



# Summit for Elected Officials: Water Quality and Septic Systems

June 29, 2011

## Summary

On June 29, 2011, fifteen elected officials from the cities of Lacey, Olympia, and Tumwater, and Thurston County gathered to discuss septic systems and related impacts to our local water resources. The goals of the summit were to develop a common understanding of key issues associated with on-site septic systems in high density areas and the scope of these issues in our communities; review existing policies and programs related to septic systems and their conversion to the sewer system; examine the effectiveness of those existing policies and programs; and determine if there is interest in developing a cooperative or collective approach to addressing the issues.

Through several presentations, the group learned about the key issues associated with on-site septic systems and existing policies and programs in place related to septic system conversion to the sewer system. They then discussed the effectiveness of those existing policies and programs and their interest in developing a cooperative or collective approach to addressing the issues. Discussion was facilitated by Michael Pendleton, Pendleton Consulting.

Sue Davis, with Thurston County Public Health and Social Services Environmental Health Division, provided an overview of key issues in Presentation 1: Water Quality and Septic Systems. She reviewed how septic systems work, including the fact that they are an effective means of wastewater management when used in areas of rural density and appropriate soils. However, septic systems are also used in urban areas of high density and in porous soils that provide little treatment to septic effluent. Within the city limits of Lacey, Olympia, and Tumwater, there are nearly 5,000 septic systems. In their associated urban growth areas, there are another 9,000 septic systems. Many of these 14,000 septic systems were intended as temporary measures, to serve urban or future urban areas until connection to the regional sewer system could be made, but conversions rarely take place. On many lots, areas intended to accommodate future repairs of septic systems are used over time for sheds, patios, and other purposes, limiting the effectiveness of repairs when they are eventually made. In addition to existing systems, new septic systems continue to be permitted and installed.

The cumulative result is significant volumes of largely untreated effluent flowing unimpeded through the area's porous soils to groundwater aquifers and, eventually, to surface waters. Hot spots of nitrate contamination in our local groundwater aquifers exist in each of the jurisdictions, and can largely be attributed to input from septic systems. While septic system effluent represents about 20% of the volume of all local wastewater, it contains roughly 75% of the total nitrogen loading from wastewater. This contamination threatens private and municipal water supplies and has led, in some cases, to abandonment of drinking water wells. Contamination also degrades local lakes, causing eutrophication – the overgrowth of algae that chokes water bodies, robbing oxygen from aquatic life and impacting recreational use. Septic effluent also makes its way to streams and rivers, carrying fecal coliform and nutrients like nitrogen to our marine waters, which impacts shellfish harvesting and contributes to low oxygen levels that threaten marine life.

In the discussion that followed Presentation 1, elected officials reiterated their understanding of the issues. Attention focused on local shellfish protection districts in recent years has made it clear that failing septic systems that leak or pool effluent at the surface need to be repaired, replaced, or connected to sewer. Less obvious are the problems caused by septic systems that are functioning, but contributing to the contamination of groundwater and surface waters. While

it is more of a challenge to identify those septic systems that are contributing to the problem in porous soils, because they appear in most respects to be working (i.e., there is no septic effluent pooling at the surface), data regarding soil types and increasing nitrogen levels in water bodies can be used to help identify problem areas. There is a significant correlation between contamination and areas of high density development served by septic systems. However, conversion of septic systems to sewer is extremely expensive. Homeowners may not be willing or able to shoulder the cost of conversion. In some cases, they may have already incurred significant costs to repair or replace their septic systems and cannot afford to make further investments. In others, it is difficult for them to accept that conversion is needed, since their systems may be, or appear to be, functioning as they were designed.

In Presentation 2: Existing Policies and Programs, a panel of staff experts from the four local governments and LOTT provided an overview of the current approach to converting septic systems to sewer and issues involved in conversions. Rich Hoey, Olympia Interim Public Works Director, presented the overview, supported by Scott Egger, Lacey Public Works Director; Jay Eaton, Tumwater Public Works Director; Art Starry, Thurston County Environmental Health Director; and Karla Fowler, LOTT Environmental Policy Director. Each of the jurisdictions requires connection to the sewer system by new development and those with failing septic systems if sewer is available within a certain distance. For existing development, the need to connect is generally triggered when a homeowner needs to correct a failing septic system, provided they are within relative proximity to a sewer utility line. Although the County Board of Health can require connection for groundwater or surface water pollution, this trigger is difficult to implement for septic systems that otherwise work properly. The existing framework addresses each septic system individually, without notification to other property owners who may need to or wish to convert. This often results in repair or replacement of septic systems, in lieu of conversion, due to the high cost of extending the sewer lines to the property.

The cost of conversion includes extension of the main sewer lines, installation of a lateral side sewer line, septic tank abandonment, LOTT and city connection fees, and permits. Examples of recent conversion project costs are nearly \$40,000 per property in the Hillview neighborhood in Olympia and \$47,000 per property in the Woodland Creek Estates neighborhood in Lacey. The City of Olympia's "Septic to Sewer" program offers incentives to property owners to help with conversion costs. This is a voluntary program affecting both individual connections and neighborhood sewer extensions, of which Hillview is an example. For these sewer extensions to be successful, a significant financial commitment is required from most of the residents in the participating neighborhood.

In discussion following Presentation 2, the group acknowledged that the current framework may not be sufficient for resolving the challenge of needed conversions. Alternative policies and financing mechanisms may be needed. In general, conversions are currently addressed one system at a time, rather than at the neighborhood scale where significant improvements in water quality and economies of scale can be made. Some elected officials feel a sense of urgency – the issue of water quality degradation from septic systems in high density areas was recognized over 20 years ago; the problem has only gotten worse over time and costs to correct the problem continue to rise. While it is true that conversion costs are high, there are benefits to conversions in terms of economic, environmental, social, and public health factors. Fairness and equity issues need to be explored further. The cost of conversion is generally carried by the individual property owner, but improvements in water quality from that conversion benefit the entire community. At the same time, a new connection to the wastewater system represents "growth" in the demand for system capacity, whether it is from new development or from conversion of an existing septic system, and community values have repeatedly emphasized that growth should pay for its impact to the extent feasible.

## Next Steps

In general, the group agreed that this complex issue needs to be addressed and would benefit from a regional approach, given the common interest the jurisdictions share in improving groundwater and surface water quality and protecting public health. It was also clear that this issue could not be resolved in a single meeting. It was proposed that the LOTT Clean Water Alliance should serve as the lead to examine alternatives for a regional approach and eventually reconvene the elected officials for a second summit to examine those alternatives.

It should be noted that neither LOTT nor the city wastewater utilities gain from the conversion of septic systems to sewer, as the revenue from connection fees and monthly service charges of new customers is offset by the need for additional infrastructure, treatment capacity, and ongoing operation and maintenance costs. However, the cities and LOTT have a responsibility to serve these customers within the UGAs upon their eventual conversion. It should also be noted that LOTT has a particular interest in improving and protecting water quality in both our marine waters and groundwater, as LOTT's long-range management plan is dependent upon the continued ability to discharge final effluent to Budd Inlet and Class A Reclaimed Water to groundwater recharge basins. LOTT is a regional entity with Board of Director representation from each of the four partner governments, supported by a Technical Subcommittee made up of the Public Works Directors, or other designee, of each of the jurisdictions. This framework, along with LOTT's interest in improving water quality, will help in facilitating next steps.

Over the next several months, the planning committee for the summit, comprised of staff members from Lacey, Olympia, Tumwater, Thurston County, and LOTT, will assume the role of a work group to explore possible alternatives. The work group will present their findings to the LOTT Technical Sub-Committee, which will make recommendations to the LOTT Board of Directors for their review and input. The findings will then be presented to the elected councils or commissions of each jurisdiction to gather their feedback. Elected officials of the LOTT partner governments then will be asked to reconvene for a second summit on this topic.

### **LOTT-Partner Elected Officials in Attendance:**

Virgil Clarkson, City of Lacey  
Ron Lawson, City of Lacey  
Cynthia Pratt, City of Lacey

Stephen Buxbaum, City of Olympia  
Doug Mah, City of Olympia  
Rhenda Strub, City of Olympia

Pete Kmet, City of Tumwater  
Tom Oliva, City of Tumwater  
Betsy Spath, City of Tumwater  
Ed Stanley, City of Tumwater  
Joan Cathey, City of Tumwater

Sandra Romero, Thurston County  
Karen Valenzuela, Thurston County  
Cathy Wolfe, Thurston County

### **Other Elected Officials in Attendance:**

Ken Jones, City of Tenino

Alan Corwin, Thurston Public Utilities District  
Paul Pickett, Thurston Public Utilities District  
Chris Stearns, Thurston Public Utilities District

### **Planning Committee Members:**

Peter Brooks, City of Lacey  
Diane Utter, City of Olympia  
Art Starry, Thurston County  
Steve Peterson, Thurston County  
Roger Giebelhaus, Thurston County  
Eric Hielema, LOTT Alliance  
Lisa Dennis-Perez, LOTT Alliance

Andy Haub, City of Olympia  
Dan Smith, City of Tumwater  
Sue Davis, Thurston County  
Scott Lindbloom, Thurston County  
Karla Fowler, LOTT Alliance  
Tyle Zuchowski, LOTT Alliance

## **More Information**

For more information on the elected officials summit or next steps, please contact Lisa Dennis-Perez, Public Communications Manager, at (360) 528-5719 or [lisdennis-perez@lottcleanwater.org](mailto:lisdennis-perez@lottcleanwater.org).