mergule nain	Arao comun	1,000 breeders	3	4	2	3	5	2	Moderate	3c
3285	30	<i>Uria aage</i>	Common Murre	Guillemot marmette	Arao comun	4,250,000 individuals	3	1	4	4	3	2	Moderate	3c
3286	31	<i>Uria lomvia</i>	Thick-billed Murre	Guillemot de Brinnitch		8,000,000 breeders	3	1	4	4	2	2	Moderate	3c
3287	32	<i>Alca torda</i>	Razorbill	Petit Pingouin		76,000 breeders	3	2	4	5	4	3	Moderate	3c
3289	27	<i>Cephus grylle</i>	Black Guillemot	Guillemot à miroir	Arao paloma	100,000 - 200,000 breeders	2	2	3	3	2	1	Not currently at risk	5
3290	29	<i>Cephus columba</i>	Pigeon Guillemot	Guillemot du Pacifique		<69,000 breeders	4	3	3	2	3	3	Moderate	3b
3292	23	<i>Brachyramphus nannorhynchus</i>	Marbled Murrelet	Guillemot marbré		300,000 - 800,000 individuals	5	2	4	2	3	4	High	2a
3293	24	<i>Brachyramphus brevirostris</i>	Kittlitz's Murrelet	Aloue pale	Pato nocturno de Xantus	7,000 - 18,000 individuals (summer)	4	3	4	4	3	4	High	2a
3294	25	<i>Synthliboramphus hypoleucis</i>	Xantus's Murrelet	Guillemot de Xantus		10,000 - 7,000 breeders	4	3	5	4	5	5	High	2a
3295	26	<i>Synthliboramphus craveni</i>	Craver's Murrelet	Aloue à aisselles grises		10,000 breeders	4	3	5	3	5	5	High	2a
3296	21	<i>Synthliboramphus antiquus</i>	Ancient Murrelet	Aloue à cou blanc	Arao paloma	1,300,000 breeders	4	1	5	4	4	3	High	2a
3298	16	<i>Psychorhamphus albatricus</i>	Cassin's Auklet	Starique de Cassin	Alcuela norteamericana	3,200,000 - 3,570,000 breeders	3	1	4	2	4	3	Moderate	3c
3299	17	<i>Aethia psittacula</i>	Parakeet Auklet	Starique pernoquet		1,000,000 individuals	?	1	2	2	3	3	Low	**
3300	18	<i>Aethia cristatella</i>	Crested Auklet	Starique cristatelle	Alcua crestada	3,000,000 breeders	?	1	4	4	4	3	Moderate	**
3301	19	<i>Aethia pygmaea</i>	Whiskered Auklet	Starique pygmee		>25,000 individuals in water around nesting colonies	?	3	4	4	4	4	Moderate	**
3302	20	<i>Aethia pusilla</i>	Least Auklet	Aloue minuscule		9,000,000 total individuals	?	1	4	2	4	3	Moderate	**
3303	15	<i>Carolinca monocerata</i>	Rhinoceros Auklet	Aloue rhinoceros	Alcuela rhinoceronte	922,000 breeders	2	1	4	2	3	3	Low	4b
3304	13	<i>Fratereula arctica</i>	Atlantic Puffin	Macareux moine		750,000 - 760,000 breeders	1	2	4	4	3	2	Not currently at risk	5
3305	14	<i>Fratereula corniculata</i>	Horned Puffin	Macareux cornu		1,000,000 breeders	?	1	4	2	3	2	Moderate	**
3306	12	<i>Fratereula carhiata</i>	Tufted Puffin	Macareux Huppé		2,750,000 - 3,000,000 breeders	2	1	4	2	2	2	Low	4b
3331	330	<i>Rosstrhamus sociabilis</i>	Snail Kite	Milan des marais	Babosero	600 - 1,000 individuals	3	4	4	4	5	5	High	2b
3624	4	<i>Podiceps nigricollis</i>	Eared Grebe	Grèbe à cou noir	Zambullidor orejudo	3,500,000 - 4,100,000 individuals (fall population)	3	1	2	4	2	3	Moderate	3c
3629	1	<i>Aechmophorus occidenalis</i>	Western Grebe	Le Grèbe de l'Ouest	Achichilique	>110,000 breeders	3	2	4	4	3	3	Moderate	3b
3630	1.1	<i>Aechmophorus danielsi</i>	Clark's Grebe	Le Grèbe de Clark	Achichilique	10,000 - 20,000 individuals	3	3	3	3	3	3	Low	4a
3631	113	<i>Phaethon aethereus</i>	Red-billed Tropicbird	Grand Paillé-en-queue	Rabijunco piquirrojo	3,800 - 7,000 breeders	4	4	5	2	3	3	High	2a
3632	113.1	<i>Phaethon rubratunda</i>	Red-tailed Tropicbird	Paille-en-queue blanc	Rabijunco cola roja	32,000 breeders	3	3	4	2	4	2	Moderate	3c
3633	112	<i>Phaethon lepturus</i>	White-tailed Tropicbird	Phaeton à bec jaune	Rabijunco cola blanca	10,000 - 23,000 breeders	4	3	5	3	3	2	High	2a
3635	117	<i>Morus bassanus</i>	Northern Gannet	Fou de Bassan	Bobo norteno	155,456 breeders	1	2	3	3	4	2	Not currently at risk	5
3638	114.1	<i>Sula nebouxi</i>	Blue-footed Booby	Fou à pattes bleues	Bobo patiazul	~90,000 individuals in Gulf of CA	4	2	5	5	5	4	High	2a
3640	114	<i>Sula dactylatra</i>	Masked Booby	Fou masque	Bobo enmascarado	80,000 - 120,000 breeders	4	2	4	2	3	2	High	2a
3640.1	—	<i>Sula granti</i>	Nazca Booby			Insufficient information	—	—	—	—	—	—	Insufficient information available to assess risk	—
3641	116	<i>Sula sula</i>	Red-footed Booby	Fou à pieds rouges	Bubia pies rojos	300,000 breeders	4	2	5	5	3	2	High	2a
3642	115	<i>Sula leucogaster</i>	Brown Booby	Fou brun	Bobo ventre-blanc	280,000 - 300,000 breeders	4	2	5	3	3	2	High	2a
3643	118	<i>Anhinga anhinga</i>	Anhinga	Anhinga d'Amérique	Anhinga americana	20,000 - 34,000 breeders in US	3	3	3	3	3	4	Moderate	3b
3653	121	<i>Phalacrocorax penicillatus</i>	Brandt's Cormorant	Cormoran de Brandt	Cormoran de Brandt	151,200 breeders	4	2	5	4	4	4	High	2a
3657	121	<i>Phalacrocorax brasilianus</i>	Neotropic Cormorant	Cormoran olivatre	Cormoran neotropical	16,000 breeders in US	2	3	3	3	3	4	Moderate	3c
3658	120	<i>Phalacrocorax auritus</i>	Double-crested Cormorant	Cormoran à aigrettes	Cormoran Orejudo	>740,000 breeders	1	2	2	2	2	2	Not currently at risk	5
3662	119	<i>Phalacrocorax carbo</i>	Great Cormorant	Grand Cormoran	Cormoran Grande	11,600 breeders	3	3	2	2	4	4	Moderate	3c
3678	124	<i>Phalacrocorax carbo</i>	Red-faced Cormorant	Cormoran à face rouge		<50,000 breeders	4	3	4	4	3	3	High	2a
3679	123	<i>Phalacrocorax urile</i>	Pelagic Cormorant	Cormoran Pelagique	Cormoran Pelagico	<69,000 breeders	4	3	4	4	3	3	High	2a
3685	198	<i>Egretta tricolor</i>	Reddish Egret	Aigrette roussatre	Garzarojiza	6,000 - 10,000 breeders	3	3	5	5	4	?	Moderate	3c
3688	199	<i>Egretta tricolor</i>	Tricolored Heron	Aigrette tricolore	Garçeta tricolor	<194,000 breeders in US	4	3	4	3	4	4	High	2a
3690	200	<i>Egretta caerulea</i>	Little Blue Heron	Petit heron bleu	Garça azul	Insufficient information	4	2	4	4	?	?	High	2a
3692	197.1	<i>Egretta gularis</i>	Western Reef-Heron			Insufficient information	—	—	—	—	—	—	Insufficient information available to assess risk	—
3694	197	<i>Egretta thula</i>	Snowy Egret	Aigrette neigeuse	Garçeta pie-dorado	>143,000 breeders	4	2	4	3	3	4	High	2a
3697	—	<i>Ptilerodius pileatus</i>	Capped Heron			Insufficient information	—	—	—	—	—	—	Insufficient information available to assess risk	—
3699	194	<i>Ardea herodias</i>	Great Blue Heron	Grand Héron	Garzon cenizo	83,000 breeders	1	2	2	2	2	3	Not currently at risk	5
3700	—	<i>Ardea coccy</i>	Coccy Heron			Insufficient information	—	—	—	—	—	—	Insufficient information available to assess risk	—
3709	196	<i>Ardea alba</i>	Great Egret	Grande aigrette	Garça branca	>180,000 breeders	1	2	2	2	?	?	Not currently at risk	5
3711	200.1	<i>Bubulcus ibis</i>	Cattle Egret	Héron garde-boeuf	Depulgabuey	1,160,000 breeders (Texas only)	2	1	2	2	3	3	Not currently at risk	5
3718	1014.1	<i>Batomides striatus</i>	Striated Heron			Insufficient information	—	—	—	—	—	—	Insufficient information available to assess risk	—
3719	201	<i>Batomides virescens</i>	Green Heron	Héron vert	Garçita verde	Insufficient information	2	3	2	3	2	4	Low	4c
3721	—	<i>Agami agami</i>	Agami Heron			Insufficient information	—	—	—	—	—	—	Insufficient information available to assess risk	—
3722	203	<i>Nyctanassa violacea</i>	Yellow-crowned Night-Heron	Bihoreau violace	Padrete enmascarado	Insufficient information	3	?	2	3	3	5	Moderate	*
3723	202	<i>Nycticorax nycticorax</i>	Black-crowned Night-Heron	Bihoreau à couronne noire	Yaboa Real	>50,000 breeders (does not include Central America)	4	3	3	3	2	3	Moderate	3b
3729	—	<i>Cochlearius cochlearius</i>	Boat-billed Heron			Insufficient information	—	—	—	—	—	—	Insufficient information available to assess risk	—

COLONIAL OR SEMICOLONIAL BREEDERS (continued)

Conservation Status Assessment Factor Scores and Categories of Concern

S/M#	AOU#	Scientific Name	English Name ^b	French Name ^b	Spanish Name ^b	Estimated Population in Plan Area	PT	PS	TB	TN	BD	ND	Category	Rule
3730	---	<i>Tigrisoma mexicanum</i>	Bare-throated Tiger-Heron			10,000 individuals	4	3	3	3	?	?	High	*
3731	---	<i>Tigrisoma fasciatum</i>	Fasciated Tiger-Heron			Insufficient information	---	---	---	---	---	---	Insufficient information available to assess risk	---
3732	---	<i>Tigrisoma lineatum</i>	Rufescent Tiger-Heron			Insufficient information	---	---	---	---	---	---	Insufficient information available to assess risk	---
3750	182	<i>Phoenicopiterus ruber</i>	Greater Flamingo	Flamant rose	Flamenco americano	90,000 - 150,000 individuals	2	2	2	?	?	?	Low	*
3755	184	<i>Eudocimus albus</i>	White Ibis	Bec croche	Corocoro blanco	>100,000 breeders in US	3	2	3	3	4	5	Moderate	3c
3756	185	<i>Eudocimus ruber</i>	Scarlet Ibis	Ibis rouge		Insufficient information	---	---	---	---	---	---	Insufficient information available to assess risk	---
3758	186	<i>Plegadis falcinellus</i>	Glossy Ibis	Ibis falcinelle		13,000 - 15,000 breeders	1	3	3	2	5	5	Low	4c
3759	187	<i>Plegadis chalybeata</i>	White-faced Ibis	Ibis à Face Blanche	Atotola	>100,000 breeders	2	2	4	3	3	4	Low	4b
3766	---	<i>Mesembrinibis cayennensis</i>	Green Ibis			Insufficient information	---	---	---	---	---	---	Insufficient information available to assess risk	---
3767	183	<i>Actitis ajaja</i>	Roseate Spoonbill	Spoutule rosee	Espatula rosada	20,500 breeders	3	3	5	5	5	5	Moderate	3c
3794	125	<i>Pelecanus erythrorhynchos</i>	American White Pelican	Pélican d'Amérique	Pelicano Nortamericano	>120,000 breeders	3	2	4	3	2	2	Moderate	3c
3795	126	<i>Pelecanus occidentalis</i>	Brown Pelican	Pélican brun	Pelicano Café	191,600 - 193,700 breeders	3	2	4	4	3	3	Moderate	3c
3804	188	<i>Myacteria americana</i>	Wood Stork	Tantale d'Amérique	Cigüena americana	32,000 - 46,000 breeders	4	3	4	3	5	5	High	2a
3819	189	<i>Jabiru myctera</i>	Jabiru	Jabiru d'Amérique	Garzon soldado	450 breeders	4	5	5	5	?	?	High	2a
3823	128	<i>Fregata magnificens</i>	Magnificent Frigatebird	Fregate superbe	Fragata magnifica	106,000 - 174,000 breeders	4	2	4	2	3	3	High	2a
3825	128.1	<i>Fregata minor</i>	Great Frigatebird	Fregate du Pacifique	Fragata pelagica	24,000 breeders	3	3	2	2	4	2	Moderate	3c
3826	128.2	<i>Fregata ariel</i>	Lesser Frigatebird	Fregate ariel		Insufficient information	---	---	---	---	---	---	Insufficient information available to assess risk	---
3852	86	<i>Fulmarus glacialis</i>	Northern Fulmar	Fulmar boréal	Fulmar Boreal	2,100,000 breeders	3	1	4	4	2	1	Moderate	3c
3860	---	<i>Pterodroma rostrata</i>	Tahiti Petrel			Insufficient information	---	---	---	---	---	---	Insufficient information available to assess risk	---
3864	---	<i>Pterodroma cervicalis</i>	White-necked Petrel			>100,000 individuals	5	5	5	2	5	5	Highly Imperiled	1a
3865	99	<i>Pterodroma inexpectata</i>	Mottled Petrel			>100,000 individuals	3	2	na	3	na	2	Low	4a
3866	99.1	<i>Pterodroma hypoleuca</i>	Bonin Petrel	Diablotin maculé		Insufficient information	---	---	---	---	---	---	Insufficient information available to assess risk	---
3867	---	<i>Pterodroma leucoptera</i>	White-winged Petrel	Petrel de Bonin		460,792 - 716,632 breeders	3	2	4	2	4	3	Moderate	3c
3868	98.3	<i>Pterodroma cookii</i>	Cook's Petrel	Diablotin de Cook	Petrel de Cook	Insufficient information	---	---	---	---	---	---	Insufficient information available to assess risk	---
3873	98.8	<i>Pterodroma alba</i>	Phoenix Petrel			>100,000 individuals	3	2	na	2	na	1	Not currently at risk	5
3874	98.6	<i>Pterodroma arminjoniana</i>	Herald Petrel			Insufficient information	---	---	---	---	---	---	Insufficient information available to assess risk	---
3875	98.5	<i>Pterodroma sandwichensis</i>	Hawaiian Petrel			Insufficient information	---	---	---	---	---	---	Insufficient information available to assess risk	---
3877	98.4	<i>Pterodroma neglecta</i>	Kermadec Petrel			Insufficient information	---	---	---	---	---	---	Insufficient information available to assess risk	---
3878	98.7	<i>Pterodroma externa</i>	Juan Fernandez Petrel			>1,000,000 individuals	4	1	na	3	na	1	Moderate	3a
3889	98.1	<i>Pterodroma cabou</i>	Bermuda Petrel			100 breeders	2	5	5	5	5	5	High	2b
3890	98	<i>Pterodroma hastata</i>	Black-capped Petrel	Diablotin éminent		4,000 - 10,000 breeders	5	3	5	3	5	3	Highly Imperiled	1a
3898	101	<i>Bulweria bulwerii</i>	Bulwer's Petrel	Petrel de Bulwer	Petrel de Bulwer	260,000 breeders	3	2	5	4	4	2	Moderate	3b
3904	88	<i>Calonectris diomedea</i>	Cory's Shearwater	Puffin cendre	Parcela de Cory	Insufficient information	3	?	na	3	na	2	Moderate	*
3906	96.1	<i>Puffinus pacificus</i>	Wedge-tailed Shearwater	Puffin fouquet	Parcela de Pacifico	<665,170 breeders	3	2	3	2	3	2	Low	4a
3907	96.2	<i>Puffinus bulleri</i>	Buller's Shearwater	Puffin de Buller	Parcela de Buller	2,500,000 individuals	?	1	na	2	na	1	Not currently at risk	**
3908	95.1	<i>Puffinus carnatus</i>	Flesh-footed Shearwater	Puffin à pattes pâles	Parcela patipalida	1,500,000 individuals	3	1	na	3	na	2	Low	4a
3909	91	<i>Puffinus creatopus</i>	Pink-footed Shearwater	Puffin à pattes roses	Parcela patirosada	35,000 - 50,000 individuals	4	3	na	4	na	2	High	2a
3910	89	<i>Puffinus gravis</i>	Greater Shearwater	Puffin majeur	Parcela mayor	Insufficient information	3	4	na	4	na	2	High	2b
3911	95	<i>Puffinus griseus</i>	Sooty Shearwater	Puffin fuligineux	Parcela gris	2,800,000 individuals	4	1	na	3	na	1	Moderate	3b
3912	96	<i>Puffinus tenuirostris</i>	Short-tailed Shearwater	Puffin à bec mince	Parcela colicorta	30,000,000 individuals	3	1	na	2	na	1	Not currently at risk	5
3913	96.3	<i>Puffinus nativitatis</i>	Christmas Shearwater	Puffin de la Nativité	Parcela de Navidad	5,000 - 6,600 breeders	3	4	4	3	3	3	High	2b
3914	90	<i>Puffinus puffinus</i>	Manx Shearwater	Le puffin manx	Parcela Manx	360 breeders	3	5	3	2	5	2	Moderate	3c
3916	93.1	<i>Puffinus auricularis newelli</i>	Newell's Shearwater	Puffin de Townsend	Parcela de Newell	29,200 breeders	5	3	5	2	5	4	Highly Imperiled	1a
3916	93.2	<i>Puffinus auricularis townsendi</i>	Townsend's Shearwater	Puffin de Townsend	Parcela de Townsend	Low	5	4	5	2	5	4	Highly Imperiled	1a
3917	93	<i>Puffinus opsthomelas</i>	Black-vented Shearwater	Puffin cul-noir	Parcela mexicana	154,640 - 159,140 breeders	4	2	5	3	5	4	High	2a
3920	92	<i>Puffinus lherminieri</i>	Audubon's Shearwater	Puffin d'Audubon	Parcela de Audubon	6,000 - 10,000 breeders	5	3	5	4	4	3	Highly Imperiled	1a
3933	82	<i>Phoebastria albatrus</i>	Short-tailed Albatross	Albatros à queue courte	Albatros rabon	~1,300 individuals	2	4	na	5	na	2	High	2b
3934	81	<i>Phoebastria nigripes</i>	Black-footed Albatross	Albatros à pattes noires	Albatros pies negros	148,000 breeders	5	2	5	5	4	2	Highly Imperiled	1a
3935	82.1	<i>Phoebastria immutabilis</i>	Laysan Albatross	Albatros de Laysan	Albatros de Laysan	1,100,000 breeders	4	1	4	4	4	2	High	2a
3943	109	<i>Oceanites oceanicus</i>	Wilson's Storm-Petrel	Petrel océanite	Paino de Wilson	50,000 - 100,000 non-breeders	3	2	na	2	na	1	Not currently at risk	5
3949	---	<i>Nesofregata fuliginosa</i>	Least Storm-Petrel	Petrel minime	Paino mínimo	Insufficient information	5	5	5	2	5	3	Highly Imperiled	1a
3951	103	<i>Oceanodroma microzoma</i>	Least Storm-Petrel	Petrel minime	Paino mínimo	>1,000,000 individuals	4	1	5	2	5	4	High	2a
3952	106.3	<i>Oceanodroma leucorhoa</i>	Wedge-rumped Storm-Petrel	Petrel de Darwin	Paino de Galapagos	>500,000 individuals	3	2	na	3	na	3	Low	4a
3953	106.2	<i>Oceanodroma castro</i>	Band-rumped Storm-Petrel	Petrel de Castro	Paino de Harcourt	200 breeders	5	5	5	2	5	2	Highly Imperiled	1a
3954	106	<i>Oceanodroma leucorhoa</i>	Leach's Storm-Petrel	Océanite cul-blanc	Paino de Leach	15,275,000 breeders	2	1	4	3	2	2	Low	4b
3957	107.1	<i>Oceanodroma tristrami</i>	Tristram's Storm-Petrel	Petrel de Tristram	Paino de Tristram	<10,000 breeders	3	3	4	2	4	3	Moderate	3c
3960	107	<i>Oceanodroma melanota</i>	Black Storm-Petrel	Océanite noir	Paino negro	>2,000,000 breeders	4	1	5	3	4	3	High	2a
3961	108	<i>Oceanodroma homochroa</i>	Ashy Storm-Petrel	Océanite cendre	Pine cenizo	<10,000 breeders	5	3	4	2	5	4	Highly Imperiled	1a
3963	105	<i>Oceanodroma furcata</i>	Fork-tailed Storm-Petrel	Petrel à queue fourchue	Paino rabihorcado	5,000,000 - 6,000,000 breeders	1	1	4	2	3	2	Not currently at risk	5

SOLITARY BREEDERS (MARSHBIRDS)

S/M#	AOU#	Scientific Name	English Name ^b	French Name ^b	Spanish Name ^b	Conservation Status Assessment Factor Scores and Categories of Concern ^f
2745	--	<i>Emypya helias</i>	Sunbittern		Garza del Sol	-----To be assessed in Version 2 of the North American Waterbird Conservation Plan-----
2777	206	<i>Grus canadensis</i>	Sandhill Crane	Grue Canadienne	Grulla Canadense	-----To be assessed in Version 2 of the North American Waterbird Conservation Plan-----
2783	204	<i>Grus americana</i>	Whooping Crane	Grue blanche d'Amérique	Grulla Americana	-----To be assessed in Version 2 of the North American Waterbird Conservation Plan-----
2786	207	<i>Aramis guarana</i>	Limpkin		Carao	-----To be assessed in Version 2 of the North American Waterbird Conservation Plan-----
2789	--	<i>Heterotis niloticus</i>	Sungrebe			-----To be assessed in Version 2 of the North American Waterbird Conservation Plan-----
2809	215	<i>Coturnix coturnix</i>	Yellow Rail	Râle jaune	Polleuta amarilla	-----To be assessed in Version 2 of the North American Waterbird Conservation Plan-----
2825	--	<i>Laterallus ruber</i>	Ruddy Crane		Polleuta rojiza	-----To be assessed in Version 2 of the North American Waterbird Conservation Plan-----
2826	--	<i>Laterallus albigularis</i>	White-throated Crane			-----To be assessed in Version 2 of the North American Waterbird Conservation Plan-----
2827	--	<i>Laterallus exilis</i>	Gray-breasted Crane			-----To be assessed in Version 2 of the North American Waterbird Conservation Plan-----
2828	216	<i>Laterallus jamaicensis</i>	Black Rail	Râle noir	Polleuta pechigris	-----To be assessed in Version 2 of the North American Waterbird Conservation Plan-----
2841	--	<i>Gallinula philippensis</i>	Buff-banded Rail		Polleuta negra	-----To be assessed in Version 2 of the North American Waterbird Conservation Plan-----
2843	--	<i>Gallinula ostreata</i>	Guam Rail			-----To be assessed in Version 2 of the North American Waterbird Conservation Plan-----
2850	211	<i>Rallus longirostris</i>	Clapper Rail	Râle gris	Rascón picudo	-----To be assessed in Version 2 of the North American Waterbird Conservation Plan-----
2851	208	<i>Rallus elegans</i>	King Rail	Râle élégant	Rascón real	-----To be assessed in Version 2 of the North American Waterbird Conservation Plan-----
2853	212	<i>Rallus limicola</i>	Virginia Rail	Râle de Virginie	Rascón de Virginia	-----To be assessed in Version 2 of the North American Waterbird Conservation Plan-----
2869	--	<i>Aramides axillaris</i>	Rufous-necked Wood-Rail		Rascón de cuellirrufo	-----To be assessed in Version 2 of the North American Waterbird Conservation Plan-----
2870	--	<i>Aramides cajana</i>	Gray-necked Wood-Rail		Rascón de cuelligris	-----To be assessed in Version 2 of the North American Waterbird Conservation Plan-----
2875	--	<i>Amaurornis amabilis</i>	Uniform Crane		Polleuta café	-----To be assessed in Version 2 of the North American Waterbird Conservation Plan-----
2891	214	<i>Porzana carolina</i>	Sora	Marouette de Caroline	Polleuta sora	-----To be assessed in Version 2 of the North American Waterbird Conservation Plan-----
2897	--	<i>Porzana tabanensis</i>	Spotless Crane			-----To be assessed in Version 2 of the North American Waterbird Conservation Plan-----
2900	--	<i>Porzana flaviventris</i>	Yellow-breasted Crane			-----To be assessed in Version 2 of the North American Waterbird Conservation Plan-----
2903	--	<i>Cyanolimnas cerverii</i>	Zapata Rail		Polleuta pechiamanilla	-----To be assessed in Version 2 of the North American Waterbird Conservation Plan-----
2904	--	<i>Neorex colombianus</i>	Colombian Crane			-----To be assessed in Version 2 of the North American Waterbird Conservation Plan-----
2905	217.1	<i>Neorex erythropus</i>	Paint-billed Crane			-----To be assessed in Version 2 of the North American Waterbird Conservation Plan-----
2906	212.2	<i>Paridallus maculatus</i>	Spotted Rail			-----To be assessed in Version 2 of the North American Waterbird Conservation Plan-----
2913	--	<i>Porphyrio porphyrio</i>	Purple Swamphen		Gallineta morada	-----To be assessed in Version 2 of the North American Waterbird Conservation Plan-----
2917	218	<i>Porphyrio martinica</i>	Purple Gallinule			-----To be assessed in Version 2 of the North American Waterbird Conservation Plan-----
2922	219	<i>Gallinula chloropus</i>	Common Moorhen		Gallineta común	-----To be assessed in Version 2 of the North American Waterbird Conservation Plan-----
2930	220.1	<i>Fulica alai</i>	Hawaiian Coot			-----To be assessed in Version 2 of the North American Waterbird Conservation Plan-----
2931	221	<i>Fulica americana</i>	American Coot		Gallineta Americana	-----To be assessed in Version 2 of the North American Waterbird Conservation Plan-----
2932	221.1	<i>Fulica caribaea</i>	Caribbean Coot			-----To be assessed in Version 2 of the North American Waterbird Conservation Plan-----
3615	5	<i>Tachypterus dominicus</i>	Least Grebe	Grebe minime	Zambullidor chico	-----To be assessed in Version 2 of the North American Waterbird Conservation Plan-----
3616	6	<i>Podilymbus podiceps</i>	Pied-billed Grebe	Grebe a bec bigarre	Zambullidor piquigueso	-----To be assessed in Version 2 of the North American Waterbird Conservation Plan-----
3621	2	<i>Podiceps griseogen</i>	Red-necked Grebe	Grebe jougris		-----To be assessed in Version 2 of the North American Waterbird Conservation Plan-----
3623	3	<i>Podiceps auritus</i>	Horned Grebe	Grebe cornu	Zambullidor comudo	-----To be assessed in Version 2 of the North American Waterbird Conservation Plan-----
3740	191	<i>Ixobrychus exilis</i>	Least Bittern	Blongios minute	Ardeola	-----To be assessed in Version 2 of the North American Waterbird Conservation Plan-----
3745	190	<i>Botaurus lentiginosus</i>	American Bittern	Butor d'Amérique	Torcomon	-----To be assessed in Version 2 of the North American Waterbird Conservation Plan-----
3746	--	<i>Botaurus pinnatus</i>	Pinnated Bittern			-----To be assessed in Version 2 of the North American Waterbird Conservation Plan-----
3845	11	<i>Gavia stellata</i>	Red-throated Loon	Plongeon catmarin	Colimbo Gøjirjojo	-----To be assessed in Version 2 of the North American Waterbird Conservation Plan-----
3846	10	<i>Gavia arctica</i>	Arctic Loon			-----To be assessed in Version 2 of the North American Waterbird Conservation Plan-----
3847	10	<i>Gavia pacifica</i>	Pacific Loon		Colimbo Artico	-----To be assessed in Version 2 of the North American Waterbird Conservation Plan-----
3848	7	<i>Gavia immer</i>	Common Loon	Plongeon huard	Colimbo mayor	-----To be assessed in Version 2 of the North American Waterbird Conservation Plan-----
3849	8	<i>Gavia adamsii</i>	Yellow-billed Loon	Huart a bec blanc	Colimbo Piquiamanillo	-----To be assessed in Version 2 of the North American Waterbird Conservation Plan-----

ACCIDENTAL OR CASUAL SPECIES^d

S/M#	AOU#	Scientific Name	English Name ^b	French Name ^b	Spanish Name ^b	Occurrence
2781	206.1	<i>Grus grus</i>	Common Crane			Accidental in AK, Alberta and Nebraska, AOU (1998)
2811	--	<i>Micropteryx schomburgkii</i>	Ocellated Crane			One record from Costa Rica, AOU (1998)
2864	--	<i>Crex crex</i>	Common Crane			Casual on Baffin Island, along Atlantic Coast of N. America, Bermuda, AOU (1998)
2889	--	<i>Porzana porzana</i>	Spotted Crane			Accidental in Lesser Antilles, AOU (1998)
2918	4081	<i>Porphyrio flavirostris</i>	Azure Gallinule			Accidental in Trinidad and NY, AOU (1998)

ACCIDENTAL OR CASUAL SPECIES (continued)

S/M#	AOU#	Scientific Name	English Name ^b	French Name ^b	Spanish Name ^b	Occurrence
2929	---	<i>Falca atra</i>	Eurasian Coot (Common)			Included with other coots in US hunting regulations. Casual or accidental in AK, Labrador, Quebec and Northern Mariana Islands, AOU (1998)
2901	---	<i>Porzana cinerea</i>	White-browed Crane			Accidental on Guam (Pratt et al. 1987)
3192	54.2	<i>Larus belcheri</i>	Black-tailed Gull	Goéland siméon		Casual in Panama, also FL
3194	54.1	<i>Larus crassirostris</i>	Black-tailed Gull	Goéland à queue noire		Accidental or casual in AK, coastal British Columbia, southern CA, Belize, MD. Slight reports for Aleutians, southern Manitoba, RI and VA
3195	---	<i>Larus modestus</i>	Gray Gull	Goéland gris		Accidental off Costa Rica and Colombia; slight reports for Panama
3195.1	---	<i>Larus californicus</i>	Yellow-legged Gull	Goéland leucophée		Casual in MD and DC; accidental in Quebec and Newfoundland
3262	---	<i>Sterna superciliosa</i>	Yellow-billed Tern	Sterne argentée		Accidental in Panama
3273	---	<i>Chlidonias leucorhynchus</i>	Whiskered Tern	Guifette moustac		Accidental in NJ, DE and Barbados
3274	78	<i>Chlidonias leucopterus</i>	White-winged Tern	Guifette leucoptère		Accidental or casual in AK, Manitoba, WI, Ontario, Quebec, New Brunswick, VT, MA, NY, NJ, DE, VA, Bahamas, Virgin Islands, Barbados, Guam, northern Marianas and Palau; slight reports from IN and GA
3276	---	<i>Phaethusa simplex</i>	Large-billed Tern	Sterne à gros bec		Casual in Panama; accidental in Bermuda, Cuba and Aruba
3283	---	<i>Larosterna inca</i>	Inca Tern	Sterne inca		Casual off Pacific coast of Panama
3283.1	---	<i>Brachyrhamphus perdix</i>	Long-billed Murrelet	Guillemot à long bec		Casual in interior N. America (AK, CA, MN, CO, AR, IN, OH, Quebec, St. Lawrence River, MA, NC, SC, FL; accidental in coastal CA
3639	---	<i>Sula variegata</i>	Peruvian Booby	Fou varié		Casual off Pacific coast of Panama
3691	196.1	<i>Egretta garzetta</i>	Little Egret	Aigrette garzette		Accidental in Quebec, Newfoundland, Nova Scotia, NH, MA, VA, Bermuda, Puerto Rico, St. Lucia, Martinique, Trinidad, Suriname
3695	196.2	<i>Egretta alophas</i>	Chinese Egret	Aigrette de Chine		Accidental in AK
3698	195	<i>Ardea cinerea</i>	Gray Heron	Héron cendré		Casual in Lesser Antilles, Trinidad
3738	---	<i>Icthyophaga sinensis</i>	Yellow Bittern	Blongios de Chine		Accidental in AK
3763	---	<i>Theristicus caudatus</i>	Buff-necked Ibis	Ibis mandore		Accidental in Panama
3861	---	<i>Pterodroma macgillivrayi</i>	Fiji Petrel	Pétrel à ailes noires		Not listed in 1998 AOU
3863	100.2	<i>Pterodroma nigripennis</i>	Black-winged Petrel	Pétrel de Stejneger		Casual in Hawaiian waters
3872	---	<i>Pterodroma longirostris</i>	Stejneger's Petrel	Pétrel de Stejneger		Ranges in waters between Hawaii and N. America; accidental in Hawaiian islands and off CA and south of Clipperton Island
3880	100.1	<i>Pterodroma ultima</i>	Murphy's Petrel	Pétrel de Murphy		Ranges at sea north to Hawaiian islands; off CA and Mexico and casually off WA and OR. Also off British Columbia and possibly Alaska
3899	101.1	<i>Bulweria fallax</i>	Jouanin's Petrel	Pétrel de Jouanin		Accidental in Hawaiian Islands
3901	---	<i>Procellaria parkinsoni</i>	Parkinson's Petrel	Pétrel de Parkinson		Ranges in waters off Central America
3905	88.1	<i>Calonectris leucomegas</i>	Streaked Shearwater	Puffin leucoméga		Casual in California and Hawaiian Islands
3921	92.1	<i>Puffinus assimilis</i>	Little Shearwater	Petit Puffin		Casual or accidental in Hawaiian Islands, Nova Scotia, SC. Slight reports for Puerto Rico and NC
3929	81.1	<i>Diomedea exulans</i>	Wandering Albatross	Albatros hurleur		Accidental off CA and Panama
3936	82.2	<i>Thalassarche melanophris</i>	Black-browed Albatross	Albatros à sourcils noirs		Sight reports (none satisfactory) for Atlantic waters off N. America from Newfoundland to FL
3937	82.3	<i>Thalassarche cauta</i>	Shy Albatross	Albatros à cape blanche		Accidental off coast of WA
3939	83	<i>Thalassarche chlororhynchus</i>	Yellow-nosed Albatross	Albatros à nez jaune		Casual or accidental in Quebec, New Brunswick, ME, NY, MD, FL, LA and TX. Slight reports off Newfoundland, ME, south to FL
3942	---	<i>Phoebastria palpestrata</i>	Light-mantled Albatross	Albatros fuligineux		Accidental off central CA
3946	111	<i>Peleadromia marina</i>	White-faced Storm-Petrel	Océanite frégate		Casual in western Atlantic off N. America from MA to NC
3950	104	<i>Hydrobates pelagicus</i>	European Storm-Petrel	Océanite tempête		Accidental in Nova Scotia
3958	---	<i>Oceanodroma markhami</i>	Markham's Storm-Petrel	Océanite de Markham		Casual north to Clipperton Island, on western coast of Coast Rica and western Panama

^aArranged by S/M # = Sibley & Monroe's numbering system (Monroe, Burt L. Jr. and Charles G. Sibley, 1993, A World Checklist of Birds, Yale University Press, New Haven, CT). Note: Non-integer values were created for this Plan.

AOU # = American Ornithologists' Union numbering system. (AOU, 1998, Checklist of North American Birds, 7th edition, American Ornithologists' Union, Washington, DC).

--- = AOU numbering system has been discontinued, number not assigned.

^bCommon names were compiled from AOU (1998), AOU's Birds of North America accounts, Native Names of Mexican Birds (Birkenstein, Lillian R. and Roy E. Thomason, 1981, USDOI-FWS, Resource Publication 139, Washington, DC) and regional workshops. It is recognized that many additional common names exist.

^cConservation Status Assessment Protocol used for colonial breeders is presented in Appendix 2. Included are definitions for factor scores (Population Trend (PT), Population Size (PS), Threats to Breeding (TB), Threats to Non-breeding (TN), Breeding Distribution (BD), Non-breeding Distribution (ND)) and conservation concern categories.

na not applicable. Species does not breed within the Plan area.
 ? unknown
 * Reflects range due to unknown factor score
 ** Recommended by specialist group

^dAccidental and casual occurrences are defined by AOU 1998 and/or expert opinion.
 Accidental - one or two records in the checklist area and is literally accidental to the area and unlikely to occur regularly.
 Casual - two or a few records in the checklist area but not enough to constitute regular occurrence. (Subsequent records are improbable).

CONSERVATION STATUS ASSESSMENT PROTOCOL

for COLONIAL WATERBIRDS

Assessment Process

A committee developed a process for assigning colonial birds to categories of conservation concern. This protocol was adapted from the Partners in Flight and U.S. Shorebird Conservation Plan guidelines and accommodates the special conservation issues of species that aggregate during breeding season and/or utilize extensive marine habitats. Conservation status was determined by evaluating six factors that reflect vulnerability to population decline. These factors were scored and each species was assigned to a category of conservation concern using a step-wise categorization process. All factor scores were derived within the spatial context of the Plan area (e.g., they do not reflect global status for those species occurring outside of the Plan area). Moreover, factor scores are relative to each other and are not benchmarks, meaning that species will occur in all categories, including those of lower conservation concern.

Factor Scores

Six factors were considered when evaluating the conservation status of a species at the continental scale. Three factors are based on quantitative information (Population Size, Breeding Distribution, Non-breeding Distribution) and three on qualitative information (Population Trend, Threats to Breeding Populations, Threats to Non-breeding Populations). All factors are scaled from 1 to 5, with 5 indicating greatest vulnerability. Each species was assigned to a category of conservation concern based on these factor scores.

Population Trend (PT): This factor reflects estimated population trends based on existing information. The time period over which trend was estimated for most species was 1970 to present.

- 5 biologically significant population decline
- 4 apparent population decline
- 3 apparently stable population
- 2 apparent population increase
- 1 biologically significant population increase

Population Size (PS): This factor provides information on the current (1990-present) abundance of each species within North America. Log-transformed population data produced a normal distribution, and the 1 to 5 scale represents quintiles of the range of log-transformed values.

- 5 up to 480 individuals
- 4 480 – 5,800 individuals
- 3 5,800 – 69,200 individuals
- 2 69,200 – 832,000 individuals
- 1 832,000 – 10,000,000 individuals

Threats to Breeding (TB): This factor rates the threats impacting most or all of the total North American population of each species during their breeding season. The importance of vulnerability due to concentration (coloniality) was considered when scoring this factor. Species that do not breed in North America received a Not Applicable (NA) for this score.

- 5 Known threats are actually occurring and can be documented; concentration results in actual risk
- 4 Significant potential threats exist, but have not actually occurred; concentration results in high potential risk
- 3 No known threats, or information not available; concentration not a risk
- 2 Threats assumed to be low from all factors including concentration
- 1 Demonstrably secure

Threats to Non-breeding (TN): This factor rates the threats known to exist for each species during their non-breeding season. The scores are the same as for the Threats to Breeding factor, but without the additional risk due to concentration during breeding.

Breeding Distribution (BD): This factor reflects the vulnerability to population loss due to a small breeding distribution. Total *land-based* breeding area in North America was estimated in square kilometers. Breeding ranges were determined using range maps (primarily from Harrison, P. Seabirds: an identification guide. Boston: Houghton Mifflin Company; 1985. 448 p. and from the American Ornithological Union's Birds of North America accounts). The 1 to 5 scale was created with log-transformed data. Species that do not breed in North America receive a Not Applicable (NA) for this score.

- 5 highly restricted (up to 450,000 km²)
- 4 local (450,000 km² – 1,500,000 km²)
- 3 intermediate (1,500,000 km² – 5,000,000 km²)
- 2 widespread (5,000,000 km² – 16,000,000 km²)
- 1 very widespread (16,000,000 km² – 52,500,000 km²)

Non-breeding Distribution (ND): This factor reflects the vulnerability to population loss due to small non-breeding distribution, that is, the total area occupied by non-breeding birds (including wintering, migratory, and in some cases breeding areas) in North America. Non-breeding ranges were determined using the standardized procedures and the sources described above.

- 5 highly restricted (up to 1,300,000 km²)
- 4 local (1,300,000 km² – 4,200,000 km²)

- 3 intermediate (4,200,000 km² – 13,600,000 km²)
- 2 widespread (13,600,000 km² – 44,000,000 km²)
- 1 very widespread (44,000,000 km² – 140,000,000 km²)

Categories of Conservation Concern

Five categories of conservation concern were developed, and species were assigned to them using a categorical approach. The categories and the series of categorization rules are presented below. Some species could not be categorized because inadequate data were available to assess risk.

1. Highly Imperiled: This includes all species with significant population declines and either low populations or some other high risk factor.

Rule 1a. PT = 5 *and* either PS, TB, TN, or BD = 5

2. High Concern: Species that are not Highly Imperiled. Populations of these species are known or thought to be declining, and have some other known or potential threat as well.

Rule 2a. PT = 4 or 5 *and* either PS, TB, TN, or BD = 4 or 5; or

Rule 2b. PS = 4 or 5 *and* either TB or TN = 4 or 5

3. Moderate Concern: Species that are not Highly Imperiled or High Concern. Populations of these species are either a) declining with moderate threats or distributions; b) stable with known or potential threats and moderate to restricted distributions; or c) relatively small with relatively restricted distributions.

Rule 3a. PT = 5 *and* either PS, TB, TN, BD, or ND > 1; or

Rule 3b. PT = 4 *and* either PS, TB, TN, BD, or ND > 2; or

Rule 3c. PT = 3 *and* either PS, TB, TN, BD, or ND = 4 or 5; or

Rule 3d. PS = 4 or 5 *and* either BD or ND > 3

4. Low Concern: Species that are not Highly Imperiled, High Concern or Moderate Concern. Populations of these species are either a) stable with moderate threats and distributions; b) increasing but with known or potential threats and moderate to restricted distributions; or c) of moderate size with known or potential threats and moderate to restricted distributions.

Rule 4a. PT = 3 *and* either PS, TB, TN, BD, or ND = 3; or

Rule 4b. PT = 2 *and* either PS, TB, TN, BD, or ND = 4 or 5; or

Rule 4c. PS = 3 *and* either TB, TN, BD, or ND = 4 or 5

5. Not Currently At Risk: All other species for which information was available.

Rule 5: Does not meet any previous rule

Information Lacking: If both Population Trend and Population Size could not be estimated, species were not ranked.

APPENDIX 3

Distribution and activity of colonial waterbird species presented by Bird Conservation Regions (BCRs) and adjacent Pelagic Bird Conservation Regions (PBCRs, shown in parentheses). Activities are: b = breeding; w = wintering; m = migratory/dispersal; p = occurs pelagically during wintering and/or non-breeding. Note: U.S. Pacific Islands are included with BCR 67, and mx = interior Mexican BCRs combined (43-56, 58-61, 65, 66). BCRs have not been established in the Caribbean and Central America.

	Bird Conservation Region (BCR) Number	Great Skua <i>Stercorarius skua</i>	South Polar Skua <i>Stercorarius macrornithus</i>	Pomarine Jaeger <i>Stercorarius pomarinus</i>	Parasitic Jaeger <i>Stercorarius parasiticus</i>	Long-tailed Jaeger <i>Stercorarius longicaudus</i>	Black Skimmer <i>Rynchops niger</i>	Heermann's Gull <i>Larus heermanni</i>	Mew Gull <i>Larus canus</i>	Ring-billed Gull <i>Larus delawarensis</i>	California Gull <i>Larus californicus</i>	Great Black-backed Gull <i>Larus marinus</i>	Glaucous-winged Gull <i>Larus glaucescens</i>
Aleutian/Bering Sea Islands (East Bering Sea)	1		p	p	bp				b				bw
Western Alaska (East Bering Sea)	2		p	bp	bp	bp			b				bw
Arctic Plains and Mountains (Chukchi & Beaufort Seas, also Arctic Ocean and Hudson Bay)	3			bp	bp	bp			b			b	b
Northwestern Interior Forest	4					b			b				bw
Northern Pacific Rainforest (Gulf of Alaska, California Current)	5		p	p	bp	p		wm	bw	bwm	wm		bw
Boreal Taiga Plains	6				b				bm	b	bm		
Taiga Shield and Hudson Plains (Newfoundland-Labrador Shelf, also Hudson Bay)	7			p	bp	p			b	b	b	b	
Boreal Softwood Shield (Newfoundland-Labrador Shelf)	8	p	p	p		p			b	b	b	bw	
Great Basin	9								wm	bwm	bwm		b
Northern Rockies	10								m	bwm	bwm		
Prairie Potholes	11									bm	bm		
Boreal Hardwood Transition	12									b		bw	
Lower Great Lakes/St. Lawrence Plain	13									bw		bw	
Atlantic Northern Forest (Scotian Shelf, NE US Continental Shelf)	14	p	p	p	p	p				bm		bw	
Sierra Nevada	15									w	bwm		
Southern Rockies/Colorado Plateau	16									wm	bwm		
Badlands and Prairies	17									bm	bm		
Shortgrass Prairie	18									w	bwm		
Central Mixed-grass Prairie	19									w			
Edwards Plateau	20									w			
Oaks and Prairies	21									w			
Eastern Tallgrass Prairie	22									wm		w	
Prairie Hardwood Transition	23									bw		w	
Central Hardwoods	24									wm			
West Gulf Coastal Plain/Ouachitas	25									w			
Mississippi Alluvial Valley	26						b			w			
Southeastern Coastal Plain (SE US Continental Shelf, Gulf of Mexico)	27	p	p	p	p	p	bw			w		bw	
Appalachian Mountains	28									m		w	
Piedmont	29									w		w	
New England/Mid-Atlantic Coast (NE US Continental Shelf)	30	p	p	p	p	p	b			w		bw	
Peninsular Florida (SE US Continental Shelf, Gulf of Mexico)	31		p	p	p	p	bw			w		w	
Coastal California (California Current)	32		p	p	p	p	bw	w	w	w	w		w
Sonoran and Mohave Deserts	33						bw	bw		w	wm		w
Sierra Madre Occidental	34									w			
Chihuahuan Desert	35									w			
Tamaulipan Brushlands (Gulf of Mexico)	36									w			
Gulf Coastal Prairie (Gulf of Mexico)	37						bw			w			
Islas Marias (Gulf of California)	38												
Sierras de Baja California	39									w	m?		
Desierto de Baja California (California Current, Gulf of California)	40		p	p	p	p		bw	w	w	w		w
Islas del Golfo de California (Gulf of California)	41							bw		w	w		w
Sierra y Planicies de El Cabo (California Current, Gulf of California)	42		p	p	p	p		bw		w	w		w
Isla Cozumel (Caribbean Sea)	57												
Archipiélago de Revillagigedo (Pacific Central-American Coastal)	62			p	p	p							
Isla Guadalupe (California Current)	63			p	p	p							
Arrecife Alacranes (Caribbean Sea)	64												
Hawaii (Insular Pacific-Hawaiian)	67		p										
(Atlantic)	atl	p	p	p	p	p							
(Pacific)	pac		p	p	p	p							
Caribbean Islands (Caribbean Sea)	car			p	p								
Central America (Caribbean Sea, Pacific Central-American Coastal)	cen		p	p	p	p	w						
Mexico (Gulf of Mexico, Pacific Central-American Coastal)	mx		p	p	p	p	bw	bw		w	w		

Bird Conservation Region (BCR) Number	Western Gull <i>Larus occidentalis</i>	Yellow-footed Gull <i>Larus livens</i>	Glaucous Gull <i>Larus hyperboreus</i>	Iceland Gull <i>Larus glaucoideus</i>	Thayer's Gull <i>Larus thayeri</i>	Herring Gull <i>Larus argentatus</i>	Slaty-backed Gull <i>Larus schistisagus</i>	Lesser Black-backed Gull <i>Larus fuscus</i>	Black-headed Gull <i>Larus ridibundus</i>	Bonaparte's Gull <i>Larus philadelphia</i>	Laughing Gull <i>Larus atricilla</i>	Franklin's Gull <i>Larus pipixcan</i>	Little Gull <i>Larus minutus</i>	Ivory Gull <i>Reggiphila etarnea</i>	Ross's Gull <i>Rhodostelitta rosea</i>	Sabine's Gull <i>Xema sabini</i>	Black-legged Kittiwake <i>Rissa tridactyla</i>	Red-legged Kittiwake <i>Rissa brevirostris</i>	Gull-billed Tern <i>Sterna fuscata</i>	Caspian Tern <i>Sterna caspia</i>	Royal Tern <i>Sterna maxima</i>	Elegant Tern <i>Sterna elegans</i>	Great Crested Tern <i>Sterna bergii</i>	Sandwich Tern <i>Sterna sandwicensis</i>	Roseate Tern <i>Sterna dougalli</i>	Common Tern <i>Sterna hirundo</i>	Arctic Tern <i>Sterna paradiisaea</i>
1			w			bw				b							bp	bp								m	bp
2			bw			bw	b			bm				p		bp		p		b						m	bp
3			b	b	bm	b							bp	bp	bp	b										m	bp
4					m	b				b							p										b
5	bw		wm		wm	bwm				wm	m	w				p	bp	p			bm		m			m	bp
6					m	bm				b		b									bm					b	b
7			bw	w	m	b				bm		b	p	p	p	b					bm						b
8			w	w	m	bw		w	bw	bm			p		p	bp					bm					b	b
9						wm				m		bm									bm					bm	
10					m	bwm				bm		bm									bm					m	
11						bm				bm		bm									bm					b	
12			w			bw				wm	m	b									bm					b	
13			w	w		bw				wm	m	bw									bm					b	
14			w	w		bw		w	b?w	wm	b		w			p	bp				m			b	b	bp	
15					m	m				m											bm						
16						wm				m		bm														m	
17					m	m				m		m									bm						
18						wm				m		m														m	
19						wm				m		m														m	
20						wm				m		m															
21						w				w		m															
22			w			bwm				m											bm					m	
23			w			bwm				wm	m	b									bm					m	
24						wm				wm	m										m					m	
25						w				wm	m										m					m	
26						w				w		m									b	m				m	
27				w		bw		w		wm	bw		w				p		bw	bw	bw	bw			bw	m	bm
28						m				m											m					m	
29						w				m											m					m	
30			w	w		bw		w	b?w	w	b		w				p		b	bm	b			b	bm	b	bp
31						w		w		wm	bw		w				p		bw	bw	bw			bw	bm	m	
32	bw					w				w		m	w			p	p		b	bw	bw	bm			m	p	
33		w				wm				wm	b									bw	bw	bw	b		m		
34						m				wm	w										m						
35						m				m	w										m						
36						wm				w	w	m								bw	w				m		
37						w		w		w	bw	m	w							bw	bw	bw			bw	bm	
38																											
39						w																					
40	bw	w			w	w				w	w					p	p			bw	bw	b			m	p	
41		bw			w	w					w									w	bw	b					
42	w	w				w				w	w					p				w	w	b			m		
57												m															
62																											p
63																											p
64												m															
67																							bp				
atl																	p										p
pac																	p										p
car						w				wm	bw	m					p		b	wm	bw			bw	bm	bm	
cen						w				wm	w	m				p			w	wm	bw	wm		bw		m	p
mx		w				wm				wm	bw	m				p			bw	wm	bw	bm		bw		m	p

Bird Conservation Region (BCR) Number	Least Auklet <i>Aethia pusilla</i>	Rhinoceros Auklet <i>Cerorhinca monocerata</i>	Atlantic Puffin <i>Fratrca arctica</i>	Horned Puffin <i>Fratrca omicralata</i>	Tufted Puffin <i>Fratrca carhata</i>	Snail Kite <i>Rostrhanus socialis</i>	Eared Grebe <i>Podiceps nigricollis</i>	Western Grebe <i>Aechmophorus occidentalis</i>	Clark's Grebe <i>Aechmophorus clarkii</i>	Red-billed Tropicbird <i>Phaethon aethereus</i>	Red-tailed Tropicbird <i>Phaethon rubricauda</i>	White-tailed Tropicbird <i>Phaethon lepturus</i>	Northern Gannet <i>Morus bassanus</i>	Blue-footed Booby <i>Sula nebouxi</i>	Masked Booby <i>Sula dactylatra</i>	Nazca Booby <i>Sula granti</i>	Red-footed Booby <i>Sula sula</i>	Brown Booby <i>Sula leucogaster</i>	Anhinga <i>Anhinga anhinga</i>	Brandt's Cormorant <i>Phalacrocorax penicillatus</i>	Neotropic Cormorant <i>Phalacrocorax brasilianus</i>	Double-Crested Cormorant <i>Phalacrocorax auritus</i>	Great Cormorant <i>Phalacrocorax carho</i>	Red-faced Cormorant <i>Phalacrocorax urile</i>	Pelagic Cormorant <i>Phalacrocorax pelagicus</i>	Reddish Egret <i>Egretta rufescens</i>	Tricolored Heron <i>Egretta tricolor</i>	
1	bp	b		bp	bp																							
2	bp	b		bp	bp																							
3			b	bp	bp																					b		
4					bp																							
5		bp		bp	bp		wm	bwm	bw												bwm							
6							b	b	b																			
7			bp																									
8			bp											bp														
9							bwm	bw	bw																			
10							b	b	b																			
11							b	b	bm																			b
12																												
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14			bp											bp														
15							b	b	b																			
16							bwm	b	b																			
17							b	b	b																			
18							bw	b	b																			
19							bw	b	b																			
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27						bw								p														bw
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30			p																									b
31						bw								p	bp				p	bw							bw	bw
32		bp			bp		bw	bw	bw	p											bw					bw		w
33							w	bw	bw	p											w	bw	bw			bw	bw	
34							bw	bw	bw													bw						
35							w	bw	bw													bw	wm					
36							w															bw	w					bw
37							w	w	w					p					p	bw		bw	w				bw	bw
38																												
39							w	bw	bw																			w
40		p					w	w	w	bp					bp	p			p		bw	bw	bw			w	bw	bw
41							w	w		bp					bp	bp					bw		bw				bw	bw
42							w	w	w	bp					bp	p					w						bw	w
57																												
62																												
63																												
64																						bw						
67											bp	bp																
atl			p																									
pac																												
car							bw			bp																	bw	bw
cen							bw	w		p																	bw	bw
mx							bw	bw	bw	bw	p																bw	bw

Bird Conservation Region (BCR) Number	Little Blue Heron <i>Egretta caerulea</i>	Western Reef-Heron <i>Egretta gilvans</i>	Snowy Egret <i>Egretta thula</i>	Capped Heron <i>Ptilerodius pileatus</i>	Great Blue Heron <i>Ardea herodias</i>	Cocoi Heron <i>Ardea cocoi</i>	Great Egret <i>Ardea alba</i>	Cattle Egret <i>Bubulcus ibis</i>	Straated Heron <i>Butorides striatus</i>	Green Heron <i>Butorides virescens</i>	Agami Heron <i>Agamia agami</i>	Yellow-crowned Night-Heron <i>Nycticorax nycticorax</i>	Black-crowned Night-Heron <i>Nycticorax nycticorax</i>	Boat-billed Heron <i>Cochlearius cochlearius</i>	Bare-throated Tiger-Heron <i>Tigrisoma mexicanum</i>	Fasciated Tiger-Heron <i>Tigrisoma fasciatum</i>	Rufescent Tiger-Heron <i>Tigrisoma lineatum</i>	Greater Flamingo <i>Phoenicopterus ruber</i>	White Ibis <i>Eudocimus albus</i>	Scarlet Ibis <i>Eudocimus ruber</i>	Glossy Ibis <i>Plegadis falcinellus</i>	White-faced Ibis <i>Plegadis chihi</i>	Green Ibis <i>Mesentornis cayennensis</i>	Roseate Spoonbill <i>Ajaja ajaja</i>	American White Pelican <i>Pelecanus erythrorhynchos</i>	Brown Pelican <i>Pelecanus occidentalis</i>	Wood Stork <i>Mycteria americana</i>		
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12					b		bm	bm		b		bm	bw																
13					bw		bm	bm		b			b																
14	bm		b		bw		m	m		b			b																
15					m			m		m			bw																
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20	b		m		bw		w	m		bw			bw																
21	b		bm		bw		bw	m		bw			b	bw															
22	m		m		bw		bm	bm		b		bm	bw																
23			bm		bw		bm	bm		b		bm	bw																
24	bm		b		bw		bm	bm		b		b	bw																
25	b		b		bw		bw	bwm		b		b	bw																
26	bw		bw		bw		bw	bwm		b		bw	bw																
27	bw		bw		bw		bw	bw		bw		bw	bw																
28	m				bw		bm	bm		b		bm																	
29	m		m		bw		bm	bm		b		m	bw																
30	bw		bw		bw		bw	bm		b		bm	bw																
31	bw		bw		bw		bw	bw		bw		bw	bw																
32	wm		bw		bw		bw	bm		bw			bw																
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34			bwm		bw		bw	bm		bw			bw																
35			bwm		bw		w	m		bw			bw																
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cen	b?w		bw		w	bw	bw	bw	bw	bw	bw	bw	bw	bw	bw	bw	bw	bw	bw	bw	w	bw	bw	bw					
mx	bw		bw		bw		bw	bw		bw	bw	bw	bw	bw	bw	bw	bw	bw	bw	bw	bw	bw	bw	bw	bw	bw	bw	bw	bw

Bird Conservation Region (BCR) Number	Region																			
1	Jabiru <i>Jabiru mycteria</i>																			
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64																				
67			bp	bp		bp	p	p	bp	p	bp	bp	p	p		bp	bp		p	p
atl					p									p?	p?		p			p
pac			p		p	p	p	p	p	p	p	p	p			p	p	p	p	p
car		bp												bp	bp		p			
cen	bw	bp	p																	p
mx	bw	bp	p																	p

Bird Conservation Region (BCR) Number	Christmas Shearwater <i>Puffinus nativitatis</i>	Maui Shearwater <i>Puffinus puffinus</i>	Newell's Shearwater <i>Puffinus auricularis newelli</i>	Townsend's Shearwater <i>Puffinus auricularis townsendi</i>	Black-vented Shearwater <i>Puffinus opisthomelas</i>	Audubon's Shearwater <i>Puffinus lherminieri</i>	Short-tailed Albatross <i>Phoebastria albatrus</i>	Black-footed Albatross <i>Phoebastria nigripes</i>	Laysan Albatross <i>Phoebastria immutabilis</i>	Wilson's Storm-Petrel <i>Oceanites oceanicus</i>	Polynesian Storm-Petrel <i>Nesofregata filiginosa</i>	Least Storm-Petrel <i>Oceanodroma microsoma</i>	Wedge-rumped Storm-Petrel <i>Oceanodroma tetrys</i>	Band-rumped Storm-Petrel <i>Oceanodroma castro</i>	Leach's Storm-Petrel <i>Oceanodroma leucorhoa</i>	Tristram's Storm-Petrel <i>Oceanodroma tristrami</i>	Black Storm-Petrel <i>Oceanodroma melanota</i>	Ashy Storm-Petrel <i>Oceanodroma homochroa</i>	Fork-tailed Storm-Petrel <i>Oceanodroma furcata</i>	
1							p	p	p						bp					bp
2							p	p	p						bp					bp
3																				
4																				
5							p	p	p						bp			p		bp
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42				p				p				p	p		p		p			
57																				
62				bp					bp											
63					bp		p	bp							bp				p?	
64																				
67	bp		bp			bp	p	bp	bp	p	bp			bp		bp				
atl		p								p					p					
pac	p		p				p	p	p	p				p	p	p				p
car						bp				p					p					
cen						p				p			p	p	p					
mx			p	p	p				p			p	p	p	p		p			

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