

2016 drinking water quality report

HAMPTON BAYS WATER DISTRICT
TOWN OF SOUTHAMPTON
PUBLIC WATER SUPPLY IDENTIFICATION NO. 5103704

ANNUAL WATER SUPPLY REPORT

MAY 2017

The Hampton Bays Water District is pleased to present this 2016 Water Quality Report. The report is required to be delivered to all residents of our District in compliance with Federal and State regulations. We are happy to report that our water supply is in full compliance with all Federal, State and County regulations with the exception of iron as presented on page 3. Our constant goal is to provide you with a safe and dependable supply of drinking water every day. We also want you to understand the efforts we make to continually improve the water treatment process and protect our water resources. The Board of Commissioners and the District employees are committed to ensuring that you and your family receive the highest quality water.

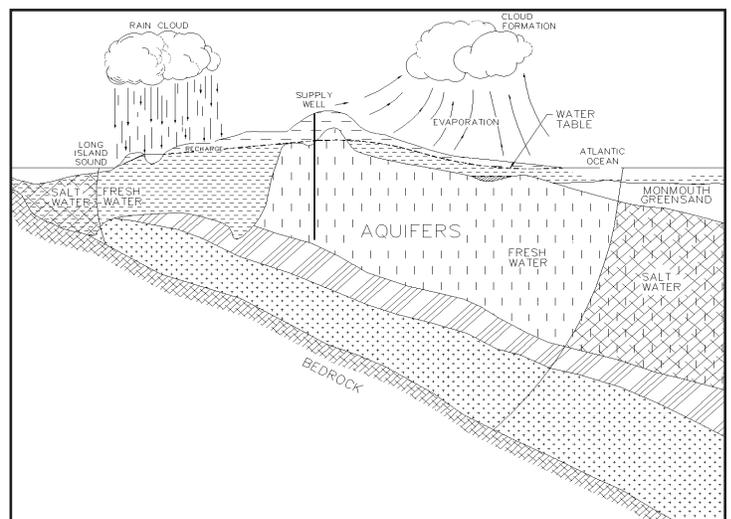
SOURCE OF OUR WATER

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 activities. Contaminants that may be present in source water include: microbial contaminants; inorganic contaminants; pesticides and herbicides; organic chemical contaminants; and radioactive contaminants.

In order to ensure that our tap water is safe to drink, the State and the EPA prescribe regulations that limit the amount of certain contaminants in water provided by public water systems. The State Health Department's and the FDA's regulations establish limits for contaminants in bottled water which must provide the same protection for public health.

The source of water for the District is groundwater pumped from 11 active wells located throughout the community that are drilled into the Glacial and Magothy aquifers beneath Long Island, as shown on the adjacent figure. Generally, the water quality of the aquifer is good to excellent, although there are

localized areas of contamination. The water from these areas is treated by the District to remove any contaminants prior to the delivery of any water to the consumer. It should also be noted that the District maintain electrical generators at many of our well sites in order to continuously provide water to the community, even during emergency situations such as power outages.



THE LONG ISLAND AQUIFER SYSTEM

WATER TREATMENT

The Hampton Bays Water District provides treatment at all of its wells to improve the quality of the water pumped prior to distribution to the consumer. The pH of the pumped water is adjusted upward to reduce the corrosive action between the water and water mains and in-house plumbing by the addition of sodium hydroxide. A phosphate product, CALCIQUEST, is added as an iron sequestering agent to minimize the discoloring of the water and staining of laundry. The District also provides disinfection treatment by the addition of small quantities of calcium hypochlorite (chlorine).

The District utilizes a billing schedule depending on your rate category (meter size), as shown below. Our Average customers are being billed at \$1.185 per 100 cubic feet of water under minimum usage.

QUARTERLY WATER RATES

	Metric Size	Minimum Bill	Minimum Usage*
Typical Residential Rate	5/8" 1"	\$11.80 \$23.60	500 cf 1,000 cf
Industrial/Commercial/Municipal Rate Category	1-1/2" 2" 3" 4" 6" 8"	\$35.40 \$47.25 \$106.30 \$127.80 \$165.40 \$189.00	1,500 cf 2,000 cf 4,500 cf 5,500 cf 7,000 cf 12,000 cf
<i>(cf - cubic feet) 1 cubic foot = 7.48 gallons</i>			
*Over minimum \$1.185 per 100 cubic feet			

The NYSDOH, with assistance from the local health department, has completed a source water assessment for this system, based on available information. Possible and actual threats to this drinking water source were evaluated. The source water assessment includes a susceptibility rating based on the risk posed by each potential source of contamination and how rapidly contaminants can move through the subsurface to the wells. The susceptibility of a water supply well to contamination is dependent upon both the presence of potential sources of contamination within the well's contributing area and the likelihood that the contaminant can travel through the environment to reach the well. The susceptibility rating is an estimate of the potential for contamination of the source water, it does not mean that the water delivered to consumers is, or will become contaminated. Please refer to section "Water Quality" for a list of the contaminants that have been detected. The source water assessments provide resource managers with additional information for protecting source waters into the future.

As mentioned before, our water is derived from 11 drilled wells. The source water assessment has rated most of the wells as having a high susceptibility to industrial solvents and nitrates. The elevated susceptibility to nitrates is due primarily to point sources of permitted discharge facilities (industrial/commercial facilities that discharge wastewater into the environment and are regulated by the state and/or federal government), and activities associated to unsewered residential land use and activities, such as fertilizing lawns. The susceptibility to industrial solvents is primarily due to point sources of contamination related to transportation routes and commercial/industrial activities in the assessment area.

A copy of the assessment, including a map of the assessment area, can be reviewed by contacting the District Office.

CONTACTS FOR ADDITIONAL INFORMATION

We are pleased to report that our drinking water is safe and meets all Federal and State requirements with the exception of iron. If you have any questions about this report or the Hampton Bays Water District, please contact Water District Superintendent Robert King at (631) 728-0179 or the Suffolk County Department of Health Services at (631) 852-5810. We want our residents to be informed about our water system. Major issues concerning the Hampton Bays Water District are discussed at the regularly scheduled District meetings. **These meetings are held in Southampton Town Hall at 10:00 a.m. on the following dates: May 7th and October 5th in 2017.**

The Hampton Bays Water District routinely monitors for different parameters and possible contaminants in your drinking water as required by Federal and State laws. All drinking water, including bottled drinking water, may be reasonably expected to contain at least small amounts of some impurities. It's important to remember that the presence of these impurities does not necessarily pose a health risk. For more information on contamination and potential health risks, please contact the USEPA Safe Drinking Water Hotline at 1-800-426-4791 or visit www.epa.gov/safewater.

Some people may be more vulnerable to disease causing microorganisms or pathogens 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 from their health care provider about their drinking water. EPA/CDC guidelines on ap-

propriate means to lessen the risk of infection by Cryptosporidium, Giardia and other microbial pathogens are available from the Safe Drinking Water Hotline (800-426-4791).

The USEPA established a Lead and Copper Rule that required all public water suppliers to sample and test for lead and copper at the consumer's tap. The first testing was required in 1992. All results were excellent indicating that the District's corrosion control treatment program was effective in preventing the leaching of lead and copper from your home's plumbing into your drinking water. The same testing was last conducted in 2016 with the same excellent results. The next testing program is scheduled to be completed in 2019.

Some of the water from the Hampton Bays Water District has elevated levels of nitrates, but well below the maximum contaminant level of 10.0 parts per million. Nitrate in drinking water at levels above 10 ppm is a health risk for infants of less than six months of age. High nitrate levels in drinking water can cause blue baby syndrome. The source of the nitrates is the nitrogen in fertilizers and from on-site septic systems. If you are caring for an infant you should ask advice from your health care provider.

2016 DRINKING WATER QUALITY REPORT - TABLE OF DETECTED PARAMETERS

Contaminants	Violation (Yes/No)	Date of Sample	Level Detected (Maximum Range)	Unit Measurement	MCLG	Regulatory Limit (MCL or AL)	Likely Source of Contaminant
Inorganic Contaminants							
Copper	No	June/July/August 2016	0.001 - 0.95 0.66 ⁽¹⁾	mg/l	1.3	AL = 1.3	Corrosion of household plumbing systems; Erosion of natural deposits
Lead	No	June/July/August 2016	ND - 130 2.1 ⁽¹⁾	ug/l	0	AL = 15	Corrosion of household plumbing systems; Erosion of natural deposits
Barium	No	06/22/16	ND - 0.07	mg/l	2	MCL = 2.0	Naturally occurring
Calcium		01/14/16	8.4 - 8.5	mg/l	n/a	None	Naturally occurring
Sodium	No	06/22/16	8.2 - 59.0	mg/l	n/a	No MCL ⁽²⁾	Naturally occurring
Zinc	No	04/14/16	ND - 0.081	mg/l	n/a	MCL = 5	Naturally occurring
Chloride	No	06/22/16	12.8 - 126	mg/l	n/a	MCL = 250	Naturally occurring
Iron	Yes	06/22/16	ND - 900	ug/l	n/a	MCL = 300 ⁽³⁾	Naturally occurring
Manganese	No	06/22/16	ND - 140	ug/l	n/a	MCL = 300 ⁽⁴⁾	Naturally occurring
Magnesium		01/14/16	3.3 - 3.8	mg/l	n/a	None	Naturally occurring
Nitrate	No	05/22/16	0.1 - 5.1	mg/l	10	MCL = 10	Runoff from fertilizer and leaching from septic tanks and sewage
Ammonia	No	06/22/16	ND - 1.13	mg/l	n/a	None	Naturally occurring
Nickel	No	06/22/16	ND - 7.7	ug/l	n/a	MCL = 100	Naturally occurring
Sulfate	No	06/22/16	6.4 - 17.9	mg/l	n/a	MCL = 250	Naturally occurring
Unregulated Contaminants							
Perchlorate	No	10/05/16	ND - 1.3	ug/l	0	AL - 18 ⁽⁵⁾	Fertilizer
Volatile Organic Contaminants							
Tetrachloroethene	No	07/27/16	ND - 0.54	ug/l	0	MCL = 5	Industrial discharge by dry cleaning agent
Total Trihalomethanes (THM)	No	06/22/16	ND - 7.4	ug/l	0	MCL = 80	Disinfection By-Product
Radionuclides							
Gross Alpha	No	08/10/16	ND - 1.15	pCi/L	--	MCL = 15	Erosion of natural deposits
Radium 226 & 228 Combined	No	08/10/16	ND - 1.0	pCi/L	--	MCL = 5 ⁽⁶⁾	Erosion of natural deposits
Unregulated Contaminant Monitoring Rule and Follow-Up Testing⁽⁷⁾							
1,4-Dioxane	No	10/05/16	ND - 0.13	ug/l	n/a	MCL = 50	Solvent
perfluoroheptanoic acid	No	07/27/16	ND - 0.0045	ug/l	n/a	MCL = 50	Industrial discharge
perfluorohexanesulfonic acid	No	07/27/16	ND - 0.018	ug/l	n/a	MCL = 50	Industrial discharge
perfluorononanoic acid	No	07/27/16	0.0042 - 0.0097	ug/l	n/a	MCL = 50	Industrial discharge
perfluorooctanesulfonic acid	No	08/19/14	0.028 - 0.082 ⁽⁸⁾	ug/l	n/a	MCL = 50	Industrial discharge
perfluoroheptanoic acid	No	10/05/16	0.0054 - 0.0078	ug/l	n/a	MCL = 50	Industrial discharge
Chromium	No	02/20/15	0.2 - 0.7	ug/l	100	MCL = 100	Naturally occurring
Strontium	No	02/20/15	30.3 - 89.5	ug/l	n/a	No MCL	Naturally occurring
Vanadium	No	02/20/15	ND - 0.57	ug/l	n/a	No MCL	Naturally occurring
Hexavalent Chromium	No	10/05/16	0.031 - 0.52	ug/l	n/a	MCL = 100	Naturally occurring
Chlorate	No	08/03/16	26.9 - 58.0	ug/l	n/a	No MCL	Agricultural defoliant
Chloromethane	No	03/18/15	ND - 1.2	ug/l	n/a	MCL = 5	Refrigerant
Bacteriological							
Total Coliform	No	10/12/16	1 positive out of 244 samples	Positive or Negative	n/a	MCL = Positive results in more than 5% of the monthly samples	Commonly found in the environment

Definitions:

Maximum Contaminant Level (MCL) - The highest level of a contaminant that is allowed in drinking water. MCLs are set as close to the MCLGs as feasible.
Maximum Contaminant Level Goal (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.
Action Level (AL) - The concentration of a contaminant which, if exceeded, triggers treatment or other requirements which a water system must follow.
Milligrams per liter (mg/l) - Corresponds to one part of liquid in one million parts of liquid (parts per million - ppm).
Micrograms per liter (ug/l) - Corresponds to one part of liquid in one billion parts of liquid (parts per billion - ppb).
Non-Detects (ND) - Laboratory analysis indicates that the constituent is not present.
pCi/L - pico Curies per Liter is a measure of radioactivity in water.

⁽¹⁾ - During 2016, the District collect 30 samples for lead and copper. The 90% level is presented in the table as the maximum result. The next round of samples will occur in 2019. If present, elevated levels of lead can cause serious health problems, especially for pregnant women, infants, and young children. It is possible that lead levels at your home may be higher than at other homes in the community as a result of materials used in your home's plumbing. Hampton Bays Water District 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 (1-800-426-4791) or at <http://www.epa.gov/safewater/lead>.
⁽²⁾ - No MCL has been established for sodium. However, 20 mg/l is a recommended guideline for people on high restricted sodium diets and 270 mg/l for those on moderate sodium diets.
⁽³⁾ - Iron has no health effects. At 1,000 ug/l a substantial number of people will note the bitter astringent taste of iron. Also, at this concentration, it imparts a brownish color to laundered clothing and stains plumbing fixtures with a characteristic rust color. Staining can result at levels of 50 ug/l, lower than those detectable to taste buds. Therefore, the MCL of 300 ug/l represents a reasonable compromise as adverse aesthetic effects are minimized at this level. Many multi-vitamins may contain 3,000 or 4,000 micrograms of iron per capsule.
⁽⁴⁾ - The Food and Nutrition Board of the National Research Council determined an estimated safe and adequate daily dietary intake of manganese to be 2,000-5,000 micrograms for adults. However, many peoples diets lead them to consume even higher amounts of manganese, especially those who consume high amounts of vegetables or are vegetarians. The infant population is of the greatest concern. It would be better if the drinking water were not used to make infant formula since it already contains iron and manganese. Excess manganese produces a brownish color in laundered goods and impairs the taste of tea, coffee and other beverages. Concentrations may cause a dark brown or black stain on porcelain plumbing fixtures. As with iron, manganese may form a coating on distribution pipes. These may slough off, causing brown blotches on laundered clothing or black particles in the water.
⁽⁵⁾ - Perchlorate is an unregulated contaminant. However, the NYS Dept. of Health has established an action level of 18 ug/l.
⁽⁶⁾ - MCL is for Radium 226 plus Radium 228 combined.
⁽⁷⁾ - UCMR3 - Unregulated Contaminant Monitoring Rule 3 is a Federal water quality sampling program where water suppliers sample and test their source water for 1 year. Results will be used by the USEPA to determine if the contaminants need to be regulated in the future. The District conducted follow-up testing in 2016 and the maximum result included the highest result from 2014-2016.
⁽⁸⁾ - See Public Notice on Page 5 of this report.

WATER QUALITY

In accordance with State regulations, the Hampton Bays Water District routinely monitors your drinking water for numerous parameters. We test your drinking water for coliform bacteria, turbidity, inorganic contaminants, lead and copper, nitrate, volatile organic contaminants, total trihalomethanes and synthetic organic contaminants. Over 135 separate parameters are tested for in each of our wells numerous times per year. The table presented on page 3 depicts which parameters or contaminants were detected in the water supply. It should be noted that many of these parameters are naturally found in all Long Island drinking water and do not pose any adverse health affects.

The Hampton Bays Water District conducts over 5,000 water quality tests throughout the year, testing for over 130 different contaminants which have been undetected in our water supply including:

Arsenic	Atrazine	Bromoacetic Acid	1,1,2-Trichloroethane
Cadmium	Metolachlor	Dichloroacetic Acid	1,3-Dichloropropane
Chromium	Metribuzin	Trichloroacetic Acid	Chlorobenzene
Copper	Butachlor	Dibromoacetic Acid	1,1,1,2-Tetrachloroethane
Mercury	2,4-D	Total Haloacetic Acid	Bromobenzene
Selenium	2,4,5-TP (Silvex)	Gross Alpha	1,1,2,2-Tetrachloroethane
Silver	Dinoseb	Gross Beta	1,2,3-Trichloropropane
Turbidity	Dalapon	Radium 226	2-Chlorotoluene
Odor	Picloram	Radium 228	4-Chlorotoluene
Nitrite	Dicamba	Dichlorodifluoromethane	1,2-Dichlorobenzene
Total Hardness	Pentachlorophenol	Chloromethane	1,3-Dichlorobenzene
Total Alkalinity	Hexachlorocyclopentadiene	Vinyl Chloride	1,4-Dichlorobenzene
Total Dissolved Solids	bis(2-Ethylhexyl)adipate	Bromomethane	1,2,4-Trichlorobenzene
Detergents (MBAS)	bis(2-Ethylhexyl)phthalate	Chloroethane	Hexachlorobutadiene
Free Cyanide	Hexachlorobenzene	Trichlorofluoromethane	1,2,3-Trichlorobenzene
Antimony	Benzo(A)Pyrene	Chlorodifluoromethane	Benzene
Beryllium	Aldicarb Sulfone	1,1-Dichloroethene	Toluene
Pentachlorophenol	Aldicarb sulfoxide	Methylene Chloride	Ethylbenzene
Thallium	Aldicarb	Trans-1,2-Dichloroethene	M,P-Xylene
Lindane	Total Aldicarb	1,1-Dichloroethane	O-Xylene
Heptachlor	Oxamyl	cis-1,2-Dichloroethene	Styrene
Aldrin	Methomyl	2,2-Dichloropropane	Isopropylbenzene (Cumene)
Heptachloro Epoxide	3-Hydroxycarbofuran	Bromochloromethane	N-Propylbenzene
Dieldrin	Carbofuran	1,1,1-Trichloroethane	1,3,5-Trimethylbenzene
Endrin	Carbaryl	Carbon Tetrachloride	Tert-Butylbenzene
Methoxychlor	Glyphosate	1,1-Dichloropropene	1,2,4-Trimethylbenzene
Toxaphene	Diquat	1,2-Dichloroethane	Sec-Butylbenzene
Chlordane	Endothall	Trichloroethene	4-Isopropyltoluene (P-Cumene)
Total PCBs	1,2-Dibromoethane (EDB)	1,2-Dichloropropane	N-Butylbenzene
Propachlor	1,2-Dibromo-3-Chl.Propane	Dibromomethane	Methyl Tert-Butyl Ether (MTBE)
Alachlor	Dioxin	Trans-1,3-Dichloropropene	Fluoride
Simazine	Chloroacetic Acid	cis-1,3-Dichloropropene	Carbon Tetrachloride
Methylene Chloride	Chloroethane	Chloromethane	

PROPOSED WATER SYSTEM IMPROVEMENTS

The District is continuing with its capital improvement plan to increase the capacity and reliability of the water system. The District is constructing a new transmission main that will improve water pressure in some areas that experience low water pressure during peak water use periods.

WATER CONSERVATION MEASURES

The household and commercial establishments serviced by the Hampton Bays Water District during 2016 was 7,212 with a population of 15,500. The total amount of water withdrawn from the aquifer in 2016 was 1.23 billion gallons, of which 93 percent was billed directly to the consumers.

Residents are urged to implement their own water conservation measures such as retrofitting plumbing fixtures with flow restrictors, modifying automatic lawn sprinklers to include rain sensors, repairing leaks in the home, installing water conservation fixtures/appliances and maintaining a daily awareness of water conservation in their personal habits. Besides protecting our precious underground water supply, water conservation will produce a cost savings to the consumer in terms of both water and energy bills (hot water).

NOTICE OF SAMPLING VIOLATION

We are required to monitor your drinking water for specific contaminants on a regular basis. Results of regular monitoring are an indicator of whether or not your drinking water meets health standards. During the first quarter of 2017, we did not monitor or test for PFOS, PFOA, PFNA, PFHpA, PFHxS and PFBS from Well No. 1-3 and, therefore, cannot be sure of the quality of your drinking water during this time. However, follow up sampling occurred in the 2nd quarter. The District has implemented a recordkeeping program to ensure all samples are taken as required.

Should you have questions concerning this sampling violation, please contact the District at 631-728-0179 or the Suffolk County Department of Health Services at 631-852-5810.

Copies of a Supplemental Data Package, which includes the water quality data for each of our supply wells utilized during 2016, are available at the Hampton Bays Water District, the Town Clerk's office and the local public library.

We at Hampton Bays Water District work around the clock to provide top quality water to every tap throughout the community. We ask that all our customers help us protect our water resources, which are the heart of our community, our way of life and our children's future.

Should you have any questions concerning the Hampton Bays Water District, please contact our Water District Superintendent Robert King at 631-728-0179 or visit our website: www.southamptontownny.gov and click on Table of Contents – Divisions and Departments

◆ Hampton Bays Water District.



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Robert King

PUBLIC NOTICE

The Water District previously notified all residents of water quality results from 2016, where as PFOS (perfluorooctanesulfonic acid) was detected at Plant No. 1. All the sample results from 2016 are summarized on Page 3 of this report.

PFOS is a fluorinated organic chemical that are part of a larger group of chemicals referred to as perfluoroalkyl substances (PFASs) which includes a second chemical PFOA. PFOS and PFOA have been the most extensively produced and studied of these chemicals. They have been used to make carpets, clothing, fabrics for furniture, paper packaging for food and other materials that are resistant to water, grease or stains such as non-stick cookware. They are also used for fire fighting at airfields and in a number of industrial processes.

To provide Americans, including the most sensitive populations, with a margin of protection from a lifetime of exposure to PFOA and PFOS from drinking water, EPA established the health advisory levels at 70 parts per trillion (ppt) on May 19, 2016. When both PFOA and PFOS are found in drinking water, the combined concentrations of PFOS and PFOA should be compared with the 70 parts per trillion (ppt) health advisory level. EPA's health advisories are based on the best available peer-reviewed studies of the effects of PFOS and PFOA on laboratory animals (rats and mice) and were also informed by epidemiological studies of human populations that have been exposed to PFASs.

These studies indicate that exposure to PFOA and PFOS over certain levels may result in adverse health effects, including developmental effects to fetuses during pregnancy or to breast fed infants (e.g., low birth weight, accelerated puberty, skeletal variations), cancer (e.g., testicular, kidney), liver effects (e.g., tissue damage), immune effects (e.g., antibody production and immunity), thyroid effects and other effects (e.g., cholesterol changes). The health advisory levels are calculated based on the drinking water intake of lactating women, who drink more water than other people and can pass these chemicals along to nursing infants through breast milk.

The results of these samples summarized on Page 3 indicated that one (1) well, designated Plant Well No. 1-1, exceeded the new advisory level and a concentration as high as 82 parts per trillion was entering the system. Well No. 1-1 was immediately removed from service. A subsequent round of sampling collected by the Health Department confirmed no PFOS concentrations in the remaining operating wells at Plant No. 1, and no PFOS concentrations in two (2) representative sampling points in the water distribution system.

Well No. 1-1 has remained out of service and we will be actively evaluating possible solutions. The District is providing you with water quality well within acceptable standards and we do not consider that it is necessary for you to take any additional actions. The District will keep you advised of any further developments.

For more information on PFOA & PFOS, please visit the following EPA website:
https://www.epa.gov/sites/production/files/2016-05/documents/drinkingwaterhealthadvisories_pfoa_pfos_5_19_16.final_.1.pdf