Great Land Trust/ Exxon Valdez Oil Spill Trustee Council Prioritization
December 2012

A land based prioritization of conservation value was conducted during the fall of 2012 by Great Land Trust with funding from USFWS Coastal Program to identify the highest quality coastal and near coastal habitat on Kodiak Island, Afognak Island, and the surrounding islands within the Kodiak Island Borough. Using ArcGIS and the best available data, land was evaluated by half kilometer grid in order to identify unconstrained regions of high conservation value. Prioritization criteria were applied to private, native corporation, native allotment, and Alaska Mental Health Trust lands.

Prioritization criteria were developed with input from the US Fish and Wildlife Service, Alaska Department of Fish and Game, Alaska Audubon Society, and independent conservation professionals. This document will be revised as data is updated or new/better data made available or with input from stakeholder review.

Prioritization Criteria

Scoring Data	Source
Anadromous Species Diversity by Subwatershed	- ADF&G Anadromous Waters Catalog (AWC) Shapefile - USGS HUC-12 Shapefiles
Presence of Significant Bird Habitat	- NOAA Environmental Sensitivity Index (ESI) Shapefiles - Alaska Audubon Important Bird Areas (IBA) Shapefiles - North Pacific Seabird Information Network (SIN) Shapefiles
Presence of Significant Marine Mammal Habitat	- NOAA ESI Shapefiles - ADF&G Most Environmentally Sensitive Areas (MESA) Shapefile
Presence of Significant Terrestrial Mammal Habitat	- ADF&G (MESA) Shapefile
Presence of Wetlands	- USFWS National Wetlands Inventory (NWI) Shapefile
Presence of a Riparian Zone	- Kodiak Island Borough Rivers and Streams Shapefile - Kodiak Island Borough Lakes Shapefile
Elevated Potential for Human Activity	- KIB Roads Shapefile - USGS Populated Places Shapefile - Koncor Forest Products Logging Roads Shapefile - Koncor Forest Products Timber Stands Shapefiles
Adjacency to Protected Lands	- USFWS Surface Ownership Shapefile - NRCS Administrative Boundaries Shapefile - ADNR Other Land Ownership Shapefile - EVOS Trustees Council Habitat Protection and Acquisition Catalog, 2006 - EVOS Trustees Council Resolutions 2007-2012 - APR State Historic Parks and Recreation Areas maps - NCED Conservation Easement Shapefiles
Within a Refuge Boundary	- USFWS Refuge Boundaries Shapefiles
Within a Kodiak NWR Refuge – Afognak State Park Connecting Corridor	- GLT Defined
Areas Identified by Expert Opinion	- US Fish and Wildlife Service - Alaska Department of Fish and Game - Alaska State Parks

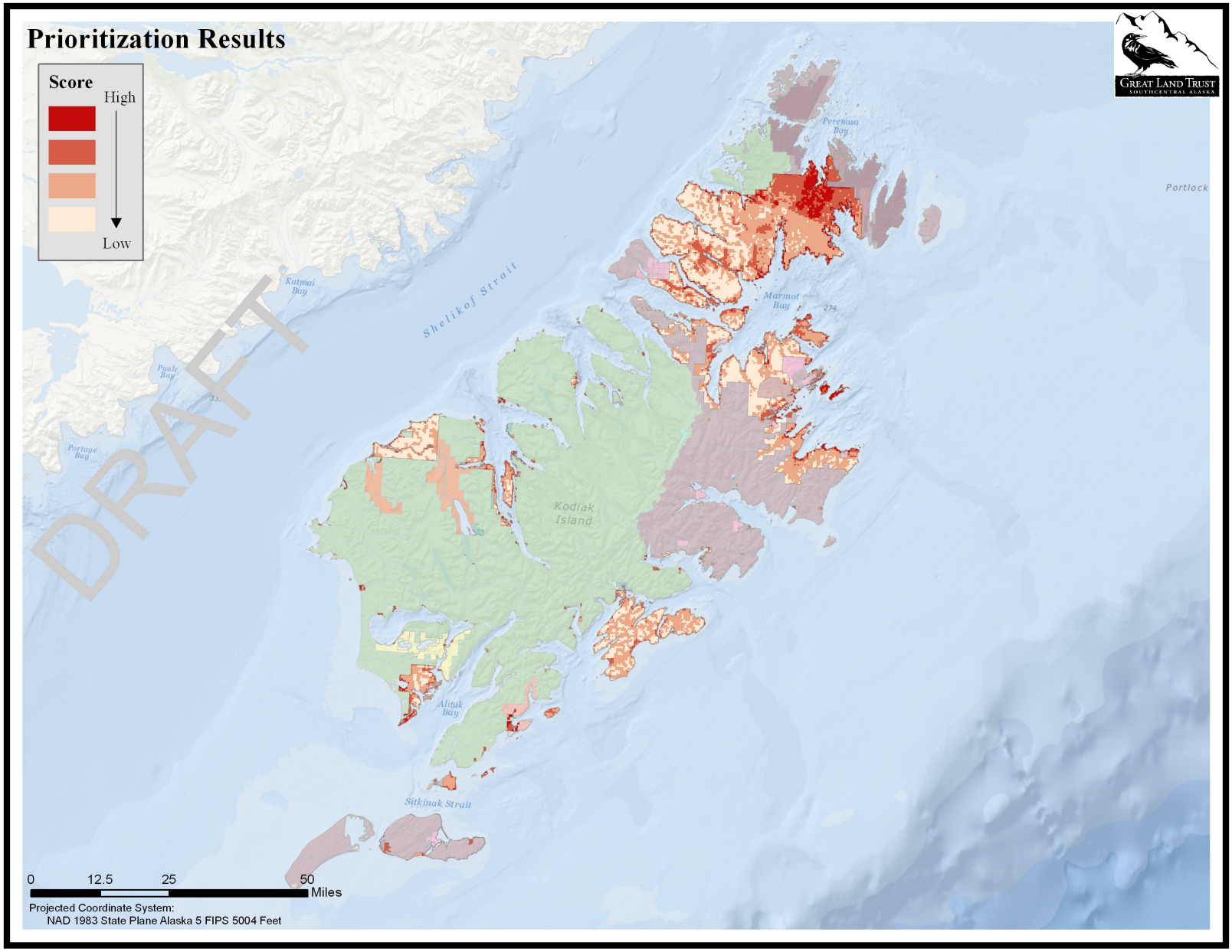
Areas Identified by Expert Opinion (cont.)	- The Nature Conservancy - The Conservation Fund

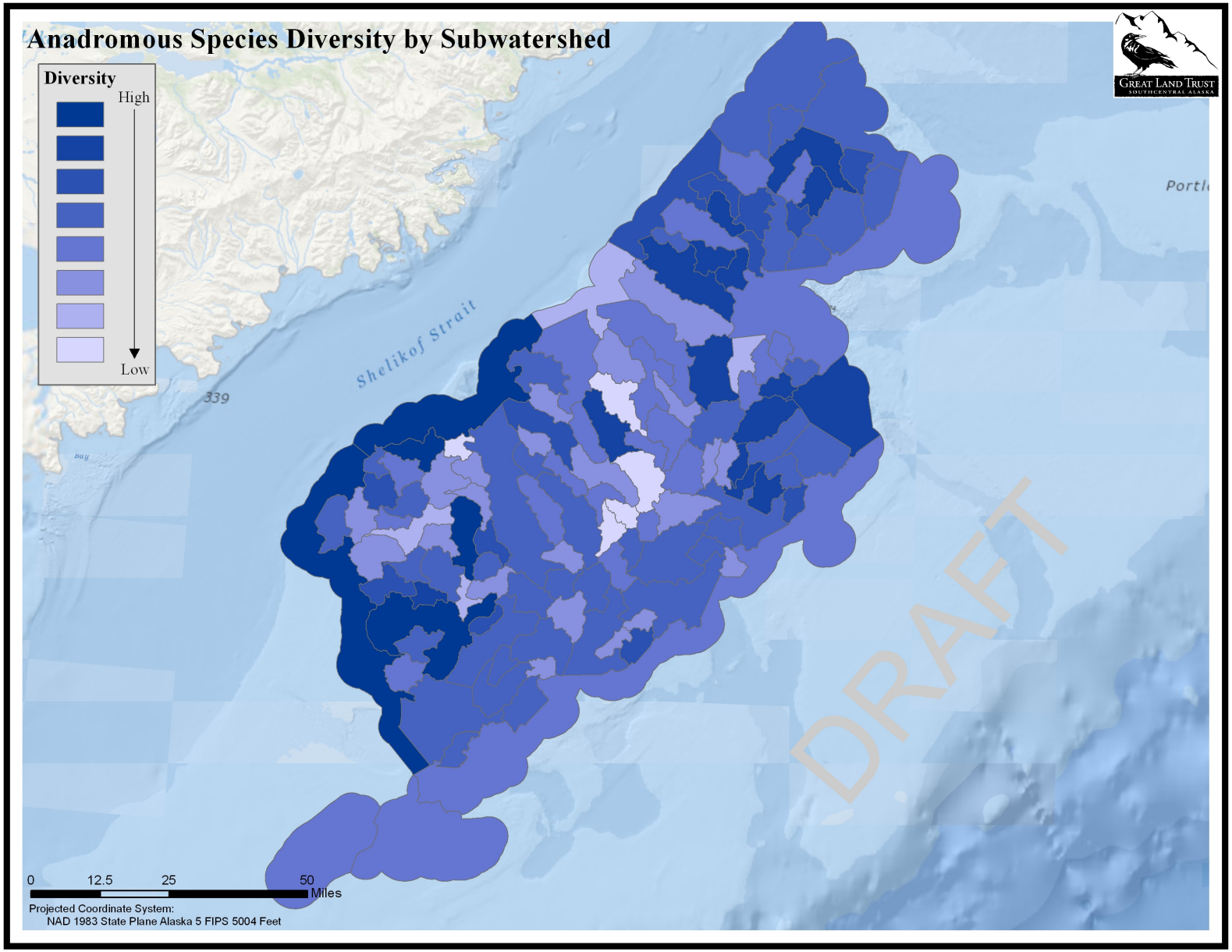
Scoring

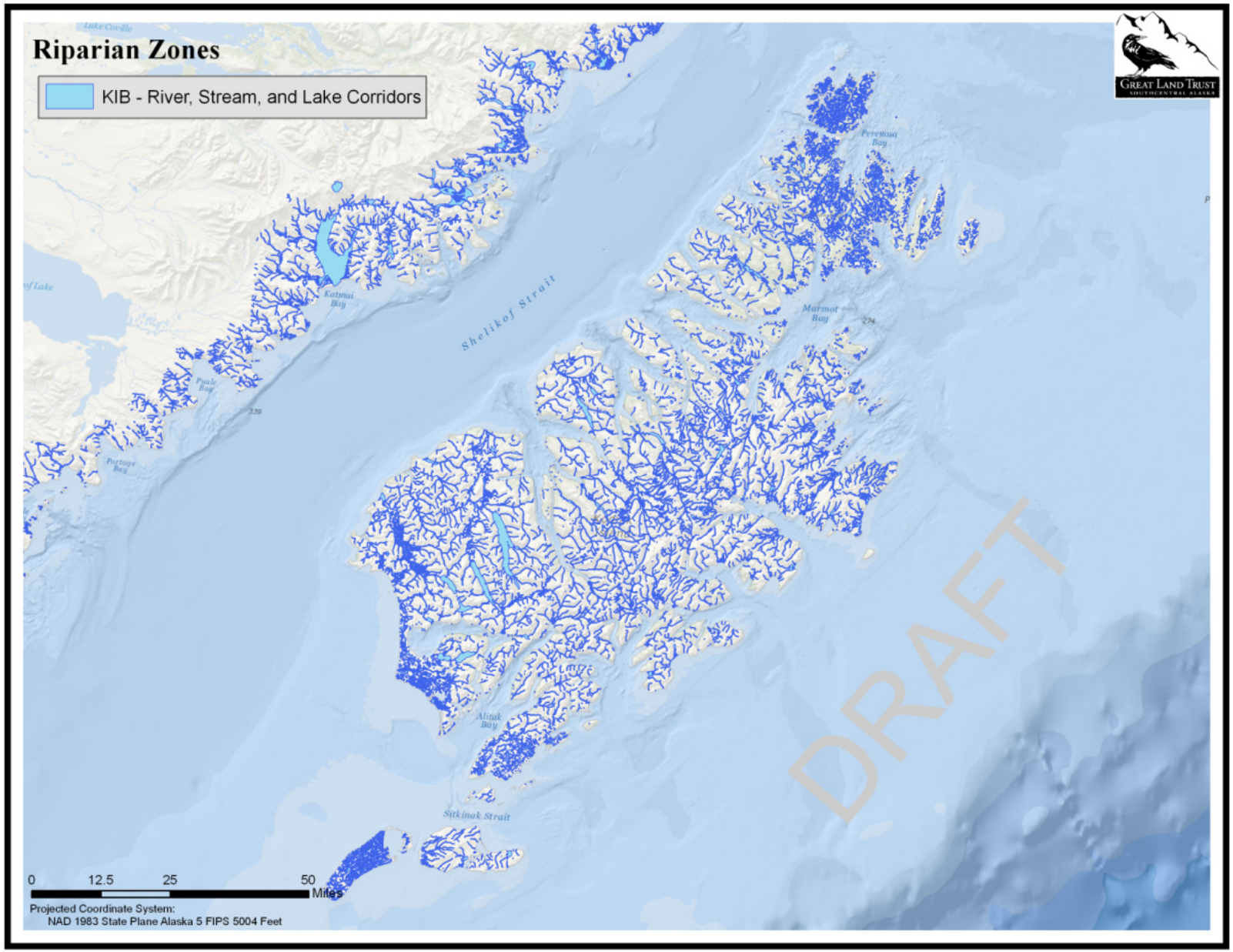
Any half kilometer by half kilometer grid square that geospatially intersected with any of the above criteria received one point for that criterion. Select criteria scored additional partial points by merit of high conservation value. Any grid square intersecting with an anadromous subwatershed earned 1 point plus and additional 1/7th point (accounting for the seven anadromous species on Kodiak and Afognak) for every species found within the containing subwatershed. Grid squares intersecting with bird habitat containing species identified by the Exxon Valdez Oil Spill Trustee Council as not yet recovered or by Alaska Department of Fish and Game for Wildlife "Conservation Strategy" on Kodiak were given an additional half point. Grid squares intersecting with marine mammal habitat containing species identified by the Exxon Valdez Oil Spill Trustee Council as not yet recovered or species classified as endangered by the Endangered Species Act were given an additional half point. Individual criteria scores of 0, 1, 1 + X*1/7, or 1.5 resulted in a possible cumulative score of 0-13 points for any given grid square.

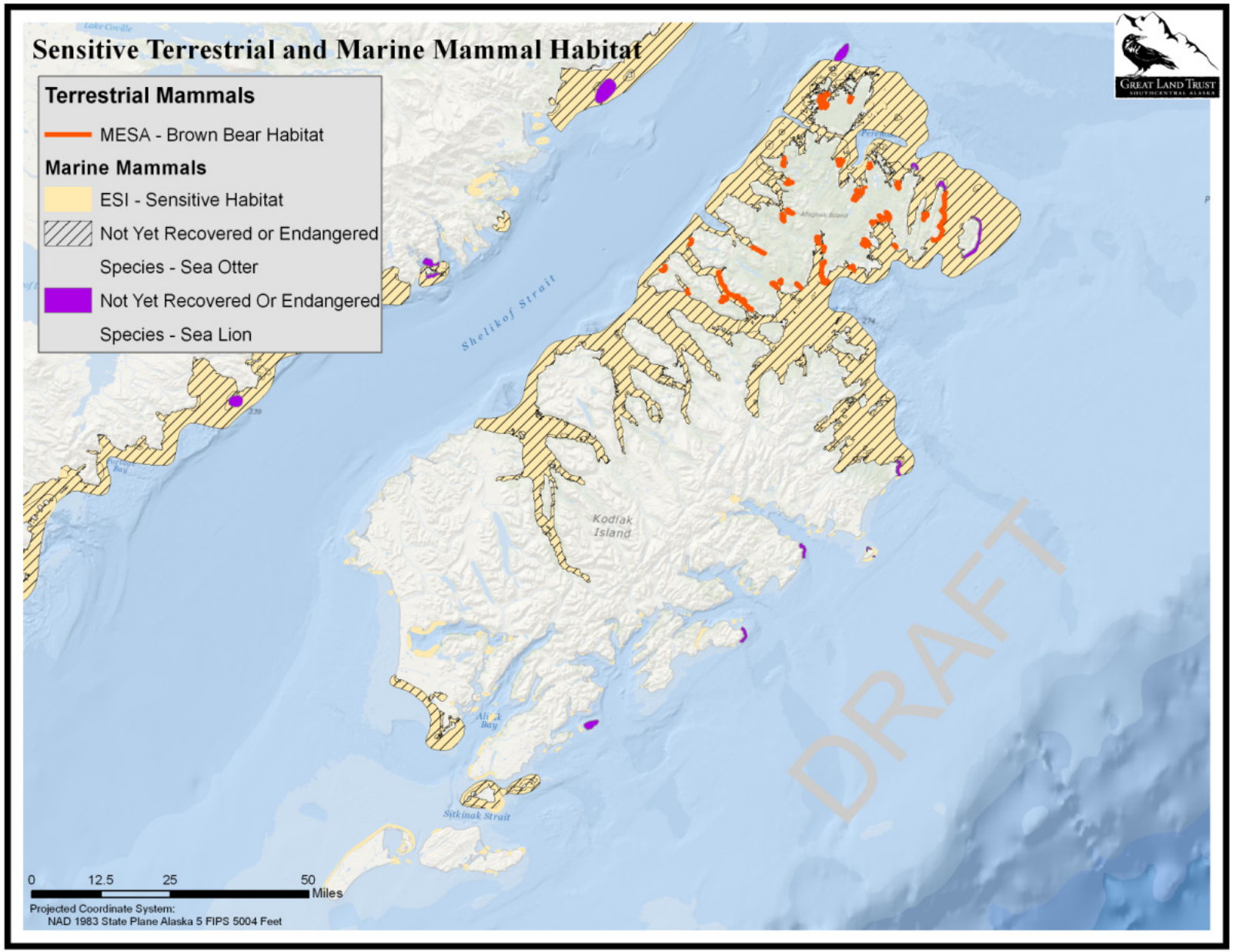
Data Modification and Processing

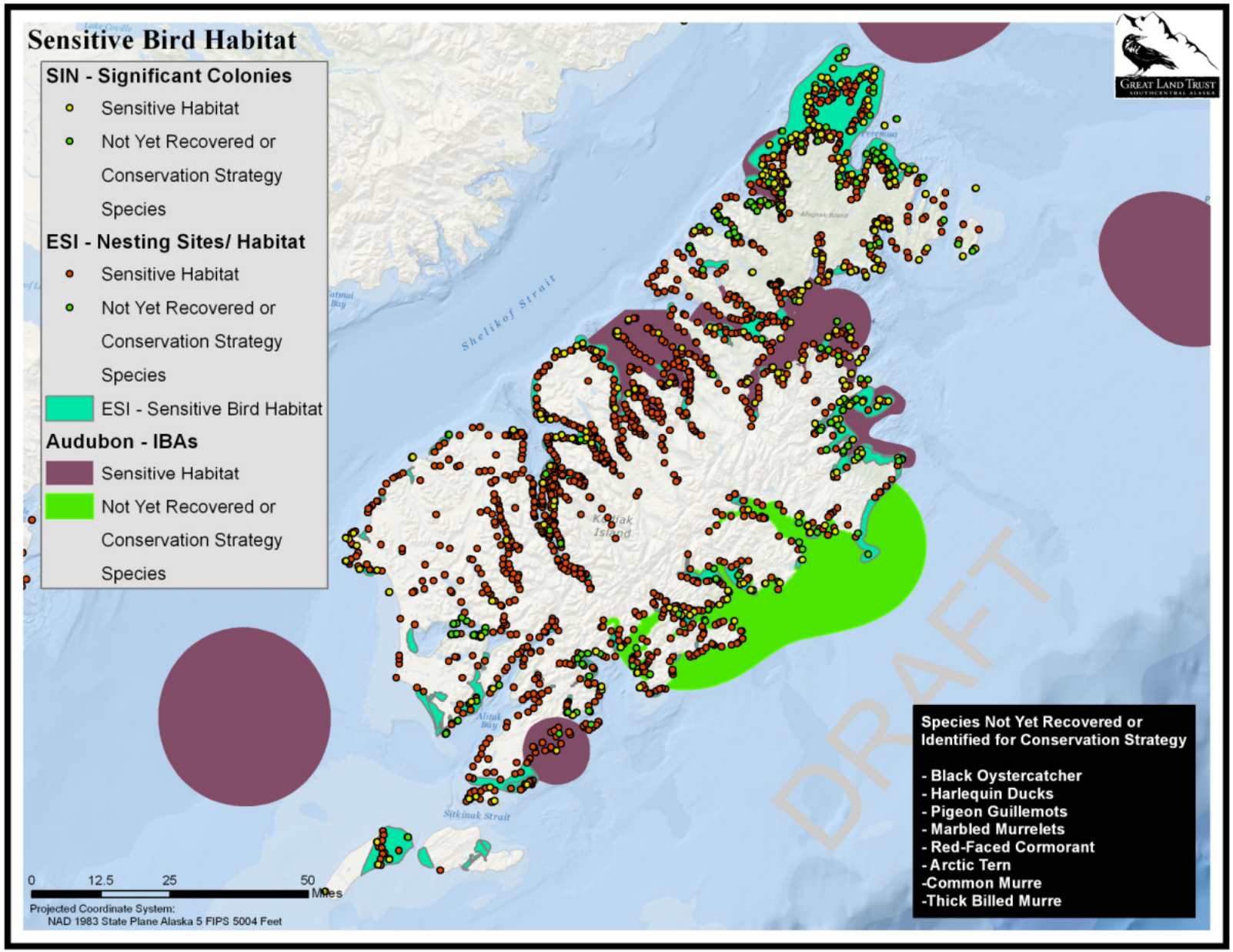
Some modification of data was done within ArcGIS to best represent the region's habitat and conservation values. The anadromous species diversity layer was created by geospatially intersecting the AWC point shapefile and the USGS HUC-12 subwatershed polygons, allowing tally of the total unique anadromous species per subwatershed. Riparian zones were created by buffering the Kodiak Island Borough's river, stream, and lake shapefiles by 300 feet. Areas determined to have elevated potential for human activity were defined by buffering the Kodiak Island Borough's Roads shapefile, the Koncor Forest Products Logging Roads shapefile, the Koncor Forest Products Timber Stands shapefiles, and the USGS Populated Places shapefile by 1 mile. The Kodiak NWR – Afognak State Park connecting corridor was drawn by linear connection of the Refuge and Park boundaries.

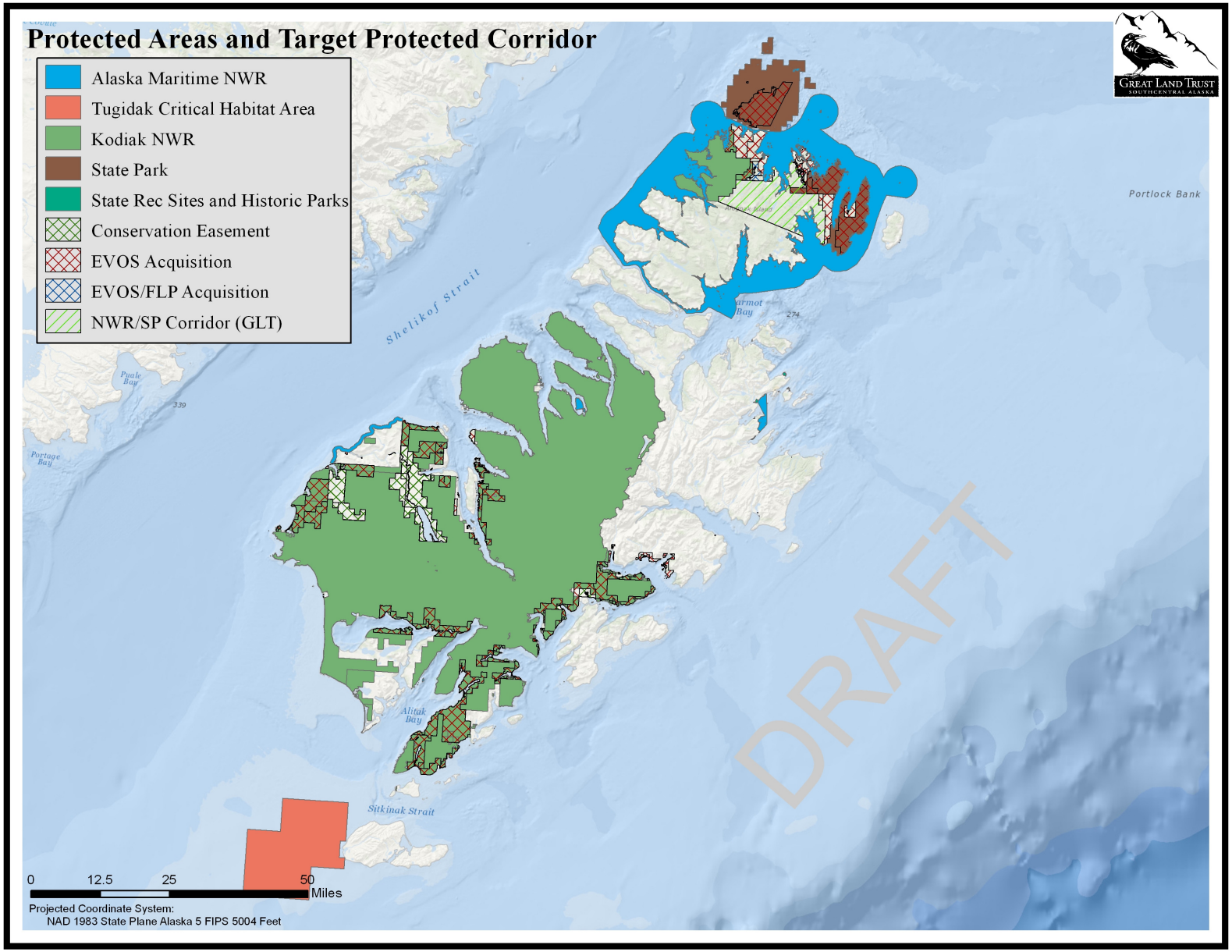

Prioritization Results
Score
High
Low
DRAFT
Great Land Trust
Southcentral Alaska
Shelikof Strait
Katmai Bay
Puale Bay
Portage Bay
Perenosa Bay
Marmot Bay
Portlock
Kodiak Island
Alitak Bay
Sitkinak Strait
0
12.5
25
50
Miles
Projected Coordinate System:
NAD 1983 State Plane Alaska 5 FIPS 5004 Feet

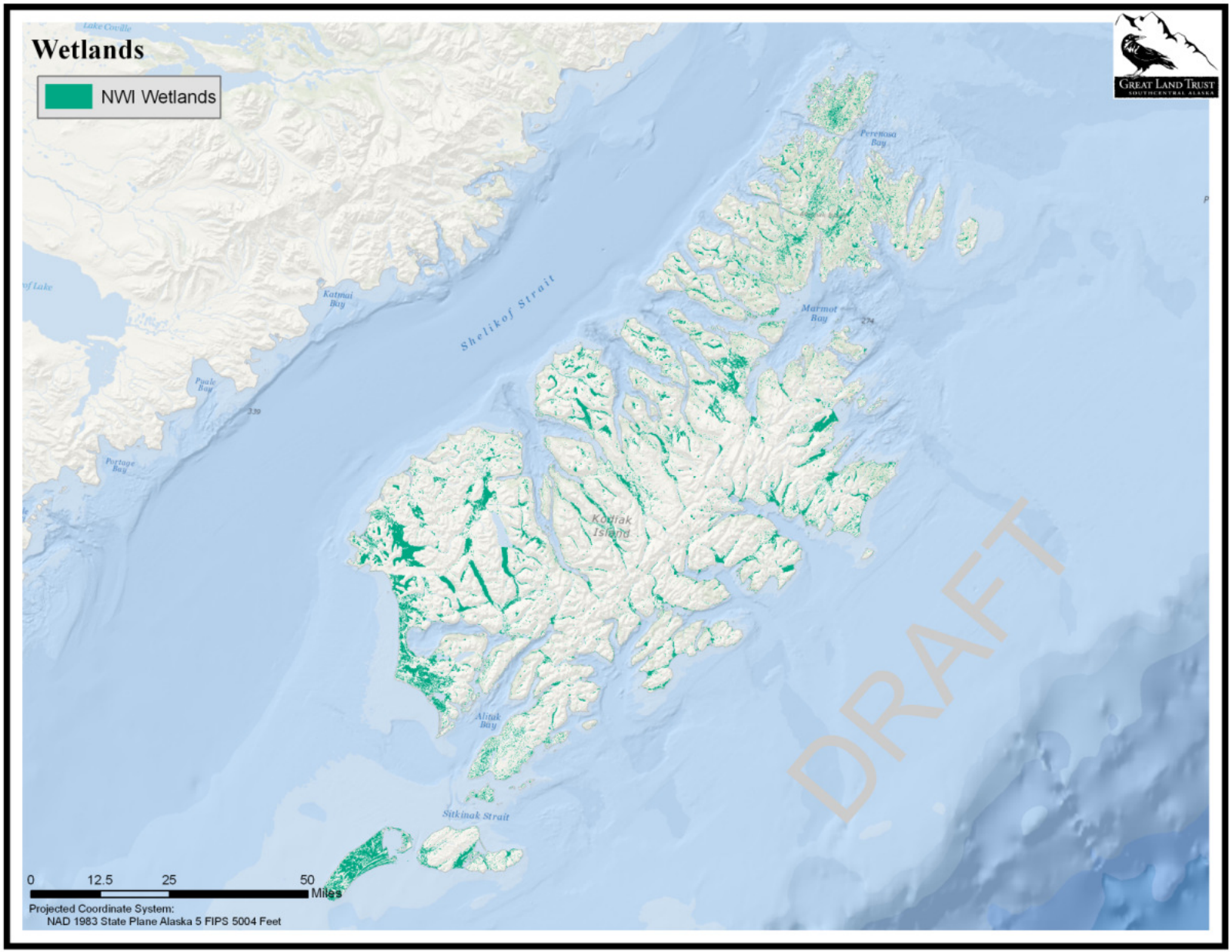

Anadromous Species Diversity by Subwatershed
Diversity
High
Low
Shelikof Strait
339
Portl
DRAFT
0
12.5
25
50
Miles
Projected Coordinate System:
NAD 1983 State Plane Alaska 5 FIPS 5004 Feet
Great Land Trust
Southcentral Alaska


Riparian Zones
KIB - River, Stream, and Lake Corridors
Lake Coville
Katmai Bay
Shelikof Strait
Pyale Bay
Portage Bay
Perenosa Bay
Marmot Bay
Alitak Bay
Sitkinak Strait
0
12.5
25
50
Miles
Projected Coordinate System:
NAD 1983 State Plane Alaska 5 FIPS 5004 Feet
DRAFT
GREAT LAND TRUST
SOUTHCENTRAL ALASKA


Sensitive Terrestrial and Marine Mammal Habitat
Terrestrial Mammals
MESA - Brown Bear Habitat
Marine Mammals
ESI - Sensitive Habitat
Not Yet Recovered or Endangered Species - Sea Otter
Not Yet Recovered Or Endangered Species - Sea Lion
Shelikof Strait
Kodiak Island
Sitkinak Strait
DRAFT
0 12.5 25 50 Miles
Projected Coordinate System:
NAD 1983 State Plane Alaska 5 FIPS 5004 Feet
GREAT LAND TRUST
SOUTHCENTRAL ALASKA


Sensitive Bird Habitat
SIN - Significant Colonies
Sensitive Habitat
Not Yet Recovered or Conservation Strategy Species
ESI - Nesting Sites/ Habitat
Sensitive Habitat
Not Yet Recovered or Conservation Strategy Species
ESI - Sensitive Bird Habitat
Audubon - IBAs
Sensitive Habitat
Not Yet Recovered or Conservation Strategy Species
Shelikof Strait
Kodiak Island
Alitak Bay
Sitkinak Strait
Afognak Island
Perenosa
0 12.5 25 50 Miles
Projected Coordinate System:
NAD 1983 State Plane Alaska 5 FIPS 5004 Feet
Species Not Yet Recovered or Identified for Conservation Strategy
- Black Oystercatcher
- Harlequin Ducks
- Pigeon Guillemots
- Marbled Murrelets
- Red-Faced Cormorant
- Arctic Tern
-Common Murre
-Thick Billed Murre
DRAFT
Great Land Trust
Southcentral Alaska


Protected Areas and Target Protected Corridor
Alaska Maritime NWR
Tugidak Critical Habitat Area
Kodiak NWR
State Park
State Rec Sites and Historic Parks
Conservation Easement
EVOS Acquisition
EVOS/FLP Acquisition
NWR/SP Corridor (GLT)
Shelikof Strait
Puale Bay
Portage Bay
Alitak Bay
Sitkinak Strait
Portlock Bank
DRAFT
0 12.5 25 50 Miles
Projected Coordinate System:
NAD 1983 State Plane Alaska 5 FIPS 5004 Feet
Great Land Trust
Southcentral Alaska


Wetlands
NWI Wetlands
Great Land Trust
Southcentral Alaska
Lake Coville
Katmai Bay
Shelikof Strait
Puale Bay
Portage Bay
Perenosa Bay
Marmot Bay
Kodiak Island
Alitak Bay
Sitkinak Strait
DRAFT
0
12.5
25
50
Miles
Projected Coordinate System:
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