



ALASKA DEPARTMENT OF ENVIRONMENTAL CONSERVATION

WASTEWATER PROGRAM GUIDELINES:

Private Residential Marine Outfalls

Private Residential Marine Outfalls

Private Residential Marine Outfalls (PRMOs) are a common subset of marine outfalls defined as outfalls that serve a private single or two-family residence on a single defined legal lot that transmits domestic wastewater only for marine discharge with a flow of 1,500 gallons per day or less. PRMOs are common in Southeast Alaska and this page provides an explanation of the requirements in 18 AAC 72.

PRMOs require an engineering plan review and approval prior to construction. The following checklists (available to the right) may be helpful in outlining the required information and provide applicable plan submittal guidance and references to 18 AAC 72:

General Data Sheet

Package Plant – under 1,500 gpd

Surface Water Outfall

Utilidor, Collection and Pumping

An Alaska Pollutant Discharge Elimination System (APDES) permit for PRMOs is in development, but not yet available for issuance. Until the PRMO permit is available, all PRMO submittals must demonstrate the ability meet secondary treatment standards and disinfection performance standards.

The performance standards for secondary treatment are defined in [18 AAC 72.990\(59\)](#). Please see the full definition for a complete understanding, but below is a summary of the main constituents:

- Five-day measure of biochemical oxygen demand (BOD₅)
 - Mean of 30-day samples not to exceed 30 mg/l
 - Mean of 7-day samples not to exceed 45 mg/l
 - Mean of 24-hour samples not to exceed 60 mg/l
- Suspended solids
 - Mean of 30-day samples not to exceed 30 mg/l
 - Mean of 7-day samples not to exceed 45 mg/l
 - Mean of 24-hour samples not to exceed 60 mg/l
- pH
 - between 6.0 and 9.0

In addition to secondary treatment, each PRMO is required to disinfect the secondary treated effluent. The performance standards for disinfection are defined in [18 AAC 72.990\(21\)](#). Please see the full definition for a complete understanding, but below is a summary of the main constituents:

- Fecal coliform (FC) bacteria
 - Mean of a minimum of five effluent samples within 30 consecutive days does not exceed 200 FC bacteria per 100 ml

- Mean of effluent samples within 7 days does not exceed 400 FC bacteria per 100 ml
- Total Residual Chlorine (only in disinfection systems utilizing chlorine)
 - Mean of effluent samples within 30 consecutive days does not exceed 0.0075 mg/l
 - Mean of effluent 24-hour samples does not exceed 0.013 mg/l

Examples of suitable documentation of performance must be applicable to the proposed application's site conditions and can include, but are not limited to:

- Applicable NSF standard certification such as NSF 40 or NSF 46
- Certification or test results from recognized international testing organizations
- Peer reviewed testing results or standards from other jurisdictions
- Peer reviewed testing results
- Statistically significant field testing results submitted to the Department

Additionally, a professional engineer licensed by the State of Alaska may self-certify that the performance of the submitted design meets the minimum standards above. If the submitting engineer elects to self-certify minimum performance, it must be submitted on the Department's PRMO Minimum Performance Certification under the professional seal of the submitting design engineer. This form is available on the Department's website at:

http://dec.alaska.gov/water/wwdp/onsite/ww_planreview-cklist.htm#

If you have questions or concerns regarding the submittal requirements for PRMOs, please contact Gene McCabe, Section Manager for Wastewater Engineering Support and Plan Review, at 907-269-7692 or

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