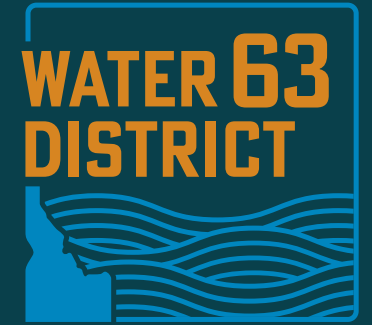


Treasure Valley Water Supply Project



2/2/2026

Presented by:

Daniel Hoke – Water District 63

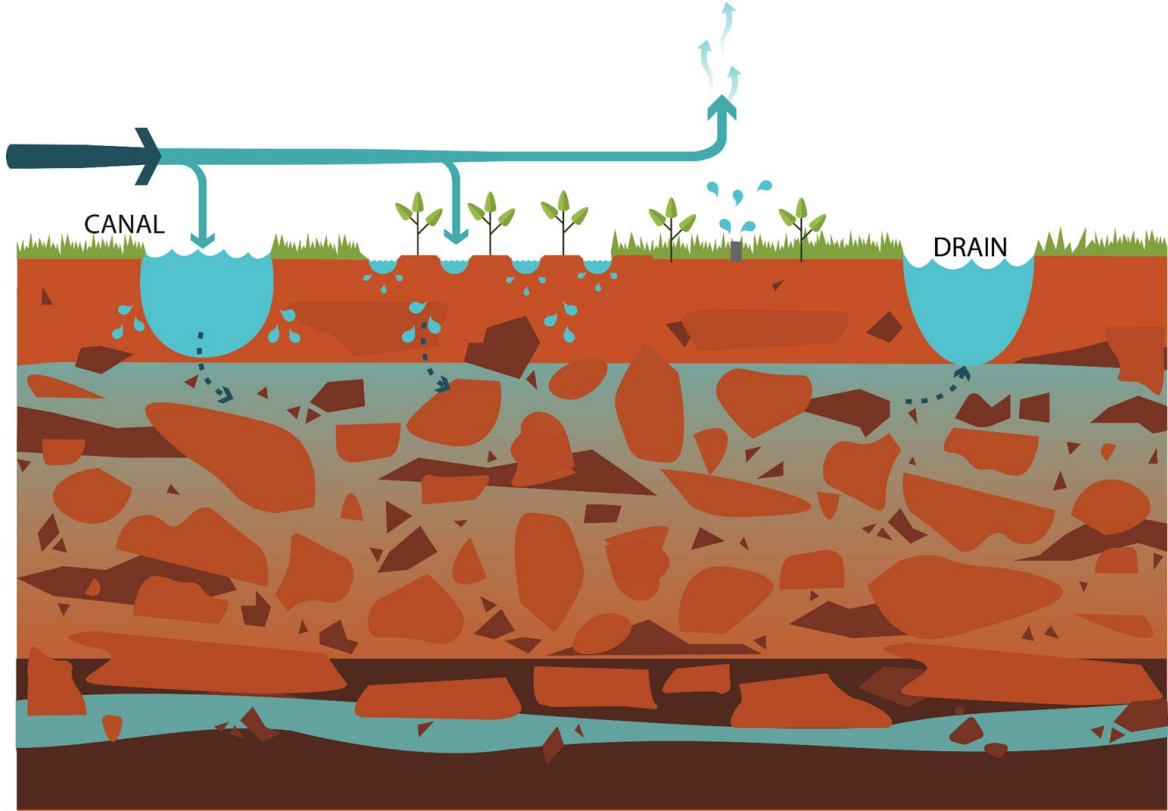
Objective

To improve water management by leveraging improved data collection throughout the Boise River Basin.

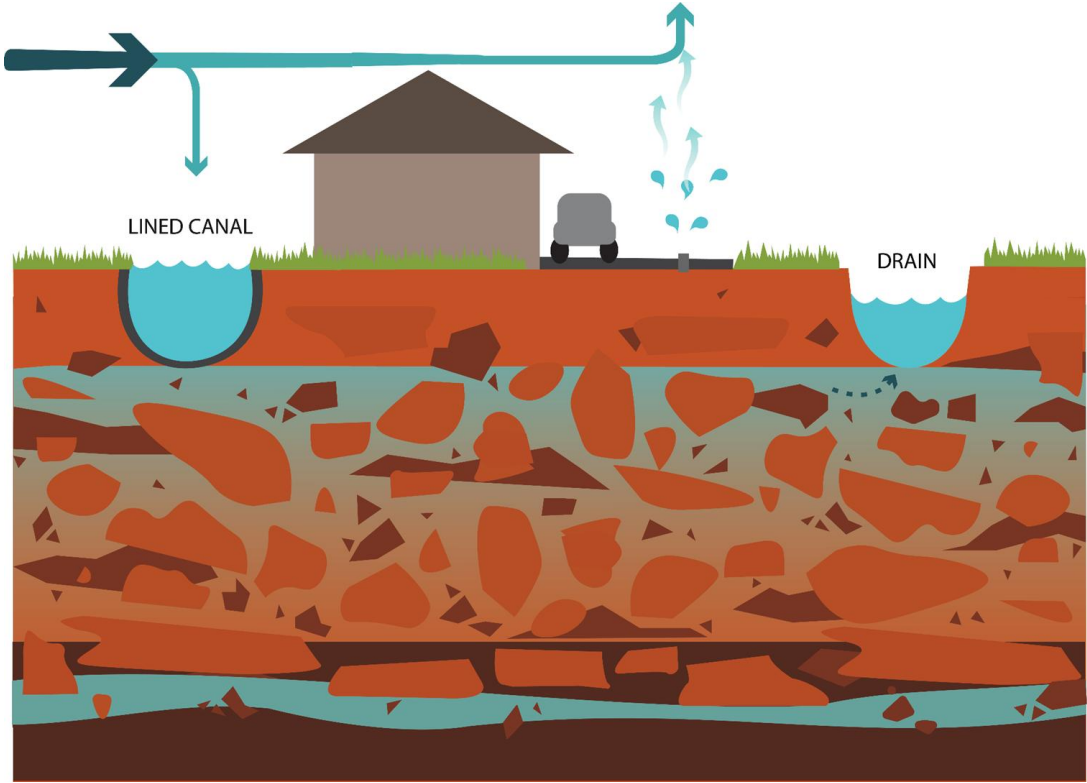
A photograph of a stone-lined water channel. A large, dark pipe opening is visible on the left side. A vertical pole with a sensor or device attached is positioned in the center. The channel is surrounded by rough, stacked stones. In the foreground, there are some dry reeds and a blue tarp. The text "Treasure Valley Water Supply Project" is overlaid in white on the right side of the image.

Treasure Valley Water Supply Project

Irrigation Efficiency and Land Use Conversions



Irrigation Conversions



Urbanization

Images from Treasure Valley water Users Association, 2025

Boise River June 30, 2022 Low Flow

On June 30th of 2022 Water District 63 did not have enough water in the Boise River to supply the demand below Caldwell. The only reason we were able to deliver water to 5 different canal companies and farmers was that we had BOR flow augmentation water in the river. Looking at the accounting, we were approximately 150 CFS short.

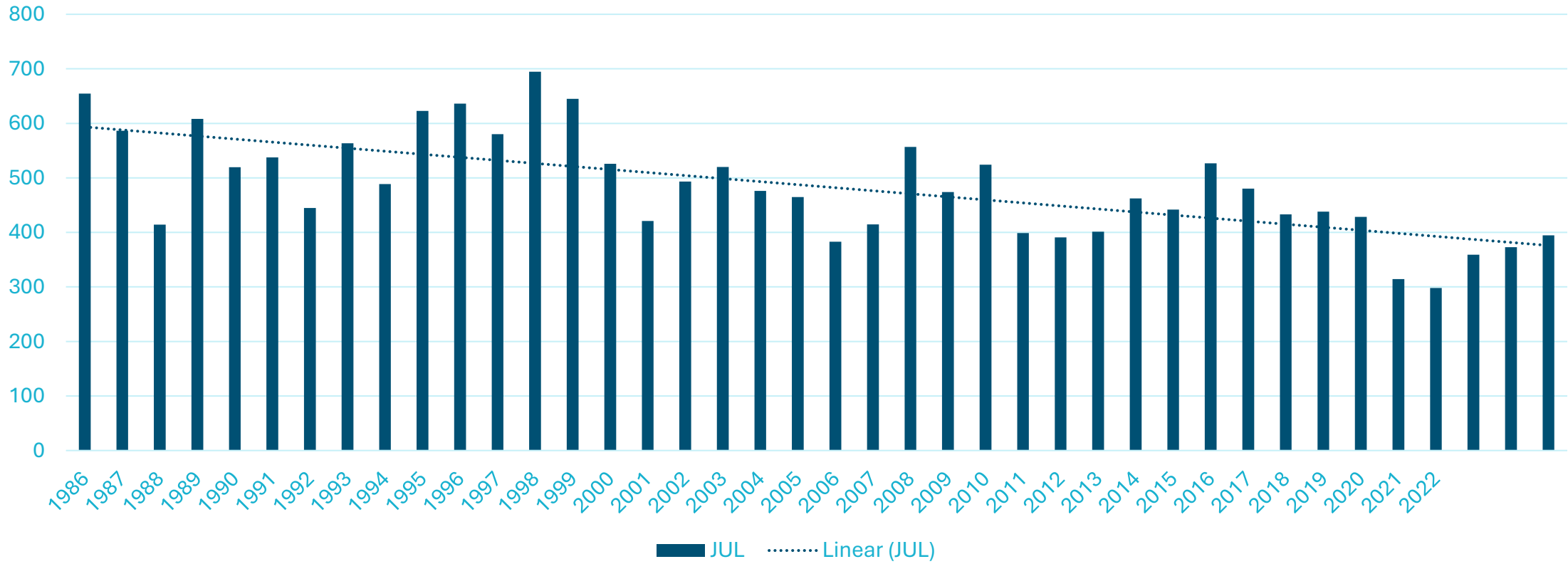
WATER DISTRICT 63 - BOISE RIVER FLOW ACCOUNTING (VER 2.1.2.126) - Jun 30, 2022												20221004	
REACH FLOWS IN CFS	ACTUAL DATE	NATURAL FLOW	ACTUAL FLOW	REMAINING NAT FLOW	OPERATN FLOW	STORED RESRVOIR FLOW	EVAP	NATURAL FLOW	TOTAL RCH DIV	TOTAL DIV	REACH GAIN	REACH LAST RIGHT	
TWIN SPRINGS	Jun 30	2052.	2050.	2050.	0.	0.	0.	2.	2.	2052.	19031214		
FEATHERVILLE	Jun 30	1101.	1090.	1091.	0.	-1.	0.	10.	11.	1101.	19031214		
FTHRVL TO ANDERSN RANCH	Jun 30	1168.	585.	1158.	0.	-573.	22.	0.	0.	67.	19031214		
ANDSN RANCH TO ARROWROCK	Jun 30	3298.	4042.	3286.	0.	755.	14.	0.	0.	78.	19031214		
MORES CREEK	Jun 30	187.	182.	182.	0.	0.	0.	4.	5.	187.	19031214		
ARROWROCK TO LUCKY PEAK	Jun 30	3500.	4293.	3484.	0.	809.	14.	0.	1.	15.	19031214		
LUCKY PEAK TO DIVSN DAM	* Jun 30	3430.	2181.	1628.	0.	553.	0.	1786.	2112.	-70.	19031214		
DIVSN DAM TO BOISE	* Jun 30	3430.	1730.	1180.	0.	550.	0.	448.	450.	0.	19031214		
BOISE TO GLENWOOD BR	Jun 30	3274.	1320.	776.	0.	544.	0.	248.	254.	-156.	19031214		
GLENWOOD BR TO MIDDLETN	Jun 30	3391.	794.	0.	250.	544.	0.	643.	644.	117.	19031214		
MIDDLETON TO CALDWELL	Jun 30	3800.	721.	127.	50.	544.	0.	481.	481.	409.	19500511		
CALDWELL TO NOTUS	* Jun 30	4055.	578.	0.	50.	528.	0.	383.	398.	255.	19500511		
NOTUS TO PARMA	Jun 30	4532.	764.	378.	0.	387.	0.	149.	197.	476.	20220101		
* - INDICATES FLOW ESTIMATED, NOT MEASURED							TOTALS:		4154.	4555.	4532.		

June 30, 2022

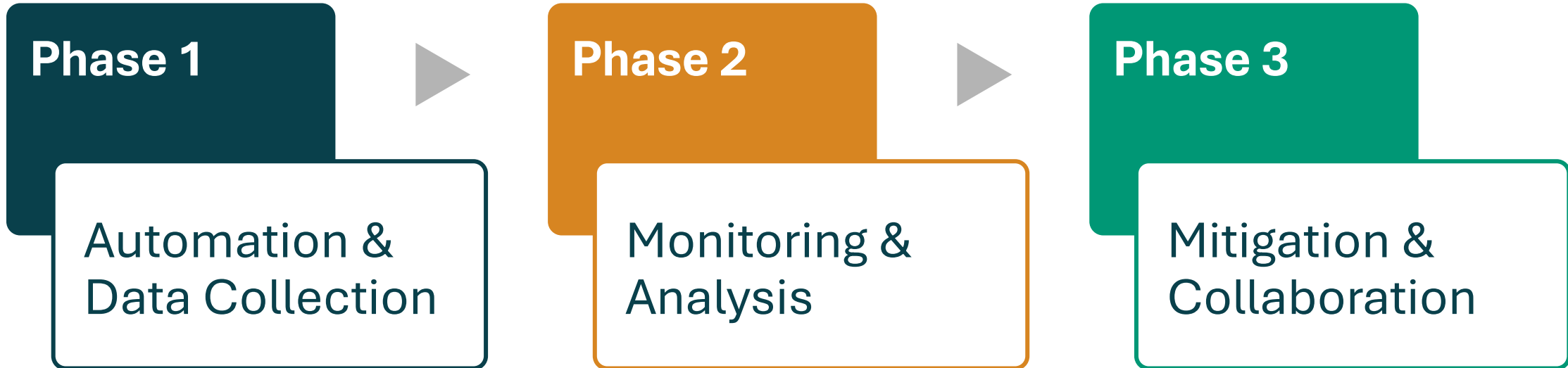
Drain	June 30 Mean Daily Flow, 2017-2022 (cfs)	June 30, 2022 Mean Flow (cfs)	Difference (cfs)
Eagle Drain	34	40	+6
Fifteen Mile Creek	103	97	-6
N Middleton Drain (Mill Slough)	38	25	-13
S Middleton Drain	71	43	-28
Mason Creek	151	75	-76
West Hartley Gulch	21	12	-9
East Hartley Gulch	55	47	-8
Conway Gulch	31	27	-4
Dixie Drain	160	135	-25
TOTAL	664	501	-163

July Drain Trends

July Monthly Combined Drain Flow Returns Upstream of Caldwell in cfs



Treasure Valley Water Supply Project



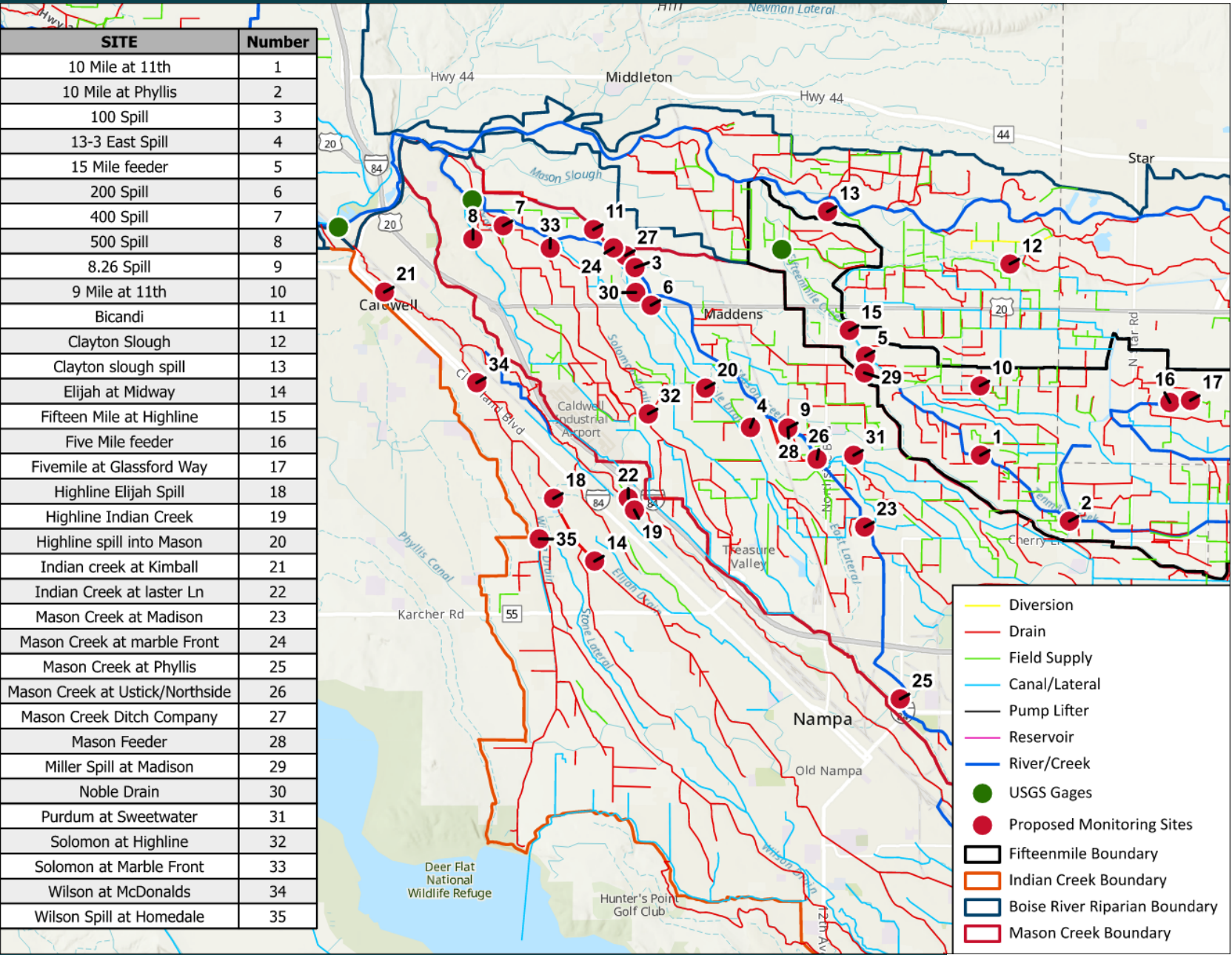
WD63

Project Partners



TVWSP Phase 1- Complete

- Equipment Installation
- Boise River Mass Balance
- Trend Analysis
- Tributary Flow Evaluation



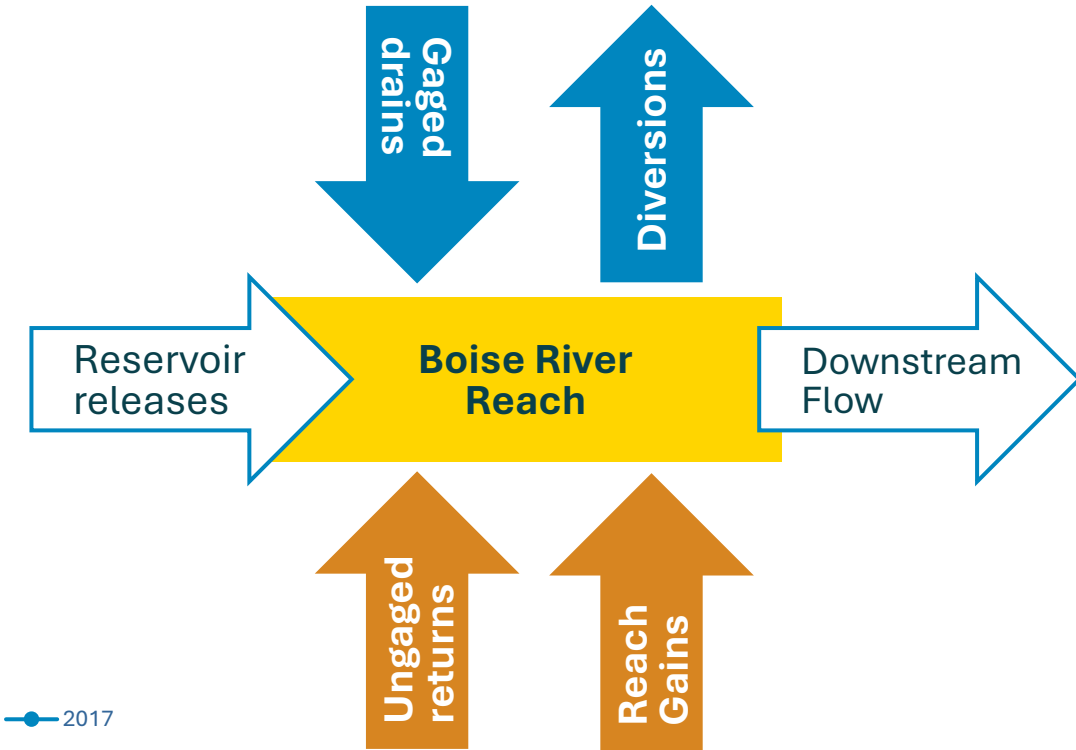
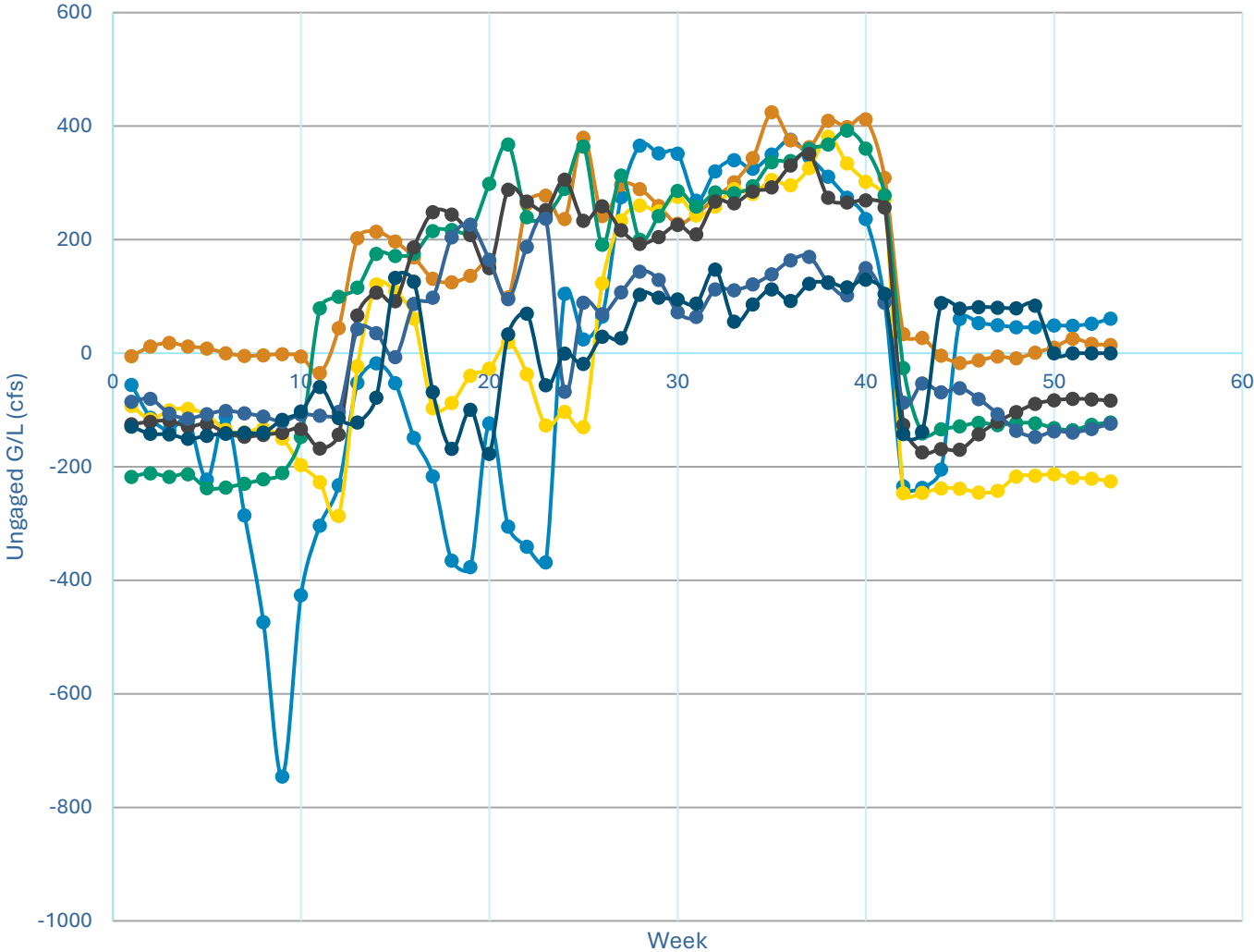
SITE	Number
10 Mile at 11th	1
10 Mile at Phyllis	2
100 Spill	3
13-3 East Spill	4
15 Mile feeder	5
200 Spill	6
400 Spill	7
500 Spill	8
8.26 Spill	9
9 Mile at 11th	10
Bicandi	11
Clayton Slough	12
Clayton slough spill	13
Elijah at Midway	14
Fifteen Mile at Highline	15
Five Mile feeder	16
Fivemile at Glassford Way	17
Highline Elijah Spill	18
Highline Indian Creek	19
Highline spill into Mason	20
Indian creek at Kimball	21
Indian Creek at Iaster Ln	22
Mason Creek at Madison	23
Mason Creek at marble Front	24
Mason Creek at Phyllis	25
Mason Creek at Ustick/Northside	26
Mason Creek Ditch Company	27
Mason Feeder	28
Miller Spill at Madison	29
Noble Drain	30
Purdum at Sweetwater	31
Solomon at Highline	32
Solomon at Marble Front	33
Wilson at McDonalds	34
Wilson Spill at Homedale	35

Monitoring Sites Installed

- LoRaWAN telemetry established for Treasure Valley (Ethos Connected)
- Drain flow, spills, and returns measured in Fifteenmile Cr., Mason Cr., and Indian Cr.
- [Ethos Connected Dashboard](#)

Boise River Mass Balance and Trend Analysis

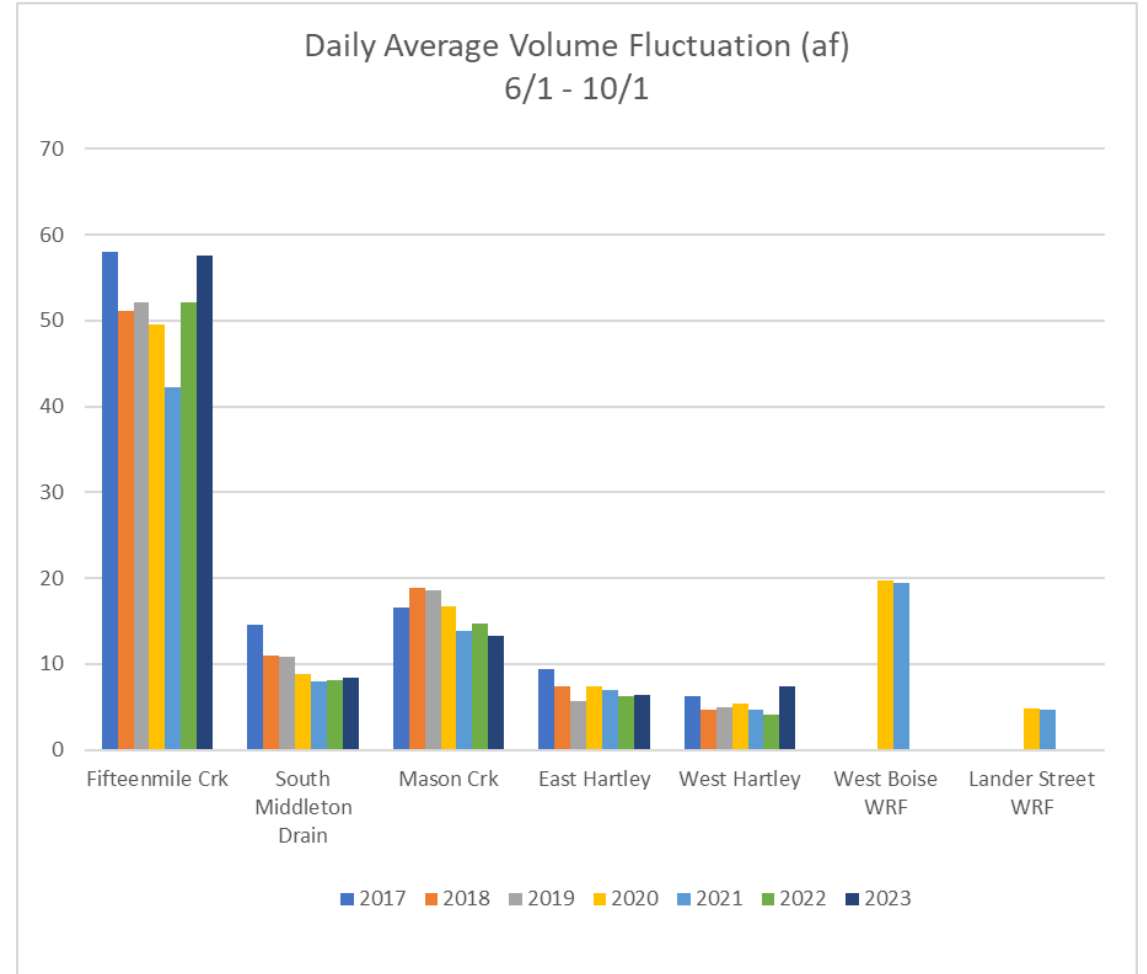
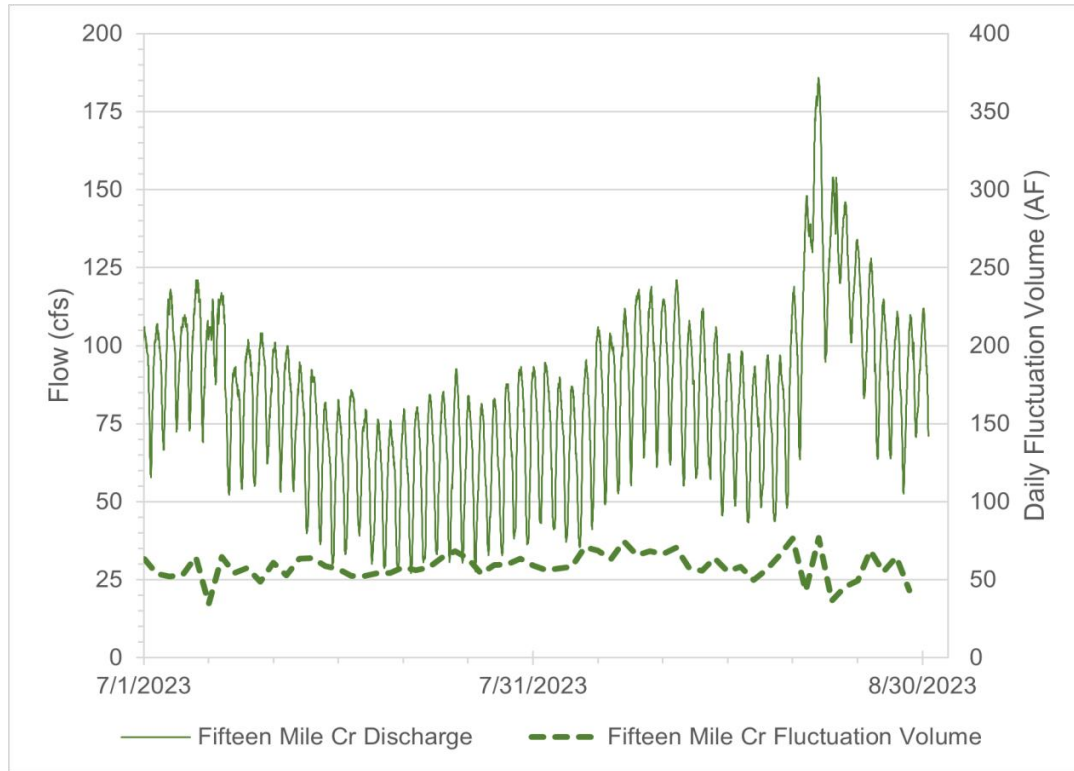
Middleton to Caldwell



- 2017
- 2018
- 2019
- 2020
- 2021
- 2022
- 2023

Tributary Analysis

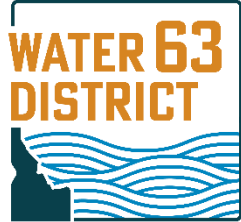
- Quantified inefficiencies in drain fluctuations
- Opportunities to increase delineable water through better regulation



TVWSP Phase 2- Modeling and Analytics

- Develop real-time data to inform Water District 63 delivery operations
- Project and anticipate return flows to the Boise River
 - Groundwater Trends
 - Development Trends
 - Irrigation and delivery efficiency
 - IWRB aquifer recharge scenarios
- Funding
 - IWRB Regional Sustainability Project
 - USBR WaterSMART Grant
 - Beginning Stakeholder Engagement

WD63 Dashboard – Vision and Architecture



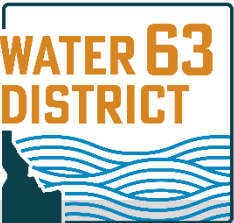
Live WD63 data – diversions & returns



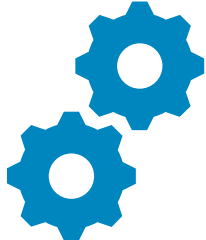
Live USGS stream gauge data



Live USBR data



Historical WD63 data – diversions & returns



Live accounting of reach and ungauged gains/losses

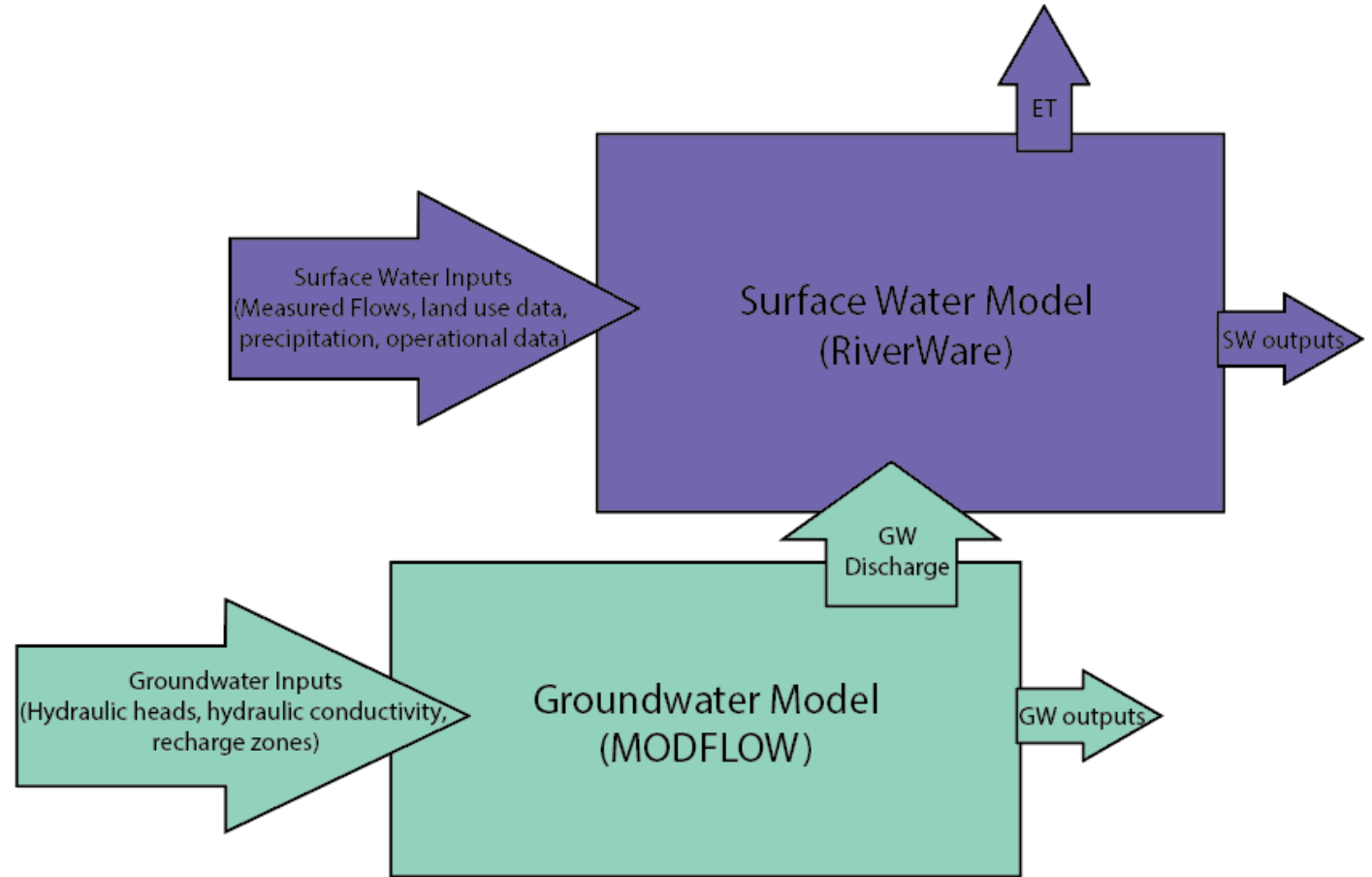


Interactive analytics dashboard

WD63

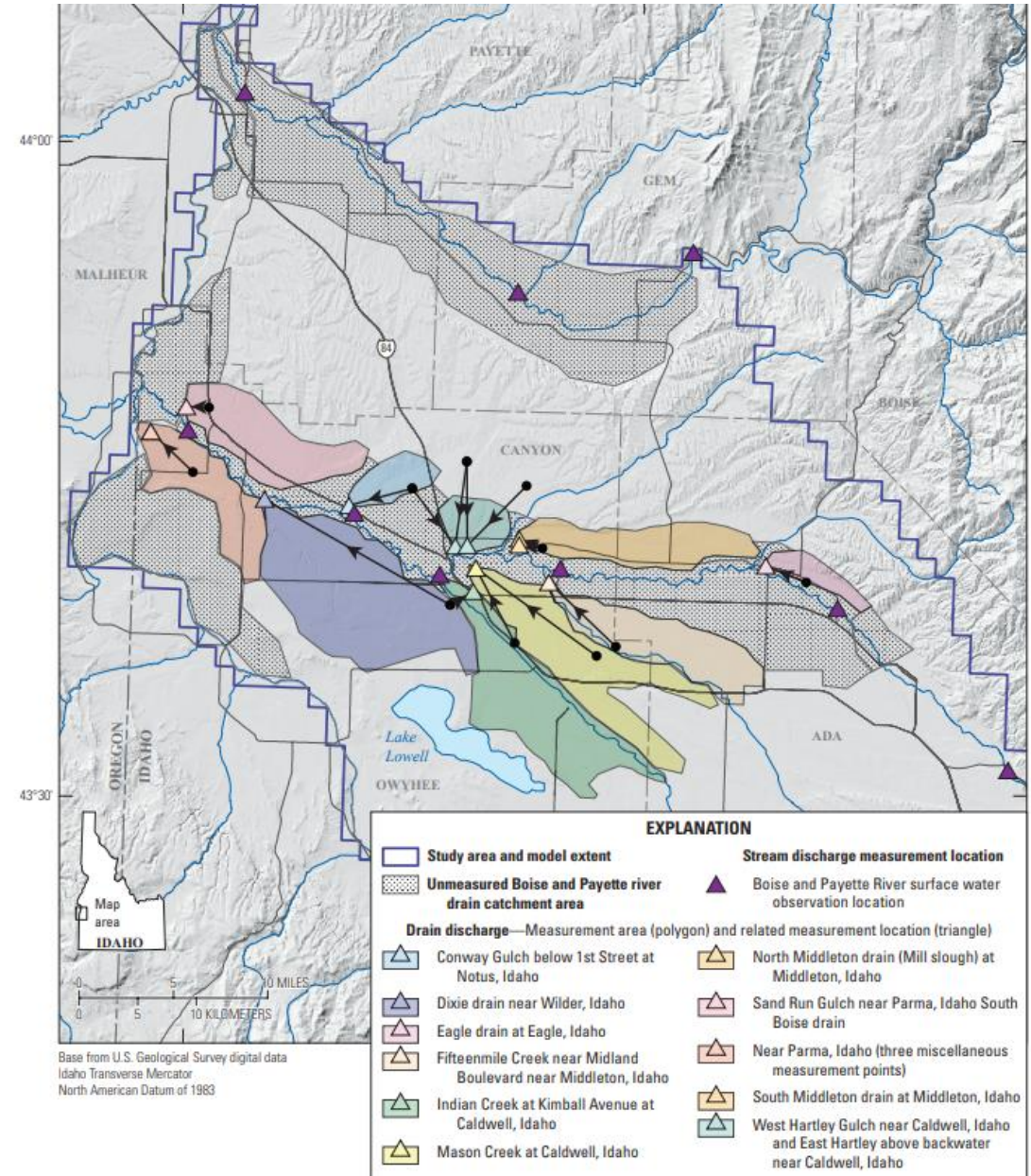
Hydrologic Modeling

- Software Selection and Data Review - Complete
- Modeling Plan- Finalizing
- Preliminary model development – Fall 2025

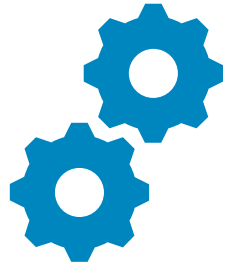


Model Development Plan

- Groundwater Interaction
 - Groundwater Recharge
 - Canal Seepage, irrigation from TVGWFM data
 - Groundwater Discharge
 - TVGWFM
 - WD63 drain flow data
 - Future Conditions- Impulse Response Function



Model Development



Model Calibration

USGS Gage Data
WD63 Flow Records

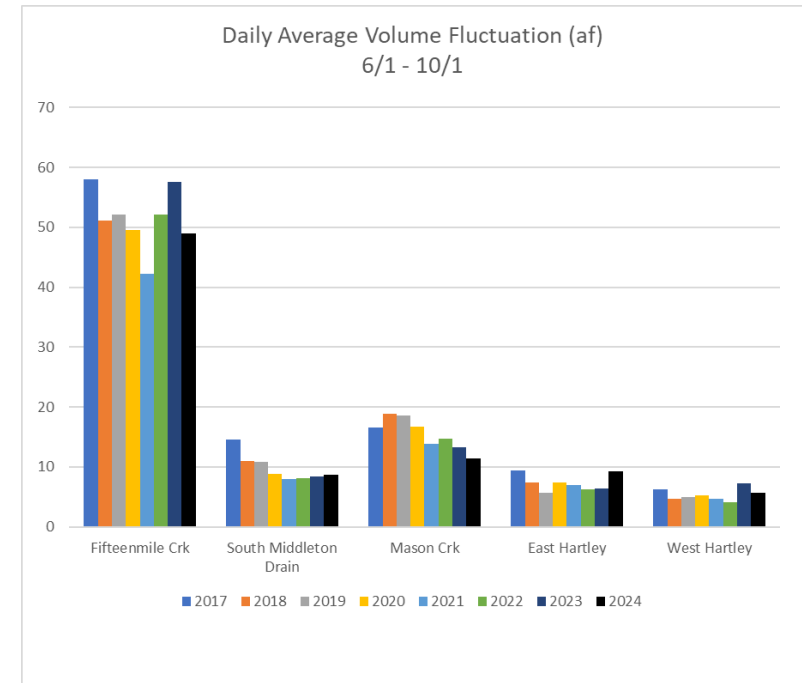
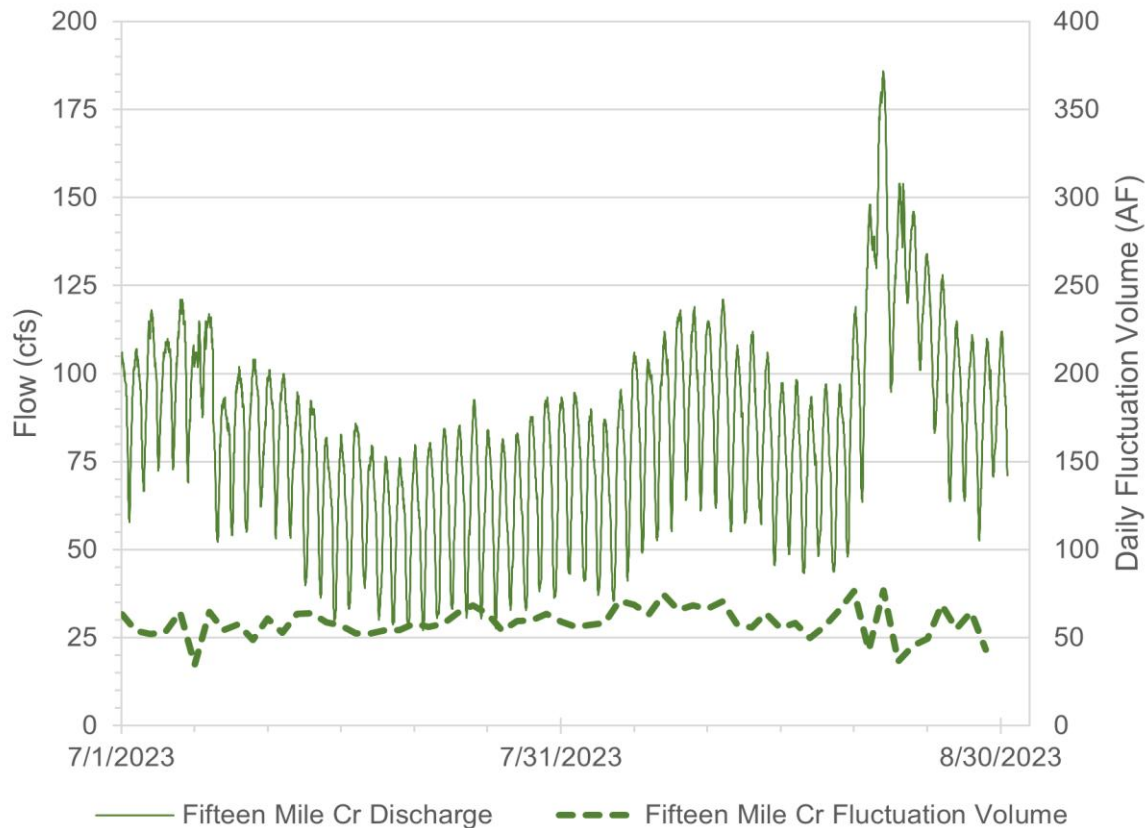


Future Conditions Modeling

City and County Comp. Plans
SW/GW Mitigation
Operational Improvements

15 Mile Drain Regulation

- Daily drain fluctuations impact WD63 deliveries in the Boise River
- WD63 could regulate Fifteen Mile Creek with 25 ac-ft
- Gravel pits exist near the Boise River confluence with adequate volume

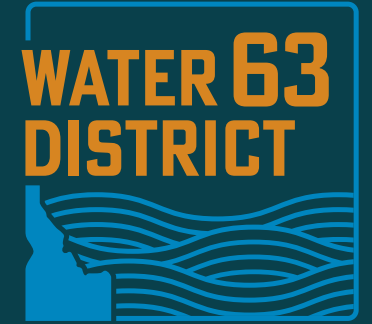




15-Mile Drain Regulation

- Water right discussions with IDWR
- Landowner Agreement
- Engineering Feasibility- Discussions with City of Nampa

Treasure Valley Water Supply Project



Objective

To improve water management by leveraging improved data collection throughout the Boise River Basin.

Thank you for your time