# Highway Preservation and Maintenance

## Washington State Transportation Commission

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# Key Takeaways

The state highway system is in the early stages of critical failure due to lack of funding. WSDOT is a national leader in asset management and has stretched Preservation as far as possible.

Preserving the existing highway system

- Is fiscally responsible with billions of dollars at stake
- Is mandated by state law
- Requires significant additional investment *to keep up with failing assets and begin proactive work*

# RCW 47.04.280
# Transportation system policy goals

- **Preservation:** To maintain, preserve, and extend the life and utility of prior investments in transportation systems and services, including the state ferry system;
- **Safety:** To provide for and improve the safety and security of transportation customers and the transportation system;
- **Stewardship:** To continuously improve the quality, effectiveness, resilience, and efficiency of the transportation system;
- **Mobility:** To improve the predictable movement of goods and people throughout Washington state, including congestion relief and improved freight mobility;
- **Economic vitality:** To promote and develop transportation systems that stimulate, support, and enhance the movement of people and goods to ensure a prosperous economy; and
- **Environment:** To enhance Washington's quality of life through transportation investments that promote energy conservation, enhance healthy communities, and protect the environment.

Section 2 of the RCW lists **Preservation** and **Safety** as priorities among the policy goals

# Separate, but connected programs

**Operations & Maintenance** – operates roadways and makes short-term repairs between preservation projects

**Preservation** – provides the long-term and longer-lasting work required for the overall life of a roadway or bridge

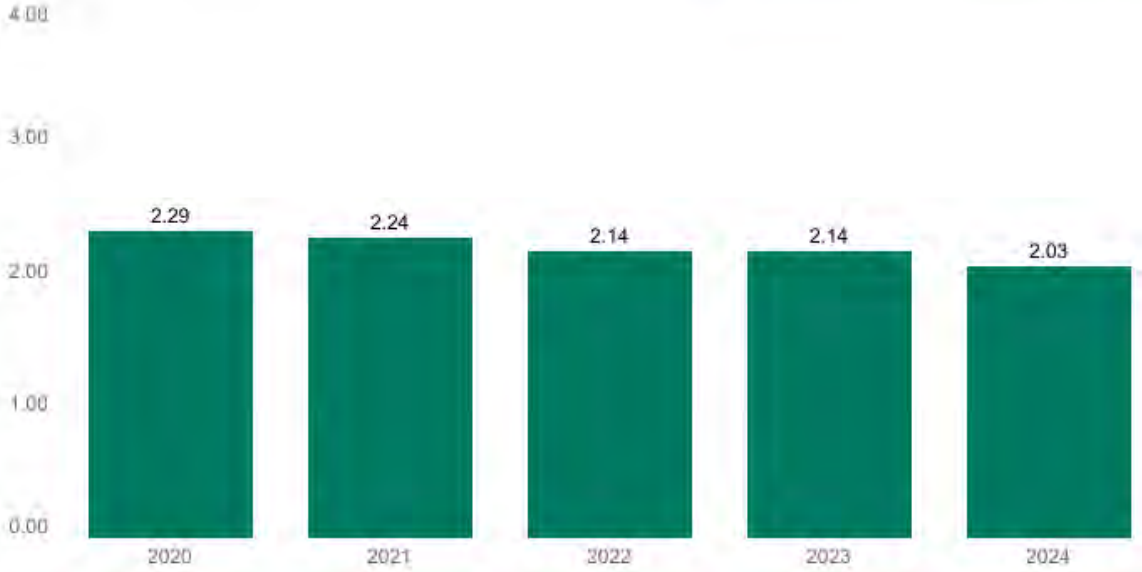
Working hand in hand: ***Both*** programs need to be adequately funded to properly maintain the transportation system and keep people and goods moving.

# Separate, but connected programs

## Maintenance Operations

**WSDOT's Level of Service**
GPA based on annual performance

| Grade | Percent | 4.0 scale |
|---|---|---|
| A | 90-100% | 4.0 |
| B | 80-89% | 3.0 |
| C | 70-79% | 2.0 |
| D | 65-69% | 1.0 |
| F | Below 65% | 0 |




# Preservation Program

WSDOT Preservation Responsibility Includes:

- Highways
- Ferries
- Facilities (buildings)

…We are going to focus on **Highways**

# Preservation Program

**Statewide Transportation Asset Management Plan (STAMP)**

### Ferries
- Terminals
- Vessels

### Highways
- ADA
- *Bridge and Pavement**
- Chronic Environmental Deficiency
- Culverts
- Geotechnical
- Major Electrical
- Roadside Land Use
- Roadway Delineation
- Signs
- Stormwater

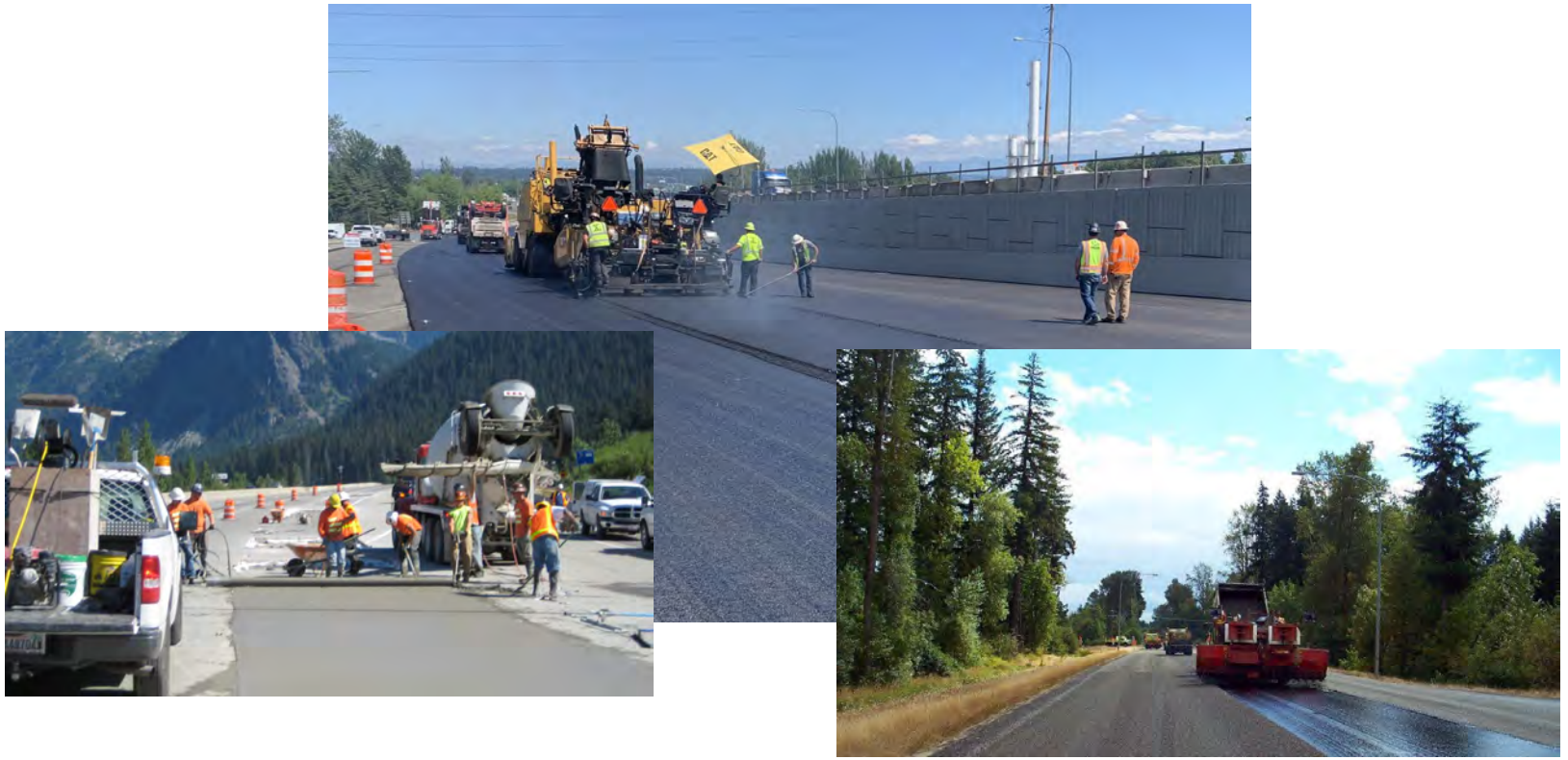
### Intra-Agency
- Capital Facilities
- Technology Services Division (TSD)
- Real Estate Services
- Transportation Equipment Fund (TEF)

### Multimodal
- Aviation
- Public Transportation (Rolling Stock, Park & Rides)
- Rail, Freight & Ports

# Highway Preservation - Pavement

Highway preservation projects consist of targeted investments to preserve the structural integrity of the state highway system

- Pavement Preservation Program (P1)



# Highway Preservation - Bridges

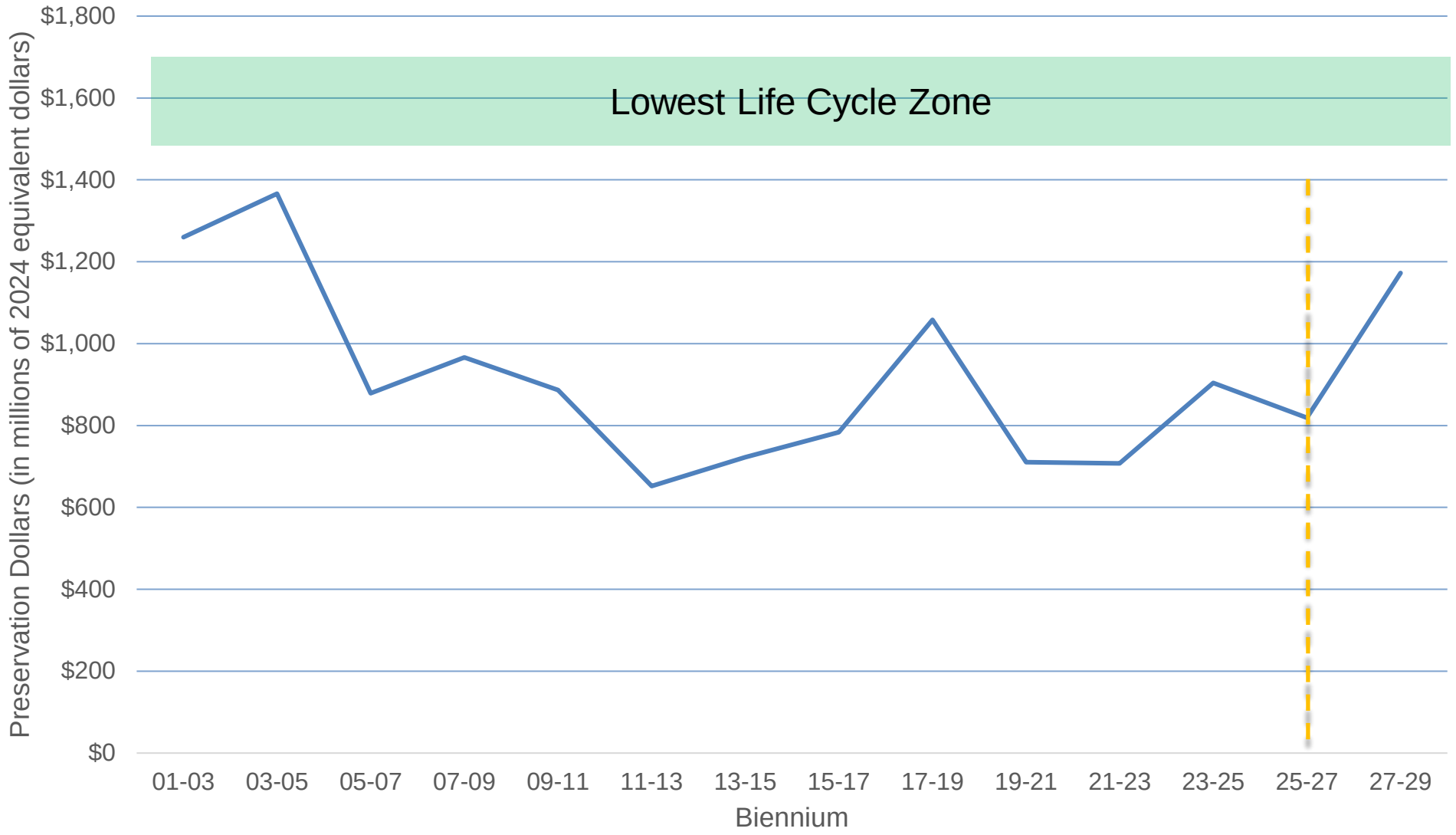
The bridge preservation program addresses the overall risk-based preservation of bridges and structures on the state highway system using an asset management approach.

- Bridge Preservation Program (P2)

# Highway Preservation – Other Highway Facilities

- Other Highway Facilities Preservation Program (P3)


# Highways Preservation Funding - 2001 through 2030



# Pavement condition


**Good/Very Good**: Minimal cracks – if any.

**Fair**: Thin cracking throughout the section, typically barely visible from a motorist perspective. *The most cost-effective time to resurface and keep the full pavement structure from deteriorating. Pavement is "Due" for resurfacing.*

**Poor**: Cracking throughout with some thick cracking, visible to motorists but does not substantially change experience. *Less cost effective because deeper repair is needed. Pavement is "Past Due" at this point.*

**Very Poor**: Deep cracking and potholing, will impact motorists and requiring reactive patching to keep drivable. *Major rehabilitation or reconstruction required.*

# State highway pavement needs

# Pavement conditions

- Over 7900 lane miles due or overdue for preservation in 2024 (paved 670 miles).
- Over 9,000 more lane miles will come due within ten years.

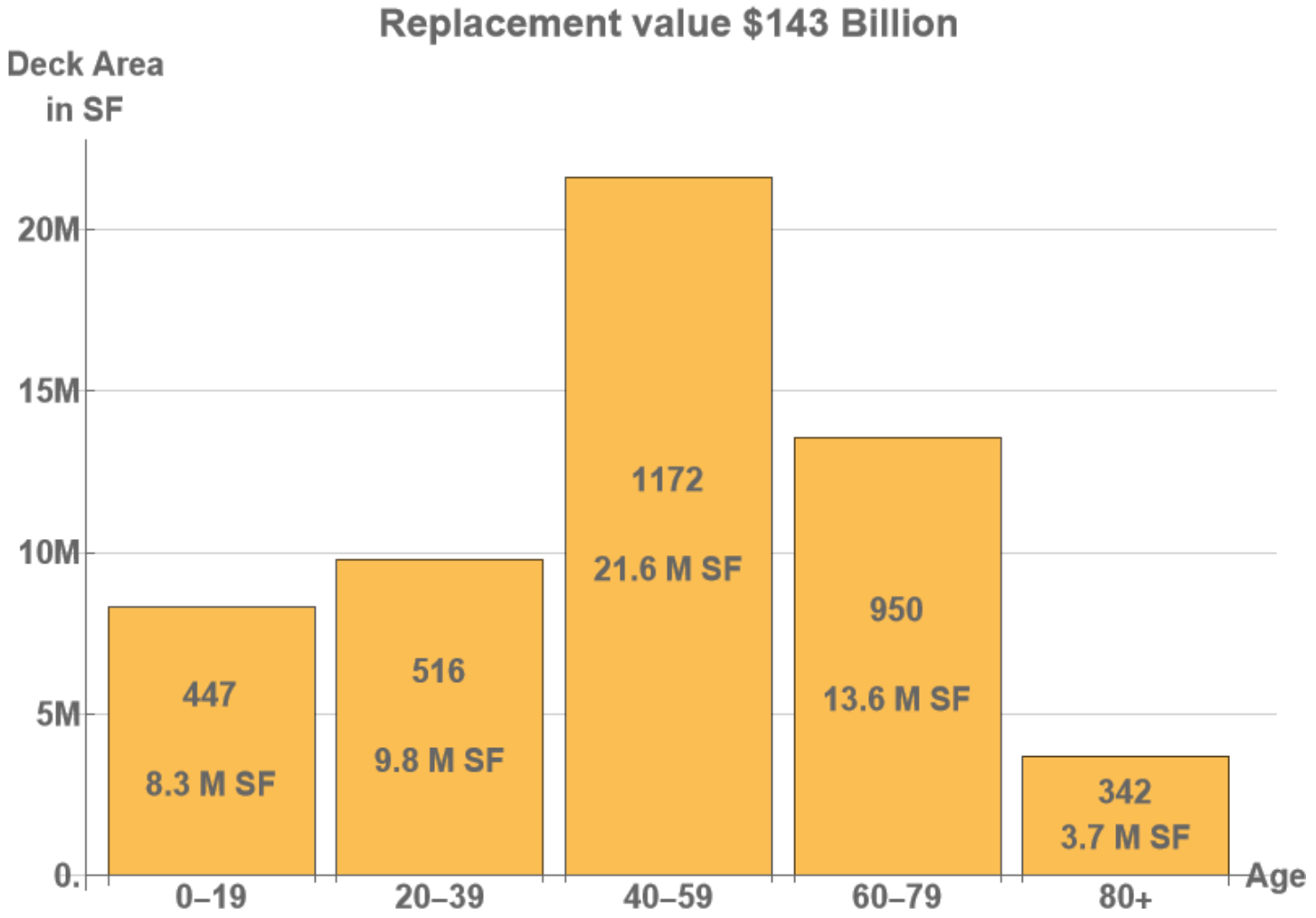
# State bridge preservation needs

# WSDOT's Aging Bridge Inventory

Total 3,427 bridges

Average age: 52 years
Oldest: 1915

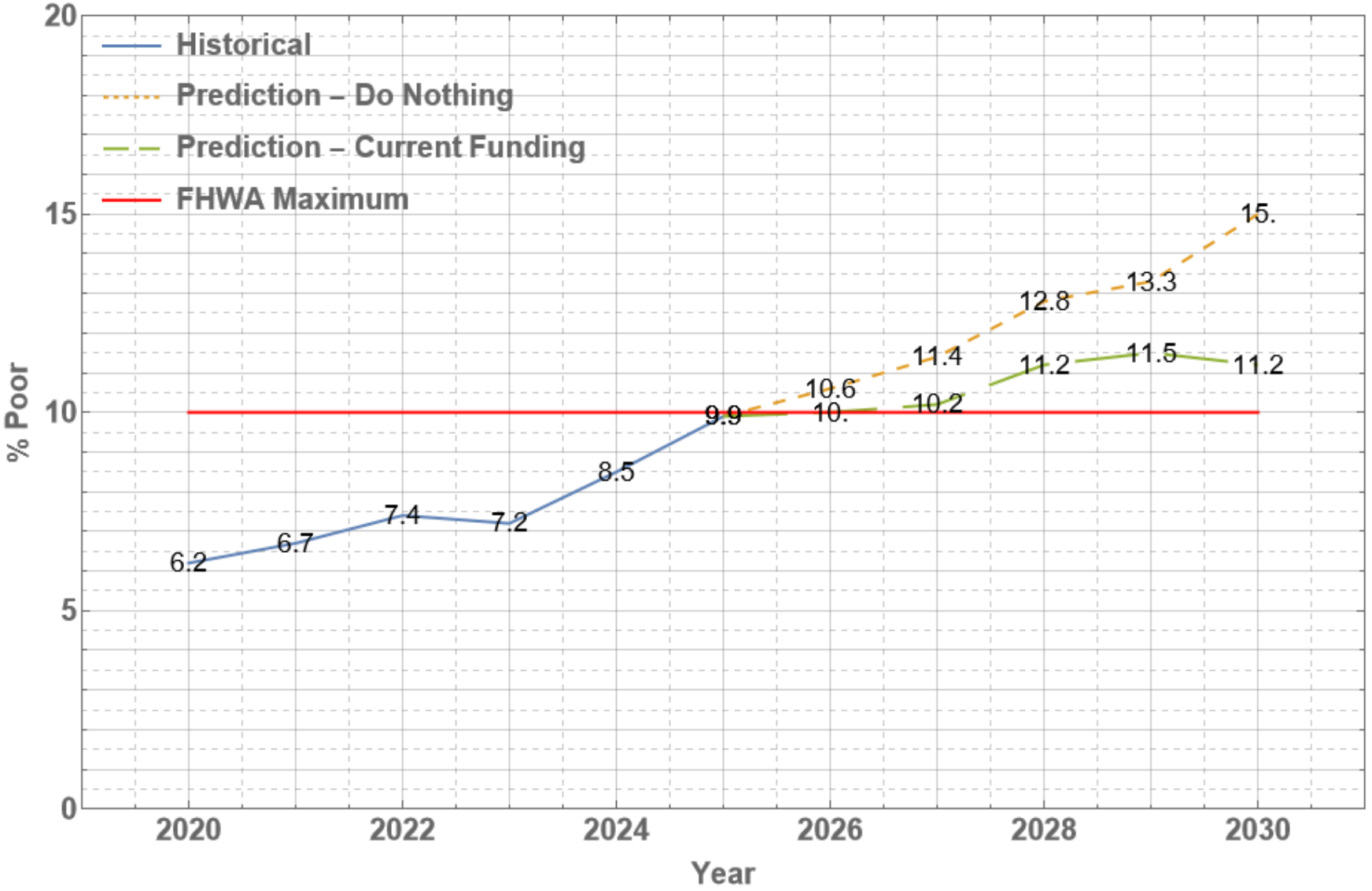
80+ yrs. old
342 bridges



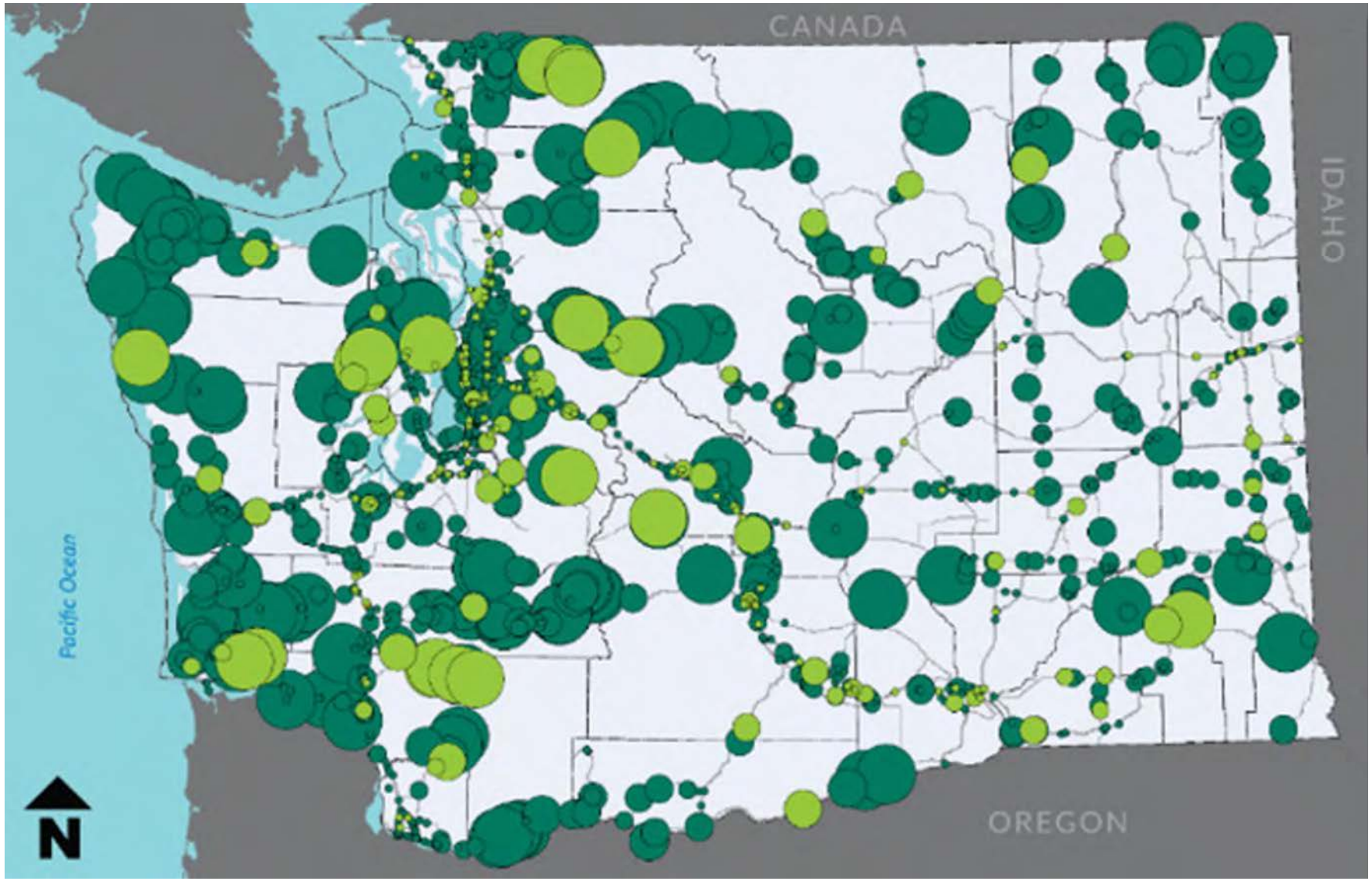

*Data from June 2025*

*Data from June 2025*

# Condition Trends and Projections




# Bridge condition and required detours




**Bridge Needs – Due Today**

**Detour Length**

- 0 – 5
- 6 – 15
- 16 – 40
- 41 – 70
- 70 +

**Bridge Needs – Due within Ten Years**

**Detour Length**

- 0 – 5
- 6 – 15
- 16 – 40
- 41 – 70
- 70 +

# Bridge Challenges

Hood Canal Bridge

Tacoma Narrows Bridge

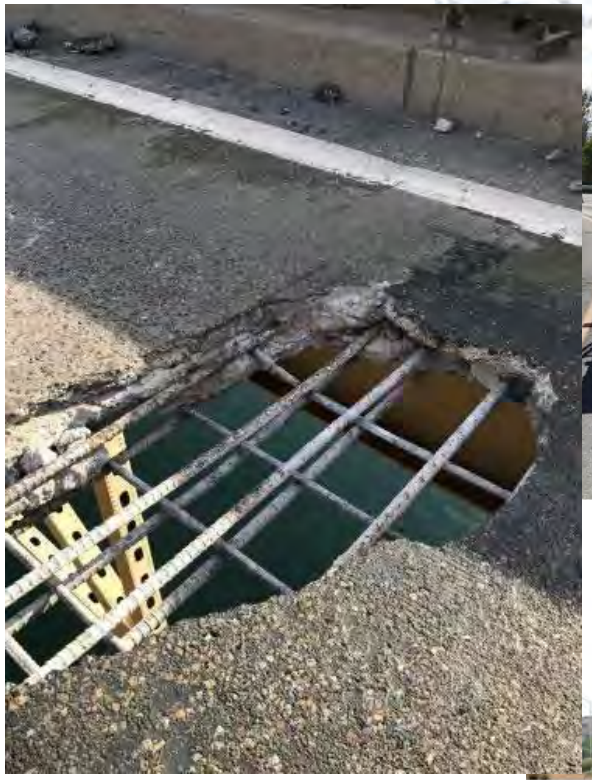
WSDOT maintains more than 3,400 state-owned bridges statewide, more than half are rated in fair or poor condition.

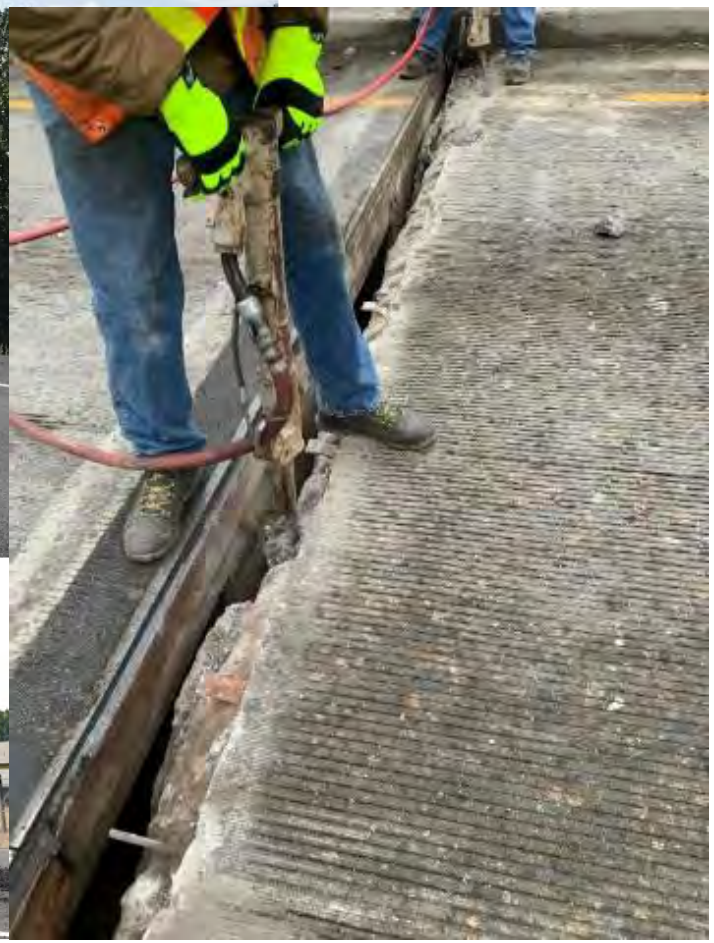
Current Preservation funding levels do not keep up with the needs resulting in:

- Deferred repairs
- More expensive repairs or reconstruction in the future
- Extending assets beyond their useful service life
- Failing to meet public expectations

Grass Creek Bridge

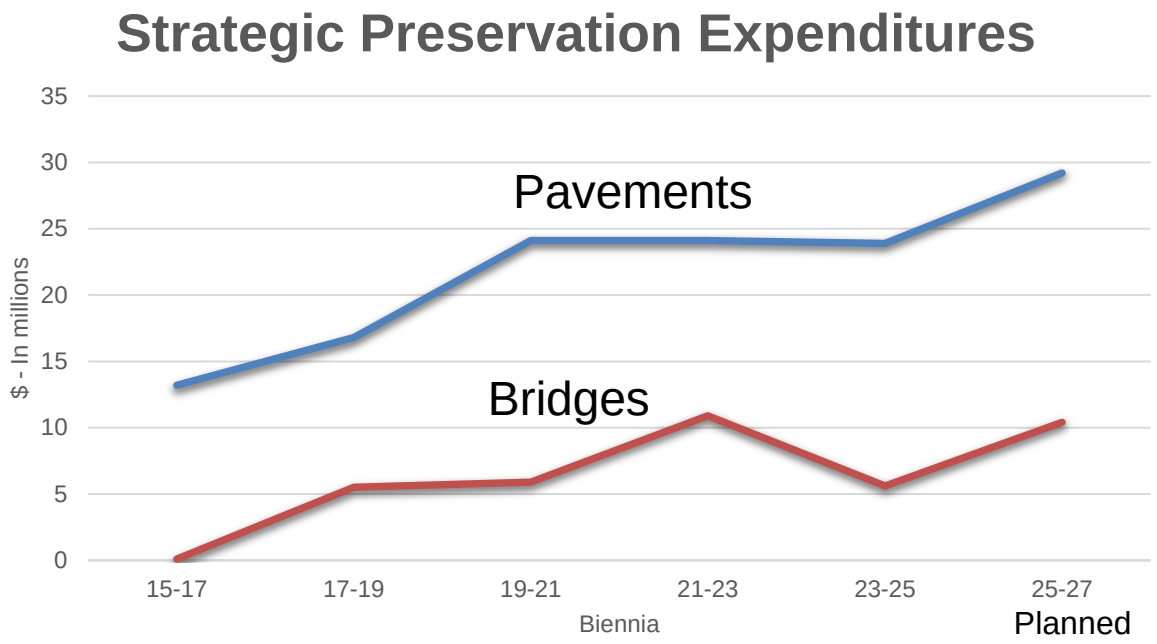
# Extending Service Life / Managing the Decline





# Extending Service Life / Managing Decline

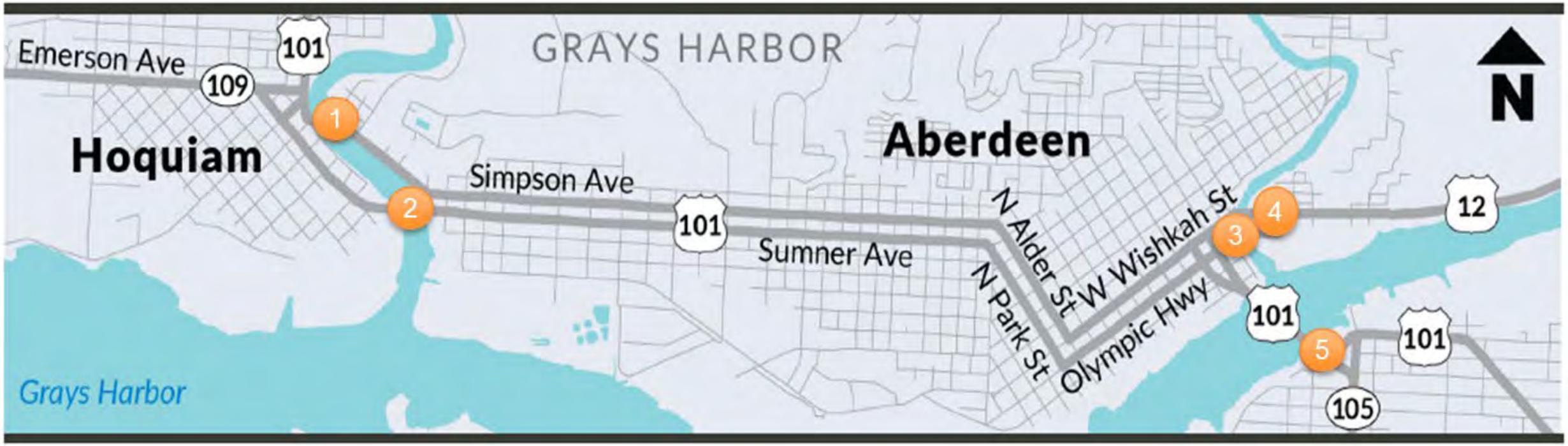
## Strategic Preservation



# Current Preservation Program Management

- No longer proactive investments. Focus is on **risk and emergent needs**.
- Focus on preservation activities that have a high likelihood of preventing a failure that will impact or close that section of highway.
- Subject Matter Expert concurrence is required for risk determination.
- Highest risk needs are allocated first (bridge mainly) along with those projects receiving grant funds and partnership projects.
- The remaining non-committed preservation are directed toward pavements using region target percentages.

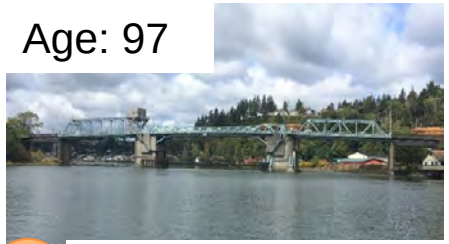
# Case Study: US 101 and US 12 Moveable Bridges




Age: 55

1 Riverside Ave. Bridge

Age: 97



2 Simpson Ave. Bridge

Age: 76

3 Heron Street Bridge

Age: 100

4 Wishkah River Bridge

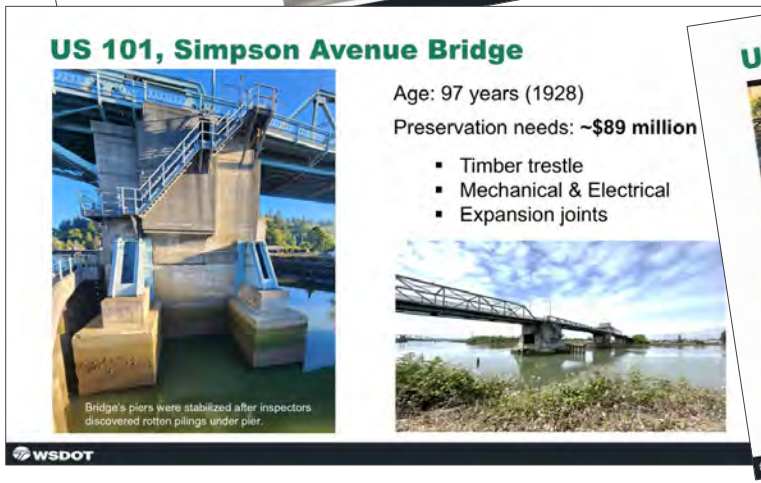
Age: 70

5 Chehalis River Bridge

# Case Study: US 101 & US 12 Moveable Bridges









Preservation cost:
**~$300 million**

# Case Study: SR 510, Failed Culvert

- Sinkhole discovered in April 2025, causing disruptive full roadway closure.
- Nearly 1,500 state-owned culverts are about to or have reached the end of their useful life. There is little maintenance crews can do at this point to prevent future failures.

# Case Study: SR 165, Carbon River Bridge

**Bridge is 103 years old:**

- Three load restrictions since 2009 as conditions worsened.
- Restricted to 8 tons in 2024, closed in 2025.
- No funding for preservation projects for many years.
- No funding to replace the bridge.

**Cost to replace:** $160 million (planning estimate), which represents 17% of the agency's current biennial Preservation budget.

**Not an isolated incident:**

- Typical bridge lifespan: 75 years.
- 315 state bridges are 80 years or older.

# Results of Underinvesting...

**Underfunding operations & maintenance and preservation puts the entire transportation system at risk.**

- The traveling public is already seeing immediate effects:
  - Failing pavement and potholes
  - Speed reductions and weight restrictions
  - Short and long-term closures
  - Impacted communities

**Delaying operations & maintenance and preservation work due to underfunding leads to:**

- More expensive and more extensive projects for taxpayers
- Rougher pavements cause reduce fuel efficiency and increased vehicle maintenance
  - Increased fuel and repair bills
  - Higher costs for goods and services
- Bridge restrictions mean longer trips to deliver goods or raw materials
  - Increased costs to consumers
  - Longer waits for restocking

# 2026 Supplemental Budget Request
## Unfunded Critical Priorities

- Preservation
- Fish Barrier Removal
- Operations and Maintenance
- Safety
- Keeping Ferries Running


# 2026 Supplemental Budget Request
## Unfunded Critical Priorities

- **Preservation – 10 Year Need $8 billion**
- Fish Barrier Removal
- **Operations and Maintenance - $365-$400 million ongoing per biennia**
- Safety
- Keeping Ferries Running


# Questions?

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