



## 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 Local Floodplain Administrator to learn of special flood hazard areas (SFHA) that impact the project site.



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 design 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 areas impacting the project site.
2. Elevation of the lowest edge of all photovoltaic panels 2 foot above the 100-year base flood elevation (BFE) or higher when at full-tilt.
3. The following must be elevated 2 foot above the 100-year base flood elevation (bfe) or higher:
  - a. electrical service equipment;
  - b. bottom of finished floor of temporary construction trailers;
  - c. inverter skid platforms; and
  - d. finished floor of permanent structures.



4. Certain improvements, especially structures, may require erosion protection.
5. Using structural components having the capability of resisting hydrostatic and hydrodynamic loads and the effect of buoyancy during a 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 Floodways are present on the site, these areas should be avoided.
10. no fill whatsoever shall be allowed except on parcels of land, the boundaries of which are of record in the Henderson County Registry as of the original date of adoption of these regulations (July 5, 2005) , and then only upon no more than 20 percent of the total of the *flood fringe* area contained in each such parcel, except that additional fill may be permitted in the *flood fringe* pursuant to a *special fill permit* (See §42-355 (Special Fill Permits).
11. Any fill material on which a structure is located shall:
  - a) Be extended to grade ten (10) feet beyond the limits of the structure foundation;
  - b) Be graded to drain;
  - c) Be protected against erosion;
  - d) Have a side slope no steeper than two (2) feet horizontal to one (1) foot vertical;
  - e) Not contain any contaminated, toxic or hazardous materials; and
  - f) Be approved before placement.
12. For most projects, a Floodplain Use Permit will be required.