

CASTLE ROCK WATER

LAWN IRRIGATION RETURN FLOW (LIRF) QUANTIFICATION – PHASE 2 PROJECT WITH W. W. WHEELER, INC.

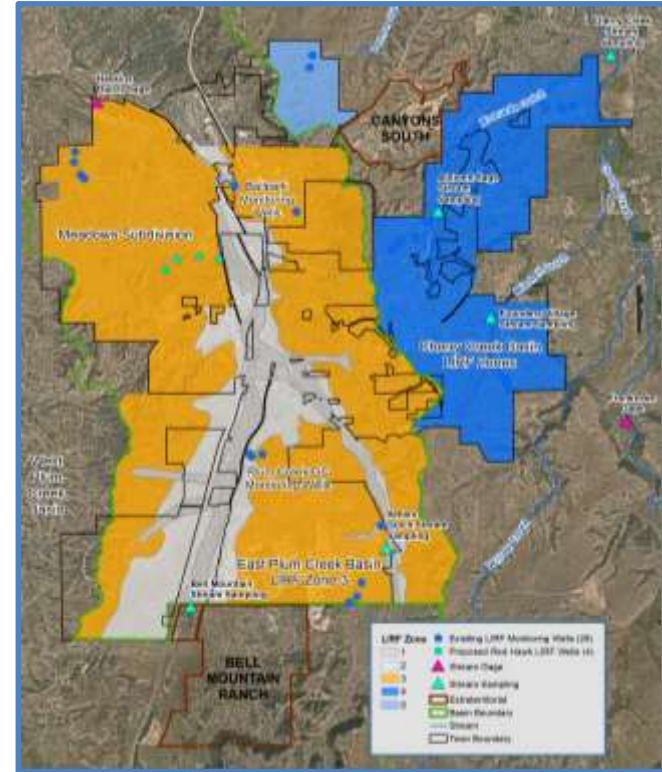
NOVEMBER 1, 2022



LIRF QUANTIFICATION PROJECT – PHASE 2

BACKGROUND

- Lawn Irrigation Return Flow (LIRF) credit already quantified for Zones 1 and 2 in East Plum Creek as well as in the Meadows – *130 AF of return flows, will increase as irrigated area increases within these Zones*
- The Town still needs to quantify LIRFs in East Plum Creek (Zone 3) and the Cherry Creek (Zones 4 and 5) Basins - *620 AF of return flow potential, will increase as irrigated areas increase within these Zones*
- Phase 1 completed in 2021
 - Completion of 26 monitoring wells
 - Established 5 streamflow monitoring sites
 - Initial modeling and monitoring
- Phase 2 will be a continuation of Phase 1 in order to complete monitoring wells and file water court applications



LIRF QUANTIFICATION PROJECT – PHASE 2

DETAILS

- Continuation of Phase 1 monitoring:
 - Streamflow monitoring at 5 locations
 - Water level monitoring at 28 locations
- Observe the construction of the remaining 5 monitoring wells
 - Red Hawk – 4 wells
 - Sapphire Point – 1 well
- Remove the sediment from 28 existing wells and 5 new wells
- Continued streamflow and water level monitoring until the decree is entered by Water Court
- Review data, estimate losses and timing of LIRFs to East Plum Creek and Cherry Creek
- Random sample calculations for LIRF Quantification
- Prepare preliminary engineering reports
- Assist with preparation of Water Court applications



LIRF QUANTIFICATION PROJECT – PHASE 2

PROJECT SUMMARY

Consultant

- W. W. Wheeler & Associates, Inc.
 - HydroKinetics, Inc. (sub)
 - Principia Mathematica, Inc. (sub)

Schedule

- Fall 2022 thru December 2023

Funding

- 2022 Budget
- 211-4340-443.30-70 (Other Professional Services)

Recommendations

- Staff
- Water Commission

Proposed Budget

W. W. Wheeler & Associates, Inc.:	
Wheeler	\$ 139,382
Hydrokinetics	\$130,005
Principia	\$58,900
Reimbursed expenses	\$7,713
Contingency (5%)	\$ 16,800
TOTAL PROJECT AUTHORIZATION	\$352,800



I MOVE TO APPROVE RESOLUTION NO. 2022-128
AS INTRODUCED BY TITLE

I MOVE TO APPROVE THE RESOLUTION AS INTRODUCED BY
TITLE, WITH THE FOLLOWING CONDITIONS: _____

“I MOVE TO CONTINUE THIS ITEM TO THE TOWN COUNCIL
MEETING ON _____ DATE TO ALLOW
ADDITIONAL TIME TO: _____