

# Riffe Lake Update

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# Agenda

- Our responsibilities
- Updates on:
  - Lake levels and river flows
  - Mossyrock Dam
  - Recreation
  - Community partnership
- Q&A
- Breakout Q&A sessions



# Stewardship of the Cowlitz River

*Our top priority is public safety.*

## Factors we must balance:

- Environment - fish and wildlife
- Grid reliability
- Recreation
- Power Production



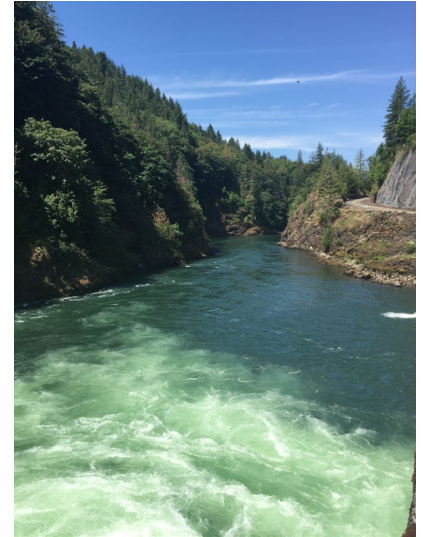
# Stewardship of the Cowlitz River

## Examples of balancing decisions:

- Keeping the lake high for recreation vs. maintaining minimum flows for fish (*especially during dry or drought conditions*).
- Keeping the lake high vs. meeting our winter flood control curve.
- Keeping the lake high vs. meeting our load demands and maintaining grid stability.

## Factors outside our control:

- Weather
- Snowpack
- Load demands
- System reliability drivers
  - (such as gas pipeline and major transmission outages)



# Federal (FERC) License Requirements

- Dam Safety
- River Flows
- Fish Passage
- Fish Supplementation
- Fish Recovery
- Fish and Wildlife Habitat
- Water Quality
- Environmental Compliance
- Recreation
- Historic Properties Management
- Shoreline Management
- Project Signs and Kiosks

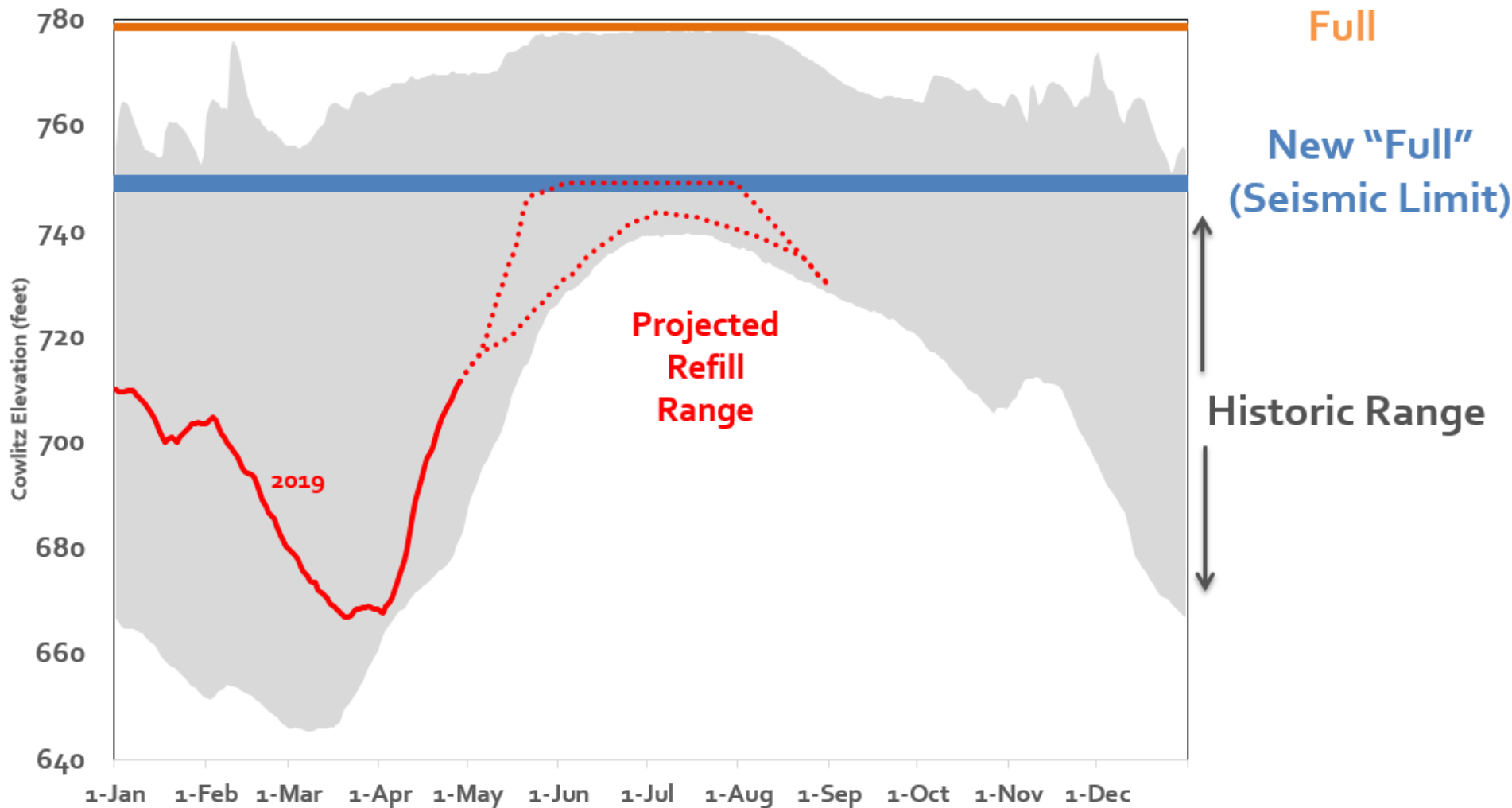
# Update - Lake Levels and River Flows

## Why has Riffe Lake been so low?!

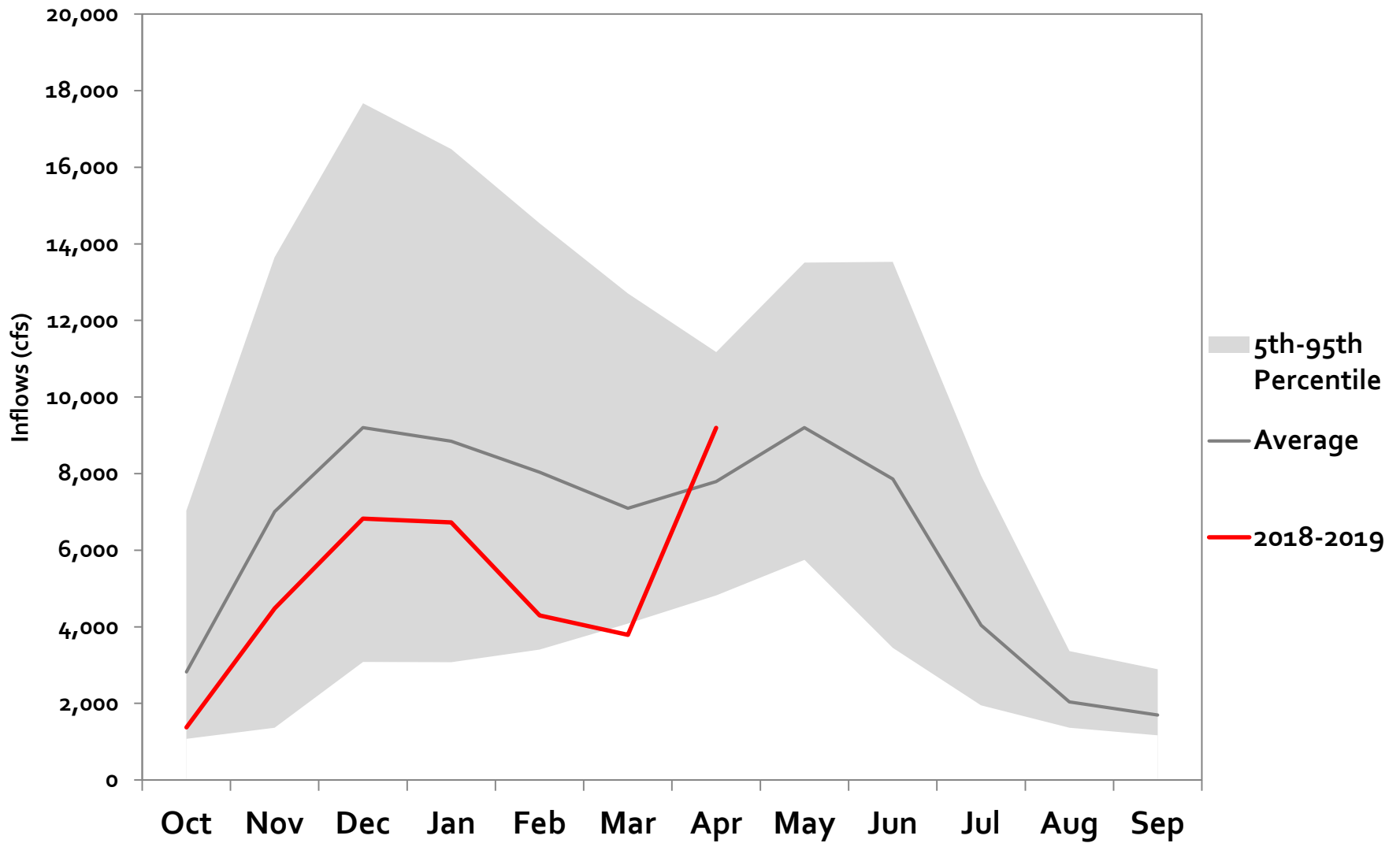
- ✓ Fifth-coolest February and fourth-driest March since 1895
- ✓ Extremely cold, dry weather
- ✓ Regional energy shortage
- ✓ Exceptionally low inflows



# Riffe Lake Elevation



# Cowlitz River Inflows



# Update - Lake Levels and River Flows

## Addressing the issue

- ✓ Worked with the Fisheries Technical Committee to lower minimum flow regime.
  - ✓ Dropped from 5,000 cfs to 2,900 cfs on April 2.



# Update - Lake Levels and River Flows

## Current state

- ✓ Today's elevation: 712.91 feet
- ✓ Snowpack is now about 80% of normal.
- ✓ Total Cowlitz-area precipitation for the year so far has been about 80% of normal.
- ✓ April inflows were higher than average.
- ✓ Nearly 10.5 inches less than average rainfall so far this year.



# Update - Mossyrock Dam

Seismicity and the reduction in Riffe Lake levels



# Mossyrock Dam Myth Busters

**Truth or myth?** Tacoma Power is keeping the lake low because there's a crack in Mossyrock Dam.

**MYTH**



# Mossyrock Dam Myth Busters

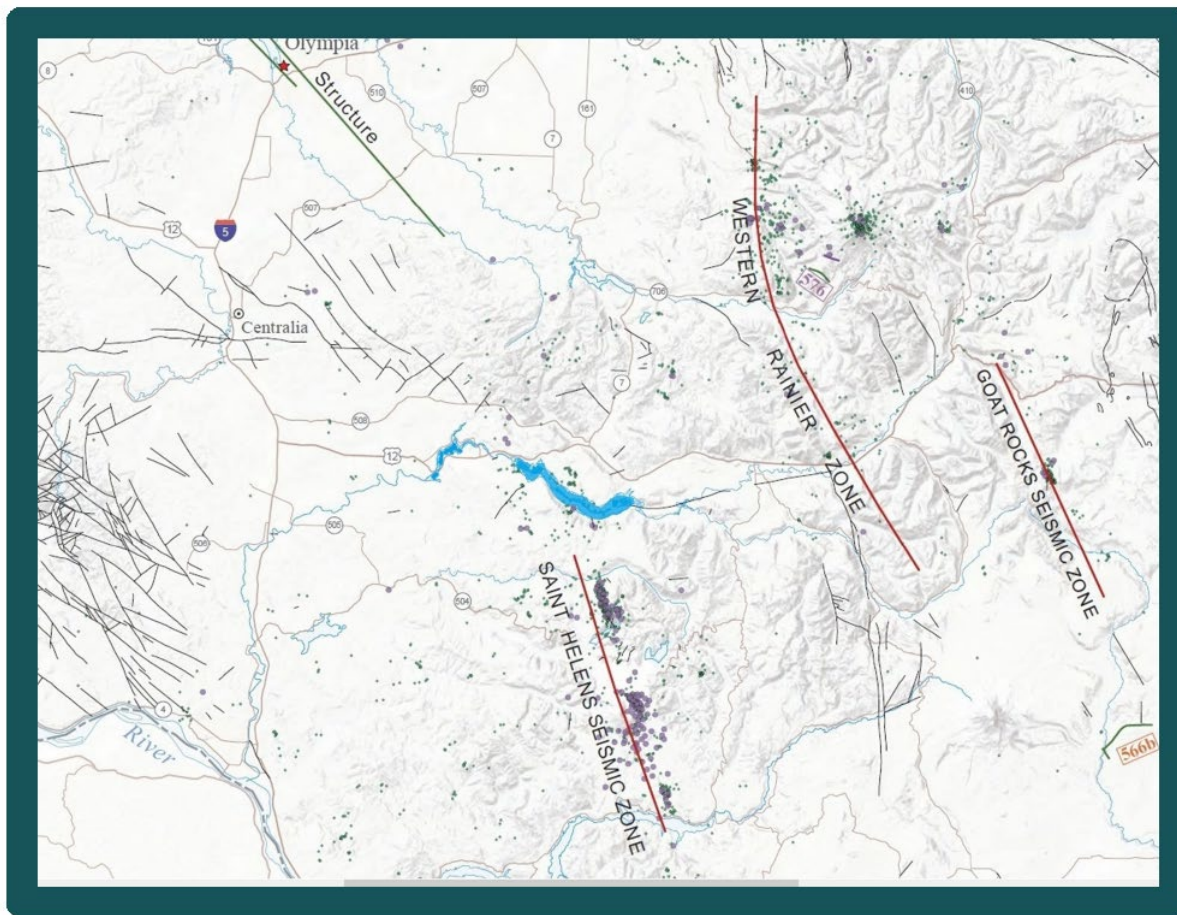
**Truth:** Our concern lies with the spillway piers, NOT the dam itself.

- ✓ During a large earthquake, the piers could break, causing an uncontrolled water release.



# Mossyrock Dam Myth Busters

**Truth:** The Department of Natural Resources continues to find more fault lines. We continue to learn more about earthquakes.



[http://www.dnr.wa.gov/publications/ger\\_ofr2014-05\\_fault\\_earthquake\\_map.pdf](http://www.dnr.wa.gov/publications/ger_ofr2014-05_fault_earthquake_map.pdf)

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# Mossyrock Dam Myth Busters - Why 749 Feet?

1 cfs = 7.5 liquid gallons per second



Elevation (in feet)	Amount of water released (cubic feet per second)	Equivalent number of gallons per second
728.5	0	0
749	60,000 <i>(Flood of Record level below Mayfield Dam)</i>	448,800
755	85,000	635,800 <i>(Olympic-sized swimming pool = 660,430 gallons)</i>
760	112,500	841,500
778.5	230,000	1,720,400

# Mossyrock Dam Myth Busters

**Truth or myth?** Tacoma Power is making millions of dollars keeping the lake low!

**MYTH**

# Mossyrock Dam Myth Busters

## Truth:

- More water behind a dam = more storage to make power.
- A higher level of water = more energy in the water.
- More energy in the water = more power with less water.
- All of the above = more flexibility to balance solar and wind on the grid (what the current grid values).
- More flexibility = better stability for the grid.

## Bottom line:

A full lake is better for you, Tacoma Power, and the region.

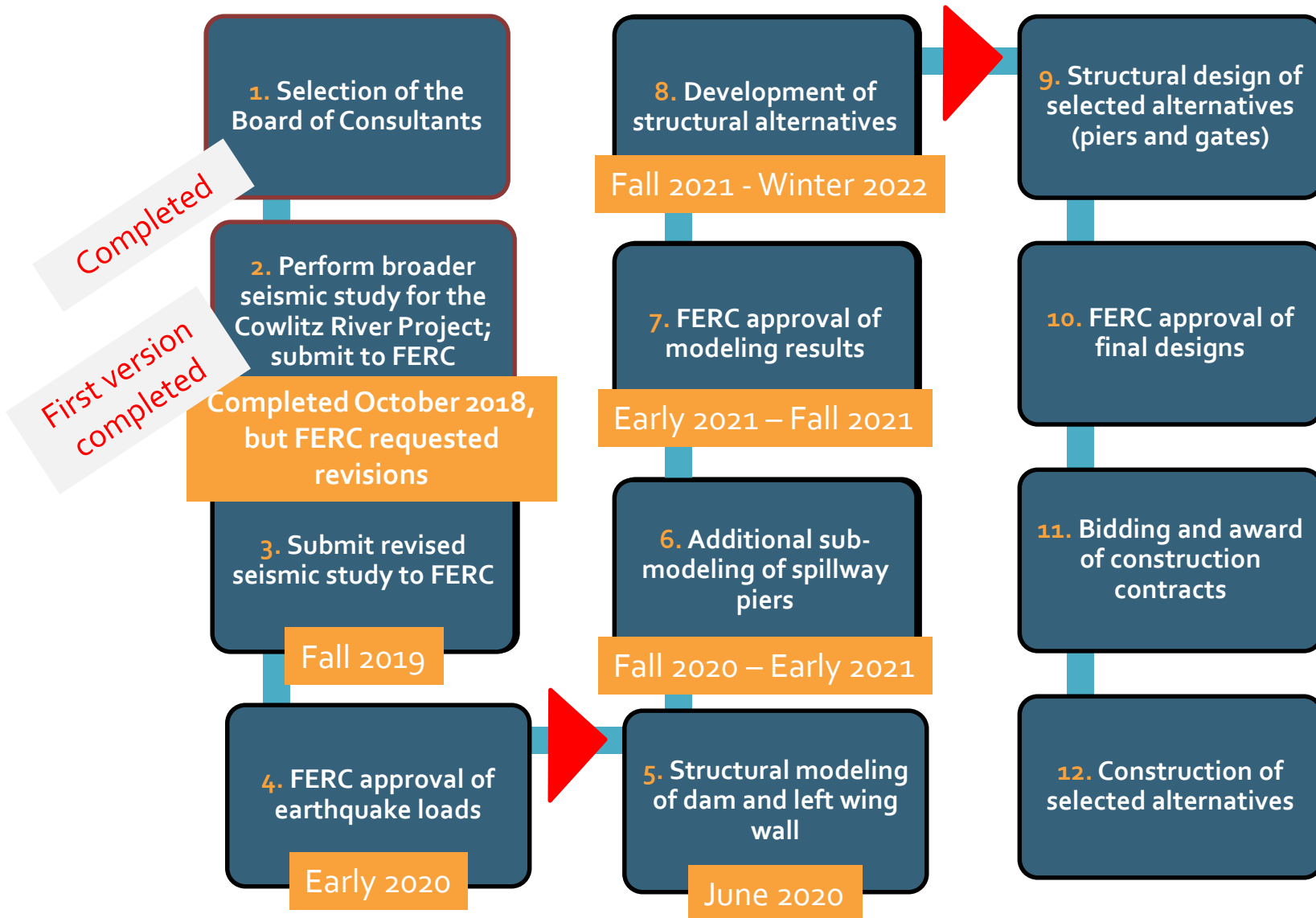
# Mossyrock Dam Myth Busters

**Truth or myth?** Tacoma Power doesn't have a plan to solve the problem.

**MYTH**

# Mitigation Plan Process

*Please note: These dates are currently best-case scenario and are subject to change.*



# Mossyrock Dam

**Truth:** Price tag of mitigation could be anywhere from tens to hundreds of millions of dollars.



# Recreation Update

## Improvements at Mossyrock Park

- Extended the boat launch.
- Added a new swim area.
- Added an ADA-accessible parking lot, trail to the swim area, and portable toilet.
- Spent approximately **\$850,000** on the improvements.
- Remodeling the main restroom near the swim area right now.



# Recreation Update

## Tacoma Power Parks

- Established a new Parks reservation system this year.

Tacoma Power Parks Reservation Home Contact Tacoma Power Parks

Shopping Cart System Time LOGIN

**TACOMA POWER PARKS**  
TACOMA PUBLIC UTILITIES

Info

Campsites Group Camps Kitchen Shelters

PARK Tacoma Power Parks

ARRIVAL 2/6/2019 DEPARTURE 2/7/2019 OR NIGHTS 1

SELECT EQUIPMENT \*

PARTY SIZE 1

Search Filters

See results on MAP LIST CALENDAR

# Recreation Update

## Peterman Hill Trail extension

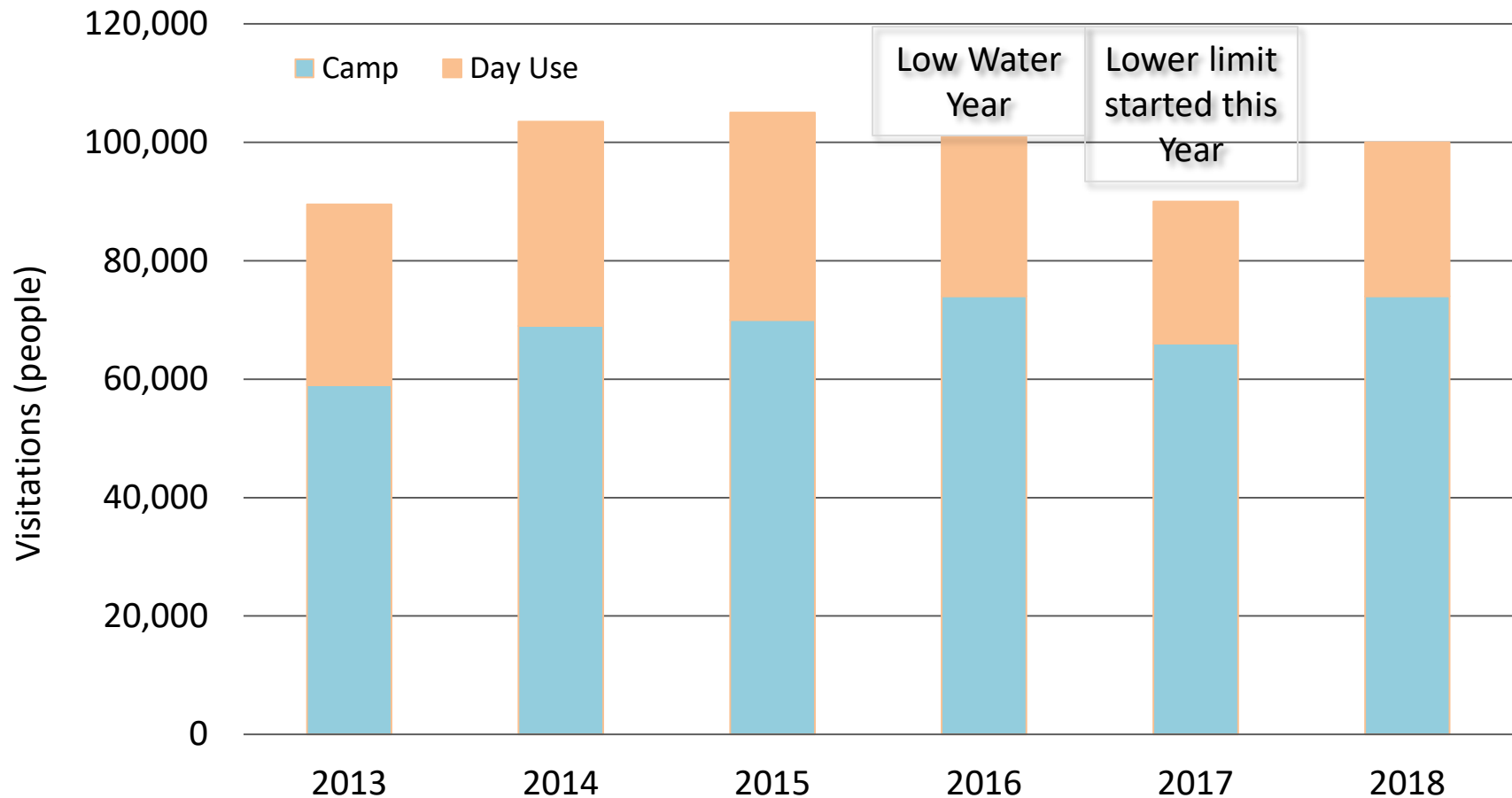
- Hikers, bicyclists, and horseback riders now have 20 miles of beautiful terrain to explore.



# Recreation Update

- Park Usage – Mossyrock Park

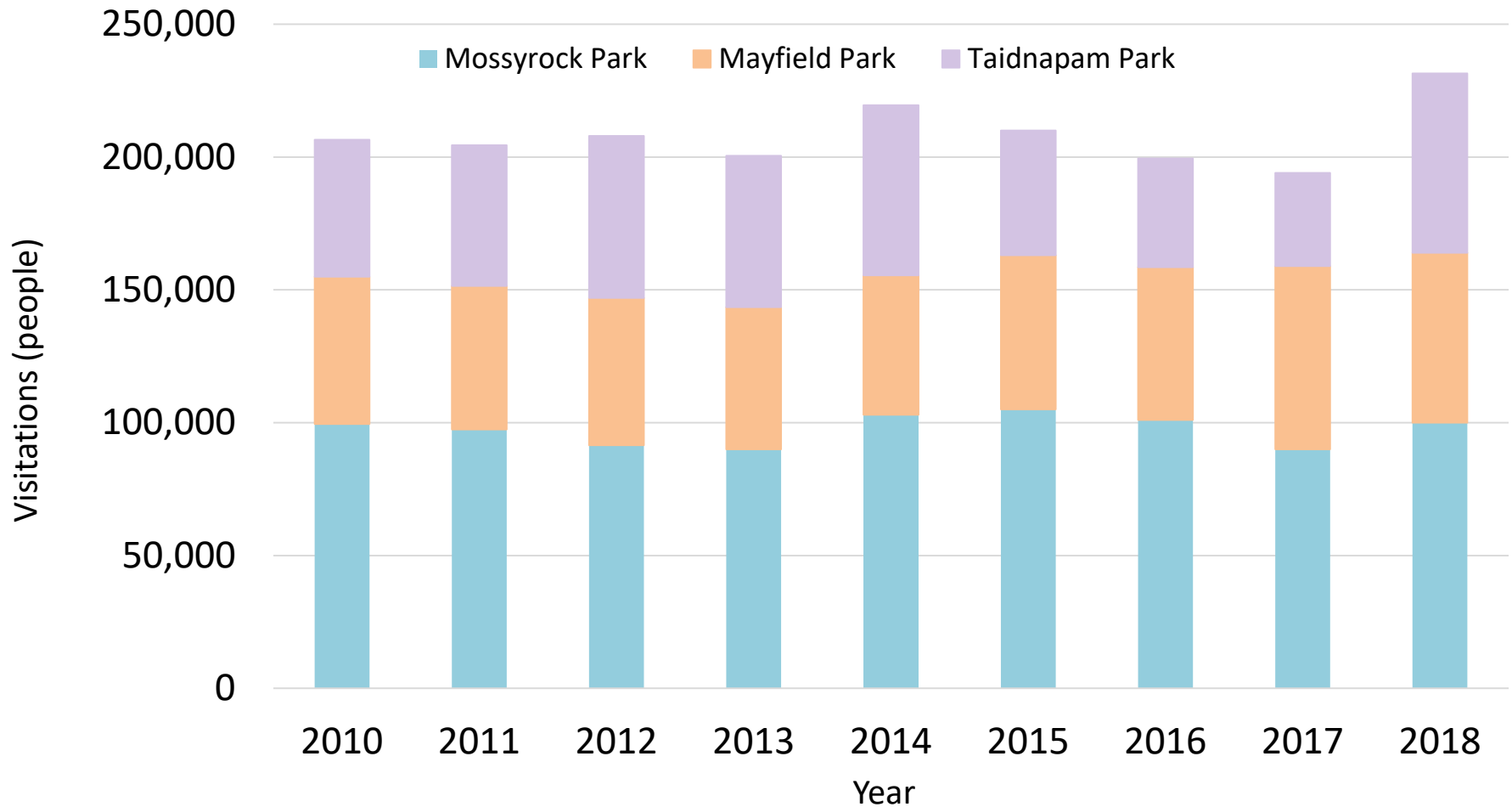
Mossyrock Park Annual Visitations



# Recreation Update

- Park Usage – All Tacoma Power Cowlitz Parks

Tacoma Power Park Visitations 2010 - 2018



# Recreation Update

## As of Today:

- The Mossyrock Park boat launch is now open.
- The Taidnapam North boat launch is usable at 720 feet (expected by mid-May).
- The Mossyrock Park swim area is usable at 728 feet (expected by Memorial Day).



# Community Partnership

- We fund community support requests (call 360-985-2222).
- We sponsor and participate in local events.
  - *Mark your calendars for our "Movies in the Park" events on June 22 and Aug. 24 at 8 p.m. Klickitat Prairie Park.*
- We provide tours of our facilities.
- We contribute annual in-lieu-of tax: \$1.68 million each year.
- We contribute in-lieu-of tax for school districts: \$440,000 total this year.



# Questions?

[MyTPU.org/LakeLevels](http://MyTPU.org/LakeLevels)

[MyTPU.org/RiffeLake](http://MyTPU.org/RiffeLake)

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