Power Delivery Facilities Master Plan

April 26, 2022

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Agenda

- ❑ Overview of Alternatives Considered
- ❑ Power Delivery Facilities Master Plan (FMP) Recommendation
  - New Facilities
  - Existing Facilities
  - Property
- ❑ Why This Alternative
- ❑ Project Delivery Method
- ❑ Budget & Schedule

Desired Outcome for Today

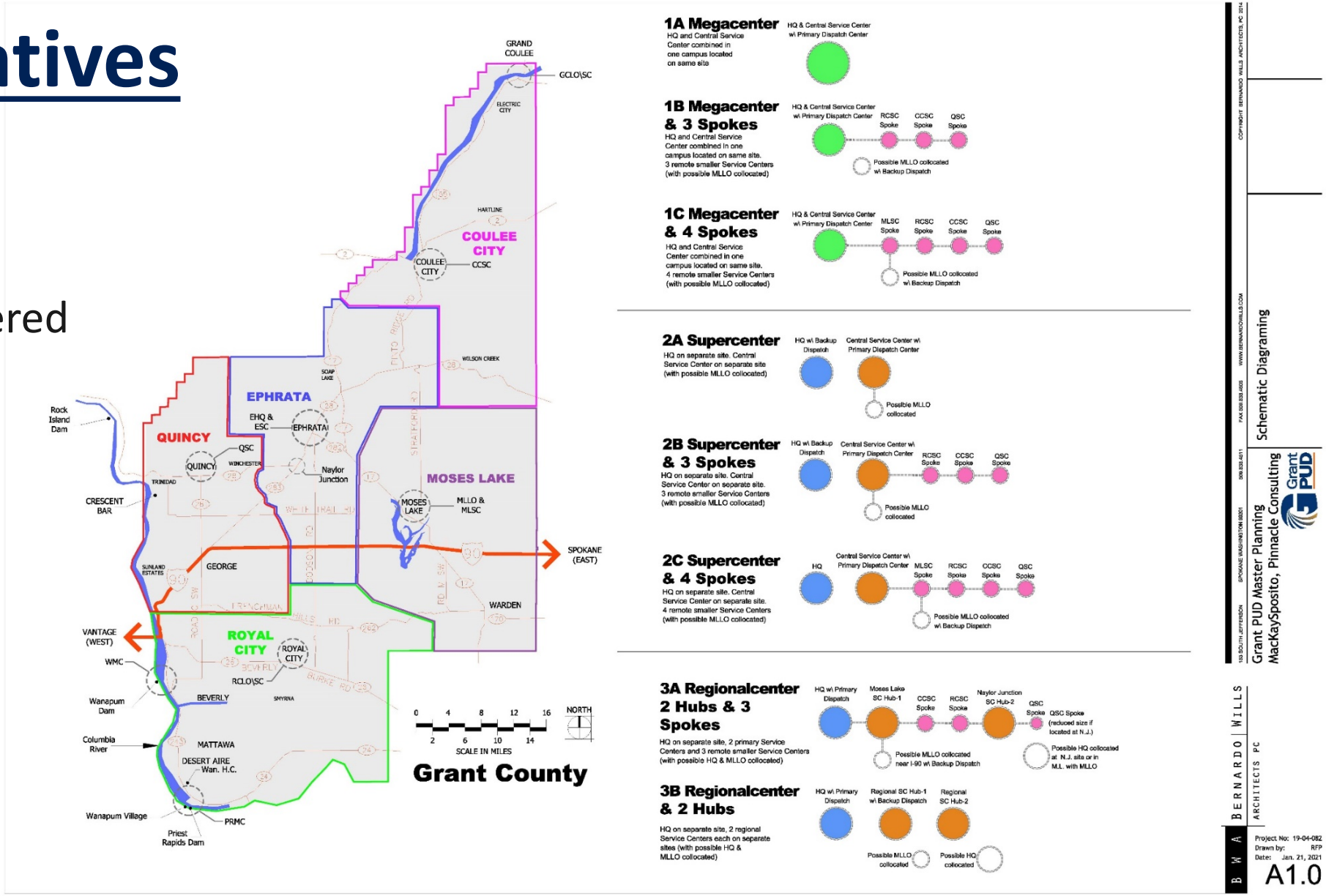
- Approval of Recommended Alternative

Purpose of a Facilities Master Plan

- *A facilities master plan is a roadmap of where we want to go in the future with our facilities – what we need and where we need it*
- *That map guides both existing & new facilities*
  - *Provides guidance on timing of existing facilities maintenance & surplus*
  - *Provides guidance on timing of new facilities and the transition from existing facilities (phasing)*

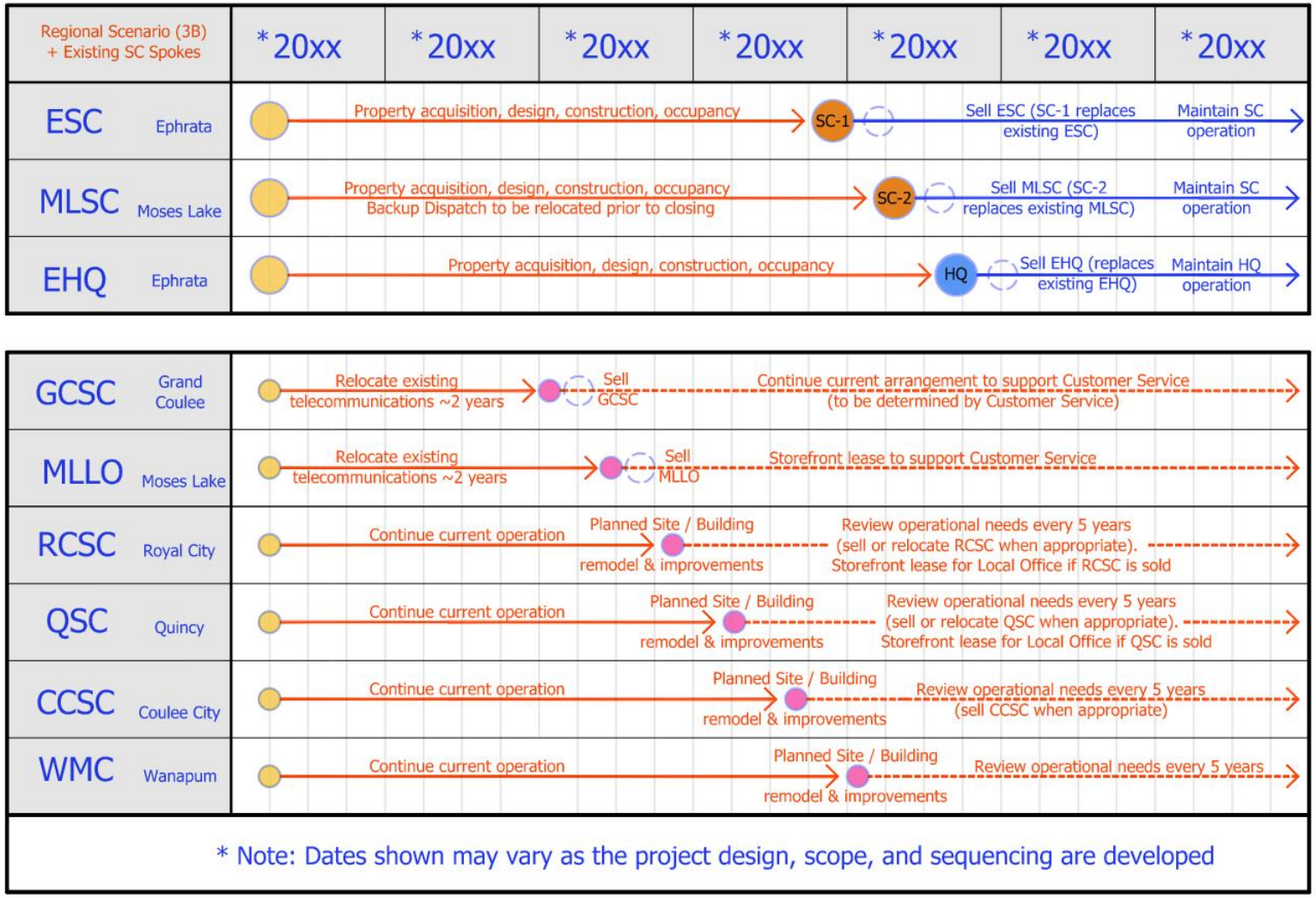
FMP Alternatives Considered

- Alternatives Considered
  - Mega-Center
  - Regional Center
  - Super Center



FMP Recommended Alternative

- ❑ New Facilities
  - Ephrata Service Center (SW Ephrata Area)
  - Moses Lake Service Center (SE Moses Lake Area)
  - Ephrata Headquarters (SE Ephrata Area)
- ❑ Existing Facilities
  - Satellite Service Centers
  - Local Offices
- ❑ Property
  - 2x Required
  - Location TBD during Preliminary Planning



Why the Regional Center+ Alternative

- Customer Service
  - New Facilities Replace Existing Facilities that are No Long Viable
    - ✓ Site Constraints, Extent of Renovations & Additions, and Compromised Operations are Not Best Value
  - Strategically Located Existing Satellite Facilities Remain
    - ✓ Existing Facilities at CCSC, QLO/SC, RCLO/SC, and Wanapum
    - ✓ Performance and Need for Existing Satellite Facilities Continues to be Reviewed
  - Reduce Travel Time for Crews
  - Maintains Our Ability to Provide In-Person Customer Interaction

- Resiliency
  - Multiple Facilities Allow Future Operations Options
  - Reduce Risk Associated with Transportation Shutdowns, Natural Disaster, and Public Health

- Reduced Impact on Operations
  - Phasing Construction of the New Facilities Reduces Operational Impacts Associated with New Facility Start-up and Staff Relocation

FMP Delivery Method

- Design/Build Preferred Project Delivery Method
  - State Project Review Committee (PRC) Process & Application Consultant (May 2022)
  - Owner's Representative Project & Construction Management Firm (July 2022)
  - PRC Application & Approval (September 2022)
    - ✓ Go / No-Go on D/B Project Delivery
  - Design/Build Contractor & Consultant Team (January 2023)

- Advantages
  - Early contractor selection & involvement of the contractor in the design process
  - Flexibility & Collaboration Throughout the Design Process
  - Improved Decision Making & Communication
  - Increased Control of Budget and Schedule
    - ✓ Reduced Project Timeline
    - ✓ Risk management through guaranteed project costs and performance

FMP Budget & Schedule

- Preliminary Budget
  - Project Cost = $ 266m

- Preliminary Schedule
  - 2022
    - ✓ Project Budget & Resources Approval
    - ✓ Project Team Selection & Project Delivery Method Approval
    - ✓ Property Due Diligence
  - 2023 - 2024
    - ✓ Property Purchase
    - ✓ Programming & Schematic Design (designed as a complete package)
  - 2025
    - ✓ Construction Cost / Schedule & Construction Contract Approval (ESC – New Facility)
  - 2026 – TBD (phased with overlapping final design/cost/contract + 2 years construction)
    - ✓ Construction & Occupancy ESC – 2027
    - ✓ Construction & Occupancy MLSC – 2029 (TBD – Estimated)
    - ✓ Construction & Occupancy EHQ – 2032 (TBD – Estimated)

Questions

?

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Approval of Facilities Master Plan

(Roadmap)

Regional Center +

Thank You

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Approved Recommendation
Facilities Master Plan (FMP) Steering Committee
March 30, 2022

Introduction

The FMP Steering Committee (SteerCo) has been meeting in recent years to guide the development of a 30-year Power Delivery (PD) Facilities Master Plan (FMP) for Grant County PUD (GPUD). FMP elements have been prepared and shared with the SteerCo through a planning team that was a combination of consultant team, led by Mackay Sposito, and GPUD staff support. Draft work products were developed in coordination with key stakeholders within the GPUD organization.

The planning team and SteerCo identified and analyzed nine different alternative facility options. Those options were narrowed to eight when re-use of our primary existing facilities (e.g., Ephrata Headquarters, Ephrata Service Center, and Moses Lake Service Center) was determined to not be a viable alternative due to current functional size and condition of site and buildings, location, ability to expand for current and future needs, and the extensive renovations and additions required. The options were then narrowed from eight down to the top three. The top three options were:

- Option 1A: Mega Center [(1) service center and headquarters on a single site]
- Option 3B: Headquarters with Two Service Centers [(2) service centers and (1) headquarters on (3) independent sites]
- Option 2A: Supercenter [(1) service center and (1) headquarters on (2) independent sites]

Periodic project status updates to the GPUD Commission have also been made during the FMP planning process with increased briefings held in late 2021 and early 2022. In late January 2022, the GPUD Commission designated two commissioners to serve on the FMP SteerCo, and several SteerCo meetings have been held in February and March 2022 to discuss and refine the elements of a final recommended FMP option. The recommendation is provided in this document. The FMP SteerCo recommendation being made is Option 3B (headquarters with two service centers) with strategically located existing satellite service centers remaining in-place while the performance of the new facilities is confirmed and continued need for satellite location(s) in the future is verified. The recommended option will be referred to as 3B+ and is discussed in greater detail below.

Facilities

Option 3B+ creates a single District HQ (District administrative functions in a single location) and creates two regionally placed primary Service Centers. The HQ would be a new facility located generally in the southeast Ephrata area. The two service centers would be located generally in the area between Ephrata/George/Quincy and in southeast Moses Lake area (near the Highway 17/I-90 intersection). However, the SteerCo also recommends a pros/cons evaluation of combining the new HQ facility with the Ephrata/George/Quincy service center in one location once specific site options have been identified as part of early FMP implementation. Location of specific Power Delivery, management, engineering,

and dispatch (primary and backup) functions to be included in these facilities would also be worked out as part of early FMP implementation activities.

Land

Regardless of the ultimate locations selected for these new facilities, the SteerCo recommends buying approximately twice the land needed for the facilities footprints to have reserve space available to support future growth.

Satellites

The recommended option also includes maintaining existing satellite service center locations in Coulee City, Royal City, Quincy, and Wanapum (***without any additional immediate improvements to these facilities***), with a rolling 5-year review of these satellite service centers related to their functionality, continued need, purpose, and performance post occupancy of the new primary service centers. Updates to the FMP would be made based upon this review. Material staging locations may also be needed in other areas of the District. Options to consider for these satellite service center reviews could include but not necessarily be limited to:

1. Keep the facility as is for additional years

2. Keep only the customer service location of the facility and close the service center portion but continue to use the site as a location for staging materials used in service calls

3. Close facility, sell the land, and consolidate operations into the newly constructed primary service centers

4. Buy additional land for an expanded or relocated satellite service center (with or without customer service replacement location)

The recommended option also includes customer service local offices in Ephrata, Moses Lake, Quincy and Royal City:

- Close Grand Coulee local office and service center, relocate telecommunications equipment, and surplus property.
    - Continue existing local office arrangements provided through cooperative efforts with other existing businesses/agencies

- Relocate Moses Lake local office to a leased facility within the Moses Lake downtown core area
    - Close existing Moses Lake local office, relocate telecommunications equipment, and surplus property.

- Relocate Ephrata local office to the new HQ or a leased facility within the Ephrata downtown core area
    - Determine location of the local office function as part of early FMP implementation activities

- Maintain Quincy local office location as a satellite service center

    - If the service center were to be closed as part of a future FMP 5-year review and update, then leased space would be provided to maintain a local office presence in the community

- Maintain Royal City local office location as a satellite service center
    - If the service center were to be closed as part of a future FMP 5-year review and update, then leased space would be provided to maintain a local office presence in the community.

See the figure in Attachment 1 for a schematic that summarizes the recommended path forward options for both the new and existing facilities.

Why Recommend Option3B+?

It was determined by the SteerCo that this Option 3B+ (with local offices and satellite service center alternatives), as described above, would provide the best combination of desired benefits, with an emphasis on:

- The existing Ephrata Service Center (ESC), Moses Lake Service Center (MLSC), and the Ephrata Headquarters (EHQ) are outdated and no longer function to meet long-term District needs. These facilities have outlived their useful life and require extensive upgrades that would be less cost effective and less functional than replacing them with new facilities in better locations. In addition, EHQ is located within the 100-year floodplain and ESC and MLSC are poorly located to serve future needs.

- Reduced travel time - for outage response in comparison to the other top two alternatives, along with the best access options for traveling to service outage areas in the District.

- Resiliency - two regionally placed primary service centers, a separate HQ, and satellite service centers would provide the highest level of resiliency, in addition to risk resiliency facility components to be incorporated into final design.

- Customer service – providing geographically distributed locations in the GPUD service area for in-person customer interaction.

- Reduced staff disruption – this recommendation would have the least impact on staff and operations and provide opportunity to stagger the impacts that are a component of a transition between facilities.

Timing and Sequencing

As noted above, the FMP is expected to meet Power Delivery facility needs for the next 30 years and beyond. It is recommended that the new HQ and service centers be designed together to achieve efficiencies through an integrated, holistic design. Then construct the facilities as quickly as can be achieved within GPUD staffing and capital funding constraints, in this order of priority:

1. New Service Center (SC-1) in area between Ephrata/George/Quincy
2. New Service Center (SC-2) in SE Moses Lake area
3. New Ephrata HQ in SW Ephrata area

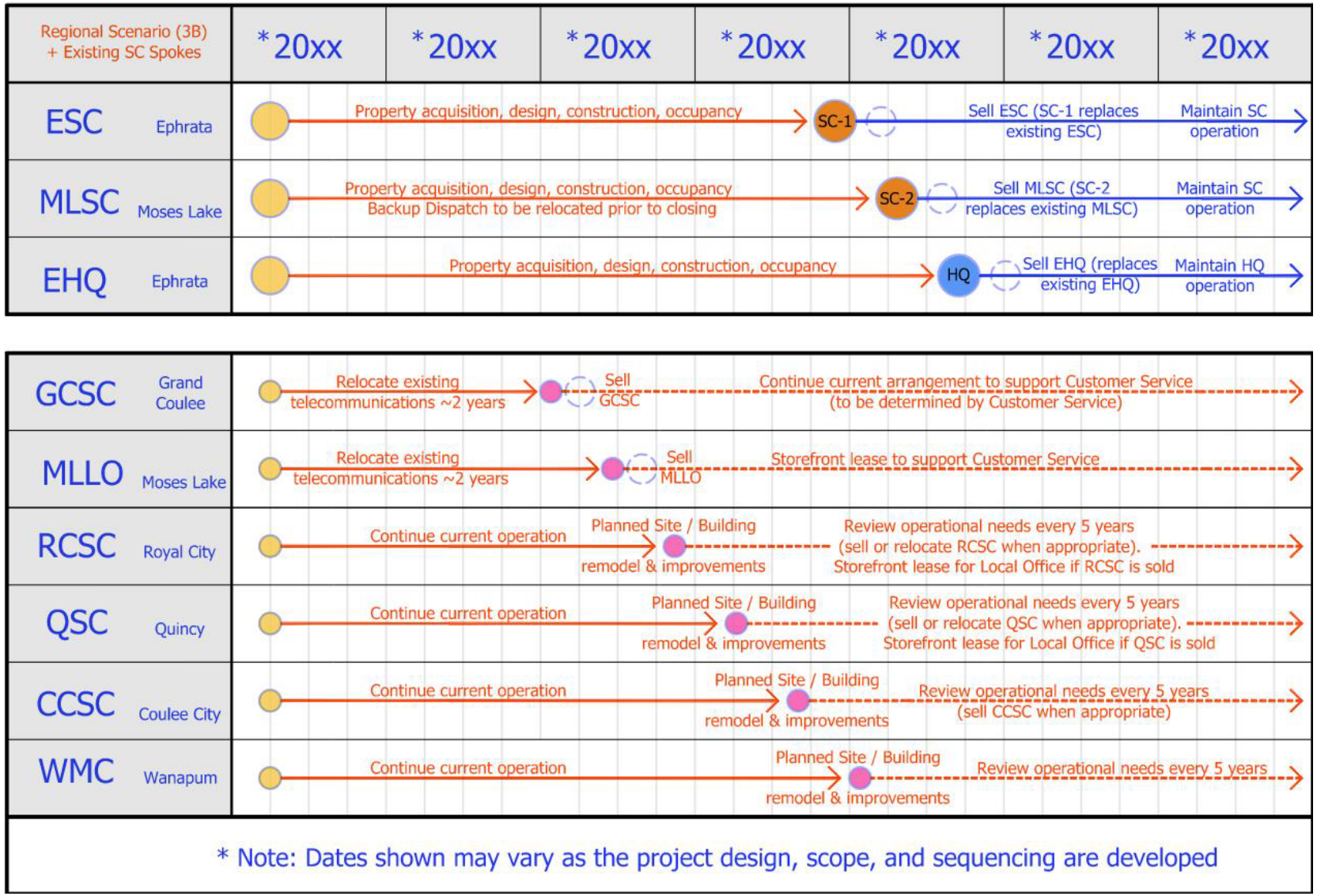
The actual construction and capital funding schedule would be integrated into the GPUD capital plan with other potential large projects, to smooth out and reduce rate, financing and other related impacts. The details of which will be determined through the Enterprise Project Portfolio Management and Portfolio Working Group processes.

Common to each of these timing/sequencing options would be to begin working on finding and leasing new local office space in Moses Lake, and to surplus Grand Coulee and the existing Moses Lake Local office in the first 1 to 2 years of implementation.

Project Delivery Approach

The SteerCo further recommends that the GPUD pursue a Progressive Design/Build (PD/B) project delivery approach for designing and constructing the new HQ and service centers, as an alternative to the traditional Design/Bid/Build delivery method. PD/B is expected to provide better District control of the project(s) budget, flexibility and collaboration throughout the design (that typically leads to better project outcomes), faster decision making both in design and construction, and providing for a reduced project timeline (potential to cut one year or more from schedule).

Attachment 1



04

Safety Report

April 2022

Date	Injury	Description
3/21	Finger	**Cut finger** While setting up for bridge crane maintenance on the loading dock, one of the metal "A" frame working overhead signs started to fall apart and pinched and cut an employee's finger.

Injuries Reported

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2022	Month	YTD
Total Incidents Reported	2 (includes one contractor)	9
Recordable Case(s)	0	3
Restricted Duty Case(s)	0	1
Lost Workday Case(s)	0	1

Monthly and Year to Date

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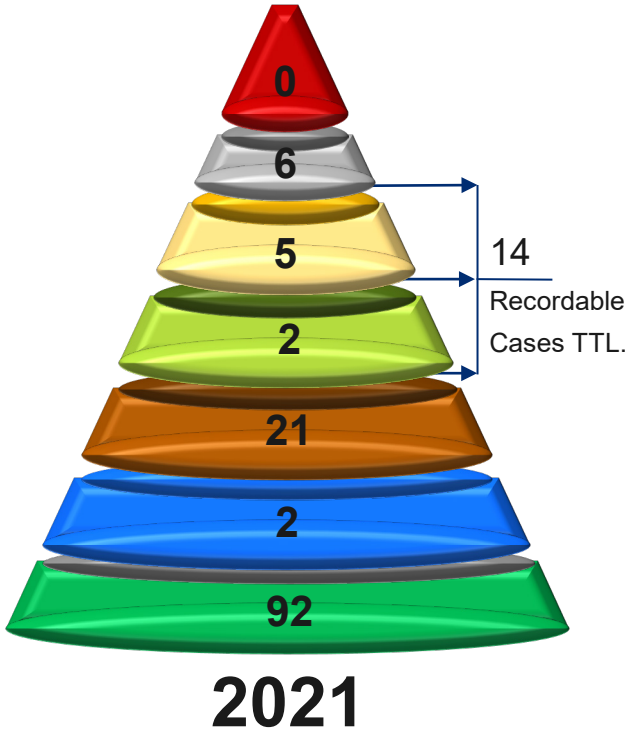
2022 incidents Year to Date Summary

Employee Safety



Date	Location	Description
3/2	WAN	**Aerial lift - Bad valve on propane tank** While installing a new tank of propane for an aerial lift the connection began to leak. The valve on the full tank was “closed”. It was determined that the valve was bad, and the tank was removed and brought it to Hazmat. The employee was pleased leather gloves were worn to prevent the propane from burning their hand. CRT Details: Proper PPE was used, and the employee responded correctly to the condition.
3/8	PRD	**Grounding Outside of Clearance Perimeter** P10 was placed on clearance to retrieve a unit rotation device. Electrical support was requested to install grounds on P10. Once on clearance, grounds were requested to be installed, and prior to tagging grounds a P10 field ground relay alarm annunciated. Upon investigation, a grounding device was found on the P10 rotor slip rings, which were not part of the clearance perimeter. Work was stopped, the Chief isolated the exciter and reported the event to the Operations Supervisor. CRT Details: A root cause evaluation will be performed.

Close Calls

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Date	Location	Description
3/16	PRD	**Potable water supply pipe removed under pressure.** A work order was in place to modify a water supply pipe to the de-ionizer tank, bringing it up to code. A Mechanic loosened the pipe, and realized it was still under pressure. The mechanic re-attached the pipe without further incident. CRT Details: Ensure isolation and a “zero-energy” state before starting work. If unsure stop work and communicate concerns with foreman, planner, and or engineering. Maintain focus on safety and that appropriate clearance perimeter is established prior to work beginning.
3/16	ESC	**Dump Bin came loose** While dumping a small scrap dump bin into a large container, the bin separated from the base due to the safety chain positioning, falling into the larger bin. There were no injuries or damage to district property. Discussed proper chain positioning and standing clear while dumping. CRT Details: Carefully inspect all safety devices to ensure they are properly secured and in the correct configuration prior to performing the task. Stop when unsure and request assistance before proceeding.

Close Calls

Grant PUD

Date	Location	Description
3/23	PRD	**Obstructed fire door** One of the fire doors for the oil purification room was obstructed by a coil of hose. If the door needed to close due to a fire it would not have been able to do its job. This door has been obstructed several times even though there is yellow cross hatches on the floor to show that the area is a non storage location. CRT Details: Blocking fire doors is not in compliance with state and federal regulations. Fire doors, fire suppression systems, and egress routes must always remain clear.
3/23	WAN	**Trip Hazard** While working in the Transformer Deck area an employee tripped and nearly fell because of the uneven surface. CRT Details: Be aware of your surroundings and keep eyes on path. Issues with uneven terrain need to be addressed during pre job brief. The gratings on the transformer deck will be investigated and remedied if possible.

Close Calls

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Date	Vehicle	Driver's Account:
3/3	V553	**Broken air valve** While turning water truck #553 around during Right bank fish ladder a maintenance operator bumped a rock that was below sight breaking right front air valve. CRT Details: Plan your path of travel and maintain awareness of the surrounding area while operating vehicles and equipment. Utilize a spotter and stop when unsure to check for changing conditions.
3/15	V198	**Bucket truck #198** An employee started the vehicle, and a weird sound came from the engine like something was rubbing. The employee turned the vehicle off and investigated under the hood and noticed the serpentine belt was breaking apart. CRT Details: The Transportation Department has been made aware of this condition.

Vehicle Incidents

Date	Location	Description
3/14	PRD	**Cut finger (Contractor)** While removing Shear tubes from the bottom off an Ice Bin a worker pinched his finger with the side of the bin. Employee was wearing gloves which likely reduced the severity of the injury. CRT Details: Ensure that proper sequencing and staging is used while placing tubes in the bin

Contractor Injuries and Incidents

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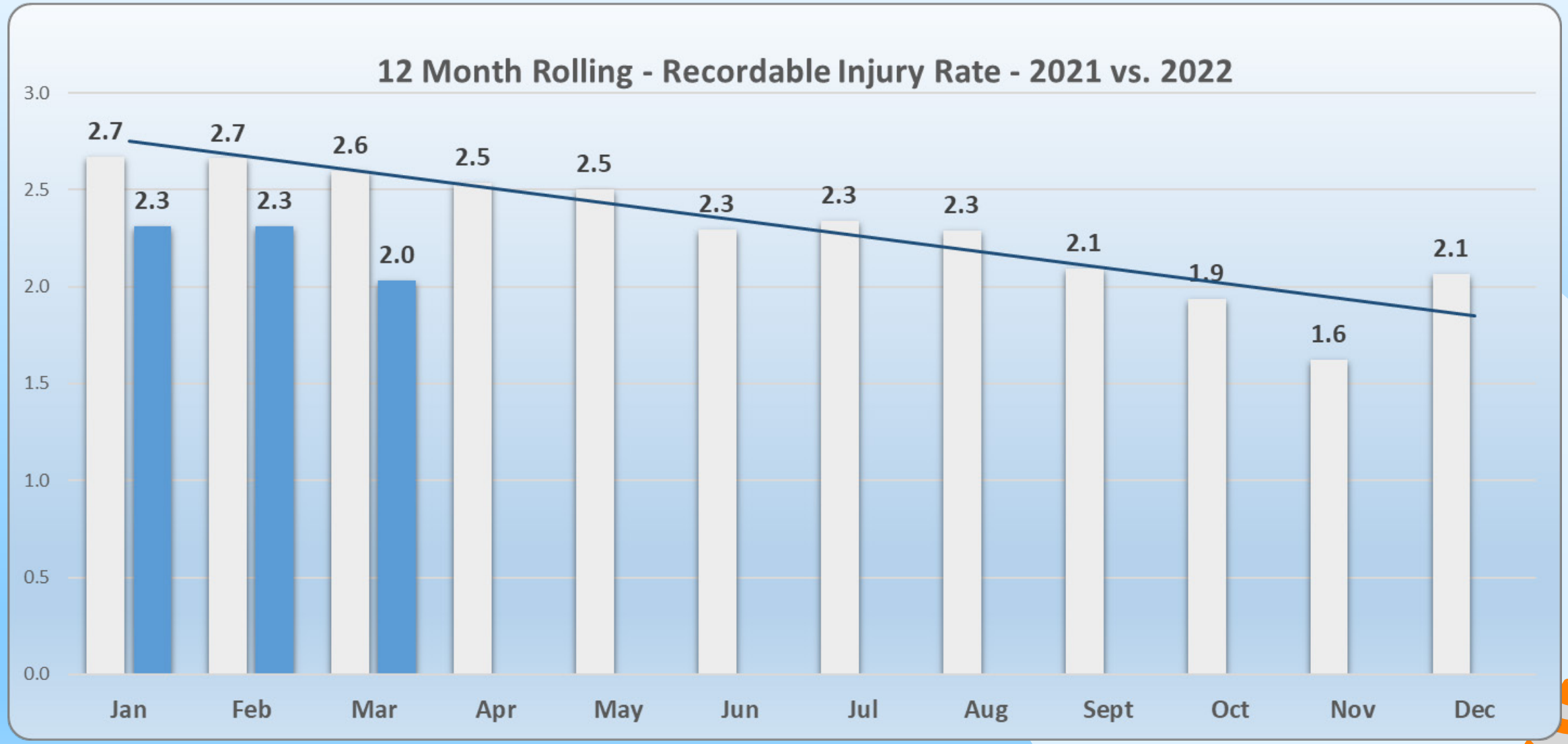
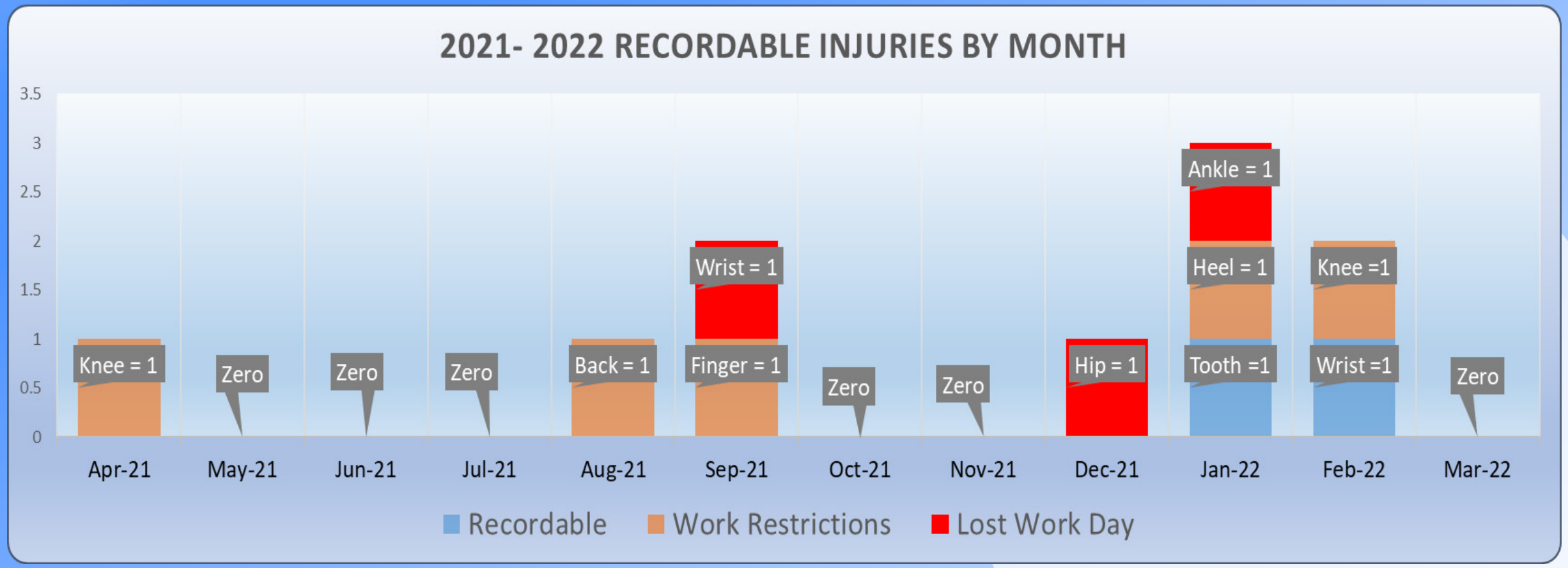
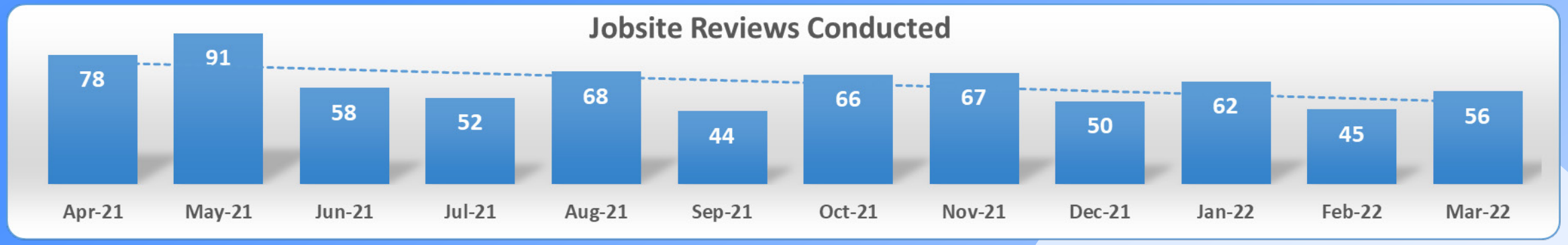
Leading & Lagging Indicators

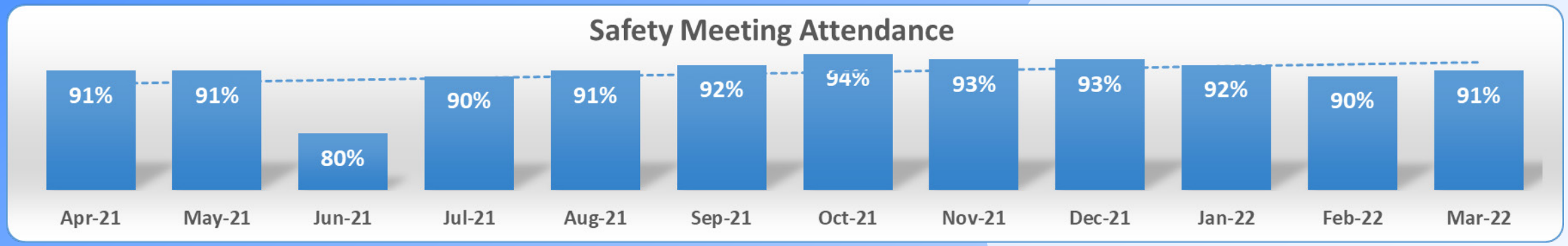


Leading & Lagging Indicators



Leading & Lagging Indicators





Exit Routes and Fire Doors

Did You Know???

- Fires and explosions kill more than 200 and injure more than **5,000** workers each year!
- Other kinds of emergencies (explosions, earthquakes, bomb threats, toxic vapors, storms, etc.) can also endanger workers
- Exit route means a continuous and unobstructed path of exit travel from any point within a workplace to a place of safety (including refuge areas).
- An exit route consists of three parts:
  - The exit access
  - The exit
  - The exit discharge.

Please keep all exit routes and Fire doors free of obstructions and blockage.

Our lives can depend on it!!!

Exit Routes and Fire Doors

- Exit routes shall be:
  - Free and unobstructed
  - Free of explosive or highly flammable materials
  - Arranged so that employees will not have to travel toward a high hazard area, unless it is shielded
- Emergency safeguards must always be in working order,
  - sprinkler systems, alarm systems, fire doors, exit lighting, etc.
- Each exit must be clearly visible and marked with an “Exit” sign
- Each exit must be free of decorations or signs that obscure the visibility of the door
- The line-of-sight to an exit sign must clearly be visible
- If the direction of exit travel is not immediately apparent, signs must be posted indicating the direction to the nearest exit
- Doors along an exit route that could be mistaken for an exit must be marked “Not an Exit”, or be identified by a sign indicating its actual use (e.g., closet)

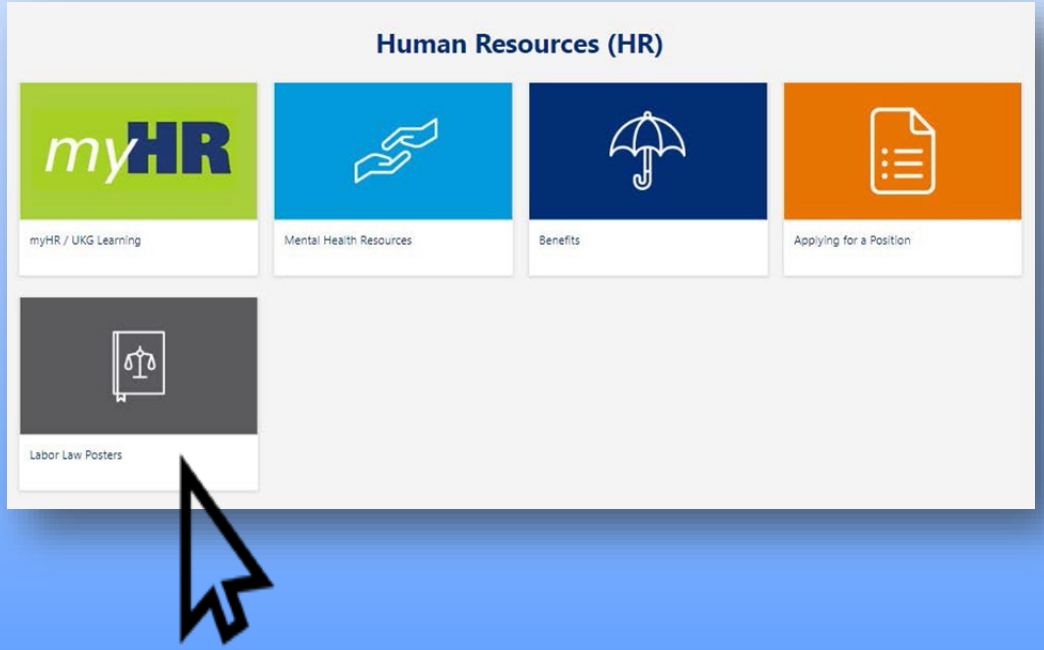
Obstructed exit route

Labor Law Poster Viewing Center

What is it? A link to Workplace Posters on the SharePoint Home page.

Why? With the introduction of remote work and several out-of-state employees, it is important to make the posters more accessible. We still must post Workplace Posters in order to meet the intent of the Washington Administrative Code. These are posted at several locations, from Priest Rapids Dam to Grand Coulee.

How does it work? You can find the link by opening the SharePoint Home page and scrolling down to the Human Resources section and clicking on the Labor Law Posters button.

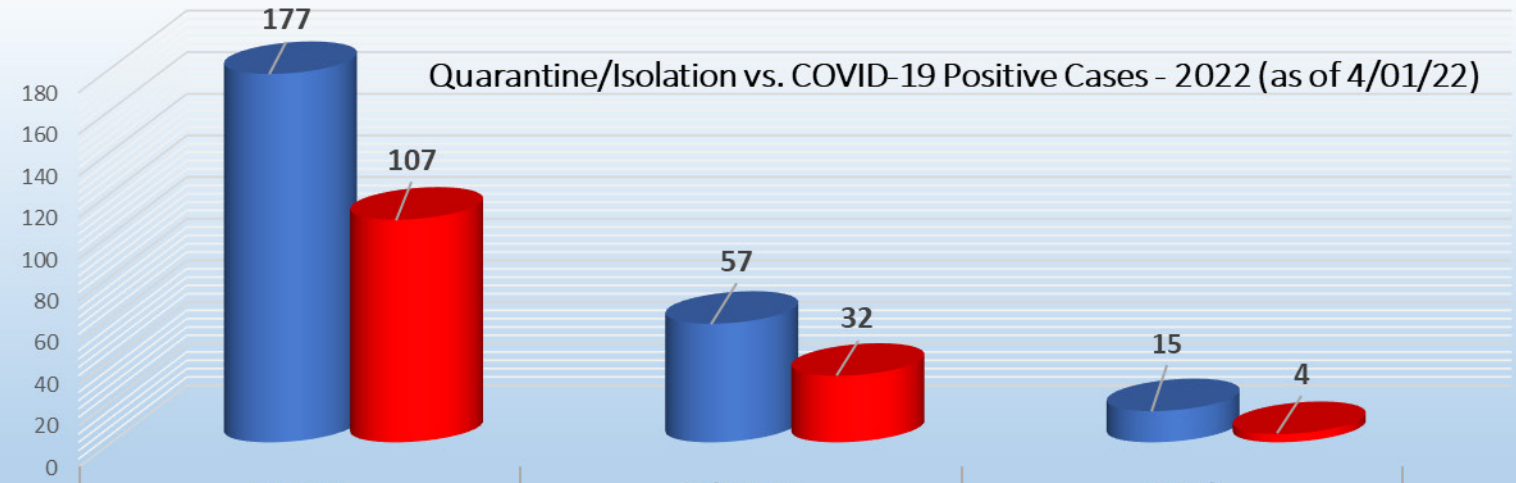


How does it work?

Then click on the choices to access the posters.

What posters will I see?

To see the posters for your location, click on the state you are working from.



	January	February	March
Total Quarantine/isolation Cases	177	57	15
COVID-19 Positive Cases	107	32	4

Four COVID-19 cases were reported during the month of March

4

COVID-19 is rolling back, and so are we!

We have discontinued our contact tracing efforts as of

April 18th.

Safety Action Item Critical Success Factors

Incident Reporting
• Number of Close Calls in March = **6**
• Number of Close Calls Reported on Time = **4**
Injuries
• Total Number of Injuries = **2**
• Total Number of Injuries Reported on Time = **2**
Mobile
• Total Number of Mobile Incidents = **2**
• Total Number of Mobile Incidents Reported on Time = **2**

Number of Open Action Items over 60 days old	
As of **February** 2022	As of **March** 2022
Year 2017 = 3	Year 2017 = 3
Year 2018 = 12	Year 2018 = 15
Year 2019 = 8	Year 2019 = 8
Year 2020 = 5	Year 2020 = 5
Year 2021 = 14	Year 2021 = 10
	Year 2022 = 2
Month Total = **42**	Month Total = **43**
Net - March 2022 = +1	

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Thank You!

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Power Delivery

Q1 2022 Business Report

April, 2022

Grant County
PUBLIC UTILITY DISTRICT

Outline

- Purpose and Goal Statements
- Organizational Structure
- Safety Performance
- Systems Performance
- Financials
- Project Highlights

Purpose and Goal

Purpose: **Provide our customers with safe, reliable electric and communication services by effectively planning, designing, constructing, maintaining and operating our transmission, substation, distribution, and fiber assets and their associated control systems.**

Goal: **Achieve our purpose while championing a culture of safety and operational excellence with continual focus on our values of safety, innovation, service, teamwork, respect, integrity and heritage.**

Structure and Personnel

Managing Director
Power Delivery
Ron Alexander

Administrative Assistant
Alicia Reynolds

Senior Manager
Construction
& Maintenance
TBD

- Line Department
- Electric Shop
- Meter/Relay Shop
- Fiber & Electronics

Manager
Dispatch
LeRoy Patterson

- Dispatch

Senior Manager
Power Delivery
Engineering
Jesus Lopez

- Systems Planning & Standards
- Transmission, Substation & Automation
- Customer & Distribution Engineering

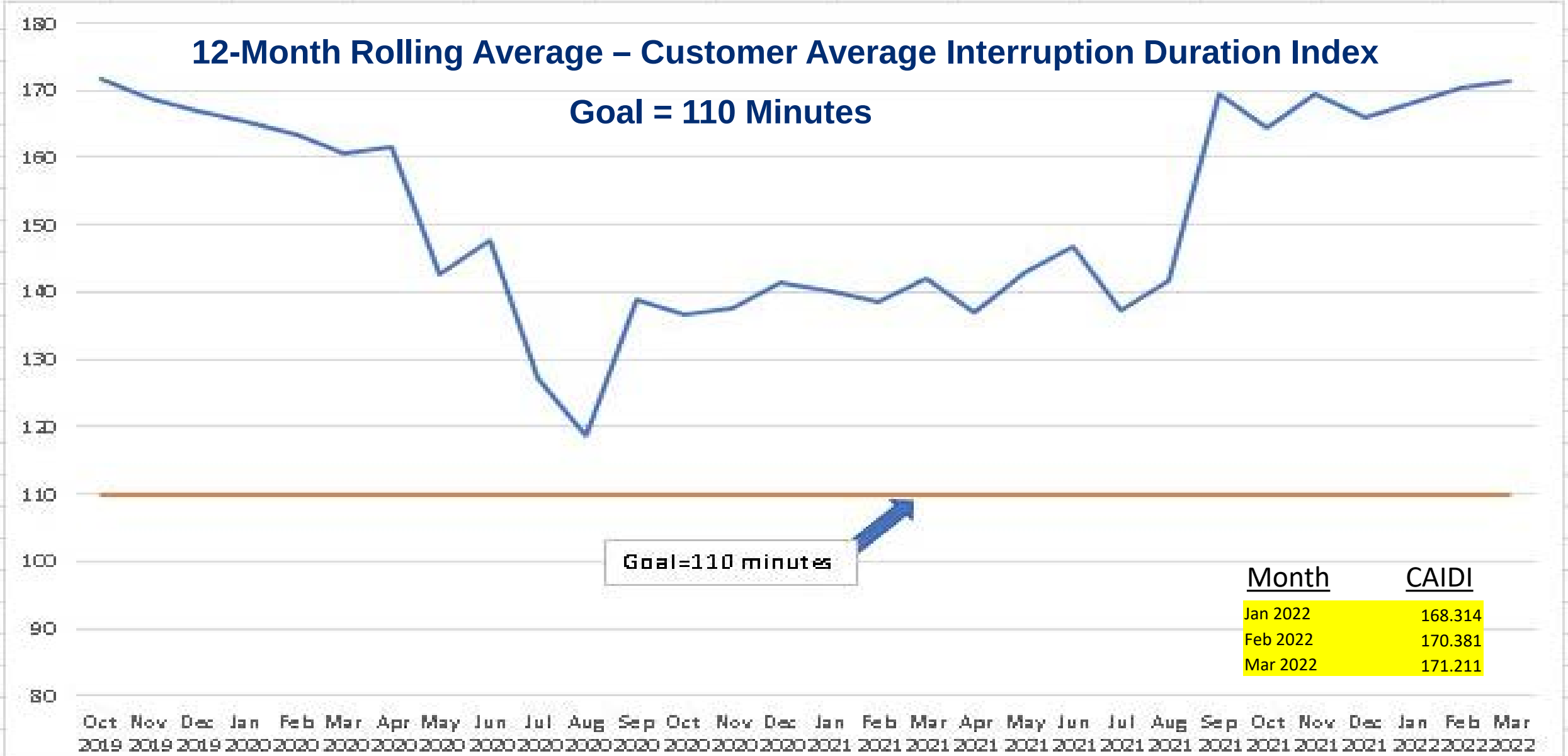
Manager
Control Systems
Engineering
Kevin Carley

- Control Systems

Safety Performance

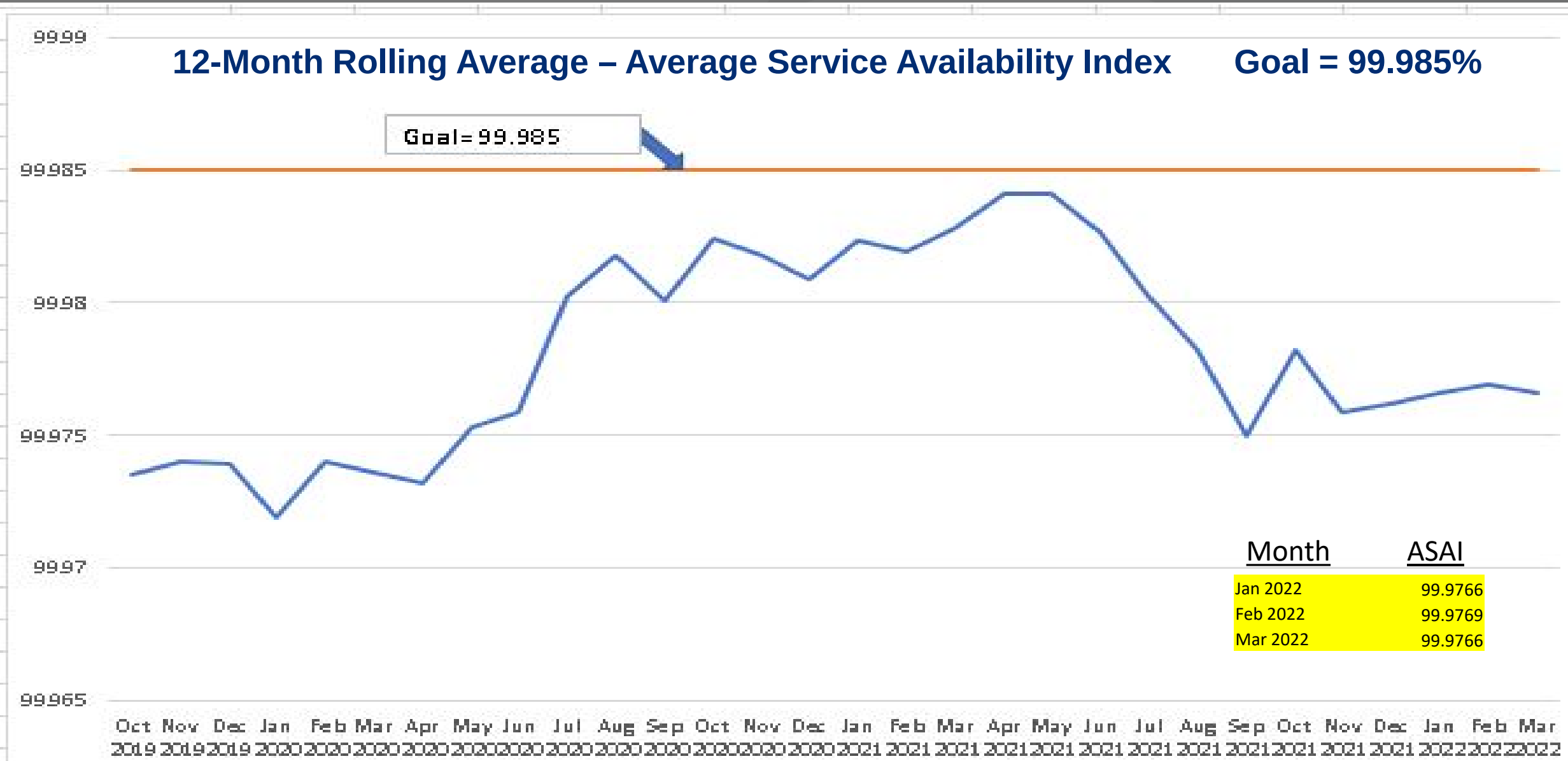
	Jan	Feb	Mar	2022 Total
Injuries	1	0	0	**1**
Recordable Injuries	1	2	0	**3**
Vehicle Incidents	1	1	0	**2**
Close Calls	0	2	0	**2**
Safety Mtg Att %	96%	98%	96%	**96.6%**

Operational Performance - CAIDI



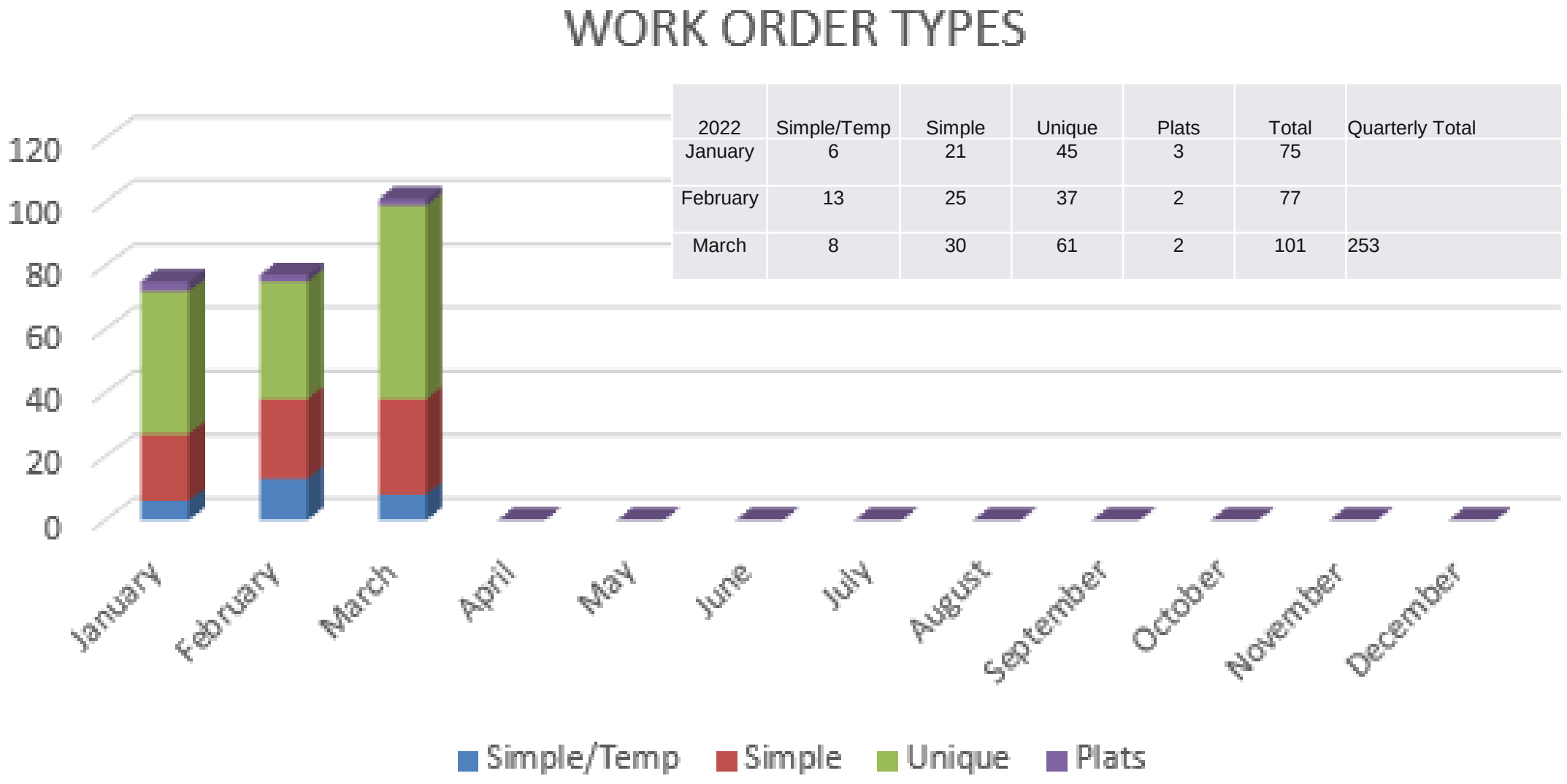
Month	CAIDI
Jan 2022	168.314
Feb 2022	170.381
Mar 2022	171.211

Operational Performance - ASAI



Month	ASAI
Jan 2022	99.9766
Feb 2022	99.9769
Mar 2022	99.9766

Operational Performance – 2022 Work Orders Rec'd



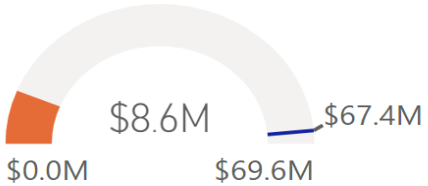
2022	Simple/Temp	Simple	Unique	Plats	Total	Quarterly Total
January	6	21	45	3	75	
February	13	25	37	2	77	
March	8	30	61	2	101	253

2022 Capital Through March

Capital Budget Versus Actuals

PD - Power Delivery QBR Year-to-Date Mar, 2022

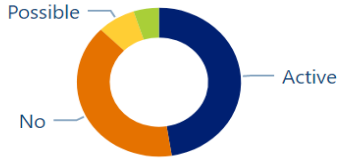
YTD Actuals



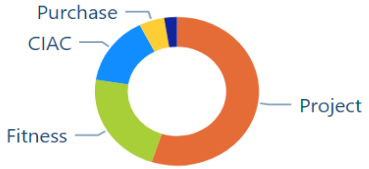
Total Projects

40

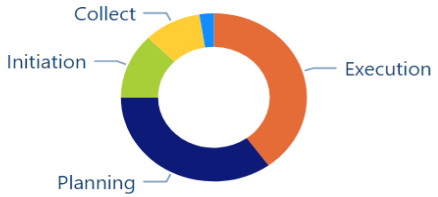
EPMO Management



Project Type



Project Phase



Budget vs Actuals (Capital Directs)

Cost Center	CY Approved Spend	CY Actuals	BOY Fx	CY YEP
EC1000	$2,123,774	$316,574	$2,597,483	$2,914,057
EC4100	$67,430,506	$8,325,915	$56,200,005	$64,525,920
Total	**$69,554,280**	**$8,642,489**	**$58,797,488**	**$67,439,977**

2022 O&M Budget through March

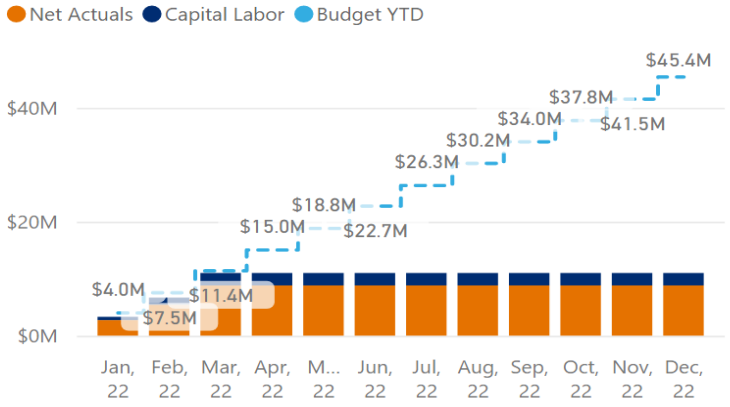
O&M Budget Versus Actuals

EC - Power Delivery QBR Year-to-Date March, 2022

Operating Unit

EC - Power Delivery

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



Gross Actuals Vs. Budget

$11.0M -3.3%

Capital Labor Actuals Vs. Budget

$2.2M +33.3%

Net Actuals Vs. Budget

$8.8M -9.5%

O&M Budget vs Actuals (Including Cap Labor)

Cost Category Type/Cost Category	Budgeted	Actuals	Budget Var	Budget Var %	Consumed %
Labor	**$9,159,058**	**$9,301,423**	**$142,366**	**1.6%**	**101.6%**
Salaries & Wages	$5,214,893	$4,911,102	-$303,791	-5.8%	94.2%
Benefits	$2,878,076	$3,249,471	$371,394	12.9%	112.9%
Overtime	$923,197	$969,535	$46,339	5.0%	105.0%
Other Labor	$142,892	$171,315	$28,423	19.9%	119.9%
Purchased Services	**$1,152,653**	**$751,228**	**-$401,425**	**-34.8%**	**65.2%**
Operating Materials & Equipment	**$933,215**	**$827,490**	**-$105,725**	**-11.3%**	**88.7%**
G&A	**$89,776**	**$54,914**	**-$34,862**	**-38.8%**	**61.2%**
IT	**$33,620**	**$34,520**	**$900**	**2.7%**	**102.7%**
Transportation		**$10,292**			
Utilities		**$13,102**			
Total	**$11,368,322**	**$10,992,970**	**-$375,352**	**-3.3%**	**96.7%**

- Capital Labor is a subset of the Labor above

- Net Actuals vs Budget = Gross Actuals minus Capital Labor

2022 Employee Activity Through March

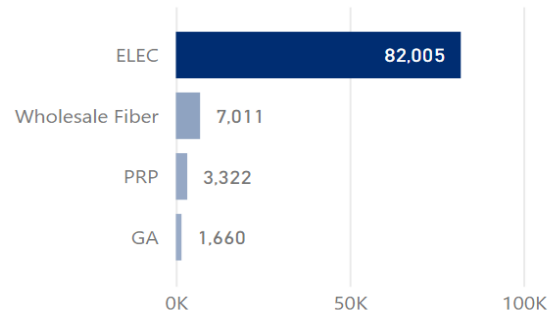
Employee Activity

EC - Power Delivery QBR Year-to-Date March, 2022

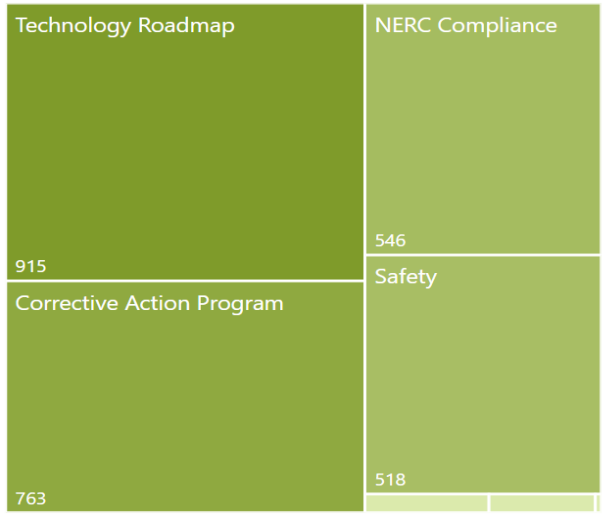
Operating Unit

EC - Power Delivery

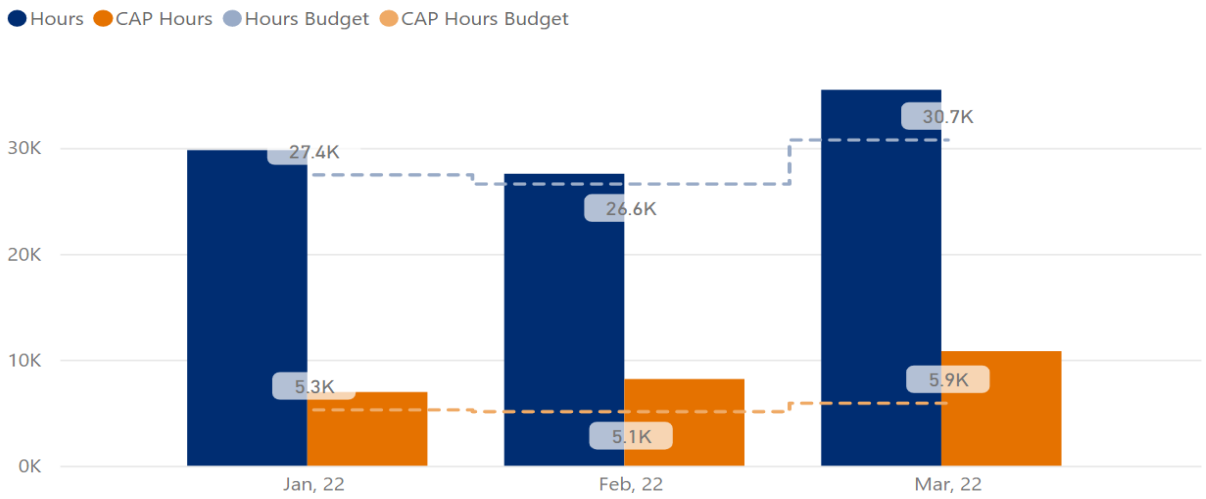
Hours by System



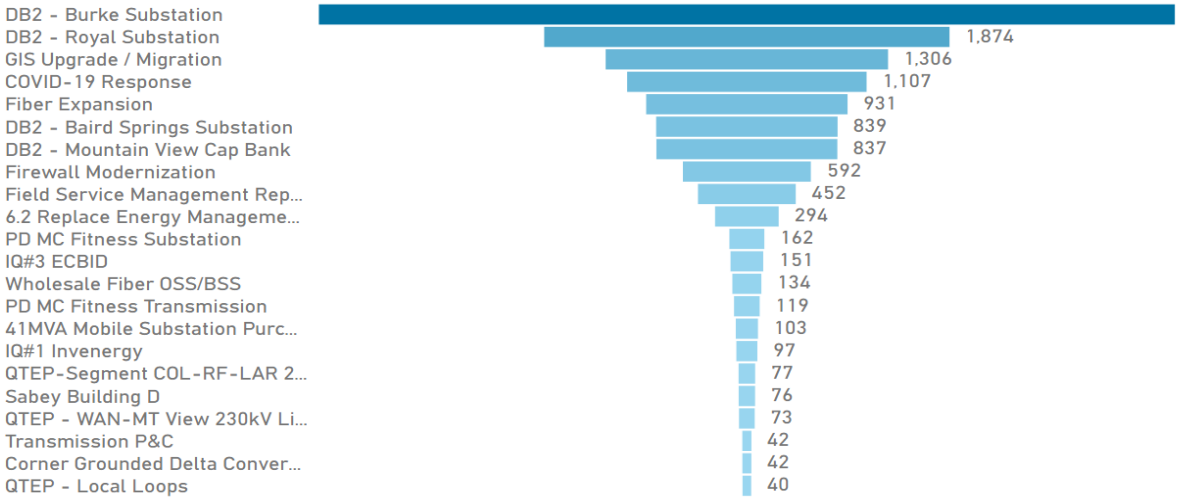
Hours by Program



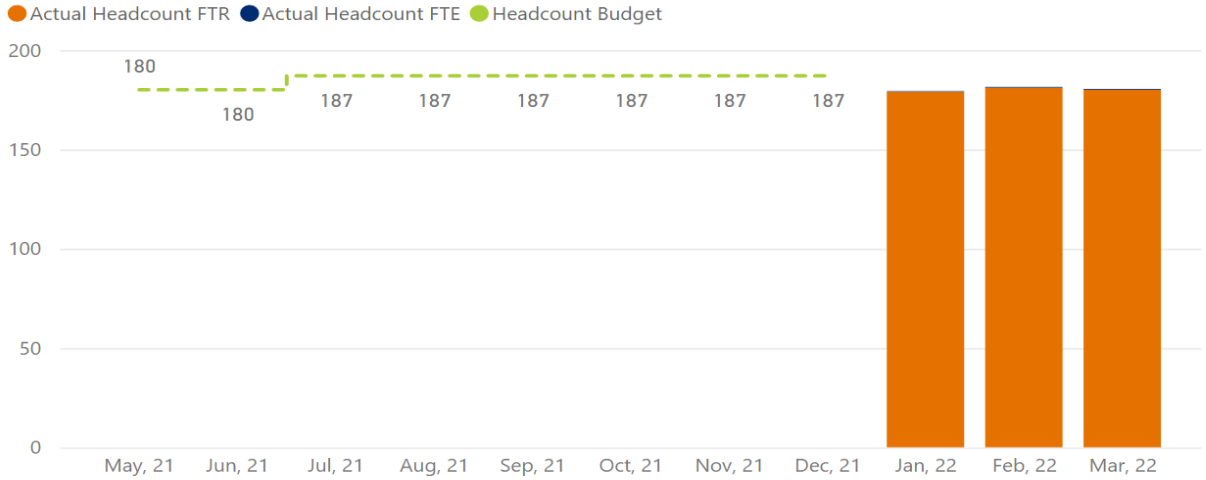
Hours and CAP Hours Vs. Budgets



Hours by Initiative



Headcount and Budget by Month & Year



Q4 2021 Highlights

- Electric System Expansion & Improvement

■ **Design-Build 2 / Load Growth Project**

- Mountain View Mobile Tap & Quincy Plains complete

- Burke (George) substation energized in March. Added load on 3/30

- Royal scheduled complete Qtr. 3 of 2022. Baird Springs scheduled May, 2023 (+/- 4 months)

■ **QTEP**

- Public meetings were held in George and Quincy

- Preferred route recommendations based on public input are in development.

■ **10-Year Reliability Improvement Plan**

- Project plans for “Top 4” worst performing feeders complete

- Work currently being processed through District’s project selection and approval process (EPPM/PWG)

Q4 2021 Highlights

- Advances in Technology

■ **GEN2**

- Industry standard ESRI geographic information system
- Electric and Fiber
- Go-live scheduled for August

■ **Clevest**

- Design phase of project close to finished
- Construction as begun
- Testing to begin incrementally as construction progresses
- Target go-live tentatively Q3 (dependent on ESRI)

■ **Energy Management System (EMS) Upgrade**

- Contract approved by Commission on 4/12

Thank You For Your Ongoing Support

Grant County
PUBLIC UTILITY DISTRICT

Power Production

Our People Driving Strong Performance

Quarterly Commission Briefing Q1 2022

Grant PUD

Powering our way of life.

Fulfilling Our Mission
Safe – Compliant - Reliable - Efficient

- Purpose: Provide **safe, secure, economical, reliable and compliant power generation** under the Priest Rapids Project Federal Energy Regulatory Commission (FERC) License Project No. 2114 while supporting the Wanapum relationship.

- Goal: Execute the aforementioned tasks while championing a **culture of safety and operational excellence** with continuous focus on the guiding values of safety, innovation, service, teamwork, respect, integrity, and heritage.

Acronym List
One Playbook

- PP – Power Production
- PRREIP – Priest Rapids Right Embankment Improvement Project
- JSR – Job Site Review (Safety)
- WMC – Wanapum Maintenance Center
- PR – Priest Rapids
- WAN – Wanapum
- PRP – Priest Rapids Project

2022 Q1 Business Report
Hitting the High Points

Key Operational Metrics

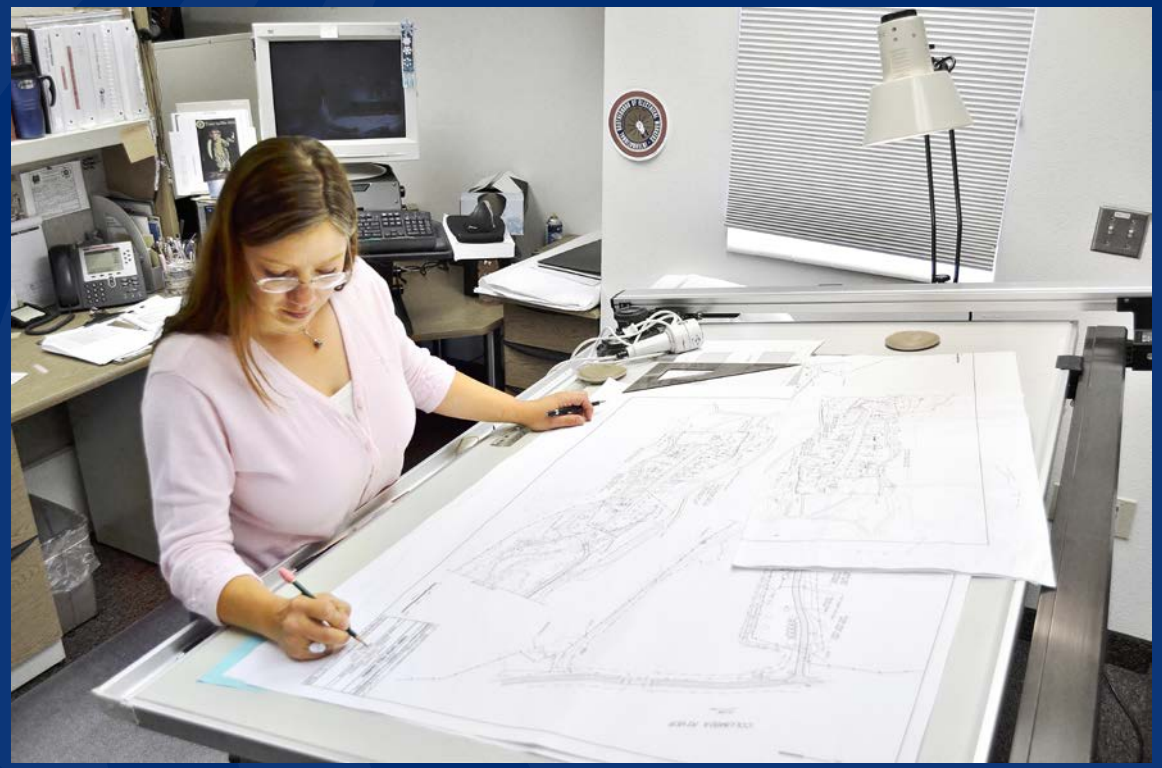
- Safety Performance
- Plant Performance
- Budget Analysis

Short & Long Term Focus

- Capital Projects
- Success Stories

Team & Next Quarter

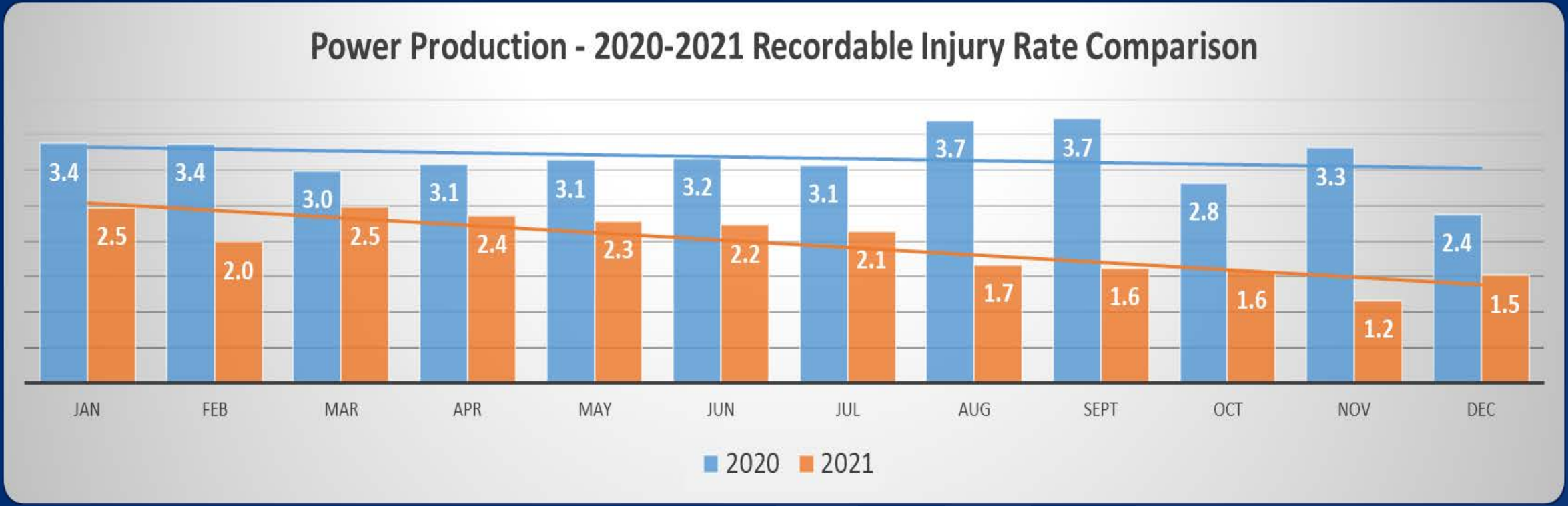
- Personnel
- 2022 Q2 Forecast



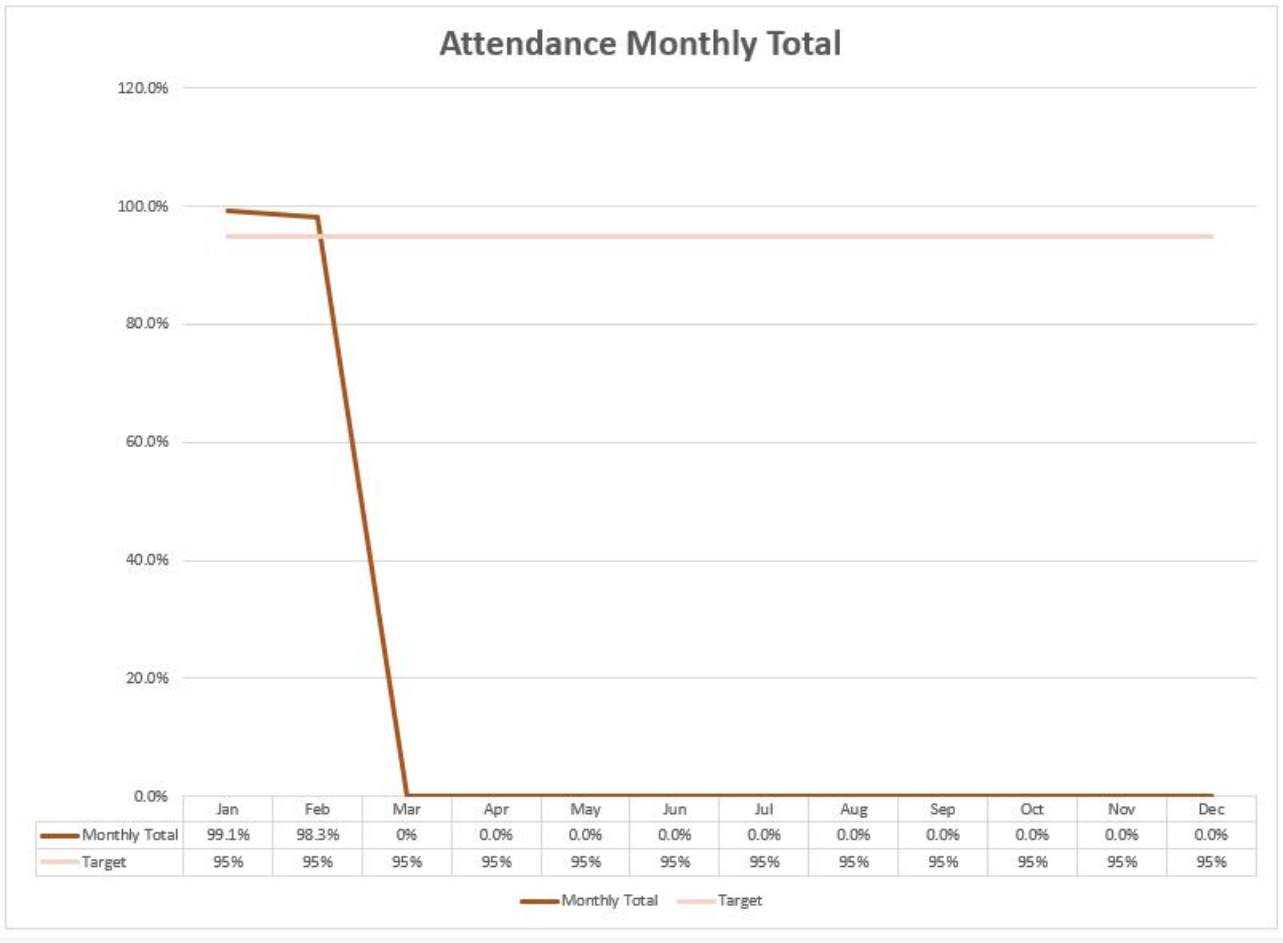
Safety Performance - 2021
Targeting Zero Harm

2021	Jan	Feb	Mar	Apr	May	Jun	Jul	Aug	Sep	Oct	Nov	Dec	YTD Total
Safety Meeting	-	-	90	95.9	92.6	96.3	97.4	95.4	97	96.2	98.8	98.9	95.9 AVG
Close Calls	1	2	2	1	2	2	1	5	7	2	1	2	28
JSR's	24	24	30	42	45	29	34	14	18	33	18	11	322
Mobile	0	1	1	1	0	0	0	4	2	3	0	2	14
Non-recordable	0	1	1	1	0	2	1	3	2	2	0	4	17
Recordables	0	0	1	1	0	0	0	0	1	0	0	1	4

Safety Performance - 2021
Trending the Right Direction

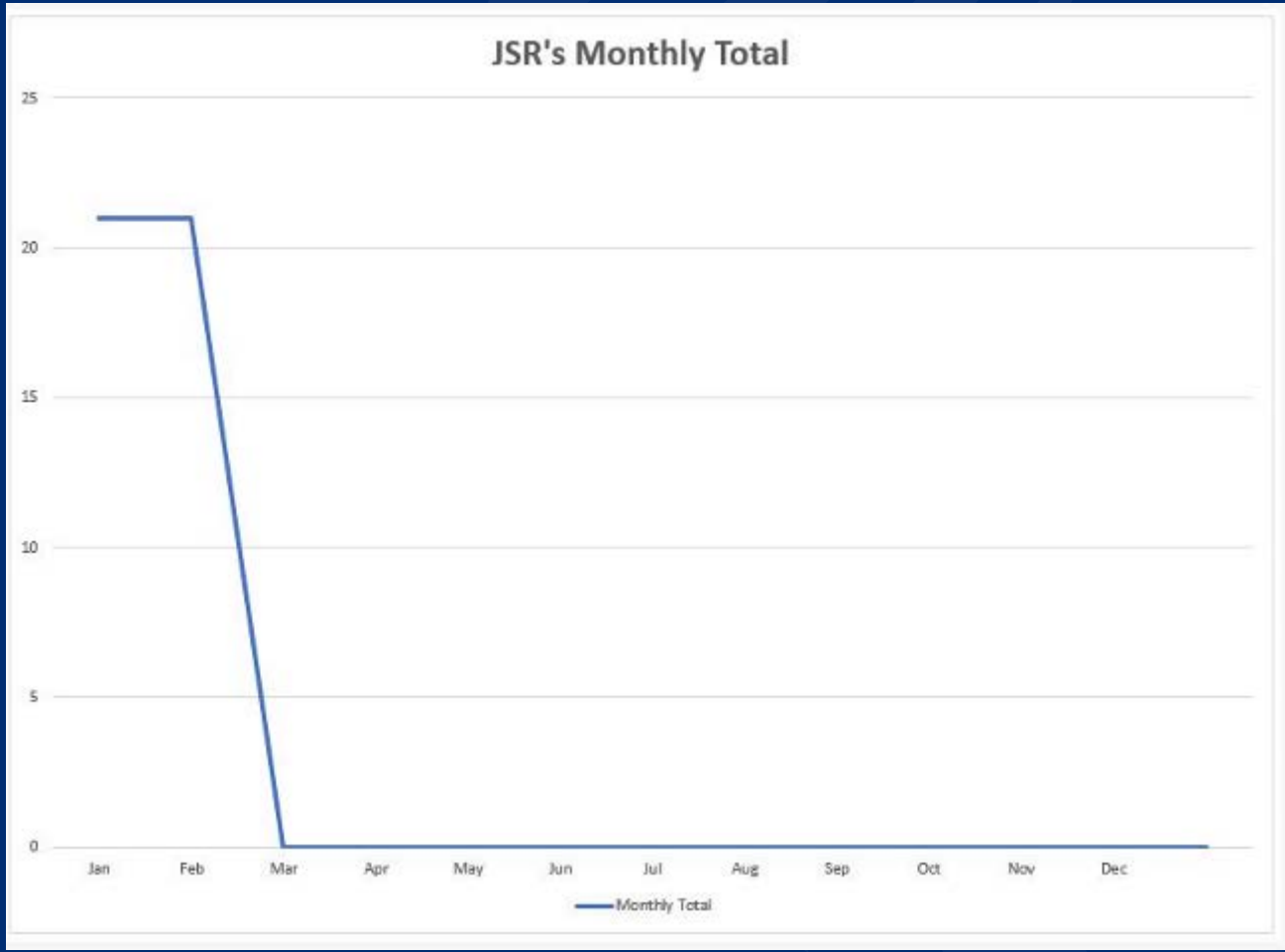


Safety Performance
Targeting Zero Harm

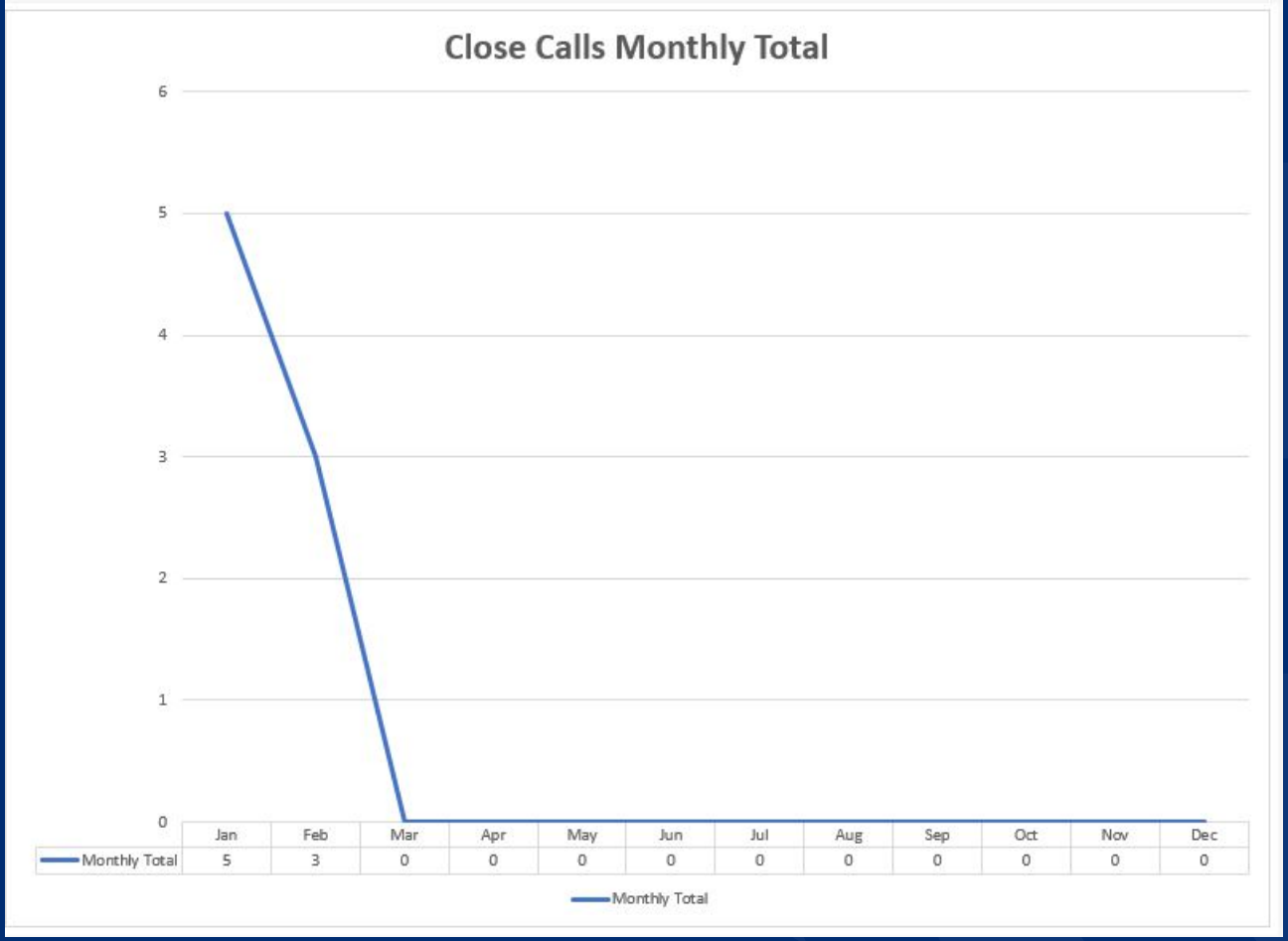


	Jan	Feb	Mar	Apr	May	Jun	Jul	Aug	Sep	Oct	Nov	Dec
Monthly Total	99.1%	98.3%	0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%
Target	95%	95%	95%	95%	95%	95%	95%	95%	95%	95%	95%	95%

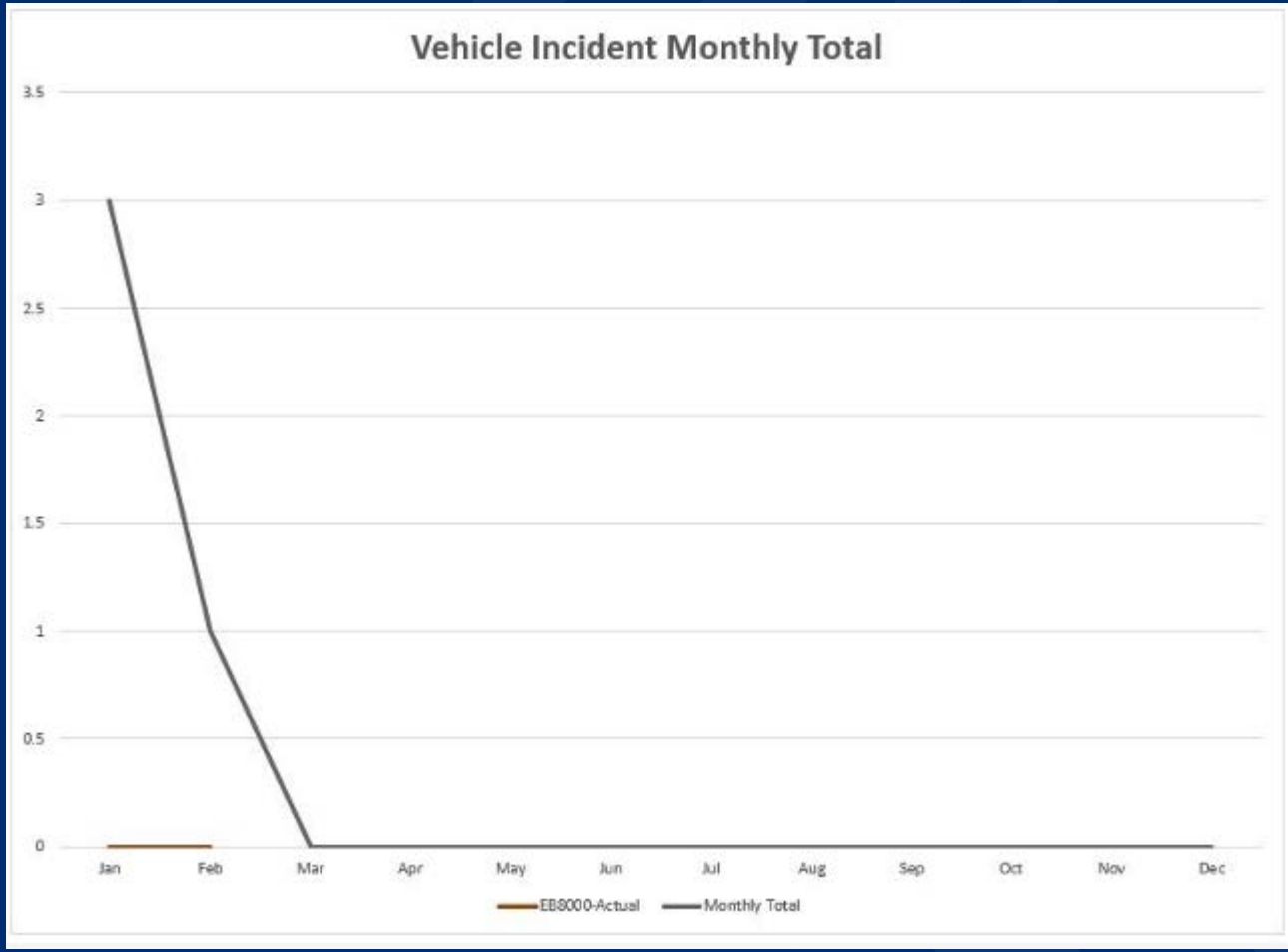
Safety Performance
Targeting Zero Harm



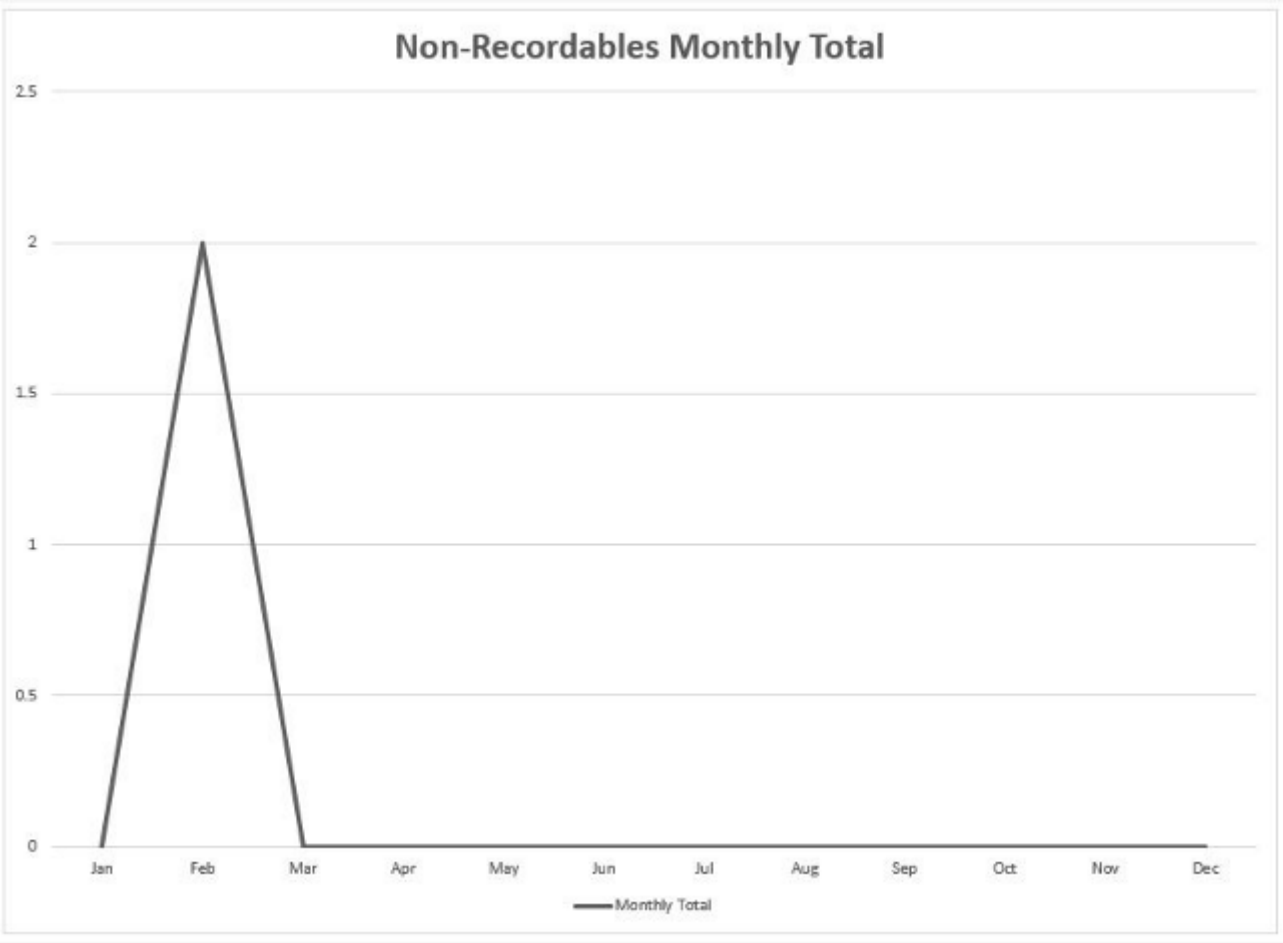
Safety Performance
Targeting Zero Harm



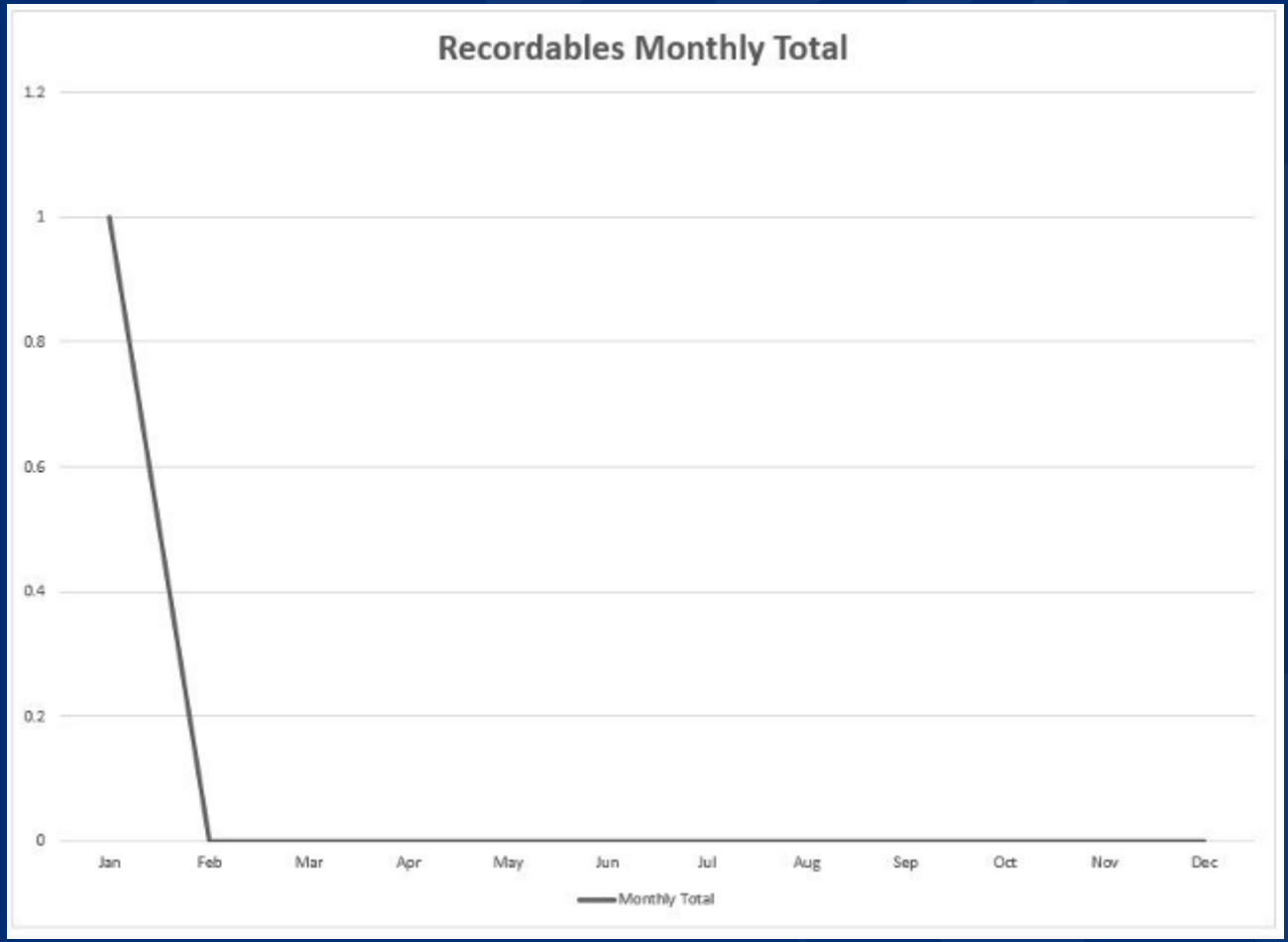
Safety Performance
Targeting Zero Harm



Safety Performance
Targeting Zero Harm



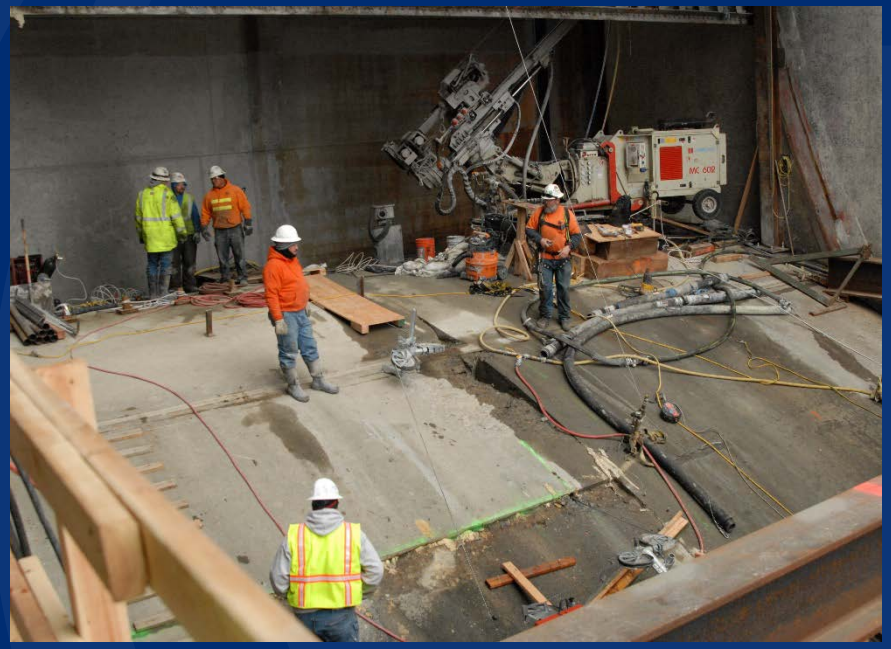
Safety Performance
Targeting Zero Harm



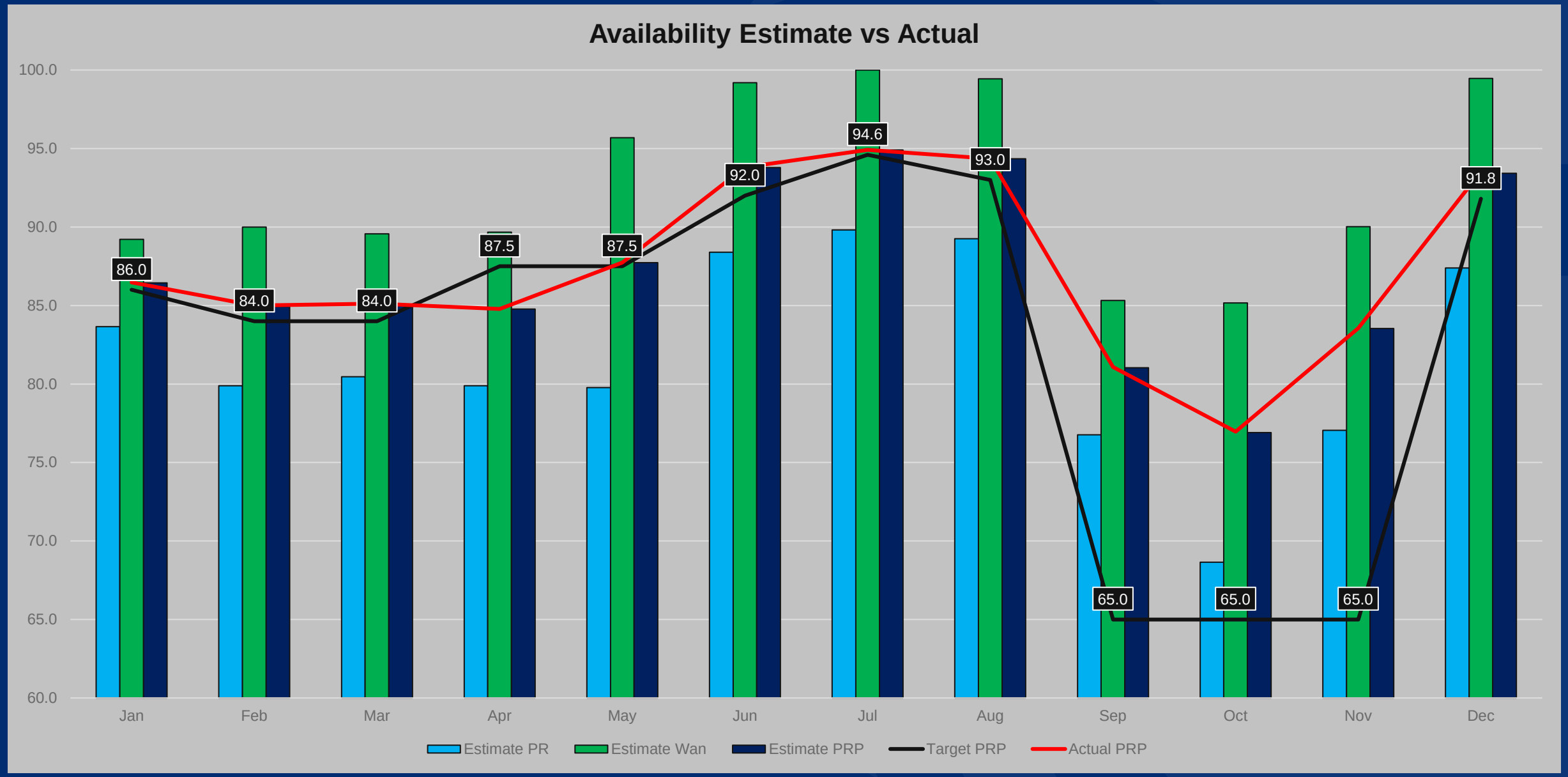
COVID Response
Protecting Critical Employees & Assets

The Current Challenge – Get back to normal without unduly increasing risk

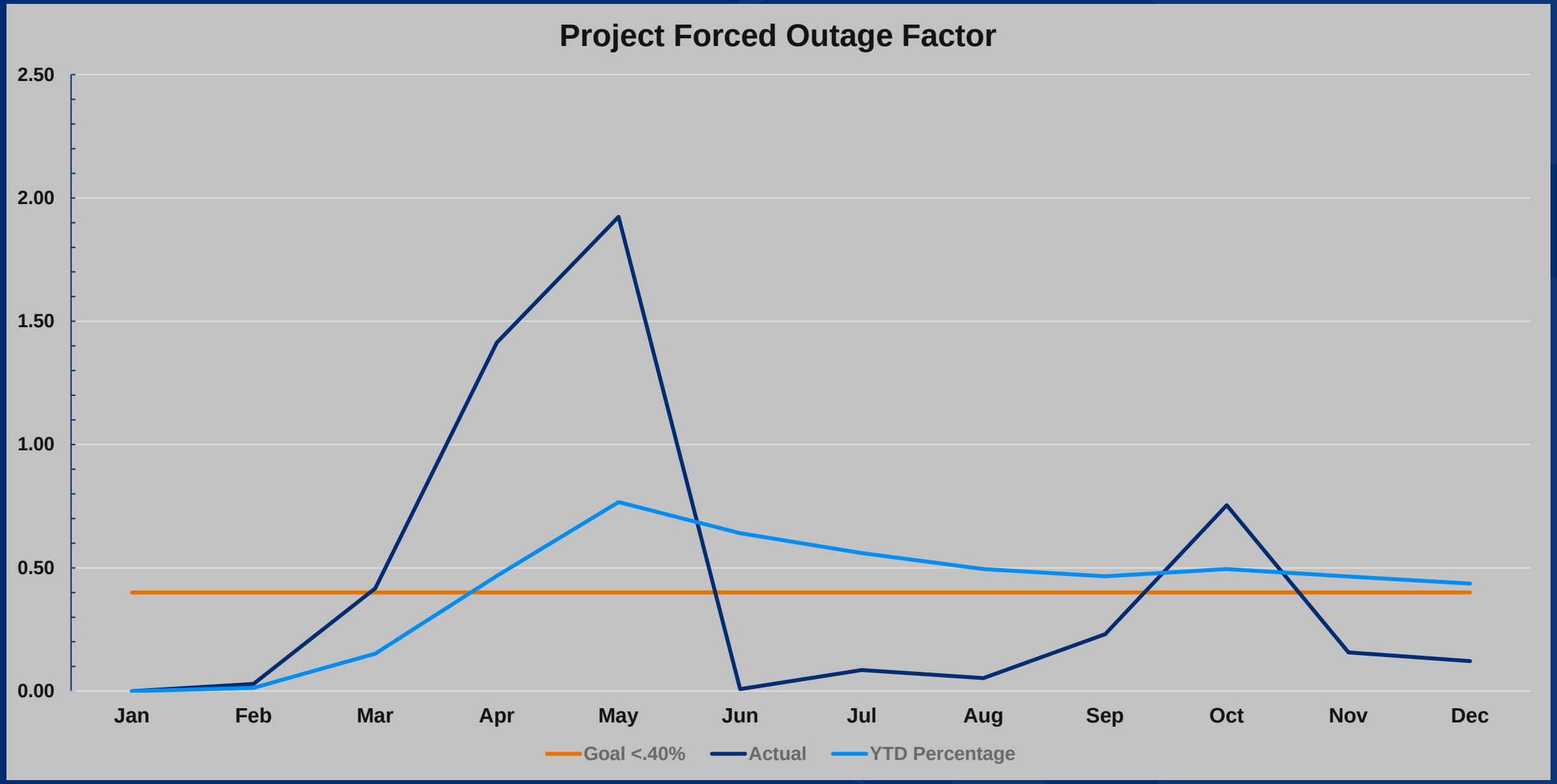
- Practices ended
  - Antigen testing
  - Masking
  - Social Distancing
  - Others
- Admin functions – many working on site at least part time
- Results: Quarantine cases extremely low to zero in last quarter



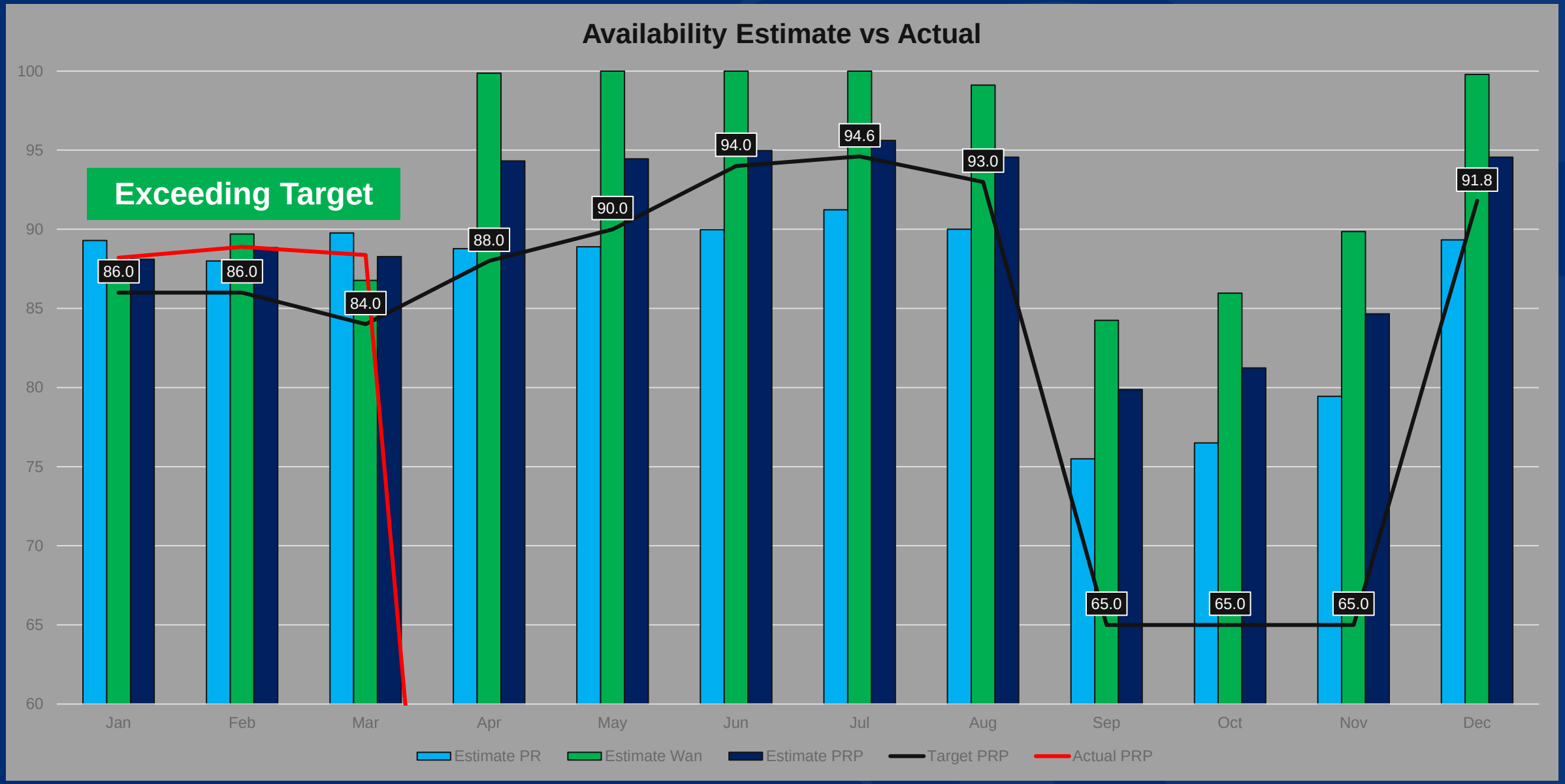
Plant Performance - 2021



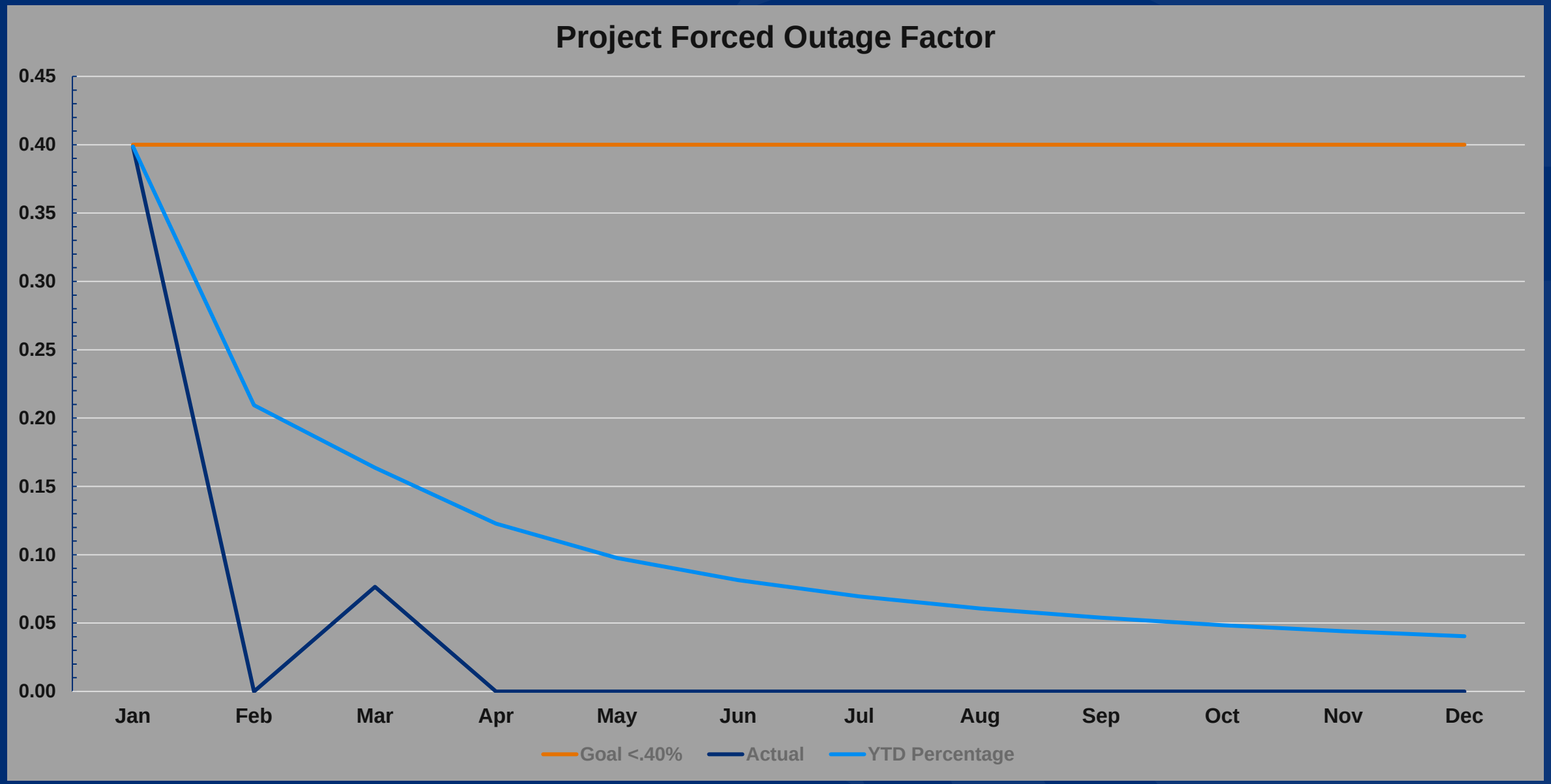
Plant Performance - 2021



Plant Performance



Plant Performance



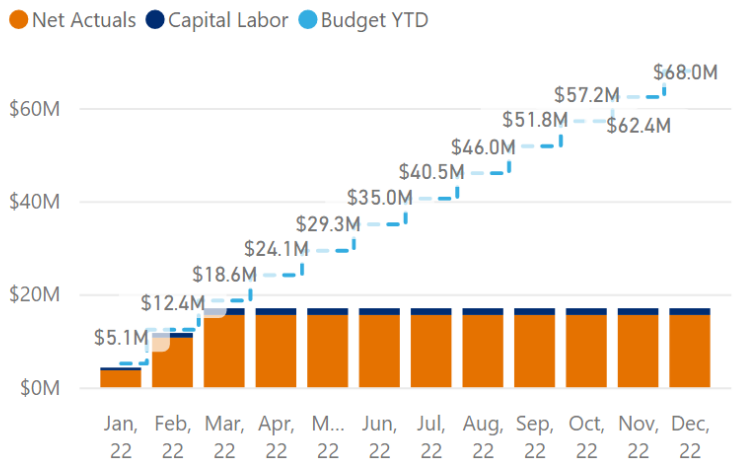
O&M Budget Versus Actuals

EB - Power Production QBR Year-to-Date March, 2022

Operating Unit

EB - Power Production

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



Gross Actuals Vs. Budget

$17.0M -8.8%

Capital Labor Actuals Vs. Budget

$1.4M -31.4%

Net Actuals Vs. Budget

$15.5M -6.0%

O&M Budget vs Actuals (Including Cap Labor)

Cost Category Type/Cost Category	Budgeted	Actuals	Budget Var	Budget Var %	Consumed %
Labor	**$10,739,464**	**$11,174,230**	**$434,766**	**4.0%**	**104.0%**
Salaries & Wages	$6,574,889	$6,437,548	-$137,340	-2.1%	97.9%
Benefits	$3,452,514	$3,883,666	$431,152	12.5%	112.5%
Overtime	$673,974	$777,268	$103,294	15.3%	115.3%
Other Labor	$38,088	$75,747	$37,660	98.9%	198.9%
Purchased Services	**$3,656,188**	**$1,691,921**	**-$1,964,267**	**-53.7%**	**46.3%**
G&A	**$3,404,115**	**$3,099,057**	**-$305,058**	**-9.0%**	**91.0%**
Operating Materials & Equipment	**$736,034**	**$919,229**	**$183,195**	**24.9%**	**124.9%**
IT	**$41,850**	**$40,770**	**-$1,080**	**-2.6%**	**97.4%**
Utilities	**$41,610**	**$48,342**	**$6,732**	**16.2%**	**116.2%**
		$130			
Transportation		**$1,122**			
Total	**$18,619,261**	**$16,974,800**	**-$1,644,461**	**-8.8%**	**91.2%**

- Capital Labor is a subset of the Labor above

- Net Actuals vs Budget = Gross Actuals minus Capital Labor

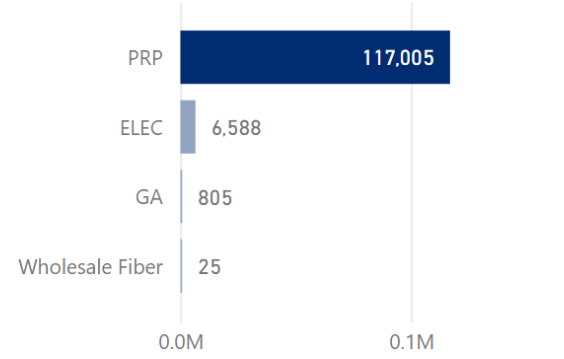
Employee Activity

EB - Power Production QBR Year-to-Date March, 2022

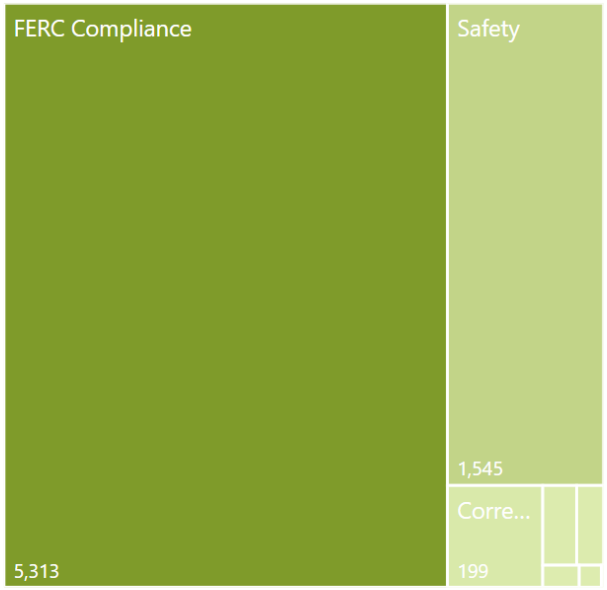
Operating Unit

EB - Power Production

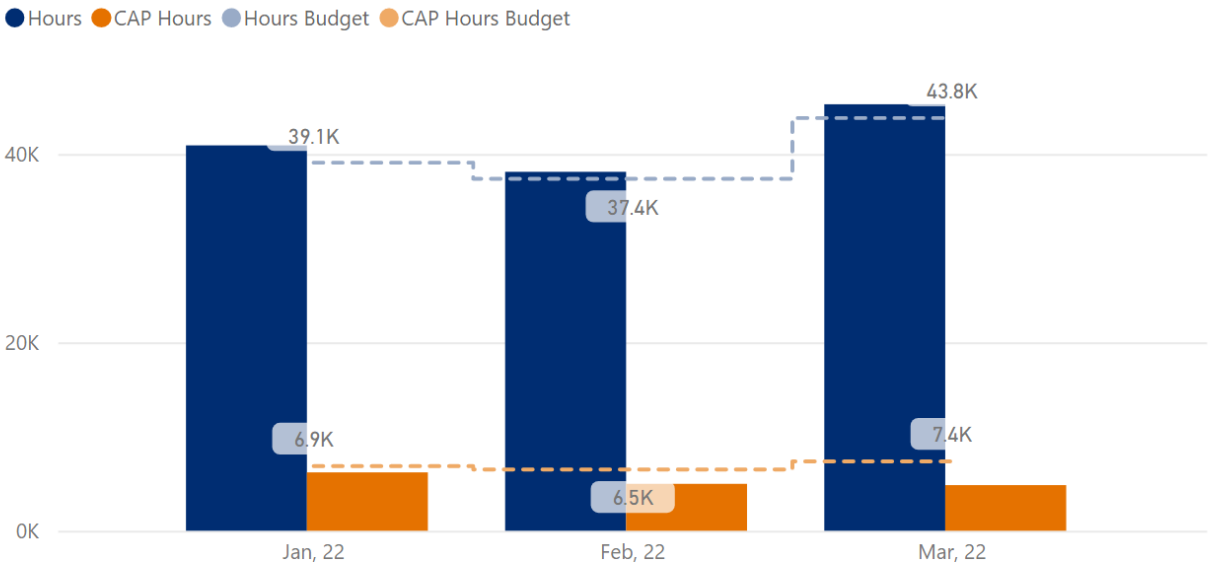
Hours by System



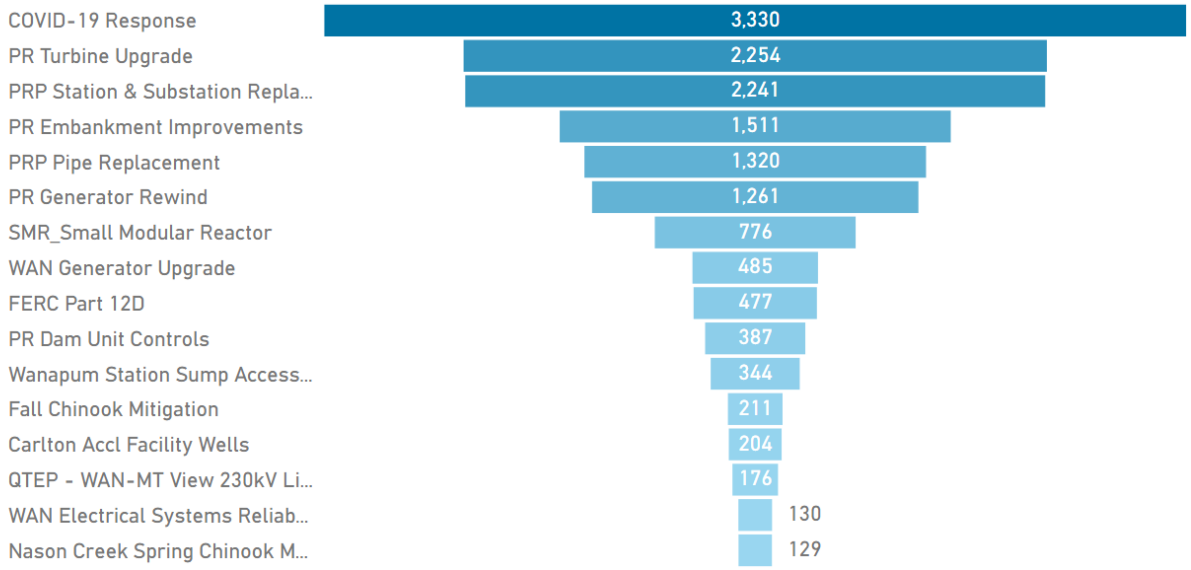
Hours by Program



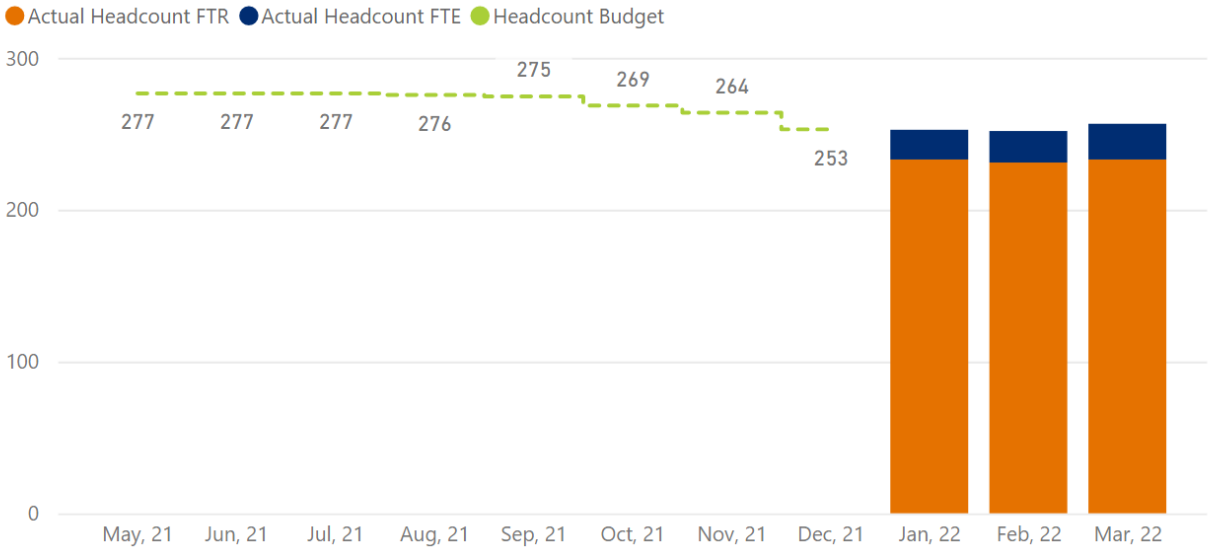
Hours and CAP Hours Vs. Budgets



Hours by Initiative



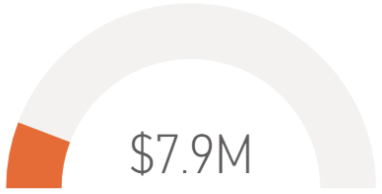
Headcount and Budget by Month & Year



Capital Budget Versus Actuals

PP - Power Production QBR Year-to-Date Mar, 2022

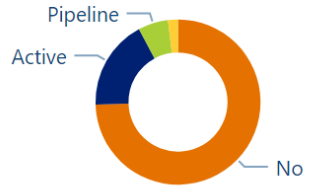
YTD Actuals



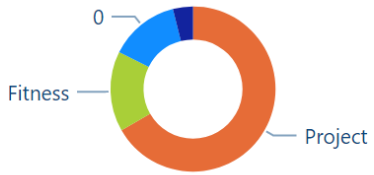
Total Projects

51

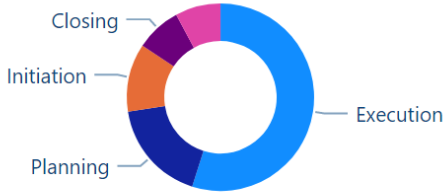
EPMO Management



Project Type



Project Phase



Budget vs Actuals (Capital Directs)

Cost Center	CY Approved Spend	CY Actuals	BOY Fx	CY YEP
EB1000	$6,948,567	$1,062,418	$6,583,217	$7,645,634
EB1100	$56,430,674	$6,199,452	$48,578,197	$54,777,649
EB1200	$1,711,148	$627,101	$2,053,685	$2,680,786
EB1300	$0	$0	$400,000	$400,000
EB4220	$2,700,670	$3,318	$2,827,210	$2,830,528
EB4320	$374,187	$11,577	$411,741	$423,318
Total	**$68,165,246**	**$7,903,866**	**$60,854,050**	**$68,757,916**

Capital Project Update
Investing in the Future

Priest Rapids Right Embankment Improvement Project

- Construction Start – Oct 4 2021
- Construction Complete – Jan 2024

- PR Unit Rehab
  - P04 – In progress; complete June 2022
  - Negotiations on Voith Labor contract ongoing
- Station Service Upgrades
  - Wan: delayed six months, Complete April 2023
  - PR: Sept 2023 – May 2024

EA's Implementation of Maximo

- 2021 = full implementation of use of WOs to plan and schedule work; recording actual time worked

2021 F&W Actual Hours						
Work Order	Description	Type	Status	Location	Job Plan	Actual Hours
309416	NPM PRD RESERVOIR, PREDATOR CONTROL, WEEKLY	PM	CLOSE	FORBAYPR	JP4012	155.0
309417	NPM PRD RESERVOIR, PREDATOR CONTROL, WEEKLY	PM	CLOSE	FORBAYPR	JP4012	111.0
309418	NPM PRD RESERVOIR, PREDATOR CONTROL, WEEKLY	PM	CLOSE	FORBAYPR	JP4012	72.0
309419	NPM PRD RESERVOIR, PREDATOR CONTROL, WEEKLY	PM	CLOSE	FORBAYPR	JP4012	107.0
309420	NPM PRD RESERVOIR, PREDATOR CONTROL, WEEKLY	PM	CLOSE	FORBAYPR	JP4012	57.0
309768	NPM PRD RESERVOIR, PREDATOR CONTROL, WEEKLY	PM	CLOSE	FORBAYPR	JP4012	103.0
310022	NPM PRD RESERVOIR, PREDATOR CONTROL, WEEKLY	PM	CLOSE	FORBAYPR	JP4012	106.5
310277	NPM PRD RESERVOIR, PREDATOR CONTROL, WEEKLY	PM	CLOSE	FORBAYPR	JP4012	120.0
310606	NPM PRD RESERVOIR, PREDATOR CONTROL, WEEKLY	PM	CLOSE	FORBAYPR	JP4012	133.0
310878	NPM PRD RESERVOIR, PREDATOR CONTROL, WEEKLY	PM	CLOSE	FORBAYPR	JP4012	85.0
311125	NPM PRD RESERVOIR, PREDATOR CONTROL, WEEKLY	PM	COMP	FORBAYPR	JP4012	5.0
311390	NPM PRD RESERVOIR, PREDATOR CONTROL, WEEKLY	PM	COMP	FORBAYPR	JP4012	68.0
311720	NPM PRD RESERVOIR, PREDATOR CONTROL, WEEKLY	PM	COMP	FORBAYPR	JP4012	71.0
316105	NPM PRD RESERVOIR, PREDATOR CONTROL, WEEKLY	PM	COMP	FORBAYPR	JP4012	77.0
316106	NPM PRD RESERVOIR, PREDATOR CONTROL, WEEKLY	PM	COMP	FORBAYPR	JP4012	105.0
316107	NPM PRD RESERVOIR, PREDATOR CONTROL, WEEKLY	PM	COMP	FORBAYPR	JP4012	73.0
316108	NPM PRD RESERVOIR, PREDATOR CONTROL, WEEKLY	PM	COMP	FORBAYPR	JP4012	99.0
	NPM Removal PR Reservoir, 2021 Actual Hours					**1,547.5**
303093	WAN AVIAN WIRE INSPECTION, PREDATOR CONTROL, MONTHLY	PM	CLOSE	WANDAM	JP4013	4.0
304139	WAN AVIAN WIRE INSPECTION, PREDATOR CONTROL, MONTHLY	PM	CLOSE	WANDAM	JP4013	4.0
304993	WAN AVIAN WIRE INSPECTION, PREDATOR CONTROL, MONTHLY	PM	CLOSE	WANDAM	JP4013	14.5
306013	WAN AVIAN WIRE INSPECTION, PREDATOR CONTROL, MONTHLY	PM	CLOSE	WANDAM	JP4013	4.0
307394	WAN AVIAN WIRE INSPECTION, PREDATOR CONTROL, MONTHLY	PM	CLOSE	WANDAM	JP4013	4.5
309769	WAN AVIAN WIRE INSPECTION, PREDATOR CONTROL, MONTHLY	PM	CLOSE	WANDAM	JP4013	2.0
310879	WAN AVIAN WIRE INSPECTION, PREDATOR CONTROL, MONTHLY	PM	COMP	WANDAM	JP4013	2.0
312389	WAN AVIAN WIRE INSPECTION, PREDATOR CONTROL, MONTHLY	PM	COMP	WANDAM	JP4013	3.0
313738	WAN AVIAN WIRE INSPECTION, PREDATOR CONTROL, MONTHLY	PM	COMP	WANDAM	JP4013	2.0
316604	WAN AVIAN WIRE INSPECTION, PREDATOR CONTROL, MONTHLY	PM	COMP	WANDAM	JP4013	1.0
	WAN Avian Wire Inspection, 2021 Actual Hours					**41.0**

EA’s Implementation of Maximo

- 2022 F&W Seasonal Staffing plan based on 2021 actuals from Maximo WOs

PM Num	Job Plan Num	Description	Apr 22			May 22					Jun 22				Jul 22					Aug 22					Sep 22					Oct 22					Nov 22					Dec 22				
			4-10	11-17	18-24	25-1	2-8	9-15	16-22	23-29	30-5	6-12	13-19	20-26	27-3	4-10	11-17	18-24	25-31	1-7	8-14	15-21	22-28	29-4	5-11	12-18	19-25	26-2	3-9	10-16	17-23	24-30	31-6	7-13	14-20	21-27	28-4	5-11	12-18	19-25	26-1
PM7979	JP4034	AIRSTRIP (DRAWDOWN) MITIGATION MAINTENANCE, VEGETATION MANAGEMENT, SITE VISIT, WEEKLY	9	9	9	9	9	9	9	9	9	9	9	9	9	9	9	9	9	9	9	9	9	9	9	9	9	9													
PM7993	JP4032	AIRSTRIP (HUNTZ) MITIGATION MAINTENANCE, VEGETATION MANAGEMENT, DEMOB, ANNUAL																											40												
PM8002	JP4023	WHITE STURGEON, JUVENILE RELEASE, ANNUAL					80																																		
PM7974	JP4022	WHITE STURGEON, JUVENILE RELEASE, PREP, ANNUAL			40																																				
PM8183	JP4341	NPM BEACH SEINE PREP, PREDATOR CONTROL, ANNUAL																16																							
PM7994	JP4097	AIRSTRIP (DRAWDOWN) MITIGATION MAINTENANCE, VEGETATION MANAGEMENT, DEMOB, ANNUAL																											40												
PM7992	JP4098	AIRSTRIP (HUNTZ) MITIGATION MAINTENANCE, VEGETATION MANAGEMENT, INSTALLATION, ANNUAL																																							
PM7995	JP4096	AIRSTRIP (DRAWDOWN) MITIGATION MAINTENANCE, VEGETATION MANAGEMENT, INSTALLATION, ANNUAL																																							
PM7971	JP4016	WEST BAR MITIGATION MAINTENANCE, VEGETATION MANAGEMENT, DEMOB, ANNUAL																												80											
PM8001	JP4019	WATERFOWL NESTING PROGRAM, WILDLIFE PLAN, WOOD DUCK BOX CHECK, BIANNUAL																																							
PM8377	JP4382	HANFORD REACH, ABC TOURNEY, SUPPORT, ANNUAL																													70										
PM8277	JP4355	NPM, BEACH SEINING, PREDATOR CONTROL, WEEKLY																		90	90	90	90	90	90	90	90	90													
PM7972	JP4017	WEST BAR MITIGATION MAINTENANCE, VEGETATION MANAGEMENT, SITE VISIT, WEEKLY	16	16	16	16	16	16	16	16	16	16	16	16	16	16	16	16	16	16	16	16	16	16	16	16	16	16													
PM7973	JP4020	WATERFOWL NESTING PROGRAM, WILDLIFE PLAN, MALLARD AND GOOSE NESTING, BI-ANNUAL																																							
PM8004	JP4031	AIRSTRIP (HUNTZ) MITIGATION MAINTENANCE, VEGETATION MANAGEMENT, SITE VISIT, WEEKLY	5	5	5	5	5	5	5	5	5	5	5	5	5	5	5	5	5	5	5	5	5	5	5	5	5	5													
PM8376	JP4381	HANFORD REACH, ABC TOURNEY, PREP, ANNUAL																													45										
PM8180		BEVERLY ISLAND, NWW WATERING SHUTTLE BOAT, BI-WEEKLY													4	4	4	4	4	4	4	4	4	4	4	4	4													
PM8005	JP4028	ARCHAEOLOGY DAYS, SUPPORT, ANNUAL																												24											
PM8197	JP4025	LAMPREY TRANSPORTATION, PACIFIC LAMPREY PLAN, WEEKLY																	0	0	0	0	6	6	6	6															
PM7970	JP4014	PRD AVIAN WIRE INSPECTION, PREDATOR CONTROL, MONTHLY					4				4				4					4				4				4				4				4					
PM8194	JP4345	PRIEST RAPIDS FISH TOWN, WATER-UP OPERATIONS, ANNUAL												60																											
PM7967	JP4012	NPM PRD RESERVOIR, PREDATOR CONTROL, WEEKLY		90	90	90	90	90	90	90	90	90	90	90	90	90	90	90	90										90	90											
PM7982	JP4024	LAMPREY TRAPPING, PACIFIC LAMPREY PLAN, WEEKLY																		0	0	0	0	0	0	0	0	0													
PM7991	JP4030	PR OLAFT, END OF SEASON, SHUT DOWN AND CLEAN OUT, ANNUAL																														30									
PM8007	JP4021	PRD, LAMPREY DETECTION MAINTENANCE, PACIFIC LAMPREY PLAN, BIWEEKLY										12	12	12	12	12	12	12	12	12	12	12	12	12	12	12	12	12	12	12	12	12	12								
PM8196	JP4024	LAMPREY TRAPPING, PACIFIC LAMPREY PLAN, WEEKLY															48	48	48	48	48	48	48	48	48	48	48														
PM8370	JP4379	PRIEST RAPIDS FISH TOWN, WINTERIZATION, ANNUAL																													20										
PM8179	JP4300	PRD, RIGHT BANK, AQ SITES, ANCHOR WIRE/FENCE CHECK, MONTHLY			4					4				4					4				4					4			4					4					4
PM8201	JP4347	PRD, OLAFT EVAPORATION POND PUMP-OUT, ANNUAL													24																										
PM7989	JP4027	NASON CREEK, NCAF INTAKE CLEANING, ANNUAL																					40																		
PM7978	JP4044	SAND HOLLOW MITIGATION MAINTENANCE, VEGETATION MANAGEMENT, SITE VISIT, BI-WEEKLY	3		3		3		3		3		3		3		3		3		3		3		3		3														
PM8137	JP4265	CRESCENT BAR ON-ISLAND WETLAND MITIGATION, VEGETATION MANAGEMENT, DEMOB, ANNUAL																													14										
PM7987	JP4038	CRESCENT BAR ON-ISLAND BL MITIGATION, VEGETATION MANAGEMENT, SITE VISIT, WEEKLY	10	10	10	10	10	10	10	10	10	10	10	10	10	10	10	10	10	10	10	10	10	10	10	10	10	10													
PM7985	JP4042	CRESCENT BAR ON-ISLAND WETLAND MITIGATION, VEGETATION MANAGEMENT, SITE VISIT, BI-WEEKLY	7.5		7.5		7.5		7.5		7.5		7.5		7.5		7.5		7.5		7.5		7.5		7.5		7.5														
PM7984	JP4092	CRESCENT BAR ON-ISLAND UPLAND MITIGATION, VEGETATION MANAGEMENT, SITE VISIT, MONTHLY		4					4				4					4				4					4														
PM7996	JP4040	CRESCENT BAR ON-ISLAND BL MITIGATION, VEGETATION MANAGEMENT, INSTALLATION, ANNUAL	120																																						
PM8003	JP4043	FRENCHMAN COULEE MITIGATION MAINTENANCE, VEGETATION MANAGEMENT, SITE VISIT, BI-WEEKLY	5		5		5		5		5		5		5		5		5		5		5		5		5														
PM8136	JP4252	CRESCENT BAR ON-ISLAND WETLAND MITIGATION, VEGETATION MANAGEMENT, INSTALLATION, ANNUAL	48																																						
PM7975	JP4047	VANTAGE BOAT LAUNCH, VEGETATION MANAGEMENT, SITE VISIT, BI-WEEKLY	3		3		3		3		3		3		3		3		3		3		3		3		3														
PM8006	JP4041	CRESCENT BAR ON-ISLAND BL MITIGATION, VEGETATION MANAGEMENT, DEMOB, ANNUAL																													30										
PM7988	JP4093	CRESCENT BAR OFF-ISLAND CBRA MITIGATION, VEGETATION MANAGEMENT, SITE VISIT, WEEKLY	20	20	20	20	20	20	20	20	20	20	20	20	20	20	20	20	20	20	20	20	20	20	20	20	20	20													
PM7969	JP4013	WAN AVIAN WIRE INSPECTION, PREDATOR CONTROL, MONTHLY		2					2				2					2				2					2				2				2					2	
PM8008	JP4021	WAN, LAMPREY DETECTION MAINTENANCE, PACIFIC LAMPREY PLAN, BIWEEKLY										12	12	12	12	12	12	12	12	12	12	12	12	12	12	12	12	12	12	12	12	12	12	12							
PM7998	JP4015	WEST BAR MITIGATION MAINTENANCE, VEGETATION MANAGEMENT, INSTALLATION, ANNUAL																																							
	NEW	VERNITA BAR FLOW MAINTENANCE, ANNUAL																													10										
	NEW	OLAFT CLEANUP AND PREP, ANNUAL																																							
	NEW	WHITE STURGEON JUVENILE MARKING, ANNUAL		50																																					
	NEW	SHOCKBOAT CLEANUP, ANNUAL																																							
	NEW	LAMPREY DETECTION MAINTENANCE PREP, PACIFIC LAMPREY PLAN, ANNUAL						50	50																																
PM7990	JP4029	ARCHAEOLOGY DAYS, SUPPORT, STURGEON TRANSPORT, ANNUAL																												12											
		TOTALED HOURS	246.5	206	212.5	150	252.5	200	224.5	154	172.5	174	198.5	238	224.5	178	244.5	248	248.5	230	244.5	232	294.5	236	250.5	232	250.5	182	194	230	90	153	58	24	12	2	8	0	0	2	4
		3 FTRs, 4 FTEs is 280 hours/week																																							

Description	Apr 22			May 22					Jun 22				Jul 22					Aug 22					Sep 22					Oct 22					Nov 22					Dec 22				
	4-10	11-17	18-24	25-1	2-8	9-15	16-22	23-29	30-5	6-12	13-19	20-26	27-3	4-10	11-17	18-24	25-31	1-7	8-14	15-21	22-28	29-4	5-11	12-18	19-25	26-2	3-9	10-16	17-23	24-30	31-6	7-13	14-20	21-27	28-4	5-11	12-18	19-25	26-1
Fish & Wildlife Asst 1	-168.8	-223.3	-224.8	-221.3	-264.8	-221.3	-224.8	-223.3	-224.8	-221.3	-224.8	-223.3	-224.8	-221.3	-234.8	-235.3	-252.8	-263.3	-262.8	-263.3	-264.8	-263.3	-262.8	-277.3	-270.8	-313.3	-210	-210	-2	-17	-62			-2	-4		-7	-2	-2
Fish & Wildlife Asst 2			-20																																					
Fish and Wildlife Foreman																																								
Fish Wildlife Specialist	-48.75	-116.3	-139.8	-116.3	-199.8	-116.3	-117.8	-118.3	-119.8	-116.3	-117.8	-118.3	-119.8	-116.3	-117.8	-116.3	-119.8	-118.3	-117.8	-116.3	-119.8	-118.3	-117.8	-116.3	-123.8	-170.3	-105	-105		-32	-32				-4				-2

EA's Implementation of Maximo

- Detailed Job Plans

DATE: 3/7/22

JOB PLAN #: JP4040

PM TITLE: CRESCENT BAR ON-ISLAND BL MITIGATION, VEGETATION MANAGEMENT, INSTALLATION, ANNUAL

SPECIAL INSTRUCTIONS: Unless water levels are extremely low, plan on deploying the pump and hose lay from a boat (Figure 1)

MATERIALS NEEDED:

- 1,500 gallon water tank (Figure 2)
- 2 solar panels with on/off switch and ALCS on the back (Figure 2)
- 1 solar panel frame and mounting hardware (Figure 2)
- 1 Manifold marked BL that will have 4 timers on it (Figure 3)
- Pump and attached 200 ft hose lay that is marked BL with white top. An approximate 12ft section of rope with small orange buoy attached.
- 4 chain-link fence panels with hardware (Figure 2).
- Section of chain approximately 3ft in length with a GCC1 lock for securing the chain-link fence.
- Approximately 16 AA batteries are needed to replace old ones in timers. If timers are newer models (blue ones) they will need a single 9-volt battery each. All timers need fresh batteries to start the year.
- Orange flatbed trailer for fencing, water tank and pump transit.
- Wooden manifold protector.
- Transfer pump and hose to fill tank enough to secure it. Crews may opt to use the orange flatbed trailer that has water tanks installed along with the mounted transfer pump for this.

TOOLS NEEDED:

- 2 ladders, approximately 10ft in length for working in a pair to install the solar panel and frame
- Hand gardening tools for clearing brush and leveling tank: shovel, rake, etc.
- Hand mechanical tools for installing hardware (may want multiple sets to work in tandem): socket set with ratchet (5/8), wrench set, pipe wrench, etc.
- Large zip ties for securing components during install.

MININUM STAFFING: 1 FW SPECIALIST, 2 HMA

WORK STEPS:

1. Load up pump marked BL with hose-lay, 2 solar panels and manifold from the WMC lockup area and the pikeminnow shop. Secure the load for transport.
2. Load up fencing, water tank, manifold cover from Wanapum fish town and secure the load
3. Transport the materials to the job site.
4. Deploy the water pump in its protective cage with filter screen attached at its designated location (Figure 1)
5. Prep the tank site by clearing brush and leveling, then install tank (Figure 2).
6. Fill water tank with transfer pump
7. Install solar panel frame on top of tank, then install solar panels pointing south (Figure 2).

DATE: 3/7/22

8. Ensure that the on/off switch on the back of the solar panel is in the off position. Then connect the ALCS, on/off switch and each solar panel appropriately (these are located on the backside of the solar panels).
9. Install the 2 leads from the ALCS in the top of the water tank at approximately 5 inches deep. When the leads are dry it will trigger the pump to run. When the water level reaches the leads, it will automatically shut the system off and maintain the water level full.
10. Install the manifold with the timers (including all new batteries).
11. Set the timer to run 15 minutes per day and the interval to be daily then cover with wooden manifold cover (be careful to not have the cover laying on the manifold without supporting it)
12. Install the security fence with chain and lock

JOB PLAN OWNER: JOE LEMOINE

MAPS/FIGURES:

Figure 1 Crescent Bar boat launch vegetation site.

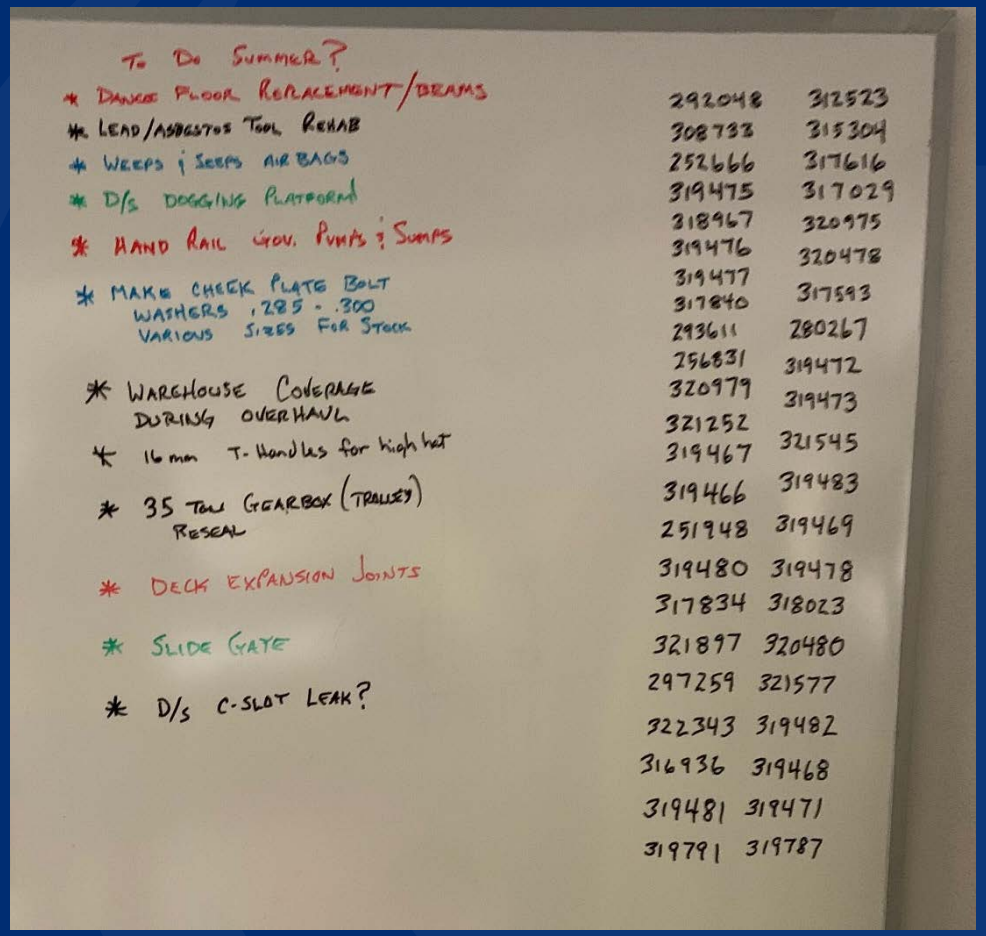
DATE: 3/7/22

Figure 2 Crescent Bar boat launch tank with infrastructure.

Success Stories
Continuous Improvement in Action

Improvements made during Wanapum unit overhauls

- 15+ improvements made during two overhauls this season
- Improvements to safety, quality and efficiency
- Driven from employee suggestion
- Approved by supervising foreman
- Supported by maintenance center fabrication
- Will continue to pay dividends every year
  - Reduced safety risk
  - Improved project quality
  - Reduced overhaul times
  - Increased revenue
  - Increased employee morale



Success Stories
Continuous Improvement in Action

Success Stories
Continuous Improvement in Action

Success Stories

Continuous Improvement in Action

Success Stories
Continuous Improvement in Action

Personnel
Matching Company Needs with Employee Skills

Environmental Affairs

- Damien Hooper – Lands & Permitting Sup
- Tim Taylor – Senior Biologist

Cultural Resources

- Ruth Jim – Cultural Project Worker

Engineering

- Calvin Mizner – Electrical Engineer
- Tim Boswell – Engineering Tech
- Zach Peebles – Engineering Tech

Plants

- Nick Guthrie - Electrician

Retirements

- Sheryl Dotson – Lands & Permitting Sup
- Gerry McFaul – Civil Engineer

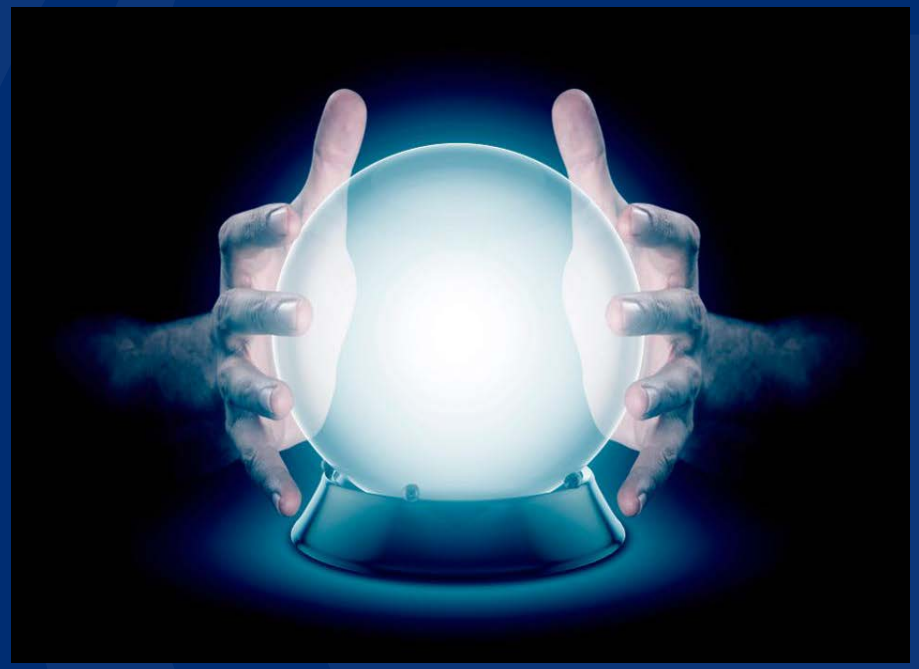
Personnel
Matching Company Needs with Employee Skills

Seasonal Employees

- Fish Counters
  - Valerie Parker
  - John Smoots
  - Carol Frady
  - Larry Wilford
  - Patricia Stephens
  - Arline Harvold-Terry
- Fish and Wlidlife
  - Walker Oblad
  - Victor Alvarez
  - Brendan Johnson
  - Ross LeMaster
- Lands and Recreation
  - Joseph Goe
  - Darin St. Clair
  - Nef Rosalos Campos
  - Kent Christensen
  - Dmitry Marushchak
  - Jagen Longwill
  - Thomas McCarrell

2022 Q2 Forecast
Staying Focused on Safety & Efficiency

- Strategic Initiatives
  - Begin executing on 2022-27 strategic plan goals
  - Begin first asset strategy
- Improve
  - Procedure use, adherence and improvement
  - Ability to plan and schedule work
  - Data driven and risk driven decision making



Continue Efforts at Managing COVID-19 Effects

Grant PUD

Powering our way of life.

Q1 RETAIL LOAD VARIANCE, EV UPDATE, AND ECONOMIC INDICATORS REPORT

Contributor:

Amanpreet Singh, Rates & Pricing

April 26th, 2022

Grant PUD

Powering our way of life.

Q1 Summary – Budget Forecast vs. Actual

Load	Budget Forecast Load (aMW)	644
	Actual Load (aMW)	661
	Load Variance (aMW)	17
	Load Variance %	2.7%

- Q1 Loads were **17 aMW**, or **2.7%**, above budgeted levels.
- The weather normalized load for Q1 is **646 aMW**, which is **2 aMW**, or **0.3%**, above budgeted levels.

Rate Schedule Load Variances

Q1 Budget Forecast and Actuals Variance by Rate Schedule				
	2022 Q1 Budget Forecast and Actual Loads (aMW)			
	Forecast	Actual	Difference	Variance %
Residential (1)	142	160	17	12.0%
Commercial (2)	79	77	(2)	-2.2%
Irrigation (3)	-	1	1	N/A
Streetlights (6)	1	1	(0)	-1.8%
Large General (7)	68	73	5	7.0%
Industrial (14)	35	35	(0)	-0.4%
Industrial (15)	247	251	5	1.9%
Ag Food (16)	35	32	(3)	-8.5%
Evolving Industry (17)	-	-	-	N/A
Ag Food-Boiler (85)	-	-	-	N/A
New Large Load (94)	37	32	(5)	-13.8%
Totals	**644**	**661**	**17**	**2.7%**

Q1 Rate Schedule Differences

Q1 **Residential (RS 1)** actual loads were **160 aMW, 12.0% higher** than budget forecast.

- Colder weather conditions led to Residential load being higher than it would have been given normal weather conditions

- Adjusted for the weather, actual load was **144 aMW**, Residential loads are **1.3% higher** than the budget forecast

Q1 Rate Schedule Differences

Q1 **General Service / Commercial (RS 2)** actual loads were **77 aMW, 2.2% lower** than budget forecast.

- The weather-normalized Commercial actual load is **77 aMW, 2.1% lower** than the budget forecast
- The February 2022 unemployment rate for Grant County was **8.1%, or 3.6% lower** than in February 2021, which was **8.4%**
  - In November 2021, unemployment was **4.7%**

**Note: the unemployment figures are subject to revision on the website

*Source: St. Louis FED. https://fred.stlouisfed.org/series/WAGRAN5URN#0

Q1 Rate Schedule Differences

Q1 **Irrigation (RS 3)** actual loads were **1 aMW**.

- Irrigation Season is April 1st through November 1st

Q1 Rate Schedule Differences

Q1 **Large General (RS 7)** actual loads were **73 aMW, 7.0% above** budget forecast.

- Large commercial growth is largely attributable to increased Cryptocurrency mining

Q1 Rate Schedule Differences

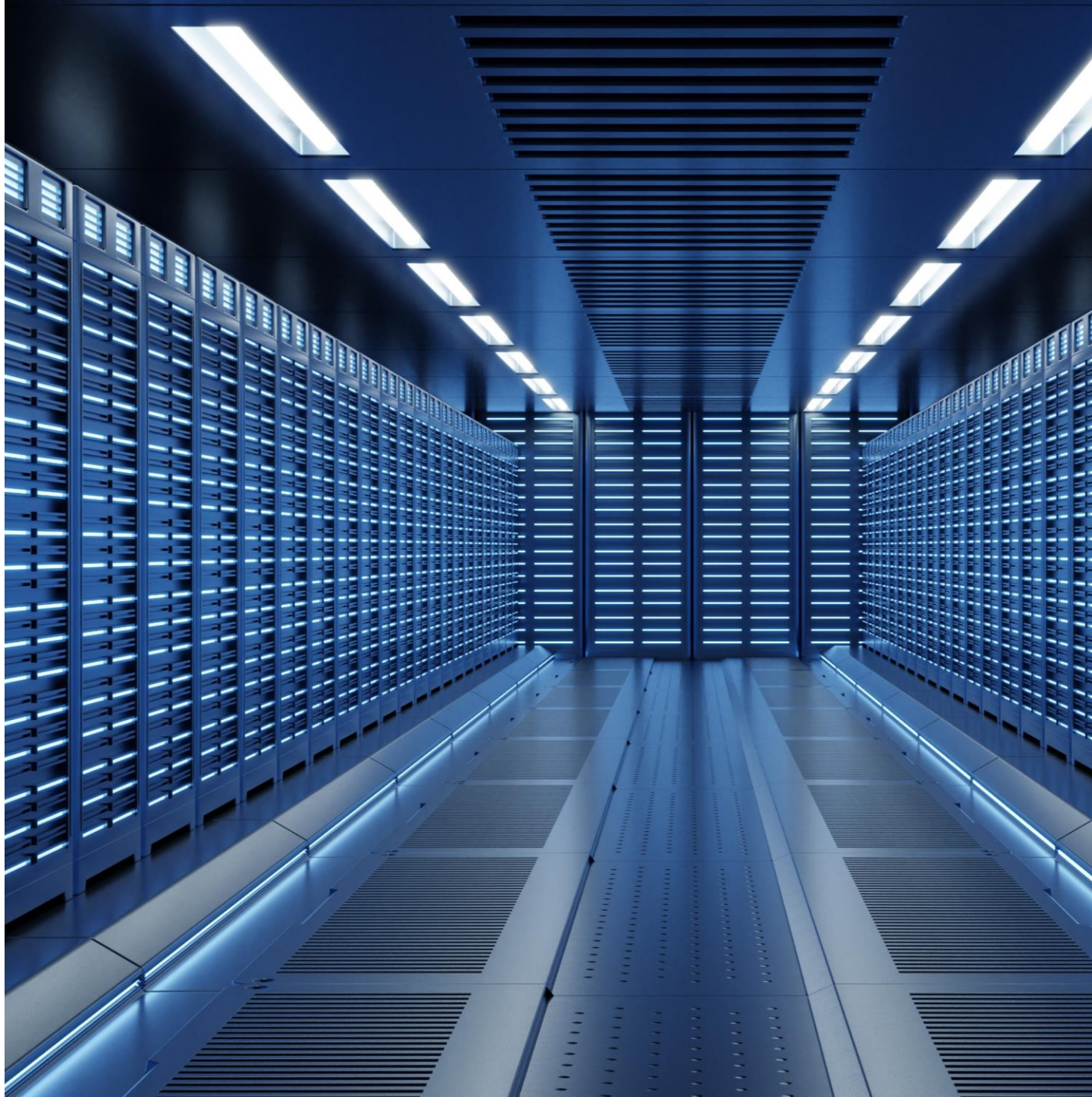
Q1 **Industrial (RS 14)** actual loads were **35 aMW, 0.4% below** budget forecast.

- Will monitor loads of one customer that is in the process of a pending sale
- Will also monitor data centers that are increasing loads

Q1 Rate Schedule Differences

Q1 **Large Industrial (RS 15)** actual loads were **251 aMW, 1.9% above** budget forecast.

- Data centers increasing loads faster than forecasted



Q1 Rate Schedule Differences

Q1 **Ag Food Processors (RS 16)** actual loads **were 32 aMW, 8.5% below** budget forecast.

- An agriculture processing customer that had a facility incident did come back online but has not reached the forecasted load
- Few customers coming in lower than forecasted

Q1 Rate Schedule Differences

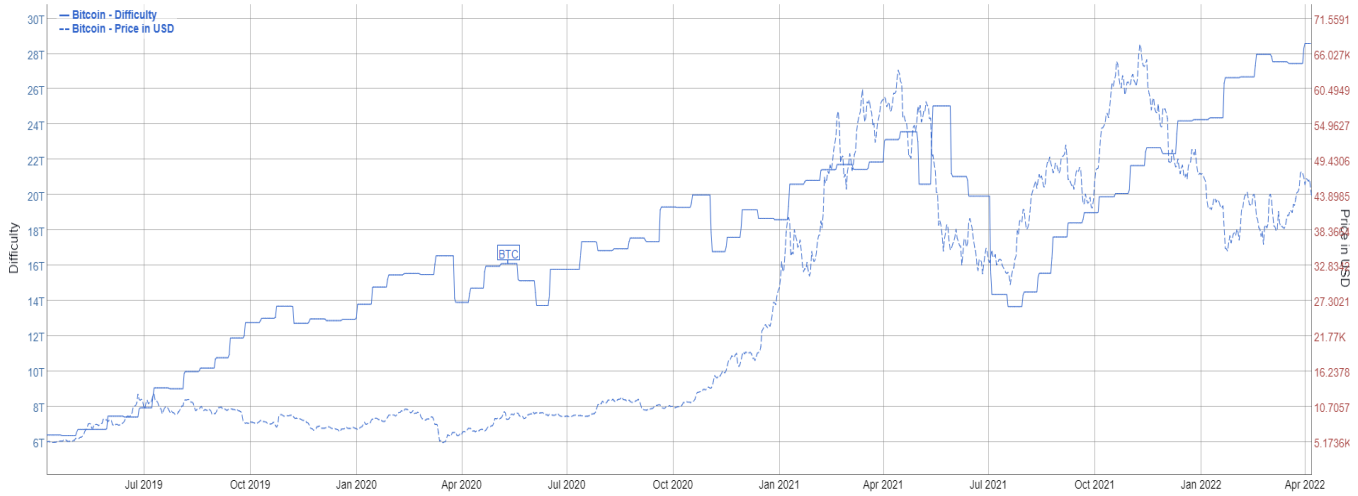
Q1 **New Large Load (RS 94)** actuals were **32 aMW, 13.8% below** budget forecast.

- Decrease in New Large Loads is arising from one customer growing slower than forecasted.

Q1 Cryptocurrency Update

Q1 **Cryptocurrency** actual loads were **~28 aMW**

- Bitcoin closed the quarter down 2%
- Q1 did not provide much by way of crypto market movement until it was basically over
- Traders are concerned about the prolonged nature of the Russia-Ukraine war, and threats from the Kremlin to cut off Europe's supply of natural gas unless the contracts are denominated in rubles
  - Risk-off environment



Source: Bitcoin Difficulty vs. Price in USD Chart (bitinfocharts.com)

Q1 2022 Takeaways

Residential and Commercial loads are 1.3% and 2.1% above and below budget respectively, on a weather adjusted basis.

Net Rate Schedule 7, 14, 15, 16, 85, & 94 actual loads are above the budget forecast by around 1 aMW; with Rate Schedule 7 and 16 having the most variance.

Evolving Industry (Rate Schedule 17) customers were moved to the appropriate classes starting March 2021. Large Power Solutions is monitoring for potential evolving industries.

Grant County Electric Vehicles

City	Count of Hybrid and Electric Vehicles		
	Plug-in Hybrid Electric Vehicle (PHEV)	Battery Electric Vehicle (BEV)	Total
MOSES LAKE	85	78	163
EPHRATA	16	18	34
WARDEN	3	1	4
SOAP LAKE	9	8	17
GEORGE	1	2	3
GRAND COULEE	2	0	2
MATTAWA	8	7	15
ROYAL CITY	3	4	7
QUINCY	11	29	40
OTHELLO	1	6	7
COULEE CITY	1	4	5
ELECTRIC CITY	2	1	3
DESERT AIRE	0	2	2
GRANT COUNTY TOTAL	**142**	**160**	**302**

Grant County Electric Vehicles Continued

City	Battery Electric Vehicle (BEV) First Year Registeration									
	2013	2014	2015	2016	2017	2018	2019	2020	2021	Total
MOSES LAKE		2	1	5	5	9	14	15	22	73
EPHRATA	1	1		3	1	4	1	5	6	22
WARDEN									1	1
SOAP LAKE				1			1	2	4	8
GEORGE							2			2
GRAND COULEE										0
MATTAWA					1		1	2	3	7
ROYAL CITY		1					1	1	1	4
QUINCY		1		1	2	3	2	9	12	30
OTHELLO	1		1		1		2	1		6
COULEE CITY					1	3				4
ELECTRIC CITY							1			1
DESERT AIRE						1			1	2
GRANT COUNTY TOTAL	**2**	**5**	**2**	**10**	**11**	**20**	**25**	**35**	**50**	**160**

Grant County Electric Vehicles Continued

City	Plug-in Hybrid Electric Vehicle (PHEV) First Year Registeration											
	2011	2012	2013	2014	2015	2016	2017	2018	2019	2020	2021	Total
MOSES LAKE	1	3	3	1	3	3	10	15	14	14	16	83
EPHRATA		2		2	1	1	3	1	3	2	5	20
WARDEN				1				1		1	1	4
SOAP LAKE			1				2	1	1	2	1	8
GEORGE								1				1
GRAND COULEE						1			1			2
MATTAWA						1	3	2	2	1		9
ROYAL CITY				1			1					2
QUINCY		1				1	1		1	3	2	9
OTHELLO									1			1
COULEE CITY								1				1
ELECTRIC CITY											2	2
DESERT AIRE												0
GRANT COUNTY TOTAL	**1**	**6**	**4**	**5**	**4**	**7**	**20**	**22**	**23**	**23**	**27**	**142**

Grant County Electric Vehicles Continued

Make and Model	Battery Electric Vehicle (BEV) First Year Registeration
BMW i3	1
CHEVROLET Bolt EV	12
CHEVROLET Spark	1
FIAT 500	3
FORD F-150	2
FORD Focus	2
FORD Mach-E	1
HYUNDAI Kona	4
JAGUAR I-PACE	1
KIA Niro	5
KIA SOUL	3
MITSUBISHI Outlander	1
NISSAN Leaf	27
PORSCHE Taycan	2
SMART Fortwo Electric Drive	3
TESLA Model 3	42
TESLA MODEL S	18
TESLA Model X	15
TESLA Model Y	17
Total	**160**

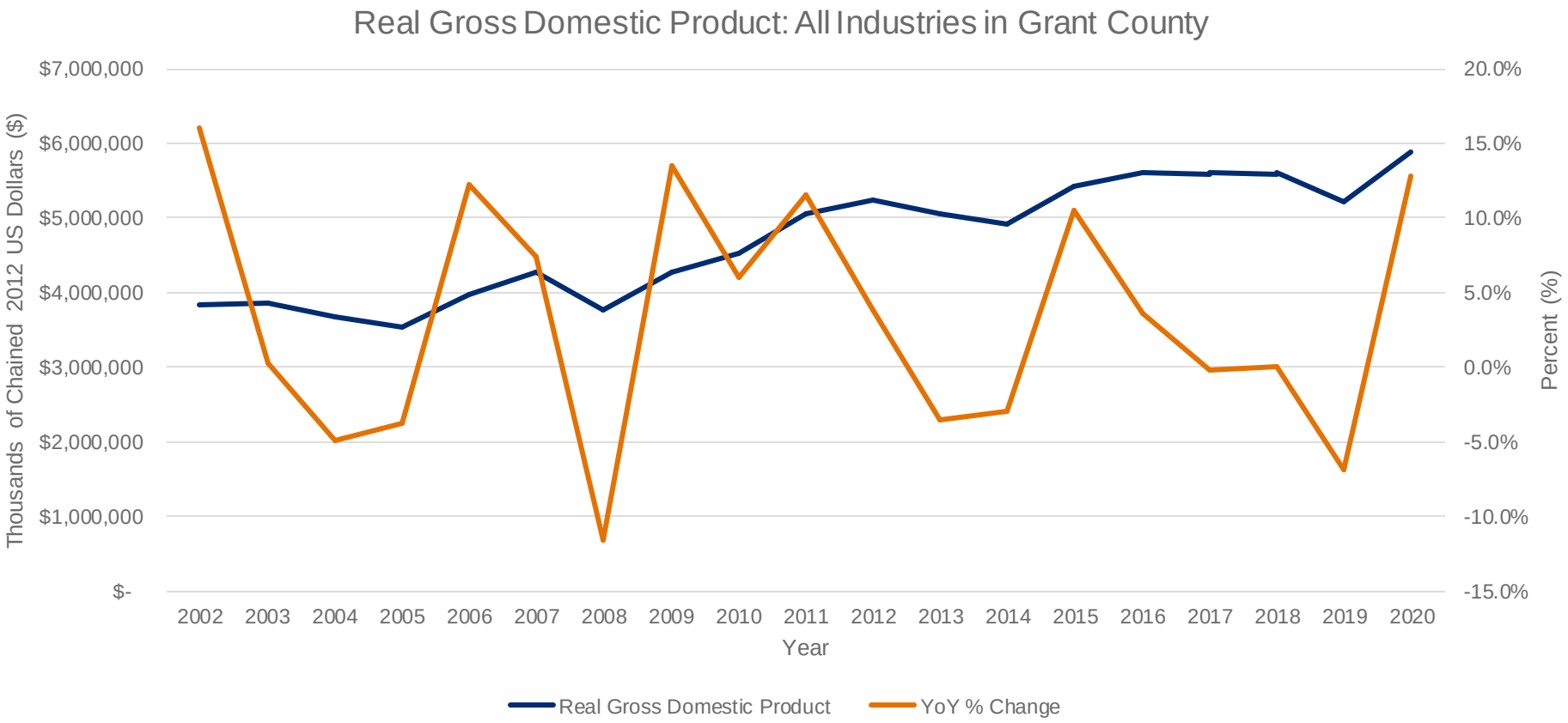
Make and Model	Plug-in Hybrid Electric Vehicle (PHEV) First Year Registeration
AUDI A3	1
BMW 330E	1
BMW 530E XDRIVE	1
BMW i3	10
BMW X5	2
CADILLAC ELR	3
CHEVROLET Volt	45
CHRYSLER Pacifica	10
FORD C-max	13
FORD Fusion	22
HONDA Clarity	3
HYUNDAI Ioniq	1
HYUNDAI Sonata	1
HYUNDAI SONATA PLUG-IN HYBRID	7
JEEP Wrangler	4
KIA Niro	1
KIA NIRO PLUG-IN HYBRID	1
MERCEDES-BENZ GLE-Class	1
PORSCHE Panamera	1
TOYOTA Prius Plug-in	4
TOYOTA Prius Prime	9
TOYOTA RAV4 Prime	1
Total	**142**

Grant County Electric Vehicles Continued

Name	Address
Shree Truck Stop	404 S Frontage
Tesla Inc	2709 Broadway Ave W
Energy Northwest	418 5th Ave E
Colville Tribes	420 Wanapum Dr
Loves Travel Stops	S Frontage
Tesla	16010 Rd 1 NW
Tesla	224 Bing Ave W

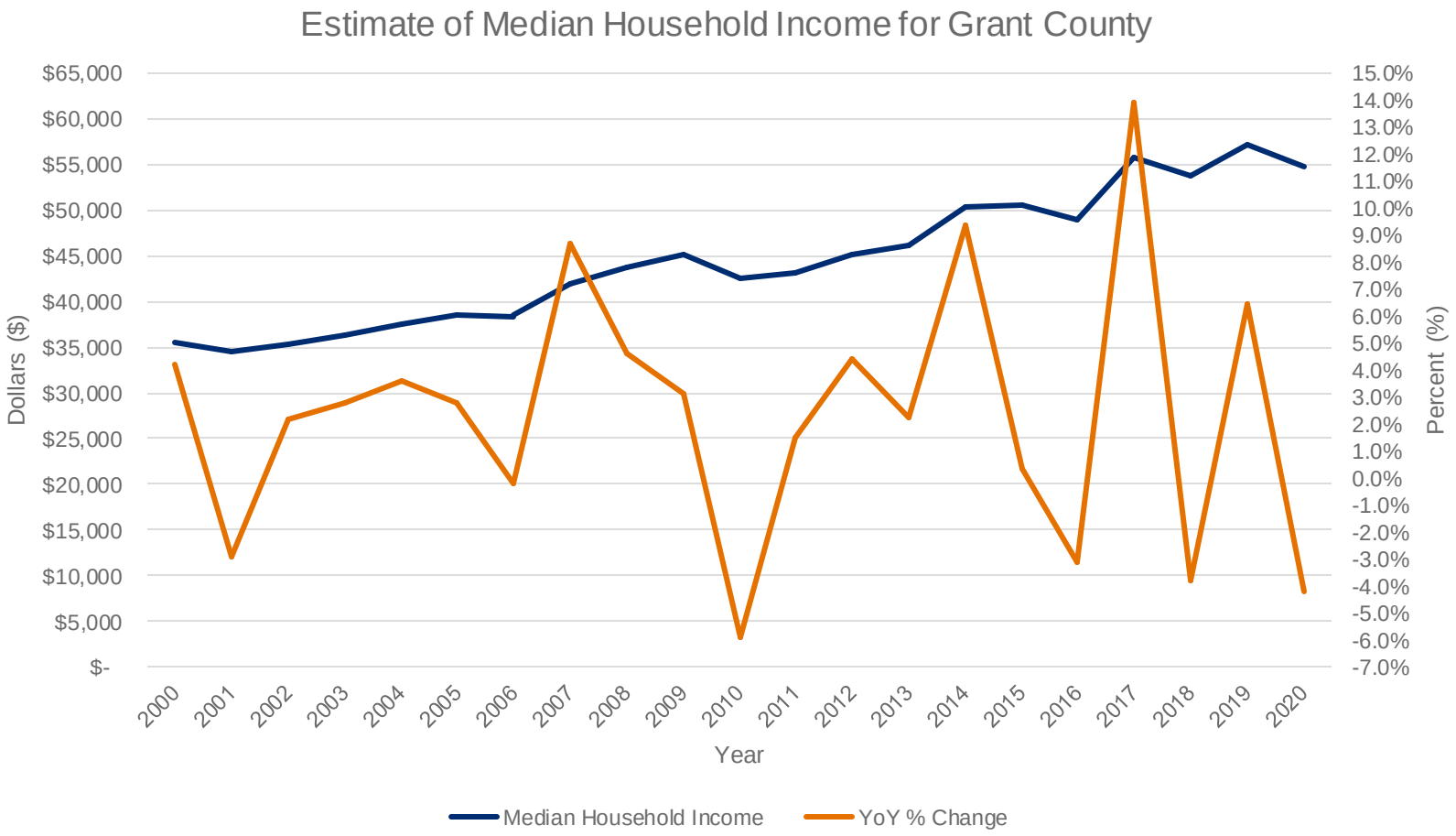
- We have been able to locate 7 commercial charging stations

Economic Indicators



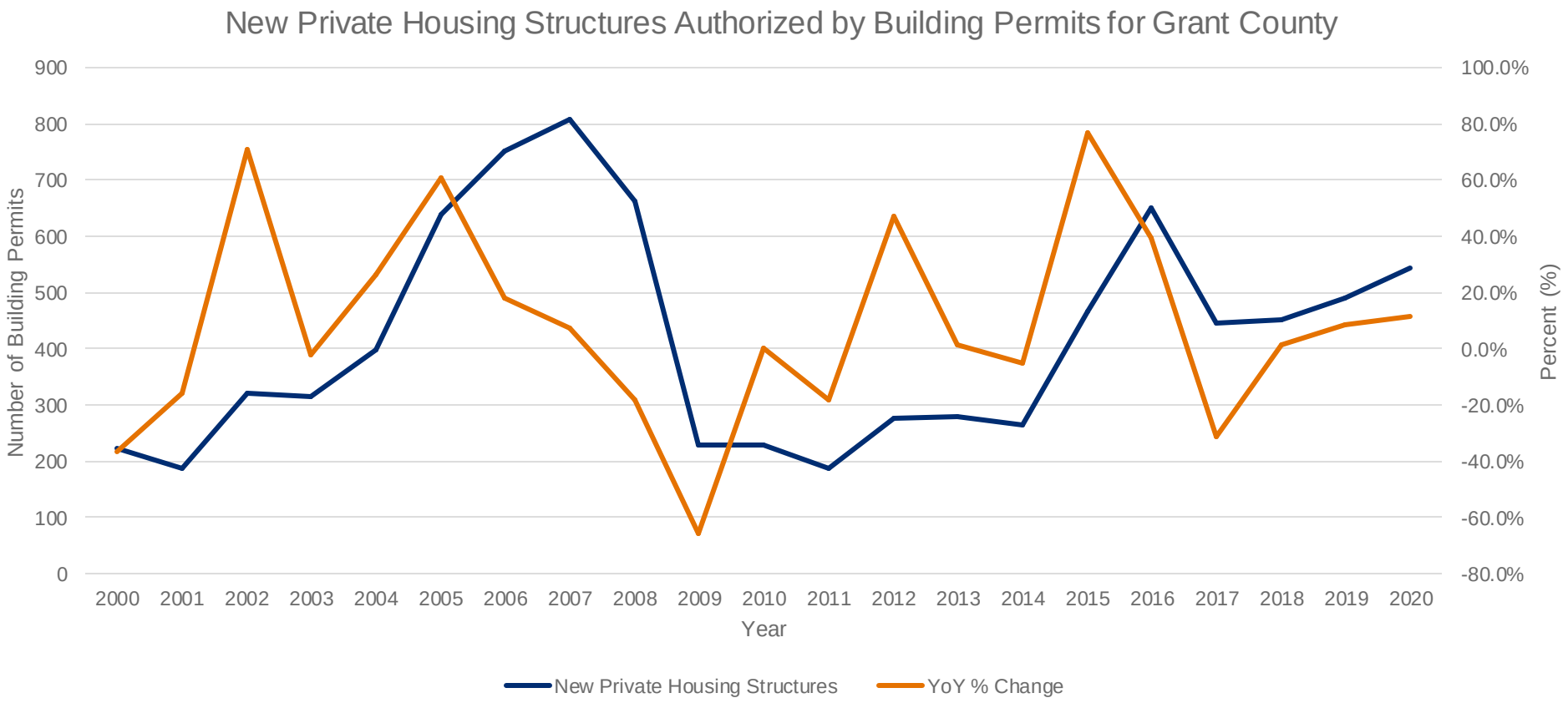
GDP by county is a measure of the market value of final goods and services produced within a county area in a particular period. While other measures of county economies rely mainly on labor market data, these statistics incorporate multiple data sources that capture trends in labor, revenue, and value of production. As a result, the capital-intensive industries are captured more fully than when measured solely by labor data. The data captured in the graph above is adjusted for inflation.

Economic Indicators Continued



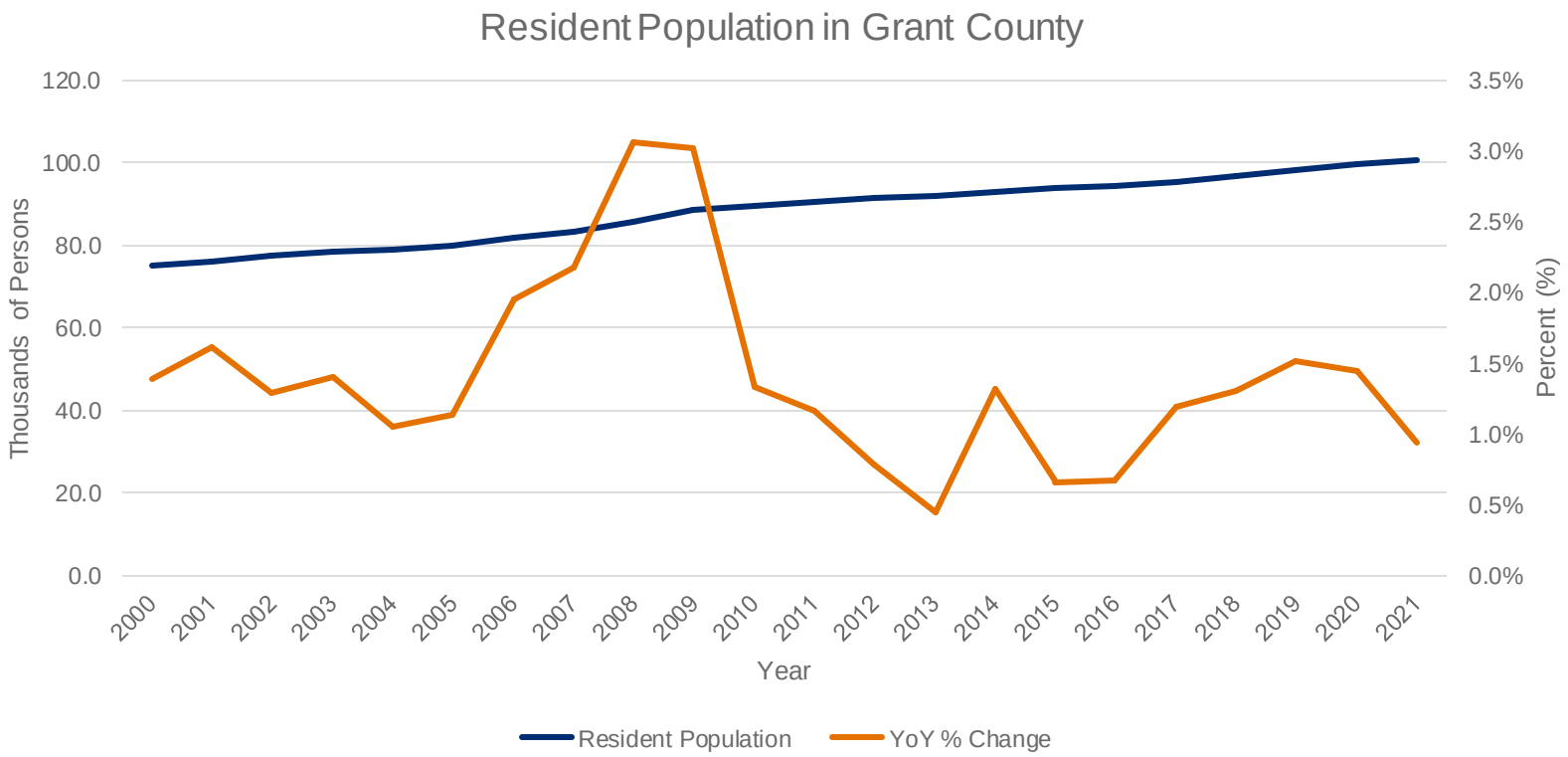
Household income includes income of the householder and all other people 15 years and older in the household, whether or not they are related to the householder. Median is the point that divides the household income distributions into two halves: one-half with income above the median and the other with income below the median. The median is based on the income distribution of all households, including those with no income.

Economic Indicators Continued



This series represents the total number of building permits for all structure types. Structure types include 1-unit, 2-unit, 3-unit, 4-unit, and 5-unit or more.

Economic Indicators Continued



Population estimates are updated annually using current data on births, deaths, and migration to calculate population change since the most recent decennial census. The annual time series of estimates begins with the most recent decennial census data and extends to the vintage year. Each vintage of estimates includes all years since the most recent decennial census.

Thank You

Grant PUD

Powering our way of life.

Service	Rate	Icon	Description
Residential Service	1		Single family dwelling, individual apartment or farmhouse for single-phase service.
General Service	2		Accounts with loads not exceeding 500 kW (as measured by Billing Demand) for general service, commercial, multi-residential and miscellaneous outbuilding lighting, heating and power (excepting irrigation service) requirements.
General Service	2F		Single-phase loads not exceeding 500 watts as determined from the equipment's UL listing.
Irrigation Service	3		Customers with irrigation, orchard temperature control or soil drainage loads not exceeding 2,500 horsepower and other miscellaneous power needs including lighting.
Street Lighting Service	6		Street lighting

Service	Rate	Icon	Description
Large General Service	7		Accounts with loads not less than 200 kW or more than 5,000 kW Billing Demand for general service lighting, heating and power requirements. Service will NOT be provided under this rate schedule to process heating or boiler service loads greater than 3,000 kW unless such loads were served on this rate schedule prior to January 1, 2001.
Industrial Service	14		Industrial customers whose Billing Demand is greater than 5 MW/MVA and less than 15 MW/MVA
Large Industrial Service	15		Industrial customers whose Billing Demand is greater than or equal to 15 MW/MVA
AG Food Processing Service	16		Customers whose Billing Demand is greater than 5 MW/MVA and less than 15 MW/MVA at plants where the primary purpose is processing, canning, freezing or the frozen storage of agricultural food crops (including livestock, poultry and fish)

Service	Rate	Icon	Description
Evolving Industry	17		Retail customers whose energy load activity and/or industry meets the requirements of the Evolving Industry definition as detailed in the rate document.
AG Food Processing Boiler Service	85		Electric boilers which are separately metered and are primarily used for the purpose of processing, canning, or freezing agricultural food crops (including livestock, poultry and fish)
New Large Load	94	MW	All New Large Loads, as defined by the District's Customer Service Policies. Service to such loads will be in accordance with the terms of this rate schedule.