

Strategic Directive 7 Reliability and Resiliency

Public Utility Board
March 22, 2023



Overview



- **Progress to Date**
- **Challenges and Barriers**
- **Completed 2022 Priorities**
- **Priorities for 2023**

Measurement 1

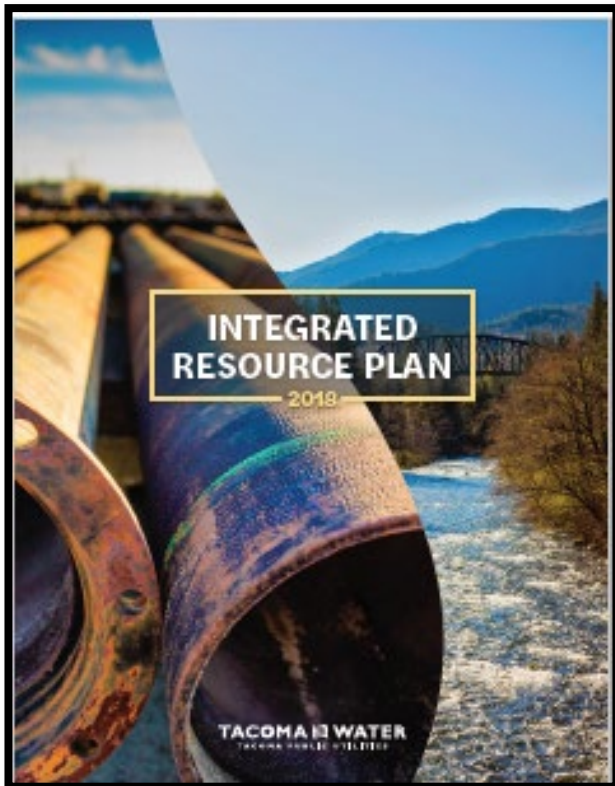


On an average basis, TPU expects power outages among all residential customers within its service area, on average, one outage per year and those outages will not exceed 75 minutes in duration. TPU will calculate the outage frequency and duration measures using industry-standard methods.

On average Tacoma Power Customers have experienced **0.73** outages lasting an average of **76** minutes in 2022

Measurement 2

Tacoma Water will maintain sufficient source supply to avoid residential customer curtailment 99 percent of the time on average.



Tacoma Water has had no residential customer curtailments since 2015

Measurement 3

Tacoma Water will maintain compliance with State and Federal drinking water regulations 100 percent of the time.

- Tacoma Water has no violations to report.
- Water will report on this measure annually in the **Annual Water Quality Report**.

Three-Year Compliance History by Quarter [\(EPA ECHO Detailed Facility Report\)](#)

Statute	Violation Type/Category		QTR 1	QTR 2	QTR 3	QTR 4	QTR 5	QTR 6	QTR 7	QTR 8	QTR 9	QTR 10	QTR 11	QTR 12	QTR 13*
SDWA (Source ID: WA5386800)			10/01-12/31/19	01/01-03/31/20	04/01-06/30/20	07/01-09/30/20	10/01-12/31/20	01/01-03/31/21	04/01-06/30/21	07/01-09/30/21	10/01-12/31/21	01/01-03/31/22	04/01-06/30/22	07/01-09/30/22	10/01-12/31/22
	Facility-Level Status		No Violation	No Violation	No Violation	No Violation	No Violation	No Violation	No Violation	No Violation	No Violation	No Violation	No Violation	No Violation	No Violation
	Category	Violation Type													

*Quarter 13 data is voluntarily entered and/or incomplete, and may not form a complete picture for that quarter. [Read more](#)

SDWA Compliance Data Last Reported: 12/23/2022

Measurement 4

Tacoma Rail expects to deliver intermodal trains at least 95 percent on-time and will deliver commercial carloads at least 85 percent on-time.

2022 Commercial KPI:

99% On-Time Performance

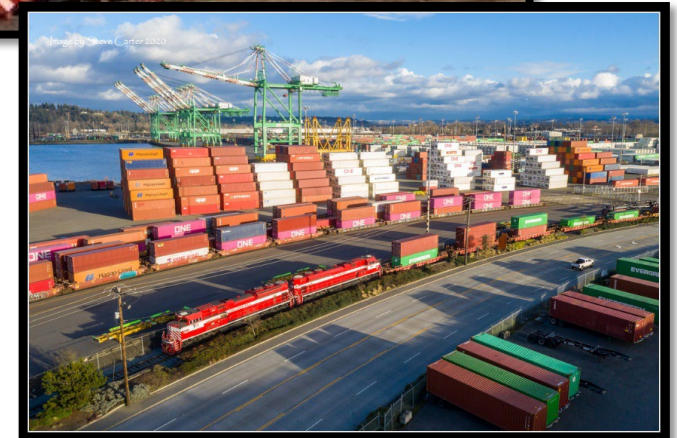
2022 Intermodal Train Departure KPI:

100% On-Time Performance

2022 Customer Satisfaction Survey:

Dependability Rating:

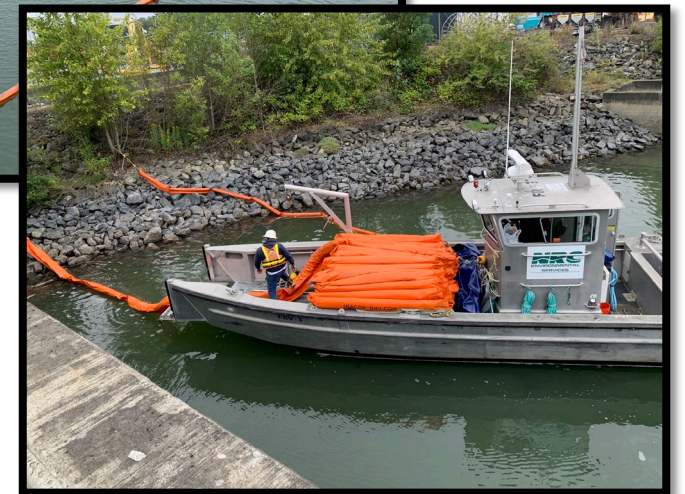
3.63 out of 4 points (91%)



Measurement 4 Continued

Tacoma Rail will maintain compliance with all aspects of our Oil Spill Contingency Plan (OSCP); and continue to refine our ability to implement rapidly with other key stakeholders.

- Ecology, Coast Guard, Puyallup Tribe, Tacoma Fire Department, and Port of Tacoma
- Two deployment drills and one Tabletop exercise per year.
- Unannounced Drills



Measurement 5



TPU will chart the time taken to activate emergency plans against the complexity of the incident disaster.

2022 Responses:

- Power
 - September 7th Red Flag Event
 - November 4th Windstorm
 - November 29th Windstorm Monitoring
 - December 22nd Ice Storm
 - December 25th Elk Plain – Graham Substation Attacks
 - December 27th Windstorm
- Rail
- Water
 - March 16th 11th St. Bridge Demo
 - July 25th Prairie Ridge Pump Station Low Pressure
 - September 9th Red Flag Event
 - October 7th Low/No Pressure in the 446 Zone
 - October 27th Boil Water Brookdale Rd E
 - December 1st Headworks/GRFF Winter Snowstorm
 - December 22nd Headworks Christmas Ice Storm

2022 Exercises:

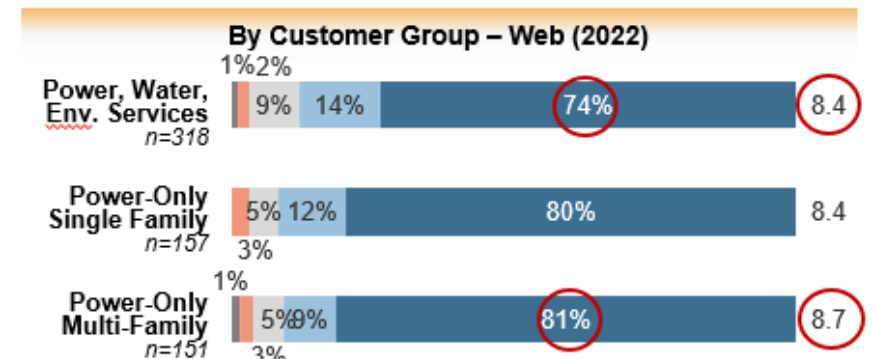
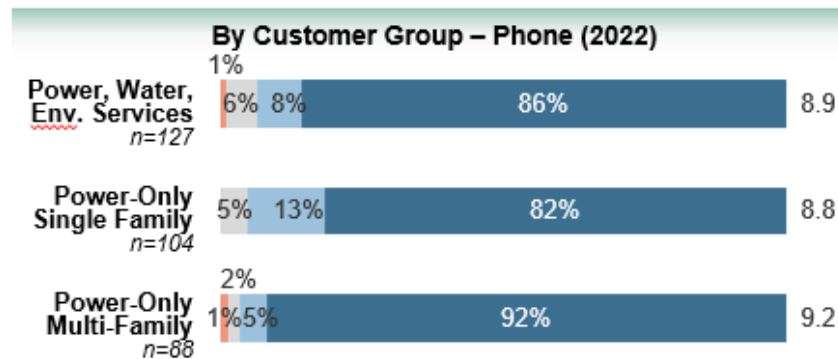
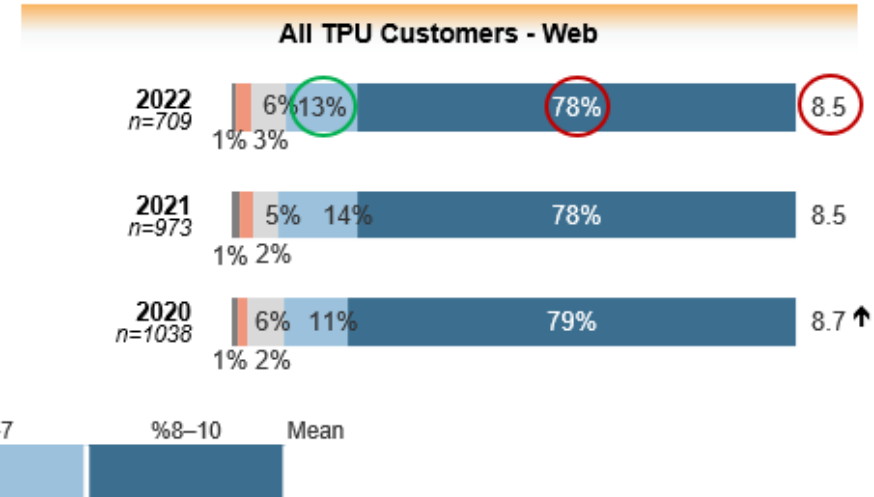
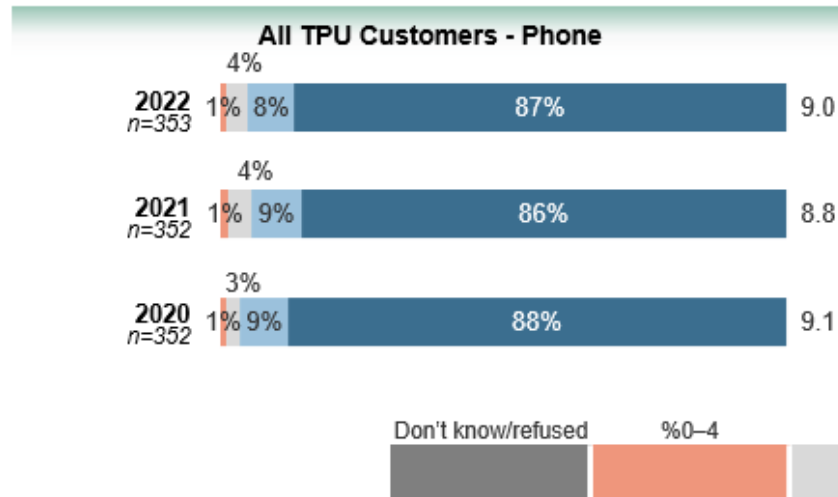
- Utility
 - Cascadia Rising June 15th
 - MultiCare Tabletop Exercise August 3rd
 - Great Shakeout Earthquake Drill October 20th
- Power
 - Cowlitz Full Power EAP Siren Test April 6th
 - Cushman Full Power EAP Siren Test April 6th
 - Cushman / Wynoochee Combined Virtual FEAP May 10th
 - Nisqually / Yelm Combined FEAP September 28th
- Rail
 - (2) Deployment Drill (OSCP)
 - Worst Case Tabletop Exercise (OSCP)
- Water
 - Washington State Drinking and Wastewater Earthquake Response Exercise July 12th
 - Headworks Emergency Response Exercise October 4th
 - EPA Earthquake Resilience Workshop October 12th

Measurement 6



Customer satisfaction regarding restoration of utility services after disruption is one measure of effectiveness of emergency planning.

Providing Reliable Electric Service- Tacoma Power



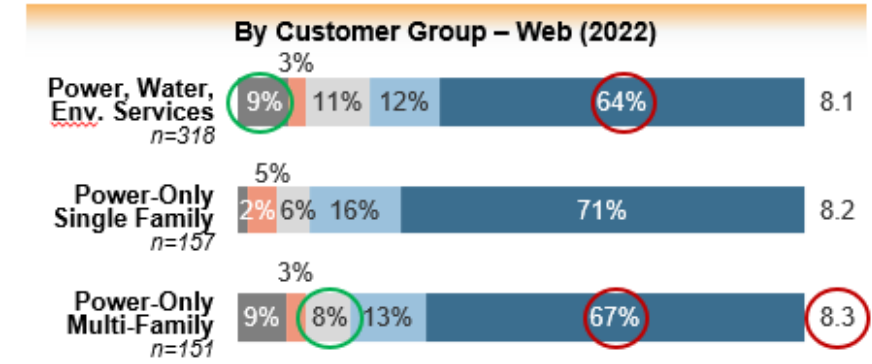
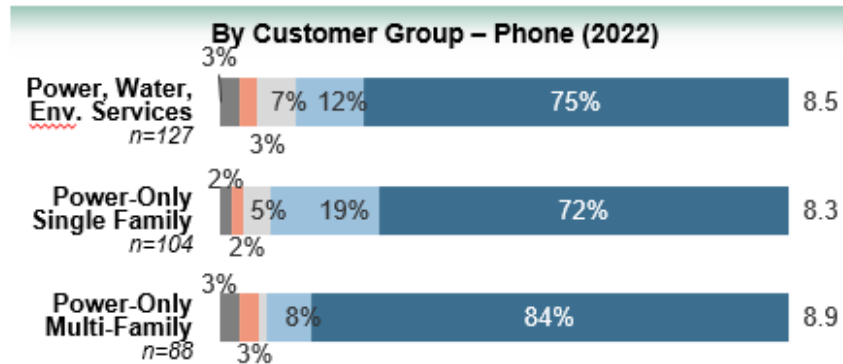
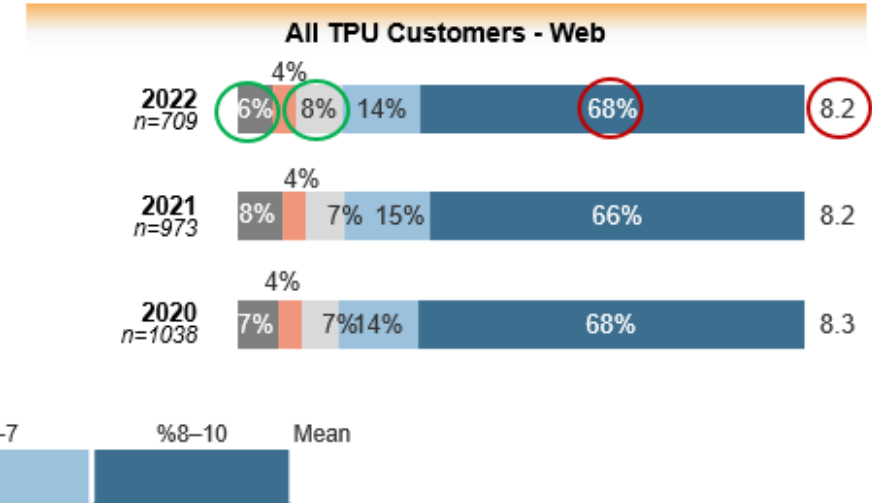
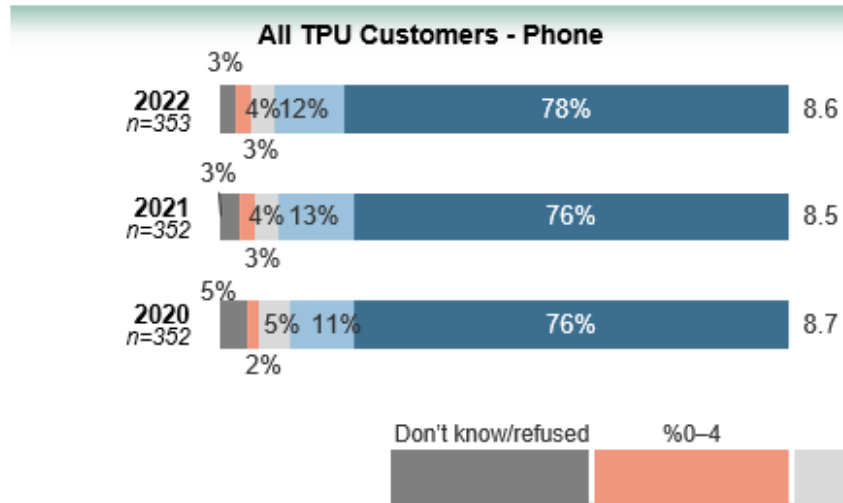
How would you rate T-P-U's performance with regard to...?

RELIABLE. Providing reliable electric service

↑↓ Indicate significant differences between the current wave and previous waves.

○ / ○ circles indicate significantly higher/lower percentages for 2022 web results versus the 2022 phone results.

Restoring Power After an Interruption-Tacoma Power



How would you rate T-P-U's performance with regard to...?
ELECTRICITY: Restoring electric service at your residence after an interruption occurs

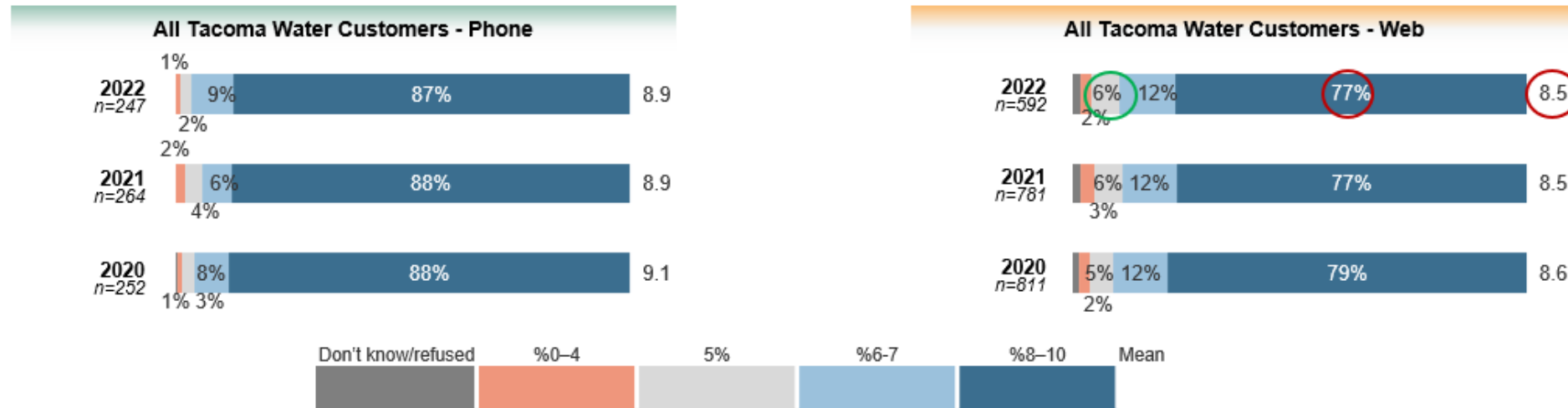
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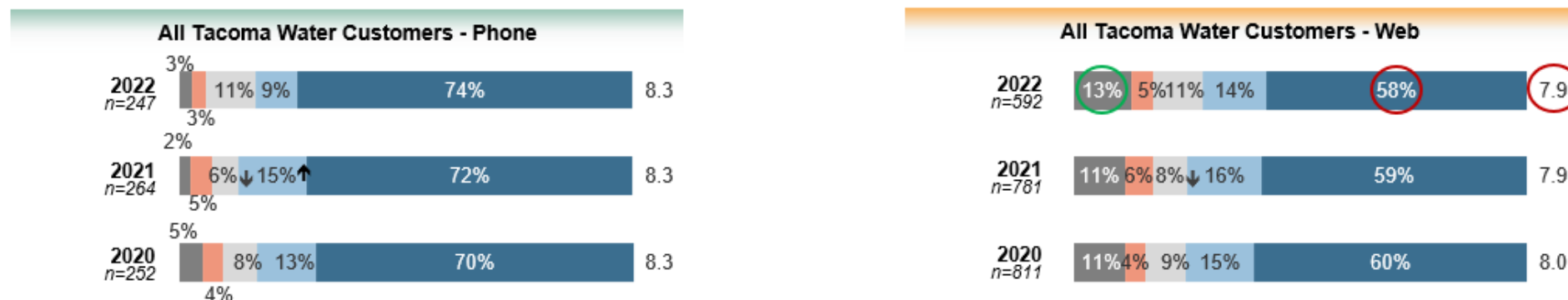
Tacoma Water Service Reliability & Resiliency



Reliability of Water Service



Water Lines are Well-Maintained



How would you rate Tacoma Water's performance with regard to...?

WTRREL. Overall reliability of water service

WTRMNT. Making sure all water lines are well-maintained

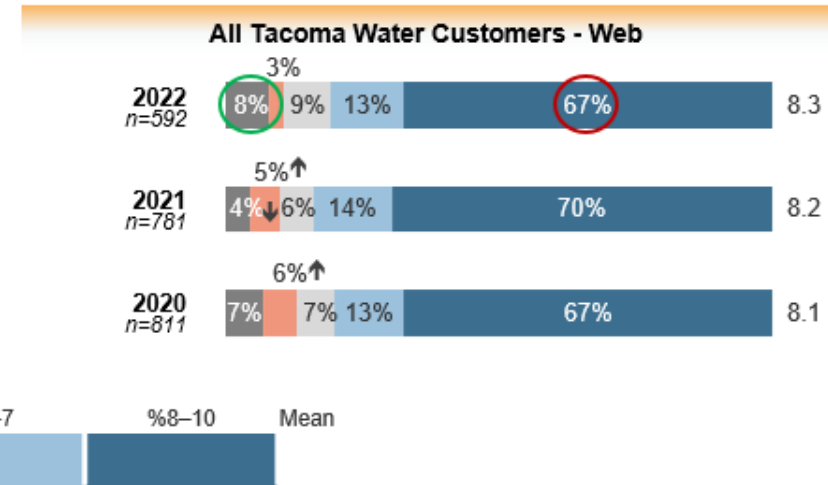
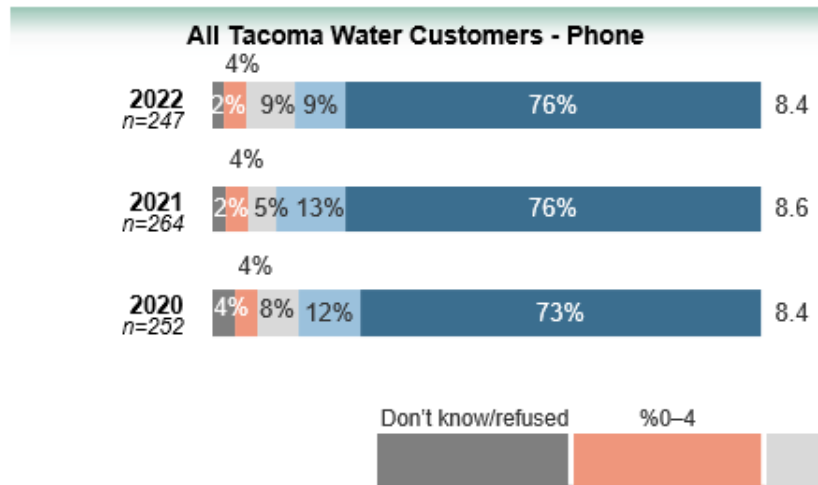
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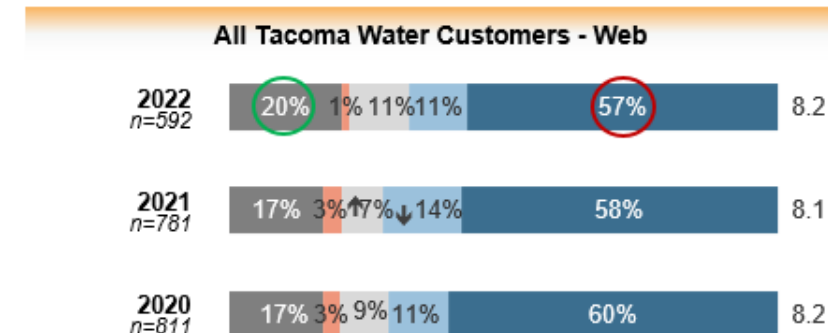
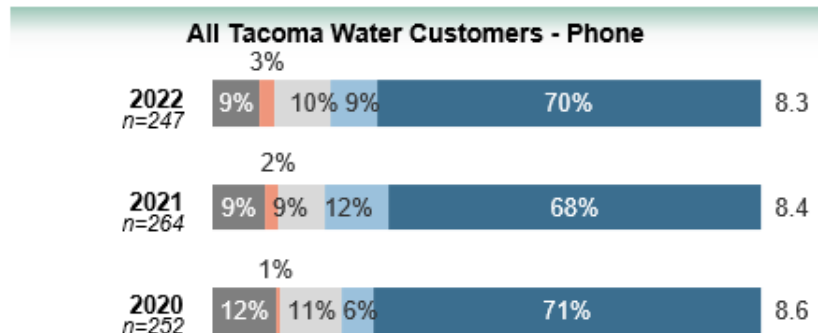
Notification of Planned Outages & Restoration



Notification of Any Planned Outages



Restoring Water After an Interruption



How would you rate Tacoma Water's performance with regard to...?
NOTMNT. Notifying you of any planned disruptions due to water system maintenance or repairs
WTRREST. Restoring water service at your residence after an unexpected disruption

↑↓ Indicate significant differences between the current wave and previous waves.

○ / ● circles indicate significantly higher/lower percentages for 2022 web results versus the 2022 phone results.

Measurement 7



Significant emergency preparedness plans (such as Continuity of Operations Plan), policies and procedures should be reviewed annually and updated as needed to reflect changes in planning goals, available resources and changing threat assessments.

Measurement 7: TPU



Completed in 2022

- TPU Continuity of Operations plan
- Initial Post Damage Building Inspector MOU with the City of Tacoma
- Approval to purchase Satellite Phones
- COVID Reconstitution After-Action Report

Measurement 7: Power



Completed in 2022:

- Power Transmission & Distribution's Emergency Response Plan contact information last updated on January 23rd, 2023.
- Power Transmission & Distribution's Emergency Operations Plan was reviewed and updated on November 22nd, 2022.
- All Four of Generations Hydroelectric Project's (Cowlitz, Cushman, Nisqually & Wynoochee) Emergency Action Plans were updated on December 30th, 2022.
- Utility Technology Services' Cyber Incident Response and System Recovery Plan contact information was last updated on March 3rd, 2023.

Measurement 7: Water



Completed in 2022:

- All Standard Operating Guides (SOG's) were reviewed and updated.
 - Three new SOG's were developed around cyber security and emergency backup power at critical Tacoma Water infrastructure
- Annual review of the Tacoma Water Emergency Operations Plan was conducted in November.
- An Alternate Water Source Plan was developed and completed in May.
 - This plan was utilized in the Cascadia Rising Exercise on June 15th.

Challenges & Barriers



Supply Chain Impacts

- Accessibility, availability, and extended timelines

Completed Priorities from 2022



- Hired additional Emergency Manager (MAII) - Power
- Emergency Preparedness for Employees
 - Held Quarterly Lunch & Learns for Employees
 - Populated Preparedness SharePoint Site for Employees
- Finalized and Distributed TPU Continuity of Operations Plan (COOP)
- Developed Combined In-Person ICS 100/200/700 Training
- Conducted Successful Cascadia Rising 2022 Exercise
- Continued Response to COVID-19
 - Implemented and Completed Employee Reconstitution
 - Completed Reconstitution After Action Review & Report
 - Initiated Contract for Consultant to Perform COVID-19 After Action Review

Priorities for 2023



Continuing to enhance our enterprise Emergency Management Program

- Improve coordination between existing Emergency Managers
- Emergency Management Structure to meet the enterprise needs
 - Strategic Plan (Align with biennium timeline and budget constraints)
 - Incident Command Structure (utility-wide)
 - Utility Activation Levels

Hire Emergency Management Analyst-TPU

Emergency Preparedness

COVID-19 After-Action Report

Support coordinated utility planning & exercises

- GridEx (Nov.)

Critical Communications

Priorities for 2023



- **Emergency Preparedness**

- For employees:

- Quarterly Lunch & Learns
 - Guidance on personal & family preparedness and planning
 - Workplace emergency preparedness kits distributed and socialized
 - Coordination with Security, Safety, and Communications Teams

- For customers:

- New content on mytpu.org - how to prepare for emergencies
 - What to do during and after emergencies (utility disruptions)

Priorities for 2023: Power



- **Preparedness**

- Substation Hardening
- Employee Incident / Event Notification SOP
- Develop / Update Power Emergency Plan ICS Org Structures

- **Communication**

- Populate Tacoma Power's Emergency Management page with information to reflect TPU's Emergency Management page.

- **Training**

- Update ICS job aides and provide training
- Implement the ICS 100/200/700 In-Person Training

- **Coordination**

- UAV Utility Steering Comity (Utility UAV Program Development)
- Pierce County Fire Entity & SS911 Training and Information Sharing
- Work with partner counties to develop MOU/MAAs for emergency equipment use.
- Partner utility pole placard cheat sheet

Thank You

