

Ms. Robyn Thorson Director, Region 1 U.S. Fish and Wildlife Service 911 NE 11th Avenue Portland, Oregon 97232

16 November 2009

Dear Ms. Thorson,

For the last decade, U.S. Shorebird Conservation Plan partners have endeavored to improve the understanding and conservation of shorebirds in the U.S. and throughout their entire ranges. Across the U.S. we have formed regional partnerships of shorebird researchers and NGO, state, and federal conservation practitioners to address the science and conservation needs to support shorebird populations during migration and on their wintering and breeding grounds in the U.S. For efficiency and greater impact, those regional working groups have integrated shorebird conservation needs and expertise into Joint Venture partnerships across the country. We recognize that the development of Landscape Conservation Cooperatives (LCC) will need to address a great diversity of biota. We put forth that as conservation approaches of LCCs are advanced, shorebird needs be incorporated explicitly and that LCCs leverage the resources of existing partnerships, including the shorebird conservation community and Joint Ventures to achieve the conservation goals for a significant component of the U.S. Fish and Wildlife Service's (Service) trust resources.

All indications are that Shorebirds are extremely vulnerable to climate change because of their unique life history and the habitats they use throughout their annual cycle, such as arctic tundra, coasts, and grasslands. The long-distance migration of many shorebird species compounds climate change effects. Central to the Service's ability to adapt conservation strategies or mitigate for climate change effects is an understanding of how species might respond to a changing environment and to monitor and evaluate the actual response. Knowledge of what environmental factors currently limit shorebird populations is rudimentary and limits our ability to predict future response to habitat change. Similarly, there are few ongoing monitoring systems to track changes in shorebird populations in response to environmental change.

Therefore, we are submitting a few high priority actions for shorebirds for you to consider in development of the Pacific Islands LCC that address biological planning, conservation design and implementation, and monitoring and evaluation components of

the Strategic Habitat Conservation cycle. These ideas draw on actions presented in regional shorebird conservation plans and Joint Venture implementation plans. Species of high conservation priority include the Hawaiian Stilt, Pacific Golden-Plover, Bristle-thighed Curlew, Wandering Tattler, Sanderling, and Ruddy Turnstone.

- 1. Determine wintering and migration population estimates and trends of priority populations.
- 2. Determine habitat requirements, limiting factors, connectivity between breeding, migration, wintering areas for Pacific Golden-Plovers, Bristle-thighed Curlews, Wandering Tattlers, and Ruddy Turnstones.
- 3. Control invasive plants and animals and develop control and eradication methods for predators, which would protect Hawaiian Stilts and Bristle-thighed Curlews.
- 4. Protect, restore, or create suitable high quality habitat for migrant and resident shorebirds at sites identified in the U.S. Pacific Islands Conservation Plan.

For further information on these potential projects, please contact Brad Andres, Division of Migratory Management, U.S. Fish and Wildlife Service, Denver, Colorado; 303-275-2324, Brad_Andres@fws.gov.

Thank you for your consideration,

John Cecil, National Audubon Society Chair, U.S. Shorebird Conservation Plan

cc: Carol Schuler



Dr. Benjamin N. Tuggle Director, Region 2 U.S. Fish and Wildlife Service P.O. Box 1306 Albuquerque, New Mexico 87103-1306

13 November 2009

Dear Dr. Tuggle,

For the last decade, U.S. Shorebird Conservation Plan partners have endeavored to improve the understanding and conservation of shorebirds in the U.S. and throughout their entire ranges. Across the U.S. we have formed regional partnerships of shorebird researchers and NGO, state, and federal conservation practitioners to address the science and conservation needs to support shorebird populations during migration and on their wintering and breeding grounds in the U.S. For efficiency and greater impact, those regional working groups have integrated shorebird conservation needs and expertise into Joint Venture partnerships across the country. We recognize that the development of Landscape Conservation Cooperatives (LCC) will need to address a great diversity of biota. We put forth that as conservation approaches of LCCs are advanced, shorebird needs be incorporated explicitly and that LCCs leverage the resources of existing partnerships, including the shorebird conservation community and Joint Ventures to achieve the conservation goals for a significant component of the U.S. Fish and Wildlife Service's (Service) trust resources.

All indications are that Shorebirds are extremely vulnerable to climate change because of their unique life history and the habitats they use throughout their annual cycle, such as arctic tundra, coasts, and grasslands. The long-distance migration of many shorebird species compounds climate change effects. Central to the Service's ability to adapt conservation strategies or mitigate for climate change effects is an understanding of how species might respond to a changing environment and to monitor and evaluate the actual response. Knowledge of what environmental factors currently limit shorebird populations is rudimentary and limits our ability to predict future response to habitat change. Similarly, there are few ongoing monitoring systems to track changes in shorebird populations in response to environmental change.

Therefore, we are submitting a few high priority actions for shorebirds for you to consider in development of the Southern Great Plains LCC that address biological planning, conservation design, and monitoring and evaluation components of the

Strategic Habitat Conservation cycle. Species of high conservation priority include the Mountain Plover, Snowy Plover, and Long-billed Curlew.

- 1. Determine the effects of windpower and associated energy transmission on the distribution, productivity and survival of the priority grassland-breeding shorebirds.
- 2. Determine landscape-level movements of breeding Snowy Plovers in the southern Playa Lakes region of Texas in response to changing habitat conditions at saline lakes.
- 3. Determine how climate-change induced reductions in river flows in the Southern Great Plains will affect breeding Snowy Plover populations.
- 4. Identify and map Mountain Plover breeding areas in New Mexico, Oklahoma, and Texas and wintering areas in Texas.

For further information on these potential projects, please contact Bill Howe, Nongame Migratory Bird Coordinator, U.S. Fish and Wildlife Service, Albuquerque, New Mexico, 505-248-6875, Bill Howe@fws.gov.

Thank you for your consideration,

John Cecil, National Audubon Society

Chair, U.S. Shorebird Conservation Plan



Mr. Tom Melius Director, Region 3 U.S. Fish and Wildlife Service One Federal Drive, Fort Snelling, Minnesota 55111-4056

13 November 2009

Dear Mr. Melius.

For the last decade, U.S. Shorebird Conservation Plan partners have endeavored to improve the understanding and conservation of shorebirds in the U.S. and throughout their entire ranges. Across the U.S. we have formed regional partnerships of shorebird researchers and NGO, state, and federal conservation practitioners to address the science and conservation needs to support shorebird populations during migration and on their wintering and breeding grounds in the U.S. For efficiency and greater impact, those regional working groups have integrated shorebird conservation needs and expertise into Joint Venture partnerships across the country. We recognize that the development of Landscape Conservation Cooperatives (LCC) will need to address a great diversity of biota. We put forth that as conservation approaches of LCCs are advanced, shorebird needs be incorporated explicitly and that LCCs leverage the resources of existing partnerships, including the shorebird conservation community and Joint Ventures to achieve the conservation goals for a significant component of the U.S. Fish and Wildlife Service's (Service) trust resources.

All indications are that Shorebirds are extremely vulnerable to climate change because of their unique life history and the habitats they use throughout their annual cycle, such as arctic tundra, coasts, and grasslands. The long-distance migration of many shorebird species compounds climate change effects. Central to the Service's ability to adapt conservation strategies or mitigate for climate change effects is an understanding of how species might respond to a changing environment and to monitor and evaluate the actual response. Knowledge of what environmental factors currently limit shorebird populations is rudimentary and limits our ability to predict future response to habitat change. Similarly, there are few ongoing monitoring systems to track changes in shorebird populations in response to environmental change.

Therefore, we are submitting a few high priority actions for shorebirds for you to consider in the development of the Plains and Prairie Potholes LCC that address biological planning, conservation design and delivery, and monitoring and evaluation components of the Strategic Habitat Conservation cycle. Species of high conservation

priority include the Piping Plover, Long-billed Curlew, Upland Sandpiper, Marbled Godwit, and Wilson's Phalarope.

- 1. Acquire conservation easements for the priority shorebird species assemblage, targeting easements of native prairie grassland/wetland complexes. On the best priority geographic areas identified by HAPET data, restore grasslands and wetlands under threat of conversion due to climate change initiatives, targeting alternate fuels.
- 2. Identify limiting factors of the priority grassland breeding shorebirds to determine the causes of breeding range contractions with changes in climate and habitats.
- 3. Monitor changes in shorebird stop-over habitat, length of stay, body condition and migration routes that are the result of changes in climate.

For further information on these potential projects, please contact Stephanie Jones, Nongame Migratory Bird Coordinator, U.S. Fish and Wildlife Service, Denver, Colorado, 303-236-4409, Stephanie Jones@fws.gov.

Thank you for your consideration,

John Cecil, National Audubon Society

Chair, U.S. Shorebird Conservation Plan



Ms. Cynthia Dohner Director, Region 4 U.S. Fish and Wildlife Service 1875 Century Boulevard Atlanta, Georgia 30345

13 November 2009

Dear Ms. Dohner,

For the last decade, U.S. Shorebird Conservation Plan partners have endeavored to improve the understanding and conservation of shorebirds in the U.S. and throughout their entire ranges. Across the U.S. we have formed regional partnerships of shorebird researchers and NGO, state, and federal conservation practitioners to address the science and conservation needs to support shorebird populations during migration and on their wintering and breeding grounds in the U.S. For efficiency and greater impact, those regional working groups have integrated shorebird conservation needs and expertise into Joint Venture partnerships across the country. We recognize that the development of Landscape Conservation Cooperatives (LCC) will need to address a great diversity of biota. We put forth that as conservation approaches of LCCs are advanced, shorebird needs be incorporated explicitly and that LCCs leverage the resources of existing partnerships, including the shorebird conservation community and Joint Ventures to achieve the conservation goals for a significant component of the U.S. Fish and Wildlife Service's (Service) trust resources.

All indications are that Shorebirds are extremely vulnerable to climate change because of their unique life history and the habitats they use throughout their annual cycle, such as arctic tundra, coasts, and grasslands. The long-distance migration of many shorebird species compounds climate change effects. Central to the Service's ability to adapt conservation strategies or mitigate for climate change effects is an understanding of how species might respond to a changing environment and to monitor and evaluate the actual response. Knowledge of what environmental factors currently limit shorebird populations is rudimentary and limits our ability to predict future response to habitat change. Similarly, there are few ongoing monitoring systems to track changes in shorebird populations in response to environmental change.

Therefore, we are submitting a few high priority actions for shorebirds for you to consider in development of the South Atlantic LCC that address biological planning, conservation design and implementation, and monitoring and evaluation components of

the Strategic Habitat Conservation cycle. These ideas draw on actions presented in regional shorebird conservation plans and Joint Venture implementation plans.

- 1. Improve sea level rise models and supporting data for the entire Atlantic Coast to evaluate impacts to shorebirds using beaches, marshes and other tidal wetlands for nesting, roosting and foraging. Current models (e.g. SLAMM) are not adequate to meet this need.
- 2. Develop species-habitat models for representative shorebird species using coastal habitat types that can predict likely impacts to populations under different sea level rise scenarios and determine impacts of climate change (through sea level rise, increased acidification and other factors) on key shorebird forage species and shorebird energetics during breeding, migration, and winter.
- 3. Develop models that can predict the migration of coastal wetlands inland and identify existing protected and managed lands that are currently available to accommodate this migration and opportunities to protect additional coastal areas to allow for this migration.
- 4. Design a shorebird monitoring program that uses consistent protocols and is designed to guide management decisions at multiple spatial scales and evaluate the effectiveness of conservation actions. Monitoring endeavors, including winter surveys, should build on existing shorebird monitoring programs such as the Program for International Shorebird Monitoring (PRISM) and the Flyway Integrated Waterbird (waterfowl, shorebird and wading bird) Monitoring and Management project.

For further information on these potential projects, please contact Andrew Milliken, Atlantic Coast Joint Venture Coordinator, U.S. Fish and Wildlife Service, Hadley, Massachusetts; 413-253-8269, Andrew Milliken@fws.gov.

Thank you for your consideration,

John Cecil, National Audubon Society Chair, U.S. Shorebird Conservation Plan

cc: Robert Ford, Amy Keister



Mr. Marvin Moriarty Director, Region 5 U.S. Fish and Wildlife Service 300 Westgate Center Drive Hadley, Massachusetts 01035-9587

13 November 2009

Dear Mr. Moriarty,

For the last decade, U.S. Shorebird Conservation Plan partners have endeavored to improve the understanding and conservation of shorebirds in the U.S. and throughout their entire ranges. Across the U.S. we have formed regional partnerships of shorebird researchers and NGO, state, and federal conservation practitioners to address the science and conservation needs to support shorebird populations during migration and on their wintering and breeding grounds in the U.S. For efficiency and greater impact, those regional working groups have integrated shorebird conservation needs and expertise into Joint Venture partnerships across the country. We recognize that the development of Landscape Conservation Cooperatives (LCC) will need to address a great diversity of biota. We put forth that as conservation approaches of LCCs are advanced, shorebird needs be incorporated explicitly and that LCCs leverage the resources of existing partnerships, including the shorebird conservation community and Joint Ventures to achieve the conservation goals for a significant component of the U.S. Fish and Wildlife Service's (Service) trust resources.

All indications are that Shorebirds are extremely vulnerable to climate change because of their unique life history and the habitats they use throughout their annual cycle, such as arctic tundra, coasts, and grasslands. The long-distance migration of many shorebird species compounds climate change effects. Central to the Service's ability to adapt conservation strategies or mitigate for climate change effects is an understanding of how species might respond to a changing environment and to monitor and evaluate the actual response. Knowledge of what environmental factors currently limit shorebird populations is rudimentary and limits our ability to predict future response to habitat change. Similarly, there are few ongoing monitoring systems to track changes in shorebird populations in response to environmental change.

Therefore, we are submitting a few high priority actions for shorebirds for you to consider in development of the North Atlantic LCC that address biological planning, conservation design and implementation, and monitoring and evaluation components of

the Strategic Habitat Conservation cycle. These ideas draw on actions presented in regional shorebird conservation plans and Joint Venture implementation plans.

- 1. Improve sea level rise models and supporting data for the entire Atlantic Coast to evaluate impacts to shorebirds using beaches, marshes and other tidal wetlands for nesting, roosting and foraging. Current models (e.g. SLAMM) are not adequate to meet this need.
- 2. Develop species-habitat models for representative shorebird species using coastal habitat types that can predict likely impact to populations under different sea level rise scenarios and determine on impacts of climate change (through sea level rise, increased acidification and other factors) on key shorebird forage species and shorebird energetics during breeding, migration, and winter.
- 3. Develop models that can predict the migration of coastal wetlands inland and identify existing protected and managed lands that are currently available to accommodate this migration and opportunities to protect additional coastal areas to allow for this migration.
- 4. Design a shorebird monitoring program that uses consistent protocols and is designed to guide management decisions at multiple spatial scales and evaluate the effectiveness of conservation actions. Monitoring endeavors should build on existing shorebird monitoring programs such as the Program for International Shorebird Monitoring (PRISM) and the Flyway Integrated Waterbird (waterfowl, shorebird and wading bird) Monitoring and Management project.

For further information on these potential projects, please contact Andrew Milliken, Atlantic Coast Joint Venture Coordinator, U.S. Fish and Wildlife Service, Hadley, Massachusetts; 413-253-8269, Andrew Milliken@fws.gov.

Thank you for your consideration,

John Cecil, National Audubon Society Chair, U.S. Shorebird Conservation Plan

cc: Jan Taylor, Rick Bennett



Mr. Geoffery Haskett Director, Region 7 U.S. Fish and Wildlife Service 1011 East Tudor Road, MS 201 Anchorage, Alaska 99503

13 November 2009

Dear Mr. Haskett,

For the last decade, U.S. Shorebird Conservation Plan partners have endeavored to improve the understanding and conservation of shorebirds in the U.S. and throughout their entire ranges. Across the U.S. we have formed regional partnerships of shorebird researchers and NGO, state, and federal conservation practitioners to address the science and conservation needs to support shorebird populations during migration and on their wintering and breeding grounds in the U.S. For efficiency and greater impact, those regional working groups have integrated shorebird conservation needs and expertise into Joint Venture partnerships across the country. We recognize that the development of Landscape Conservation Cooperatives (LCC) will need to address a great diversity of biota. We put forth that as conservation approaches of LCCs are advanced, shorebird needs be incorporated explicitly and that LCCs leverage the resources of existing partnerships, including the shorebird conservation community and Joint Ventures to achieve the conservation goals for a significant component of the U.S. Fish and Wildlife Service's (Service) trust resources.

All indications are that Shorebirds are extremely vulnerable to climate change because of their unique life history and the habitats they use throughout their annual cycle, such as arctic tundra, coasts, and grasslands. The long-distance migration of many shorebird species compounds climate change effects. Central to the Service's ability to adapt conservation strategies or mitigate for climate change effects is an understanding of how species might respond to a changing environment and to monitor and evaluate the actual response. Knowledge of what environmental factors currently limit shorebird populations is rudimentary and limits our ability to predict future response to habitat change. Similarly, there are few ongoing monitoring systems to track changes in shorebird populations in response to environmental change.

Therefore, we are submitting a few high priority actions for shorebirds for you to consider for development of the Arctic Plains and Mountains LCC that address biological planning, conservation design, and monitoring and evaluation components of the Strategic Habitat Conservation cycle.

- 1. Support the implementation of a long-term monitoring program (i.e. the Program for Regional and International Shorebird Monitoring) for shorebirds that would provide information on habitat use and population size and trends.
- 2. Support the establishment and long-term implementation of an Arctic Shorebird Demographic Network whose goal is to gather information on potential mechanisms behind shorebird declines that can be measured on the breeding grounds.
- 3. Provide funds to equip a multitude of shorebird species with inexpensive geolocator devices that would allow migration timing and pathways to be determined. Obtaining such information would allow the potential risk to each species to be fully quantified, be it through loss of coastal staging areas, interrupted climate patterns that aid migration, or loss of essential nonbreeding areas.
- 4. Evaluate potential impacts to breeding and staging shorebirds from coastal erosion and salt water inundation.
- 5. Using existing survey data and state-of-the-art satellite imagery, develop habitat use models for arctic-breeding shorebirds to predict across the landscape where shorebirds are likely to be. This would allow the adaptive placement of oil and gas developments to minimize impacts to shorebirds and other species.

For further information on these potential projects, please contact Rick Lanctot, Shorebird Coordinator, U.S. Fish and Wildlife Service, Anchorage, Alaska, 907-786-3609, Richard Lanctot@fws.gov

Thank you for your consideration,

John Cecil, National Audubon Society Chair, U.S. Shorebird Conservation Plan



Mr. Ren Lohoefener Director, Region 8 U.S. Fish and Wildlife Service 2800 Cottage Way, W-2606 Sacramento, CA 95825

9 November 2009

Dear Mr. Lohoefener,

For the last decade, U.S. Shorebird Conservation Plan partners have endeavored to improve the understanding and conservation of shorebirds in the U.S. and throughout their entire ranges. Across the U.S. we have formed regional partnerships of shorebird researchers and NGO, state, and federal conservation practitioners to address the science and conservation needs to support shorebird populations during migration and on their wintering and breeding grounds in the U.S. For efficiency and greater impact, those regional working groups have integrated shorebird conservation needs and expertise into Joint Venture partnerships across the country. We recognize that the development of Landscape Conservation Cooperatives (LCC) will need to address a great diversity of biota. We put forth that as conservation approaches of LCCs are advanced, shorebird needs be incorporated explicitly and that LCCs leverage the resources of existing partnerships, including the shorebird conservation community and Joint Ventures to achieve the conservation goals for a significant component of the U.S. Fish and Wildlife Service's (Service) trust resources.

All indications are that Shorebirds are extremely vulnerable to climate change because of their unique life history and the habitats they use throughout their annual cycle, such as arctic tundra, coasts, and grasslands. The long-distance migration of many shorebird species compounds climate change effects. Central to the Service's ability to adapt conservation strategies or mitigate for climate change effects is an understanding of how species might respond to a changing environment and to monitor and evaluate the actual response. Knowledge of what environmental factors currently limit shorebird populations is rudimentary and limits our ability to predict future response to habitat change. Similarly, there are few ongoing monitoring systems to track changes in shorebird populations in response to environmental change.

Therefore, we are submitting a few high priority actions for shorebirds for you to consider when developing the Southern Pacific LCC that address biological planning, conservation design, and monitoring and evaluation components of the Strategic Habitat Conservation cycle. These reflect priorities as outlined in the Southern Pacific Shorebird

Conservation Plan, the Central Valley Joint Venture Monitoring and Evaluation Plan, and the San Francisco Bay Joint Venture Implementation Plan.

- 1. Track changes in migratory and wintering shorebird population size, distribution, and movements to assess the impacts of changes in habitat availability. Changes may be due to direct climate change impacts or major land use changes in response to factors such as water reallocation and habitat restoration efforts for other sensitive species. Currently a monitoring program for shorebirds in the Southern Pacific LCC is being developed and data from existing programs is being centralized. This can serve as a great resource for addressing biological planning and conservation design needs of the Southern Pacific LCC for this significant component of its biota.
- 2. Track the changing habitat landscape for shorebirds during migration and winter. In the highly managed interior landscape of the Central Valley, this will entail tracking land use change as well as major changes in management of wet habitats (wetlands and flooded agriculture). In the San Francisco Bay estuary and immediate coast, this will entail tracking habitat loss, particularly due to sea level rise and major habitat alterations completed for tidal marsh restoration.
- 3. Determine limiting resources for shorebirds during migration and winter. This will entail assessment of carrying capacity of major habitat types as well as the development of management strategies to increase the carrying capacity of a potentially reduced amount of total habitat.
- 4. Initiate modeling to project the impacts of changes in habitat availability and carrying capacity from changes in climate and human land use on migrating and wintering shorebird populations.

Investing in the four components above will facilitate the development of adaptation strategies to ensure that the Southern Pacific LCC continues to provide the resources necessary to support Pacific Flyway shorebird populations.

For further information on the Southern Pacific Shorebird Conservation Plan, the resources of its partners, and the needs stated above, please contact Catherine Hickey, PRBO Conservation Science, Petaluma, CA, 415-868-0371, ext. 307, chickey@prbo.org.

Thank you for your consideration,

John Cecil, National Audubon Society Chair, U.S. Shorebird Conservation Plan