Site Definition

Location data about a restoration project will include information about the **project** itself, locations of the work **sites** where restoration occurred and finally detailed location information about the individual restoration treatments or **features** within those sites. For more information please see *Best Practices for Reporting Location and Time Related Data*.

PROJECT
For our purposes, a project is defined as all work taking place under one FRGP contract number.

SITE
A project ***site*** is defined as an area, length, or point which spatially describes the area where specific restoration activities take place. Many projects employ multiple treatment types within a given work site. The following are general guidelines on how projects are divided into sites.

POINT SITES are sites that can be spatially described as a point because the treatment occurs at a single location.

- Fish passage improvement at a stream crossing.
- Removal of a barrier for fish passage improvement.
- A fish ladder.
- A fish screen. Even though associated parts such as a diversion canal and bypass may make it seem like a triangle shaped feature, by convention, make the fish screen the center point.

LINE SITES are sites that can be spatially described as a continuous line even though treatment may be sporadic.

- Instream and streambank stabilization features that are less than 0.5 miles apart, should be depicted as one line shaped site. To capture affected areas, begin a short distance below (e.g. three habitat units) of the most downstream feature and extend a short distance (e.g. three habitat units) above the most upstream feature.
- Several barriers in a row should be described as a linear site since they all contribute to opening the same length of stream.
- For road upgrading and decommissioning projects, each site is defined as a continuous stretch of road, including the stream crossings, that drains into a single fish bearing (Class I) stream. There are often hundreds of specific features (e.g. stream crossings) or treatments (e.g. cross road drains, ditch relief culvert, outsloping, etc.) along a road segment or site. The individual features and treatments along a road are not point sites but are aggregated into these linear road segments. Remember when you cross into a new watershed (Class I) or the treatment changes from upgrading to decommissioning (or vice versa), you begin a new site.

POLYGON SITES are sites that can be spatially described as an area of any shape.

- Both riparian and upslope revegetation should always be described as polygons. Even a planting along a bank can be given a length and an average width.
- Upslope stabilization or sediment delivery prevention, such as a major landslide excavation, could be described as a polygon. For such a treatment to be its own site, it should be isolated from other treatments and/or be large enough to warrant being its own site. Until better

guidelines are developed, this judgment will be made based on the project description or decided in the field based on profession opinion.

Example of dividing a project into sites
A project that included instream restoration and riparian treatments would require two sites, a line for the instream activities and a polygon area for the riparian plantings, assuming that the work is performed in a contiguous area. The reach of stream may have instream habitat structures, streambank stabilization structures, and a log jam barrier removal and be considered one line site, provided the individual features were less than 0.5 miles apart. Similarly, the area of riparian habitat where Himalayan blackberry was removed and conifer trees were planted would be one polygon site.

FEATURE
Within one site can be numerous features. Features are the individual restoration treatments within a site. For implementation monitoring, features must be divided by treatment type and location. However, functional groups of structures or treatments can be grouped as one feature. For example, a group of tightly spaced willow baffles should be considered one feature. It is impractical to separate each baffle because they interact and work together as a group for the same goal at the same location. A string of closely spaced grade control weirs is another example of this situation. However, willow baffles and rip-rap at the same location would need to be separated into different features because they are different treatment types.

How to document project, site and feature locations

1. The **project** is described as a center point lat/long on the general tab of the database. The project boundaries are further described by the sites.
    a. For a project with a single site or with several sites accessed by a singe set of driving directions, fill out one *Site Access and Location Form* describing how to get to the project.
2. Before conducting a monitoring evaluation, check to see how sites are divided in the CHRPD. Use the same site name and site ID on your summary data sheets. Contact Laurie Williams (916-324-8298, lwilliams@dfg.ca.gov) if any changes need to be made.
3. During implementation monitoring, **site** boundaries must be field verified.
    a. If the sites are accessed by driving to different locations, use one *Site Access and Location Form* to describe how to get to each site.
    b. Field verify the site location by recording the lat/long information on the site summary sheet with the performance measures.
    c. Latitude/longitude gathered via GPS using NAD-83 datum and reported in decimal degrees (dd.ddddd°) is preferred. Where there is poor GPS coverage, use a map or mapping program to determine lat/long to the best of your ability using distance from a known lat/long and landmarks.
    d. For points, determine lat/long at center of project. For lines, determine lat/long at upstream and downstream ends of the stream reach or the beginning and end of the road segment. For polygons, walk around the site boundary and collect lat/long at various spots, especially at corners and upstream/downstream ends. You may also track around a site and electronically submit the track (more information to come on the subject of tracks).

    e. Because GPS unit can have significant error, confirm that lat/long gathered via GPS is correct on the map (no convention for this yet, use mapping program to display your points).
4. Documenting the location of **features** is important because they correspond to the data collected on the monitoring forms.
    a. Because of GPS coverage and accuracy limitations, feature description cannot rely solely on lat/long.
    b. Use a combination of GPS, a map/sketch and the *Onsite Navigation Form* to create on-the-ground directions to each feature.
    c. Use the most logical method; think about what you would need to find the features if you had never been there before.
    d. Don't forget to include a brief description of the features or other navigation points.