

Guidelines for Solar Array Projects

Solar array project sites often encompass extensive areas, and it is economically desirable to minimize land costs. As a result, many sites that meet these 2 criteria are within flood prone areas.

When considering a site for a potential solar project, contact the Regional Flood Control District to learn of known floodplains including sheet flooding areas that impact the project site. If recent floodplain studies accepted by the District are not available, a floodplain study will be required. Certain mapped FEMA zones require more detailed study prior to project design.



A project site with FEMA approximate 1-foot mapping

It's usually not necessary to avoid flood prone areas, however certain design considerations are necessary within flood prone areas.

The design requirements should be discussed with the project team, and the methods to meet these requirements need to be shown on the site construction plans.

Basic design requirements include:

1. Determination of all regulatory floodplains or sheet flooding areas impacting the project site.
2. Elevation of the lowest edge of all photovoltaic panels at or above the 100-year water surface elevation when at full-tilt.



3. The following must be elevated at least 1 foot above the 100-year water surface elevation:
 - a. electrical service equipment;
 - b. bottom of structural frame of temporary construction trailers;
 - c. inverter skid platforms; and
 - d. permanent structures.
4. Certain improvements, especially structures, may require erosion protection.
5. Column embedment sufficient to provide structural stability assuming full depth of scour during the 100-year event.
6. Fencing to provide for flow-through of 100-year flood waters.
7. Access drives to be constructed at grade.
8. Grading along site boundaries shall be compatible with the upstream and downstream conditions.
9. If Regulated Riparian Habitat is present on the site, these areas should be avoided if possible. If not possible, a Riparian Habitat Mitigation Plan may be required.

For most projects, a Floodplain Use Permit will be required.



A solar array installation