

**Instructions for
Hydrologic/Biologic Field Forms and Data Collection
At Wetland Sites in Support of the California DMG Water Study**

Required Elements

Employees, Agency, and Date

Record names and agencies of employees collecting data. Also record the date of data collection.

Location of wetland

Record the latitude and longitude of the wetland and indicate how it was determined. Also record the landline location as closely as possible—ideally to the closest quarter, quarter, quarter section. Indicate the USGS 7 1/2-minute topographic map that includes the wetland. Estimate the altitude of the spring and record how the estimate was made. If the wetland has a name on the topographic map (Goat Spring, for example) record the name and also indicate if a spring symbol is shown on the map for the site. If the site is shown on a National Wetland Inventory map, record the wetland code that is used for the site. Record the topographic setting of the site.

Discharge, EC, and Water Temperature

Measure or estimate the discharge and record the results, in gallons per minute. Indicate how the discharge was determined. Measure and record the water temperature to the nearest one-half degree Celsius. Measure and record the electrical conductance of the water, in microsiemens at 25 degrees Celsius.

Water Use and Plumbing

Determine and record the use of the water even if it is only used to support plants and animals. Briefly describe the plumbing at the site—namely the man-made collection structures, piping, and/or water storage at the site. Plumbing should also will be documented by photographs described below.

Description of Wetland

Describe and record the size of wetland and whether it has flowing water, ponded water, and/or simply wetted soil. An example: *“Spring issues from bedrock and flows about 50 feet in a 2-foot wide shallow channel into a pond that is about 12 to 15 feet in diameter. The pond is surrounded by a 2- to 5-foot fringe of wetted soil”*. Each element of the wetland also will be documented by photographs described below.

Observed Plants and Animals

Record the plants and animals that you observe at the wetland. These probably will include both obligate and facultative plants and perhaps both invertebrates and small vertebrates. Tracks and scat of larger vertebrates that utilize the wetland also should be

noted if you have the expertise to identify them. You may be able to identify plant and animals species with their scientific names, or you may simply be able to identify them with their common names. Whenever possible take photographs to document plants and animals.

Photographs

Take photographs to document the source of springs, the manmade plumbing, the flowing and ponded elements of the wetland, the plants, and the animals if possible. A photograph from a distance showing the entire wetland site also is useful. Record the subject of each photograph on the field form. Record the photograph number on the back of each photograph when you get them back from the photo printer, along with the location, date, and name of site. The photographs and your original field forms will be maintained in a hard-copy archive by the USGS for future reference and use.

Optional Elements

Manmade Factors Affecting Discharge or Water Quality

If you observe anthropogenic factors that are impacting a spring, they should be recorded. For example, cattle wallowing in a spring is obvious most of the time. You may see a nearby well or even a home with a septic system near a wetland. Although you do not know for sure whether the well or septic system is affecting the wetland, they should be recorded.

Geologic Setting and Type of Aquifer

Depending on your expertise, you may be able to observe and record the geologic setting of the wetland. If possible, it is important to record the source of water supplying a wetland site. Does the water issue from bedrock or sediment? What is the type of bedrock—volcanic, metamorphic, or sedimentary? What is the degree of fracturing in the bedrock? Is the wetland associated with faulting? Does the water issue from an aquifer of probable limited areal extent or from a larger regional aquifer? Is the wetland supplied by a perched aquifer or is the wetland supplied by the regional water table? These and other factors should be recorded if you have the knowledge to identify them.

Remarks

Space is provided for you to record other observations or to make comments that you feel might be useful to others who may someday visit or look at your data. Unusual access problems to a site, for example, might be noted here. The fact that you collected a water sample for chemical analyses during this visit also should be noted here.