

STELLER'S EIDER RECOVERY TASK LIST
MAY 2007

This list of recovery tasks was revised at a Steller's Eider Recovery Team meeting in January 2007, and in a subsequent ranking vote in March 2007. Ranked tasks are high priority; tasks marked M are medium priority; and tasks marked L are low priority. Ranks are numbered beginning at 1 for highest priority based on a ranking process established in February 2003. High priority tasks given a number with a small letter attached reflect ties in the ranking (e.g., Tasks 8a and 8b were tied in the ranking process).

Tasks are listed under general categories that address threats and obstacles to recovery. There is also a category to address additional miscellaneous research and monitoring needs.

1A). Reduce Hunting and Shooting Mortality

PRIORITY	TASK
12b	Increase education efforts including village visits and eider identification tools across the range of the Steller's eider to eliminate take
19a	In concert with education efforts, increase law enforcement across the range of the Steller's eider to eliminate take
27a	Gather and summarize information on harvest levels in Alaska
L	Gather & summarize information on harvest levels in Russia
L	Education to eliminate shooting in Russia
L	Recommend law enforcement presence at Izembek
L	Evaluate feasibility of screening birds for embedded shot; conduct pilot study at Kodiak or Izembek (1/07)

1B). Reduce Exposure to Lead

PRIORITY	TASK
4d	Work toward the prohibition of the use of lead shot on the Yukon-Kuskokwim Delta (all seasons, all quarries)
12a	Continue education, including non-toxic shot clinics and village visits to eliminate the use of lead shot for waterfowl across the range of the Steller's eider
25a	Law enforcement to eliminate the use of lead shot for waterfowl
38a	Screen/monitor for lead exposure throughout the range of the listed population
38c	Monitor use of lead shot on the North Slope
L	Education to eliminate use of lead in Russia
L	Study persistence of lead in Arctic
L	Evaluate grit selection
L	Assess effects of exposure on STEI

1C). Reduce Oil Exposure

PRIORITY	TASK
M	Continue advocacy for prudent oil management
M	Incorporate eider conservation needs in spill response plan
M	Monitor trends in oil concentrations near small boat harbors
M	Determine level of exposure in field by monitoring internal exposure
L	Evaluate physiological effects of exposure
L	Determine level of exposure in field by looking for dead birds
L	Expand assessment of hydrocarbon levels in STEI wintering areas

1D). Minimize loss to disease

PRIORITY	TASK
L	Develop plan for unusual mortality events

1F). Reduce collisions

PRIORITY	TASK
27b	Develop and implement technology for reducing collisions
44	Monitor frequency of collisions

1G.) Reduce researcher – induced mortality

PRIORITY	TASK
21d	Summarize survival rates of transmitter implanted eiders (include all sea duck species) 1/07
M	Evaluate changes in annual survival of Steller's eiders as a result of surgically implanting transmitters (field study) 1/07
M	Determine the physiological and behavioral effects and pre-screening methods of surgery and implants (captive study) 1/07
M	Measure changes in reproductive potential related to implanted transmitters (captive study) 1/07
M	Ensure consultation occurs for federal research
L	Summarize effects of all other research activities
L	Develop educational products for researchers

2A). Reduce nest & young predation

PRIORITY	TASK
1c	Continue fox control near Barrow
11	Implement jaeger control (egg removal or adult removal as necessary) under certain circumstances near Barrow
21a	Confirm identity of predator species causing egg/young loss
32b	Reduce availability of anthropogenic food sources to nest predators of Steller's eiders at Barrow
32c	Continue raven control near Barrow
M	Gull control

2B). Reduce nest and young disturbance by humans

PRIORITY	TASK
21b	Continue education at Barrow, including Eider Journey, Barrow Bird and Cultural Camp, Migratory Bird Calendar contest and North Slope Outreach Team meetings for Barrow residents to reduce disturbance of nests and ducklings

2E). Captive flock and breeding program

PRIORITY	TASK
4b	Maintain captive flocks, develop techniques for artificial propagation, and investigate development of a second captive flock
9	Develop a plan for re-introduction, including fully establishing a known-geographic origin flock of Steller's eiders At ASLC
15b	Refine, implement and evaluate field techniques for enhancing egg survival with artificial incubation
27c	Opportunistically collect eggs on the Yukon-Kuskokwim Delta and North Slope to establish a flock of known-geographic origin Steller's eiders at ASLC

2F). Increase fecundity and fertility

PRIORITY	TASK
38d	Determine the number and causes of infertile and inviable eggs in the Barrow breeding population 1/07

2G). Enhance pre-fledging survival

PRIORITY	TASK
M	Captive study: effects of pond salinity on STEI ducklings (added January 2006, moved 1/07)

3A). Protect important breeding habitat

PRIORITY	TASK
1a	Barrow conservation plan
M	Investigate potential for additional easements on North Slope
M	Investigate potential for easements on YKD
L	Identify various components of important breeding habitat (foraging, roosting, nesting, brood-rearing)

3B). Protect important non-breeding habitat

PRIORITY	TASK
4a	Identify and protect important non-breeding habitats of the listed population, especially in the Chukchi Sea
21c	Continue studies at Kuskokwim Shoals to understand how eiders using Kuskokwim Shoals relate to the listed population
M	Investigate habitat associations in Kuskokwim shoals for spring
L	Identify various components of important molting habitat (foraging, resting, etc...)
L	More specific delineation of molting areas

4B). Monitor size and trend of listed population

PRIORITY	TASK
4c	Continue intensive aerial surveys in the Barrow Triangle
10	Continue standardized ground-based breeding pair surveys (formerly “Foot Surveys”) at Barrow
25b	Explore possibility of counting birds in the ice leads of the Chukchi Sea in spring before they arrive on the North Slope 1/07
31	Conduct a one-time marine survey (Barrow to Wainwright) after birds arrive at Barrow breeding grounds to see if there is a reservoir of non-breeding birds 1/07
45	Evaluate/reconcile North Slope Eider Survey vs. Arctic Coastal Plain Survey (Moved from low 1/07)
M	Continue Arctic coastal plain survey (breeding pair survey)
M	Monitor Kuskokwim shoals for molting use (multiple surveys for different age classes)
M	Continue North Slope eider survey (changed from L to M 1/07)

4C). Monitor size and trend of Pacific population

PRIORITY	TASK
14	Continue spring Pacific population survey (Larned's survey)
M	Conduct aerial summer population survey in Russia
M	Develop/explore additional means of monitoring Pacific wintering population (workshop)

4D). Monitor Demographic trends

PRIORITY	TASK
1b	Continue nest and brood monitoring at Barrow
8	Update and evaluate Population Viability Analysis with the most recent survey and demographic data 1/07
15c	Continue Izembek adult survival monitoring until analytical and study design are evaluated
15d	Evaluate analytical and study design of Izembek annual survival study
38b	Generate annual survival estimates from Izembek National Wildlife Refuge (INWR)
M	Initiate survival study at Kuskokwim shoals (during molting period)

4E). Monitor trends in threats and success of management actions

PRIORITY	TASK
42b	Monitor changes in distribution and abundance of predators at Barrow
M	Study environmental patterns and processes on the Yukon-Kuskokwim Delta to guide management actions such as predator control (SPEI) and re-introduction (STEI) (added January 2006)
M	Synthesize results of management actions
M	Monitor changes in lead exposure levels and/or rates
L	Evaluate cumulative habitat loss
L	Monitor researcher activity and impacts
L	Assess tidal regime and currents in dispersing contaminants/effluents
L	Assess cumulative effects of harbor and wind power development in southwestern Alaska

4F). Monitor body condition

PRIORITY	TASK
M	Standardize protocol
M	Maximize data collection during banding drive at Izembek
M	Determine variation in pre-breeding body mass and condition 1/07
L	Expand spatio-temporal scope of sampling

5A). Identify links between breeding, molting, wintering, and staging areas (to include fidelity)

PRIORITY	TASK
15a	Determine female breeding area fidelity by capturing, marking and re-sighting hens at Barrow
19b	Conduct satellite telemetry study to link breeding, molting, wintering and staging areas (moved from M to High 1/07)
32a	Further analyze breeding female fidelity at Barrow
42a	Acquire more genetic samples opportunistically from Russia and Alaska
M	Document fidelity to breeding, molting, wintering, and staging areas
M	Determine distribution of non-breeders in breeding season
M	Breeding female fidelity – satellite telemetry of Russian breeders
M	Breeding female fidelity – satellite telemetry of Alaska breeders

5B). Estimate basic demographic parameters

PRIORITY	TASK
32d	Determine post hatch-fledging survival
M	Estimate first year survival
M	Estimate survival of sub adults
M	Determine age and sex ratios on wintering grounds
M	Estimate age at first breeding
M	Develop techniques to determine age and sex (changed and moved from L to M 1/07)
M	Develop ways to determine recruitment for listed population 1/07
L	Deal with potentially senescent females
L	Estimate frequency of breeding after first breeding

5D). Epidemiological survey – determine disease prevalence and effects

PRIORITY	TASK
32f	Continue studies on prevalence and effects of disease and causes of mortality (moved from M to high 1/07)
L	Review and update protocol for handling sick, injured, and dead eiders
L	Develop baseline hematology and serum chemistry

5E). Other research methods that are tasks themselves

PRIORITY	TASK
27d	Develop visibility correction factor for aerial surveys of Steller's eiders on the breeding grounds (Moved from M to high 1/07)
32e	Develop techniques for diet assessment
M	Develop techniques to evaluate body condition and general health
L	Determine spring and summer diet at Barrow
L	Determine diet in SW Alaskan waters
L	Correlate Barrow breeding effort with environmental variables
L	Determine local movements of STEI in wintering areas

6) Assess cumulative effects of human development on STEI

PRIORITY	TASK
M	Develop technique and identify information needs for evaluating cumulative effects of human development on the listed population of Steller's eiders (break it down into modules so you could start to collect data for models) 1/07