Contract 330-11366

August 9, 2022

Zach Ruby – Chief Dam Safety Engineer

Grant PUD

Agenda

- Description
- Background
- Proposals
- Considerations
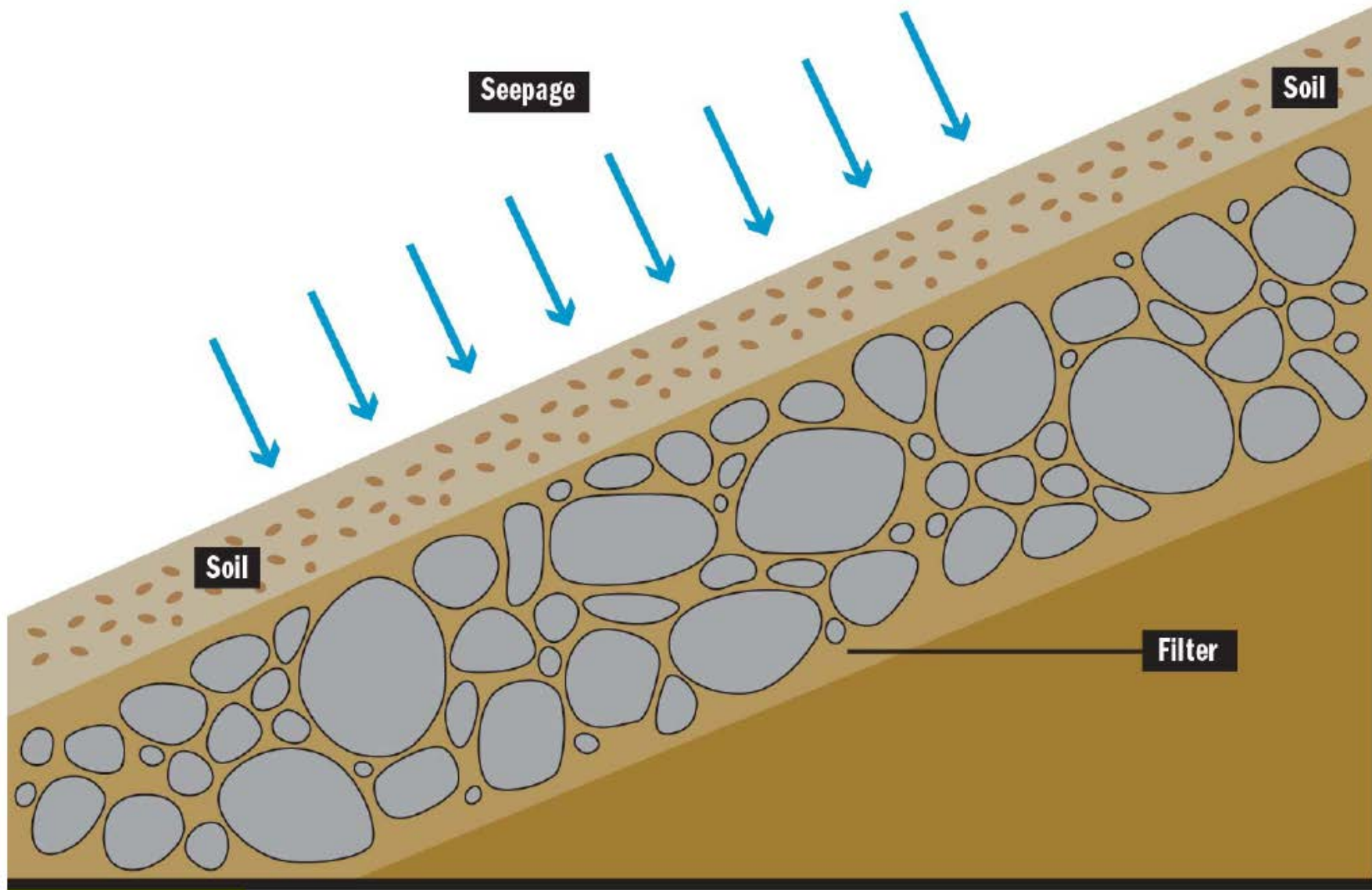- Questions

Description

Description

- Professional engineering services supporting the investigation, characterization, mitigation design, and construction support for potential internal erosion of the Wanapum Left Embankment
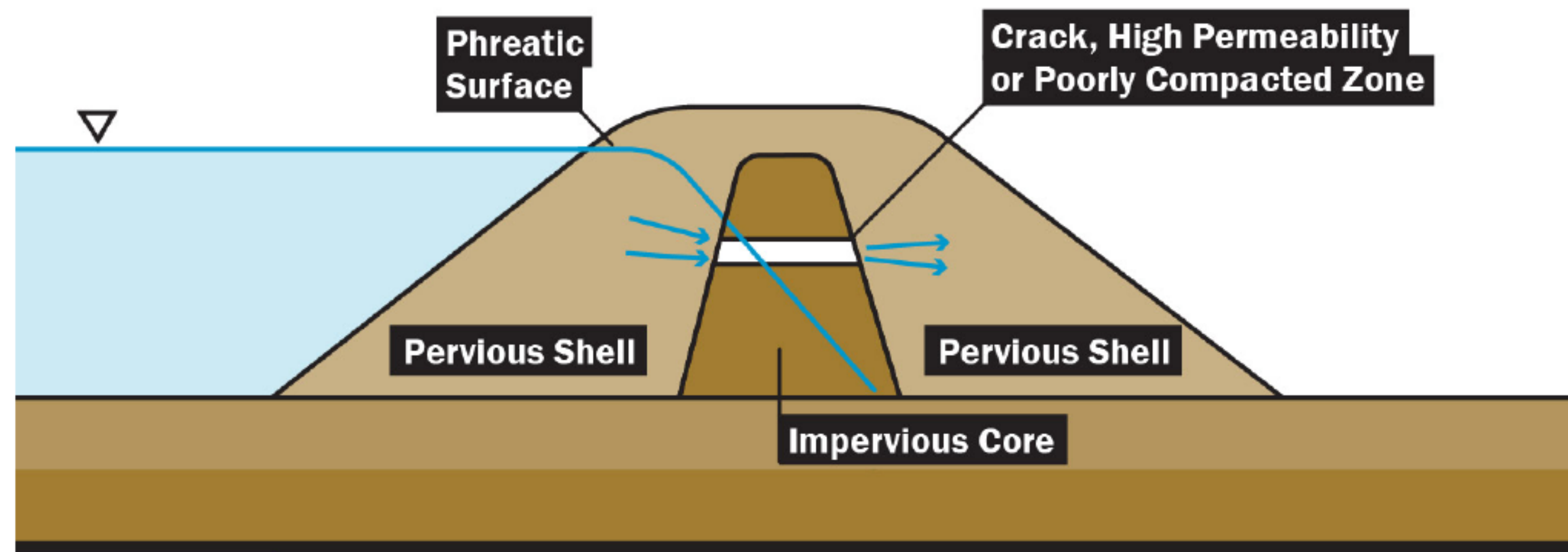
- 10-year duration

- Not-to-exceed value of $15,000,000

Background

$p = yH$

H

Shell

Core

$f(H)$

Foundation
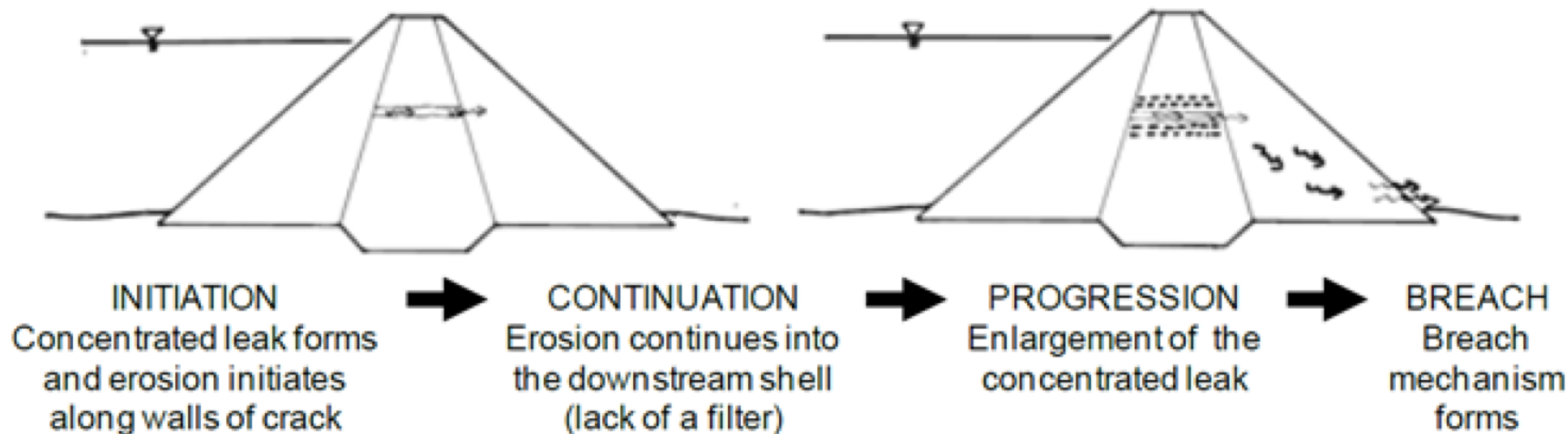
(a)

a

b

c

d

d

e

f

g

h

i

j

k
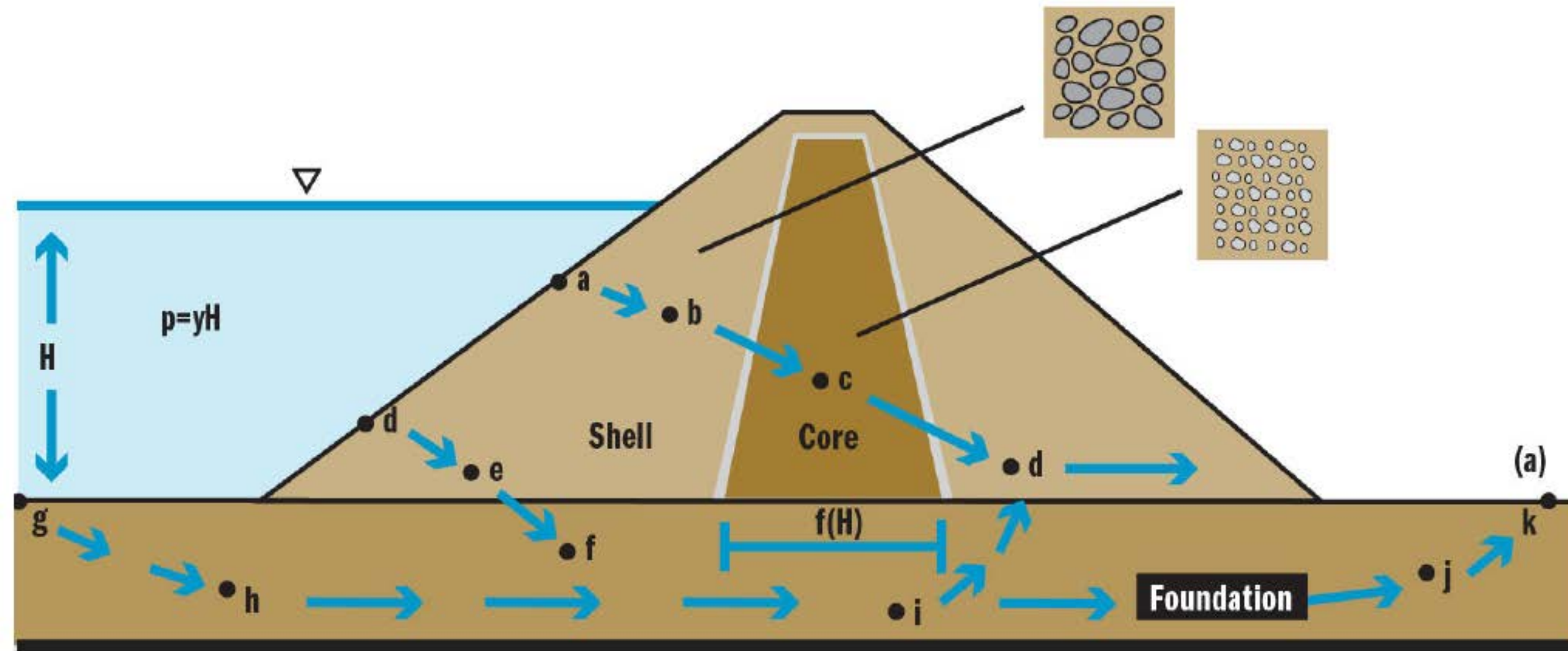
Figure 1-7. Filter used to prevent movement from base soil into a coarser soil.

Figure 1-53. Internal erosion through the embankment. Image from Reclamation (2015b).

INITIATION
Concentrated leak forms
and erosion initiates
along walls of crack

CONTINUATION
Erosion continues into
the downstream shell
(lack of a filter)

PROGRESSION
Enlargement of the
concentrated leak

BREACH
Breach
mechanism
forms

Figure 1-58. Internal erosion through an embankment initiated by concentrated leak. Image from Reclamation (2015).

INITIATION
Leakage exits on the
downstream side of core, and
backward erosion initiates

CONTINUATION
Erosion continues into
the downstream shell
(lack of a filter)

PROGRESSION
Backward erosion
progresses back
to the reservoir or
flood side

BREACH
Breach
mechanism
forms
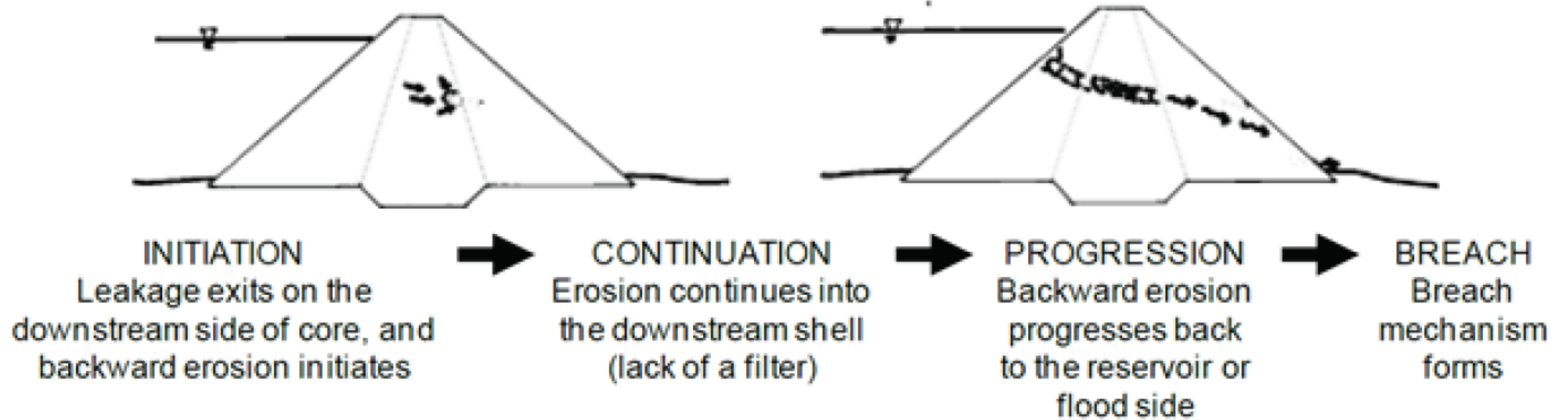
Figure 1-59. Internal erosion through an embankment initiated by backward erosion. Image adapted from Fell et al. (2008).
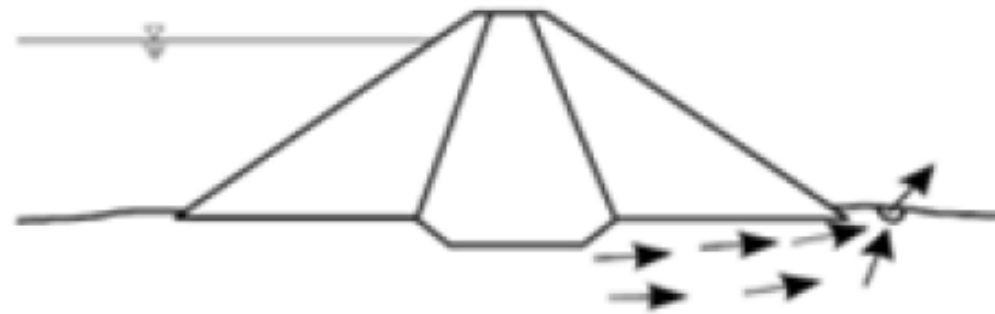
INITIATION
Seepage exits from the
foundation, and backward
erosion initiates

CONTINUATION
Erosion continues at
the downstream toe
(lack of a filter)

PROGRESSION
Backward erosion
progresses back
to the reservoir or
flood side

BREACH
Breach
mechanism
forms

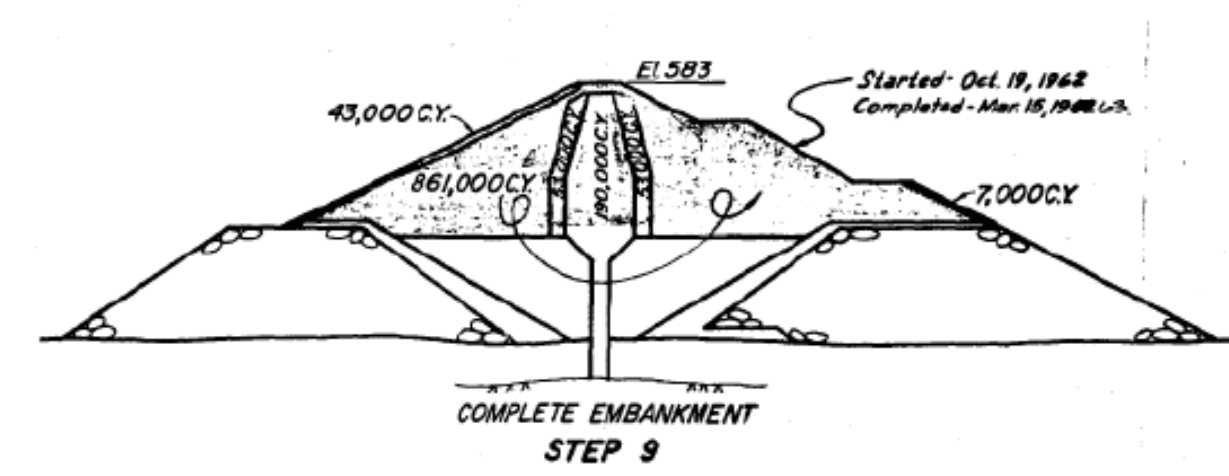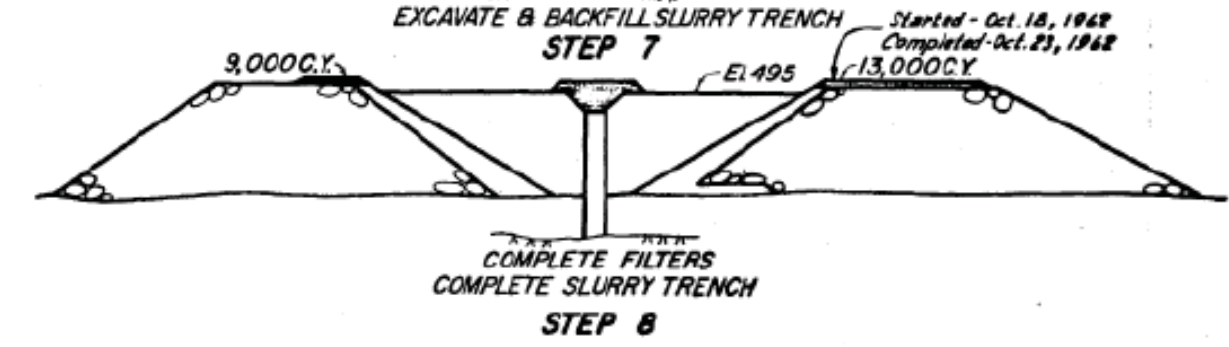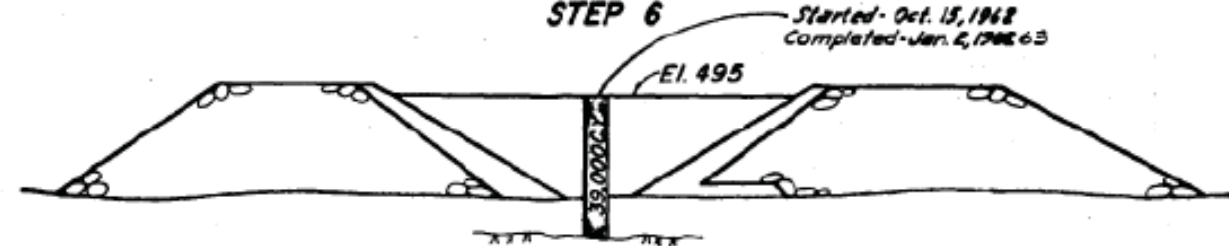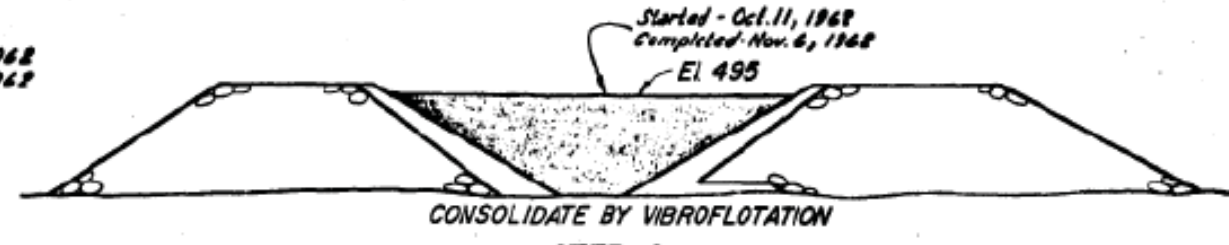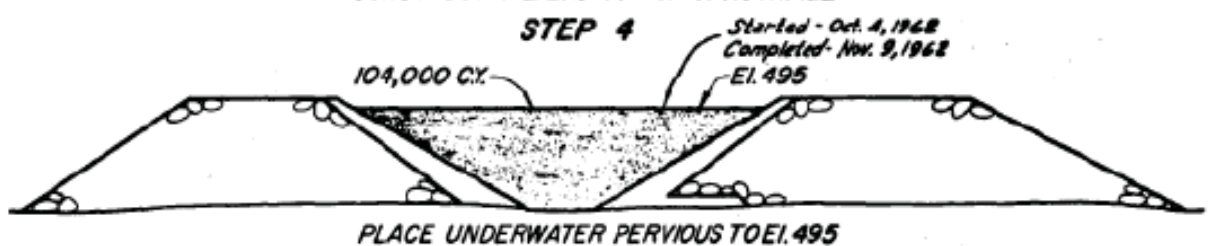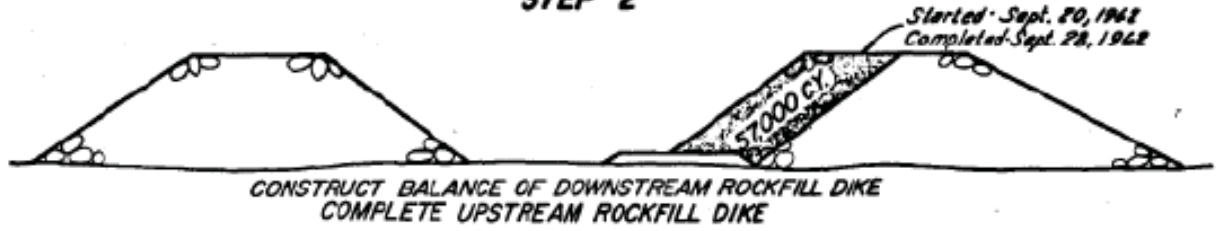**Figure 1-60.** Internal erosion through a foundation initiated by backward erosion. Image adapted from Fell et al. (2008).
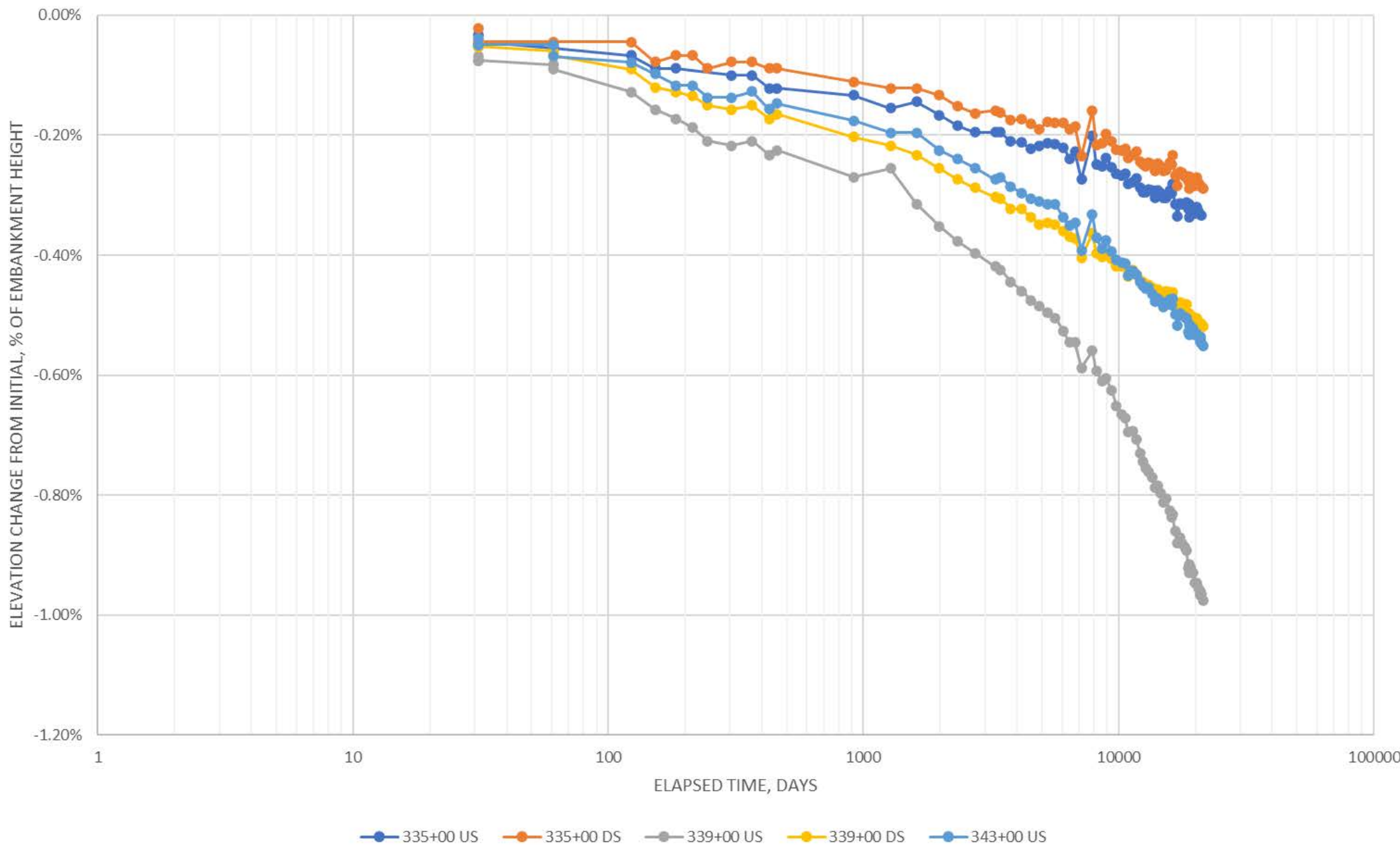
River Closure Construction Sequence

STEP 1 — CONSTRUCT PARTIAL DOWNSTREAM ROCKFILL DIKE
El.500, Started - Aug. 10, 1962, Completed - Oct. 5, 1962, 183,000 C.Y.

STEP 2 — CONSTRUCT HORIZONTAL FILTER / CONSTRUCT UPSTREAM ROCKFILL DIKE
Started - Aug. 13, 1962, Completed - Oct. 5, 1962, 196,000 C.Y.
Started - Sept. 19, 1962, Completed - Sept. 26, 1962, 14,000 C.Y.

STEP 3 — CONSTRUCT BALANCE OF DOWNSTREAM ROCKFILL DIKE / COMPLETE UPSTREAM ROCKFILL DIKE
Started - Sept. 20, 1962, Completed - Sept. 28, 1962, 57,000 C.Y.

STEP 4 — CONSTRUCT FILTERS TO TOP OF ROCKFILL
Started - Sept. 26, 1962, Completed - Oct. 5, 1962, 18,000 C.Y.
Started - Sept. 26, 1962, Completed - Oct. 2, 1962, 14,000 C.Y.

STEP 5 — PLACE UNDERWATER PERVIOUS TO EL. 495
Started - Oct. 4, 1962, Completed - Nov. 9, 1962, El. 495, 104,000 C.Y.

STEP 6 — CONSOLIDATE BY VIBROFLOTATION
Started - Oct. 11, 1962, Completed - Nov. 6, 1962, El. 495

STEP 7 — EXCAVATE & BACKFILL SLURRY TRENCH
Started - Oct. 15, 1962, Completed - Jan. 2, 1963, El. 495

STEP 8 — COMPLETE FILTERS / COMPLETE SLURRY TRENCH
Started - Oct. 18, 1962, Completed - Oct. 23, 1962, El. 495, 9,000 C.Y., 13,000 C.Y.

STEP 9 — COMPLETE EMBANKMENT
Started - Oct. 19, 1962, Completed - Mar. 15, 1963, El. 583, 43,000 C.Y., 861,000 C.Y., 190,000 C.Y., 7,000 C.Y.

WANAPUM EMANKMENT SETTLEMENT
Left Embankment River Closure Section

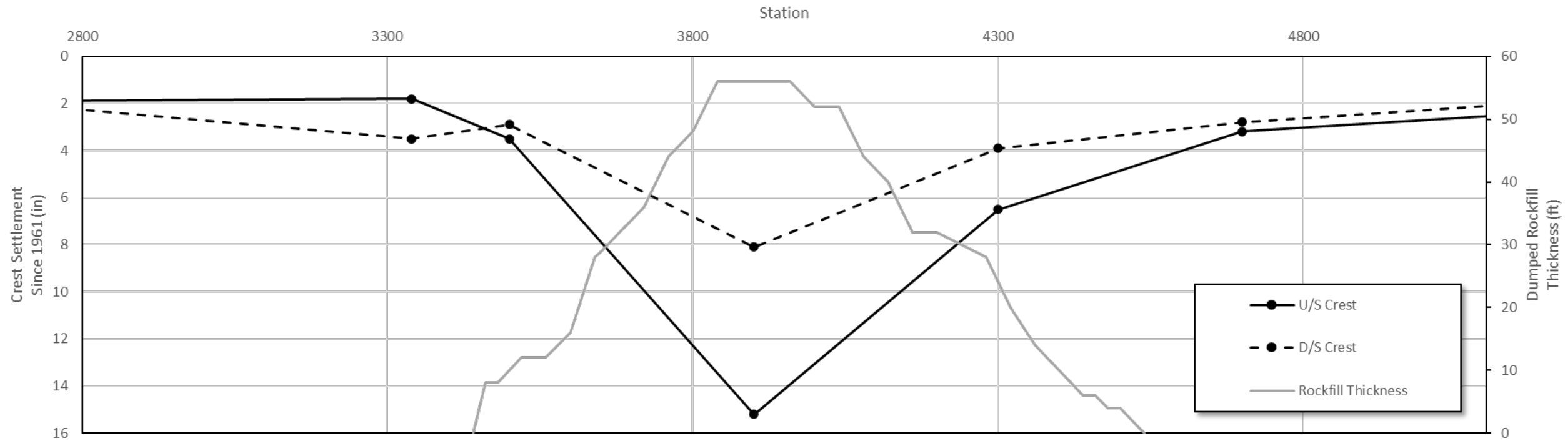**Table 6: Representative Embankment Zone Gradation Index Values**

Base	Filter	Figure Number(s)	Likelihood of Internal Erosion
Impervious Core	Transition Fill	20 – 21	Low
Impervious Core	Underwater Pervious Fill	22	Low
Slurry Trench Backfill	Underwater Pervious Fill	23	Low
Transition Fill	Underwater Pervious Fill	24	Low
Transition Fill	Pervious Shell	25 – 28	Low
Pervious Shell	Dumped Rockfill	29	High*
Underwater Pervious Fill	Filter	30 – 32	Moderate
Underwater Pervious Fill	Slurry Trench Backfill	--	Low
Underwater Pervious Fill	Pervious Fill	33	Low
Underwater Pervious Fill	Dumped Rockfill	34 – 36	Moderate
Filter	Dumped Rockfill	--	Low
Slurry Trench Backfill	Alluvium	37 – 40	High*
Underwater Pervious Fill	Alluvium	41 – 42	Moderate
Dumped Rockfill	Alluvium	--	Low
Filter	Alluvium	--	Low
Alluvium	Dumped Rockfill	43 – 44	Moderate
Alluvium	Filter	--	Moderate
Alluvium	Alluvium	45 – 48	High*

Proposals

Proposals

- Respondents
  - Gannett Fleming
  - Hatch
  - Schnabel
  - Tetra Tech
- Review Team
  - Dale Campbell – Senior Manager of Power Production Engineering
  - Becca Simpson – Manager of Civil/Dam Safety Engineering
  - Zach Ruby – Chief Dam Safety Engineer

Scoring Criteria

- Management Plan – 7%
- Capabilities of Firm – 10%
- Response Time – 3%
- Cost Control Experience – 5%
- Client List and Client References – 15%
- Equivalent Projects and Services – 25%
- Key Personnel Qualifications and Relevant Experience – 25%
- Support Services Organization and Capabilities – 5%
- Accessibility to District and Project Sites – 5%

Final Scores

- Gannett Fleming – 4.8
- Tetra Tech – 4.6
- Schnabel – 4.5
- Hatch – 4.2

Considerations

Considerations

- Large Cost and Long Duration
  - Accommodate design and construction support
  - Engineering costs ~10% of construction costs
- FERC License Compliance
- Reservoir Drawdown
- Embankment Failure

Questions?

COMMISSION BUDGET REVIEW

2023 PRELIMINARY BUDGET

2023 BUDGET TIMELINE

AUGUST	8/9/22	Commission reviews preliminary budget presentation and preliminary budget filing
	8/23/22	RCW budget filing resolution approval
SEPTEMBER	9/27/22	Advertising of public hearings, 2 weeks prior to first hearing
	9/27/22	Commission review of public materials for hearing
OCTOBER	10/5/22	Public hearing materials available to the public (1 week prior to first hearing)
	10/11/22	Commission opens RCW budget process. Public budget hearings to be held during the month of October 2022.
	10/25/22	Commission review final budget and forecast
NOVEMBER	11/8/22	Anticipated Commission adoption of budget and forecast

ANTICIPATED CHANGES BETWEEN PRELIMINARY AND FINAL BUDGETS

- Preliminary Budget is the 2023 figures from the 2022 Q1 Forecast

- Future Rate Increases

  - Assumed to be de-minimis at 0.1% annually (effectively = 0)

- Final management review in late August

- Major Changes

  - O&M and Labor update

  - Retail forecast update

  - Capital Plan update

  - Wholesale Market Price curve update

  - Retail Revenue adjustments updated to meet Strategic Plan metrics

PRELIM. BUDGET SUMMARY – TOTAL EXPENDITURES (EXHIBIT A)

Exhibit A - Summary of Budget Items		Actuals	Forecast	Forecast	Probable	Impacted
$'s in thousands		2021	2022	2023	Change	By
TOTAL O&M		165,470	163,215	164,962	↑	Generational Inflation
TAXES		20,081	19,940	20,003	↑	Higher Retail Sales
ELECTRIC CAPITAL		90,033	87,510	89,174	↑	QTEP and DB2 Increased Project Activity
PRP CAPITAL		67,163	59,592	53,604	→	
DEBT SERVICE (net of rebates)		74,465	74,452	70,756	→	
TOTAL EXPENDITURES		417,212	404,708	398,499		
Expenditure offsets for deduction						
Contributions in Aid of Construction		(14,110)	(9,207)	(9,140)	→	
Sales to Power Purchasers at Cost		(23,584)	(29,670)	(15,608)	→	
Net Power (+ Expense, - Revenue)		(90,411)	(81,677)	(90,278)	→	Higher Market Prices, offset by Load Growth
Conservation Loans		13	(125)	(125)	→	
TOTAL EXPENDITURE OFFSETS		(128,092)	(120,679)	(115,151)		
TOTAL BUDGETED EXPENDITURES		289,120	284,029	283,348		

*figures shown in thousands ($000)

PRELIM. BUDGET SUMMARY – OPERATIONAL PERFORMANCE (EXHIBIT B)

Exhibit B -$'s in thousands		Actuals	Forecast	Forecast	Probable	Impacted
CONSOLIDATED OPERATIONAL PERFORMANCE		2021	2022	2023	Change	By
Sales to Power Purchasers at Cost		23,584	29,670	15,608	→	
Retail Energy Sales		231,740	237,300	248,785	↑	Higher Retail Sales
Net Power (Net Wholesale+Other Power Revenue)		90,411	81,677	90,278	→	Higher Market Prices, offset by Load Growth
Fiber Optic Network Sales		12,046	12,100	12,300	→	
Other Revenues		1,758	2,354	2,354	→	
Operating Expenses		(165,470)	(163,215)	(164,962)	↑	Generational Inflation
Taxes		(20,081)	(19,940)	(20,020)	↑	Increase with Higher Retail Sales
Net Operating Income(Loss) Before Depreciation		173,989	179,946	184,344		
Depreciation and amortization		(80,591)	(75,454)	(77,672)	→	
Net Operating Income (Loss)		93,398	104,492	106,671		
Other Revenues (Expenses)						
Interest, debt and other income		(33,577)	(48,601)	(36,048)	→	
CIAC		14,110	9,207	9,140	→	
Change in Net Position		73,931	65,099	79,763		

*figures shown in thousands ($000)

PRELIM. BUDGET SUMMARY – METRICS (EXHIBIT B)

	Target	Actuals 2021	Forecast 2022	Forecast 2023	Probable Change	Impacted By
NET INCOME		73,931	65,099	79,763	↑	Up slightly with Higher Income, offset by OPEX
LIQUIDITY (measured at year end)						
Elect System Liquidity (Rev + R&C)	$105 MM	111,739	109,668	111,014	→	
Excess Liquidity		22,578	17,098	182	→	
Days Cash On Hand	> 250	338	303	266	→	
LEVERAGE						
Consolidated DSC	>1.8x	2.40	2.28	2.47	→	
Consolidated Debt/Plant Ratio	≤ 60%	51%	47%	44%	→	
PROFITABILITY						
Consolidated Return on Net Assets	>4%	3.2%	2.8%	3.3%	↑	Up slightly with Higher Income, offset by OPEX
Retail Operating Ratio	≤ 100%	115%	106%	107%	↑	Up slightly with Higher Income, offset by OPEX

*figures shown in thousands ($000)

- Higher Retail Sales, Higher Market Value, offset by Operating Expense increases and Load Growth impacts on Wholesale activities
  - Retail Sales are forecast to be higher than previously expected
  - Labor and O&M expenses has been and will continue to be impacted by generational inflationary pressures
    - Supply chain, international food and energy markets, and highly constrained labor markets will continue to drive inflation through 2023

Questions?

Power Delivery: Construction and Maintenance Update
Second Quarter 2022

Powering our way

Mission:

To safely operate and maintain the investment entrusted to us by our customers.

Vision Statement 2020-2025 (5-year dynamic scope):

Our vision is to be an industry expert in the safe and reliable operation of the transmission and distribution grid, including fiber communications. In partnership with other PUD stakeholders, we will strategically develop a safe and cost-effective approach to construction and maintenance that will allow us to work proactively, demonstrating excellence in service. We will strengthen the management of PUD assets to improve both the quality and the reliability of the power grid and fiber network.

Fiber Network & Electronic Shop

Fiber Network Techs

- The Fiber Network Technician Apprenticeship job description is pending approval, and we will hire 1 or 2 as soon as possible.
- Future staffing plans are being evaluated with the pending completion of Fiber Expansion and likelihood of NorthSky's departure.
- New FNT Training Specialist – *Chad Robinson*

Electronic Techs

- 3 apprentices progressing – training with Big Bend CC and online
- 4 fiber hubs/huts built or expanded, 2 more in progress
- Techs working with DB2 testing and commissioning.
- Firewall Modernization – 9 sites completed

Meter and Relay Shop

LA – upgraded Foreman: Randy Hovland

- Transmission relay testing complete for the year and 8 Distribution stations have been completed.
- DB2 support w/ numerous people – Inspector and Testing/Commissioning
- Burke substation commissioning is complete and serving load
- Royal substation testing and commissioning is in process

Note:

- Corner Ground Delta upgrade project bids are in and being evaluated.
  - Engineers Estimate: $864,627
  - Bids received at $625,779 and $802,103
  - Work should start within 6 weeks

Power System Electricians

Supervisor: Jeremy Robertson

New Trainee Power System Electrician: Craig Wood (internal)

For our customers:
- Developing maintenance strategy and practices
- Working with PD Asset Management to develop SharePoint site for better record management and maintenance trending

Other new
- Developing Training schedule with Snohomish County PUD for joint training
- Developing Journeyman in Training position and training standards

Line Crew

Staffing
- New Line Office Supervisor (Tyler DeLong)
- 2 New first step apprentices. (Daniel Schroyer, Sheldon Kosa)
- 1 Apprentice has passed his journeyman exam. (Parker Ball)
- 7 total apprentice lineman are in the Line Department.
- 4 Lineman positions are vacant.

Projects
- Vegetation management on transmission right away is 100% complete.
- Crews have been working on fiber make ready pole replacement, trouble reports, maintenance and customer work.

Power Quality

C&M's Q2 improvements:

- 66 pump starts completed; 29 horsepower corrections identified for a new revenue of $51,244.20. Recoverable revenue would be approximately $102,488.40

- New Rd E Var controlling capacitor bank site identified and design completed on K5 feeder.

- Move K172 capacitor bank onto main feeder.

- Identified needed feeder rebuild on main run of K5 feeder, upsize from 336 to 795.

- Move J267 Capacitor bank approximately 15 spans west to support voltage at large pumping sites.

- New AR10 – R8 air switch to be added to alleviate heavy loading of AR10.

Maintenance Engineering

Will Coe – ME Lead

- 2 openings with 7 applicants
- Construction Inspectors
- Power Quality
- Tree trimming contract (6'), expands to 10' in 2023
- New boring sub-contractor. Improves efficiency in installing underground power and fiber circuits.
- Pole test and treat contractor to complete the northern portion of the County
- The DC battery trailer purchases are on schedule for delivery in October.
- Leading the Soap Lake substation transformer upgrade - October.

Operating Unit

EC - Power Delivery ⌄

Department

EC1 - PD Delivery Const... ⌄

Capital Labor & Net Actuals YTD Vs. Year-End-Projections

● Net Actuals ● Capital Labor ● YEP Yearly Total Remaining ● Budget YTD
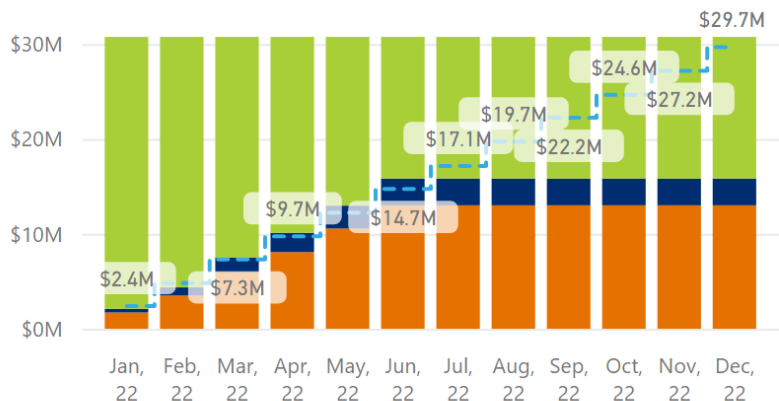
Gross Actuals Vs. Budget

$15.8M +7.4%

Capital Labor Actuals Vs. Budget

$2.4M +47.5%

Net Actuals Vs. Budget

$13.0M +2.0%

Budget vs Actuals (Including Cap Labor)

Cost Category Type/Cost Category	Budgeted	Actuals	Budget Var	Budget Var %	Consumed %
⊟ **Labor**	**$11,641,301**	**$13,014,641**	**$1,373,341**	**11.8%**	**111.8%**
Salaries & Wages	$6,961,487	$6,437,682	-$523,805	-7.5%	92.5%
Benefits	$2,998,580	$4,498,170	$1,499,590	50.0%	150.0%
Overtime	$1,529,449	$1,853,972	$324,522	21.2%	121.2%
Other Labor	$151,784	$224,817	$73,033	48.1%	148.1%
⊞ **Operating Materials & Equipment**	**$1,844,234**	**$1,957,545**	**$113,311**	**6.1%**	**106.1%**
⊞ **Purchased Services**	**$1,089,976**	**$728,980**	**-$360,996**	**-33.1%**	**66.9%**
⊞ **G&A**	**$105,858**	**$52,135**	**-$53,723**	**-50.8%**	**49.2%**
⊞ **IT**	**$43,440**	**$16,959**	**-$26,481**	**-61.0%**	**39.0%**
⊞ **Risk**		**$3,328**			
⊞ **Transportation**		**$19,450**			
⊞ **Utilities**		**$28,675**			
Total	**$14,724,808**	**$15,821,713**	**$1,096,905**	**7.4%**	**107.4%**

- **Capital Labor is a subset of the Labor above**   - **Net Actuals vs Budget = Gross Actuals minus Capital Labor**
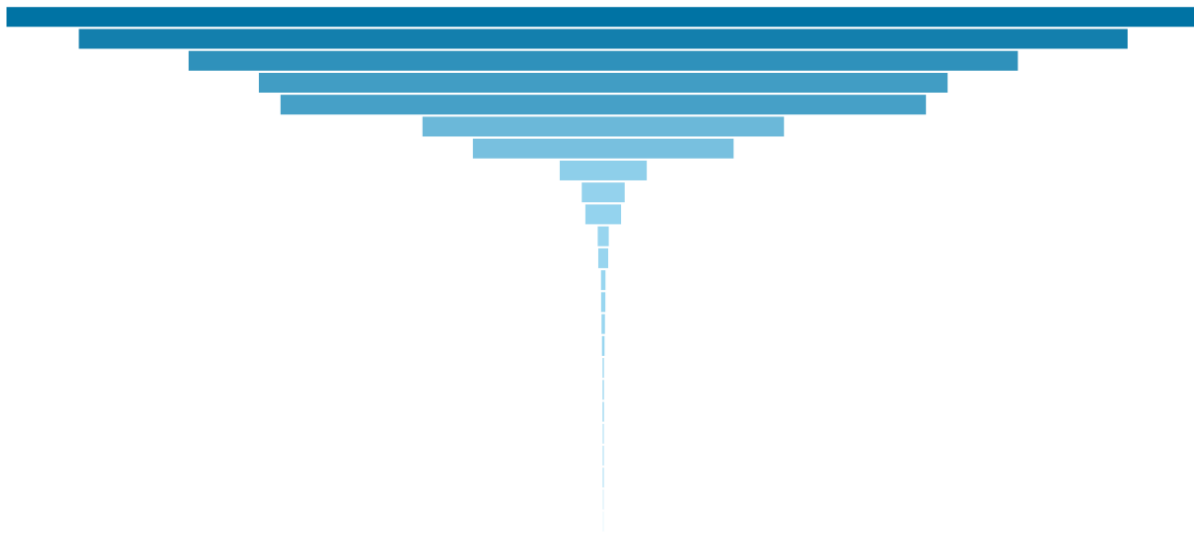
Operational Unit

EC - Power Delivery

Department
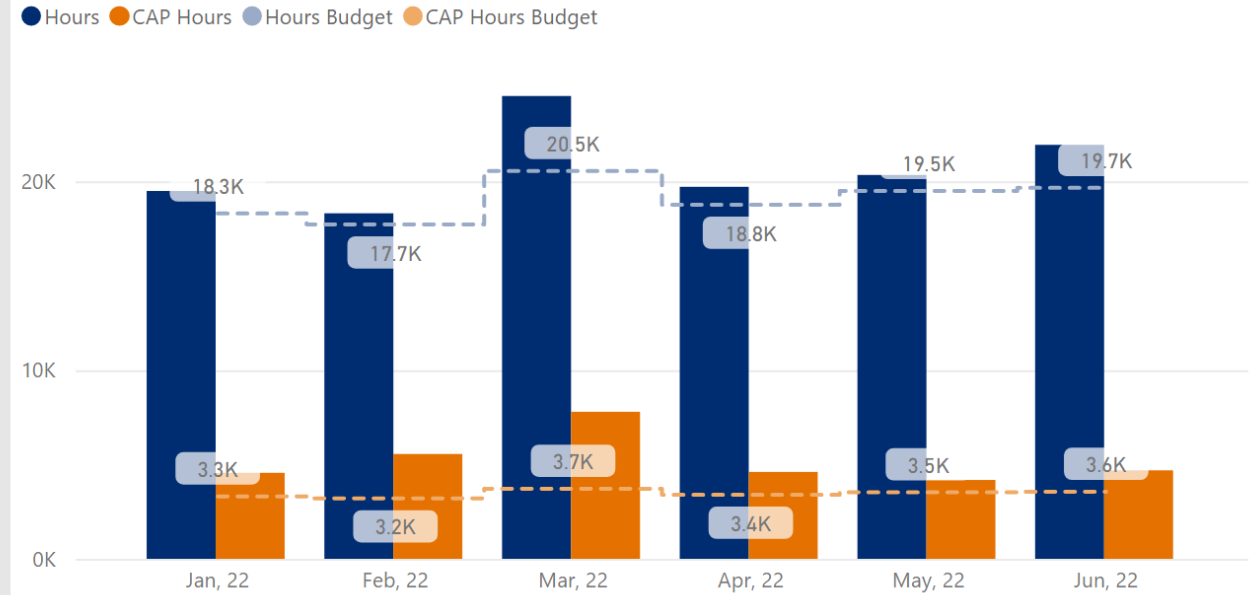
EC1 - PD Delivery Const Maint

Hours by System

System	Hours
ELEC	108,783
Wholesale Fiber	12,697
GA	2,848
PRP	2,074

Hours by Program

Safety	NERC Compliance
905	900
Corrective Action Program	**Technology Roadmap**
847	680

Hours and CAP Hours Vs. Budgets

● Hours ● CAP Hours ● Hours Budget ● CAP Hours Budget

Month	Hours	CAP Hours
Jan, 22	18.3K	3.3K
Feb, 22	17.7K	3.2K
Mar, 22	20.5K	3.7K
Apr, 22	18.8K	3.4K
May, 22	19.5K	3.5K
Jun, 22	19.7K	3.6K

Hours by Initiative

Headcount and Budget by Month & Year

● Actual Headcount FTR ● Actual Headcount FTE ● Headcount Budget

Month	Headcount Budget
Jan, 22	130
Feb, 22	130
Mar, 22	130
Apr, 22	130
May, 22	130
Jun, 22	130
Jul, 22	130
Aug, 22	130
Sep, 22	130
Oct, 22	130
Nov, 22	130
Dec, 22	130

Capital Budget Versus Actuals

EC10 - PD C&M QBR Year-to-Date June 2022

Initiative ID	Name	CY Scope	CY Schedule	CY Price	CY Variance	TP Scope	TP Schedule	TP Price	TP Variance
IN125	Corner Grounded Delta Conversions.xlsm	○ $0	○ $0	○ $0	🟢 $661	○ $0	○ $0	○ $0	🟢 $429
IN237	PD MC Fitness Substation.xlsm	○ $0	○ $0	○ $0	🟢 ($1,019)	○ $0	○ $0	○ $0	🟢 ($1,019)
IN238	PD MC Fitness Transmission.xlsm	○ $0	○ $0	○ $0	🟢 ($128)	○ $0	○ $0	○ $0	🟢 ($128)
IN239	PD MC Fitness Distribution.xlsm	○ $0	○ $0	○ $0	◆ ($473,041)	○ $0	○ $0	○ $0	◆ ($473,041)
IN240	PD MC Fitness Equipment.xlsm	○ $0	○ $0	○ $0	🟢 $3,760	○ $0	○ $0	○ $0	🟢 $3,760
IN319	PD MC Fitness Switchyards.xlsm	○ $0	○ $0	○ $0	○ $0	○ $0	○ $0	○ $0	○ $0
IN369	Field Services Management .xlsm	🟢 $21,528	◆ $160,208	🟢 $44,876	◆ $226,612	🟢 $21,528	◆ $187,745	🟢 $44,859	◆ $254,132
Total		**$21,528**	**$160,208**	**$44,876**	**($243,155)**	**$21,528**	**$187,745**	**$44,859**	**($215,867)**

Project Phase

Execution

Project Type

Project — Fitness

YTD Actuals

$2.5M
$922K
$0M $4M
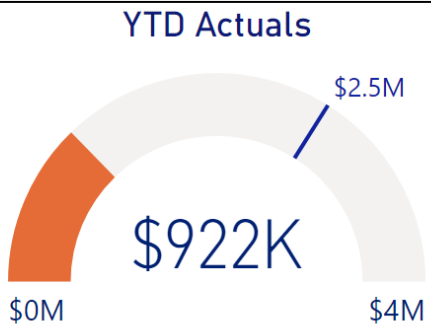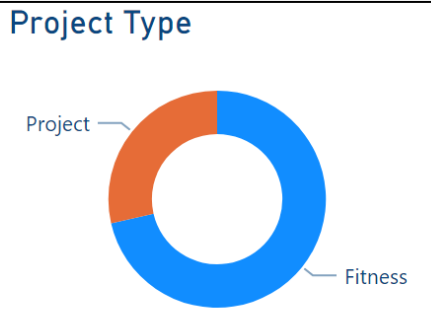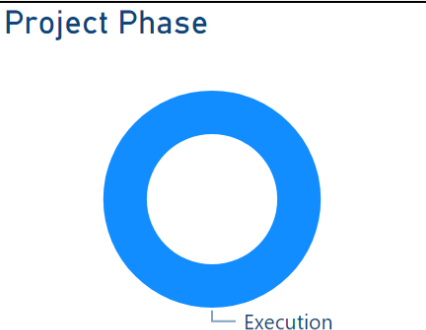
Initiative ID	Link	Name	CY Approved Spend	CY Actuals	BOY Fx	CY YEP
IN125	🔗	Corner Grounded Delta Conversions.xlsm	$1,064,003	$120,836	$943,828	$1,064,664
IN237	🔗	PD MC Fitness Substation.xlsm	$100,000	$27,781	$71,200	$98,981
IN238	🔗	PD MC Fitness Transmission.xlsm	$479,389	$308,612	$170,649	$479,261
IN239	🔗	PD MC Fitness Distribution.xlsm	$633,041	$0	$160,000	$160,000
IN240	🔗	PD MC Fitness Equipment.xlsm	$746,000	$47,564	$702,196	$749,760
IN319	🔗	PD MC Fitness Switchyards.xlsm	$100,000	($2,895)	$102,895	$100,000
IN369	🔗	Field Services Management .xlsm	$505,030	$420,091	$311,552	$731,643
Total			**$3,627,463**	**$921,988**	**$2,462,320**	**$3,384,308**

Power Delivery C&M Challenges/Opportunities Q2 2022

❖ West Quincy WQ40RT Outage

❖ Pole Fires

❖ Cable Faults

❖ Phone System Configuration for RTO

❖ Burke Substation Testing and Commissioning

❖ Line Office Supervisor replacement

❖ Posted C&M Maintenance Engineer (2 positions)

Enterprise Technology Business Review

Commission Update – August 2022

Grant PUD

Powering our way of life.

Agenda

1 Functional Review

2 Financial Review

3 Technology Project Update

4 Organizational Health and Staffing

Vision & Mission – Enterprise Technology

<u>Vision</u>: To deliver operational excellence through a focus on engagement, architecture, compliance, and reliability; becoming a crucial, valued, and sought-after business partner.

<u>Mission</u>: To enable cost-efficient, error-free operation and timely decision making through technology that anticipates needs, silently solves everyday issues, and presents highly consumable, relevant information to stakeholders and users, regardless of where they are, when they need it, or how they wish to access it.

01

Functional Review
Key Accomplishments Since Last Update

IT Organization - 2022

Current IT organization chart
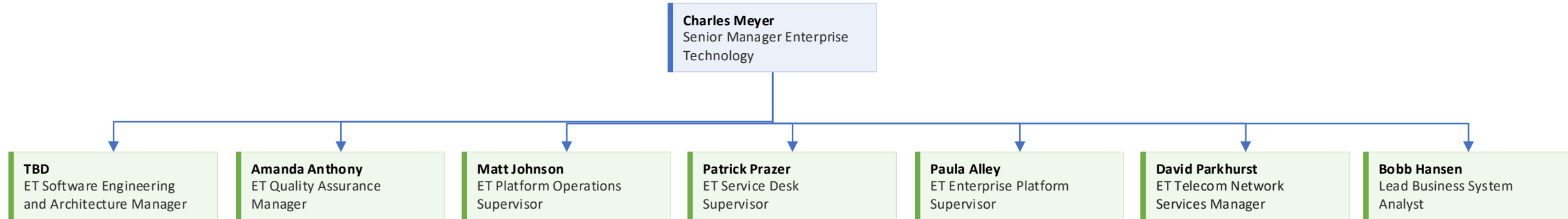
Significant Accomplishments in 2022

Service Desk has continued to successfully support the District both remotely and now primarily on site at District facilities:

- **Updated** and refined IT Asset tracking in ServiceDeskPlus tool, providing better information for Internal and State Audits.

- **Converted** LA to FTE to more reliably support the District IT needs.

- **Completed over 4,000** Service Requests/Incidents between January 1st and July 31st.

- **Deployed** Robin Hoteling software to support hybrid work environment.

- **Deployed** IT Hardware to ensure preparedness of approximately 500 workstations.

- **Continued Sequential** Rollout of Intune Co-management to District devices.

Next steps – Renew and implement a better functional Asset Management system and refresh existing end user workstations throughout the District.

Significant Accomplishments in 2022

Platform Operations making efforts to stabilize environment, improve operational processes, and ability to better deliver on projects:

- **Updated** MoveIT SFTP to support the bulk energy sales operations. Replaced the outdated and unsupported software with a current, secure, supported, and more operationally reliable solution.

- **Built** new Citrix deployment leveraging their latest hybrid Cloud Citrix solution. Replacing the outdated system is positioning us in terms of supportability, longevity, and the ability to take advantage of new offerings more readily.

- **Deployed** next generation infrastructure for compute and storage in Dell VxRail, replacing all infrastructure in support of VMs in the PROD environment. Migrated 230+ servers and met our planned completion timeline for cutover (End of Q2).

- **Finetuned** OpManager for more granular monitoring of the health and performance of our Production Compute and Storage Infrastructure. It has been integrated with SD+ for continuity of our existing IT processes and workflows. It is delivering deeper insight and enabling us to improve on stability and SLA's. We continue to fine tune this tool and future state would be to enable access of this system into all security zones (DEV, DMZ, etc.).

- **Expanded** patching to include all Critical, Required, and High Priority OS patching.

- **Mitigated** security vulnerabilities through numerous channels. (Netscaler, Cloudflare DNS, CIS Benmarks, Microsoft Security Score,

- **Consolidated** SQL server instances across the enterprise was continued. Reduced total Databases by 128, Reduced SQL Licenses by 13, Recovered 106 CPU cores, 244 GB MEM, and 5.4 TB of storage. We continue to progress nicely with our SQL Roadmap.

- **Provided** 100% successful restoration of all requested data restores in 2022.

- **Purchased** two new host clusters. One to upgrade the out of support Telecom hosts, and the other to support the buildout of a new secure "Tools Network" which will be used as a secured area for Administration and Management tools, scan tools, out-of-band management tools, etc. This will be a shared environment for Platform Operations, Telecom, Cyber, and EMS to house tools requiring elevated access. Goal end of Q3 for deployments.

Next steps – Continue to follow Technology Roadmap, improve delivery of Business and IT projects. Position us for long-term operational goals for performance, stability, security, and delivery.

Significant Accomplishments in 2022

Enterprise Applications successes year to date:

- **Completed** Oracle CCS 21 releases (A,B and soon C). Now in preparations for taking on the next major release 22 which will be a bigger change for users.

- **Completed** a minor upgrade to the latest version of Maximo 7. This will allow us to be ready for the next big release Maximo 8 (MAS). Deployed a Lands, Rec and Shoreline service request which is similar to our Facilities request in Maximo to improve the management of the work on those sites.

- **Completed** the new Condition Reporting Tool (CRT) in Maximo which allows for centralized tracking of all close calls/incidents/injuries and onboarded Supervisors to manage those CAP items to resolution. We have also made a few updates to the CRT tool due to new requirements that arose after being in use for a while.

- **Completed** Automating Remote Work Agreements into a Power Application. This was a quick need for tracking for those that choose to work a hybrid work schedule.

- **Completed** the implementation of the Robin Hotel Software which allows for hybrid work staff to reserve workspaces when they are in the office. This was done in a short timeline with no major issues.

- **Continue** to provide support on the Technology Roadmap projects such as GEN2, OSS/BSS and MWFM.

Significant Accomplishments in 2022

Cybersecurity continues to advance our protections and controls to prevent intrusion, malware and cybercrime through design, implementation and oversight of an overlapping series of controls detailed in the Cybersecurity CIS-Controls Roadmap.

- **Deployed** new firewalls at Frenchman Hills, Rocky Ford, Burke, Larson, SandDunes, Customer Kiosk, Fleet Management and Geneva as part of project to modernize 36 aging firewalls across all district facilities and substations, including CIP environments.

  - **Next steps – Continue roll-out** across 11 geographically grouped locations (June 2023).

- **Deployed Enterprise** "Information Protection Policy" for all data classifications with data governance that includes labeling across digital data repositories and data layer protections across all compute platforms.

- **Rolled-out** Managed Defense 24x7x365 security incident and event management, rolled out Endpoint Detection and Response solution for incident discovery and investigation.

- **Successfully Exercised** our cyber incident response plans with Power Production and Power Delivery as well as conducted multiple incident response and vulnerability mitigations based on the threat landscape.

- **Developed** proposal for Vulnerability Assessment System replacement.

- **Managed** 3rd party vendor assessments of our cyber security protections and identified gaps to address.

- **Moving** CIP responsibilities and Cybersecurity personnel to CSE and retaining enterprise facing Cybersecurity responsibilities.

Significant Accomplishments in 2022

Telecom Engineering has quietly improved its internal processes, practices and capabilities

- **Provided** significant GEN2 / ESRI development and resourcing efforts for fiber data modeling, data mapping, configuration, and data source consolidation for migration. This will be a transformational success for the District and fiber plant when launched in 2022.

- **Engineering Design and Development Support for OSS/BSS** integration with the wholesale network

- **Achieved** network availability of 99.999% for the MPLS backbone and Internet edge and met SLA of 99.98% for Access and Distribution networks.

- **Designed and deployed** new Grant Fiber hubs and access network infrastructure for new 2022 wholesale fiber expansion markets, according to schedule.

- **Successfully** engineered backbone capacity growth where critically needed to avoid network saturation. This is a significant accomplishment given the exhausted network platform and fiber resources in the wide area core network.

- **Completed** RFP evaluations for Fiber backbone (WAN) modernization, and contract development is now in progress.

- **Developed** new Telecom transport network solution for power production and Transfer/Trip communications

- **Hired new Network Engineer** dedicated to Business and Data Center design, development, and modernization

Next steps – Staff augmentation, network capacity & diversity, design/standards consistency for documentation and deployment, legacy life-cycling, tooling and process development for operations success.

Significant Accomplishments in 2022

Software Engineering & Architecture provides all the enterprise cross-cutting integration and solution design in support of our technology modernization projects. Key accomplishments for 2021 to date include:

- **Continued** to provide development activities on the Technology Roadmap projects such as GEN2, OSS/BSS and MWFM.

- **Continued** to provide development activities on the Data Warehouse project on the Technology Roadmap.

Significant Accomplishments in 2022

Quality Assurance provides the organization with a framework and team to ensure the quality of the solutions developed by the Enterprise Technology organization. Key accomplishments for 2022:

- **Promoted** our IT Student Helper to FTR position in the QA Department to assist in testing and QA activities for existing and future Technology Roadmap projects.

- **Promoted** IT Service Desk staff to QA Department to assist testing and QA activities for existing and future Technology Roadmap projects.

- **On-going** leading of QA/QC activities for 3 inter-dependent capital projects on the Technology Roadmap

- **On-going** consultation of quality in various O&M Enterprise Applications

02

Financial Review (to year end)
O&M and Capital

Operating Unit

FE - Senior Mgr Enterprise Tech ⌄

Capital Labor & Net Actuals YTD Vs. Year-End-Projections

● Net Actuals ● Capital Labor ● YEP Yearly Total Remaining ● Budget YTD

O&M Budget vs Actuals (Including Cap Labor)

Cost Category Type/Cost Category ▼	Budgeted	Actuals	Budget Var	Budget Var %	Consumed %
⊟ **Labor**	**$3,618,530**	**$3,305,104**	**-$313,426**	**-8.7%**	**91.3%**
Salaries & Wages	$2,523,544	$2,098,150	-$425,394	-16.9%	83.1%
Benefits	$1,059,786	$1,131,011	$71,226	6.7%	106.7%
Other Labor	$17,710	$63,728	$46,018	259.8%	359.8%
Overtime	$17,490	$12,215	-$5,275	-30.2%	69.8%
⊞ **IT**	**$2,787,954**	**$2,660,826**	**-$127,128**	**-4.6%**	**95.4%**
⊞ **Purchased Services**	**$1,043,948**	**$646,527**	**-$397,421**	**-38.1%**	**61.9%**
⊞ **Utilities**	**$228,874**	**$195,843**	**-$33,031**	**-14.4%**	**85.6%**
⊞ **G&A**	**$94,570**	**$35,129**	**-$59,441**	**-62.9%**	**37.1%**
⊞ **Operating Materials & Equipment**	**$13,000**				
Total	**$7,786,876**	**$6,843,430**	**-$943,446**	**-12.1%**	**87.9%**

Gross Actuals Vs. Budget

$6.8M -12.1%

Capital Labor Actuals Vs. Budget

$497.6K +9.1%

Net Actuals Vs. Budget

$6.3M -13.4%

- Capital Labor is a subset of the Labor above   - Net Actuals vs Budget = Gross Actuals minus Capital Labor

Operating Unit

FE - Senior Mgr Enterprise Tech ⌄

Hours by Program

Technology Roadmap	Data Gover...
	1,050
	CIP Compli...
	760
	Safe... Org...
9,082	649 613

Hours by System

- GA — 34,188
- ELEC — 3,259
- Wholesale Fiber — 1,786
- PRP — 130

(0K — 20K — 40K)

Hours and CAP Hours Vs. Budgets

● Hours ● CAP Hours ● Hours Budget ● CAP Hours Budget

Month	Hours	CAP Hours
Jan, 22	6.7K	0.8K
Feb, 22	6.2K	0.8K
Mar, 22	7.0K	0.9K
Apr, 22	6.5K	0.8K
May, 22	7.0K	0.9K
Jun, 22	7.0K	0.9K

Hours by Initiative

Initiative	Hours
GIS Upgrade / Migration	
Oracle CCS Migration	1,654
Wholesale Fiber OSS/BSS	1,612
Enterprise Data Architecture I...	896
IT Project Pool - Small Projects	554
Mobile Workforce	476
Return to Office	439
10.14 Network Core Replacem...	438
Field Service Management Rep...	310
Business Data Network Moder...	279
Firewall Modernization	274
Human Capital Management Sy...	271
WAN-AncLk-Col Line Trs Trip ...	225
Records Management Info Gov	193
6.3 Substation SCADA Build-Out	177
FireEye Managed Defense-SOC	177
Broadband Customer Connecti...	175
Network Modernization	174
Fiber Expansion	110
CAP Development	106
SCADA Communication Networ...	88

Headcount and Budget by Month & Year

● Actual Headcount FTR ● Actual Headcount FTE ● Headcount Budget

(Jan, 22 — Feb, 22 — Mar, 22 — Apr, 22 — May, 22 — Jun, 22)

YTD Actuals

$3.0M

$0.2M

$0.0M $5.5M

Total Projects

10

EPMO Management

Pipeline
Active

No

Project Type

0
Fitness

Project

Project Phase

Planning
Initiation

Execution

Budget vs Actuals (Capital Directs) by Cost Center

Cost Center	CY Approved Spend	CY Actuals	BOY Fx	CY YEP
FE0000	$1,081,542	$106,466	$324,000	$430,466
FE1000	$200,000	$0	$116,667	$116,667
FE1200	$100,000	$0	$50,000	$50,000
FE1300	$0	$96	$0	$96
FE5000	$4,073,640	$87,626	$2,270,000	$2,357,626
FE6000	$70,255	$16,626	$32,000	$48,626
Total	**$5,525,437**	**$210,813**	**$2,792,667**	**$3,003,480**

Budget vs Actuals (Capital Directs) not including Fitness

Name	CY Approved Spend	CY Actuals	BOY Fx	CY YEP
Enterprise Data Architecture Implementation.xlsm	$1,081,542	$106,466	$324,000	$430,466
Business Data Network Modernization.xlsm	$0	$79,731	$0	$79,731
Firewall Modernization.xlsm	$70,255	$16,626	$32,000	$48,626
10.14 Network Core Replacements.xlsm	$3,773,640	$7,895	$2,000,000	$2,007,895
Total	**$4,925,437**	**$210,717**	**$2,356,000**	**$2,566,717**

03

Technology Project Update
Key Projects in Flight

Strategic Projects for 2022

A number of key strategic projects will consume the majority of resources across functions.
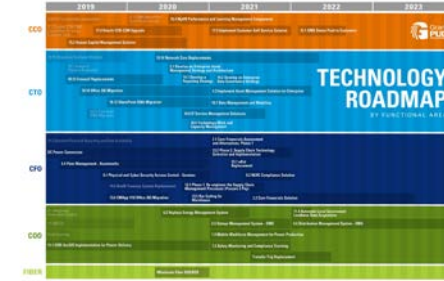
(Not Started) Maximo Expansion Program. A critical expansion of Maximo to support the Enterprise Asset Management Program covering both PP and T&D. Capital components are still in analysis to develop plans/costs/ROI.

Factors: The O&M analysis portions are proceeding, and capital work is in flight where analysis warrants action.

(In Progress) ESRI/ArcGIS Replaces legacy electric and fiber design tools and GIS with ESRI based integrated tools from Schneider Electric. Targeting early Q4 2022 for go-live.

(**In Progress)** We are moving forward with the new **OSS/BSS** in support of Wholesale Fiber and Power Delivery. Targeting a late Q4 2022 go-live.

(In Progress) We are moving forward with **Mobile Workforce Management** project in support of Wholesale Fiber. Replaces our current ARCOS system for "Trouble Reports" and "Service Work", with a goal to unify the idea of work as a single type with priority. Targeting a Q1 2023.

Technology Projects for 2022

We have organized a program to collect and oversee the basket of technology infrastructure modernization projects with the support of Project Management.
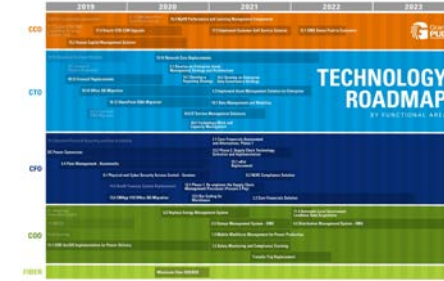
(In Progress) Technology *infrastructure refresh projects* are proceeding and will modernize <u>cyber</u>, <u>network</u>, <u>servers,</u> <u>storage</u> and <u>monitoring</u> for long-term needs. Commission contract approval will be required for the WAN Network.

   Factors: Alignment of all modernization efforts, key decisions on deployment location.

(In Progress) Enterprise Data Lake and Enterprise Analytics/Reporting in-flight with phData to build out data models and infrastructure to support business needs.

   Factors: Business ownership to leverage new tools, partnership with IT to identify needs.

(In Progress) Firewall Modernization- Implement remaining 35 Substation firewalls, and EMS firewalls.

   Factors: Application deployment resource availability, external Business Unit Prioritizations.

(In Progress) DB2 Firewall and MOD Build and Deployment.

   Factors: Application deployment resource availability, external Business Unit Prioritizations.

Technology Projects for 2022

We have organized a program to collect and oversee the basket of technology infrastructure modernization projects with the support of Project Management.
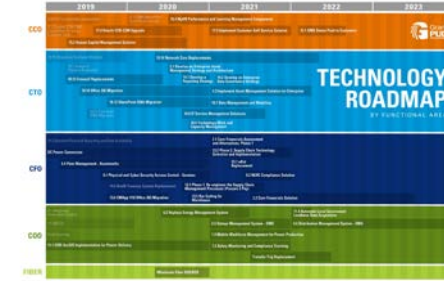
(Completed) Endpoint Management System (EMS)- FortiClient Management and updates implementation.

Factors: Lots of moving parts that all must be orchestrated with the ServiceDesk and PlatformOps.

(Deployed) FireEye/Mandiant - Managed Defense Endpoint Detection and Response deployment and monitoring.

Factors: Lots of moving parts that all must be orchestrated with the ServiceDesk and PlatformOps and MD.

(On Track) Tenable- Vulnerability Assessment (NERC CIP)- Replacement for the Alienvault system currently in initial costing phase.

Factors: Lots of moving parts that all must be orchestrated with the ServiceDesk and PlatformOps, Telecom, EMS, GMS, and SCADA.

(Completed) PrinterLogic Migration – migration of printing services to SaaS solution allowing for service agility and decomm of older technology and risk mitigation associated with those systems.

Technology Projects for 2022

We have organized a program to collect and oversee the basket of technology infrastructure modernization projects with the support of Project Management.
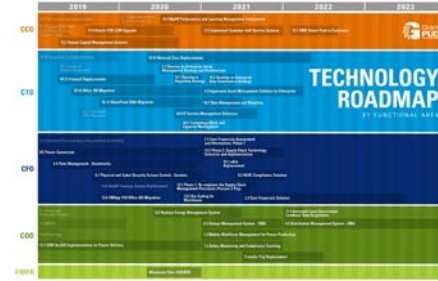
(On Track) – Intermediate System (Consoleworks) (NERC CIP) – Replacement required due to age of system and increased compliance requirement.

Factors: Lots of moving parts that all must be orchestrated with the ServiceDesk and PlatformOps, Telecom, EMS, GMS, and SCADA.

(Not Started) – Baseline collection and change management technology (NERC CIP) – Required as part of the Alienvault and Consoleworks replacement (ex. TripWire).

Factors: Lots of moving parts that all must be orchestrated with the ServiceDesk and PlatformOps, Telecom, EMS, GMS, and SCADA.

(In Progress) MFA/Password-less LogOn – implementation of multi-factor authentication technologies for increasing operational security and decreasing reliance and overhead of traditional passwords.

Factors: Lots of moving parts that all must be orchestrated with the ServiceDesk and PlatformOps.

Technology Projects for 2022

We have organized a program to collect and oversee the basket of technology infrastructure modernization projects with the support of Project Management.
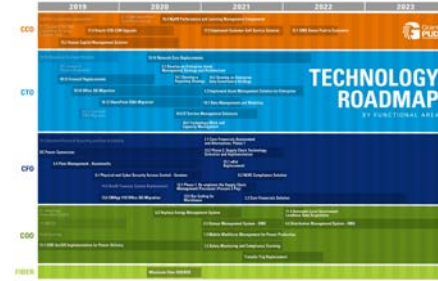
(In Progress) Conference Room Technology Update – upgrade of hardware and software within District Conference rooms to modernize advancements in current collaborative technologies.

Factors: Lots of moving parts that all must be orchestrated with the ServiceDesk and PlatformOps.

(In Progress) EDR – Migration from Symantec AV to Windows Defender – this will incorporate AV into our overall Microsoft toolset/investment and allow for decom of the Symantec Service.

Factors: Lots of moving parts that all must be orchestrated with the ServiceDesk, Cyber Security and PlatformOps.

(Planning to Expand) Remote Access Services (DaaS,AppV) deployment of highly available remote desktop and application access, lessening reliance on VPN and providing a more secure method of access to Corporate data and Services to Contracted entities.

Factors: Lots of moving parts that all must be orchestrated with the ServiceDesk, Cyber Security and PlatformOps.

Technology Projects for 2022

We have organized a program to collect and oversee the basket of technology infrastructure modernization projects with the support of Project Management.
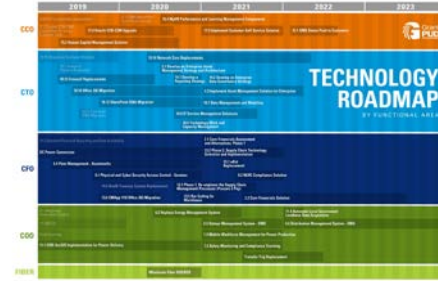
(Finalizing) Dell VxRail Hyperconverged Infrastructure – Modernization and replacement of the physical server infrastructure used to host the District's business services.

    Factors: Large project requiring in depth architecture by Platform Operations.

(In-Progress) NSX-T and vRealize will be implemented to provide tighter security controls, operations insight, and automation of the new HCI Vmware environment.

    Factors: Architecture design is in final stages and configuration will be done alongside VxRail install and configuration.

(Completed) Citrix Upgrade – Upgrade of Citrix environment using most current model in a hybrid cloud configuration.

    Factors: Completed build out. Need to plan and complete UAT prior to cutover.

(Completed) MoveIT SFTP – upgrade and migration to most current version to ensure SFTP system is secure and reliable.

    Factors: Serves important purpose in the tracking of power sales/usage. Caution is being taken to ensure cutover is as seamless as possible.

04 Organizational Health and Staffing
Resourcing to meet demand

Personnel Changes / Staffing

We continue to improve our high-performing team.

Telecom   *1 position open (Telecom Engineer left District)*

Software Engineering & Architecture   *3 positions open*

PlatOps   *1 position open (Cybersecurity Manager left District)*

Organizational Health

- *We currently have 5 open positions that are in the process of being filled. We have lost a significant amount of experience which will take time to replace, in-particular in the leadership area.*

- *Due to resource overallocation, the decision was made to serialize project support for the second half of 2022 development of the large capital in-flight projects. This relieves stress from the team and allows us to get synergy around one project to get to completion.*

- *Growth of Quality Department is helping the Business to drive to completion of system acceptance testing.*

- *Primary gap is business analyst skills to perform the front-end work of decomposing needs into requirements and developing options and related business cases.*

- *Leadership team focusing on employee development and providing more opportunities to be challenged and provide path for professional growth.*

Summary / Close-out

The first half of 2022 was another period of heads down work on in-flight projects, planning for near-term projects, consolidation of legacy technology and stabilization of solutions deployed in 2020 (e.g., CCS).

The IT function is largely sold-out for implementation capacity for 2022 and early 2023 with teams focusing on ESRI/GEN2, OSS/BSS, Clevest MWFM and a host of infrastructure projects (Firewalls, Network, Compute/Storage refresh).

We continue to refine and adjust recently implemented solutions to improve usability, efficiency and to drive overall value attainment.

The remainder of 2022 will keep staff busy with a collection of infrastructure upgrades and preparation for go-live on several key long-duration projects.

Grant PUD

Powering our way of life.

STATE AND FEDERAL LEGISLATIVE UPDATE

Aug. 9, 2022

Grant PUD

Powering our way of life.

Agenda

Key Issues

- Federal –
  - Lower Snake River Dams
  - Infrastructure Investment & Jobs Act (IIJA)
  - Direct Subsidy Bonds
- State –
  - Utility Arrearages
  - Recreational Immunity
- Other Areas of Interest –
  - General updates

Federal Legislative

Recent Activities

- June 9 – Sen. Murray and Gov. Inslee release "Lower Snake River Dams Benefit Replacement Draft Report"

- Mid-C GM's submit Op-ed that runs in the Wenatchee World and other Grant County Newspapers

- Grant PUD submits official comments to the consulting team as well as shares the letter with other congressional and state legislators

- Reps. McMorris Rodgers and Newhouse introduce a bill to protect the dams

- The White House Council on Environmental Quality released two reports (NOAA & BPA) which weigh in on the issue.

- Sen. Murray and Gov. Inslee recommendations to follow

Outreach

Infrastructure Investment & Jobs Act

Where we are at

- The Law authorizes $1.2 trillion for transportation and infrastructure spending

- Includes spending for energy and power infrastructure and broadband

- Most programs are still at various stages of the agency development. Most of the funds will be directed over a 5-year period

Legend:
- Previously-Passed Transportation Funding * | $650 billion
- Roads, Bridges and Related Programs | $111 billion
- Energy, Power and Electric Grid Reliability | $107.50 billion
- Freight and Passenger Rail | $66 billion
- Broadband | $65 billion
- Water and Wastewater Infrastructure | $55 billion
- Public Transportation | $39.20 billion
- Airports | $25 billion
- Natural Disaster Prevention and Mitigation | $23.30 billion
- Cleaning-Up Abandoned Sites | $21 billion
- Army Corps of Engineers | $16.70 billion
- Highway and Pedestrian Safety | $11 billion
- Ports and Coast Guard | $7.8 billion
- Cybersecurity and Other Infrastructure Programs | $10.11 billion

Grant PUD

Initial Programs of Interest

Hydropower

- Total funding of more than $500 Million – Funding will be limited to 30% of the costs of the applicable improvements. No facility may receive a fiscal payment of more than $5 million in a single year.

- Hydroelectric efficiency improvement incentives (sec. 40332 / sec. 243)
  - Improve efficiency by at least 3%

- Maintaining and enhancing hydroelectric incentives (sec. 40333 / sec. 247)
  - Improve dam safety, environmental improvements

- DOE has released a Request for Information for Hydropower infrastructure grants – responses due Sept. 6, 2022

Grant PUD

Programs of Interest – Cont.

Preventing Outages & Enhancing the Resiliency of the Electric Grid

- $5 billion in grant funding - $1 billion a year over a five-year period
- Half of the funding is distributed directly to states and tribes. 30% of the funding is reserved for small utilities with w/limited electricity sales
- DOE still developing the program – RFI for states and tribes program has been released. RFI for direct funds could be out soon
- Funding will be limited to a total amount no greater than the entity has spent in the prior 3 years on efforts to reduce the likelihood and consequence of disruptive events

Grant
PUD

Programs of Interest – Cont.

Broadband

- USDA Reconnect Grant Program – Purpose is to bring high-speed internet to rural areas
  - Open to Private Companies, nonprofits, tribes, state and local governments
  - Established in 2018
  - Most recent application window recently closed. Anticipate that another round may be open later this year. Exact funding determined at that time
- Broadband Equity, Access and Deployment Program (BEAD)
  - State block grant program with each state receiving at least $100mm

Direct subsidy bonds

BABs & CREBs

- American Public Power Association (APPA) and 13 other members of the Public Finance Network sent a letter to the House and Senate Budget Committees urging Congress to act to prevent the potential elimination of future direct bond payments
    - Congress will need to waive the Pay as You Go Act (PAYGO) in relation to American Rescue Plan Act (ARPA) which was enacted last year
    - In 2021 Congress moved to prevent PAYGO from applying to ARPA in 2022
    - However, a permanent fix was not put into place at that time
- We are engaging with the Large Public Power Council (LPPC), APPA and others to avoid any impact on Grant PUD

Grant PUD

State Legislative

Update

State Arrearages funding

- In 2022, the state legislature appropriated $100 Million
  - Funding is available for public/private utilities (electrical, water, sewer, garbage and natural gas)
  - Funds to be used to help reduce residential customer arrearages accrued due to the pandemic
  - Only residential customers who receive help from the Low-Income Home Energy Assistance (LIHEAP) programs or own rate-payer-funded benefits are eligible to receive funding.
- Currently in the second phase of submission of information to the Dept. of Commerce

Grant PUD

Recreational Immunity

2023 Session

- Code Revisor Bill Drafted
  - Focuses on hydro projects with FERC licenses to limit the inclusions of other amendments
  - The other Mid-C's have reviewed and are supportive of the proposal

- Upcoming months
  - Will discuss with other FERC licensed hydro operators
  - Coordinate with the 13th Legislative District members
  - Identify a legislative sponsor of the bill
  - Coordinate other possible supporters
  - Look to file the bill in early December

Other topics of interest

Electrification of transportation

- WSDOT EV Infrastructure
  - This fall WSDOT could receive $71million in federal funding to implement its plan for deploying EV infrastructure
  - WSDOT will prioritize investment within Alternative Fuel Corridors which include I-90 in Grant County
  - Exact sites TBD – a requirement that there is no more than 50 miles between sites
- Funding and projects to be deployed over five years. WSDOT is expected to use third-party entities to manage the projects
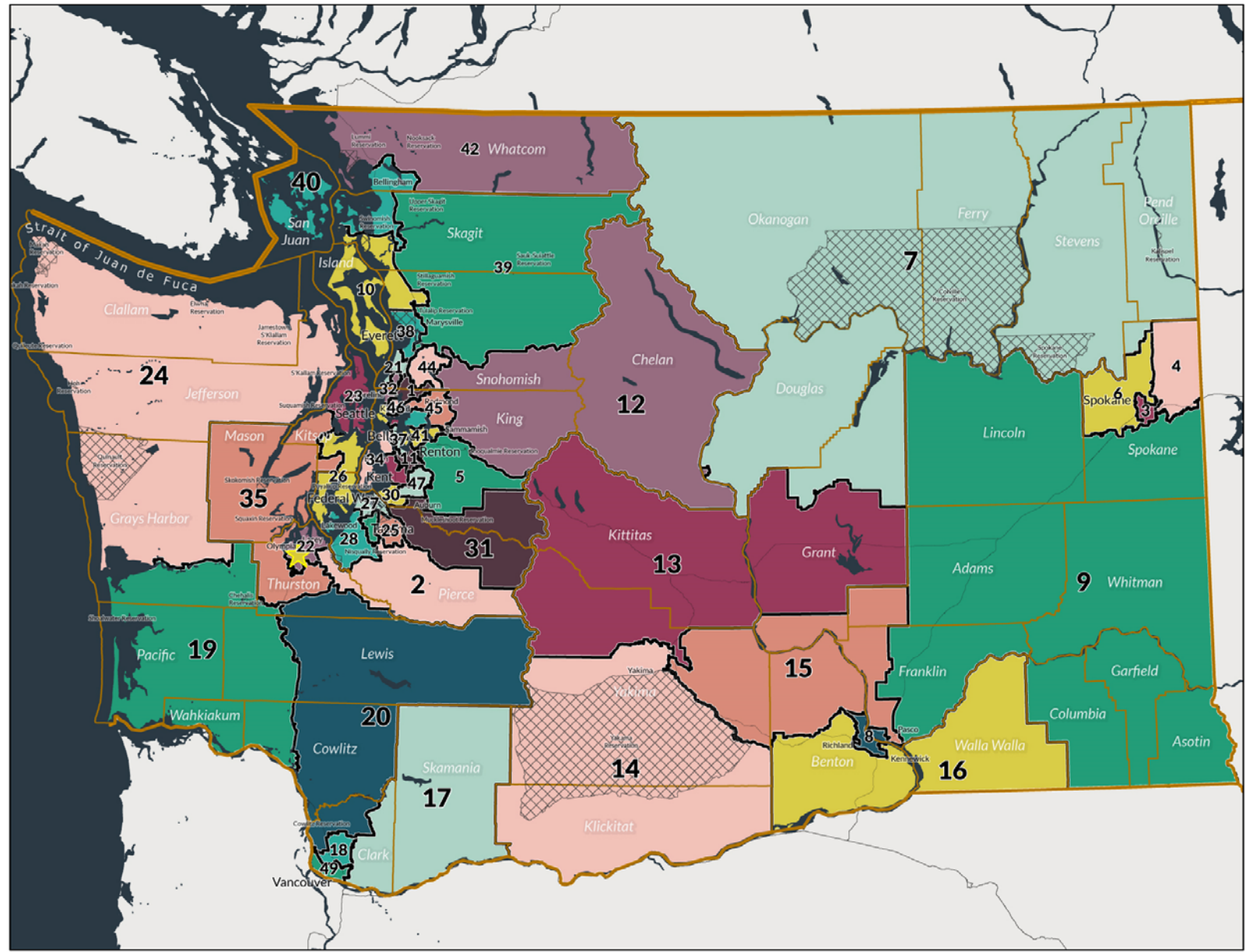
Redistricting

- 13th Legislative District
  - Sen. Judy Warnick
  - Rep. Tom Dent
  - Rep. Alex Ybarra

- 7th Legislative District
  - Sen. Shelly Short
  - Rep. Jacquelin Maycumber
  - Rep. Joel Kretz

Thank You