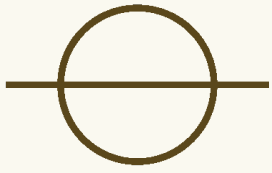


Derby Dam Horizontal Fish Screen Farmers Conservation Alliance

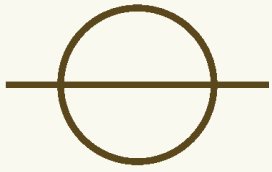




Farmers
Conservation
Alliance is a 501c3
nonprofit
organization working
in partnership with rural
communities to keep the
water flowing for farms,
food, and fish



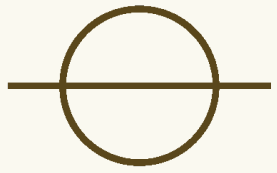
Original FCA Team



Farmers Screen

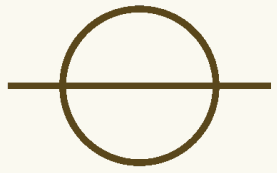
- 50 Screens Installed across 6 States
- Technology recognized for allowing any flow rate, low O&M costs, and being NMFS approved
 - *The bypass flow required for self-cleaning protects fish from injury, mortality, and delay.*
- The largest horizontal fish screen commissioned September 2020 at Derby Dam; collaborative project with Bureau of Reclamation and US Fish and Wildlife





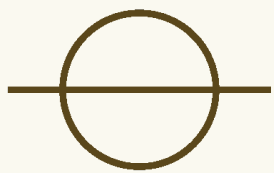
Derby Dam Fish Screen Project



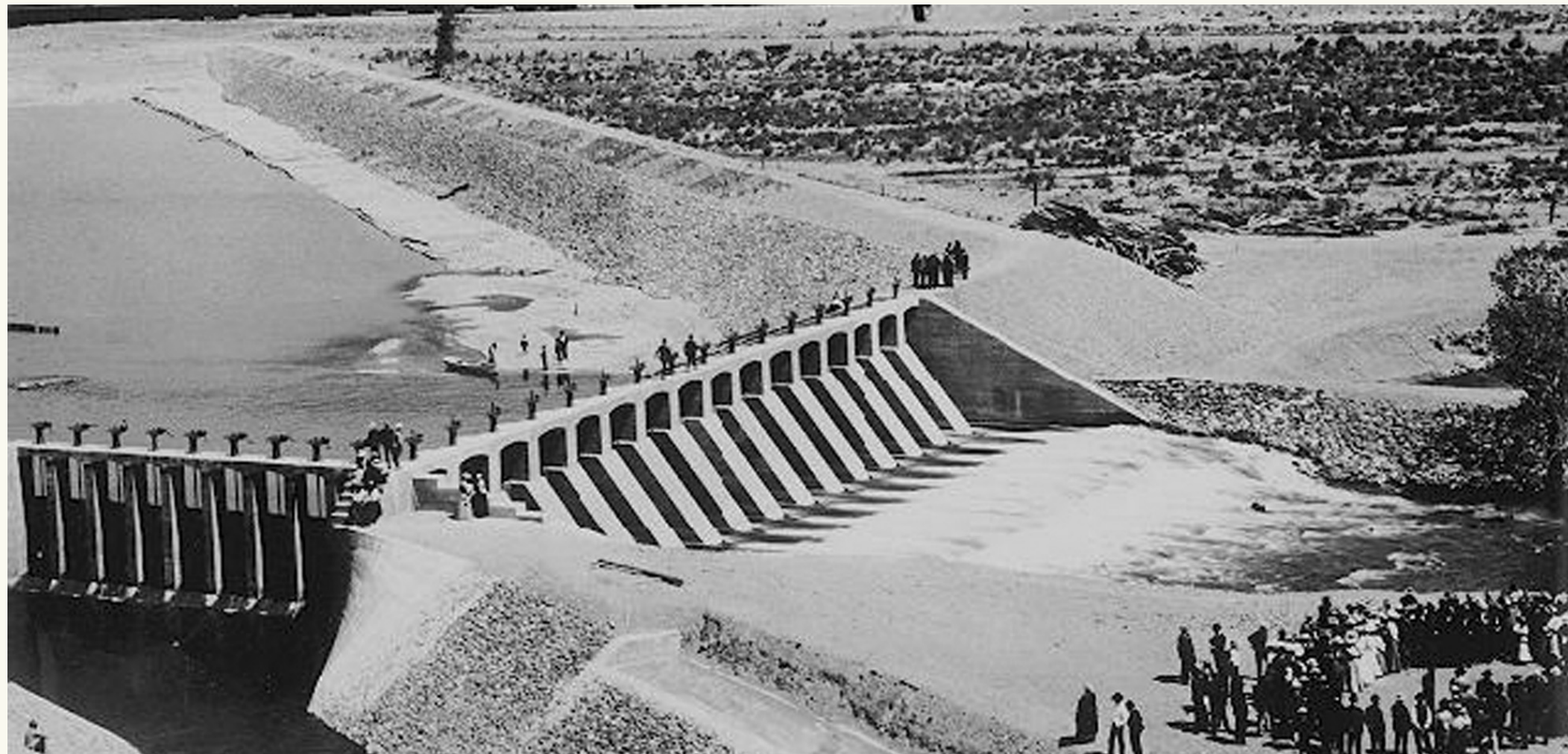


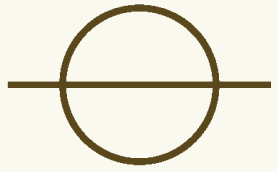
Truckee River





Derby Dam History





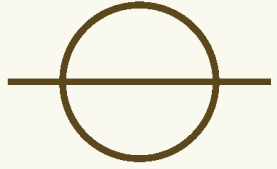
Listed Species in the Truckee River

- Cui-ui



- Lahontan cutthroat trout (LCT)





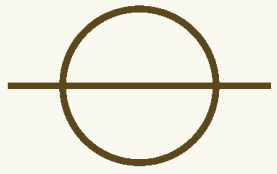
Derby Dam Fish Screen Project Partners

- U.S. Bureau of Reclamation
- U.S. Fish and Wildlife Service



FCA
TCID
Paiute Tribe

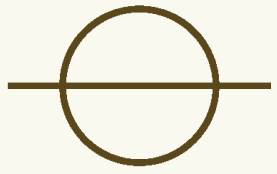
- Anderson Perry
- Farmers Irrigation District
- McMillen Jacobs
- SMF
- Elgin
- Granite Construction



Fish Passage

- Upstream fish passage
- Downstream fish screen
- Fish return

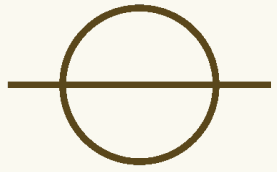




Derby Dam Fish Screen

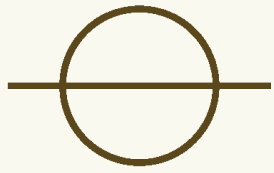
- Five screen array
- 40 – 600 cfs
- Stainless steel
- Sediment management
- Two fish returns





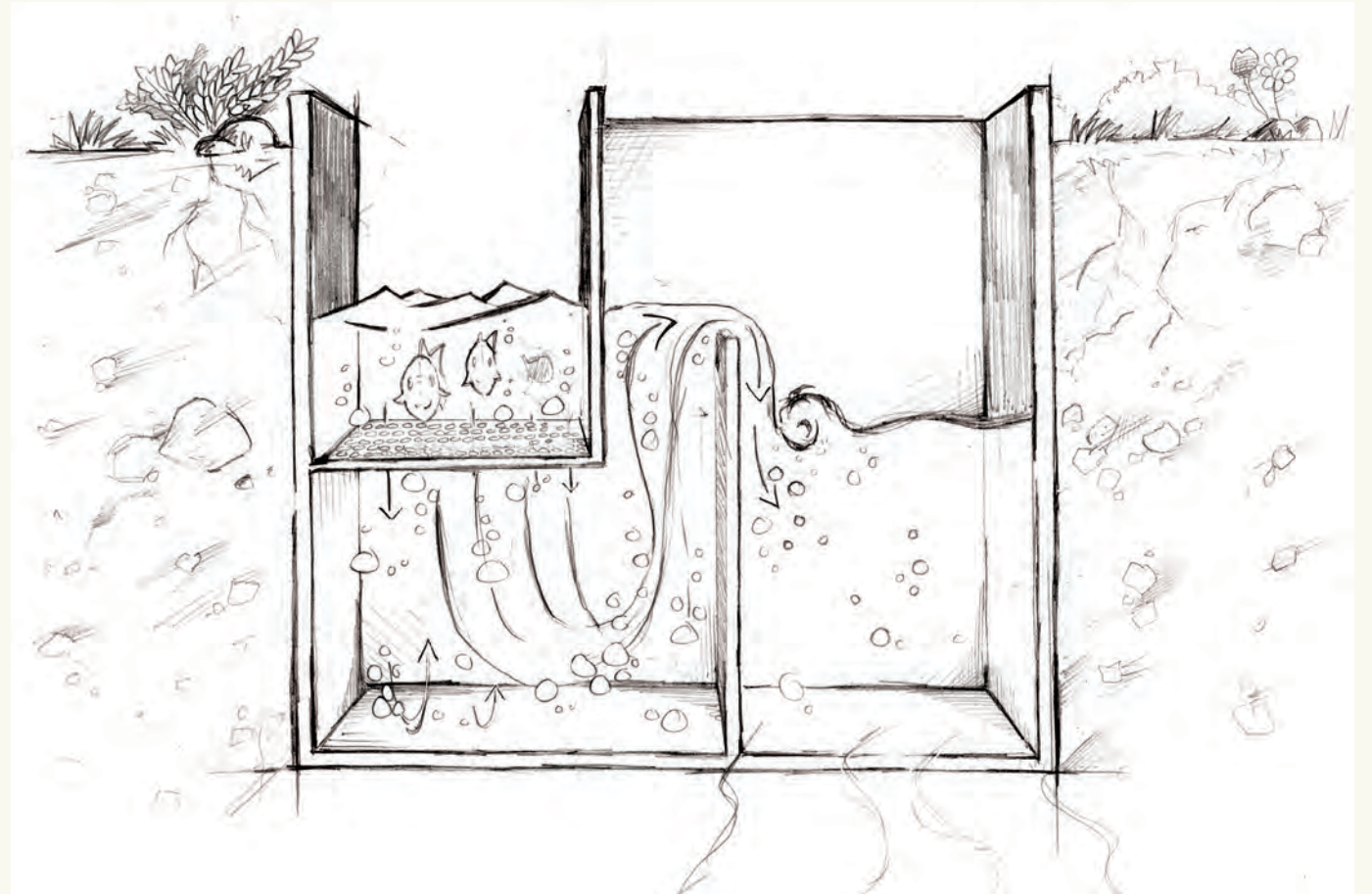
Farmers Screen Operation

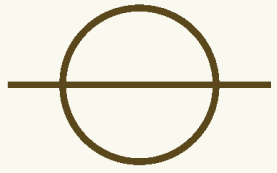
- Farmer Screen Operation
 - <https://vimeo.com/463288348>
- Ribbon Cutting
 - <https://vimeo.com/471279417>
- Screen Design
 - <https://vimeo.com/445229201>
- Collaboration and Permitting
 - <https://vimeo.com/449810084>
- USFW Lahontan National Fish Hatchery
 - <https://vimeo.com/448375863>



Farmers Screen

- No continuous moving parts
- Passive cleaning properties
- Low operation and maintenance
- Low head loss
- Meets NMFS criteria

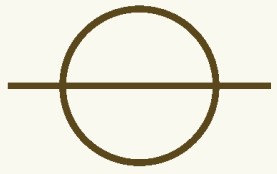




Key Factors in Design and Construction

- Site access
- Liquefiable soils
- Slope stability
- Old infrastructure
- Highly managed river system
- Water users
- Two box culverts





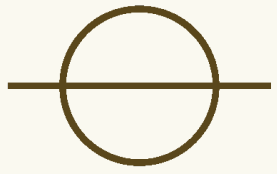
November 4, 2019





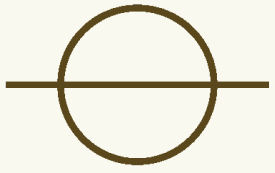
January 8, 2020





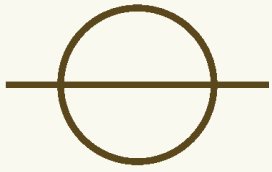
March 10, 2020

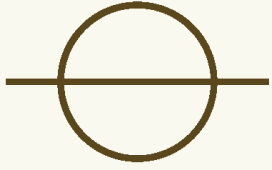


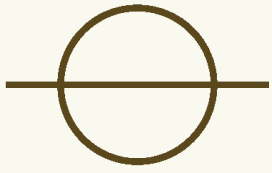


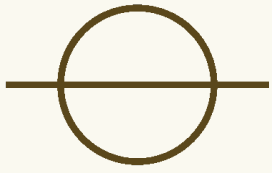
September 25, 2020

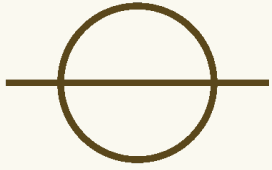












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