Introduction (for information purposes, ***not*** proposed rule language)

Oregon's Reasonable Potential Procedures require the department to determine if a discharge has the reasonable potential to cause or contribute to an excursion above a numeric or narrative water quality criterion. The department must establish water quality-based effluent limits (WQBEL) when a determination is made that a pollutant is, or may be, discharged at levels which cause, have the reasonable potential to cause, or contribute, to an excursion of the water quality criterion. In some situations, the sole origin of a pollutant in a discharge may be the intake water for the facility. Where the intake water contains pollutants at levels that exceed water quality criteria, facilities which use and discharge that intake water may face the need for WQBELs even where the facility otherwise does not contribute that pollutant to the waste stream, unless special consideration of the source of the pollutant is taken into account. The Background Concentration Rule and the Intake Credit Rule are for situations where the origin of a pollutant in a discharge is the intake water for a facility.

The proposed guidance for the Background Concentration Rule is similar to the Intake Pollutant Reasonable Potential Procedure*"* developed in the *Water Quality Guidance for the Great Lakes System* (EPA, March 23, 2005), and the proposed guidance for the Intake Credit Rule is similar to the "No Net addition procedure*"* developed in the *Water Quality Guidance for the Great Lakes System*.

The Background Concentration Rule determines whether WQBELs are necessary for facilities that return unaltered intake water pollutants to the source of the intake water. The procedure allows the department to determine that there is no reasonable potential for the discharge of a particular intake water pollutant to cause or contribute to an excursion above a numeric water quality criterion based on the permittee's demonstration of specified conditions. If these conditions are demonstrated, the department would not be required to include a WQBEL for the pollutant in the facility's permit. If it is determined that a WQBEL is necessary then the Intake Credit Rule can be used to develop the WQBEL. The Intake Credit Rule provides a methodology where intake pollutants may be taken into account in establishing WQBELs.

The underlying premise for this proposal, is that determinations whether a discharge of intake water pollutants should be limited by a WQBEL and, if so, the scope of such limitations, must be determined after consideration of site-specific factors. These factors include consideration of the applicable water quality criteria, the quality of the receiving water relative to the criteria, additional pollutant loadings from other point and nonpoint sources, and evaluation of the facility's effluent. The effect of the discharge of intake water pollutants may also vary substantially depending on the location of the outfall in relation to the intake point, the time interval between intake and discharge, alterations of the pollutant by the wastewater treatment process, synergistic or additive interactions between the intake water and other wastewater pollutants, or the chemical nature of the

pollutant in the environment. Therefore, the permittee would be eligible for the Background Concentration Rule upon demonstration of the following five conditions:

(1) 100 percent of the intake water containing the pollutant is withdrawn from the same body of water into which the discharge is made.

(2) The facility does not contribute any additional mass of the specified intake water pollutant to its wastewater. In other words, the pollutant present in the discharge must be due solely to its presence in intake water from the receiving water body.

(3) The facility does not alter the identified intake water pollutant chemically or physically in a manner that would cause adverse water quality impacts to occur from the discharge that would not occur if the pollutant were left in-stream. Alterations could occur as long as they do not cause adverse water quality impacts.

(4) The pollutant is not concentrated at the edge of any available mixing zone after discharge from the facility.

(5) The timing and location of the effluent discharge does not cause adverse water quality impacts to occur that would not occur if the pollutant were left in-stream.

If the permittee demonstrated the five conditions to the satisfaction of the department, the proposed Rule further identifies three conditions that the department would have to address: 1) the department must summarize the basis for the determination that there is no reasonable potential for the discharge of an identified intake water pollutant to cause or contribute to an excursion above a narrative or numeric water quality criterion within a State WQS in the permit fact sheet or statement of basis, including an evaluation of the permittee's demonstration of the five specified conditions described above; 2) the permit must require all monitoring of the influent, effluent and ambient water necessary to determine that the conditions of the Background Concentration Rule are maintained during the permit term; and 3) the permit must contain a reopener clause authorizing the department to modify or revoke and reissue the permit if new information indicates that changes in any of the conditions of the Rule have occurred.

The Intake Credit Rule provides for a direct adjustment to WQBELs when the discharge contains intake pollutants from the same body of water as the discharge, and the other requirements for the Background Concentration Rule (as listed above) are met. The only difference between the Intake Credit Rule and the Background Concentration Rule is that, under the Intake Credit Rule, a discharger may add mass of the identified pollutant of concern to its waste

stream as long as its discharge contains no more mass of the pollutant than was contained in the intake water. In a sense, the permittee must demonstrate what may be viewed as the functional equivalent of the Background Concentration Rule, or simple pass through situation because this procedure establishes WQBELs at a level which ensures the discharge has no greater impact on the receiving water than if the discharger had not removed and returned the intake pollutants to the same body of water.

Proposed Rule Language: Policy Statement

For facilities covered under individual permits, the Background Concentration Rule allows the department to determine that a water quality based effluent limitation is not needed for a particular pollutant when a discharger returns unaltered intake pollutants to the same body of water, and the discharge does not cause adverse water quality effects that would not otherwise have occurred if the pollutants were left in-stream.

The Intake Credit Rule is intended for facilities covered under individual permits, where the department has determined that a water quality based effluent limitation is needed. The Intake Credit Rule allows for a direct adjustment to the water quality-based effluent limit when the discharge contains intake pollutants from the same body of water as the discharge and the specific requirements established in section III. A. are demonstrated.

Proposed Rule Language:

I. General

The following provisions apply to the Background Concentration Rule and the Intake Credit Rule.

(1) An "intake pollutant" is the amount of a pollutant that is present in public waters (including groundwater as provided in (4), below) at the time it is withdrawn from such waters by the discharger or other facility supplying the discharger with intake water.

(2) An intake pollutant is considered to be from the "same body of water" as the discharge if the department finds that the intake pollutant would have reached the vicinity of the outfall point in the receiving water within a reasonable period had it not been removed by the permittee. This finding may be deemed established if:

(a) The background concentration of the pollutant in the receiving water (excluding any amount of the pollutant in the facility's discharge) is similar to that in the intake water;
(b) There is a direct hydrological connection between the intake and discharge points; and
(c) Water quality characteristics (e.g., temperature, pH, hardness) are similar in the intake and receiving waters.

(3) The department may also consider other site-specific factors relevant to the transport and fate of the pollutant to make the finding in a particular case that a pollutant would or would not have reached the vicinity of the outfall point in the receiving water within a reasonable period had it not been removed by the permittee.

(4) An intake pollutant from groundwater may be considered to be from the "same body of water" if the permitting authority determines that the pollutant would have reached the vicinity of the outfall point in the receiving water within a reasonable period had it not been removed by the permittee, except that such a pollutant is not from the same body of water if the groundwater contains the pollutant partially or entirely due to human activity, such as industrial, commercial, or municipal operations, disposed actions, or treatment processes.

(5) The determinations made under sections II and III, below, shall be made on a pollutant-by-pollutant, and outfall-by-outfall basis.

II. Background Concentration Rule:

(1) The department may determine that there is no reasonable potential for the discharge of an identified intake pollutant to cause or contribute to an excursion above a numeric water quality criterion contained in Oregon's water quality standards where a discharger demonstrates to the satisfaction of the department (based upon information provided in the permit application or other information deemed necessary by the department) that:

(a) The facility withdraws 100 percent of the intake water containing the pollutant from the same body of water into which the discharge is made;
(b) The facility does not contribute any additional mass of the identified intake pollutant to its wastewater;
(c) The facility does not alter the identified intake pollutant chemically or physically in a manner that would cause adverse water quality impacts to occur that would not occur if the pollutants were left in-stream;
(d) The facility does not increase the identified intake pollutant concentration, at the edge of the mixing zone, or at the point of discharge if a mixing zone is not allowed, as compared to the pollutant concentration in the intake water, unless the increased concentration does not cause or contribute to an excursion above an applicable water quality standard; and

(e) The timing and location of the discharge would not cause adverse water quality impacts to occur that would not occur if the identified intake pollutant were left in-stream.

(2) Upon a finding that a pollutant in the discharge does not cause, have the reasonable potential to cause, or contribute to an excursion above an applicable water quality standard, the department is not required to include a water quality-based effluent limit for the identified intake pollutant in the facility's permit, provided:

(a) The NPDES permit evaluation report includes a determination that there is no reasonable potential for the discharge of an identified intake pollutant to cause or contribute to an excursion above an applicable numeric water quality criterion and references appropriate supporting documentation included in the administrative record;
(b) The permit requires all influent, effluent, and ambient monitoring necessary to demonstrate that the conditions above in subsection (1) of this section, are maintained during the permit term; and
(c) The permit contains a reopener clause authorizing modification or revocation and reissuance of the permit if new information shows that the conditions in subsection (1) (a) through (e) of this section are not being met.

III. Intake Credit Rule

(1) The department may consider pollutants in intake water when establishing water quality-based effluent limitations based on numeric criteria, provided that the discharger has demonstrated to the satisfaction of the department that the following conditions are met:

(a) The facility withdraws 100 percent of the intake water containing the pollutant from the same body of water into which the discharge is made;
(b) The observed maximum ambient background concentration and the intake water concentration of the pollutant exceeds water quality criteria for that pollutant;
(c) Intake water is not a result of inflow and infiltration;
(d) The facility does not alter the identified intake pollutant chemically or physically in a manner that would cause adverse water quality impacts to occur that would not occur if the pollutants were left in-stream;
(e) The facility does not increase the identified intake pollutant concentration, as defined by the department, at the point of discharge; and
(f) The timing and location of the discharge would not cause adverse water quality impacts to occur that would not occur if the identified intake pollutant were left in-stream.

(2) Where the conditions in subsection (1) of this section are met, the department may establish water quality-based effluent limitations allowing the facility to discharge a mass and concentration of the intake water pollutant that is no greater than the mass and concentration found in the facility's intake water. A discharger may add mass of the pollutant to its waste stream if an equal or greater mass is removed prior to discharge, so there is no net addition of the pollutant in the discharge compared to the intake water.

(3) Where proper operation and maintenance of a facility's treatment system results in the removal of an intake water pollutant, the department may establish limitations that reflect the lower mass and concentration of the pollutant achieved by such treatment.

(4) Where intake water for a facility is provided by a municipal water supply system and the supplier provides treatment of the raw water that removes an intake water pollutant, the concentration of the intake water pollutant shall be determined at the point where the water enters the water supplier's distribution system.

(5) Where a facility discharges pollutants from multiple sources that originate from the receiving water body and from other water bodies, the department may derive an effluent limitation reflecting the flow-weighted amount of each source of the pollutant provided that adequate monitoring to determine compliance can be established and is included in the permit. When calculating the flow-weighted effluent limitation, the pollutant from the receiving water body shall be assumed to have a concentration that is no greater than the concentration in the facility's intake water; the same pollutant from other sources shall be assumed to have a concentration that is no greater than the most stringent applicable criterion/objective.

(6) The permit shall specify how compliance with mass and concentration-based limitations for the intake water pollutant will be assessed. This may be done by basing the effluent limitation on background concentration data. Alternatively, the department may determine compliance by monitoring the pollutant concentrations in the intake water and in the effluent. This monitoring may be supplemented by monitoring internal waste streams or by a department evaluation of the use of best management practices.

(7) In addition to the above, effluent limitations must be established to comply with all other applicable State and Federal laws and regulations including technology-based requirements and antidegradation policies.

(8) When determining whether WQBELs are necessary, information from chemical-specific whole effluent toxicity and biological assessments shall be considered independently.