

Large On-Site Sewage System  
Rule Committee Meeting Summary  
September 30, 2008  
9:30am – 3:30pm

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**Action and Follow-Up Items**

**Future Meetings:**

**Full Rule Advisory Committee:**

- **December 2, 2008:** Tumwater, Point Plaza East bldg.
- **January 22, 2009:** Tumwater, Point Plaza East bldg.

\* Oct meeting cancelled

**Technical Review Subcommittee:**

- **November 5, 2008:** Tumwater

**Operating Permit Subcommittee:**

- Nothing scheduled through end of year

**Local Government Consistency Subcommittee:**

- To be scheduled.

**Follow-Up:**

**Future tasks:**

- What’s involved in the annual renewal of an operating permit?
- Define failure of a LOSS.
- Define minimum expected information from permittee (type of system, do they meet regs –if no, ECY says don’t issue permit).
- Define what requirements should be in the first permit (monitoring, data gathering, schedule).
- DOH staff develop strategies for remaining questions on operating permits and bring back to LRAC, or

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- Develop rule language – to see how it follows and where the gaps are. Would help the discussion, or
- Work up issue paper for remaining operating permit issues. Take to subcommittee??
- Check Oregon drainfield regulations; their drainfields are much smaller than Washington's.
- Check with Dave Gustavson for Minnesota program's take on vertical separation reduction.
- Find any current WA examples with reduced vertical separation.
- All to review horizontal set-back table – slides 9 and 11 – for next discussion.
- Develop what performance monitoring looks like.
- If there are any comments or responses to questions (failures and repairs, operator certification), please e-mail them to Melissa.
- Ecology presentation on present potential funding options/financial assistance for LOSS upgrades (John Stormon to arrange)
- **AKART:** Prepare Issue Paper for AKART. Nancy and John Stormon will collaborate.
- Performance Monitoring.
- Consider later: will we allow slope > 30% for LOSS?
- Consider again: metering/flow measurement requirements.

### For TRS:

- Reconsider Issue #7 (vertical separation) with respect to other TRS recommendations and performance monitoring.
- Reconsider Issue #7 (Intermittent Sand Filters).
- Minimum land area. GMA/urban service concerns.
- Remote drainfield issue: Calculate land area based on gross acreage; require remote treatment site to be contiguous to property served?
- Topic 7, Vertical Separation

### Other:

- On page 5 of the issue paper #5: does “professional” include on-site designer? Consult DOL and AAG.
- Define surface water. See King County result.
- DOH must establish a better high strength waste standard

## Welcome and Introductions

Dave Lenning welcomed LOSS Rule Advisory Committee (LRAC) members, reviewed the agenda with committee members, and asked committee members, DOH staff and audience members to introduce themselves. There were 11 committee members present constituting a quorum. There were no comments on or additions to the agenda.

## Task 1 – Operating Permit Discussion

Linda Pang presented information from two Operating Permit Subcommittee meetings and led discussion on the framework for operating permits. Linda's PowerPoint presentation highlighted the Operating Permit Subcommittees recommendations on a framework for LOSS Operating Permits. After explanations, the committee discussed the issues, identified remaining concerns and tasks. The committee then voted on whether to accept the framework recommendations.

### **LOSS Rule Advisory Committee Discussion- General Approach**

Linda presented the information on the general approach DOH is looking at as a framework for issuing Operating Permits. Linda also outlined Ecology's current permit process for comparison.

### **General Discussion and Questions**

#### **1. Ecology (ECY) operating permit process for LOSS:**

- 5 year permit cycle – with public notification/comment
- Annual fee
- Permit can be amended at any time – with public notification/comment
- ECY-issued order can amend the permit – no public notification/comment

#### **2. Question:** Should new determinations for Total Maximum Daily Load (TMDL), Sensitive Areas, Marine Recovery Areas (MRAs) trigger an operating permit reassessment before the "periodic" evaluation is due? (Periodic is assumed to be greater than annual; maybe 5, 10, etc. years)

#### **3. Question:** When does DOH provide technical assistance, and when should it be formal enforcement?

#### **4. Question:** What is a LOSS "failure"?

##### Discussion and Comments:

- Surfacing sewage (public health; easily noticed)
- Ponded effluent in the drainfield
- Groundwater contamination
- Failure of a component of the LOSS
- Shellfish closure

#### **5. Question:** What happens if a failure is suspected or determined?

##### Discussion and comments:

- Follow the "F" track on flow chart
- Less than 5 years to demonstrate progress to meet public health/environmental concerns
- If reported failure: assess ASAP
- Immediate response from DOH
- 5 years is too long for a shellfish closure situation (DOH could choose to enforce a shorter time)

6. **Question:** Is there, or could there be, an incentive to come forward and reveal a failure (vs being reported by others)?

Discussion and comments:

- Higher operating permit fee for noncompliant LOSS (though haven't really used for failure condition)
- Funding assistance
- Leniency in enforcement, if appropriate
- LOSS operators/maintenance company should reveal failures (and through monitoring reports)
- ECY flexibility: maximum penalty is specified in rule; may choose smaller amount. Use internal compliance matrix that includes cooperation level.

**Consensus Recommendation:** Stakeholders should develop a "repair/improvement" funding package for the legislature – as an incentive.

**LOSS Rule Advisory Committee Discussion- Operating Permit Framework**

Linda introduced a flowchart showing a framework DOH thinks will work for issuing operating permits. The flow chart outlines different tracks: "A", "B", "C", and "F". (Flow chart is attached to chart notes.) The Operating Permit Goal of "F", "C", and "B" tracks is to get to the "A" track: public health and environmental compliance. Linda explained the differences between the tracks and tied this flowchart in with recommendations from the Operating Permit Subcommittee. The main points include:

- "B" track: ECY permits transferred to DOH. May already also meet public health standards – could quickly move to "A" track.
- "Post-1995 WAC" used to denote rule change when the goal to protect public health was clearly included.
- "C", "B" tracks: formerly called "interim permits"
- "A" track formerly called "green permits"
- "C" track: 5 year clock to repair/upgrade/comply with public health and environment protection when the LOSS hits the DOH priority level to be evaluated.

**Discussion of Operating Permit Flow Chart:**

1. **Question:** Should the "C" track mirror the small on-site program in Puget Sound counties?

Discussion and Comments– Require owner to hire an engineer to document the system and fix as necessary.

2. **Question:** How will an annual renewal be different from a "periodic review"?

Discussion and Comments–

- Should be more than a cursory review;
- Need to check submittals – are they sent in, do they show compliance?
- To issue a first permit for LOSS not currently in the system, need a minimal level of information: need to define what that is.

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- ECY position: if permit application is incomplete, don't issue a permit. Go to enforcement immediately.
- First permit could be issued with the requirement to provide certain information by a scheduled time. (especially for "C" track)

### 3. To-do: Future Discussion

- AAG question: Can we or must we issue an operating permit to a LOSS that doesn't have a complete application? (such as knowing what type of treatment system they have)
- What's involved in the annual renewal?
- Define failure.
- Define minimum expected information from permittee (type of system, do they meet regs –if no, ECY says don't issue permit).
- Define what requirements should be in the first permit (monitoring, data gathering, schedule).

**LRAC vote:** 10-Green, 1-Yellow: Conceptual agreement with operating permit flow chart with tracks "A", "B", "C", "F".

Comments: Proposed operating permit flow will be a balancing act – get compliance and stay non-adversarial.

### **LOSS Rule Advisory Committee Discussion- Operating Permits – Prioritizing in each Track**

Dave Lenning then asked the committee what DOH should focus on in the "prioritizing" before the permit evaluation for each track. The committee thought finding and enforcing permits in the various "tracks" was critical. The LRAC discussed approaches and provided suggestions.

### **Suggestions/Discussion on setting the priorities for finding and enforcing permits- Look at High Priority Areas:**

1. Failures
2. Known "sensitive" areas
  - Shellfish growing area
  - Marine recovery area (MRA)
  - Proximity to a water body
  - Critical aquifer recharge areas (CARA)
  - Spokane aquifer
  - Shallow aquifers
  - Wellhead protection areas
  - Local health jurisdiction input
3. Puget Sound counties
  - Ask on operating permit application: location information (as found on property tax statement)

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- Survey/questionnaire after operating permit is issued: ask questions so DOH can rank risk level.
- Scoring: use point ranking. If answer is unknown – higher points (higher risk).

### Next- look at Secondary priority levels within each “high priority” area

- Other Track “C” LOSS
- Density of development
- Depth of soil; soil type
- Public water system or private water
- Age of system
- Local health input: chronic complaints
- Waste strength
- High flow
- How much information do we have (less info – higher risk)
- For-profit LOSS (other permits)
- Publicly-owned LOSS

### **LOSS Rule Advisory Committee Discussion- Operating Permits – Next Steps**

Dave finished the segment with a quick check on what would be most valuable for committee members as DOH continues to work on Operating Permit questions or issues.

- (1) Do we need the Operating Permit Subcommittee to meet and discuss the additional issues? (No time before next LRAC meeting.)
- (2) For the additional issues, format would the LRAC prefer?
  - DOH staff should develop strategy and bring back to LRAC. or
  - Develop rule language – to see how it follows and where the gaps are. Would help the discussion, or
  - Work up issue paper.

## **WORKING LUNCH**

### **Task 2 – Technical Review Subcommittee Recommendations**

Task 2 was moved to the afternoon.

### **Task 3 – General Updates**

#### **1. Assessment of Combination of Technical Review Subcommittee’s Recommendations: (Lead: Jeanne Andreasson):**

At the July 30<sup>th</sup> meeting, the LRAC suggested DOH prepare a safety factor overview: compare the existing reg with decisions made by LRAC for changes. Jeanne Andreasson prepared this information and presented it to the committee

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Jeanne distributed design data for various scenarios – under current regulation and under proposed changes. She highlighted some of the differences in results. Not all “more stringent”, nor all “less stringent” than today’s regulations.

Concerns for public health and environmental protection when:

- Doubling flow AND vertical separation for treatment levels A-C. (Especially C: fecal coliform max = 50,000, and mounding)
- Track C operating permit – allow a combination waiver?
- New construction: allow one variance or the other; not both.
- Waste strength increases (conservation plumbing).
- Treatment is “advanced technology”. Don’t want to increase residence time for sewage (in most large LOSS cases, the septic tank size increases dramatically). Be flexible.

### **Discussion and Comments:**

Need to include requirement for sewage flow-metering (not just water meter).

To-do: Check Oregon drainfield regulations; their drainfields are much smaller than Washington’s. Different soil?

### **2. Upcoming Meetings Schedule (Lead: Melissa McEachron):**

LRAC agreed to change the next meeting date and location from October 28 in Kent to October 30 in Tumwater.

### **Task 4 – Audience Comments:**

No additional comments.

### **Tasks 2 & 5 – Technical Review Subcommittee Recommendations**

Richard Benson presented the issue papers reviewed by the Technical Review Subcommittee (TRS) and their recommendations from Aug 6, 2008 and Sept. 9 meeting. Richard’s PowerPoint presentation highlighted the decisions and recommendations. Copies of the issue papers with TRS results and recommendations were sent to the committee members prior to the LRAC meeting. After explanations, the committee discussed the issues, and voted on whether to accept the TRS recommendations.

**Hand-out of the technical presentation provided.**

### **Subcommittee Recommendations and Rule Committee Discussion and Votes**

#### **Technical Review Subcommittee (TRS) Recommendations (Lead: Richard Benson)**

##### **Technical Issue # 6: Minimum Land Area**

Comments:

Environmental concerns still need to be addressed.

Increase in treatment levels could increase the density of the development.

If we establish a minimum land area, it could conflict with local planning.

Is road right-of-way still allowed in the minimum land area calculation?

Single family residential has more land required than multi-family residential or commercial – so gallons/ft<sup>2</sup> is lower. Not a strength issue – hydraulic loading concern.

**LRAC Vote:** 9-Green. Use Option D.

**TRS Recommendations**

**Technical Issue #7: Vertical Separation**

Comments:

Water Reclamation impact?

- Not effluent (but LOSS effluent may be ~ Class A)
- Beneficial reuse (defines reclamation) could be discharge to the vadose zone
- Disposal vs aquifer recharge
  - Who will define vertical separation?
  - LOSS or reclaimed water
  - Who has the lead and/or review responsibility if one is part of the other?

Vertical Separation reduction

- Repairs only
- Allow only for LOSS 14,500 gallons/day or less.
- No mounding – mounding analysis needed
- Assure that at least 2 feet of vertical separation exists under drainfield
- Nitrogen balance required
- Choice for new construction: **either** increased loading **or** reduced vertical separation
  - With pretreatment
  - Timed dosing reduces risk
- Gravel recirc filter allowable with Treatment Level C

To-do: Check with Dave Gustavson, Minnesota program.

To-do: Find any current WA examples.

To-do: Take Issue #7 back to the TRS. Reconsider with respect to other TRS recommendations and performance monitoring.

**Technical Issue #15: L & I Safety and Electrical Requirements**

Cite required compliance with “most current version of...”

**LRAC Vote:** 9-Green

**Technical Issue #16: Collection and Transmission**

Do not include details in WAC; cite acceptable references.

**LRAC Vote:** 9-Green

**Technical Issue #17: Design to Facilitate Operations & Maintenance**

Size of access ports will be addressed in other parts of the LOSS Rule – or in Sewage Tank Rule.

**LRAC Vote:** 9-Green

**Technical Issue #23: Intermittent Sand Filters**

Sieve analysis from RS&G to Rule

- Difficult to enforce
- If a problem, decrease loading?
  - Too late, by time of discovery
  - Loading has already been decreased from 1.2 to 1.0
- Dosing requirement of 18/day should also help with loading.

Amend: 30 foot Horizontal Separation

- Down-gradient from drainfield disposal component
- 100 feet from stormwater infiltration ponds, swales, trenches
- Cut: down-gradient filter from interceptor, curtain drain, foundation drains

Amend: Impact of irrigation and precipitation on drainfield – ensuring unsaturated soil and no clogging biomat.

- Move to guidance

**To-do: Return Issue #23 to the TRS.**

**To-do: All to review horizontal set-back table – slides 9 and 11 – for next discussion.**

**Technical Issue #23: Sand-lined Trenches**

Accept LOSS foundation document (page 28)

Increase minimum doses to 18 per day.

**LRAC Vote: 9-Green.**

**Technical Issue #10: Treatment Level – Update**

1. Does it make sense to have a treatment level higher than A?
  - YES – reclaimed applications
2. Does it make sense to have Treatment Level P (phosphorus)?
  - YES
3. Does it make sense to have Treatment Levels N10 and N20?
  - YES – for existing LOSS. All need performance monitoring.

**Technical Issue #11: Performance Verification – Update**

Comments:

- John Eliasson (DOH on-site technical expert): if we use performance verification – how do we assure that design engineer-proposed treatment technologies can do what they claim?
  - Registration advantage/safeguard: if registered system fails, the registration would be pulled – no others of that kind installed until the problem is worked out and treatment is re-registered.
  - What public health or environmental harm, extra cost, and staff time is incurred to fix a treatment problem discovered after installation and use?

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- The LOSS's performance is unverified (if specially designed by P.E.) until in use.
- Performance monitoring (after the fact) would have to be mandatory.
- Expensive for treatment system to go through NSF certification.
- DOH staff time would increase substantially if we have to oversee a registration process.

### Treatment Level B

- Intermittent Sand Filter
- Advantex
- Glenendon
- Others

To-do: Develop what performance monitoring looks like.

### Other

The rest of the technical issues hand-out was briefly reviewed.

To-do: If there are any comments or responses to questions (failures and repairs, operator certification), please e-mail them to Melissa.

## Wrap-Up

### ACTION ITEMS FOR FUTURE MEETINGS

Melissa provided a hand-out at the end of the meeting: summarizes issues with committee recommendations and what remains.

### **Ahead of us: "Difficult Topics" noted:**

- Public vs Private Ownership
- Monitoring
- Compliance and Enforcement
- Operating Permit Details

Dave told members he and DOH are very pleased with the progress on the LOSS rule and that the advice we are receiving is very valuable. He voiced his concern that we will not be able to get to all the prioritized issues in only 2 more meetings. He asked members if they would be willing to meet a few more times beyond October. The group said yes.

Dave also said DOH will look closely over the next week and determine whether we have enough for a full meeting at the end of October. (Especially since some technical issues are going back to the Technical Review Subcommittee and that group meets next in early November. If it does not look like we will have enough for a full meeting, we will cancel the October LRAC meeting.

Dave asked if there was anything else members had to add before adjourning.

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- LRAC is open to receiving issues/questions via e-mail ahead of time. DOH should note in title: "RESPONSE REQUIRED".

### **Rule Advisory Committee Meetings – Tumwater**

~~October 30, 2008~~ Cancelled

December 2, 2008

January 22, 2009

### **Potential Technical Review Subcommittee Meetings – Tumwater**

~~October 17, 2008~~

November 5, 2008

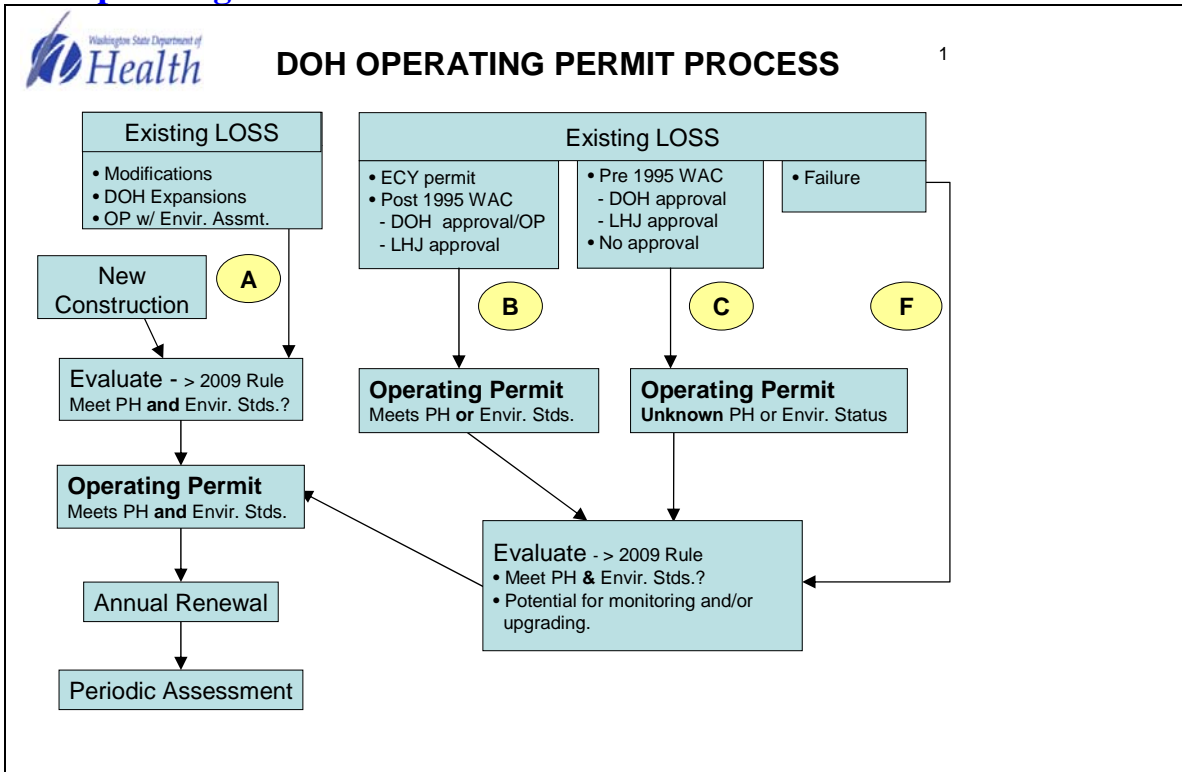
### **Local Government Consistency Subcommittee Meeting**

Not yet scheduled

[Adjourn 3:25](#)

## List of Handouts

### 1. Operating Permit Slide:



### 2. Assessment of the Combination of Technical Review Subcommittee's Recommendations: Table

### 3. Remaining Technical Issues Update

### 4. Rule Topic Issues Update

**Meeting Attendees**

**Department of Health**

Maryanne Guichard, Director, Office of Shellfish and Water Protection  
 Dave Lenning, Manager, Wastewater Management Program  
 Denise Lahmann P.E., Engineering Supervisor, WWMP  
 Melissa McEachron, WWMP Rule Coordinator  
 Richard Benson P.E., Technical Issues Lead

<b>Committee Members and Alternates</b>	<b>Guests</b>
David Jensen P.E., Design Engineers	Jim Gleason, Enviroquip
Jenn Kunkel, BIAW	Robert Nation, Fextex Systems, Inc
John Stormon, Ecology	
Judy Hockett, WSDOT- Operations	
Jerry Deeter, Public Health, Kitsap Co. Health Dist.	
John Poppe, Public Utility, West Sound Utility Dist. & WASWD	
Bill Stuth Jr., Installers	
Bill Dewey, Environmental Interests, Taylor Shellfish,	
Thesesa Janzen, Manufactured Housing Association of WA	
Scott Jones P.E., Design Engineers, Jensen Engineering	
Matt Lee, LOSS O&M Companies, Aqua Test Inc.	
<b>DOH Staff</b>	
Linda Pang P.E., Wastewater Management Program	
Jeanne Andreason, P.E., Wastewater Management Program	
Mamdouh El-Aarag P.E., Wastewater Management Program	
Nancy Darling, Wastewater Management Program	
Lynn Schnieder, Wastewater Management Program	

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### Parking Lot Items

2/28/08

#### *Legislative Issues:*

- UTC regulation of private, for-profit management companies, if allowed.
- Staffing to implement the rule. (inspection workload)

3/25/08

No adds

4/24/08

#### *Attorney General consultation topics:*

- Stretch “annual” permit to reduce costs.
- Interpret “initial permit in compliance”.

6/26/08

No adds

7/30/08

#### AAG Consultation Topics:

- Ask AAG: How does 2007 LOSS legislation impact existing LOSS?

9/30/08

#### AAG Consultation Topics:

- Ask AAG: Can we or must we issue an operating permit to a LOSS that doesn't have a complete application?

#### Legislative Issues:

- Stakeholders should develop a “repair/improvement” funding package for the legislature – as an incentive.