

Las Vegas Wash Channelization Improvements

Client – PBS&J

Owner - CCWRD



The project consists of the channelization of the Las Vegas Wash at the Clark County Water Reclamation District's Central Plant. Improvements will consist of an up to 600 feet wide flood plain channel about 5 feet deep and a 100 feet wide low flow channel about 2 feet deep. A new 25 feet wide access road to the Advanced Wastewater Treatment Plant will also be constructed. The low flow channel will be concrete lined. The flood plain channel will be rip rap lined. A concrete vertical drop structure having a fall of about 9 feet will be constructed downstream of the access road. A 96-inch diameter interceptor sewer will be constructed beneath the wash downstream of the drop structure. To contain a 100-year flood, earthen levees about 12 feet tall will be constructed at the western margin of the flood plain. A shallow basin to promote wetlands will also be constructed within the flood plain. As part of the project, two water quality ponds encompassing about 1 acre each will be constructed within the Central Plant to contain the first flush run off. The water quality ponds will be lined with concrete and equipped with pumps and pipelines to drain into the aerated surge ponds

GES will perform 3 tasks for this project, Task 1-Groundwater Quality Evaluation from Monitoring Wells: GES will install five temporary monitoring wells to a depth of 35 feet each. The temporary monitoring wells will be installed in general accordance with NAC 534.4351. The temporary monitoring wells will be constructed with 2-inch polyvinyl chloride (PVC) pipe using sand in the annulus surrounding the pipe. The subsurface conditions will be logged by Engineering Intern, and after 24 hours, will measure the groundwater elevation in the wells. One sample of water from within each of the five wells will be collected after at least 24 hours after completion of the wells and sent to a chemical testing laboratory. GES will present three copies of a summary report presenting the data. Task 2-Surface Water Quality Evaluation within the LV Wash: GES will sample surface water flowing in the Las Vegas Wash from two locations. The samples will be sent to lab to perform chemical analysis. Task 3-Geotechnical Exploration and Evaluation: GES will drill a total of 3 borings to depths of between 35 and 40 feet. Two of the borings will be drilled to a depth of 40 feet each and one to 35 feet for a total footage 115 feet. Relatively undisturbed soil samples will be obtained by using ring sampler and lab tests will be performed on the samples obtained. GES will present the results of the exploration logs and lab tests and submit an update letter as part of a separate task for the project.