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Midway Sewer
District

Press Release

New 48" sewer outfall construction set to begin in Des Moines Beach Park this June.

Popular park and important marine environment complicate pipeline construction.

Des Moines, WA, May 16, 2007: Midway Sewer District has awarded a construction contract to General Construction Company to complete the last remaining 2,100 feet of 48" diameter sewer outfall. Construction of this vital pipeline will take place within the Des Moines Beach Park from mid-June until October of this year. The new outfall is needed to prevent treated effluent from overflowing into Des Moines Creek during major storm events and to accommodate increasing demand. There are 5 distinct construction zones involved in this project, each with its own set of specific challenges.

General Construction has subcontracted the tunnel portion of the pipeline work to Northwest Boring . They plan on starting in mid-June and expect to be completed in the first week in August. They will bore a tunnel underneath the bluff starting on the north side of the pathway and terminate about 290 feet away at a point on the beach near the seawall.

General Construction has subcontracted the inter-tidal portion of the pipeline work to Tri-State Construction. Their task is to start at the extreme low tide line and bury the outfall in the beach with about 4 feet of cover up to where the tunnel operation ended, a length of about 575 feet. They must limit their operation to a relatively narrow corridor to minimize impacts to the beach. In order to accomplish this they must use sheet piling and dewatering equipment and only work when the low tides permit. They expect to be working from mid-July until mid-August.

In the next zone, General Construction must contend with tidal constraints and eelgrass, a critical habitat for much sea life including salmonids. The first work will be in shallow water thus it will require working at higher tides, which are primarily at night. Once they are in deeper water they can work during the day but soon will approach the eel grass beds. Construction here requires the temporary removal of a swath of eelgrass under the direction of a marine biologist. The marine biologist, Michael Kyte with Entrix and his team, will employ state-of-the-art eelgrass harvesting and planting techniques to ensure that the eelgrass beds will be restored. Construction through the eelgrass zone will be slow going (60 to 80 feet per week) and sheet

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piling will be used to keep the trench width to an absolute minimum. As soon as possible the eelgrass will be replanted. The eelgrass will be monitored for at least the next five years to ensure that it survives.

The next 180 feet or so will involve underwater trenching and pipe installation. In this zone the pipe burial depth gets shallower until the pipe emerges onto the seafloor. At this point the pipe is about 55 feet or more below the surface of the Puget Sound.

The last remaining construction zone involves placing the pipe directly on the seafloor. It will be held in place with concrete anchors. In this zone two different types of pipe will be used, 48" diameter outfall pipe followed by the last remaining 300 feet which is made up of telescoping diffuser pipe. The diffuser has been carefully designed to properly mix the treated sewage effluent into the Sound. The diffuser must meet strict dilution criteria at both low flow and high flow conditions. The end of the diffuser will be about 1,800 feet off-shore at a depth of about 170 feet below the surface of the Puget Sound.

Design and construction engineering of this outfall together with assistance in obtaining the necessary permits has been accomplished by URS Corporation. Skip Grodt, the Project Manager along with his team have been involved in every segment of this pipeline. David Breen, Senior Construction Manager, and Ole Olson, Inspector, both with Vanir Construction Management, Inc. have been selected to provide construction management services for this project.

Once construction of the new outfall is complete the District can allow the use of the old outfall by the Des Moines Creek Basin Committee. They plan to use that pipeline as a creek high flow bypass to remove some of the peak flow from the Des Moines Creek and thereby help prevent flooding, erosion and damage to the stream bed environment. The use of the old outfall coupled with their other improvements may soon restore Des Moines Creek to the point where it will be a productive fish habitat.

