



ASSESSMENT OF EXTENT AND CONDITION OF DEPRESSIONAL WETLANDS IN SOUTHERN CALIFORNIA

What is it?

The San Diego, Santa Ana, and Los Angeles Regional Water Quality Control Boards have determined that evaluation of the extent and condition of depressional wetlands (such as freshwater marshes, and wet meadows) will be a priority for the next several years as a new element of the cooperative regional monitoring and assessment in southern California. These Regional Boards and the Southern California Coastal Water Research Project (SCCWRP) designed a study on the systematic condition assessment of southern California depressional wetlands. This study includes an evaluation of indicators that will help assess the condition and stressors associated with the beneficial uses in these areas. The depressional wetland assessment will address the following questions of importance to regulatory agencies and regulated communities, and the public:

- **What is the extent and distribution of depressional wetlands in Southern California?**
- **What is the condition of depressional wetlands in Southern California?**
- **What are the major stressors affecting depressional wetland condition in Southern California?**

Ambient condition will be assessed using a combination of probabilistic (random) and targeted sampling. Probabilistic sites serve to provide an evaluation of overall regional condition in a statistically meaningful manner; targeted sites serve to provide information about specific areas of interest and can aid in assessment of trends. Two broad categories of indicators will be collected at each site: indicators of condition and indicators of stress. There are three types of indicators that will be used to assess wetland conditions: (1) California Rapid Assessment Method (CRAM), (2) community-level characteristics of aquatic macroinvertebrates, and (3) algae. There are four types

of indicators that will be used to assess stress: (1) sediment toxicity, (2) sediment chemistry, (3) hydrology, and (4) landscape-scale stressors. The 2011 field season was used to test protocols and conduct a pilot assessment on a small number of sites in order to determine efficacy of various indicators. The full ambient assessment program will begin in 2012.

Why is it important?

This project fulfills SWAMP's mission to assess water bodies in California, and currently there is no assessment conducted for freshwater wetlands. SWAMP fills this gap by conducting this freshwater wetlands assessment. The project is important to the State because depressional wetlands are of particular interest since they are the most abundant wetland type (about 45% of the State's 3.6 million acres of wetlands), are subject to ongoing impacts, and are seldom systematically monitored. Most monitoring and assessment of depressional wetlands is associated with specific impact or mitigation projects. As a result, available information is limited in space and time and there is little knowledge of overall extent and condition of depressional wetlands. This study will be the first-ever systematic condition assessment of Southern California depressional wetlands. This condition assessment will allow future management actions to be better targeted toward addressing deficiencies and in improving beneficial uses over the long-term. In addition, this project will help expand the science of depressional wetland assessment by developing a study design and indicators that could be adopted or modified for other regions of the State or for use in future project assessments under the 401, NPDES, and WDR programs. The results of this project will provide essential information on the condition of freshwater depressional wetlands for regulators, the regulated community and the public. This project allows citizens to gain greater understanding in the condition of depressional freshwater wetlands which generally leads to improved stewardship and better solutions in resolving water quality problems in these waterbodies.

How will this information be used?

Data collected by this collaborative effort will be used in many ways:

- **Regional Boards and State Board will use the data to decide what management strategies need to be implemented to protect and restore southern California depressional freshwater wetlands.**

- The data collected through this project will be uploaded in Wetland Tracker and CEDEN for use by public, private and governmental organizations and individuals.
- Data can be used by State Board to identify impaired waters under the Clean Water Act, 303(d) and 305(b) Integrated Reporting Requirement.