

**AFWFO CLIMATE CAPACITY BUILDING WORKSHOP  
CASE STUDY  
PROJECT STATEMENT**

**PROJECT NAME:** Fish & Wildlife Habitat Prioritization for Private Land Conservation in the Mat-Su Valley.

**BACKGROUND:** For the past several years, AFWFO regulatory and non-regulatory programs have been working with the Great Land Trust (GLT) and other agency and NGO partners to conduct a prioritization of private land parcels having the highest fish, wildlife and conservation values. The primary goal of this effort is to develop a GIS-based conservation planning tool to identify and prioritize lands for strategic habitat conservation in the Matanuska-Susitna Borough.

ArcGIS, a Geographic Information System (GIS), was the primary tool used to complete the Mat-Su Borough parcel prioritization analysis. The GIS tool development process involved guidance from several steering committee meetings, involving participants from EPA, MSB, USFWS, ADF&G, TNC and GLT.

Due to the large area of the Matanuska-Susitna Borough, and the numerous parcels contained within it (106,189 parcels), it was necessary to first reduce the number of parcels that would be considered in this analysis. To decrease the number of parcels, GLT used a set of filters. Parcels remaining for consideration in the analysis must pass all the filters. The filters are:

1. Within the boundaries of the Mat-Su Borough.
2. Below 1500ft elevation and/or within 1 mile of a road.
3. Greater than 5 acres.
4. Owner other than Federal or State (Public University and Mental Health Trust lands are considered private)

The MSB Conservation Prioritization Project utilized 13 different conservation criteria:

1. Adjacent to or within protected areas.
2. Adjacent to or containing a threatened or impaired waterbody.
3. Presence of wetlands.
4. Normalized area of wetlands.
5. Presence of anadromous streams.
6. Presence of any stream.
7. Normalized area of 300ft riparian buffer zone.
8. Development vulnerability.
9. Anadromous fish diversity.
10. Adjacent to or within IBAs.
11. Moose habitat.
12. Adjacent to or within MSB community infrastructure.
13. Normalized parcel size.

For all criteria, the best available data was used. Some of this data, however, required processing before the criteria data could be used to score the parcels. Methods are available, upon request.

**DECISION** (the FWS decisions; e.g. what mitigation recommendations to make and where; whether to propose listing; where to focus habitat restoration and protection projects)

This Decision Support Tool is used for the following decisions:

1. Recommend projects during compensatory mitigation process (during individual project reviews and during In-lieu Fee program activities).
2. Identify projects for voluntary habitat conservation (conservation easements or fee simple acquisition).
3. Support funding requests for habitat conservation projects.
4. Support Coastal Program, Conservation Planning Assistance and the Mat-Su Basin Salmon Habitat Partnership objectives for habitat conservation.
5. Meet objectives of State Refuge and Game management unit plans, as applicable.

**CLIMATE NEXUS** (how climate is anticipated to influence this decision)

The primary questions concerning climate change: 1) how best to incorporate a climate change lens into the current habitat conservation decision-support tool, 2) by integrating a climate change lens into this prioritization will it result in a change in the current priorities/strategies for habitat conservation in this geographic area.

**DATA INPUTS (for current decision-support tool)** (indicate available data sets (known and suspected); identify where the data resides – university, partner, FO; include biological and physical data)

- **MSB**
  - Parcels
  - MSB boundaries
  - Town parks
  - Public facilities (schools & rec)
  - Wetland Mitigation Banks
  - Core/Pt. MacKenzie Green Infrastructure
- **TNC**
  - AWCA 303d listed waterbodies
  - Conservation Management Status
  - Subwatershed Vulnerability Layer
- **NWI**
  - MSB Wetlands Quads
- **Mike Gracz**
  - Cook Inlet Wetland M
- **NRCS**
  - Administrative boundaries (protected areas)
  - Soils (hydric)
  - HUC boundaries
- **National Hydrology Dataset**
  - Streams and Lakes
- **ADF&G**
  - Anadromous Waters Catalog
  - Moose Habitat Range
- **Alaska Audubon**

- Important Bird Areas (IBAs)
- **USGS**
  - Big Lake hydrology layer
- **Great Land Trust**
  - Conservation Easements

## **PARTNERS FOR CREATING CURRENT DECISION-SUPPORT TOOL**

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