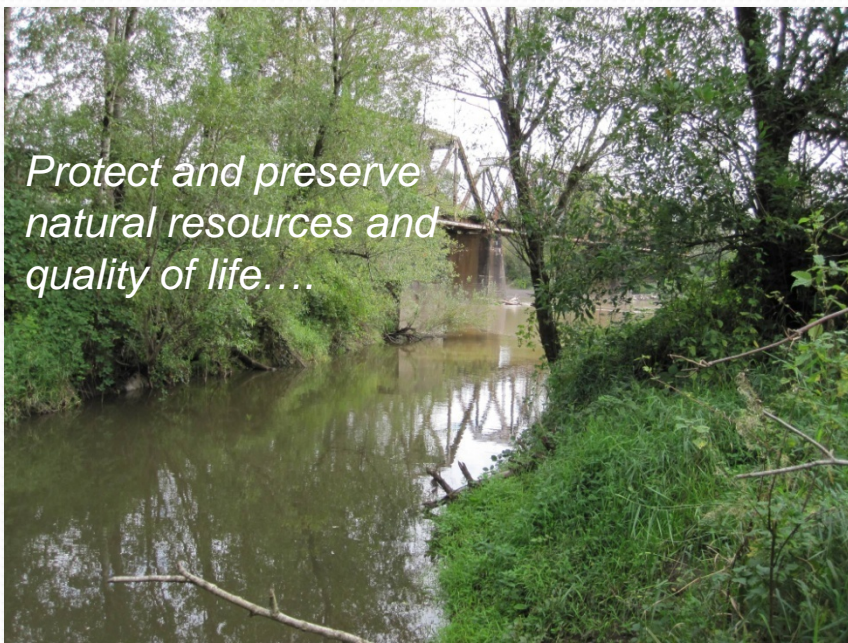


Multnomah County 2013 Fish Barrier Culvert Assessment



Water Quality Program



- Assist Transportation Programs with strategies to minimize and avoid impacts to water quality
 - Stormwater Management
 - Erosion control
- Partner with watershed interests
 - Threatened and Endangered Species
 - Stream Health

Fish Barrier Culvert Assessment



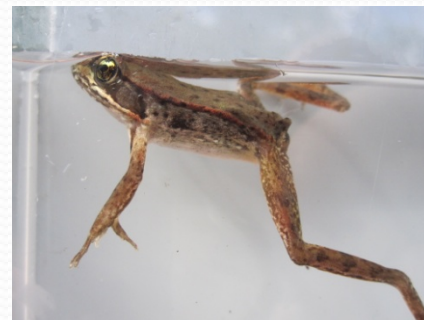
1. Impacts of fish barriers
2. Project goals and funding
3. Extent of fish barriers
4. Future of existing barriers

Equity implications...

Many streams go unrecognized



Many native fish species are found in County streams



Many threats exist to fish and overall watershed health



High quality refuge areas remain



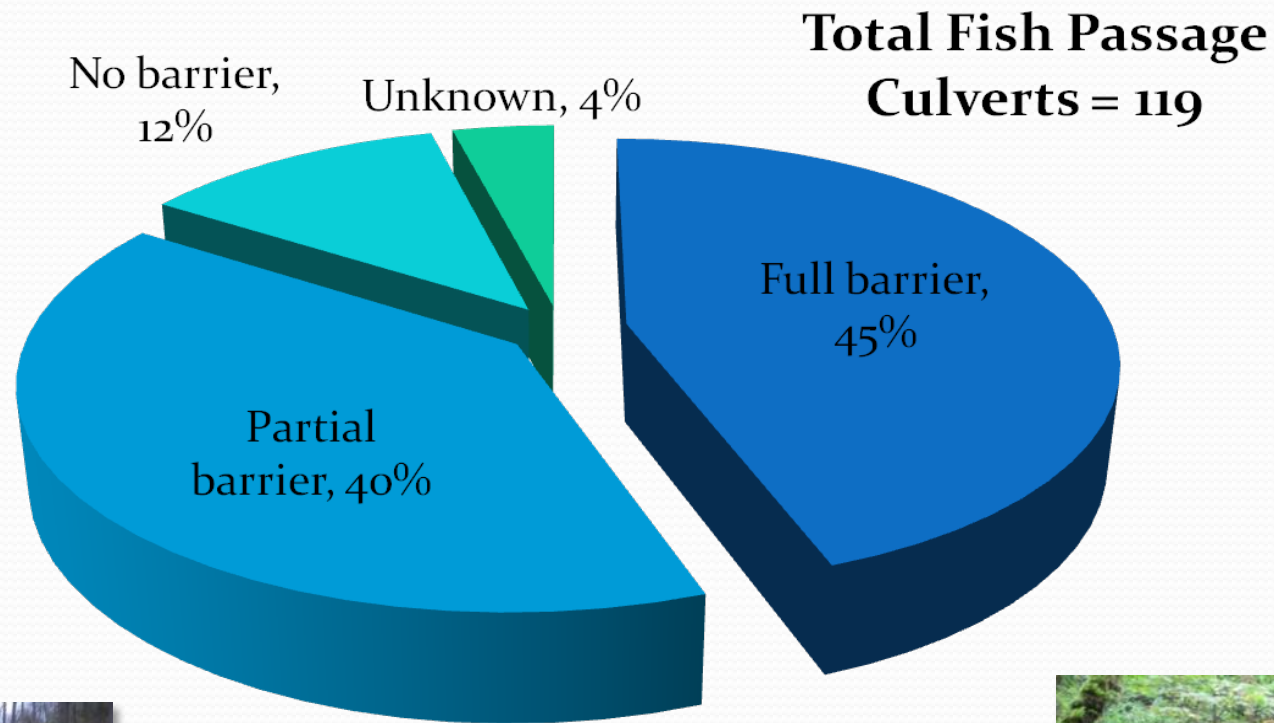
Culverts disconnect stream reaches



Culvert replacement can prevent emergencies and erosion



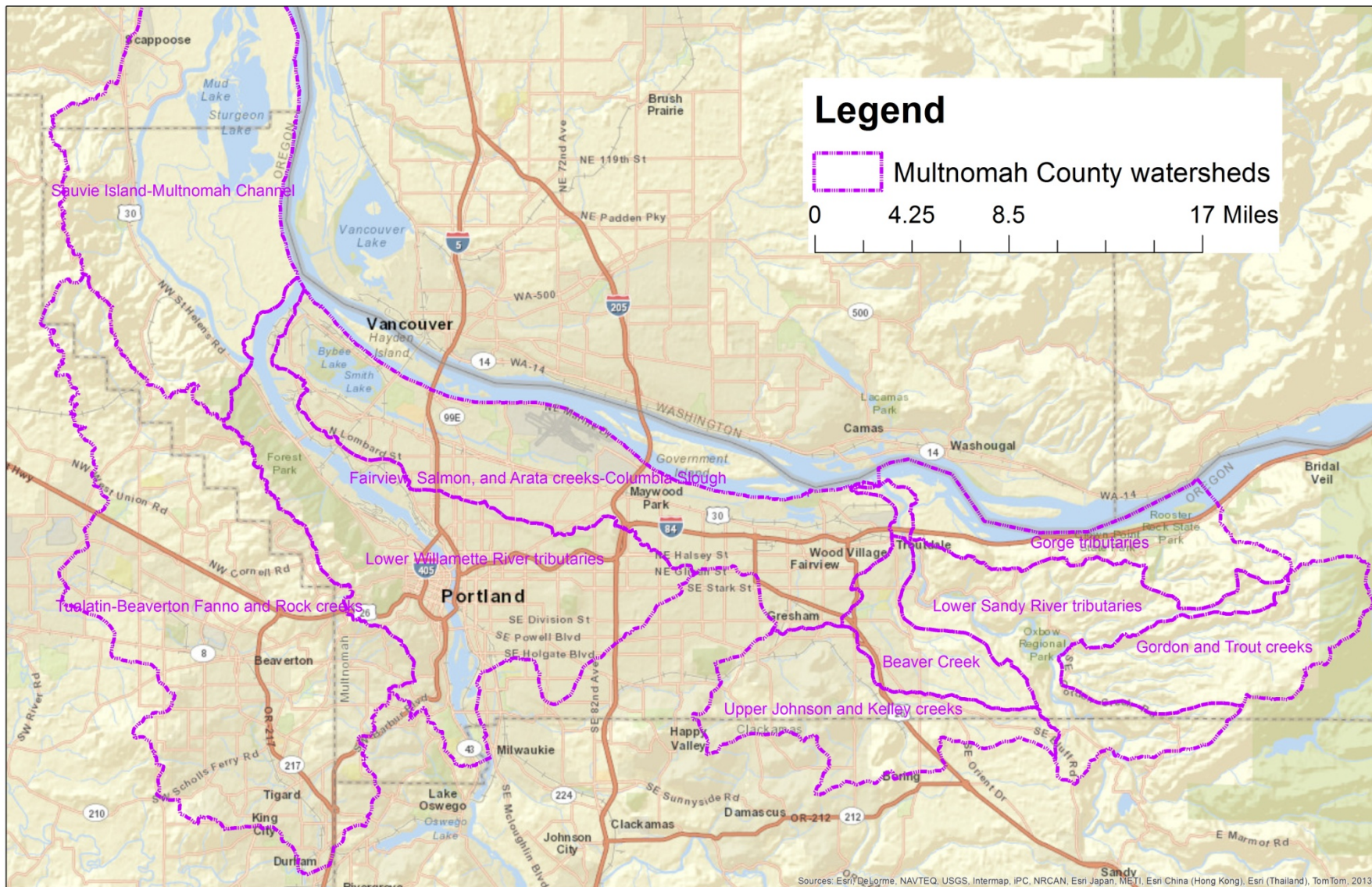
How many man-made fish barriers exist under County roads?





Location and extent of fish barriers

	Key streams		Blocked habitat
East County	Beaver Creek Johnson Creek Fairview Creek Sandy Tributaries Gorge Tributaries	Anadromous fish	13 miles
		Resident fish	10 miles
West County	McCarthy Creek Tualatin Tributaries Multnomah Channel Tributaries	Anadromous fish	2 miles
		Resident fish	1 miles



Fish passage culvert design alternatives



Bridges



Culvert baffles

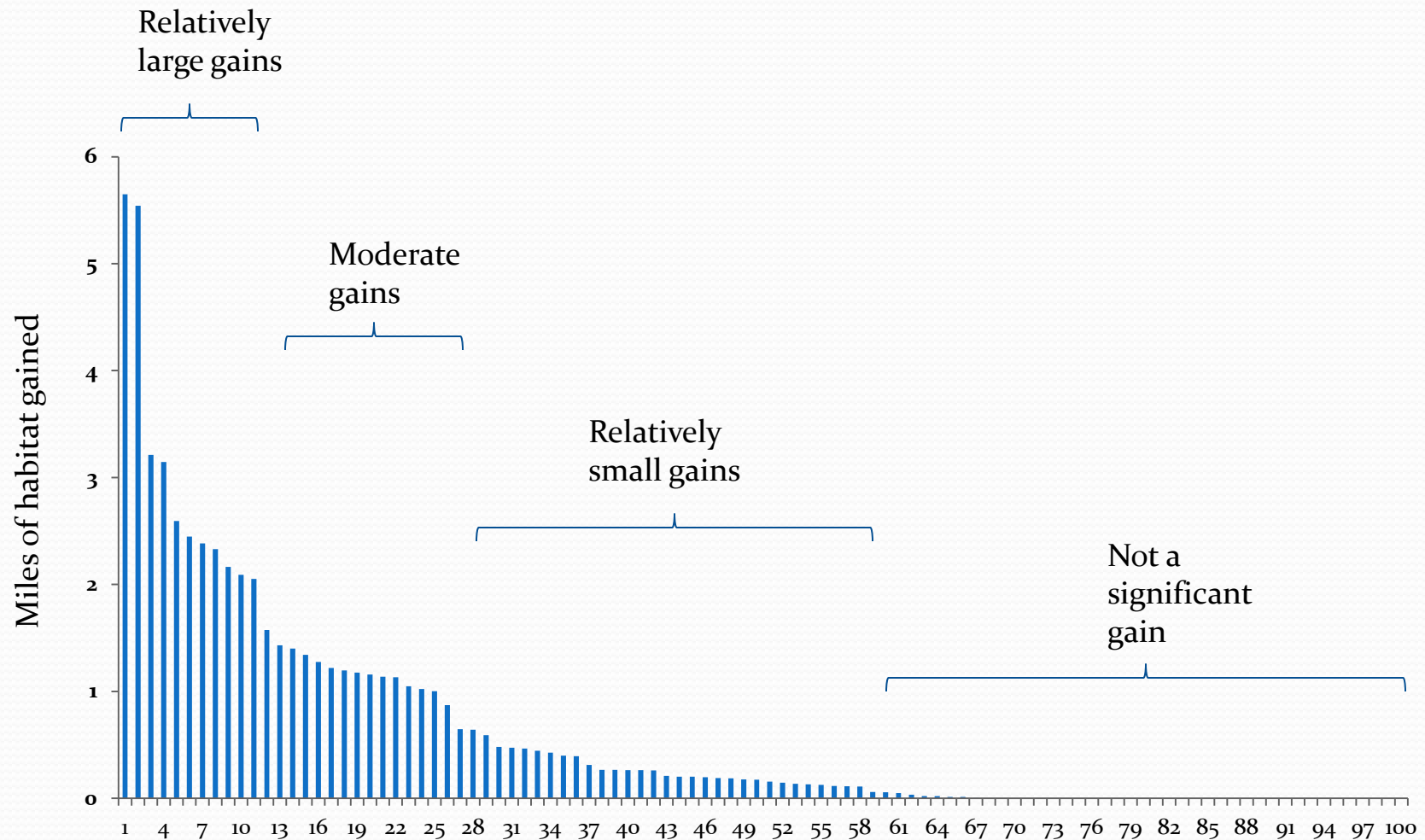


Stream simulation culvert



Outlet pool retrofit

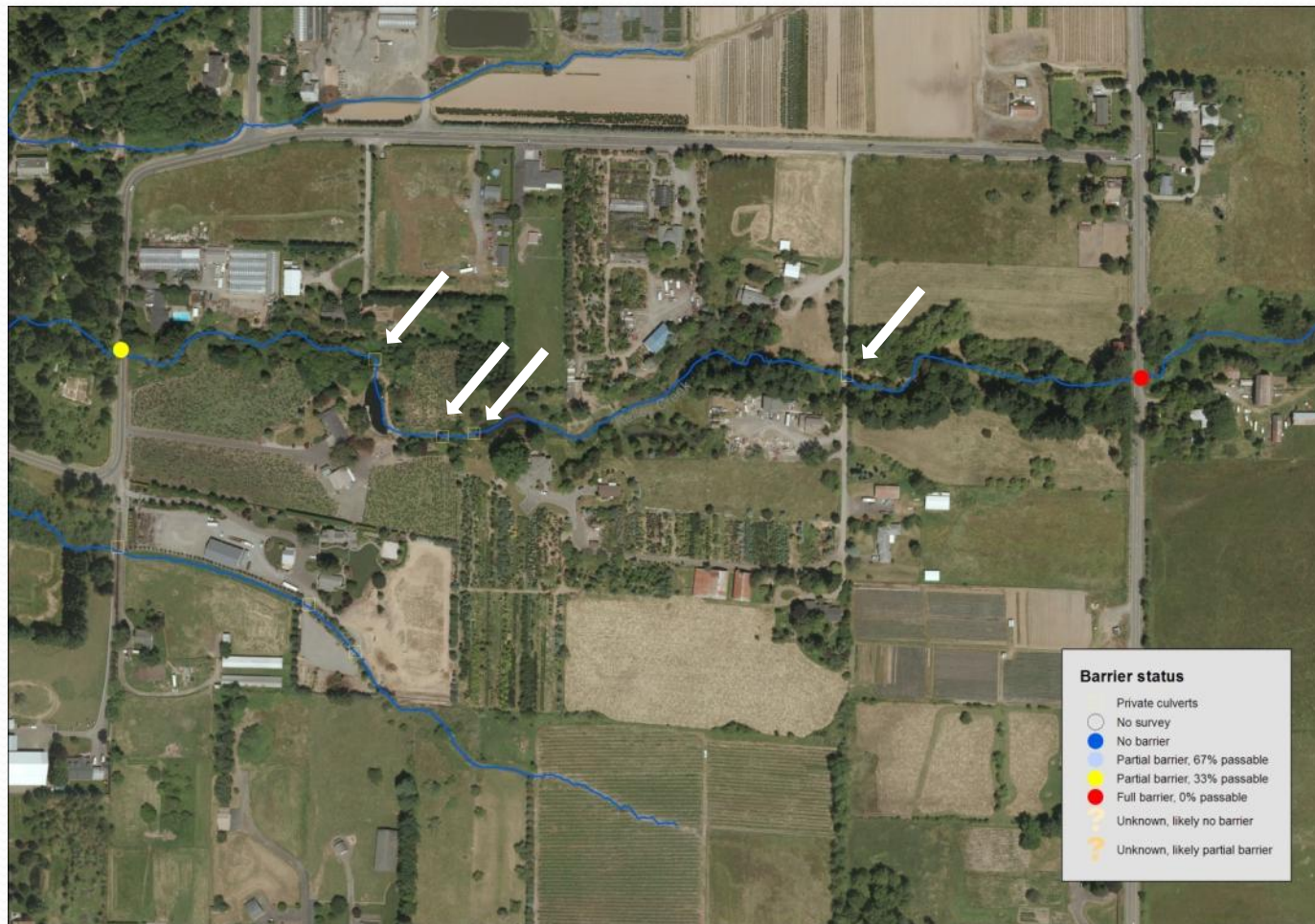
Potential habitat gain with fish barrier replacement



Many culverts are in poor condition



Partnerships with private landowners are needed



Next steps

1. Develop full prioritization strategy
 - Cumulative passability and habitat gains
 - Culvert condition
 - Private culverts
2. Improve short term fish passage with retrofits
 - Oregon Dept Fish & Wildlife
3. Improve long term strategy for grant funding
 - Local partners
 - Grant opportunities



Questions?

Water.Quality@multco.us

Dept of Community Services
Road Services Division
Water Quality Program

