

# Logan River Watershed Plan-EIS

## Project Overview Fact Sheet

Crockett Avenue Irrigation Company (CAIC) diverts water from the Logan River to a service area of 11,050 acres. The irrigation delivery system was constructed in the late 1800's. Since then, much of the service area has been converted from agriculture to residential and the canal delivery system has many deficiencies that need repair. CAIC prepared a Master Plan from 2016-2019 to evaluate several system improvement alternatives. The Plan identified the construction of a pressurized irrigation system to deliver water to shareholders and residential users as the most beneficial alternative to the community. CAIC then began looking at potential grant sources to help fund these system upgrades.

The Natural Resources Conservation Service (NRCS) manages the PL-566 Watershed and Flood Prevention Operations (WFPO) Program, which provides technical and financial assistance to public entities for planning and implementing projects to address resource challenges including flood prevention (flood damage reduction), agricultural water management, and public recreation. The Program has three phases: planning, design, and construction. 100% of costs for the planning and design phases are funded by the Program and construction costs are covered at 100% for flood control, 75% for agricultural water management, and 50% for recreation.

The Cache Water District as local project sponsor, with CAIC, Logan City, North Logan City, and Hyde Park City as co-sponsors received PL-566 program funds to conduct the Logan River Watershed Plan Environmental Impact Statement (EIS) to address the issues noted above. Sponsors contracted with J-U-B Engineers and Franson Civil Engineers to conduct the study. The EIS is currently ongoing and includes previous public comment periods. The estimated project timeline is shown to the right.

Project alternatives were developed and adjusted based on public, agency, sponsor and co-sponsor input. A brief comparison of the current alternatives is shown in the table below.

Future Without Federal Investment (FWOFI)	First Dam Alternative (FDA)	Crockett Diversion Alternative (CDA)
Reconstruct Crockett Diversion dam	Move CAIC diversion from Crockett Diversion to First Dam Reconstruct Crockett Diversion dam	Reconstruct Crockett Diversion dam
Enclose Canal (200 E to 500 E) along Canyon Road	Pressurized Irrigation System	Pressurized Irrigation System
Future enclosure of all main canals except the Little Logan	West River Pump Station	West River Pump Station
	West Lagoon Pump and Hydropower Station	West Lagoon Pump Station
	Water Storage Facility	Water Storage Facility

After much evaluation, the project sponsor and co-sponsors prefer the First Dam Alternative as it is the most affordable and secures key benefits for the entire community while limiting adverse impacts. Comparisons of the pros and cons associated with each alternative are shown on the following page.



## Approximate Project Timeline



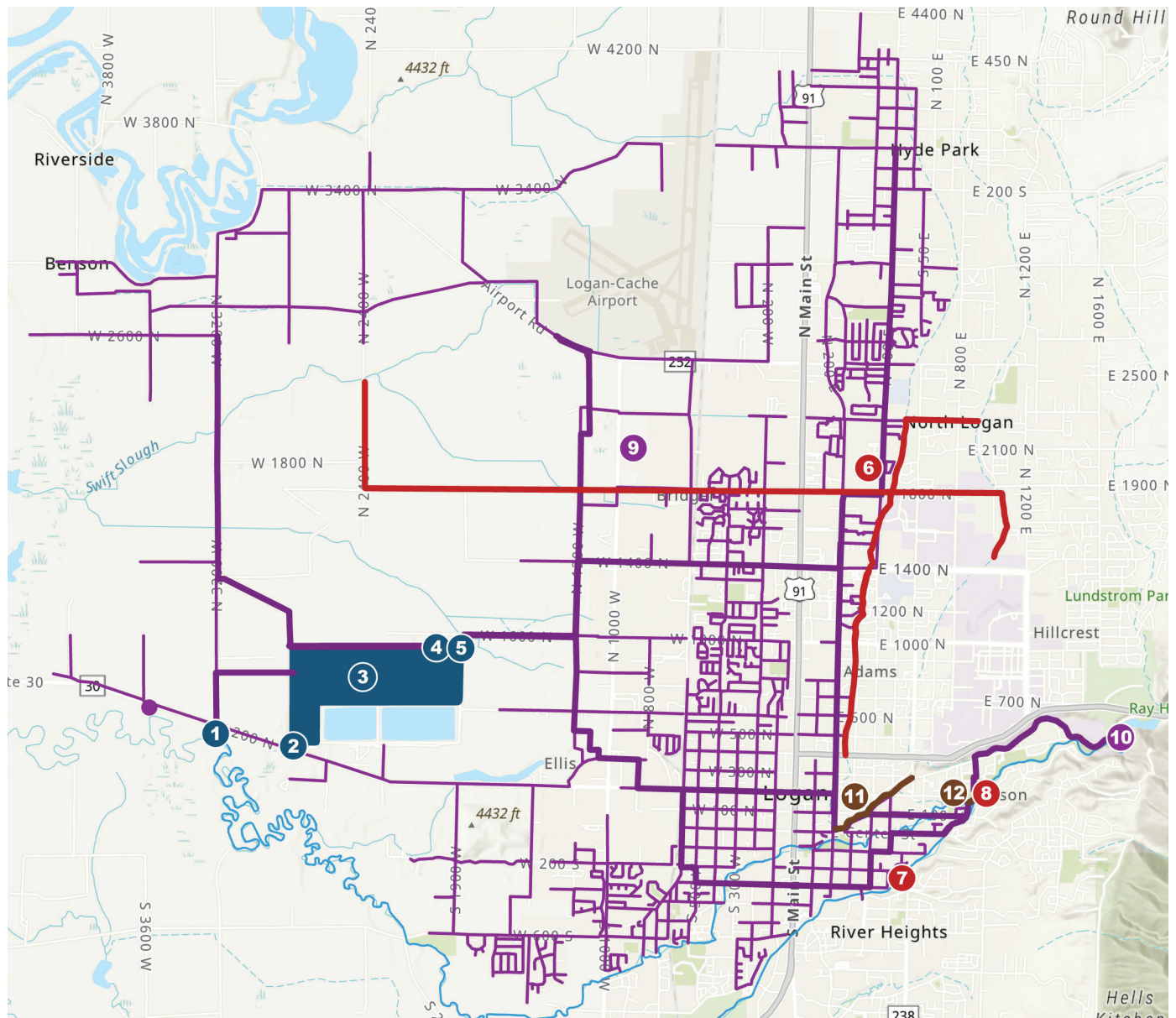
	Future Without Federal Investment	First Dam Alternative	Crockett Diversion Alternative
<b>Pros:</b>	Improves timeline to project completion due to reduced scope	Provides secondary water to landowners in the Crockett Service Area, increasing irrigated acreage	
		Increases instream flows by a minimum of 25 cfs above existing summer base flows for 14 miles of the Logan River below Crockett Diversion	
		Provides for pressurized connection to all existing shareholders	
		Provides 2,100 acre-feet of secondary water storage for improved late-season water availability	
		New hydropower turbine at the storage facility generates more power than the First Dam Turbines to offset lost generation and some pumping costs	
		Reduces floodplain impacts for 28 homes near the Logan River (reduced flooding impacts and reduced insurance requirements)	
		Conserves approximately 5,200 acre-feet of water per year (currently lost to seepage)	
<b>Neutral:</b>	Requires smaller shareholder base to keep the system running	Requires landowners to connect their secondary system to the provided secondary meter	
		Bills landowners for secondary water connection, but secondary water will largely offset culinary water usage and associated bill	
<b>Cons:</b>	Maintains existing low flows in the Logan River through the City	Reduces flow between First Dam and Crockett Diversion. The Logan River Task Force classified the change as "Good" (30-60 cfs summer flow) instead of the current "Very Good" (>60 cfs summer flow).	Requires additional pumping (estimated to be between \$550,000-\$600,000 annually with associated emissions)
	Continues to decrease irrigated area	Requires up to 5 years to construct throughout the service area	
	Uses water inefficiently	Increases shareholder assessments significantly, but less than under the FWOFI or CDA alternatives.	Increases shareholder assessments significantly
	Increases shareholder assessments		Raises secondary water rates slightly higher than the First Dam Alternative

The First Dam Alternative includes the following project measures (see Figure 1 for Preferred Alternative map):

- Relocation of the river diversion from existing location adjacent to River Hollow Park to First Dam and west of Logan where additional flow in the river will be returned to the irrigation system. (includes continuation of service to water right holders between First Dam and Crockett Diversion through delivery of low-pressure water to canals)
- Reconstruction of the existing Crockett Diversion dam in the Logan River with overflow gates to allow for natural flow to enter the Little Logan, allowing for fish passage and recreational portage to River Hollow Park.
- Construction of a pressurized irrigation system through the entire service area, includes all components to the meter. Shareholders and landowners would be responsible for connections between the meter and their irrigation system.
- Creation of 2,100 acre-feet of water storage in several unused wastewater treatment lagoons and construction of pump stations to deliver this water to system users when river flows decline
- New hydropower turbines at the new water storage facility will generate more power than the existing hydropower turbines at First Dam.
- Increase instream flows by a minimum of 25 cfs above existing summer base flows for 14 miles of the Logan River below Crockett Diversion.
- Reduce flow for 2.2 miles between First Dam and the Crockett Diversion
- Provide base flows for the entire length of the Little Logan up to 10 cfs
- Removal of sediment at First Dam to improve operational reliability and water quality
- Provide floodwater overflow along 1800 N to the west to reduce floodwater damage in the service area from runoff carried in the canals
- Construction of a recreation trail along a half mile of Canyon Road and a new bridge and trail connection between River Hollow and Sumac Park.



Figure 1: Preferred Alternative Map



### PROPOSED ACTIVITY BY PURPOSE

#### Agricultural Water Management

- 1. West River Pump Station
- 2. Cow Pasture Pump Station
- 3. Storage Facility
- 4. West Lagoons Pump Station
- 5. Hydropower Station

#### Flood Prevention

- 6. Stormwater System
- 7. Removal of Providence Pioneer Diversion Dam
- 8. Reconstruction of Crockett Diversion Dam

#### Agricultural Water Management & Flood Prevention

- 9. Pressurized Irrigation System
- 10. First Dam Intake

#### Recreation

- 11. New Canyon Road Trail
- 12. New River Hollow Park Trail

## FIRST DAM ALTERNATIVE PROPOSED ACTIVITIES BY PURPOSE



Logan River Watershed EIS

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