

**TITLE 252. DEPARTMENT OF ENVIRONMENTAL QUALITY
CHAPTER 628. INDIRECT POTABLE REUSE FOR SURFACE WATER
AUGMENTATION**

Before the Water Quality Management Advisory Council 1/11/2018
Before the Environmental Quality Board 2/16/2018

RULE IMPACT STATEMENT

DESCRIPTION: The gist of the proposed rulemaking is to create a new Chapter, OAC 252:628 Indirect Potable Reuse for Surface Water Augmentation (IPR), that will describe how DEQ will regulate new discharges of treated municipal wastewater to existing Public Water Supply (PWS) surface waterbodies for the purpose of augmenting the existing volume of water available for PWS purposes.

The proposed rules will guide DEQ in the issuance of discharge and construction permits to those who wish to undertake an IPR project. The proposed rules establish effluent water quality benchmarks and permit implementation procedures, treatment standards for IPR treatment plants, operation and maintenance standards, operator certification standards, and IPR receiving waterbody monitoring requirements. In addition, the Chapter proposes to establish fees associated with IPR permitting and operations.

CLASSES OF PERSONS AFFECTED: Persons who choose to own and/or operate an IPR project will be required to comply with the proposed rulemaking. Other persons potentially impacted include those who are currently using an IPR waterbody for recreation or as a PWS source who are not a party to the IPR project.

CLASSES OF PERSONS WHO WILL BEAR COSTS: Persons who choose to own and/or operate an IPR project will bear the costs associated with requirements in the new Chapter. Others who might incur costs under these rules are recreational users of the waterbody, small businesses associated with supporting these recreational uses, and municipalities and industries who are co-users of the waterbody for public water supply or other needs.

INFORMATION ON COST IMPACTS FROM PRIVATE/PUBLIC ENTITIES: Treatment for IPR projects will involve at a minimum the following: Tertiary Filtration, Biological Nutrient Removal, and Advanced Disinfection. Cost for these minimum treatment requirements is approximately \$10 million per million gallons of water treated. The level of additional costs that may be incurred in order to comply with SDWA standards at the PWS treatment plant are unknown at this time.

CLASSES OF PERSONS BENEFITTED: Municipalities and other public and private water suppliers, and those they serve, who elect to undertake IPR projects will benefit from an increased and assured source of dependable water supply especially during periods of drought.

PROBABLE ECONOMIC IMPACT ON AFFECTED CLASSES OF PERSONS: Municipalities with long-term water supply issues will benefit economically through increased water availability. Owners and operators of IPR facilities shall bear the costs of construction and operation of the IPR project. The owner/operator of the IPR facility will run a cost/benefit analysis to evaluate the overall feasibility of the project in comparison to developing other water resources or increasing non-potable reuse. Externality costs include the potential costs that would result from a lessening of water quality in the IPR waterbody by those who are users of the surface waterbody for recreation or as a public water supply. These externality costs for those who are not directly benefited by the IPR project could include costs of additional water treatment and/or potential periodic loss of use.

PROBABLE ECONOMIC IMPACT ON POLITICAL SUBDIVISIONS: Both the political subdivision who undertakes the IPR Project as well as other political subdivisions who are co-users of the waterbody are potentially impacted by the projects. These economic impacts are discussed in the above paragraph.

POTENTIAL ADVERSE EFFECTS ON SMALL BUSINESSES: The potential adverse effects on small businesses include the temporary loss of recreational use of the waterbody, and the increased water treatment costs that a municipality might impose on its customers as a result of the IPR project.

LISTING OF ALL FEE CHANGES, INCLUDING A SEPARATE JUSTIFICATION FOR EACH FEE CHANGE: Under the new Chapter, an entity choosing to construct and operate an IPR project will be subject to the following fees as applicable:

- (a) IPR Treatment Plant Construction Permit will be \$18,160. The proposed fee is intended to help cover agency costs for permit review and to research treatment effectiveness in meeting IPR regulatory objectives.
- (b) OPDES Discharge Permit will be an additional \$2,000. The proposed fee is intended to help cover agency costs for reviewing and approving the permit.
- (c) IPR Annual Operations Fee will be \$21,600. The proposed fee is intended to help cover agency costs for reviewing reports and inspections submitted by the owner/operator.

PROBABLE COSTS AND BENEFITS TO DEQ TO IMPLEMENT AND ENFORCE: DEQ will absorb the costs not covered by the fees, and is therefore not seeking additional funds to implement this program.

PROBABLE COSTS AND BENEFITS TO OTHER AGENCIES TO IMPLEMENT AND ENFORCE: No other State agencies will be implementing the rules proposed here.

SOURCE OF REVENUE TO BE USED TO IMPLEMENT AND ENFORCE RULE: DEQ's costs to implement the Chapter being proposed will be covered through fees and appropriations.

PROJECTED NET LOSS OR GAIN IN REVENUES FOR DEQ AND/OR OTHER AGENCIES IF IT CAN BE PROJECTED: If an entity decides to own and/or operate an IPR project, DEQ shall receive revenue from the fees. The fees have been developed based on DEQ's reasonable estimate of the time involved in permitting and monitoring an IPR project. However, being a new program, it is unknown whether the proposed fees will cover the entire cost of the program.

COOPERATION OF POLITICAL SUBDIVISION REQUIRED TO IMPLEMENT OR ENFORCE RULE: No cooperation in implementing or enforcing the proposed rule changes will be required from any political subdivision.

EXPLANATION OF THE MEASURES THE DEQ TOOK TO MINIMIZE COMPLIANCE COSTS: The development of the proposed rules took over three years and numerous man-months of effort. DEQ is not trying to recoup these costs through the fees included in these rules. In addition, these rules do not automatically require that a facility install the highest level of water treatment currently possible, namely microfiltration, reverse osmosis, and advanced oxidation. Estimated cost of the highest level of treatment is approximately \$16 million per million gallons of water treated. Instead, IPR projects will be required to perform routine lake monitoring to evaluate the potential for lowering of water quality in the waterbody.

DETERMINATION OF WHETHER THERE ARE LESS COSTLY OR NONREGULATORY OR LESS INTRUSIVE METHODS OF ACHIEVING THE PURPOSE OF THE PROPOSED RULE: The potential impacts from IPR discharges are not contemplated by the existing regulatory structure for municipal dischargers. DEQ has determined that the proposed rules are the minimum that will provide a level of assurance that public health and the PWS waterbody are not negatively affected. IPR is one option to address water quantity concerns across the state, especially during times of drought.

DETERMINATION OF THE EFFECT ON PUBLIC HEALTH, SAFETY AND ENVIRONMENT: The proposed rules are designed to require an additional level of water treatment for IPR discharges to lower the potential for impacts to public health, safety, and the environment.

IF THE PROPOSED RULE IS DESIGNED TO REDUCE SIGNIFICANT RISKS TO THE PUBLIC HEALTH, SAFETY AND ENVIRONMENT, EXPLANATION OF THE NATURE OF THE RISK AND TO WHAT EXTENT THE PROPOSED RULE WILL REDUCE THE RISK: The primary risks associated with an IPR discharge to a waterbody include, among others, the potential to introduce higher levels of pathogens, increased levels of some primary and secondary drinking water contaminants, increased levels of nutrients and their corresponding potential to contribute to harmful algal blooms, and the introduction of constituents of emerging concern to the waterbody. These rules are intended to mitigate these risks, especially those from pathogens, exceedances of primary drinking water standards, and build-up of nutrients. Individual PWS systems would still have additional requirements under the SDWA to treat the raw water to acceptable levels for public consumption.

DETERMINATION OF ANY DETRIMENTAL EFFECT ON THE PUBLIC HEALTH, SAFETY AND ENVIRONMENT IF THE PROPOSED RULE IS NOT IMPLEMENTED:

Failure to pass the proposed rules would limit the options available to municipalities in acquiring additional public water supplies to ensure growth and to mitigate the impacts of drought on their drinking water supplies.

PROBABLE QUANTITATIVE AND QUALITATIVE IMPACT ON BUSINESS ENTITIES INCLUDING QUANTIFIABLE DATA WHERE POSSIBLE:

DEQ does not have access to any data on qualitative or quantitative impacts on business entities.

THIS RULE IMPACT STATEMENT WAS PREPARED ON: October 23, 2017