

Bear River System Modeling

Idaho and Utah, together with PacifiCorp, assembled a technical team to develop a planning model of the Bear River System focusing on flood control operations. The model initially focused on scenarios to change flood control operations to increase storage in Bear Lake. In future modeling, the model may consider additional water management scenarios. The state of Wyoming participated in discussions and model review as party to the Bear River Compact.

Methods and Results

In this study, flood control scenarios were developed based on changes to the PacifiCorp target elevation (PTE) and the target maximum flow in Gentile Valley. Historical diversion data was used to represent current water use in the model.

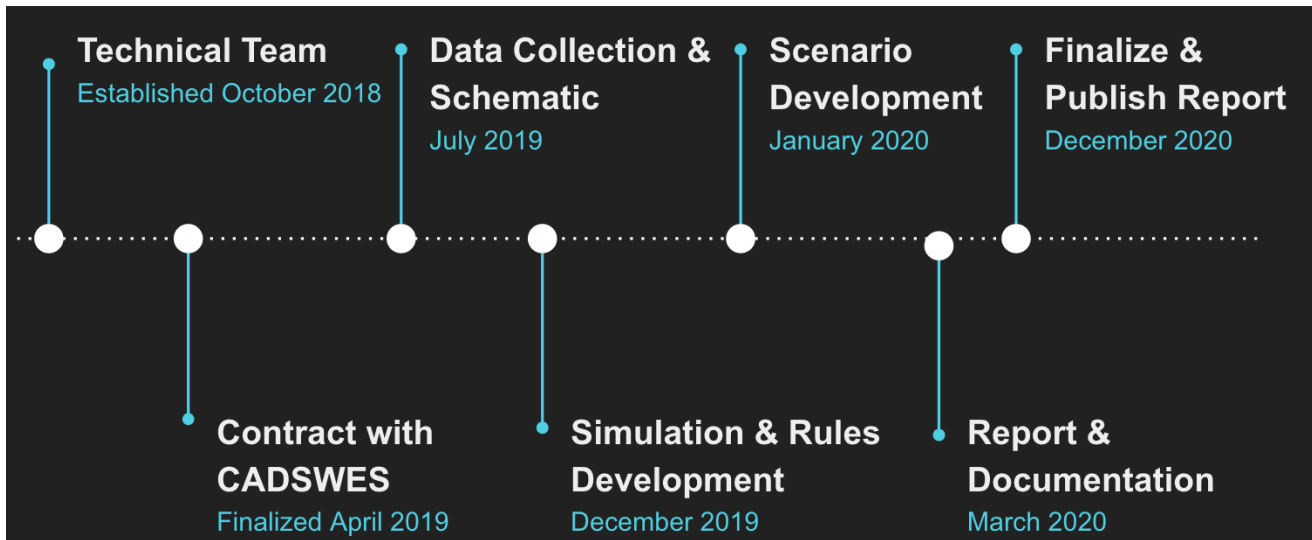
These two parameters are considered when PacifiCorp operates Bear Lake for flood control. Changes to these parameters could increase the amount of storage in Bear Lake.

The scenarios modified the PTE and target maximum flow parameters to quantify future possibilities compared to the baseline model output.

Scenario results were evaluated that increased downstream flow constraints and raised Bear Lake elevations that could improve water quality in the lake by decreasing the amount of water from the Bear River needed to fill Bear Lake.

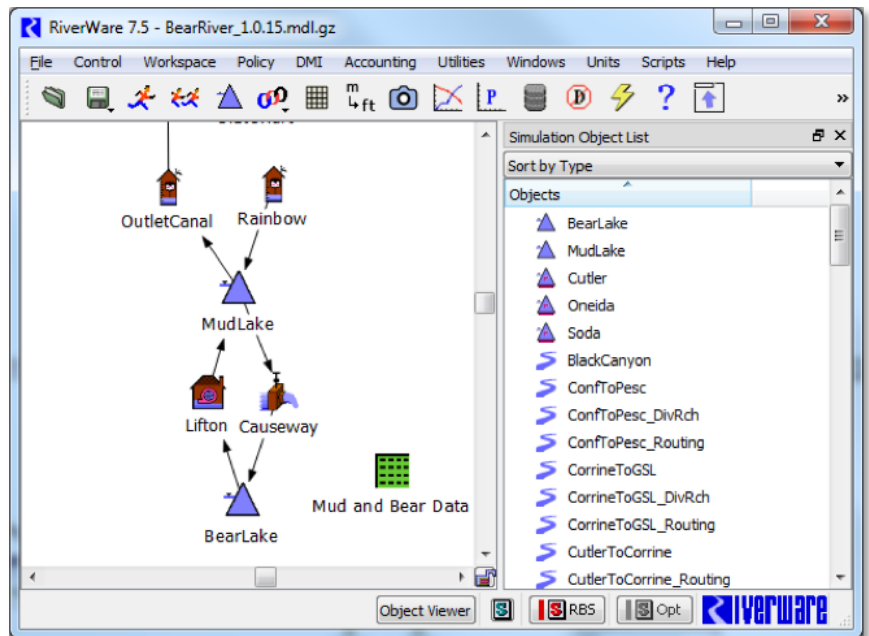


Phase I Timeline



Technical Team

Technical personnel from Utah, Idaho, and PacifiCorp with guidance from the University of Colorado Boulder, used RiverWare to model Bear Lake operations.



Portion of Model Schematic



Takeaways

- There is potential to store more water in Bear Lake— especially when going into a drought cycle. This may give an additional year of supply for irrigators.
- Storing more water in Bear Lake could raise lake levels.
- To increase storage in Bear Lake, it would be necessary to accommodate increased flows.