

BUREAU OF LAND MANAGEMENT

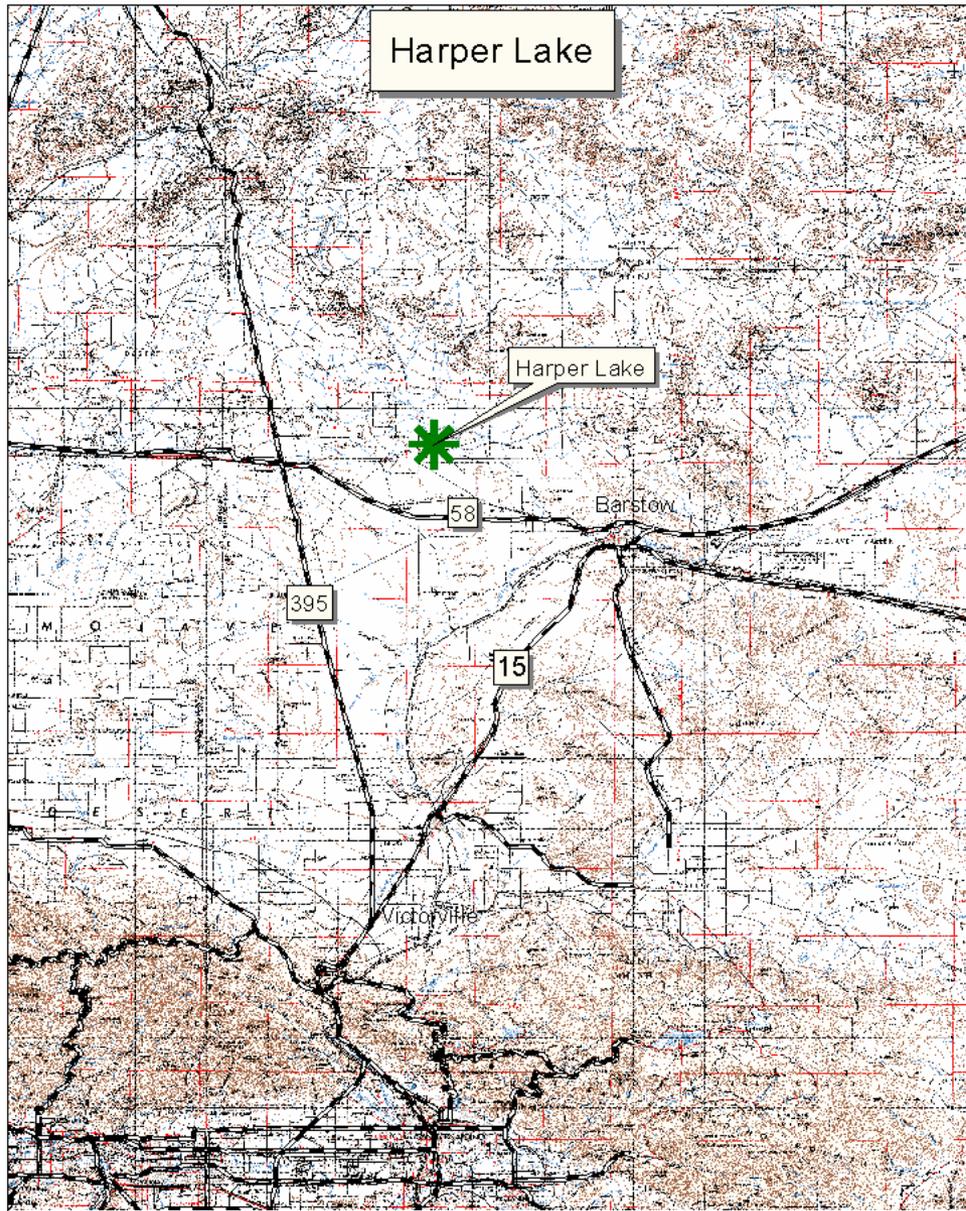
CALIFORNIA DESERT DISTRICT



BARSTOW FIELD OFFICE

WETLAND AND MARSH RESTORATION AT HARPER DRY LAKE





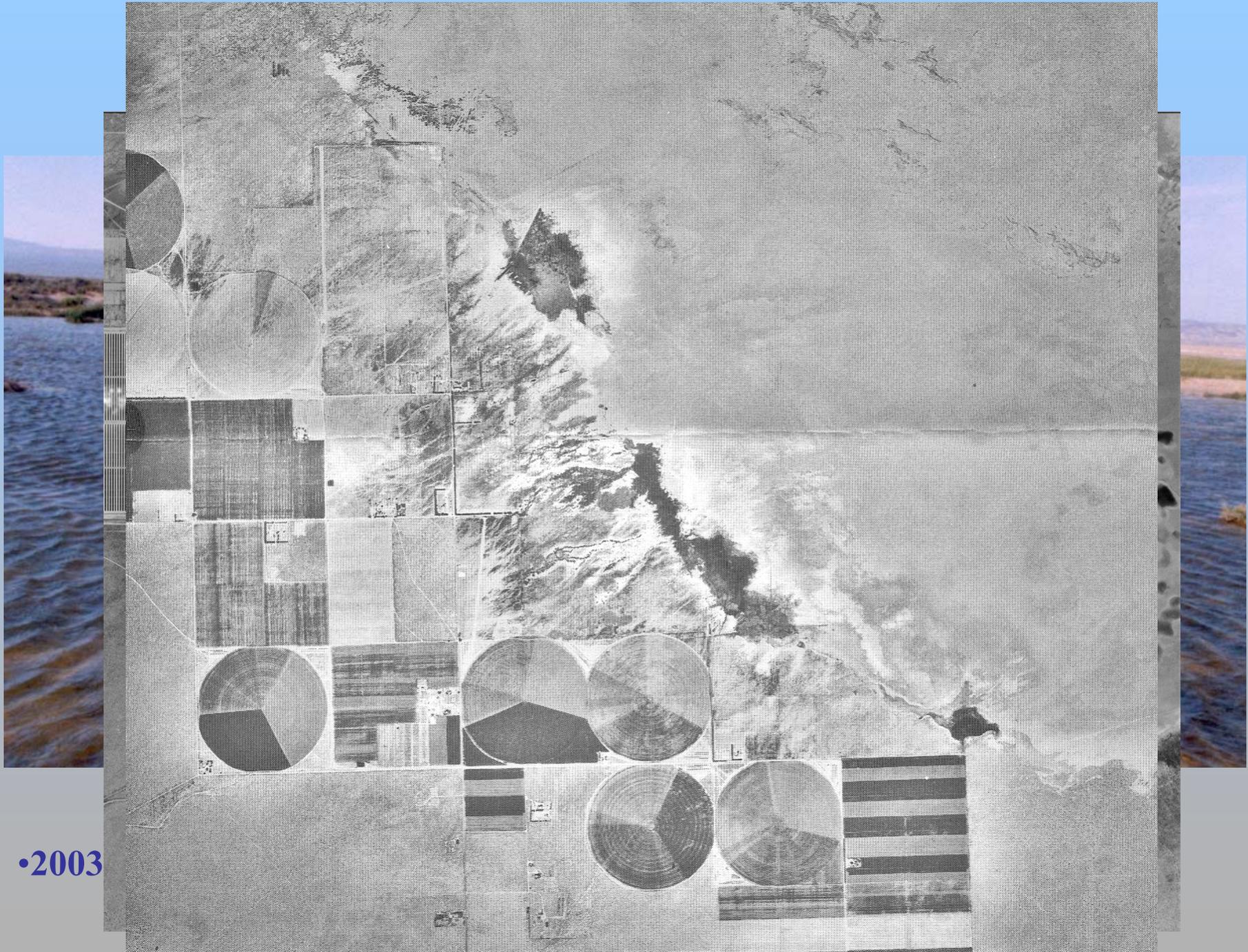
Harper Lake

Harper Lake

Barstow

Victorville

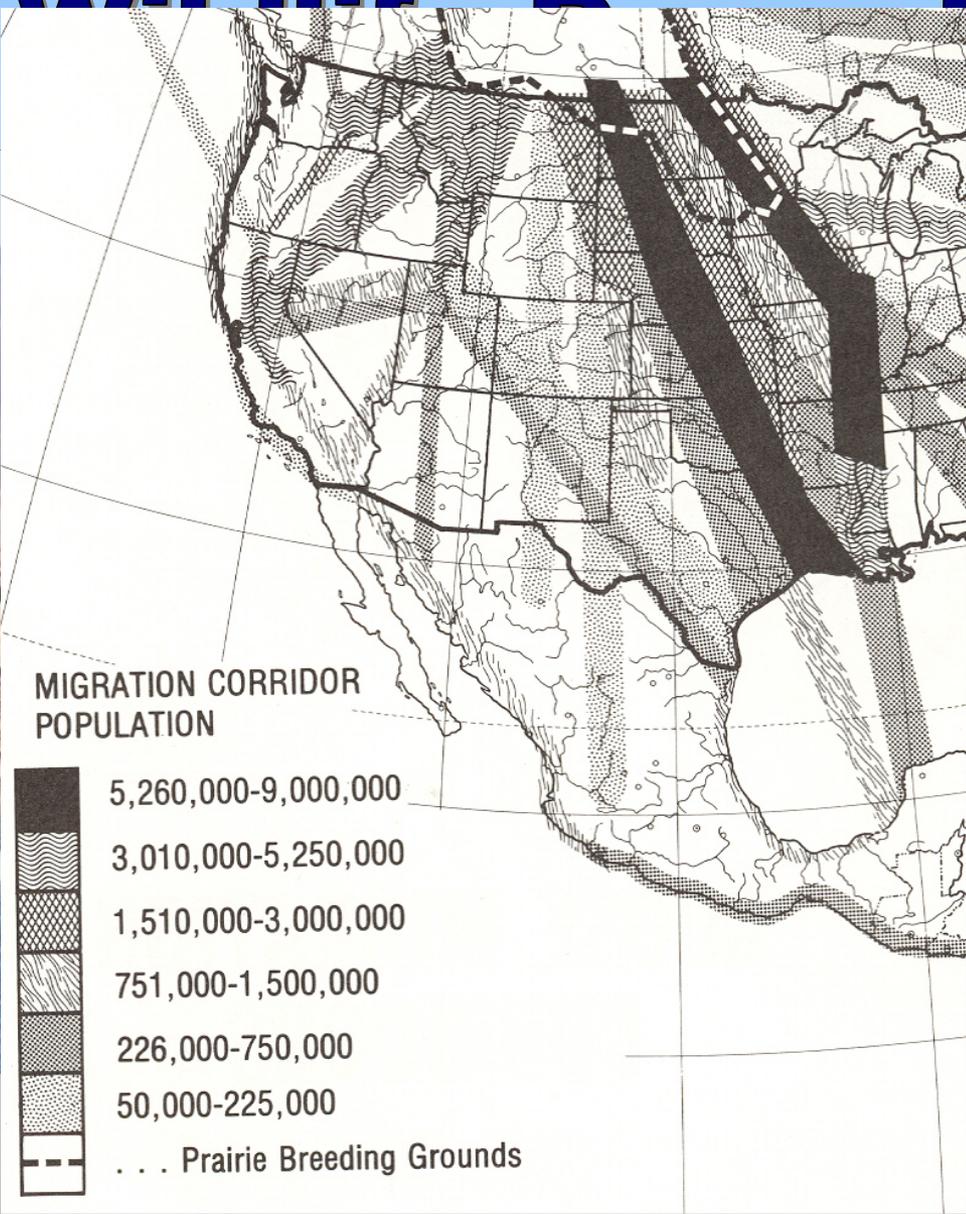




•2003

WATER BIRDS

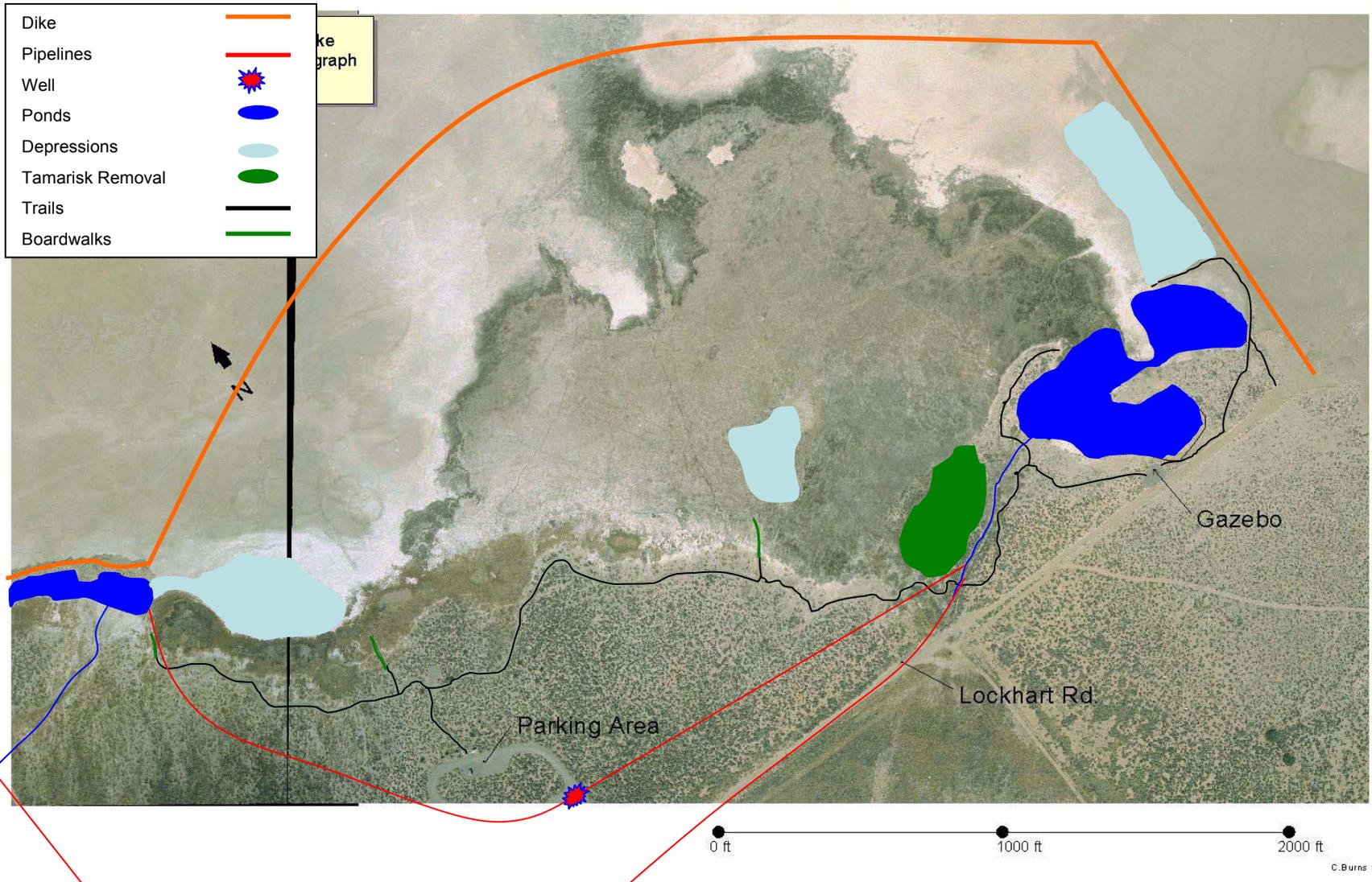
- 2
- (
- C
- I
- C
- 1
- Ha
- River



Mitigation Opportunity

- **Mitigation \$\$ from Luz Solar Partners**
- **75 acre-ft of Water in Perpetuity**
- **\$60,000 for Well and Pipe installation**
- **Friends of Harper Lake**
- **California Watchable Wildlife Site**

CONSTRUCTION ACTIVITIES



REHYDRATION

- Water turned on February 28, 2003
- Primary filling done April 2003 with aid of a larger well owned by the Friends of Harper Lake.
- Should Harbor Birds for Spring Migration, Overwintering, and Fall Migration
- Water is Reduced in the Summer to Mirror Natural Conditions
 - Save Water
 - Cattail Control
 - Provide Playa Habitat for Nesting Snowy Plovers

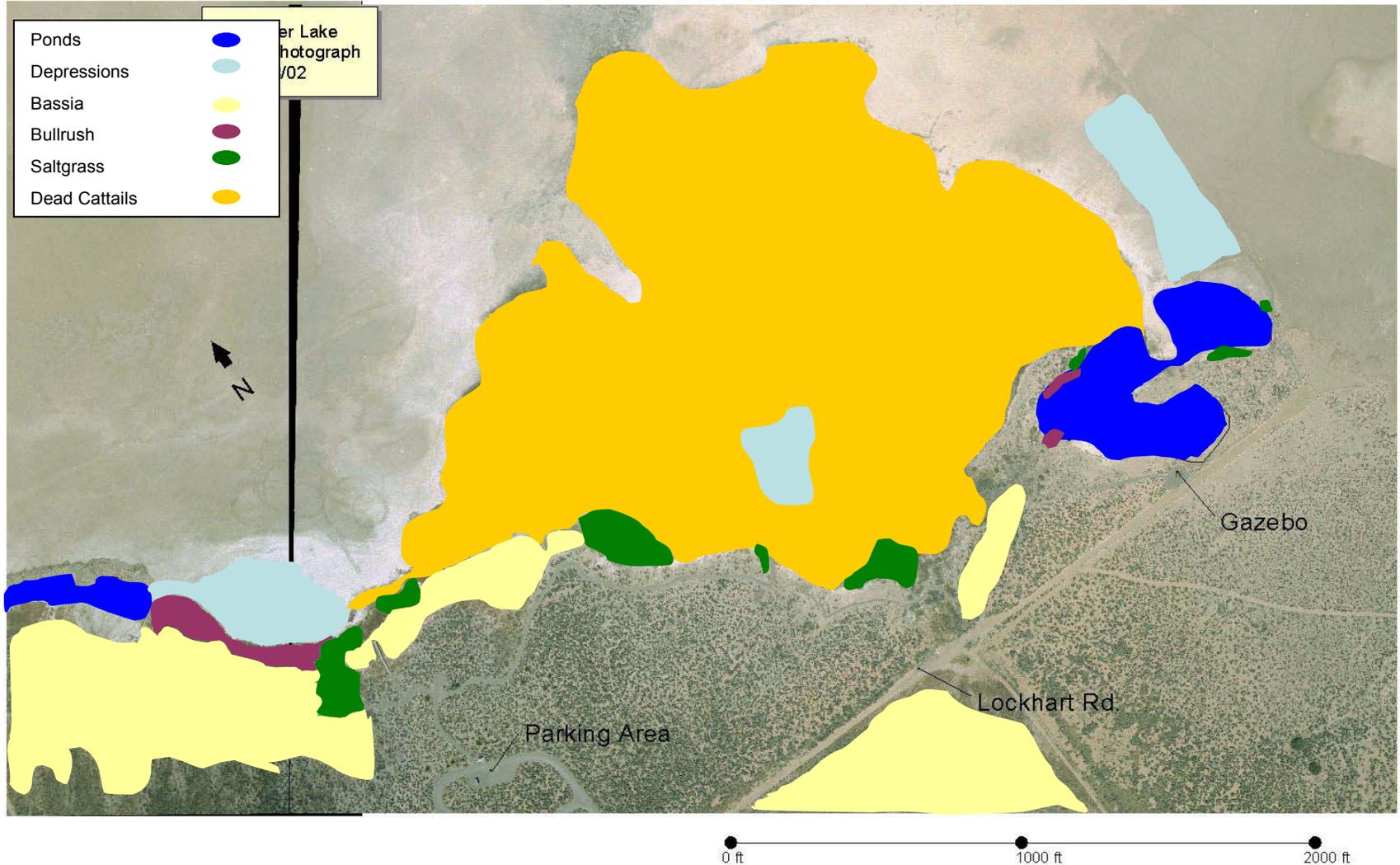
Avian Species - Spring 2003

- **killdeer (nesting)**
- great egrets
- **American avocets (nesting)**
- western sandpipers
- spotted sandpipers
- black-necked stilts
- long-billed dowitchers
- **western snowy plovers (nesting)**
- semipalmated plovers
- Wilson's phalaropes
- least sandpiper
- white-faced ibises
- mallards
- cinnamon teals
- black terns
- ring-billed gulls
- nighthawks
- red-tailed hawks
- turkey vultures
- Wilson's warblers
- western kingbirds
- mourning doves
- western meadowlarks
- sage sparrows
- horned larks.
- common ravens

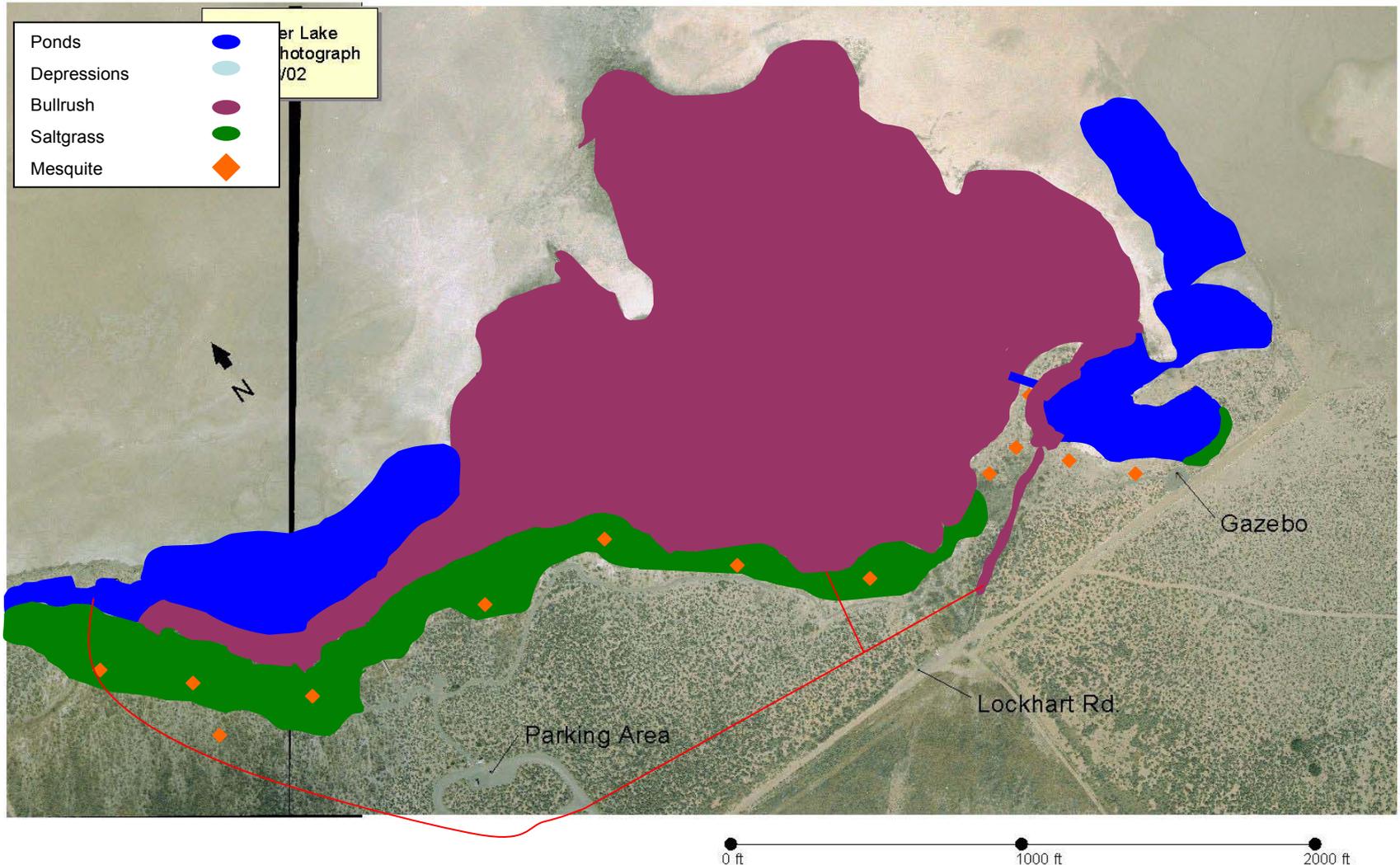
Avian Species - Winter 2003/2004

- great egrets
- snowy egrets
- killdeer
- American avocets
- western sandpipers
- northern shovelers
- green-winged teal
- mallards
- pied-billed grebes
- American wigeons
- northern harriers
- prairie falcons
- Say's phoebes
- horned larks
- western meadowlarks
- savannah sparrows
- sage sparrows
- marsh wrens
- common ravens
- loggerhead shrikes
- American pipits
- LeConte's thrasher

Current Vegetation



Restoration of Native Plant Communities



ECOSYSTEM FUNCTIONALITY

- **Goal: To mirror a naturally functioning ecosystem, which necessitates minimal management intervention**
- **Diverse wetland and marsh habitats to support a variety of birds**
- **Inoculation with Mojave River invertebrates**
- **Introduction of Fish**
- **Possible translocation of Mojave River Vole if water can be obtained to sustain the wetland in the summer.**
- **Mesquite plantings**

RECREATION / EDUCATION

- **Signs from Highway 58**
- **Interpretive Kiosk and Educational Signs along trails**
- **School Field Trips**
- **Bird Club Field Trips**
- **Watchable Wildlife Site**

PARTNERS / SUPPORT

- **25+ Contributors from Schools, Businesses, Nonprofits, Local, State, and Federal Government**
- **Apple Valley High School, Excelsior High School, Bank of America, Brubaker-Mann, Luz Solar Partners, Starbucks**
- **Friends of Harper Lake, Audubon Society, Point Reyes Bird Observatory, Ducks Unlimited, Sierra Club, Boy Scouts, Girl Scouts**
- **Congressman Jerry Lewis, Mojave Desert RCD, CA Dept. of Fish and Game, CA Energy Commission, LaHonton RWQCB, Mojave Water Agency**
- **California and LA Conservation Corps and many Volunteers**

Future Work at Harper Lake

- Continual monitoring of species richness, nesting status, etc.
- Continual mechanical and chemical control of five-hook bassia following initial burn.
- Continual tamarisk control by office personnel and CCC / LACC.
- Cooperation with adjacent landowners for weed removal.
- Modification of water delivery system to increase the extent of the marsh in certain areas.
- Seek grant funding for additional projects at Harper Lake.
- Continue working with our partners in an effort to obtain more water rights for wetland expansion.
- Continue environmental education
- Continue to pursue the IMCC Harper Lake mitigation project.

