

**Place-Based Integrated Water Resources Planning
Upper Grande Ronde River Watershed Partnership
Quarterly Implementation Meeting #1
May 10, 2022; 4:00 p.m. – 6:00 p.m.
OSU Extension Service Building & Teams Meeting**

ATTENDANCE

Dana Kurtz, Donna Beverage, Steve Parrett, Mike Burton, Adrienne Averett, Joe Lemanski, Larry Larson, Shad Hattan, Jed Hassinger, Sarah Henderson, Jesse Steele, Phillip Marcy, Jim Webster, Jason Spreit, Darrin Walenta, Tim Wallender, Bill Gamble, Abigail Tomasek, Salini Sasidharan, Curt Howell, Cory Courchane, Maria Isabel Re Zamora

I. WELCOME

Introductions

Brief introductions took place.

II. QUARTERLY IMPLEMENTATION MEETING GOALS/STRUCTURE

1. Future schedule: Quarterly meetings will be scheduled in La Grande during the months of March, June, September, and December from 4pm to 6pm.
2. Goals/Structure:
 - 1) Share organizational updates
 - 2) Share strategy group updates
 - 3) Obtain feedback and direction
3. Consensus decision-making – do we continue this way or work more informally?

Concerns were shared about informal decision-making by smaller subgroups with little monitoring or knowledge of the larger group. Subgroups will continue to be guided by the Plan's tasks and goals; they will submit meeting minutes for email distribution after each meeting. This will allow for timely updates and alleviate unnecessary workload for Dana and others. SharePoint may also be utilized to provide more transparency, although there was not wide support for this due to its limited details. Quarterly meetings will provide time for subgroups to report progress and seek input from the larger group. Large group consensus decision-making will be used to make bigger decisions (i.e., funding).

4. Comments/suggestions – food?

There was moderate support to provide food at meetings; light snacks and water will be provided. In-person vs. call-in meeting options were discussed; hybrid meetings with both options have been helpful and will continue.

III. ORGANIZATIONAL UPDATES

- OSU, Darrin Walenta – Crop tour will be in-person on June 21; requesting 10-15 minute informal report from this group. Working with OWR to get resources and equipment for new regional Agriment stations (southern end of this county, Baker valley, and Wallowa County). Also in the works is the larger project throughout the western US, OpenET (evapotranspiration), which will build mapping that can zone in on a particular parcel and is based on real-live weather data.
- NRCS, Mike Burton – Continuing emphasis on improving irrigation systems, working primarily in the mid-Catherine creek range. Would like to convene a meeting this fall (primarily producers) to look at soil health to increase soil organic matter and water storage over agriculture, timber, and rangelands. Union County is poised to be an example of work utilizing grazing and cover crops. Potential funding sources include the Climate-Smart Commodities opportunity and the Conservation Innovation Grant.
- GRMW, Jesse Steele – Continued funding of restoration projects. Floodplain connection and natural storage are major objectives. Work is funded by GRMW and completed by its partners like USFS, Tribes, ODFW, and NRCS. More information provided in "data" group update.

- OWRD – Steve- the OWR Commission will sign a resolution recognizing this Partnership’s plan. New staffing and responsibilities at OWR after this last legislative session include support for planning, implementation, and groundwater studies. Currently taking feedback on 2023-25 Legislative biennium; one potential concept would continue some form of state supported water planning. Sarah- has worked in the flow restoration program doing instream transfers and leases and is the program lead for the Deschutes mitigation program. Corey- works with the Allocation of Conserved Water Program and has experience with instream leases. Shad- Regional Assistant Mark Sanderson is stationed here. Locally they are supporting programs and collecting data on stream gauges and would like to have a broader range of static water levels and groundwater health. Phil- hopes to get data on more wells that are representative across the valley, helping to compile a long-term record. Abigail- they are developing a mobile water education trailer.
- ODFW, Joe and Adrienne – Looking forward to actively participating in subgroups.
- USFS, Bill Gamble – Continuing habitat flood plain restoration, helping whole watershed restoration and downstream users. Had the Tribes implement two river water restoration projects over last handful of years. Working to bring in another \$5 million over the next five years to continue work looking at connectivity uses, improving water quality and watershed function. That could be linked with the annual \$3 million we have now from the Collaborative Forest Landscape Restoration fund for upland work like thinning and fuel treatments. Looking to engage with Starkey PNW scientist who is shifting to a water-based research initiative in 2023. Opportunities to apply research to our restoration activities and on relevant questions that are important for the work that this group has been engaged in. Secured \$100k funding to bring bio-char from John Day to the upper GR that is set for restoration in 2024. This is an opportunity to see how we can connect forests to our farms through production of bio-char that can then be applied on ag lands to reduce water needs and sequester carbon in soil.
- Union County, Donna Beverage – Work being done in storage meetings. Looking forward to Crop Tour and Farmer’s Merchant Banquet. The Plan received unanimous support from OWR Commission. Association of Oregon Counties hired someone to support other basins because they didn’t want water planning to be limited to four basins every five years. Lots of other groups are doing place-based water planning but not necessarily through OWRD.
- Union County Farm Bureau, Jed Hassinger – participated in presentation of Plan to OWRD.
- Union Soil and Water Conservation District, Jim Webster – Working with BOR and another subgroup through GRMW. Looking at hydrologic modeling (focusing on how water might be controlled at different constriction points) and all of the tributary confluences to see how water moves through the valley, what places might cause flooding, and what actions we might take in the future to reduce flooding. Talked with BPA about extending upper GR modeling efforts into the valley to look at bedload transported through the river system. Working with NRCS putting actions on the ground to conserve water and improve efficiency (conservation incentive strategy) centered on lower Catherine Creek, Mill Creek and part of Ladd Creek. Also working with GRMW on several restoration projects that add to the natural storage of floodplains for water.
- No updates available from CTUIR, ODA, DEQ, USFWS, BOR, NMFS, Union County Cattlemen, Freshwater Trust, City of La Grande, City of Cove, City of Union.

IV. STRATEGY GROUP UPDATES / ACTION ITEMS

GROUP	UPDATES	ACTION ITEMS
Project Management	Plan recognized by WRC. Open grants: OWRD Feasibility Study, OWRD PBP Grant, OWEB TA Grant, OWEB Capacity Grant. Potential grants: BOR WaterSmart Grant; OWEB FIP. Dana will be on leave this summer. Brett retiring this summer.	OWEB TA Grant. SharePoint tracking. Plan update to WRC in 1-2 years.
Outreach	Developed press release. Assisted with newspaper article.	Update outreach plan for OWEB Capacity Grant
Municipal	Working on integrated FEMA ERP. Cities don't want formal agreement or list of shared equipment.	Assist cities with Emergency Response Plans
Administrative		Survey interest in voluntary programs
Infrastructure	Reengaged NRCS	BOR hydrologic model. GRMW sediment deposition study. Ditch meeting.
Public Land	Bill Gamble retiring this June.	Schedule forest collaborative support field trip after new USFS staff hired
Habitat	Met with Jesse and Alex at GRMW to learn how ATLAS geomorphic scores are calculated (outlined on feasibility map). Developing list of natural storage locations. (Jim) This is part of existing work already being done and should be combined with the implementation team that has completed actions under this strategy through GRMW for many years and has access to funding for those types of projects.	Meeting to review feasibility study natural locations/concepts utilizing ATLAS geomorphic potential layer
Data	(Jesse) Most work accomplished were projects that were initiated before PBP started or dovetailed into work that GRMW was already doing. GRMW has worked with OWR for many years to fund and collect data from stream gauges; GRMW finds funds, Shad does the work. Found OWEB grant to fund that for another two years. Also applied annually for BPA funds for that work. Hope to expand efforts but for now will focus on maintaining those currently funded. ODFW does not have capacity to do IS study. List of potential companies submitted to be reviewed under competitive RFP.	Meet to review In-stream flow study draft RFP. Determine OWEB SAP (see discussion below).
Agricultural Land	Reengaged NRCS	Ask Rodger for Range Representatives. CIG Grant or others?
Built Storage	Aboveground storage feasibility study in progress	Meet to review draft RFP for in-stream flow study. Review location map. Attend next tech meeting. Determine next steps for Underground storage at Catherine Creek.

OWEB Strategic Action Plan *attached presentation pages 18-19*

SAP is specifically written to meet state-identified restoration objectives, typically with the goal to apply for OWEB Focused Investment Partnership (designated pot of money to implement restoration projects; \$6-12 million over 6 years). FIPs are restricted to 7 categories; the only applicable category to this basin is the aquatic habitat for native fish. 3 ideas to meet requirements:

1. Draft own small SAP with small set of projects associated with restoration/data collection groups that would be appended to Step 5 Plan (would not recommend submitting for OWEB FIP)
2. Draft own SAP with intent to apply for OWEB FIP (likely in competition with GRMW)
3. Assist GRMW in updating their SAP (with intent to work together to include projects of importance)

Comments from group discussion

- Is funding needed to continue these meetings?
- Is this group being used to get OWEB grant when it may not have a say where it's going?
- Will funding benefit all users if it is fish-focused?
- Strong desire to follow guidelines this group worked hard to establish
- Thought our PBP Plan would be close to the SAP, but ours is not project-specific enough
- This group may be more successful with other grants if it pursues its own SAP (idea 2)
- Having own FIP would require hiring someone to manage it
- Would FIP fund projects that address other priorities?
- Interest in working with current entities, but only if it focuses on all users
- Don't want to be in competition with GRMW
- Leveraging OWEB grant to help GRMW get FIP could draw in money for years
- Assisting with GRMW SAP supports restoration in basin without additional work from this group
- Restoration benefits all users because it improves water quality and quantity (not just fish)
- GRMW is already doing the work and OWEB is very focused on habitat category
- GRMW might consider additional capacity if funding was available
- Could GRMW expand its work to include agriculture?
- Makes most sense to work together
- 3 of our top 5 strategies have projects that could be funded in FIP
- Interest in exploring idea to establish an irrigation district like other basins have done
- Focus on most efficient investment to be successful and secure more grants

SAP decision was tabled to allow time to collect detailed information about options. Vote by email was discussed but decided against since it would require an extensive summary of meeting discussions. Donna will report back with information about the John Day basin. Jesse will report back with information from GRMW after its board meets. FIP deadline is June 2023; Dana will begin the work now.

In lieu of extending the meeting, Dana will email storage study results and everyone has the option to attend the next storage meeting to learn more; *attached presentation pages 21-39*. Dana reported that the storage study is going really well; 150 locations have been identified and different ways will be used to narrow that down to the top 10. More landowner outreach will be needed to gauge interest before taking action.

V. CONCLUSION

1. Next meeting tentatively planned for September
2. Other comments – none.

The meeting was adjourned at 6:20 p.m.



Place-Based Integrated Water Resources Planning

Quarterly Implementation Meeting #1

Upper Grande Ronde River
Watershed Partnership

Union County, Oregon
May 10, 2022



Meeting Agenda

- Welcome
- Quarterly Implementation Meeting
Goals/Structure
- Organizational Updates
- Strategy Group Updates/Action Items
- Conclusion



I. Welcome



Introductions

- Name
- Organization



II. Quarterly Implementation Meeting Goals/Structure



Goals/Structure

- General Schedule: Mid March, June, September, December
- General Time: 4-6
- Goals:
 - Share organizational updates/obtain assistance
 - Share strategy group updates
 - Obtain feedback and direction
- Meeting Structure – feedback
- Consensus decision-making: do we continue with this, or work more informally?
- Comments/Suggestions (food?)



III. Organizational Updates



Organizational Updates

- OSU
- NRCS
- CTUIR
- GRMW
- OWRD
- ODFW
- ODA
- DEQ
- USFS
- USFWS
- NMFS
- Union County
- Union County Farm Bureau
- Union County Cattleman
- The Freshwater Trust
- Union Soil and Water Conservation District
- City of La Grande
- City of Cove
- City of Union
- Others?



IV. Strategy Group Updates/Action Items



Project Management

- **Step 5 Plan Recognized by WRC!**
- **Open Grants**
 - OWRD Feasibility Study Grant (expires June 2023) – submitted quarterly report through April 20, 2022
 - OWRD PBP Grant (50,000 additional funds, expires June 2023) – submitted semi annual report through Dec 2021
 - OWEB TA Grant (expires June 2024) – need to develop contract with Union County and RFP
 - OWEB Capacity Grant (expires June 2023) – submitted semi annual report through December 2021
- **Potential Grants**
 - BOR WaterSmart Grant (not open yet, capacity, application potentially due in January 2023)
 - OWEB FIP (not open yet, potentially due June 2023)
- **Action Items**
 - OWEB TA Grant (expires June 2024) – need to develop contract with Union County and RFP
 - If requested, assist in setting up meetings
 - Staffing notes – Dana and Brett
 - Move tracking spreadsheets to sharepoint for access
 - Plan update to WRC in 1-2 years
 - Others?



Outreach

- Lead: (Union County); Team: Kyle, Roxy, Donna, Darrin
- Developed press release
- Assisted with newspaper article

- **Action Items**
 - Need to update outreach plan for OWEB Capacity Grant



Municipal

- Lead: (City of La Grande); Team: Kyle, Leonard, Dave J.; JB Brock
- Working on FEMA Emergency Response Plan (integrated with Union County's) – update?
- **Action Items**
 - List of shared equipment/determine desire for formal agreement
 - Assist with ERPs?



Administrative

- Lead: (CTUIR); Team: Adrienne, Tony M, Steve P, Anton, Jim Webster, Shad, Winston, Adrienne (Levi Old declined to participate)
- **Action Items**
 - Survey of interest in voluntary programs



Infrastructure

- Lead: (Union County); Team: Curt Howell, Jed H, Jim W, Cheryl, **Brett, County Road Department (JB Brock), Mike Burton (NRCS), Anton**

- **Action Items**
 - Reengage NRCS – Dana to call
 - BOR hydrologic Model – Jim and Jed Scoping
 - GRMW Sediment Deposition Study – Jim and Kayla
 - Ditch meeting – Dana to set up



Public Land

- Lead: (USFS); Team: Bill G, Union County (Donna), Joe, Winston
- **Action Items**
 - Staffing – Bill G retirement timeline?
 - Field trip or forest collaborative support?



Habitat

- Lead: (Union SWCD); Team: Darrin Walenta, Jim W, Curt R, Rodger H, Joe, Winston, Adrienne, Jesse, Bill, Mike Burton (NRCS), Tony Malmberg, CTUIR (Allen Childs or Anton) Grant from OWRD, OWEB, and match from Partnership, CTUIR, and ODFW
- Developing list of Natural Storage Locations
- **Action Items**
 - Review of Feasibility Study Natural Storage Locations/Concepts (utilizing ATLAS geomorphic potential layer) – Dana to set up meeting



Data

- Lead: (GRMW - Jesse); Team: Steve, Bill, Anton, Joe, Winston, Adrienne, Larry, Shad, Phil Marcy,

- **Action Items:**
 - Set up meeting to review draft RFP for in-stream flow study
 - Determine OWEB SAP Plan (See next slide)



OWEB STRATEGIC ACTION PLAN

- OWEB Strategic Action Plan is a plan specifically written to meet State identified restoration objectives through project based work.
- Goal is typically to use the SAP to apply for a OWEB Focused Investment Partnership which is a designated pot of money to implement restoration projects (6-12 million over 6 years)
- FIPs are restricted to 7 categories: Aquatic habitat for native fish species, closed lakes basin wetland habitat, coastal estuaries, Coho habitat and populations along the coast, dry-type forest habitat, oak woodland and prairie habitat, and sagebrush/sage-steppe habitat
- The only category applicable to our basin is the aquatic habitat for native fish.



OWEB STRATEGIC ACTION PLAN

- Requirement of OWEB Capacity Grant - 3 ideas to meet grant requirements:
 1. Draft our own small Strategic Action Plan (could be a small set of projects associated with restoration/data collection groups that we append to our Step 5 plan) – if we went this small scale route, I would not recommend submitting it for an OWEB Focused Investment Partnership
 2. Draft our own Strategic Action Plan with the intent of applying for an OWEB Focused Investment Partnership (Due June 2023; would likely be in competition with the GRMW’s plan)
 3. Assist GRMW in updating their Strategic Action Plan with the intent of working together to include projects of importance to the Partnership and supporting their application to OWEB Focused Investment Partnership.
 - We could develop a suite of projects collaboratively that would benefit native fish but also directly address the natural floodplain water storage strategy.
 - This is work that GRMW is already coordinating and we could increase the amount of natural storage projects significantly with another FIP.
 - GRMW could add capacity to facilitate the FIP
 - If the Place-based group would prefer to pursue a FIP independently of GRMW that would be fine but GRMW is planning to apply for one as well. It seems beneficial to work together rather than compete against one another for this funding opportunity.

Comments/Ideas?



Agricultural Land

- Lead: (NRCS); Team: Mike B, Curt R, Matt, Jed, Darrin Walenta, Tim W, Jim W (contact Rodger for range representatives)

- **Action Items**
 - Reengage NRCS
 - Ask Rodger for Range Representatives
 - CIG Grant or others?



Built Storage

- Aboveground Storage Feasibility Study – in progress (See summary in next slides)

- **Action Items:**
 - Set up meeting to review draft RFP for in-stream flow study
 - Review location map
 - Attend next technical meeting (date TBD)
 - Underground Storage Catherine Creek Next Steps – Dana to set up meeting



Storage Feasibility Study Overview and Process



Background/Objectives

- Grant from OWRD, OWEB, and match from Partnership, CTUIR, and ODFW
- Storage feasibility study (with instream flow component)
- The goal of the Study is to identify storage locations and assess site suitability through a variety of social, legal, environmental, economic, and technical factors, while simultaneously conducting large-scale in-stream flow incremental methodology/physical habitat simulation system (IFIM/PHABSIM) studies to determine in-stream flow needs for fisheries.

- Specific objectives of the Study are as follows:
 1. Determine if suitable locations in the UGRRW exist for aboveground water storage to be used for ecological and agricultural needs.
 2. Complete in-stream flow IFIM/PHABSIM studies on portions of Catherine Creek and the Upper Grande Ronde River that are likely to be identified as storage sites and have been identified by Oregon Department of Fish and Wildlife (ODFW) biologists as priority habitats to complete these in stream flow studies.



Tasks/Timeline

Task 1. Technical Feasibility Assessment (February 2022-April 2022). Identify all potential storage sites.

Task 2. Social/Legal Feasibility Assessment (April 2022-June 2022). Place all sites in a spreadsheet and rule out those that are not feasible based on associated scoring criteria.

Task 3. Select up to Four Target Sites (June 2022). Review feasible locations and select up to four target sites for further analysis based on those that score most highly in the social/legal feasibility assessment.

Task 4. Complete IFIM/PHABSIM Studies on Catherine Creek and the Upper Grande Ronde River (ongoing). Conduct IFIM/PHABSIM studies on Catherine Creek and/or the Upper Grande Ronde River to address in-stream demand data gaps and identify peak, flushing, and bypass flows. The OWEB grant expires June 30, 2024, with the progress report due March 30, 2023.

Task 5. Environmental Feasibility Assessment (June 2022-August 2022). Determine whether the top four locations are feasible based on alternative means of water supply being available, ecological flows being supported (task four data to be used), analysis of environmental impacts, and evaluation of the need and ability to augment in-stream flows.

Task 6 (August 2022-June 2023). Next Steps for Selected Sites. Prepare a Feasibility Study report and Oregon Watershed Enhancement Board (OWEB) Strategic Action Plan with details on whether to pursue funding for implementation and design on any of the sites. The OWRD grant expires June 30, 2023.



Task 1. Technical Feasibility Assessment

- To identify all potential storage sites, LiDAR data, contour maps, and aerial photos of the UGRRW were obtained and overlaid with several GIS layers including wetlands/waterbodies, fish distribution, effective 100-year floodplain, 20-foot contours, and water availability.
- Geographic reviews were conducted by biologists and engineers. Polygons of all potential storage sites were created in ArcGIS.
- Existing literature related to previous aboveground storage studies was also used to identify potential storage sites.
- Existing water storage locations were identified to determine if expansion is possible.
- Storage and earthwork volumes were calculated at each location using ArcGIS and Microsoft excel.
- Natural storage sites are being identified and reviewed – will require additional collaboration with the natural storage/habitat improvements group as a separate review process.



Review Web Map

URL for Web App:

<https://apai.maps.arcgis.com/apps/webappviewer/index.html?id=e6628f5f187d4b26ab17c4e4a5f64c87>

URL/QR Code for Survey:

<https://arcg.is/1r0G48>

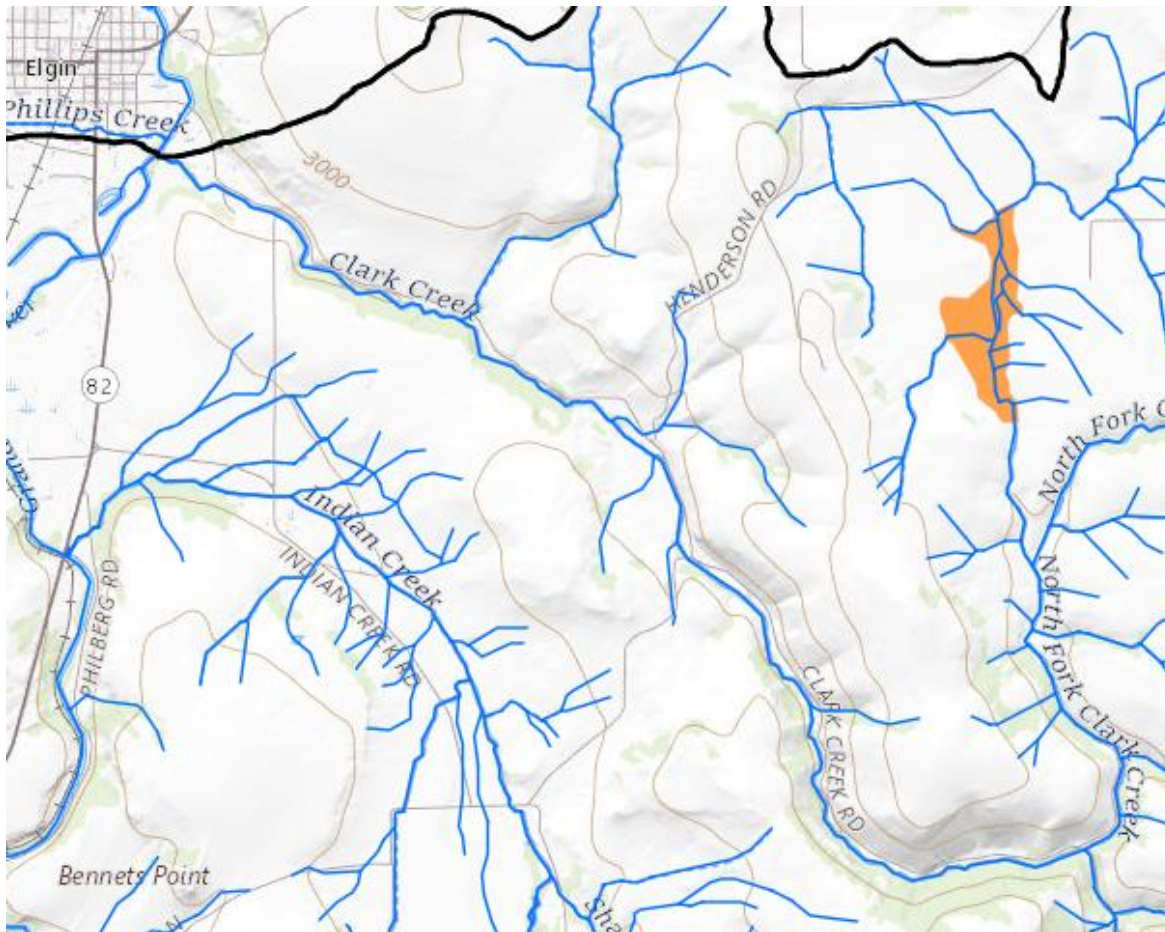




Examples of potentially feasible sites



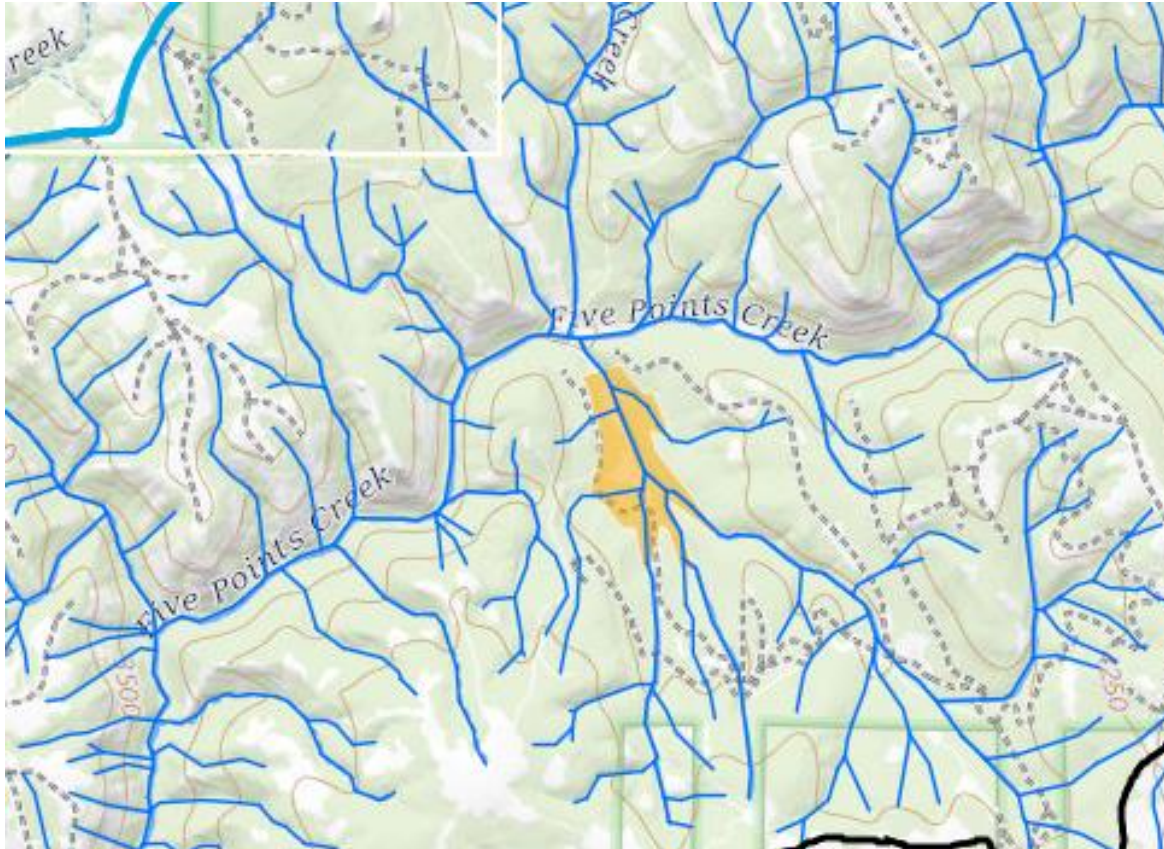
North Fork Clark Creek



- **1000 AF**
- **Off Channel**
- **Small amount of earthwork (30 ft high dam)**
- **Can pull water from North Fork Clark Creek**
- **Low capital cost**
- **Would release to Clark Creek, and go to Elgin (upstream users would not benefit)**



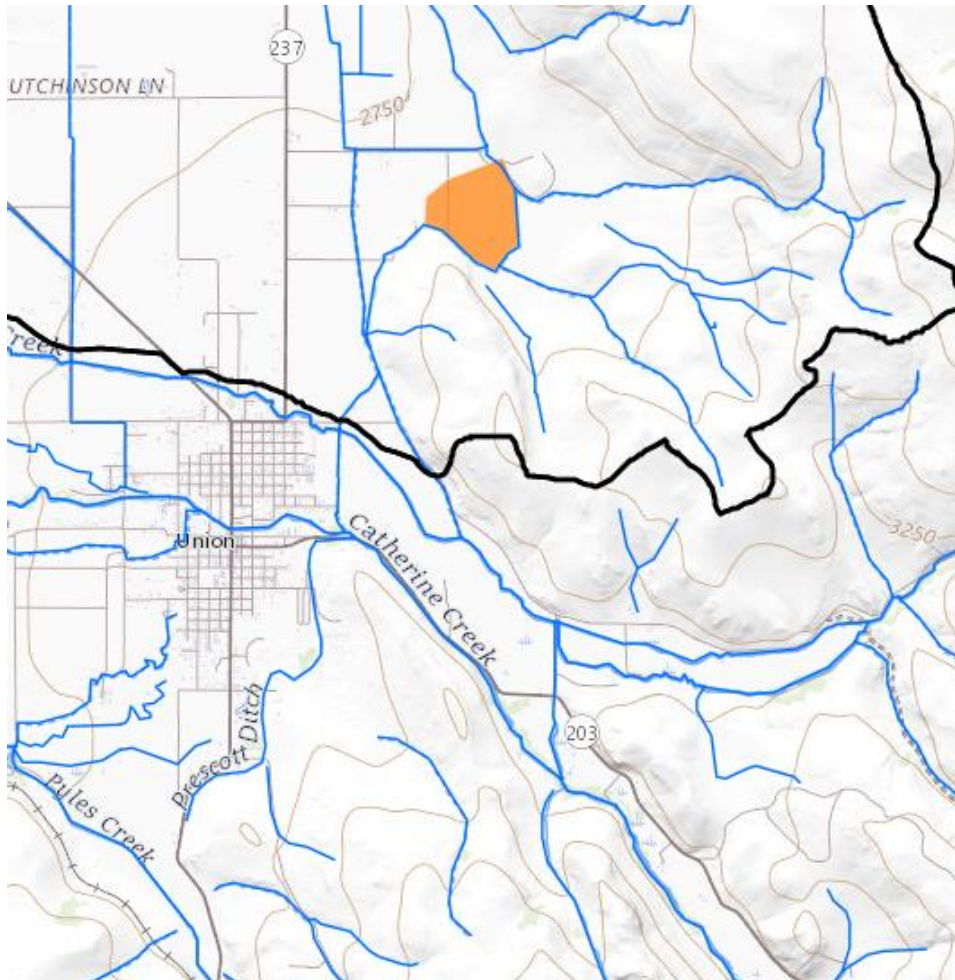
Five Points Creek



- **Off Channel**
- **1000 AF (7 CFS of water for 3 months, 300 acres for irrigation)**
- **Can pull water from Five Points Creek**
- **Benefit flood control and late season water (lower valley irrigation)**



Catherine Creek Highline Canal

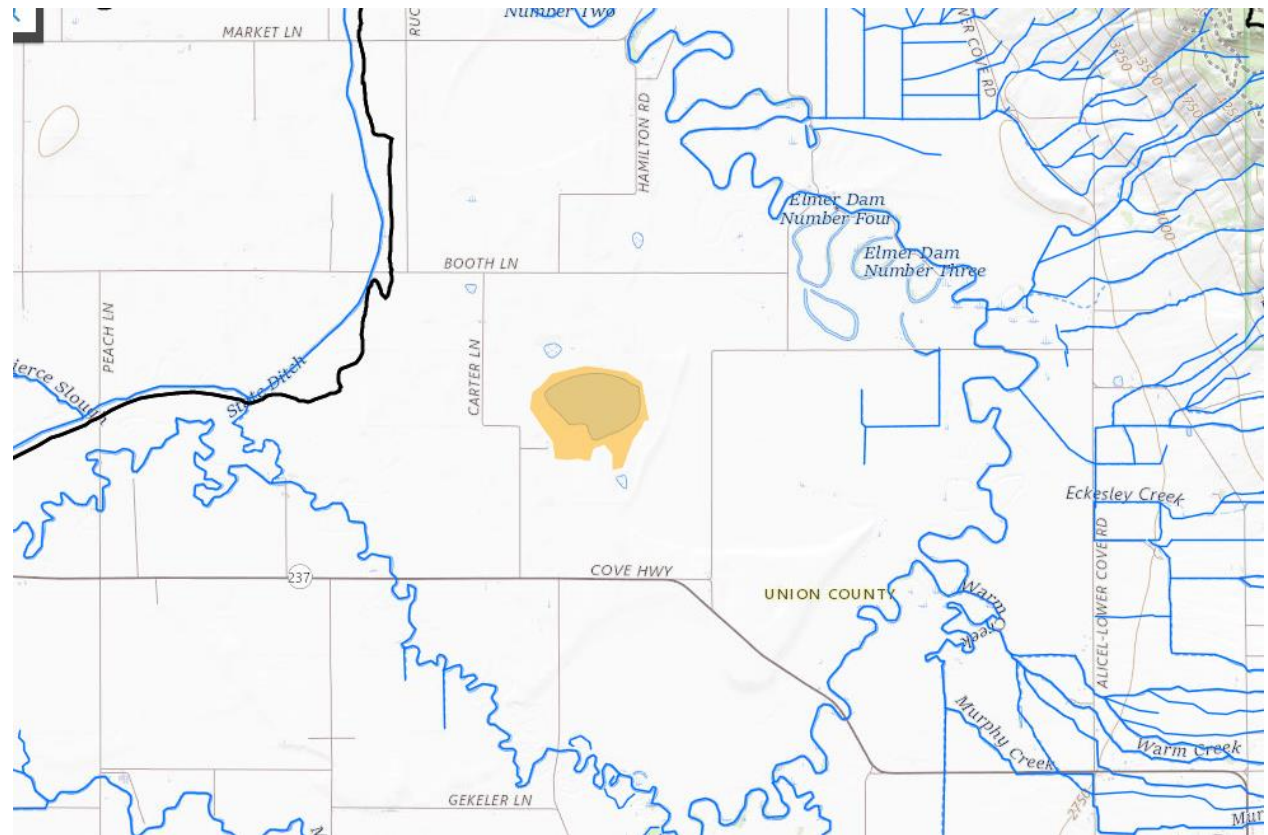


- **Off Channel**
- **Fill 2-foot-high dike**



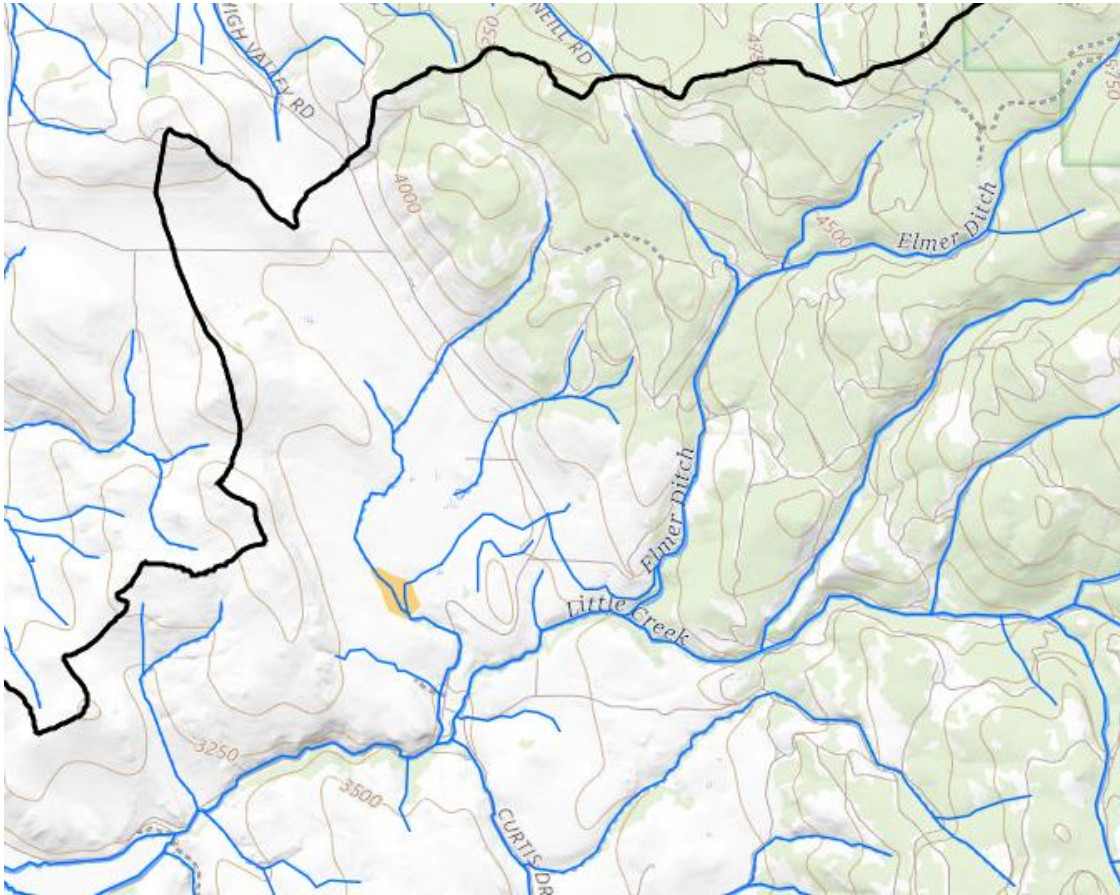
Conley Reservoir

- Divert additional water from Catherine Creek.
- Owned and maintained by the Oregon Department of Fish and Wildlife as wildlife habitat.
- Dries up every year.





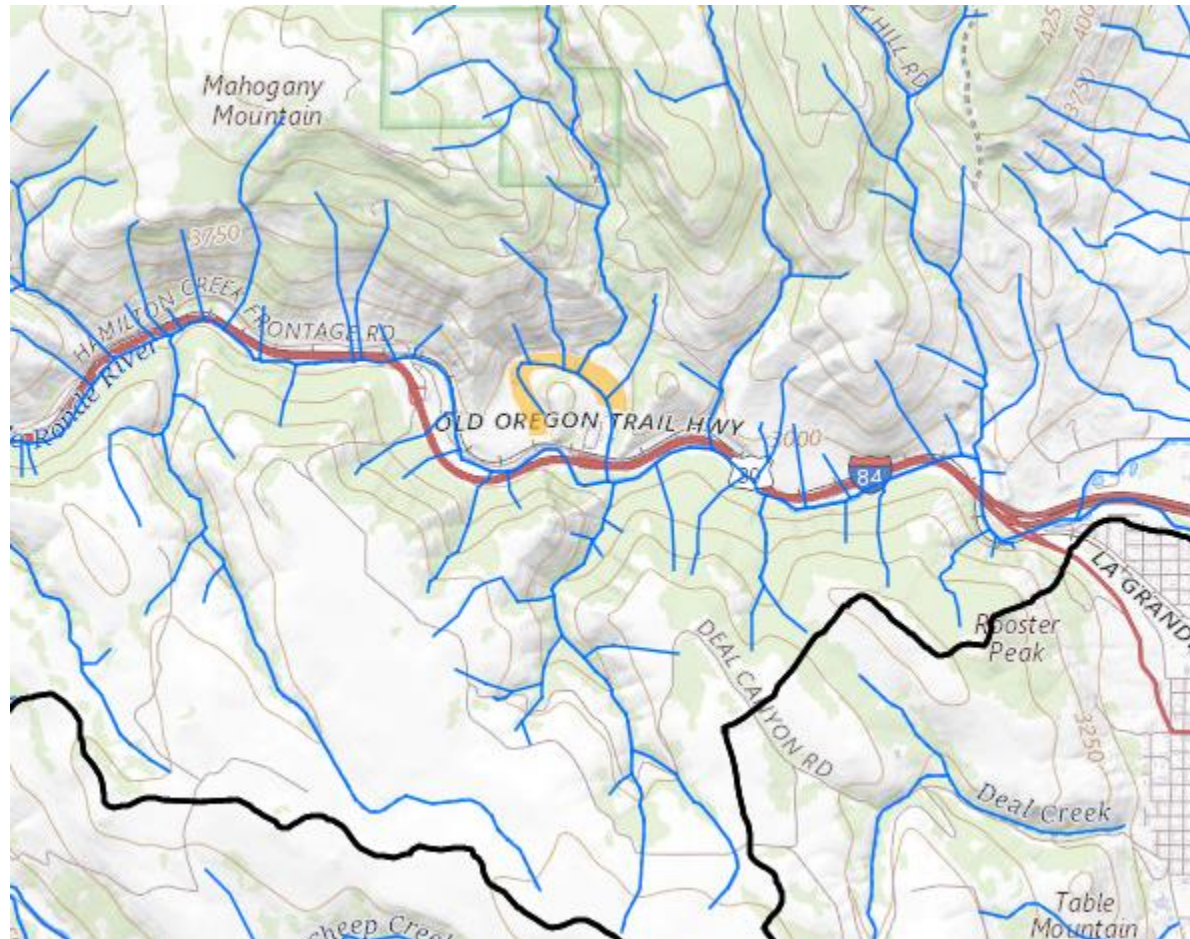
Little Creek



- **Off Channel**
- **Can pull water from little creek**



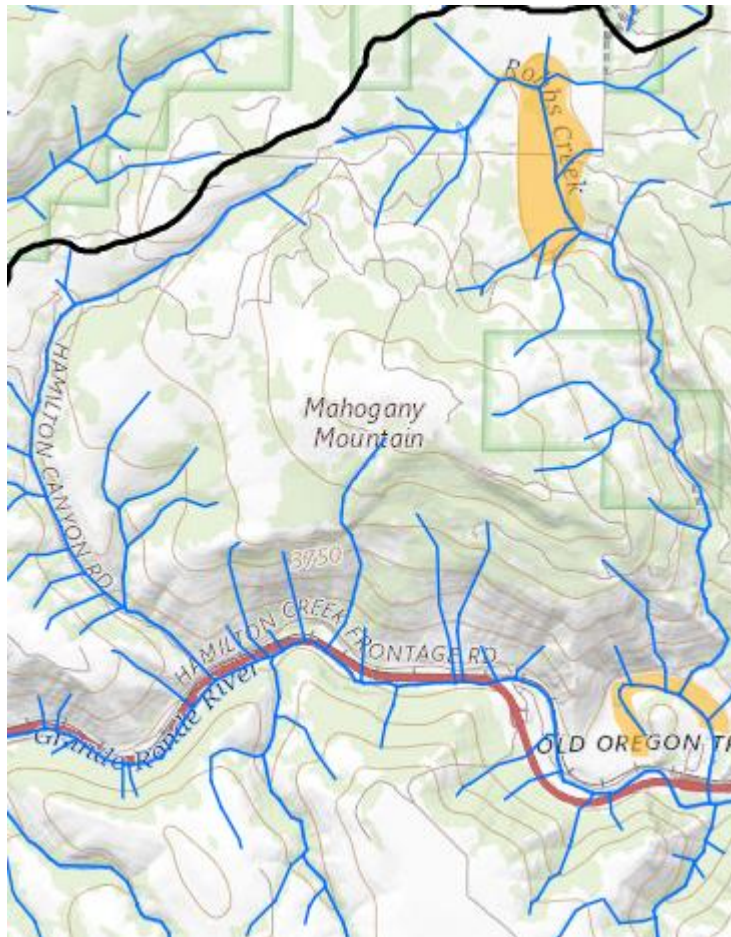
Lower Perry



- **Off channel**
- **Collect water from Robbs Creek or from the Grande Ronde River**



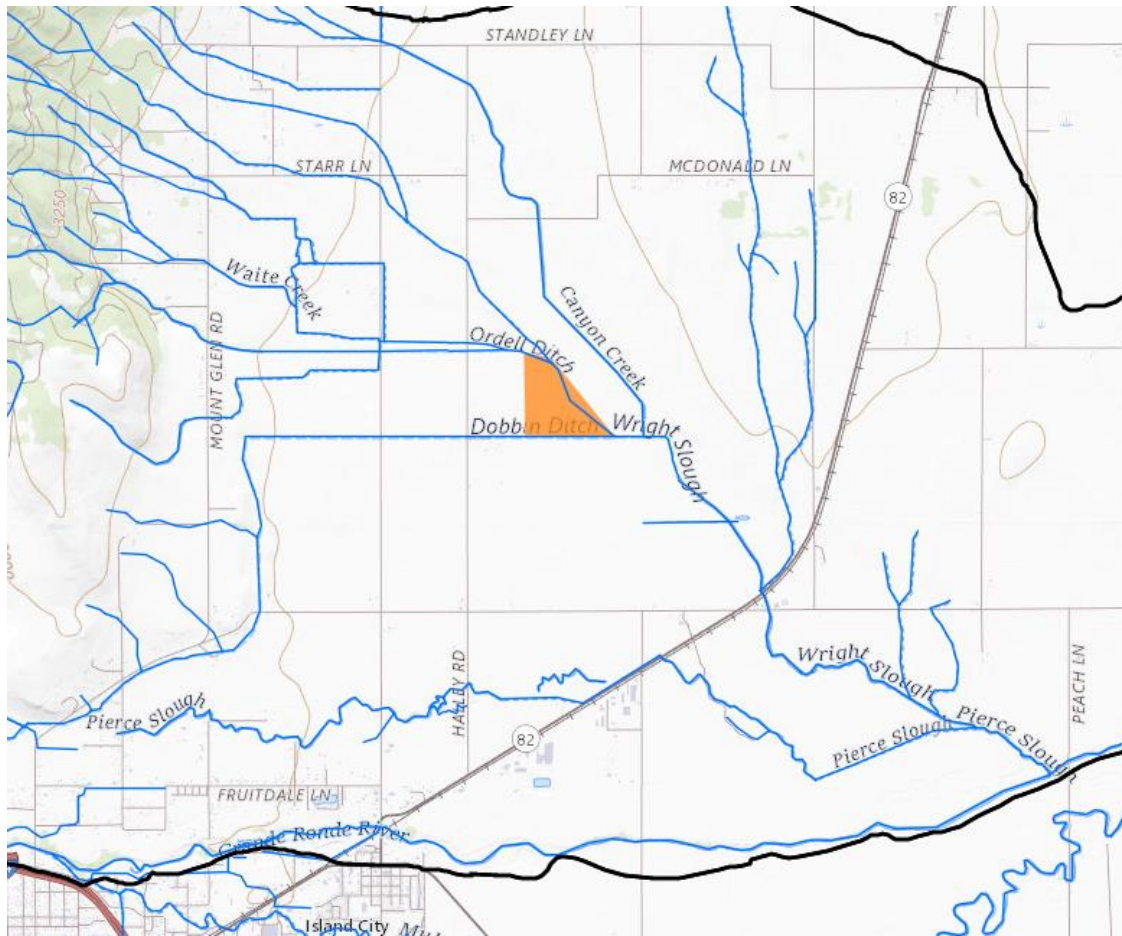
Robbs Creek



- **Off Channel**
- **Small drainage**
- **No easily accessible adjacent water**



Dobbin Ditch

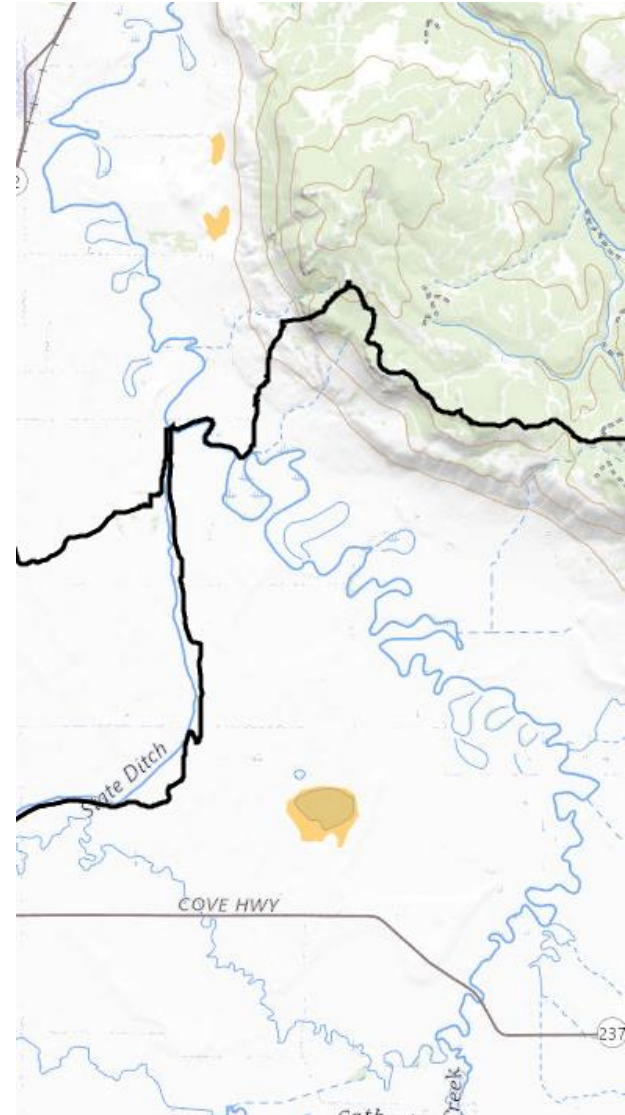


- **Off Channel**
- **Constructed pond for flood control**



Oxbows

- **Off channel**
- **The existing Elmer oxbows 1 through 4 are currently permitted.**
- **Permit additional oxbows.**





Task 2. Social/Legal Feasibility Assessment

200 potential sites were identified and placed into a spreadsheet. those that are not feasible based on associated scoring criteria will be ruled out.

Name	Description	Stream Name	App/Permit/Cert	On/Off Channel	Potential Storage Capacity (ac-ft)	Estimated Earthwork (CY)	Storage Volume (ac-ft)	GIS Acres	Storage Type	AP Comments	CY/ac-ft	Cost per ac-ft
Site_1						40326	131	12.57668776	Above Ground Storage		211	4220
Site_10						40312	176	16.04192702	Above Ground Storage		229	4580
Site_100						883257	5174	107.9808511	Above Ground Storage		171	3420
Site_101						314449	670	21.1317806	Above Ground Storage		469	9380
Site_102						360801	1001	28.75428506	Above Ground Storage		360	7200
Site_103						838247	2496	90.10990878	Above Ground Storage		336	6720
Site_104						786218	1945	67.57632634	Above Ground Storage		404	8080
Site_105						893717	5032	129.4556391	Above Ground Storage		178	3560
Site_106						3119698	3974	75.55673168	Above Ground Storage		785	15700
Site_107						1613211	5293	133.9580319	Above Ground Storage		305	6100
Site_108						1432216	3253	79.63094601	Above Ground Storage		440	8800
Site_109						2661089	10760	290.6401554	Above Ground Storage		247	4940
Site_11						155749	438	24.86668795	Above Ground Storage		356	7120
Site_110						261867	598	37.73392387	Above Ground Storage		438	8760
Site_111						609067	1476	122.4035475	Above Ground Storage		413	8260
Site_112						385547	634	57.77700726	Above Ground Storage		577	11540
Site_113						62386	118	10.85392267	Above Ground Storage		529	10580
Site_117									Above Ground Storage	New off channel		
Site_118									Above Ground Storage	New Off channel		
Site_119									Above Ground Storage	Off Channel		
Site_120									Above Ground Storage	Off Channel		
Site_121									Above Ground Storage	On Channel		
Site_122									Above Ground Storage	New On Channel		
Site_123									Above Ground Storage	On Channel		
Site_124									Above Ground Storage	Off Channel		
Site_125									Above Ground Storage	Small off channel		
Site_126									Above Ground Storage			
Site_127									Above Ground Storage	Off Channel		
Site_128									Above Ground Storage	Off Channel. Can water from adjacent streams		
Site_129									Above Ground Storage	Off Channel		
Site_13						562253	2366	74.69845354	Above Ground Storage		238	4760
Site_130									Above Ground Storage	Off Channel		
Site_131									Above Ground Storage			
Site_132									Above Ground Storage			
Site_14						246899	444	16.4237894	Above Ground Storage		556	11120
Site_15						509141	595	16.82803742	Above Ground Storage		856	17120
Site_16						612611	474	10.44111275	Above Ground Storage		1232	25840
Site_17						601044	2524	77.35952434	Above Ground Storage		238	4760
Site_18						816323	4893	118.7715384	Above Ground Storage		167	3340
Site_19						1231440	11159	312.686571	Above Ground Storage		110	2200
Site_2						340190	352	7.838359976	Above Ground Storage		966	19320
Site_20						455096	2182	72.30982239	Above Ground Storage		209	4180
Site_21						626377	658	20.43185499	Above Ground Storage		952	19040
Site_22						577267	1929	58.79616696	Above Ground Storage		299	5980
Site_23						200433	629	31.58325763	Above Ground Storage		319	6380
Site_24						1241388	4741	106.178295	Above Ground Storage		262	5240
Site_25						282179	786	25.11761939	Above Ground Storage		359	7180
Site_26						334754	11727	282.751577	Above Ground Storage		29	580
Site_27						279188	4691	162.7292563	Above Ground Storage		60	1200
Site_29						292431	1530	46.91694665	Above Ground Storage		191	3820
Site_3						31272	62	4.25965474	Above Ground Storage		504	10080
Site_30						240903	1367	55.38450284	Above Ground Storage		176	3520
Site_31						139076	1573	68.40943063	Above Ground Storage		88	1760



Preliminary items to consider for the social/legal feasibility assessment

- **Capital and O&M costs**
- **Storage capacity**
- **Months of water availability**
- **Impacts on flows**
- **ESA impacts**
- **Environmental harm or impacts**
- **Landownership issues**
- **Public safety**
- **Fundability**
- **Permitting**



Next Steps

- A map of all potential storage sites will be provided to the group for feedback.
- Start social/technical feasibility review (sites will be narrowed down based on the cost/benefit analysis).
- In stream flow IFIM/PHABSIM study is in progress.



IV. Conclusion



- Next Quarterly Implementation Meeting: September 14 (4-6)
- Let me know if you need assistance setting up meetings etc