

MEMORANDUM

DATE: May 8, 2019

TO: Roger Chase – Chairman, Idaho Water Resources Board

FROM: Terry Scanlan, P.E., P.G. – SPF Water Engineering

CC: Bud Corbus – Elmore County Commissioner
Scott Campbell – Elmore County Water Attorney

RE: Elmore County - Canyon Creek Aquifer Recharge Project Update

The Elmore County Board of Commissioners has completed diversion system improvements at Canyon Creek for purposes of aquifer recharge northwest of the City of Mountain Home. The improvements were accomplished using financial assistance from the Idaho Water Resources Board under Contract No. CON001251.

The construction work included diversion system upgrades or new diversion systems at three sites. The three sites are gravel pits owned by JR Simplot Company, Calvin Ireland, and the Bureau of Land Management (BLM). The project included installation of check structures, headgates, culverts, and measurement weirs. Construction began in December 2018 and was completed in February 2019.

Also included in the work was preparation of water quality monitoring plans for each recharge site. The water-quality monitoring plans were approved by the Idaho Department of Environmental Quality in October 2018. Pre-recharge water-quality sampling events were conducted in late February and early March 2019 at 16 wells, followed by a during-recharge sampling event in April 2019. A post-recharge sampling event is scheduled for late May 2019.

Recharge activities in 2019 commenced on March 25 and were concluded on April 25. Approximately 1403 acre feet of recharge water was diverted and measured through the constructed recharge facilities in spring 2019. All flow in Canyon Creek passing the Mountain Home Irrigation District diversion dam during 2019 was either diverted into the recharge facilities or infiltrated directly into the bed of Canyon Creek upstream of I-84.

The recharge site construction is complete with the exception of (1) installation of a culvert under Mashburn Road to connect the BLM pit with an Idaho Department of Transportation pit and (2) breaching of a berm between the currently utilized BLM pit and an adjacent BLM pit. These items cannot be completed until an expanded right-of-way is granted by the BLM. The right-of-way application and associated NEPA work have been completed by the County, but the BLM has not completed their processing. Elmore County has obtained a license agreement for use of the ITD pit for recharge purposes.

Figure 1 shows the location of the recharge facilities. Figures 2 through 6 show the typical completed recharge facility improvements.

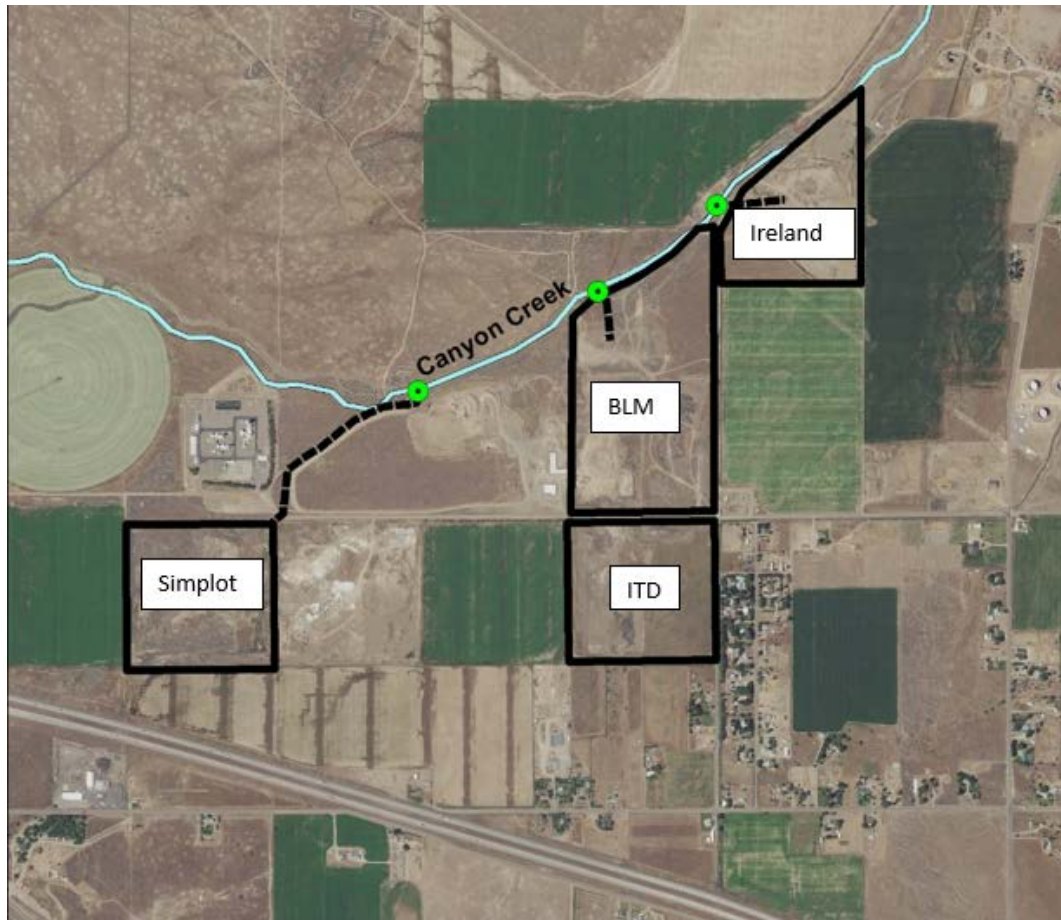


Figure 1. Recharge Pit Locations (approximately 2 miles NW of Mountain Home)



Figure 2. BLM Pit check structure and headgates on Canyon creek



Figure 3. Check structure on Canyon Creek at BLM Pit. Removable ecology blocks are placed on concrete sill to raise the water level at the headgates.



Figure 4. Stilling pool upstream of weir at BLM Pit



Figure 5. 8-foot suppressed weir at BLM Pit



Figure 6. Culverts to Simplot Pit at Mashburn Road