



Washington's 2018 Water Quality Assessment Listing Process & PBDEs



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Spokane River Regional Toxics Task Force – 5/26/2021

What is the Water Quality Assessment?

- Clean Water Act requirement to provide “Integrated Report” on Water Quality to EPA every two years
 - 303(d) – Impaired waters not supporting **designated uses**
 - 305(b) – General report on water quality
- Comprehensive assessment of health of Washington’s surface waters based on all **readily available data**
- **Goal:** Prioritize protection and improvement of water quality
 - Required prioritize and develop Total Maximum Daily Loads (TMDLs)

WQ Determination Process

Numeric WQ Standards

- Parameter with approved WQS
- Policy 1-11 details parameter specific analysis
- Majority of WQ determinations

Examples

- Dissolved oxygen
- Lead
- *E. coli*
- 4,4-DDT (metabolites)

Narrative WQ Standards

- Parameter without approved WQS
- Policy 1-11 provides framework *but not parameter specific*
- Few WQ determinations

Examples

- Flow modifications
- Fine sediment
- Nitrogen
- Total furans

Narrative Standards

WAC 173 201A-260(2)

- (a) Toxic, radioactive, or deleterious material concentrations must be below those which have the potential, either singularly or cumulatively, to **adversely affect characteristic water uses, cause acute or chronic conditions to the most sensitive biota dependent upon those waters, or adversely affect public health**

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PBDEs

Fish Consumption Advisory

Policy 1-11 Section 1D. Data Credibility

Information Submittals Based on Narrative Standards (pg. 16)

- “...studies must show a link between the environmental alteration in the waterbody and the impairment of a designated use.”
- “...data submitter must provide information to show:
 - Documentation of a designated use impairment in the AU, and
 - Documentation that deleterious, chemical, or physical alterations are causing the designated use impairment in the same AU”

Additional requirements:

- Data collected on a waterbody in Washington
- Data must meet our data credibility requirements

Policy 1-11 Section 1D. Data Credibility

Information Submittals Based on Narrative Standards (pg. 16)

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 - Documentation that deleterious, chemical, or physical alterations are causing the designated use impairment in the same AU”

Environmental alteration – elevated levels of PBDEs in fish tissue

Impairment of a designated use – harvesting

Documentation – fish consumption advisory

Policy 1-11 Section 2I. Toxics–HHC

- “Other lines of evidence intended to assess the status of the designated uses” will be considered (pg. 75)
 - **Fish consumption advisories**
 - WA Department of Health
 - Oregon Health Authority
 - Idaho Department of Health and Welfare
- “Fish consumption advisories are directly related to harvest use impairment”
- “Ecology may also consider impairment determinations based on fish advisories for chemicals that are not priority pollutants adopted in the water quality standards if data collected from specific AUs meet data requirements.”

Policy 1-11 Section 2I. Toxics–HHC

- “Other lines of evidence intended to assess the status of the designated uses” will be considered (pg. 75)
 - **Fish consumption advisories**
 - **WA Department of Health**
 - Oregon Health Authority
 - Idaho Department of Health and Welfare
- PBDE FCA in place on 3 sections of Spokane River since 2008
- “Fish consumption advisories are directly related to harvest use impairment”
- “Ecology may also consider impairment determinations based on fish advisories for chemicals that are not priority pollutants adopted in the water quality standards if data collected from specific AUs meet data requirements.”

In summary

What are we proposing for 303d listing?

Multiple sections of the Spokane River for the harvesting use, based on PBDE data

Why is it proposed for 303d listing?

WA DOH fish consumptions advisories demonstrate the harvesting use is not being met

How did we develop the 303d listing?

Under the application of our narrative criteria process....

Tissue data & fish consumption advisories

- Ecology fish tissue data:
 - Water Quality Assessment
 - WA DOH fish consumption advisories
- Within WA, there are fish consumption advisories for:
 - PCBs
 - DDT
 - Dioxin
 - Lead

TEC thresholds

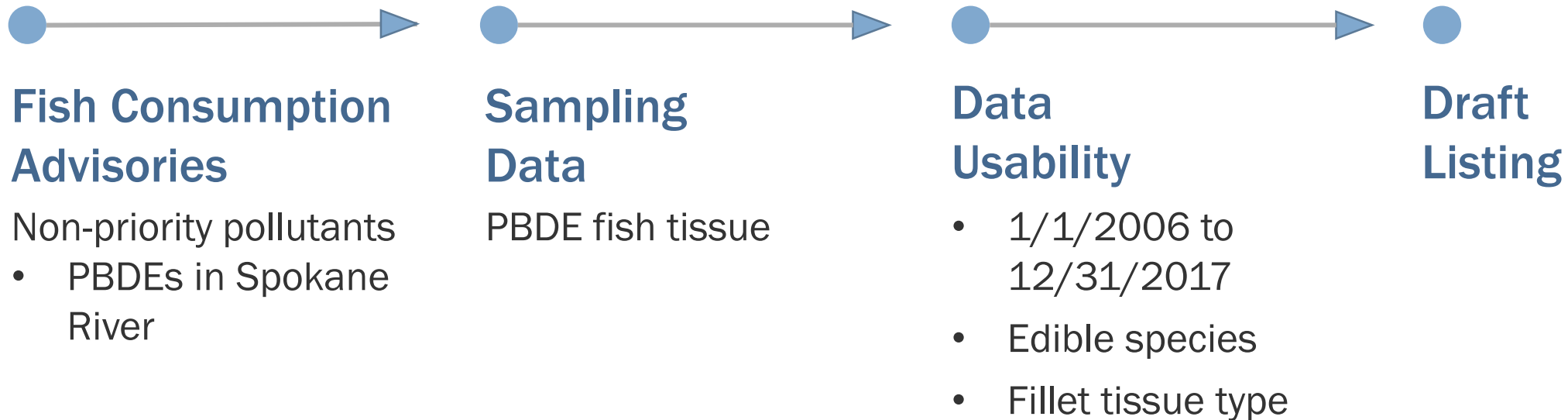
 - Mercury } *Tissue based criterion*
 - PBDEs } *Narrative*
- PBDE fish consumption advisories for 3 sections of the Spokane River



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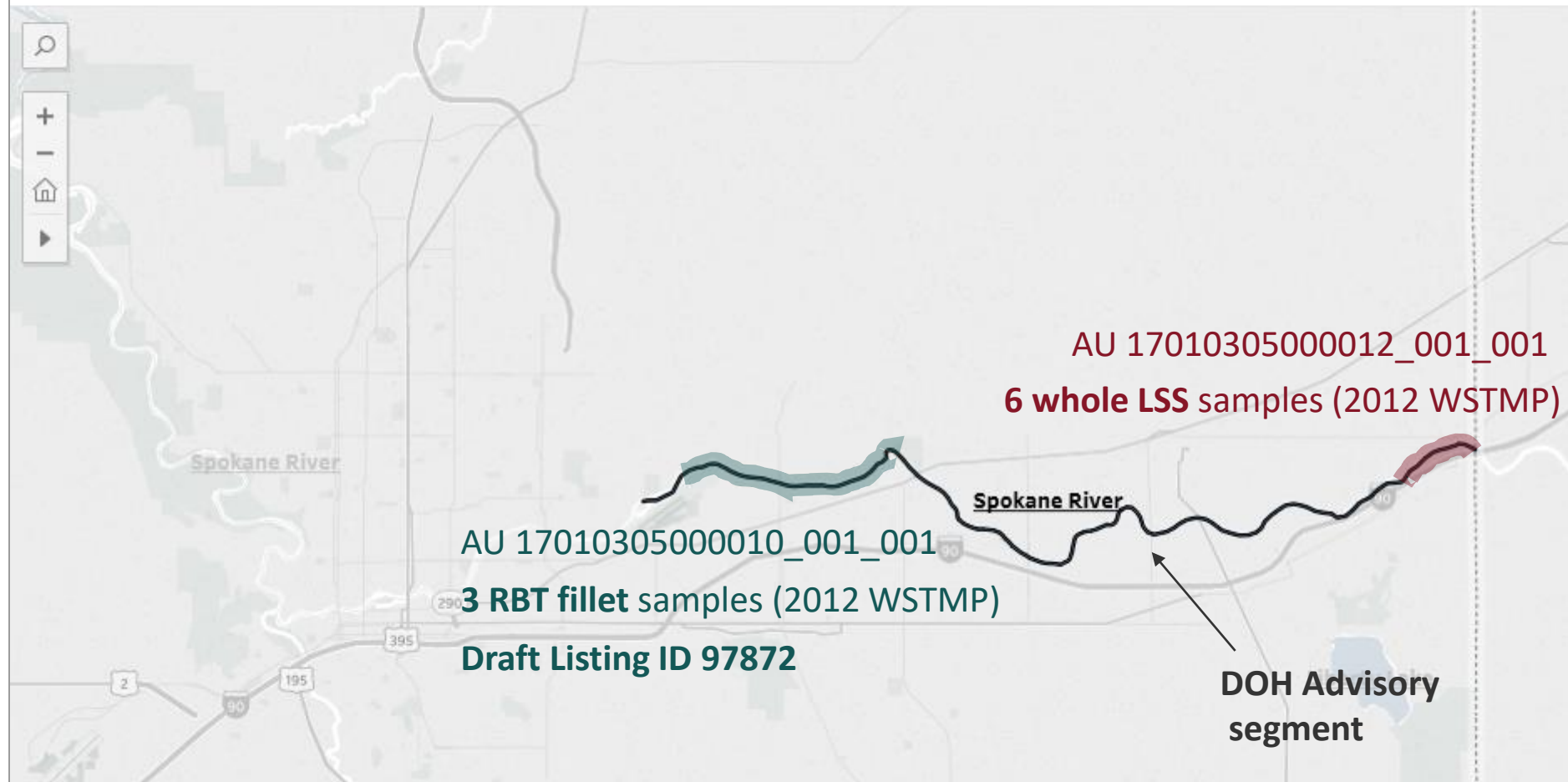
Listing Steps

Process to generate draft PBDE tissue listings



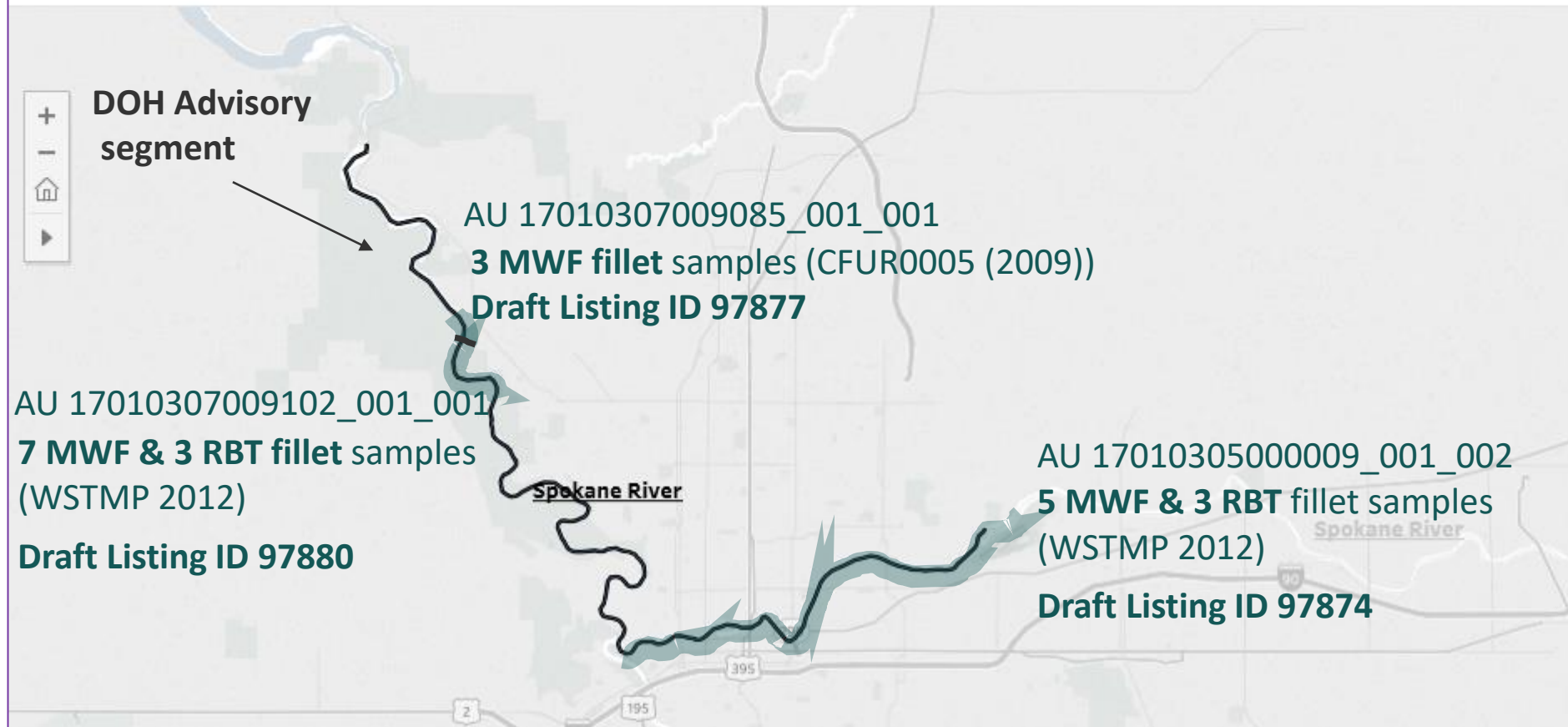
<i>Water Body</i>	<i>Location Description</i>	<i>Fish Species</i>	<i>Advisory</i>	<i>Contaminant</i>	<i>Population of Concern</i>
Spokane River	Idaho Border to Upriver Dam	All Fish (Spokane River)	Catch and release only	PCBs, PBDEs, Lead	Everyone

Fish Advisory: Idaho Border to Upriver Dam



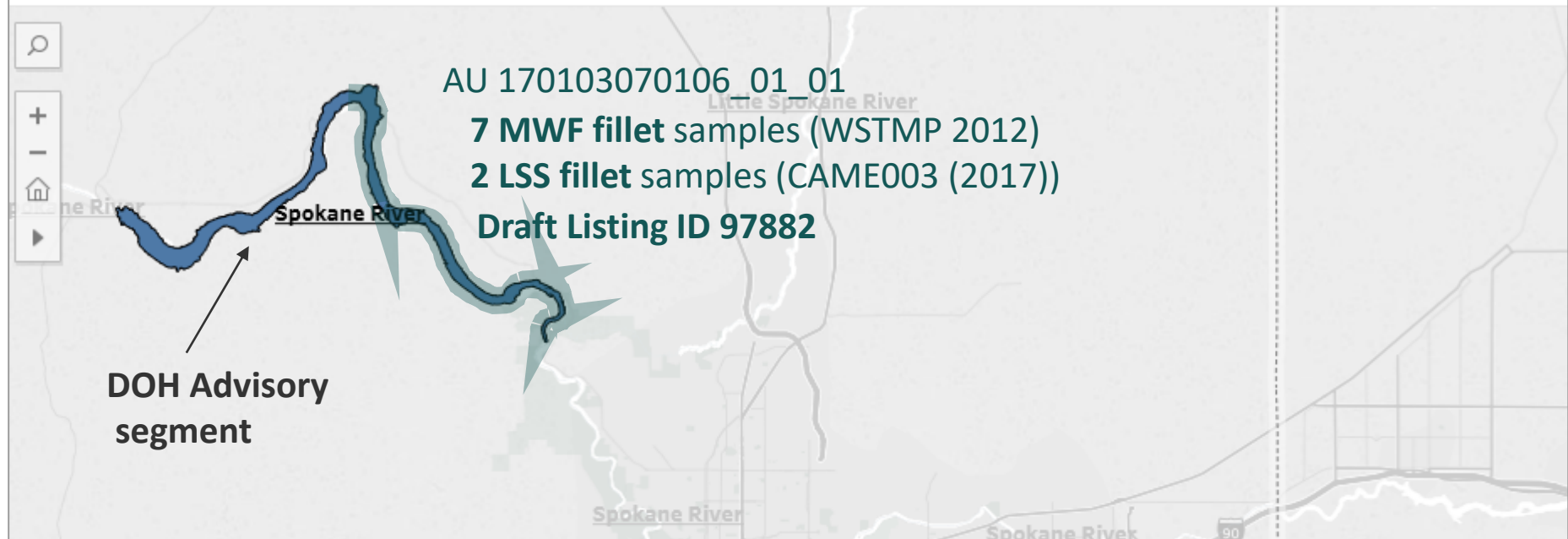
Fish Advisory: Upriver Dam to Nine Mile Dam

<i>Water Body</i>	<i>Location Description</i>	<i>Fish Species</i>	<i>Advisory</i>	<i>Contaminant</i>	<i>Population of Concern</i>
Spokane River	UpRiver Dam to Nine Mile Dam	Largescale Sucker	Up to 2 meals per month	PCBs, PBDEs, Lead	Everyone
		Mountain Whitefish	Up to 1 meal per month	PCBs, PBDEs, Lead	Everyone
		Rainbow trout	Up to 2 meals per month	PCBs, PBDEs, Lead	Everyone



Fish Advisory: Long Lake Spokane

<i>Water Body</i>	<i>Location Description</i>	<i>Fish Species</i>	<i>Advisory</i>	<i>Contaminant</i>	<i>Population of Concern</i>
Spokane River	Long Lake (Lake Spokane)	Brown Trout	Up to 1 meal per month	PCBs, PBDEs, Lead	Everyone
		Common Carp	Do not eat	PCBs	Everyone
		Largescale Sucker	Up to 1 meal per month	PCBs, PBDEs, Lead	Everyone
		Mountain Whitefish	Up to 2 meals per month	PCBs, PBDEs, Lead	Everyone
		Northern Pikeminnow	Up to 2 meals per month	-	Everyone



Questions?

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Comments Due: June 4, 2021

