

An integrated approach would address multiple taxonomic groups, including shorebirds, marshbirds, colonial waterbirds, and waterfowl. Integrated management is more complex than management for single species or taxonomic groups, and is best addressed as part of a coordinated program. Development of the capacity to conduct integrated training on waterbirds will require substantial material development and technical input. Integrated training for waterbird management would ensure that appropriate state and federal staff have access to the most up-to-date approaches to management of wetland and deepwater habitats for multiple species. The workshops will increase the amount of management activity for waterbirds by increasing awareness and understanding of management opportunities and challenges, and by supporting the use of multiple species management that can benefit many groups of non-game birds. Costs for development of the training program would total \$350,000 with implementation of the program costing approximately \$180,000 per year.

4) Shorebird Sister Schools Program

Development of a national Shorebird Sister Schools program will ensure that public education includes information on the needs of shorebirds and exposes children to their interesting and unusual biology. The Shorebird Sister Schools program has been an extremely effective model for increasing elementary education opportunities on shorebird ecology, migration, and conservation. The program involves schools from throughout the Hemisphere in tracking the annual migration of shorebirds through their respective regions, and has been most active in the Pacific Flyway. This model should be expanded to cover the remainder of the country. Increasing exposure of children to shorebird ecology and conservation will ensure ongoing interest and support for shorebird conservation programs. The program would cost approximately \$270,000 per year to support one national coordinator and three regional coordinators for the Pacific, Atlantic, and Central/Mississippi flyways.

5) Support for Regional Shorebird Plans and Joint Ventures

The Regional Shorebird Conservation Plans summarized above outline the most critical projects and programs needed in each area of the country to support shorebird conservation. Collectively, these projects will ensure that the United States does its part to guarantee that the shorebirds of the Western Hemisphere are protected, and that stable and self-sustaining populations persist. The details describing projects needed in each region are provided in the detailed regional reports. The Shorebird Plan partnership is committed to raising the funds necessary to support these regional projects. Existing Joint Ventures will in most cases serve as the primary delivery partnerships for the shorebird plan, and securing full and permanent funding for current and planned Joint Ventures is a high priority for Shorebird Plan implementation.



*During winter, Black Turnstones, which breed only in Alaska, are specialists of rocky, intertidal habitats along the Pacific coast of the United States and Mexico.
Photo by Mike Patterson.*

NABCI Recommendations for National Programs that Benefit Shorebirds

The North American Bird Conservation Initiative is proposing several important national programs that will benefit bird conservation broadly. Several of these programs are of particular importance for shorebirds, and these are listed below. The Shorebird Plan partnership fully supports all the goals of NABCI, but will play a particularly significant role in supporting the development of the following programs:

1) Increase funding support for the North American Wetlands Conservation Act (NAWCA).

NAWCA has been a major catalyst for migratory bird habitat conservation since 1989. It has been a major conservation success, contributing significantly to the effectiveness and maturation of Joint Venture partnerships developed through the North American Waterfowl Management Plan. However, many worthy projects involving millions of dollars of non-federal funding commitments go uncompleted each year due to insufficient NAWCA funding. NAWCA has never been appropriated at more than half of its authorized funding. One of the most immediate steps to more comprehensively address bird conservation needs should be to maintain full fund for the North American Wetlands Conservation Act.

2) Pass an analog act to NAWCA to support conservation of upland bird habitats.

NAWCA has been a successful model for addressing the needs of wetland habitats for bird conservation. Building upon that model, analogous federal legislation should be passed to address critical upland habitat needs in the U.S. and other countries sharing populations of birds. To facilitate efficiency and integrated bird conservation delivery, the existing mechanism of the North American Wetlands Conservation Council should be used as the foundation for this broadened, more inclusive, integrated conservation approach. This program would provide support for conservation of grassland nesting shorebird habitat.

3) Increase funding, federal and non-federal, for other partner-based habitat conservation programs.

Increased support is needed for programs in several federal agencies, e.g., USFWS's Partners for Fish and Wildlife program, USFWS's Coastal program, and USDA Forest Service's Taking Wing program. Increased funding is essential at the state level where much of the nation's habitat conservation is focused. The challenge cost share programs of several federal agencies also serve as effective catalysts for bird conservation delivery. These programs should be expanded to adequately take advantage of the public and private non-federal partners willing and desiring to help fund bird habitat conservation.

4) Contribute to improved habitat conservation in Western Hemisphere nations sharing U.S. bird populations.

Just as bird conservation needs vary across regions of the U.S., needs and successful approaches differ across international borders. However, the U.S. shares many bird populations with other nations, and should partner with them to comprehensively address the full range of habitat and management needs of those shared populations. Funding for federal programs supporting habitat conservation outside the U.S., e.g., North American Wetlands Conservation Act international projects, the Borderlands Program, and USFWS's International Affairs Small Grants Program, should be increased to more adequate levels, with appropriate levels of matching non-federal funds, and funding for the Western Hemisphere Shorebird Reserve Network should be increased to support the inclusion of critical sites in other countries.

5) Develop and implement comprehensive monitoring and assessment capabilities to fully address bird conservation needs.

Effective management decisions must be based on sound understanding of the status and trends of bird populations and their relationships to habitats throughout their annual life cycles. Existing monitoring and assessment programs for migratory bird populations should be enhanced, and similar programs for birds for which little or no reliable data are available should be developed.

6) Cooperatively enhance management capabilities for birds at all geographic scales based on sound science, measurable conservation objectives, and an adaptive process of planning, implementation, and evaluation.

Evaluation of relationships among habitats, management actions, and population responses must be an ongoing activity to refine and integrate bird conservation practices. Capabilities of existing migratory bird research programs should be restored and enhanced, and new programs should be developed for bird groups having little or no current scientific support. Adaptive ecological models for important breeding, wintering, and migratory staging areas for major bird groups should be identified and developed, guided cooperatively by groups such as the USFWS/USGS Adaptive Management and Assessment Team.

7) Strengthen cooperation and funding among land management agencies and land-related regulatory agencies that directly and indirectly affect bird conservation.

Actions of federal and state agencies affect bird conservation in important ways. In many cases, however, existing funds for natural resource conservation are not expended as effectively as possible to gain the broadest resource benefits, including birds. Improved coordination within and among many of these agencies could lead to improved bird conservation. A strategic plan for the U.S. Departments of Agriculture and Interior should be developed to enhance funding capabilities and delivery of habitat protection and restoration activities governed by provisions of



the Farm Bill, recognizing statutory modifications as appropriate. Due to their impacts on land management, comprehensive and integrated bird conservation commitments and strategies should also be established, in consultation with the Department of Interior, by the U.S. Departments of Transportation, Defense, Energy, the Federal Energy Regulatory Commission, and Environmental Protection Agency.

8) Fully fund the 10 existing bird conservation Joint Ventures, and support the development of 10-20 new Joint Venture partnerships.

Several North American Waterfowl Management Plan Joint Ventures already have taken steps to be the delivery mechanism for other migratory bird initiatives. To carry out, coordinate, and communicate the regional planning, monitoring, evaluation, and delivery of actions necessary for integrated bird conservation, the 10 existing regional Joint Ventures should be fully funded. Further, to deliver the integrated conservation actions of all bird conservation initiatives in areas not included in existing joint ventures, 10-20 new Joint Venture partnerships should be developed.

9) Conduct cost-effective, integrated delivery of bird conservation on a regional basis.

Comprehensive bird conservation joint ventures, from coast-to-coast, are necessary for cost-effective, integrated conservation of bird populations and habitats. This must be facilitated through a coordinated planning process within each bird initiative to step down identified national needs and priorities to regional action plans, and to identify individual management actions generating the greatest benefits. Although some broadly beneficial programs and management actions can be identified now, regionalization should be accelerated and finalized.

10) Develop an effective outreach and education program that promotes enhanced wild bird-related recreational and educational opportunities for the American people.

The support and participation of the American public as partners in this national and international bird conservation effort is essential. Funding and other resources required to achieve the vision of national bird conservation will not flow without their support. However, rapidly growing participation in bird-related recreational pursuits clearly demonstrates the public's strong collective interest in birds. With the majority of U.S. bird habitats in private ownership, the active, voluntary participation of landowners and the general public in delivering management actions is a cornerstone of successful bird conservation. The support of the American public has been critical to the successes achieved to date, and must be maintained and strengthened through an effective, partner-driven outreach and education program about bird populations, their habitats, and responsible natural resource conservation.



Bar-tailed Godwits are widespread across Northern Europe, but also breed in smaller numbers in Alaska. The Alaskan-breeding birds winter along with the old-world populations in southeast Asia, Australia, and New Zealand. Photo by Tim Bowman.

Part 7: *List of Shorebird Conservation Plan Technical Reports*

Regional Shorebird Conservation Plan Reports

Alaska
Northern Pacific
Southern Pacific
Hawaii/Pacific Islands
Intermountain West
Northern Plains/Prairie Potholes
Central Plains/Playa Lakes
Upper Mississippi Valley/Great Lakes
Lower Mississippi/Western Gulf Coast
Northern Atlantic
Southeastern Coastal Plains-Caribbean

National Shorebird Conservation Plan Technical Reports

A Comprehensive Monitoring Program for North American Shorebirds

National Shorebird Research Needs: A Proposal for a National Research Program and Example High Priority Research Topics

Shorebird Education and Outreach Needs in the United States

National Shorebird Conservation Assessment: Shorebird Conservation Status, Conservation Units, Population Estimates, Population Targets, and Species Prioritization

Estimates of Shorebird Populations in Canada and the Western Hemisphere

The North American Bird Conservation Initiative in the United States: A Vision of American Bird Conservation

All of these technical reports can be downloaded from the U.S. Shorebird Conservation Plan website, at <http://www.manomet.org/USSCP.htm>



Appendix 1. Shorebird Population Estimates and Population Targets

SPECIES	BINOMIAL NAME	POPULATION ESTIMATE	CONFIDENCE	TENTATIVE TARGET	PROPOSED ACTION
Black-bellied Plover	<i>Pluvialis squatarola cyanosurae</i>	150,000	Low	272,700	Halt declines, then restore to calculated 1972 levels.
	<i>P.s. squatarola</i>	50,000	Low	90,900	Increase recommended to compensate for extensive loss of U.S. West Coast intertidal habitat.
American Golden-Plover	<i>Pluvialis dominica</i>	150,000	Low	?	Halt declines, determine extent and then reverse decline with goal of restoring to 1972 levels.
Pacific Golden-Plover	<i>Pluvialis fulva</i>	16,000	Low	16,000	Population change status unknown.
Snowy Plover	<i>Charadrius alexandrinus nivosus (interior)</i>	13,200	Good	13,200	Information lacking on extent of decline; numbers at modestly healthy level, so increase goal not warranted until better information exists.
	<i>Ch. a. nivosus (Pacific)</i>	2,000	Good	3,000	Increase to level called for by recovery plan.
	<i>Ch. a. tenuirostris (Gulf & Caribbean)</i>	500	Good	Recovery plan not completed	Increase to level called for by recovery plan.
Wilson's Plover	<i>Charadrius wilsonia</i>	6,000	Low	10,000	Coastal beach nesting habitat greatly reduced; population small—increase to ensure viability.
Semipalmated Plover	<i>Charadrius semipalmatus</i>	150,000	Low	150,000	Population change status unknown.
Piping Plover	<i>Charadrius melodus circumcinctus (Gt. Plains)</i>	3,300	High	6,000	Monitor nonbreeding season habitat loss, including riverine sandbars, determine historic population size and restore population to same level.
	<i>Charadrius m. melodus (Atlantic)</i>	2,600	Good	4,000	Increase to level called for by recovery plan.
	<i>Ch. m. circumcinctus (Gt. Lakes)</i>	300	Good	300	Population recovery plan calls for 150 breeding pairs.
Killdeer	<i>Charadrius vociferus</i>	2,000,000	Low	2,440,000	Halt declines, then restore to calculated 1980 levels.
Mountain Plover	<i>Charadrius montanus</i>	9,000	Good	20,000	Calculated 1970 population=20,000 based on BBS decline rates.
American Oystercatcher	<i>Haematopus palliatus</i>	7,500	Moderate	?	Coastal beach nesting habitat greatly reduced and at risk; monitor pop. to determine population trends.
Black Oystercatcher	<i>Haematopus bachmani</i>	8,900	Moderate	11,900	Halt declines, determine extent and then reverse decline with goal of restoring to 1970 levels.
Black-necked Stilt	<i>Himantopus mexicanus mexicanus</i>	150,000	Low	150,000	Population change status unknown.
	<i>H. m. knudseni</i>	1,600	Good	1,600	Goal from Endangered Species Recovery Plan is 1,500.
American Avocet	<i>Recurvirostra americana</i>	450,000	Moderate	450,000	Investigate suspected declines.
Greater Yellowlegs	<i>Tringa melanoleuca</i>	100,000	Low	100,000	Population change status unknown.



Appendix 1. Shorebird Population Estimates and Population Targets, cont.

SPECIES	BINOMIAL NAME	POPULATION ESTIMATE	CONFIDENCE	TENTATIVE TARGET	PROPOSED ACTION
Lesser Yellowlegs	<i>Tringa flavipes</i>	500,000	Low	2,400,000	Halt declines, then restoration to calculated 1980 levels.
Solitary Sandpiper	<i>Tringa solitaria cinnamomea</i>	4,000	Poor	>4,000	Investigate suspected declines.
	<i>T. s. solitaria</i>	21,000	Poor	>21,000	Investigate suspected declines.
Willet	<i>Catoptrophorus semipalmatus inomatus</i>	160,000	Poor	160,000	Population change status unknown.
	<i>C. s. semipalmatus</i>	90,000	Poor	90,000	Population change status unknown.
Wandering Tattler	<i>Heteroscelus incanus</i>	10,000	Poor	10,000	Population change status unknown.
Spotted Sandpiper	<i>Actitis macularia</i>	150,000	Poor	150,000	Population change status unknown.
Upland Sandpiper	<i>Bartramia longicauda</i>	350,000	Poor	470,000	Halt decline, then restore to calculated 1980 levels.
Eskimo Curlew	<i>Numenius borealis</i>	<50	Poor	>100%	Determine status. If population exists, manyfold increase necessary for recovery.
Whimbrel	<i>Numenius phaeopus rufiventris</i>	40,000	Low	105,000	Monitor populations and non-breeding season habitat loss.
	<i>N. p. hudsonicus</i>	17,000	Low	42,500	Calculated population in 1972 was 42,500; halt declines, then evaluate restoration to 1972 levels.
Bristle-thighed Curlew	<i>Numenius tahitiensis</i>	10,000	Good	13,300	Calculated population was <13,300; halt declines, then evaluate restoration goals.
Long-billed Curlew	<i>Numenius americanus</i>	20,000	Moderate	28,500	30% loss of Great Plains habitat; restore to 1970 levels; increase by 30%.
Hudsonian Godwit	<i>Limosa haemastica (Hudson's Bay)</i>	36,000	Moderate	36,000	Population change status unknown.
	<i>Limosa haemastica (Alaska)</i>	14,000	Low	18,700	Decline suspected, population small; increase by 25%.
Bar-tailed Godwit	<i>Limosa lapponica</i>	100,000	Moderate	100,000	Population change status unknown.
Marbled Godwit	<i>Limosa fedoa (Gr. Plains)</i>	168,000	Moderate	258,500	Restoration goal based on 35% increase (commensurate with habitat loss); halt declines, determine extent and then reverse decline with goal of restoring loss.
	<i>L. f. beringiae (Alaska)</i>	2,000	Low	2,000	Population change status unknown.
	<i>L. f. fedoa (Hudson's Bay)</i>	1,500	Low	3,000	Population small—double to ensure viability.
Ruddy Turnstone	<i>Arenaria interpres morinella</i>	180,000	Moderate	>180,000	Halt declines, determine extent and then reverse decline with goal of restoring to 1970 levels.
	<i>A. i. interpres (Alaska)</i>	20,000	Poor	20,000	Population change status unknown.
	<i>A. i. interpres (High Arctic Canada)</i>	35,000	Poor	35,000	Population change status unknown.
Black Turnstone	<i>Arenaria melanocephala</i>	80,000	Good	80,000	Population change status unknown.
Surfbird	<i>Aphriza virgata</i>	70,000	Moderate	?	Halt suspected declines, determine extent and reverse with goal of restoring 1970 levels.



Appendix 1. Shorebird Population Estimates and Population Targets, con't.

SPECIES	BINOMIAL NAME	POPULATION ESTIMATE	CONFIDENCE	TENTATIVE TARGET	PROPOSED ACTION
Red Knot	<i>Calidris canutus roseaari</i>	150,000	Moderate	?	Evaluate; winters in So. Am. where intertidal habitat is disappearing with likely effect on population size.
	<i>C. c. rufa</i>	170,000	Good	240,000	Evaluate Delaware Bay counts; halt declines, then restore to 1980 levels.
	<i>C. c. islandica</i>	80,000	Good	?	Evaluate population change; winters in Europe where extensive intertidal habitat loss has occurred in recent decades.
Sanderling	<i>Calidris alba</i>	300,000	Low	1,500,000	Uncertain recovery goal. Population may have recovered somewhat since period during which decline was calculated. Halt decline if ongoing and restore 1972 levels.
Semipalmated Sandpiper	<i>Calidris pusilla</i>	3,500,000	Low	8,200,000	Halt declines, then evaluate restoration to calculated 1972 levels.
Western Sandpiper	<i>Calidris mauri</i>	3,500,000	Good	3,500,000	Halt declines, determine extent and then reverse decline with goal of restoring to 1972 levels.
Least Sandpiper	<i>Calidris minutilla</i>	600,000	Poor	1,400,000	Halt declines, then evaluate restoration to calculated 1972 levels.
White-rumped Sandpiper	<i>Calidris fuscicollis</i>	400,000	Moderate	400,000	Investigate suspected declines and set population goal accordingly.
Baird's Sandpiper	<i>Calidris bairdii</i>	300,000	Moderate	300,000	Population change status unknown.
Pectoral Sandpiper	<i>Calidris melanotos</i>	400,000	Poor	400,000	Population change status unknown.
Purple Sandpiper	<i>Calidris maritima belcheri</i>	15,000	Moderate	15,000	Population change status unknown.
	<i>C. m. maritima</i>	?	Poor	?	None. Non-breeding habitat in Iceland/Europe.
Rock Sandpiper	<i>Calidris ptilocnemis cousei</i>	75,000	Low	75,000	Population change status unknown.
	<i>C. p. ptilocnemis</i>	25,000	Moderate	41,700	30-50% decline suspected, population fairly small; increase by 40% (?).
	<i>C. p. tschuktschorum</i>	50,000	Low	50,000	Population change status unknown.
Dunlin	<i>Calidris alpina pacifica</i>	550,000	Low	>550,000	Halt declines, determine causes and extent of decline, then evaluate goals.
	<i>C. a. arctica</i>	750,000	Low	>750,000	Halt declines, then restore to 1980 levels.
	<i>C. a. hudsonia</i>	225,000	Low	>225,000	Halt declines, determine extent and then reverse decline with goal of restoring to 1970 levels.
Stilt Sandpiper	<i>Calidris himantopus</i>	200,000	Low	200,000	Population change status unknown.
Buff-breasted Sandpiper	<i>Tryngites subruficollis</i>	15,000	Low	150,000	Strong declines suspected; increase by >90%.
Short-billed Dowitcher	<i>Limnodromus griseus caurinus</i>	150,000	Low	?	Population change status unknown.
	<i>L. g. griseus</i>	110,000	Low	204,000	Halt declines, then evaluate restoration to calculated 1972 levels (204,000).
	<i>L. g. hendersoni</i>	60,000	Low	>60,000	Halt declines, determine extent and then reverse decline with goal of restoring to 1970 levels.
Long-billed Dowitcher	<i>Limnodromus scolopaceus</i>	500,000	Poor	500,000	Population change status unknown.



Appendix 1. Shorebird Population Estimates and Population Targets, cont.

SPECIES	BINOMIAL NAME	POPULATION ESTIMATE	CONFIDENCE	TENTATIVE TARGET	PROPOSED ACTION
Common Snipe	<i>Gallinago gallinago</i>	2,000,000	Poor	4,345,000	Restore to calculated 1950 population level.
Wilson's Phalarope	<i>Phalaropus tricolor</i>	1,500,000	Low	2,800,000	Halt declines, then restoration to calculated 1972 levels.
Red-necked Phalarope	<i>Phalaropus lobatus</i>	2,500,000	Poor	5,000,000?	Halt declines, determine extent and then reverse decline with goal of restoring to 1970 levels.
Red Phalarope	<i>Phalaropus fulicaria</i>	1,000,000	Poor	1,000,000?	Halt declines, determine extent and then reverse decline with goal of restoring to 1970 levels.

NOTES:

The population estimates and targets provided here are only a first approximation. In many cases population targets are extremely conservative because available information is limited, and larger population recovery may be needed for some species to meet the overall goals of the Plan. Establishing population targets known to be sufficient for achieving the vision of protecting shorebirds in the United States will require significant funding for the monitoring and research needs outlined in the national Plan, and will result in modified targets that will be revised as more detailed information becomes available. Population estimates and targets will be revised as new information becomes available. Updated information will be posted at the U.S. Shorebird Conservation Plan website at: <http://www.manomet.org/USSCP.htm>.

Population estimates and goals for American Woodcock will be established by the Woodcock Task Force.

CONFIDENCE IN POPULATION ESTIMATES IS RATED AS FOLLOWS:

Poor: A population estimate based on an educated guess.

Low: A population estimate based on broad-scale surveys where estimated population size is likely to be in the correct order of magnitude.

Moderate: A population estimate based on a special survey, or on broad-scale surveys of a narrowly distributed species whose populations tend to concentrate to a high degree either a) in a restricted habitat, or b) at a small number of favored sites. Estimate thought to be within 50% of the true number.

Good: A calculated estimate based on broad-scale mark:recapture ratios or other systematic estimating effort resulting in estimates on which confidence limits can be placed.

High: Number obtained from a dedicated census effort and thought to be accurate and precise.



Appendix 2. Relative Importance of Each Shorebird Planning Region for Each Species

SPEC	SPECIES NAME	PACIFIC				IM WEST	CENTRAL		MISSISSIPPI		EASTERN		
		1	2	3	4	5	6	7	8	9	10	11	12
BBPL	Black-bellied Plover	B,M	M,W	M,W		M,W	m	M	M	M,W	M,w	m	M,W
AGPL	American Golden-Plover	B				m	M	M	M	M	m	m	m
PGPL	Pacific Golden-Plover	B,M			M,W								
SNPL	Snowy Plover		B,M,W	B,M,W		B,M,W		M,B		b,M,W			B,W
WIPL	Wilson's Plover									B,m,w	b		B,W
SEPL	Semipalmated Plover	B,m	M,w	M,w		M,w	M	M	M	M,w	M	m	M,W
PIPL	Piping Plover						B,M	B,M	B,M	M,W	B,m		B,M,W
KILL	Killdeer	b	M,W	B,M,W		B,M,W	B	M,W,B	B,M	B,M,W	B,m,w	b,w	B,W
MOPL	Mountain Plover			M,W		B,m,W	b,m	M,w,B		m,w			
AMOY	American Oystercatcher									b,W	B		B,W
BLOY	Black Oystercatcher	B,W	B,M,W	B,W									
BNST	Black-necked Stilt		m	B,M,W	B	B,M,W	b	B,M		b,M,W	m		B,m,W
AMAV	American Avocet		m	B,M,W		B,M,W	B	M,w,B		b,M,W	m		m,w
GRYE	Greater Yellowlegs	B,M	M,W	M,W		M,W	M	M	M	M,W	M	m	M,W
LEYE	Lesser Yellowlegs	B,m	M	m,w		M,w	M	M	M	M,W	M	m	M,W
SOSA	Solitary Sandpiper	B	m			m	M	M	b,M	M,w	M	m	M
WILL	Willet		m,w	b,M,W		B,M,W	B,M	B,M,w	m	B,M,W	B,M,w		B,M,W
WATA	Wandering Tattler	B	M	M,w	M								
SPSA	Spotted Sandpiper	B	b,m,w	B,M,W		B,M,W	B,M	B,M,w	B,M	b,M,w	B,M	b,m	b,M,W
UPSA	Upland Sandpiper	b				b,m	B	B,M	b,m	M	b,m	m	b,M
ESCU	Eskimo Curlew	m,b						M		M	M		
WHIM	Whimbrel	B,M	M,w	M,w		M		M	m	M	M	m	M,w
BTCU	Bristle-thighed Curlew	B,M			M								
LBCU	Long-billed Curlew		m,w	b,M,W		B,M,W	b	B,M		M,W			m,w
HUGO	Hudsonian Godwit	B,M					M	M	M	M	M		m
BRGO	Bar-tailed Godwit	B,M											
MAGO	Marbled Godwit	B,M	M,w	M,W		b,M,W	B,m	m	b,m	M,W	m	m	M,W
RUTU	Ruddy Turnstone	B,M	M,w	m,w	M	m	m	m	M,w	M,W	M,w	m	M,W
BLTU	Black Turnstone	B,M,w	M,W	M,W									
SURF	Surfbird	B,M,w	M,W	m,w									
REKN	Red Knot	B,M	M	M,W		m			m	M,w	M		M,W
SAND	Sanderling	b,m,w	M,W	M,W		m	m	m	M	M,W	M,w	m	M,W
SESA	Semipalmated Sandpiper	B,M				m	M	M	M	M	M	m	M
WESA	Western Sandpiper	B,M	M,w	M,W		M,W	m	M	m	M,W	m		M,W
LESA	Least Sandpiper	B,M	M,w	M,W		M,W	m	M,W	M	M,W	M	m	M,W
WRSA	White-rumped Sandpiper	B				m	M	M	M	M	M	m	m
BASA	Baird's Sandpiper	B,m		m		M	M	M	M	M	m	m	m
PESA	Pectoral Sandpiper	B,M	m	m		m	M	M	M	M	m	m	M
PUSA	Purple Sandpiper								m		W		w
ROSP	Rock Sandpiper	B,W	m,w	w									

Appendix 2. Relative Importance of Each Shorebird Planning Region for Each Species

SPEC	SPECIES NAME	PACIFIC				IM WEST	CENTRAL		MISSISSIPPI		EASTERN		
		1	2	3	4	5	6	7	8	9	10	11	12
DUNL	Dunlin	B,M	M,W	M,W		M,W	M	m	M	M,W	M,W	m,w	m, W
STSA	Stilt Sandpiper	B	m			m	M	M	M	M,w	m	m	M,w
BBSA	Buff-breasted Sandpiper	m, B	m				M	M	M	M			M
SBDO	Short-billed Dowitcher	B,M	M,W	M,W		m	M	m	M	M,W	M	m	M,W
LBDO	Long-billed Dowitcher	B,M	M,W	M,W		M,W	M	M,W	M	M,W	m	m	m,W
COSN	Common Snipe	B	b,m, W	W,b		B,M,W	b	b,M,W	B,M	M,W	B,M,w	m	M,W
ANWO	American Woodcock						B	B,W	B,M	B,W	B,M,W	b,M,w	B,W
WIPH	Wilson's Phalarope		b,m	b,M		B,M	B	B,M	b,M	M	m	m	M
RNPH	Red-necked Phalarope	B,M	M	M		M	M	m	m	m	M		m
REPH	Red Phalarope	B,M	M,w	M,w		m				m	M		m,w

REGION NUMBER/NAME:

1	Alaska	5	Intermountain West	9	Lower Mississippi/Western Gulf Coast
2	Northern Pacific	6	Northern Plains/Prairie Potholes	10	Northern Atlantic
3	Southern Pacific	7	Central Plains/Playa Lakes	11	Appalachians
4	Hawaii/Pacific Islands	8	Upper Mississippi Valley/Great Lakes	12	Southeastern Coastal Plains–Caribbean

CODE:

B=Breeding, M=Migration, and W=Wintering.

B,M,W=high concentrations, region extremely important to the species relative to the majority of other regions.

B,W,M=common or locally abundant, region important to the species.

b,w,m=uncommon to fairly common, region within species range but occurs in low relative abundance relative to other regions.

Area Importance scores for the Bird Conservation Regions within each Shorebird Planning Region are available at <http://www.manomet.org/USSCP/files.htm>



Appendix 3. National Shorebird Prioritization Scores

SPECIES	PT	RA	TB	TN	BD	ND	CONSERVATION CATEGORY
Black-bellied Plover	5	3	2	2	2	1	3
American Golden-Plover	5	3	2	4	2	3	4
Pacific Golden-Plover	3	5	2	2	5	4	4
Snowy Plover	5	5	4	4	3	4	5
Wilson's Plover	3	5	4	4	4	3	4
Semipalmated Plover	3	3	2	2	1	1	2
Piping Plover	5	5	5	4	5	4	5
Killdeer	5	1	3	3	1	2	3
Mountain Plover	5	5	4	4	5	4	5
American Oystercatcher	3	5	4	4	3	4	4
Black Oystercatcher	3	5	4	3	3	4	4
Black-necked Stilt	3	3	3	2	1	2	2
American Avocet	3	2	3	4	2	3	3
Greater Yellowlegs	3	4	2	2	2	1	3
Lesser Yellowlegs	5	2	2	3	2	1	3
Solitary Sandpiper	3	4	4	2	3	2	4
Willet	3	3	3	3	3	3	3
Wandering Tattler	3	5	2	2	3	2	3
Spotted Sandpiper	3	3	2	2	1	1	2
Upland Sandpiper	5	2	2	4	2	3	4
Eskimo Curlew	5	5	3	4	5	5	5
Whimbrel	5	4	2	2	3	2	4
Bristle-thighed Curlew	3	5	2	4	5	3	4
Long-billed Curlew	5	5	4	4	3	3	5
Hudsonian Godwit	3	4	3	4	4	4	4
Bar-tailed Godwit	3	4	2	4	4	3	4
Marbled Godwit	4	3	4	4	3	3	4
Ruddy Turnstone	4	3	2	4	2	2	4
Black Turnstone	3	4	4	4	5	3	4
Surfbird	4	4	2	4	4	3	4
Red Knot	5	2	2	4	3	3	4
Sanderling	5	2	2	4	2	1	4
Semipalmated Sandpiper	5	1	2	3	3	3	3
Western Sandpiper	5	1	2	4	4	2	4
Least Sandpiper	5	2	2	2	2	2	3
White-rumped Sandpiper	3	2	2	2	3	3	2
Baird's Sandpiper	3	2	2	2	3	3	2
Pectoral Sandpiper	3	2	2	3	2	3	2
Purple Sandpiper	2	5	2	3	3	3	2
Rock Sandpiper	3	3	3	4	5	4	3
Dunlin	5	2	2	3	2	3	3
Stilt Sandpiper	3	3	3	4	3	3	3
Buff-breasted Sandpiper	4	5	3	4	3	4	4
Short-billed Dowitcher	5	2	2	4	3	2	4



Appendix 3. National Shorebird Prioritization Scores, con't.

SPECIES	PT	RA	TB	TN	BD	ND	CONSERVATION CATEGORY
Long-billed Dowitcher	2	2	2	3	4	3	2
Common Snipe	5	1	3	2	1	2	3
American Woodcock	5	1	4	4	2	3	4
Wilson's Phalarope	5	1	3	4	2	5	4
Red-necked Phalarope	4	1	2	3	2	1	3
Red Phalarope	5	1	2	3	2	1	3

SPECIES with SUBSPECIES SCORE	PT	RA	TB	TN	BD	ND	CONSERVATION CATEGORY
Black-bellied Plover	5	3	2	2	2	1	3
<i>Pluvialis squatarola squatarola</i>	5	4	2	2	3	4	4
<i>P.s. cynosurae</i>	U (3)	3	2	4	4	2	3
Snowy Plover	5	5	4	4	3	4	5
<i>Charadrius alexandrinus nivosus</i> (Pacific Coast)	5	5	5	5	5	5	5
<i>C.a. nivosus</i>	4	5	4	4	3	3	4
<i>C. a. tenuirostris</i>	5	5	4	4	5	5	5
Piping Plover	5	5	5	4	4	4	5
<i>Charadrius melodus melodus</i>	5	5	5	4	5	4	5
<i>C. m. circumcinctus?</i> (Great Lakes)	5	5	5	4	5	5	5
<i>C. m. circumcinctus</i> (Great Plains)	5	5	5	4	4	4	5
Black-necked Stilt	3	3	3	2	1	2	2
<i>Himantopus mexicanus</i>	3	4	4	3	2	2	3
<i>H. m. knudseni</i>	3	5	5	5	5	5	4
Solitary Sandpiper	3	5	2	2	3	2	3
<i>Tringa solitaria solitaria</i>	U (3)	5	2	2	2	1	2
<i>T. s. cinnamomea</i>	U (3)	5	2	2	3	2	3
Willet	3	3	3	3	3	3	3
<i>Catoptrophorus semipalmatus semipalmatus</i>	3	4	3	3	4	2	3
<i>C. s. inornatus</i>	U (3)	3	4	3	3	2	3
Whimbrel	5	4	2	2	3	2	4
<i>Numenius phaeopus hudsonicus</i>	5	5	2	3	4	3	5
<i>N. p. rufiventris</i>	U (3)	4	2	3	3	3	3
Hudsonian Godwit	3	4	3	4	4	4	4
<i>Limosa haemastica</i> (Alaska)	U (3)	5	2	4	5	5	4
<i>Limosa haemastica</i> (Hudson Bay)	3	4	3	4	5	5	4
Marbled Godwit	4	3	4	4	3	3	4
<i>Limosa fedoa fedoa</i> (Great Plains)	4	3	4	4	3	3	4
<i>L. f. fedoa</i> (Hudson Bay)	4	5	3	3	5	3	4
<i>L. f. beringiae</i>	3	5	2	4	5	4	4
Ruddy Turnstone	4	3	2	4	2	2	4
<i>Arenaria interpres interpres</i> (Alaska)	U (3)	5	2	4	4	1	3
<i>A. i. interpres</i> (Canada to Europe)	U (3)	4	2	2	2	2	3
<i>A. i. morinella</i>	4	3	2	4	4	2	4



Appendix 3. National Shorebird Prioritization Scores, con't.

SPECIES with SUBSPECIES SCORES	PT	RA	TB	TN	BD	ND	CONSERVATION CATEGORY
Red Knot	5	2	2	4	3	3	4
<i>Calidris canutus rufa</i>	5	3	2	4	4	2	4
<i>C. c. islandica</i>	U(3)	4	2	4	4	3	3
<i>C. c. roselarri</i>	U(3)	3	2	4	4	3	3
Purple Sandpiper	2	5	2	3	3	3	2
<i>Calidris maritima maritima</i>	U(3)	5	2	2	4	3	4
<i>C. m. belcheri</i>	3	5	2	2	4	4	4
Rock Sandpiper	3	3	3	4	5	4	3
<i>Calidris ptilocnemis tschuktschorum</i>	3	4	3	3	5	4	4
<i>C. p. ptilocnemis</i>	4	5	4	5	5	5	4
<i>C. p. cousei</i>	3	4	3	3	5	4	4
Dunlin	5	2	2	3	2	3	3
<i>Calidris alpina pacifica</i>	4	2	2	4	4	3	4
<i>C. a. arctica</i>	5	4	2	5	5	3	5
<i>C. a. hudsonia</i>	4	3	2	3	3	3	3
Short-billed Dowitcher	5	2	2	3	3	2	3
<i>Limnodromus griseus griseus</i>	5	4	2	3	4	3	4
<i>L. g. hendersoni</i>	4	4	2	3	3	3	4
<i>L. g. caurinus</i>	U(3)	3	2	4	4	3	3

NOTES:

- PT* Population Trend
RA Relative Abundance
TB Threats during the Breeding Season
TN Threats during the Non-breeding Season
BD Breeding Distribution
ND Non-breeding Distribution

CONSERVATION CATEGORIES:

- Category 5* Highly Imperiled
Category 4 Species of High Concern
Category 3 Species of Moderate Concern
Category 2 Species of Low Concern
Category 1 Species Not at Risk

Conservation categories are explained in the text. Conservation scores will be revised as new information becomes available. Updated information will be posted at the U.S. Shorebird Conservation Plan website at: <http://www.manomet.org/USSCP/files.htm>



Appendix 4: Uncommon Shorebird Species Recorded in the U.S.

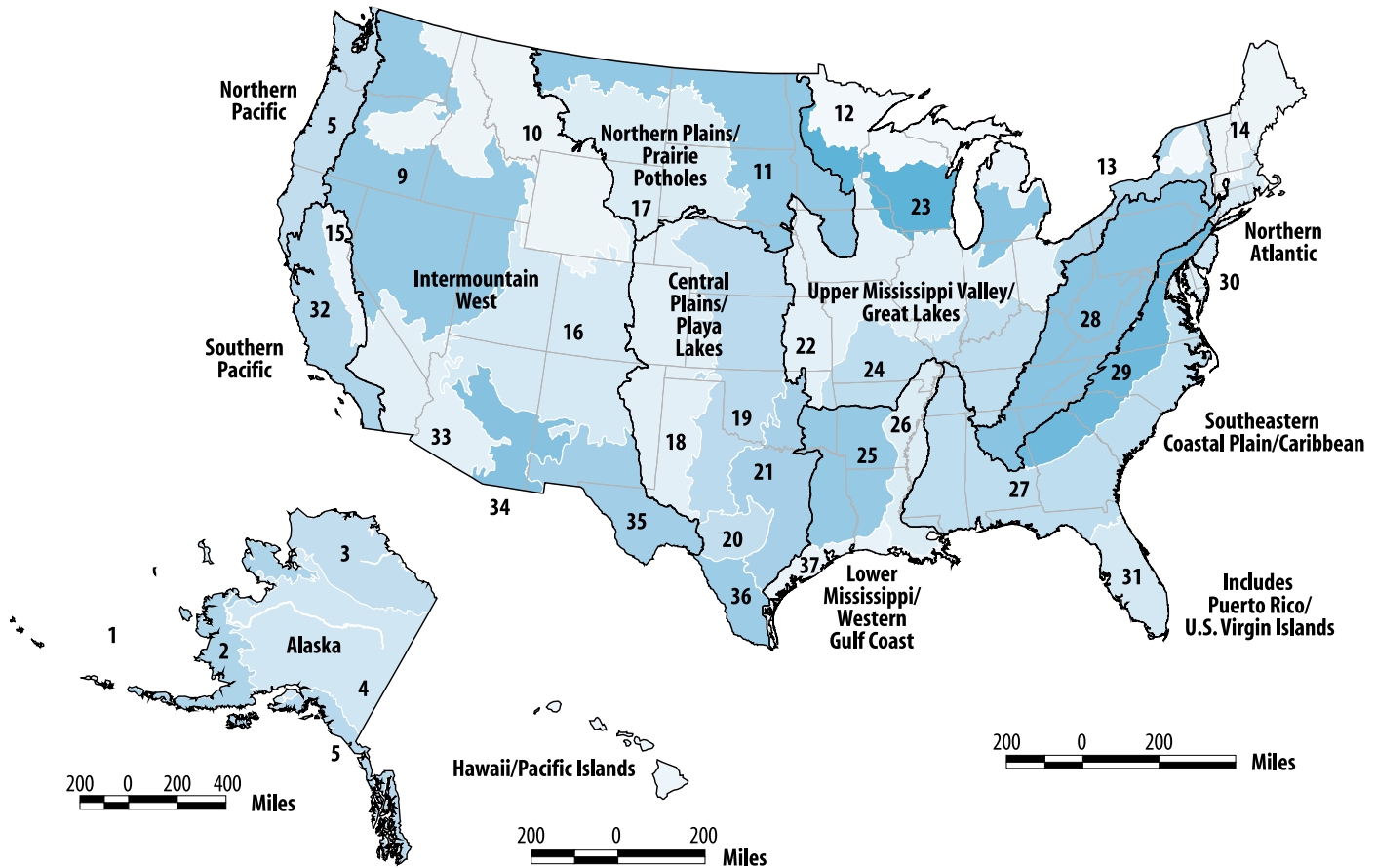
Rare or vagrant shorebirds in the United States (American Ornithologists' Union, 1998)

STATUS	COMMON NAME	SCIENTIFIC NAME
Rare or sporadic breeders from Europe or Asia	Mongolian Plover Common Ringed Plover Eurasian Dotterel Wood Sandpiper Common Sandpiper Red-necked Stint Curlew Sandpiper Ruff	<i>Charadrius mongolus</i> <i>Charadrius hiaticula</i> <i>Charadrius morinellus</i> <i>Tringa glareola</i> <i>Actitis hypoleucos</i> <i>Calidris ruficollis</i> <i>Calidris ferruginea</i> <i>Philomachus pugnax</i>
Migrants or vagrants from Europe or Asia	Oriental Pratincole Northern Lapwing Eurasian Golden Plover Little Ringed Plover Black-winged Stilt Common Greenshank Marsh Sandpiper Spotted Redshank Green Sandpiper Gray-tailed Tattler Terek Sandpiper Little Curlew Eurasian Curlew Far Eastern Curlew Black-tailed Godwit Great Knot Little Stint Temminck's Stint Long-toed Stint Spoonbill Sandpiper Broad-billed Sandpiper Jack Snipe Pin-tailed Snipe Eurasian Woodcock	<i>Glareola maldivarum</i> <i>Vanellus vanellus</i> <i>Pluvialis apricaria</i> <i>Charadrius dubius</i> <i>Himantopus himantopus</i> <i>Tringa nebularia</i> <i>Tringa stagnatilis</i> <i>Tringa erythropus</i> <i>Tringa ochropus</i> <i>Heteroscelus brevipes</i> <i>Xenus cinereus</i> <i>Numenius minutus</i> <i>Numenius arquata</i> <i>Numenius madagascariensis</i> <i>Limosa limosa</i> <i>Calidris tenuirostris</i> <i>Calidris minuta</i> <i>Calidris temminckii</i> <i>Calidris subminuta</i> <i>Eurynorhynchus pygmaeus</i> <i>Limicola falcinellus</i> <i>Lymnocyptes minimus</i> <i>Gallinago stenura</i> <i>Scolopax rusticola</i>
Migrants or vagrants from south of the United States	Double-striped Thick-knee Collared Plover Northern Jacana	<i>Burhinus bistriatus</i> <i>Charadrius collaris</i> <i>Jacana spinosa</i>



Appendix 5. Shorebird Planning Regions and Bird Conservation Regions

Shorebird Planning Regions and NABCI Bird Conservation Region Numbers and Names



Alaska

- 1 Bering Sea/Aleutian Islands
- 2 Western Alaska
- 3 Arctic Plains and Mountains
- 4 Northwestern Interior Forest
- 5 Northwestern Pacific Rainforest (Alaska)

Northern Pacific

- 5 Northwestern Pacific Rainforest (Alaska)

Southern Pacific

- 15 Sierra Nevada
- 32 Coastal California

Hawaii/Pacific Islands

Not numbered – Hawaii

Intermountain West

- 9 Great Basin
- 10 Northern Rockies
- 16 Southern Rockies/Colorado Plateau
- 33 Sonoran and Mojave Deserts

- 34 Sierra Madre Occidental
- 35 Chihuahuan Desert

Northern Plains/Prairie Potholes

- 11 Prairie Potholes
- 17 Badlands and Prairies

Central Plains/Playa Lakes

- 18 Short Grass Prairie
- 19 Central Mixed Grass Prairie
- 21 Oaks and Prairies
- 20 Edwards Plateau
- 36 Tamaulipan Brushlands

Upper Mississippi Valley/Great Lakes

- 12 Boreal Hardwood Transition
- 13 Lower Gt Lakes/St. Lawrence Plain
- 22 Eastern Tall Grass Prairie
- 23 Prairie Hardwood Transition
- 24 Central Hardwoods

Lower Mississippi/Western Gulf Coast

- 25 West Gulf Coastal Plain/Ouachitas
- 26 Mississippi Alluvial Valley
- 37 Gulf Coastal Prairie

Northern Atlantic

- 14 Atlantic Northern Forest
- 30 New England/Mid-Atlantic Coast

Southeastern Coastal Plains—Caribbean

- 27 Southeastern Coastal Plain
- 29 Piedmont
- 31 Peninsular Florida

Not numbered – Puerto Rico/U.S. Virgin Islands

BCRs entirely within Canada or Mexico

- 6 Boreal Taiga Plains
- 7 Taiga Shield and Hudson Plains
- 8 Boreal Softwood Shield
- 38 Mexico (additional BCRs to be defined)

Note:

There is no regional shorebird plan for bird conservation
Region 28 – Appalachian Mountains



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