

## **Questions Asked at the Lake Washington Aquatic Herbicide Open House**

The Washington Department of Ecology (Ecology) sponsored a public open house held on May 18, 2006 in Seattle. A portion of the program included comments and questions from the public. Below are Ecology's written responses to the questions that were asked that evening. The responses were prepared by Ecology's Aquatic Plant Specialist and Aquatic Pesticide Specialist.

### **1. Who are the parties appealing the Aquatic Plant and Algae Management General permit? Who are they appealing to and when will these appeals be heard?**

The new Aquatic Plant and Algae Management General permit was appealed by three separate entities. These appeals were submitted to the Pollution Control Hearings Board (PCHB), the administrative board that makes decisions on Ecology permit appeals. The Washington Toxics Coalition (WTC) appealed and requested a stay of the permit. However in their June 6, 2006 decision, the PCHB upheld the Aquatic Plant and Algae Management General permit and denied the request for a stay. If a stay had been granted, all in-lake chemical applications would have been stopped. Northwest Aquatic Eco-Systems, and Aquatechnex, LLC, two private firms specializing in aquatic pesticide applications also appealed portions of the permit. The first hearing on this permit was held May 17<sup>th</sup>, and focused on the request for stay by WTC. The PCHB will hear the other issues on November 2, 3, and 6, 2006, although these dates are subject to change.

### **2. Was a public hearing required prior to the issuance of the Aquatic Plant and Algae Management General Permit?**

Yes, Ecology is required by law to hold one hearing prior to issuing a permit. For this permit, Ecology held three public hearings, in Spokane, Lynnwood, and Centralia.

### **3. How was the public informed of the permit comment periods? Was enough advertising done to ensure public awareness?**

Ecology informed the public of the comment period on the draft permit in four ways. Public input helps Ecology do a better job of insuring public awareness of the opportunity to comment. Ecology published notice of the draft permit and its comment period:

- In three newspapers: The Spokane Spokesman-Review, the Olympian, and the Seattle Daily Journal of Commerce
- In the state register
- On Ecology's website
- Via email notices to a wide audience.

Ecology received more than 700 letters commenting on this permit. At least 300 of these focused on Lake Washington, about 200 of which were in support and another 100 in opposition to pesticide applications on the lake.

Citizens at the May 18<sup>th</sup> meeting provided advice on additional avenues for getting the word out to the public.

**4. Who has jurisdiction over Lakes Washington, Union, and Sammamish?**

The only local government body that has jurisdiction over the entire three-lake system is King County. However, a patchwork of incorporated cities and towns have jurisdiction along the shorelines of these lakes.

**5. How can other aquatic plant control methods be considered before chemicals?**

Ecology strongly encourages lake groups to consider all methods of plant control and then select the methods that are most effective and appropriate for their site and situation. Ecology cannot require the applicant or a sponsor to conduct an evaluation of all control methods prior to applying for permit coverage.

For example, because Ecology provides grants for development of lake management plans for treatment of noxious weeds, Ecology can require grant recipients to consider non-chemical methods instead of, or in addition to, chemical methods. Ecology also provides grant funding to help develop these plans.

**6. How could Ecology provide better communication to adjacent landowners prior to treatment? Could this be through the Department of Natural Resources or another way?**

The Aquatic Plant and Algae Management General permit requires a 10-21 day notice to all shoreline residents within ¼ mile of the treatment site prior to any herbicide application. The permit also requires applicators to post the entire area of treatment, and 400 feet beyond the treatment area, prior to treatment taking place. These notification requirements go above and beyond what is required by the Environmental Protection Agency (EPA) on the pesticide label or by state law. For coverage under this general permit, each applicant must also publish a notice in the newspaper. In most situations, these steps provide adequate notice to affected landowners. If residents have ideas for additional notification, they may make recommendations for Ecology's consideration during the next permit cycle. You could also contact your neighbor directly for information about the treatment(s) they have requested.

**7. How does the aquatic herbicide fluridone bind to sediment, and what is its persistence in the water?**

Fluridone is a slow-acting herbicide that needs to be in the water for long periods of time to be effective. Fluridone is found in water and sediments following treatment of a pond or lake. Field tests have shown that the average half-life in water is 21 days and longer in sediments (90 days). Residues may persist longer depending on the amount of sunlight and the water temperature. Fluridone is primarily degraded by sunlight and microorganisms. Decreased temperatures and low light levels slow its breakdown in water.

**8. What impacts are there to organisms due to the slow release fluridone product?**

Research shows only minor impacts to organisms (other than aquatic plants) as a result of fluridone application, regardless of which formulation is applied. Fluridone works by acting on a biochemical pathway that exists in plants but not in animals.

**9. What are the impacts of fluridone to Puget Sound?**

No impacts to Puget Sound are anticipated following a fluridone application to Portage Bay. It is unlikely that any fluridone will reach Puget Sound because each treatment site is small compared to the volume and size of the entire lake. Even if fluridone did reach Puget Sound, no impacts would be expected on Puget Sound animals. Marine organisms are not known to be any more sensitive to fluridone than freshwater organisms.

**10. How have you looked at the long-term effects of aquatic pesticides on returning salmon?**

Research has been and continues to be conducted by Dr. Christian Grue and colleagues at the University of Washington. To date, the research has evaluated the effects of aquatic pesticides on young salmon (smoltification and olfactory) responses. According to Dr. Grue, there were no “red flags” raised as a result of this research that would indicate potential long-term effects on returning salmon.

**11. How have you looked at long-term environmental/cumulative impacts of herbicide use?**

Yes, Ecology’s risk assessment for each chemical evaluates short-term, long-term, and cumulative impacts of the chemical(s) on the ecosystem. A recent study indicated that 60 years extensive aquatic plant management, including herbicide use, had little impact on the ecology of Lake Moraine in New York as compared to a nearby lake that had no aquatic plant management. (Willard N. Harman, L.P. Hingula, and C.E. MacNamara. 2005. *Does Long-Term Macrophyte Management in Lakes Affect Biotic Richness and Diversity?* J. of Aquat. Plant Manage. 43:57-64.)

**12. Can I water my plants and veggies with fluridone treated lake water?**

Ecology does not recommend using lake water to water your house or vegetable plants after fluridone treatment, unless water testing indicates that fluridone is at five parts per billion or less. This product is an herbicide, designed to kill plants, and, unless testing shows otherwise, could still be at concentrations that would damage some plants.

**13. This permit does not meet the needs of the Lake Washington system. When can Ecology start a process to develop a permit that will meet these needs?**

Ecology does not currently have the resources to develop a permit specifically for the Lake Washington system. Later in this response to questions (see question 19), we discuss a possible option for addressing Lake Washington-specific issues. Ecology recognizes that many members of the public believe that this permit does meet the needs of Lake Washington.

**14. Prior to the Washington Department of Agriculture conducting an aerial spray in Seattle for gypsy moths, they notified newspapers and other news media. Can Ecology do similar notification?**

Ecology does not have the resources to notify the media each and every time a pesticide is applied to a lake in Washington. When the permit was issued March 1, 2006, Ecology issued a press release and an information sheet. For each treatment under this new permit, the permittee/applicator must send a 10-21 day notification to all shoreline residents within ¼ mile of the treatment site. In addition, before receiving permit coverage, applicants must place a legal notice in the newspaper detailing the planned treatment(s).

Gypsy moth spraying was sponsored by the Department of Agriculture using their contract applicators. A press release was issued by the Department of Agriculture prior to the treatment. This scenario does not parallel the Ecology permitting scenario. For almost all aquatic herbicide applications, Ecology is not the project sponsor or the applicant, as was the case with the gypsy moth spraying. Ecology's permit requires the applicants to assume responsibility for the public notification.

**15. There are unknowns with all of these chemicals. Why do we continue to allow their use?**

These aquatic herbicides undergo extensive acute (immediate) and chronic (long term) toxicity testing prior to use in the United States. They have been reviewed by the EPA and then further reviewed by the Washington State Department of Agriculture prior to registration in Washington. Unlike many other states, Ecology completes extensive risk assessments and environmental impact statements on aquatic herbicides prior to allowing their use under a permit. These risk assessments further restrict the number of chemicals allowed for use in Washington waters. After

reviewing copper, a very common aquatic algaecide/herbicide, Ecology chose to prohibit its use in Washington lakes. This product is allowed in almost every other state.

Ecology's risk assessments indicate that the products allowed under the permit do not pose an unacceptable risk to human health or the environment when used according to the EPA label and in compliance with the general permit conditions. In other parts of the country, applicators must follow EPA label guidelines only, but in Washington the permit also oversees aquatic pesticide use. And, in many states, lake residents can legally purchase these pesticides, and apply them without any training, regulatory oversight, or public notification or posting.

#### **16. Why is there no evaluation of other methods prior to the use of herbicides?**

Ecology evaluated all available aquatic plant control methods in an Environmental Impact Statement (EIS). In the EIS, Ecology determined that chemical control is one tool for aquatic plant management. Other tools include mechanical, manual, and biological control. In a number of lakes across the state, lake residents use non-chemical control methods (including on Lake Washington). In fact, the Seattle and Queen City Yacht Clubs completed an Integrated Aquatic Plant Management Plan, and all control methods were evaluated.

Ecology's water quality permitting program evaluated all aquatic plant management methods, and, through its permitting authority, only has the ability to regulate chemical control, and its potential impacts on water. Other plant control methods are regulated by Fish and Wildlife. Sometimes local governments may also impose additional local regulation of various aquatic plant management methods. Until a few years ago, the City of Seattle prohibited aquatic pesticide use within the city limits.

#### **17. Why not focus on mechanical controls?**

Through its NPDES and state waste discharge permitting programs, Ecology cannot require mechanical or other methods of aquatic plant control in lieu of aquatic herbicide use. Ecology only has regulatory authority over the application of products that may alter the biological or chemical characteristics of state waters. Ecology cannot mandate which aquatic plant control activity people must use, but under its permitting authority Ecology can mitigate for any impacts these pesticides may have on the environment, such as setting timing restrictions to protect young salmon.

Although Ecology cannot require permittees to pursue non-chemical treatment prior to receiving permit coverage, Ecology supports and encourages non-chemical plant management methods. Ecology has traditionally relied on voluntary methods to encourage use of these methods. For example, because Ecology provides grants for development of lake management plans for treatment of noxious weeds, Ecology can require grant recipients to consider non-chemical methods instead of, or in addition to, chemical methods.

Also, under the prior version of the Nuisance Plants General Permit, Ecology required permittees to consider alternatives to chemical treatment if they wanted to treat for more than two years during a permit cycle. Although Ecology could not require permittees to implement non-chemical treatment in lieu of chemical treatment, our hope was that applicants for permit coverage would seriously consider pursuing non-chemical treatment under appropriate circumstances. What we learned was that few, if any, applicants under the prior permit opted for non-chemical treatment due to its increased expense and, in some instances, decreased effectiveness compared to chemical treatment. Therefore, rather than continue to require consideration of non-chemical treatment, the new permit puts more stringent standards in place to ensure that water quality standards are met and waterbodies' beneficial uses, such as swimming, fishing and aquatic life, are preserved.

People incorrectly assume that mechanical controls have no environmental impacts. However, there are documented negative impacts to fish and wildlife from the use of mechanical methods such as harvesting. Harvesting inadvertently kills large numbers of fish, amphibian, reptiles, and invertebrates as the machines cut and collect aquatic plants. In addition to having negative impacts to fish and wildlife, mechanical removal can enhance the spread of invasive species by creating thousands of viable fragments, each of which can form a new plant. Machines, like rotovators, disturb the sediment, potentially releasing plant nutrients, or long-buried toxins to the water. The large machines can be difficult to maneuver around docks and in marina areas leading to safety concerns.

**18. Does Ecology have the ability to re-evaluate and revise/modify this permit before next season?**

Ecology may revise this permit prior to the 2007 treatment season based on the outcome of the permit appeals.

**19. What is the possibility of forming a lake stewardship council for this lake system?**

Forming a lake stewardship council depends heavily on the local governments and their willingness to undertake such a process. The Water Resource Inventory Area (large watershed) (WRIA) 8 Watershed Forum meetings can provide opportunities for public comments and discussion. Those interested in Lake Washington and Portage Bay herbicide treatment issues may want to submit written comments to the WRIA 8 Forum or attend one of their meetings.

Below we provide the 2006 schedule for the WRIA 8 Watershed Steering Committee and Forum. Any letters of concern should be addressed to the WRIA 8 Forum and specifically the WRIA 8 Chair - Dr. Don Davidson, Council member for the City of Bellevue.

Other key staff members include:

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Local partners working together to conserve and restore salmon habitat

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## Lake Washington/Cedar/Sammamish Watershed (WRIA 8) 2006 MEETING SCHEDULE and TOPICS

Meeting times are 3:30 to 5:30 PM unless noted. Meeting locations will be in the Community Center at Mercer View, with rooms identified below. (link for map and driving instructions: [http://www.ci.mercer-island.wa.us/files/ccmv\\_directions.pdf](http://www.ci.mercer-island.wa.us/files/ccmv_directions.pdf).) Meeting dates, times, locations, and agenda topics are subject to change.

To verify or for more information, contact Mary Jorgensen, Acting Watershed Coordinator, at 206-296-8067 or [mary.jorgensen@metrokc.gov](mailto:mary.jorgensen@metrokc.gov).

<b>WRIA 8 Steering Committee</b> Interjurisdictional and multi-stakeholder committee overseeing development of the watershed implementation. Generally meetings are on 4th Thursdays.	
Meeting Date	Anticipated Topics
Thursday, April 6 (Mercer 3)	Implementation Committee Structure Options – Discussion 2007 Work Plan – Approval Prioritized 3-year list of Implementation Actions – Methodology - Approval Updates - SRFB Round 7 proposed changes and Regional H-Integration
Thursday, June 22 (Calkins)	Implementation – approach and initial actions – Discussion SRFB Progress Report Updates
Thursday, Sept 28 (TBD)	SRFB Project list – approval Hatchery and Harvest – initial H-integration
Thursday, Dec 7 (TBD)	TBD (EDT model – report on latest results)
<b>WRIA 8 Forum</b> Committee of elected officials representing local governments participating in the interlocal agreement to fund watershed implementation for salmon conservation. Generally meetings are	
Meeting Date	Anticipated Topics
Thursday, March 2 (Calkins)	Committee Structure, roles and responsibilities – initial discussion Organization Structure – service provider options pros and cons – Decision Updates – Regional Recovery Plan, watershed representative to Shared Strategy's Development Committee, other topics.
Thursday, April 20 (Mercer 3) 2:30 to 5:30 - 3 hours	Committee Structure, roles and responsibilities – Decision Implementation ILA - Overview of Changes – initial discussion 2007 workplan, staffing models – initial discussion Updates
<i>Thursday, May 18</i> (Mercer 3) 2:30 to 5:30 - 3 hours	<b>Additional meeting</b> Implementation ILA revisions - discussion 2007 work plan, staffing and budget - Decision
<i>Thursday, June 15</i> 3:30 to 5:30 - 2 hours	<b>Additional meeting</b> Implementation ILA revisions - discussion 2007 work plan, staffing and budget - Decision

Thursday, <b>July 20</b> (Mercer 3)	ILA approval - decision KCD projects – approval of project list, KCD progress report update MOU – initial discussion
Thursday, <b>Oct 19</b> (TBD)	MOU approval - decision Implementation – Report on first year start-up Regional H- integration – Policy discussion