

Human Health Topic Forum Workshop
Tacoma, April 22, 2008
Workshop Summary

Meeting Purpose

In April 2008, the Puget Sound Partnership asked experts from around the region to lead a series of six topic forums, each designed to address one of the Partnership's six goals (human health, quality of life, water quantity, water quality, species/biodiversity/food web, and habitat/land use). Forum leads helped identify a core team and developed a discussion paper guided by science and policy questions provided by the Partnership. Each topic forum (with the exception of quality of life) hosted a public workshop to present their findings and solicit feedback.

Meeting Overview

Approximately 60 people attended the Human Health topic forum at the Landmark Catering and Convention Center. Among those represented were local and tribal governments, local organizations, businesses, federal and state agencies, non-profit organizations, and citizens.

Meeting Summary

The meeting facilitator, Mike Sharar, welcomed participants to the meeting and introduced presenters, Partnership staff and topic forum leads. Martha Neuman, Action Agenda Director, provided background on the Partnership and its charge, the topic forum process, and expectations for the workshop. Martha explained that the core team will be reviewing comments made at the topic forum, as well as those provided in written form and via the Partnership's Web site through a May 6 comment deadline. The core team will broadly categorize these comments and make recommendations for inclusion in a revised Human Health discussion paper.

The following is a list of questions and comments heard regarding the introductory remarks. Answers are indicated with italics:

- A lot of information was developed for the 2007 Puget Sound Action Team Report. Where is this past information going? *The work of the Puget Sound Partnership is building on past work, including that of the Puget Sound Action Team. For instance, the Action Team's work did not address human health, the topic of today's discussion. It will be important that this past work is wrapped into the Partnership's efforts in a very explicit way. The topic forums are an opportunity to comment on whether this past work was adequately captured and/or correctly represented.*
- Where does the work of the Partnership sit relative to the Shared Strategy for Puget Sound? *Shared Strategy was salmon-focused work and did not address*

human health. The Regional Salmon Recovery Plan will be folded into the work of the Partnership and the Action Agenda.

- Will the Partnership be developing a responsiveness summary of all comments received? *Comments received at today's topic forum, through written submissions, and via the website and threaded discussion boards will be grouped into a summary and considered by the core team for incorporation in their revised discussion paper. As such, responses to individual comments may be reflected in the revised paper, but will not be responded to individually as you would find in an EIS or rulemaking process.*
- Can written comments be submitted to the Partnership? Will these written comments be posted to the Web? *Yes, written comments can be submitted to the Partnership, including comments related to the Shared Strategy for Puget Sound. Yes, all comments received will be compiled into reports and posted to the Web for review.*

Session 1: What do we know about the status and threats to Puget Sound?

Rob Duff of the Washington State Department of Ecology gave a presentation from the topic core team about the status of threats to Human Health in Puget Sound.

Mike Sharar facilitated a discussion based on the following questions:

- Have we accurately described what we know and don't know about Puget Sound and human health, and our certainty of that knowledge?
- Have we missed any major findings (in the literature)? Locally? Elsewhere?
- What are the key themes from this paper that should carry forward to the Action Agenda?

The following is a list of questions and comments heard regarding this session's discussion questions. Answers are indicated with italics:

- The discussion paper should more specifically address hormonally-active compounds and endocrine disruptors.
- The discussion paper should address a broader class of emerging chemicals. There are thousands of chemicals that have no regulatory standing, but are a potential threat to human health. There is not enough time or resources to investigate the sub-lethal and chronic effects of these chemicals, but there is information on their presence through information on small quantity generators of hazardous waste and other technical assistance programs administered through Ecology.

- There are several chemicals that aren't addressed by the discussion paper regarding the threat of toxics, including phthalates and pesticides. The discussion paper should also include a discussion on the limits of the current Persistent Bioaccumulative Toxics (PBT) list.
- Nanoparticles, fluoride, biosolids, and polycyclic aromatic hydrocarbons (PAHs) were left out of the discussion of threats.
- Local food production should be highlighted in the discussion paper as a contributory factor to human health.
- The paper did not discuss the importance of preserving access to the food resources as a means of sustaining the population.
- Consumption of toxics in fish and shellfish through "pooled cooking," such as food cooked in the same pan at a restaurant, was not addressed in the discussion paper.
- Exposure from tidelands harvested by private landowners is a data gap.
- There was not a section on the consumption of various seaweeds. The Washington State Department of Health issues harvest permits that may provide more information about sites where this is occurring.
- Assumptions about fish consumption need a definitive study that provides information about where populations are getting their seafood and how much they are eating, and takes into consideration cultural ideals.
- The assessment of threats relative to seafood consumption does not take into account threats consumers will face through alternatives at their local grocery store. Are we sure that food at the grocery store is any safer?
- Air-related health issues, including lead, were missing from the paper.
- There should be more emphasis on sources of contamination in Puget Sound. There are many sources of toxics that are not well known at this point, including PBTs in general and contributions of toxics from large rivers. More environmental and health monitoring is needed and a mass balance of contamination should be measured: contaminants entering the system, contaminants leaving the system.
- The Partnership has said that its scope is from "snowcaps to whitecaps," including the health of children in the inner city. The discussion paper is biased towards

marine areas and is missing watersheds. People for Puget Sound has developed a list describing where it thinks this line should be drawn, with respect to scope.

- The quality of data used to determine certainty about a threat is at times questionable based on incorrect sampling and analysis.
- The discussion paper describes benchmarks as a means of establishing the basis of human health risk, but concepts of frequency of exposure and dose should be more clearly described. This information will help different users of Puget Sound resources understand their relative risk level.
- Some of the language in the discussion of a “healthy condition” is too vague and open for interpretation. Specifically, the language “should not harm” does not provide any specifics about the spectrum of risk for different users based on frequency of consumption of or contact with pathogens or toxics. The document needs to describe these expectations, and may be more clearly communicated in a graphic.
- The relative risk that each of these threats represent needs to be articulated. By including general statements about risk, we lose the demarcation of risk. This could include a collection of examples or otherwise put in a universal context that is easily understood by the general public. If everything is put in its own context, the public will not be able to follow along.
- The paper should adequately and appropriately address the “maximally” exposed individual.
- This document is not a risk assessment. It can speak to threats and issues, but should not attempt to calculate risk by focusing on benchmarks and exposures.
- Is there data about incidence of illness that can be cited when describing the certainty about pathogen and biotoxin exposures through consumption? This is not clear in the discussion paper.
- The certainty of exposures to pathogens and toxics through direct contact with waters and swimming beaches is limited by the funding and monitoring that is currently conducted. More monitoring is needed.
- A lot of the risk tolerance targets could be achieved by using the precautionary principle.
- The paper would benefit from more data in summary form, including tables.

- It is challenging to decide how to describe relative risk associated with sustenance versus recreation. When we develop our list of what can or should be done about these threats, we need to consider that there are communities that remain on the margins in terms of protection. When looking at human health, there should be particular emphasis on protecting those that rely on the water. For these communities, it is not a choice and the decisions that are made will have significant impacts on their health and economy.
- There is a lot of anxiety on the part of industry and local governments about the potential regulatory impacts of acknowledging these human health threats. *The Partnership has a communications program and will encourage industry and other stakeholders not present at these meetings to participate in a review of the Partnership's approach. It is the primary focus of the core team and these topic forums to ensure that the facts presented in the discussion papers are accurate.*
- The focus of the discussion paper should not be risk assessment, but rather on actions to address the human health threats.
- The ultimate indicator of a human health condition is a measure of the rates of disease that are linked to various environmental threats.
- The human health approach should follow the precautionary principle. Biomonitoring would provide information about risks and exposures.
- What do we want to do in the absence of perfect knowledge about threats to human health? Do we want to adopt the precautionary principle? We have done traditional risk assessment in the past and are still in a situation where human health is threatened. We need to consider whether or not a “paradigm shift” is needed in terms of how we define and address threats to human health.

Session 2: What is the documented effectiveness of solutions to addressing the threats?

Stuart Glascoe of the Washington State Department of Health gave a presentation from the topic core team about the documented effectiveness of actions to address threats to human health in Puget Sound.

Mike Sharar facilitated a discussion based on the following questions:

- Does this accurately characterize the known certainty of effectiveness of the tools available?
- Have we missed any major findings (in the literature)? Locally? Elsewhere?

- What are the key themes from this paper that should carry forward to the Action Agenda?

The following is a list of questions and comments heard regarding this session's discussion questions. Answers are indicated with italics:

- There needs to be more emphasis on those approaches that have been most effective in removing the human health risk from the environment, i.e. we should distinguish between actions we take to prevent exposure from actions that address the pollution issue. Fish advisories, for example, do not remove pollution from the system. These approaches need to be described on both a short-term basis and a long-term perspective.
- Effectiveness is limited by available surveillance. More can be done in this area to understand the occurrence of human health threats. While indicators may be more cost-effective than conducting epidemiological monitoring, current gaps in reporting do not give a complete picture of the magnitude of the human health threat.
- The PBT program should be mentioned as an effective approach, rather than the Chemical Action Plan in Table S2-2.
- Combined sewer overflow (CSO) control plans should be included as an effective approach in Table S2-2.
- The National Pollutant Discharge Elimination System (NPDES) is supposed to reduce use of waterways as a means of waste disposal, so it should be marked as source reduction in Tables S2-1 and S2-2.
- Wastewater treatment and septic systems should be given equal consideration throughout the document.
- Stormwater permitting and stormwater pollution prevention plans under NPDES should stand alone as a documented effective program.
- Permit-writing personnel need to be retrained on the intent of the Clean Water Act and Clean Air Act; current practices are undermining this approach and constitute "permits to pollute."
- Medical testing for environmental health threats does not always happen in low-income communities.

- CSOs should be added as a limitation to existing programs relative to the pathogen threat.
- Land use practices such as low impact development (LID), mass transit and other transportation works should be listed as approaches that contribute to source reduction. Examples include specific land use practices, pollution prevention programs, the Healthy Ports Initiative, etc.
- Improved building methods can reduce non-point pollution sources.
- Strategic chemical and product bans should be included as an effective management approach, with the phase-out of polybrominated diphenyl ethers (PBDE) being an example.
- Health departments are considering how the built environment influences human health, including proximity to services, access to trails and paths, etc.
- Pollution prevention is missing from the list of documented effective programs. Examples include the Department of Ecology's Pollution Prevention and Technical Resources for Engineering Efficiency (TREE) programs.
- Ecology's Urban Waters initiative is an effective program; the program works with local businesses to implement upland source control through inspections, spills reporting, and catch basin cleaning.
- The conceptual model being developed as part of the indicators work for Puget Sound Partnership should be included as an attachment to the paper as a means of describing all sources of exposure and pathways.
- Source control needs to be expanded to include activity in our homes, such as human consumption of pharmaceuticals at dosages that enter our wastewater streams.
- There should be a heavier emphasis on source control as it is a key factor in the long-term success of reducing human health risks (currently represented by item #7 in Table S2-2).
- For each threat listed, there should be a systematic identification of the regulatory programs that address it, and an assessment of the extent to which it is being addressed.

Session 3: What are we currently doing to address the problem?

Larry Fay of the King County Department of Health gave a presentation about current policy approaches to address threats to human health in Puget Sound.

Mike Sharar facilitated a discussion based on the following questions:

- Does this accurately characterize what we are now doing?
- Have we missed any major findings (in the literature)? Locally? Elsewhere?
- What are the key themes from this paper that should carry forward to the Action Agenda?

The following is a list of questions and comments heard regarding this session's discussion questions. Answers are indicated with italics:

- The Department of Ecology's Beyond Waste Plan is a documented effective program. 10,000 tons of toxics are removed from the waste stream statewide each year.
- Outreach and training of medical and mental health providers should be conducted about how toxics/toxins affect human health. Also, this should be further integrated into nursing curriculum.

Session 4: What criteria should we use? What actions should we stop, add, realign, continue?

Rob Duff of the Washington State Department of Ecology gave a presentation about the assessment of needed actions to address threats to human health in Puget Sound and related gaps in policy.

Three facilitated workgroups were asked to consider the following questions:

- Have we accurately captured the principles that should be reflected in the strategies to address threats to Puget Sound?
- Did we capture actions that should continue, be added, be changed, or stopped?
- How will we measure progress?

Discussion notes from these workgroups are available upon request. Key responses are highlighted below:

Have we accurately captured the principles that should be reflected in the strategies to address threats to Puget Sound?

- We need to differentiate between short-term and long-term risks.

- There should be equal consideration of sources of contamination: industries, small businesses, and households.
- Partnerships between regulators, the business community, and private property owners would enhance implementation.

Did we capture actions that should continue, be added, be changed, or stopped?

- Identifying where regulatory authority exists and coordinating overlapping policy between jurisdictions.
- Gather data sufficient to establish baselines to describe human health conditions.
- Develop social marketing campaigns and education to drive behavior change.

How will we measure progress?

- Fewer closures and fewer illnesses related to pathogens/biotoxins/toxics.
- Rates of public participation.
- Rates of measurable behavior change (consumer behavior, other lifestyle choices).

In addition, all three of the break-out groups discussed questions about the scope of the Partnership human health assessment. Specifically, participants asked about whether the following topical and geographic items should be included:

- Inhaled air toxics
- Drinking water
- A host of “emerging chemicals” not included in the paper and not addressed by the PBT Chemical Action Plan
- Human health impacts from upland areas of the Puget Sound basin

The following is a list of additional questions and comments heard regarding this session’s discussion questions. Answers are indicated with italics:

- Language of the discussion papers should be more accessible to different audiences for better public participation.
- Use of the term “sensitive populations” is misleading and should read more like “potentially disproportionately impacted populations.”
- Maps should be made available that displays where vulnerable communities are located.

- A diversity of input and opinions are needed, including those of industry and communities, around development, implementation, and enforcement of the Action Agenda.
- The Partnership should consider a requirement for community involvement. Planning of actions that consider the priorities of communities may enhance the success of programs, especially with respect to managing non-point source pollution.
- Public access to beaches per capita is not addressed enough. A public ownership and access plan should be developed.
- Recreational use of the resource should be encouraged.
- A lack of coordination amongst agencies is a policy issue that should be included in the Action Agenda. For example, the issue of how to address non-point source pollution in stormwater should involve the WRIs and local governments.
- Funding needs to be addressed for local governments to do outreach and inspections with small businesses.
- Local health jurisdictions are not adequately funded for managing septic systems.
- Data sharing between programs, including geographic data, is an important point of coordination.
- More of the available data needs to be entered into a GIS application to be able to see potential trends/problems.
- Public beaches need more signage that gives information about toxics and pathogens on the beach as well as in the water.
- We need to rethink how we regulate chemicals in Washington. The biggest gap is an understanding of what chemicals are used. A rule or law is needed to provide access to information about the amount of chemicals used in products, which would aid in monitoring and managing human health threats.
- It will be important for the Partnership to address how we are balancing competing interests, such as the desire for a healthy sound versus the desire for food availability (where aquaculture that may threaten biodiversity).
- Water Quality and Human Health should both address overlapping elements.

- Expense should not be considered at this point in the process, as it could leave out possibilities and perhaps stifle motivations. Rather, cost-effectiveness should be considered as a matter of policy and/or by engineers. The assessment should focus on identifying what's effective and what's not and their relative benefits.

Wrap up and Next Steps

Mike Sharar thanked everyone for attending and explained that the core team will be reviewing comments made at this topic forum, as well as those provided in written form and via the Partnership's website through a May 6 comment deadline. The core team will broadly categorize these comments and make recommendations for inclusion in a revised Human Health discussion paper.