Reclaimed Water Rule Advisory Committee

April 11, 2007, 9:30 – 3:30 Lacey, Washington

DRAFT Meeting Summary

Attendees

See attached list

Materials

- Two documents were emailed prior to the meeting: The document containing PP# 17, 17B, 18, 29 and 19-25 is attached as part of this summary. (The other document, (PP#26-31) is included in the revised March 14th summary.

Ecology Action Items

- Kathy to send a reminder email regarding people needed on sub-committees.
- Gather examples of contracts.

Parking Lot

1. Definitions needed: beneficial use, significant risk, controlled use.
2. Pipe separation standards.
3. Countywide Planning policies should be encouraged in RW.
4. Recommend statewide indemnification for legislators.

Agreements Thus Far

I. <u>Process Agreements</u>

1. Evaluate all types of permitting approaches including combined vs. separate permits, general vs. individual permits, drinking water, biosolids, and other approaches. Flexibility is good.
2. Good that DOH and Ecology are working on the permit process and will present proposal in July. They should keep the committee updated on their progress.
3. Want outside speakers at every meeting. Real world examples.
4. Need to begin now to work on task forces that may happen from proposed legislation.
5. Appreciate PSAT working with the Environmental Law Institute – this will be valuable.

II. <u>Agreements Related to the Intent of the Puzzle Pieces</u>

6. Puzzle Piece **#8:** Automatic transfer of permit ownership is good.
7. Puzzle Piece **#9**: A permit fact sheet or statement of basis is needed. It should cover important information but keep it as short and simple as possible.
8. Puzzle Piece **#17:** Water Quality, Distribution and Use
   - Permit conditions for water quality, location rate and purpose of use.
   - Permit conditions for adequate and reliable treatment.
   - Permit conditions assuring public health, environmental protection and suitability for the permitted uses.
9. Puzzle Piece **#17B** Pretreatment and Source Control
   - Permit conditions should require pre-treatment and source control.
10. Puzzle Piece **# 18**
    - This is going to need a lot more work.
    - Contracts and Agreements should comply with the permit requirements.

11. Puzzle Piece **#19** O&M Protocols
    - Permit should require proper operation and maintenance.
12. Puzzle Piece **#29** Adding New Users
    - Make it easy and simple.
13. Puzzle Piece **#20** Operator Certification
    - Provide recommendations to operator certification advisory committee for updating Ch 173-230 WAC.
    - Like the idea of participating in the national process for certification through ABC – meld with the other states efforts.
14. Puzzle Piece **#21** Laboratory Accreditation
    - Require certification as a permit condition.
15. Puzzle Piece **#22** Monitoring and Recording
    - Appropriate monitoring and records should be a permit condition.
16. Puzzle Piece **#23** Monitoring Protocols and Frequencies
    - Permit condition should require monitoring protocols and frequencies.
    - This one will need a lot more work.
17. Puzzle Piece **#24** Reporting Requirements
    - Periodic reporting should be a permit condition.
    - Emergency reporting OK as long as someone is there 24/7 to take the calls.
    - Permitting agency should supply the reporting forms.
18. Puzzle Piece **#25** Other Permit Terms and Conditions
    - Require consistency with permit terms and conditions.
    - Address water right impairment legal requirements.
    - State that permits are in addition to – and do not limit – requirements in other state and federal laws.
    - Allow permitting agencies to add conditions necessary to protect public health and the environment.

Task 1 – Reclaimed Water Program and Rule Updates

Kathy Cupps provided updates on the following topics:

- Legislation
- Task Forces
    - Impairment- Ken Slattery, WR
    - Barriers
    - Funding
    - Technical

Ken Slattery, Water Resources Program Manager, provided additional information on the Impairment Task Force and asked for volunteers.

Scott Redman provided updates on the PSAT project with the Environmental Law Institute.

The group discussed the positions that needed to be filled on the various sub committees. Some people volunteered; some people volunteered others. Kathy will work with leadership to fill these positions.

Task 2 – Permit Conditions (#17, 17B)

PP#17 Water Quality, Distribution and Use Requirements
PP#17B Source Control and Pretreatment

Kathy Cupps presented a general overview of each topic; Lori Isenberg facilitated discussion. Key items discussed and/or handed in as a note are listed below.

#17 Water Quality, Distribution and Use

Agreements

- Permit conditions for water quality, location rate and purpose of use.
- Permit conditions for adequate and reliable treatment.
- Permit conditions assuring public health, environmental protection and suitability for the permitted uses.

Comments on Water Quality

- Standard of treatment is needed but do not specify required technologies. It is an antiquated approach to prescribe the treatment technology – creates confusion and has unnecessary costs.
- The entity should be required to produce a certain type of water but do not prescribe the technology. Standards should allow case-by-case assessments of technology.
- Retain flexibility for new/emerging technologies.
- It may be useful to have prescriptive requirements for packaged treatment units – just buy and install them.
- Guidance documents would be good for the pre-fabricated treatment units.
- We are covering a wide range of facilities and uses. We may need to balance prescriptive treatment techniques as indicators or surrogates of water quality vs. the cost of monitoring for more water quality parameters.
- Small decentralized facilities may need different standards for receiving water quality. Antidegradation is good but we should not have to clean up to a higher standard for already impaired receiving waters.
- Provide more information on surface water quality requirements – lunch speaker.
- It may be difficult to meet WQ standards with pharmaceutical issues.
- WQ standards are changing rapidly – Puget Sound.
- Strong language needed – cross-control must be very good. Temperature may be difficult to maintain.
- Monitoring and reporting requirements should be continuous (monthly).
- There may be less costly way to disinfect the chlorine residual in the distribution lines: ability to trace origin of the leak/spill.
- Prefer standards of WQ performance (depending on use) rather than specified technologies.
- Potential BMPs include source control legislation keeping pharmaceuticals out of WWTP in flow.

Comments on Distribution System

- Chlorine in distribution systems– what is the purpose - human health protection or maintenance?

- If only for maintenance, allow other approaches – less expensive – no toxics.
- There may be less costly way to disinfect the chlorine residual in the distribution lines: ability to trace origin of the leak/spill.
- We need some type of tracer or indicator to determine the origins of leaks or spills.
- Where do we monitor water quality in the distribution system? At the furthest point like for drinking water.

Comments on Agency Discretion:

- It is too vague to allow any other limits, BMPs or controls deemed appropriate by Ecology and Health.
- This is standard for all WACs for a regulatory agency.
- It may be useful to have discretion for permits – flexibility.
- Some of this could be in guidance instead of in rule.

#17B Pretreatment and Source Control

Agreements:

- Permit conditions should require pre-treatment and source control.

Comments

- Clarify that industrial pre-treatment permits go to the industries.
- Clarify which industries are included.
- Address endocrine disruptors and emerging chemicals.
- BMPs should include public education and outreach requirements to help with source control.
- Focus on on-site systems – less treatment and environmental attenuation.

Working Lunch
Audience Comments-None
Task 3–Lunch Speakers:

- **Gary Bailey** from Ecology's Water Quality Program presented information on Wastewater Discharge Permits (Individual and General).
- **Chris McCord** from Dept. of Health's Drinking Water Division presented information on Drinking Water Operating Permits.

Task 4 – Permit Conditions Continued (18, 29, 19-21)

PP#18 Contracts and Agreements
PP#29 Adding New Users
PP#19 Operations and Maintenance Protocols
PP# 20 Operator Certification and Staffing Requirements
PP# 21 Laboratory Accreditation
PP# 22 Monitoring and Recording Requirements
PP# 23 Monitoring Protocols and Frequencies
PP#24 Reporting Requirements
PP#25 Other Permit Terms and Conditions

Kathy Cupps presented a general overview of each topic; Lori Isenberg facilitated discussion. Key items discussed and/or handed in as a note are listed below.

#18 Contracts and Agreements

Agreement:

- This is going to need a lot more work.
- Should comply with the permit requirements.

Comments:

- Concern with liabilities and insurance.
- Risk-based public health requirements should be identified in the rule.
- How can we effectively enforce compliance?

#29 Adding New Users

Agreement:

- Make it easy and simple.

Comments:

- Need to clarify process for adding new users.
- Craft language in permits to allow adding uses.
- Develop the permit with a service area from the source. Define provider and add new users.
- There should not have to be a public process for each new user.
- Avoiding public notice and comment is a mistake.
- Do not require annual reporting in the permits. Ask for the information when you need it.
- Make it a submittal in the permit like the DMRs.
- Make it an electronic submittal.
- Provide incentives for new and future users.

#19 O&M Protocols

Agreement

- Permit should require proper operation and maintenance.

Comments

- Do not require compliance with operating flows and waste loadings within approved design criteria. Utilities should not be constrained.
- This is a factor of safety – could re-rate the facility if it can perform better.
- Annual assessments are too stringent – just require reviewing procedures.
- Consider three year review – half way through comp. plan process. May provide a view from 10,000 feet. Consistent with GMA review.
- Should only have to update as needed. Not annual.
- Assessments are to optimize the utility and the process – should be voluntary.
- Put in guidance – make the triggers voluntary.
- It is a method to assure compliance. Needed.
- We never get the O&M manuals before the facilities are operating.
- Should reduce energy use.
- Just require utilities to keep O&M up-to-date.
- Think about energy use, should reduce energy use.
- Use the same methodology as for a wastewater treatment plant.

- Rule should encourage utilities to optimize operations and report on factors that contribute to improved/optimal operations. Not required in permit – but encourage.
- Base State's review of O&M protocols on how well the facility delivers RW in compliance with output stds. "Green" RW plants have no review. "Yellow" (due to RW facility failing to deliver to water in compliance with output standards) have more review of O&M protocols.

#20 Operator Certification

Agreement

- Provide recommendations to operator certification advisory committee for updating Ch 173-230 WAC.
- Like the idea of participating in the national process for certification through ABC – meld with the other states efforts.

Comments

- Should be a separate certification for reclaimed water facilities.
- Should have distribution certification similar to drinking water distribution.
- May use other personnel for work under the supervision of the certified person.
- End users should not be certified but should get some level of training.
- Ann Wick agreed to check into certification process for irrigators licensing.
- Need to better understand certification for water systems.
- Include a sufficient number of staff as permit condition. Different conditions i.e. King County versus smaller utility.

#21 Laboratory Accreditation

Agreement

- Require certification as a permit condition.

Comments

- Flow and other parameters exempted should still be calibrated.
- Check into process for accreditation of labs for IDEXX process.
- Do not exempt turbidity, pH and conductivity when important to permit.

Task 5 – Permit Conditions Continued (22-25)

#22 Monitoring and Recording

Agreement

- Appropriate monitoring and records should be a permit condition.

Comments:

- Monitoring leakage and losses in the distribution system.
- Require flow monitoring if there is mitigation for new water rights.

#23 Monitoring Protocols and Frequencies

Agreement

- Permit condition should require monitoring protocols and frequencies.
- This one will need a lot more work.

Comments:

- Two stage program - back-off on monitoring frequencies for good performance.
- Like the concept of color-coded plants (drinking water operating permits). Perhaps could use that for monitoring frequencies. Best compliance records have less frequent monitoring requirements.
- There are big differences in size and complexity of facilities.
- Consider affordability and risk.
- Agree to participate in third party assessments and national research.
- Be careful not to scare the public with too much information.
- Do not get data unless agencies know what they will do with it. Priority pollutant scans, toxics, etc.
- Need to know when the system is compromised.
- Need information for permit renewals.
- Not testing for endocrine disrupting compounds – need some way to address.
- Coliform is a very important standard to monitor for. Is 7 days sample adequate to comply?

#24 Reporting Requirements

Agreement

- Periodic reporting should be a permit condition.
- Emergency reporting OK as long as someone is there 24/7 to take the calls.
- Permitting agency should supply the reporting forms.

Comments:

- Language is not clear on emergency reporting (immediate vs. 24 hours etc.)
- Use e-reports whenever possible.

#25 Other Permit Terms and Conditions

Agreement:

- Require consistency with permit terms and conditions.
- Address water right impairment legal requirements.
- State that permits are in addition to – and do not limit – requirements in other state and federal laws.
- Allow permitting agencies to add conditions necessary to protect public health and the environment.

Comment:

- Add a permit re-opener clause.

Task 6 Audience Comments and Wrap-Up

Audience Comments

Ken Alexander commented that his firm has clients who want a water right to direct recharge with reclaimed water. Ken also provided written comments. (Attached)

Wrap-up

Facilitator, Lori Isenberg, reviewed the action items and agreements. She then facilitated a Go-Round for closing comments from the committee members. Comments reflected the group was pleased with the meeting.

Adjourn 3:15

Attendees April 11, 2007

Department of Ecology	***Department of Health***
Katharine Cupps, Agency Lead	Dave Lenning, Environmental Health and Safety
Melissa McEachron, Rule Coordinator	

Committee Members			***Alternates***	
Department of Ecology (WRP)	Lynn Coleman		WWSA	Hal Schlomann
Department of Ecology (WQP)	Nancy Winters			
	Kathleen Emmett		***Facilitator***	
Department of Health	Craig Riley		Northwest Dynamics, Inc.	Lori Isenberg
City of Olympia	Tikva Breuer			
King County	Peggy Leonard			
Spokane County	Bruce Rawls			
Kitsap County	Keith Folkerts			
LOTT Alliance	Karla Fowler			
Department of Agriculture	Ann Wick			
Sno-King Water Alliance	Ginger Desy			
City of Seattle	Terry Martin			
Evergreen Valley Utilities	Clint Perry			
Washington Water & Sewer Assoc.	Walt Canter			
Puget Sound Action Team	Scott Redman			
People for Puget Sound (phone)	Heather Trim			
Seattle Public Utilities	Tom Fox			
Washington Dept. of Corrections	Garvin Schrieve			
Lakehaven Utility District	Don Perry			
The Center for Justice	Bonne Beavers			
Spokane County	Bill Peacock			
Carollo Engineers	Jim Hagstrom			
WA. Public Utilities Dist. (phone)	John Kounts			

Tasks 2, 4, &5 - Material Used in Committee Discussion

Ecology would like input on Permit Conditions PP# 17, 17B, 18, 29 and 19-25

Overall Concept – Rule should state what conditions must be included in the permit. This is primarily a list. We will specify the details in other sections of the rule or in implementation guidance for the permit writers.

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* OK (green card)
* Minor changes needed (yellow card).
* Major changes needed (red card).

Topics in the permit condition section

PP#17 Water Quality, Distribution and Use Requirements
PP#17B Source Control and Pretreatment
PP#18 Contracts and Agreements
PP#29 Adding New Users
PP#19 Operations and Maintenance Protocols
PP# 20 Operator Certification and Staffing Requirements
PP# 21 Laboratory Accreditation
PP# 22 Monitoring and Recording Requirements
PP# 23 Monitoring Protocols and Frequencies
PP#24 Reporting Requirements
PP#25 Other Permit Terms and Conditions

Statutory requirements for permit conditions. Review before meeting.

The reclaimed water statute Ch 90.46 RCW instructs ecology to issue reclaimed water permits under the authority of Ch 90.48 RCW, the Water Pollution Control Act.

Ch 70.95B Domestic waste treatment plants — operators

Regulations related to permit conditions: Review before meeting.

State Waste Discharge Permits:

WAC 173-216-110 State Wastewater discharge - Permit terms and conditions.
WAC 173-216-060 Prohibited discharges
WAC 173-216-125 Monitoring. Use of registered or accredited laboratories

NPDES Permits:

WAC 173-220-150 NPDES - Other terms and conditions.
WAC 173-220-130 NPDES -Effluent limitations, water quality standards
WAC 173-220-210 NPDES – Monitoring, recording and reporting.

Other WACs:

Ch 173-50 WAC Accreditation of environmental laboratories
Ch 173-208 WAC Grant of authority sewerage systems
Ch 173-230 WAC. Certification of operators of wastewater treatment plants.

Federal Industrial Pretreatment Regulations: 40 CFR Part 403

Ecology guidance related to permit conditions. Review before meeting.

Permit boilerplate

Permit Writer's Manual – Chapter XI Reclaimed Water Use

Water Reclamation and Reuse Standards

PP#17 Water Quality, Distribution and Use Requirements

Concept: Per statute (Ch 90.46 RCW) , reclaimed water permits must specify conditions governing water quality, location, rate and purpose of use. By definition, reclaimed water must be adequately and reliably treated so that it is suitable for the use. Permit should assure public health and environmental protection and suitability of the water for the use.

- Related rules: WAC 173-220-130 NPDES and WAC 173-216-110 state permits.

Suggested: The rule should state that reclaimed water permits must include conditions:

- Governing the water quality, location, rate and purpose of use.
- Assuring adequate and reliable treatment for the proposed use including public health and environmental protection.
- Assuring that reclaimed water use includes suitable controls to maintain water quality, public health and environmental protection through distribution and proposed uses.
- Clarifying that permit conditions specific to reclaimed water are in addition to - and do not limit- the requirements under other state and federal laws.
  - Any RW permit involving ground water, surface water or wetlands use or discharge must meet both RW standards and the water quality standards applicable to the receiving water.
  - A combined reclaimed and waste discharge permits must meet all permit conditions required for the type of wastewater discharges to waters of the state.
  - Complying with applicable requirements in other federal and state laws including:
    - Hazardous Waste Disposal Act, Ch 70.105 RCW.
    - Solid waste management -- Recovery and recycling, Ch. 70.95 RCW.
    - Resource Conservation and Recovery Act of 1976 (Public Law 95.190)
    - Local ordinances.

Q: What permit conditions should we require to assure water quality?

A: Existing standards specify the following types of permit requirements:

- Source control and pretreatment.
- Treatment techniques depending on the proposed uses (such as oxidation, nitrogen reduction, coagulation, filtration, reverse osmosis, disinfection).

- Numerical water quality limits for a few specified parameters (such as BOD, TSS, dissolved oxygen, turbidity, total coliform, nitrogen, phosphorus, total organic carbon).
- Numerical receiving water limits and monitoring requirements to assure meeting applicable ground water quality, wetland or surface water quality standards.
- Additional requirements to protect biological diversity and the hydroperiod requirements of wetlands.
- A chlorine residual in the distribution lines.
- Best management practices (BMPs) and controls to prevent cross connections with potable water or sewerage systems.
- BMPs and controls to protect the use areas.
- Conditions to prevent and control pollutant discharges from the collection system, treatment plant, plant site runoff, spillage or leaks, sludge or waste disposal, or raw material storage.
- Any other limits, BMPs or controls deemed appropriate by Ecology and Health.
- Monitoring and reporting requirements (see PP's #22-24)

Advisory Committee Recommendations:

* OK (green card)
* Minor changes needed (yellow card).
* Major changes needed (red card).

Include suggestions below and submit written suggestions to facilitator:

PP#17B Source Control and Pretreatment

Concept: The rule should state that reclaimed water and wastewater discharge permits must include requirements for pretreatment and source control in accordance with federal standards (40 CRF Part 403) for regulated non-domestic pollutants introduced into the treatment facility.

- WAC 173-216-060 Prohibited discharges
- Ch 173-208 WAC Grant of authority sewerage systems
- 40 CFR Part 403 Federal Pretreatment Regulations

Suggested:

All required non-domestic facilities discharging commercial or industrial wastewater to the collection system or otherwise introducing pollutants must have an effective pretreatment permit. Either Ecology issues the industrial pretreatment permits or requires a POTW to develop a local pretreatment program as specified under federal law (40 CFR Part 403 Federal Pretreatment Regulations)

- The local pretreatment program:
  - Authorizes POTW to issue industrial user permits under;
  - Implements a pretreatment permit program at least as stringent as Ecology.

- The permit must prohibit discharges of dangerous wastes and many other substances to the collection system that may interfere with treatment or may pass through the treatment plant without treatment. WAC 173-216-060 lists the prohibitions.

- The Permittee must report to the permitting agency any new introduction of pollutants into the treatment works from a new source or a substantial change in an existing source including:
  - The quality and quantity of wastewater introduced into the treatment works.
  - Any anticipated impact on the quantity or quality of the reclaimed water.

Advisory Committee Recommendations:

* OK (green card)
* Minor changes needed (yellow card).
* Major changes needed (red card).

Include suggestions below and submit written suggestions to facilitator:

PP#18 Contracts and Agreements

Concept: The permit should include conditions assuring that when the Permittee is not the person distributing the reclaimed water that the construction, operation, maintenance and monitoring of the entire system meets all Ecology and DOH requirements.

1997 Water Reclamation and Reuse Standards – SECTION I, Article 9, Sect 6 (c and d)
RW Permit Boilerplate, Condition S8, sections F and G.

Suggested:

- Permits currently issued include requirements for binding service and use area agreements and local ordinances to ensure all activities are consistent with permit requirements. Require a permit condition assuring that all binding agreements are in place and approved by the permitting agencies before distribution of reclaimed water.

- Ecology and DOH must approve the agreement before the utility provides RW service to others.

- Generally address the content that agencies will require in these agreements. Permits currently include the following conditions related to ordinances and agreements:

  - Quality and volume of water supplied.
  - Agreement with distributor or customer to take the water.
  - Fees.
  - Indemnity provisions.
  - Access to distribution or use sites for the purposes of maintenance or inspection.
  - Provides authority to terminate service to anyone violating the terms and conditions of the agreement.

- Confines reclaimed water use, including runoff and spray, to the designated and approved use areas.

- Assures that all construction, operation, maintenance, and monitoring practices meet the requirements in the permit.

Advisory Committee Recommendations:

* OK (green card)
* Minor changes needed (yellow card).
* Major changes needed (red card).

Include suggestions below and submit written suggestions to facilitator:

PP#29 Adding New Users

Concept: Rule should provide a process to add new users and uses. This should be as easy as possible while assuring public participation and permit compliance.

- Reference: Water Reclamation and Reuse Standards

Suggested:

- Establish a permit condition allowing the permittee to add new users consistent with the permitted water quality, locations (may be a defined service area), uses and best management practices.
- Require signed enforceable contracts in place prior to distribution or use with copy in files and available for inspection. Failure to have signed contracts is permit noncompliance.
- Require submittal of annual (or more frequent) report to permitting agency.
- If the locations or uses are not included within the permit, require a permit modification including public notice processes. See PP#30.

Advisory Committee Recommendations:

* OK (green card)
* Minor changes needed (yellow card).
* Major changes needed (red card).

Include suggestions below and submit written suggestions to facilitator:

PP#19 Operations and Maintenance Protocols

Concept: The permit should include requirements assuring proper operation and maintenance (O&M) of reclaimed water facilities. Operational protocols are part of the facility operation and maintenance (O&M) manual. They describe - in detail - how the facility will operate so that reclaimed water meets all requirements before distribution or use. The permit should require the operator to follow an O&M manual written for the facility.

- **WAC 173-220-150 (g) NPDES and WAC 173-216-110 (4) State**

  Note: The O&M manual is a submittal. The rule advisory committee will address O&M manual contents when we get to that part of the rule. In existing procedures:

  - The utility must submit an O&M manual before the permitting agency issues a permit. The O&M manual is a required part of the permit application. This is the same procedure used for NPDES and state wastewater discharge permits.
  - The permit requires implementing appropriate operating protocols for the entire reclaimed water system. It requires the operators to follow the protocols and instructions in the manual.
  - The permit will require annual review, assessment of effectiveness and any needed updates of the operating protocols in the O&M manual.

  Examples of operational protocols include:

  - Criteria to make continuous determinations of acceptable reclaimed water quality such as parameter setpoints for on-line monitoring equipment.
  - Procedures when an operator is not present at the facility.
  - Alarm response and emergency procedures for a system upset when facility produces substandard water.
  - How to determine when water returns to acceptable quality for distribution.
  - Ground water monitoring network sampling and testing, if required.
  - Cross-connection control and inspection program compliance and testing.
  - Control strategies for reclaimed water distribution and use areas.

Suggested:

The rule should state that permit conditions will require:

- Proper operation and maintenance of all facilities and control systems for the entire reclaimed water system – at all times.
- Operating flows and waste loadings within approved design criteria for the facilities.
- An up-to-date O&M manual with operating protocols that assure compliance with the terms and conditions of the permit.
- Annual review and assessment of effectiveness of operational protocols and updates of those protocols as needed.

Advisory Committee Recommendations:

* OK (green card)
* Minor changes needed (yellow card).
* Major changes needed (red card).

Include suggestions below and submit written suggestions to facilitator:

PP# 20 Operator Certification and Staffing Requirements

Concept: Ecology establishes the certification procedures for treatment plant operators in **Ch 173-230 WAC.** **(** Statutory authority**:** CH 70.95B RCW). State standards require reclaimed water treatment facilities have enough certified operators to achieve the required level of treatment at all times. (SECTION I, Article 9, Section 1)

> **Note:** Existing certification requirements do not include RW distribution systems or use areas. Ecology's certification board is considering the concept of a special endorsement for reclaimed water facilities.

Suggested: The rule should require sufficient number and level of certified staff as a permit condition. Use **Ch 173-230 WAC.** for certification level.

> **Note:** This advisory committee should provide any recommendations to the wastewater treatment operator certification advisory committee for a special endorsement for reclaimed water operators. These could be implemented as part of Ch 173-230 WAC.

Advisory Committee Recommendations:

- * OK (green card)
- * Minor changes needed (yellow card).
- * Major changes needed (red card).

Include suggestions below and submit written suggestions to facilitator:

PP# 21 Laboratory Accreditation

Concept: Rule should require use of accredited laboratories as a permit condition. Accreditation assures that an environmental laboratory is capable of producing accurate and defensible analytical data. Ecology accredits laboratories for both drinking water and nonpotable water monitoring under **Ch 173-50 WAC** Accreditation of environmental laboratories.

> **Note:** **WAC 173-216-125** WAC 173-216-125 – state wastewater discharge permits exempts accreditation of flow, temperature, settleable solids, and internal process control. If lab does not otherwise require accreditation, it also exempts pH, turbidity and conductivity.

Suggested:

- Rule should require compliance with Ch 173-50 WAC lab accreditation as a permit condition. The requirement applies to all monitoring data submitted regardless of whether or not it is a specified permit condition unless this rule exempts the parameter.
- Rule may exempt specific parameters such as flow, temperature, settleable solids, internal process control monitoring.
- Advisory committee should propose any other laboratory certification exemptions for agency consideration.

Advisory Committee Recommendations:

- * OK (green card)
- * Minor changes needed (yellow card).
- * Major changes needed (red card).

Include suggestions below and submit written suggestions to facilitator:

PP# 22 Monitoring and Recording Requirements

Concept: Rule should require monitoring and reporting as permit requirements.
WAC 173-220-210 NPDES – Monitoring, recording and reporting.
Water Reclamation and Reuse Standards (SECTION I, Article 9, Section 3)

Suggested: Reclaimed water use permit conditions should include the monitoring requirements in the existing Water Reclamation and Reuse Standards for:

- Installation, use, and maintenance of monitoring equipment and methods.
- Reclaimed water quality monitoring.
- Receiving water monitoring (where appropriate).
- Influent, internal waste streams, and distribution systems to verify proper treatment and quality control processes.

Permittees must keep a copy of the permit and the following operating records at the reclamation plant or other approved location:

- Sampling including date, place and time.
- Analysis including date, method used, name of analyst and results.
- Operational problems, unit process and equipment breakdowns.
- Diversions to emergency storage or disposal.
- All corrective or preventative action taken.

Permittees must maintain a separate record of all process or equipment failures triggering an alarm including the time and cause of failure and corrective action taken.

The permittee must retain all monitoring records including the original recordings of continuous monitoring instrumentation, instrument calibration and maintenance records:

- Reclaimed water and wastewater monitoring = 3 years.
- Biosolids (sludge) monitoring = 5 years.
- During unresolved litigation, the permittee must keep all applicable records.

Advisory Committee Recommendations:

* OK (green card)
* Minor changes needed (yellow card).
* Major changes needed (red card).

Include suggestions below and submit written suggestions to facilitator:

PP# 23 Monitoring Protocols and Frequencies

Concept: The rule should establish monitoring protocols and frequencies as a permit condition. Monitoring must be at intervals sufficiently frequent to yield data, which reasonably assures the reclaimed water meets required levels at all times.

Note: Existing standards require the following protocols and minimum level of monitoring (Section I, Article 7, Section 1):

- Biochemical oxygen demand (BOD)
  - 24-hour composite samples.
  - Minimum frequency = weekly.
  - Compliance = arithmetic mean.

- Total suspended solids (TSS)
  - 24-hour composite samples.
  - Minimum frequency = daily (7 days per week) except:
    - May reduce frequency for Class A facilities with on-line turbidity monitoring.
  - Compliance = arithmetic mean.

- Total coliform
  - Grab samples collected when wastewater characteristics most demanding.
  - Minimum frequency = daily.
    - May reduce for Class D reclaimed water at sites with additional access controls, disinfection reliability and irrigation methods.
    - Minimum for Class D = 2 per week
  - Compliance:
    - 7 day (7 sample if less frequent) median running value and sample maximum.

- Turbidity
  - Continuous recording turbidimeter read at least every 4 hours.
  - Compliance:
    - arithmetic mean and instantaneous maximum.

- Dissolved oxygen
  - Grab sample collected when wastewater characteristics most demanding.
  - Minimum frequency = daily.

- Permitting agencies may specify additional parameters.

Suggested:

Rule states that monitoring protocols and frequencies are permit conditions.If the permittee monitors any required parameter more frequently, these results are included in the calculations.

Note: The rule advisory committee should address what parameters and frequencies should be in rule and what to keep in guidance documents like Ecology's Permit Writer's Manual.

Advisory Committee Recommendations:

- * OK (green card)
- * Minor changes needed (yellow card).
- * Major changes needed (red card).

Include suggestions below and submit written suggestions to facilitator:

PP#24 Reporting Requirements

Concept: The permittee periodically reports on the proper reporting form, the monitoring results obtained under the monitoring requirements in the permit. The permit also requires emergency reporting and submission of other reports to the regulatory agencies. The rule should state that reporting to the regulatory agencies is a permit condition.

- WAC 173-220-210 NPDES Monitoring, recording and reporting.
- WAC 173-216-110 State wastewater – Permit terms and conditions.
- Section I, Article 9, Section 3 Water Reclamation and Reuse Standards
- Reclaimed water permit template

Suggested:

- All permit submittals are signed by the same person signing the application form (see PP# 5) or authorized designee.

- The Permittee submits information on a (monthly) monitoring report provided by the permitting agency whether or not the facility is reclaiming water. If not operating the reclaimed water treatment facilities, enter 'no reclamation or use' in place of monitoring results. If not using the reclaimed water, enter "no use".

- The Permittee must notify the permitting agency of any facility expansions, production increases or process modifications.

- The Permittee must report emergencies to the appropriate regulatory agencies.

  Note: Permits currently require the following emergency reporting:

  - Immediately telephone and report any of the following to both Ecology and Health:

    - Any discharge of untreated or partially treated wastewater to the use area.
    - Failure of the disinfection system.
    - Collection system overflows or plant bypass discharging to a shellfish area.
    - Any other event that may immediately endanger health or the environment.

  - Within 24-hours from the time the Permittee becomes aware of the circumstances, telephone and report any of the following:

    - Any overflow prior to the treatment works, whether or not such overflow endangers health or the environment or exceeds any permit limitation.
    - Any unanticipated bypass of any part of the treatment processes.

- Any treatment upset that exceeds a permit limitation.
- Any violation of a maximum daily or instantaneous permit limitation.

➢ Within five days of the time the Permittee becomes aware of any event required to be reported above, submit a written report containing:

- A description of the noncompliance and its cause;
- The period of noncompliance, including exact dates and times;
- If not corrected, when the facility expects to return to compliance.
- Steps to reduce, eliminate, and prevent recurrence of the noncompliance.
- If the noncompliance involves an overflow prior to the treatment works, an estimate of the quantity (in gallons) of untreated overflow.
- If noncompliance involves any discharge of untreated or partially treated wastewater to the use area, an estimate of the quantity (in gallons).

➢ When monitoring reports are submitted, the Permittee must report all other instances of noncompliance.

Advisory Committee Recommendations:

* OK (green card)
* Minor changes needed (yellow card).
* Major changes needed (red card).

Include suggestions below and submit written suggestions to facilitator:

PP#25 Other Permit Terms and Conditions

Concept: This puzzle piece lists other permit conditions that should be included in the rule.

Suggested:

- All uses or discharges authorized by the permit shall be consistent with the terms and conditions of the permit.
- Reclaimed water use must not impair existing downstream water rights without compensation or mitigation.
- Permit conditions specific to RW are in addition to - and do not limit- the requirements under other state and federal laws.
- The permitting agencies may include additional permit conditions as necessary to protect public health and the environment.
- Advisory committee should recommend other permit conditions.

Advisory Committee Recommendations:

* OK (green card)
* Minor changes needed (yellow card).
* Major changes needed (red card).

Include suggestions below and submit written suggestions to facilitator:

Task 6 –Additional Audience Comments

Ken Alexander, Gray & Osborn, Inc.:

Melissa

Thank you for this opportunity to comment on the proposed Permit Conditions for water reclamation and reuse facilities in the State of Washington that were discussed the Water Reuse Advisory Group meeting of 4-12-2007.

Our comments reflect Gray & Osborne's eleven-plus years developing water reclamation and reuse projects in the State of Washington, including several systems that have been in operation for five years or more. We have worked with [three of the four] Department of Ecology regions and have designed and commissioned working systems in both the eastern and western parts of the state.

Our comments are attached.

[Ken Alexander]
Project Manager
Gray & Osborne, Inc.

PP#17 – Water Quality Distribution and Use Requirements

1. The new rule should clearly define the applicability of the chlorine residual requirement.

Background: This issue has been highly confusing for us because we were told by DOH in one case (City of Ephrata) that we had to have proof of a chlorine residual in a Class A reclaimed water that is dispensed into a tanker truck that delivers reclaimed water to a construction site. The reason we were told this was required was for protection of public health. But at the 4/12/07 Advisory Committee, the same DOH representative said chlorine residual was only for maintenance of distribution systems, not for public health protection. In another instance (City of Sequim) Ecology's reviewing engineer told us that we should not use chlorine to provide for bio-growth control in an irrigation system because it was his opinion that it was not needed. We said it was the City's decision whether to do this and the City was allowed to install a chlorination system for its irrigation water just as it would in a treatment plant non-potable water system, but it surprised us that we were being actively discouraged from this practice by a regulatory agency. These cases taken together make the State's view of this issue confusing.

PP#18 – Contracts and Agreements

1. The new rule should allow Permittees to develop standard use contracts for an approved use, which may be applied to new users in the future. See also PP#29, Adding New Users.

PP#19 - Operations and Maintenance Protocols

1. The operator should be required to read and understand the O&M manual for their reclamation and reuse facilities and demonstrate their knowledge in an objective fashion.

Background: We are finding that operators sometimes do not recognize a number of unique aspects of how water reclamation and reuse systems are designed and operated and may unwittingly modify their O&M practices or even the treatment systems themselves in a manner that thwarts the intent of the design and operation of their facilities. Treatment system issues such as process redundancy, disinfection dose control, monitoring system operation, bypass and alarm conditions and proper response

to upsets/bypasses are often misunderstood. Reuse systems require an understanding of cross-connection control, distribution system hydraulics and regrowth control that may not be intuitive to a Class 3 wastewater treatment plant operator. We recommend asking Ecology's roving operators for input on this as well - to avoid the perception of heavy handedness, perhaps this could be part of a Q/A between the roving operator and the treatment plant operator during periodic site visits.

2. Interest in decentralized water reclamation and reuse continues to increase. Therefore the new rule should acknowledge that reduced on-site staff time might in some cases be appropriate in exchange for increased remote monitoring and operations capabilities. Operator certification requirements should be maintained even for remote facilities.

PP#20 - Operator Certification and Staffing Requirements

1. Maintain current Level 3 certification with added requirements for water reclamation and reuse.

Background: Our experience indicates that it is sufficient to have a Class 3 operator permit to operate a small water reclamation facility. However, for water reclamation facilities there should be an additional certification criterion that includes demonstrating knowledge of the reclamation and reuse standards that govern the design and operation of **their** facilities. These should include (1) process redundancy requirements; (2) alarm/bypass requirements; (3) monitoring requirements; (4) reuse system O&M requirements. The focus of this knowledge demonstration should be on the reclamation processes that are intended to provide the high level and high reliability of disinfection that is being provided in the process as well as public health protection measures that are provided through the normal O&M of the reuse system(s). Additionally, if irrigation systems are included in the reuse systems, an understanding of basic irrigation principles is needed as well. These requirements will be plant and site specific, so they should be tied to an understanding of the O&M manual (see comment on PP#19).

PP#22 - Monitoring and Recording Requirements & PP#23 - Monitoring Protocols and Frequencies

1. Monitoring for trace contaminants in product water and groundwater needs to be appropriate and reasonable.

Background: One of the more complex and potentially contentious issues is not monitoring the treatment process itself, but monitoring for trace pollutants in the product water and, in the case of groundwater recharge projects, monitoring for such contaminants in groundwater with monitoring wells. We ask that Ecology and DOH develop consistent statewide approaches that are both reasonable and appropriate. For example, we have been advised in the development of a recent project that the drinking water contaminants regulated under the Safe Drinking Water Act must be tested in the product water that is used to recharge groundwater. There are over 100 regulated contaminants in the SDWA. This requirement can seem daunting for a small community considering reclaimed water. Such trace contaminants should be selected based on the likelihood that (a) they could be introduced into the sewer system (b) be produced as part of the treatment process (e.g. chlorinated hydrocarbons such as THMs, (c) be present at levels of concern to public health. The utility will already monitor for these contaminants as part of their drinking water monitoring requirements - this information could be used to help develop such a list and could go a long way to eliminate concerns about trace contaminants that are not ever likely to be found in the reclaimed water.

2. Allow one exemption per month from the maximum total coliform requirement, as allowed in other states.

PP#29 – New Users

1. Allow for standard service and use agreements to minimize regulatory reviews and engineering expenses.

Background: To expedite addition of new users for a use approved by the permit, the new rule should allow Permittees to develop a standard Service and Use Agreement for that use (such as irrigation, construction water). Once the Departments of Heath and Ecology have approved the standard contract, the Permittee could continue to execute the standard contract with new users according to the terms of the approved use. This would avoid lengthy and expensive reviews of each potential new use by DOH and Ecology that can strain limited resources on both sides.