

A COMMUNITY-BASED ASSESSMENT OF SUBSISTENCE FISHING IN SEATTLE'S URBAN WATERS: CHARACTERIZING THE HEALTH IMPACTS OF A SUPERFUND SITE CLEANUP

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Mural painted near the Duwamish River in South Park

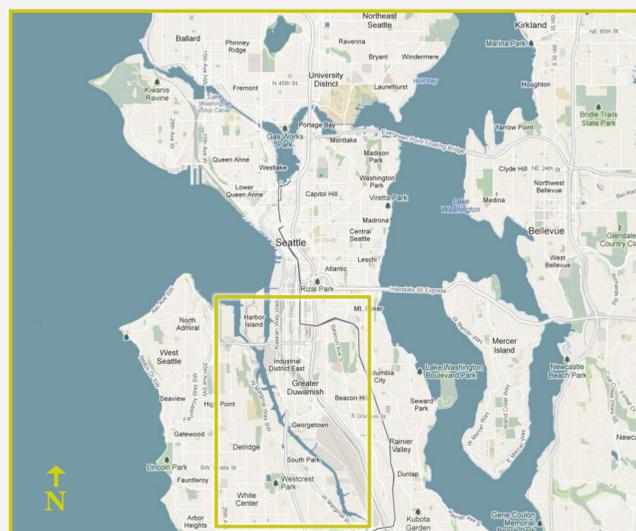
BACKGROUND

This research project informed a Health Impact Assessment. The goal of this research project was to characterize the potential unintended health consequences of the proposed plan to cleanup the Duwamish River Superfund Site. Specifically, the research aimed to describe:

- Existing conditions among urban, non-tribal subsistence fishers;
- Likelihood of potential health effects;
- Recommendations to maximize beneficial health outcomes and minimize harmful health outcomes in this population.

SETTING

The Lower Duwamish Waterway Superfund site is a 5.5 mile stretch of contaminated river that runs through industrial and residential areas in Seattle, Washington. Over 100 years of industrial and urban wastes have left the Duwamish River's sediments, fish, and shellfish contaminated with harmful toxicants. Previous local studies suggest that fishing and shellfish harvesting may be important activities for Native Americans, Asian and Pacific Islanders, and immigrant populations.



OBJECTIVES

- Evaluate the factors that lead people to fish in contaminated urban waters by answering the questions: Why do people fish? Why do people fish where they fish? Why do people fish in contaminated urban waters?
- Engage members of fishing communities in research to gain a broad, contextual understanding of fishing behaviors, choices, and decisions

METHODS



KEY FINDINGS

Most focus group participants were Asian immigrants and nearly half did not read either English or their primary language.

Fishers reported fishing for food, relaxation and recreation, and culture and tradition.

"I don't have that much money.

If I can't catch the fish, I can't eat the fish."

"I was raised around fishing... I remember when I was smaller than my daughter my earliest memory was of us going fishing."

Focus group participants were eager to discuss the fish they caught and consumed, including many species included in fish consumption advisories. Many participants enjoyed sharing and communal consumption of caught fish.

Decisions about fishing locations were influenced by availability of desired fish, convenience and accessibility, cultural traditions, and perceived safety and quality.

Most participants relied on visual cues, rather than posted signs, to assess contaminated waters and fish.

"I see the people fishing, so I'm going to fish. If they're fishing, it should be fine."

"Zombie fish"

"When you lift up a fish and the scales slide off..."

Most were unfamiliar with specific health effects, contaminants, and bioaccumulation, and health effects of consuming contaminated seafood.

"Dirty or not dirty, I'm still going to fish.

If I can't eat the fish, I don't know what to do.

Still I'm going to throw my pole in that dirty water."

Participants were wary to discuss disadvantages of traditional fishing advisories, but supported innovative alternate approaches including maps and signs, urban fishing ponds, and maintaining visually appealing fishing sites in less contaminated waterways.

"We have to trust the government. If [the EPA] can maintain [the river] clean, we can fish. If not, then we will follow the law."

FOCUS GROUP PARTICIPANTS (N=41)	N	%
Male	18	43.9%
Race		
African, Black, or African American*	2	4.9%
Asian*	38	92.7%
Filipino*	1	2.4%
White*	1	2.4%
Foreign Born	35	85.4%
Country of Origin (if Foreign Born)		
Laos	33	94.3%
Philippines	1	2.9%
Thailand	1	2.9%
English as Second Language Reading Proficiency	37	90.2%
Do not read primary language	15	44.1%
Read primary language at least a little bit	19	55.9%
English Speaking Proficiency		
Do not speak English	9	22.0%
Speak English at least a little bit	32	78.0%
English Reading Proficiency		
Do not read English	18	45.0%
Read English at least a little bit	22	55.0%

*Alone or in combination with another race

CONCLUSIONS

Fishing behaviors are influenced by a complex blend of cultural, traditional, and economic values and needs.

Reasons for fishing vary, even among seemingly homogenous groups. Messaging, outreach, and other future projects aimed at changing fishing behaviors should work to understand the specific cultural context of fishing and cultural concepts of health and contamination, since this context determines many fishing behaviors.

Reasons for choosing fishing locations also vary, and aesthetics are often more influential than posted signs or advisories. This can lead individuals to catch and consume fish and shellfish included in seafood consumption advisories, such as resident fish and shellfish from contaminated waterways.

Fishers supported alternatives to traditional fishing advisories that allowed continued fishing and fish consumption, rather than discouraged fishing.

Reactions to alternatives to fishing advisories varied, and different methods will be more culturally-appropriate and effective for different communities. Traditional institutional control fishing advisories could restrict healthful fishing and fish consumption practices.