Logan River Watershed Plan-EIS Solutions and Benefits

Upper Logan River Reach Residents

After extensive discussion, analysis, and comparison between evaluated alternatives, Cache Water District, Crockett Avenue Irrigation Company (CAIC), Logan City, North Logan City, and Hyde Park City, in concert with the Natural Resources Conservation Service (NRCS), have determined the First Dam Alternative would best meet their objectives. One of the objectives of this alternative is to build a new pressurized irrigation (secondary water) system that would service all current shareholders and landowners in the CAIC service area to achieve the benefits described in this document. Further information on the First Dam Alternative can be found in the Logan River Watershed Plan-EIS Project Overview Fact Sheet.

Municipal Benefits

The project will provide over an estimated $180 Million of benefit to three cities over the next 50 years. Benefits range from avoided culinary infrastructure, avoided water source development, reduced flood impacts, avoided wastewater treatment costs, improved aquatic corridor below Crockett Diversion, improved storm/floodwater conveyance capacity in canals, hydropower generation, recreation improvements, and others.

Flood Protection

Floodplain impacts in the Thrushwood area will be reduced from 42 to 14 homes and by approximately 3100 linear feet of roadway. 28-33 homeowners will qualify for reduced flood insurance premiums. See Figure 8 for a map of the homes protected by this project.

Logan River Instream Flows

The project will provide a minimum instream flow of 25 cfs increase above existing summer base flows for 14 miles in the Logan River downstream of River Hollow Park which improves water quality, fish and wildlife habitat, and recreation of the river as evaluated by scientists and reviewed by the Logan River Task Force. Figures 3 and 4 on the Photos page illustrate comparative flow rates.

Keeps Irrigation Companies Whole

Irrigation companies with diversions between First Dam and the Crockett Diversion will be mitigated by the project by providing low-pressure water to an agreed upon location along the canal alignment near the current diversions.

Cost Savings

Pressurizing the system from First Dam will save between $500,000-$600,000 each year (in 2024 dollars, including all capital and pumping costs) over pumping irrigation water at River Hollow Park. This alternative reduces secondary water rates to system users from $5-10 per landowner per month ($60-$120 annually below other alternatives).

Impacts to Logan River between First Dam and Crockett Diversion

Flows in the Logan River between First Dam and River Hollow Park (2.2 miles) will be reduced due to diversion of water for irrigation and hydropower generation. This reduction in flow was evaluated by scientists and reviewed by the Logan River Task Force in accordance with the Conservation Action Plan Criteria shown in the following table. Evaluation showed that the rating would change from “Very Good” under current circumstances to “Good” under the First Dam Alternative.

Logan River Conservation Action Plan Summer Base Flow Evaluation Criteria			
Poor	**Fair**	**Good**	**Very Good**
< 10 cfs	10-30 cfs	31-60 cfs	>60 cfs

Logan River Flow Comparisons

See Figures 1 and 2 for comparisons between the First Dam Alternative (dotted lines) and the Historical Conditions (solid lines). A wet (2017), dry (2022) and average (2019) year were selected to show a range of anticipated flow rates. The second figure shows the late summer months where the difference would be most notable. The difference in flow rate varies throughout the year, based on the Kimball Decree and the instream flow that is diverted at the downstream pump station. Flow rates would be more consistent between wet and dry years, and that summer base flows from August through October would range between approximately 40-70 cfs, but could reach as high as 100-150 cfs, depending on the snowpack. Figures 5-7 show the river at various flow rates to help visualize the anticipated impacts.

Flow Comparisons Continued

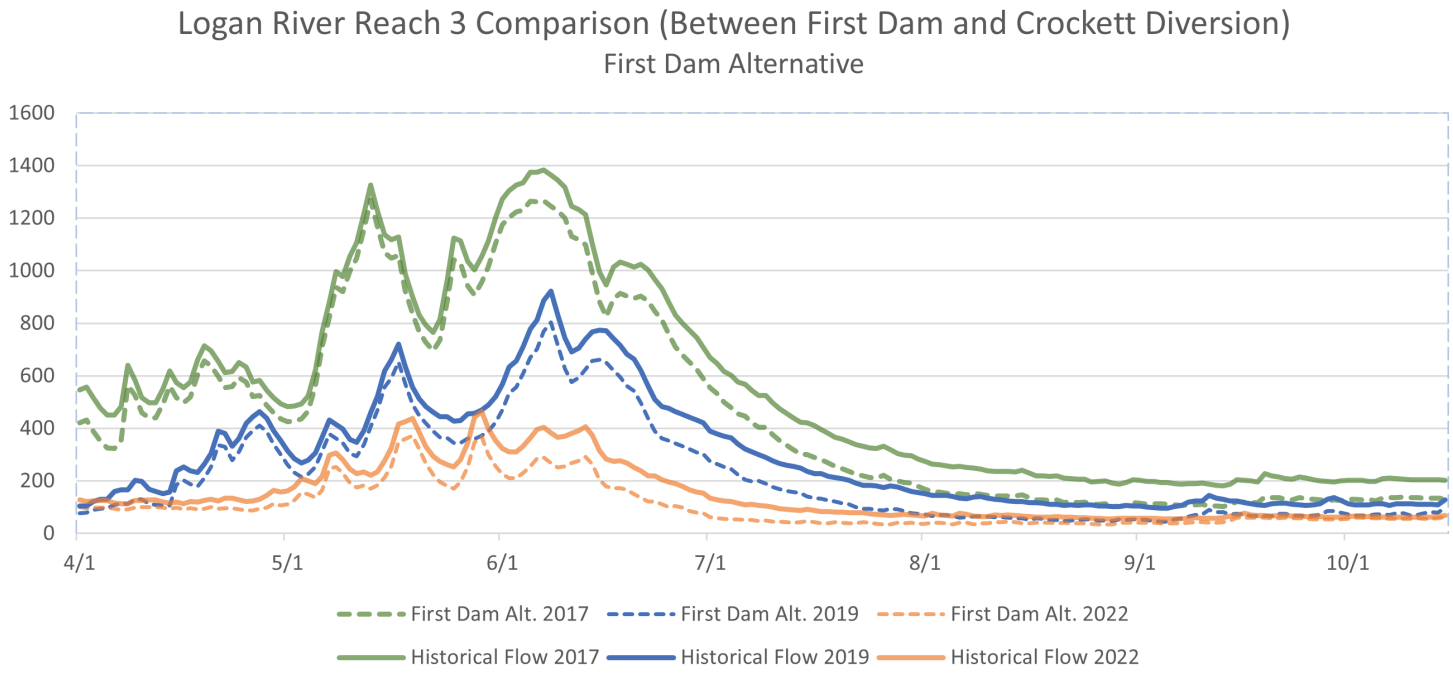

Figure 1: Logan River Between First Dam and Crockett Anticipated Flow Comparison

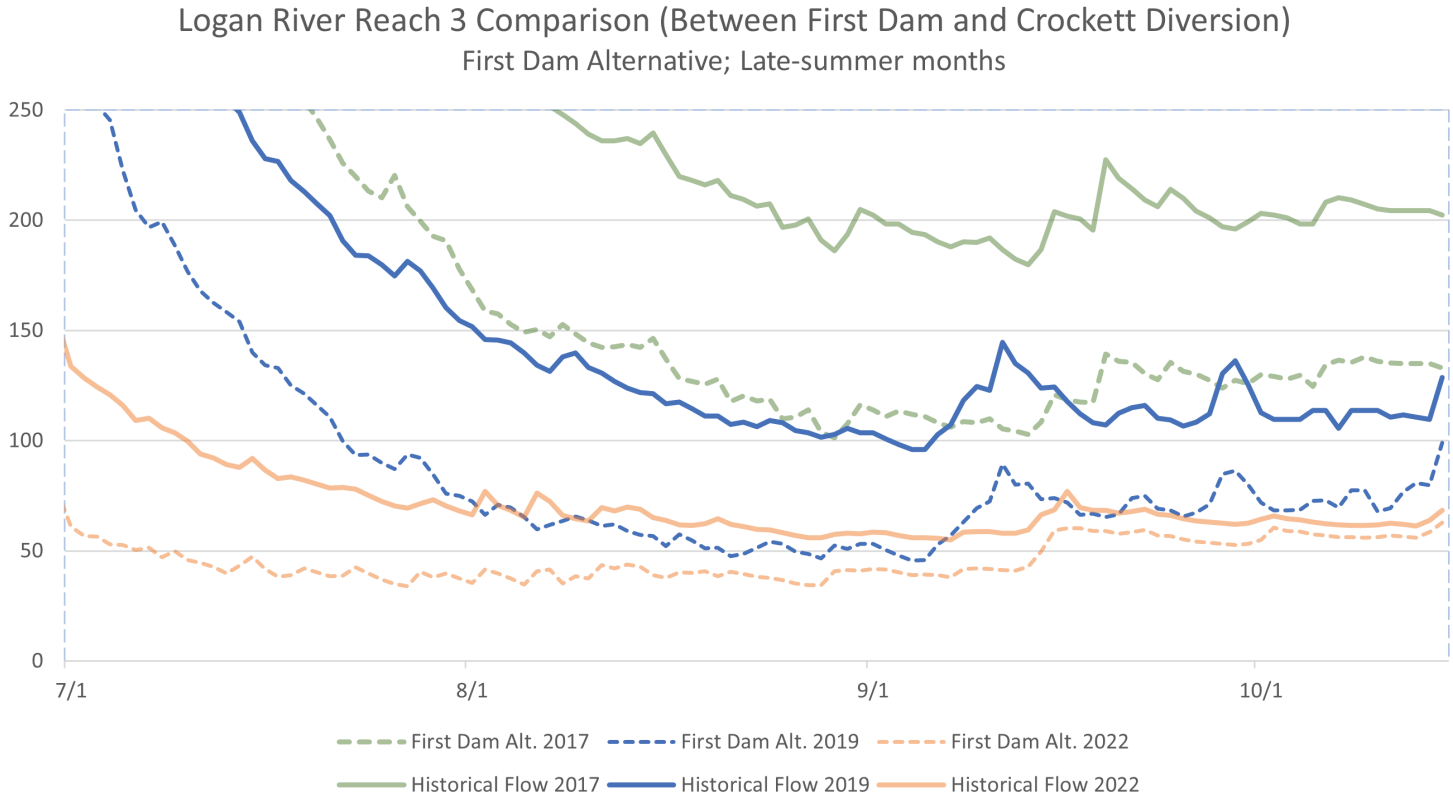

Figure 2: Logan River Between First Dam and Crockett Anticipated Flow Comparison (Late Summer)

Logan River Comparative Flows

Figure 3: Photo near Logan River Golf Course taken on 6-29-2021, Flow Rate between 5-15 cfs (as is currently experienced during a significant portion of the irrigation season)

Figure 4: Photo near Logan River Golf Course taken on 5-6-2021, Flow Rate between 30-50 cfs (as would be experienced with Logan River instream flows included in the First Dam Alt.)

Figure 5: Photo of Logan River between First Dam and the Crockett Diversion taken on 6-29-2021, Flow Rate between 60–80 cfs

Figure 6: Photo of Logan River between First Dam and the Crockett Diversion taken on 5-06-2021, Flow Rate between 100–120 cfs

Figure 7: Photo of Logan River between First Dam and the Crockett Diversion taken on 5-17-2021, Flow Rate between 210–230 cfs

Figure 8: Homes protected by this project

REDUCED FLOODPLAIN IMPACTS UNDER FIRST DAM ALTERNATIVE

Logan River Watershed Plan-EIS

1% Floodplain (FEMA Zone AE)

Area Outside the 1% Floodplain with the Proposed Project

CACHE WATER DISTRICT