



**Mercury Minimization Plan
Warrenton Wastewater Treatment Plant**

October 11, 2017

**MUNICIPAL MERCURY MINIMIZATION PLAN
WARRENTON WASTEWATER TREATMENT PLANT
NPDES #NC0020834**

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SECTION I - PURPOSE

The purpose of this Mercury Minimization Plan (“MMP”) is to describe best management practices through which the Town of Warrenton (the Town) will seek to reduce the amount of mercury discharged into its system and, ultimately, to the environment. The MMP compiles mercury reduction-related efforts to-date and potential future action items. It is designed to be a working document to help guide the Town in its efforts to control mercury loadings discharged into its Publicly-Owned Treatment Works (POTW) by users of the sewer system. Such a reduction in loadings to the sewer system should translate to a reduction in the amount of mercury which is discharged from the treatment plant. The management practices summarized below may also help control some of the mercury reaching our storm sewer system as well.

SECTION II – FACILITY DESCRIPTION

The Town operates a publicly owned treatment works (POTW), including a collection system and wastewater treatment plant (WWTP), that serves the Towns of Warrenton, Norlina and Soul City, North Carolina.

The WWTP is a 2.0 MGD treatment facility, utilizing the activated sludge process. The major treatment process consists of: preliminary treatment, oxidation ditches for biological treatment, secondary clarifiers, tertiary sand filter, disinfection, and solids handling. However, as with most municipal treatment plants, the Town’s WWTP is not designed to remove mercury and it is exceedingly expensive to do so to very low levels. Incidental mercury removal occurs through typical municipal treatment with trace levels of mercury (and other metals) ending up in solids removed from the raw wastewater.

Mercury is not used in the treatment processes at the WWTP. Mercury may be introduced into the sewer system through a variety of sources, such as from industrial users, laboratories, and other businesses. Residual deposits of mercury are also possible in the sewer system from historic practices. Finally, trace amounts from household products and atmospheric deposition (both wet and dry) contribute to sewer system mercury loadings.

While there is typically some mercury contributed to public sewer systems statewide, it is usually in minute quantities and comprises a tiny portion of the already insignificant statewide loading for all point sources - just two percent of the annual mercury loadings to all State waters.

SECTION III – PROGRAM PLAN

A. EVALUATION OF POTENTIAL NON-DOMESTIC SOURCES CONTRIBUTING MERCURY TO THE POTW

The Town will evaluate available information to assess the potential for non-domestic users of the sewer system to contribute mercury to the system. The information to be reviewed may include: (1) POTW influent and effluent mercury data and trends; (2) industrial user permits and associated mercury monitoring data; (3) Toxics Release Inventory (TRI); (4) state hazardous site registry and the National Priority List relating to mercury contamination; and (5) historical records of industrial sites which may have contributed mercury loadings to the sewer system.

The Town will also survey and evaluate the following common sources of mercury in its service area: (1) dentist offices; (2) hospitals; (3) laboratories; (4) auto recyclers; and (5) other potential sources of mercury based on existing information.

The Town will request that industrial users review mercury concentrations in high-volume process chemicals and demonstrate that the mercury concentrations are below industry average. The Town will request that alternative sources for chemicals be explored if the mercury levels are determined to be significantly higher than would normally be expected.

The evaluation of potential non-domestic sources of mercury to the sewer system will be updated every five years, as warranted by prior sampling results and any additional new potentially significant sources to the system.

B. ADDITIONAL CONTROL MEASURES

This MMP identifies reasonable and cost-effective control measures to minimize mercury being discharged into the POTW. Below is a listing of initial BMPs for this POTW.

Pollution Prevention

Substances used at the WWTP will be evaluated to determine if they contain mercury or mercury-based compounds. Any such chemicals will be evaluated for substitution with non-mercury-containing substances.

Housekeeping, Spill Control and Collection, and Education

The Town will develop procedures to minimize the possibility of any spill or release at the WWTP involving mercury containing substances. The Town will add mercury identification and proper disposal to ongoing and future operator training procedures.

Public Outreach

The Town will make available educational information regarding sources of household mercury and appropriate use/disposal practices. This information may be posted on the Town's website. The availability of this information will be highlighted in the next two years outreach to the Town's customers. The Town will also facilitate public awareness regarding community collection points for mercury-containing products from residents/customers for proper disposal. Periodic reminders of such collection programs will be provided as part of the Town's ongoing public outreach.

Laboratory Practice

The Town operates a laboratory for purposes of complying with state and federal monitoring and sampling requirements. The laboratory is a potential source of small quantities of mercury-containing compounds. Laboratory employees will be trained in the proper handling and disposal of these materials. The laboratories have also replaced mercury thermometers with non-mercury thermometers, whenever practical.

C. TRACKING AND MONITORING

In order to assess the implementation of the control measures, the Town proposes to undertake the following evaluations beginning after the first full year that this MMP is implemented:

1. Survey annually at least ten percent (10%) of any non-domestic users identified as possible significant sources of mercury to the POTW;
2. Track the implementation of the programs outlined above;
3. Monitor influent mercury at least annually. Require significant non-domestic sources of mercury to monitor periodically, as warranted; and
4. Measure effluent mercury as required by the NPDES permit.

These efforts will allow the Town to establish a baseline of influent and effluent mercury levels to assist in identifying any trends in mercury contributions from domestic and non-domestic users of the sewer system. This baseline will be tracked annually.

SECTION IV — IMPLEMENTATION OF CONTROL MEASURES

The Town will implement the control measures summarized in Section III over the permit term and will update this MMP as warranted.

SECTION V – REPORTING

A summary of the MMP activities will be submitted as part of the NPDES permit renewal process.