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March 6, 2024

SENT VIA CERTIFIED MAIL RETURN RECEIPT REQUESTED

London Breed Mayor of San Francisco San Francisco City Hall 1 Dr. Carlton B. Goodlett Place, Room 200 San Francisco, California 94102

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Notice of Violation and Intent to File Suit Under the Clean Water Act Re:

Dear Mayor Breed, Mr. Herrera, Mr. Prather, Mr. Chiu, and Board of Supervisors:

I am writing on behalf of San Francisco Baykeeper ("Baykeeper") regarding violations of the Clean Water Act¹ ("CWA" or "Act") and the National Pollution Discharge Elimination System ("NPDES") Permit² ("Bayside Permit" or "Permit") for the Southeast Water Pollution Control Plant, North Point Wet Weather Facility, Bayside Wet Weather Facilities, and Wastewater

¹ Federal Water Pollution Control Act, 33 U.S.C. § 1251 et seg.

²NPDES Permit No. CA0037664, San Francisco Bay Regional Water Quality Control Board ("Regional Board") Order No. R2-2013-0029.

Collection System ("Bayside Facilities") operated by the San Francisco Public Utilities Commission ("SFPUC"), an agency of the City and County of San Francisco ("City"). The Bayside Permit lists the Bayside Facilities' address as 750 Phelps Street, San Francisco, California 94124. The purpose of this letter ("Notice Letter") is to put the City and SFPUC on notice that, at the expiration of sixty days from the date the Notice Letter is sent,³ Baykeeper intends to file a "citizen suit" action against the City and SFPUC in U.S. Federal District Court. The civil action will: (1) allege ongoing violations of the Act and the Bayside Permit at the Bayside Facilities, including but not limited to unlawful discharges to San Francisco Bay, Mission Creek, and Islais Creek ("Receiving Waters") during combined sewer discharges ("CSDs") and overflows ("CSOs"), causing violations of water quality standards for Receiving Waters, impairing the Receiving Waters' designated Beneficial Uses, failing to comply with the federal Combined Sewer Overflow Policy as implemented by the Permit, and failing to revise operating protocols as necessary to comply with the Bayside Permit; and (2) seek judicial imposition of injunctive relief and civil penalties.

The Act is a strict liability statute. To establish liability under section 301 of the Act, Baykeeper must only establish that the City and SFPUC have (i) discharged, *i.e.*, added, (ii) a pollutant (iii) to navigable waters (iv) from a point source (v) in violation of an NPDES permit. *See Comm. to Save Mokelumne River v. E. Bay Mun. Util. Dist.*, 13 F.3d 305, 308 (9th Cir. 1993), *cert. denied*, 513 U.S. 873 (1994); *Nat'l Wildlife Fed. v. Gorsuch*, 693 F.2d 156, 165 (D.C. Cir. 1982). As described in detail below, the City and SFPUC are liable for ongoing violations of the Act as a consequence of the Bayside Facilities' failure to comply with the Bayside Permit's Discharge Prohibitions, Receiving Water Limitations, and CSO Controls. Each violation of any term or condition of the Bayside Permit is an independent violation of the Act. As explained below, the City and SFPUC are liable under the Act for daily, date-specific, monthly, and annual violations of the Bayside Permit since March 6, 2019. 33 U.S.C. §§ 1311(a), 1319(d); 40 C.F.R. § 19.4.

This Notice Letter contains sufficient information to permit the City and SFPUC to understand and ameliorate alleged violations, and to comply with applicable regulations. *See* 40 C.F.R. § 135.3. The Notice Letter includes, without limitation: (1) citations to the Act's relevant mandates, and descriptions of the statutory permitting scheme; (2) citations to specific provisions in the Bayside Permit that have been and are being violated by the City and SFPUC; (3) a description of the City and SFPUC's combined sewer system and the Bayside Facilities; (4) descriptions of the impacts of the City and SFPUC's discharges on the Receiving Waters and their Beneficial

³ Section 505(b) of the CWA requires that sixty days prior to initiating a civil action under Section 505(a), 33 U.S.C. § 1365(a), a citizen must give notice of their intention to file suit to the alleged violator, the Administrator of the United States Environmental Protection Agency ("U.S. EPA"), the Regional Administrator of the U.S. EPA, the Executive Officer of the water pollution control agency in the State in which the violations occur, and, if the alleged violator is a corporation, the registered agent of the corporation. 33 U.S.C. § 1365(b); 40 C.F.R. § 135.2.

Uses; and (5) specific date(s) and locations of discharges violating the Bayside Permit, and timeframes during which non-discharge violations took place.

I. BACKGROUND

A. San Francisco Baykeeper

Baykeeper is a non-profit public benefit corporation organized under the laws of California. Baykeeper's mission is to defend San Francisco Bay from the biggest threats, and hold polluters accountable to create healthier communities and help wildlife thrive. Baykeeper has over five thousand members and supporters who use and enjoy San Francisco Bay and connected surface waters for various recreational, educational, and spiritual purposes. At the behest of its members, Baykeeper has sought to protect and promote water resources that are swimmable, drinkable, fishable, and sustainable. To further this mission, Baykeeper actively seeks federal and state implementation of the Act.

Members of Baykeeper reside in San Francisco, and near San Francisco Bay and use the waters in and near Mission Creek, and Islais Creek, as well as other parts of the Bay that are impacted by SFPUC and the City's failure to comply with the Act. The Bayside Facilities persistently discharge pollutants into the Receiving Waters in violation of the Act and the Bayside Permit. Baykeeper members use the Receiving Waters to bird watch, view wildlife, kayak, hike, bike, walk, run, and sightsee, as well as for aesthetic enjoyment. Additionally, Baykeeper members use local waters to engage in educational and scientific study through pollution and habitat monitoring and restoration activities. As explained herein, the Bayside Facilities' historic and ongoing discharge of pollutants into the Receiving Waters in violation of the Act and Bayside Permit have adversely affected, are adversely affecting, and continue to adversely affect the interests of Baykeeper's members.

B. Responsible Entities for Combined Sewer System

The City and SFPUC are the owners and operators of the Bayside Facilities. The City and SFPUC are responsible for operating and maintaining the Bayside Facilities. Operating and maintaining the Bayside Facilities includes tasks such as collecting and conveying wastewater and stormwater through the Bayside Facilities, providing treatment for combined sewer flows prior to discharge into Receiving Waters, conducting routine maintenance, cleaning and inspecting the Bayside Facilities, and responding to citizen complaints related to the combined sewer system. Further, the City and SFPUC are responsible for preventing discharges from the Bayside Facilities that violate the Bayside Permit.

1. The City and County of San Francisco

The City is a municipality incorporated under the laws of the State of California. The City has offices at 1 Dr. Carlton B. Goodlett Place, San Francisco, California 94102. The current Mayor is London Breed. San Francisco Charter sec. 3.100 provides that "[t]he Mayor shall enforce all laws relating to the City and County, and accept service of process on its behalf" and "[t]he Mayor shall have responsibility for . . . [r]eceipt and examination of complaints relating to the administration of the affairs of the City and County, and timely delivery of notice to the complainant of findings and actions taken."

2. San Francisco Public Utilities Commission

SFPUC is a department of the City. The department's mission is "to provide [its] customers with high quality, efficient and reliable water, power, and sewer services in a manner that is inclusive of environmental and community interests, and that sustains the resources entrusted to [its] care." SFPUC has offices at 525 Golden Gate Avenue, 13th Floor, San Francisco, California 94102. The current General Manager of SFPUC is Dennis J. Herrera and the Acting Assistant General Manager for the Wastewater Enterprise is Joel Prather.

II. San Francisco's Combined Sewer System and Clean Water Act Permits

A. The Combined Sewer System

The City, through SFPUC, operates two distinct combined sewer systems that convey, store, treat, and discharge combined sewage and stormwater flows: the Bayside Facilities, which serve approximately 580,000 residents of eastern San Francisco and portions of Brisbane and Daly City; and the "Oceanside" or "Westside" facilities, which serve a population of approximately 250,000 residents of western San Francisco and a small portion of Daly City. Only the Bayside Facilities located within the City operate under the Bayside Permit and are at issue here. *See* Permit, Fact Sheet at F-4.

1. Relevant History

The Bayside Facilities comprise approximately 600 miles of pipe, and seven major and eleven minor pump stations, the Southeast Plant, the North Point Facility, and the "Bayside Wet Weather Facilities," which consist of large storage/transport structures. Permit, Fact Sheet at F-4. The Southeast Plant and North Point Facility were originally constructed in 1951. SFPUC, San Francisco Wastewater Long Term Control Plan Synthesis (2018) at 10 ("Long Term CSO Control Plan Synthesis"). In 1967, the City published a "Characterization and Treatment of Combined Sewer Overflows Report," which concluded that separation of stormwater and sewer flows was

"not advised because it was anticipated to only provide reductions of some constituents, namely in biological oxygen demand and nutrients, whereas treatment of combined flows would provide greater pollution control." *Id*.

In 1971, the San Francisco Master Plan for Waste Water Management recommended "a systemwide approach to minimize [wet weather] overflows" by "balanc[ing] system storage and treatment to reduce the number of wet weather discharges at the lowest cost, using a combination of pumps, pipes, storage reservoirs, treatment plants, and outfalls." Long Term CSO Control Plan at 10–11. After the passage of the CWA, the City revised the Master Plan and developed a programmatic environmental impact report and environmental impact statement for its implementation. Id. At the direction of the Regional Board, the City studied and recommended "the appropriate frequency of overflows based on several considerations, including the [1975] Basin Plan's water quality objectives and an evaluation of cost-effective combinations of storage, outfall location and length, and treatment." *Id.* at 12 (internal quotations omitted). The Regional Board then issued Order R2-79-67 providing design criteria for construction of the storage pipes and boxes, pump stations, treatment facilities, and outfall structures "deemed necessary by the Regional Water Board to protect beneficial uses during wet weather events" given long term annual average overflow frequencies of fifteen total discharges across three drainage basins. Id. at 13. Full implementation of the Master Plan, including updated treatment facilities at the Southeast Water Pollution Control Plant, was completed in 1997. Id. at 14.

2. <u>Current Operations</u>

During dry weather, the Bayside Wet Weather Facilities transport wastewater to the Southeast Plant, located on Phelps Street at Jarrold Avenue near the Islais Creek Channel, for primary and secondary treatment. *Id.* at F-5. When wet weather adds stormwater to the wastewater flows, the Bayside Wet Weather Facilities transport flows exceeding the Southeast Plant's capacity to the North Point Facility, located on Bay Street near The Embarcadero, which provides primary treatment of combined wastewater and stormwater. *Id.* The Bayside Wet Weather Facilities can store an additional 120 million gallons of combined wastewater and stormwater. *Id.*

The Southeast Plant has a dry weather design capacity of 85.4 million gallons per day (MGD). Permit, Fact Sheet at F-5. Treatment consists of coarse and fine bar screens and grit removal, primary sedimentation tanks, pure oxygen aeration basins, secondary clarifiers, chlorination using sodium hypochlorite, and dechlorination using sodium bisulfite. *Id.* During dry weather, all wastewater receives secondary treatment before being discharged to Lower San Francisco Bay through a deepwater outfall (Discharge Point No. 001) at Pier 80, immediately north of the Islais Creek Channel. *Id.* at F-6. During wet weather, the Southeast Plant is designed to fully treat up to 150 MGD of combined wastewater and stormwater, and provide only primary treatment and disinfection to another 100 MGD. *Id.* at F-5. Up to 140 MGD of wet weather secondary-treated

effluent then discharges to the Quint Street shallow water outfall (Discharge Point No. 002) within Islais Creek, while up to 100 MGD of disinfected primary-treated effluent mixed with at least 10 MGD of secondary-treated effluent discharges to Discharge Point No. 001. *Id*.

During wet weather, the North Point Facility provides primary treatment for up to an additional 150 MGD of combined wastewater and stormwater. Permit, Fact Sheet at F-5. Treatment technologies include bar screens, sedimentation tanks equipped with skimmers, sodium hypochlorite injection, and dechlorination using sodium bisulfite. *Id.* When necessary to prevent or mitigate combined sewer overflows in the Central and Southeast Drainage Basins, the North Point Facility discharges primary-treated effluent to Central San Francisco Bay through four deepwater outfalls, Discharge Point Nos. 003 and 004 at the end of Pier 33 and Discharge Point Nos. 005 and 006 at the end of Pier 35. *Id.* at F-6.

Wet weather consistently overwhelms the combined sewer system's treatment and storage capacity. According to the Bayside Permit, "[i]n the event that the capacities of the Southeast Plant, North Point Facility, and storage/transport structures are exceeded, the combined wastewater receives the equivalent of primary treatment in the storage/transport structures and is discharged to San Francisco Bay through any one of 29 shoreline combined sewer discharge structures." Permit, Fact Sheet at F-5. The treatment allegedly provided by the Bayside Wet Weather Facilities "consists of settling solids with a series of baffles and weirs that also remove floatable materials prior to discharge." *Id*.

3. <u>Bayside Combined Sewer Discharge Outfalls</u>

The 29 Bayside CSD outfalls discharge from three hydraulically connected drainage basins: the North Shore Drainage Basin, the Central Drainage Basin, and the Southeast Drainage Basin. Permit at 1–3. The North Shore Drainage Basin contains CSD Nos. 009 (Baker Street), 010 (Pierce Street), 011 (Laguna Street), 013 (Beach Street), 015 (Sansome Street), and 017 (Jackson Street). *Id.* at 1–2. The Central Drainage Basin contains CSD Nos. 018 (Howard Street), 019 (Brannan Street), 022 (Third Street), 023 (Fourth Street North), 024 (Fifth Street North), 025 (Sixth Street North), 026 (Division Street), 027 (Sixth Street South), 028 (Fourth Street South), 029 (Mariposa Street), 030 (20th Street), 030A (22nd Street), 031 (Third Street North), 031A (Islais Creek North), 032 (Marin Street), 033 (Selby Street), and 035 (Third Street South). *Id.* at 2–3. The Southeast Drainage Basin contains CSD Nos. 037 (Evans Avenue), 038 (Hudson Avenue), 040 (Griffith Street South), 041 (Yosemite Avenue), 042 (Fitch Street), and 043 (Sunnydale Avenue). *Id.* at 3.

In the North Shore Drainage Basin, CSD No. 009 discharges to Marina Beach⁴, CSD No. 011

⁴ CSD No. 010 (Pierce Street) was decommissioned in May 2021 due to "poor condition." Letter from Regional Board to SFPUC (July 21, 2023) at 2. SFPUC modeling indicates that CSD flows previously

discharges to Yacht Harbor #2, and CSD Nos. 013–017 discharge directly to Central San Francisco Bay. Permit at 1–2. According to the Bayside Sensitive Areas Report, CSDs in the North Shore Drainage Basin discharge approximately 34.3 MGD of minimally-treated combined sewer effluent over the course of three CSO events in a typical year. SFPUC, Bayside Sensitive Areas Report (2018) at 15. The Bayside Sensitive Areas Report indicates that primary contact recreation, including swimming and wading, occurs at Crissy Field East Beach near CSD No. 009. *Id.* at 13.

In the Central Drainage Basin, CSD No. 018 discharges directly to Central San Francisco Bay, CSD No. 019 discharges directly to Lower San Francisco Bay, CSD Nos. 022–028 discharge to Mission Creek, CSD Nos. 029, 030, and 030A discharge to the Central Basin, and CSD Nos. 031–035 discharge to Islais Creek. Permit at 2–3. According to the Bayside Sensitive Areas Report, CSDs in the Central Drainage Basin discharge approximately 1,222 MGD of minimally-treated combined sewer effluent over the course of twelve CSO events in a typical year. Bayside Sensitive Areas Report at 21. The Bayside Sensitive Areas Report indicates that kayaking occurs throughout Mission and Islais Creeks, near CSD Nos. 022–028 and 031–035. *Id.* at 13.

In the Southeast Drainage Basin, CSD Nos. 037 and 038 discharge to India Basin, CSD Nos. 040 and 042 discharge to the South Basin, and CSD No. 041 discharges to Yosemite Creek. Permit at 3. According to the Bayside Sensitive Areas Report, CSDs in the Central Drainage Basin discharge approximately 0.01 MGD of minimally-treated combined sewer effluent over the course of one CSO event in a typical year. Bayside Sensitive Areas Report at 29. The Bayside Sensitive Areas Report indicates that primary contact recreation, including wind surfing and wading, occurs in the Candlestick Point State Recreation Area near CSD No. 043. *Id.* at 13.

B. Bayside NPDES Permit

1. The NPDES Permit Program

The Act is the primary federal statute regulating the protection of the nation's water. The Act aims to prevent, reduce, and eliminate the discharge of pollution in order to "restore and maintain the chemical, physical, and biological integrity of the Nation's waters." 33 U.S.C. § 1251(a). To accomplish this goal, Section 301(a) prohibits the discharge of any pollutant into waters of the United States unless the discharge complies with other enumerated sections of the Act, including

discharging through CSD-010 "primarily shift to the nearby Baker Street CSD outfall to the west, with some flows also discharging through the nearby Laguna Street CSD outfall to the east," and that "the outfall closure could increase flooding from about 0.1 feet to 0.4 feet (about 4 inches) during a 5-year 3-hour storm" and from about 1.1 feet to 1.3 feet (about 2 inches) during a 100-year 3-hour storm." *Id.* at 3. Extensive flooding did occur in the North Shore Basin on October 24, 2021 and December 31, 2022. *See* Table 4.

the prohibition on discharges not authorized by, or in violation of, the terms of a NPDES permit issued pursuant to section 402(b). 33 U.S.C. §§ 1311, 1342(b). The Act requires all point source discharges of pollutants to waters of the United States be regulated by an NPDES permit. *Id.*; *see also* 40 C.F.R. § 122.26(c)(1).

Compliance with the Bayside Permit⁵ constitutes compliance with the Act. 33 U.S.C. § 1342(k). Conversely, a permittee that fails to comply with the terms and conditions of its permit is liable for violations of the Act. *Nw. Env't Advocs. v. City of Portland*, 56 F.3d 979, 988, 986 (9th Cir. 1995) ("[T]he plain language [of the CWA] authorizes citizens to enforce *all* permit conditions." (emphasis in original)); *Ecological Rights Found. v. Pac. Lumber Co.*, 230 F.3d 1141, 1151 (9th Cir. 2000) (finding that "the Clean Water Act allows citizen suits based on violations of any conditions of an NPDES permit, even those which are purely procedural."); *see also* Permit at 7 ("Any sanitary or combined sewer discharge of untreated or partially-treated wastewater to waters of the United States not expressely [sic] authorized by this Order is prohibited.")

a. The Combined Sewer Overflow Control Policy

Regulations governing CSOs were promulgated by the U.S. EPA in 1994 as the Combined Sewer Overflow Control Policy ("CSO Control Policy"), 59 Fed. Reg. 18688–98. In 2000, the Wet Weather Water Quality Act mandated that "[e]ach permit . . . for a discharge from a municipal combined storm and sanitary sewer shall conform to the Combined Sewer Overflow Control Policy." 33 U.S.C. § 1342(q)(1). The CSO Control Policy prohibits any CSO in dry weather and sets limits on wet weather CSOs to protect the beneficial uses of receiving waters. The CSO Control Policy's technology-based requirements include nine "minimum control measures": (1) Proper operation and regular maintenance programs for the sewer system; (2) Maximum use of the collection system for storage; (3) Review and modification of pretreatment requirements to assure CSO impacts are minimized; (4) Maximization of flow to Publicly Owned Treatment Works ("POTW") for treatment; (5) Prohibition of dry weather CSOs; (6) Control of solid and floatable materials in CSOs; (7) Pollution prevention; (8) Public notification of CSO occurrences and impacts; and (9) Monitoring to effectively characterize CSO impacts and the efficacy of CSO controls. 59 Fed. Reg. 18691; see also Permit at 19–20. In addition, the CSO Control Policy requires municipalities to develop a "Long Term CSO Control Plan" "that will ultimately result in compliance with the requirements of the CWA." 59 Fed. Reg. 18691; see also Permit at 23-25.

⁵ In addition to the Bayside Permit, discharges from the Bayside Facilities are also regulated under NPDES Permit No. CA0038849, which establishes requirements on mercury and polychlorinated biphenyls (PCBs) from wastewater discharges to San Francisco Bay, as well as NPDES Permit No. CA0038873, which establishes requirements on nutrients for the entire SFPUC combined sewer system. Neither of these permits is at issue here.

The CSO Control Policy allows a municipality to elect either a "Demonstration Approach" or a "Presumption Approach" to determine whether its Long Term CSO Control Plan will meet the CWA's water quality-based requirements. The Demonstration Approach requires a successful demonstration that a municipality's selected controls will meet relevant water quality objectives and protect the receiving waters' beneficial uses, including designation of Total Maximum Daily Load allocations for impaired receiving waters. 59 Fed. Reg. 18693. Under the Presumption Approach, a municipality's CSO program is reasonably presumed to meet these requirements where selected controls result in any one of the following criteria: (1) no more than an average of four CSOs not meeting minimum treatment requirements per year; (2) elimination or treatment of at least 85% of the annual average volume of combined sewage collected during precipitation events; or (3) elimination or treatment of the equivalent pollutant mass contained in at least 85% of the annual average volume of combined sewage collected during precipitation events. *Id.* at 18692–93. Such a reasonable presumption must be based on "the data and analysis conducted in the characterization, monitoring, and modeling of the system and the consideration of sensitive areas." Id. at 18692. Therefore, receiving water monitoring data and analysis may rebut the presumption that a municipality's CSO program meets CWA's water quality-based requirements. See, e.g., Regional Board, Response to Written Comments on the Reissuance of an NPDES Permit for Discharges from the [Bayside Facilities] (2013) at 2 ("the policy explicitly requires our presumption to be reasonable and supported by evidence obtained through post-construction compliance monitoring."); Permit, Fact Sheet at F-42 ("The Order requires the Discharger to continue monitoring wet weather discharges to characterize their impacts and evaluate . . . whether beneficial uses are protected."). When the CSO Control Policy went into effect, the City and SFPUC elected to employ the Presumption Approach.

2. Current Bayside Permit Requirements

The Bayside Permit contains the following provisions and mandates:

a. Discharge Prohibitions

Discharge Prohibition A prohibits discharges of untreated or partially-treated wastewater to waters of the United States except as expressly authorized in the Permit. Permit § III.A. Discharge Prohibition C prohibits bypass of untreated or partially-treated wastewater to waters of the United States except during wet weather and as provided in the Permit. Permit § III.C. Discharge Prohibition D prohibits any dry weather discharges from Discharge Points Nos. 002 through 043. Permit § III.D. Discharge Prohibition F prohibits discharges of treated wastewater in any location or manner different from that described in the Permit. Permit § III.F.

b. Receiving Water Limitations

Receiving Water Limitation A prohibits any discharge that causes certain conditions, including floating, suspended or deposited macroscopic particulate matter or foams, alteration of temperature, turbidity, or color, and "toxic or other deleterious substances," to exist in receiving waters outside the "near-field mixing zone (i.e., where mixing is not controlled by effluent discharge momentum and buoyancy)." Permit § V.A.

Receiving Water Limitation C prohibits any discharge that causes "a violation of any water quality standard for receiving waters outside near-field mixing zones." Permit § V.C. Enforceable water quality standards for the Receiving Waters include those promulgated in the Water Quality Control Plan for the San Francisco Bay Basin ("Basin Plan"), which do not differentiate between dry and wet weather discharges.

c. Combined Sewer System Controls

The Combined Sewer System Controls require the Bayside Facilities to "maximize flows to the Southeast Plant and pollutant removal during wet weather in accordance with the Nine Minimum Controls and the Discharger's Long-Term Control Plan," Permit § VI.C.5, and specify performance criteria and monitoring requirements for wet weather combined sewer system operations consistent with their implementation, *see* Permit at 19–20, 23–25, and Fact Sheet at F-15, F-42. The City and SFPUC must implement the Long Term Control Plan and revise it "as necessary to ensure compliance with the Nine Minimum Controls and the Long Term Control Plan requirements of the Combined Sewer Overflow Control Policy." Permit § VI.C.5.a.

Among other provisions, the Permit's "Nine Minimum Controls" term requires proper operation and maintenance of the collection system and the combined sewer discharge outfalls "to reduce the magnitude, frequency, and duration of combined sewer discharges," Permit § VI.C.5.b.i.(b), requires operation of the Southeast Plant at maximum treatable flow during wet weather, Permit § VI.C.5.b.iv, and prohibits dry weather CSOs from CSD Nos. 002 through 043, Permit § VI.C.5.b.v.

Among other provisions, the Permit's "Long Term Control Plan" term requires "capture for treatment, or storage and subsequent treatment, [of] 100 percent of the combined sewage flow collected in the combined sewage system during precipitation events" for secondary treatment, equivalent-to-primary treatment, or primary treatment. Permit § VI.C.5.c.ii. "Primary Clarification," as described in the CSO Control Policy, requires removal of "floatables and settleable solids." 59 Fed. Reg. 18693. The term also details the operating conditions for each wet weather facility, including flow and storage capacities required to be met prior to CSD events. Permit § VI.C.5.c.iii.

III.RELEVANT WATERWAYS AND STANDARDS

A. Receiving Waters

The combined sewer system pipes and other conveyances from the Bayside Facilities discharge to the Central and Lower San Francisco Bay, Mission Creek Channel, Islais Creek Channel, and other local waterbodies. These receiving waters are waters of the United States within the San Francisco Bay watershed. Permit, Fact Sheet, at F-4.

1. Central and Lower San Francisco Bay

San Francisco Bay is an ecologically-sensitive waterbody and a defining feature of Northern California. San Francisco Bay is an important and heavily-used resource, with special aesthetic and recreational significance for people living in the surrounding communities. Aquatic sports are very popular in the Bay Area. The San Francisco Bay shoreline has numerous highly-valued beaches with public access that offer unique recreational opportunities for swimmers, kayakers, stand up paddleboarders, and windsurfers. The large-scale urbanization of the Bay Area makes these recreational and aesthetic uses critically important to the quality of life of Bay Area residents. Unfortunately, sewage spills and combined sewage overflows render San Francisco Bay's coastal resources inaccessible and/or hazardous for human contact or non-contact recreation for significant periods every year.

Further, San Francisco Bay's water quality is impaired and continues to decline. Central and Lower San Francisco Bay are both impaired for chlordane, DDT (dichlorodiphenyltrichloroethane), dieldrin, dioxin compounds, furan compounds, invasive species, mercury, PCBs (polychlorinated biphenyls), and trash; Central San Francisco Bay is further impaired for selenium. San Francisco Bay's once-abundant and varied fisheries have been drastically diminished by pollution, and much of the wildlife habitat of San Francisco Bay has been degraded.

2. Mission Creek

Mission Creek is a dredged channel that runs approximately 2/3 mile between San Francisco Bay at Oracle Park and the start of Interstate 280 at 7th Street to the southwest, fed by a freshwater culvert originating at headwaters in the Castro District. The Creek abuts five wastewater pump stations and six combined sewer discharge outfalls. Mission Creek borders Oracle Park and its adjacent ferry terminal, China Basin Park, a Bay Area Water Trail kayak and small boat launch, and a continuous Shoreline Park, which contain walking paths, picnic areas, an amphitheater, sports courts, and a dog park. Mission Creek hosts approximately 20 houseboats and is a popular

area for water recreation activities. A wetland mitigation area near the kayak launch provides ecologically important habitat, and Mission Creek is also considered potential habitat for herring and shoreline wetland species. Again, sewage spills and combined sewage overflows render Mission Creek hazardous for human contact or non-contact recreation for significant periods every year. Further, Mission Creek is impaired for ammonia, chlordane, dieldrin, hydrogen sulfide, lead, mercury, PAHs (polycyclic aromatic hydrocarbons), PCBs (polychlorinated biphenyls), silver, and zinc, all commonly found in raw sewage.

3. Islais Creek

Islais Creek Channel is an approximately one mile long, east-west estuary connecting Central San Francisco Bay at Pier 84 and mostly underground freshwater culverts originating from Upper Islais Creek in Glen Park Canyon and Precita Creek in Diamond Heights. The Channel abuts the Southeast Wastewater Treatment Plant. Islais Creek was once San Francisco's largest freshwater body prior to extensive land reclamation, and the Channel continues to serve as a salt marsh and marine habitat to many aquatic species, including fish, marine mammals, vegetation, and over 168 species of birds. The Channel's shoreline hosts numerous small parks and walking trails, as well as a Bay Water Trail kayak and small boat launch. As with other waters impacted by discharges from the City and SFPUC, sewage spills and combined sewage overflows render Islais Creek hazardous for human contact or non-contact recreation for significant periods every year. Further, Islais Creek Channel is impaired for ammonia, chlordane, dieldrin, hydrogen sulfide, PAHs (polycyclic aromatic hydrocarbons), and toxicity—impairments caused by raw sewage discharges.

B. Water Quality Standards and Impairments

The Basin Plan designates beneficial uses and water quality objectives for waters receiving discharges from the Bayside Facilities. The existing beneficial uses for both Mission Creek and Islais Creek include: commercial and recreational fishing, estuarine habitat, wildlife habitat, water contact recreation, noncontact water recreation, and navigation. The existing beneficial uses for Central and Lower San Francisco Bay include: industrial service supply, industrial process supply, commercial and sport fishing, shellfish harvesting, estuarine habitat, fish migration, preservation of rare and endangered species, fish spawning, wildlife habitat, water contact recreation, noncontact water recreation, and navigation. *See* Basin Plan, Ch. 2 at Table 2-1: Existing and Potential Beneficial Uses of Water Bodies in the San Francisco Bay Region.

The Basin Plan provides narrative and numeric water quality objectives to define appropriate

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⁶ Port of San Francisco, Waterfront Resilience Story Maps (Dec. 17, 2021), https://storymaps.arcgis.com/stories/39325a275f4a487d890b4608125595c5/.

⁷ Port of San Francisco, Waterfront Resilience Story Maps.

environmental quality and to control activities that can adversely affect aquatic systems. Water quality objectives are necessary to protect the present and potential beneficial uses. Numeric objectives describe pollutant concentration, physical/chemical conditions of the water itself, and the toxicity of the water to aquatic organisms, and are designed to represent the maximum amount of pollutants that can remain in the water column without causing any adverse effect on aquatic organisms, on people consuming those organisms or water, and on other current or potential beneficial uses. Table 3-1 of the Basin Plan⁸ provides numeric water quality objectives for bacteria, specifically fecal coliform, total coliform, E. coli, and enterococcus, including water contact recreation receiving water standards of 110 cfu/100 mL standard threshold value ("STV") for enterococcus concentrations and 320 cfu/100 mL STV for E. Coli concentrations. Water quality objectives for bacteria in Table 3-1 of the Basin Plan shall be strictly applied. *See* Basin Plan, Ch. 3.

Information available to Baykeeper documents the presence of fecal indicator bacteria in the Receiving Waters following modest storm events and even during dry weather at concentrations orders of magnitude greater than water quality standards for water contact recreation for E. Coli and enterococcus. Targeted epidemiological studies have shown a number of adverse health outcomes associated with fecally-polluted recreational water. Such health impacts result in a significant burden of disease and economic loss. Studies conducted worldwide have correlated gastrointestinal symptoms to recreating in water with high bacterial counts.⁹

California-specific studies show a higher incidence of upper respiratory and gastrointestinal symptoms associated with swimming in the vicinity of storm drains contaminated with high bacteria counts. ¹⁰ Contaminated creeks run through San Francisco's parks, posing public health threats, particularly to children, and significantly diminishing recreation-based beneficial uses. Additionally, the Receiving Waters are also listed on the State of California's 2020-2022 Clean Water Act Section 303(d) list of impaired waterbodies. A waterbody that is listed as impaired cannot support the designated beneficial uses for that waterbody.

C. The City and County of San Francisco and SFPUC's Discharges' Impacts on Receiving Waters and Beneficial Uses

Self-Monitoring Reports submitted by SFPUC show 40 combined sewer overflows ("CSOs"),

⁸ See Exhibit C.

⁹ Annette Pruss, *Review of Epidemiological Studies on Health Effects from Exposure to Recreational Water*, 27 Int'l J. Epidemiology 1, 1–9 (1998), https://academic.oup.com/ije/article/27/1/1/813163/.

¹⁰ Robert W. Haile et al., *The Health Effects of Swimming in Ocean Water Contaminated by Storm Drain Runoff*, 10 Epidemiology 4, 355–63 (1999),

https://journals.lww.com/epidem/pages/articleviewer.aspx?year=1999&issue=07000&article=00004&type=abstract#pdf-link.

releasing untreated or minimally-treated sewage, between March 2019 and February 2024 from the Bayside Facilities. SFPUC further reported at least one (1) bypass event, four (4) leaks, and numerous other operational failures from the Bayside Facilities during this same time period. Combined wastewater and stormwater effluent contains human waste, viruses, protozoa, mold spores, bacteria, and chemicals that cause cancer or reproductive toxicity. High concentrations of these pollutants are typically found in raw and/or inadequately-treated effluent. Raw and minimally-treated sewage enters the Bayside Facilities and then subsequently flows directly to the Receiving Waters during CSO and bypass events.

As a direct result of these releases of untreated or minimally-treated sewage, self-reported monitoring data shows enterococcus concentrations exceeding the water contact recreation receiving water standard of 110 cfu/100 mL STV at one or more CSO monitoring locations for at least 17 months between March 2019 and February 2024 sampling shows E. Coli levels exceeding the water contact recreation receiving water standard of 320 cfu/100 mL STV for at least five (5) months between March 2019 and April 2021. Sampling results demonstrated the presence of fecal indicator bacteria at concentrations that were orders of magnitude greater than numeric water quality objectives for water contact and non-contact recreation. This data demonstrates that the Bayside Facilities' CSO discharges are causing exceedances of fecal indicator bacteria water quality objectives in the Receiving Waters.

CSOs and dry weather discharges are recognized sources of impairing pollutants, including human fecal matter. The discharge of raw and/or inadequately-treated sewage via the Bayside Facilities harms the Receiving Waters and poses a serious risk to human health and the environment. The intensive use of San Francisco Bay and its tributaries for water-contact, and non-water-contact recreation ensures that people will come into contact with fecal matter and other pollutants from the raw and minimally-treated sewage discharged by the Bayside Facilities during CSO events. By discharging raw and/or inadequately-treated sewage and its associated pollutants into waters of the United States, the City and SFPUC have caused and are causing the continuing impairment of the Receiving Waters in violation of the Bayside Permit and the Act.

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¹¹ See Mark Dorfman, Swimming in Sewage: The Growing Problem of Sewage Pollution and How the Bush Administration Is Putting Our Health and Environment at Risk (2004), https://www.csu.edu/cerc/documents/SwimmingInSewage.pdf; Elizabeth Frick et al., Presence of Pharmaceuticals in Wastewater Effluent and Drinking Water, Metropolitan Atlanta, Georgia July-Sept. 1999, Proceedings of the 2001 Georgia Water Resources Conference (Mar. 26–27, 2001), https://repository.gatech.edu/server/api/core/bitstreams/f014ec77-2e44-479b-b9e1-8dbd588dc29e/content; Assoc. Press, Death by Dirty Water: Storm Runoff a Risk for Fish (Nov. 17, 2014, updated Jan. 10, 2019), https://www.oregonlive.com/today/2014/11/death by dirty water storm run.html.

¹² No E. Coli sampling results were reported after April 2021.

IV. CLEAN WATER ACT VIOLATIONS

A. Bayside Permit Discharge Prohibition A

Discharge Prohibition A prohibits discharges of treated wastewater in any location or manner different from that described in the Bayside Permit. Permit § III.A. SFPUC and the City violate this prohibition in a host of ways.

First, SFPUC's self-reported violations on the State Board's California Integrated Water Quality System Project ("CIWQS") database indicate that discharges occurred as a result of equipment, operation and/or maintenance failures on numerous occasions in the past five years. *See* Table 1. The information in Table 1 demonstrates at least 146 violations and days of violations of the Permit's Discharge Prohibition A.¹³

Second, to the extent the City and SFPUC assert that the CSO discharges consist of "treated wastewater," the CSO operations and associated discharge events violate Discharge Prohibition A because they occur in a manner that is "different from" what the Permit mandates. SFPUC's Permit incorporates its Maintenance and Operations Plan and its Long Term Control Plan. See Permit § VI.C.5. Where SFPUC does not operate its system as described in those documents and the Permit, it is in violation of Discharge Prohibition A each time a CSO discharge occurs.

Since March 6, 2019, SFPUC's CSO maintenance failures and discharge point closures mean that each CSO discharge in that time is inconsistent with Discharge Prohibition A. Three specific examples of these differences are: (1) the closure of the Pierce Street outfall; (2) the inoperability or closure of the Brannan Street Combined Sewer Discharge Point during that entire period, and (3) the inoperability or closure of the 4th Steet South Combined Sewer Discharge Point during that entire period. In each instance, the Permit, as well as SFPUC's representations to the Regional Board and EPA about how its system operates were based on these outfalls being open and operable. Closing these discharge points results in changes to the quantity and pollutant content of discharges occurring during CSO events from other outfalls. As a result of these closed and/or inoperable discharge points, discharges occur from the system in substantially different ways than required or allowed by the Permit.

The Permit allows deviation from these requirements only if the City and SFPUC demonstrate that changes to the operating parameters "will result" in improvements in storage or treatment of wastewater flows *and* the Executive Officer of the Regional Water Board concurs with that demonstration, in writing, prior to implementation of the changes by the City and SFPUC. The City and SFPUC have neither made the required demonstration that their closure or non-use of

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¹³ Tables 1 through 7 referenced herein are attached as Exhibit A to this Notice Letter.

the Pierce Street, Brannon Street, and Fourth Street South outfalls "will result" in improvements, nor has SFPUC obtained written consent to deviate from the Permit's operational requirements. *See* Permit § VI.C.5.c.iii.

The City and SFPUC's prohibited discharges from the Bayside Facilities to the Receiving Waters are ongoing and continuous. Each day and/or occasion that the City and SFPUC have discharged and continues to discharge treated wastewater in ways that violate Discharge Prohibition A is a separate and distinct violation of the Act. The City and SFPUC's violations will continue each day and/or occasion that the City and SFPUC fail to operate their system as required by the Permit when it discharges sewage and wastewater from the Bayside Facilities to the Receiving Waters in violation of the requirements of the Permit and the Act. The City and SFPUC are subject to civil penalties for all violations of the Act occurring in the five years prior to the date of this Notice Letter.

B. Bayside Permit Discharge Prohibition C

Discharge Prohibition C prohibits bypass of untreated or partially-treated wastewater to waters of the United States except during wet weather and as provided in the Permit. Permit § III.C. Available data indicates that at least one bypass of untreated or partially-treated wastewater occurred since March 6, 2019. *See* Table 2. The information in Table 2 demonstrates at least one violation and day of violation of Discharge Prohibition C.

The City and SFPUC's prohibited discharges from the Bayside Facilities to the Receiving Waters are ongoing and continuous. Each day and/or occasion that the City and SFPUC have discharged and continue to discharge untreated or partially treated wastewater in violation of the Permit's Discharge Prohibition C is a separate and distinct violation of the Act. The City and SFPUC's violations will continue each day and/or occasion that the City and SFPUC fail to prohibit the unpermitted bypass of untreated or partially treated wastewater from the Bayside Facilities to the Receiving Waters in violation of the requirements of the Permit and the Act. The City and SFPUC are subject to civil penalties for all violations of the Act occurring in the five years prior to the date of this Notice Letter.

C. Bayside Permit Discharge Prohibition D

Discharge Prohibition D prohibits any dry weather discharges from Discharge Points Nos. 002 through 043. Permit § III.D. Available data indicates that dry weather discharges occurred from unauthorized discharge points on at least four occasions since March 6, 2019. *See* Table 3. The information in Table 3 demonstrates at least four violations and days of violation of Discharge Prohibition D.

The City and SFPUC's prohibited discharges from the Bayside Facilities to the Receiving Waters are ongoing and continuous. Each day and/or occasion that the City and SFPUC have discharged and continue to discharge sewage during dry weather in violation of the Permit's Discharge Prohibition D is a separate and distinct violation of the Act. The City and SFPUC's violations will continue each day and/or occasion that the City and SFPUC fail to prohibit the unpermitted discharge of sewage from the Bayside Facilities to the Receiving Waters during dry weather in violation of the requirements of the Permit and the Act. The City and SFPUC are subject to civil penalties for all violations of the Act occurring in the five years prior to the date of this Notice Letter.

D. Bayside Permit Discharge Prohibition F

Discharge Prohibition F prohibits CSOs of untreated or partially-treated wastewater to waters of the United States except as expressly authorized in the Permit. Permit § III.F. Again, the City and SFPUC have and continue to violate this prohibition in several ways.

First, SFPUC self-reporting demonstrates that the Bayside Facilities discharged untreated or partially-treated wastewater on at least 14 occasions since March 6, 2019. *See* Table 4. The information in Table 4 demonstrates at least 14 violations and 16 days of violation of Discharge Prohibition F.

Second, the City and SFPUC's wastewater discharges during CSO events are discharges of untreated wastewater in violation of Discharge Prohibition F. As described below, the City and SFPUC fail to comply with the Combined Sewer Overflow controls that arise from the Permit, the federal CSO Policy, the Nine Minimum Controls, the Long Term Control Plan, and the Operations and Maintenance Plan. As a result of these failures, the CSO discharges by the City and SFPUC into the Receiving Waters consist of untreated wastewater. While SFPUC and the City presume that all of the wastewater discharged during CSO events receives at least primary treatment, this presumption is belied by the reality of the harmful contents of those discharges, including trash, floatable materials, human fecal matter, and other waste inconsistent with primary treatment.

Third, the City and SFPUC's wastewater discharges during CSO events are discharges of partially treated wastewater that are not "expressly authorized by the Permit." Permit § III.F. To the extent some of the CSO discharges do in fact receive primary or equivalent to primary treatment, such discharges still violation Discharge Prohibition F because those discharges of partially treated wastewater are not expressly authorized by the Permit because they occur in ways that are different from and inconsistent with the Permit's requirements. *See* Permit § VI.C.5.

The City and SFPUC's prohibited combined sewer discharges from the Bayside Facilities to the Receiving Waters are ongoing and continuous. Each day and/or occasion that the City and SFPUC have discharged and continues to result in combined sewer discharges of untreated or partially treated wastewater in violation of the Permit's Discharge Prohibition F is a separate and distinct violation of the Act. The City and SFPUC's violations will continue each day and/or occasion that the City and SFPUC fail prohibit the unpermitted discharge of untreated or partially treated wastewater, including raw sewage, from the Bayside Facilities to the Receiving Waters in violation of the requirements of the Permit and the Act. The City and SFPUC are subject to civil penalties for all violations of the Act occurring in the five years prior to the date of this Notice Letter.

E. Receiving Water Limitations

1. Receiving Water Limitation A

Receiving Water Limitation A prohibits any discharge that causes floating, suspended or deposited macroscopic particulate matter or foams, alteration of temperature, turbidity, or color, and "toxic or other deleterious substances," to exist in receiving waters outside the "near-field mixing zone." Permit § V.A.

Videos taken by SFPUC and photos taken by Baykeeper during and shortly after storm and combined discharge events reveal myriad floating objects, including feces, trash, condoms, and syringes, discharging to Mission Creek from Bayside overflow structures on at least the following dates: December 27, 2022; December 31, 2022; January 9, 2023; January 14, 2023; February 24, 2023; March 9, 2023; March 14, 2023; March 21, 2023; March 28, 2023; December 18, 2023; December 19, 2023. *See* Exhibit D. Due to the velocity of flow during combined sewer overflow and discharge events into Mission Creek, each time SFPUC conducts a combined sewer discharge it contains harmful levels of trash, floating objects, and other deleterious materials.

Further, the discharges from the Bayside Facilities to Mission Creek violate Receiving Water Limitation A every time these facilities overflow during rain events or bypass normal treatment processes during dry weather. CSOs from the Mission Creek CSD outfalls have occurred on at least the following dates during the relevant time period: March 6, 2019; March 20, 2019; November 26, 2019; December 7, 2019; January 16, 2020; January 27, 2021; January 29, 2021; October 21, 2021; October 22, 2021; October 23–24, 2021; November 8–9, 2021; December 13, 2021; December 16, 2021; December 23, 2021; December 27, 2022; December 31, 2022; January 4, 2023; January 9, 2023; January 10, 2023; January 11, 2023; January 14, 2023; January 15, 2023; January 16, 2023; February 23–24, 2023; March 9, 2023; March 10, 2023; March 14, 2023; March 21–22, 2023; March 28, 2023; November 18, 2023; December 18, 2023;

December 19, 2023; December 20, 2023; December 29, 2023; January 13, 2024; January 14, 2024; January 22, 2024; and January 31, 2024. This information demonstrates at least 42 violations and days of violation of Receiving Water Limitation A.

In addition, millions of gallons of untreated combined wastewater discharged to the San Francisco Bay due to extensive flooding in the Marina Boulevard area on October 24, 2021 and December 31, 2022. *See* Table 4. This information demonstrates at least an additional two (2) violations of Receiving Water Limitation A.

These violations are ongoing and will continue each time contaminated water is discharged in violation of Receiving Water Limitation A of the Permit and Section 301(a) of the Clean Water Act, 33 U.S.C. § 1311(a). Each time discharges from the Bayside Facilities cause floating, suspended or deposited macroscopic particulate matter or foams, alteration of temperature, turbidity, or color, and "toxic or other deleterious substances," to exist in receiving waters outside the "near-field mixing zone" is a separate and distinct violation of Receiving Water Limitation A of the Permit and Section 301(a) of the Clean Water Act, 33 U.S.C. § 1311(a). The City and SFPUC are subject to civil penalties for all violations of the Clean Water Act occurring in the five years prior to the date of this Notice Letter.

2. Receiving Water Limitation C

Receiving Water Limitation C prohibits any discharge that causes "a violation of any water quality standard for receiving waters outside near-field mixing zones." Permit § V.C.

SFPUC's self-monitoring data demonstrates that discharges from the Bayside Facilities contain elevated concentrations of pollutants, such as E. Coli and enterococcus, at levels exceeding applicable water quality standards by orders of magnitude. *See*, *e.g.*, Exhibit B (listing results of SFPUC's water quality monitoring and instances when violations of water quality standards occurred); *see also* Basin Plan, Table 3-1. Discharges with elevated levels of bacteria and other pollutants adversely affect the beneficial uses of the Receiving Waters, and thus violate Receiving Water Limitation C of the Permit and the Act.

SFPUC's self-reporting demonstrates that CSO events caused standard threshold values (STV) for concentrations of enterococcus and/or E. Coli exceeding applicable water quality standards at one or more Bayside CSO monitoring locations during at least 17 months since March 6, 2019. Water quality monitoring showed no exceedances during only one month (May 2019) when a CSO event occurred in the past five years. *See* Table 5; *see also* Exhibit B. The information in Table 5 demonstrates at least 114 violations and 495 days of violation of Receiving Water

¹⁴ SFPUC's self-monitoring reports for April-August 2020 and October 2020-February 2021 are missing data for Monitoring Location 210.1. Reported data for Monitoring Location 230 begins January 2021.

Limitation C. SFPUC's sampling indicates that the discharges from the Bayside Facilities violate Receiving Water Limitation C every time these facilities overflow during rain events or bypass normal treatment processes during dry weather.

These violations are ongoing and will continue each time contaminated water is discharged in violation of Receiving Water Limitation C of the Permit and Section 301(a) of the Act, 33 U.S.C. § 1311(a). Each time discharges from the Bayside Facilities cause a violation of an applicable water quality standard is a separate and distinct violation of Receiving Water Limitation C of the Permit and Section 301(a) of the Act, 33 U.S.C. § 1311(a). The City and SFPUC are subject to civil penalties for all violations of the Act occurring in the five years prior to the date of this Notice Letter.

F. CSO Controls

1. Nine Minimum Control Measures

The Bayside Permit's "Nine Minimum Controls" term requires proper operation and maintenance of the collection system and the combined sewer discharge outfalls "to reduce the magnitude, frequency, and duration of combined sewer discharges," Permit § VI.C.5.b.i.(b), requires operation of the Southeast Plant and North Point Facility at maximum treatable flow during wet weather, Permit § VI.C.5.b.iv, and prohibits dry weather CSOs from CSD Nos. 002 through 043, Permit § VI.C.5.b.v.

SFPUC's self-reporting indicate at least 171 occasions combined sewer system operation and/or maintenance failures since March 6, 2019. *See* Table 6. The operation and maintenance failures listed in Table 6 further violated the requirement to operate the Southeast Plant and North Point Facility at maximum treatable flow during wet weather on at least the following dates: October 21, 2021; October 24, 2021; December 31, 2022; March 21–22, 2023; and March 28, 2023. These operation and maintenance failures further violated the prohibition against dry weather CSOs from Discharge Points No. 002 on at least the following dates: August 5, 2021; March 17, 2023; and June 25, 2023.

The information in Table 6 demonstrates at least 180 violations and 171 days of violation of the Bayside Permit's "Nine Minimum Controls" term. The City and SFPUC's failure to meet the Bayside Permit's "Nine Minimum Controls" term is ongoing and continuous. The City and SFPUC have therefore been in daily and continuous violation of the Permit every day since at least March 6, 2019. Each day and/or occasion that the City and SFPUC fail to properly operate and maintain its sewer system, prevent dry weather CSOs, and control solid and floatable materials in CSOs is a separate and distinct violation of the Act. The City and SFPUC's violations will continue each day and/or occasion that the City and SFPUC fail to meet the

requirements of the Permit and the Act. The City and SFPUC are subject to civil penalties for all violations of the Act occurring in the five years prior to the date of this Notice Letter.

2. Long Term CSO Control Plan

The Bayside Permit's "Long Term Control Plan" term requires capture of "100 percent of the combined sewage flow collected in the combined sewage system during precipitation events" for equivalent-to-primary, primary, or secondary treatment. Permit § VI.C.5.c.ii. "Primary Clarification," as described in the CSO Control Policy, requires removal of "floatables and settleable solids." 59 Fed. Reg. 18693. The term also details the operating parameters for each wet weather facility, including flow and storage capacities required to be met prior to CSD events, Permit § VI.C.5.c.iii, and requires revision of operating protocols "as necessary to ensure compliance with the Nine Minimum Controls and the Long-Term Control Plan requirements of the Combined Sewer Overflow Control Policy," Permit § VI.C.5.a.

Videos taken by SFPUC and photos taken by Baykeeper during storm events reveal myriad floating objects, including feces, trash, condoms, and syringes, discharging to Mission Creek from Bayside overflow structures, as well as the two self-reported occasions of extensive flooding in the Marina Boulevard area, demonstrate failure to capture and treat the required 100 percent of combined sewage flow collected in the combined sewage system during precipitation events. Discharges from the Bayside Facilities to Mission Creek violate the Bayside Permit's "Long Term Control Plan" term every time these facilities overflow during rain events or bypass normal treatment processes during dry weather. CSOs from the Mission Creek CSD outfalls have occurred on at least the following dates during the relevant time period: March 6, 2019; March 20, 2019; November 26, 2019; December 7, 2019; January 16, 2020; January 27, 2021; January 29, 2021; October 21, 2021; October 22, 2021; October 23–24, 2021; November 8–9, 2021; December 13, 2021; December 16, 2021; December 23, 2021; December 27, 2022; December 31, 2022; January 4, 2023; January 9, 2023; January 10, 2023; January 11, 2023; January 14, 2023; January 15, 2023; January 16, 2023; February 23-24, 2023; March 9, 2023; March 10, 2023; March 14, 2023; March 21–22, 2023; November 18, 2023; December 18, 2023; December 19, 2023; December 20, 2023; December 29, 2023; January 13, 2024; January 14, 2024; January 22, 2024; and January 31, 2024. In addition, millions of gallons of untreated combined wastewater discharged to the San Francisco Bay due to flooding on October 24, 2021 and December 31, 2022. This information demonstrates at least 39 violations and days of violation of the Bayside Permit's "Long Term Control Plan" section VI.C.5.c.ii since March 6, 2019.

SFPUC's self-reporting indicate wet weather facility operating parameter violations on at least 11 occasions since March 6, 2019. *See* Table 7. The information in Table 7 demonstrates at least 11 violations and days of violation of the Bayside Permit's "Long Term Control Plan" section VI.C.5.c.iii since March 6, 2019.

Moreover, SFPUC's self-reported monitoring data demonstrate that the Bayside Facilities do not achieve relevant water quality objectives and therefore do not overcome the "presumption" described in the Long Term Control Plan and the CSO Policy. Specifically, CSO events caused standard threshold values (STV) for concentrations of enterococcus and/or E. Coli exceeding applicable water quality standards at one or more Bayside CSO monitoring locations during at least 17 months since March 6, 2019. ¹⁵ *See* Table 5; *see also* Exhibit B. Water quality monitoring showed no exceedances during only one month (May 2019) when a CSO event occurred in the past five years.

Regulators have confirmed SFPUC's failure to meet water quality standards as required. For example, the Bayside Permit Fact Sheet recounts that CSD monitoring conducted under the previous permit, Order No. R2-2008-0007, showed average combined sewer discharge pollutant concentrations "below acute water quality objectives for metals and other priority pollutants, with the exceptions of copper and zinc." Bayside Permit, Fact Sheet at F-42 (emphasis added). In a November 21, 2019 letter to SFPUC regarding the reissuance of the Oceanside Permit, the EPA stated its concern that the approach adopted by San Francisco in the 1970s, with its continued reliance on primary treatment, does not meet the "presumption" approach under the CSO Policy. Further, SFPUC has self-reported more than the four (4) CSOs failing to meet minimum treatment requirements per year, and SFPUC's failure to treat 85% of CSO volume, or to remove 85% of the mass of impairing pollutants in CSOs, for at least the last five years. The City and SFPUC have undertaken no Long Term Control Plan revisions to bring operating protocols into compliance with the CWA and therefore operate in violation of the Bayside Permit.

Additionally, as described above, SFPUC fails to operate the system as dictated and required by the Permit because it has chosen to cease using discharge points without demonstrating that those closures will result in beneficial impacts related to storage or treatment, and with the written consent of the Regional Water Board. Instead, SFPUC has and continues to operate its combined sewer discharges in ways not authorized by the Permit and which are inconsistent with its Long Term Control Plan and Operations and Maintenance Plan.

The information in Table 7 as well as the City and SFPUC's other failures to comply with the CSO Policy demonstrate that the City and SFPUC have operated the Bayside Facilities every day for at least the last five years in a manner inconsistent with the Permit. The City and SFPUC have failed to revise the Long Term Control Plan to bring the Bayside Facilities into compliance with the CWA, violating Permit § VI.C.5.a every day for at least the last five years. These violations are ongoing and will continue each time insufficiently treated water is discharged. Each time discharges from the Bayside Facilities cause a violation of an applicable water quality

¹⁵ SFPUC's self-monitoring reports for April-August 2020 and October 2020-February 2021 are missing data for Monitoring Location 210.1. Reported data for Monitoring Location 230 begins January 2021.

standard is a separate and distinct violation of the Bayside Permit and Section 301(a) of the Act, 33 U.S.C. § 1311(a). The City and SFPUC are subject to civil penalties for all violations of the Act occurring in the five years prior to the date of this Notice Letter.

V. RELIEF SOUGHT FOR VIOLATIONS OF THE CLEAN WATER ACT

Upon expiration of the 60-day notice period, Baykeeper will file a citizen suit enforcement action pursuant to Section 505(a) of the Act, 33 U.S.C. § 1365(a), for the above-referenced violations and any additional violations stemming from the same conduct. Baykeeper will seek injunctive relief preventing further violations of the Act pursuant to Sections 505(a) and (d), 33 U.S.C. § 1365(a) and (d), declaratory relief, and such other relief as permitted by law. Pursuant to Section 309(d) of the Act, 33 U.S.C. § 1319(d), and the Adjustment of Civil Monetary Penalties for Inflation, 40 C.F.R. § 19.4, each separate violation of the Act subjects the violator to a penalty for all violations occurring during the period commencing five years prior to the date of a notice of intent to file suit letter. The Act imposes civil penalty liability of up to \$64,618 per day per violation for violations occurring after November 2, 2015. 33 U.S.C. § 1319(d); 40 C.F.R. §§ 19.1-19.4. Lastly, pursuant to Section 505(d) of the Act, 33 U.S.C. §1365(d), Baykeeper will seek to recover its costs, including attorneys' and experts' fees, associated with this enforcement action.

VI. PERSONS RESPONSIBLE FOR THE VIOLATIONS

Baykeeper puts the City and SFPUC on notice that they are the entities responsible for the violations described above. If additional persons are subsequently identified as also being responsible for the violations set forth above, Baykeeper puts the City and SFPUC on notice that it intends to include those persons in this action.

VII. NAME AND ADDRESS OF NOTICING PARTY

The name, mailing address, and telephone number of the noticing party is:

Eric Buescher (Bar No. 271323) Nicole C. Sasaki (Bar No. 298736) San Francisco Baykeeper 1736 Franklin Street, Suite 800 Oakland, California 94612 eric@baykeeper.org nicole@baykeeper.org (510) 735-9700

Baykeeper has retained legal counsel to represent it in this matter. Please direct all communications to:

Daniel Cooper (Bar No. 153576) Sycamore Law, Inc. 1004 O'Reilly Avenue San Francisco, California 94129 daniel@sycamore.law (415) 360-2962

VIII. CONCLUSION

Baykeeper is willing to discuss effective remedies for the violations described in this Notice Letter. If you wish to pursue settlement discussions, please reach out to counsel at Sycamore Law, Inc. using the contact information above. I suggest that, if interested, those discussions be initiated soon, as Baykeeper does not intend to delay filing a complaint in federal court if discussions are continuing when the 60-day period ends.

Sincerely,

Daniel Cooper

Cc:

Michael S. Regan, Administrator U.S. Environmental Protection Agency Mail Code: 1101A 1200 Pennsylvania Avenue, N.W. Washington, D.C. 20460

Martha Guzman, Regional Administrator U.S. EPA, Region 9 75 Hawthorne Street San Francisco, California 94105 Eileen White, Executive Officer Regional Water Quality Control Board San Francisco Bay Region 1515 Clay Street, Suite 1400 Oakland, California 94612

Eileen Sobeck, Executive Director State Water Resources Control Board 1001 I Street Sacramento, California 95812

Enclosures

List of Exhibits

Exhibit A - Tables 1 - 7

Exhibit B – Summary of SFPUC Bacteria Water Quality Sampling

Exhibit C – Basin Plan, Table 3.1

Exhibit D – Examples of floatables (trash, feces, etc.) in and after CSO events in Mission Creek

TABLE 1: DISCHARGE PROHIBITION A VIOLATIONS SINCE MARCH 2019

Date	Location	Cause
"intermittently"	Air vent pipe	Leaking air vent pipe section
March 6, 2019	470 ft. upstream	
– June 25, 2019	of EFF-001	
June 10–12,	Air vent pipe	"Construction activities related to replacing a vent pipe
2020	470 ft. upstream	section"
	of EFF-001	
December 23,	Pipe joint under	"leak from a joint on the forty-two-inch Islais Creek force
2020 – January	Pier 80	main that conveys treated effluent from [Southeast Plant
20, 2021		("SEP")] to the Pier 80 deep-water outfall (Discharge
		Point No. 001)"
August 5, 2021	EFF-002	"an issue with the V20 valve located at the booster pump
		station during a power blip"
December 16,	Pipe joint under	"leaking pipe joint in the final effluent force main below
2021	Pier 80	Pier 80"
March 17,	EFF-002	"an issue with transitioning one of the effluent pumps at
2023		the Booster Pump Station (BPS) from local control to
		automatic level control upon re-starting of the plant after
		a SEP shutdown"
June 25, 2023	EFF-002	"loss of power to the Booster Pump Station (BPS), which
		pumps final effluent to Discharge Point No. 001"

TABLE 2: DISCHARGE PROHIBITION C VIOLATIONS SINCE MARCH 2019

Date	Location	Cause
October 21,	Central Basin	"an unanticipated bypass of the primary disinfection system
2021	CSDs	(PDS) occurred when a pressure manhole on one of the PDS
		channels failed."

TABLE 3: DISCHARGE PROHIBITION D VIOLATIONS SINCE MARCH 2019

Date	Location	Cause	
August 5,	EFF-002	"an issue with the V20 valve located at the booster pump station	
2021		during a power blip"	
April 8,	CSD-026	discharge of hydraulic fluid due to "the failure of two hydraulic	
2022		position sensors associated with the Division Street CSD Outfall"	
March 17,	EFF-002	"an issue with transitioning one of the effluent pumps at the Booster	
2023		Pump Station (BPS) from local control to automatic level control	
		upon re-starting of the plant after a SEP shutdown"	
June 25,	EFF-002	"loss of power to the Booster Pump Station (BPS), which pumps	
2023		final effluent to Discharge Point No. 001"	

TABLE 4: DISCHARGE PROHIBITION F VIOLATIONS SINCE MARCH 2019

Date	Location	Violated Permit Term	Cause
May 18–19,	CSD-040 -	Griffith Pump Station	"essential maintenance"
2019	CSD-042	"could not be operated at	
		its wet weather design	
		capacity" in accordance	
		with Provision	
		VI.C.5.c.iiiI	
December 22,	CSD-029	"The Mariposa Pump	"The flow fluctuations at the pump
2019	CSD 02)	Station (MPS) did not	station were indicative of a
2017		maintain peak wet	'ragging' event''
		weather capacity (10	ragging event
		MGD) during the 12/22	
		CSD event in accordance	
		with Provision	
D	CCD 020	VI.C.5.c.iii(b)." CSD "before the	6D
December 17,	CSD-029		"Drain valve blocked open due to
2020		Mariposa Pump Station	debris"
		reached 10 MGD, as	
		required by Provision	
0 1 21	G . 1	VI.C.5.c.iii(b)"	
October 21,	Central	"SEP flow was not	"a blown manhole at the Facility's
2021	Basin CSDs	maintained at 250 MGD	primary disinfection system
		during the wet weather	(PDS)"
		event as required by	
0 1 22	NT 41 1	Provision VI.C.5.c.iiiI"	
October 23,	Northshore	CSD "before the North	Operator error
2021	CSDs	Point Facility reached	
		135 MGD, as required by	
0 1 24	G . 1	Provision VI.C.5.c.iii(a)"	
October 24,	Central	"SEP flow was not	Power interruption at Flynn Pump
2021	Basin CSDs	maintained at 250 MGD	Station
		during a wet weather	
		event, as required by	
		Provision VI.C.5.c.iiiI"	
	Marina	"approximately 1.4	"flooding in the parking lot serving
	Green Park	million gallons	Marina Green Park, which has
		discharged to San	several storm drains that discharge
		Francisco Bay without	directly to San Francisco Bay"
		authorization"	
December 31,	Northshore	Flow to the North Point	"one of the two Northshore wet
2022	CSDs	Facility was not	weather pumps (which provide
		maintained at 135 MGD	flow to the North Point Wet
		in violation of §	Weather Facility) was out of
		VI.C.5.c.iii(a)	service because a control board on
			the variable frequency drive

EXHIBIT A

			(VFDs) failed."
	Marina Boulevard Area	"approximately 2.3 million gallons discharged to San Francisco Bay without authorization"	"approximately 18.6 million gallons of untreated combined wastewater flooded the Marina Boulevard area"
January 9, 2023	CSD-029	Mariposa Pump Station did not maintain peak flow rate throughout the CSD event in violation of § VI.C.5.c.iii(b)	"Power issues during the storm caused the pumps to stop"
February 23– 24, 2023	Central Basin CSDs	Channel Pump Station "flow rate periodically dropped to less than 80 MGD" in violation of § VI.C.5.c.iii(b)	"pumps tripping"
March 9–10, 2023	Central Basin CSDs	Channel Pump Station "flow rate dropped to zero" in violation of § VI.C.5.c.iii(b)	(1) "power issues tripped CHS pumps" (2) after restart, "the frame on the CHS downstream influent throttling gate detached from the hydraulic actuator CHS was shut down because the gate failure prevented pumping"
March 21–22, 2023	Central Basin CSDs	SEP flow rate was not maintained at 250 MGD during a wet weather event, as required by § VI.C.5.c.iiiI	"power outage shut down [Booster Pump Station], which limited SEP discharge to Discharge Point No. 002."
March 28, 2023	Central Basin CSDs	SEP flow rate was not maintained at 250 MGD during a wet weather event, as required by § VI.C.5.c.iiiI	"a local power issue at 2:12 p.m. caused the BPS pumps to trip and shut off."

TABLE 5: RECEIVING WATER LIMITATION C VIOLATIONS SINCE MARCH 2019

Date	Monitoring Locations	Monitoring Locations
	(Enterococcus)	(E. Coli*)
		*only reported through March 2021
March 2019	220, 320	220, 320
November 2019	220, 320	220, 320
December 2019	202.4, 220, 320	220, 320
January 2020	202.4, 220, 320	220, 320
December 2020	211, 301.1, 301.2	
January 2021	211, 220, 301.1, 320	220, 301.1
October 2021	202.4, 202.5, 210.1, 211, 220, 230,	
	300.1, 301.1, 301.2, 320	
November 2021	220, 230, 301.1, 320	
December 2021	202.4, 202.5, 220, 230, 320	
December 2022	202.4, 202.5, 211, 220, 230, 300.1,	
	301.1, 320	
January 2023	202.4, 202.5, 211, 220, 230, 300.1,	
	301.1, 320	
February 2023	202.4, 202.5, 220, 230, 300.1, 301.1,	
	301.2, 320	
March 2023	202.4, 220, 230, 320	
November 2023	202.5, 210.1, 211, 220, 230, 301.1,	
	320	
December 2023	202.4, 202.5, 220, 230, 300.1, 301.1,	
	301.2, 320	
January 2024	220, 230, 300.1, 301.1, 301.2, 320	
February 2024	202.4, 202.5, 211, 220, 230, 300.1,	
	301.1, 301.2, 320	

TABLE 6: PROPER OPERATION AND MAINTENANCE VIOLATIONS SINCE MARCH 2019

Date	Location	Operation/Maintenance Failure
May 18–19,	Griffith Pump	Failure to maintain peak wet weather capacity
2019	Station	
"intermittently"	Air vent pipe 470	Leak
March 6, 2019	ft. upstream of	
– June 25, 2019	EFF-001	
December 22,	Mariposa Pump	Failure to maintain peak wet weather capacity
2019	Station	
June 10–12,	Air vent pipe 470	Leak
2020	ft. upstream of	
	EFF-001	
December 17,	Mariposa Pump	Failure to achieve peak wet weather capacity

EXHIBIT A

2020	Station	
December 23,	Pipe joint under	Leak
2020 – January	Pier 80	
20, 2021		
August 5, 2021	Booster Pump	"an issue with the V20 valve"
	Station	
October 21,	Southeast Plant	Failure of a pressure manhole on one of the PDS
2021		channels; Failure to maintain peak wet weather
	~ 1 71	capacity
October 24,	Southeast Plant	Failure maintain peak wet weather capacity
2021		
December 16,	Pipe joint under	Leak
2021	Pier 80	
April 8, 2022	CSD-026	Failure of two hydraulic position sensors led to
D 1 21	N. d.D.	discharge of hydraulic fluid
December 31,	North Point	Failure to maintain peak wet weather capacity
2022	Facility	
January 9,	Mariposa Pump	Failure to maintain peak wet weather capacity
2023	Station	
February 23–	Channel Pump	Failure to maintain peak wet weather capacity
24, 2023	Station	
March 9–10,	Channel Pump	Failure to maintain peak wet weather capacity
2023	Station	
March 17,	Booster Pump	Failure to properly transition from local control to
2023	Station	automatic level control after Southeast Plant shutdown
March 21–22,	Southeast Plant	Failure to maintain peak wet weather capacity
2023		
March 28,	Southeast Plant	Failure to maintain peak wet weather capacity
2023		
June 25, 2023	Booster Pump	Power loss
	Station	

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TABLE 7: OPERATING PARAMETER VIOLATIONS SINCE MARCH 2019

Date Operating CSD			Cause
Date	Parameter Parameter	Location	Cause
May 18–19, 2019	§ VI.C.5.c.iiiI (Griffith Pump Station)	CSD-040 – CSD-042	"Essential maintenance caused an unanticipated bypass: a planned rehabilitation project precluded use of wet
			weather pumps"
December 22, 2019	§ VI.C.5.c.iii(b) (Mariposa Pump Station)	CSD-029	"Ragging event interfered with pumping"
December 17, 2020	§ VI.C.5.c.iii(b) (Mariposa Pump Station)	CSD-029	"Drain valve blocked open due to debris"
October 21, 2021	§ VI.C.5.c.iiiI (Southeast Plant)	Central Basin CSDs	"Pressure manhole failure limited SEP flow for safety and prevent facility damage"
October 23, 2021	§ VI.C.5.c.iii(a) (North Point Facility)	Northshore CSDs	"Operator error"
October 24, 2021	§ VI.C.5.c.iiiI (Southeast Plant)	Central Basin CSDs	"PG&E power interruption" at Flynn Pump Station
December 31, 2022	§ VI.C.5.c.iii(a) (North Point Facility)	Northshore CSDs	"one of the two Northshore wet weather pumps (which provide flow to the North Point Wet Weather Facility) was out of service because a control board on the variable frequency drive (VFDs) failed."
January 9, 2023	§ VI.C.5.c.iii(b) (Mariposa Pump Station)	CSD-029	"[Mariposa Pump Station] reached peak wet weather capacity (10 MGD) when the Mariposa CSD started but did not maintain that peak flow rate throughout the CSD event."
February 23, 2023	§ VI.C.5.c.iii(b) (Channel Pump Station)	Central Basin CSDs	"pumps tripping"
March 21, 2023	§ VI.C.5.c.iiiI (Southeast Plant)	Central Basin CSDs	"power outage shut down [Booster Pump Station], which limited SEP discharge to Discharge Point No. 002."
March 28, 2023	§ VI.C.5.c.iiiI (Southeast Plant)	Central Basin CSDs	"a local power issue at 2:12 p.m. caused the BPS pumps to trip and shut off."

<u>LEGEND</u>				
Reported Combined Sewer Discharge	E. Coli	Enterococci		
Elevated Bacteria Count Unassociated With Reported	400 MPN/100mL	104 MPN/100mL		
REC-1 Bacteria WQO (STV) Exceedance	320 MPN/100mL	110 MPN/100mL		

MONITORING STATION: CRISSY FIELD BEACH EAST (202.4)

NOVEMBER 2018				
Campling Data	E. Coli	Enterococci		
Sampling Date	(MPN/100mL)	(MPN/100mL)		
11/5/18	10	10		
11/13/18	10	10		
11/19/18	10	110		
11/20/18	52	41		
11/21/18	985	173		
11/22/18	52	10		
11/26/18	10	20		
11/29/18	31	135		
11/30/18	31	10		
Log Mean	1.489796256	1.48039849		
<u>STV</u>	207.0260394	<u>146.3517097</u>		

JANUARY 2019				
Committee Date	E. Coli	Enterococci		
Sampling Date	(MPN/100mL)	(MPN/100mL)		
1/7/19	51	10		
1/14/19	10	10		
1/22/19	10	20		
1/28/19	10	10		
Log Mean	1.176892544	1.075257499		
<u>STV</u>	42.70168641	18.54461093		

MARCH 2019		
Campling Data	E. Coli	Enterococci
Sampling Date	(MPN/100mL)	(MPN/100mL)
3/4/19	74	84
3/11/19	63	20
3/18/19	359	30
3/25/19	10	10
Log Mean	1.805916679	1.425607634
<u>STV</u>	<u>418.520181</u>	<u>83.37064293</u>

ΝЛ	۸v	2019	

DECEMBER 2018		
Sampling Date	E. Coli	<u>Enterococci</u>
Sampling Date	(MPN/100mL)	(MPN/100mL)
12/3/18	10	10
12/10/18	10	10
12/17/18	85	63
12/24/18	10	10
12/31/18	10	10
Log Mean	1.185883785	1.15986811
<u>STV</u>	<u>52.32937171</u>	41.50995782

FEBRUARY 2019		
Sampling Date	E. Coli	Enterococci
	(MPN/100mL)	(MPN/100mL)
2/4/19	10	10
2/11/19	10	10
2/13/19	990	441
2/14/19	577	1565
2/15/19	41	20
2/19/19	20	10
2/25/19	10	75
Log Mean	1.667232123	1.716434884
<u>STV</u>	<u>587.9072696</u>	726.2973498

APRIL 2019		
Sampling Date	<u>E. Coli</u> (MPN/100mL)	Enterococci (MPN/100mL)
4/1/19	1607	85
4/2/19	1112	52
4/3/19	10	10
4/8/19	10	10
4/15/19	52	10
4/22/19	10	10
4/29/19	10	10
Log Mean	1.709732001	1.235060324
<u>STV</u>	<u>990.748981</u>	<u>56.98152608</u>

EXHIBIT B

Sampling Date	<u>E. Coli</u> (MPN/100mL)	Enterococci (MPN/100mL)
	(IVIFIN/ TOOTIL)	(IVIFIN/ 100IIIL)
5/6/19	10	10
5/13/19	10	10
5/20/19	10	10
5/28/19	10	10
Log Mean	1	1
<u>STV</u>	<u>10</u>	<u>10</u>

	JULY 2019	
Sampling Date	E. Coli	<u>Enterococci</u>
Sampling Date	(MPN/100mL)	(MPN/100mL)
7/1/19	10	10
7/8/19	10	10
7/15/19	20	10
7/22/19	41	10
7/29/19	20	31
Log Mean	1.24296877	1.098272339
<u>STV</u>	<u>37.22229765</u>	23.98742734

SEPTEMBER 2019		
	E. Coli	Enterococci
Sampling Date	(MPN/100mL)	(MPN/100mL)
9/3/19	10	20
9/9/19	10	10
9/16/19	10	97
9/23/19	31	10
9/30/19	583	10
Log Mean	1.45140605	1.257560346
<u>STV</u>	<u>270.3872377</u>	<u>64.00655682</u>

NOVEMBER 2019			
Sampling Date	E. Coli	Enterococci	
Sampling Date	(MPN/100mL)	(MPN/100mL)	
11/4/19	85	24196	
11/5/19	10	110	
11/6/19	10	10	
11/12/19	10	10	
11/18/19	10	10	
11/25/19	75	31	
Log Mean	1.300746698	1.300746698	
<u>STV</u>	79.15089343	<u>991.7043915</u>	

JANUARY 2020

	JUNE 2019	
Canadina Data	<u>E. Coli</u>	<u>Enterococci</u>
Sampling Date	(MPN/100mL)	(MPN/100mL)
6/3/19	20	10
6/10/19	10	20
6/17/19	10	10
6/24/19	10	10
Log Mean	1.075257499	1.075257499
<u>STV</u>	<u>18.54461093</u>	<u>18.54461093</u>

AUGUST 2019		
Sampling Date	<u>E. Coli</u>	<u>Enterococci</u>
Sampling Date	(MPN/100mL)	(MPN/100mL)
8/5/19	31	10
8/12/19	20	10
8/19/19	41	20
8/26/19	10	10
Log Mean	1.351293887	1.075257499
<u>STV</u>	<u>49.38990348</u>	<u>18.54461093</u>

OCTOBER 2019		
Campuling Data	E. Coli	Enterococci
Sampling Date	(MPN/100mL)	(MPN/100mL)
10/1/19	10	10
10/7/19	10	10
10/15/19	10	10
10/21/19	10	10
10/28/19	10	10
Log Mean	1	1
<u>STV</u>	<u>10</u>	<u>10</u>

DECEMBER 2019		
Sampling Date	<u>E. Coli</u> (MPN/100mL)	Enterococci (MPN/100mL)
12/2/19	10	31
12/8/19	75	173
12/9/19	20	10
12/16/19	10	10
12/23/19	10	20
12/30/19	52	52
Log Mean	1.3153491	1.457740189
<u>STV</u>	<u>65.94876297</u>	<u>116.0324378</u>

Sampling Date	<u>E. Coli</u> (MPN/100mL)	Enterococci (MPN/100mL)
1/6/20	31	52
1/13/20	31	41
1/16/20	414	794
1/17/20	75	882
1/18/20	20	20
1/21/20	97	309
1/22/20	109	134
1/23/20	10	10
1/27/20	10	131
1/28/20	10	10
Log Mean	1.580001322	1.920944086
<u>STV</u>	188.0696959	692.5901259

MARCH 2020	
E. Coli	<u>Enterococci</u>
(MPN/100mL)	(MPN/100mL)
10	10
10	10
10	10
10	10
10	20
1	1.060205999
<u>10</u>	17.09207828
	E. Coli (MPN/100mL) 10 10 10 10 10

	MAY 2020	
Campling Data	E. Coli	Enterococci
Sampling Date	(MPN/100mL)	(MPN/100mL)
5/4/20	10	10
5/11/20	10	10
5/18/20	10	10
5/26/20	10	10
Log Mean	1	1
<u>STV</u>	<u>10</u>	<u>10</u>

	JULY 2020	
Sampling Date	E. Coli	<u>Enterococci</u>
Sampling Date	(MPN/100mL)	(MPN/100mL)
7/6/20	10	10
7/13/20	10	10
7/20/20	75	10
7/27/20	20	10
Log Mean	1.294022815	1
<u>STV</u>	<u>66.51073834</u>	<u>10</u>

FEBRUARY 2020		
Sampling Date	<u>E. Coli</u> (MPN/100mL)	Enterococci (MPN/100mL)
2/3/20	10	1515
2/4/20	10	10
2/10/20	10	10
2/18/20	10	10
2/24/20	31	10
Log Mean	1.098272339	1.436082527
<u>STV</u>	23.98742734	<u>485.4827112</u>

	APRIL 2020	
Sampling Date	<u>E. Coli</u>	Enterococci
	(MPN/100mL)	(MPN/100mL)
4/6/20	10	10
4/13/20	10	10
4/20/20	10	10
4/27/20	10	10
Log Mean	1	1
<u>STV</u>	<u>10</u>	<u>10</u>

	JUNE 2020	
Sampling Date	<u>E. Coli</u>	<u>Enterococci</u>
	(MPN/100mL)	(MPN/100mL)
6/1/20	10	10
6/8/20	10	10
6/15/20	10	6488
6/16/20	10	10
6/22/20	10	10
6/29/20	10	10
Log Mean	1	1.46868514
<u>STV</u>	<u>10</u>	<u>871.9100966</u>

AUGUST 2020		
Sampling Date	E. Coli	<u>Enterococci</u>
Sampling Date	(MPN/100mL)	(MPN/100mL)
8/3/20	20	10
8/10/20	10	10
8/17/20	96	10
8/24/20	10	52
8/31/20	63	10
Log Mean	1.416528356	1.143200669
<u>STV</u>	<u>99.86890651</u>	<u>35.78535349</u>

SEPTEMBER 2020		
Sampling Date	E. Coli	Enterococci
Sampling Date	(MPN/100mL)	(MPN/100mL)
9/8/20	52	10
9/14/20	145	10
9/21/20	41	10
9/28/20	97	10
Log Mean	1.869231734	1
<u>STV</u>	<u>155.0612111</u>	<u>10</u>

NOVEMBER 2020		
Campling Data	E. Coli	Enterococci
Sampling Date	(MPN/100mL)	(MPN/100mL)
11/2/20	41	20
11/9/20	10	10
11/16/20	195	148
11/17/20	14136	83
11/18/20	31	10
11/23/20	10	10
11/30/20	10	10
Log Mean	1.792072385	1.3414814
<u>STV</u>	<u>1799.251518</u>	<u>95.50681449</u>

JANUARY 2021		
Sampling Date	E. Coli	<u>Enterococci</u>
Sampling Date	(MPN/100mL)	(MPN/100mL)
1/4/21	10	10
1/11/21	10	10
1/19/21	10	10
1/25/21	10	52
1/27/21	132	98
Log Mean 1.224114786 1.341445884		1.341445884
<u>STV</u>	<u>73.54802346</u>	<u>89.88369293</u>

MARCH 2021		
Campling Date	E. Coli	<u>Enterococci</u>
Sampling Date	(MPN/100mL)	(MPN/100mL)
3/1/21	20	20
3/8/21	52	98
3/15/21	31	31
3/22/21	10	10
3/31/21	10	10

OCTOBER 2020		
Sampling Date	E. Coli	Enterococci
Sampling Date	(MPN/100mL)	(MPN/100mL)
10/5/20	41	10
10/13/20	109	52
10/19/20	74	10
10/26/20	223	10
Log Mean	1.966936734	1.179000836
<u>STV</u>	230.324265	<u>43.44691849</u>

DECEMBER 2020		
Sampling Date	<u>E. Coli</u> (MPN/100mL)	Enterococci (MPN/100mL)
12/7/20	10	10
12/13/20	10	10
12/14/20	10	20
12/21/20	73	10
12/28/20	20	10
Log Mean	1.232870571	1.060205999
<u>STV</u>	51.83263021	17.09207828

FEBRUARY 2021		
Sampling Date E. Coli Enterococci (MPN/100mL) (MPN/100mL)		
2/1/21	30	10
2/8/21	31	10
2/16/21	10	10
2/22/21	21 10 10	
Log Mean	og Mean 1.242120737 1	
STV 39.86721186 10		<u>10</u>

APRIL 2021		
Sampling Date	E. Coli	<u>Enterococci</u>
	(MPN/100mL)	(MPN/100mL)
4/5/21	50	41
4/12/21	50	97
4/19/21	10	10
4/26/21	20	10
Log Mean 1.424742501 1.399888898		
<u>STV</u>	72.4753284	105.530012

JUNE 2021		
Campling Data	<u>Enterococci</u>	
Sampling Date	(MPN/100mL)	

STV	50.32820476	76.67515916
Log Mean	1.301679007	1.356723553

MAY 2021		
Compling Date	<u>Enterococci</u>	
Sampling Date	(MPN/100mL)	
5/3/21	10	
5/10/21	10	
5/17/21	10	
5/24/21	10	
Log Mean	1	
<u>STV</u>	<u>10</u>	

JULY 2021		
Sampling Date	<u>Enterococci</u>	
Sampling Date	(MPN/100mL)	
7/6/21	754	
7/7/21	10	
7/12/21	41	
7/19/21	10	
7/26/21	52	
7/27/21	243	
7/29/21	10	
Log Mean	1.655966403	
<u>STV</u>	<u>407.0789686</u>	

SEPTEMBER 2021		
Sampling Date	<u>Enterococci</u>	
Sampling Date	(MPN/100mL)	
9/7/21	10	
9/13/21	10	
9/20/21	10	
9/27/21	10	
Log Mean	1	
<u>STV</u>	<u>10</u>	

NOVEMBER 2021		
Canadina Data	<u>Enterococci</u>	
Sampling Date	(MPN/100mL)	
11/1/21	10	
11/8/21	10	
11/15/21	10	
11/22/21	10	
11/29/21	10	
Log Mean	1	

6/1/21	20
6/7/21	10
6/14/21	10
6/21/21	10
6/28/21	253
6/29/21	10
Log Mean	1.284025086
<u>STV</u>	<u>100.8380751</u>

AUGUST 2021		
Sampling Date	<u>Enterococci</u>	
	(MPN/100mL)	
8/2/21	10	
8/9/21	10	
8/16/21	41	
8/23/21	96	
8/30/21	10	
Log Mean	1.319011018	
<u>STV</u>	80.08008643	

0.0700	ED 2024		
OCIOB	OCTOBER 2021		
Sampling Date	<u>Enterococci</u>		
	(MPN/100mL)		
10/4/21	20		
10/12/21	10		
10/18/21	10		
10/24/21	24196		
10/25/21	341		
10/26/21	20		
Log Mean	1.919759658		
STV	<u>4271.672269</u>		

DECEMBER 2021		
Sampling Date	Enterococci	
	(MPN/100mL)	
12/6/21	10	
12/13/21	315	
12/14/21	20	
12/20/21	20	
12/23/21	63	
12/27/21	74	
Log Mean	1.628157136	
<u>STV</u>	208.590763	

<u>STV</u> <u>10</u>

JANUARY 2022	
Canadina Data	Enterococci
Sampling Date	(MPN/100mL)
1/3/22	75
1/10/22	20
1/18/22	148
1/19/22	10
1/24/22	20
1/31/22	2723
Log Mean	1.847071769
<u>STV</u>	<u>966.5053031</u>

MARCH 2022	
Sampling Date	Enterococci (MPN/100mL)
3/1/22	520
3/2/22	20
3/7/22	10
3/14/22	216
3/15/22	20
3/21/22	10
3/28/22	305
3/29/22	41
Log Mean	1.718700098
<u>STV</u>	<u>403.6278803</u>

MAY 2022	
Sampling Date	Enterococci (MPN/100mL)
5/2/22	31
5/9/22	10
5/16/22	10
5/23/22	10
5/31/22	10
Log Mean	1.098272339
<u>STV</u>	<u>23.98742734</u>

JULY 2022	
Sampling Date	Enterococci
	(MPN/100mL)
6/5/22	10
6/11/22	10

FEBRUARY 2022	
Sampling Date	Enterococci (MPN/100mL)
2/1/22	161
2/2/22	10
2/7/22	10
2/14/22	169
2/15/22	52
2/22/22	10
2/28/22	417
Log Mean	1.681550283
STV	<u>367.3814261</u>

APRIL 2022	
Sampling Date	Enterococci (MPN/100mL)
4/4/22	10
4/11/22	10
4/18/22	10
4/25/22	10
Log Mean	1
<u>STV</u>	<u>10</u>

JUNE 2022	
Campulina Data	Enterococci
Sampling Date	(MPN/100mL)
6/6/22	10
6/14/22	10
6/21/22	10
6/27/22	10
Log Mean	1
<u>STV</u>	<u>10</u>

AUGUS	ST 2022
Constitute Butter	Enterococci
Sampling Date	(MPN/100mL)
8/1/22	10
8/8/22	134
8/9/22	31
8/15/22	20
8/22/22	10
8/29/22	10
Log Mean	1.319916081
<u>STV</u>	77.60548503

6/18/22	31
6/25/22	41
Log Mean	1.276036388
<u>STV</u>	48.92967414

SEPTEMBER 2022	
Sampling Date	Enterococci (MPN/100mL)
9/6/22	31
9/12/22	20
9/19/22	10
9/26/22	10
Log Mean	1.198097922
<u>STV</u>	32.19621662

NOVEMBER 2022	
Camadina Data	Enterococci
Sampling Date	(MPN/100mL)
11/7/22	20
11/14/22	10
11/21/22	41
11/28/22	121
11/29/22	10
Log Mean	1.399319845
<u>STV</u>	<u>97.10653286</u>

JANUARY 2023	
Sampling Date	Enterococci
	(MPN/100mL)
1/1/23	146
1/3/23	86
1/9/23	98
1/10/23	160
1/11/23	20
1/12/23	41
1/14/23	31
1/16/23	426
1/17/23	63
1/23/23	10
1/30/23	10
Log Mean	1.738920278
<u>STV</u>	<u>251.0307102</u>

MARCH 2023
IVIANCH 2023

OCTOBER 2022	
Sampling Date	<u>Enterococci</u>
Sumpling Date	(MPN/100mL)
10/3/22	20
10/11/22	10
10/17/22	10
10/24/22	10
10/31/22	10
Log Mean	1.060205999
<u>STV</u>	<u>17.09207828</u>

DECEMBER 2022	
Campling Data	Enterococci
Sampling Date	(MPN/100mL)
12/1/22	10
12/5/22	31
12/12/22	10
12/19/22	10
12/27/22	20
12/31/22	2282
Log Mean	1.525117888
<u>STV</u>	<u>507.6482456</u>

FEBRUARY 2023	
Sampling Date	Enterococci (MPN/100mL)
2/6/23	14136
2/7/23	10
2/13/23	20
2/21/23	10
2/24/23	109
2/25/23	20
2/27/23	10
Log Mean	1.684259004
<u>STV</u>	<u>1431.297741</u>

APRIL 2023	
Sampling Date	<u>Enterococci</u>
	(MPN/100mL)
4/3/23	10
4/10/23	1050
4/11/23	10
4/17/23	10
4/24/23	613
4/25/23	41

Sampling Date	<u>Enterococci</u>
Sampling Date	(MPN/100mL)
3/6/23	10
3/13/23	10
3/14/23	465
3/15/23	10
3/20/23	10
3/27/23	10
Log Mean	1.277908825
<u>STV</u>	<u>141.4525762</u>

MAY 2023		
Sampling Date	<u>Enterococci</u>	
oumpung sate	(MPN/100mL)	
5/1/23	10	
5/8/23	20	
5/15/23	10	
5/22/23	85	
5/30/23	31	
Log Mean	1.344362123	
<u>STV</u>	<u>69.51797246</u>	

JULY 2023	
Sampling Date	Enterococci (MPN/100mL)
7/3/23	63
7/10/23	10
7/17/23	10
7/24/23	10
7/31/23	10
Log Mean	1.15986811
<u>STV</u>	<u>41.50995782</u>

SEPTEMBER 2023		
Sampling Date	Enterococci	
	(MPN/100mL)	
9/5/23	10	
9/11/23	20	
9/18/23	10	
9/25/23	20	
Log Mean	1.150514998	
<u>STV</u>	23.62252276	

NOVEMBER 2023	
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Log Mean	1.736905605
<u>STV</u>	<u>869.346252</u>

JUNE 2023		
Sampling Date	Enterococci	
	(MPN/100mL)	
6/5/23	10	
6/12/23	52	
6/20/23	10	
6/26/23	10	
Log Mean	1.179000836	
<u>STV</u>	43.44691849	

AUGUST 2023		
Sampling Date	<u>Enterococci</u>	
	(MPN/100mL)	
8/7/23	10	
8/14/23	85	
8/22/23	10	
8/28/23	10	
Log Mean	1.232354731	
STV	67.31506397	

OCTOBER 2023		
Comming Data	<u>Enterococci</u>	
Sampling Date	(MPN/100mL)	
10/2/23	10	
10/10/23	10	
10/17/23	10	
10/23/23	10	
10/30/23	10	
Log Mean	1	
<u>STV</u>	<u>10</u>	

DECEMBER 2023		
Sampling Date	<u>Enterococci</u>	
Sampling Date	(MPN/100mL)	
12/4/23	10	
12/11/23	20	
12/18/23	228	
12/19/23	148	
12/20/23	1585	
12/21/23	86	
12/26/23	41	

Sampling Date	Enterococci (MPN/100mL)
11/6/23	10
11/13/23	10
11/18/23	86
11/20/23	10
11/27/23	10
Log Mean	1.18689969
<u>STV</u>	<u>52.80483123</u>

JANUARY 2024		
Sampling Date	Enterococci	
Sampling Date	(MPN/100mL)	
1/2/24	10	
1/8/24	30	
1/14/24	52	
1/16/24	31	
1/22/24	98	
1/29/24	31	
Log Mean	1.527845677	
STV	88.47065286	

Log Mean	1.939505448
<u>STV</u>	<u>754.8176998</u>

FEBRUARY 2024*		
Campling Date	Enterococci	
Sampling Date	(MPN/100mL)	
2/1/24	448	
2/2/24	63	
2/4/24	10	
2/5/24	305	
2/6/24	72	
2/12/24	10	
2/20/24	31	
2/26/24	10	
Log Mean	1.660451574	
<u>STV</u>	<u>321.7157381</u>	

^{*}Note: CSD data has not yet been reported

MONITORING STATION: CRISSY FIELD BEACH WEST (202.5)

NOVEMBER 2018		
Sampling Date	E. Coli	Enterococci
Sampling Date	(MPN/100mL)	(MPN/100mL)
11/5/18	10	10
11/13/18	10	10
11/19/18	10	10
11/21/18	464	122
11/22/18	657	631
11/23/18	75	98
11/24/18	75	31
11/26/18	10	10
11/29/18	31	107
Log Mean	1.636174175	1.59981786
<u>STV</u>	<u>368.3975234</u>	<u>277.7370071</u>

JANUARY 2019		
Sampling Date	E. Coli	Enterococci
	(MPN/100mL)	(MPN/100mL)
1/7/19	52	20
1/14/19	10	10
1/22/19	10	10
1/28/19	10	10
Log Mean	1.179000836	1.075257499
<u>STV</u>	43.44691849	18.54461093

MARCH 2019		
Sampling Date	<u>E. Coli</u> (MPN/100mL)	Enterococci (MPN/100mL)
3/4/19	20	20
3/11/19	31	20
3/18/19	10	10
3/25/19	31	10
Log Mean	1.320938346	1.150514998
<u>STV</u>	41.53127257	23.62252276

MAY 2019		
Sampling Date	E. Coli	Enterococci
Sampling Date	(MPN/100mL)	(MPN/100mL)
5/6/19	10	10
5/13/19	10	10
5/20/19	10	10
5/28/19	10	10
Log Mean	1	1
<u>STV</u>	<u>10</u>	<u>10</u>

JULY 2019

DECEMBER 2018		
Campling Date	E. Coli	Enterococci
Sampling Date	(MPN/100mL)	(MPN/100mL)
12/1/18	512	383
12/2/18	10	10
12/3/18	10	10
12/10/18	10	10
12/17/18	20	41
12/24/18	10	10
12/31/18	10	10
Log Mean	1.287185708	1.313711804
<u>STV</u>	<u>127.018381</u>	<u>122.6834538</u>

FEBRUARY 2019		
Sampling Date	<u>E. Coli</u> (MPN/100mL)	Enterococci (MPN/100mL)
2/4/19	63	52
2/11/19	10	10
2/13/19	1500	1850
2/14/19	428	187
2/15/19	41	30
2/19/19	10	10
2/25/19	10	10
Log Mean	1.745665633	1.676019705
<u>STV</u>	<u>721.5888644</u>	<u>577.0021768</u>

APRIL 2019		
Sampling Date	E. Coli	<u>Enterococci</u>
	(MPN/100mL)	(MPN/100mL)
4/1/19	10	10
4/8/19	10	10
4/15/19	10	10
4/22/19	10	10
4/29/19	10	10
Log Mean	1	1
<u>STV</u>	<u>10</u>	<u>10</u>

	JUNE 2019	
Sampling Date	<u>E. Coli</u> (MPN/100mL)	Enterococci (MPN/100mL)
6/3/19	10	10
6/10/19	10	10
6/17/19	10	10
6/24/19	10	10
Log Mean	1	1
<u>STV</u>	<u>10</u>	<u>10</u>

Sampling Date	<u>E. Coli</u> (MPN/100mL)	Enterococci (MPN/100mL)
7/1/19	10	10
7/8/19	10	10
7/15/19	41	10
7/22/19	10	10
7/29/19	10	10
Log Mean	1.122556771	1
STV	29.77712814	<u>10</u>

SEPTEMBER 2019		
Sampling Date	<u>E. Coli</u> (MPN/100mL)	Enterococci (MPN/100mL)
9/3/19	10	10
9/9/19	10	10
9/16/19	31	1565
9/17/19	41	10
9/23/19	52	10
9/30/19	10	10
Log Mean	1.303358149	1.36575239
STV	54.8312963	<u>326.8171333</u>

NOVEMBER 2019		
Sampling Date	E. Coli	<u>Enterococci</u>
	(MPN/100mL)	(MPN/100mL)
11/4/19	10	10
11/12/19	41	20
11/18/19	10	10
11/25/19	10	41
Log Mean	1.153195964	1.228453463
<u>STV</u>	35.15526827	40.17375886

JANUARY 2020		
Sampling Date	<u>E. Coli</u> (MPN/100mL)	Enterococci (MPN/100mL)
1/6/20	52	10
1/13/20	20	10
1/16/20	52	158
1/17/20	63	20
1/21/20	10	10
1/27/20	10	10
Log Mean	1.422062872	1.249947847
<u>STV</u>	<u>78.87589655</u>	<u>73.35941797</u>

MARCH 2020	

AUGUST 2019		
Sampling Date	E. Coli	<u>Enterococci</u>
Sampling Date	(MPN/100mL)	(MPN/100mL)
8/5/19	20	10
8/12/19	10	10
8/19/19	10	75
8/26/19	10	10
Log Mean	1.075257499	1.218765316
<u>STV</u>	18.54461093	60.21151929

	OCTOBER 2019	
Campling Data	E. Coli	Enterococci
<u>Sampling Date</u>	(MPN/100mL)	(MPN/100mL)
10/7/19	10	10
10/15/19	10	10
10/21/19	10	10
10/28/19	30	41
Log Mean	1.119280314	1.153195964
<u>STV</u>	<u>26.61429938</u>	<u>35.15526827</u>

DECEMBER 2019			
Campling Data	E. Coli	Enterococci	
Sampling Date	(MPN/100mL)	(MPN/100mL)	
12/2/19	10	84	
12/8/19	20	10	
12/9/19	10	10	
12/16/19	10	10	
12/23/19	10	10	
12/30/19	10	10	
Log Mean	1.050171666	1.154046548	
<u>STV</u>	16.13329339	43.43007504	

FEBRUARY 2020		
Campling Date	E. Coli	<u>Enterococci</u>
Sampling Date	(MPN/100mL)	(MPN/100mL)
2/3/20	10	10
2/10/20	10	10
2/18/20	10	10
2/24/20	10	10
Log Mean	1	1
<u>STV</u>	<u>10</u>	<u>10</u>

	APRIL 2020	
Campling Data	E. Coli	Enterococci
Sampling Date	(MPN/100mL)	(MPN/100mL)

Campling Data	E. Coli	<u>Enterococci</u>
Sampling Date	(MPN/100mL)	(MPN/100mL)
3/2/20	10	10
3/9/20	10	10
3/16/20	20	10
3/23/20	10	10
3/30/20	10	10
Log Mean	1.060205999	1
<u>STV</u>	<u>17.09207828</u>	<u>10</u>

MAY 2020		
Sampling Date	E. Coli	Enterococci
Sampling Date	(MPN/100mL)	(MPN/100mL)
5/4/20	10	10
5/11/20	10	10
5/18/20	10	10
5/26/20	10	10
Log Mean	1	1
<u>STV</u>	<u>10</u>	<u>10</u>

	JULY 2020	
Sampling Date	<u>E. Coli</u> (MPN/100mL)	Enterococci (MPN/100mL)
7/6/20	10	10
7/13/20	10	10
7/20/20	10	10
7/27/20	10	10
Log Mean	1	1
<u>STV</u>	<u>10</u>	<u>10</u>

SEPTEMBER 2020		
Sampling Date	<u>E. Coli</u> (MPN/100mL)	Enterococci (MPN/100mL)
9/8/20	20	10
9/14/20	10	10
9/21/20	10	10
9/28/20	20	10
Log Mean	1.150514998	1
<u>STV</u>	23.62252276	<u>10</u>

NOVEMBER 2020			
Sampling Date	<u>E. Coli</u> (MPN/100mL)	Enterococci (MPN/100mL)	
11/2/20	10	10	
11/9/20	10	10	
11/16/20	31	20	
11/23/20	10	10	
11/30/20	10	10	
Log Mean	1.098272339	1.060205999	

4/6/20	10	10
4/13/20	10	10
4/20/20	10	10
4/27/20	10	10
Log Mean	1	1
<u>STV</u>	<u>10</u>	<u>10</u>

JUNE 2020		
Sampling Date	E. Coli	<u>Enterococci</u>
Sampling Date	(MPN/100mL)	(MPN/100mL)
6/1/20	10	10
6/8/20	10	10
6/15/20	10	269
6/16/20	10	10
6/22/20	10	10
6/29/20	10	10
Log Mean	1	1.238292047
<u>STV</u>	<u>10</u>	<u>96.958895</u>

AUGUST 2020		
Sampling Date	E. Coli	<u>Enterococci</u>
Sampling Date	(MPN/100mL)	(MPN/100mL)
8/3/20	10	10
8/10/20	10	10
8/17/20	10	10
8/24/20	10	10
8/31/20	10	10
Log Mean	1	1
STV	<u>10</u>	<u>10</u>

OCTOBER 2020		
Campling Data	E. Coli	Enterococci
Sampling Date	(MPN/100mL)	(MPN/100mL)
10/5/20	10	10
10/13/20	10	10
10/19/20	10	10
10/26/20	10	10
Log Mean	1	1
<u>STV</u>	<u>10</u>	<u>10</u>

DECEMBER 2020		
Sampling Date	E. Coli	Enterococci
Sampling Date	(MPN/100mL)	(MPN/100mL)
12/7/20	20	10
12/13/20	10	20
12/14/20	10	20
12/21/20	10	10
12/28/20	41	75

STV	23.98742734	17.09207828
<u> </u>	23.30172137	17.03207020

JANUARY 2021		
Sampling Date	<u>E. Coli</u> (MPN/100mL)	Enterococci (MPN/100mL)
1/4/21	10	10
1/11/21	10	10
1/19/21	10	20
1/25/21	10	10
1/27/21	10	75
Log Mean	1	1.235218252
<u>STV</u>	<u>10</u>	<u>52.87721497</u>

MARCH 2021		
Sampling Date	E. Coli	Enterococci
Sampling Date	(MPN/100mL)	(MPN/100mL)
3/1/21	10	10
3/8/21	10	10
3/15/21	10	10
3/22/21	10	10
3/31/21	10	10
Log Mean	1	1
<u>STV</u>	<u>10</u>	<u>10</u>

MAY 2021		
Sampling Date	<u>Enterococci</u>	
Sampling Date	(MPN/100mL)	
5/3/21	10	
5/10/21	10	
5/17/21	10	
5/24/21	10	
Log Mean	1	
<u>STV</u>	<u>10</u>	

JULY 2021		
Sampling Date	Enterococci (MPN/100mL)	
7/6/21	10	
7/12/21	10	
7/19/21	10	
7/26/21	10	
Log Mean	1	
<u>STV</u>	<u>10</u>	

SEPTEMBER 2021		
Sampling Date	Enterococci (MPN/100mL)	
9/7/21	10	

Log Mean	1.18276277	1.295424251
<u>STV</u>	34.14545538	56.68339048

FEBRUARY 2021		
Sampling Date	E. Coli	<u>Enterococci</u>
	(MPN/100mL)	(MPN/100mL)
2/1/21	10	10
2/8/21	31	10
2/16/21	10	10
2/22/21	10	10
Log Mean	1.122840423	1
<u>STV</u>	27.40332549	<u>10</u>

APRIL 2021		
Sampling Date	<u>Enterococci</u>	
	(MPN/100mL)	
4/5/21	10	
4/12/21	10	
4/19/21	10	
4/26/21	10	
Log Mean	1	
<u>STV</u>	<u>10</u>	

JUNE 2021		
Sampling Date	<u>Enterococci</u>	
Sumpling Date	(MPN/100mL)	
6/1/21	10	
6/7/21	10	
6/14/21	10	
6/21/21	10	
6/28/21	10	
Log Mean	1	
<u>STV</u>	<u>10</u>	

AUGUST 2021		
Sampling Date	Enterococci	
	(MPN/100mL)	
8/2/21	10	
8/9/21	10	
8/16/21	10	
8/23/21	10	
8/30/21	10	
Log Mean	1	
<u>STV</u>	<u>10</u>	

OCTOBER 2021		
Sampling Date	Enterococci	
Sampling Date	(MPN/100mL)	

9/13/21	10
9/20/21	10
9/27/21	10
Log Mean	1
<u>STV</u>	<u>10</u>

NOVEMBER 2021	
	Enterococci
Sampling Date	(MPN/100mL)
11/1/21	10
11/8/21	10
11/15/21	10
11/22/21	10
11/29/21	10
Log Mean	1
<u>STV</u>	<u>10</u>

JANUARY 2022	
Sampling Date	Enterococci (MPN/100mL)
1/3/22	10
1/10/22	10
1/18/22	10
1/24/22	10
1/31/22	10
Log Mean	1
<u>STV</u>	<u>10</u>

MARCH 2022		
Sampling Date	Enterococci (MPN/100mL)	
3/7/22	10	
3/14/22	10	
3/21/22	10	
3/28/22	10	
Log Mean	1	
<u>STV</u>	<u>10</u>	

MAY 2022		
Sampling Date	Enterococci (MPN/100mL)	
5/2/22	10	
5/9/22	10	
5/16/22	10	
5/23/22	10	
5/31/22	10	
Log Mean	1	

10/4/21	10
10/12/21	432
10/13/21	10
10/18/21	31
10/24/21	305
10/25/21	241
10/26/21	41
Log Mean	1.800849454
<u>STV</u>	<u>494.8559621</u>

DECEMBER 2021	
Sampling Date	Enterococci (MPN/100mL)
12/6/21	10
12/13/21	1904
12/14/21	74
12/20/21	10
12/23/21	85
12/27/21	160
12/28/21	10
Log Mean	1.754633939
<u>STV</u>	<u>687.6727144</u>

FEBRUARY 2022	
Sampling Date	Enterococci (MPN/100mL)
2/7/22	10
2/14/22	10
2/22/22	10
2/28/22	10
Log Mean	1
<u>STV</u>	<u>10</u>

APRIL 2022	
Sampling Date	Enterococci (MPN/100mL)
4/4/22	10
4/11/22	41
4/18/22	10
4/25/22	10
Log Mean	1.153195964
<u>STV</u>	<u>35.15526827</u>

JUNE 2022	
Sampling Date	<u>Enterococci</u>
	(MPN/100mL)
6/6/22	10

<u>STV</u>	<u>10</u>

JULY 2022	
Carrallian Data	Enterococci
Sampling Date	(MPN/100mL)
6/5/22	10
6/11/22	10
6/18/22	30
6/25/22	712
6/26/22	10
Log Mean	1.46592025
<u>STV</u>	<u>312.1077153</u>

SEPTEMBER 2022	
Sampling Date	Enterococci (MPN/100mL)
9/6/22	10
9/12/22	10
9/19/22	52
9/26/22	10
Log Mean	1.179000836
<u>STV</u>	<u>43.44691849</u>

NOVEMBER 2022	
Sampling Date	Enterococci (MPN/100mL)
11/7/22	30
11/14/22	63
11/21/22	10
11/28/22	10
Log Mean	1.319115451
<u>STV</u>	<u>66.1774099</u>

JANUARY 2023		
Sampling Date	<u>Enterococci</u>	
Sampling Date	(MPN/100mL)	
1/1/23	31	
1/3/23	20	
1/9/23	487	
1/10/23	52	
1/10/23 (aft)	110	
1/11/23	404	
1/12/23	20	
1/14/23	241	
1/15/23	187	
1/16/23	480	
1/17/23	10	
1/23/23	20	

<u>STV</u>	<u>10</u>
Log Mean	1
6/27/22	10
6/21/22	10
6/14/22	10

AUGUST 2022	
Sampling Date	<u>Enterococci</u>
Sampling Date	(MPN/100mL)
8/1/22	10
8/8/22	10
8/15/22	10
8/22/22	10
8/29/22	10
Log Mean	1
STV	<u>10</u>

OCTOBER 2022	
Sampling Date	Enterococci (MPN/100mL)
10/3/22	10
10/11/22	10
10/17/22	10
10/24/22	10
10/31/22	10
Log Mean	1
STV	<u>10</u>

DECEMBER 2022	
Commisso Date	Enterococci
Sampling Date	(MPN/100mL)
12/1/22	10
12/5/22	10
12/12/22	10
12/19/22	10
12/27/22	624
12/28/22	10
12/31/22	1198
Log Mean	1.553377344
<u>STV</u>	<u>588.147553</u>

FEBRUARY 2023	
Sampling Date	Enterococci
	(MPN/100mL)
2/6/23	10
2/13/23	10
2/21/23	10
2/24/23	231

1/30/23	10
Log Mean	1.829296763
<u>STV</u>	449.6392987

MAR	CH 2023
6 1: 5 :	Enterococci
Sampling Date	(MPN/100mL)
3/6/23	10
3/13/23	10
3/14/23	85
3/20/23	10
3/27/23	10
Log Mean	1.185883785
<u>STV</u>	<u>52.32937171</u>

MAY 2023	
Sampling Date	Enterococci (MPN/100mL)
5/1/23	10
5/8/23	10
5/15/23	10
5/22/23	10
5/30/23	10
Log Mean	1
<u>STV</u>	<u>10</u>

JULY 2023	
Sampling Date	<u>Enterococci</u>
	(MPN/100mL)
7/3/23	10
7/10/23	10
7/17/23	10
7/24/23	10
7/31/23	10
Log Mean	1
<u>STV</u>	<u>10</u>

SEPTEMBER 2023	
Carrallia - Data	Enterococci
Sampling Date	(MPN/100mL)
9/5/23	10
9/11/23	10
9/18/23	10
9/25/23	10
Log Mean	1
STV	<u>10</u>

NO\	/EMBER	2023

2/25/23	20	
2/27/23	556	
2/28/23	85	
Log Mean	1.619876528	
<u>STV</u>	<u>356.1515034</u>	

APRIL 2023		
Campling Data	Enterococci	
<u>Sampling Date</u>	(MPN/100mL)	
4/3/23	10	
4/10/23	10	
4/17/23	10	
4/24/23	10	
Log Mean	1	
STV	<u>10</u>	

JUNE 2023		
Camadina Data	Enterococci	
Sampling Date	(MPN/100mL)	
6/5/23	10	
6/12/23	10	
6/20/23	10	
6/26/23	10	
Log Mean	1	
STV	10	

AUGUST 2023			
Campling Data	<u>Enterococci</u>		
Sampling Date	(MPN/100mL)		
8/7/23	10		
8/14/23	10		
8/22/23	10		
8/28/23	10		
Log Mean	1		
<u>STV</u>	<u>10</u>		

OCTOBER 2023		
Sampling Date	Enterococci	
	(MPN/100mL)	
10/2/23	10	
10/10/23	10	
10/17/23	10	
10/23/23	10	
10/30/23	10	
Log Mean	1	
<u>STV</u>	<u>10</u>	

DECEMBER 2023

Sampling Date	Enterococci	
Sampling Date	(MPN/100mL)	
11/6/23	10	
11/13/23	10	
11/18/23	1046	
11/19/23	10	
11/20/23	10	
11/27/23	31	
Log Mean	1.41848223	
<u>STV</u>	<u>285.173451</u>	

JANUARY 2024		
Sampling Date	Enterococci (MPN/100mL)	
1/2/24	10	
1/8/24	10	
1/14/24	10	
1/16/24	10	
1/22/24	323	
1/23/24	10	
1/29/24	31	
Log Mean	1.285794888	
<u>STV</u>	<u>103.7900513</u>	

Sampling Date	Enterococci	
Sampling Date	(MPN/100mL)	
12/4/23	10	
12/11/23	10	
12/18/23	10	
12/19/23	145	
12/20/23	905	
12/21/23	10	
12/26/23	10	
Log Mean	1.44543094	
<u>STV</u> <u>291.149000</u>		

FEBRUARY 2024			
Sampling Date	Enterococci (MPN/100mL)		
2/1/24	323		
2/2/24	31		
2/4/24	10		
2/5/24	20		
2/12/24	10		
2/20/24	399		
2/21/24	10		
2/26/24	10		
Log Mean	1.487820888		
STV 231.1643281			

MONITORING STATION: AQUATIC PARK - HYDE STREET PIER (210.1)

NOVEMBER 2018		
Committee Date	E. Coli	Enterococci
Sampling Date	(MPN/100mL)	(MPN/100mL)
11/5/18	10	52
11/13/18	10	10
11/19/18	10	10
11/21/18	63	10
11/22/18	52	20
11/26/18	41	10
11/29/18	31	31
Log Mean	1.374212778	1.215485005
<u>STV</u>	69.00765472	<u>39.15428651</u>

	JANUARY 2019	
Sampling Date	E. Coli	Enterococci
	(MPN/100mL)	(MPN/100mL)
1/29/19	10	10
Log Mean	1	1
<u>STV</u>	#DIV/0!	#DIV/0!

MARCH 2019		
E. Coli	Enterococci	
(MPN/100mL)	(MPN/100mL)	
20	10	
31	20	
197	20	
20	10	
1.596971978	1.150514998	
<u>159.9900506</u>	23.62252276	
	E. Coli (MPN/100mL) 20 31 197 20 1.596971978	

	MAY 2019	
Sampling Date	E. Coli	<u>Enterococci</u>
	(MPN/100mL)	(MPN/100mL)
5/6/19	10	10
5/13/19	20	10
5/20/19	10	10
5/28/19	10	10
Log Mean	1.075257499	1
<u>STV</u>	<u>18.54461093</u>	<u>10</u>

	JULY 2019	
Sampling Date	<u>E. Coli</u> (MPN/100mL)	Enterococci (MPN/100mL)
7/1/19	10	10

DECEMBER 2018		
Sampling Date	E. Coli	Enterococci
Sampling Date	(MPN/100mL)	(MPN/100mL)
12/3/18	10	10
12/10/18	10	10
12/17/18	98	31
Log Mean	1.330408692	1.163787231
<u>STV</u>	115.8984432	33.68798219

FEBRUARY 2019		
Campling Data	E. Coli	Enterococci
Sampling Date	(MPN/100mL)	(MPN/100mL)
2/4/19	10	10
2/11/19	10	10
2/13/19	97	75
2/19/19	10	10
2/25/19	216	10
Log Mean	1.464245097	1.175012253
<u>STV</u>	196.9251435	<u>47.50170819</u>

	APRIL 2019	
Sampling Date	<u>E. Coli</u> (MPN/100mL)	Enterococci (MPN/100mL)
4/1/19	10	10
4/8/19	85	10
4/15/19	20	10
4/22/19	10	10
4/29/19	10	10
Log Mean	1.246089784	1
<u>STV</u>	<u>58.01377533</u>	<u>10</u>

JUNE 2019		
Campling Data	E. Coli	<u>Enterococci</u>
Sampling Date	(MPN/100mL)	(MPN/100mL)
6/3/19	10	10
6/10/19	52	20
6/17/19	10	10
6/24/19	10	10
Log Mean	1.179000836	1.075257499
<u>STV</u>	<u>43.44691849</u>	<u>18.54461093</u>

	AUGUST 2019	
Sampling Date	<u>E. Coli</u> (MPN/100mL)	Enterococci (MPN/100mL)

STV	<u>10</u>	<u>10</u>
Log Mean	1	1
7/29/19	10	10
7/22/19	10	10
7/15/19	10	10
7/8/19	10	10

SEPTEMBER 2019		
Sampling Date	<u>E. Coli</u>	<u>Enterococci</u>
Sampling Date	(MPN/100mL)	(MPN/100mL)
9/3/19	231	10
9/9/19	677	10
9/10/19	63	10
9/16/19	10	10
9/23/19	31	10
9/30/19	10	10
Log Mean	1.747483815	1
<u>STV</u>	<u>496.8751553</u>	<u>10</u>

NOVEMBER 2019		
Sampling Date	E. Coli	<u>Enterococci</u>
Sampling Date	(MPN/100mL)	(MPN/100mL)
11/4/19	10	10
11/12/19	10	10
11/18/19	10	10
11/25/19	10	10
Log Mean	1	1
<u>STV</u>	<u>10</u>	<u>10</u>

JANUARY 2020		
Campling Data	E. Coli	Enterococci
Sampling Date	(MPN/100mL)	(MPN/100mL)
1/6/20	10	20
1/13/20	10	10
1/16/20	10	10
1/21/20	10	10
1/27/20	20	10
Log Mean	1.060205999	1.060205999
<u>STV</u>	<u>17.09207828</u>	<u>17.09207828</u>

MARCH 2020			
Sampling Date E. Coli Enterococci (MPN/100mL) (MPN/100mL)			
3/2/20	3/2/20 20 10		
3/9/20	3/9/20 20 10		
3/16/20	3/16/20 10 10		
Log Mean 1.200686664 1		1	
<u>STV</u>	<u>26.51538528</u>	<u>10</u>	

STV	18.54461093	10
Log Mean	1.075257499	1
8/26/19	10	10
8/19/19	20	10
8/12/19	10	10
8/5/19	10	10

OCTOBER 2019		
Sampling Date	<u>E. Coli</u> (MPN/100mL)	Enterococci (MPN/100mL)
10/7/19	31	10
10/15/19	10	10
10/21/19	10	10
10/28/19	10	10
Log Mean	1.122840423	1
<u>STV</u>	27.40332549	<u>10</u>

DECEMBER 2019		
Sampling Date	E. Coli	Enterococci
	(MPN/100mL)	(MPN/100mL)
12/2/19	98	10
12/8/19	538	226
12/9/19	63	10
12/16/19	10	10
12/23/19	10	20
12/30/19	10	10
Log Mean	1.586891483	1.275856406
<u>STV</u>	318.0534897	93.41641126

FEBRUARY 2020		
Sampling Date	E. Coli	Enterococci
Sampling Date	(MPN/100mL)	(MPN/100mL)
2/3/20	20	10
2/10/20	41	10
2/18/20	75	20
2/24/20	10	10
Log Mean 1.447218779 1.075257499		1.075257499
<u>STV</u>	<u>85.82457557</u>	<u>18.54461093</u>

SEPTEMBER 2020		
Sampling Date	<u>E. Coli</u> (MPN/100mL)	Enterococci (MPN/100mL)
9/8/20	10	10
Log Mean	1 1	
<u>STV #DIV/0!</u> #DIV/0!		

APRIL 2021

MARCH 2021		
Sampling Date	E. Coli	Enterococci
Sampling Date	(MPN/100mL)	(MPN/100mL)
3/22/21	no data 10	
3/31/21	10 10	
Log Mean	1 1	
<u>STV</u>	#DIV/0! 10	

MAY 2021	
Sampling Date	<u>Enterococci</u>
	(MPN/100mL)
5/3/21	10
5/10/21	10
5/17/21	10
5/24/21	10
Log Mean	1
<u>STV</u>	<u>10</u>

JULY 2021		
Sampling Date	<u>Enterococci</u>	
Sampling Date	(MPN/100mL)	
7/6/21	10	
7/12/21	10	
7/19/21	10	
7/26/21	10	
Log Mean	1	
<u>STV</u>	<u>10</u>	

SEPTEMBER 2021	
Commine Date	<u>Enterococci</u>
<u>Sampling Date</u>	(MPN/100mL)
9/7/21	10
9/13/21	
	10
9/20/21	10
9/27/21	10
Log Mean	1
<u>STV</u>	<u>10</u>

NOVEMBER 2021		
Sampling Date	Enterococci	
	(MPN/100mL)	
11/1/21	10	
11/8/21	10	
11/15/21	10	

Sampling Date	Enterococci
	(MPN/100mL)
4/5/21	10
4/12/21	20
4/19/21	10
4/26/21	10
Log Mean	1.075257499
<u>STV</u>	<u>18.54461093</u>

JUNE 2021	
Sampling Date	<u>Enterococci</u>
Sampling Date	(MPN/100mL)
6/1/21	
	10
6/7/21	10
6/14/21	10
6/21/21	10
6/28/21	10
Log Mean	1
<u>STV</u>	<u>10</u>

AUGUST 2021	
Sampling Date	Enterococci (MPN/100mL)
8/2/21	10
8/9/21	10
8/16/21	10
8/23/21	10
8/30/21	10
8/31/21	10
Log Mean	1
<u>STV</u>	<u>10</u>

OCTOBER 2021	
Sampling Date	<u>Enterococci</u>
Sampling Date	(MPN/100mL)
10/4/21	10
10/12/21	10
10/18/21	10
10/24/21	63
10/25/21	181
10/26/21	20
Log Mean	1.393008187
STV	116.8515128

DECEMBER 2021

11/22/21	10
11/29/21	10
Log Mean	1
<u>STV</u>	<u>10</u>

JANUARY 2022	
c 1: D :	Enterococci
Sampling Date	(MPN/100mL)
1/3/22	10
1/10/22	226
1/11/22	10
1/18/22	10
1/25/22	10
1/31/22	10
Log Mean	1.22568474
<u>STV</u>	<u>85.97858782</u>

MARCH 2022	
Sampling Date	Enterococci (MPN/100mL)
3/7/22	10
3/14/22	10
3/21/22	10
3/28/22	10
Log Mean	1
<u>STV</u>	<u>10</u>

MAY 2022	
Sampling Date	Enterococci (MPN/100mL)
5/2/22	10
5/9/22	10
5/16/22	10
5/23/22	10
5/31/22	10
Log Mean	1
<u>STV</u>	<u>10</u>

JULY 2022	
Sampling Date	Enterococci (MPN/100mL)
6/5/22	20
6/11/22 6/18/22 6/25/22	10 10 10

Sampling Date	Enterococci (MPN/100mL)
12/6/21	10
12/13/21	20
12/20/21	10
12/23/21	30
12/27/21	20
Log Mean	1.215836249
<u>STV</u>	30.52934654

FEBRUARY 2022	
Sampling Date	<u>Enterococci</u>
	(MPN/100mL)
2/7/22	10
2/14/22	10
2/22/22	10
2/28/22	10
Log Mean	1
STV	<u>10</u>

APRIL 2022	
Comming Date	<u>Enterococci</u>
Sampling Date	(MPN/100mL)
4/4/22	10
4/11/22	10
4/18/22	10
4/25/22	10
Log Mean	1
<u>STV</u>	<u>10</u>

JUNE 2022	
Sampling Date	Enterococci
	(MPN/100mL)
6/6/22	10
6/14/22	10
6/21/22	10
6/27/22	10
Log Mean	1
<u>STV</u>	<u>10</u>

AUGUST 2022	
Sampling Date	<u>Enterococci</u>
	(MPN/100mL)
8/1/22	10
8/8/22	10
8/15/22	10

Log Mean	1.075257499
<u>STV</u>	18.54461093

SEPTEME	3ER 2022
Sampling Date	Enterococci (MPN/100mL)
9/6/22	31
9/12/22	20
9/19/22	10
9/26/22	10
Log Mean	1.198097922
<u>STV</u>	32.19621662

NOVEMBER 2022	
Sampling Date	Enterococci (MPN/100mL)
11/7/22	63
11/14/22	10
11/21/22	10
11/28/22	10
Log Mean	1.199835137
<u>STV</u>	<u>51.54807237</u>

JANUARY 2023	
Campling Data	<u>Enterococci</u>
Sampling Date	(MPN/100mL)
1/3/23	10
1/9/23	52
1/10/23	31
1/12/23	41
1/14/23	31
1/16/23	51
1/17/23	20
1/23/23	20
1/30/23	10
Log Mean	1.402348973
<u>STV</u>	<u>56.52723448</u>

JULY 2023	
Sampling Date	Enterococci (MPN/100mL)
7/3/23	31
7/10/23	10
7/17/23	10
7/24/23	10
7/31/23	74

8/22/22	10
8/29/22	10
Log Mean	1
<u>STV</u>	<u>10</u>

OCTOBER 2022	
Camarina Data	Enterococci
Sampling Date	(MPN/100mL)
10/3/22	10
10/11/22	10
10/17/22	10
10/24/22	10
10/31/22	10
Log Mean	1
<u>STV</u>	<u>10</u>

DECEMBER 2022	
Compline Date	<u>Enterococci</u>
Sampling Date	(MPN/100mL)
12/1/22	10
12/5/22	10
12/12/22	10
12/19/22	10
12/27/22	41
12/31/22	20
Log Mean	1.152302309
<u>STV</u>	30.20835718

FEBRUARY 2023	
Sampling Date	<u>Enterococci</u>
Sampling Date	(MPN/100mL)
2/6/23	10
2/13/23	10
2/21/23	10
2/24/23	10
2/27/23	10
Log Mean	1
<u>STV</u>	<u>10</u>

AUGUST 2023	
Sampling Date	Enterococci
	(MPN/100mL)
8/7/23	183
8/14/23	10
8/22/23	74
8/28/23	10

Log Mean	1.272118683
STV	60.19848442

SEPTEMBER 2023		
Compline Date	Enterococci	
Sampling Date	(MPN/100mL)	
9/5/23	10	
9/11/23	10	
9/18/23	10	
9/25/23	10	
Log Mean	1	
<u>STV</u>	<u>10</u>	

NOVEMBER 2023		
Sampling Date	Enterococci (MPN/100mL)	
11/6/23	10	
11/13/23	10	
11/18/23	583	
11/19/23	52	
11/20/23	10	
11/27/23	10	
Log Mean	1.413611983	
<u>STV</u>	<u>218.1474393</u>	

JANUARY 2024		
Sampling Date	Enterococci (MPN/100mL)	
1/2/24	20	
1/8/24	10	
1/14/24	63	
1/16/24	10	
1/22/24	41	
1/29/24	10	
Log Mean	1.285525734	
<u>STV</u>	54.38463699	

Log Mean	1.532920702
<u>STV</u>	222.9559988

OCTOBER 2023		
Sampling Date	Enterococci (MPN/100mL)	
10/2/23	10	
10/10/23	10	
10/17/23	10	
10/23/23	41	
10/30/23	10	
Log Mean	1.122556771	
STV	29.77712814	

DECEMBER 2023		
6 11 5 1	Enterococci	
Sampling Date	(MPN/100mL)	
12/4/23	10	
12/11/23	10	
12/18/23	52	
12/19/23	31	
12/20/23	121	
12/21/23	10	
12/26/23	10	
Log Mean	1.327164344	
<u>STV</u>	78.52994366	

FEBRUARY 2024		
Sampling Date	Enterococci	
	(MPN/100mL)	
2/1/24	75	
2/4/24	10	
2/5/24	10	
2/12/24	10	
2/20/24	134	
2/21/24	41	
2/26/24	10	
Log Mean	1.373564274	
<u>STV</u>	100.1076891	

*Note: CSD data has not yet been reported

MONITORING STATION: AQUATIC PARK - BEACH EAST END (211)

NOVEMBER 2018		
Campling Data	E. Coli	Enterococci
Sampling Date	(MPN/100mL)	(MPN/100mL)
11/5/18	10	10
11/13/18	10	10
11/19/18	10	10
11/21/18	41	52
11/26/18	10	10
11/29/18	41	75
Log Mean	1.204261286	1.265177435
<u>STV</u>	40.73217972	62.4841892

JANUARY 2019		
Sampling Date	E. Coli	Enterococci
Sampling Date	(MPN/100mL)	(MPN/100mL)
1/7/19	110	52
1/14/19	63	31
1/22/19	31	10
1/28/19	616	359
1/29/19	31	10
Log Mean	1.922607467	1.552491897
STV	408.1948286	237.0923112

MARCH 2019		
Sampling Date	<u>E. Coli</u>	<u>Enterococci</u>
Sampling Date	(MPN/100mL)	(MPN/100mL)
3/4/19	41	31
3/11/19	20	10
3/18/19	272	10
3/25/19	41	20
Log Mean	1.740291653	1.198097922
<u>STV</u>	230.6003369	32.19621662

MAY 2019		
Complian Data	E. Coli	<u>Enterococci</u>
Sampling Date	(MPN/100mL)	(MPN/100mL)
5/6/19	20	10
5/13/19	20	10
5/20/19	10	10
5/28/19	10	10
Log Mean	1.150514998	1
STV	23.62252276	<u>10</u>

JULY 2019		
Campling Data	E. Coli	Enterococci
Sampling Date	(MPN/100mL)	(MPN/100mL)
7/1/19	1172	359
7/2/19	73	175
7/3/19	10	10

DECEMBER 2018		
Campalina Data	E. Coli	<u>Enterococci</u>
Sampling Date	(MPN/100mL)	(MPN/100mL)
12/3/18	216	243
12/4/18	10	85
12/10/18	10	10
12/17/18	10	20
12/24/18	41	10
12/31/18	31	10
Log Mean	1.406433217	1.436009199
<u>STV</u>	<u>122.0101655</u>	<u>155.2080979</u>

FEBRUARY 2019		
Sampling Date	E. Coli	Enterococci
Sampling Date	(MPN/100mL)	(MPN/100mL)
2/4/19	10	41
2/11/19	41	10
2/13/19	169	96
2/19/19	10	10
2/25/19	10	10
Log Mean	1.368134112	1.319011018
<u>STV</u>	118.01843	80.08008643

	APRIL 2019	
Sampling Date	<u>E. Coli</u> (MPN/100mL)	Enterococci (MPN/100mL)
4/1/19	10	10
4/8/19	10	10
4/15/19	75	10
4/22/19	10	10
4/29/19	10	10
Log Mean	1.175012253	1
<u>STV</u>	<u>47.50170819</u>	<u>10</u>

	JUNE 2019	
Campling Data	E. Coli	Enterococci
Sampling Date	(MPN/100mL)	(MPN/100mL)
6/3/19	10	10
6/10/19	134	10
6/17/19	10	10
6/24/19	63	20
Log Mean	1.481611337	1.075257499
<u>STV</u>	<u>164.0214425</u>	18.54461093

AUGUST 2019		
Campling Data	E. Coli	<u>Enterococci</u>
Sampling Date	(MPN/100mL)	(MPN/100mL)
8/5/19	20	10
8/6/19	73	20
8/12/19	209	10

STV	<u>256.6448048</u>	<u>183.0467368</u>
Log Mean	1.614505624	1.426173222
7/31/19	20	10
7/29/19	30	10
7/22/19	41	10
7/15/19	31	10
7/9/19	10	10
7/8/19	52	109

OCTOBER 2019		
Sampling Date	<u>E. Coli</u> (MPN/100mL)	Enterococci (MPN/100mL)
10/1/19	31	10
10/7/19	135	10
10/15/19	2187	272
10/16/19	10	52
10/21/19	74	20
10/28/19	10	10
Log Mean	1.805129328	1.408600374
<u>STV</u>	<u>854.2034139</u>	<u>140.3394413</u>
<u>STV</u>	<u>854.2034139</u>	140.339441

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	DECEMBER 2019		
Sampling Date	E. Coli	<u>Enterococci</u>	
Sumpling Date	(MPN/100mL)	(MPN/100mL)	
12/2/19	20	20	
12/8/19	414	231	
12/9/19	41	10	
12/16/19	10	10	
12/23/19	10	20	
12/30/19			
12/30/19	10	10	
Log Mean	1.421802366	1.327611995	
<u>STV</u>	<u>171.9110558</u>	101.2003872	

FEBRUARY 2020		
Sampling Date	E. Coli	<u>Enterococci</u>
Sampling Date	(MPN/100mL)	(MPN/100mL)
2/3/20	20	10
2/10/20	41	10
2/18/20	52	10
2/24/20	31	20
Log Mean	1.530294722	1.075257499
<u>STV</u>	<u>57.39478275</u>	<u>18.54461093</u>

	APRIL 2020	
Campling Data	E. Coli	Enterococci
Sampling Date	(MPN/100mL)	(MPN/100mL)
4/6/20	10	10
4/13/20	10	10

STV	163.3504546	28.16748679
Log Mean	1.693444506	1.158478338
8/26/19	31	31
8/19/19	31	10

SEPTEMBER 2019		
Camalia - Data	E. Coli	<u>Enterococci</u>
Sampling Date	(MPN/100mL)	(MPN/100mL)
9/3/19	41	20
9/9/19	10	10
9/16/19	52	10
9/23/19	20	10
9/30/19	464	175
Log Mean	1.659267035	1.308813609
<u>STV</u>	<u>292.2340913</u>	<u>99.74112808</u>

NOVEMBER 2019		
Sampling Date	E. Coli	Enterococci
	(MPN/100mL)	(MPN/100mL)
11/4/19	41	10
11/12/19	41	20
11/18/19	41	10
11/25/19	364	882
11/26/19	231	10
Log Mean	1.952612987	1.449299716
<u>STV</u>	359.6206901	342.3635482

JANUARY 2020	
E. Coli	Enterococci
(MPN/100mL)	(MPN/100mL)
10	10
30	10
10	41
31	20
10	10
1.19369659	1.18276277
<u>34.18083588</u>	<u>34.14545538</u>
	E. Coli (MPN/100mL) 10 30 10 31 10 1.19369659

	MARCH 2020	
Sampling Date	E. Coli	<u>Enterococci</u>
Sampling Date	(MPN/100mL)	(MPN/100mL)
3/2/20	20	10
3/9/20	145	10
3/16/20	10	10
3/23/20	120	63
3/30/20		
-,, -	41	10
Log Mean	1.63087262	1.15986811
<u>STV</u>	<u>185.5701103</u>	<u>41.50995782</u>

4/20/20 4/27/20	10 10	31 20
Log Mean	1	1.198097922
<u>STV</u>	<u>10</u>	<u>32.19621662</u>

	JUNE 2020	
Sampling Date	<u>E. Coli</u> (MPN/100mL)	Enterococci (MPN/100mL)
6/1/20	75	10
6/8/20	10	10
6/15/20	10	10
6/22/20	20	10
6/29/20	10	10
Log Mean	1.235218252	1
<u>STV</u>	<u>52.87721497</u>	<u>10</u>

	AUGUST 2020	
Sampling Date	<u>E. Coli</u> (MPN/100mL)	Enterococci (MPN/100mL)
	(IVIPIN/ 100IIIL)	(IVIPIN/ 100ITIL)
8/3/20	2014	20
8/4/20	10	10
8/10/20	10	10
8/17/20	20	10
8/24/20	10	10
8/31/20	74	52
Log Mean	1.57905353	1.169505557
<u>STV</u>	<u>557.2286139</u>	<u>35.14384988</u>

OCTOBER 2020		
Sampling Date	E. Coli	Enterococci
Sampling Date	(MPN/100mL)	(MPN/100mL)
10/5/20	30	10
10/13/20	10	10
10/19/20	10	10
10/26/20	10	10
Log Mean	1.119280314	1
<u>STV</u>	<u>26.61429938</u>	<u>10</u>

DECEMBER 2020		
Sampling Date	E. Coli	Enterococci
Sampling Date	(MPN/100mL)	(MPN/100mL)
12/7/20	41	10
12/13/20	10	10
12/14/20	146	189
12/15/20	10	10
12/21/20	20	10

	MAY 2020	
Campling Date	E. Coli	<u>Enterococci</u>
Sampling Date	(MPN/100mL)	(MPN/100mL)
5/4/20	10	10
5/11/20	10	10
5/18/20	20	10
5/26/20	10	52
Log Mean	1.075257499	1.179000836
<u>STV</u>	<u>18.54461093</u>	<u>43.44691849</u>

	JULY 2020	
Sampling Date	<u>E. Coli</u> (MPN/100mL)	Enterococci (MPN/100mL)
7/6/20	41	10
7/13/20	30	10
7/20/20	10	10
7/27/20	10	10
Log Mean	1.272476278	1
<u>STV</u>	48.08743495	<u>10</u>

SEPTEMBER 2020		
Sampling Date	E. Coli	<u>Enterococci</u>
Sampling Date	(MPN/100mL)	(MPN/100mL)
9/8/20	20	10
9/14/20	41	20
9/21/20	10	10
9/28/20	10	10
Log Mean	1.228453463	1.075257499
<u>STV</u>	<u>40.17375886</u>	<u>18.54461093</u>

NOVEMBER 2020		
Canadia a Data	E. Coli	Enterococci
Sampling Date	(MPN/100mL)	(MPN/100mL)
11/2/20	20	40
11/9/20	31	10
11/16/20	31	31
11/23/20	31	10
11/30/20	31	20
Log Mean	1.453295354	1.278890336
STV	36.51050278	42.97946769

	JANUARY 2021	
Sampling Date	<u>E. Coli</u> (MPN/100mL)	Enterococci (MPN/100mL)
1/4/21	10	10

12/28/20	185	96
Log Mean	1.557556406	1.376455506
<u>STV</u>	188.0103649	<u>136.0108997</u>

FEBRUARY 2021		
Committee Date	E. Coli	Enterococci
Sampling Date	(MPN/100mL)	(MPN/100mL)
2/1/21	10	10
2/8/21	1658	168
2/9/21	63	10
2/16/21	75	10
2/22/21	31	10
Log Mean	1.877069607	1.245061856
<u>STV</u>	<u>861.9450242</u>	<u>88.62694254</u>

APRIL 2021		
Sampling Date	Enterococci (MPN/100mL)	
4/5/21	228	
4/6/21	10	
4/12/21	10	
4/19/21	10	
4/26/21	20	
Log Mean	1.331792969	
<u>STV</u>	<u>121.880769</u>	

JUNE 2021		
Sampling Date	Enterococci (MPN/100mL)	
6/1/21	10	
6/7/21	10	
6/14/21	10	
6/21/21	10	
6/28/21	20	
Log Mean	1.060205999	
<u>STV</u>	<u>17.09207828</u>	

AUGUST 2021		
Enterococci		
(MPN/100mL)		
10		
10		
10		
10		
86		
10		
1.155749742		
<u>44.14100556</u>		

<u>STV</u>	221.6449052	<u>142.890055</u>
Log Mean	1.592920915	1.532022157
1/28/21	171	30
1/27/21	203	171
1/25/21	20	74
1/19/21	10	10
1/11/21	52	41

MARCH 2021		
Sampling Date	E. Coli	<u>Enterococci</u>
Sampling Date	(MPN/100mL)	(MPN/100mL)
3/1/21	10	10
3/8/21	145	246
3/9/21	10	10
3/15/21	10	10
3/22/21	10	10
3/31/21	41	20
Log Mean	1.295691976	1.281994184
<u>STV</u>	<u>83.87966243</u>	<u>98.93863047</u>

MAY 2021		
Sampling Date	Enterococci (MPN/100mL)	
5/3/21	10	
5/10/21	10	
5/17/21	10	
5/24/21	10	
Log Mean	1	
STV	<u>10</u>	

JULY 2021		
Sampling Date	<u>Enterococci</u>	
Sampling Date	(MPN/100mL)	
7/6/21	10	
7/12/21	10	
7/19/21	10	
7/20/21	10	
7/26/21	10	
Log Mean	1	
STV	<u>10</u>	

SEPTEMBER 2021		
Sampling Date	Enterococci	
	(MPN/100mL)	
9/7/21	10	
9/13/21	10	
9/20/21	10	
9/27/21	10	

OCTOBER 2021		
Campling Data	<u>Enterococci</u>	
Sampling Date	(MPN/100mL)	
10/4/21	10	
10/12/21		
10/12/21	10	
10/18/21	10	
10/24/21	481	
10/25/21	496	
10/26/21	63	
Log Mean	1.696161217	
<u>STV</u>	<u>573.8660355</u>	

DECEM	BER 2021
DECEIVI	BEK ZUZI
Committee Date	Enterococci
Sampling Date	(MPN/100mL)
12/6/21	
12/0/21	10
12/13/21	189
12/14/21	31
12/20/21	10
12/23/21	10
12/27/21	10
Log Mean	1.29463725
<u>STV</u>	<u>91.36194517</u>

FEBRUARY 2022	
Sampling Date	<u>Enterococci</u>
Sampling Date	(MPN/100mL)
2/7/22	10
2/14/22	63
2/22/22	10
2/28/22	41
Log Mean	1.353031102
<u>STV</u>	76.67876193

APRIL 2022	
Sampling Date	Enterococci (MPN/100mL)
4/4/22	10
4/11/22	10
4/18/22	10
4/25/22	10
Log Mean	1
<u>STV</u>	<u>10</u>

JUNE 2022	
Sampling Date	Enterococci
	(MPN/100mL)

Log Mean	1
<u>STV</u>	<u>10</u>

NOVEMBER 2021	
Sampling Date	<u>Enterococci</u>
	(MPN/100mL)
11/1/21	10
11/8/21	10
11/15/21	10
11/22/21	10
11/29/21	10
Log Mean	1
STV	<u>10</u>

JANUARY 2022	
Campling Data	Enterococci
Sampling Date	(MPN/100mL)
1/3/22	10
1/10/22	52
1/18/22	10
1/24/22	10
1/31/22	10
Log Mean	1.143200669
<u>STV</u>	35.78535349

MARCH 2022	
Sampling Date	Enterococci (MPN/100mL)
3/7/22	10
3/14/22	10
3/21/22	10
3/28/22	1616
3/29/22	10
Log Mean	1.441688271
<u>STV</u>	<u>510.3277219</u>

MAY 2022		
Sampling Date	<u>Enterococci</u>	
Sampling Date	(MPN/100mL)	
5/2/22	10	
5/9/22	10	
5/16/22	30	
5/23/22	10	
5/31/22	10	
Log Mean	1.095424251	
<u>STV</u>	23.38681845	

JULY 2022

	İ
6/6/22	10
6/14/22	10
6/21/22	10
6/27/22	20
Log Mean	1.075257499
STV	<u>18.54461093</u>

AUGUST 2022	
Sampling Date	Enterococci (MPN/100mL)
8/1/22	10
8/8/22	10
8/15/22	10
8/22/22	10
8/29/22	10
Log Mean	1
<u>STV</u>	<u>10</u>

OCTOBER 2022	
Sampling Date	<u>Enterococci</u>
	(MPN/100mL)
10/3/22	10
10/11/22	10
10/17/22	10
10/24/22	10
10/31/22	20
Log Mean	1.060205999
<u>STV</u>	<u>17.09207828</u>

DECEMBER 2022	
Sampling Date	Enterococci (MPN/100mL)
12/1/22	52
12/5/22	10
12/12/22	41
12/19/22	10
12/27/22	41
12/31/22	241
Log Mean	1.55393135
<u>STV</u>	<u>164.3506068</u>

FEBRUARY 2023	
Sampling Date	Enterococci (MPN/100mL)
2/6/23	420
2/13/23	10
2/21/23	10
2/24/23	10
2/25/23	10

Campling Data	<u>Enterococci</u>
Sampling Date	(MPN/100mL)
6/5/22	10
6/11/22	10
6/18/22	10
6/25/22	10
Log Mean	1
<u>STV</u>	<u>10</u>

SEPTEMBER 2022	
Campling Data	Enterococci
Sampling Date	(MPN/100mL)
9/6/22	10
9/12/22	10
9/19/22	41
9/26/22	41
Log Mean	1.306391928
STV	<u>57.53762001</u>

NOVEMBER 2022	
Canadia a Data	Enterococci
<u>Sampling Date</u>	(MPN/100mL)
11/7/22	441
11/8/22	146
11/9/22	10
11/14/22	10
11/21/22	10
11/28/22	10
Log Mean	1.468131908
<u>STV</u>	<u>261.8338133</u>

JANUARY 2023	
Sampling Date	<u>Enterococci</u>
Juliphing Date	(MPN/100mL)
1/1/23	142
1/3/23	74
1/9/23	169
1/10/23	20
1/10/23 (aft)	52
1/12/23	31
1/14/23	31
1/16/23	75
1/17/23	31
1/23/23	10
1/30/23	10
Log Mean	1.60141695
<u>STV</u>	<u>135.1680741</u>

MARCH 2023

2/27/23	10
Log Mean	1.270541548
<u>STV</u>	<u>131.858619</u>

APRIL 2023	
Sampling Date	Enterococci (MPN/100mL)
4/3/23	10
4/10/23	10
4/17/23	10
4/24/23	10
Log Mean	1
<u>STV</u>	<u>10</u>

JUNE 2023	
Sampling Date	Enterococci (MPN/100mL)
6/5/23	10
6/12/23	10
6/20/23	10
6/26/23	10
Log Mean	1
STV	<u>10</u>

AUGUST 2023	
Sampling Date	Enterococci
	(MPN/100mL)
8/7/23	10
8/14/23	10
8/22/23	31
8/28/23	10
Log Mean	1.122840423
<u>STV</u>	<u>27.40332549</u>

OCTOBER 2023	
Sampling Date	<u>Enterococci</u>
	(MPN/100mL)
10/2/23	20
10/10/23	31
10/17/23	10
10/23/23	10
10/30/23	41
Log Mean	1.281035109
<u>STV</u>	43.59676811

Sampling Date	Enterococci (MPN/100mL)
3/6/23	41
3/13/23	31
3/14/23	31
3/20/23	10
3/27/23	10
Log Mean	1.319101449
<u>STV</u>	49.87863478

MAY 2023		
Sampling Date	Enterococci (MPN/100mL)	
5/1/23	10	
5/8/23	10	
5/15/23	10	
5/22/23	10	
5/30/23	10	
Log Mean	1	
<u>STV</u>	<u>10</u>	

JULY 2023		
Campling Data	Enterococci	
Sampling Date	(MPN/100mL)	
7/3/23	31	
7/10/23	31	
7/17/23	10	
7/24/23	20	
7/31/23	10	
Log Mean	1.256750677	
STV	37.43760706	

SEPTEMBER 2023		
Sampling Date	Enterococci (MPN/100mL)	
9/5/23	41	
9/11/23	10	
9/18/23	41	
9/25/23	10	
Log Mean	1.306391928	
<u>STV</u>	<u>57.53762001</u>	

NOVEMBER 2023		
Sampling Date	<u>Enterococci</u>	
	(MPN/100mL)	
11/6/23	10	
11/13/23	10	

DECEMBER 2023		
Sampling Date	Enterococci	
Sampling Date	(MPN/100mL)	
12/4/23	10	
12/11/23	20	
12/18/23	31	
12/19/23	75	
12/20/23	52	
12/26/23	20	
Log Mean	1.447414382	
<u>STV</u>	71.25480983	

FEBRUARY 2024		
Commiss Data	Enterococci	
Sampling Date	(MPN/100mL)	
2/1/24	203	
2/2/24	10	
2/4/24	31	
2/5/24	31	
2/12/24	10	
2/20/24	355	
2/21/24	51	
2/26/24	10	
Log Mean	1.568502244	
<u>STV</u>	<u>216.9128019</u>	

*Note: CSD data has not yet been reported

11/18/23	355
11/19/23	31
11/20/23	10
11/27/23	41
Log Mean	1.442395651
<u>STV</u>	<u>166.4691632</u>

JANUARY 2024		
Sampling Date	<u>Enterococci</u>	
	(MPN/100mL)	
1/2/24	10	
1/8/24	52	
1/14/24	20	
1/16/24	41	
1/22/24	20	
1/29/24	10	
Log Mean	1.321807865	
<u>STV</u>	50.7656404	

MONITORING STATION: MISSION CREEK - KAYAK PIER (220)

NOVEMBER 2018		
Sampling Date	E. Coli	<u>Enterococci</u>
Sampling Date	(MPN/100mL)	(MPN/100mL)
11/5/18	10	10
11/13/18	10	10
11/19/18	10	10
11/21/18	24196	24196
11/22/18	6867	908
11/23/18	1137	414
11/24/18	448	63
11/25/18	160	10
11/26/18	31	10
11/29/18	1223	488
11/30/18	368	109
Log Mean	2.388755005	1.953092421
<u>STV</u>	<u>7784.539104</u>	<u>2425.600335</u>

JANUARY 2019		
Sampling Date	E. Coli	Enterococci
Sampling Date	(MPN/100mL)	(MPN/100mL)
1/6/19	24196	24196
1/7/19	6488	1112
1/8/19	169	10
1/14/19	10	10
1/16/19	12033	3654
1/17/19	24196	24196
1/18/19	2755	457
1/19/19	156	75
1/22/19	52	31
1/28/19	20	20
1/31/19	2187	144
Log Mean	2.897998813	2.442008375
<u>STV</u>	<u>31690.28822</u>	<u>11544.57282</u>
Reported GM	<u>791</u>	<u>277</u>

Sampling Date	E. Coli	Enterococci
ouriping sate	(MPN/100mL)	(MPN/100mL)
3/4/19	63	86
3/6/19	24196	24196
3/7/19	1956	279
3/8/19	216	10
3/11/19	20	10
3/18/19	41	10
3/20/19	24196	24196
3/21/19	63	10
3/25/19	41	20
Log Mean	2.502065396	2.049846645
<u>STV</u>	<u>11359.76705</u>	<u>7324.305081</u>

DECEMBER 2018		
Camadina Data	E. Coli	Enterococci
Sampling Date	(MPN/100mL)	(MPN/100mL)
12/1/18	691	161
12/2/18	52	20
12/3/18	74	20
12/10/18	20	10
12/17/18	24196	6131
12/18/18	10	10
12/24/18	10	10
12/31/18	75	10
Log Mean	1.998068493	1.574552148
<u>STV</u>	<u>2823.703783</u>	<u>683.9845157</u>

FEBRUARY 2019		
Compling Data	E. Coli	Enterococci
Sampling Date	(MPN/100mL)	(MPN/100mL)
2/1/19	144	30
2/4/19	529	262
2/5/19		
2/3/19	10	10
2/11/19	20	10
2/13/19	24196	24196
2/14/19	24196	24196
2/15/19	17329	1153
2/16/19	2014	63
2/17/19	670	52
2/18/19	97	30
2/19/19	52	20
2/25/19	10	20
Log Mean	2.58516818	2.109938679
<u>STV</u>	<u>16387.80533</u>	<u>4614.490493</u>

	APRIL 2019	
Sampling Date	E. Coli	<u>Enterococci</u>
Sampling Date	(MPN/100mL)	(MPN/100mL)
4/1/19	10	10
4/8/19	31	10
4/15/19		
4/15/15	10	10
4/22/19	10	10
4/29/19	10	10
Log Mean	1.098272339	1
<u>STV</u>	<u>23.98742734</u>	<u>10</u>

	MAY 2019	
Campling Data	E. Coli	<u>Enterococci</u>
Sampling Date	(MPN/100mL)	(MPN/100mL)
5/6/19	10	10
5/13/19	10	10
5/20/19	10	10

	JUNE 2019	
Campling Data	E. Coli	Enterococci
Sampling Date	(MPN/100mL)	(MPN/100mL)
6/3/19	10	10
6/10/19	31	10
6/17/19		
6/17/19	10	20
6/24/19	10	471
6/25/19	10	10
Log Mean	1.098272339	1.394810181
<u>STV</u>	23.98742734	<u>211.821478</u>

	AUGUST 2019	
Sampling Date	<u>E. Coli</u> (MPN/100mL)	Enterococci (MPN/100mL)
8/5/19	10	10
8/12/19	10	10
8/19/19	10	10
8/26/19	10	10
Log Mean	1	1
<u>STV</u>	<u>10</u>	<u>10</u>
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OCTOBER 2019		
Sampling Date	E. Coli	Enterococci
Sampling Date	(MPN/100mL)	(MPN/100mL)
10/7/19	10	10
10/15/19	10	10
10/21/19	10	10
10/28/19		
10/20/19	30	10
Log Mean	1.119280314	1
<u>STV</u>	26.61429938	<u>10</u>

DECEMBER 2019		
Sampling Data	E. Coli	Enterococci
Sampling Date	(MPN/100mL)	(MPN/100mL)
12/2/19	228	171
12/3/19	10	10
12/8/19	5172	1842
12/9/19	789	298
12/10/19	146	86
12/16/19	20	10
12/23/19	41	10
12/30/19	135	51
Log Mean	2.147146355	1.826821328
<u>STV</u>	<u>1866.053265</u>	<u>759.712888</u>

FFBRUARY 2020	

5/28/19	10	10
Log Mean	1	1
<u>STV</u>	<u>10</u>	<u>10</u>

	JULY 2019	
Sampling Date	E. Coli	<u>Enterococci</u>
Sampling Date	(MPN/100mL)	(MPN/100mL)
7/1/19	10	10
7/8/19	31	10
7/15/19	10	10
7/22/19	10	10
7/29/19	10	10
Log Mean	1.098272339	1
<u>STV</u>	23.98742734	<u>10</u>

SEPTEMBER 2019		
Compling Data	E. Coli	<u>Enterococci</u>
Sampling Date	(MPN/100mL)	(MPN/100mL)
9/3/19	10	10
9/9/19	10	10
9/16/19	121	10
9/23/19	10	10
9/30/19	20	10
Log Mean	1.276763073	1
<u>STV</u>	75.52537648	<u>10</u>

	NOVEMBER 2019	
Campling Data	E. Coli	Enterococci
Sampling Date	(MPN/100mL)	(MPN/100mL)
11/4/19	10	10
11/12/19	10	10
11/18/19	10	10
11/25/19	10	10
11/27/19	6867	3448
11/28/19	504	218
11/29/19	691	537
11/30/19	121	63
Log Mean	1.932682625	1.800667323
<u>STV</u>	<u>2233.061311</u>	<u>1143.052983</u>

JANUARY 2020		
Campling Data	E. Coli	Enterococci
Sampling Date	(MPN/100mL)	(MPN/100mL)
1/6/20	10	10
1/13/20	10	10
1/16/20	24196	17329
1/17/20	1679	169
1/18/20	404	63

<u>STV</u>	43.44691849	<u>27.40332549</u>
Log Mean	1.179000836	1.122840423
2/24/20	10	10
2/18/20	10	10
2/10/20	10	10
2/3/20	52	31
Sampling Date	(MPN/100mL)	(MPN/100mL)
Campling Data	E. Coli	Enterococci

	MARCH 2020	
Campling Data	E. Coli	Enterococci
Sampling Date	(MPN/100mL)	(MPN/100mL)
3/2/20	10	10
3/9/20	10	10
3/16/20	10	10
3/23/20	41	10
3/30/20	10	10
Log Mean	1.122556771	1
<u>STV</u>	<u>29.77712814</u>	<u>10</u>

	MAY 2020	
Compling Data	E. Coli	Enterococci
Sampling Date	(MPN/100mL)	(MPN/100mL)
5/11/20	20	10
5/18/20	10	10
5/26/20	10	10
Log Mean	1.100343332	1
<u>STV</u>	21.04527525	<u>10</u>

	JULY 2020	
Committee Date	<u>E. Coli</u>	<u>Enterococci</u>
Sampling Date	(MPN/100mL)	(MPN/100mL)
7/6/20	30	10
7/13/20	31	10
7/20/20	10	10
7/27/20	20	10
Log Mean	1.317378236	1
<u>STV</u>	40.78055777	<u>10</u>

SEPTEMBER 2020		
Sampling Date	<u>E. Coli</u> (MPN/100mL)	Enterococci (MPN/100mL)
	(IVIFIN/ 100IIIL)	(IVIFIN/ LOUITL)
9/8/20	10	10
9/14/20	20	10
9/21/20	31	10
9/28/20	31	10
Log Mean	1.320938346	1
<u>STV</u>	41.53127257	<u>10</u>

1/19/20	521	97
1/20/20	315	75
1/21/20	216	51
1/27/20	63	10
Log Mean	2.396013135	1.870600437
<u>STV</u>	<u>5751.985382</u>	<u>1435.46358</u>

	APRIL 2020	
Sampling Date	<u>E. Coli</u> (MPN/100mL)	Enterococci (MPN/100mL)
4/6/20	31	10
4/13/20	10	10
4/20/20	10	10
4/27/20	10	10
Log Mean	1.122840423	1
<u>STV</u>	27.40332549	<u>10</u>

	JUNE 2020	
Campling Date	E. Coli	<u>Enterococci</u>
Sampling Date	(MPN/100mL)	(MPN/100mL)
6/1/20	41	10
6/8/20		
5/ 5/ =5	10	10
6/15/20	10	10
6/22/20	10	10
6/29/20	10	10
Log Mean	1.122556771	1
<u>STV</u>	29.77712814	<u>10</u>

	AUGUST 2020	
Sampling Date	E. Coli	<u>Enterococci</u>
	(MPN/100mL)	(MPN/100mL)
8/3/20	10	10
8/10/20	10	10
8/17/20	86	10
8/24/20	10	10
8/31/20	20	10
Log Mean	1.247105689	1
<u>STV</u>	58.51996623	<u>10</u>

	OCTOBER 2020	
Committee Date	E. Coli	Enterococci
Sampling Date	(MPN/100mL)	(MPN/100mL)
10/5/20	10	10
10/13/20	10	10
10/19/20	20	10
10/26/20	10	10
Log Mean	1.075257499	1
<u>STV</u>	18.54461093	<u>10</u>

NOVEMBER 2020		
Sampling Date	<u>E. Coli</u> (MPN/100mL)	Enterococci (MPN/100mL)
11/2/20	10	10
11/9/20	10	10
11/16/20	10	10
11/23/20	10	10
11/30/20	10	10
Log Mean	1	1
<u>STV</u>	<u>10</u>	<u>10</u>

JANUARY 2021		
Sampling Date	E. Coli	<u>Enterococci</u>
Sampling Date	(MPN/100mL)	(MPN/100mL)
1/4/21	135	10
1/11/21	10	10
1/19/21	20	10
1/25/21	10	10
1/27/21	24196	14136
1/28/21	471	272
1/29/21	2489	1565
1/30/21	109	132
1/31/21	41	31
Log Mean	2.170484833	1.932371712
<u>STV</u>	<u>4342.672072</u>	<u>2506.727637</u>

APRIL 2021		
Sampling Date	Enterococci (MPN/100mL)	
4/5/21	10	
4/12/21	10	
4/19/21	10	
4/26/21	10	
Log Mean	1	
<u>STV</u>	<u>10</u>	

JUNE 2021		
Sampling Date	Enterococci (MPN/100mL)	
6/1/21	10	
6/7/21	10	
6/14/21	10	
6/21/21	10	
6/28/21	20	
Log Mean	1.060205999	
<u>STV</u>	<u>17.09207828</u>	

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DECEMBER 2020		
Sampling Date	E. Coli	Enterococci
Sampling Date	(MPN/100mL)	(MPN/100mL)
12/7/20	20	10
12/14/20	10	30
12/21/20	10	10
12/28/20	10	10
Log Mean	1.075257499	1.119280314
STV	18.54461093	26.61429938

FEBRUARY 2021		
	E. Coli	Enterococci
Sampling Date	(MPN/100mL)	(MPN/100mL)
2/1/21	135	41
2/8/21	10	10
2/16/21	30	10
2/22/21	31	10
Log Mean	1.524704179	1.153195964
<u>STV</u>	<u>131.632501</u>	<u>35.15526827</u>

MARCH 2021		
Complian Data	E. Coli	<u>Enterococci</u>
Sampling Date	(MPN/100mL)	(MPN/100mL)
3/1/21	10	10
3/8/21	41	10
3/15/21	10	20
3/22/21	10	10
3/31/21	10	10
Log Mean	1.122556771	1.060205999
<u>STV</u>	<u>29.77712814</u>	<u>17.09207828</u>

MAY 2021		
Sampling Date	Enterococci (MPN/100mL)	
5/3/21	10	
5/10/21	10	
5/17/21	20	
5/24/21	10	
Log Mean	1.075257499	
STV	18.54461093	

JULY 2021		
Sampling Date	Enterococci	
	(MPN/100mL)	
7/6/21	10	
7/12/21	10	
7/19/21	10	
7/26/21	10	

Sampling Date	Enterococci (MPN/100mL)
8/2/21	10
8/9/21	10
8/16/21	10
8/23/21	20
8/30/21	10
Log Mean	1.060205999
<u>STV</u>	17.09207828

OCTOBER 2021		
Camadia a Data	Enterococci	
Sampling Date	(MPN/100mL)	
10/4/21	10	
10/12/21	10	
10/18/21	10	
10/24/21	24196	
10/25/21	9804	
10/26/21	98	
10/27/21	63	
Log Mean	2.166530501	
<u>STV</u>	<u>10387.33047</u>	

DECEMBER 2021		
Sampling Date	<u>Enterococci</u>	
Sampling Date	(MPN/100mL)	
12/6/21	10	
12/13/21	46361	
12/14/21	14562	
12/15/21	263	
12/16/21	2974	
12/17/21	10	
12/18/21	20	
12/19/21	10	
12/20/21	10	
12/23/21	6408	
12/24/21	2467	
12/25/21	20	
12/26/21	31	
12/27/21	445	
12/28/21	20	
12/29/21	20	
12/30/21	63	
Log Mean	2.407162095	
STV	<u>10575.20056</u>	

FEBRUARY 2022	
Camadina Data	<u>Enterococci</u>
Sampling Date	(MPN/100mL)
2/7/22	10

Log Mean	1
<u>STV</u>	<u>10</u>

SEPTEMBER 2021	
Sampling Date	<u>Enterococci</u>
Sampling Date	(MPN/100mL)
9/7/21	10
9/13/21	10
9/20/21	10
9/27/21	10
Log Mean	1
<u>STV</u>	<u>10</u>

NOVEMBER 2021	
110 1211	Enterococci
Sampling Date	(MPN/100mL)
44/4/24	
11/1/21	183
11/2/21	187
11/3/21	63
11/8/21	20
11/9/21	13473
11/10/21	20
11/11/21	10
11/12/21	10
11/15/21	30
11/22/21	10
11/29/21	10
Log Mean	1.685661709
<u>STV</u>	<u>783.1157401</u>

JANUARY 2022	
Sampling Date	<u>Enterococci</u>
	(MPN/100mL)
1/3/22	10
1/10/22	10
1/18/22	20
1/24/22	20
1/31/22	10
Log Mean	1.120411998
<u>STV</u>	<u>21.46788878</u>

MARCH 2022	
Sampling Date	Enterococci (MPN/100mL)
3/7/22	10
3/14/22	10
3/21/22	10
3/28/22	63
Log Mean	1.199835137

2/14/22 2/22/22	10 10
2/28/22	10
Log Mean	1
<u>STV</u>	<u>10</u>

MAY 2022	
Sampling Date	Enterococci (MPN/100mL)
5/2/22	10
5/9/22	10
5/16/22	10
5/23/22	10
5/31/22	10
Log Mean	1
<u>STV</u>	<u>10</u>

JULY 2022	
Sampling Date	Enterococci (MPN/100mL)
6/5/22	10
6/11/22	10
6/18/22	10
6/25/22	10
Log Mean	1
<u>STV</u>	<u>10</u>

SEPTEMBER 2022	
Sampling Date	Enterococci (MPN/100mL)
9/6/22	10
9/12/22	10
9/19/22	10
9/26/22	10
Log Mean	1
<u>STV</u>	<u>10</u>

NOVEMBER 2022	
Sampling Date	<u>Enterococci</u>
	(MPN/100mL)
11/7/22	10
11/14/22	10
11/21/22	10
11/28/22	10
Log Mean	1
<u>STV</u>	<u>10</u>

<u>STV</u>	<u>104.3357552</u>

APRIL 2022	
Sampling Date	Enterococci (MPN/100mL)
4/4/22	10
4/11/22	20
4/18/22	10
4/25/22	10
Log Mean	1.075257499
<u>STV</u>	<u>18.54461093</u>

JUNE 2022	
Sampling Date	Enterococci (MPN/100mL)
6/6/22	10
6/14/22	10
6/21/22	10
6/27/22	10
Log Mean	1
<u>STV</u>	<u>10</u>

AUGUST 2022	
Sampling Date	Enterococci (MPN/100mL)
8/1/22	10
8/8/22	10
8/15/22	10
8/22/22	10
8/29/22	10
Log Mean	1
<u>STV</u>	<u>10</u>

OCTOBER 2022	
Sampling Date	<u>Enterococci</u>
	(MPN/100mL)
10/3/22	10
10/11/22	10
10/17/22	10
10/24/22	10
10/31/22	10
Log Mean	1
<u>STV</u>	<u>10</u>

DECEMBER 2022	
Sampling Date	Enterococci
	(MPN/100mL)

JANUARY 2023	
JANUA	
Sampling Date	Enterococci
	(MPN/100mL)
1/1/23	1634
1/2/23	393
1/3/23	183
1/4/23	774
1/5/23	3150
1/6/23	2019
1/7/23	10
1/8/23	122
1/9/23	37782
1/10/23	47241
1/11/23	1271
1/12/23	12274
1/13/23	1041
1/14/23	24105
1/15/23	116
1/16/23	24060
1/17/23	20
1/18/23	75
1/19/23	259
1/20/23	31
1/21/23	110
1/22/23	171
1/23/23	31
1/30/23	10
Log Mean	2.707716406
<u>STV</u>	<u>14547.49911</u>
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MARCH 2023	
Sampling Date	Enterococci (MPN/100mL)
3/1/23	10
3/6/23	10
3/10/23	3466
3/11/23	414
3/12/23	175
3/13/23	10
3/14/23	81252
3/15/23	10
3/16/23	30
3/17/23	10
3/18/23	10
3/19/23	148
3/20/23	52
3/22/23	24705
3/23/23	815
3/24/23	41
3/25/23	41
3/26/23	41
3/27/23	10
3/29/23	131

12/1/22	22444
12/2/22	2935
12/3/22	297
12/4/22	131
12/5/22	10
12/6/22	98
12/7/22	10
12/12/22	20
12/19/22	10
12/27/22	6637
12/28/22	537
12/29/22	178
12/30/22	148
12/31/22	32985
Log Mean	2.442281178
<u>STV</u>	<u>9779.209984</u>

FEBRUARY 2023	
Committee Date	Enterococci
Sampling Date	(MPN/100mL)
2/6/23	31
2/13/23	20
2/21/23	20
2/24/23	1265
2/25/23	41
2/26/23	122
2/27/23	336
2/28/23	323
Log Mean	1.991274712
STV	<u>708.5723335</u>

APRIL 2023	
Sampling Date	<u>Enterococci</u>
Sampling Date	(MPN/100mL)
4/3/23	31
4/10/23	10
4/11/23	10
4/17/23	10
4/24/23	10
Log Mean	1.098272339
STV	23.98742734

MAY 2023	
Sampling Date	Enterococci (MPN/100mL)
5/1/23	10
5/8/23	10
5/15/23	10
5/22/23	10
5/30/23	10
Log Mean	1
<u>STV</u>	<u>10</u>

3/30/23	10
Log Mean	1.949173936
<u>STV</u>	<u>2681.448241</u>

JULY 2023		
	Enterococci	
Sampling Date	(MPN/100mL)	
7/3/23	10	
7/10/23	10	
7/17/23	10	
7/24/23	10	
7/31/23	10	
Log Mean	1	
<u>STV</u>	<u>10</u>	

SEPTEMBER 2023		
Sampling Date	Enterococci (MPN/100mL)	
9/5/23	10	
9/11/23	10	
9/18/23	10	
9/25/23	10	
Log Mean	1	
<u>STV</u>	<u>10</u>	

NOVEMBER 2023		
Sampling Date	Enterococci	
Sampling Date	(MPN/100mL)	
11/6/23	20	
11/13/23	10	
11/18/23	13830	
11/19/23	10	
11/20/23	20	
11/21/23	31	
11/22/23	10	
11/23/23	10	
11/24/23	10	
11/27/23	10	
Log Mean	1.423424387	
<u>STV</u>	<u>466.557767</u>	

JANUARY 2024		
Campling Data	Enterococci	
Sampling Date	(MPN/100mL)	
1/1/24	10	
1/2/24	10	
1/8/24	52	
1/14/24	4653	
1/15/24	279	

JUNE 2023		
Sampling Date	<u>Enterococci</u>	
	(MPN/100mL)	
6/5/23	10	
6/12/23	10	
6/20/23	10	
6/26/23	10	
Log Mean	1	
<u>STV</u>	<u>10</u>	

AUGUST 2023		
Sampling Date	Enterococci (MPN/100mL)	
8/7/23	10	
8/14/23	10	
8/22/23	10	
8/28/23	10	
Log Mean	1	
<u>STV</u>	<u>10</u>	

OCTOBER 2023		
Sampling Date	Enterococci (MPN/100mL)	
10/2/23	10	
10/10/23	10	
10/17/23	10	
10/23/23	10	
10/30/23	10	
Log Mean	1	
<u>STV</u>	<u>10</u>	

DECEMBER 2023		
Campling Date	Enterococci	
Sampling Date	(MPN/100mL)	
12/4/23	10	
12/11/23	10	
12/18/23	3076	
12/18/23	49769	
12/19/23	18706	
12/20/23	3573	
12/21/23	11620	
12/22/23	774	
12/23/23	160	
12/24/23	122	
12/25/23	10	
12/26/23	30	
12/30/23	3292	
12/31/23	126	
Log Mean	2.667809837	

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1/16/24	52
1/17/24	98
1/18/24	20
1/19/24	31
1/20/24	20
1/22/24	18344
1/23/24	388
1/24/24	1135
1/25/24	20
1/26/24	20
1/27/24	10
1/28/24	10
1/29/24	10
Log Mean	1.841076296
<u>STV</u>	<u>1268.885472</u>

<u>STV</u>	<u>20739.53064</u>

FEBRUARY 2024		
Sampling Date	<u>Enterococci</u>	
Sampling Date	(MPN/100mL)	
2/1/24	288	
2/2/24	199	
2/3/24	20	
2/4/24	86	
2/5/24	2613	
2/6/24	41	
2/8/24	41	
2/12/24	10	
2/20/24	24196	
2/21/24	10462	
2/22/24	41	
2/26/24	20	
Log Mean	2.246137773	
<u>STV</u>	<u>5969.702705</u>	

*Note: CSD data has not yet been reported

MONITORING STATION: CRANE COVE PARK (230)

JANUARY 2021		
Sampling Date	E. Coli	Enterococci
Sampling Date	(MPN/100mL)	(MPN/100mL)
1/4/21	20	10
1/11/21	218	10
1/19/21	20	62
1/25/21	10	10
1/27/21	52	97
1/29/21	20	30
Log Mean	1.492924971	1.376047446
<u>STV</u>	<u>125.6528501</u>	87.86950548

MARCH 2021		
Sampling Date	E. Coli	<u>Enterococci</u>
Sampling Date	(MPN/100mL)	(MPN/100mL)
3/1/21	10	10
3/8/21	10	10
3/15/21	10	10
3/22/21	10	10
3/31/21	10	10
Log Mean	1	1
<u>STV</u>	<u>10</u>	<u>10</u>

MAY 2021		
Sampling Date	Enterococci	
	(MPN/100mL)	
5/3/21	20	
5/10/21	10	
5/17/21	10	
5/24/21	10	
Log Mean	1.075257499	
<u>STV</u>	<u>18.54461093</u>	

JULY 2021		
Sampling Date	Enterococci	
	(MPN/100mL)	
7/6/21	20	
7/12/21	20	
7/19/21	10	
7/26/21	10	
Log Mean	1.150514998	
<u>STV</u>	23.62252276	

SEPTEMBER 2021

FEBRUARY 2021		
Sampling Date	E. Coli	Enterococci
Sampling Date	(MPN/100mL)	(MPN/100mL)
2/1/21	10	10
2/8/21	10	10
2/16/21	10	10
2/22/21	10	41
Log Mean	1	1.153195964
<u>STV</u>	<u>10</u>	<u>35.15526827</u>

APRIL 2021		
Sampling Date	Enterococci (MPN/100mL)	
4/5/21	10	
4/12/21	10	
4/19/21	10	
4/26/21	20	
Log Mean	1.075257499	
<u>STV</u>	<u>18.54461093</u>	

JUNE 2021		
Sampling Date	<u>Enterococci</u>	
Sampling Date	(MPN/100mL)	
6/1/21	10	
6/7/21	10	
6/14/21	10	
6/21/21	10	
6/28/21	30	
Log Mean	1.095424251	
STV	23.38681845	

AUGUST 2021	
Sampling Date	Enterococci (MPN/100mL)
8/2/21	10
8/9/21	10
8/16/21	10
8/23/21	10
8/30/21	10
Log Mean	1
<u>STV</u>	<u>10</u>

OCTOBER 2021	
Sampling Date	<u>Enterococci</u>
	(MPN/100mL)

Sampling Date	Enterococci (MPN/100mL)
9/7/21	10
9/13/21	10
9/20/21	10
9/21/21	20
9/27/21	10
Log Mean	1.060205999
<u>STV</u>	<u>17.09207828</u>

NOVEMBER 2021	
6 1: 5 :	Enterococci
Sampling Date	(MPN/100mL)
11/1/21	10
11/8/21	3255
11/9/21	201
11/10/21	10
11/15/21	10
11/22/21	52
11/29/21	10
Log Mean	1.647392913
<u>STV</u>	<u>676.4981756</u>

JANUARY 2022	
Sampling Date	Enterococci (MPN/100mL)
1/3/22	10
1/10/22	12033
1/11/22	10
1/18/22	10
1/24/22	10
1/31/22	10
Log Mean	1.513395653
<u>STV</u>	<u>1335.316517</u>

MARCH 2022	
Enterococci (MPN/100mL)	
41	
10	
10	
10	
1.153195964	
<u>35.15526827</u>	

MAY 2022	
Camadina Data	Enterococci
Sampling Date	(MPN/100mL)

10/4/21	350
10/5/21	20
10/12/21	10
10/18/21	10
10/21/21	24196
10/22/21	86
10/24/21	24196
10/25/21	341
10/26/21	30
Log Mean	2.284106586
<u>STV</u>	<u>9529.503529</u>

DECEMBER 2021	
Complian Data	Enterococci
Sampling Date	(MPN/100mL)
12/6/21	10
12/13/21	428
12/14/21	959
12/15/21	41
12/16/21	52
12/20/21	10
12/23/21	10
12/27/21	41
Log Mean	1.694354179
<u>STV</u>	460.2073513

FEBRUARY 2022	
Sampling Date	Enterococci
	(MPN/100mL)
2/7/22	10
2/14/22	10
2/22/22	10
2/28/22	10
Log Mean	1
<u>STV</u>	<u>10</u>

APRIL 2022	
Sampling Date	Enterococci
	(MPN/100mL)
4/4/22	10
4/11/22	10
4/18/22	10
4/25/22	10
Log Mean	1
<u>STV</u>	<u>10</u>

<u>STV</u>	<u>10</u>
Log Mean	1
5/31/22	10
5/23/22	10
5/16/22	10
5/9/22	10
5/2/22	10

JULY 2022	
Sampling Date	Enterococci (MPN/100mL)
6/5/22	10
6/11/22	10
6/18/22	10
6/25/22	10
Log Mean	1
<u>STV</u>	<u>10</u>

SEPTEMBER 2022	
Sampling Date	Enterococci
Sampling Date	(MPN/100mL)
9/6/22	10
9/12/22	10
9/19/22	10
9/20/22	10
9/26/22	10
Log Mean	1
<u>STV</u>	<u>10</u>

NOVEMBER 2022	
Sampling Date	Enterococci (MPN/100mL)
11/7/22	10
11/14/22	10
11/21/22	10
11/28/22	10
Log Mean	1
<u>STV</u>	<u>10</u>

JANUARY 2023	
Sampling Date	<u>Enterococci</u>
	(MPN/100mL)
1/1/23	121
1/2/23	31
1/3/23	134
1/4/23	52
1/5/23	30

JUNE 2022	
Sampling Date	Enterococci (MPN/100mL)
6/6/22	10
6/14/22	10
6/21/22	41
6/27/22	256
6/28/22	10
Log Mean	1.505255956
<u>STV</u>	<u>229.7523952</u>

AUGUST 2022	
Sampling Date	<u>Enterococci</u>
	(MPN/100mL)
8/1/22	10
8/8/22	20
8/15/22	10
8/22/22	10
8/29/22	10
Log Mean	1.060205999
STV	17.09207828

OCTOBER 2022	
Camalia - Data	Enterococci
<u>Sampling Date</u>	(MPN/100mL)
10/3/22	10
10/11/22	10
10/17/22	10
10/24/22	20
10/31/22	10
Log Mean	1.060205999
<u>STV</u>	<u>17.09207828</u>

DECEMBER 2022	
Sampling Date	<u>Enterococci</u>
	(MPN/100mL)
12/1/22	30
12/2/22	86
12/5/22	10
12/12/22	30
12/19/22	10
12/27/22	216
12/28/22	20
12/31/22	6488
Log Mean	1.792041944
<u>STV</u>	<u>972.1692622</u>

<u>STV</u>	<u>232.3090795</u>
Log Mean	1.805021904
1/30/23	10
1/23/23	10
1/17/23	52
1/16/23	218
1/15/23	63
1/14/23	520
1/13/23	41
1/12/23	121
1/11/23	110
1/10/23	161
1/9/23	52
1/8/23	31
1/6/23	75
1/6/22	75

MARCH 2023	
Commiss Date	Enterococci
Sampling Date	(MPN/100mL)
3/6/23	10
3/10/23	2359
3/11/23	31
3/13/23	31
3/14/23	7270
3/15/23	20
3/19/23	3076
3/20/23	10
3/22/23	6131
3/23/22	31
Log Mean	2.228489508
<u>STV</u>	<u>6290.867587</u>

JUNE 2023	
Sampling Date	<u>Enterococci</u>
	(MPN/100mL)
6/5/23	10
6/12/23	10
6/20/23	10
6/26/23	20
Log Mean	1.075257499
<u>STV</u>	<u>18.54461093</u>

AUGUST 2023	
Sampling Date	Enterococci
	(MPN/100mL)
8/1/23	41
8/7/23	10

FEBRUARY 2023	
Campling Data	<u>Enterococci</u>
Sampling Date	(MPN/100mL)
2/6/23	10
2/7/23	10
2/13/23	10
2/21/23	10
2/24/23	183
2/25/23	31
2/26/23	1153
2/27/23	31
Log Mean	1.538375473
<u>STV</u>	<u>322.5278719</u>

APRIL 2023	
Sampling Date	Enterococci (MPN/100mL)
4/3/23	10
4/10/23	10
4/17/23	10
4/24/23	10
Log Mean	1
<u>STV</u>	<u>10</u>

MAY 2023		
Sampling Date	Enterococci (MPN/100mL)	
5/1/23	10	
5/8/23	10	
5/15/23	10	
5/22/23	10	
5/30/23	10	
Log Mean	1	
STV	<u>10</u>	

JULY 2023		
Sampling Date	Enterococci (MPN/100mL)	
7/3/23	20	
7/10/23	10	
7/17/23	10	
7/24/23	10	
7/31/23	10	
Log Mean	1.060205999	
<u>STV</u>	17.09207828	

SEPTEMBER 2023

8/22/23 8/28/23	10 10
8/28/23 Log Mean	1.122556771
STV	13.26040448

OCTOBER 2023		
Sampling Date	Enterococci	
Sampling Date	(MPN/100mL)	
10/2/23	10	
10/10/23	10	
10/17/23	189	
10/18/23	10	
10/23/23	10	
10/30/23	41	
Log Mean	1.314874277	
<u>STV</u>	<u>99.00553503</u>	

DECEMBER 2023		
Sampling Date	Enterococci (MPN/100mL)	
12/4/23	10	
12/11/23	231	
12/12/23	52	
12/18/23	882	
12/18/23	1789	
12/19/23	231	
12/20/23	8664	
12/21/23	52	
12/26/23	30	
12/30/23	301	
12/31/23	171	
Log Mean	2.31670108	
<u>STV</u>	<u>2492.837446</u>	

FEBRUARY 2024		
Campling Data	Enterococci	
Sampling Date	(MPN/100mL)	
2/1/24	706	
2/2/24	20	
2/4/24	432	
2/5/24	1624	
2/6/24	122	
2/7/24	10	
2/12/24	20	
2/20/24	5172	
2/21/24	379	
2/22/24	85	
2/26/24	74	
Log Mean	2.224931151	

Sampling Date	Enterococci	
Sampling Date	(MPN/100mL)	
9/5/23	10	
9/11/23	10	
9/18/23	10	
9/25/23	10	
Log Mean	1	
<u>STV</u>	<u>10</u>	

NOVEMBER 2023		
Sampling Date	Enterococci (MPN/100mL)	
11/6/23	10	
11/13/23	10	
11/18/23	565	
11/19/23	10	
11/20/23	10	
11/27/23	30	
Log Mean	1.371528284	
STV	<u>187.2504897</u>	

JANUARY 2024		
Sampling Date	<u>Enterococci</u>	
Sampling Date	(MPN/100mL)	
1/1/24	31	
1/2/24	10	
1/8/24	41	
1/14/24	281	
1/15/24	31	
1/16/24	10	
1/22/24	161	
1/23/24	10	
1/24/24	10	
1/29/24	10	
Log Mean	1.425103944	
<u>STV</u>	<u>130.3192775</u>	

<u>STV</u> <u>2094.726795</u>

*Note: CSD data has not yet been reported

MONITORING STATION: CANDLESTICK POINT - SUNNYDALE (300.1)

NOVEMBER 2018		
Sampling Date	E. Coli	Enterococci
Sampling Date	(MPN/100mL)	(MPN/100mL)
11/5/18	318	20
11/13/18	10	10
11/19/18	10	10
11/26/18	10	10
Log Mean	1.37560678	1.075257499
<u>STV</u>	218.1034643	18.54461093

JANUARY 2019		
Sampling Date	E. Coli	<u>Enterococci</u>
Sampling Date	(MPN/100mL)	(MPN/100mL)
1/7/19	285	350
1/8/19	233	457
1/9/19		
1/9/19	450	813
1/10/19	613	820
1/11/19	369	201
1/12/19	187	118
1/13/19	216	96
1/14/19	31	52
1/22/19	10	10
1/28/19	10	10
Log Mean	2.092755719	2.110124128
<u>STV</u>	900.9829266	<u>1027.419595</u>

MARCH 2019		
Sampling Date	E. Coli	Enterococci
Sampling Date	(MPN/100mL)	(MPN/100mL)
3/4/19	318	175
3/5/19	41	31
3/11/19	63	10
3/18/19	158	20
3/25/19	146	108
3/26/19	155	148
3/27/19	1396	743
3/28/19	51	10
Log Mean	2.165043595	1.763763003
<u>STV</u>	<u>632.71555</u>	<u>420.3045989</u>

	MAY 2019	
Sampling Date	E. Coli	<u>Enterococci</u>
Sampling Date	(MPN/100mL)	(MPN/100mL)
5/6/19	272	63
5/13/19	31	10
5/20/19		
	30	52
5/28/19	10	155
5/29/19	10	31

DECEMBER 2018		
Sampling Date	E. Coli	<u>Enterococci</u>
Sampling Date	(MPN/100mL)	(MPN/100mL)
12/3/18	355	776
12/4/18	173	73
12/10/18	20	10
12/17/18	554	448
12/18/18	85	41
12/24/18	10	74
12/31/18	10	10
Log Mean	1.823176163	1.840925453
<u>STV</u>	<u>572.134276</u>	<u>603.6119775</u>

	FEBRUARY 2019		
Sampling Date	E. Coli	<u>Enterococci</u>	
Sampling Date	(MPN/100mL)	(MPN/100mL)	
2/4/19	20	10	
2/11/19	41	31	
2/13/19	24196	5475	
2/14/19	4106	3448	
2/15/19	256	148	
2/16/19	52	20	
2/19/19	31	41	
2/25/19	697	305	
2/26/19	146	201	
2/27/19	309	285	
2/28/19	63	20	
Log Mean	2.347587822	2.126796309	
<u>STV</u>	<u>3731.054383</u>	<u>1926.079305</u>	

	APRIL 2019	
Sampling Date	E. Coli	Enterococci
Sampling Date	(MPN/100mL)	(MPN/100mL)
4/1/19	10	10
4/8/19	10	10
4/15/19	292	131
4/16/19	145	31
4/22/19	10	10
4/29/19	85	171
4/30/19	309	20
Log Mean	1.720875466	1.448951299
<u>STV</u>	<u>415.5512895</u>	<u>134.6738747</u>

	JUNE 2019	
Sampling Date	E. Coli	<u>Enterococci</u>
Sampling Date	(MPN/100mL)	(MPN/100mL)
6/3/19	121	75
6/10/19	10	10

Log Mean	1.480610371	1.639407457
<u>STV</u>	170.3988451	<u>158.6054711</u>

	JULY 2019	
Sampling Date	<u>E. Coli</u> (MPN/100mL)	Enterococci (MPN/100mL)
7/1/19	41	10
7/8/19	146	657
7/9/19	10	20
7/15/19	10	10
7/22/19	10	20
7/29/19	389	52
Log Mean	1.561181052	1.522604784
<u>STV</u>	<u>277.8027751</u>	<u>253.0079053</u>

SEPTEMBER 2019		
Camadina Data	E. Coli	<u>Enterococci</u>
Sampling Date	(MPN/100mL)	(MPN/100mL)
9/3/19	52	10
9/9/19	20	10
9/16/19	10	10
9/23/19	41	10
9/30/19	10	10
Log Mean	1.325963439	1
<u>STV</u>	56.85573442	<u>10</u>

	NOVEMBER 2019	
Campling Data	E. Coli	Enterococci
Sampling Date	(MPN/100mL)	(MPN/100mL)
11/4/19	10	10
11/12/19	31	10
11/18/19	41	10
11/25/19	282	63
Log Mean	1.638598665	1.199835137
<u>STV</u>	<u>257.6155826</u>	51.54807237

	JANUARY 2020		
Sampling Date	<u>E. Coli</u> (MPN/100mL)	Enterococci (MPN/100mL)	
1/1/20	10	85	
1/6/20	10	571	
1/7/20	63	203	
1/8/20	10	10	
1/13/20	20	10	
1/21/20	63	52	
1/27/20	10	10	
Log Mean	1.271387299	1.672793488	
<u>STV</u>	56.85279246	380.0087774	

MARCH 2020

<u>STV</u>	100.3345324	<u>60.21151929</u>
Log Mean	1.345953841	1.218765316
6/24/19	20	10
6/17/19	10	10

	AUGUST 2019	
Sampling Date	E. Coli	<u>Enterococci</u>
Sampling Date	(MPN/100mL)	(MPN/100mL)
8/5/19	10	10
8/12/19	10	10
8/19/19	41	10
8/26/19	10	10
Log Mean	1.153195964	1
<u>STV</u>	<u>35.15526827</u>	<u>10</u>

	OCTOBER 2019	
Campling Data	E. Coli	Enterococci
Sampling Date	(MPN/100mL)	(MPN/100mL)
10/7/19	52	10
10/15/19	20	10
10/21/19	10	10
10/28/19	749	158
10/29/19	20	10
Log Mean	1.638509031	1.239731417
<u>STV</u>	382.443945	<u>84.51910379</u>

	DECEMBER 2019	
Sampling Date	E. Coli	<u>Enterococci</u>
Sampling Date	(MPN/100mL)	(MPN/100mL)
12/2/19	231	583
12/3/19	41	75
12/9/19	158	31
12/16/19	160	216
12/17/19	31	73
12/23/19	216	613
12/24/19	52	20
12/30/19	41	145
12/31/19	2909	121
Log Mean	2.110835475	2.073612441
<u>STV</u>	<u>786.0123214</u>	<u>534.4626902</u>

	FEBRUARY 2020	
Sampling Date	<u>E. Coli</u> (MPN/100mL)	Enterococci (MPN/100mL)
2/3/20	10	10
2/10/20	10	10
2/18/20	10	52
2/24/20	31	10
Log Mean	1.122840423	1.179000836
<u>STV</u>	27.40332549	43.44691849

Sampling Date	E. Coli	Enterococci
	(MPN/100mL)	(MPN/100mL)
3/2/20	20	10
3/9/20	121	97
3/16/20	41	85
3/23/20	41	41
3/30/20	51	41
Log Mean	1.663390651	1.628351675
<u>STV</u>	<u>105.3742584</u>	<u>135.1443673</u>

	MAY 2020	
Sampling Date	E. Coli	Enterococci
Sampling Date	(MPN/100mL)	(MPN/100mL)
5/4/20	•	
3/4/20	20	10
5/11/20	253	52
5/18/20	52	10
5/26/20	10	10
Log Mean	1.605038465	1.179000836
<u>STV</u>	<u>242.1333779</u>	<u>43.44691849</u>

	JULY 2020	
Sampling Date	<u>E. Coli</u> (MPN/100mL)	Enterococci (MPN/100mL)
7/6/20	166	10
7/13/20	20	10
7/20/20	63	10
7/27/20	10	98
Log Mean	1.580119658	1.247806519
<u>STV</u>	<u>186.7754274</u>	<u>76.41567143</u>

	SEPTEMBER 2020	
Sampling Date	<u>E. Coli</u> (MPN/100mL)	Enterococci (MPN/100mL)
9/8/20	173	74
9/14/20	121	10
9/21/20	63	10
9/28/20	85	10
Log Mean	2.012397737	1.21730793
<u>STV</u>	<u>180.2227049</u>	<u>59.49568406</u>

NOVEMBER 2020		
Sampling Date	<u>E. Coli</u> (MPN/100mL)	Enterococci (MPN/100mL)
11/2/20	110	20
11/3/20	52	10
11/9/20	324	41
11/10/20	288	62

	APRIL 2020	
Sampling Date	E. Coli	<u>Enterococci</u>
Sampling Date	(MPN/100mL)	(MPN/100mL)
4/6/20	10	10
4/13/20	10	10
4/20/20	10	10
4/27/20	10	31
Log Mean	1	1.122840423
STV	<u>10</u>	27.40332549

	JUNE 2020	
Campling Data	E. Coli	Enterococci
Sampling Date	(MPN/100mL)	(MPN/100mL)
6/1/20	132	10
6/8/20	52	10
6/15/20	41	20
6/22/20	10	10
6/29/20	52	10
Log Mean	1.633072895	1.060205999
<u>STV</u>	<u>141.5461938</u>	<u>17.09207828</u>

	AUGUST 2020	
Sampling Date	E. Coli	<u>Enterococci</u>
Sampling Date	(MPN/100mL)	(MPN/100mL)
8/3/20	122	10
8/10/20	62	10
8/17/20	145	10
8/24/20	52	10
8/31/20	30	10
Log Mean	1.846648824	1
<u>STV</u>	<u>160.4377797</u>	<u>10</u>

	OCTOBER 2020	
Sampling Date	E. Coli	<u>Enterococci</u>
Sampling Date	(MPN/100mL)	(MPN/100mL)
10/5/20	41	41
10/13/20	545	52
10/14/20	120	10
10/19/20	97	10
10/26/20	109	10
Log Mean	2.090511967	1.3321968
<u>STV</u>	408.2323724	<u>67.12971727</u>

DECEMBER 2020		
Camadina Data	E. Coli	Enterococci
Sampling Date	(MPN/100mL)	(MPN/100mL)

<u>STV</u>	306.5252335	78.85902153
Log Mean	1.714456512	1.358071004
11/30/20	10	20
11/24/20	10	10
11/23/20	52	144
11/16/20	97	10
11/11/20	10	10

JANUARY 2021		
E. Coli	Enterococci	
(MPN/100mL)	(MPN/100mL)	
146	323	
10	10	
10	10	
10	10	
10	10	
1.232870571	1.301840504	
<u>79.51086289</u>	<u>146.9292666</u>	
	E. Coli (MPN/100mL) 146 10 10 10 10 10	

MARCH 2021		
Camadina Data	E. Coli	<u>Enterococci</u>
Sampling Date	(MPN/100mL)	(MPN/100mL)
3/1/21	10	10
3/8/21	10	10
3/15/21	10	10
3/22/21	10	10
3/30/21	20	10
Log Mean	1.060205999	1
<u>STV</u>	<u>17.09207828</u>	<u>10</u>

MAY 2021		
Campling Data	Enterococci	
Sampling Date	(MPN/100mL)	
5/3/21	20	
5/10/21	10	
5/17/21	10	
5/24/21	10	
Log Mean	1.075257499	
STV	18.54461093	

JULY 2021		
Sampling Date	Enterococci	
	(MPN/100mL)	
7/6/21	388	
7/7/21	10	
7/12/21	10	
7/19/21	10	
7/26/21	10	
Log Mean	1.317766345	
<u>STV</u>	<u>169.3120194</u>	

Log Mean STV	1.479152961 161.3287945	1.245567808 75.02459655
12/28/20	10	10
12/21/20	10	10
12/14/20	63	96
12/7/20	131	10

FEBRUARY 2021		
Sampling Date	<u>E. Coli</u> (MPN/100mL)	Enterococci (MPN/100mL)
2/1/21	41	414
2/2/21	75	288
2/3/21	10	10
2/8/21	20	30
2/16/21	10	10
2/22/21	10	10
Log Mean	1.298145853	1.592252347
<u>STV</u>	59.88463601	<u>365.6978537</u>

APRIL 2021		
Sampling Date	<u>Enterococci</u>	
	(MPN/100mL)	
4/5/21	10	
4/12/21	10	
4/19/21	10	
4/26/21	10	
Log Mean	1	
<u>STV</u>	<u>10</u>	

JUNE 2021		
Sampling Date	Enterococci (MPN/100mL)	
6/1/21	10	
6/7/21	10	
6/14/21	31	
6/21/21	10	
6/28/21	10	
Log Mean	1.098272339	
<u>STV</u>	23.98742734	

AUGUST 2021		
Sampling Date	Enterococci (MPN/100mL)	
8/2/21	10	
8/9/21	10	
8/16/21	10	
8/23/21	10	
8/30/21	10	
Log Mean	1	
STV	<u>10</u>	

SEPTEMBER 2021		
Sampling Date	<u>Enterococci</u>	
Sampling Date	(MPN/100mL)	
9/7/21	10	
9/13/21	10	
9/20/21	10	
9/27/21	10	
Log Mean	1	
<u>STV</u>	<u>10</u>	

NOVEMBER 2021	
Sampling Date	Enterococci
	(MPN/100mL)
11/1/21	1178
11/2/21	31
11/8/21	98
11/15/21	10
11/22/21	10
11/29/21	41
Log Mean	1.694419486
<u>STV</u>	<u>486.1355088</u>

JANUARY 2022	
Sampling Date	<u>Enterococci</u>
Sampling Date	(MPN/100mL)
1/3/22	201
1/4/22	473
1/5/22	20
1/10/22	144
1/11/22	10
1/18/22	52
1/24/22	52
1/31/22	52
Log Mean	1.823182465
<u>STV</u>	<u>329.1813415</u>

MARCH 2022	
Sampling Date	<u>Enterococci</u>
Sampling Bate	(MPN/100mL)
3/7/22	10
3/14/22	10
3/21/22	10
3/28/22	187
3/29/22	31
Log Mean	1.35264066
<u>STV</u>	<u>116.3143487</u>

MAY 2022

OCTOBER 2021	
Campling Data	<u>Enterococci</u>
Sampling Date	(MPN/100mL)
10/4/21	31
10/12/21	10
10/18/21	10
10/24/21	24196
10/25/21	845
10/26/21	355
10/27/21	231
10/28/21	156
10/29/21	41
Log Mean	2.169078974
<u>STV</u>	<u>3477.339937</u>

DECEMBER 2021	
Sampling Date	<u>Enterococci</u>
	(MPN/100mL)
12/6/21	63
12/13/21	1259
12/14/21	10
12/20/21	109
12/21/21	63
12/27/21	52
Log Mean	1.908689445
STV	605.9659733

FEBRUARY 2022	
Sampling Date	<u>Enterococci</u>
	(MPN/100mL)
2/7/22	10
2/14/22	41
2/22/22	20
2/28/22	20
Log Mean	1.303710962
<u>STV</u>	42.1163614

APRIL 2022		
Sampling Date	Enterococci	
Sampling Date	(MPN/100mL)	
4/4/22	20	
4/11/22	41	
4/18/22	10	
4/25/22	10	
Log Mean	1.228453463	
<u>STV</u>	<u>40.17375886</u>	

JUNE 2022

Sampling Date	Enterococci
Sampling Date	(MPN/100mL)
5/2/22	10
5/9/22	20
5/16/22	10
5/23/22	10
5/31/22	10
Log Mean	1.060205999
<u>STV</u>	17.09207828

JULY 2022	
Sampling Date	Enterococci
Sampling Date	(MPN/100mL)
6/5/22	10
6/11/22	10
6/18/22	10
6/25/22	31
Log Mean	1.122840423
<u>STV</u>	<u>27.40332549</u>

SEPTEMBER 2022	
Sampling Date	<u>Enterococci</u>
	(MPN/100mL)
9/6/22	31
9/12/22	20
9/19/22	63
9/20/22	10
9/26/22	10
Log Mean	1.318346448
<u>STV</u>	<u>56.89981788</u>

NOVEMBER 2022	
Sampling Date	Enterococci (MPN/100mL)
11/7/22	315
11/8/22	703
11/9/22	31
11/14/22	20
11/21/22	10
11/28/22	142
11/29/22	10
Log Mean	1.755706559
<u>STV</u>	<u>511.804049</u>

JANUARY 2023	
Sampling Date	Enterococci (MPN/100mL)
1/1/23	173
1/2/23	98
1/3/23	168
1/4/23	9208

Campling Data	<u>Enterococci</u>
Sampling Date	(MPN/100mL)
6/6/22	10
6/14/22	10
6/21/22	10
6/27/22	10
Log Mean	1
<u>STV</u>	<u>10</u>

AUGUST 2022	
Sampling Date	Enterococci (MPN/100mL)
8/1/22	10
8/8/22	98
8/15/22	10
8/22/22	31
8/29/22	10
Log Mean	1.296517554
<u>STV</u>	73.14937174

OCTOBER 2022	
Sampling Date	Enterococci
	(MPN/100mL)
10/3/22	10
10/11/22	10
10/17/22	10
10/24/22	10
10/31/22	10
Log Mean	1
<u>STV</u>	<u>10</u>

DECEMBER 2022	
Committee Date	<u>Enterococci</u>
Sampling Date	(MPN/100mL)
12/5/22	144
12/6/22	109
12/7/22	10
12/12/22	20
12/19/22	52
12/27/22	1250
12/28/22	187
12/29/22	144
12/30/22	97
12/31/22	7270
Log Mean	2.158824259
STV	<u>1641.424206</u>

FEBRUARY 2023	
Sampling Date	<u>Enterococci</u>
	(MPN/100mL)
2/6/23	10

. /= /==	
1/5/23	1050
1/6/23	504
1/7/23	75
1/9/23	2909
1/10/23	173
1/11/23	95
1/17/23	85
1/23/23	10
1/30/23	51
Log Mean	2.333379262
<u>STV</u>	<u>2175.538277</u>
·	·

APRIL 2023	
Enterococci (MPN/100mL)	
10	
10	
31	
10	
1.122840423	
<u>27.40332549</u>	

JUNE 2023	
Sampling Date	<u>Enterococci</u>
	(MPN/100mL)
6/5/23	52
6/12/23	52
6/20/23	10
6/26/23	31
Log Mean	1.480842095
<u>STV</u>	81.96819586

AUGUST 2023	
Sampling Date	<u>Enterococci</u>
	(MPN/100mL)
8/1/23	10
8/7/23	10
8/14/23	20
8/22/23	10
8/28/23	10
Log Mean	1.060205999
<u>STV</u>	<u>17.9129134</u>

OCTOBER 2023	
Sampling Date	Enterococci
	(MPN/100mL)
10/2/23	10
10/10/23	10
10/17/23	10

2/13/23	10
2/21/23	10
2/27/23	455
2/28/23	565
Log Mean	1.682011969
<u>STV</u>	<u>758.593101</u>

MARCH 2023		
Sampling Date	Enterococci (MPN/100mL)	
3/1/23	31	
3/6/23	31	
3/13/23	75	
3/20/23	134	
3/21/23	52	
3/27/23	31	
Log Mean	1.698709081	
<u>STV</u>	<u>108.374245</u>	

MAY 2023		
Sampling Date	Enterococci (MPN/100mL)	
5/1/23	41	
5/8/23	98	
5/15/23	30	
5/22/23	10	
5/30/23	10	
Log Mean	1.416226237	
<u>STV</u>	91.18584749	

JULY 2023		
Sampling Date	Enterococci (MPN/100mL)	
7/3/23	10	
7/10/23	20	
7/17/23	10	
7/24/23	52	
7/31/23	1054	
Log Mean	1.60797479	
STV	<u>489.2570844</u>	

SEPTEMBER 2023		
Sampling Date	Enterococci (MPN/100mL)	
9/5/23	20	
9/11/23	10	
9/18/23	10	
9/25/23	20	
Log Mean	1.150514998	

Log Mean STV	1.15563025 27.55824042	
10/30/23	30	
10/23/23	20	

DECEMBER 2022		
DECEMBER 2023		
Sampling Date	<u>Enterococci</u>	
Sampling Date	(MPN/100mL)	
12/4/23	10	
12/11/23	41	
12/18/23	4352	
12/19/23	613	
12/20/23	1198	
12/21/23	6867	
12/22/23	30	
12/26/23	10	
Log Mean	2.303909792	
<u>STV</u>	<u>6302.111976</u>	

FEBRUARY 2024		
Sampling Date	Enterococci	
	(MPN/100mL)	
2/5/24	345	
2/6/24	85	
2/12/24	10	
2/20/24	1259	
2/21/24	41	
2/26/24	10	
Log Mean	1.863341268	
<u>STV</u>	<u>875.7532702</u>	

^{*}Note: CSD data has not yet been reported

NOVEMBER 2023		
Sampling Date	Enterococci (MPN/100mL)	
11/6/23	10	
11/13/23	10	
11/20/23	52	
11/27/23	10	
Log Mean	1.179000836	
<u>STV</u>	<u>43.44691849</u>	

JANUARY 2024		
Sampling Date	Enterococci	
Sampling Date	(MPN/100mL)	
1/2/24	216	
1/3/24	63	
1/8/24	10	
1/16/24	435	
1/17/24	487	
1/18/24	31	
1/22/24	379	
1/23/24	31	
1/29/24	40	
Log Mean	1.958137234	
STV	<u>558.1685872</u>	

MONITORING STATION: CANDLESTICK POINT WINDSURFER (301.1)

NOVEMBER 2018		
Sampling Date	E. Coli	Enterococci
Sampling Date	(MPN/100mL)	(MPN/100mL)
11/5/18	41	84
11/13/18	10	31
11/19/18	10	20
11/26/18	108	75
Log Mean	1.411551903	1.64793306
<u>STV</u>	<u>114.6410031</u>	<u>108.275396</u>

JANUARY 2019		
Sampling Date	E. Coli	<u>Enterococci</u>
Sampling Date	(MPN/100mL)	(MPN/100mL)
1/7/19	160	285
1/8/19	565	1725
1/0/10		
1/9/19	279	161
1/10/19	145	75
1/14/19	189	171
1/15/19	1259	266
1/16/19	1043	728
1/17/19	246	203
1/18/19	63	246
1/19/19	10	10
1/22/19	146	63
1/28/19	10	10
Log Mean	2.192711749	2.14927516
<u>STV</u>	<u>1124.442362</u>	<u>989.785167</u>

	MARCH 2019	
Campling Data	E. Coli	Enterococci
Sampling Date	(MPN/100mL)	(MPN/100mL)
3/4/19	383	52
3/11/19	364	10
3/18/19	24196	984
3/19/19	97	63
3/25/19	233	2909
3/26/19	20	85
Log Mean	2.530533564	2.150250273
<u>STV</u>	<u>7029.945755</u>	<u>2059.881532</u>

	MAY 2019	
Campling Data	E. Coli	<u>Enterococci</u>
Sampling Date	(MPN/100mL)	(MPN/100mL)
5/6/19	31	10
5/13/19	52	10
5/19/19	161	146
5/20/19	20	20
5/28/19	10	10
Log Mean	1.543044182	1.29307657
<u>STV</u>	<u>133.612403</u>	86.98811472

DECEMBER 2018		
Campling Data	E. Coli	Enterococci
Sampling Date	(MPN/100mL)	(MPN/100mL)
12/3/18	145	20
12/10/18	20	20
12/17/18	4106	2489
12/18/18	132	41
12/24/18	134	173
12/25/18	63	85
12/31/18	31	10
Log Mean	2.087742559	1.825476253
<u>STV</u>	<u>1126.870551</u>	<u>728.254178</u>

FEBRUARY 2019		
Sampling Date	E. Coli	<u>Enterococci</u>
Sampling Date	(MPN/100mL)	(MPN/100mL)
2/4/19	10	52
2/11/19	10	10
2/13/19	327	292
2/14/19	4611	1374
2/15/19	464	75
2/16/19	31	31
2/19/19	20	41
2/25/19	173	85
Log Mean	1.984412331	1.903499833
<u>STV</u>	<u>1579.851596</u>	<u>543.6483652</u>

	APRIL 2019	
Sampling Date	E. COII	Enterococci
Sampling Date	(MDN/100ml)	(MDN/100ml)
4/1/19	122	63
4/8/19	10	10
4/15/19	1334	52
4/16/19	867	10
4/17/19	10	10
4/22/19	10	10
4/29/19	10	10
Log Mean	1.735647823	1.216477699
<u>STV</u>	<u>957.745181</u>	<u>49.14091691</u>

	JUNE 2019	
Sampling Date	<u>E. Coli</u> (MPN/100mL)	Enterococci (MPN/100mL)
6/3/19	10	10
6/10/19	10	10
6/17/19	10	10
6/24/19	52	10
Log Mean	1.179000836	1
<u>STV</u>	43.44691849	<u>10</u>

	JULY 2019	
Sampling Date	E. Coli	Enterococci
Sampling Date	(MPN/100mL)	(MPN/100mL)
7/1/19	10	86
7/8/19	10	10
7/15/19	10	10
7/22/19	10	10
7/29/19	52	10
Log Mean	1.143200669	1.18689969
<u>STV</u>	<u>35.78535349</u>	52.80483123

SEPTEMBER 2019		
Sampling Date	E. Coli	<u>Enterococci</u>
Sampling Date	(MPN/100mL)	(MPN/100mL)
9/3/19	10	10
9/9/19	10	10
9/16/19	10	10
9/23/19	41	41
9/30/19	30	10
Log Mean	1.217981022	1.122556771
<u>STV</u>	40.32226986	<u>29.77712814</u>

NOVEMBER 2019		
Camadina Data	E. Coli	Enterococci
Sampling Date	(MPN/100mL)	(MPN/100mL)
11/4/19	_	
11/4/19	51	10
11/12/19	249	10
11/18/19	10	10
11/25/19	359	241
11/26/19	10	10
Log Mean	1.731772794	1.345504261
<u>STV</u>	<u>479.2463976</u>	<u>170.3637476</u>

JANUARY 2020		
Sampling Date	E. Coli	Enterococci
	(MPN/100mL)	(MPN/100mL)
1/6/20	10	84
1/13/20	10	10
1/21/20		
1/21/20	52	20
1/27/20	10	10
Log Mean	1.179000836	1.30632732
<u>STV</u>	<u>43.44691849</u>	<u>73.2698264</u>

	MARCH 2020	
Campling Data	E. Coli	Enterococci
Sampling Date	(MPN/100mL)	(MPN/100mL)

	AUGUST 2019	
Sampling Date	<u>E. Coli</u> (MPN/100mL)	Enterococci (MPN/100mL)
8/5/19	10	10
8/12/19	10	10
8/19/19	10	10
8/26/19	10	10
Log Mean	1	1
<u>STV</u>	<u>10</u>	<u>10</u>

OCTOBER 2019		
Campling Data	E. Coli	<u>Enterococci</u>
Sampling Date	(MPN/100mL)	(MPN/100mL)
10/7/19	75	10
10/15/19		
10/15/19	10	10
10/16/19	10	10
10/21/19	10	10
10/28/19	350	12997
10/29/19	1022	31
10/30/19	789	705
10/31/19	272	75
Log Mean	1.903593399	1.791056899
<u>STV</u>	<u>987.8290185</u>	<u>1793.871129</u>

DECEMBER 2019		
Sampling Date	<u>E. Coli</u> (MPN/100mL)	Enterococci (MPN/100mL)
12/2/19	97	106
12/3/19	10	10
12/9/19	52	10
12/16/19	63	41
12/23/19	97	173
12/24/19	20	52
12/30/19	85	98
Log Mean	1.674190898	1.654766463
<u>STV</u>	145.4963626	<u>193.1033156</u>

FEBRUARY 2020		
Sampling Date	E. Coli	Enterococci
Sampling Date	(MPN/100mL)	(MPN/100mL)
2/3/20	121	10
2/10/20	10	10
2/18/20	10	51
2/24/20	10	20
Log Mean	1.270696343	1.252150043
STV	92.20654834	48.06171383

3/2/20	10	10
3/9/20	185	546
3/10/20	10	213
3/11/20	10	10
3/16/20	86	52
3/23/20	10	20
3/30/20	20	10
Log Mean	1.357528596	1.583229369
<u>STV</u>	<u>108.3571068</u>	<u>309.3408361</u>

	MAY 2020	
Sampling Date	E. Coli	<u>Enterococci</u>
Sampling Date	(MPN/100mL)	(MPN/100mL)
5/4/20	1670	10
5/5/20	714	41
5/6/20	414	10
F /7 /20		_
5/7/20	10	20
5/11/20	211	10
5/18/20	305	10
5/19/20	119	10
5/26/20	75	10
Log Mean	2.306575693	1.114226732
<u>STV</u>	<u>1496.963202</u>	<u>25.4483258</u>

	JULY 2020	
Sampling Date	<u>E. Coli</u> (MPN/100mL)	Enterococci (MPN/100mL)
7/6/20	2700	30
7/7/20	266	10
7/13/20	121	10
7/20/20	119	10
7/27/20	145	10
Log Mean	2.435189147	1.095424251
<u>STV</u>	<u>1485.645338</u>	<u>23.38681845</u>

SEPTEMBER 2020		
Campling Data	E. Coli	Enterococci
<u>Sampling Date</u>	(MPN/100mL)	(MPN/100mL)
9/8/20	75	10
9/14/20	216	75
9/15/20	85	10
9/21/20	181	10
9/22/20	201	97
9/28/20	17329	30
9/29/20	282	10
Log Mean	2.48411874	1.389825709
<u>STV</u>	<u>3258.767305</u>	<u>95.23482346</u>

NOVEMBER 2020

	APRIL 2020	
Sampling Date	E. Coli	Enterococci
Sampling Date	(MPN/100mL)	(MPN/100mL)
4/6/20	52	134
4/7/20	63	108
4/8/20	10	10
4/13/20	31	20
4/14/20	20	10
4/15/20	20	31
4/20/20	10	10
4/27/20	85	10
Log Mean	1.442273063	1.36911503
<u>STV</u>	78.53742899	<u>95.11873614</u>

	JUNE 2020	
Sampling Date	E. Coli	<u>Enterococci</u>
Sampling Date	(MPN/100mL)	(MPN/100mL)
6/1/20	41	10
6/8/20	131	20
6/15/20	738	10
6/16/20	20	10
6/22/20	173	10
6/29/20	41	10
Log Mean	1.958328578	1.050171666
<u>STV</u>	<u>483.0363066</u>	<u>16.13329339</u>

	AUGUST 2020	
Campling Date	E. Coli	<u>Enterococci</u>
Sampling Date	(MPN/100mL)	(MPN/100mL)
8/3/20	259	10
8/4/20	812	10
8/5/20	161	52
8/10/20	31	10
8/17/20	2359	521
8/18/20	683	187
8/19/20	31	20
8/24/20	144	20
8/31/20	20	10
Log Mean	2.242105132	1.478526963
<u>STV</u>	<u>1454.378556</u>	<u>194.5793064</u>

OCTOBER 2020		
Sampling Date	E. Coli	Enterococci
Sampling Date	(MPN/100mL)	(MPN/100mL)
10/5/20	20	10
10/13/20	1935	10
10/14/20	573	10
10/15/20	31	10
10/19/20	30	10
10/26/20	345	41

Sampling Date	E. Coli	Enterococci
Sampling Date	(MPN/100mL)	(MPN/100mL)
11/2/20	30	10
11/9/20	63	10
11/16/20	171	1019
11/17/20	256	480
11/18/20	292	535
11/19/20	121	122
11/20/20	41	52
11/23/20	52	213
11/24/20	52	20
11/30/20	10	10
Log Mean	1.851065665	1.884954198
<u>STV</u>	270.3370428	<u>781.4064783</u>

JANUARY 2021		
Sampling Date	<u>E. Coli</u> (MPN/100mL)	Enterococci (MPN/100mL)
1/4/21	512	1017
1/5/21	20	20
1/11/21	1187	3654
1/12/21	218	388
1/13/21	30	20
1/19/21	10	20
1/25/21	20	256
1/26/21	158	246
1/27/21	281	583
1/28/21	216	231
1/29/21	30	193
1/30/21	63	41
Log Mean	1.954969782	2.240733998
<u>STV</u>	<u>616.3100979</u>	<u>1496.618517</u>

APRIL 2021		
Sampling Date	Enterococci (MPN/100mL)	
4/5/21	216	
4/6/21	109	
4/7/21	86	
4/12/21	20	
4/19/21	63	
4/26/21	97	
Log Mean	1.898920163	
<u>STV</u>	<u>217.5323307</u>	

JUNE 2021		
Sampling Date	<u>Enterococci</u>	
Sampling Date	(MPN/100mL)	
6/1/21	135	
6/2/21	52	

<u>STV</u>	<u>1309.159157</u>	24.23624015
Log Mean	2.148928476	1.087540551
10/27/20	155	10

	DECEMBER 2020		
Sampling Date	E. Coli	Enterococci	
	(MPN/100mL)	(MPN/100mL)	
12/7/20	10	10	
12/14/20	75	63	
12/21/20	20	10	
12/28/20	132	1274	
12/29/20	10	10	
Log Mean	1.459333038	1.580901995	
<u>STV</u>	<u>131.3350029</u>	<u>575.3963319</u>	

FEBRUARY 2021		
Compling Data	E. Coli	Enterococci
Sampling Date	(MPN/100mL)	(MPN/100mL)
2/1/21	10	75
2/8/21	199	63
2/16/21	20	10
2/22/21 10 63		63
Log Mean 1.399970768 1.618435591		1.618435591
<u>STV</u>	<u>154.6899512</u>	<u>140.9188592</u>

MARCH 2021		
Campling Data	E. Coli	<u>Enterococci</u>
Sampling Date	(MPN/100mL)	(MPN/100mL)
3/1/21	776	3448
3/2/21	10	20
3/8/21	10	481
3/9/21	209	187
3/10/21	158	1054
3/11/21	10	30
3/15/21	10	20
3/22/21	10	10
3/31/21	10	10
Log Mean	1.489851677	1.954841755
<u>STV</u>	<u>289.1232798</u>	<u>1477.431596</u>

MAY 2021		
Sampling Date	Enterococci (MPN/100mL)	
5/3/21	30	
5/10/21	20	
5/17/21	557	
5/18/21	10	
5/24/21	10	
Log Mean	1.504801289	

6/7/21	10
6/14/21	10
6/21/21	52
6/28/21	691
6/29/21	10
Log Mean	1.628831215
<u>STV</u>	<u>333.4015141</u>

AUGUST 2021		
Sampling Date	<u>Enterococci</u>	
ouriping sate	(MPN/100mL)	
8/2/21	31	
8/9/21	52	
8/16/21	20	
8/23/21	20	
8/30/21	52	
Log Mean	1.505085674	
<u>STV</u>	<u>59.05618165</u>	

OCTOBER 2021		
Sampling Date	Enterococci (MPN/100mL)	
10/4/21	20	
10/12/21	52	
10/18/21	10	
10/24/21	19863	
10/25/21	4611	
10/26/21	537	
10/27/21	934	
10/28/21	565	
10/29/21	512	
10/30/21	2909	
10/31/21	242	
Log Mean	2.635279269	
<u>STV</u>	<u>8280.336923</u>	

DECEMBER 2021	
Sampling Date	Enterococci (MPN/100mL)
12/6/21	73
12/19/21	243
12/20/21	315
12/21/21	10
Log Mean	1.936809922
STV	<u>649.3715889</u>

FEBRUARY 2022

<u>STV</u>	270.371738

JULY 2021	
Sampling Date	Enterococci (MPN/100mL)
7/6/21	30
7/12/21	10
7/19/21	10
7/26/21	20
Log Mean	1.194537813
STV	<u>31.39821636</u>

SEPTEMBER 2021	
Sampling Date	Enterococci
	(MPN/100mL)
9/7/21	10
9/13/21	52
9/20/21	63
9/27/21	10
Log Mean	1.378835973
<u>STV</u>	87.36356352

NOVEMBER 2021	
Campling Data	<u>Enterococci</u>
Sampling Date	(MPN/100mL)
11/1/21	1169
11/2/21	31
11/8/21	96
11/15/21	171
11/16/21	6488
11/17/21	4611
11/18/21	160
11/19/21	860
11/20/21	631
11/21/21	31
11/22/21	41
11/29/21	20
Log Mean	2.382847738
<u>STV</u>	<u>3087.76753</u>

JANUARY 2022	
Sampling Date	Enterococci
	(MPN/100mL)
1/3/22	5794
1/4/22	195
1/5/22	30
1/10/22	10
1/18/22	10

Enterococci
(MPN/100mL)
10
10
173
10
10
10
1.206341017
<u>71.49942351</u>

APRIL 2022	
Sampling Date	Enterococci
	(MPN/100mL)
4/4/22	10
4/11/22	10
4/18/22	441
4/19/22	10
4/25/22	10
Log Mean	1.328887718
<u>STV</u>	<u>186.9347859</u>

JUNE 2022	
Sampling Date	Enterococci (MPN/100mL)
6/6/22	10
6/14/22	10
6/21/22	10
6/27/22	10
Log Mean	1
<u>STV</u>	<u>10</u>

AUGUST 2022	
Sampling Date	Enterococci (MPN/100mL)
8/1/22	20
8/8/22	10
8/15/22	10
8/22/22	10
8/29/22	20
Log Mean	1.120411998
<u>STV</u>	<u>21.46788878</u>

OCTOBER 2022	
Sampling Date	<u>Enterococci</u>
	(MPN/100mL)
10/3/22	41
10/11/22	10

1/25/22	20
1/31/22	122
Log Mean	1.845360598
<u>STV</u>	<u>1274.050699</u>

MARCH 2022	
Sampling Date	Enterococci (MPN/100mL)
3/7/22	10
3/14/22	10
3/21/22	10
3/28/22	31
Log Mean	1.122840423
<u>STV</u>	<u>27.40332549</u>

MAY 2022	
Sampling Date	<u>Enterococci</u>
ournaming Date	(MPN/100mL)
5/2/22	10
5/9/22	10
5/16/22	10
5/23/22	10
5/31/22	10
Log Mean	1
STV	<u>10</u>

JULY 2022	
Sampling Date	<u>Enterococci</u>
	(MPN/100mL)
6/5/22	41
6/11/22	10
6/18/22	10
6/25/22	10
Log Mean	1.153195964
<u>STV</u>	<u>35.15526827</u>

SEPTEMBER 2022	
Sampling Date	Enterococci
	(MPN/100mL)
9/6/22	10
9/12/22	10
9/19/22	20
9/26/22	10
Log Mean	1.075257499
<u>STV</u>	<u>18.54461093</u>

STV	29.77712814
Log Mean	1.122556771
10/31/22	10
10/24/22	10
10/17/22	10

DECEMBER 2022	
Sampling Date	Enterococci
Sampling Date	(MPN/100mL)
12/5/22	1354
12/6/22	295
12/7/22	20
12/12/22	95
12/19/22	10
12/27/22	697
12/28/22	110
12/29/22	259
12/30/22	187
12/31/22	41
Log Mean	2.106274497
<u>STV</u>	<u>910.5777346</u>

FEBRUARY 2023	
	Enterococci
Sampling Date	(MPN/100mL)
2/6/23	10
2/13/23	10
2/21/23	10
2/27/23	455
2/28/23	464
Log Mean	1.664905875
<u>STV</u>	<u>679.3941335</u>

APRIL 2023	
Sampling Date	Enterococci
	(MPN/100mL)
4/3/23	10
4/10/23	10
4/17/23	41
4/24/23	10
Log Mean	1.153195964
<u>STV</u>	<u>35.15526827</u>

JUNE 2023	
Sampling Date	Enterococci
	(MPN/100mL)
6/5/23	10
6/12/23	41

NOVEMBER 2022	
Sampling Date	Enterococci (MPN/100mL)
11/7/22	41
11/14/22	10
11/21/22	63
11/28/22	52
Log Mean	1.532031937
STV	<u>99.34487956</u>

JANUARY 2023	
Campling Data	<u>Enterococci</u>
Sampling Date	(MPN/100mL)
1/3/23	152
1/4/23	565
1/5/23	4611
1/6/23	201
1/7/23	132
1/8/23	201
1/9/23	521
1/10/23	74
1/17/23	41
1/23/23	10
1/30/23	10
Log Mean	2.138500591
<u>STV</u>	<u>1362.815533</u>

MARCH 2023		
Sampling Date	Enterococci (MPN/100mL)	
3/1/23	41	
3/6/23	10	
3/13/23	20	
3/20/23	10	
3/27/23	20	
Log Mean	1.24296877	
<u>STV</u>	<u>37.22229765</u>	

MAY 2023		
Sampling Date	Enterococci (MPN/100mL)	
5/1/23	20	
5/8/23	20	
5/15/23	10	
5/22/23	10	
5/30/23	10	
Log Mean	1.120411998	
<u>STV</u>	<u>21.46788878</u>	

6/20/23	10	
6/26/23	10	
Log Mean	1.153195964	
<u>STV</u>	<u>35.15526827</u>	

AUGUST 2023		
Sampling Date	Enterococci (MPN/100mL)	
8/7/23	10	
8/14/23	10	
8/22/23	10	
8/28/23	10	
Log Mean	1	
<u>STV</u>	<u>10</u>	

OCTOBER 2023		
Sampling Date	Enterococci	
Sampling Date	(MPN/100mL)	
10/2/23	10	
10/10/23	10	
10/17/23	10	
10/23/23	10	
10/30/23	31	
Log Mean	1.098272339	
STV	23.98742734	

DECEMBER 2023		
Sampling Date	<u>Enterococci</u>	
Sampling Date	(MPN/100mL)	
12/4/23	10	
12/11/23	96	
12/18/23	63	
12/26/23	10	
Log Mean	1.445402946	
<u>STV</u>	<u>129.3181398</u>	

FEBRUARY 2024		
Sampling Date	Enterococci	
Sampling Date	(MPN/100mL)	
2/5/24	185	
2/6/24	31	
2/12/24	10	
2/20/24	110	
2/21/24	73	
2/26/24	120	
2/27/24	10	
Log Mean	1.677490031	
<u>STV</u>	<u>221.5218944</u>	

JULY 2023		
Campling Data	Enterococci	
Sampling Date	(MPN/100mL)	
7/3/23	10	
7/10/23	10	
7/17/23	10	
7/24/23	20	
7/31/23	10	
Log Mean	1.060205999	
<u>STV</u>	<u>17.09207828</u>	

SEPTEMBER 2023		
Sampling Date	Enterococci	
	(MPN/100mL)	
9/5/23	10	
9/11/23	10	
9/18/23	10	
9/25/23	20	
9/26/23	10	
Log Mean	1.060205999	
<u>STV</u>	<u>17.9129134</u>	

NOVEMBER 2023		
Sampling Date	Enterococci	
Sampling Date	(MPN/100mL)	
11/6/23	369	
11/7/23	10	
11/13/23	10	
11/20/23	10	
11/27/23	10	
Log Mean	1.313405273	
<u>STV</u>	<u>162.8640005</u>	

JANUARY 2024		
Sampling Date	Enterococci (MPN/100mL)	
1/2/24	41	
1/8/24	132	
1/9/24	85	
1/16/24	10	
1/22/24	369	
1/23/24	10	
1/29/24	10	
Log Mean	1.604257583	
<u>STV</u>	<u>259.5184385</u>	

MONITORING STATION: CANDLESTICK POINT JACK RABBIT (301.2)

NOVEMBER 2018		
Campling Date	E. Coli	Enterococci
Sampling Date	(MPN/100mL)	(MPN/100mL)
11/5/18	10	10
11/13/18	10	10
11/19/18	10	10
11/26/18	211	31
11/29/18	201	717
11/30/18	63	41
Log Mean	1.57113651	1.493277451
<u>STV</u>	256.2291428	<u>261.6573556</u>

	JANUARY 2019	
Campling Data	E. Coli	Enterococci
Sampling Date	(MPN/100mL)	(MPN/100mL)
1/7/19	63	75
1/14/19	10	10
1/17/19	31	10
1/22/19	10	10
1/28/19	20	10
Log Mean	1.318346448	1.175012253
<u>STV</u>	<u>56.89981788</u>	<u>47.50170819</u>

MARCH 2019			
Sampling Date	<u>E. Coli</u> (MPN/100mL)	Enterococci (MPN/100mL)	
3/4/19	41	20	
3/11/19	10	10	
3/18/19	110	457	
3/19/19	63	10	
3/25/19	10	10	
Log Mean	1.490703418	1.392189239	
<u>STV</u>	<u>125.059732</u>	<u>206.9944606</u>	

	MAY 2019	
Sampling Date	E. Coli	Enterococci
Sampling Date	(MPN/100mL)	(MPN/100mL)
5/6/19	10	10
5/13/19	10	10
5/20/19		
3/20/19	20	10
5/28/19	20	10
Log Mean	1.150514998	1
<u>STV</u>	23.62252276	<u>10</u>

	JULY 2019	

DECEMBER 2018			
Campling Data	E. Coli	<u>Enterococci</u>	
Sampling Date	(MPN/100mL)	(MPN/100mL)	
12/3/18	583	884	
12/4/18	86	31	
12/10/18	10	10	
12/17/18	110	134	
12/18/18	31	30	
12/24/18	41	41	
12/31/18	10	10	
Log Mean	1.692243606	1.664974838	
<u>STV</u>	310.8090152	<u>348.3713495</u>	

FEBRUARY 2019			
Sampling Date	<u>E. Coli</u> (MPN/100mL)	Enterococci (MPN/100mL)	
2/4/19	74	784	
2/5/19	10	10	
2/11/19	10	20	
2/13/19	75	279	
2/14/19	332	74	
2/19/19	20	10	
2/25/19	20	52	
Log Mean	1.552498723	1.746597904	
<u>STV</u>	186.2255361	471.3123909	

	APRIL 2019	
Campling Data	E. Coli	Enterococci
Sampling Date	(MPN/100mL)	(MPN/100mL)
4/1/19	10	10
4/8/19	20	10
4/15/19	10	10
4/22/19	10	10
4/29/19	20	226
4/30/19	10	10
Log Mean	1.100343332	1.22568474
<u>STV</u>	19.93571414	85.97858782

	JUNE 2019	
Sampling Date	<u>E. Coli</u> (MPN/100mL)	Enterococci (MPN/100mL)
6/3/19	10	10
6/10/19	1236	246
6/11/19	20	10
6/17/19	20	10
6/24/19	24196	24196
6/25/19	10	10

Campling Data	E. Coli	Enterococci
Sampling Date	(MPN/100mL)	(MPN/100mL)
7/1/19	10	10
7/8/19	10	10
7/15/19	10	10
7/22/19	10	10
7/29/19		
7/29/19	20	61
Log Mean	1.060205999	1.157065967
<u>STV</u>	17.09207828	40.48716958

SEPTEMBER 2019			
Sampling Date	<u>E. Coli</u> (MPN/100mL)	Enterococci (MPN/100mL)	
9/3/19	20	10	
9/9/19	10	10	
9/16/19	10	10	
9/23/19	98	10	
9/30/19	31	10	
Log Mean	1.356723553	1	
<u>STV</u>	<u>76.67515916</u>	<u>10</u>	

NOVEMBER 2019			
Sampling Date	E. Coli	Enterococci	
Sampling Date	(MPN/100mL)	(MPN/100mL)	
11/4/19	10	10	
11/12/19	41	31	
11/18/19	10	10	
11/25/19	10	10	
Log Mean	1.153195964	1.122840423	
<u>STV</u>	<u>35.15526827</u>	<u>27.40332549</u>	

JANUARY 2020			
Campling Date	E. Coli	<u>Enterococci</u>	
Sampling Date	(MPN/100mL)	(MPN/100mL)	
1/6/20	10	10	
1/13/20	10	10	
1/21/20	10	31	
1/27/20	86	10	
Log Mean	1.233624613	1.122840423	
<u>STV</u>	<u>68.02023375</u>	<u>27.40332549</u>	

MARCH 2020		
Committee Date	E. Coli	<u>Enterococci</u>
Sampling Date	(MPN/100mL)	(MPN/100mL)
3/2/20	10	10
3/9/20	10	295
3/10/20	10	85

Log Mean	2.01297034	1.79577978
<u>STV</u>	<u>6492.626281</u>	<u>3721.91836</u>

	AUGUST 2019	
Sampling Date	E. Coli	Enterococci
Sampling Date	(MPN/100mL)	(MPN/100mL)
8/5/19	85	10
8/12/19	10	10
8/19/19	10	20
8/26/19	2359	98
8/27/19	10	10
Log Mean	1.660429373	1.258451214
<u>STV</u>	<u>980.8794597</u>	<u>64.49831168</u>

	OCTOBER 2019	
Sampling Date	<u>E. Coli</u> (MPN/100mL)	Enterococci (MPN/100mL)
10/7/19	10	10
10/15/19	10	10
10/21/19	10	10
10/28/19	41	10
Log Mean	1.153195964	1
<u>STV</u>	35.15526827	<u>10</u>

DECEMBER 2019		
Sampling Date	<u>E. Coli</u> (MPN/100mL)	Enterococci (MPN/100mL)
12/2/19	213	602
12/3/19	20	41
12/9/19	52	52
12/16/19	10	31
12/23/19	20	74
12/30/19	10	10
Log Mean	1.441073823	1.744829518
<u>STV</u>	<u>123.7529442</u>	<u>314.4177909</u>

	FEBRUARY 2020	
Sampling Date	E. Coli	Enterococci
Sampling Date	(MPN/100mL)	(MPN/100mL)
2/3/20	10	10
2/10/20	10	10
2/18/20	40	40
	10	10
2/24/20	20	10
Log Mean	1.075257499	1
<u>STV</u>	18.54461093	<u>10</u>

3/16/20	20	292
3/17/20	10	10
3/23/20	10	10
3/30/20	51	10
Log Mean	1.144085739	1.552089113
<u>STV</u>	<u>31.15963118</u>	<u>291.2809869</u>

	MAY 2020	
Sampling Date	<u>E. Coli</u> (MPN/100mL)	Enterococci (MPN/100mL)
5/4/20	10	10
5/11/20	30	10
5/18/20	10	10
5/26/20	20	10
Log Mean	1.194537813	1
<u>STV</u>	<u>31.39821636</u>	<u>10</u>

	JULY 2020	
Sampling Date	E. Coli	<u>Enterococci</u>
Sampling Date	(MPN/100mL)	(MPN/100mL)
7/6/20	31	10
7/13/20	20	10
7/20/20	10	10
7/27/20	10	10
Log Mean	1.198097922	1
<u>STV</u>	32.19621662	<u>10</u>

SEPTEMBER 2020		
Committee Date	E. Coli	Enterococci
Sampling Date	(MPN/100mL)	(MPN/100mL)
9/8/20	31	420
9/9/20	20	41
9/14/20	62	10
9/21/20	20	10
9/28/20	481	10
9/29/20	63	10
Log Mean	1.727883167	1.447206629
<u>STV</u>	246.3858714	227.0324843

NOVEMBER 2020		
Campling Data	E. Coli	Enterococci
Sampling Date	(MPN/100mL)	(MPN/100mL)
11/2/20	63	10
11/9/20	52	3076
11/10/20	10	10
11/16/20	20	52
11/23/20	10	10

	APRIL 2020	
Sampling Date	E. Coli	Enterococci
Sampling Date	(MPN/100mL)	(MPN/100mL)
4/6/20	10	10
4/13/20	20	10
4/20/20	41	31
4/27/20	10	10
Log Mean	1.228453463	1.122840423
<u>STV</u>	40.17375886	27.40332549

JUNE 2020		
Sampling Date	E. Coli	Enterococci
Sampling Date	(MPN/100mL)	(MPN/100mL)
6/1/20	10	10
6/8/20	10	10
6/9/20	171	10
6/15/20	10	10
6/22/20	10	10
6/20/20		
6/29/20	10	10
Log Mean	1.205499352	1
<u>STV</u>	70.9280203	<u>10</u>

AUGUST 2020		
Sampling Date	E. Coli	<u>Enterococci</u>
Sampling Date	(MPN/100mL)	(MPN/100mL)
8/3/20	20	10
8/10/20	10	10
8/17/20	10	448
8/18/20	31	10
8/24/20	10	10
8/31/20	10	10
Log Mean	1.132065282	1.275213002
<u>STV</u>	25.43723448	<u>137.8635606</u>

	OCTOBER 2020		
Sampling Date	E. Coli	Enterococci	
Sampling Date	(MPN/100mL)	(MPN/100mL)	
10/5/20	20	10	
10/13/20	1860	10	
10/14/20	52	10	
10/19/20	63	52	
10/26/20	41 10		
Log Mean	1.939734138 1.143200669		
STV <u>837.4872341</u> <u>35.78535349</u>		<u>35.78535349</u>	

11/30/20	85	75
Log Mean	1.457632136	1.679841823
<u>STV</u>	<u>96.83962246</u>	<u>835.9363104</u>

	JANUARY 2021	
Sampling Date	<u>E. Coli</u> (MPN/100mL)	Enterococci (MPN/100mL)
1/4/21	74	20
1/11/21	160	52
1/19/21	41	110
1/20/21	10	10
1/25/21	10	10
Log Mean	1.537227112	1.411685205
<u>STV</u>	<u>166.341092</u>	99.83792548

MARCH 2021		
Sampling Date	E. Coli	Enterococci
Sampling Date	(MPN/100mL)	(MPN/100mL)
3/1/21	10	31
3/8/21	10	31
3/15/21	10	10
3/22/21	10	52
3/31/21	10	31
Log Mean	1	1.438017685
<u>STV</u>	<u>10</u>	<u>59.67469137</u>

MAY 2021		
Sampling Date	Enterococci (MPN/100mL)	
5/3/21	10	
5/4/21	10	
5/10/21	10	
5/17/21	10	
5/24/21	10	
Log Mean	1	
<u>STV</u>	<u>10</u>	

JULY 2021		
Sampling Date	Enterococci	
Sampling Date	(MPN/100mL)	
7/6/21	10	
7/12/21	10	
7/19/21	10	
7/26/21	20	
Log Mean	1.075257499	
STV	18.54461093	

DECEMBER 2020		
Campling Data	E. Coli	Enterococci
Sampling Date	(MPN/100mL)	(MPN/100mL)
12/1/20	10	10
12/7/20	10	10
12/14/20	10	10
12/21/20	10	464
12/22/20	10	31
12/23/20	10	74
12/28/20	10	41
Log Mean	1	1.519985036
<u>STV</u>	<u>10</u>	<u>202.4339509</u>

FEBRUARY 2021		
Sampling Date	<u>E. Coli</u> (MPN/100mL)	Enterococci (MPN/100mL)
2/1/21	20	30
2/8/21	10	31
2/16/21	10	10
2/22/21	2/22/21 10 10	
Log Mean	1.075257499	1.242120737
<u>STV</u>	<u>18.54461093</u>	<u>39.86721186</u>

APRIL 2021		
Sampling Date	Enterococci (MPN/100mL)	
4/5/21	10	
4/12/21	10	
4/19/21	10	
4/26/21	10	
Log Mean	1	
<u>STV</u>	<u>10</u>	

JUNE 2021		
Sampling Date	Enterococci (MPN/100mL)	
6/1/21	10	
6/7/21	10	
6/14/21	10	
6/21/21	10	
6/28/21	10	
Log Mean	1	
<u>STV</u>	<u>10</u>	

AUGUST 2021	
Sampling Date	Enterococci
	(MPN/100mL)

SEPTEMBER 2021	
Sampling Date	<u>Enterococci</u>
	(MPN/100mL)
9/7/21	10
9/13/21	10
9/20/21	30
9/27/21	10
Log Mean	1.119280314
<u>STV</u>	26.61429938

NOVEMBER 2021	
Canadia - Data	<u>Enterococci</u>
Sampling Date	(MPN/100mL)
11/1/21	231
11/2/21	63
11/8/21	63
11/15/21	20
11/22/21	10
11/29/21	281
11/30/21	20
Log Mean	1.716151341
<u>STV</u>	<u>265.2274796</u>

JANUARY 2022	
Camalian Data	Enterococci
Sampling Date	(MPN/100mL)
1/3/22	1246
1/4/22	10
1/10/22	1039
1/11/22	10
1/18/22	10
1/25/22	10
1/31/22	148
Log Mean	1.754627901
<u>STV</u>	<u>1046.042689</u>

MARCH 2022	
Canadia - Data	<u>Enterococci</u>
Sampling Date	(MPN/100mL)
3/7/22	10
3/14/22	10
3/21/22	10
3/28/22	529
3/29/22	10
Log Mean	1.344691134
<u>STV</u>	<u>215.1771911</u>

8/2/21	10
8/9/21	10
8/16/21	10
8/23/21	10
8/30/21	10
Log Mean	1
<u>STV</u>	<u>10</u>

OCTOBER 2021	
Sampling Date	Enterococci (MPN/100mL)
10/4/21	213
10/5/21	10
10/12/21	10
10/18/21	10
10/24/21	794
10/25/21	199
10/26/21	292
10/27/21	10
Log Mean	1.749054504
<u>STV</u>	<u>633.4679553</u>

DECEMBER 2021	
Sampling Date	Enterococci (MPN/100mL)
12/6/21	41
12/19/21	109
12/20/21	309
12/21/21	10
Log Mean	1.785042209
STV	<u>396.3386416</u>

FEBRUARY 2022	
Sampling Date	Enterococci (MPN/100mL)
2/1/22	10
2/7/22	73
2/14/22	10
2/22/22	373
2/23/22	10
2/28/22	31
Log Mean	1.487732231
<u>STV</u>	<u>201.625436</u>

APRIL 2022	
Sampling Date	Enterococci (MPN/100mL)
4/4/22	10

MAY 2022	
Sampling Date	Enterococci (MPN/100mL)
5/2/22	41
5/9/22	10
5/16/22	10
5/23/22	10
5/31/22	10
Log Mean	1.122556771
<u>STV</u>	<u>29.77712814</u>

JULY 2022	
Sampling Date	Enterococci (MPN/100mL)
6/5/22	10
6/11/22	10
6/18/22	10
6/25/22	10
Log Mean	1
STV	<u>10</u>

SEPTEMBER 2022	
Sampling Date	<u>Enterococci</u>
	(MPN/100mL)
9/6/22	10
9/12/22	10
9/19/22	10
9/26/22	10
Log Mean	1
<u>STV</u>	<u>10</u>

NOVEMBER 2022	
Sampling Date	<u>Enterococci</u>
	(MPN/100mL)
11/7/22	10
11/14/22	10
11/21/22	10
11/28/22	142
11/29/22	10
Log Mean	1.230457669
<u>STV</u>	<u>77.8209708</u>

JANUARY 2023	
Sampling Date	<u>Enterococci</u>
	(MPN/100mL)
1/3/23	52

4/11/22 4/18/22	10 30
4/25/22	10
Log Mean	1.119280314
<u>STV</u>	<u>26.61429938</u>

JUNE 2022	
Sampling Date	Enterococci (MPN/100mL)
6/6/22	10
6/7/22	10
6/14/22	10
6/21/22	10
6/27/22	10
Log Mean	1
<u>STV</u>	<u>10</u>

AUGU:	ST 2022
Campling Data	Enterococci
Sampling Date	(MPN/100mL)
8/1/22	20
8/8/22	10
8/15/22	30
8/22/22	30
8/29/22	10
Log Mean	1.251054501
<u>STV</u>	36.22256539

OCTOBER 2022	
6 1: 5 :	Enterococci
Sampling Date	(MPN/100mL)
10/3/22	10
10/11/22	10
10/17/22	10
10/24/22	10
10/31/22	84
Log Mean	1.184855857
STV	<u>51.85264255</u>

DECEMBER 2022	
Sampling Date	Enterococci (MPN/100mL)
12/5/22	107
12/6/22	10
12/12/22	10
12/19/22	20

Log Mean STV	1.472762879 87.1570365
1/30/23	30
1/23/23	20
1/17/23	20
1/10/23	10
1/9/23	110

MARCH 2023	
Sampling Date	Enterococci
Sampling Date	(MPN/100mL)
3/1/23	10
3/6/23	42
3/13/23	10
3/20/23	41
3/27/23	20
Log Mean	1.307412629
<u>STV</u>	<u>50.53776786</u>

MAY 2023	
IVIA	Y 2023
Sampling Date	<u>Enterococci</u>
Sampling Date	(MPN/100mL)
5/1/23	20
5/8/23	41
5/15/23	10
5/22/23	10
5/30/23	30
Log Mean	1.278187021
<u>STV</u>	42.97837002

JULY 2023	
Camarlina Data	<u>Enterococci</u>
Sampling Date	(MPN/100mL)
7/3/23	10
7/10/23	10
7/17/23	10
7/24/23	10
7/31/23	10
Log Mean	1
<u>STV</u>	<u>10</u>

SEPTEMBER 2023	
Sampling Date	Enterococci
	(MPN/100mL)
9/5/23	10
9/11/23	10
9/18/23	10

12/27/22	41
Log Mean	1.388639526
<u>STV</u>	<u>89.39553663</u>

FEBRUARY 2023	
Sampling Date	Enterococci (MPN/100mL)
2/6/23	410
2/7/23	51
2/13/23	10
2/21/23	10
2/27/23	959
2/28/23	771
Log Mean	2.031537836
STV	<u>1611.881436</u>

APRIL 2023	
Sampling Date	Enterococci (MPN/100mL)
4/3/23	10
4/10/23	20
4/17/23	10
4/24/23	10
Log Mean	1.075257499
<u>STV</u>	18.54461093

JUNE 2023	
Sampling Date	<u>Enterococci</u>
Sumpling Date	(MPN/100mL)
6/5/23	20
6/12/23	41
6/20/23	10
6/21/23	10
6/26/23	20
Log Mean	1.24296877
<u>STV</u>	<u>37.22229765</u>

AUGUST 2023	
Sampling Date	<u>Enterococci</u>
	(MPN/100mL)
8/7/23	10
8/14/23	10
8/22/23	10
8/28/23	10
8/29/23	10
Log Mean	1
<u>STV</u>	<u>10</u>

9/25/23	10
Log Mean	1
<u>STV</u>	<u>10</u>

NOVEMBER 2023	
Sampling Date	<u>Enterococci</u>
Sampling Date	(MPN/100mL)
11/6/23	41
11/13/23	10
11/20/23	10
11/27/23	20
Log Mean	1.228453463
STV	40.17375886

JANUARY 2024	
Campling Data	<u>Enterococci</u>
Sampling Date	(MPN/100mL)
1/2/24	51
1/8/24	10
1/16/24	31
1/22/24	1455
1/23/24	10
1/29/24	218
1/30/24	10
Log Mean	1.67146448
<u>stv</u>	<u>531.43185</u>

OCTOBER 2023	
Sampling Date	Enterococci (MPN/100mL)
10/2/23	10
10/10/23	10
10/17/23	10
10/23/23	10
10/30/23	10
Log Mean	1
<u>STV</u>	<u>10</u>

DECEMBER 2023	
Campalina Data	Enterococci
Sampling Date	(MPN/100mL)
12/4/23	10
12/11/23	235
12/12/23	10
12/18/23	52
12/26/23	41
Log Mean	1.539971013
STV	381.2574001

FEBRUARY 2024	
Sampling Date	Enterococci
Sampling Date	(MPN/100mL)
2/1/24	327
2/2/24	10
2/5/24	98
2/12/24	10
2/20/24	132
2/22/24	10
2/26/24	10
Log Mean	1.51804968
<u>STV</u>	<u>234.743949</u>

*Note: CSD data has not yet been reported

MONITORING STATION: ISLAIS CREEK - ISLAIS LANDING (320)

NOVEMBER 2018		
Campling Data	E. Coli	Enterococci
Sampling Date	(MPN/100mL)	(MPN/100mL)
11/5/18	10	10
11/13/18	20	10
11/19/18	97	10
11/21/18	24196	24196
11/22/18	24196	24196
11/23/18	14136	3448
11/24/18	2142	31
11/25/18	479	41
11/26/18	480	108
11/27/18	187	10
11/29/18	24196	8164
11/30/18	4884	578
Log Mean	3.020197706	2.343037879
<u>STV</u>	<u>38059.98759</u>	<u>12965.18005</u>

	JANUARY 2019	
	E. Coli	Enterococci
Sampling Date	(MPN/100mL)	(MPN/100mL)
1/6/19	24196	8164
1/7/19	24196	24196
1/8/19	24196	10462
1/9/19	10462	272
1/10/19	2014	20
1/11/19	86	10
1/14/19	52	10
1/17/19	24196	24196
1/18/19	24196	15531
1/19/19	2481	156
1/20/19	886	171
1/21/19	122	75
1/22/19	86	30
1/28/19	10	10
Log Mean	3.161129473	2.528864744
<u>STV</u>	98372.96887	<u>18719.45161</u>

	APRIL 2019	
Sampling Date	E. Coli	Enterococci
	(MPN/100mL)	(MPN/100mL)
4/1/19	602	97
4/2/19	74	41
4/8/19	31	10
4/15/19	108	20
4/22/19	10	31
4/29/19	10	10
Log Mean	1.695602277	1.39865788
<u>STV</u>	<u>371.9761185</u>	<u>77.22185116</u>

DECEMBER 2018		
Campling Date	E. Coli	<u>Enterococci</u>
Sampling Date	(MPN/100mL)	(MPN/100mL)
12/1/18	414	98
12/2/18	223	75
12/3/18	75	30
12/10/18	31	20
12/17/18	20	75
12/24/18	10	31
12/31/18	10	10
Log Mean	1.661822594	1.572980221
<u>STV</u>	304.3875308	<u>108.1163194</u>

FEBRUARY 2019		
Sampling Date	E. Coli	<u>Enterococci</u>
Sampling Date	(MPN/100mL)	(MPN/100mL)
2/4/19	74	63
2/5/19	135	10
2/11/19	10	20
2/13/19	24196	24196
2/11/12		
2/14/19	24196	12997
2/15/19	24196	3130
2/16/19	1725	185
2/17/19	199	86
2/19/19	435	231
2/20/19	41	10
2/25/19	74	108
2/26/19	173	189
2/27/19	905	272
2/28/19	4611	546
Log Mean	2.761816645	2.367173632
<u>STV</u>	<u>18019.99088</u>	<u>5009.198756</u>

	MARCH 2019	
Sampling Date	E. Coli	<u>Enterococci</u>
Sampling Date	(MPN/100mL)	(MPN/100mL)
3/1/19	109	41
3/4/19	110	20
1/6/00	24196	24196
3/7/19	24196	9208
3/8/19	987	52
3/9/19	145	20
3/11/19	384	52
3/18/19	41	10
3/25/19	292	31
Log Mean	2.740498825	2.054013457
<u>STV</u>	<u>10836.13935</u>	<u>4247.387438</u>

MAY 2019

	JUNE 2019	
Campling Date	E. Coli	<u>Enterococci</u>
Sampling Date	(MPN/100mL)	(MPN/100mL)
6/3/19	10	10
6/10/19	52	10
6/17/19	10	10
6/24/19	10	10
Log Mean	1.179000836	1
<u>STV</u>	43.44691849	<u>10</u>

	JULY 2019	
Sampling Date	E. Coli	Enterococci
Sampling Date	(MPN/100mL)	(MPN/100mL)
7/1/19	10	10
7/8/19	10	10
7/15/19	10	52
7/22/19	10	10
7/29/19	10	10
Log Mean	1	1.143200669
<u>STV</u>	<u>10</u>	<u>35.78535349</u>

SEPTEMBER 2019		
Campling Data	E. Coli	Enterococci
Sampling Date	(MPN/100mL)	(MPN/100mL)
9/3/19	10	10
9/9/19	161	10
9/16/19	52	10
9/23/19	10	10
9/30/19	10	31
Log Mean	1.384565844	1.098272339
<u>STV</u>	124.5557435	23.98742734

NOVEMBER 2019		
Campling Date	E. Coli	Enterococci
Sampling Date	(MPN/100mL)	(MPN/100mL)
11/4/19	10	10
11/12/19	41	10
11/18/19	20	10
11/25/19	84	20
11/27/19	24196	24196
11/28/19	19863	3654
11/29/19	14136	798
11/30/19	173	120
Log Mean	2.613531775	2.153590781
<u>STV</u>	<u>27821.50994</u>	<u>7065.055121</u>

JANUARY 2020		
Campling Data	E. Coli	Enterococci
Sampling Date	(MPN/100mL)	(MPN/100mL)

	1
E. Coli	<u>Enterococci</u>
(MPN/100mL)	(MPN/100mL)
20	10
548	10
10	10
20	10
31	10
1.566440449	1
<u>273.1181167</u>	<u>10</u>
	(MPN/100mL) 20 548 10 20 31 1.566440449

	AUGUST 2019	
Sampling Date	E. Coli	<u>Enterococci</u>
Sampling Date	(MPN/100mL)	(MPN/100mL)
8/5/19	30	41
8/12/19	10	10
8/19/19	121	10
8/26/19	10	10
Log Mean	1.389976656	1.153195964
<u>STV</u>	<u>111.8337151</u>	<u>35.15526827</u>

OCTOBER 2019		
Sampling Date	<u>E. Coli</u> (MPN/100mL)	Enterococci (MPN/100mL)
10/7/19	10	10
10/15/19	20	10
10/21/19	10	10
10/28/19	52	10
Log Mean	1.254258335	1
<u>STV</u>	48.84394426	<u>10</u>

	DECEMBED 2010		
	DECEMBER 2019		
Campling Data	E. Coli	Enterococci	
Sampling Date	(MPN/100mL)	(MPN/100mL)	
12/1/19	135	109	
12/2/19	134	98	
12/8/19	24196	24196	
12/9/19	8164	638	
12/10/19	4611	109	
12/11/19	529	145	
12/12/19	393	97	
12/16/19	218	52	
12/23/19	364	226	
12/24/19	63	85	
12/30/19	52	84	
Log Mean	2.722693659	2.302417551	
<u>STV</u>	<u>7185.135032</u>	<u>1816.304179</u>	

FEBRUARY 2020

1/6/20	85	52
1/13/20	10	10
1/16/20	24196	24196
1/17/20	24196	10462
1/18/20	19863	3609
1/19/20	6131	228
1/20/20	148	41
1/21/20	75	199
1/22/20	31	10
1/27/20	31	10
Log Mean	2.68105286	2.358924106
<u>STV</u>	<u>26977.61466</u>	<u>11983.30615</u>

	4.55.11.000.0	
	APRIL 2020	
Sampling Date	E. Coli	Enterococci (MARNI/AGG, A)
	<u>(MPN/100mL)</u>	(MPN/100mL)
4/6/20	984	496
4/7/20	75	20
4/8/20	10	10
4/13/20	20	10
4/20/20	20	10
4/27/20	10	10
Log Mean	1.578352726	1.332751945
<u>STV</u>	<u>360.3470119</u>	<u>159.3760953</u>

	JUNE 2020	
Campling Data	E. Coli	<u>Enterococci</u>
Sampling Date	(MPN/100mL)	(MPN/100mL)
6/1/20	20	10
6/8/20	20	10
6/15/20	10	10
6/22/20	96	30
6/29/20	52	10
Log Mean	1.460066914	1.095424251
<u>STV</u>	90.52502432	23.38681845

	AUGUST 2020	
Sampling Date	<u>E. Coli</u>	<u>Enterococci</u>
odinaming Date	(MPN/100mL)	(MPN/100mL)
8/3/20	203	10
8/10/20	10	10
8/17/20	110	399
8/18/20	20	10
8/24/20	20	10
8/31/20	31	10
Log Mean	1.573718401	1.266828816
<u>STV</u>	<u>163.1597507</u>	<u>127.2731808</u>
<u> </u>	103.1337307	127.2731000

Campling Data	E. Coli	<u>Enterococci</u>
Sampling Date	(MPN/100mL)	(MPN/100mL)
2/3/20	52	20
2/10/20	10	10
2/18/20	62	10
2/24/20	74	10
2/25/20	223	10
Log Mean	1.745186323	1.060205999
<u>STV</u>	<u>232.187667</u>	<u>17.09207828</u>

	MARCH 2020	
Sampling Date	<u>E. Coli</u> (MPN/100mL)	Enterococci (MPN/100mL)
3/2/20	97	110
3/3/20	20	10
3/9/20	10	10
3/16/20	122	193
3/17/20	10	10
3/23/20	30	63
3/30/20	10	10
Log Mean	1.407326116	1.446612935
<u>STV</u>	<u>101.5146352</u>	<u>152.4192427</u>

	MAY 2020	
Sampling Date	<u>E. Coli</u> (MPN/100mL)	Enterococci (MPN/100mL)
5/4/20	10	10
5/11/20	30	10
5/18/20	31	10
5/26/20	20	10
Log Mean	1.317378236	1
<u>STV</u>	40.78055777	<u>10</u>

	JULY 2020	
Sampling Date	E. Coli	<u>Enterococci</u>
	(MPN/100mL)	(MPN/100mL)
7/6/20	10	10
7/13/20	10	10
7/20/20	20	10
7/27/20	10	10
Log Mean	1.075257499	1
<u>STV</u>	<u>18.54461093</u>	<u>10</u>

	SEPTEMBER 2020	
Campling Data	E. Coli	<u>Enterococci</u>
Sampling Date	(MPN/100mL)	(MPN/100mL)
9/8/20	10	10
9/14/20	41	10
9/21/20	10	10

OCTOBER 2020		
Sampling Date		Enterococci (MPN/100mL)
10/5/20	10	10
10/13/20	75	10
10/19/20	31	10
10/26/20	31	20
Log Mean	1.464446163	1.075257499
<u>STV</u>	<u>83.97705571</u>	<u>18.54461093</u>

DECEMBER 2020		
Sampling Date	E. Coli	<u>Enterococci</u>
Sampling Bate	(MPN/100mL)	(MPN/100mL)
12/7/20	10	10
12/14/20	145	145
12/15/20	52	31
12/21/20	10	20
12/28/20	20	10
Log Mean	1.435680268	1.390751938
<u>STV</u>	<u>119.5724501</u>	<u>101.0896481</u>

	FEBRUARY 2021		
Campling Data	E. Coli	Enterococci	
Sampling Date	(MPN/100mL)	(MPN/100mL)	
2/1/21	20	20	
2/8/21	10	10	
2/16/21	145	73	
2/22/21	10	10	
Log Mean	Log Mean 1.365599499 1.291088214		
<u>STV</u>	117.3890323	64.99776897	

MARCH 2021		
Sampling Date	<u>E. Coli</u> (MPN/100mL)	Enterococci (MPN/100mL)
3/1/21	10	10
3/8/21	10	10
3/15/21	95	146
3/16/21	10	10
3/22/21	10	10
3/31/21	10	10
Log Mean	1.162953934	1.194058809
<u>STV</u>	<u>47.27911624</u>	<u>63.59913075</u>

MAY 2021		
Campling Date	<u>Enterococci</u>	
Sampling Date	(MPN/100mL)	
5/3/21	10	
5/10/21	10	
5/17/21	20	

9/28/20 Log Mean	160 1.45422596	10

NOVEMBER 2020		
Campling Data	E. Coli	Enterococci
Sampling Date	(MPN/100mL)	(MPN/100mL)
11/2/20	31	10
11/9/20	10	10
11/16/20	10	10
11/23/20	201	63
11/30/20	10	10
Log Mean 1.35891155 1.15986811		1.15986811
<u>STV</u>	<u>122.615532</u>	41.50995782

JANUARY 2021		
Campling Date	E. Coli	Enterococci
Sampling Date	(MPN/100mL)	(MPN/100mL)
1/4/21	20	52
1/11/21	31	31
1/19/21	10	10
1/20/21	10	10
1/21/21	10	10
1/23/21	10	10
1/25/21	20	20
1/27/21	31	1483
1/28/21	74	350
1/29/21	10	41
1/30/21	148	98
1/31/21	30	30
Log Mean	1.341783172	1.714520697
<u>STV</u>	<u>68.07879267</u>	<u>385.3773536</u>

APRIL 2021	
Campling Data	<u>Enterococci</u>
Sampling Date	(MPN/100mL)
4/5/21	10
4/12/21	10
4/19/21	20
4/26/21	20
Log Mean	1.150514998
<u>STV</u>	23.62252276

JUNE 2021	
Campling Date	<u>Enterococci</u>
Sampling Date	(MPN/100mL)
6/1/21	10
6/7/21	20
6/14/21	10

5/24/21	10
Log Mean	1.075257499
<u>STV</u>	18.54461093

JULY 2021		
Sampling Date	Enterococci (MPN/100mL)	
7/6/21	10	
7/12/21	10	
7/19/21	10	
7/26/21	10	
Log Mean	1	
<u>STV</u>	<u>10</u>	

SEPTEMBER 2021	
Sampling Date	Enterococci (MPN/100mL)
9/7/21	10
9/13/21	20
9/20/21	63
9/27/21	10
Log Mean	1.275092636
<u>STV</u>	<u>57.36869119</u>

NOVEMBER 2021	
Sampling Date	Enterococci (MPN/100mL)
11/1/21	31
11/8/21	10
11/9/21	1515
11/10/21	52
11/15/21	10
11/22/21	10
11/29/21	10
Log Mean	1.483968239
<u>STV</u>	<u>326.1342066</u>

JANUARY 2022	
Complian Data	<u>Enterococci</u>
Sampling Date	(MPN/100mL)
1/3/22	10
1/10/22	120
1/11/22	10
1/18/22	121
1/19/22	10
1/20/22	10
1/31/22	98
Log Mean	1.450456099
<u>STV</u>	<u>148.5004982</u>

6/21/21 6/22/21	73 10
6/28/21	20
Log Mean	1.244230475
<u>STV</u>	<u>47.48751774</u>

AUGUST 2021	
Canadia a Data	Enterococci
Sampling Date	(MPN/100mL)
8/2/21	10
8/5/21	10
8/9/21	10
8/16/21	10
8/23/21	10
8/30/21	10
Log Mean	1
<u>STV</u>	<u>10</u>

OCTOBER 2021	
Campling Data	Enterococci
Sampling Date	(MPN/100mL)
10/4/21	10
10/12/21	31
10/18/21	10
10/21/21	249
10/22/21	15531
10/23/21	278
10/24/21	24196
10/25/21	9208
10/26/21	789
10/27/21	20
Log Mean	2.506882114
<u>STV</u>	<u>15810.65509</u>

DECEMBER 2021	
Campling Date	Enterococci
Sampling Date	(MPN/100mL)
12/6/21	10
12/7/21	20
12/13/21	26308
12/14/21	14097
12/15/21	3083
12/16/21	20597
12/17/21	12141
12/18/21	20
12/19/21	10
12/20/21	85
12/21/21	10
12/22/21	191
12/23/21	18412

FEBRUARY 2022	
Sampling Date	Enterococci
	(MPN/100mL)
2/7/22	10
2/14/22	10
2/22/22	74
2/28/22	10
Log Mean	1.21730793
<u>STV</u>	<u>59.49568406</u>

MARCH 2022	
Sampling Date	Enterococci
Sampling Date	(MPN/100mL)
3/7/22	10
3/14/22	10
3/21/22	10
3/28/22	10
Log Mean	1
<u>STV</u>	<u>10</u>

MAY 2022	
Sampling Date	Enterococci
	(MPN/100mL)
5/2/22	10
5/9/22	10
5/16/22	10
5/23/22	20
5/31/22	10
Log Mean	1.060205999
<u>STV</u>	<u>17.09207828</u>

JULY 2022	
Sampling Date	<u>Enterococci</u>
	(MPN/100mL)
6/5/22	10
6/11/22	10
6/18/22	10
6/25/22	10
Log Mean	1
<u>STV</u>	<u>10</u>

SEPTEMBER 2022	
Sampling Date	<u>Enterococci</u>
	(MPN/100mL)
9/6/22	31
9/12/22	10
9/19/22	121

12/24/21 12/25/21	28222 10
12/26/21	719
12/27/21	379
12/28/21	41
12/29/21	10
Log Mean	2.528031552
<u>STV</u>	<u>21312.84394</u>

APRIL 2022		
Sampling Date	Enterococci (MPN/100mL)	
4/4/22	10	
4/11/22	20	
4/18/22	10	
4/25/22	20	
Log Mean	1.150514998	
STV	23.62252276	

JUNE 2022	
Sampling Date	Enterococci (MPN/100mL)
6/6/22	10
6/14/22	10
6/21/22	10
6/27/22	10
Log Mean	1
STV	<u>10</u>

AUGU:	ST 2022
Sampling Date	<u>Enterococci</u>
<u>Sampling Date</u>	(MPN/100mL)
8/1/22	10
8/8/22	10
8/15/22	10
8/22/22	20
8/29/22	10
Log Mean	1.060205999
STV	17.09207828

OCTOBER 2022	
Sampling Date	Enterococci (MPN/100mL)
10/3/22	10
10/11/22	10
10/17/22	10
10/24/22	10

67.65557767
1.29507268
31
10
10
10
10

DECEMBER 2022	
Sampling Date	<u>Enterococci</u>
Sampling Date	(MPN/100mL)
12/5/22	3448
12/6/22	31
12/12/22	228
12/13/22	10
12/19/22	41
12/27/22	18417
12/28/22	1931
12/29/22	191
12/30/22	393
12/31/22	7598
Log Mean	2.630677402
<u>STV</u>	<u>10642.04092</u>

FEBRUARY 2023	
Enterococci	
(MPN/100mL)	
10	
20	
10	
26031	
7898	
132	
110	
816	
2.335961844	
<u>10121.62016</u>	

MARCH 2023	
Sampling Date	Enterococci
Sampling Date	(MPN/100mL)
3/1/23	216
3/2/23	10
3/6/23	158
3/7/23	10
3/10/23	4409
3/11/23	4834
3/12/23	99
3/13/23	63
3/14/23	48967
3/15/23	14652
3/16/23	31

10/31/22	10
Log Mean	1
<u>STV</u>	<u>10</u>

NOVEMBER 2022	
Sampling Date	Enterococci (MPN/100mL)
11/7/22	63
11/14/22	10
11/21/22	10
11/28/22	10
Log Mean	1.199835137
<u>STV</u>	<u>51.54807237</u>

IANIIA	RY 2023
JANUA	
Sampling Date	Enterococci
	(MPN/100mL)
1/1/23	1982
1/2/23	3078
1/3/23	148
1/4/23	696
1/5/23	13568
1/6/23	1574
1/7/23	120
1/8/23	350
1/9/23	18258
1/10/23	31919
1/11/23	2862
1/12/23	7639
1/13/23	168
1/14/23	29981
1/15/23	846
1/16/23	24637
1/17/23	1263
1/18/23	86
1/19/23	30
1/20/23	20
1/21/23	63
1/22/23	31
1/23/23	31
1/30/23	63
Log Mean	2.844699701
<u>STV</u>	<u>16319.30772</u>

APRIL 2023	
Sampling Date	<u>Enterococci</u>
	(MPN/100mL)
4/1/23	10
4/3/23	10
4/10/23	10
4/17/23	10

3/17/23	10
3/19/23	239
3/20/23	256
3/21/23	52
3/22/23	23415
3/23/23	5897
3/24/23	134
3/25/23	41
3/26/23	10
3/27/23	10
3/29/23	38422
3/30/23	1840
3/31/23	56
Log Mean	2.45767235
<u>STV</u>	<u>11253.47956</u>

JUNE 2023	
Sampling Date	Enterococci (MPN/100mL)
6/5/23	10
6/12/23	10
6/20/23	10
6/26/23	10
Log Mean	1
<u>STV</u>	<u>10</u>

AUGUST 2023	
Sampling Date	Enterococci (MPN/100mL)
8/7/23	131
8/8/23	10
8/14/23	10
8/22/23	10
8/28/23	41
Log Mean	1.34601103
<u>STV</u>	<u>54.80314506</u>

OCTOBER 2023	
Sampling Date	Enterococci (MPN/100mL)
10/2/23	10
10/10/23	31
10/17/23	10
10/23/23	121
10/24/23	10
10/30/23	20
Log Mean	1.31252951
<u>STV</u>	<u>72.77416488</u>

4/24/23	10
Log Mean	1
<u>STV</u>	<u>10</u>

MAY 2023	
Sampling Date	Enterococci
	(MPN/100mL)
5/1/23	10
5/8/23	10
5/15/23	10
5/22/23	10
5/30/23	10
Log Mean	1
<u>STV</u>	<u>10</u>

JULY 2023		
Sampling Date	Enterococci (MPN/100mL)	
7/3/23	31	
7/10/23	20	
7/17/23	10	
7/24/23	10	
7/31/23	10	
Log Mean	1.158478338	
STV	28.16748679	

SEPTEMBER 2023	
Sampling Date	Enterococci (MPN/100mL)
9/5/23	10
9/11/23	24196
9/12/23	10
9/18/23	10
9/25/23	10
Log Mean	1.676748715
STV	<u>4137.548283</u>

NOVEMBER 2023	
Campling Data	Enterococci
Sampling Date	(MPN/100mL)
11/6/23	10
11/13/23	10
11/18/23	6454
11/19/23	2737
11/20/23	30
11/21/23	10
11/22/23	10
11/27/23	20
Log Mean	1.753156876
<u>STV</u>	<u>1801.824552</u>

Sampling Date	Enterococci (MPN/100mL)
12/4/23	10
12/11/23	10
12/18/23	631
12/18/23	72999
12/19/23	20115
12/20/23	42262
12/21/23	7390
12/22/23	99
12/23/23	86
12/24/23	10
12/25/23	10
12/26/23	10
12/30/23	13236
12/31/23	6273
Log Mean	2.942568874
<u>STV</u>	<u>72451.83457</u>

FEBRUARY 2024				
Sampling Date	Enterococci			
	(MPN/100mL)			
2/1/24	19863			
2/2/24	1553			
2/3/24	201			
2/4/24	24196			
2/5/24	9804			
2/6/24	5475			
2/7/24	86			
2/8/24	108			
2/9/24	20			
2/12/24	31			
2/20/24	20			
2/21/24	17329			
2/22/24	504			
2/23/24	41			
2/26/24	20			
Log Mean	2.654820343			
<u>STV</u>	<u>15956.00718</u>			

^{*}Note: CSD data has not yet been reported

JANUARY 2024				
Sampling Date	<u>Enterococci</u>			
	(MPN/100mL)			
1/1/24	426			
1/2/24	10			
1/8/24	10			
1/14/24	15164			
1/15/24	3702			
1/16/24	213			
1/17/24	150			
1/18/24	92			
1/19/24	72			
1/20/24	250			
1/21/24	189			
1/22/24	41655			
1/23/24	5407			
1/24/24	74			
1/25/24	41			
1/26/24	74			
1/27/24	10			
1/28/24	10			
1/29/24	10			
Log Mean	2.214869663			
<u>STV</u>	<u>4344.740495</u>			

Table 3-1: Water Quality Objectives for Bacteria^a

Beneficial Use	Fecal Coliform ^a (MPN/100mL)	Total Coliform ^a (MPN/100mL)	Enterococcus (CFU/100mL) ^g	E. coli (CFU/100mL) ^g
Water Contact Recreation			geometric mean < 30 STV < 110	geometric mean < 100 STV < 320
Shellfish Harvesting ^b	median < 14 90th percentile < 43	median < 70 90th percentile < 230°		
Non-contact Water Recreation ^d	mean < 2000 90th percentile < 4000			
Municipal Supply: Surface Water ^e	geometric mean < 20	geometric mean < 100		
Municipal Supply: Groundwater		< 1.1 ^f		

Notes:

- a. Based on a minimum of five consecutive samples equally spaced over a 30-day period.
- b. Source: National Shellfish Sanitation Program.
- c. Based on a five-tube decimal dilution test or 300 MPN/100 ml when a three-tube decimal dilution test is used.
- d. Source: Report of the Committee on Water Quality Criteria, National Technical Advisory Committee, 1968.
- e. Source: California Department of Public Health recommendation.
- f. Based on multiple tube fermentation technique; equivalent test results based on other analytical techniques, as specified in the National Primary Drinking Water Regulation, 40 CFR, Part 141.21(f), revised June 10, 1992, are acceptable.
- g. Numeric values are from Part 3 of the Water Quality Control Plan for Inland Surface Waters, Enclosed Bays, and Estuaries of California based on Section 7958 of Title 17 of the California Code of Regulations, 69FR 67217 et seq., and 40 CFR Part 131.41 (effective date December 16, 2004). The Enterococcus objective applies to marine and estuarine waters where the salinity is greater than 1 part per thousand more than 5 percent of the time. The E. coli objective applies to freshwaters where the salinity is equal to or less than 1 part per thousand 95 percent or more of the time. The geometric mean for enterococcus and E. coli is computed weekly for all samples in a 6-week interval.

There is no fecal coliform objective to protect water contact recreation for inland surface waters, enclosed bays, or estuaries, but a fecal coliform objective protecting this use remains in the California Ocean Plan.

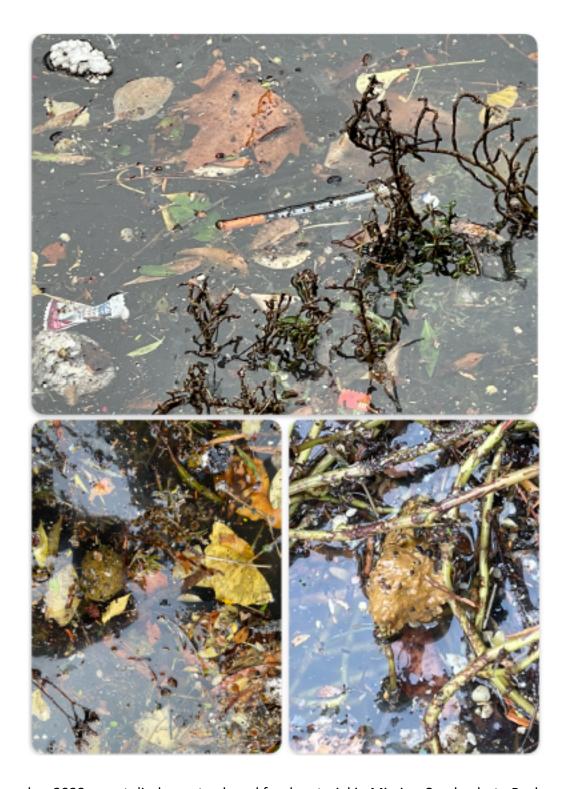
The STV is the statistical threshold value and shall not be exceeded by more than 10 percent of the samples collected in a calendar month.

EXHIBIT C

The units CFU denote colony forming units. This unit of measurement is equivalent to MPN (most probable number). The use of either MPN or CFU is based on the method used to detect bacteria, and both are valid measures of bacteria density.



March 2023, floating trash during discharge from 6th and Berry outfall, photo SFPUC.



December 2023 – post discharge trash and fecal material in Mission Creek, photo Baykeeper.