

Section #	Subsection	Sec Title	Rule Version	Who	Type	Comment	Suggested revisions
subpart B: new		Acronyms	Pre-draft; #2 revisions. WITH KC COMMENTS	DOH		add acronym section	Exemptions from statutory requirements. Use, distribution, storage, and the recovery from storage of reclaimed water permitted under this chapter is exempt from the permit requirements of RCW 90.03.250 and 90.44.060. Further, RCW 90.03.370(3) and RCW 90.
010	3	Applicability				add this subsection back in.	<i>Exemptions from statutory requirements. Use, distribution, storage, and the recovery from storage of reclaimed water permitted under this chapter is exempt from the permit requirements of RCW 90.03.250 and 90.44.060. Further, RCW 90.03.370(3) and RCW 90.035 exempts reclaimed WATER from the definition of an "artificial storage and recovery project", although a permit for recovery of reclaimed water from aquifer storage shall be reviewed under</i>
050	2	reg agency resp				Agree with KC: need to include specific mention of construction docs; separate process from OP. Also discussed in RAC mtg.	Lead agency responsibilities. The lead agency is responsible for the coordination, review, issuance and enforcement of a reclaimed water permit under chapter 90.46 RCW and other submittal documents leading to approval of a facility that generates reclaimed water . Specifically the lead agency.....
050	2f	reg agency resp			editing		Monitors compliance, conducts compliance inspections and directs the permittee to take takes corrective actions as needed.
050	4a(i)	reg agency resp				why is funding mentioned? I don't think this overrides the key decision for lead-nonlead that it follows the permit. So if a LOSS is funded by ECY, it should still be DOH as lead. Or if a WPCF that has zero discharge -- still DOH.	1) Department of ecology responsibilities. Ecology:
050	cont'd	reg agency resp				cont'd	a) Serves as the lead agency in projects where:
050	cont'd	reg agency resp				cont'd	i) The reclaimed water generator is a water pollution control facility permitted or funded by ecology.
050	4b(i)	reg agency resp				Pls define sewerage system (is it used elsewhere?) -- do you mean collection system? Also, clarify that this doesn't include sites with no discharge (all RW used on site)	(i) Design, construction, and operation of all sewerage collection systems and associated water pollution control facilities that collect or treat wastewater and generate reclaimed water with discharges to the waters of the state , except as exempted under RCW 90.48.110.
050	new (ii)	reg agency resp				Suggest adding this for clarification - land application = ECY	ii) The main uses of reclaimed water are for land application purposes.
050	5a(i)	reg agency resp				suggest adding language	a) Serves as the lead agency in projects where:

050		reg agency resp				suggest adding language -- there could be "discharges to the environment" when all RW is used on site -- but not to the groundwater or surface water.	i) The majority uses are industrial and commercial where there is no discharge of reclaimed water to the environment waters of the state except where wastewater treatment or reclaimed water generation at the site is also permitted as a large on-site sewage system per chapter 70.118B RCW.
050	5c	reg agency resp				add language	a) Assures adequate public health related treatment, reliability, and exposure provisions in reclaimed water production, storage, distribution and use.
060	3	Fees				Add DOH WW fee WAC	The department of health may establish fees under RCW 90.46.030, and may require fees appropriate for review and consultation pursuant to RCW 43.70.250 and chapter 246-272 WAC .
090	2	Definitions				AKART definition for RW -- "prevention" is inappropriate.	" AKART " is an acronym for all known, available, and reasonable methods of prevention , process control and reliable treatment. The term has the same meaning as it is defined in WAC 173-201A-020.
090	2	Definitions			Issue	Definition of emerging contaminants:	We are concerned about including provisions in rule for emerging trace contaminants without standards established by peer-reviewed scientific study for health and environmental concerns.
090	2	Definitions			editing	Definition editing	"Emerging contaminants" include substances derived from pharmaceutical products, endocrine disrupting compounds, personal care products and household cleaning products detected in very small amounts in water, for which there are no currently established health- or environmental-based limits.
090	2	Definitions			editing	Definition editing	"Plans and specifications": Delete this portion (more appropriate in section 160 or 170): Except as otherwise allowed, plans and specifications are preceded by an approved engineering report.
090	2	Definitions			Add	Need to add definitions for person, public entity, private entity, private utility (latter 2 used interchangeably in section 205). Private entity reference in section 205 should actually be in section 145 too.	"Public entity" means a municipal corporation such as a city; town; county; water, sewer, or water-sewer district; public utility district; port district; or federal, state or local agency. "Person" means any individual, corporation, company, association, society, firm, partnership, joint stock company, or any governmental agency, or the authorized agents of these entities.
090	2	Definitions				Definition editing: impairment is not hypothetical.	"Water rights impairment" means.....wastewater discharge in order to reclaim the water, that would is confirmed to :
090	2	Definitions				Wetlands mitigation seems to encompass multiple definitions. Steps or actions -- and compensatory (required) actions. Needs editing.	
090	2	Definitions				Reclaimed water facility definition	Strike "or use sites".
100		Exclusive rights for RW			editing	consistent with statute	The owner of a wastewater treatment facility that is reclaiming water with a permit issued under this chapter has is granted the exclusive right to any reclaimed water generated by the treatment facility

120	1	Submission of documents for review & approval required			clarification - add language	consistent with past discussions with DOH	The nonlead agency may limit the scope of review or waive the requirement for submission of their copies of documents.
120	3c	Submission of documents for review & approval required			issue of consistency with DOH life of project	DOH has a 2 year approval of expiration. We'd appreciate the opportunity to be consistent.	Where two or more years have elapsed since approval of either the engineering report or construction plans and specifications, the lead agency may cancel the project. The applicant may request in writing an extension of the lead agency approval prior to the end of the two year period. If granted, the lead agency may require updates to address changes in water quality conditions, regulatory requirements, or engineering technology.
130	2d	Agency review standards			addition	stand-alone item or combine with 2d(iv)	Guidelines and standards of professional practice published by professional organizations such as Water Environment Federation, American Water Works Association, WaterReuse Association, National Water Research Institute, and American Society of Civil Engineers.
130	3	Agency review standards			correction	missing word	Review period. Both lead and nonlead agencies must promptly take action to comment on, approve, or reject a submittal within 90 days of receipt except for water right impairment reviews under WAC 173-219-105. If circumstances prevent review within a 90-day period, the lead agency must notify the applicant of the reason for the delay and provide an estimated review time
140	2	RW Planning			addition	Need to consider impact to a water utility if a RW customer can no longer use RW and must revert to a public water supply. Add this new "g".	(g) Describe the contingency plan for reclaimed water customer reversion to a public drinking water source if reclaimed water production is discontinued for any reason.
145	1	Private utility capacity assessment			addition	Suggested addition is meant to broaden the submittal to UTC (for example) if they regulate private wastewater companies in the future, as proposed in the 2010 SSB 6808.	A private utility must submit adequate information to the lead agency and any other agency, if required, to determine if the entity has the technical, managerial, administrative, operational and financial capacity for issuance of a permit
145	2	Private utility capacity assessment			deletion	Please consider carefully the role DOH and ECY have in requiring and evaluating management and financial information. While it wise to determine the "capacity" of an applicant to operate in the long term, the agencies do not have the professional staff qualifications to evaluate and judge. We could be at the edge of our statutory authority. OK with establishing a standard or level of excellence.	2-) The lead agency may require that changes be made such as managerial or financial changes before issuance of a permit.

145	3c(i)	Private utility capacity assessment				See previous comment. Also, a private utility could see this as too intrusive for those developing or operating multiple facilities as separate business ventures. The standard: assure the entity has sufficient income to construct and support the operation until sufficient cash flow is available from users.	
145	4	Private utility capacity assessment			correc tion	Public entity status does not guarantee that the "trust" entity has sufficient capacity. The SDWA adequate capacity program was begun because many publically-owned water systems could not provide adequate service.	If the lead agency declines to issue a permit based on a determination of inadequate technical, managerial or financial capacity, or lack of sufficient information on which to make a determination, the private utility may establish adequate capacity by entering into an agreement with a public entity third party guarantor to serve as the primary management entity or as a third party trust . Said The management agreement must be binding on both parties to remain in force until the lead agency determines that the private utility has the technical, managerial, and financial capacity to qualify for an operating permit, or until the entity enters into an agreement with another public entity.
160	3	Engineering Report			Additio n	Add DOH report reqmts and citations.	3) The engineering report must include or reference approved documents on file with the lead agency that include the following content: a) WAC 173-240-060 requirements for an engineering report for domestic wastewater facilities, where applicable. b) WAC 246-271-170 requirements for an engineering report, as applicable. c) WAC 246-290-110 requirements for a project report for public water systems, as applicable. d) A statement regarding compliance with the State Environmental Policy Act (SEPA) and the National Environmental Policy Act (NEPA), if applicable. e) A statement regarding compliance with any applicable state or local water quality management plan or any plan adopted under the Federal Water Pollution Control Act as amended.
160	5a	Engineering Report			Edit		A pilot plant study may be required to evaluate the ability of the proposed facility, process or equipment to adequately and reliably meet all reclaimed water treatment process efficiency and water quality requirements applicable to the project.

160	6b	Engineering Report		Edit		When required, a study protocol must be submitted for agency review and approval prior to the pilot plant start-up. The protocol must provide a description of all equipment and facilities to be used during the study, treatment capacity of the pilot plant, the operation and maintenance procedures, the parameters to be monitored, monitoring frequency, sampling techniques, analytical methods, the length of the study, and steps taken to protect both public health and the environment if any beneficial use of reclaimed water or discharge to the environment of incompletely treated reclaimed water or wastewater is anticipated during the study
160	4k	Engineering Report		addition		The engineering design calculations for the reclaimed water process. Include at a minimum:
180	2d	O&M manual		addition		xvii)Other relevant data requested by the lead and non-lead agencies reasonably necessary to fully understand the operation and maintenance of the reclaimed water facilities.
190	2	Construction quality assurance		question/clarity	where are "significant deviations" defined? This is an area of interpretation that we hope the guidance manual will clarify.	
205	2c	Eligibility to apply for OP		clarification/editing	lead agency issuing discharge permit = ECY. Need to add DOH equivalent.	Any entity, public or private, currently holding an active wastewater discharge permit issued under chapter 90.48 RCW or LOSS operating permit under chapter 70.118B RCW . For new facilities, the lead agency may issue the wastewater discharge permit under chapter 90.48 RCW or LOSS operating permit under chapter 70.118B RCW concurrently with the operating permit. The lead agency may require the information specified in WAC 173-219-145 of this rule to assure that a private entity has sufficient capacity to provide reliability, continuity, and supervision of the reclaimed water facility
220	3	General permits		Question/editing	How do these requirements apply to DOH? We presume they are copied from WW discharge permit reqmts. DOH has no equivalent. Why would a lead agency need to prepare a SBEIS? Where is the statutory authority in 90.46 -- and where is the need? Seems like a burden to the agencies if no need.	Strike (d) -- requirement to prepare SBEIS.
250	2	notifications, comments, procedures		Editing	Too onerous to include copies of statement of basis/fact sheet and draft permit in the public notice -- for newspaper publication. Should be reference of where to find them (on line).	b) Copies of the statement of basis or fact sheet and the draft permits or b) Copies of the statement of basis or fact sheet and the draft permits, or locations where they may be obtained
250	3i (i)	notifications, comments, procedures		Editing	Too much for a newspaper notice.	i) A copy of the application to apply for coverage under the general permit or the location where a copy may be obtained .

250	6	notifications, comments, procedures		Deletion	There is not a statutory requirement for this provision. It is not consistent with DOH practices and would be a significant burden for DOH. -- having it in the rule creates an expectation.	Delete the entire #6. If ECY wants to hold public workshops, they can invoke the option under discharge permit regulations. We realize the language says "may". If that's the case, why include it in the rule. The lead agency "may" do this w/o it being a rule requirement.
290	5	Standard permit conditions		Consistency	Many emerging trace contaminants do not have standard methods for testing. If that section remains in, it will be in conflict with this section, unless an exclusion is provided. Not having standard methods for testing is another hindrance in the inclusion of trace contaminants that make it lack credibility at this early stage.	Accreditation of Environmental Laboratories. All monitoring data required by the permit must be prepared by a laboratory registered or accredited under the provisions of Chapter 173-50 WAC, <i>Accreditation of Environmental Laboratories</i> . Flow, temperature, settleable solids, conductivity, pH, turbidity, emerging contaminants , and internal process control parameters are exempt from this requirement
290	7	Standard permit conditions		Additions	The nonlead (DOH) should also be included. There may be times when crossconnection or other features related to public health may need to be inspected with the lead agency or separately.	Regulatory entry and access. For the purpose of assessing compliance, the permittee shall allow the lead and nonlead agencies the right to (a) enter the permitted facilities and premises where records are kept; (b) inspect any records that must be kept under the conditions of the permit; (c) inspect any facility, equipment, practice, or operation permitted or required by the permit; (d) sample or monitor any substance or any parameter at the facility; and (e) copy, at reasonable cost, any records required to be kept under the terms and conditions of the permit
295	3	Specific permit conditions		edits		The lead agency permit may establish a compliance schedule for existing facilities as part of the permit conditions including (a) the specific steps or actions to be taken by the permittee to achieve compliance with interim and final requirements or permit conditions; and (b) the dates by which those steps or action are to be taken
295	4	Specific permit conditions			This subsection is exclusively directed to utilities that will have ECY discharge permits. None of this jargon or provisions are in DOH regs -- including "source control", "pollution prevention plan" and "pretreatment". Define in this reg?? We will assume that this part does not apply to DOH permittees.	Source control and pretreatment. The permit must specify conditions for source control and pretreatment appropriate to the type and size of the reclaimed water plant. Conditions may include specific prohibitions, pretreatment requirements, industrial user surveys, establishment of local ordinances, inspections, public education requirements or other source control measures such as pollution prevention plans

295	5	Specific permit conditions			<p>Adds are for clarity so that WQ limits aren't for process control only. Also, where will emerging contaminants fit in here? Part of the issue with them is standard testing methods and detection levels.</p>	<p>Reclaimed water quality limits. The permit must specify enforceable water quality limits to verify that the required treatment processes at the reclaimed water plant are functioning correctly and that the facility is reliably achieving the required technology- based and use-based standards established for the proposed use(s) <i>that have been established for public health and environmental protection</i> . The water quality limits must specify the required parameters, the regulatory limits, the sample type, method, and location for determining compliance, and when exceeding the limits is considered a permit violation. Requirements must include any minimum requirements established in technical standards in this chapter for the permitted use(s).</p>
295	6	Specific permit conditions			<p>What other substance or parameters are being considered beyond water quality limits? Is waters of the state included for ?? Is it for WQ monitoring to assure compliance with streamflow augmentation? If it's for aquifer recharge, 080 requires that the RW conform to the state drinking water MCLs. The rule should be using consistent language and not appear to expand WQ to monitoring GW quality separately. Reclaimed water is not a waste, so reference to pollutants is not appropriate. Also -- does this rule regulate permit writers?</p>	<p>Monitoring Schedules. The permit must establish a detailed self-monitoring and testing schedule for water quality limits <u>and other substances or parameters</u> to be monitored in the reclaimed water or in <u>waters of the state</u> . Specified monitoring parameters, sample types, locations and frequencies must include any minimum requirements established in the technical standards in this chapter for the permitted use(s). <i>The lead agency will</i> Permit writers should base requirements on available guidance or model permits, the quantity, quality and variability of the reclaimed water, the treatment methods, significance of the pollutants <i>constituents</i> , the availability of appropriate indicator or surrogate parameters, the cost of monitoring, and past compliance history. The permit must allow the lead agency to <i>may</i> increase monitoring parameters or frequency for cause including but not limited to significant, recurrent permit violations or where determined necessary to protect public health and the environment.</p>

295	8			Deletion/editing	<p>We agree with the TAP and RAC recommendations that this subsection does not belong in the rule at this time. Without a solid basis for requiring tests or WQ limits (PH or env protection due to "effects"), it is premature. Let the science catch up with us. This could provide a formidable barrier and uncertainty for applicants and RW generators. So far, there are no demonstrated health effects, and no testing or limits regulation in drinking water. RW water is not wastewater, so requiring additional monitoring for environmental concern is not consistent with production of RW. It's creating a higher standard for RW production than for WW treatment and discharge. Environmental protection language in the last sentence needs to be tied to 90.48 regulation and permits, not 90.46. Any reclamation permitting requirement must be tied to recognized PH risks from these chemicals based on direct exposure from the use or indirectly from the use of recovered water from aquifer or surface water storage.</p>	<p>Assessment of emerging contaminants of interest. The lead agency may include additional water quality monitoring parameters to protect beneficial uses of reclaimed water, if necessary, and based on demonstrable increased public health risks based on the permitted uses. The lead and nonlead agencies must consider relevant scientific studies regarding the laboratory methodologies for detecting very small amounts of a contaminant, fate and transport of the contaminant within the environment, and potential impacts to aquatic health in making decisions to require additional monitoring.</p>
295	13			WW vs RW editing	<p>"Loading" is a WW-based term re pollutants. Growth pressures are not an issue in RW like they may be in WW.</p>	<p>Facility production capacity assurance loading. The permit must establish conditions to assure that the facility operates within the approved design capacity. The permit may specify design and operational limits that may not be exceeded, periodic assessments and reporting of flow customer demands, and process and equipment loadings, and warning levels that trigger requirements for planning or other actions to maintain adequate capacity. The facility shall also demonstrate adequate wastewater treatment and disposal capacity in conformance with an active NPDES or state waste discharge permit for all facilities for that portion of the influent wastewater flow that exceeds all reclaimed water demands and product storage capacity.</p>

295	15				Editing	not about bypassing -- but making sure "non-spec" water doesn't go to use areas.	Actions to avoid bypass of incomplete, inadequate or unreliable treatment. The permit must prohibit the generation, distribution or use of reclaimed water under certain conditions. Permit conditions must specify when and how the reclaimed water facility must cease or otherwise control the generation, distribution and use of reclaimed water including, but not limited to, the reduction, loss, failure, or bypass of any unit processes of the reclaimed water plant. Permit conditions may specify procedures to establish when the treatment processes are sufficiently restored to allow the generation, distribution or use of the reclaimed water. <u>Bypass of any part of the treatment plant or any unit process required to produce reclaimed water of the specified classification to any use area is prohibited.</u>
295	19a				editing		19 a) (ii) Allow the permittee or their authorized distributor- representative to regulate control distribution, enter and inspect the site and terminate service of reclaimed water to users violating the terms and conditions of the permit and this chapter
295	19b					to add certainty that contract content has been reviewed.	The permit may require the lead agency to review and approve individual contracts or may specify terms and conditions allowing the use of a standardized contract or local ordinances for all or some distributors, uses, or users. The lead agency must review and accept the terms in standardized contracts or local ordinances.
310						"prevent" is an absolute that cannot be achieved, RW rule should require compliance with state and federal WW requirements that do not apply to a non-wastewater. The intent is to assure protection that is equivalent to that provided under those programs.	Source water controls must prevent are intended to control and limit the presence of substances that may affect the reclaimed water quality or the ability to generate reclaimed water. To assure adequate and reliable treatment, source water to reclaimed water generating plants must comply with requirements conform with the standards for the pretreatment of industrial wastewater under 40 CFR Part 403 and sections 307(b) and 308 in the Federal Water Pollution Control Act, and chapter 90.48 RCW, the Washington Water Pollution Control Act and with the discharge restrictions and prohibitions of dangerous waste regulations, chapter 173-303 WAC and WAC 173-216-060.
320	1b				editing		The membrane filtration method consists of biological oxidation, followed by membrane filtration either separately or a membrane bioreactor combined into a single basin. the biological oxidation and membrane filtration processes. Either process method is followed by disinfection.

320	1c				editing		Another method demonstrated. Alternative treatment methods must demonstrate capability as an equivalent treatment process in a reclaimed water engineering report approved under WAC 173-219-160. Minimum performance standards for an equivalent process must meet the concentrations must demonstrate that water quality limits are consistently and reliably achievable through proper design, application and operation and maintenance of each of the treatment units in that process.
320	2b(iii)				clarification	TSS should be waived for plants with continuous turbidity meters. What other purpose would TSS measurements provide?	Total Suspended Solids (TSS) must be measured as a 24-hour composite sample in the effluent from the biological oxidation process. TSS must not exceed a monthly average of 30 mg/L or a weekly average of 45 mg/L TSS. TSS measurement may be waived if continuous turbidity measurement is provided.
320	3b				comment	A valid question we need to be able to answer is how does limiting BOD result in better water quality and/or filter removal efficiency and/or filter removal consistency.	The lead agency may require BOD5 to be measured as a 24-hour composite sample in the effluent from the filtration processes. BOD5 measured after filtration must not exceed a monthly average of 10 mg/L
320	4b				comment	A valid question we need to be able to answer is how does limiting BOD result in better water quality and/or filter removal efficiency and/or filter removal consistency. Also membrane filters should produce TSS < 2, easily.	If the BOD5 cannot be measured prior to membrane filtration, the lead agency may require BOD5 to be measured as a 24-hour composite sample in the effluent from the filtration processes. BOD5 measured after filtration must not exceed a monthly average of 10 mg/L.
320	6				typo		The study must demonstrate that the disinfection method is consistently capable of an acceptable level of of virus removal or inactivation. Minimum requirements are:
340	1				edit/added	in the past 6 months, ozonation has developed a much larger role in RW treatment; should mention specifically.	The disinfection process may be chlorination, ultraviolet light, ozonation , or any other system approved by the lead agency in accordance with the state of Washington Reclaimed Water Facilities Manual or other accepted standard engineering practices for reclaimed water disinfection.
340	2				edit		Chlorine. Chlorination disinfection processes must at a minimum meet a an effective disinfectant concentration (C) of 1 mg/L measured as free chlorine, a disinfectant contact time (T) of 30 minutes measured, as "t10" at peak hourly flow

340	2b				edit	CT levels are a concern to DOH -- both agencies.	The lead agency may approve an alternative CT measurement and disinfection process including, but not limited to, "C" values based on total chlorine residual and "T" values determined through an acceptable residence time distribution analysis of the contact chamber . at peak hourly flow. The alternative must demonstrate, to the satisfaction of the agencies lead agency , that it consistently provides an equivalent degree of public health and environmental protection conforming to virus inactivation requirements of WAC 173-219-320.
340	2c				Corxn	Temperature and pH are only necessary to define a CT required under the Surface Water Treatment Rule (drinking water); that doesn't apply to this rule since the CT required is always 30 or 325/450 in (b).	The proposed CT and method of measurement must be addressed within the engineering report. The CT calculations must consider the effects of temperature and pH on the ability to consistently meet the required minimum CT value.
340	new 2d				Add		d) Minimum effective contact time shall be determined by an approved residence time distribution analysis or tracer study.
350	1				Add		Reliability assessment required. All reclaimed water plants must be designed and operated to meet the reliability requirements in this section. The methods and criteria must be approved by the lead agency as part of the engineering report per WAC 173-219-160(4)(j) and incorporated in the operation and maintenance manual.
410	2				Add		Chlorine residual waiver. Maintenance of a chlorine residual may be waived upon written request of the permittee for reclaimed water impoundments, storage ponds, and storage tanks unless the type of beneficial use or distribution system following storage requires a chlorine residual to prevent biological re- growth, prevent deterioration of water quality, or is necessary to protect public health. The lead agency shall respond to waiver requests in writing.
420	2 new "c"				Add		c) Minimum horizontal and vertical separation from existing potable water pipelines shall be approved by the water system purveyor and DOH Office of Drinking Water prior to installation of reclaimed water pipelines.

500	2a				consistency edit	make consistent with "b"	Backflow and/or back pressure assemblies commensurate with the hazard level posed by a potential cross-connection are required. The cross-connection control assembly must be approved, installed at the potable water service connection to the use area, and inspected, as directed by the potable water supplier's cross-connection control plan in conformance with WAC 246-290-490 , installed at the potable water service connection to the use area in accordance with WAC 246-290-490 or the locally adopted plumbing code; or ordinance, whichever is more stringent.
500	2b				consistency edit	make consistent with "a"	If a potable water source is blended with reclaimed water at a use site, there must be an air gap separation. The air gap separation must be approved and inspected, as directed by the potable water supplier's cross-connection control plan in conformance with WAC 246-290-490 , and or the locally adopted plumbing code or ordinance, whichever is more stringent.
540	5				comment	In discussion with the RAC, it was decided that the RW utility would provide standard WQ information on request. Additional WQ information that is specific to a use would remain the responsibility of the user, as it is now with the use of potable water for nonpotable uses.	
560	5				move to guidance	These requirements should be on the user, not the generator.	(5) Agronomic rates and water quality characterization. The application of irrigation water is limited to methods and agronomic rates established in standard manuals of practice appropriate to the type of landscape irrigated. In addition to the minimum technology-based standards, the quality of the reclaimed water must be characterized sufficiently to assure it is appropriate for the uses approved in the engineering report. Constituents such as salts, nutrients, organic and inorganic compounds may adversely affect soil or plants when applied for irrigation. Characterization must include the parameters listed in standard industry manuals of practice applicable to the types of vegetation and irrigation methods. Where approved:
							(a) Reclaimed water may be blended with potable or other nonpotable water supplies,
							(b) Additional treatment may be provided at the use site, or
							(c) Additional restrictions may apply to meet the required water quality for a specific use.

580	9				move to guidance	These requirements should be on the user, not the generator. (see 560(5) comment)	(1) Agronomic rates and water quality characterization. The application of irrigation water is limited to methods and agronomic rates established in standard manuals of practice appropriate to the type of crop irrigated. In addition to the minimum technology-based standards, the quality of the reclaimed water must be characterized sufficiently to assure it is appropriate for the uses approved in the WAC 173-219-160 engineering report. Constituents such as salts, nutrients, organic and inorganic compounds may adversely affect soil or plants when applied for irrigation. Characterization must include the parameters listed in standard industry manuals of practice applicable to the crops and irrigation methods. Where approved:--
							(a) Reclaimed water may be blended with potable or other nonpotable water supplies;
							(b) Additional treatment may be provided at the use site, or
							(c) Additional restrictions may apply to meet the required water quality for a specific use.
600	5b				definition	Add a definition for "depressional wetlands" or be more specific here.	
600	7a				definition needed	Add a definition for "hydrogeomorphic class" or cite a rating or class system for reference.	
700	5				Edits/definition	Either define "naturally low quality aquifers" or call them "naturally nonpotable". Actually not sure why we need to say "naturally". Also, why must this be in "the public interest" -- something not defined or prescribed by the statute. Just leave it at "the lead agency may".	Exception for recharge to naturally-low quality <i>nonpotable</i> aquifers. When in the public interest, the The lead agency may establish less stringent technology based requirements for recharge to naturally nonpotable aquifers of naturally low quality . The aquifer must not be designated as a special protection area under WAC 173-200-090, must be considered unsuitable as source water for potable use, and the required treatment methods must be considered unreasonable or impractical. The determination must be made on a case-by-case basis
700	3				Technical Question	Make making the statement underlined in the next box, are we limiting ourselves to CAS? We have been asked before if P-Chem processes (whatever they are) can be used.	Recharge by surface percolation. The Class A technology-based standards plus biological nitrogen reduction apply for all uses of reclaimed water to recharge groundwater by surface or vadose zone percolation except as in subsection 5. <u>Total nitrogen must be reduced within the biological oxidation treatment process.</u> Total nitrogen measured in the final, disinfected reclaimed water prior to groundwater recharge must not exceed a monthly average of 10 mg/L or a sample maximum of 15 mg/L.

700	7				Edits/ definition	the language needs to acknowledge that the statute says the point of complinace <u>is</u> beneath or downgradient of the recharge site.	Point of Compliance. For each parameter, the lead agency establishes the point of compliance at a location where the enforceable limit for each parameter must not be exceeded. The point of compliance must be established <i>in the permit</i> . by the lead agency. <i>As agreed with the permittee, the point of compliance may be:</i>
700	7d					No one has determined that anti-degradation can be applied here.	At an alternative point in the surface water beyond the property boundary, if necessary, for the purpose of compliance with chapter 173-201A WAC.
700	9b				Edit	Use guidance to develop criteria for this. Chapter 173-157 is artificial storage and recovery, derived from 90.03, shown below, which exempts reclaimed water. 90.03.370 Reservoir permits — Secondary permits — Expedited processing — Underground artificial storage and recovery project standards and rules — Exemptions — Report to the legislature. (3) For the purposes of this section, "underground artificial storage and recovery project" means any project in which it is intended to artificially store water in the ground through injection, surface spreading and infiltration, or other department-approved method, and to make subsequent use of the stored water. <u>However, (a) this subsection does not apply to irrigation return flow, or to operational and seepage losses that occur during the irrigation of land, or to water that is artificially stored due to the construction, operation, or maintenance of an irrigation district project, or to projects involving water reclaimed in accordance with chapter 90.46 RCW;</u> and (b) RCW 90.44.130 applies to those instances of claimed artificial recharge occurring due to the construction, operation, or maintenance of an irrigation district project or operational and seepage losses that occur during the irrigation of land, as well as other	(a) Site specific soil and hydro-geologic information necessary to characterize and evaluate the groundwater recharge site. using criteria from chapter 173-157 WAC, sections 110 through 170, and chapter 173-200 WAC, as applicable.
720	title				Edit	It is confusing to have an agency use an acronym that means 2 things: ASR -- aquifer storage and recovery and ASR -- artificial storage and recovery. Id on't think it's used in 173-219, or minimally. If it is, spell it out.	WAC 173-219-720 Aquifer Storage and Recovery (ASR)

720	1				edit	the word "artificail brings up the links to other statutes that exempt reclamation projects from ASR. We should call this simply "reclaimed water storage"	Applicability. The following additional requirements apply to the artificial -storage of reclaimed water in underground geological formations and subsequent recovery for beneficial use permitted under this chapter
720	2				need for review	this is confusing. The use, distribution and storage of all reclaimed water is exempted from 90.03.250 and 90.44.060 - not just aquifer storage and recovery. 90.03.370(1) requires a 'secondary permit' for those who use water from storage. 90.03.370(3) exempts RW from the definition of artificial storage and recovery.	Other applicable laws. Use, distribution and recovery of reclaimed water from aquifer storage are exempt from the permit requirements of RCW 90.03.250 370 and RCW 90.44.060 035 . The provisions of this chapter do not limit a person's ability to submit an application for and acquire water rights appropriated under RCW 90.03.250 and RCW 90.44.060.
720	2				review	Since no one has established the specific point at which the original appropriator has abandoned or relinquished, this language could open up some really big battles by implying or allowing a third party to apply for RW immediately after discharge. This will create more barriers for maintaining access to the RW source or the RW once it has been recharged.	Other applicable laws. Use, distribution and recovery of reclaimed water from aquifer storage are exempt from the permit requirements of RCW 90.03.250 and RCW 90.44.060. <u>The provisions of this chapter do not limit a person's ability to submit an application for and acquire water rights appropriated under RCW 90.03.250 and RCW 90.44.060.</u>
720	3				Add		Engineering report. The following information is required as part of the reclaimed water engineering report. A professional hydrogeologist or geologist licensed by the state of Washington must prepare the <u>geological information required</u>
720	4					This should only be left in if there are stringent limits on potential modifications, otherwise this will become another barrier for systems that are uncertain about future access, increased monitoring, or additional treatment based on "later documentation".	Permit conditions. The permit must include appropriate conditions authorizing and controlling the storage, recovery and subsequent uses of the reclaimed water. Conditions must include estimated time frames for recovery of the reclaimed water based on the hydrogeologist report. <u>Ecology may modify the permit and the recovery time based on later documentation.</u>