

Martha's Vineyard Airport Water, Wastewater, and Facilities Department Information and Overview

May 2017

MVY Airport
71 Airport Road
West Tisbury, MA

Public Water Supply # 4296004
Groundwater Discharge Permit
No. SE #3-171
<http://www.mvyairport.com>

Contact:

Mike Eldridge
Chief Operator

Jeremy Osborn
Operator

Christina Colarusso
Operator

Office Hours:
M-F 8:00 AM to 3:00 PM
Office: 508-693-3783

Martha's Vineyard Airport Commission
(MVAC):

Meeting Schedule:
Official meeting notices and agendas are posted on the bulletin board in the GA building at the Airport and are accessible 24 hours a day on our website. Meetings are open to the public. Call the Airport Managers office for the procedure to be placed on the agenda.

Water Department Overview

The main objective of this report is to inform our customers of where they get their water from, how it is treated after being used and how your money is being spent.

How we are defined by State DEP as a Public Water System (PWS)

The EPA (Environmental Protection Agency) and State Department of Environmental Protection (MADEP) defines public water systems in the following categories: Community Water System (COM), Non-Transient Non-Community Water System (NTNC) and Transient Non-Community Water System (TNC).

For our purposes we will go over Community and Non-Transient Non-Community Water Systems as it relates to us.

A water system that serves residential customers year round with at least 15 service connections or at least 25 year round residents is classified as a Community Water System.

All Community Water System are required by the Safe Drinking Water Act to issue an annual Consumer Confidence Report for their systems.

This water distribution system is classified as a Non-Transient Non-Community Water System (NTNC) because it doesn't serve year round residential housing but we do have at least 15 service connections and serve at least 25 people 60 or more days each year.



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For information on water supplied by OBWD contact:

Oak Bluffs Water District
P.O. Box 1297
96 Vineyard Avenue
Oak Bluffs, MA 02557
(508) 693-5527
(508) 693-7014 FAX
e-mail: obwater@comcast.net
PWSID #4221000

Although we are not required to prepare an annual Consumer Confidence Report as outlined by the Safe Drinking Water Act (SDWA), the airport management felt it was our responsibility to have an informed customer base.

In addition, this water system is classified as a consecutive water distribution system because we get all our water through the Oak Bluffs Water District.

Oak Bluffs Water District and the Edgartown Water Department maintain an interconnection for backup emergency use which helps to stabilize our water supply.

All our water passes through a master meter that the Oak Bluffs Water District invoices the airport for.

The water distribution system is operated and maintained by the Martha's Vineyard Airport Water Department.

The water distribution system follows Barnes Road starting at the Deer Run Housing Development. The distribution system enters the business park along the North Road entrance, supplies the MV Business Park and continues on to the airport terminal ending at the airport wastewater treatment plant.

The airport maintains the distribution system by performing fire flow testing, hydrant maintenance, flushing the water mains, monthly bacterial testing, Cross-Connection Backflow Prevention Testing and inspections, Sanitary Surveys, Leak Detection and Water Audits, assists with water meter installations, monthly water meter readings and invoicing for water use.

The airport water department also files an Annual Statistical Report with the MA DEP Drinking Water Program which can be made available upon request.

The airport water department would like to thank the Oak Bluffs and Edgartown Water Departments for their help and support over the past years and look forward to many more.

MEMBERSHIP AFFILIATIONS

WATER DEPARTMENT

AWWA

American Water Works Association

MWWA

Massachusetts Water Works Association

NEWWA

New England Water Works Association

WASTEWATER DEPARTMENT

MWPCA

Massachusetts Water Pollution Control Association

WEF

Water Environment Federation

NEIWPCC

New England Interstate Water Pollution Control Commission

Jeremy Osborn Operator Licenses

MA Wastewater:

License #15997 7-C full active

Christina Colarusso

B.S Marine Engineering, Mass Maritime
EPA Universal Refrigeration Technician
Second Engineer, Motor and Gas Turbine
Third Engineer, Steam of Unlimited HP
High Voltage Safety Training, MEBA

Michael W Eldridge Operator Licenses

MA drinking water:

License# 12362 VSS full
License# 23744 4T OIT (treatment)
License# 23481 4D OIT (distribution)
License# 32160 Backflow Tester and
 Surveyor

MA Wastewater:

License#4870 7-C full active
License#HE-063217 Hoisting Engineer
Certification # C-3322 Collection System
 Operator
Certification# C-0523 Laboratory Analyst

CONSUMER CONFIDENCE REPORT OVERVIEW

The Martha's Vineyard Airport Water Department routinely monitors for constituents in your drinking Water according to Federal and State laws. In order to ensure that tap water is safe to drink, the MADEP and EPA prescribe regulations that limit the amount of certain contaminants in water provided by public water systems. The Food and Drug Administration and the Massachusetts Department of Public Health regulations establish limits for contaminants in bottled water that must provide the same protection for public health.

The water quality tables at the end of this drinking water section show the results of our monitoring for the year indicated. In the case where a contaminant is sampled for, on less than an annual basis (i.e. once every three years), we have included in the table the last sample result and the year in which the sample was taken. DEP may reduce the monitoring requirements for synthetic organic compounds (SOCs) and inorganic compounds (IOCs) to less often than once per year if the source is not at risk of contamination.

The Oak Bluffs Water District samples for regulated contaminants, as well as unregulated contaminants. Unregulated contaminants are those for which EPA has not established drinking water standards. The purpose of unregulated contaminant monitoring is to assist EPA in determining their occurrence in drinking water and whether future regulation is warranted.

Source Waters and their potential contaminants

Many drinking water sources in New England are naturally corrosive (i.e. they have a pH of less than 7.0 and or are soft water). The water they supply has a tendency to corrode and dissolve the metal piping it flows through. This not only damages the pipes but can also add harmful metals, such as lead and copper, to the water. For this reason, it is sometimes beneficial to add chemicals that make the water neutral or slightly alkaline. This is done by adding any one, or a combination or several, approved chemicals. The Oak Bluffs Water District treats the groundwater for pH adjustment and adds fluoride to the water to aid in dental hygiene.

All present and future treatment methods must be approved by the Department of Environmental Protection and chemical dosages used are reported to them monthly.

AT RISK INDIVIDUALS

Some people may be more vulnerable to contaminants in drinking water than the general population. Immune-compromised persons such as persons with cancer undergoing chemotherapy, persons who have undergone organ transplants, people with HIV/AIDS or other immune system disorders, some elderly and infants can be particularly at risk from infections. These people should seek advice about drinking water from their health care providers. EPA/CDC guidelines on appropriate means to lessen the risk of infection by cryptosporidium and other microbiological contaminants are available from the **Safe Drinking Water Hotline (800-426-4791)**.

Health Statement for Lead

If present, elevated levels of lead can cause serious health problems, especially for pregnant women and young children. Lead in drinking water is primarily from materials and components associated with service lines and home plumbing. The Oak Bluffs Water District and Martha's Vineyard Airport Water Department is responsible for providing high quality drinking water, but cannot control the variety of materials used in plumbing components. When your water has been sitting for several hours, you can minimize the potential for lead exposure by flushing your tap for 30 seconds to 2 minutes before using water for drinking or cooking. If you are concerned about lead in your water, you may wish to have your water tested. Information on lead in drinking water, testing methods and steps you can take to minimize exposure is available from the **Safe Drinking Water Hotline** or at <http://www.epa.gov/safewater/lead>.

How Your Money Is Spent For Water Service

The water department performs annual flushing and fire flow testing of all hydrants located at the Airport terminal, Business Park and beside Barnes Road from the Oak Bluffs/Edgartown line to the entrance of the business park.

After flushing the hydrants, any maintenance that is required is noted and scheduled. Hydrants are kept clear of overgrowth and snow as needed.

Monthly water samples are collected at State DEP approved sites and sent out for coliform testing.

Monthly water meter readings are taken at the end of every month and are checked for any unusual flows which could indicate a leak. If unusual flows are observed, we may contact the master lease holder to coordinate conducting a water audit to locate leaks.

Water audits can also be performed at a customer's request to locate any water leaks or unusual water bills. Water meters are also tested to insure that our customers are only paying for what they use.

Oak Bluffs Water District has our master meter calibrated and tested on a regular basis, usually every two to three years.

We oversee service line tie-ins, review plumbing plans and layouts, water meter installations and materials used, cross-connection surveys and backflow testing, leak detections, mark out water lines for Dig-Safe, fill out forms and labels for sampling.

Once a year we submit an Annual Statistical Report to the State DEP Drinking Water Program that outlines the status of our water system.

Once every three years we take samples for lead and copper and send them out for testing.

Drinking Water Testing

Martha's Vineyard Airport uses State Certified Laboratories to perform our water testing per DEP sampling requirements. We have several laboratories that perform all of our water and wastewater tests including volatile organic compound testing. Laboratory results and Chain of Custody are available upon request.

Water Quality Tables

The following tables indicate the results of any detectable Coliforms from our monthly bacteriological testing along with our Lead and Copper sampling results. The Oak Bluffs Water Department does many more tests as our water supplier which is included with their Water Quality Report.

2009

Lead & Copper	Date Collected	90 th Percentile of Sample	Action Level	MCLG	Violation	Possible Source of Contamination
Lead (ppb)	7/21/2009	3.7	15	0	No	Corrosion of household plumbing systems
Copper (ppm)	7/21/2009	0.077	1.300	1.3	No	Corrosion of household plumbing systems

ppb: parts per billion

ppm: parts per million

ND: non-detected

AL: action level is the concentration of a contaminant that, if exceeded, triggers treatment or other requirements, which a water system must follow.

Lead and Copper 90th Percentile: Out of ten samples, nine were at or below this level.

2010

Microbial Results	Highest # of Positive Samples in a Month	MCL	MCLG	Violation	Possible Source of Contamination
Total Coliform	0	1	0	No	Naturally present in the environment
Fecal Coliform-E. coli	0	*	0	No	Human and animal Fecal waste

*Compliance with the Fecal Coliform/E-coli MCL is determined upon additional testing.

MCL: Maximum Contaminant Level is the highest level of a contaminant that is allowed in drinking water. MCLs are set as close to the MCLGs as feasible using the best available treatment technology.

MCLG: Maximum Contaminant Level Goal is the level of a contaminant in drinking water below which there is no known or expected risk to health. MCLGs allow for a margin of safety.

Water Quality Tables 2011

Microbial Results	Highest # of Positive Samples in a Month	MCL	MCLG	Violation	Possible Source of Contamination
Total Coliform	0	1	0	No	Naturally present in the environment
Fecal Coliform-E. coli	0	*	0	No	Human and animal Fecal waste

*Compliance with the Fecal Coliform/E-coli MCL is determined upon additional testing.

MCL: Maximum Contaminant Level is the highest level of a contaminant that is allowed in drinking water. MCLs are set as close to the MCLGs as feasible using the best available treatment technology.

MCLG: Maximum Contaminant Level Goal is the level of a contaminant in drinking water below which there is no known or expected risk to health. MCLGs allow for a margin of safety.

Water Quality Tables

2012

Microbial Results	Highest # of Positive Samples in a Month	MCL	MCLG	Violation	Possible Source of Contamination
Total Coliform	0	1	0	No	Naturally present in the environment
Fecal Coliform-E. coli	0	*	0	No	Human and animal Fecal waste

*Compliance with the Fecal Coliform/E-coli MCL is determined upon additional testing.

MCL: Maximum Contaminant Level is the highest level of a contaminant that is allowed in drinking water. MCLs are set as close to the MCLGs as feasible using the best available treatment technology.

MCLG: Maximum Contaminant Level Goal is the level of a contaminant in drinking water below which there is no known or expected risk to health. MCLGs allow for a margin of safety.

2012

Lead & Copper	Date Collected	90 th Percentile of Sample	Action Level	MCLG	Violation	Possible Source of Contamination
Lead (ppb)	7/24/2012	9	15	0	No	Corrosion of household plumbing systems
Copper (ppm)	7/24/2012	0.074	1.300	1.3	No	Corrosion of household plumbing systems

ppb: parts per billion

ppm: parts per million

ND: non-detected

AL: action level is the concentration of a contaminant that, if exceeded, triggers treatment or other requirements, which a water system must follow.

Lead and Copper 90th Percentile: Out of ten samples, nine were at or below this level.

Next sampling for lead and copper due 2015

Water Quality Tables

2013

Microbial Results	Highest # of Positive Samples in a Month	MCL	MCLG	Violation	Possible Source of Contamination
Total Coliform	0	1	0	No	Naturally present in the environment
Fecal Coliform-E. coli	0	*	0	No	Human and animal Fecal waste

*Compliance with the Fecal Coliform/E-coli MCL is determined upon additional testing.

MCL: Maximum Contaminant Level is the highest level of a contaminant that is allowed in drinking water. MCLs are set as close to the MCLGs as feasible using the best available treatment technology.

MCLG: Maximum Contaminant Level Goal is the level of a contaminant in drinking water below which there is no known or expected risk to health. MCLGs allow for a margin of safety.

Although it is believed that there is no asbestos drinking water distribution piping in our system. The Martha's Vineyard Water Department tests the drinking water to confirm this.

Determination of Asbestos Structures >10um in Drinking Water Performed by the 100.2 Method (EPA 600/R-94/134)

2013

Location	Date Collected	Asbestos Types	Fibers Detected	Analytical Sensitivity MFL	Violation	Possible Source of Contamination
At Start of Distribution System	4/25/2013	None Detected	ND	0.19	No	Asbestos water distribution pipes
At End of Distribution System	4/25/2013	None Detected	ND	0.19	No	Asbestos water distribution pipes

MFL: million fibers per liter
ND: non-detected

Next sampling for asbestos due 2022

Water Quality Tables

2014

Microbial Results	Highest # of Positive Samples in a Month	MCL	MCLG	Violation	Possible Source of Contamination
Total Coliform	0	1	0	No	Naturally present in the environment
Fecal Coliform-E. coli	0	*	0	No	Human and animal Fecal waste

*Compliance with the Fecal Coliform/E-coli MCL is determined upon additional testing.

MCL: Maximum Contaminant Level is the highest level of a contaminant that is allowed in drinking water. MCLs are set as close to the MCLGs as feasible using the best available treatment technology.

MCLG: Maximum Contaminant Level Goal is the level of a contaminant in drinking water below which there is no known or expected risk to health. MCLGs allow for a margin of safety.

Water Quality Tables

2015

Microbial Results	Highest # of Positive Samples in a Month	MCL	MCLG	Violation	Possible Source of Contamination
Total Coliform	0	1	0	No	Naturally present in the environment
Fecal Coliform-E. coli	0	*	0	No	Human and animal Fecal waste

*Compliance with the Fecal Coliform/E-coli MCL is determined upon additional testing.

MCL: Maximum Contaminant Level is the highest level of a contaminant that is allowed in drinking water. MCLs are set as close to the MCLGs as feasible using the best available treatment technology.

MCLG: Maximum Contaminant Level Goal is the level of a contaminant in drinking water below which there is no known or expected risk to health. MCLGs allow for a margin of safety.

2015

Lead & Copper	Date Collected	90 th Percentile of Sample	Action Level	MCLG	Violation	Possible Source of Contamination
Lead (ppb)	9/22/2015	0	15	0	No	Corrosion of household plumbing systems
Copper (ppm)	9/22/2015	0.190	1.300	1.3	No	Corrosion of household plumbing systems

ppb: parts per billion

ppm: parts per million

ND: non-detected

AL: action level is the concentration of a contaminant that, if exceeded, triggers treatment or other requirements, which a water system must follow.

Lead and Copper 90th Percentile: Out of ten samples, nine were at or below this level.

Next sampling for lead and copper due 2018

Water Quality Tables

2016

Microbial Results	Highest # of Positive Samples in a Month	MCL	MCLG	Violation	Possible Source of Contamination
Total Coliform	0	1	0	No	Naturally present in the environment
Fecal Coliform-E. coli	0	*	0	No	Human and animal Fecal waste

*Compliance with the Fecal Coliform/E-coli MCL is determined upon additional testing.

MCL: Maximum Contaminant Level is the highest level of a contaminant that is allowed in drinking water. MCLs are set as close to the MCLGs as feasible using the best available treatment technology.

MCLG: Maximum Contaminant Level Goal is the level of a contaminant in drinking water below which there is no known or expected risk to health. MCLGs allow for a margin of safety.

Wastewater Department Overview

The State Department of Environmental Protection's Bureau of Resource Protection oversees the wastewater facility and its operation.

The State DEP issued a Ground Water Discharge Permit to the Martha's Vineyard Airport to operate the WWTF with conditions that the airport must follow. A copy of the seven page permit is distributed to the chief operator, the airport commission, the West Tisbury Board of Health and the Boston DEP.

The Martha's Vineyard Wastewater Treatment Facility has been in operation since the early 1940's. It was built to serve the Naval Air Station that was created during the war.

The WWTF is located on approximately five acres of fenced in land located in West Tisbury on the southwest corner of the airport.

The WWTF originally consisted of a settling tank. The settling tank water flowed to a dosing tank before being discharged underground.

Due to concerns about the islands sole source aquifer, the WWTF was upgraded to a small advanced facility. The WWTF upgrade was finished and went online in June of 1992. The new facility consists of a process, utility, office and storage rooms along with a laboratory and restroom.

The process room contains a single four stage aerobic Rotating Biological Contactor (with space for a second RBC), dual anoxic RBCs, two secondary clarifiers and dual sand filters followed by ultraviolet disinfection before discharge to the new surface rapid infiltration beds.

Outside the facility, the following units have been added: a coarse bar rack, a primary settling tank (or clarifier), flow equalization tank with two pumps, a sludge holding tank and the original dosing tank that discharges to the original discharge beds that can be used if needed.

Excess sludge is removed from the holding tank by tanker and brought off-island for further treatment.

The facility is connected through a series of sewer pipes ranging in size from four inch to twelve inch gravity as well as a four inch force main from the business park pump station. There are approximately two miles of main sewer lines.

WWTF specifications:

Combined Grade 4 Facility as of May 2017, Previously Grade 5

Flow capacity for the current Phase 1 is 37,000 gallons per day, for Phase 2 it is 61,000 GPD with the addition of the second aerobic RBC.

Staff is three fulltime employees, consisting of one chief operator, one operator, and one operator in training.

Wastewater Test Results Summary

Influent (incoming) Wastewater is tested for the following:

pH (acidity)

Total Suspended Solids

Biological Oxygen Demand (strength of wastewater)

Oil and Grease (coats piping, hard to break down)

Ammonia as Nitrogen (eutrophication in ponds)

Volatile Organic Compounds (can be vaporized in air or dissolved in water, causes cancer and other health problems)

Effluent (outgoing) Wastewater is tested or measured for the following:

Flow (gallons per day must stay within limits for the WWTF design flows)

pH

Total Nitrogen (includes ammonia, nitrites and nitrates; causes eutrophication)

Total Suspended Solids

Total Solids

Oil and Grease

Biological Oxygen Demand (oxygen used by organisms to breakdown waste)

Nitrate Nitrogen

Fecal Coliform

Total Phosphorus (eutrophication)

Orthophosphate (eutrophication)

Volatile Organic Compounds

Effluent Monitoring Wells are tested or measured for the following:

Static water level

Specific Conductance (amount of solids and salts)

pH

Total Nitrogen

Nitrate as Nitrogen

Total Phosphorus

Orthophosphate

Volatile Organic Compounds

The wastewater department test results have consistently been within the parameters required by the State.

The efficiency of the WWTF for BOD and TSS has been in the high 90%. There have been no violations or notice of non-compliances issued to this department for many years.

How Your Money Is Spent For Wastewater Service (Just the Highlights)

On a daily basis we check the process for alarms and run conditions, check emergency generator status, change 24 hour flow chart, check UV operation, take influent wastewater and effluent wastewater pH and temperature readings, add lime to primary tank for alkalinity control, check Business Park Pump Station status, clean influent coarse bar rack, check equalization tank for proper water level, drain down sludge lines, perform laboratory tests for process control such as nitrogen, check methanol level in storage drums and dosing pump operation.

On a weekly basis we clean the UV light assembly, transition boxes and effluent flume. The flume is used in conjunction with flow measuring equipment that is calibrated annually. Weekly laboratory tests that we perform are for total and/or fecal coliform, alkalinity and ammonia. Flush the emergency shower and eye wash station, maintenance on equipment, order supplies and materials, pump primary tank sludge to sludge holding tank for further dewatering. Decant excess water from sludge holding tank back to the primary tank to save on shipping cost with a thicker sludge. The Business Park Pump Station is checked for proper operation of wet well pumps, wet well water level, propane tank level and status of emergency generator.

As needed the grass is cut, supplies are checked, maintenance on truck, building cleaned, trash disposed, paperwork filed, building or equipment painted and service scheduled.

On a monthly basis we exchange two of the discharge beds that are in service with the two that were off-line. This introduces air into the beds to promote better filtration within the sand.

Twice a month we collect influent and effluent wastewater samples and send them out to a State certified laboratory to test for contaminants in the wastewater that must meet our Discharge Permit. These test results and process data that we collect daily are entered into the computer at the WWTF and reported to the State DEP, Airport Management as requested, and the West Tisbury Board of Health.

Quarterly we collect groundwater samples from the effluent discharge monitoring wells located up-gradient and down-gradient of the discharge beds. Volatile Organic Compounds (gasoline, cleaning solvents, etc.) sampling is also done. These samples are sent out and the test results reported to above agencies.

Once a year all the laboratory equipment is tested and calibrated. A sludge sample is taken and sent out for analysis.

The State also has requirements that we take educational courses to stay current with technology and practices.

Besides providing safe water that is disposed of safely, we (the airport) strive to do it in a way that is as cost effective as possible.

Any questions please feel free to contact us at 508-693-3783

The Facilities Department was added to the Water and Wastewater Departments in November 2016 when Jeremy Osborn and Christina Colarusso were hired to join Mike Eldridge. The departments are responsible for maintaining the Airport's water distribution system, drinking water sampling, maintaining the airport's wastewater collection system and treatment plant, wastewater sampling and testing, and maintaining and overseeing mechanical systems in the airport terminal, General Aviation, and other ancillary buildings.