

Wetlands

Seasonal Wetland Mitigation, Geothermal, Inc. Facility Closure Lake County, California



Background

From 1976 to 1986, the Geothermal, Inc. site located east of the City of Middletown served as a disposal facility for geothermal wastes generated at the Geysers Geothermal Field. Liquid waste materials were deposited in seven evaporation ponds and dried solids were buried in onsite disposal trenches. In 2002, a Closure Plan was prepared in response to a Regional Water Quality Control Board Cleanup and Abatement Order. Closure activities described in the Plan consisted of filling and capping the ponds, grading to eliminate ponding and reduce infiltration, and planting vegetation ('phytcover') to reduce shallow ground-water levels. Habitat impacts associated with the Closure Plan included filling 3.4 acres of jurisdictional wetlands.

Project Highlights

- Created new wetlands and swales in non-native grassland habitat south of the evaporation ponds.
- Performed hydrologic analyses characterizing the existing onsite vernal pools and swales which served as the basis for siting and configuration of the new wetlands.
- Worked with the project biologist to develop construction plans for the created wetlands.
- Observed wetland grading activities.
- Designed and implemented a five-year hydrologic monitoring program.
- Installed electronic equipment to measure ponding durations and depths in both the newly created wetlands and in a subset of the existing vernal pools and swales ('reference wetlands').
- The new wetlands met hydrologic performance criteria during the first four years of monitoring. The fifth year of monitoring is underway.

