Predicting and Managing Climate Change Impacts on Semi-arid Land Wetlands, Migratory Birds, and Their Prey:

An Integration of Remote Sensing, Molecular Genetics, Hydrology, and Environmental Modeling

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- Predicted GC impact on Great Basin wetlands will alter their #, distribution, quality (e.g., salinity)

How will GC affect migratory bird species (invertebrate prey) dependent on climate-sensitive wetlands in western Great Basin?

1. Determine scope of abiotic impacts:
   **DIGITAL WETLANDS MODEL (DWM)**
   (Remote sensing, historical climate data, ground-monitoring)

2. Use DNA markers to measure level of aquatic invertebrate species connectivity throughout wetlands network

3. **DWM + Climate Projections + Landscape Genetics = MODEL** future scenarios of (1) wetland patch quality; (2) species connectivity