



PUBLIC HEALTH
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Vibrio parahaemolyticus:
Proposed Methodology for Risk Assessment

Washington State Department of Health VpAC Meeting

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Outline

- Purpose
- Assumptions
- Implementation
- Public Health Rationale

Purpose

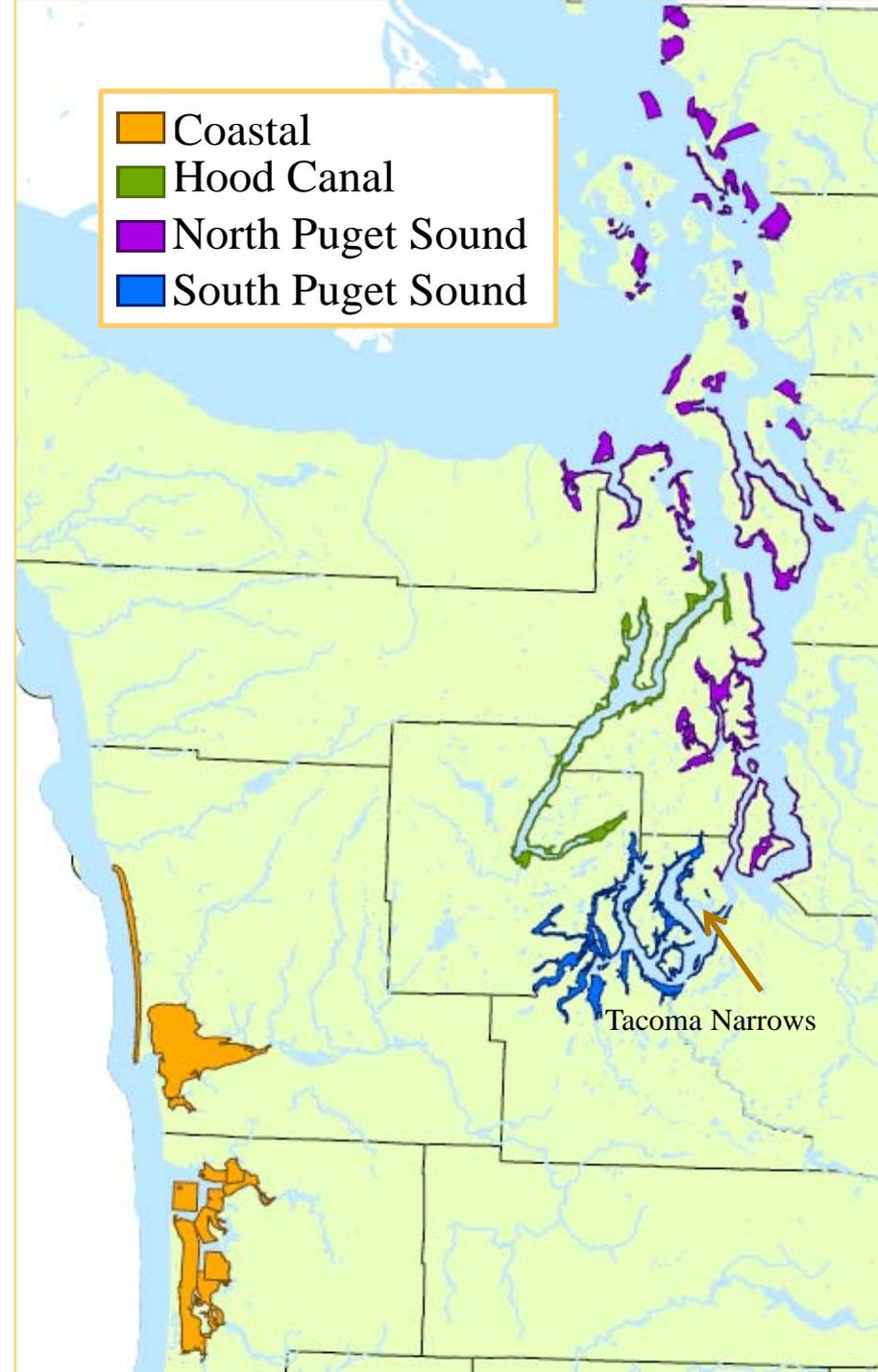
- Characterize risk within Washington
 - Locations
 - Periods
 - Conditions
- Concentrate monitoring efforts in risk-prone areas
- Propose tiered proactive controls based on increasing risk

Assumptions

- WA *Vp* strain is 10x more virulent
 - FDA risk level: 1 in 100,000 exposures (no published record)
 - WA risk level: 1 in 1,000,000 exposures
- Serving size is smaller
 - FDA serving: 12 oysters (200 g.)
 - Washington serving: 1 oyster (variable g.)
- There are regional differences in oyster serving size within Washington water bodies

Implementation

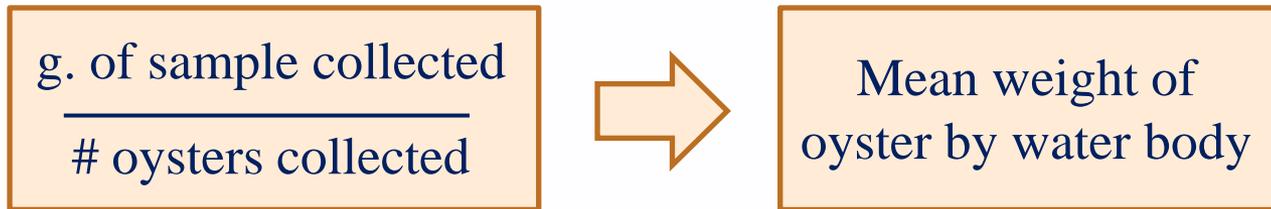
1. Define water bodies:
 - Coastal
 - Hood Canal
 - North Puget Sound
 - South Puget Sound
2. Divide sampling sites based on water bodies



Implementation *continued*

3. Determine oyster weight by water body

- Using the last 50 samples by site, calculate average oyster weight for each water body
 - Preliminary methodology



4. Obtain landings data from harvesters

- Develop submission form
- Submit monthly record of the number of oysters harvested by harvest area

Implementation *continued*

5. Obtain illness data

- Rely on shellfish illness log records
 - Includes number of illnesses by harvest date and growing area

6. Determine illness weight

- Commercial sole-source case = # illnesses by growing area
- Commercial multi-source case = weight based on historical illness association by growing area
 - Exclude all illnesses associated with documented post-harvest abuse
 - Exclude all multi-source cases with non-Washington product implicated

Implementation *continued*

7. Calculate risk per serving by water body

$$\frac{\text{\# confirmed } Vp \text{ illnesses}}{\text{\# oyster servings harvested}} \times 1,000,000$$

8. Identify growing areas with no known *Vp* risk

9. Calculate total statewide risk per serving by year

Public Health Rationale

- Provide a quantitative measure of risk
- Gain the ability to assess *risk by serving* and *risk by growing area* rather than simply total illnesses
- Compare risk between years objectively
- Understand how risk patterns emerge and change over time

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