



MEMO

To: ESPA CAMP Recharge Working Group
From: Bill Quinn
Subject: Cost Estimates of Constructed Recharge Sites
Date: October 7, 2009

Two priority sites for constructed recharge projects have been identified: Mile Post 31 along the Milner-Gooding Canal in Jerome County and West Egin Lakes adjacent to the St. Anthony and Recharge Canals in Fremont County. Selection of a third priority site to be supplied by Wood River system water has not been finalized. This memorandum summarizes estimated construction costs and time frames for construction of the Mile Post 31 and West Egin Lakes sites.

Mile Post 31: Estimated construction cost: \$1.25 million

This site would be developed in three phases. A 36-inch pipeline capable of delivering 35 cubic feet per second (approximately 70 acre-feet per day) would be installed through a temporary diversion structure in each phase. Successive construction phases (pipe installations) would be dependent on successful recharge infiltration through the previous pipeline. Full build-out would accommodate approximately 105 cfs (210 afd) and include a permanent head gate structure, delivery piping with supports into the basin, and a check structure in the Milner-Gooding Canal.

West Egin Lakes: Estimated construction cost: \$880 thousand

This design would accommodate diversion rate of approximately 150 cfs (300 afd) from the St. Anthony Canal and delivery of approximately 80 cfs (160 afd) to the West Recharge area. All existing structures in the Recharge Canal are retained. Improvements to the inlet to the Recharge Canal include an additional headgate to replace board checks. If a new gate for the inlet cannot be adapted to the existing head gate structure, a new structure would be required. Other construction tasks include sediment and material removal from the Recharge Canal and inlet to Tibbitts Lake, removal of excavated material, installation of flow measuring devices for the Recharge Canal and inlet to Tibbitts Lake, and possible removal of trees and brush from the Tibbitts Lake inlet.

Additional cost may be incurred if a berm must be construction in order to prevent recharge water from entering the BLM wilderness study area immediately west of the recharge area. This unknown can be defined when a site topographic survey is conducted.

These estimates for Mile Post 31 and West Egin Lakes are based on GIS-derived dimensional information. A topographic survey of both sites will be required to determine actual dimensions and elevations to be used in design calculations. Check structure heights are estimated to be eight feet, including a three-foot thick concrete base slab.