

SUMMARY OF ROCKY REACH AQUATIC HABITAT MAPPING

June 15, 2000

DE&S mapped the aquatic habitat in the Rocky Reach Reservoir during August, 1999. A total of 40 transects, spaced on average about 1 mile apart, were measured. The following information was gathered at each transect:

- Location on the reach using differential GPS
- River bank profile down to the water surface on both sides
- Depths across the transect at approximately 200 – 300 locations
- Velocities throughout the water column at approximately 200 – 300 locations which coincided with the depth measurements.
- Cover and dominant and sub-dominant substrate, using the Washington Department of Fish and Wildlife substrate and cover codes

Depths and velocities were measured using an Acoustic Doppler Current Profiler (ADCP). Substrates and cover were evaluated using an underwater video camera. Bank elevations and distances were surveyed using a Total Station, while locations were noted with a Trimble Pathfinder differential GPS. Date, time, flow and river mile for each transect were also noted so that the water surface elevation for the transect could be calculated from the rating curves.

Of the 40 transects surveyed for aquatic habitat mapping, 21 were also used for backwater curves to evaluate the existing rating curves for the Project.

DE&S is currently calibrating the transect data. Once the range of flows to be modeled is identified, DE&S will simulate depths, velocities, cover and substrate at these flows. After the Fish Presence and Habitat Utilization surveys are complete, utilization curves will be developed from the information gathered during the surveys so that: 1) known utilization areas are documented; and 2) areas with the same habitat conditions (depths, velocities, substrates, and cover) can be identified.

If sturgeon can be targeted, additional transects may be required to model the habitat in those areas where sturgeon can be found. The need for these transects is under discussion and there has been no decision reached at this time.