

Change Order 19 – Plastic Concrete, Water Supply, and Dust Control

December 2022



Powering our way of life

SUN MON TUE WED THU FRI SAT 1 2 3 4 5 6 7 8 9 10 11 12 13 14 15 16 17 18 19 20 21 22 23 24 25 26 27 28 29 30 31

12 13 14 15 16 17 10 19 20 21 22 23 24 25 26 27 28 29 30 31

Project Update

Project is slightly ahead of schedule.

Projected completion date:

December 19, 2023

Change Order Background

Plastic Concrete Mix Design Revisions \$2,055,888

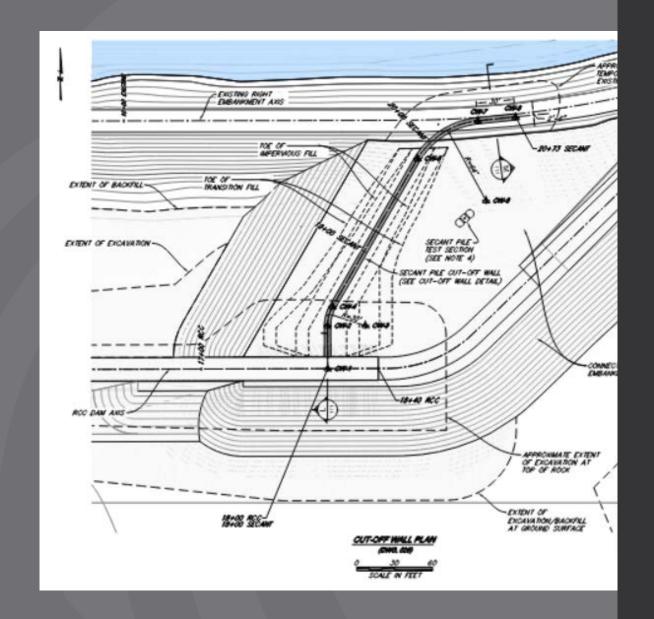
River Water Supply System \$158,778

Midway Substation Road Interim Repairs \$50,000

Additional Dust Control Efforts \$867,000

Plastic Concrete Revised Mix Design

- ➤ Mix design still being evaluated when bid package was finalized
- At that time mix without coarse aggregate was expected to meet design parameters
- Lab tests indicated that a mix without coarse aggregate would not provide sufficiently plastic material relative to design requirements
- ➤ Ultimately, a revised mix incorporating a coarse aggregate was developed to satisfy the design intent



Plastic Concrete Revised Mix Design

- ➤ Introduction of Coarse Aggregate was not considered by IMCO when sizing and selecting their secondary batch plant.
- ➤ Inclusion of a second aggregate changes the operation of the batch plant and requires equipment modifications.
 - Additional effort from loader to load two separate aggregates (loading hoppers 2x more often)
 - ➤ Upsizing pumps and piping
- ➤ Placement rate is expected to be reduced due to pumpability





Compressive Strength (psi)	River Water (TB8)	Potable Control (TB7)	Comment		
7-Day 70		70			
28-Day 133 (avg)		143 (avg)	Specified requirement of 100-300 psi		

River Water Supply System

- During development of the RCC water supply well, flowrates were approximately 88 gallons per minute (GPM). Permitted for up to 100 GPM (November – February) and 200 (GPM March – October)
 - This flowrate is adequate for RCC placement, however concurrent placement of RCC and Plastic Concrete is anticipated starting early 2023
- Least cost option is to modify existing surface water intake to supply water to the plastic concrete batch plant.
- Test results of the River Water indicate that water quality satisfies requirements for ASTM C 1602.
- Trial batches using river water demonstrated equivalent performance when compared to trial batches using well water.

River Water Supply System

- Concurrent placement of RCC and plastic concrete was not considered when installing the RCC water supply well.
 - Incorporated into the schedule during the negotiation process of Change Order 11.
- Permitted to withdraw approximately 322,330 gallons/day – more than enough to service both plastic concrete production and dust control.
- Installation of a larger/additional well would likely be more cost and time prohibitive due to permitting.
- Additional water storage was considered but quickly dismissed due to costs.



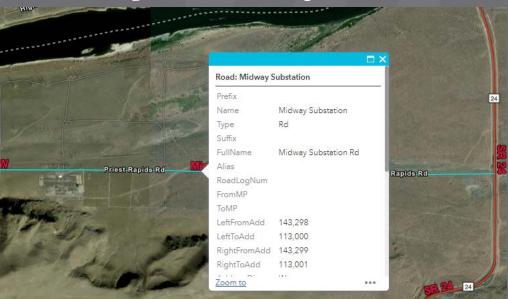
Photo 1. Well Testing Setup

Midway Substation Road Interim Repairs

- > Midway Substation Road is the first section of the Martinez Road which is the primary access route for mobilization activities and larger construction traffic.
- As part of the agreement with Department of Energy (DOE) to use the road the District is responsible for its maintenance, repair, and improvement.
- > Cold patching is a cost-effective interim repair method for filling large potholes.

> Allows roadway to remain in working order and keep the District in compliance with the

agreement with DOE.







Dust Control Efforts

Efforts employed to-date:

- Water trucks during the work shift
- Off-hours dust control crews (evenings and weekends)
- Sprinklers on stockpiles adjacent to Wanapum Indian Village
- Lignin ground treatment on roadway surfaces

Dust Control Efforts

Further efforts under consideration:

Dust Control Measure	Pros	Cons
Plastic Coverings on Stockpiles	 Covers and protects largest dust generating source No impacts to fill materials 	 Requires regular maintenance/adjustments/m anagement. May be damaged, or cause damage in high winds
Tackifier on Excavated Slopes	 No impacts to fill materials Passive approach – can remain in place as backfill takes place 	 Upstream slope cannot be treated for Dam Safety (visual inspections). Unknown useful life
Lignin on Stockpiles and Excavated Slopes	• Proven to be an effective dust control method	 May impact revegetation efforts and plant survival Upstream slope cannot be treated for Dam Safety

Recommendation

Proceeding with CO19 is in the best interest of the District and the Wanapum. The revised plastic concrete mix will produce a more robust and reliable Secant Pile Wall, while added dust control efforts will keep the project in compliance with the MOA.

Approval is recommended.





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Grant PUD Commission Meeting December 13, 2022

Operate Responsibly by Attaining Environmental, Cultural Resource and Regulatory Compliance



Powering our way of life

Purpose & Goal

The Fish and Wildlife Business Unit uses technology, innovation, strategic thinking, good stakeholder relations and skilled negotiations to ensure we are achieving compliance with our Natural Resources regulatory requirements in a safe, cost efficient and biologically sound manner while helping to maintain the long-term financial health of the District.



2022 Safety Culture

- **❖** No Recordable Incidents;
- **❖** Job Site Briefs = 234 (Through November 2022)
- **❖** Job Site Reviews = 92 (Currently at ~39%)
 - **☐** Goals = 10%; Stretch Goal = 15-20%
- **❖** Safety Meeting Attendance (2021) = 100%
- **❖** Training Status Completion Rate Jan Present = 99%





Project Phase

Planning

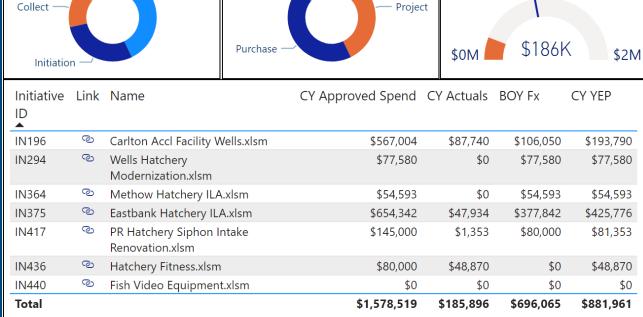
Collect

EB42 - F&W MBR Year-to-Date Oct, 2022

Initiative ID	Name	CY Scope	CY	' Schedule	CY Price	CY Variance	TP Scope	TP Schedule	TP Price	TP Variance
IN196	Carlton Accl Facility Wells.xlsm	\circ	\$0 🔷	(\$373,214)	\$0 🔷	(\$373,214)	\$0 🔷	\$370,447	\$0 <	\$370,447
IN294	Wells Hatchery Modernization.xlsm		\$0 🔘	\$0	\$0 (\$0	(\$128,264)	\$0 (\$0 <	(\$128,264)
IN364	Methow Hatchery ILA.xlsm		\$0 🔘	\$0	\$0 (\$0	(\$110,536)	\$0 (\$0 <	(\$110,536)
IN375	Eastbank Hatchery ILA.xlsm		\$0	\$0	\$0 🔷	(\$228,566)	\$0 (\$0 (\$0 <	(\$228,566)
IN417	PR Hatchery Siphon Intake Renovation.xlsm		\$0	\$0	\$0 🛕	(\$63,647)	\$0 (\$0 🔷	\$5,171,353	\$5,171,353
IN436	Hatchery Fitness.xlsm		\$0	\$0	\$0	(\$31,130)	\$0 (\$0 (\$0 <	\$663,870
IN440	Fish Video Equipment.xlsm	\bigcirc	\$0 🔘	\$0	\$0 (\$0 (\$0 (\$0 (\$0	\$80,000
Total			\$0	(\$373,214)	\$0	(\$696,558)	(\$238,800)	\$370,447	\$5,171,353	\$5,818,304

YTD Actuals

\$696.1K



Project Type

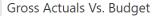
Fitness

Execution

	East bank Hatchery Capital Improvement Projects	Project Status – November 17, 2022
	Reuse Building Rehab	Construction will not be started in 2022
1	Pump Building Rehab	Project under construction but will roll into 2023
	Avian Predation Prevention Upgrades	Project work complete/all to be billed in 2022
		Project work complete/all to be billed in 2022
	SG32 & SG33 Replacement	
		Project work complete/all to be billed in 2022
	Trap Safety Improvements	
		Project work complete/all to be billed in 2022
	Safety Improvements	







\$9.3M -21.9%



Capital Labor Actuals Vs. Budget

\$14.0K +694.7%



Net Actuals Vs. Budget

\$9.3M -22.0%



Budget vs Actuals (Including Cap Labor)

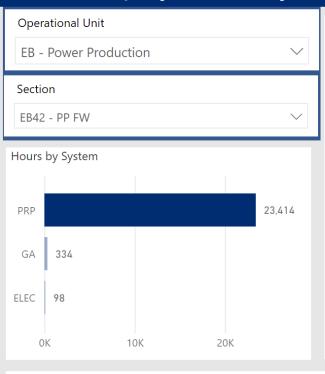
Cost Category Type/Cost Category	Budgeted	Actuals	Budget Var	Budget Var %	Consumed %
Purchased Services	\$7,767,957	\$5,606,366	-\$2,161,591	-27.8%	72.2%
⊕ G&A	\$2,463,601	\$2,306,168	-\$157,433	-6.4%	93.6%
□ Labor	\$1,270,713	\$1,276,592	\$5,879	0.5%	100.5%
Salaries & Wages	\$1,234,216	\$1,229,899	-\$4,317	-0.3%	99.7%
Other Labor	\$31,697	\$14,925	-\$16,772	-52.9%	47.1%
Overtime	\$4,800	\$31,768	\$26,968	561.8%	661.8%
⊕ Operating Materials & Equipment	\$392,408	\$91,689	-\$300,719	-76.6%	23.4%
⊕ Utilities	\$36,915	\$31,561	-\$5,354	-14.5%	85.5%
⊕ IT		\$2,433			
		\$3,153			
Total	\$11,931,594	\$9,317,962	-\$2,613,632	-21.9%	78.1%

Budget vs Actuals (including Cap Labor)

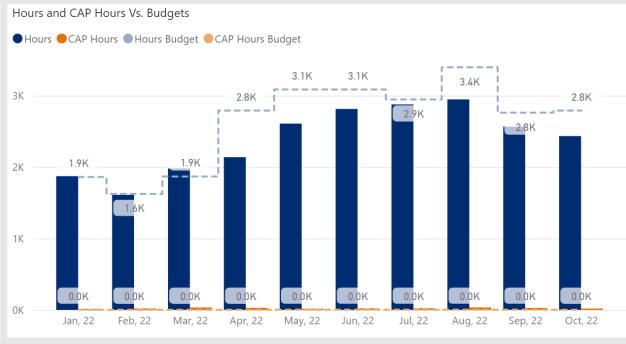
Currently underspent by ~22%. Majority of underspending is occurring within the purchased services category Reasons for underspending included the following:

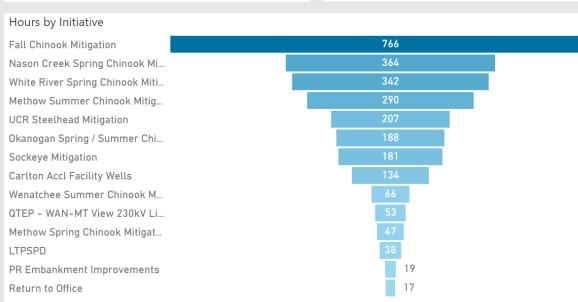
- ✓ Invoicing (e.g., late invoicing or majority of work occurs in Q4).
- GPUD developed budgets are based on contractor provided estimates (e.g., DPUD, CPUD and WDFW).
- ✓ Monthly spenddowns do not match up when invoices are expected to be received.
- ✓ Contingencies (that may not be apparent) built into provided contractor budgets.
- Capital Labor is a subset of the Labor above
- Net Actuals vs Budget = Gross Actuals minus Capital Labor

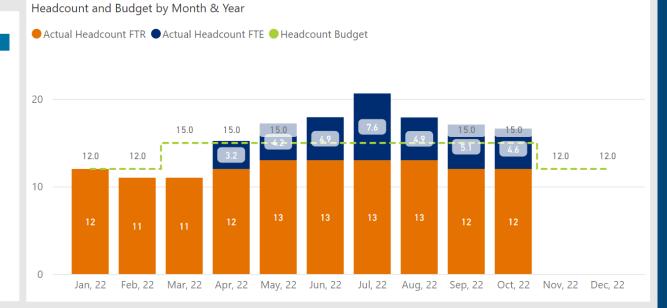
The Grant | Employee Activity











Carlton Acclimation Facility

Methow River migrating away from existing water intake structure. During extremely cold snaps typically in late February/early March the facility can be left with no to very little river water for fish acclimation. Channel migration away from the intake structure continues to occur.

Alternatives Analysis Completed (2018-2019)

- ✓ Five different alternatives evaluated.
- ✓ Alternative selected Install additional Production & Domestic wells.

Current Status

- ✓ Phase 1: (Well drilling)
 - Contract in place Irrigation Technology and Control, Inc.
 - Contract Cost per bid = \$864,030.
 - Tentative mobilize plan 11/28/22-12/2/22.
- ✓ Phase 2: (Construction connecting wells to building)
 - On Hold





Priest Rapids Hatchery Siphon Intake

❖ A 2017 NOAA-Fisheries Biological Opinion for Priest Rapids Hatchery Program requires Grant PUD upgrade the Priest Rapids Siphon Intake by 2026. The siphon intake does not currently meet specific fish screening criteria.

Project Scope

- ✓ Replace existing traveling screen with dual traveling screens.
- ✓ Update electrical power feed to the Siphon.
- ✓ Update vacuum pump system that initiates and preserves the Siphon.
- **❖** Estimated Completed Project Cost = \$5.3 million.
- Current Project Schedule.
 - ✓ Initiation: August 2022- March 2023 ✓ Planning: April 2023 June 2026

 - ✓ Project Work Window July-August 2026
 - ✓ Projected Completion Date December 2026
- Current Status.
 - ✓ Staff completing internal project intake information
 - ✓ Approved Spending to Date = \$325K



Video Fish Count Program

- ❖ Grant PUD is required to maintain the video adult fish counting equipment at both developments in good condition and provide reliable fish count information.
- ❖ In 2021 (and again in 2022) large discrepancies in fish counts between Priest Rapids, Wanapum and Rock Island Dams have been observed.
- ❖ This information is important as it sets escapement estimates for the Upper Columbia River Basin (e.g., broodstock collections, selective fisheries, etc.).
- ❖ WDFW sent a letter, recognizing activities to date to improve the VFC system, however encouraged Grant PUD to make the necessary improvements for reliable and timely fish counts in 2023.

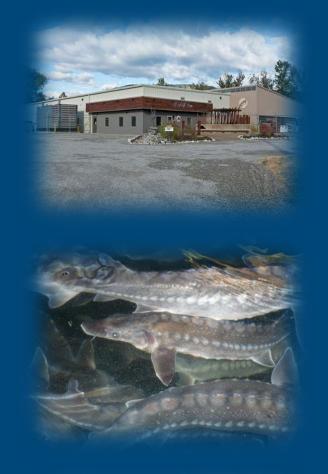
Critical Needs

- ✓ Upgrade servers/equipment/software/switching.
- ✓ Automation improvements.
- ✓ Determine reasons for fish count discrepancies.
- ✓ Determine who counts fish (internal; vs. external).



2022 Successes

- Compliance reports submitted on time.
- **❖ 10-year comprehensive Hatchery M&E report completed (Grant PUD sections).**
- **❖** 10-year Hatchery recalculation completed (next recalculation 2033).
- **Substantial progress on invoice submittals from Colville Confederated Tribe.**
- Carlton Acclimation Facility production and domestic well project contracted.
- Successful adult sturgeon broodstock collection effort.
- **❖** Successful transport of 2300 adult Pacific lamprey upstream of Priest Rapids Project.
- **❖** Implemented External Outreach/Communication Plan.





2023+ Business Unit Activities

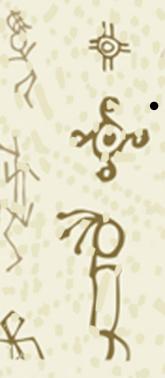
- **External & Internal stakeholder relationships.**
- **❖** Achieving compliance, stewardship, and budget requirements.
- Asset Management for Hatchery facilitates.
- Succession Planning & Employee Retention.
- Sockeye Statement of Agreement.
- Summer subyearling Chinook behavior & survival.
- **❖** White River Spring Chinook supplementation program (2026).
- Avian predation.
- Juvenile salmonid survival.
- **❖** Performance standard evaluations (2025-2027).





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Department Purpose and Goal

The Cultural Resources Department is tasked with ensuring compliance with FERC regulatory requirements related to cultural resources. These include historic and prehistoric sites and Traditional Cultural Places important to the Wanapum, Yakama and CCT people. A secondary goal is to help foster the relationship between the District and the Wanapum, all in alignment with Grant PUD's safety, financial, and compliance goals.







Q2 Business Review

- Regulatory Compliance
 Safety Metrics
 - Compliance Violations = 0
 - NCRRP Reviews = 17
 - FERC orders/notices = 0
 - Summary/Listing of filings=0

- Incidents = 1; Cracked windshield
- Close calls = 0
- JSRs = 36
- Safety meeting attendance = 94%







Q3/4 Business Activities

Compliance: Archaeology/River Patrol

- PRREIP Archaeological Monitoring, Village Safety Monitoring and assistance and Interface TCP monitoring is ongoing
- •We received an ARPA permit from BLM early this year which allowed us to wrap up annual fieldwork ahead of schedule
- Reporting for 2022 Archaeological monitoring of NR eligible sites
- Renewed on-call contracts
- 3rd quarter CRWG meeting was December 8. Agenda items included continued discussions related to mitigation of archaeological site effects across the project.







Q3/4 Business forecast

Compliance: Wanapum Interface/Traditional Program

- NWA contract is ending. Changing with a view to eventually bringing this in house
- Archiving sensitive data to move new Wanapum liaison into former liaison office
- Royal slope solar project TCP analysis
- YTC fire department opening
- One additional reactor has been cocooned at Hanford site





Q3/4 Business Activities

Traditional Program: Wanapum Heritage Center:

- Wanapum Heritage Center is open to general public Thursday through Monday. Tuesdays and Wednesdays are dedicated to local school Districts based on feedback from adult visitors.
- We sponsored the 1st archaeology days in 3 years.
- We've started the process to replace the WNADU, we're working with Wanapum on slight design modifications, but it will remain largely unchanged.
- New, incoming collections from Charles Nelson, Ankeny collection and David Rice collections



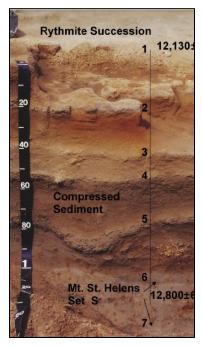


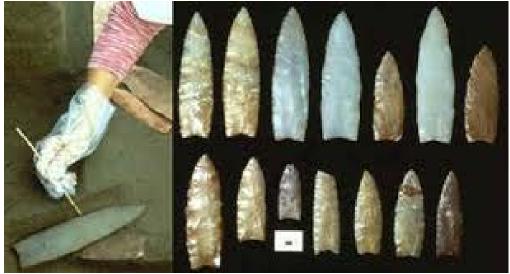


Q3/4 Business Review

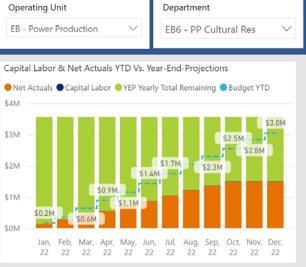
Major Projects: Archaeology

- Right Bank project isolates identified outside the project Area of Potential Effect. Work stoppages unnecessary.
- QTEP planning continues; Clearance surveys will take place as soon as land access issues are complete.





हिन्म | Budget Versus Actuals





Net Actuals Vs. Budget	
\$1.5M -40.0%	

Budget vs Actuals	(Including	Cap Labor)	
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Cost Category Type/Cost Category	Budgeted	Actuals	Budget Var	Budget Var %	Consumed %
□ Labor	\$1,443,437	\$1,177,291	-\$266,145	-18.4%	81.6%
Salaries & Wages	\$1,406,879	\$1,148,808	-\$258,070	-18.3%	81.7%
Overtime	\$20,471	\$12,678	-\$7,793	-38.1%	61.9%
Other Labor	\$16,087	\$15,805	-\$282	-1.8%	98.2%
Purchased Services	\$767,430	\$236,266	-\$531,164	-69.2%	30.8%
⊕ G&A	\$293,666	\$26,920	-\$266,746	-90.8%	9.2%
Operating Materials & Equipment	\$44,330	\$48,154	\$3,824	8.6%	108.6%
⊕ IT		\$16,444			
⊞ Transportation		\$133			
Total	\$2,548,863	\$1,505,209	-\$1,043,654	-40.9%	59.1%

- Capital Labor is a subset of the Labor above

- Net Actuals vs Budget = Gross Actuals minus Capital Labor





2022 Q3/4 Forecast Use of Allocated Resources



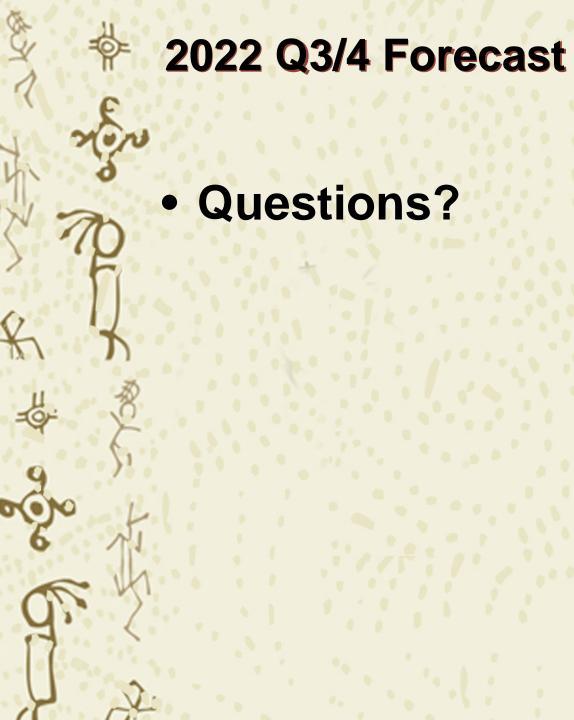
Staffing -

 Internal staff will be moving around a bit in order to support our TCP compliance. Changes are yet to be finalized.

Services -

TCP section will be brought in-house.
 Together with the language program this will help coordinate and streamline the Traditional programs.





Community Engagement Activity Report

Commission Presentation Dec 7, 2022

Chuck Allen, *Supervisor, Public Affairs*Annette Lovitt, *Community Engagement, Public Affairs*



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Agenda

Community Outreach

- Festivals, Fairs and Fun
- Rich's introductions
- Pay it Forward

Educational Outreach

- NCESD
- Tours
- Riverfest

Marketing Messages

- Fiber
- Social Media

Big 3 in 2023

External Affairs Goal

External Affairs and Communications Structure & Personnel



Chuck Allen Senior Manager



Cindy McClure Administrative Assistant

Public Affairs



Christine
Pratt
Public Information
Officer



Annette
Lovitt
Community
Engagement





Raquel Urbina Communication Specialist

Government/ Regulatory Affairs



Ryan Holterhoff Senior Policy Analyst

Policy Management



Jessie Allemand Policy Administrator

Records Management



Beverly
Peterson
Records
Officer



Michelle Clark Records Officer



Angie Albertson Records Compliance Specialist

Community Outreach We're BACK!

Fairs, Festivals and Fun

Grand Coulee

Colorama

Coulee City

Coulee City Roundup

Soap Lake

Ephrata

Sage 'n Sun Car Show

Halloween

Bells on Basin

Quincy

"B" Street Block Party
Farmer Consumer Awareness Day
2nd Harvest Food Event



George

Fourth of July festival

Mattawa

Halloween Trunk or Treat

Royal City

Moses Lake

Ag Parade

ML Chamber of Commerce

City of Moses Lake

Economic Development

Warden

2nd Harvest Food Event

Fair Time!















Introducing...

Rich Wallen!

- Moses Lake Rotary
- Quincy Rotary
- Moses Lake City Council
- Grant County All-Ports

Moses Lake

Quincy

Mattawa

Warden

Ephrata

Royal Slope

Moses Lake Economic
 Development Coordinating
 Committee

















Pay it Forward

George Elementary – Bites2Go

Warden - Bites2Go

Cambridge Assisted Living Festival of Trees

More in 2023!



Educational outreach Stronger than ever

North Central Educational Service District



Classroom presence

- Electrical safety, conservation and hydrological cycle education
- Kindergarten through Fifth grade
- Contract through 2023



NCESD Computer Science Fair

- First Annual
- STEM
- Amanda Anthony, Don Lester, Francisco Shillander, Brandon Williams
- Panelists: Joshika Suresh and Shannon Kellam
- Incredible feedback





Tours









Tri-Cities Riverfest 2022

Sharing the hydropower message with our Northwest partners.



OUR RIVERS, OUR LIFE

SATURDAY, OCTOBER 8, 2022 10:00 AM to 3:00 PM COLUMBIA PARK, KENNEWICK, WA

A FUN AND FREE FAMILY EVENT!

- Learn Why Hydropower is Important
 Music & Entertainment
- · Hands-on Learning Experiences





























TIDEWATER





Marketing Messages Expanding our reach

Fiber Marketing

We have added 1,521 new fiber subscribers through September and have a take rate of near 70 percent.



Social Media









Hang up immediately and call Grant PUD at 509-766-2505.









04 2023 Looking so bright

Big 3 in 2023

External Affairs Big 3 Goal:

Create a marketing plan by March 31 targeting Grant County residents that will show a 20% increase in the number of campsites used in the Sand Hollow, Rocky Coulee, and the Jackson Creek recreation areas by end of Q4, 2024.

Overall benefit – Grant PUD customers are more aware of recreation amenities and opportunities that are a benefit of hydropower.



Sand Hollow Campground



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