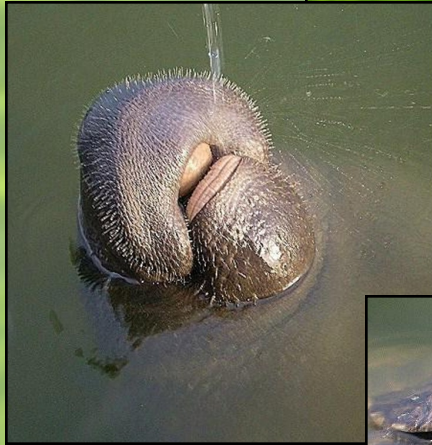




Patrick
Air Force Base



2011

Water Quality Report

**2011 Water Quality Report
Patrick Air Force Base (AFB)
PWS-ID: 3054128**

According to the Environmental Protection Agency (EPA), each water system is required to publish an annual Consumer Confidence Report (CCR). The CCR is intended to inform you about the quality of your drinking water. All drinking water sampling requirements, results and any contaminants exceeding regulatory limits defined by the EPA's Safe Drinking Water Act (SDWA) are published in this report.

TABLE OF CONTENTS

- SECTION 1:** WATER SOURCES, SOURCE WATER PLAN, AND TREATMENT
- SECTION 2:** COMPLIANCE INFORMATION
- SECTION 3:** CONTACT INFORMATION
- SECTION 4:** PERIOD COVERED BY REPORT
- SECTION 5:** TERMS AND ABBREVIATIONS
- SECTION 6:** WATER QUALITY TEST RESULTS
- SECTION 7:** VIOLATIONS
- SECTION 8:** SPECIAL NOTICE REQUIREMENTS FOR THE GROUNDWATER RULE
- SECTION 9:** REPORTING DETECTIONS OF ARSENIC, NITRATES, *CRYPTOSPORIDIUM*, AND RADON
- SECTION 10:** LEAD INFORMATION
- SECTION 11:** VULNERABLE POPULOUS INFORMATION
- SECTION 12:** CLOSING

SECTION 1: WATER SOURCES, SOURCE WATER PLAN, AND TREATMENT

We are pleased to present you our annual water quality report. This report is designed to inform you about the quality water and services delivered to you every day. Our constant goal is to provide you with a safe and dependable supply of drinking water. We want you to understand the efforts we make to continually improve the water treatment process and protect our water resources. We are committed to ensuring the quality of your water. Patrick AFB purchases drinking water from the neighboring Cities of Cocoa and Melbourne. Because of this arrangement, we are classified as a "Consecutive Community Water System".

The City of Cocoa retrieves raw groundwater from the Floridan Aquifer and the overlying secondary artesian aquifer. As a supplement to the aquifer, the City of Cocoa also utilizes surface water from the Taylor Creek Reservoir. The City of Cocoa treats ground and surface water at the Dyal Water Treatment Plant. Ground water is treated by adding chlorine, lime, soda ash, and coagulant to remove hardness and suspended solids. Fluoride is then added to the water in accordance with the Environmental Protection Agency/Center for Disease Control (EPA/CDC) guidelines. Carbon dioxide is added to reduce the pH and to stabilize the water. Chloramination is used to disinfect the water before passing through filters containing sand and anthracite coal. Turbidity (cloudiness) is constantly measured at each filter. Surface water requires a different type of treatment. After surface water enters the plant, ferric sulfate, hydrated lime and a polymer are added. Ozone is injected into clarified water for disinfection, taste and odor removal, and for control of disinfection by-products. After adding ozone, the water is treated with hydrated lime, carbon dioxide, chlorine, and ammonia before passing through sand and anthracite coal filters. Turbidity is constantly measured at each filter. Water from both processes is pumped and blended into storage tanks before it is sent into the distribution system.

The City of Melbourne also retrieves its ground water from the Floridan Aquifer and augments this supply with surface water from Lake Washington. Surface water from Lake Washington is treated using a micro-sand ballasted, coagulation process (Actiflo). The water is then treated for taste and odor (plus pre-disinfection) using the ozone process, before being filtered through granular activated carbon filters. Concurrently, brackish ground water from the Floridan Aquifer is treated using the reverse osmosis filtering process. The product waters from both processes are then blended, disinfected using chloramines, pH adjusted and fluoridated before being pumped to the distribution system.

Once the water reaches Patrick AFB, the 45th Civil Engineer Squadron provides appropriate chlorine residual using an automatic injection system. The water is then distributed throughout Patrick AFB through a system of pipes to assure a safe supply of water is available at sufficient pressure to serve the needs of base personnel, family housing residents, and the Child Development Center.

Source Water Assessment for Cocoa

In 2011 the Florida Department of Environmental Protection (FDEP) completed a Source Water Assessment on Cocoa's system. The assessment was conducted to provide information about any potential sources of contamination in the vicinity of our water supply. The Source Water Assessment identified 29 potential sources of contamination in the well field and at the plant with levels of concern rated at "low to moderate." The potential sources were identified as the backup power generators and the diesel storage tanks used to power the generators located at the well sites and the plant. The tanks are regularly inspected for leakage. The Taylor Creek Reservoir intake assessment was considered to have a concern level of "low" with no potential sources of contamination.

Source Water Assessment for Melbourne

In 2011 the Florida Department of Environmental Protection (FDEP) completed a Source Water Assessment on Melbourne's system. The assessment was conducted to provide information about any potential sources of contamination in the vicinity of ground water wells and surface water intakes. Three potential sources of contamination were identified for the groundwater wells and were rated with a "moderate" level of concern. The potential sources were identified as the petroleum storage tanks used for backup generator power and general industrial waste water. The assessment for surface water identified multiple sources of potential contamination present in the water system area. The surface water was considered to have a "high" level of concern.

The assessment results for both cities are available on the FDEP Source Water Assessment and Protection Program Web site at www.dep.state.fl.us/swapp

SECTION 2: COMPLIANCE INFORMATION

We are pleased to report that our drinking water meets all federal and state requirements.

SECTION 3: CONTACT INFORMATION

For specific information about Patrick AFB's drinking water system, you can call the Bioenvironmental Engineering Flight at (321) 494-5435, the Public Health Flight at (321) 494-8292, or Civil Engineer Customer Service at (321) 494-7773/7883. Water quality questions, concerns, and comments can also be addressed at town meetings. For more information about the City of Cocoa water supply, you can call (321) 433-8705, or visit the City's Drinking Water web site under Utilities at <http://www.cocoafl.org>

For information Concerning the City of Melbourne's water supply, you can contact Melbourne Public Works & Utilities Department at (321) 674-5761 or visit the city's web site at <http://www.melbourneflorida.org>. Consumers can also call the EPA Safe Drinking Water Hotline at 1-800-426-4791, or visit EPA's web site at <http://www.epa.gov/safewater/dwhealth.html> for additional information about contaminants and potential health risks.

SECTION 4: PERIOD COVERED BY REPORT

Patrick AFB's drinking water system routinely monitors for contaminants in your drinking water according to Federal and State laws, rules and regulations. Except where indicated otherwise, this report is based on the results of our monitoring for the period of January 1 to December 31, 2011. Data obtained before January 1, 2011, and presented in this report are from the most recent testing done in accordance with the laws, rules, and regulations.

SECTION 5: TERMS AND ABBREVIATIONS

Throughout this report you may find unfamiliar terms and abbreviations. To help you better understand these terms we've provided the following definitions:

Action Level (AL): The concentration of a contaminant which, if exceeded, triggers treatment or other requirements that a water system must follow.

Bioenvironmental Engineering Flight (BEF): Active Duty Air Force members responsible for sampling and monitoring the Patrick AFB water system for contaminants listed in this report.

Initial Distribution System Evaluation (IDSE): An important part of the Stage 2 Disinfection Byproducts Rule (DBPR). The IDSE is a one-time study conducted by water systems to identify distribution system locations with high concentrations of trihalomethanes (THMs) and haloacetic acids (HAAs). Water systems will use the results from the IDSE, in conjunction with their Stage 1 DBPR compliance monitoring data, to select compliance monitoring locations for the Stage 2 DBPR.

Maximum Contaminant Level or MCL: 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.

Maximum Contaminant Level Goal or MCLG: 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.

Maximum Residual Disinfectant Level or MRDL: The highest level of a disinfectant allowed in drinking water. There is convincing evidence that addition of a disinfectant is necessary for control of microbial contaminants.

Maximum Residual Disinfectant Level Goal or MRDLG: The level of a drinking water disinfectant below which there is no known or expected risk to health. MRDLGs do not reflect the benefits of the use of disinfectants to control microbial contaminants.

Million fibers per liter (MFL): Measure of the presence of asbestos fibers that are longer than 7 micrometers.

Millirem per year (mrem/yr): Measure of radiation absorbed by the body.

SECTION 5: TERMS AND ABBREVIATIONS (cont.)

Nephelometric Turbidity Unit (NTU): Measure of clarity of water. Turbidity in excess of 5 NTU is just noticeable to the average person.

Not Detected (ND): Not detected and indicates that the substance was not found by laboratory analysis.

Parts per million (ppm) or Milligrams per liter (mg/l): One part by weight of analyte to 1 million parts by weight of the water sample.

Parts per billion (ppb) or Micrograms per liter (µg/l): One part by weight of analyte to 1 billion parts by weight of the water sample.

Picocurie per liter (pCi/L): Measure of the radioactivity in water.

Treatment Technique (TT): A required process intended to reduce the level of a contaminant in drinking water

SECTION 6: WATER QUALITY TEST RESULTS

To ensure our drinking water is potable and all Safe Drinking Water Act (SDWA) regulatory limits are met, the Bioenvironmental Engineering Flight (BEF) and the Cities of Cocoa and Melbourne conduct routine sampling, analysis, and monitoring of the drinking water. Each sample type requires a different sampling technique and frequency. Some are required several times throughout the year, while others are required annually or on three, four, or even nine-year intervals. This report shows our water quality results and what they mean. For your information, we have compiled the tables below to show what substances were detected in our drinking water during 2011. We feel it is important that you know exactly what was detected and how much of the substance was present in the water.

The Total Coliform Rule requires water systems to meet a stricter limit for coliform bacteria. Coliform bacteria are usually harmless, but their presence in water can be an indication of disease-causing bacteria. When coliform bacteria are found, special follow-up tests are done to determine if harmful bacteria are present in the water supply. If this limit is exceeded, the water supplier must notify the public by newspaper, television or radio. To comply with the stricter regulation, we have increased the average amount of chlorine in the distribution system.

At Patrick AFB the Bioenvironmental Engineering Flight routinely collects a minimum of 9 samples each month from representative locations throughout the base and housing areas. In 2011 there were no instances where greater than 40 samples were collected in a single month.

Microbiological Contaminants						
Contaminant and Unit of Measurement	Dates of sampling (mo./yr.)	MCL Violation Y/N	Highest Monthly Percentage/ Number	MCLG	MCL	Likely Source of Contamination
Patrick AFB						
Total Coliform Bacteria (positive samples)	2011 Monthly	No	1	0	For systems collecting fewer than 40 samples per month: presence of coliform bacteria in >1 sample collected during a month	Naturally present in the environment
City of Melbourne						
Total Coliform Bacteria (positive samples)	2011 Monthly	No	1.4%	0	For systems collecting at least 40 samples per month: presence of coliform bacteria in >5% of monthly samples	Naturally present in the environment

Microbiological Contaminants						
<i>Contaminant and Unit of Measurement</i>	<i>Dates of sampling (mo./yr.)</i>	<i>MCL Violation Y/N</i>	<i>Highest Monthly Percentage/ Number</i>	<i>MCLG</i>	<i>MCL</i>	<i>Likely Source of Contamination</i>
City of Cocoa						
Total Coliform Bacteria (positive samples)	2011 Monthly	No	4.5%	0	For systems collecting at least 40 samples per month: presence of coliform bacteria in >5% of monthly samples	Naturally present in the environment
<i>Contaminant and Unit of Measurement</i>	<i>Dates of sampling (mo./yr.)</i>	<i>MCL Violation Y/N</i>	<i>Highest Monthly Percentage/ Number</i>	<i>MCLG</i>	<i>MCL</i>	<i>Likely Source of Contamination</i>
Fecal Coliform and <i>E. Coli</i> in the distribution system (positive samples)	2011 Monthly	No	0	0	0	Human and animal fecal waste
* <i>E. Coli</i> (at the ground water source)	1/11 – 12/11	No	3	0	0	Human or animal fecal waste
<p>The result reported in the Highest Monthly Percentage/Number column is the highest number of total coliform-positive samples reported monthly throughout the year.</p> <p>*All fecal indicator-positive ground water source samples (which include both triggered source water samples and assessment source water samples) are further explained in Section 8, Special Notice Requirements for the Ground Water Rule.</p>						

<i>Contaminant and Unit of Measurement</i>	<i>Dates of sampling (mo./yr.)</i>	<i>MCL Violation Y/N</i>	<i>The Highest Single Measurement</i>	<i>The Lowest Monthly Percentage of samples meeting regulatory Limits</i>	<i>MCLG</i>	<i>MCL</i>	<i>Likely Source of Contamination</i>
City of Cocoa							
*Turbidity (NTU)	2010 (Daily)	No	0.21	100	N/A	TT	Soil runoff
City of Melbourne							
Turbidity (NTU)	1-11 - 12-11	No	0.07	100	N/A	TT	Soil runoff
<p>The result in the Lowest Monthly Percentage column is the lowest monthly percentage of samples reported in the Monthly Operating Report meeting the required turbidity limits.</p> <p>Turbidity is a measure of the cloudiness of the water. We monitor it because it is a good indicator of the effectiveness of our filtration system. High turbidity can hinder the effectiveness of disinfectants.</p> <p>*Surface water plant was not in operation for the 2011 water quality reporting period. Reported results are from 2010.</p>							

Radioactive Contaminants							
City of Cocoa							
<i>Contaminant and Unit of Measurement</i>	<i>Dates of sampling (mo./yr.)</i>	<i>MCL Violation Y/N</i>	<i>Level Detected</i>	<i>Range of Results</i>	<i>MCLG</i>	<i>MCL</i>	<i>Likely Source of Contamination</i>
Alpha emitters (pCi/L)	2011 (Monthly)	No	0.87 (Highest Running Annual Average)	ND-3.70	0	15	Erosion of natural deposits
Radium 226 + 228 [Combined radium] (pCi/L)	2011 (Monthly)	No	1.30 (Highest Running Annual Average)	ND-2.10	0	5	Erosion of natural deposits
<p>Results in the Level Detected column for radioactive contaminants are the highest average at any of the sample points or the highest detected level at any sampling point depending on sample frequency.</p>							

Inorganic Contaminants							
City of Cocoa							
Contaminant and Unit of Measurement	Dates of sampling (mo./yr.)	MCL Violation Y/N	Level Detected	Range of Results	MCLG	MCL	Likely Source of Contamination
Arsenic (ppb)	2011 (Monthly)	No	0.552 (Highest Running Annual Average)	ND-1.27	N/A	10	Erosion of natural deposits; runoff from orchards; runoff from glass and electronics production wastes
Asbestos (MFL)	05/11	No	0.34	ND-0.34	7	7	Decay of asbestos cement water mains; erosion of natural deposits
Barium (ppm)	01/11	No	0.0103	N/A	2	2	Discharge of drilling wastes; discharge from metal refineries; erosion of natural deposits
Chromium (ppb)	01/11	No	1.970	N/A	100	100	Discharge from steel and pulp mills; erosion of natural deposits
Fluoride (ppm)	01/11	No	0.572	N/A	4	4.0	Erosion of natural deposits; discharge from fertilizer and aluminum factories. Water additive which promotes strong teeth when at optimum levels between 0.7 and 1.3 ppm.
Nickel (ppb)	01/11	No	1.36	N/A	N/A	100	Pollution from mining and refining operations; Natural occurrence in soil
Selenium (ppb)	01/11	No	9.410	N/A	50	50	Discharge from petroleum and metal refineries; erosion of natural deposits; discharge from mines
Sodium (ppm)	01/11	No	79.4	N/A	N/A	160	Salt water intrusion, leaching from soil
City of Melbourne							
Barium (ppm)	5/11	No	0.021	N/A	2	2	Discharge of drilling wastes; discharge from metal refineries; erosion of natural deposits
Cyanide (ppb)	5/11	No	5.7	N/A	200	200	Discharge from steel/metal factories; discharge from plastic and fertilizer factories.
Fluoride (ppm)	5/11	No	0.92	N/A	4	4.0	Erosion of natural deposits; discharge from fertilizer and aluminum factories. Water additive which promotes strong teeth when at optimum levels between 0.7 and 1.3 ppm.
Mercury (inorganic) (ppb)	5/11	No	0.10	N/A	2	2	Erosion of natural deposits; discharge from refineries and factories; runoff from landfills; runoff from cropland
Nitrate (as Nitrogen) (ppm)	5/11	No	0.22	N/A	10	10	Runoff from fertilizer use; leaching from septic tanks, sewage; erosion of natural deposits
Sodium (ppm)	5/11	No	84.9	N/A	N/A	160	Saltwater intrusion, leaching from soil
Results in the Level Detected column for inorganic contaminants are the highest average at any of the sample points or the highest detected level at any sampling point depending on sample frequency.							

Stage 1 Disinfectant/Disinfection By-Product							
Disinfectant or Contaminant and Unit of Measurement	Dates of sampling (mo./yr.)	MCL or MRDL Violation Y/N	Level Detected	Range of Results	MCLG or MRDLG	MCL or MRDL	Likely Source of Contamination
Patrick AFB							
TTHM [Total Trihalomethanes] (ppb)	2011 (Quarterly)	No	45.2	29.85 - 59.07	N/A	MCL = 80	By-product of drinking water disinfection
Haloacetic Acids (five) (HAA5) (ppb)	2011 (Quarterly)	No	10.89	6.96 - 12.61	N/A	MCL = 60	By-product of drinking water disinfection
City of Cocoa							
Chloramines (ppm)	2011 (Quarterly)	No	2.92	0.7 - 4.3	MRDLG = 4.0	MRDL = 4.0	Water additive used to control microbes
Haloacetic Acids (five) (HAA5) (ppb)	(2008-09 IDSE) 2011 (Quarterly)	No	40.34	9.30 - 64.10	N/A	MCL = 60	By-product of drinking water disinfection
TTHM [Total Trihalomethanes] (ppb)	(2008-09 IDSE) 2011 (Quarterly)	No	38.28	9.01 - 145	N/A	MCL = 80	By-product of drinking water disinfection
City of Melbourne							
Bromate (ppb)	1/11 - 12-11	No	5.4	2.8 - 12.2	MCLG = 0	MCL = 10	By-product of drinking water disinfection
Chloramines (ppm)	1/11 - 12-11	No	3.3	0.1 - 6.3	MRDLG = 4.0	MRDL = 4.0	Water additive used to control microbes
Haloacetic Acids (five) (HAA5) (ppb)	1/11 - 12-11	No	11.8	5.6 - 21.1	N/A	MCL = 60	By-product of drinking water disinfection
TTHM [Total Trihalomethanes] (ppb)	1/11 - 12-11	No	44.6	21.7 - 78.4	N/A	MCL = 80	By-product of drinking water disinfection
For bromate and chloramines the level detected is the highest running annual average (RAA), computed quarterly, of monthly averages of all samples collected. For haloacetic acids or TTHM, the level detected is the highest RAA, computed quarterly, of quarterly averages of all samples collected if the system is monitoring quarterly or is the average of all samples taken during the year if the system monitors less frequently than quarterly. Range of Results is the range of individual sample results (lowest to highest) for all monitoring locations, including Initial Distribution System Evaluation (IDSE) results as well as Stage 1 compliance results.							

Total Organic Carbon							
Contaminant and Unit of Measurement	Dates of sampling (mo./yr.)	TT Violation Y/N	Lowest Running Annual Average, Computed Quarterly, of Monthly Removal Ratio	Range of Monthly Removal Ratio	MCLG	MCL	Likely Source of Contamination
City of Cocoa							
Total Organic Carbon	2011 (Monthly)	No	1.1	0.1 - 2.6	N/A	TT	Naturally present in the environment
City of Melbourne							
Total Organic Carbon	1/11 - 12/11	No	2.0	1.8 - 2.3	N/A	TT	Naturally present in the environment

Lead and Copper (Tap Water)							
Contaminant and Unit of Measurement	Dates of sampling (mo./yr.)	AL Exceeded Y/N	90th Percentile Result	# of sample sites exceeding the AL	MCLG	AL (Action Level)	Likely Source of Contamination
Patrick AFB							
Copper (tap water) (ppm)	7/09	No	0.272	0	1.3	1.3	Corrosion of household plumbing systems; erosion of natural deposits; leaching from wood preservatives
Lead (tap water) (ppb)	7/09	No	11.9	1	0	15	Corrosion of household plumbing systems, erosion of natural deposits
<p>Lead and copper sampling is completed every three years at Patrick AFB to ensure the drinking water system is not being contaminated by old disintegrating pipes. Lead and copper were common materials used in the construction of water pipes prior to the early 1980s.</p> <p>The action levels (AL) for lead and copper are based on a percentage of the total samples collected. If 90% of the samples do not exceed the AL, the water system is in compliance with the Lead and Copper Rule. In 2009 Bioenvironmental Engineering Flight collected 20 lead and copper water samples from strategic locations throughout the base and housing areas. Patrick AFB had one site (Base Housing, Building 265) that exceeded the AL for lead. Base Housing, Building 265 was given a fact sheet that addressed lead and copper in drinking water. The housing areas and Child Development Center did not exceed the AL for lead or copper. In accordance with the Lead and Copper Rule for sampling frequency, Patrick AFB is scheduled to conduct lead and copper tap water sampling in July 2012. Sample results will be included in the 2012 Patrick AFB Consumer Confidence Report. For additional lead-specific information, please refer to Section 10, Lead Information.</p>							

SECTION 7: VIOLATIONS

<p>Patrick AFB had no reported violations during the reporting period of 1 January – 31 December 2011.</p> <p>The City of Cocoa reported the following violations: “In January 2011, due to a misunderstanding of the technical requirements associated with the EPA’s new Ground Water Rule, the Utilities Department failed to collect the required number of triggered well samples within a 24 hour time period as required. One sample from each well was taken; however, the Ground Water Rule required that three samples be taken from each well. The Utilities Department is now aware of this requirement and will sample accordingly in the future.</p> <p>The City of Cocoa Utilities Department had three wells test positive for <i>E. coli</i> during 2011: January 13, September 17, and October 25, 2011. Each sample was taken prior to any treatment or disinfection and each well was shut down for each occurrence immediately and the affected well was taken out of service and retested. Public Notices were sent to the public according to the Florida Department of Environmental Protection and the Environmental Protection Agency’s Groundwater Rule.</p> <p>There was no immediate health risk to our customers. The City of Cocoa Utilities is dedicated to providing the highest quality drinking water to our customer and is working diligently to address this issue.”</p> <p>The City of Melbourne reported the following violation: “We constantly monitor for various contaminants in the water supply to meet all regulatory requirements. Our water system was in violation of federal and state water standards for failing to maintain a disinfectant residual in a portion of our distribution system in October 2011. Inadequate levels of disinfectant can lead to microbial contamination in the distribution system. It should be noted that routine bacteriological testing in the affected area showed no evidence of microbial contamination. This violation was corrected through the performance of additional flushing in the affected area, the adjustment of our disinfectant dosages, and through the performance of a study to determine the exact cause of this issue. The results of the study are being implemented.”</p> <p><i>Consumers should be advised that inadequately treated water may contain disease-causing organisms. These organisms include bacteria, viruses, and parasites, which can cause symptoms such as nausea, cramps, diarrhea, and associated headaches.</i></p>
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SECTION 8: SPECIAL NOTICE REQUIREMENTS FOR THE GROUNDWATER RULE

<p>As reported by the City of Cocoa; “On January 12, well 11 T, September 15, Well 12 B, and on October 20, 2011, well 25 tested positive for <i>E. coli</i>. Each well was immediately taken out of service, and was tested again five times and came back negative. Each well was then cleaned and disinfected and then again passed two days of bacteriological sampling.”</p>

SECTION 9: REPORTING DETECTIONS OF ARSENIC, NITRATES, CRYPTOSPORIDIUM, AND RADON

Cryptosporidium is a microbial parasite that is found in surface water throughout the U.S. Although Cryptosporidium can be removed by filtration, the most commonly used filtration methods cannot guarantee 100 percent removal. The Cities of Cocoa and Melbourne performed monitoring of source water in 2006 through 2008. Samples indicated the presence of these organisms in untreated surface water sources from Lake Washington and Taylor Creek Reservoir prior to water treatment. The Cities of Melbourne and Cocoa thoroughly disinfect surface water to ensure these bacteria are destroyed prior to filtration. Additionally, the City of Melbourne performed sampling on their finished water (after filtration) prior to entry into the distribution system and no organisms were detected. Currently, all regulatory requirements regarding microbiological inactivation are being met. However, it is important to understand the symptoms of infection which may include nausea, diarrhea, and abdominal cramps. Most healthy individuals are able to overcome the disease within a few weeks. However, immuno-compromised people have more difficulty and are at greater risk of developing severe life-threatening illnesses. Immuno-compromised individuals are encouraged to consult their doctor regarding appropriate precautions to take to prevent infection. Cryptosporidium must be ingested for it to cause disease, and it may be spread through means other than drinking water.

SECTION 10: LEAD INFORMATION

Lead-specific information: 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 Cities of Cocoa and Melbourne are 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>.

The sources of drinking water (both tap water and bottled water) include rivers, lakes, streams, ponds, reservoirs, springs, and wells. As water travels over the surface of the land or through the ground, it dissolves naturally occurring minerals and, in some cases, radioactive material, and can pick up substances resulting from the presence of animals or from human activity.

Contaminants that may be present in source water include:

- (A) Microbial contaminants, such as viruses and bacteria, which may come from sewage treatment plants, septic systems, agricultural livestock operations, and wildlife.
- (B) Inorganic contaminants, such as salts and metals, which can be naturally-occurring or result from urban stormwater runoff, industrial or domestic wastewater discharges, oil and gas production, mining, or farming.
- (C) Pesticides and herbicides, which may come from a variety of sources such as agriculture, urban stormwater runoff, and residential uses.
- (D) Organic chemical contaminants, including synthetic and volatile organic chemicals, which are by-products of industrial processes and petroleum production, and can also come from gas stations, urban stormwater runoff, and septic systems.
- (E) Radioactive contaminants, which can be naturally occurring or be the result of oil and gas production and mining activities.

In order to ensure that tap water is safe to drink, the EPA prescribes regulations, which limit the amount of certain contaminants in water provided by public water systems. The Food and Drug Administration (FDA) regulations establish limits for contaminants in bottled water, which must provide the same protection for public health. Drinking water, including bottled water, may reasonably be expected to contain at least small amounts of some contaminants. The presence of contaminants does not necessarily indicate that the water poses a health risk. More information about contaminants and potential health effects can be obtained by calling the Environmental Protection Agency's Safe Drinking Water Hotline at 1-800-426-4791.

SECTION 11: VULNERABLE POPULOUS INFORMATION

Some people may be more vulnerable to contaminants in drinking water than the general population. Immuno-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).

SECTION 12: CLOSING

We at Patrick AFB would like you to understand the efforts we make to continually improve the water treatment process and protect our water resources. We are committed to insuring the quality of your water. If you have any questions or concerns about the information provided, please feel free to call any of the numbers listed in **Section 3** of this report.