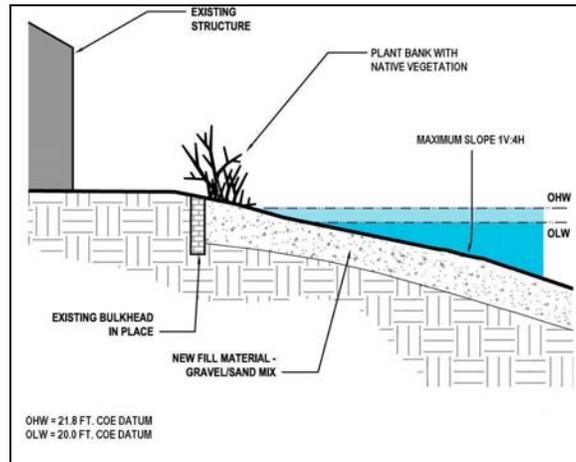


Gravel Fill Beach and Re-vegetate



Where option #1 cannot be done, because of site conditions, place gravel beach fill in front of existing bulkhead (covering the rip rap) or remove rip rap across the maximum width of the property and replace with gravel beach fill. Plant native riparian vegetation ten feet deep across more than 50% of the width of the shoreline. Place gravel beach fill grading slope to range of 1V:4H or flatter. Design target for the slope is 1V:7H. Typically gravel size should range from 1/8 inch to 2 inches. More than 2 cubic yards of gravel fill per lineal foot at or below the 21.85 foot elevation will need additional review by COE. Add emergent plants in areas where wave action is suitable for growth. For higher energy areas shoreline logs may be partially buried within the new substrate at the water's edge. The area behind the logs will be planted with willows and/or emergent vegetation. Section F gives the COE web site for work windows at various locations around the lake. Best management practices including installation of silt fences for water quality control must be used. This method may be suited for those properties with a structure close to the shoreline and/or on a steep-sloped shoreline. Site specific engineering may be needed depending on location and scale of project.

A site where this technique has been used is the former seawall at Lincoln Park in west Seattle. Gravel fill was placed seaward of the wall to form a beach and protect a sewer main during the 1980s. Minimal gravel replenishment has been necessary over the past twenty years. See Appendix 1 for more details.



Photo courtesy of COE
Lincoln Park before construction



Photo courtesy of COE
Lincoln Park after construction