BROOKS PIERCE
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2000 RENAISSANCE PLAZA
230 NORTH ELM STREET
GREENSBORO, NC 27401

T 336.373.8850
F 336.378.1001
WWW.BROOKSPIERCE.COM

May 2, 2022

Wastewater Permitting
Attn: Chemours Permit
1617 Mail Service Center
Raleigh, N.C. 27699-1617

Re: CHEMOURS

Publiccomments@ncdenr.gov

We serve as environmental counsel for the Cape Fear Public Utility Authority ("CFPUA") and submit these comments on the NC Division of Water Resources of the NC Department of Environmental Quality draft Permit NC0090042 for Chemours Outfall 004 (the Draft Permit). CFPUA believes certain of the requirements and conditions of the Draft Permit will be inadequate to protect the health of the water users of the lower Cape Fear River and will place unreasonable economic burdens upon the citizens living in the lower Cape Fear basin for the benefit of Chemours. These requirements and conditions (discussed below) are arbitrary and capricious, unreasonable, unsupported by substantial evidence, and unfair to CPFUA, its customers, and the other citizens of the lower Cape Fear River basin impacted by Chemours' contamination.

CFPUA carefully monitors the PFAS entering its raw water intake.

CFPUA has continued to monitor all PFAS that currently have industry accepted sampling protocols in its raw water intake at Kings Bluff; this monitoring includes all Table 3+ PFAS compounds that have been identified as originating from releases from the Chemours Fayetteville Works Facility (the "Site") over the past 40 years (see attached spreadsheet of the Kings Bluff raw water intake sampling results, Tab 1). As is now understood by all parties, the concentrations of PFAS in CFPUA's intake rise with lower river flows and diminish with higher river flows; and mass rises with higher river flows. At flows below 10,000 CFS, the PFAS concentrations of the Consent Order Attachment C compounds regularly exceed the 70/10 ppt (ng/L) requirement for groundwater remediation set forth in the Consent Order (see attached charts of flow vs. concentration and mass in Tab 2). It is also clear to all parties that the vast majority (up to 88%) of total PFAS seen at the Kings Bluff raw water intake is from Chemours' Site.[1]

[1] Pétré M.A., Salk K.R., Stapleton H.M., Ferguson P.L., Tait G., Obenour D.R., Knappe D.R.U., Genereux D.P., (2021), *Per- and poly-fluoroalkyl substances (PFAS) in river discharge: modeling loads upstream and downstream*

CFPUA's treatment costs are directly tied to Chemours' pollution loading.

There is a significant lack of information regarding the human and environmental health impacts of the family of PFAS chemicals CFPUA customers have been, and continue to be, exposed to due to 40 years of willful pollution by Chemours and its predecessor company DuPont. Levels of total PFAS contaminants in raw river water regularly exceed 130 ppt (ng/L) (see Tab 1). In the absence of much-needed scientific studies to establish human and environmental exposure thresholds, downstream water providers such as CFPUA are forced to attempt to remove as much PFAS contamination as they can with current or developing treatment technologies. CFPUA has expended over $1.4 million in the last 12 months alone, replacing spent Granular Activated Carbon (GAC) in the 14 existing biological filters at its Sweeney Water Treatment Plant (the "Sweeney Plant") to provide partial (40%) removal of raw water PFAS contaminants. New deep bed GAC filtration, operated at peak performance, can reach the true limits of technology (not currently demonstrated by Chemours' existing or planned infrastructure), reducing total PFAS to below 10 ppt (ng/L). But the cost of achieving the limits of technology removal would be staggering, an estimated $3.7 million in the first year and up to $5 million every year thereafter. These costs are directly related to the amount of PFAS in the Kings Bluff raw water supply.

From the fact sheet prepared for Permit Number NC0090042, Chemours acknowledges the cost of wastewater reuse at the Site with a no-discharge treatment system ($69.6 million) is only $1.4 million more than the cost of direct discharge ($68.2 million) over twenty years. In other words, for only $70,000 more per year (net present value), Chemours can obviate the need for discharge from the Site and avoid significant imposed remediation costs on downstream water suppliers, and thereby minimize the potential human health impacts and environmental harms from PFAS contaminants. This reason alone warrants denial of authorization to discharge from Outfall 004.

Potential health effect impacts are too problematic to allow discharge.

Chemours' 40-year legacy of pollution has exposed a sizable population to toxic and potentially toxic compounds via air, groundwater and surface water. DEQ has documented groundwater contamination as far as 18 miles from the Site, with more than 4,540 wells exceeding the 70/10 ppt (ng/L) limitation imposed by the consent order as of September 2021. This represents an enormous reservoir of PFAS that may take decades to migrate through groundwater and into surface waters. River sediments upstream and downstream of the Site are also vast reservoirs of PFAS contamination that Chemours must address, or downstream communities will be required to deal with those PFAS contaminants over decades.

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of a PFAS manufacturing plant in the Cape Fear watershed, North Carolina (2022, February 3). https://doi.org/10.31223/X59D1Q; also retrieved from https://eartharxiv.org/repository/view/3062/.

A growing body of knowledge points to human health and environmental impacts of PFAS. EPA has established new lower reference doses for GenX chemicals, PFBS, PFOA, and PFOS[2] and has published pending EPA health advisories for the same chemicals. Health-based aquatic life criteria for PFOA and PFOS have been proposed and recent research suggests immunotoxicity impacts[3] [4] of PFAS mixtures such as those produced by Chemours pollution. States such as New Jersey and California are announcing public health goals that are orders of magnitude lower than previously assumed thresholds, and North Carolina researchers such as Dr. Jamie DeWitt raise precautionary warnings that, like lead, "there may be no safe level of PFAS."

Recognizing that under-studied PFAS compounds, alone and in combination, likely have human and environmental health impacts, the only reasonable conclusion is to prohibit any discharge from Outfall 004, especially since Chemours itself acknowledges available, cost-effective treatment options, i.e., recycle and reuse.

CFPUA requests three changes to Draft Permit NC0090042. The three requested changes are reasonable in scope and cost, will greatly improve and expedite clean-up of PFAS from the lower Cape Fear River, and will minimize environmental harm and human health impacts arising from PFAS contaminants.

1. **As discussed above, Chemours should be required to recycle and reuse all wastewater from Outfall 004.**

CFPUA continues to believe both the PFAS Loading Reduction Plan dated August 26, 2019 (the "Reduction Plan") updated by the SUPPLEMENTAL INFORMATION REPORT to the Reduction Plan dated November 2019 (the "Supplemental Report") and Chemours' Corrective Action Plan dated December 31, 2019 (the "CAP") are inadequate to remediate the PFAS contamination released from the Site. Nevertheless, assuming for the moment the accuracy of Geosyntec's ON AND OFFSITE ASSESSMENT dated September 30, 2019 (the "Assessment"), CFPUA understands that Geosyntec's "Current Conceptual Site Model" (the "Site Model") from the Assessment is still the operative analysis used by both Chemours and DEQ. The Site Model identified three dominant PFAS whose presence distinguish the different releases and emissions of Table 3+ PFAS to the environment:

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[2] EPA, (2021, October), Technical Fact Sheet: Human Health Toxicity Assessment for GenX Chemicals, Office of Water, retrieved from https://www.epa.gov/system/files/documents/2021-10/genx-final-tox-assess-tech-factsheet-2021.pdf.

[3] Dewitt. J., (2021, October 1), *Per-and polyfluoroalkyl substances – Emerging research for not so emerging contaminants,* Duke Integrated Toxicology & Environmental Health Program's Fall 2021 Series.

[4] Gray, E. & J. Conley, *Characterization of developmental toxicity and Adverse Outcome Pathways for emerging PFAS - individual compounds and mixtures,* SOT Risk Assessment and Mixtures Specialty Sections Joint Webinar Series-Virtual, NA, Virtual, January 13, 2021. Retrieved from https://cfpub.epa.gov/si/si_public_record_Report.cfm?dirEntryId=351857&Lab=CPHEA.

Aerial deposition PFAS Signature, dominated by PMPA
Combined process water PFAS Signature, dominated by PFMOAA
Other process water PFAS, comprising a mix

In general, Geosyntec determined that: (a) PFAS compounds in groundwater under the Site are dominated by PFMOAA; (b) aerial deposition of PFAS compounds in the open waters of the Cape Fear River and its tributaries are dominated by PMPA; and (c) the PFAS compound HFPO-DA ("GenX") is found in both the groundwater under the Site and in the river and its tributaries.

The Draft Permit for Outfall 004, with a proposed average flow of 2.38 MGD (2.9 MGD max), is intended to mainly treat groundwater pumped from the surficial and Black Creek Aquifers under the Site, combined with limited treatment of dry and wet flows from Seeps A and B. As such, the wastewater can be expected to be dominated by PFMOAA and secondarily by GenX. This proposed treatment regime is of serious economic concern to CFPUA.

CFPUA has been sampling and graphing the continuing concentration and mass of PFMOAA, PMPA, GenX, Total Table 3+ PFAS, and total PFAS. Attached hereto are the graphs of concentrations and mass loadings for these specific PFAS since January 2019 (Tab 3). The sampling results from before and after implementation of the Interim Seep remedial actions is compelling. The average post-implementation PFMOAA mass loading is 60% higher, whereas mass loadings of GenX and total PFAS are only slightly lower. This is consistent with the Site Model's prediction that the upwelling of groundwater from the Site in the Seeps is dominated by PFMOAA and is clearly an indicator of what can be expected from the implementation of the groundwater pumping plan proposed in the Draft Permit for Outfall 004. Even assuming the accuracy of the Assessment, the evidence shows that the current Interim Seep remediation plan will not control PFMOAA and is actually exacerbating its release, and there is good reason to believe that Chemours' planned Outfall 004 remediation efforts (for an average of 2.38 MGD of wastewater containing a high concentration of PFMOAA) also will fail.

This is particularly important for CFPUA because the cost of controlling PFMOAA in the operation of the Sweeney Plant is significant. It is anticipated that each 0.1 pounds of PFMOAA removed by the new GAC filters will cost an additional $600,000 to $700,000 every year. This is an unacceptable burden to be placed upon the citizens of New Hanover County.

A better alternative is available: **recycling the treated wastewater for Site use**. This solution is reasonable and cost-effective, and it does not slow down construction of the barrier wall, wells, or proposed treatment system. If the wastewater after treatment is good enough for downstream water users to drink, it should be good enough for Chemours' manufacturing and cooling water uses.

Paragraph 8 of the DEQ Fact Sheet accompanying the Draft Permit for Outfall 004 shows a minimal difference in the annual cost for Chemours to implement non-discharge management of the wastewater from the Seep and Barrier Wall remediation program. Paragraph 8 of the Fact

Sheet states that the "production needs of all the manufacturing entities (at the Site)...use less than 0.6 MGD." Whether or not this 0.6 MGD includes the vaguely described "non-contact cooling water," there is an extra 2.2+ MGD that can be circulated within the plant for cooling water that could replace all or a large portion of the 21+ MGD of Cape Fear River water Chemours supposedly needs for "non-contact cooling water."

Moreover, "non-contact cooling water" is an inaccurate euphemism. As noted in the Assessment, this "upstream" water is dominated by PMPA and GenX and the perimeter channel is susceptible to groundwater upwelling and onsite air emissions. The Draft Permit anticipates that water in Outfall 004 will discharge into this perimeter intake water channel and then flow to the Cape River through new Outfall 002. As Geosyntec states in the Assessment, the Cape Fear River water being withdrawn for "non-contact cooling water" is largely contaminated by PFAS air deposition from Chemours and constitutes up to 15% of the PFAS loading in the Cape Fear River at the Site's intake.

Instead of using this opportunity to treat the very water it has contaminated, Chemours seeks to use this water to further dilute what is coming from Outfall 004. It is important to note that the Assessment assumed that upstream air deposition contaminated only 6 miles of the upstream Cape Fear River basin. We now know that assumption is not valid; subsequent well sampling has shown that the aerial extent of this deposition may be more than 20 miles along the predominant wind vector. The Wind Rose attached to the Tetra Tech Technical Review demonstrates this wind direction is directly up the Cape Fear River. As shown in the recent report of Petre, Genereux, Korpeckyj, Knappe, Duboscq, Gilmore, Hopkins (April 2, 2020) on *Per- and Polyfluoroalkyl Substances (PFAS) Transport from Groundwater to Streams near a PFAS Manufacturing Facility in North Carolina,* published in Environmental Science & Technology, the residence time of groundwater transport through the geological strata in the Cape Fear River basin can be between 30 and 50 years. Rather than "non-contact," the contaminated water withdrawn from the Cape Fear River by Chemours is directly impacted by and in contact with this continuing groundwater flow and on-going air emissions from the Chemours Site. River water is and will be significantly contaminated for decades to come as the result of Chemours' and DuPont's prior and continuing releases of PFAS. This water is undeniably in "contact" with Chemours' and DuPont's released pollutants. It is imperative to reduce this 15% loading of the Cape Fear River as soon as possible. Chemours should be required to treat all contaminated waters used on or flowing through its Site, whether from the Cape Fear River water or its production activities.

If the treatment of all such waters were required, it is probable that Chemours will determine that the amount of additional Cape Fear River water needed for cooling, in addition to the 2.3 to 2.9 MGD generated from recycling at Outfall 004, can be significantly reduced.

Another alternative is suggested by Geosyntec in Paragraphs 3.5.6 and .7 of the Supplement, the split treatment of all flows at new Outfall 002, i.e., a separate pipe for cooling water being routed around the Site and treatment of all other wastewaters from the Site. If recycling is not mandated and this split approach were followed, Chemours should not be allowed to backslide. Instead, the

discharge limits of treated wastewater should be the same concentrations as Chemours has been achieving at Old Outfall 002: 2.3 ppt of GenX, 26.5 ppt of PFMOAA, and 10 ppt of PMPA. The effect of this split would be to remove Chemours' ability to dilute the wastewater from Outfall 004 by using the 21 MGD of cooling water being routed around the Site and thereby reduce the PFAS loading at new Outfall 002.

In its Request to the U.S. Environmental Protection Agency ("EPA") for Correction of EPA's October 2021 GenX Chemicals Toxicity Assessment dated March 18, 2022, Chemours touts the success of its recycling of wastewaters at its West Virginia facility. If wastewater recycling is successful in West Virginia, it can be similarly successful in North Carolina.

2. Chemours should be required to sample for and control 99% of all PFAS being discharged.

CFPUA contends the evidence shows no discharge is warranted or needed. However, if a discharge is permitted, the proposed sampling protocol is woefully inadequate. Under the Draft Permit, Chemours is required to sample for only three dominant contaminants and meet the TBELs set forth in the Draft Permit. As an initial matter, CFPUA is currently sampling for 65 PFAS that have been previously identified as being released from the Site, whereas the compliance for mass loading is only based upon the three dominant PFAS, and monitoring is only required for the Table 3+ PFAS. CFPUA requests the Draft Permit be modified so Chemours' compliance is based on, and monitoring includes, all PFAS heretofore determined to have been released from the Site, plus any identified hereafter as Chemours-related PFAS.

Secondly, based upon the sampling at Old Outfall 002, the effluent TBELs are set at too high a concentration and therefore, under the Draft Permit, Chemours would be allowed to discharge excessive amounts of PFMOAA and GenX as well as all other uncontrolled PFAS. Based upon the calculations in the Fact Sheet, Chemours would be authorized to discharge 87.5 pounds of GenX, 461.2 pounds of PFMOAA, and 94.7 pounds of PMPA, a total of 643.4 pounds per year of just those three compounds. Chemours also would be authorized to discharge an additional unknown number of pounds of total PFAS or Table 3+ PFAS. Based on the evidence in the record, limiting Chemours' compliance to three PFAS is not reasonable, and such a compliance regime would be a great disadvantage to CFPUA. All PFAS sorb to the Sweeney Plant filters, whether later determined harmful or not, and will be treated, because the intake and Sweeney's filters do not distinguish between "harmful" and "non-harmful" PFAS. The result is that the Sweeney Plant will be required to spend significantly more on annual operating costs to treat Chemours' discharges of PFAS – an additional unacceptable burden on the citizens of New Hanover County.

Thirdly, the evidence in the record does not support the conclusion that sampling only this limited number of PFAS compounds will reduce all PFAS in Table 3+ by 99%. Based upon the sampling results of CFPUA's intake water (see Tab 1), these three compounds only account on average for 49% concentration of the Table 3+ compounds and range from a minimum of 15% to a maximum of 81%. To provide reasonable assurance of effective remediation, the final Permit should at least

require: a) compliance sampling for all Table 3+ PFAS, and b) the actual concentrations be used to determine total mass for which 99% removal is required. There is no rational reason to guess. The cost of such sampling is small compared to the risks it addresses to human health and the environment. If the final Permit allows Chemours to discharge any PFAS, then at least it should require monitoring and removal of 99% of **all** PFAS.

Furthermore, as CFPUA reads the Draft Permit, "daily" sampling is not required. Paragraph A.(1.) of Part I defines "daily" sampling as a "weekly" grab sample. Therefore, the Draft Permit really requires only four daily samples per month, the results of which will be averaged. Given the failure to require Chemours to manage for storm events (see comments below), more frequent sampling becomes crucial to determine actual pollution loading.

CFPUA requests that daily sampling or weekly composite sampling be included as minimum permit requirements for any discharge and, again, points out that discharge from Outfall 004 is not necessary or in the public interest.

3. Chemours should be required to manage for larger storm events.

According to Geosyntec's Outfall 004 Design Plan, the equalization basins and other impoundments prior to treatment and the treatment plant are only required to control a 24-hour, 0.5-inch rainfall event. Rainfall in excess of that design storm will result in a bypass of the system, i.e., a direct discharge of the collected waters into the Cape Fear River.

The Outfall 004 Design Plan describes a number of uncertainties related to extracting groundwater from seven geological layers beneath the Site, including interconnectedness, heterogeneity within each layer, rates of sorption, rates of transmissivity, etc. These variables have a significant impact on the operation of the barrier wall and northern pumping-only extraction well system. The Outfall 004 Design Plan states that Chemours will attempt to maintain the barrier wall 4 feet above the 100-year flood along the southern portion of the groundwater control system but notes that constructability problems along the northern portion of the Site will require the installation of well pumps designed to function properly at just 0.5 inches of rainfall.

However, rainfall events in excess of 0.5 inches in 24 hours are not unusual in the Cape Fear Basin, and flood waters four feet above the long-term flood plain are common during hurricane season and large thunderstorms. Attached at Tab 4 is a chart of the rainfall recorded by the USGS at the William O. Huske Dam for the past 12 years. There have been 358 days of rainfall in excess of 0.5 inches, with the highest rainfall reading of 16.15 inches on October 8, 2016. This represents almost a year of such rainfall events within a 12-year period. Requiring control only for a 24-hour, 0.5-inch rainfall event guarantees ongoing periodic bypasses of the treatment system, exposing downstream water treatment systems to uncontrolled "slugs" of Chemours pollution; this is an unacceptable and unreasonable design flaw.

Moreover, the collection of large amounts of extracted, contaminated groundwater in above-ground surface impoundments and equalization basins waiting to be treated essentially ensures bypass events will be heavily laden with PFAS, especially PFMOAA and GenX, the dominant contaminants in the Site groundwater. The Interim Seep V flume locations have already flooded or over-washed on several occasions. According to the Outfall 004 Design Plan, Seeps C and D and the portions of Seeps A and B that daylight beyond the planned barrier wall will discharge as they have historically and will not be part of the Outfall 004 collection system. In the event the new collection system basins and surface impoundments flood or over-wash, the concentrated groundwater will result in a massive PFAS release.

Second, a large rainfall may cause the groundwater flow to the barrier wall and well pumps to dramatically increase. The pumping system, as designed, does not seem to have the capacity to remove large amounts of groundwater, and the current storage system does not seem to have the capacity to hold it, even if the pumps could carry the load. The barrier wall will then become a dam that will force the groundwater to flow over or around it at the north and south ends and any breaks in the barrier wall. Again, as with the bypass of surface waters, the amounts of PFAS in these dammed up groundwater situations will be significantly higher in concentration and resulting mass than are now occurring.

CFPUA supports a remediation system that includes a barrier wall and extraction-well system. To be effective, however, the operable system needs to control a much larger rainfall event. The Dam Safety Section of DEQ uses a Probable Maximum Precipitation calculation to determine the spillway and free board designs for above-ground dams to prevent harm to downstream properties and populations. This barrier wall and well control system is in reality an underground dam, and it needs to be designed and built to protect downstream properties and populations. Retrofitting will be exceedingly difficult once the barrier wall and extraction-well system is installed.

Summary

In summary, CFPUA requests three modifications to the Draft Permit so that the final Permit will be more effective and more protective of the citizens of the Lower Cape Fear River and will place the economic burden of managing Chemours' PFAS releases upon Chemours and not the citizens of the State of North Carolina:

1. Chemours should recycle all or as much as possible of the wastewater it creates or uses at the Site;

2. Chemours' compliance with the final Permit should be based upon its management of all the PFAS compounds released by its previous actions and from continuing releases, not some limited subset that is inadequately monitored; and

3. Chemours should be required to design, build and manage its remediation system for much larger rainfall events, which regularly occur in the area, to prevent bypass events.

CFPUA looks forward to your review of its comments and is prepared to meet with DEQ to discuss them further.

Sincerely,

George W. House

GWH/clv

Enclosures

TAB 1

CFPUA PFAS DATA from Raw Water Intake

Grayed out cells denote the compound was not analyzed for that sample date. This could be due to the unavailability of standards for the compound, compound was inadvertently not run within the analyses, or a quality control issue with the compound which made it not valid and non-reportable.

Compound Name	NVHOS	Perfluoro(2-ethoxyethane)sulfonic acid (PFEESA)	Fluorotelomer sulfonate 10:2 (10:2 FTS)	PMPA	2,3,3,3-Tetrafluoro-2-(1,1,2,2,3,3,3-heptafluoropropoxy)-propanoic acid (PFPrOPrA) GenX	Nonafluoro-3,6-dioxaheptanoic acid (NFDHA)	Perfluorooctadecanoic acid (PFODA)	2-(N-ethylperfluoro-1-octanesulfonamido)-ethanol (N-EtFOSE)	Perfluorooctanesulfonate (PFOS)	Perfluorononanoic acid (PFNA)	N-methylperfluoro-1-octanesulfonamidoacetic acid	Byproduct 4 (BP4); R-PSDA	Byproduct 5 (BP5); Hydrolyzed PSDA	Byproduct 6 (BP6); R-PSDCA	R-EVE	2-(N-methylperfluoro-1-octanesulfonamido)-ethanol (N-MeFOSE)	Sodium 2,3,3,3-tetrafluoro-2-(perfluoroethoxy)propanoic acid (PEPA)
CAS Number	1122933-86-8	113507-82-7	120226-60-0	13140-23-9	13252-13-6	151772-58-6	16517-11-6	1691-99-2	1763-23-1	2058-94-8	2355-31-9	2416366-18-0	2416366-19-1	2416366-21-5	2416366-22-6	24448-09-7	267239-61-2
Compound on Table 3+	Y	Y		Y	Y	Y						Y	Y	Y	Y		Y
Sample location / Sample date	NG/L	NG/L	NG/L	NG/L	NG/L	NG/L	NG/L	NG/L	NG/L	NG/L	NG/L	NG/L	NG/L	NG/L	NG/L	NG/L	NG/L
Sweeney Raw 9/12/2018			ND		16.9			ND	17.8	0.580	ND					ND	
Sweeney Raw 9/14/2018			ND		15.5			ND	17.7	ND	ND					ND	
Sweeney Raw 9/15/2018			ND		18.8			ND	16.2	ND	ND					ND	
Sweeney Raw 9/16/2018			ND		15.2			ND	13.5	ND	ND					ND	
Sweeney Raw 9/17/2018			ND		33.8			ND	9.72	ND	ND					ND	
Sweeney Raw 9/18/2018			ND		18.6			ND	7.83	ND	ND					ND	
Sweeney Raw 9/19/2018			ND		17.6			ND	6.45	ND	ND					ND	
Sweeney Raw 9/20/2018			ND		18.9			ND	7.03	ND	ND					ND	
Sweeney Raw 9/21/2018			ND		12.6			ND	7.36	ND	ND					ND	
Sweeney Raw 9/22/2018			ND		8.44			ND	7.97	ND	ND					ND	
Sweeney Raw 9/23/2018			ND		5.11			ND	6.42	ND	ND					ND	
Sweeney Raw 9/24/2018			ND		6.32			ND	7.31	ND	ND					ND	
Sweeney Raw 9/25/2018			ND		8.54			ND	7.15	ND	ND					ND	
Sweeney Raw 9/26/2018			ND		15.9			ND	7.47	ND	ND					ND	
Sweeney Raw 9/27/2018			ND		17.5			ND	7.59	ND	ND					ND	
Sweeney Raw 9/28/2018			ND		27.7			ND	10.4	ND	ND					ND	
Sweeney Raw 9/29/2018			ND		25.1			ND	10.6	ND	ND					ND	
Sweeney Raw 9/30/2018			ND		12.4			ND	14.6	ND	ND					ND	
Sweeney Raw 10/1/2018			ND		10.3			ND	16.0	ND	ND					ND	
Sweeney Raw 10/2/2018			ND		9.79			ND	14.2	ND	ND					ND	
Sweeney Raw 10/3/2018			ND		11.7			ND	14.9	ND	ND					ND	
Sweeney Raw 10/4/2018			ND		10.4			ND	14.7	ND	ND					ND	
Sweeney Raw 10/5/2018			ND		11.0			ND	14.8	ND	ND					ND	
Sweeney Raw 10/6/2018			ND		10.6			ND	16.0	ND	ND					ND	
Sweeney Raw 10/7/2018			ND		10.2			ND	16.8	ND	ND					ND	
Sweeney Raw 10/8/2018			ND		11.0			ND	17.2	ND	ND					ND	
Sweeney Raw 10/9/2018			ND		10.2			ND	19.1	ND	ND					ND	
Sweeney Raw 10/10/2018			ND		9.94			ND	18.2	ND	ND					ND	
Sweeney Raw 10/11/2018			ND		9.58			ND	16.8	ND	ND					ND	
Sweeney Raw 10/12/2018			ND		10.8			ND	18.0	ND	ND					ND	
Sweeney Raw 11/20/2018			ND		3.96			ND	5.45	ND	ND					ND	
Sweeney Raw 11/27/2018			ND		12.0			ND	12.6	ND	ND					ND	
Sweeney Raw 12/3/2018			ND		6.93			ND	12.8	ND	ND					ND	
Sweeney Raw 12/10/2018			ND		16.0			ND	9.44	ND	ND					ND	
Sweeney Raw 12/17/2018			ND		25.6			ND	6.67	ND	ND					ND	
Sweeney Raw 12/24/2018			ND		5.46			ND	11.7	ND	ND					ND	
Sweeney Raw 12/31/2018			ND		12.8			ND	13	ND	ND					ND	
Sweeney Raw 1/7/2019			ND		6.92			ND	12.6	ND	ND					ND	
Sweeney Raw 1/14/2019			ND		6.83			ND	11.8	ND	ND					ND	
Sweeney Raw 1/21/2019			ND		9.69			ND	8.92	ND	ND					ND	
Sweeney Raw 1/28/2019			ND		4.31			ND	10.4	ND	ND					ND	
Sweeney Raw 2/4/2019			ND		11.8			ND	11.1	ND	ND					ND	
Sweeney Raw 2/11/2019			ND		19.0			ND	12.6	ND	ND					ND	
Sweeney Raw 2/18/2019			ND		11.9			ND	9.24	ND	ND					ND	
Sweeney Raw 2/25/2019			ND		4.08			ND	9.54	ND	ND					ND	
Sweeney Raw 3/4/2019			ND		8.59			ND	7.93	ND	ND					ND	
Sweeney Raw 3/11/2019			ND		6.75			ND	8.69	ND	ND					ND	
Sweeney Raw 3/18/2019			ND		7.12			ND	13.6	ND	ND					ND	
Sweeney Raw 3/25/2019			ND		3.14			ND	10.5	ND	ND					ND	
Sweeney Raw 4/1/2019			ND		7.90			ND	11.1	ND	ND					ND	
Sweeney Raw 4/8/2019			ND		18.7			ND	12.2	ND	ND					ND	
Sweeney Raw 4/15/2019			ND		8.39			ND	8.55	ND	ND					ND	
Sweeney Raw 4/22/2019			ND		18.0			ND	9.38	ND	ND					ND	
Sweeney Raw 4/29/2019			ND		8.64			ND	16.6	ND	ND					ND	
Sweeney Raw 5/6/2019			ND		6.79			ND	15.1	ND	ND					ND	
Sweeney Raw 5/13/2019			ND		12.0			ND	18.2	ND	ND					ND	
Sweeney Raw 5/20/2019			ND		19.6			ND	14.0	ND	ND					ND	
Sweeney Raw 5/27/2019			ND		23.6			ND	13.8	ND	ND					ND	
Sweeney Raw 6/3/2019			ND		31.9			ND	17.4	ND	ND					ND	
Sweeney Raw 6/10/2019			ND		36.9			ND	18.4	ND	ND					ND	
Sweeney Raw 6/17/2019			ND		9.66			ND	14.0	ND	ND					ND	
Sweeney Raw 6/24/2019			ND		9.67			ND	14.4	ND	ND					ND	
Sweeney Raw 7/1/2019			ND		54.8			ND	1.56	ND	ND					ND	
Sweeney Raw 7/8/2019			ND		28.6			ND	19.6	ND	ND					ND	
Sweeney Raw 7/15/2019			ND		24.8			ND	21.4	ND	ND					ND	
Sweeney Raw 7/29/2019			ND		24.8			ND	19.7	ND	ND					ND	
Sweeney Raw 8/12/2019			ND		15.7			ND	15.7	ND	ND					ND	
Sweeney Raw 8/26/2019			ND		28.3			ND	18.4	ND	ND					ND	
Sweeney Raw 9/4/2019			ND		11.3			ND	14.5	ND	ND					ND	
Sweeney Raw 9/5/2019			ND		11.6			ND	15.5	ND	ND					ND	
Sweeney Raw 9/6/2019			ND		11.1			ND	15.4	ND	ND					ND	
Sweeney Raw 9/9/2019			ND		76.0			ND	15.5	ND	ND					ND	

Compound Name	Perfluorooctanesulfonamide (PFOSA)	N-methylperfluoro-1-octanesulfonamide (N-MeFOSA)	Perfluorononanoic acid (PFNA)	Perfluorodecanoic acid (PFDA)	Perfluorodecanesulfonate (PFDS)	N-CMeP-N-ethylperfluoro-1-octanesulfonamide (N-CMeP-N-EtFOSA)	Perfluorohexanesulfonate (PFHxS)	3:3 FTCA	Perfluorobutyric acid (PFBA)	Perfluorobutanesulfonate (PFBS)	Perfluoroheptanoic acid (PFHpA)	Perfluoroheptanesulfonate (PFHpS)	Perfluoromonanoic acid (PFNA)	Perfluorotetradecanoic acid (PFTeDA)	Perfluoro-3-methoxypropanoic acid (PFMOPrA or PFMPA)	Fluorotelomer sulfonate 8:2 (8:2 FTS)	Perfluoro(3,5-dioxahexanoic) acid (PFO2HxA)	Perfluoro(3,5,7-trioxaoctanoic) acid (PFO3OA)	Perfluoro(3,5,7,9-tetraoxadecanoic) acid (PFO4DA)	Sodium 2,2,4,4,6,6,8,8,10,10,12,12,12-tridecafluoro-3,5,7,9,11-pentaoxododecanoate (PFO5DA)	N-ethylperfluoro-1-octanesulfonamide (N-EtFOSA)	PFHxSA	PFPA	N-AP-PHxSA	Perfluoro-2-methoxyacetic acid (PFMOAA)	Perfluoroheptanoic acid (PFHpA)
CAS Number	307-24-4	307-55-1	375-95-1	335-76-2	335-77-3	34455-29-3	355-46-4	356-03-5	375-22-4	375-73-5	375-85-9	375-92-8	375-95-1	376-06-7	377-73-1	39108-34-4	39492-89-1	39492-89-2	39492-90-5	39492-91-6	41311-50-2	41997-13-1	422-64-0	50598-28-2	674-13-5	67905-19-5
Compound on Table 3+															Y		Y	Y	Y						Y	
Sample location / Sample date	NG/L	NG/L	NG/L	NG/L	NG/L	NG/L	NG/L	NG/L	NG/L	NG/L	NG/L	NG/L	NG/L	NG/L	NG/L	NG/L	NG/L	NG/L	NG/L	NG/L	NG/L	NG/L	NG/L	NG/L	NG/L	NG/L
Sweeney Raw 9/12/2018	22.3	ND	ND	9.08	1.43	ND		7.55		10.7	5.44	12.5	ND	2.28	ND	4.47	ND	13.4	10.9	3.41		ND				14.3	ND
Sweeney Raw 9/14/2018	22.9	ND	ND	10.5	1.57	ND		7.05		11.7	4.98	13.6	ND	2.18	ND	ND	ND	43.9	43.4	14.6		ND				51.5	ND
Sweeney Raw 9/15/2018	28.9	ND	ND	12.1	1.70	ND		6.43		12.2	4.77	17.9	ND	2.53	ND	5.14	ND	25.5	22.4	5.84		ND				26.3	ND
Sweeney Raw 9/16/2018	23.5	ND	ND	8.81	1.44	ND		5.63		9.04	4.37	15.1	ND	1.64	ND	ND	ND	28.1	28.0	8.67		ND				33.4	ND
Sweeney Raw 9/17/2018	14.2	ND	ND	5.54	1.07	ND		3.71		6.59	2.54	9.27	ND	0.831	ND	7.61	ND	11.2	7.35	3.19		ND				13.9	ND
Sweeney Raw 9/18/2018	9.80	ND	ND	4.41	0.683	ND		2.87		5.8	1.96	6.48	ND	ND	ND	ND	ND	9.06	5.66	2.32		ND				10.6	ND
Sweeney Raw 9/19/2018	5.20	ND	ND	3.35	ND	ND		2.59		4.73	1.52	2.97	ND	0.777	ND	ND	ND	6.94	4.43	2.77		ND				9.90	ND
Sweeney Raw 9/20/2018	5.17	ND	ND	3.34	0.693	ND		2.62		5.1	1.69	2.99	ND	0.824	ND	ND	ND	8.44	5.14	2.16		ND				10.2	ND
Sweeney Raw 9/21/2018	5.14	ND	ND	3.20	0.736	ND		3.27		5.08	1.99	3.00	ND	0.999	ND	10.2	ND	7.05	5.28	1.67		ND				10.7	ND
Sweeney Raw 9/22/2018	3.83	ND	ND	3.23	ND	ND		1.66		4.86	1.50	2.48	ND	0.973	ND	ND	ND	6.89	5.90	2.09		ND				6.82	ND
Sweeney Raw 9/23/2018	2.49	ND	ND	3.23	ND	ND		2.16		4.12	1.43	1.73	ND	0.996	ND	ND	ND	4.59	3.22	1.96		ND				5.73	ND
Sweeney Raw 9/24/2018	4.05	ND	ND	3.39	ND	ND		2.07		5.39	1.73	2.06	ND	0.914	ND	ND	ND	4.96	2.88	ND		ND				4.05	ND
Sweeney Raw 9/25/2018	5.32	ND	ND	3.38	ND	ND		1.97		6.79	1.53	2.10	ND	1.07	ND	3.35	ND	6.31	3.63	1.25		ND				6.70	ND
Sweeney Raw 9/26/2018	7.10	ND	ND	4.28	ND	ND		1.97		10.3	1.79	3.37	ND	1.03	ND	8.60	ND	13.4	7.87	2.66		ND				13.7	ND
Sweeney Raw 9/27/2018	3.84	ND	ND	3.95	ND	ND		2.36		6.93	1.75	2.56	ND	0.926	ND	2.12	ND	12.6	5.14	2.05		ND				16.0	ND
Sweeney Raw 9/28/2018	5.68	ND	ND	6.12	ND	ND		3.96		10.2	2.43	3.00	ND	0.744	ND	12.2	ND	18.9	9.97	3.95		ND				21.2	ND
Sweeney Raw 9/29/2018	6.33	ND	ND	6.13	ND	ND		4.29		9.95	2.74	3.34	ND	1.02	ND	9.19	ND	18.6	8.66	3.46		ND				17.5	ND
Sweeney Raw 9/30/2018	8.74	ND	ND	6.14	0.966	ND		4.81		7.49	2.64	5.36	ND	1.40	ND	5.32	ND	9.26	4.6	1.69		ND				7.53	ND
Sweeney Raw 10/1/2018	13.6	ND	ND	7.05	1.15	ND		4.34		7.35	2.82	7.63	ND	1.68	ND	4.82	ND	7.05	4.37	1.2		ND				8.03	ND
Sweeney Raw 10/2/2018	13.7	ND	ND	7.17	1.08	ND		4.25		9.10	2.85	7.95	ND	1.39	ND	5.32	ND	4.93	ND	1.74		ND				7.02	ND
Sweeney Raw 10/3/2018	13.0	ND	ND	6.96	1.37	ND		3.89		10.1	2.89	9.66	ND	1.55	ND	4.81	ND	4.93	3.66	1.30		ND				7.19	ND
Sweeney Raw 10/4/2018	15.4	ND	ND	8.17	1.46	ND		4.25		9.97	3.31	9.95	ND	1.76	ND	4.15	ND	5.45	3.5	ND		ND				6.83	ND
Sweeney Raw 10/5/2018	15.2	ND	ND	7.43	1.33	ND		3.75		10.2	2.61	10.0	ND	1.81	ND	4.59	ND	4.23	3.77	2.20		ND				8.27	ND
Sweeney Raw 10/6/2018	18.6	ND	ND	9.59	1.59	ND		3.90		10.9	3.34	12.2	ND	1.83	ND	4.58	ND	5.29	4.74	1.56		ND				7.77	ND
Sweeney Raw 10/7/2018	23.2	ND	ND	9.89	1.63	ND		4.52		12.0	3.54	14.3	ND	2.06	ND	3.90	ND	5.63	4.63	1.22		ND				6.17	ND
Sweeney Raw 10/8/2018	25.1	ND	ND	8.97	1.57	ND		3.88		12.9	3.77	16.4	ND	2.13	ND	4.15	ND	5.23	ND	1.55		ND				7.69	ND
Sweeney Raw 10/9/2018	26.2	ND	ND	10.3	1.67	ND		4.35		10.6	3.67	16.8	ND	1.86	ND	4.21	ND	5.57	4.49	1.83		ND				6.15	ND
Sweeney Raw 10/10/2018	27.3	ND	ND	11.6	1.68	ND		4.64		9.46	4.02	17.3	ND	2.15	ND	4.01	ND	4.32	ND	1.33		ND				5.42	ND
Sweeney Raw 10/11/2018	26.0	ND	ND	10.9	1.80	ND		5.00		10.4	3.72	16.8	ND	2.14	ND	2.95	ND	4.54	4.53	2.02		ND				6.27	ND
Sweeney Raw 10/12/2018	25.4	ND	ND	10.4	1.92	ND		4.67		10.1	3.73	16.8	ND	2.27	ND	4.87	ND	8.25	4.47	2.29		ND				9.81	ND
Sweeney Raw 11/20/2018	3.41	ND	ND	3.14	ND	ND		2.05		ND	1.64	2.55	ND	0.890	ND	ND	ND	4.65	3.02	ND		ND				5.21	ND
Sweeney Raw 11/27/2018	9.46	ND	ND	7.50	0.711	ND		3.75		3.86	3.0	7.53	ND	1.13	ND	5.48	ND	6.14	2.59	ND		ND				12.3	ND
Sweeney Raw 12/3/2018	12.9	ND	ND	7.36	0.854	ND		3.01		4.96	2.81	10.7	ND	1.16	ND	ND	ND	4.21	ND	ND		ND				6.34	ND
Sweeney Raw 12/10/2018	11.6	ND	ND	6.41	0.807	ND		3.19		5.36	2.54	8.88	ND	1.41	ND	ND	ND	11.7	4.38	ND		ND				15.3	ND
Sweeney Raw 12/17/2018	4.79	ND	ND	4.01	ND	ND		2.81		4.09	1.73	3.17	ND	0.749	ND	9.99	ND	9.33	ND	1.20		ND				15.3	ND
Sweeney Raw 12/24/2018	5.38	ND	ND	5.73	ND	ND		3.85		ND	2.29	3.87	ND	0.910	ND	ND	ND	3.09	ND	ND		ND				5.98	ND
Sweeney Raw 12/31/2018	8.56	ND	ND	7.09	0.736	ND		3.45		3.97	2.65	6.21	ND	1.09	ND	ND	ND	6.3	ND	ND		ND				8.87	ND
Sweeney Raw 1/7/2019	9.83	ND	ND	7.05	ND	ND		3.73		4.62	2.55	7.08	ND	0.826	ND	3.38	ND	5.58	1.87	ND		ND				6.33	ND
Sweeney Raw 1/14/2019	10.8	ND	ND	6.78	ND	ND		3.71		6.53	2.64	7.58	ND	1.23	ND	ND	ND	5.59	1.34	ND		ND				8.19	ND
Sweeney Raw 1/21/2019	8.11	ND	ND	6.68	0.593	ND		2.73		4.61	2.16	5.26	ND	0.952	ND	13.1	ND	8.39	3.03	ND		ND				11.1	ND
Sweeney Raw 1/28/2019	10.2	ND	ND	6.74	ND	ND		3.70		3.67	2.51	7.91	ND	0.953	ND	9.74	ND	3.69	1.35	ND		ND				5.08	ND
Sweeney Raw 2/4/2019	7.70	ND	ND	6.06	ND	ND		3.18		ND	2.28	5.6	ND	0.972	ND	4.25	ND	10.7	5.46	1.72		ND				16.9	ND
Sweeney Raw 2/11/2019	7.49	ND	ND	6.32	ND	ND		4.28		ND	2.63	4.64	ND	0.735	ND	5.96	ND	13.6	4.75	1.27		ND				17.8	ND
Sweeney Raw 2/18/2019	6.24	ND	ND	4.58	ND	ND		4.25		3.68	2.26	3.96	ND	ND	ND	4.79	ND	7.79	3.73	1.5		ND				12.4	ND
Sweeney Raw 2/25/2019	4.02	ND	ND	4.41	ND	ND		2.10		ND	1.60	2.13	ND	0.809	ND	1.61	ND	2.78	ND	ND		ND				3.82	ND
Sweeney Raw 3/4/2019	3.28	ND	ND	4.68	ND	ND		2.26		ND	1.58	2.07	ND	0.723	ND	5.21	ND	6.54	1.61	ND		ND				7.68	ND
Sweeney Raw 3/11/2019	3.74	ND	ND	4.64	ND	ND		2.50		4.39	1.61	2.22	ND	0.629	ND	10.6	ND	5.36	1.63	ND		ND				4.69	ND
Sweeney Raw 3/18/2019	5.86	ND	ND	6.86	0.747	ND		3.51		3.76	2.30	3.59	ND	0.991	ND	4.26	ND	5.29	1.67	ND		ND				7.07	ND
Sweeney Raw 3/25/2019	5.57	ND	ND	5.40	ND	ND		3.03		3.87	2.03	3.26	ND	0.893	ND	1.32	ND	3.08	ND	ND		ND				4.36	ND
Sweeney Raw 4/1/2019	5.32	ND	ND	6.32	0.673	ND		2.98		ND	1.95	3.14	ND	0.857	ND	4.09	ND	9.98	3.87	ND		ND				12.2	ND
Sweeney Raw 4/8/2019	6.54	ND	ND	5.82	ND	ND		4.26		3.08	2.55	5.86	ND	0.929	ND	10.6	ND	13.0	4.48	1.52		ND				14.7	ND
Sweeney Raw 4/15/2019	3.67	ND	ND	3.69	ND	ND		2.50		ND	2.05	2.81	ND	0.830	ND	5.05	ND	7.65	2.78	ND		ND				7.20	ND
Sweeney Raw 4/22/2019	3.59	ND	ND	4.63	ND	ND		2.69		ND	1.96	2.6	ND	0.727	ND	12.1	ND	11.3	5.84	1.78		ND				15.5	ND
Sweeney Raw 4/29/2019	9.01	ND	ND	8.79	0.718	ND		4.15		4.65	2.77	8.29	ND	1.42	ND	6.06	ND	8.79	3.83	ND		ND				11.8	ND
Sweeney Raw 5/6/2019	9.42	ND	ND	7.87	0.730	ND		3.30		5.37	2.77	6.82	ND	1.17	ND	2.47	ND	5.76	2.73	ND		ND				8.19	ND
Sweeney Raw 5/13/2019	10.9	ND	ND	8.24	0.932	ND		4.13		ND	3.05	7.93	ND	1.17	ND	4.61	ND	14.5	6.09	1.90		ND				18.7	ND
Sweeney Raw 5/20/2019	8.69	ND	ND	7.03	ND	ND		4.70		5.64	2.64	4.98	ND	1.24	ND	8.76	ND	19.4	7.27	2.57		ND				25.2	ND
Sweeney Raw 5/27/2019	11.0	ND	ND	6.97	0.750	ND		4.46		6.52	3.15	7.35	ND	0.95	ND	6.78	ND	20.3	8.01	2.59		ND				29.3	ND
Sweeney Raw 6/3/2019	16.5	ND	ND	7.97	0.775	ND		5.83		6.89	3.75	9.99	ND	1.29	ND	14.6	ND	43.5	16.7	6.14		ND				52.2	ND
Sweeney Raw 6/10/2019	14.4	ND	ND	8.27	0.890	ND		6.25		5.29	3.72	9.47	ND	1.02	ND	14.7	ND	46.8	18.4	7.09		ND				57.0	ND
Sweeney Raw 6/17/2019	15.3	ND	ND	6.51	0.783	ND		4.52		6.07	3.44	9.57	ND	1.07	ND	2.07	ND	7.70	2.82	ND		ND				8.02	ND
Sweeney Raw 6/24/2019	20.3	ND	ND	8.61	1.25	ND		3.58		6.43	2.41	13.5	ND	1.42	ND	5.46	ND	13.7	4.13	1.65		ND				14.7	ND
Sweeney Raw 7/1/2019	5.16	ND	ND	3.36	ND	ND		2.08		6.86	10.3	2.22	ND	ND	ND	64.9	ND	57.7	11.3	ND		ND				63.0	ND
Sweeney Raw 7/8/2019	25.7	ND	ND	9.63	1.29	ND		5.73		7.22	4.45	17.7	ND	1.48	ND	8.07	ND	32.5	9.71	3.88		ND				36.2	ND
Sweeney Raw 7/15/2019	16.0	ND	ND	8.59	1.01	ND		9.39		5.20	5.53	10.9	ND	1.37	ND	7.58	ND	24.7	7.43	3.31		ND				34.9	ND
Sweeney Raw 7/29/2019	19.3	ND	ND	7.20	0.968	ND		8.54		7.70	5.43	12.7	ND	1.28	ND	6.67	ND	25.3	8.85	2.42		ND				30.0	ND
Sweeney Raw 8/12/2019	14.2	ND	ND	6.62	0.967	ND		7.05		8.28	4.84	10.5	ND	1.13	ND	5.51	ND	15.5	5.10	2.04		ND				22.2	ND
Sweeney Raw 8/26/2019	34.7	ND	ND	9.95	1.42	ND		6.24		11.2	5.54	24.8	ND	1.74	ND	8.30	ND	28.7	9.93	3.15		ND				38.9	ND
Sweeney Raw 9/4/2019	26.4	ND	ND	8.44	0.969	ND		4.80		10.8	4.31	21.9	ND	1.54	ND	5.97	ND	11.5	4.08	1.75		ND				14.8	ND
Sweeney Raw 9/5/2019	28.2	ND	ND	8.42	1.04	ND		5.72		11.5	4.70	23.1	ND	1.60	ND	7.41	ND	12.9	3.91	1.69		ND				16.5	ND
Sweeney Raw 9/6/2019	30.9	ND	ND	7.70	1.07	ND		4.22		11.2	4.22	24.2	ND	1.53	ND	6.77	ND	12.7	3.69	ND		ND				15.8	ND
Sweeney Raw 9/9/2019	35.2	ND	ND	8.30	0.943	ND		4.75		12.5	5.00	26.0	ND	1.45	ND	21.7	ND	36.1	14.3	7.98		ND				52.3	ND

CFPUA PFAS DATA from Raw Water Intake

Grayed out cells denote the compound was not analyzed for that sample date. This could be due to the unavailability of standards for the compound, compound was inadvertently not run within the analyses, or a quality control issue with the compound which made it not valid and non-reportable.

Compound Name	NVHOS	Perfluoro(2-ethoxyethane)sulfonic acid (PEESA)	Fluorotelomer sulfonate 10:2 (10:2 FTS)	PMPA	2,3,3,3-Tetrafluoro-2-(1,1,2,2,3,3,3-heptafluoropropoxy)-propanoic acid (PFPrOPrA) GenX	Nonafluoro-3,6-dioxaheptanoic acid (NFDHA)	Perfluorooctadecanoic acid (PFODA)	2-(N-ethylperfluoro-1-octanesulfonamido)-ethanol (N-EtFOSE)	Perfluorooctanesulfonate (PFOS)	Perfluoroundecanoic acid (PFUdA)	N-methylperfluoro-1-octanesulfonamidoacetic acid	Byproduct 4 (BP4); R-PSDA	Byproduct 5 (BP5); Hydrolyzed PSDA	Byproduct 6 (BP6); R-PSDCA	R-EVE	2-(N-methylperfluoro-1-octanesulfonamido)-ethanol (N-MeFOSE)	Sodium 2,3,3,3-tetrafluoro-2-(perfluoroethoxy)propanoic acid (PEPA)
CAS Number	1112933-86-8	113507-82-7	120226-60-0	13140-29-9	13252-13-6	151772-58-6	16517-11-6	1691-99-2	1763-23-1	2058-94-8	2355-31-9	2416586-18-0	2416586-19-1	2416586-21-5	2416586-22-6	24448-09-7	26723B-61-2
Compound on Table 3+	Y	Y		Y	Y	Y						Y	Y	Y	Y		Y
Sample location / Sample date	NG/L	NG/L	NG/L	NG/L	NG/L	NG/L	NG/L	NG/L	NG/L	NG/L	NG/L	NG/L	NG/L	NG/L	NG/L	NG/L	NG/L
Sweeney Raw 9/23/2019			ND		28.4			ND	11.4	ND	ND					ND	
Sweeney Raw 10/1/2019			ND		39.4			ND	16.0	ND	ND					ND	
Sweeney Raw 10/7/2019			ND		38.8			ND	15.2	ND	ND					ND	
Sweeney Raw 10/21/2019			ND		41.7			ND	14.9	ND	ND					ND	
Sweeney Raw 11/4/2019			ND		24.8			ND	17.1	ND	ND					ND	
Sweeney Raw 11/18/2019			ND		35.0			ND	12.9	ND	ND					ND	
Sweeney Raw 12/2/2019			ND		22.5			ND	11.0	ND	ND					ND	
Sweeney Raw 12/16/2019			ND		19.9		ND	ND	13.0	ND	ND					ND	
Sweeney Raw 12/30/2019			ND		8.04		ND	ND	10.1	ND	ND					ND	
Sweeney Raw 1/13/2020			ND		6.36		ND	ND	11.3	ND	ND					ND	
Sweeney Raw 1/27/2020			ND		12.7		ND	ND	13.1	ND	ND					ND	
Sweeney Raw 2/10/2020			ND		4.47		ND	ND	8.18	ND	ND					ND	
Sweeney Raw 2/24/2020			ND		4.61		ND	ND	8.93	ND	ND					ND	
Sweeney Raw 3/9/2020			ND		13.0		ND	ND	9.48	ND	ND					ND	
Sweeney Raw 4/6/2020			ND		11.3		ND	ND	15.2	ND	ND					ND	
Sweeney Raw 5/4/2020			ND		9.42		ND	ND	12.4	ND	ND					ND	
Sweeney Raw 6/1/2020			ND		4.19		ND	ND	11.3	ND	ND					ND	
Sweeney Raw 7/6/2020			ND		17.8		ND	ND	14.8	ND	ND					ND	
Sweeney Raw 7/22/2020			ND		23.5		ND	ND	16.4	ND	ND					ND	
Sweeney Raw 7/23/2020			ND		23.9		ND	ND	17.9	ND	ND					ND	
Sweeney Raw 7/24/2020			ND		24.9		ND	ND	13.2	ND	ND					ND	
Sweeney Raw 7/25/2020			ND		22.5		ND	ND	13.8	ND	ND					ND	
Sweeney Raw 8/2/2020			ND		16.4		ND	ND	13.0	ND	ND					ND	
Sweeney Raw 8/3/2020			ND		15.2		ND	ND	12.1	ND	ND					ND	
Sweeney Raw 8/4/2020			ND		13.5		ND	ND	14.7	ND	ND					ND	
Sweeney Raw 8/5/2020			ND		13.3		ND	ND	12.6	ND	ND					ND	
Sweeney Raw 8/17/2020			ND		10.1		ND	ND	12.3	ND	ND					ND	
Sweeney Raw 8/31/2020			ND		10.3		ND	ND	8.80	ND	ND					ND	
Sweeney Raw 9/14/2020		ND	ND		13.6	ND	ND	ND	12.6	ND	ND	29.5	24.2	ND	19.20	ND	4.83
Sweeney Raw 9/28/2020		ND	ND		13.0	ND	ND	ND	13.4	ND	ND	37.4	20.7	ND	7.81	ND	3.83
Sweeney Raw 10/5/2020		ND	ND		4.45	ND	ND	ND	9.74	ND	ND	10.8	5.88	ND	3.97	ND	1.55
Sweeney Raw 10/12/2020		ND	ND		8.96	ND	ND	ND	13.9	ND	ND	17.7	11.9	ND	7.63	ND	2.41
Sweeney Raw 10/19/2020		ND	ND		7.49	ND	ND	ND	11.6	ND	ND	15.8	9.30	ND	5.90	ND	2.73
Sweeney Raw 10/26/2020		ND	ND		7.16	ND	ND	ND	11.5	ND	ND	13.4	11.2	ND	6.32	ND	2.28
Sweeney Raw 11/2/2020		ND	ND		21.6	18.0	ND	8.65	ND	4.35	8.65	0.79	ND	ND	ND	6.53	ND
Sweeney Raw 11/9/2020		ND	ND		7.00	ND	ND	ND	13.3	ND	ND	14.7	11.0	ND	7.02	ND	1.97
Sweeney Raw 11/16/2020		ND	ND		6.43	ND	ND	ND	8.10	ND	ND	10.9	3.24	ND	3.18	ND	ND
Sweeney Raw 11/23/2020		ND	ND		5.97	ND	ND	ND	14.2	ND	ND	9.29	3.64	ND	3.74	ND	2.05
Sweeney Raw 11/30/2020		ND	ND		10.6	ND	ND	ND	19.9	ND	ND	22.4	15.3	ND	9.04	ND	4.36
Sweeney Raw 12/7/2020		ND	ND		6.28	ND	ND	ND	10.6	ND	ND	12.9	8.16	ND	4.86	ND	2.59
Sweeney Raw 12/14/2020		ND	ND		7.38	ND	ND	ND	13.1	ND	ND	14.9	9.30	ND	6.88	ND	3.08
Sweeney Raw 12/21/2020		ND	ND		3.66	ND	ND	ND	9.35	ND	ND	8.16	4.04	ND	3.45	ND	1.60
Sweeney Raw 12/29/2020		ND	ND		3.61	ND	ND	ND	9.45	ND	ND	6.02	3.04	ND	2.47	ND	1.60
Sweeney Raw 1/4/2021		ND	ND		5.65	ND	ND	ND	12.3	ND	ND	7.22	3.95	ND	3.41	ND	1.74
Sweeney Raw 1/11/2021		ND	ND		6.10	ND	ND	ND	10.9	ND	ND	7.64	3.78	ND	3.80	ND	2.49
Sweeney Raw 1/18/2021		ND	ND		9.25	ND	ND	ND	9.45	ND	ND	19.3	10.9	ND	8.54	ND	3.70
Sweeney Raw 1/25/2021		ND	ND		10.4	ND	ND	ND	8.98	ND	ND	20.8	12.1	ND	9.02	ND	4.04
Sweeney Raw 2/1/2021		ND	ND		4.45	ND	ND	ND	8.03	ND	ND	10.9	5.05	ND	4.07	ND	1.57
Sweeney Raw 2/8/2021		ND	ND		5.55	ND	ND	ND	11.4	ND	ND	12.7	9.00	ND	7.02	ND	2.41
Sweeney Raw 2/15/2021		ND	ND		5.78	ND	ND	ND	7.05	ND	ND	13.0	7.80	ND	6.22	ND	2.12
Sweeney Raw 2/22/2021		ND	ND		7.58	ND	ND	ND	4.72	ND	ND	10.5	3.41	ND	4.96	ND	1.85
Sweeney Raw 3/1/2021		ND	ND		6.96	ND	ND	ND	11.2	ND	ND	11.9	7.27	ND	5.70	ND	2.66
Sweeney Raw 3/8/2021		ND	ND		56.3	ND	ND	ND	12.6	ND	ND	7.99	4.38	ND	3.24	ND	1.47
Sweeney Raw 3/15/2021		ND	ND		10.8	ND	ND	ND	8.96	ND	ND	13.6	10.1	ND	5.80	ND	3.83
Sweeney Raw 3/22/2021		ND	ND		7.98	ND	ND	ND	9.12	ND	ND	11.7	6.96	ND	5.91	ND	2.66
Sweeney Raw 3/29/2021		ND	ND		8.69	ND	ND	ND	11.5	ND	ND	12.3	7.06	ND	7.42	ND	3.40
Sweeney Raw 4/5/2021		ND	ND		2.87	ND	ND	ND	11.4	ND	ND	5.24	ND	ND	3.41	ND	ND
Sweeney Raw 4/12/2021		ND	ND		10.1	ND	ND	ND	9.24	ND	ND	15.3	9.86	ND	10.1	ND	3.84
Sweeney Raw 4/19/2021		ND	ND		8.79	ND	ND	ND	12.1	ND	ND	15.4	8.89	ND	9.73	ND	3.10
Sweeney Raw 4/26/2021		ND	ND		12.6	ND	ND	ND	12.7	ND	ND	31.7	21.5	ND	15.9	ND	4.24
Sweeney Raw 4/29/2021		ND	ND		15.6	ND	ND	ND	12.5	ND	ND	27.8	17.8	ND	16.8	ND	5.24
Sweeney Raw 5/3/2021		ND	ND		21.3	ND	ND	ND	14.2	ND	ND	28.0	19.3	ND	13.1	ND	6.76
Sweeney Raw 5/10/2021		ND	ND		16.0	ND	ND	ND	13.2	ND	ND	46.8	16.5	ND	17.6	ND	5.45
Sweeney Raw 5/17/2021		ND	ND		11.2	ND	ND	ND	14.9	ND	ND	26.6	10.0	ND	15.4	ND	3.50
Sweeney Raw 5/24/2021		ND	ND		11.2	ND	ND	ND	12.9	ND	ND	19.4	8.92	ND	10.7	ND	3.65
Sweeney Raw 6/1/2021		ND	ND		17.2	ND	ND	ND	14.2	ND	ND	24.6	10.5	ND	11.0	ND	5.21
Sweeney Raw 6/7/2021		ND	ND		17.0	ND	ND	ND	15.3	ND	ND	25.1	9.12	ND	20.6	ND	4.99
Sweeney Raw 6/14/2021		ND	ND		13.9	ND	ND	ND	16.0	ND	ND	16.8	4.93	ND	14.0	ND	4.07
Sweeney Raw 6/21/2021		ND	ND		7.36	ND	ND	ND	11.6	ND	ND	11.0	3.31	ND	5.35	ND	2.39
Sweeney Raw 6/28/2021		ND	ND		14.9	ND	ND	ND	19.8	ND	ND	23.6	10.4	ND	9.23	ND	4.07
Sweeney Raw 7/6/2021	4.98	ND	ND	6.68	7.86	ND	ND	ND	8.67	0.094	0.034	ND	19.7	ND	11.3	ND	6.32
Sweeney Raw 7/12/2021	4.52	ND	ND	5.77	6.87	ND	ND	ND	9.52	0.129	ND	ND	7.46	0.043	6.21	ND	6.47

Compound Name	Perfluoropentanoic acid (PFPeA)	Perfluoropentanesulfonate (PFPeS)	Fluorotelomer sulfonate 6:2 (6:2 FTS)	Nafion Byproduct 1	N-ethylperfluoro-1-octanesulfonamidoacetic acid	FBSA	Perfluorohexanoic acid (PFHxA)	Perfluorododecanoic acid (PFDoA)	N-methylperfluoro-1-octanesulfonamide (N-MeFOSA)	Perfluorooctanoic acid (PFOA)	Perfluorononanoic acid (PFNA)	Perfluorodecanesulfonate (PFDS)	N-(2Moroll-ff-2 FOSA	Perfluorohexanesulfonate (PFHxS)	3:3 FTCA	Perfluorobutyric acid (PFBA)	Perfluorobutanesulfonate (PFBS)	Perfluoroheptanoic acid (PFHpA)	Perfluoroheptanesulfonate (PFHpS)	Perfluorononanoic acid (PFNA)	Perfluorotetradecanoic acid (PFTeDA)	Perfluoro-3-methoxypropanoic acid (PFMOPrA or PFMPA)	Fluorotelomer sulfonate 8:2 (8:2 FTS)	Perfluoro(3,5-dioxahexanoic) acid (PFO2HxA)	Perfluoro(3,5,7-trioxaoctanoic) acid (PFO3OA)	Perfluoro(3,5,7,9-tetraoxadecanoic) acid (PFO4DA)	Sodium 2,2,4,4,6,6,8,8,10,10,12,12-octafluoro-3,5,7,9,11-pentaoxadodecanoate (PFO5DA)	N-ethylperfluoro-1-octanesulfonamide (N-EtFOSA)	FHxSA	PFPA	N-AP-FHxSA	Perfluoro-2-methoxyacetic acid (PFMOAA)	Perfluorohexadecanoic acid (PFHxDA)
CAS Number	2706-90-3	2706-91-4	27619-97-2	29911-07-9	2991-50-6	30334-69-1	307-24-4	307-55-1	31506-32-8	335-67-1	335-76-2	335-77-3	34455-29-3	355-46-4	356-02-5	375-22-4	375-73-5	375-85-9	375-92-8	375-95-1	376-06-7	377-73-1	39108-34-4	39492-88-1	39492-89-2	39492-90-5	39492-91-6	41311-50-2	41997-13-1	422-64-0	50598-28-2	674-13-5	67905-19-5
Compound on Table 3+				Y																		Y		Y	Y	Y						Y	
Sample location / Sample date	NG/L	NG/L	NG/L	NG/L	NG/L	NG/L	NG/L	NG/L	NG/L	NG/L	NG/L	NG/L	NG/L	NG/L	NG/L	NG/L	NG/L	NG/L	NG/L	NG/L	NG/L	NG/L	NG/L	NG/L	NG/L	NG/L	NG/L	NG/L	NG/L	NG/L	NG/L	NG/L	NG/L
Sweeney Raw 9/23/2019	15.6	0.665	ND	ND	ND		11.3	ND	ND	5.19	ND	ND		5.03		16.1	3.39	7.98	ND	0.714	ND	8.74	ND	24.1	8.80	3.20		ND				34.2	ND
Sweeney Raw 10/1/2019	21.0	1.23	ND	ND	ND		21.1	ND	ND	7.58	1.01	ND		6.73		9.16	5.60	14.9	ND	1.29	ND	10.4	ND	40.3	14.30	3.74		ND				46.8	ND
Sweeney Raw 10/7/2019	31.8	1.24	ND	ND	ND		33.4	ND	ND	9.63	0.820	ND		7.71		13.8	6.73	22.1	ND	1.40	ND	15.7	ND	50.2	17.5	5.29		ND				57.4	ND
Sweeney Raw 10/21/2019	45.1	1.51	ND	ND	ND		45.5	ND	ND	10.20	1.05	ND		7.41		18.3	6.61	30.2	ND	1.67	ND	11.4	ND	47.7	17.6	6.13		ND				55.6	ND
Sweeney Raw 11/4/2019	36.5	1.60	ND	ND	ND		32.6	ND	ND	9.84	0.961	ND		9.18		17.1	6.52	22.3	ND	1.41	ND	9.21	ND	23.0	9.52	2.65		ND				26.7	ND
Sweeney Raw 11/18/2019	26.9	1.13	ND	ND	ND		24.4	ND	ND	7.96	0.737	ND		5.97		2.05	5.99	14.3	ND	1.61	ND	17.1	ND	34.2	9.97	4.38		ND				41.8	ND
Sweeney Raw 12/2/2019	13.8	0.875	ND	ND	ND		12.4	ND	ND	5.08	ND	ND		5.51		5.95	4.24	6.43	ND	0.778	ND	13.0	ND	20.6	6.01	2.26		ND				24.0	ND
Sweeney Raw 12/16/2019	25.4	0.996	ND	ND	ND		30.8	ND	ND	7.92	0.866	ND		4.26		10.60	6.06	15.70	ND	1.070	ND	6.7	ND	19.8	7.89	2.46	ND	ND				21.3	ND
Sweeney Raw 12/30/2019	14.3	0.907	ND	ND	ND		18.3	ND	ND	6.60	ND	ND		3.78		7.07	4.02	11.9	ND	1.03	ND	ND	ND	7.98	2.69	ND	ND	ND				8.52	ND
Sweeney Raw 1/13/2020	11.3	1.010	ND	ND	ND		15.1	ND	ND	8.92	ND	ND		4.14		5.92	5.01	7.95	ND	0.972	ND	3.5	ND	6.86	2.30	ND	ND	ND				6.98	ND
Sweeney Raw 1/27/2020	10.8	0.681	ND	ND	ND		12.9	ND	ND	7.22	ND	ND		4.02		5.31	3.76	9.10	ND	0.970	ND	8.5	ND	12.4	5.12	1.33	ND	ND				16.0	ND
Sweeney Raw 2/10/2020	4.70	ND	ND	ND	ND		5.79	ND	ND	4.37	ND	ND		2.93		3.29	2.40	5.34	ND	0.713	ND	7.71	ND	4.17	1.36	ND	ND	ND				5.82	ND
Sweeney Raw 2/24/2020	6.13	ND	ND	ND	ND		6.54	ND	ND	5.40	ND	ND		3.11		3.43	2.61	5.45	ND	0.749	ND	2.01	ND	4.04	ND	ND	ND	ND				9.89	ND
Sweeney Raw 3/9/2020	6.32	ND	ND	ND	ND		6.03	ND	ND	5.64	ND	ND		3.61		ND	2.93	4.38	ND	0.903	ND	5.05	ND	11.6	3.61	1.64	ND	ND				18.7	ND
Sweeney Raw 4/6/2020	10.1	0.662	ND	ND	ND		13.7	ND	ND	8.68	ND	ND		4.27		5.53	4.33	11.3	ND	1.42	ND	6.98	ND	12.7	4.93	1.37	ND	ND				9.11	ND
Sweeney Raw 5/4/2020	11.4	1.20	ND	ND	ND		12.0	ND	ND	7.92	ND	ND		5.38		5.75	4.42	6.69	ND	0.819	ND	11.1	ND	9.7	3.58	1.38	ND	ND				10.9	ND
Sweeney Raw 6/1/2020	4.36	ND	ND	ND	ND		4.90	ND	ND	4.63	ND	ND		3.51		3.05	2.38	2.69	ND	1.02	ND	2.67	ND	3.77	ND	ND	ND	ND				3.40	ND
Sweeney Raw 7/6/2020	8.35	0.707	ND	ND	ND		7.40	ND	ND	7.90	0.654	ND		4.83		5.88	3.95	3.90	ND	0.934	ND	9.82	ND	20.0	7.26	2.10	1.19	ND				23.8	ND
Sweeney Raw 7/22/2020	9.51	0.993	ND	ND	ND		7.46	ND	ND	6.83	0.731	ND		5.02		5.76	4.18	3.96	ND	1.12	ND	12.4	ND	24.1	6.65	2.25	1.25	ND				24.8	ND
Sweeney Raw 7/23/2020	9.31	0.768	ND	ND	ND		7.82	ND	ND	6.51	0.748	ND		5.41		6.06	4.41	3.75	ND	1.34	ND	12.3	ND	24.9	6.45	2.71	1.32	ND				22.1	ND
Sweeney Raw 7/24/2020	9.87	0.834	ND	ND	ND		7.67	ND	ND	6.41	0.609	ND		5.05		6.58	4.14	4.65	ND	1.31	ND	7.12	ND	26.5	8.61	2.70	1.58	ND				34.6	ND
Sweeney Raw 7/25/2020	9.39	0.678	ND	ND	ND		7.47	ND	ND	6.32	0.691	ND		4.43		6.42	4.03	3.83	ND	0.982	ND	7.41	ND	25.9	8.51	2.63	1.91	ND				30.0	ND
Sweeney Raw 8/2/2020	7.49	0.675	ND	ND	ND		6.11	ND	ND	6.09	ND	ND		4.46		4.86	4.09	3.31	ND	0.834	ND	10.80	ND	17.3	5.36	2.25	ND	ND				22.0	ND
Sweeney Raw 8/3/2020	8.94	0.804	ND	ND	ND		7.65	ND	ND	6.59	ND	ND		4.59		5.66	4.52	3.74	ND	0.947	ND	10.30	ND	11.7	3.94	1.50	ND	ND				19.0	ND
Sweeney Raw 8/4/2020	9.51	0.771	ND	ND	ND		8.59	ND	ND	7.70	0.790	ND		4.67		5.63	5.12	4.46	ND	1.22	ND	9.73	ND	13.3	3.70	1.45	ND	ND				15.8	ND
Sweeney Raw 8/5/2020	8.94	0.593	ND	ND	ND		8.22	ND	ND	7.01	0.817	ND		4.65		5.71	4.42	4.49	ND	1.28	ND	9.28	ND	12.1	3.43	1.23	ND	ND				15.4	ND
Sweeney Raw 8/17/2020	9.78	0.763	ND	ND	ND		8.65	ND	ND	7.03	0.777	ND		4.16		5.46	5.01	4.48	ND	1.04	ND	7.52	ND	6.64	2.70	1.48	ND	ND				10.3	ND
Sweeney Raw 8/31/2020	7.28	0.745	ND	ND	ND		6.37	ND	ND	5.40	ND	ND		3.97		5.41	4.01	3.41	ND	1.09	ND	4.93	ND	14.20	4.61	1.45	ND	ND				14.4	ND
Sweeney Raw 9/14/2020	8.89	0.785	ND	ND	ND		8.30	ND	ND	5.93	0.763	ND		4.14		6.49	4.40	3.64	ND	1.22	ND	8.11	ND	12.7	5.39	3.22	ND	ND				21.5	ND
Sweeney Raw 9/28/2020	19.9	1.01	ND	2.31	ND		8.79	ND	ND	7.32	0.731	ND		4.16		6.17	4.77	4.88	ND	1.08	ND	ND	ND	8.21	4.77	1.82	ND	ND				45.8	ND
Sweeney Raw 10/5/2020	13.0	0.649	ND	ND	ND		5.82	ND	ND	4.61	ND	ND		3.28		ND	3.02	3.14	ND	0.744	ND	10.8	ND	3.28	1.66	ND	ND	ND				14.8	ND
Sweeney Raw 10/12/2020	8.0	0.833	ND	ND	ND		6.96	ND	ND	6.21	ND	ND		3.96		4.63	3.90	3.85	ND	0.965	ND	ND	ND	5.93	4.07	1.20	ND	ND				36.3	ND
Sweeney Raw 10/19/2020	12.2	0.771	6.08	ND	ND		8.88	ND	ND	6.48	ND	ND		4.15		5.96	4.66	4.10	ND	1.16	0.834	6.3	ND	4.99	3.14	ND	ND	ND				22.0	1.22
Sweeney Raw 10/26/2020	7.37	0.601	ND	ND	ND		6.55	ND	ND	6.50	ND	ND		3.60		4.71	3.84	3.40	ND	1.03	ND	ND	ND	5.34	3.12	ND	ND	ND				26.9	ND
Sweeney Raw 11/2/2020	ND	5.74	ND	ND	5.68		5.68	3.55	3.45	ND	1.02	ND		ND		ND	7.84	4.65	1.48	ND	ND	37.2	ND	ND	ND	ND	ND	ND				ND	ND
Sweeney Raw 11/9/2020	10.6	0.985	ND	ND	ND		9.25	ND	ND	8.19	0.721	ND		4.83		6.83	4.96	4.43	ND	1.18	ND	5.36	ND	5.79	3.62	ND	ND	ND				30.3	ND
Sweeney Raw 11/16/2020	5.86	ND	ND	ND	ND		4.54	ND	ND	4.59	ND	ND		2.51		4.55	2.49	2.45	ND	0.955	ND	ND	ND	5.42	2.70	ND	ND	ND				18.2	ND
Sweeney Raw 11/23/2020	5.41	0.658	ND	ND	ND		5.40	ND	ND	7.19	ND	ND		3.67		4.60	3.69	3.33	ND	1.09	ND	7.64	ND	4.22	1.91	ND	ND	ND				12.0	ND
Sweeney Raw 11/30/2020	8.16	0.788	ND	ND	ND		7.33	ND	ND	9.17	0.812	ND		4.34		5.73	4.34	4.22	ND	1.33	ND	15.1	ND	8.32	3.96	1.47	ND	ND				39.6	ND
Sweeney Raw 12/7/2020	6.37	0.651	ND	ND	ND		5.37	ND	ND	6.52	ND	ND		3.55		5.26	3.94	3.49	ND	1.05	ND	ND	ND	3.79	1.85	ND	ND	ND				18.3	ND
Sweeney Raw 12/14/2020	6.81	0.813	ND	ND	ND		6.47	ND	ND	7.90	ND	ND		4.07		5.41	4.24	4.03	ND	1.05	ND	ND	ND	4.87	2.35	ND	ND	ND				28.4	ND
Sweeney Raw 12/21/2020	4.81	ND	ND	ND	ND		4.24	ND	ND	4.53	ND	ND		3.17		4.77	2.65	2.54	ND	0.840	ND	ND	ND	2.25	1.26	ND	ND	ND				8.92	ND
Sweeney Raw 12/29/2020	4.21	ND	ND	ND	ND		3.95	ND	ND	5.14	ND	ND		2.62		ND	2.28	2.44	ND	0.78	ND	ND	ND	2.04	ND	ND	ND	ND				8.29	ND
Sweeney Raw 1/4/2021	5.46	ND	ND	ND	ND		6.03	ND	ND	6.96	0.716	ND		3.26		4.57	3.64	3.22	ND	1.13	ND	ND	ND	3.76	1.28	ND	ND	ND				4.08	ND
Sweeney Raw 1/11/2021	4.07	ND	ND	ND	ND		4.37	ND	ND	6.74	ND	ND		3.18		ND	2.56	2.35	ND	0.951	ND	ND	ND	4.25	1.32	ND	ND	ND				3.93	ND
Sweeney Raw 1/18/2021	3.41	ND	ND	ND	ND		3.09	ND	ND	4.47	ND	ND		3.15		3.01	2.40	1.92	ND	0.682	ND	ND	ND	6.09	2.43	ND	ND	ND				30.1	ND
Sweeney Raw 1/25/2021	4.17	ND	ND	ND	ND		3.70	ND	ND	4.67	ND	ND		3.53		4.17	2.96	2.17	ND	0.646	ND	ND	ND	6.38	2.88	ND	ND	ND				34.8	ND
Sweeney Raw 2/1/2021	3.99	ND	ND	ND	ND		4.25	ND	ND	4.95	ND	ND		2.38		3.96	2.39	2.50	ND	0.687	ND	ND	ND	2.57	1.46	ND	ND	ND				10.5	ND
Sweeney Raw 2/8/2021	5.69	1.32	ND	ND	ND		6.32	ND	ND	6.58	ND	ND		4.02		4.61	3.83	3.22	ND	0.917	ND	ND	ND	3.47	ND	ND	ND	ND				5.30	ND
Sweeney Raw 2/15/2021	3.49	ND	ND	ND	ND		3.36	ND	ND	3.97	ND	ND		2.60		ND	2.54	1.84	ND	0.613	ND	ND	ND	3.55	1.45	ND	ND	ND				5.09	ND
Sweeney Raw 2/22/2021	1.71	ND	ND	ND	ND		1.84	ND	ND	2.40	ND	ND		1.56		2.05	1.26	1.44	ND	ND	ND	ND	ND	3.44	ND	ND	ND	ND				7.58	ND
Sweeney Raw 3/1/2021	3.63	0.727	ND	ND	ND		3.60	ND	ND	5.37	ND	ND		3.53		ND	2.73	2.72	ND	0.865	ND	ND	ND	4.06	2.13	ND	ND	ND				15.8	ND
Sweeney Raw 3/8/2021	3.92	0.672	ND	ND	ND		5.17	ND	ND	6.30	ND	ND		3.35		3.61	2.95	3.49	ND	0.892	ND	ND	ND	3.04	ND	ND	ND	ND				11.5	ND
Sweeney Raw 3/15/2021	4.38	ND	ND	ND	ND		4.77	ND	ND	5.80	ND	ND		3.16		3.75	3.08	3.34	ND	0.762	ND	ND	ND	7.00	3.44	ND	ND	ND				38.7	ND
Sweeney Raw 3/22/2021	4.02	ND	ND	ND	ND		4.25	ND	ND	4.15	ND	ND		2.78		ND	2.31	3.06	ND	0.690	ND	ND	ND	4.45	2.17	ND	ND	ND				21.5	ND
Sweeney Raw 3/29/2021	5.69	0.731	ND	ND	ND		5.55	ND	ND	7.34	ND	ND		3.96		4.54	3.56	3.80	ND	0.908	ND	ND	ND	5.19	3.37	ND	ND	ND				17.2	ND
Sweeney Raw 4/5/2021	4.37	0.652	ND	ND	ND		4.09	ND	ND	6.27	ND	ND		3.24		4.54	3.05	2.91	ND	0.912	ND	ND	ND	1.94	ND	ND	ND	ND				4.37	ND
Sweeney Raw 4/12/2021	3.68	ND	ND	ND	ND		3.09	ND	ND	4.14	ND	ND		3.00		4.76	2.30	2.11	ND	0.670	ND	2.11	ND	7.49	3.89	1.16	ND	ND				27.6	ND
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CFPUA PFAS DATA from Raw Water Intake

Grayed out cells denote the compound was not analyzed for that sample date. This could be due to the unavailability of standards for the compound, compound was inadvertently not run within the analyses, or a quality control issue with the compound which made it not valid and non-reportable.

Compound Name		NVHOS	Perfluoro(2-ethoxyethane)sulfonic acid (PFEESA)	Fluorotelomer sulfonate 10:2 (10:2 FTS)	FMPA	2,3,3,3-Tetrafluoro-2-[1,1,2,2,3,3-heptafluoro(propyl)oxy]-propanoic acid (PFPrOPrA) GenX	Nonafluoro-3,6-dioxaheptanoic acid (PFMOAA)	Perfluorooctadecanoic acid (PFODA)	2-(N-ethyl)perfluoro-1-octanesulfonamido)-ethanol (N-EtFOSE)	Perfluorooctanesulfonate (PFOS)	Perfluoroundecanoic acid (PFUdA)	N-methylperfluoro-1-octanesulfonamidoacetic acid	Byproduct 4 (BP4); R-PSDA	Byproduct 5 (BP5); Hydrolyzed PSDA	Byproduct 6 (BP6); R-PSDCA	R-EVE	2-(N-methyl)perfluoro-1-octanesulfonamido)-ethanol (N-MeFOSE)	Sodium 2,3,3,3-tetrafluoro-2-(perfluoroethoxy)propanoic acid (PEPA)	Perfluoropentanoic acid (PFPeA)	Perfluoroheptanesulfonate (PFHpS)	Fluorotelomer sulfonate 6:2 (6:2 FTS)	Nafion Byproduct 1	N-ethylperfluoro-1-octanesulfonamidoacetic acid	FBSA	Perfluorohexanoic acid (PFHxA)	Perfluorododecanoic acid (PFDoA)	N-methylperfluoro-1-octanesulfonamide (N-MeFOSA)	Perfluorooctanoic acid (PFOA)	Perfluorodecanoic acid (PFDA)	Perfluorodecanesulfonate (PFDS)	N-(2Man)-P-6:2 FOSA	Perfluorohexanesulfonate (PFHxS)	3:3 FTCA	Perfluorobutyric acid (PFBA)	Perfluorobutanesulfonate (PFBS)	Perfluoroheptanoic acid (PFHpA)	Perfluoroheptanesulfonate (PFHpS)	Perfluorononanoic acid (PFNA)	Perfluorotetradecanoic acid (PFTeDA)	Perfluoro-3-methoxypropanoic acid (PFMOPrA or PFMPA)	Fluorotelomer sulfonate 8:2 (8:2 FTS)	Perfluoro(3,5-dioxahexanoic) acid (PFO2HxA)	Perfluoro(3,5,7-trioxaoctanoic) acid (PFO3OA)	Perfluoro(3,5,7,9-tetraoxadecanoic) acid (PFO4DA)	Sodium 2,2,4,4,6,6,8,8,10,10,12,12-tridecafluoro-3,5,7,9,11-pentaoxadodecanoate (PFO5DA)	N-ethylperfluoro-1-octanesulfonamide (N-EtFOSA)	FHxSA	PFPA	N-AP-FHxSA	Perfluoro-2-methoxyacetic acid (PFMOAA)	Perfluorohexadecanoic acid (PFHxDA)
CAS Number		1190193-86-8	113507-82-7	120226-60-0	13140-29-9	13252-13-6	13577-25-6	16517-11-6	1691-99-2	1763-23-1	2058-94-8	2355-31-9	2416366-18-0	2416366-19-1	2416366-21-5	2416366-22-6	24448-09-7	267239-61-2	2706-90-3	2706-91-4	27619-97-2	29911-07-9	2991-50-6	30334-69-1	307-24-4	307-55-1	31506-32-8	335-67-1	335-76-2	335-77-3	34455-29-3	355-46-4	355-02-5	375-22-4	375-73-5	375-85-9	375-92-8	375-95-1	376-06-7	377-73-1	39108-34-4	39492-88-1	39492-89-2	39492-90-5	39492-91-6	4151-50-2	41997-13-1	422-64-0	50598-28-2	674-13-5	67905-19-5
Compound on Table 3+		Y	Y		Y	Y	Y						Y	Y	Y	Y		Y				Y																		Y		Y	Y	Y						Y	
Sample location	Sample date	NG/L	NG/L	NG/L	NG/L	NG/L	NG/L	NG/L	NG/L	NG/L	NG/L	NG/L	NG/L	NG/L	NG/L	NG/L	NG/L	NG/L	NG/L	NG/L	NG/L	NG/L	NG/L	NG/L	NG/L	NG/L	NG/L	NG/L	NG/L	NG/L	NG/L	NG/L	NG/L	NG/L	NG/L	NG/L	NG/L	NG/L	NG/L	NG/L	NG/L	NG/L	NG/L	NG/L	NG/L	NG/L	NG/L	NG/L	NG/L	NG/L	NG/L
Sweeney Raw	7/19/2021	2.26	ND	ND	ND	3.64	ND	ND	ND	10.3	0.126	ND	ND	4.77	ND	7.24	ND	ND	6.90	0.616	0.271	ND	ND	0.588	6.44	ND	ND	5.96	0.420	ND		3.77		5.15	6.28	3.45	0.258	0.908	ND	ND	ND	2.76	2.30	ND	ND	ND				34.6	ND
Sweeney Raw	8/2/2021	5.44	ND	ND	14.1	5.73	ND	ND	ND	13.8	0.176	ND	63.9	17.4	ND	21.5	ND	ND	8.85	0.814	ND	ND	ND	0.535	8.34	ND	ND	5.45	0.540	ND		4.94		5.96	5.93	3.48	0.402	0.928	0.397	ND	ND	2.43	1.76	1.74	ND	ND				52.2	ND
Sweeney Raw	8/9/2021	5.06	ND	ND	ND	8.80	ND	ND	ND	5.93	ND	ND	ND	12.5	ND	13.7	ND	13.7	5.53	0.598	ND	ND	ND	ND	3.83	ND	ND	4.00	0.364	ND		2.76		5.29	3.12	2.09	0.183	0.657	ND	ND	ND	4.57	3.95	2.06	ND	ND				91.7	ND
Sweeney Raw	8/16/2021	ND	ND	ND	9.49	11.0	ND	ND	ND	8.45	ND	ND	ND	9.86	ND	6.80	ND	ND	ND	ND	0.334	ND	ND	ND	5.08	ND	ND	3.92	ND	ND		3.36		ND	ND	2.16	ND	0.549	ND	ND	ND	4.96	2.92	ND	ND	ND				79.6	ND
Sweeney Raw	8/23/2021	7.68	ND	ND	12.9	10.0	ND	ND	ND	10.1	ND	ND	ND	17.8	ND	9.56	ND	10.4	10.2	0.863	ND	ND	ND	0.909	7.24	ND	ND	5.74	0.473	ND		5.93		ND	ND	3.26	ND	0.788	ND	ND	ND	10.2	4.86	ND	ND	ND				118	ND
Sweeney Raw	8/30/2021	3.83	ND	ND	5.62	5.05	ND	ND	ND	10.4	0.193	ND	38.6	11.7	ND	10.5	ND	9.12	12.5	0.716	0.199	ND	ND	0.894	8.26	ND	ND	6.09	0.760	ND		4.28		6.90	5.91	4.27	ND	0.918	ND	ND	ND	4.95	3.33	ND	ND	ND				64.3	ND
Sweeney Raw	9/7/2021	2.26	ND	ND	ND	5.69	ND	ND	ND	13.3	0.190	ND	ND	7.42	ND	4.95	ND	ND	11.5	0.575	ND	ND	ND	ND	7.29	ND	ND	6.16	0.879	ND		4.59		ND	ND	5.05	0.208	0.940	ND	ND	ND	1.69	2.53	ND	ND	ND				75.1	ND
Sweeney Raw	9/13/2021	3.34	ND	ND	11.4	12.4	ND	ND	ND	14.0	ND	ND	ND	8.84	ND	5.71	ND	11.6	11.1	1.05	0.669	ND	ND	0.801	9.90	ND	ND	7.51	0.614	ND		5.24		7.82	9.04	4.84	ND	0.959	ND	ND	ND	8.45	6.02	ND	ND	ND				133	ND
Sweeney Raw	9/20/2021	9.44	ND	ND	7.88	20.7	ND	ND	ND	12.3	0.271	0.137	38.7	14.8	ND	11.7	ND	ND	12.1	0.971	0.270	ND	ND	1.22	8.86	ND	ND	6.72	0.621	ND		5.71		5.63	5.59	3.88	0.249	1.01	0.343	0.223	ND	9.40	2.50	1.95	ND	ND				103	ND
Sweeney Raw	9/27/2021	8.60	ND	ND	4.21	5.69	ND	ND	ND	14.6	0.237	ND	ND	5.20	ND	4.83	ND	ND	18.4	0.995	0.354	ND	ND	0.726	11.0	ND	ND	7.46	0.662	ND		9.23		5.77	8.21	5.20	0.221	0.922	ND	ND	ND	4.37	ND	ND	ND	ND				21.9	ND
Sweeney Raw	10/4/2021	1.85	ND	ND	ND	4.39	ND	ND	ND	6.53	0.206	ND	38.4	20.3	ND	17.3	ND	ND	4.53	0.348	ND	ND	ND	ND	3.30	ND	ND	2.94	0.387	ND		1.89		4.01	1.72	1.74	0.134	0.642	ND	ND	ND	2.12	1.33	ND	ND	ND				32.5	ND
Sweeney Raw	10/11/2021	3.78	ND	ND	4.47	9.84	ND	ND	ND	7.22	0.183	ND	ND	16.6	ND	14.4	ND	ND	5.33	0.404	ND	ND	ND	ND	3.52	ND	ND	3.43	0.345	ND		2.56		3.92	2.65	1.99	0.143	0.680	0.700	ND	ND	6.58	2.43	ND	ND	ND				86.5	ND
Sweeney Raw	10/12/2021	3.92	ND	ND	6.52	12.0	ND	ND	ND	8.10	0.210	ND	ND	14.4	ND	12.5	ND	7.29	6.83	0.406	ND	ND	ND	ND	4.14	ND	ND	3.75	0.322	ND		3.17		3.36	2.24	2.06	ND	0.647	ND	ND	ND	10.12	2.82	ND	ND	ND				91.3	ND
Sweeney Raw	10/18/2021	1.80	ND	ND	4.28	4.86	ND	ND	ND	11.8	0.208	ND	ND	5.17	ND	4.15	ND	ND	8.29	0.567	0.564	ND	ND	0.415	7.08	ND	ND	6.49	0.742	ND		3.36		4.78	3.08	3.45	0.205	1.16	0.284	ND	ND	3.53	2.07	ND	ND	ND				24.3	ND
Sweeney Raw	10/19/2021	1.72	ND	ND	4.05	4.03	ND	ND	ND	9.92	ND	ND	ND	6.19	ND	5.85	ND	ND	8.58	0.403	0.414	ND	ND	0.398	6.06	ND	ND	4.80	0.584	ND		3.21		4.26	2.60	2.74	0.168	0.920	ND	ND	ND	5.09	1.61	ND	ND	ND				26.9	ND
Sweeney Raw	10/25/2021	2.00	ND	ND	3.95	5.77	ND	ND	ND	6.90	0.180	ND	ND	7.07	ND	6.6	ND	ND	ND	0.478	ND	ND	ND	0.259	4.38	ND	ND	3.57	0.466	ND		2.75		3.24	2.55	2.49	ND	0.717	ND	ND	ND	5.75	1.64	ND	ND	ND				49.3	ND
Sweeney Raw	11/1/2021	7.72	ND	ND	14.4	12.6	ND	ND	ND	7.82	ND	ND	ND	14.3	ND	8.3	ND	17.8	11.9	0.749	ND	ND	ND	0.591	9.34	ND	ND	5.06	0.452	ND		3.82		5.29	5.05	3.68	ND	0.744	ND	ND	ND	15.0	3.33	ND	ND	ND				104	ND
Sweeney Raw	11/8/2021	6.73	ND	ND	17.5	17.5	ND	ND	ND	9.51	ND	ND	32.9	17.3	ND	11.7	ND	7.71	14.4	0.711	0.217	ND	ND	0.631	10.5	ND	ND	5.70	0.267	ND		5.00		5.70	6.12	3.91	0.331	0.671	ND	ND	ND	12.6	4.72	ND	ND	ND				67.5	ND
Sweeney Raw	11/15/2021	11.6	ND	ND	12.7	11.9	ND	ND	ND	11.5	ND	ND	46.6	24.0	ND	18.2	ND	ND	20.0	0.978	0.704	ND	ND	0.983	13.2	ND	ND	6.79	0.279	ND		7.13		6.92	7.61	4.03	ND	0.749	ND	ND	ND	9.92	2.23	ND	ND	ND				69.7	ND
Sweeney Raw	11/22/2021	8.25	ND	ND	8.49	10.6	ND	ND	ND	10.2	ND	ND	ND	21.4	ND	14.3	ND	ND	19.0	0.845	0.276	ND	ND	0.874	14.5	ND	ND	6.35	0.314	ND		5.57		7.10	7.27	4.77	0.289	0.701	ND	ND	ND	9.09	3.12	ND	ND	ND				78.2	ND
Sweeney Raw	11/29/2021	8.5	ND	0.231	10.9	11.8	ND	ND	ND	9.36	ND	ND	27.2	15.6	ND	13.5	ND	ND	17.7	0.976	ND	ND	ND	0.911	12.8	0.213	ND	7.29	0.463	ND		4.82		7.46	9.07	4.12	0.298	0.929	0.266	ND	0.253	12.2	3.36	ND	ND	ND				90.7	ND
Sweeney Raw	12/6/2021	10.4	ND	ND	10.2	12.9	ND	ND	ND	15.7	ND	ND	ND	27.2	ND	25.2	ND	ND	23.0	1.26	0.383	ND	ND	1.57	17.1	ND	ND	11.2	0.889	ND		8.28		10.5	10.4	7.13	ND	1.23	ND	ND	ND	12.8	4.74	ND	ND	ND				82.7	ND
Sweeney Raw	12/13/2021	7.25	0.285	ND	12.3	18.9	0.440	ND	ND	12.2	0.330	0.363	51.2	32.1	ND	51.7	ND	ND	18.2	0.876	0.416	ND	ND	1.34	15.4	0.255	ND	10.8	0.581	ND		5.56		8.52	7.12	3.83	0.336	1.69	ND	0.396	ND	12.8	4.97	ND	ND	ND				99.9	ND
Sweeney Raw	12/20/2021	7.96	ND	ND	8.75	8.56	ND	ND	ND	8.49	ND	ND	61.6	20.6	ND	18.1	ND	6.30	10.9	0.784	0.224	ND	ND	0.858	8.64	ND	ND	6.01	0.506	ND		4.97		5.06	6.41	3.48	0.365	0.742	ND	ND	ND	6.17	2.61	ND	ND	ND				67.3	ND
Sweeney Raw	12/28/2021	10.0	ND	ND	8.60	13.3	ND	ND	ND	8.90	ND	ND	73.7	21.6	ND	20.6	ND	5.60	11.3	0.837	0.137	ND	ND	0.904	9.08	ND	ND	5.92	0.558	ND		4.69		6.24	6.39	3.63	0.214	0.749	ND	ND	ND	8.54	1.99	ND	ND	ND				83.5	ND
Sweeney Raw	1/3/2022	7.25	ND	ND	6.66	8.89	ND	ND	ND	12.7	0.141	ND	ND	31.9	0.046	12.8	ND	ND	14.7	1.17	0.527	ND	ND	0.657	10.3	ND	ND	6.49	0.630	ND		6.60		7.96	7.34	3.93	0.286	0.914	ND	ND	ND	9.47	3.58	ND	ND	ND				76.7	ND
Sweeney Raw	1/10/2022	ND	ND	ND	ND	3.32	ND	NR	ND	7.14	ND	ND	6.9	3.8	ND	6.2	ND	ND	ND	0.49	0.134	ND	ND	0.235	4.64	ND	ND	3.87	0.389	ND	ND	2.77	ND	ND	3.21	2.23	0.238	0.677	0.208	ND	ND	ND	1.42	ND	ND	ND	ND	21.2	ND	42.6	ND
Sweeney Raw	1/18/2022	ND	ND	ND	ND	2.43	ND	ND	ND	7.53	ND	ND	ND	ND	ND	ND	ND	ND	6.84	ND	ND	ND	ND	ND	6.77	ND	ND	5.32	0.591	ND	ND	ND	ND	4.24	2.27	2.85	ND	0.467	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	12.2	ND
Sweeney Raw	1/24/2022	1.45	ND	ND	ND	2.87	ND	ND	ND	5.83	0.179	ND	9.93	5.91	ND	8.08	ND	ND	4.06	0.353	0.256	ND	ND	0.335	3.78	ND	ND	3.41	0.369	ND	ND	2.87	ND	ND	3.14	2.13	ND	0.621	ND	ND	ND	1.77	ND	ND	ND	ND	ND	17.7	ND	35.4	ND
Sweeney Raw	1/31/2022	ND	ND	ND	4.55	3.94	ND	ND	ND	8.46	ND	ND	ND	3.40	ND	6.45	ND	ND	5.93	0.704	0.157	ND	ND	0.364	6.45	ND	ND	5.44	0.229	ND	ND	2.53	ND	3.72	4.84	2.72	0.213	0.574	ND	ND	ND	4.06	ND	ND	ND	ND	ND	36.5	ND	27.5	ND
Sweeney Raw	2/7/2022	3.22	ND	ND	4.89	4.83	ND	ND	ND	7.05	ND	ND	9.12	2.75	ND	10.9	ND	2.83	6.36	0.395	0.337	ND	ND	0.461	4.92	ND	ND	4.91	0.321	ND	ND	2.47	ND	4.23	3.71	2.34	ND	0.630	ND	ND	ND	4.75	ND	ND	ND	ND	ND	31.2	ND	30.2	ND
Sweeney Raw	2/21/2022	4.34	ND	ND	ND	5.64	ND	ND	ND	7.37	ND	ND	20.9	9.38	ND	19.6	ND	3.16	5.86	0.690	0.340	ND	ND	0.520	5.08	ND	ND	4.21	0.346	ND	ND	3.59	ND	3.09	4.48	2.35	0.236	0.531	ND	ND	ND	1.75	ND	ND	ND	ND	ND	24.4	ND	40.2	ND
Sweeney Raw	2/28/2022	4.45	ND	ND	ND	4.33	ND	ND	ND	11.55	ND	ND	11.2	3.77	ND	12.8	ND	ND	7.65	0.817	0.532	ND	ND	0.367	7.24	ND	ND	5.56	0.359	ND	ND	5.13	ND	4.86	5.51	3.19	ND	0.715	ND	ND	ND	9.32	1.56	ND	ND	ND	ND	32.4	ND	47.4	ND
Sweeney Raw	3/7/2022	1.94	ND	ND	ND	2.81	ND	ND	ND	13.3	0.232	ND	6.65	1.86	ND	6.13	ND	ND	8.42	0.978	0.422	ND	ND	1.06	10.6	ND	ND	7.81	0.439	ND	ND	5.00	ND	5.18	6.56	4.00	ND	0.878	ND	ND	ND	4.66	ND	ND	ND	ND	ND	33.7	ND	21.7	ND
Sweeney Raw	3/14/2022	4.15	ND	ND	ND	1.63	ND	ND	ND	10.3	ND	ND	7.96	1.84	ND	3.65	ND	ND	7.54	0.931	0.340	ND	ND	0.738	6.64	ND	ND	5.55	0.384	ND	ND	4.77	ND	4.01	4.58	2.89	0.276	0.637	ND	ND	ND	1.54	ND	ND	ND	ND	ND	8.71	ND	10.0	ND
Sweeney Raw	3/21/2022	ND	ND	ND	ND	1.04	ND	ND	ND	5.62	ND	ND	ND	1.31	ND	ND	ND	ND	2.77	0.292	ND	ND	ND	ND	2.55	ND	ND	2.93	0.285	ND	ND	1.61	ND	ND	1.55	1.50	ND	0.570	ND	ND	ND	ND	ND	ND	ND	ND	ND	4.17	ND	11.1	ND
Sweeney Raw	3/28/2022	ND	ND	ND	1.88	1.52	ND	ND	ND	9.06	ND	ND	ND	1.14	ND	2.81	ND	ND	4.44	0.621	ND	ND	ND	0.356	4.54	ND	ND	5.28	0.379	ND	ND	3.02	ND	3.52	2.74	2.29	0.258	0.732	ND	ND	ND	1.80	ND	ND	ND	ND	ND	4.81	ND	15.2	ND

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Grayed out cells denote the compound was not analyzed for that sample date. This could be due to the unavailability of standards for the compound, compound was inadvertently not ran within the analyses, or a quality control issue with the compound which made it not valid and non-reportable.

Compound Name		Perfluorooctanesulfonate (PFAS)	Perfluoroethoxypropionic acid (EVE Acid)	Perfluorotridecanoic acid (PFTrDA)	Nafion Byproduct 2	Perfluorooctanesulfonamide (PFOSA)	9-chlorohexadecafluoro-3-oxanonane-1-sulfonate	Fluorotelomer sulfonate 4:2 (4:2 FTS)	11-chloroeicosafluoro-3-oxaundecane-1-sulfonate (PF3OUdS)	Hydro-EVE	Perfluoro-1-dodecanesulfonate (PFDoS)	4-(Heptafluoroisopropoxy)hexafluorobutanoic acid (PFECA-G)	7:3 FTCA	Perfluoro-4-methoxybutanoic acid (PFMOBA or PFMBA) - Sol PMPA	5:3 FTCA	Sodium dodecafluoro-3H-4,8-dioxanonanoate (ADONA)	1,1,2,2-Tetrafluoro-2-(1,2,2,2-tetrafluoroethoxy)ethane sulfonic acid (NVHOS)	Total of all Compounds	Total of Table 3+ Compounds	% of Total that is Chemours
CAS Number		68259-12-1	69087-48-3	72629-94-8	748036-20-2	754-91-6	756426-58-1	757124-72-4	763051-92-9	773804-62-9	79780-39-5	801212-59-9	812-70-4	863090-89-5	914637-49-3	919005-14-4	801209-59-4			
Compound on Table 3+			Y		Y					Y		Y		Y			Y			
Sample location	Sample date	NG/L	NG/L	NG/L	NG/L	NG/L	NG/L	NG/L	NG/L	NG/L	NG/L	NG/L	NG/L	NG/L	NG/L	NG/L	NG/L	Total	NG/L	%
Sweeney Raw	9/12/2018	ND		ND	1.70	ND	ND	ND	ND			ND		7.29		ND		191.16	72.37	38
Sweeney Raw	9/14/2018	ND		ND	3.29	ND	ND	ND	ND			ND		2.83		ND		297.30	175.02	59
Sweeney Raw	9/15/2018	ND		ND	1.85	ND	ND	ND	ND			ND		5.37		ND		247.14	111.20	45
Sweeney Raw	9/16/2018	ND		ND	1.97	ND	ND	ND	ND			ND		9.7		ND		233.10	125.04	54
Sweeney Raw	9/17/2018	ND		ND	2.35	ND	ND	ND	ND			ND		13.8		ND		163.90	94.53	58
Sweeney Raw	9/18/2018	ND		ND	1.34	ND	ND	ND	ND			ND		ND		ND		97.26	47.58	49
Sweeney Raw	9/19/2018	ND		ND	ND	ND	ND	ND	ND			ND		ND		ND		74.71	41.64	56
Sweeney Raw	9/20/2018	ND		ND	ND	ND	ND	ND	ND			ND		ND		ND		79.85	44.84	56
Sweeney Raw	9/21/2018	ND		ND	ND	ND	ND	ND	ND			ND		ND		ND		83.74	47.50	57
Sweeney Raw	9/22/2018	ND		ND	ND	ND	ND	ND	ND			ND		ND		ND		60.67	30.14	50
Sweeney Raw	9/23/2018	ND		ND	ND	ND	ND	ND	ND			ND		ND		ND		46.88	20.61	44
Sweeney Raw	9/24/2018	ND		ND	ND	ND	ND	ND	ND			ND		8.71		ND		58.03	26.92	46
Sweeney Raw	9/25/2018	ND		ND	ND	ND	ND	ND	ND			ND		ND		ND		67.17	29.78	44
Sweeney Raw	9/26/2018	ND		ND	ND	ND	ND	ND	ND			ND		24.8		ND		140.34	86.93	62
Sweeney Raw	9/27/2018	ND		ND	ND	ND	ND	ND	ND			ND		21.0		ND		113.62	76.41	67
Sweeney Raw	9/28/2018	ND		ND	1.68	ND	ND	ND	ND			ND		ND		ND		148.07	95.60	65
Sweeney Raw	9/29/2018	ND		ND	1.4	ND	ND	ND	ND			ND		9.31		ND		144.44	93.22	65
Sweeney Raw	9/30/2018	ND		ND	ND	ND	ND	ND	ND			ND		14.3		ND		116.26	55.10	47
Sweeney Raw	10/1/2018	ND		ND	ND	ND	ND	ND	ND			ND		10.3		ND		117.46	46.07	39
Sweeney Raw	10/2/2018	ND		ND	ND	ND	ND	ND	ND			ND		17.1		ND		121.85	45.90	38
Sweeney Raw	10/3/2018	ND		ND	ND	ND	ND	ND	ND			ND		17.3		ND		129.01	50.89	39
Sweeney Raw	10/4/2018	ND		ND	ND	ND	ND	ND	ND			ND		21.7		ND		137.04	52.03	38
Sweeney Raw	10/5/2018	ND		ND	ND	ND	ND	ND	ND			ND		25.3		ND		141.83	59.36	42
Sweeney Raw	10/6/2018	ND		ND	ND	ND	ND	ND	ND			ND		23.6		ND		155.18	58.14	37
Sweeney Raw	10/7/2018	ND		ND	ND	ND	ND	ND	ND			ND		15.9		ND		156.79	47.65	30
Sweeney Raw	10/8/2018	ND		ND	ND	ND	ND	ND	ND			ND		ND		ND		144.34	29.62	21
Sweeney Raw	10/9/2018	ND		ND	ND	ND	ND	ND	ND			ND		ND		ND		152.73	32.45	21
Sweeney Raw	10/10/2018	ND		ND	ND	ND	ND	ND	ND			ND		ND		ND		147.25	25.02	17
Sweeney Raw	10/11/2018	ND		ND	ND	ND	ND	ND	ND			ND		ND		ND		146.96	29.89	20
Sweeney Raw	10/12/2018	ND		ND	ND	ND	ND	ND	ND			ND		ND		ND		155.10	40.49	26
Sweeney Raw	11/20/2018	ND		ND	ND	ND	ND	ND	ND			ND		ND		ND		39.95	16.84	42
Sweeney Raw	11/27/2018	ND		ND	ND	ND	ND	ND	ND			ND		ND		ND		97.30	38.51	40
Sweeney Raw	12/3/2018	ND		ND	ND	ND	ND	ND	ND			ND		ND		ND		85.85	17.48	20
Sweeney Raw	12/10/2018	ND		ND	ND	ND	ND	ND	ND			ND		13.6		ND		122.92	60.98	50
Sweeney Raw	12/17/2018	ND		ND	1.39	ND	ND	ND	ND			ND		ND		ND		95.77	62.81	66
Sweeney Raw	12/24/2018	ND		ND	ND	ND	ND	ND	ND			ND		ND		ND		55.04	14.53	26
Sweeney Raw	12/31/2018	ND		ND	ND	ND	ND	ND	ND			ND		ND		ND		83.19	27.97	34
Sweeney Raw	1/7/2019	ND		ND	ND	ND	ND	ND	ND			ND		ND		ND		80.75	24.08	30
Sweeney Raw	1/14/2019	ND		ND	ND	ND	ND	ND	ND			ND		ND		ND		82.53	21.95	27
Sweeney Raw	1/21/2019	ND		ND	ND	ND	ND	ND	ND			ND		ND		ND		92.05	45.31	49
Sweeney Raw	1/28/2019	ND		ND	ND	ND	ND	ND	ND			ND		ND		ND		78.43	24.17	31
Sweeney Raw	2/4/2019	ND		ND	ND	ND	ND	ND	ND			ND		6.17		ND		100.73	57.00	57
Sweeney Raw	2/11/2019	ND		ND	ND	ND	ND	ND	ND			ND		ND		ND		109.00	62.38	57
Sweeney Raw	2/18/2019	ND		ND	ND	ND	ND	ND	ND			ND		7.23		ND		90.49	49.34	55
Sweeney Raw	2/25/2019	ND		ND	ND	ND	ND	ND	ND			ND		ND		ND		40.99	12.29	30
Sweeney Raw	3/4/2019	ND		ND	ND	ND	ND	ND	ND			ND		3.57		ND		58.45	33.20	57
Sweeney Raw	3/11/2019	ND		ND	ND	ND	ND	ND	ND			ND		2.31		ND		63.29	31.34	50
Sweeney Raw	3/18/2019	ND		ND	ND	ND	ND	ND	ND			ND		4.04		ND		75.86	29.45	39
Sweeney Raw	3/25/2019	ND		ND	ND	ND	ND	ND	ND			ND		ND		ND		52.52	11.90	23
Sweeney Raw	4/1/2019	ND		ND	ND	ND	ND	ND	ND			ND		1.72		ND		77.70	39.76	51
Sweeney Raw	4/8/2019	ND		ND	1.46	ND	ND	ND	ND			ND		6.02		ND		122.71	74.65	61
Sweeney Raw	4/15/2019	ND		ND	ND	ND	ND	ND	ND			ND		2.17		ND		60.89	33.24	55
Sweeney Raw	4/22/2019	ND		ND	1.48	ND	ND	ND	ND			ND		ND		ND		95.69	66.00	69
Sweeney Raw	4/29/2019	ND		ND	ND	ND	ND	ND	ND			ND		4.04		ND		108.78	43.16	40
Sweeney Raw	5/6/2019	ND		ND	ND	ND	ND	ND	ND			ND		3.03		ND		90.46	28.97	32
Sweeney Raw	5/13/2019	ND		ND	ND	ND	ND	ND	ND			ND		ND		ND		123.20	57.80	47
Sweeney Raw	5/20/2019	ND		ND	ND	ND	ND	ND	ND			ND		3.96		ND		146.58	86.76	59
Sweeney Raw	5/27/2019	ND		ND	ND	ND	ND	ND	ND			ND		1.82		ND		160.30	92.40	58
Sweeney Raw	6/3/2019	ND		ND	3.51	ND	ND	ND	ND			ND		6.34		ND		262.47	174.89	67
Sweeney Raw	6/10/2019	ND		ND	5.43	ND	ND	ND	ND			ND		8.23		ND		281.19	194.55	69
Sweeney Raw	6/17/2019	ND		ND	ND	ND	ND	ND	ND			ND		2.40		ND		107.88	32.67	30
Sweeney Raw	6/24/2019	ND		ND	ND	ND	ND	ND	ND			ND		2.41		ND		140.68	51.72	37
Sweeney Raw	7/1/2019	ND		ND	ND	ND	ND	ND	ND			ND		22.6		ND		311.88	274.30	88
Sweeney Raw	7/8/2019	ND		ND	3.08	ND	ND	ND	ND			ND		9.52		ND		247.60	131.56	53
Sweeney Raw	7/15/2019	ND		ND	2.70	ND	ND	ND	ND			ND		7.15		ND		212.15	112.57	53
Sweeney Raw	7/29/2019	ND		ND	2.10	ND	ND	ND	ND			ND		7.90		ND		213.14	108.04	51
Sweeney Raw	8/12/2019	ND		ND	1.57	ND	ND	ND	ND			ND		5.79		ND		160.61	73.41	46
Sweeney Raw	8/26/2019	ND		ND	2.70	ND	ND	ND	ND			ND		ND		ND		268.86	119.98	45
Sweeney Raw	9/4/2019	ND		ND	ND	ND	ND	ND	ND			ND		3.24		ND		171.49	52.64	31
Sweeney Raw	9/5/2019	ND		ND	ND	ND	ND	ND	ND			ND		6.60		ND		186.76	60.61	32
Sweeney Raw	9/6/2019	ND		ND	ND	ND	ND	ND	ND			ND		ND		ND		178.16	50.06	28
Sweeney Raw	9/9/2019	ND		ND	6.14	ND	ND	ND	ND			ND		16.0		ND		376.85	234.30	62

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Grayed out cells denote the compound was not analysed for that sample date. This could be due to the unavailability of standards for the compound, compound was inadvertently not run within the analyses, or a quality control issue with the compound which made it not valid and non-reportable.

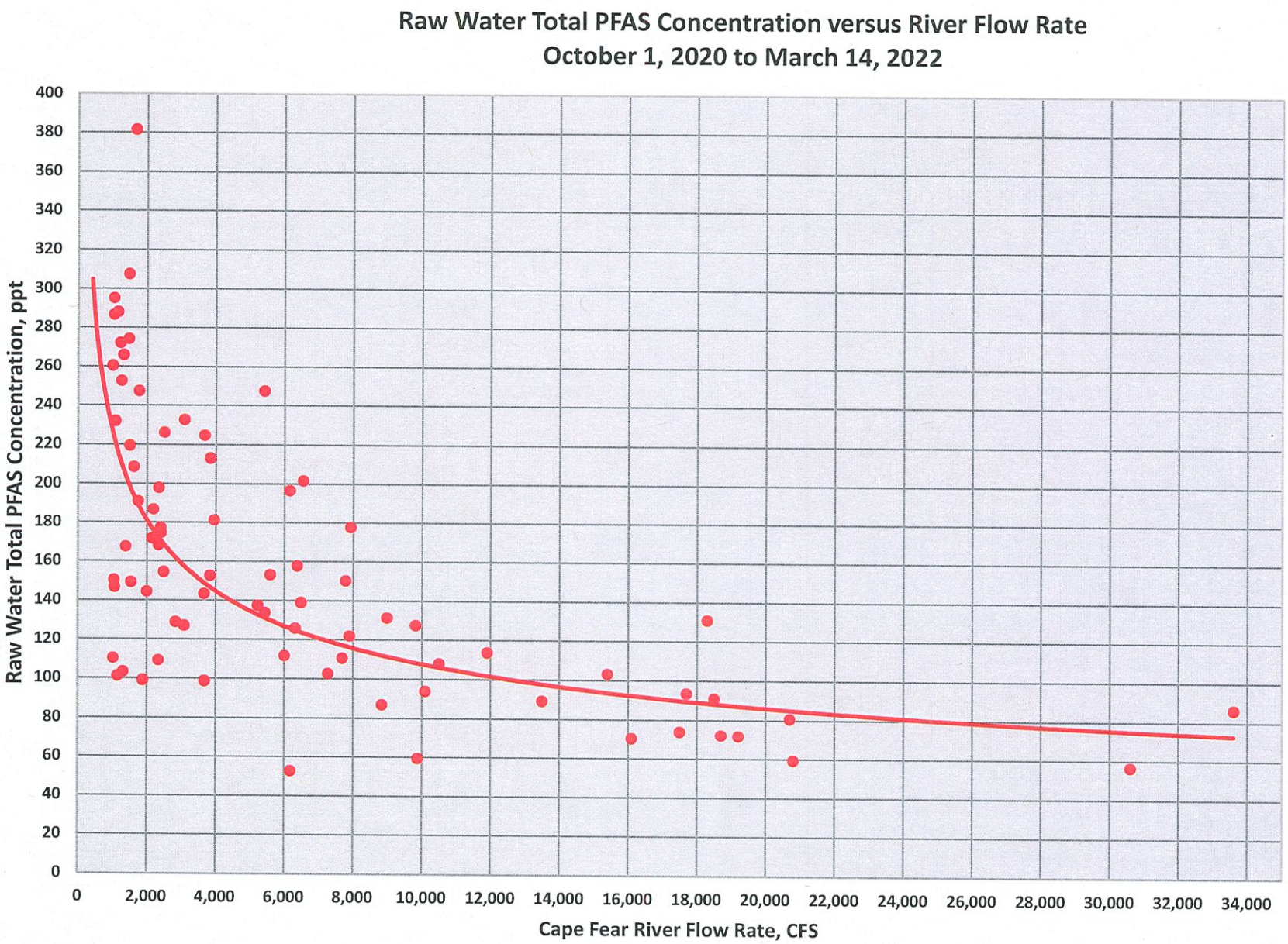
Compound Name		Perfluorononanesulfonate (PFNS)	Perfluoroethoxypropionic acid (EVE Acid)	Perfluorotridecanoic acid (PFTrDA)	Nafion Byproduct 2	Perfluorooctanesulfonamide (PFOSA)	9-chlorohexadecafluoro-3-oxanonane-1-sulfonate	Fluorotelomer sulfonate 4/2 (4:2 FTS)	11-chloroeicosafluoro-3-oxaundecane-2-sulfonate (PFO2UdS)	Hydro-EVE	Perfluoro-1-dodecanesulfonate (PFDoS)	4-(Heptafluoro(nonyloxy)propoxy)hexafluorobutanoic acid (PFECA-G)	7:3 FTCA	Perfluoro-4-methoxybutanoic acid (PFMOBA or PFMBA) - Gen PMPA	5:3 FTCA	Sodium dodecafluoro-3H-4,8-dioxanonanoate (ADONA)	1,1,2,2-Tetrafluoro-2-(1,2,2,2-tetrafluoroethoxy)ethane sulfonic acid (PFEVS)	Total of all Compounds	Total of Table 3+ Compounds	% of Total that is Chemours
CAS Number		68259-12-1	69087-48-3	72629-94-8	749836-20-2	754-91-6	756426-58-1	757124-72-4	763051-92-9	773804-62-9	79780-39-5	801212-59-9	812-70-4	865230-59-5	914637-49-3	919005-14-4	801209-99-4			
Compound on Table 3+			Y		Y					Y		Y		Y			Y			
Sample location	Sample date	NG/L	NG/L	NG/L	NG/L	NG/L	NG/L	NG/L	NG/L	NG/L	NG/L	NG/L	NG/L	NG/L	NG/L	NG/L	NG/L	Total	NG/L	%
Sweeney Raw	9/23/2019	ND		ND	2.98	ND	ND	ND	ND			ND		15.6		ND		203.39	126.02	62
Sweeney Raw	10/1/2019	ND		ND	3.41	ND	ND	ND	ND			ND		25.7		ND		289.65	184.05	64
Sweeney Raw	10/7/2019	ND		ND	2.91	ND	ND	ND	ND			ND		11.0		ND		342.63	198.80	58
Sweeney Raw	10/21/2019	ND		ND	3.33	ND	ND	ND	ND			ND		11.1		ND		377.01	194.56	52
Sweeney Raw	11/4/2019	ND		ND	1.68	ND	ND	ND	ND			ND		5.47		ND		258.14	103.03	40
Sweeney Raw	11/18/2019	ND		ND	1.62	ND	ND	ND	ND			ND		ND		ND		248.02	144.07	58
Sweeney Raw	12/2/2019	ND		ND	ND	ND	ND	ND	ND			ND		ND		ND		154.43	88.37	57
Sweeney Raw	12/16/2019	ND		ND	ND	ND	ND	ND	ND			ND		6.02		ND		200.76	84.09	42
Sweeney Raw	12/30/2019	ND		ND	ND	ND	ND	ND	ND			ND		2.86		ND		108.10	30.09	28
Sweeney Raw	1/13/2020	ND		ND	ND	ND	ND	ND	ND			ND		1.49		ND		99.11	27.49	28
Sweeney Raw	1/27/2020	ND		ND	ND	ND	ND	ND	ND			ND		ND		ND		123.91	56.05	45
Sweeney Raw	2/10/2020	ND		ND	ND	ND	ND	ND	ND			ND		ND		ND		61.24	23.53	38
Sweeney Raw	2/24/2020	ND		ND	ND	ND	ND	ND	ND			ND		1.50		ND		64.40	22.05	34
Sweeney Raw	3/9/2020	ND		ND	ND	ND	ND	ND	ND			ND		6.75		ND		99.64	60.35	61
Sweeney Raw	4/6/2020	ND		ND	ND	ND	ND	ND	ND			ND		4.49		ND		126.07	50.88	40
Sweeney Raw	5/4/2020	ND		ND	ND	ND	ND	ND	ND			ND		3.54		ND		117.58	49.60	42
Sweeney Raw	6/1/2020	ND		ND	ND	ND	ND	ND	ND			ND		ND		ND		51.87	14.03	27
Sweeney Raw	7/6/2020	ND		ND	1.37	ND	ND	ND	ND			ND		7.50		ND		150.15	89.65	60
Sweeney Raw	7/22/2020	ND		ND	1.41	ND	ND	ND	ND			ND		ND		ND		158.32	95.11	60
Sweeney Raw	7/23/2020	ND		ND	1.47	ND	ND	ND	ND			ND		ND		ND		159.18	93.83	59
Sweeney Raw	7/24/2020	ND		ND	1.69	ND	ND	ND	ND			ND		9.18		ND		177.20	115.30	65
Sweeney Raw	7/25/2020	ND		ND	1.75	ND	ND	ND	ND			ND		7.17		ND		165.82	105.87	64
Sweeney Raw	8/2/2020	ND		ND	ND	ND	ND	ND	ND		ND	ND		2.45		ND		127.48	76.56	60
Sweeney Raw	8/3/2020	ND		ND	ND	ND	ND	ND	ND		ND	ND		2.58		ND		119.76	64.22	54
Sweeney Raw	8/4/2020	ND		ND	ND	ND	ND	ND	ND		ND	ND		ND		ND		120.64	57.48	48
Sweeney Raw	8/5/2020	ND		ND	ND	ND	ND	ND	ND		ND	ND		ND		ND		113.47	54.74	48
Sweeney Raw	8/17/2020	ND		ND	ND	ND	ND	ND	ND		ND	ND		ND		ND		98.19	38.74	39
Sweeney Raw	8/31/2020	ND		ND	ND	ND	ND	ND	ND		ND	ND		4.87		ND		101.25	54.76	54
Sweeney Raw	9/14/2020	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND		5.42		ND	1.77	206.60	149.44	72
Sweeney Raw	9/28/2020	ND	ND	ND	1.55	ND	ND	ND	ND	ND	ND	ND		5.21		ND	1.71	226.33	154.12	68
Sweeney Raw	10/5/2020	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND		1.35		ND	ND	102.54	58.54	57
Sweeney Raw	10/12/2020	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND		3.22		ND	ND	152.54	99.32	65
Sweeney Raw	10/19/2020	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND		3.11		ND	1.20	150.05	81.95	55
Sweeney Raw	10/26/2020	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND		2.10		ND	ND	126.92	77.82	61
Sweeney Raw	11/2/2020	ND	ND	ND	1.80	ND	4.27	ND	ND	ND	ND	ND		2.10		ND	ND	153.03	81.49	53
Sweeney Raw	11/9/2020	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND		2.35		ND	ND	154.39	89.11	58
Sweeney Raw	11/16/2020	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND		ND		ND	ND	86.12	50.07	58
Sweeney Raw	11/23/2020	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND		3.29		ND	ND	102.99	53.75	52
Sweeney Raw	11/30/2020	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND		3.42		ND	2.01	201.70	135.58	67
Sweeney Raw	12/7/2020	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND		2.19		ND	ND	107.72	60.92	57
Sweeney Raw	12/14/2020	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND		2.60		ND	ND	133.65	79.76	60
Sweeney Raw	12/21/2020	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND		ND		ND	ND	70.24	33.34	47
Sweeney Raw	12/29/2020	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND		1.24		ND	ND	59.18	28.31	48
Sweeney Raw	1/4/2021	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND		2.17		ND	ND	80.55	33.26	41
Sweeney Raw	1/11/2021	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND		3.14		ND	ND	71.57	36.45	51
Sweeney Raw	1/18/2021	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND		ND		ND	ND	121.89	90.31	74
Sweeney Raw	1/25/2021	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND		ND		ND	1.95	137.37	102.37	75
Sweeney Raw	2/1/2021	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND		ND		ND	ND	73.71	40.57	55
Sweeney Raw	2/8/2021	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND		ND		ND	ND	93.36	45.45	49
Sweeney Raw	2/15/2021	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND		ND		ND	1.54	72.01	46.55	65
Sweeney Raw	2/22/2021	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND		ND		ND	ND	56.30	39.32	70
Sweeney Raw	3/1/2021	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND		ND		ND	ND	90.85	56.48	62
Sweeney Raw	3/8/2021	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND		ND		ND	ND	130.87	87.92	67
Sweeney Raw	3/15/2021	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND		ND		ND	ND	131.27	93.27	71
Sweeney Raw	3/22/2021	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND		ND		ND	ND	93.71	63.33	68
Sweeney Raw	3/29/2021	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND		ND		ND	1.34	113.55	65.97	58
Sweeney Raw	4/5/2021	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND		ND		ND	ND	59.26	17.83	30
Sweeney Raw	4/12/2021	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND		ND		ND	1.36	125.80	92.81	74
Sweeney Raw	4/19/2021	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND		ND		ND	1.54	98.44	58.82	60
Sweeney Raw	4/26/2021	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND		ND		ND	3.55	186.76	139.54	75
Sweeney Raw	4/29/2021	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND		ND		ND	3.99	197.96	149.82	76
Sweeney Raw	5/3/2021	ND	ND	ND	1.51	ND	ND	ND	ND	ND	ND	ND		ND		ND	4.44	226.10	171.81	76
Sweeney Raw	5/10/2021	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND		ND		ND	5.51	224.65	166.48	74
Sweeney Raw	5/17/2021	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND		ND		ND	4.05	171.60	109.59	64
Sweeney Raw	5/24/2021	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND		ND		ND	3.75	167.36	108.94	65
Sweeney Raw	6/1/2021	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND		ND		ND	4.48	208.57	148.55	71
Sweeney Raw	6/7/2021	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND		ND		ND	4.68	213.02	148.04	69
Sweeney Raw	6/14/2021	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND		ND		ND	3.91	157.69	91.18	58
Sweeney Raw	6/21/2021	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND		ND		ND	2.02	98.87	53.53	54
Sweeney Raw	6/28/2021	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND		ND		ND	4.56	177.11	104.51	59
Sweeney Raw	7/6/2021	ND	ND	ND	0.353	ND	ND	ND	ND	0.617	ND	ND		ND		ND		179.42	135.58	76
Sweeney Raw	7/12/2021	ND	ND	0.258	0.343	0.091	ND	ND	ND	0.392	ND	ND		ND		ND		127.42	79.59	62

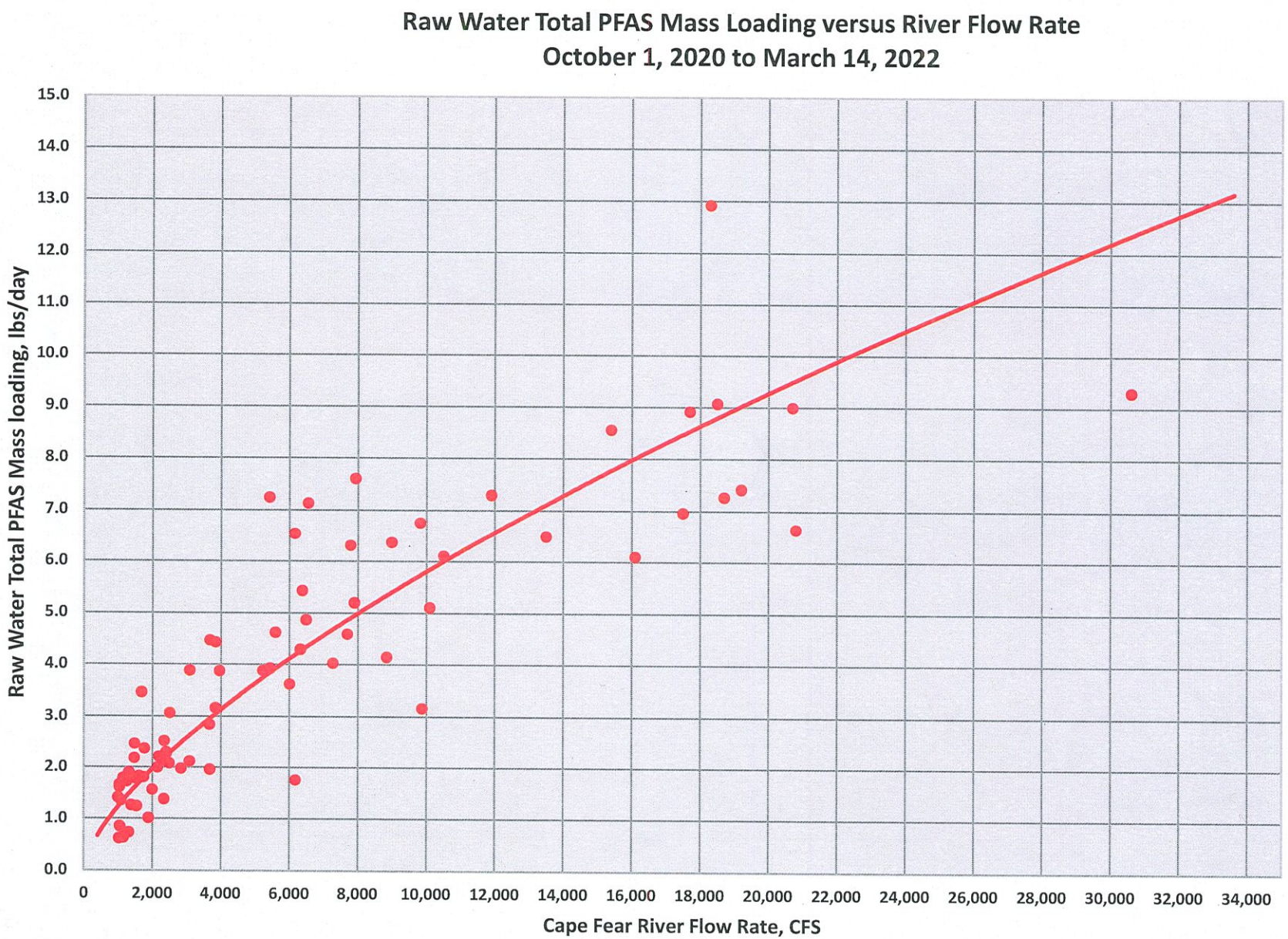
CFPUA PFAS DATA from Raw Water Intake

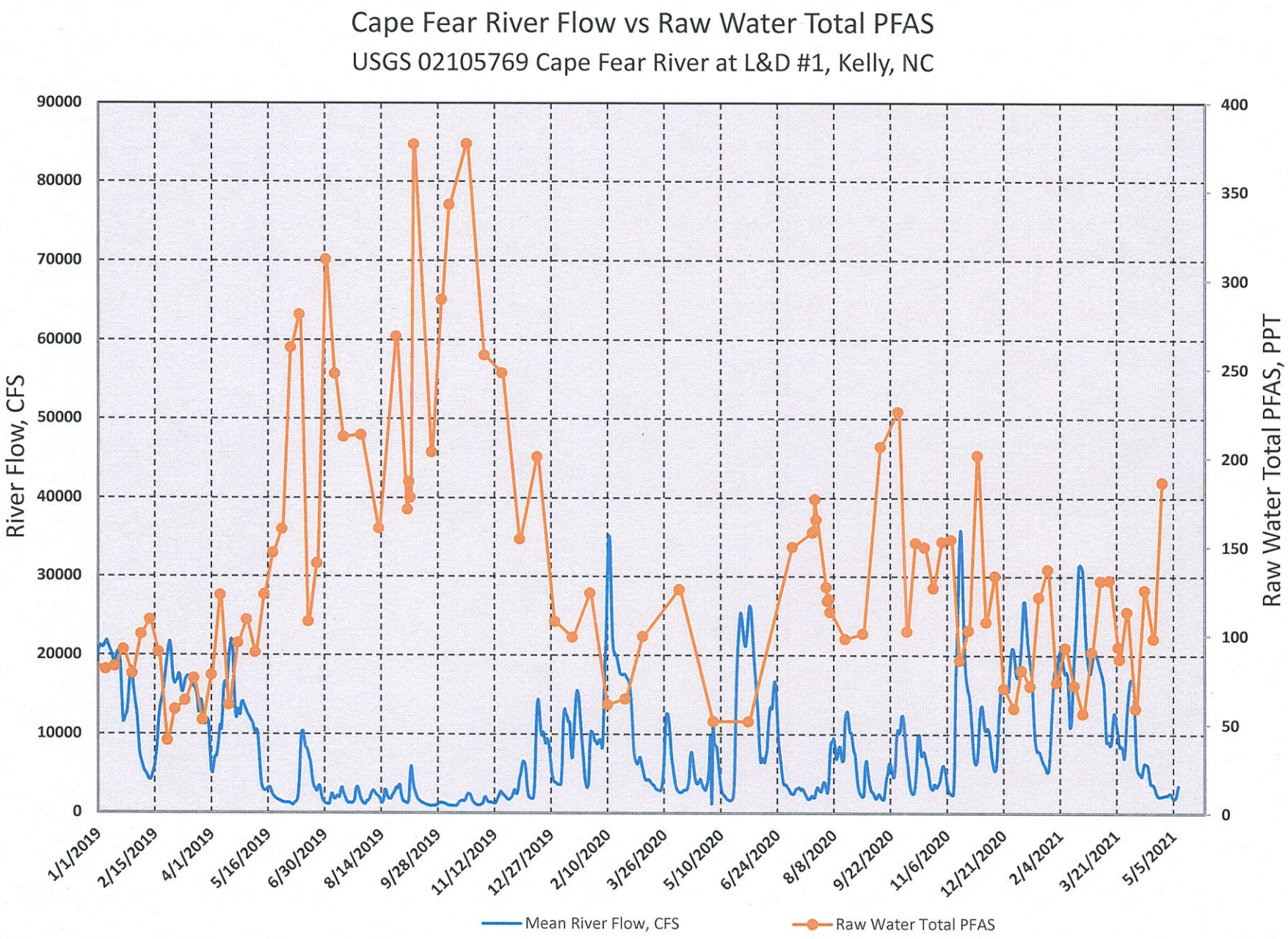
Grayed out cells denote the compound was not analyzed for that sample date. This could be due to the unavailability of standards for the compound, compound was inadvertently not run within the analyses, or a quality control issue with the compound which made it not valid and non-reportable.

Compound Name		Perfluoromonoethanesulfonate (PFMS)	Perfluoroethoxypropionic acid (EVE Acid)	Perfluorotridecanoic acid (PFTrDA)	Nafion Byproduct 2	Perfluorooctanesulfonamide (PFOSA)	9-chlorohexadecafluoro-3-oxanonane-1-sulfonate	Fluorotelomer sulfonate 4:2 (4:2 FTS)	11-chloroeicosafluoro-3-oxaundecane-1-sulfonate (PF3OUdS)	Hydro-EVE	Perfluoro-1-dodecanesulfonate (PFDoS)	4-[heptafluoroisopropoxy]hexafluorobutanoic acid (PFECA-G)	7:3 FTCA	Perfluoro-4-methoxybutanoic acid (PFMOBA or PFMBA) - Gen PMPA	5:3 FTCA	Sodium dodecafluoro-3H-4,8-dioxanonanoate (ADONA)	1,1,2,2,-Tetrafluoro-2-(1,2,2,2-tetrafluoroethoxy)ethane sulfonic acid (NVHOS)	Total of all Compounds	Total of Table 3+ Compounds	% of Total that is Chemours	
CAS Number		68259-12-1	69987-46-9	72629-94-8	746836-20-2	754-91-6	756426-58-1	757124-72-4	763051-92-9	773804-62-9	779980-18-5	801212-59-9	812-70-4	863090-89-5	914637-49-3	919005-14-4	801209-99-4				
Compound on Table 3+			Y		Y					Y		Y		Y			Y				
Sample location	Sample date	NG/L	NG/L	NG/L	NG/L	NG/L	NG/L	NG/L	NG/L	NG/L	NG/L	NG/L	NG/L	NG/L	NG/L	NG/L	NG/L	Total	NG/L	%	
Sweeney Raw	7/19/2021	ND	ND	ND	ND	ND	ND	ND	ND	0.124	ND	ND		ND		ND		109.07	57.65	53	
Sweeney Raw	8/2/2021	ND	ND	0.152	0.549	ND	ND	ND	ND	ND	ND	ND		ND		ND		247.38	186.70	75	
Sweeney Raw	8/9/2021	ND	ND	ND	0.450	ND	ND	ND	ND	ND	ND	ND		ND		ND		190.82	156.46	82	
Sweeney Raw	8/16/2021	ND	ND	ND	0.598	ND	ND	ND	ND	ND	ND	ND		ND		ND		149.07	125.22	84	
Sweeney Raw	8/23/2021	ND	ND	ND	0.776	ND	ND	ND	ND	ND	ND	ND		ND		ND		247.52	202.02	82	
Sweeney Raw	8/30/2021	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND		ND		ND		219.32	156.97	72	
Sweeney Raw	9/7/2021	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND		ND		ND		150.26	99.63	66	
Sweeney Raw	9/13/2021	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND		ND		ND		274.17	200.55	73	
Sweeney Raw	9/20/2021	ND	ND	0.319	ND	ND	ND	0.134	ND	ND	ND	ND		ND		0.100		286.53	220.11	77	
Sweeney Raw	9/27/2021	ND	ND	ND	ND	0.174	ND	ND	ND	ND	ND	ND		ND		ND		138.91	54.84	39	
Sweeney Raw	10/4/2021	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND		ND		ND		146.60	118.23	81	
Sweeney Raw	10/11/2021	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND		ND		ND		177.62	144.56	81	
Sweeney Raw	10/12/2021	ND	ND	ND	0.474	ND	ND	ND	ND	ND	ND	ND		ND		ND		196.62	161.38	82	
Sweeney Raw	10/18/2021	ND	ND	ND	0.477	ND	ND	ND	ND	ND	ND	ND		ND		ND		103.13	50.64	49	
Sweeney Raw	10/19/2021	ND	ND	ND	0.399	ND	ND	ND	ND	ND	ND	ND		ND		ND		100.93	55.88	55	
Sweeney Raw	10/25/2021	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND		ND		ND		110.04	82.06	75	
Sweeney Raw	11/1/2021	ND	ND	ND	0.353	ND	ND	ND	ND	ND	ND	ND		ND		ND		252.61	198.09	78	
Sweeney Raw	11/8/2021	ND	ND	ND	0.424	ND	ND	ND	ND	ND	ND	ND		ND		ND		260.42	196.67	76	
Sweeney Raw	11/15/2021	ND	ND	ND	0.331	ND	ND	ND	ND	ND	ND	ND		ND		ND		288.03	207.06	72	
Sweeney Raw	11/22/2021	ND	ND	ND	0.463	ND	ND	ND	ND	ND	ND	ND		ND		ND		231.93	153.94	66	
Sweeney Raw	11/29/2021	ND	ND	0.343	0.688	0.155	ND	ND	ND	ND	ND	ND		ND		ND		272.05	194.38	71	
Sweeney Raw	12/6/2021	ND	ND	ND	0.365	ND	ND	ND	ND	ND	ND	ND		ND		ND		295.22	186.65	63	
Sweeney Raw	12/13/2021	ND	ND	ND	0.314	ND	0.234	0.265	0.257	ND	ND	ND		ND		0.241		381.33	292.52	77	
Sweeney Raw	12/20/2021	ND	ND	ND	0.451	ND	ND	ND	ND	ND	ND	ND		ND		ND		265.85	208.40	78	
Sweeney Raw	12/28/2021	ND	ND	ND	0.549	ND	ND	ND	ND	ND	ND	ND		ND		ND		307.64	248.11	81	
Sweeney Raw	1/3/2022	ND	ND	ND	0.518	ND	ND	ND	ND	0.556	0.024	ND		ND		ND		232.63	158.32	68	
Sweeney Raw	1/10/2022	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND		111.64	64.23	58	PFODA is not reported due to QC failures at the lab. See email from Mark Hagar 2/11/22
Sweeney Raw	1/18/2022	ND	ND	1.10	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND		52.64	14.66	28	Samples collected 1/18 - 1/19 were analyzed using 50 mL of sample rather than 250 mL due to a matrix interference. This may have resulted in ND for some compounds, therefore lower total PFAS.
Sweeney Raw	1/24/2022	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND		110.46	65.45	59	
Sweeney Raw	1/31/2022	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND		128.77	49.92	39	
Sweeney Raw	2/7/2022	ND	ND	ND	0.418	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND		143.23	73.95	52	
Sweeney Raw	2/21/2022	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND		168.06	104.95	62	
Sweeney Raw	2/28/2022	ND	ND	ND	0.311	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND		181.10	95.17	53	
Sweeney Raw	3/7/2022	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND		144.27	45.72	32	
Sweeney Raw	3/14/2022	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND		89.11	30.78	35	
Sweeney Raw	3/21/2022	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND		37.33	13.48	36	
Sweeney Raw	3/28/2022	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND		66.39	24.35	37	

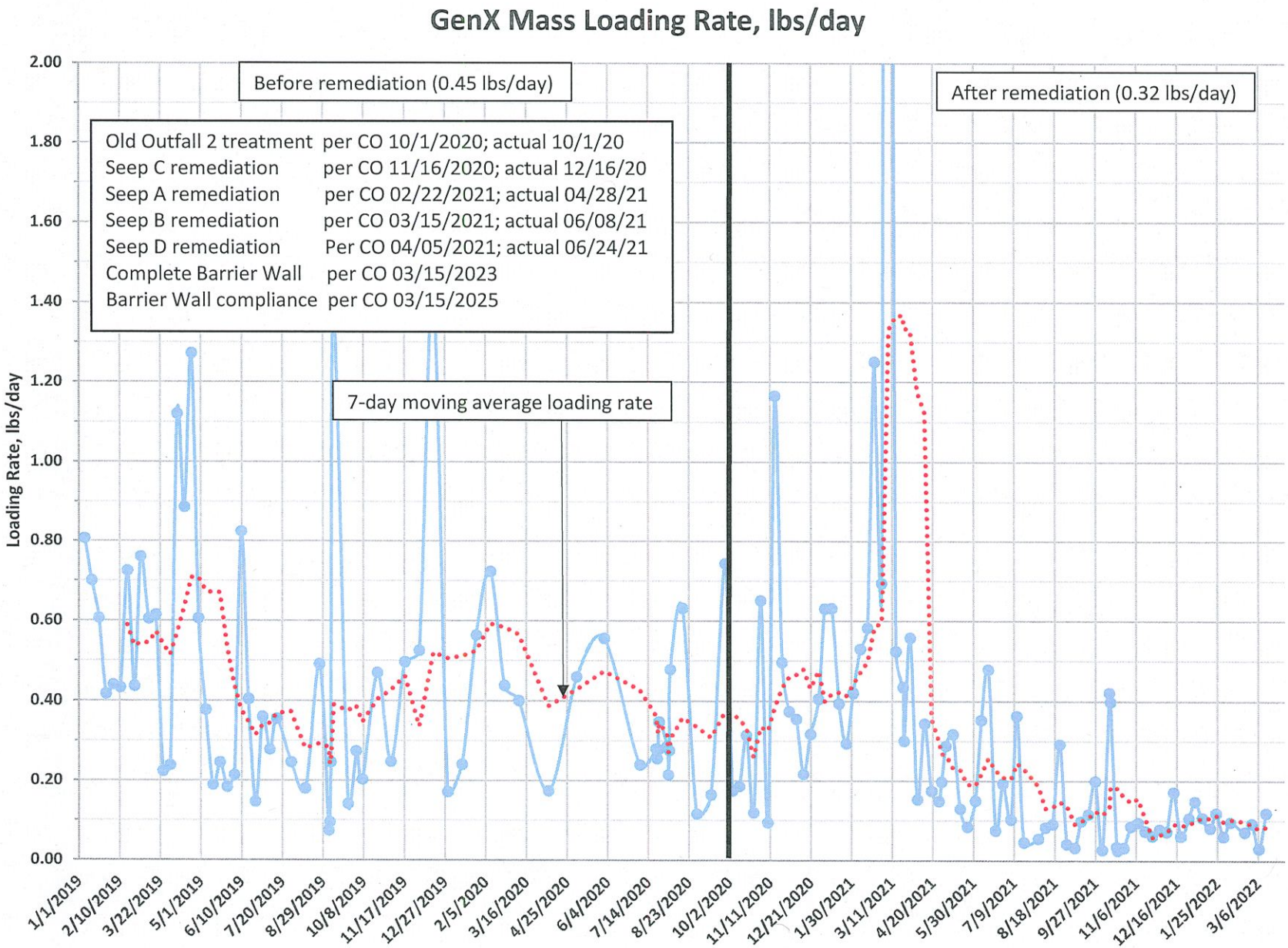
TAB 2


Raw Water Total PFAS Concentration versus River Flow Rate
October 1, 2020 to March 14, 2022
Raw Water Total PFAS Concentration, ppt
0
20
40
60
80
100
120
140
160
180
200
220
240
260
280
300
320
340
360
380
400
0
2,000
4,000
6,000
8,000
10,000
12,000
14,000
16,000
18,000
20,000
22,000
24,000
26,000
28,000
30,000
32,000
34,000
Cape Fear River Flow Rate, CFS


Raw Water Total PFAS Mass Loading versus River Flow Rate
October 1, 2020 to March 14, 2022
Raw Water Total PFAS Mass loading, lbs/day
15.0
14.0
13.0
12.0
11.0
10.0
9.0
8.0
7.0
6.0
5.0
4.0
3.0
2.0
1.0
0.0
0
2,000
4,000
6,000
8,000
10,000
12,000
14,000
16,000
18,000
20,000
22,000
24,000
26,000
28,000
30,000
32,000
34,000
Cape Fear River Flow Rate, CFS


Cape Fear River Flow vs Raw Water Total PFAS
USGS 02105769 Cape Fear River at L&D #1, Kelly, NC
River Flow, CFS
Raw Water Total PFAS, PPT
90000
80000
70000
60000
50000
40000
30000
20000
10000
0
400
350
300
250
200
150
100
50
0
1/1/2019
2/15/2019
4/1/2019
5/16/2019
6/30/2019
8/14/2019
9/28/2019
11/12/2019
12/27/2019
2/10/2020
3/26/2020
5/10/2020
6/24/2020
8/8/2020
9/22/2020
11/6/2020
12/21/2020
2/4/2021
3/21/2021
5/5/2021
Mean River Flow, CFS
Raw Water Total PFAS

TAB 3


GenX Mass Loading Rate, lbs/day
Before remediation (0.45 lbs/day)
After remediation (0.32 lbs/day)
Old Outfall 2 treatment per CO 10/1/2020; actual 10/1/20
Seep C remediation per CO 11/16/2020; actual 12/16/20
Seep A remediation per CO 02/22/2021; actual 04/28/21
Seep B remediation per CO 03/15/2021; actual 06/08/21
Seep D remediation Per CO 04/05/2021; actual 06/24/21
Complete Barrier Wall per CO 03/15/2023
Barrier Wall compliance per CO 03/15/2025
7-day moving average loading rate
Loading Rate, lbs/day
2.00
1.80
1.60
1.40
1.20
1.00
0.80
0.60
0.40
0.20
0.00
1/1/2019
2/10/2019
3/22/2019
5/1/2019
6/10/2019
7/20/2019
8/29/2019
10/8/2019
11/17/2019
12/27/2019
2/5/2020
3/16/2020
4/25/2020
6/4/2020
7/14/2020
8/23/2020
10/2/2020
11/11/2020
12/21/2020
1/30/2021
3/11/2021
4/20/2021
5/30/2021
7/9/2021
8/18/2021
9/27/2021
11/6/2021
12/16/2021
1/25/2022
3/6/2022

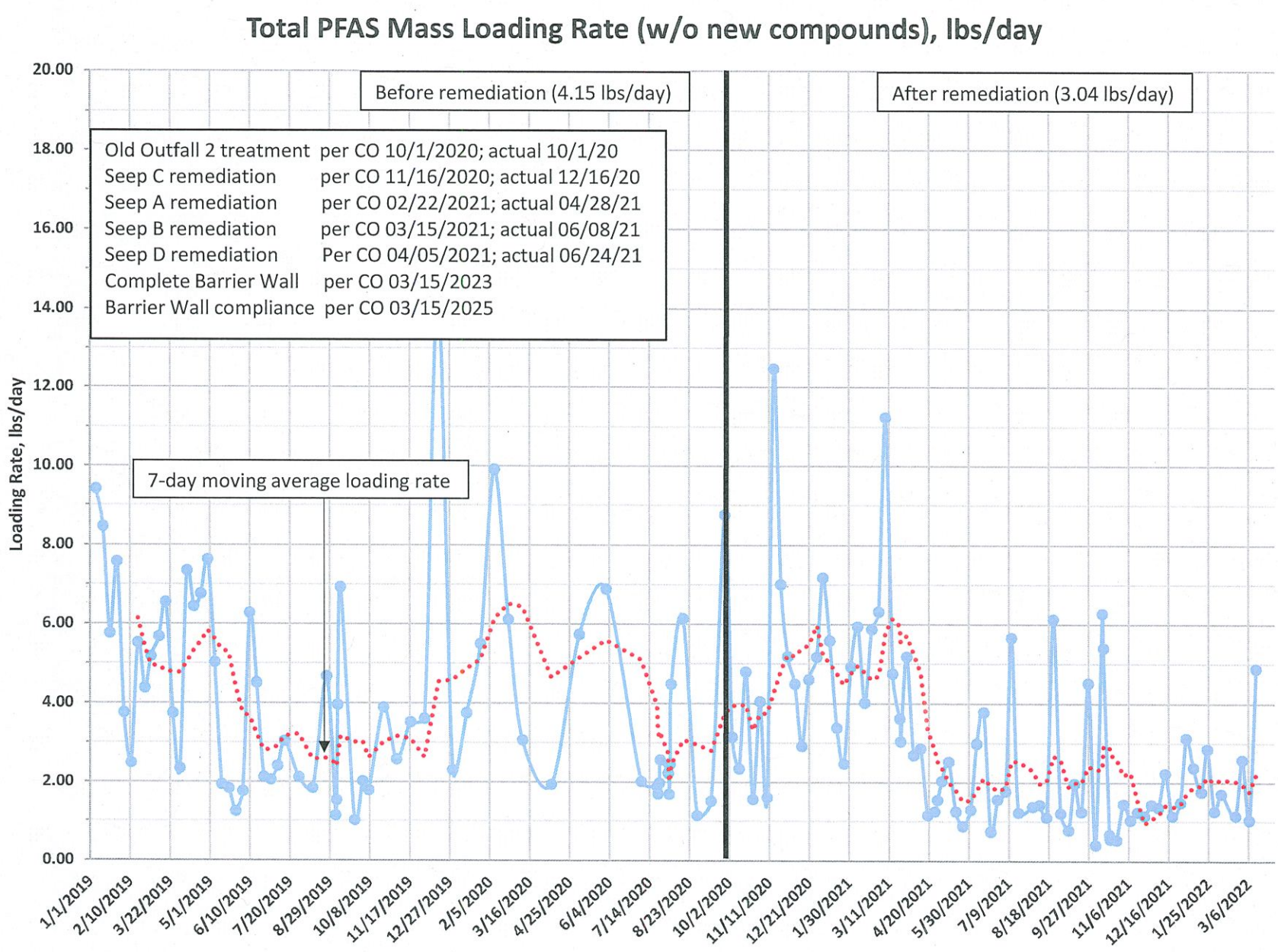
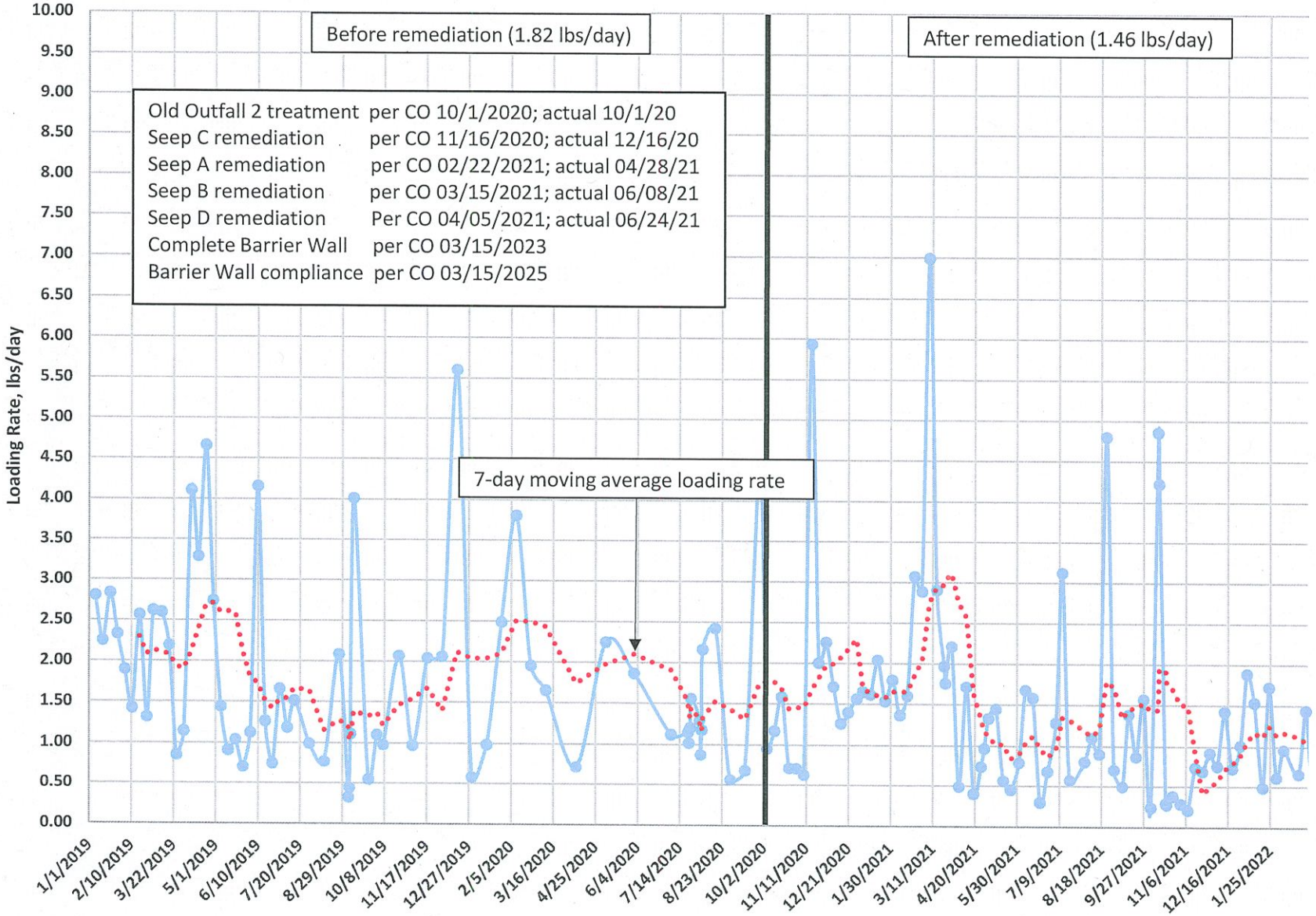
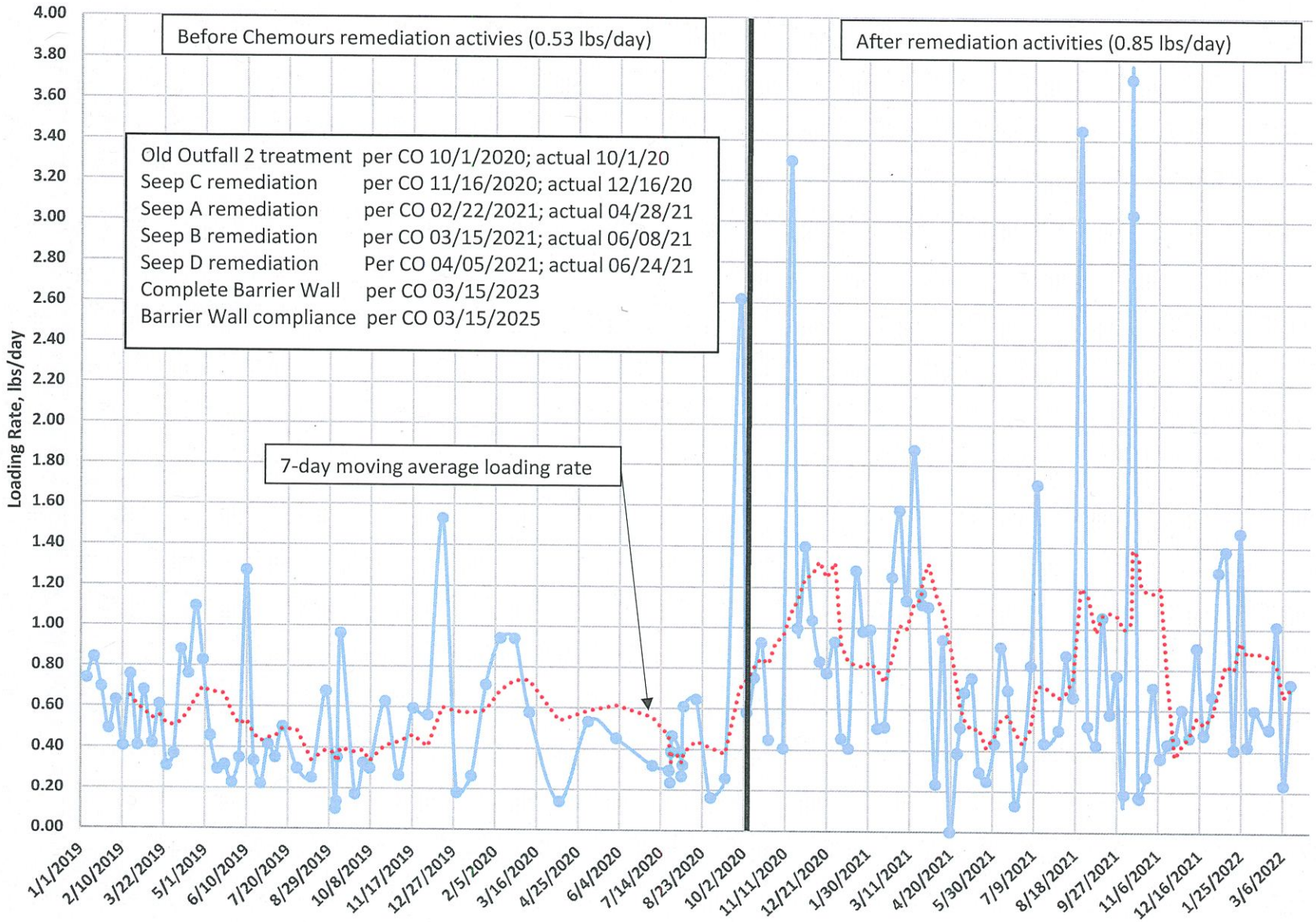

Total PFAS Mass Loading Rate (w/o new compounds), lbs/day
Before remediation (4.15 lbs/day)
After remediation (3.04 lbs/day)
Old Outfall 2 treatment per CO 10/1/2020; actual 10/1/20
Seep C remediation per CO 11/16/2020; actual 12/16/20
Seep A remediation per CO 02/22/2021; actual 04/28/21
Seep B remediation per CO 03/15/2021; actual 06/08/21
Seep D remediation Per CO 04/05/2021; actual 06/24/21
Complete Barrier Wall per CO 03/15/2023
Barrier Wall compliance per CO 03/15/2025
7-day moving average loading rate
Loading Rate, lbs/day
20.00
18.00
16.00
14.00
12.00
10.00
8.00
6.00
4.00
2.00
0.00
1/1/2019
2/10/2019
3/22/2019
5/1/2019
6/10/2019
7/20/2019
8/29/2019
10/8/2019
11/17/2019
12/27/2019
2/5/2020
3/16/2020
4/25/2020
6/4/2020
7/14/2020
8/23/2020
10/2/2020
11/11/2020
12/21/2020
1/30/2021
3/11/2021
4/20/2021
5/30/2021
7/9/2021
8/18/2021
9/27/2021
11/6/2021
12/16/2021
1/25/2022
3/6/2022

Table 3+ Mass Loading Rate (w/o new compounds), lbs/day



PFMOAA Mass Loading Rate, lbs/day



TAB 4

Daily precipitation data between 1/1/2010 - 4/26/2022 were obtained from the United State Geological Survey website for the William O Huske Dam Station near Tar Heel, NC (USGS station number 02105500): https://waterdata.usgs.gov/nwis/dv?cb_00045=on&format=rdb&site_no=02105500&referred_module=sw&period=&begin_date=2010-01-01&end_date=2022-04-26 (Accessed on 4/27/2022).

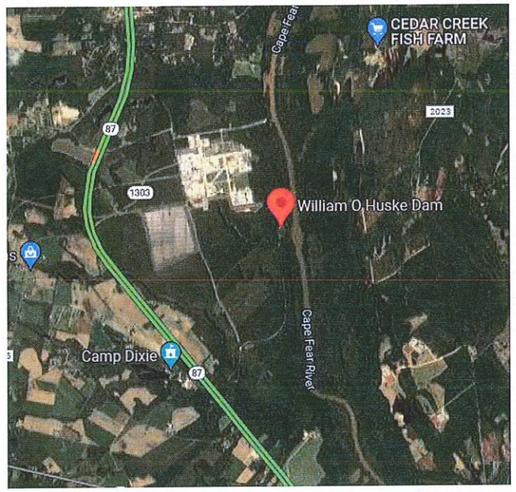
Over the period of 1/1/2010 to 4/26/2022, precipitation rate was reported for 4353 days. Precipitation rate was at or greater than 0.5 inch on 358 days, which accounts for approximately 8% of the time when data are available. The highest rainfall event occurred on 10/8/2016 with a total precipitation of 16.15 inches. Processed data can be found in the attached spreadsheet.

% day with rainfall>=0.5"	8%
Total day with data	4353
Total day with rainfall>=0.5"	358
Maximum Rainfall (inch)	16.15

USGS 02105500 CAPE FEAR R AT WILM O HUSKE LOCK NR TARHEEL, NC

https://waterdata.usgs.gov/nwis/dv?cb_00045=on&format=rdb&site_no=02105500&referred_mod

Data range: 1/1/10 - 4/26/22



	2010		2011		2012		2013		2014	
Year	2010		2011		2012		2013		2014	
# of days with data	301		343		366		365		360	
# of days with rain >= 0.5"	**20**		**17**		**29**		**38**		**28**	
Maximum rainfall (")	5.05	6/25/2010	1.45	8/27/2011	2.11	5/17/2012	2.64	6/7/2013	3.74	5/15/2014
	Rain (inch)	Date	Rain (inch)	Date	Rain (inch)	Date	Rain (inch)	Date	Rain (inch)	Date
1/1/2010	0.02	1/1/2011	0.03	1/1/2012	0	1/1/2013	0.06	1/1/2014	0	1/1/2015
1/2/2010	0.02	1/2/2011	0.02	1/2/2012	0	1/2/2013	0.33	1/2/2014	0.47	1/2/2015
1/3/2010	0	1/3/2011	0	1/3/2012	0	1/3/2013	0.02	1/3/2014	0	1/3/2015
1/4/2010	0	1/4/2011	0	1/4/2012	0	1/4/2013	0	1/4/2014	0	1/4/2015
1/5/2010	0	1/5/2011	0	1/5/2012	0	1/5/2013	0	1/5/2014	0.2	1/5/2015
1/6/2010	0	1/6/2011	0	1/6/2012	0	1/6/2013	0.06	1/6/2014	0.04	1/6/2015
1/7/2010	0	1/7/2011	0	1/7/2012	0	1/7/2013	0.01	1/7/2014	0	1/7/2015
1/8/2010	0	1/8/2011	0.01	1/8/2012	0	1/8/2013	0	1/8/2014	0	1/8/2015
1/9/2010	0	1/9/2011	0	1/9/2012	0.34	1/9/2013	0	1/9/2014	0	1/9/2015
1/10/2010	0	1/10/2011		1/10/2012	0.01	1/10/2013	0	1/10/2014	0.4	1/10/2015
1/11/2010	0	1/11/2011		1/11/2012	0.15	1/11/2013	0.12	1/11/2014	0.76	1/11/2015
1/12/2010	0	1/12/2011	0	1/12/2012	0	1/12/2013	0	1/12/2014	0.01	1/12/2015
1/13/2010	0	1/13/2011	0	1/13/2012	0	1/13/2013	0	1/13/2014	0	1/13/2015
1/14/2010	0	1/14/2011	0.02	1/14/2012	0	1/14/2013	0	1/14/2014	0.34	1/14/2015
1/15/2010	0	1/15/2011	0.2	1/15/2012	0	1/15/2013	0	1/15/2014	0	1/15/2015
1/16/2010	0.07	1/16/2011	0	1/16/2012	0	1/16/2013	0	1/16/2014	0.03	1/16/2015
1/17/2010	0.96	1/17/2011	0.01	1/17/2012	0.09	1/17/2013	0.74	1/17/2014	0	1/17/2015
1/18/2010	0	1/18/2011	0	1/18/2012	0.26	1/18/2013	0.02	1/18/2014	0	1/18/2015
1/19/2010	0	1/19/2011	0.04	1/19/2012	0	1/19/2013	0	1/19/2014	0	1/19/2015
1/20/2010	0	1/20/2011	0	1/20/2012	0.06	1/20/2013	0	1/20/2014	0	1/20/2015
1/21/2010	0.76	1/21/2011	0	1/21/2012	1.12	1/21/2013	0	1/21/2014	0.04	1/21/2015
1/22/2010	0.16	1/22/2011	0	1/22/2012	0	1/22/2013	0	1/22/2014	0	1/22/2015
1/23/2010	0	1/23/2011	0	1/23/2012	0	1/23/2013	0	1/23/2014	0	1/23/2015
1/24/2010	0.03	1/24/2011	0	1/24/2012	0	1/24/2013	0	1/24/2014	0	1/24/2015
1/25/2010	0.41	1/25/2011	0.17	1/25/2012	0	1/25/2013	0	1/25/2014	0	1/25/2015
1/26/2010	0	1/26/2011	0.06	1/26/2012	0	1/26/2013	0.06	1/26/2014	0	1/26/2015
1/27/2010	0	1/27/2011	0	1/27/2012	0.2	1/27/2013	0	1/27/2014	0	1/27/2015
1/28/2010	0	1/28/2011	0	1/28/2012	0	1/28/2013	0.01	1/28/2014		1/28/2015
1/29/2010	0	1/29/2011	0	1/29/2012	0	1/29/2013	0	1/29/2014		1/29/2015
1/30/2010		1/30/2011	0	1/30/2012	0	1/30/2013	0	1/30/2014	0	1/30/2015
1/31/2010		1/31/2011	0	1/31/2012	0	1/31/2013	0.39	1/31/2014	0	1/31/2015
2/1/2010		2/1/2011	0	2/1/2012	0	2/1/2013	0	2/1/2014	0.51	2/1/2015
2/2/2010		2/2/2011	0.19	2/2/2012	0.13	2/2/2013	0	2/2/2014	0.02	2/2/2015
2/3/2010		2/3/2011	0	2/3/2012	0	2/3/2013	0	2/3/2014	0	2/3/2015
2/4/2010	0	2/4/2011	0.8	2/4/2012	0	2/4/2013	0	2/4/2014	0.1	2/4/2015
2/5/2010	1.58	2/5/2011	0	2/5/2012	0.17	2/5/2013	0	2/5/2014	0.15	2/5/2015
2/6/2010	0	2/6/2011	0	2/6/2012	0	2/6/2013	0	2/6/2014	0	2/6/2015
2/7/2010	0	2/7/2011	0.09	2/7/2012	0	2/7/2013	0.7	2/7/2014	0	2/7/2015
2/8/2010	0	2/8/2011	0.07	2/8/2012	0	2/8/2013	0.81	2/8/2014	0	2/8/2015
2/9/2010	0.45	2/9/2011	0	2/9/2012	0	2/9/2013	0	2/9/2014	0	2/9/2015
2/10/2010	0	2/10/2011	0.03	2/10/2012	0	2/10/2013	0	2/10/2014	0.04	2/10/2015
2/11/2010	0	2/11/2011	0	2/11/2012	0	2/11/2013	0.2	2/11/2014		2/11/2015

2/12/2010		2/12/2011	0	2/12/2012	0	2/12/2013	0.14	2/12/2014		2/12/2015
2/13/2010		2/13/2011	0	2/13/2012	0	2/13/2013	0.21	2/13/2014		2/13/2015
2/14/2010		2/14/2011	0	2/14/2012	0	2/14/2013	0	2/14/2014	0	2/14/2015
2/15/2010		2/15/2011	0	2/15/2012	0	2/15/2013	0	2/15/2014	0.33	2/15/2015
2/16/2010	0	2/16/2011	0	2/16/2012	0.07	2/16/2013	0.18	2/16/2014	0	2/16/2015
2/17/2010	0	2/17/2011	0	2/17/2012	0	2/17/2013	0.04	2/17/2014	0	2/17/2015
2/18/2010	0	2/18/2011	0	2/18/2012	0	2/18/2013	0	2/18/2014	0	2/18/2015
2/19/2010	0	2/19/2011	0	2/19/2012	0.66	2/19/2013	0.04	2/19/2014	0.19	2/19/2015
2/20/2010	0	2/20/2011	0	2/20/2012	0.01	2/20/2013	0	2/20/2014	0	2/20/2015
2/21/2010	0	2/21/2011	0	2/21/2012	0	2/21/2013	0	2/21/2014	0.26	2/21/2015
2/22/2010	0.51	2/22/2011	0	2/22/2012	0	2/22/2013	0.06	2/22/2014	0	2/22/2015
2/23/2010	0	2/23/2011	0	2/23/2012	0.03	2/23/2013	0.75	2/23/2014	0	2/23/2015
2/24/2010	0.2	2/24/2011	0	2/24/2012	0.73	2/24/2013	0.03	2/24/2014	0	2/24/2015
2/25/2010	0.01	2/25/2011	0.07	2/25/2012	0	2/25/2013	0	2/25/2014	0	2/25/2015
2/26/2010	0	2/26/2011	0	2/26/2012	0	2/26/2013	0.85	2/26/2014	0.02	2/26/2015
2/27/2010	0	2/27/2011	0	2/27/2012	0.32	2/27/2013	0	2/27/2014	0	2/27/2015
2/28/2010	0.06	2/28/2011	0.85	2/28/2012	0	2/28/2013	0	2/28/2014	0	2/28/2015
3/1/2010	0	3/1/2011	0.01	2/29/2012	0	3/1/2013	0	3/1/2014	0	3/1/2015
3/2/2010	0.74	3/2/2011	0	3/1/2012	0	3/2/2013	0	3/2/2014	0	3/2/2015
3/3/2010	0.21	3/3/2011	0	3/2/2012	0.03	3/3/2013	0	3/3/2014	0.25	3/3/2015
3/4/2010	0	3/4/2011	0	3/3/2012	0.81	3/4/2013	0	3/4/2014	0	3/4/2015
3/5/2010	0	3/5/2011	0	3/4/2012	0.81	3/5/2013	0.04	3/5/2014	0.26	3/5/2015
3/6/2010	0	3/6/2011	0.55	3/5/2012	0	3/6/2013	0.04	3/6/2014	0.87	3/6/2015
3/7/2010	0	3/7/2011	0	3/6/2012	0	3/7/2013	0	3/7/2014	0.62	3/7/2015
3/8/2010	0	3/8/2011	0	3/7/2012	0	3/8/2013	0	3/8/2014	0	3/8/2015
3/9/2010	0	3/9/2011	0.09	3/8/2012	0	3/9/2013	0	3/9/2014	0	3/9/2015
3/10/2010	0.02	3/10/2011	0.63	3/9/2012	0.03	3/10/2013	0	3/10/2014	0	3/10/2015
3/11/2010	0.66	3/11/2011	0.01	3/10/2012	0	3/11/2013	0	3/11/2014	0	3/11/2015
3/12/2010	0.4	3/12/2011	0	3/11/2012	0	3/12/2013	0.66	3/12/2014	0.02	3/12/2015
3/13/2010	0.51	3/13/2011	0	3/12/2012	0	3/13/2013	0	3/13/2014	0	3/13/2015
3/14/2010	0	3/14/2011	0	3/13/2012	0	3/14/2013	0	3/14/2014	0	3/14/2015
3/15/2010	0	3/15/2011	0	3/14/2012	0	3/15/2013	0	3/15/2014	0	3/15/2015
3/16/2010	0	3/16/2011	0	3/15/2012	0	3/16/2013	0	3/16/2014	0.16	3/16/2015
3/17/2010	0	3/17/2011	0	3/16/2012	0	3/17/2013	0	3/17/2014	0.38	3/17/2015
3/18/2010	0	3/18/2011	0	3/17/2012	0.05	3/18/2013	0.03	3/18/2014	0.11	3/18/2015
3/19/2010	0	3/19/2011	0	3/18/2012	0.02	3/19/2013	0.05	3/19/2014	0.03	3/19/2015
3/20/2010	0	3/20/2011	0	3/19/2012	0.1	3/20/2013	0	3/20/2014	0	3/20/2015
3/21/2010	0	3/21/2011	0	3/20/2012	0.1	3/21/2013	0	3/21/2014	0	3/21/2015
3/22/2010	0.2	3/22/2011	0	3/21/2012	0	3/22/2013	0	3/22/2014	0	3/22/2015
3/23/2010	0	3/23/2011	0	3/22/2012	0	3/23/2013	0.01	3/23/2014	0.02	3/23/2015
3/24/2010	0	3/24/2011	0	3/23/2012	0	3/24/2013	0.39	3/24/2014	0	3/24/2015
3/25/2010	0	3/25/2011	0	3/24/2012	1.58	3/25/2013	0	3/25/2014	0.02	3/25/2015
3/26/2010	0.06	3/26/2011	0.02	3/25/2012	0.15	3/26/2013	0	3/26/2014	0	3/26/2015
3/27/2010	0	3/27/2011	0	3/26/2012	0.03	3/27/2013	0	3/27/2014	0	3/27/2015
3/28/2010	0.01	3/28/2011	0	3/27/2012	0	3/28/2013	0	3/28/2014	0.17	3/28/2015
3/29/2010	1.43	3/29/2011		3/28/2012	0	3/29/2013	0	3/29/2014	0.95	3/29/2015
3/30/2010	0	3/30/2011		3/29/2012	0	3/30/2013	0.08	3/30/2014	0	3/30/2015

3/31/2010	0	3/31/2011		3/30/2012	0.25	3/31/2013	0.09	3/31/2014	0	3/31/2015
4/1/2010	0	4/1/2011		3/31/2012	0.31	4/1/2013	0.16	4/1/2014	0	4/1/2015
4/2/2010	0	4/2/2011		4/1/2012	0.01	4/2/2013	0	4/2/2014	0	4/2/2015
4/3/2010	0	4/3/2011		4/2/2012	0	4/3/2013	0	4/3/2014	0	4/3/2015
4/4/2010	0	4/4/2011		4/3/2012	0	4/4/2013	0.87	4/4/2014	0	4/4/2015
4/5/2010	0	4/5/2011		4/4/2012	0	4/5/2013	0.01	4/5/2014	0	4/5/2015
4/6/2010	0	4/6/2011		4/5/2012	0.31	4/6/2013	0	4/6/2014	0	4/6/2015
4/7/2010	0.01	4/7/2011		4/6/2012	0.55	4/7/2013	0	4/7/2014	0.25	4/7/2015
4/8/2010	0	4/8/2011	0	4/7/2012	0	4/8/2013	0	4/8/2014	0.06	4/8/2015
4/9/2010	0.07	4/9/2011	0.12	4/8/2012	0	4/9/2013	0	4/9/2014	0.1	4/9/2015
4/10/2010	0	4/10/2011	0	4/9/2012	0	4/10/2013	0	4/10/2014	0	4/10/2015
4/11/2010	0	4/11/2011	0	4/10/2012	0	4/11/2013	0	4/11/2014	0	4/11/2015
4/12/2010	0	4/12/2011	0.02	4/11/2012	0	4/12/2013	0.73	4/12/2014	0	4/12/2015
4/13/2010	0	4/13/2011	0.01	4/12/2012	0	4/13/2013	0	4/13/2014	0	4/13/2015
4/14/2010	0	4/14/2011	0	4/13/2012	0	4/14/2013	0	4/14/2014	0.01	4/14/2015
4/15/2010	0	4/15/2011	0	4/14/2012	0	4/15/2013	0.01	4/15/2014	0.88	4/15/2015
4/16/2010	0	4/16/2011	0.36	4/15/2012	0	4/16/2013	0	4/16/2014	0	4/16/2015
4/17/2010	0	4/17/2011	0	4/16/2012	0	4/17/2013	0	4/17/2014	0	4/17/2015
4/18/2010	0	4/18/2011	0	4/17/2012	0	4/18/2013	0	4/18/2014	0.44	4/18/2015
4/19/2010	0	4/19/2011	0	4/18/2012	1.07	4/19/2013	0.47	4/19/2014	1.07	4/19/2015
4/20/2010	0	4/20/2011	0	4/19/2012	0	4/20/2013	0.35	4/20/2014	0.06	4/20/2015
4/21/2010	0.16	4/21/2011	0	4/20/2012	0	4/21/2013	0	4/21/2014	0	4/21/2015
4/22/2010	0	4/22/2011		4/21/2012	0.06	4/22/2013	0	4/22/2014	0.02	4/22/2015
4/23/2010	0	4/23/2011		4/22/2012	0.18	4/23/2013	0	4/23/2014	0	4/23/2015
4/24/2010	0	4/24/2011		4/23/2012	0.05	4/24/2013	0	4/24/2014	0	4/24/2015
4/25/2010	0.1	4/25/2011		4/24/2012	0	4/25/2013	0	4/25/2014	0	4/25/2015
4/26/2010	0	4/26/2011		4/25/2012	0.06	4/26/2013	0	4/26/2014	0	4/26/2015
4/27/2010	0.05	4/27/2011	0	4/26/2012	0	4/27/2013	0	4/27/2014	0	4/27/2015
4/28/2010	0.01	4/28/2011	0.97	4/27/2012	0	4/28/2013	0.09	4/28/2014	0.29	4/28/2015
4/29/2010	0	4/29/2011	0	4/28/2012	0.01	4/29/2013	0.97	4/29/2014	0.08	4/29/2015
4/30/2010	0	4/30/2011	0	4/29/2012	0	4/30/2013	0	4/30/2014	0.55	4/30/2015
5/1/2010	0	5/1/2011	0	4/30/2012	0	5/1/2013	0.02	5/1/2014	0	5/1/2015
5/2/2010	0	5/2/2011	0	5/1/2012	0	5/2/2013	0.01	5/2/2014	0	5/2/2015
5/3/2010	0	5/3/2011	0	5/2/2012	0	5/3/2013	0	5/3/2014	0	5/3/2015
5/4/2010	0.02	5/4/2011	0.06	5/3/2012	0	5/4/2013	0	5/4/2014	0	5/4/2015
5/5/2010	0	5/5/2011	0	5/4/2012	0	5/5/2013	0.35	5/5/2014	0	5/5/2015
5/6/2010	0	5/6/2011	0.25	5/5/2012	0.03	5/6/2013	0.37	5/6/2014	0	5/6/2015
5/7/2010	0	5/7/2011	0	5/6/2012	0.01	5/7/2013	0	5/7/2014	0	5/7/2015
5/8/2010	0	5/8/2011	0	5/7/2012	0	5/8/2013	0	5/8/2014	0	5/8/2015
5/9/2010	0	5/9/2011	0	5/8/2012	0	5/9/2013	0	5/9/2014	0	5/9/2015
5/10/2010	0	5/10/2011	0	5/9/2012	0.61	5/10/2013	0	5/10/2014	0	5/10/2015
5/11/2010	0	5/11/2011	0	5/10/2012	0	5/11/2013	0	5/11/2014	0	5/11/2015
5/12/2010	0	5/12/2011		5/11/2012	0	5/12/2013	0	5/12/2014	0	5/12/2015
5/13/2010	0	5/13/2011		5/12/2012	0	5/13/2013	0	5/13/2014	0	5/13/2015
5/14/2010	0	5/14/2011		5/13/2012	0.08	5/14/2013	0	5/14/2014	0	5/14/2015
5/15/2010	0	5/15/2011		5/14/2012	1.01	5/15/2013	0	5/15/2014	3.74	5/15/2015
5/16/2010	1.99	5/16/2011		5/15/2012	0.01	5/16/2013	0	5/16/2014	0.34	5/16/2015

5/17/2010	0.66	5/17/2011	0.34	5/16/2012	0.04	5/17/2013	0	5/17/2014	0	5/17/2015
5/18/2010	0.06	5/18/2011	0	5/17/2012	2.11	5/18/2013	0	5/18/2014	0	5/18/2015
5/19/2010	0.07	5/19/2011	0	5/18/2012	0	5/19/2013	0.25	5/19/2014	0	5/19/2015
5/20/2010	0	5/20/2011	0	5/19/2012	0	5/20/2013	0.98	5/20/2014	0	5/20/2015
5/21/2010	0	5/21/2011	0	5/20/2012	0	5/21/2013	0.53	5/21/2014	0	5/21/2015
5/22/2010	0	5/22/2011	0.15	5/21/2012	0	5/22/2013	0.16	5/22/2014	0	5/22/2015
5/23/2010	0.71	5/23/2011	0.05	5/22/2012	0	5/23/2013	0.08	5/23/2014	0	5/23/2015
5/24/2010	0.4	5/24/2011	0	5/23/2012	0.11	5/24/2013	0	5/24/2014	0	5/24/2015
5/25/2010	0.02	5/25/2011	0	5/24/2012	0	5/25/2013	0	5/25/2014	0	5/25/2015
5/26/2010	0	5/26/2011	0	5/25/2012	0	5/26/2013	0	5/26/2014	0	5/26/2015
5/27/2010	0	5/27/2011	0.23	5/26/2012	0	5/27/2013	0	5/27/2014	0	5/27/2015
5/28/2010	0	5/28/2011	0.19	5/27/2012	0	5/28/2013	0	5/28/2014	0.02	5/28/2015
5/29/2010	0	5/29/2011	0	5/28/2012	0.24	5/29/2013	0	5/29/2014	0	5/29/2015
5/30/2010	0	5/30/2011	0	5/29/2012	0.87	5/30/2013	0	5/30/2014	0.62	5/30/2015
5/31/2010	0.09	5/31/2011	0	5/30/2012	1.88	5/31/2013	0	5/31/2014	0	5/31/2015
6/1/2010	0.66	6/1/2011	0	5/31/2012	0	6/1/2013	0	6/1/2014	0	6/1/2015
6/2/2010	0.01	6/2/2011	0	6/1/2012	0.44	6/2/2013	0	6/2/2014	0	6/2/2015
6/3/2010	0.31	6/3/2011	0	6/2/2012	0	6/3/2013	0.43	6/3/2014	0	6/3/2015
6/4/2010	0	6/4/2011	0	6/3/2012	0	6/4/2013	0.01	6/4/2014	0	6/4/2015
6/5/2010	0	6/5/2011	0	6/4/2012	0	6/5/2013	0	6/5/2014	0.17	6/5/2015
6/6/2010	0	6/6/2011	0	6/5/2012	0.02	6/6/2013	1.08	6/6/2014	0	6/6/2015
6/7/2010	0	6/7/2011	0	6/6/2012	0	6/7/2013	2.64	6/7/2014	0	6/7/2015
6/8/2010	0	6/8/2011	0	6/7/2012	0	6/8/2013	0.41	6/8/2014	0	6/8/2015
6/9/2010	0	6/9/2011	0	6/8/2012	0	6/9/2013	0	6/9/2014	0	6/9/2015
6/10/2010	0.1	6/10/2011	0	6/9/2012	0	6/10/2013	1	6/10/2014	0.97	6/10/2015
6/11/2010	0	6/11/2011	0	6/10/2012	0	6/11/2013	0	6/11/2014	0.02	6/11/2015
6/12/2010	0	6/12/2011	0.3	6/11/2012	0.72	6/12/2013	0	6/12/2014	0.47	6/12/2015
6/13/2010	0	6/13/2011	0.01	6/12/2012	0.11	6/13/2013	0.98	6/13/2014	0	6/13/2015
6/14/2010	0	6/14/2011	0	6/13/2012	0	6/14/2013	0	6/14/2014	0	6/14/2015
6/15/2010	0	6/15/2011	0	6/14/2012	0	6/15/2013	0	6/15/2014	0	6/15/2015
6/16/2010	0	6/16/2011	0.28	6/15/2012	0	6/16/2013	0	6/16/2014	0	6/16/2015
6/17/2010	0	6/17/2011	0	6/16/2012	0	6/17/2013	0.52	6/17/2014	0	6/17/2015
6/18/2010	0	6/18/2011	0.05	6/17/2012	0	6/18/2013	0.86	6/18/2014	0	6/18/2015
6/19/2010	0	6/19/2011	0	6/18/2012	0	6/19/2013	0.98	6/19/2014	0.44	6/19/2015
6/20/2010	0	6/20/2011	0	6/19/2012	0	6/20/2013	0	6/20/2014	0	6/20/2015
6/21/2010	0	6/21/2011	0.24	6/20/2012	0	6/21/2013	0	6/21/2014	0.49	6/21/2015
6/22/2010	0	6/22/2011	0.8	6/21/2012	0	6/22/2013	0.01	6/22/2014	0.01	6/22/2015
6/23/2010	0	6/23/2011	0.02	6/22/2012	0	6/23/2013	0	6/23/2014	0	6/23/2015
6/24/2010	0	6/24/2011	0	6/23/2012	0.4	6/24/2013	0.43	6/24/2014	0.06	6/24/2015
6/25/2010	5.05	6/25/2011	0	6/24/2012	0.04	6/25/2013	0.15	6/25/2014	0	6/25/2015
6/26/2010	0.14	6/26/2011	0	6/25/2012	0	6/26/2013	0.26	6/26/2014	0	6/26/2015
6/27/2010	0	6/27/2011	0	6/26/2012	1.08	6/27/2013	0.49	6/27/2014	1.27	6/27/2015
6/28/2010	0	6/28/2011	0.01	6/27/2012	0	6/28/2013	0.58	6/28/2014	0.02	6/28/2015
6/29/2010	0	6/29/2011	0	6/28/2012	0	6/29/2013	0	6/29/2014	0	6/29/2015
6/30/2010	0.01	6/30/2011	0	6/29/2012	0	6/30/2013	0.76	6/30/2014	0	6/30/2015
7/1/2010	0.01	7/1/2011	0	6/30/2012	0	7/1/2013	0.58	7/1/2014	0	7/1/2015
7/2/2010	0	7/2/2011	0	7/1/2012	0.86	7/2/2013	0.92	7/2/2014	0	7/2/2015

7/3/2010	0	7/3/2011	0	7/2/2012	0	7/3/2013	0.81	7/3/2014	0.58	7/3/2015
7/4/2010	0	7/4/2011	0.29	7/3/2012	0	7/4/2013	0.01	7/4/2014	0	7/4/2015
7/5/2010	0	7/5/2011	0.27	7/4/2012	0	7/5/2013	0.25	7/5/2014	0	7/5/2015
7/6/2010	0	7/6/2011	0.07	7/5/2012	0	7/6/2013	0	7/6/2014	0	7/6/2015
7/7/2010	0	7/7/2011	0	7/6/2012	0	7/7/2013	0	7/7/2014	0	7/7/2015
7/8/2010	0	7/8/2011	0	7/7/2012	0	7/8/2013	0.03	7/8/2014	0	7/8/2015
7/9/2010	0.12	7/9/2011	0.06	7/8/2012	0	7/9/2013	1.16	7/9/2014	0	7/9/2015
7/10/2010	1.06	7/10/2011	0	7/9/2012	0.09	7/10/2013	0	7/10/2014	0.78	7/10/2015
7/11/2010	0	7/11/2011	0	7/10/2012	0.67	7/11/2013	0.17	7/11/2014	0.01	7/11/2015
7/12/2010	0.02	7/12/2011	0	7/11/2012	0.14	7/12/2013	0.24	7/12/2014	0	7/12/2015
7/13/2010	0	7/13/2011	0.18	7/12/2012	0.07	7/13/2013	0.52	7/13/2014	0	7/13/2015
7/14/2010	0	7/14/2011	0	7/13/2012	0.47	7/14/2013	0	7/14/2014	0	7/14/2015
7/15/2010	0	7/15/2011	0	7/14/2012	0	7/15/2013	0	7/15/2014	0.08	7/15/2015
7/16/2010	0	7/16/2011	0	7/15/2012	0	7/16/2013	0	7/16/2014	0.13	7/16/2015
7/17/2010	0	7/17/2011	0	7/16/2012	0.12	7/17/2013	0	7/17/2014	0	7/17/2015
7/18/2010	0.25	7/18/2011	0	7/17/2012	0.01	7/18/2013	0	7/18/2014	0	7/18/2015
7/19/2010	0	7/19/2011	0	7/18/2012	0	7/19/2013	0	7/19/2014	0	7/19/2015
7/20/2010	0	7/20/2011	0	7/19/2012	0	7/20/2013	0	7/20/2014	0	7/20/2015
7/21/2010	0	7/21/2011	0.65	7/20/2012	0.95	7/21/2013	0	7/21/2014	0.3	7/21/2015
7/22/2010	0	7/22/2011	0	7/21/2012	0.46	7/22/2013	0	7/22/2014	0	7/22/2015
7/23/2010	0	7/23/2011	0.64	7/22/2012	0	7/23/2013	0	7/23/2014	0.03	7/23/2015
7/24/2010	0	7/24/2011	0	7/23/2012	0	7/24/2013	1.26	7/24/2014	0.01	7/24/2015
7/25/2010	0	7/25/2011	0.1	7/24/2012	0.14	7/25/2013	0	7/25/2014	0.01	7/25/2015
7/26/2010	0	7/26/2011	0.02	7/25/2012	0	7/26/2013	0	7/26/2014	0	7/26/2015
7/27/2010	0	7/27/2011	0	7/26/2012	0	7/27/2013	0.06	7/27/2014	0	7/27/2015
7/28/2010	0	7/28/2011	0	7/27/2012	0	7/28/2013	0.08	7/28/2014	0	7/28/2015
7/29/2010	0	7/29/2011	0	7/28/2012	0	7/29/2013	0.76	7/29/2014	0	7/29/2015
7/30/2010		7/30/2011	0.05	7/29/2012	0.27	7/30/2013	0	7/30/2014	0	7/30/2015
7/31/2010		7/31/2011	0.24	7/30/2012	0.13	7/31/2013	0	7/31/2014	0.01	7/31/2015
8/1/2010		8/1/2011	0	7/31/2012	0.67	8/1/2013	0	8/1/2014	0.05	8/1/2015
8/2/2010		8/2/2011	0	8/1/2012	0.28	8/2/2013	0	8/2/2014	0.43	8/2/2015
8/3/2010		8/3/2011	0	8/2/2012	0.03	8/3/2013	0	8/3/2014	1.29	8/3/2015
8/4/2010		8/4/2011	0	8/3/2012	0.01	8/4/2013	0	8/4/2014	0	8/4/2015
8/5/2010		8/5/2011	0.01	8/4/2012	0	8/5/2013	0	8/5/2014	0	8/5/2015
8/6/2010		8/6/2011	0	8/5/2012	0.19	8/6/2013	0	8/6/2014	0	8/6/2015
8/7/2010		8/7/2011	0.01	8/6/2012	0.09	8/7/2013	0	8/7/2014	0	8/7/2015
8/8/2010		8/8/2011	0.01	8/7/2012	0.82	8/8/2013	0	8/8/2014	0	8/8/2015
8/9/2010		8/9/2011	0	8/8/2012	0.4	8/9/2013	0	8/9/2014	0.19	8/9/2015
8/10/2010		8/10/2011	0.59	8/9/2012	0	8/10/2013	0.17	8/10/2014	0.33	8/10/2015
8/11/2010		8/11/2011	0	8/10/2012	0.26	8/11/2013	0	8/11/2014	0.11	8/11/2015
8/12/2010		8/12/2011	0.13	8/11/2012	0.16	8/12/2013	0	8/12/2014	0.01	8/12/2015
8/13/2010		8/13/2011	0.08	8/12/2012	0	8/13/2013	1.07	8/13/2014	0	8/13/2015
8/14/2010		8/14/2011	0.48	8/13/2012	0.03	8/14/2013	0	8/14/2014	0	8/14/2015
8/15/2010		8/15/2011	0.17	8/14/2012	0	8/15/2013	0.19	8/15/2014	0	8/15/2015
8/16/2010		8/16/2011	0	8/15/2012	0	8/16/2013	0.17	8/16/2014	0	8/16/2015
8/17/2010		8/17/2011	0	8/16/2012	0	8/17/2013	1.35	8/17/2014	0	8/17/2015
8/18/2010		8/18/2011	0	8/17/2012	0.02	8/18/2013	0.01	8/18/2014	0.06	8/18/2015

8/19/2010		8/19/2011	0	8/18/2012	0	8/19/2013	1.43	8/19/2014	1.62	8/19/2015
8/20/2010		8/20/2011	0.18	8/19/2012	0.79	8/20/2013	0.05	8/20/2014	0.1	8/20/2015
8/21/2010		8/21/2011	0.33	8/20/2012	1.36	8/21/2013	1.69	8/21/2014	0	8/21/2015
8/22/2010		8/22/2011	0.97	8/21/2012	0	8/22/2013	0.07	8/22/2014	0	8/22/2015
8/23/2010		8/23/2011	0	8/22/2012	0.26	8/23/2013	0.01	8/23/2014	0.89	8/23/2015
8/24/2010		8/24/2011	0	8/23/2012	0.04	8/24/2013	0	8/24/2014	0.01	8/24/2015
8/25/2010		8/25/2011	0	8/24/2012	0.42	8/25/2013	0	8/25/2014	0	8/25/2015
8/26/2010		8/26/2011	1.15	8/25/2012	0.31	8/26/2013	0	8/26/2014	0	8/26/2015
8/27/2010		8/27/2011	1.45	8/26/2012	0	8/27/2013	0	8/27/2014	0	8/27/2015
8/28/2010		8/28/2011	0	8/27/2012	0.01	8/28/2013	0	8/28/2014	0	8/28/2015
8/29/2010		8/29/2011	0.26	8/28/2012	0.22	8/29/2013	0.05	8/29/2014	0	8/29/2015
8/30/2010		8/30/2011	0.01	8/29/2012	0.1	8/30/2013	0	8/30/2014	0	8/30/2015
8/31/2010		8/31/2011	0	8/30/2012	0	8/31/2013	0	8/31/2014	0	8/31/2015
9/1/2010		9/1/2011	0	8/31/2012	0	9/1/2013	0.11	9/1/2014	0	9/1/2015
9/2/2010		9/2/2011	0	9/1/2012	0.06	9/2/2013	0.28	9/2/2014	0.34	9/2/2015
9/3/2010		9/3/2011	0	9/2/2012	0.24	9/3/2013	0.52	9/3/2014	0.03	9/3/2015
9/4/2010		9/4/2011	0	9/3/2012	0	9/4/2013	0	9/4/2014	0.01	9/4/2015
9/5/2010		9/5/2011	0.11	9/4/2012	0	9/5/2013	0	9/5/2014	0	9/5/2015
9/6/2010		9/6/2011	0.48	9/5/2012	0	9/6/2013	0	9/6/2014	0	9/6/2015
9/7/2010		9/7/2011	0	9/6/2012	0.29	9/7/2013	0	9/7/2014	0.43	9/7/2015
9/8/2010		9/8/2011	0	9/7/2012	0	9/8/2013	0	9/8/2014	1.96	9/8/2015
9/9/2010		9/9/2011	0	9/8/2012	0.21	9/9/2013	0	9/9/2014	0.01	9/9/2015
9/10/2010		9/10/2011	0	9/9/2012	0.05	9/10/2013	0	9/10/2014	0	9/10/2015
9/11/2010		9/11/2011	0	9/10/2012	0	9/11/2013	0	9/11/2014	0	9/11/2015
9/12/2010		9/12/2011	0	9/11/2012	0	9/12/2013	0	9/12/2014	0.49	9/12/2015
9/13/2010		9/13/2011	0	9/12/2012	0	9/13/2013	0	9/13/2014	0.84	9/13/2015
9/14/2010		9/14/2011	0	9/13/2012	0	9/14/2013	0	9/14/2014	0.01	9/14/2015
9/15/2010		9/15/2011	0.18	9/14/2012	0	9/15/2013	0	9/15/2014	0	9/15/2015
9/16/2010		9/16/2011	0.01	9/15/2012	0	9/16/2013	0.04	9/16/2014	0.4	9/16/2015
9/17/2010		9/17/2011	0.01	9/16/2012	0.04	9/17/2013	0	9/17/2014	0.24	9/17/2015
9/18/2010		9/18/2011	0	9/17/2012	0	9/18/2013	0	9/18/2014	0	9/18/2015
9/19/2010		9/19/2011	0	9/18/2012	0.68	9/19/2013	0	9/19/2014	0	9/19/2015
9/20/2010		9/20/2011	0.4	9/19/2012	0.01	9/20/2013	0.16	9/20/2014	0	9/20/2015
9/21/2010	0	9/21/2011	0	9/20/2012	0	9/21/2013	0.28	9/21/2014	0	9/21/2015
9/22/2010	0	9/22/2011	0.01	9/21/2012	0	9/22/2013	0.57	9/22/2014	0.05	9/22/2015
9/23/2010	0	9/23/2011	1.02	9/22/2012	0	9/23/2013	0	9/23/2014	0.12	9/23/2015
9/24/2010	0	9/24/2011	0.07	9/23/2012	0	9/24/2013	0	9/24/2014	0.33	9/24/2015
9/25/2010	0	9/25/2011	0.48	9/24/2012	0	9/25/2013	0.17	9/25/2014	0.38	9/25/2015
9/26/2010	1.65	9/26/2011	0.24	9/25/2012	0	9/26/2013	0.02	9/26/2014	0.01	9/26/2015
9/27/2010	3.19	9/27/2011	0.02	9/26/2012	0	9/27/2013	0	9/27/2014	0	9/27/2015
9/28/2010	0.2	9/28/2011	0	9/27/2012	0	9/28/2013	0	9/28/2014	0	9/28/2015
9/29/2010	1.89	9/29/2011	0	9/28/2012	0	9/29/2013	0	9/29/2014	0.14	9/29/2015
9/30/2010	1.14	9/30/2011	0.34	9/29/2012	0.3	9/30/2013	0	9/30/2014	0	9/30/2015
10/1/2010	0	10/1/2011	0	9/30/2012	0.03	10/1/2013	0	10/1/2014	0	10/1/2015
10/2/2010	0	10/2/2011	0	10/1/2012	0.31	10/2/2013	0	10/2/2014	0	10/2/2015
10/3/2010	0	10/3/2011	0	10/2/2012	0.14	10/3/2013	0	10/3/2014	0.05	10/3/2015
10/4/2010	0	10/4/2011	0	10/3/2012	0	10/4/2013	0	10/4/2014	0.03	10/4/2015

10/5/2010	0	10/5/2011	0	10/4/2012	0	10/5/2013	0	10/5/2014	0	10/5/2015
10/6/2010	0	10/6/2011	0	10/5/2012	0	10/6/2013	0	10/6/2014	0	10/6/2015
10/7/2010	0	10/7/2011	0	10/6/2012	0	10/7/2013	0.1	10/7/2014	0	10/7/2015
10/8/2010	0	10/8/2011	0	10/7/2012	0	10/8/2013	0.09	10/8/2014	0	10/8/2015
10/9/2010	0	10/9/2011	0	10/8/2012	0.53	10/9/2013	0.01	10/9/2014	0	10/9/2015
10/10/2010	0	10/10/2011	0	10/9/2012	0	10/10/2013	0.01	10/10/2014	0	10/10/2015
10/11/2010	0	10/11/2011	0.2	10/10/2012	0.01	10/11/2013	0	10/11/2014	0.7	10/11/2015
10/12/2010	0	10/12/2011	0.38	10/11/2012	0	10/12/2013	0	10/12/2014	0.01	10/12/2015
10/13/2010	0	10/13/2011	0	10/12/2012	0	10/13/2013	0.02	10/13/2014	0.01	10/13/2015
10/14/2010	0.07	10/14/2011	0.09	10/13/2012	0	10/14/2013	0.04	10/14/2014	1.11	10/14/2015
10/15/2010	0	10/15/2011	0	10/14/2012	0	10/15/2013	0	10/15/2014	0.5	10/15/2015
10/16/2010	0	10/16/2011	0	10/15/2012	0.09	10/16/2013	0	10/16/2014	0	10/16/2015
10/17/2010	0	10/17/2011	0	10/16/2012	0	10/17/2013	0	10/17/2014	0	10/17/2015
10/18/2010	0	10/18/2011	0.33	10/17/2012	0	10/18/2013	0	10/18/2014	0	10/18/2015
10/19/2010	0	10/19/2011	0.22	10/18/2012	0	10/19/2013	0.07	10/19/2014	0	10/19/2015
10/20/2010	0	10/20/2011	0	10/19/2012	0.08	10/20/2013	0	10/20/2014	0	10/20/2015
10/21/2010	0	10/21/2011	0	10/20/2012	0	10/21/2013	0	10/21/2014	0	10/21/2015
10/22/2010	0	10/22/2011	0	10/21/2012	0	10/22/2013	0	10/22/2014	0	10/22/2015
10/23/2010	0	10/23/2011	0	10/22/2012	0	10/23/2013	0	10/23/2014	0	10/23/2015
10/24/2010	0	10/24/2011	0	10/23/2012	0	10/24/2013	0	10/24/2014	0	10/24/2015
10/25/2010	0.14	10/25/2011	0	10/24/2012	0	10/25/2013	0	10/25/2014	0	10/25/2015
10/26/2010	0.01	10/26/2011	0	10/25/2012	0	10/26/2013	0	10/26/2014	0	10/26/2015
10/27/2010	0	10/27/2011	0	10/26/2012	0	10/27/2013	0	10/27/2014	0	10/27/2015
10/28/2010	0.24	10/28/2011	0	10/27/2012	0	10/28/2013	0	10/28/2014	0	10/28/2015
10/29/2010	0	10/29/2011	0.08	10/28/2012	0	10/29/2013	0	10/29/2014	0.2	10/29/2015
10/30/2010	0	10/30/2011	0	10/29/2012	0.01	10/30/2013	0	10/30/2014	0.02	10/30/2015
10/31/2010	0	10/31/2011	0.5	10/30/2012	0.01	10/31/2013	0	10/31/2014	0	10/31/2015
11/1/2010	0	11/1/2011	0	10/31/2012	0	11/1/2013	0.24	11/1/2014	0.22	11/1/2015
11/2/2010	0	11/2/2011	0	11/1/2012	0	11/2/2013	0.14	11/2/2014	0	11/2/2015
11/3/2010	0.75	11/3/2011	0	11/2/2012	0	11/3/2013	0	11/3/2014	0	11/3/2015
11/4/2010	0.56	11/4/2011	0.85	11/3/2012	0	11/4/2013	0	11/4/2014	0	11/4/2015
11/5/2010	0	11/5/2011	0	11/4/2012	0.05	11/5/2013	0	11/5/2014	0	11/5/2015
11/6/2010	0	11/6/2011	0	11/5/2012	0	11/6/2013	0	11/6/2014	0	11/6/2015
11/7/2010	0	11/7/2011	0	11/6/2012	0	11/7/2013	0.21	11/7/2014	0	11/7/2015
11/8/2010	0	11/8/2011	0	11/7/2012	0	11/8/2013	0	11/8/2014	0	11/8/2015
11/9/2010	0	11/9/2011	0	11/8/2012	0	11/9/2013	0	11/9/2014	0	11/9/2015
11/10/2010	0	11/10/2011	0	11/9/2012	0	11/10/2013	0	11/10/2014	0	11/10/2015
11/11/2010	0	11/11/2011	0	11/10/2012	0	11/11/2013	0	11/11/2014	0	11/11/2015
11/12/2010	0	11/12/2011	0	11/11/2012	0	11/12/2013	0.01	11/12/2014	0	11/12/2015
11/13/2010	0	11/13/2011	0	11/12/2012	0	11/13/2013	0	11/13/2014	0	11/13/2015
11/14/2010	0	11/14/2011	0	11/13/2012	0.04	11/14/2013	0	11/14/2014	0	11/14/2015
11/15/2010	0	11/15/2011	0	11/14/2012	0	11/15/2013	0	11/15/2014	0	11/15/2015
11/16/2010	0	11/16/2011	0.05	11/15/2012	0.64	11/16/2013	0	11/16/2014	0.02	11/16/2015
11/17/2010	0	11/17/2011	0.05	11/16/2012	0	11/17/2013	0.01	11/17/2014	0.02	11/17/2015
11/18/2010	0	11/18/2011	0	11/17/2012	0	11/18/2013	0	11/18/2014	0	11/18/2015
11/19/2010	0	11/19/2011	0	11/18/2012	0.05	11/19/2013	0	11/19/2014	0	11/19/2015
11/20/2010	0	11/20/2011	0	11/19/2012	0	11/20/2013	0	11/20/2014	0	11/20/2015

11/21/2010	0	11/21/2011	0	11/20/2012	0	11/21/2013	0	11/21/2014	0	11/21/2015
11/22/2010	0	11/22/2011	0	11/21/2012	0	11/22/2013	0	11/22/2014	0	11/22/2015
11/23/2010	0.03	11/23/2011	0.23	11/22/2012	0	11/23/2013	0	11/23/2014	0.67	11/23/2015
11/24/2010	0.01	11/24/2011	0	11/23/2012	0	11/24/2013	0	11/24/2014	0.05	11/24/2015
11/25/2010	0	11/25/2011	0	11/24/2012	0	11/25/2013	0	11/25/2014	0.87	11/25/2015
11/26/2010	0.05	11/26/2011	0	11/25/2012	0	11/26/2013	0.76	11/26/2014	1.04	11/26/2015
11/27/2010	0	11/27/2011	0	11/26/2012	0	11/27/2013	0.88	11/27/2014	0	11/27/2015
11/28/2010	0	11/28/2011	0.29	11/27/2012	0.24	11/28/2013	0	11/28/2014	0	11/28/2015
11/29/2010	0	11/29/2011	1.39	11/28/2012	0	11/29/2013	0	11/29/2014	0	11/29/2015
11/30/2010	0	11/30/2011	0	11/29/2012	0	11/30/2013	0	11/30/2014	0	11/30/2015
12/1/2010	0	12/1/2011	0	11/30/2012	0	12/1/2013	0	12/1/2014	0	12/1/2015
12/2/2010	0	12/2/2011	0	12/1/2012	0	12/2/2013	0	12/2/2014	0	12/2/2015
12/3/2010	0	12/3/2011	0	12/2/2012	0	12/3/2013	0.01	12/3/2014	0	12/3/2015
12/4/2010	0.11	12/4/2011	0	12/3/2012	0	12/4/2013	0.25	12/4/2014	0	12/4/2015
12/5/2010	0	12/5/2011	0.01	12/4/2012	0	12/5/2013	0	12/5/2014	0	12/5/2015
12/6/2010	0	12/6/2011	0	12/5/2012	0.08	12/6/2013	0	12/6/2014	0.05	12/6/2015
12/7/2010	0	12/7/2011	0.13	12/6/2012	0	12/7/2013	0.36	12/7/2014	0.01	12/7/2015
12/8/2010	0	12/8/2011	0	12/7/2012	0.01	12/8/2013	0.16	12/8/2014	0.01	12/8/2015
12/9/2010	0	12/9/2011	0	12/8/2012	0	12/9/2013	0.03	12/9/2014	0.03	12/9/2015
12/10/2010	0	12/10/2011	0	12/9/2012	0	12/10/2013	0.44	12/10/2014	0.01	12/10/2015
12/11/2010	0.26	12/11/2011	0	12/10/2012	0	12/11/2013	0	12/11/2014	0	12/11/2015
12/12/2010	0.28	12/12/2011	0	12/11/2012	0	12/12/2013	0	12/12/2014	0	12/12/2015
12/13/2010	0	12/13/2011	0	12/12/2012	0.65	12/13/2013	0	12/13/2014	0	12/13/2015
12/14/2010	0	12/14/2011	0	12/13/2012	0.2	12/14/2013	0.93	12/14/2014	0	12/14/2015
12/15/2010	0	12/15/2011	0	12/14/2012	0	12/15/2013	0.02	12/15/2014	0	12/15/2015
12/16/2010	0.01	12/16/2011	0	12/15/2012	0	12/16/2013	0	12/16/2014	0.27	12/16/2015
12/17/2010	0	12/17/2011	0	12/16/2012	0.09	12/17/2013	0	12/17/2014	0.01	12/17/2015
12/18/2010	0.31	12/18/2011	0	12/17/2012	0.65	12/18/2013	0	12/18/2014	0	12/18/2015
12/19/2010	0	12/19/2011	0	12/18/2012	0.01	12/19/2013	0	12/19/2014	0	12/19/2015
12/20/2010	0.01	12/20/2011	0	12/19/2012	0	12/20/2013	0	12/20/2014	0.1	12/20/2015
12/21/2010	0	12/21/2011	0.06	12/20/2012	0.39	12/21/2013	0	12/21/2014	0.03	12/21/2015
12/22/2010	0	12/22/2011	0	12/21/2012	0	12/22/2013	0	12/22/2014	0.54	12/22/2015
12/23/2010	0	12/23/2011	0	12/22/2012	0	12/23/2013	0.7	12/23/2014	0.94	12/23/2015
12/24/2010	0	12/24/2011	0	12/23/2012	0	12/24/2013	0.05	12/24/2014	1.28	12/24/2015
12/25/2010		12/25/2011	0	12/24/2012	0.05	12/25/2013	0	12/25/2014	0.06	12/25/2015
12/26/2010		12/26/2011	0	12/25/2012	0	12/26/2013	0.06	12/26/2014	0	12/26/2015
12/27/2010	0	12/27/2011	0.66	12/26/2012	1.97	12/27/2013	0	12/27/2014	0	12/27/2015
12/28/2010	0	12/28/2011	0	12/27/2012	0	12/28/2013	0	12/28/2014	0.01	12/28/2015
12/29/2010	0	12/29/2011	0	12/28/2012	0	12/29/2013	1.91	12/29/2014	0.35	12/29/2015
12/30/2010	0	12/30/2011	0	12/29/2012	0.74	12/30/2013	0	12/30/2014	0	12/30/2015
12/31/2010	0	12/31/2011	0.01	12/30/2012	0	12/31/2013	0	12/31/2014	0	12/31/2015
				12/31/2012	0					

2015		2016		2017		2018		2019		2020		2021		2022
359		363		365		345		364		365		344		113
34		**32**		**29**		**31**		**31**		**38**		**24**		**7**
4.11	10/8/2016	16.15	4/24/2017	3.07	7/28/2018	1.96	9/5/2019	3.82	11/12/2020	5.4	7/19/2021	3.95	1/16/2022	1.41
Rain (inch)	Date	Rain (inch)	Date	Rain (inch)	Date	Rain (inch)	Date	Rain (inch)	Date	Rain (inch)	Date	Rain (inch)	Date	Rain (inch)
0	1/1/2016	0.01	1/1/2017	0.02	1/1/2018	0	1/1/2019	0.01	1/1/2020	0	1/1/2021	0.46	1/1/2022	0.3
0.04	1/2/2016	0	1/2/2017	0.61	1/2/2018	0	1/2/2019	0	1/2/2020	0.04	1/2/2021	0.6	1/2/2022	0.98
0.09	1/3/2016	0	1/3/2017	0.52	1/3/2018	0	1/3/2019	0.22	1/3/2020	0.7	1/3/2021	0.31	1/3/2022	0.74
0.49	1/4/2016	0	1/4/2017	0	1/4/2018	0.01	1/4/2019	0.76	1/4/2020	0.73	1/4/2021	0	1/4/2022	0
0	1/5/2016	0	1/5/2017	0	1/5/2018	0	1/5/2019	0	1/5/2020	0	1/5/2021	0.03	1/5/2022	0.06
0	1/6/2016	0	1/6/2017	0.35	1/6/2018	0	1/6/2019	0	1/6/2020	0	1/6/2021	0.01	1/6/2022	0
0	1/7/2016	0	1/7/2017	0.57	1/7/2018	0	1/7/2019	0	1/7/2020	0	1/7/2021	0	1/7/2022	0
0	1/8/2016	0	1/8/2017	0.01	1/8/2018	0	1/8/2019	0	1/8/2020	0	1/8/2021	0.77	1/8/2022	0
0	1/9/2016	0.21	1/9/2017	0.04	1/9/2018	0	1/9/2019	0	1/9/2020	0	1/9/2021	0.01	1/9/2022	0.49
0	1/10/2016	0.01	1/10/2017	0.05	1/10/2018	0	1/10/2019	0	1/10/2020	0	1/10/2021	0	1/10/2022	0
0	1/11/2016	0	1/11/2017	0	1/11/2018	0.09	1/11/2019	0	1/11/2020	0.08	1/11/2021	0.06	1/11/2022	0
2.66	1/12/2016	0	1/12/2017	0	1/12/2018	0.22	1/12/2019	0	1/12/2020	0.7	1/12/2021	0.45	1/12/2022	0
0.25	1/13/2016	0	1/13/2017	0	1/13/2018	0	1/13/2019	0.7	1/13/2020	0.6	1/13/2021	0	1/13/2022	0
0	1/14/2016	0	1/14/2017	0	1/14/2018	0	1/14/2019	0	1/14/2020	0	1/14/2021	0	1/14/2022	0
0.05	1/15/2016	0.53	1/15/2017	0	1/15/2018	0	1/15/2019	0	1/15/2020	0	1/15/2021	0.33	1/15/2022	0
0.01	1/16/2016	0	1/16/2017	0	1/16/2018	0	1/16/2019	0	1/16/2020	0	1/16/2021	0.01	1/16/2022	1.41
0	1/17/2016	0.18	1/17/2017	0	1/17/2018	0.2	1/17/2019	0.17	1/17/2020	0	1/17/2021	0	1/17/2022	0
0.69	1/18/2016	0	1/18/2017	0	1/18/2018	0.07	1/18/2019	0	1/18/2020	0	1/18/2021	0	1/18/2022	0
0	1/19/2016	0	1/19/2017	0	1/19/2018	0.01	1/19/2019	0	1/19/2020	0.03	1/19/2021	0	1/19/2022	0
0	1/20/2016	0	1/20/2017	0	1/20/2018	0	1/20/2019	0.5	1/20/2020	0	1/20/2021	0	1/20/2022	
0	1/21/2016	0	1/21/2017	0.03	1/21/2018	0	1/21/2019	0	1/21/2020	0	1/21/2021	0	1/21/2022	
0	1/22/2016		1/22/2017	0.31	1/22/2018	0	1/22/2019	0	1/22/2020	0	1/22/2021	0	1/22/2022	
0.45	1/23/2016		1/23/2017	0.04	1/23/2018	0.08	1/23/2019	0	1/23/2020	0	1/23/2021	0	1/23/2022	0
0.6	1/24/2016	0	1/24/2017	0	1/24/2018	0	1/24/2019	0.83	1/24/2020	0.03	1/24/2021	0	1/24/2022	0
0	1/25/2016	0	1/25/2017	0	1/25/2018	0	1/25/2019	0	1/25/2020	0.25	1/25/2021	0.5	1/25/2022	0
0.01	1/26/2016	0	1/26/2017	0.01	1/26/2018	0	1/26/2019	0	1/26/2020	0	1/26/2021	0.31	1/26/2022	0
0	1/27/2016	0	1/27/2017	0	1/27/2018	0	1/27/2019	0	1/27/2020	0.09	1/27/2021	0.42	1/27/2022	0
0	1/28/2016	0.06	1/28/2017	0	1/28/2018	1.04	1/28/2019	0	1/28/2020	0.01	1/28/2021	0.42	1/28/2022	0
0	1/29/2016	0	1/29/2017	0	1/29/2018	1.04	1/29/2019	0.09	1/29/2020	0	1/29/2021	0	1/29/2022	0.04
0	1/30/2016	0	1/30/2017	0	1/30/2018	0.03	1/30/2019	0	1/30/2020	0	1/30/2021	0	1/30/2022	0
0	1/31/2016	0	1/31/2017	0	1/31/2018	0	1/31/2019	0	1/31/2020	0.86	1/31/2021	0.8	1/31/2022	0
0	2/1/2016	0	2/1/2017	0	2/1/2018	0	2/1/2019	0	2/1/2020	0	2/1/2021	0	2/1/2022	0
0.39	2/2/2016	0	2/2/2017	0	2/2/2018	0.18	2/2/2019	0	2/2/2020	0	2/2/2021	0	2/2/2022	0
0	2/3/2016	1.29	2/3/2017	0.03	2/3/2018	0	2/3/2019	0	2/3/2020	0	2/3/2021	0	2/3/2022	0
0	2/4/2016	0.63	2/4/2017	0	2/4/2018	1.12	2/4/2019	0	2/4/2020	0	2/4/2021	0	2/4/2022	0.09
0.01	2/5/2016	0.02	2/5/2017	0	2/5/2018	0	2/5/2019	0	2/5/2020	0.02	2/5/2021	0.17	2/5/2022	0
0	2/6/2016	0.12	2/6/2017	0	2/6/2018	0	2/6/2019	0	2/6/2020	2.63	2/6/2021	0.18	2/6/2022	0.01
0	2/7/2016	1.4	2/7/2017	0	2/7/2018	0.08	2/7/2019	0	2/7/2020	0.48	2/7/2021	0.25	2/7/2022	0.54
0	2/8/2016	0.15	2/8/2017	0.14	2/8/2018	0.03	2/8/2019	0	2/8/2020	0	2/8/2021	0	2/8/2022	0
0	2/9/2016	0.01	2/9/2017	0.16	2/9/2018	0	2/9/2019	0	2/9/2020	0	2/9/2021	0	2/9/2022	0
0.32	2/10/2016	0	2/10/2017	0	2/10/2018	0.21	2/10/2019	0	2/10/2020	0	2/10/2021	0	2/10/2022	0
0	2/11/2016	0	2/11/2017	0	2/11/2018	0	2/11/2019	0.25	2/11/2020	0	2/11/2021	0.46	2/11/2022	0

0	2/12/2016		2/12/2017	0	2/12/2018	0.01	2/12/2019	0.25	2/12/2020	0	2/12/2021	0.32	2/12/2022	0
0	2/13/2016	0	2/13/2017	0	2/13/2018	0	2/13/2019	0.02	2/13/2020	0.15	2/13/2021	1.4	2/13/2022	0
0	2/14/2016	0	2/14/2017	0	2/14/2018	0	2/14/2019	0	2/14/2020	0	2/14/2021	0.65	2/14/2022	0
0	2/15/2016	0	2/15/2017	0.7	2/15/2018	0	2/15/2019	0	2/15/2020	0	2/15/2021	0.67	2/15/2022	0
	2/16/2016	1.28	2/16/2017	0	2/16/2018	0	2/16/2019	0.6	2/16/2020	0.22	2/16/2021	0.02	2/16/2022	0
	2/17/2016	0	2/17/2017	0	2/17/2018	0	2/17/2019	0.04	2/17/2020	0.04	2/17/2021	0	2/17/2022	0
	2/18/2016	0	2/18/2017	0	2/18/2018	0	2/18/2019	0.12	2/18/2020	0.15	2/18/2021	1.09	2/18/2022	0.08
0	2/19/2016	0	2/19/2017	0	2/19/2018	0.04	2/19/2019	0.11	2/19/2020	0.11	2/19/2021	0.92	2/19/2022	0
0	2/20/2016	0	2/20/2017	0	2/20/2018	0.01	2/20/2019	0.19	2/20/2020		2/20/2021	0	2/20/2022	0
0.01	2/21/2016	0	2/21/2017	0	2/21/2018	0	2/21/2019	0.16	2/21/2020	0	2/21/2021	0	2/21/2022	0
0.25	2/22/2016	0.21	2/22/2017	0	2/22/2018	0	2/22/2019	0.28	2/22/2020	0	2/22/2021	0.21	2/22/2022	0
0.72	2/23/2016	0.62	2/23/2017	0	2/23/2018	0	2/23/2019	0.46	2/23/2020	0	2/23/2021	0	2/23/2022	0
	2/24/2016	0.92	2/24/2017	0	2/24/2018	0	2/24/2019	0.01	2/24/2020	0.23	2/24/2021	0	2/24/2022	0
	2/25/2016	0	2/25/2017	0	2/25/2018	0	2/25/2019	0	2/25/2020	0.05	2/25/2021	0	2/25/2022	0
	2/26/2016	0	2/26/2017	0	2/26/2018	0.22	2/26/2019	0	2/26/2020	0	2/26/2021	0	2/26/2022	0
0	2/27/2016	0	2/27/2017	0	2/27/2018	0.01	2/27/2019	0	2/27/2020	0	2/27/2021	0	2/27/2022	0.33
0	2/28/2016	0	2/28/2017	0	2/28/2018	0.07	2/28/2019	0	2/28/2020	0	2/28/2021	0	2/28/2022	0
0.2	2/29/2016	0	3/1/2017	0.46	3/1/2018	0.9	3/1/2019	0.68	2/29/2020	0	3/1/2021	0.04	3/1/2022	0
0.01	3/1/2016	0	3/2/2017	0.09	3/2/2018	0	3/2/2019	0.01	3/1/2020	0	3/2/2021	0	3/2/2022	0
0.04	3/2/2016	0.12	3/3/2017	0	3/3/2018	0	3/3/2019	1.04	3/2/2020	0	3/3/2021	0.09	3/3/2022	0
0	3/3/2016	0.14	3/4/2017	0	3/4/2018	0	3/4/2019	0.14	3/3/2020	0.21	3/4/2021	0	3/4/2022	0
0.51	3/4/2016	0.04	3/5/2017	0	3/5/2018	0	3/5/2019	0	3/4/2020	0.01	3/5/2021	0	3/5/2022	0
0	3/5/2016	0	3/6/2017	0	3/6/2018	0.26	3/6/2019	0	3/5/2020	0.64	3/6/2021	0	3/6/2022	0
0	3/6/2016	0.01	3/7/2017	0	3/7/2018	0.02	3/7/2019	0	3/6/2020	0.02	3/7/2021	0	3/7/2022	0
0	3/7/2016	0	3/8/2017	0.01	3/8/2018	0	3/8/2019	0.51	3/7/2020	0	3/8/2021	0	3/8/2022	0.01
0	3/8/2016	0	3/9/2017	0	3/9/2018	0	3/9/2019	0.07	3/8/2020	0	3/9/2021	0	3/9/2022	0.02
0	3/9/2016	0	3/10/2017	0.06	3/10/2018	0	3/10/2019	0	3/9/2020	0	3/10/2021	0	3/10/2022	0.12
0.09	3/10/2016	0	3/11/2017	0	3/11/2018	0.02	3/11/2019	0	3/10/2020	0	3/11/2021	0	3/11/2022	0.15
0.01	3/11/2016	0	3/12/2017	0.19	3/12/2018	0.63	3/12/2019	0	3/11/2020	0	3/12/2021	0	3/12/2022	0.74
0	3/12/2016	0	3/13/2017	0.88	3/13/2018	0.01	3/13/2019	0	3/12/2020	0	3/13/2021	0	3/13/2022	0
0.91	3/13/2016	0.03	3/14/2017	0.34	3/14/2018	0	3/14/2019	0	3/13/2020	0	3/14/2021	0	3/14/2022	0
0	3/14/2016	0	3/15/2017	0	3/15/2018	0	3/15/2019	0.7	3/14/2020	0	3/15/2021	0	3/15/2022	0
0	3/15/2016	0.15	3/16/2017	0	3/16/2018	0	3/16/2019	0	3/15/2020	0.15	3/16/2021	0.88	3/16/2022	0
0	3/16/2016	0	3/17/2017	0	3/17/2018	0	3/17/2019	0	3/16/2020	0	3/17/2021	0.03	3/17/2022	0.14
0	3/17/2016	0	3/18/2017	0.24	3/18/2018	0	3/18/2019	0	3/17/2020	0.2	3/18/2021	0.07	3/18/2022	0
0.27	3/18/2016	0	3/19/2017	0	3/19/2018	0.01	3/19/2019	0	3/18/2020	0	3/19/2021	0.07	3/19/2022	0
0.36	3/19/2016	0	3/20/2017	0	3/20/2018	0.57	3/20/2019	0.19	3/19/2020	0	3/20/2021	0	3/20/2022	0
0	3/20/2016	0.22	3/21/2017	0.01	3/21/2018	0.1	3/21/2019	0.15	3/20/2020	0	3/21/2021	0	3/21/2022	0
0	3/21/2016	0.01	3/22/2017	0.37	3/22/2018	0	3/22/2019	0.01	3/21/2020	0.02	3/22/2021	0	3/22/2022	0
0.03	3/22/2016	0	3/23/2017	0	3/23/2018	0	3/23/2019	0	3/22/2020	0.06	3/23/2021	0	3/23/2022	0
0	3/23/2016	0	3/24/2017	0	3/24/2018	0.43	3/24/2019	0	3/23/2020	0.08	3/24/2021	0.24	3/24/2022	0.04
0	3/24/2016	0	3/25/2017	0	3/25/2018	0.21	3/25/2019	0.53	3/24/2020	0.13	3/25/2021	0.01	3/25/2022	0
0.37	3/25/2016	0	3/26/2017	0	3/26/2018	0	3/26/2019	0.07	3/25/2020	0.89	3/26/2021	0.08	3/26/2022	0
0.63	3/26/2016	0.01	3/27/2017	0	3/27/2018	0.01	3/27/2019	0	3/26/2020	0	3/27/2021	0	3/27/2022	0
0.04	3/27/2016	0.7	3/28/2017	0.14	3/28/2018	0	3/28/2019	0	3/27/2020	0	3/28/2021	0.26	3/28/2022	0
0	3/28/2016	0.01	3/29/2017	0	3/29/2018	0	3/29/2019	0	3/28/2020	0	3/29/2021	0	3/29/2022	0
0.09	3/29/2016	0	3/30/2017	0	3/30/2018	0	3/30/2019	0	3/29/2020	0	3/30/2021	0	3/30/2022	0

0	3/30/2016	0	3/31/2017	1.24	3/31/2018	0	3/31/2019	0	3/30/2020	0	3/31/2021	0.3	3/31/2022	0.01
0	3/31/2016	0	4/1/2017	0	4/1/2018	0	4/1/2019	0	3/31/2020	0.29	4/1/2021	0.05	4/1/2022	0
0	4/1/2016	0.65	4/2/2017	0	4/2/2018	0	4/2/2019	1.02	4/1/2020	0.03	4/2/2021	0	4/2/2022	0
0	4/2/2016	0.03	4/3/2017	0.57	4/3/2018	0	4/3/2019	0	4/2/2020	0	4/3/2021	0	4/3/2022	0
0	4/3/2016	0	4/4/2017	0	4/4/2018	0	4/4/2019	0	4/3/2020	0	4/4/2021	0	4/4/2022	0
0	4/4/2016	0	4/5/2017	0.84	4/5/2018	0	4/5/2019	1.03	4/4/2020	0	4/5/2021	0	4/5/2022	0.93
0	4/5/2016	0	4/6/2017	0.01	4/6/2018	0	4/6/2019	0	4/5/2020	0	4/6/2021	0	4/6/2022	0.15
0.02	4/6/2016	0	4/7/2017	0	4/7/2018	0.68	4/7/2019	0	4/6/2020	0.05	4/7/2021	0	4/7/2022	0.03
0.02	4/7/2016	0.31	4/8/2017	0	4/8/2018	0.25	4/8/2019	0	4/7/2020	0.01	4/8/2021	0	4/8/2022	0
0.07	4/8/2016	0	4/9/2017	0	4/9/2018	0.04	4/9/2019	0.03	4/8/2020	0.21	4/9/2021	0.04	4/9/2022	0
0	4/9/2016	0	4/10/2017	0	4/10/2018	0	4/10/2019	0	4/9/2020	0.15	4/10/2021	0.68	4/10/2022	0
0	4/10/2016	0	4/11/2017	0	4/11/2018	0	4/11/2019	0	4/10/2020	0	4/11/2021	0	4/11/2022	0
0	4/11/2016	0	4/12/2017	0	4/12/2018	0	4/12/2019	1.1	4/11/2020	0	4/12/2021	0	4/12/2022	0
0	4/12/2016	0.6	4/13/2017	0	4/13/2018	0	4/13/2019	1.18	4/12/2020	0	4/13/2021	0	4/13/2022	0
1.14	4/13/2016	0.01	4/14/2017	0	4/14/2018	0	4/14/2019	0.23	4/13/2020	0.27	4/14/2021	0	4/14/2022	0
0.28	4/14/2016	0	4/15/2017	0	4/15/2018	1.06	4/15/2019	0	4/14/2020	0	4/15/2021	0	4/15/2022	0
0.04	4/15/2016	0	4/16/2017	0	4/16/2018	0	4/16/2019	0	4/15/2020	0	4/16/2021	0	4/16/2022	0
0	4/16/2016	0	4/17/2017	0.04	4/17/2018	0	4/17/2019	0	4/16/2020	0	4/17/2021	0	4/17/2022	0
0.25	4/17/2016	0	4/18/2017	0.02	4/18/2018	0	4/18/2019	0	4/17/2020	0	4/18/2021	0	4/18/2022	0.8
0.81	4/18/2016	0	4/19/2017	0	4/19/2018	0	4/19/2019	0.48	4/18/2020	0.01	4/19/2021	0	4/19/2022	0
0.01	4/19/2016	0	4/20/2017	0	4/20/2018	0	4/20/2019	0	4/19/2020	0	4/20/2021	0	4/20/2022	0
0	4/20/2016	0	4/21/2017	0	4/21/2018	0	4/21/2019	0	4/20/2020	0.63	4/21/2021	0	4/21/2022	0
0	4/21/2016	0.02	4/22/2017	0.18	4/22/2018	0	4/22/2019	0	4/21/2020	0	4/22/2021	0	4/22/2022	0
0	4/22/2016	1.25	4/23/2017	0.13	4/23/2018	0.23	4/23/2019	0	4/22/2020	0	4/23/2021	0	4/23/2022	0
0	4/23/2016	0.01	4/24/2017	3.07	4/24/2018	1.18	4/24/2019	0	4/23/2020	0.26	4/24/2021	0.27	4/24/2022	0
0.1	4/24/2016	0	4/25/2017	0.12	4/25/2018	0	4/25/2019	0	4/24/2020	0.01	4/25/2021	0.01	4/25/2022	0
0.05	4/25/2016	0	4/26/2017	0	4/26/2018	0	4/26/2019	0.05	4/25/2020	0	4/26/2021	0	4/26/2022	0.18
0.02	4/26/2016	0	4/27/2017	0	4/27/2018	0.13	4/27/2019	0	4/26/2020	0	4/27/2021	0		
0	4/27/2016	0	4/28/2017	0	4/28/2018	0	4/28/2019	0	4/27/2020	0	4/28/2021	0		
0.14	4/28/2016	0.06	4/29/2017	0	4/29/2018	0	4/29/2019	0	4/28/2020	0	4/29/2021	0		
0.15	4/29/2016	0	4/30/2017	0	4/30/2018	0	4/30/2019	0	4/29/2020	0	4/30/2021	0		
0.18	4/30/2016	0	5/1/2017	0.39	5/1/2018	0	5/1/2019	0	4/30/2020	2.04	5/1/2021	0		
0	5/1/2016	0.34	5/2/2017	0	5/2/2018	0	5/2/2019	0	5/1/2020	0	5/2/2021	0		
0	5/2/2016	1.87	5/3/2017	0	5/3/2018	0	5/3/2019	0	5/2/2020	0	5/3/2021	0.11		
0	5/3/2016	1.79	5/4/2017	0.02	5/4/2018	0	5/4/2019	0.16	5/3/2020	0	5/4/2021	0.01		
0	5/4/2016	0.01	5/5/2017	0.83	5/5/2018	0	5/5/2019	0.39	5/4/2020	0	5/5/2021	0		
0	5/5/2016	0	5/6/2017	0	5/6/2018	0.04	5/6/2019	0	5/5/2020	0.94	5/6/2021	0		
0	5/6/2016	0.04	5/7/2017	0	5/7/2018	0	5/7/2019	0	5/6/2020	0.4	5/7/2021			
0	5/7/2016	0	5/8/2017	0	5/8/2018	0	5/8/2019	0	5/7/2020	0	5/8/2021			
1.06	5/8/2016	0	5/9/2017	0	5/9/2018	0	5/9/2019	0	5/8/2020	0	5/9/2021			
0.67	5/9/2016	0	5/10/2017	0	5/10/2018	0.08	5/10/2019	0	5/9/2020	0	5/10/2021			
0.02	5/10/2016	0	5/11/2017	0	5/11/2018	0	5/11/2019	0	5/10/2020	0	5/11/2021			
0.01	5/11/2016	0	5/12/2017	0	5/12/2018	0	5/12/2019	0.13	5/11/2020	0	5/12/2021			
0	5/12/2016	0.66	5/13/2017	0.02	5/13/2018	0	5/13/2019	0	5/12/2020	0	5/13/2021			
0	5/13/2016	0.43	5/14/2017	0	5/14/2018	0	5/14/2019	0	5/13/2020	0	5/14/2021			
0	5/14/2016	0	5/15/2017	0	5/15/2018	0	5/15/2019	0	5/14/2020	0	5/15/2021			
0	5/15/2016	0	5/16/2017	0	5/16/2018	0.25	5/16/2019	0	5/15/2020	0	5/16/2021			

0	5/16/2016	0	5/17/2017	0	5/17/2018	0.8	5/17/2019	0	5/16/2020	0	5/17/2021	
0.49	5/17/2016	0.14	5/18/2017	0	5/18/2018	0.01	5/18/2019	0	5/17/2020	0	5/18/2021	
0.11	5/18/2016	0	5/19/2017	0	5/19/2018	0.23	5/19/2019	0	5/18/2020	0.2	5/19/2021	
0	5/19/2016	0	5/20/2017	0	5/20/2018	0	5/20/2019	0.24	5/19/2020	0.54	5/20/2021	
0.14	5/20/2016	0.03	5/21/2017	0	5/21/2018	0	5/21/2019	0	5/20/2020	1.7	5/21/2021	
0	5/21/2016	0.66	5/22/2017	1.25	5/22/2018	0	5/22/2019	0	5/21/2020	0.7	5/22/2021	
0	5/22/2016	0.04	5/23/2017	0.76	5/23/2018	0.07	5/23/2019	0	5/22/2020	0.15	5/23/2021	
0	5/23/2016	0	5/24/2017	0.35	5/24/2018	1.86	5/24/2019	0	5/23/2020	0.13	5/24/2021	
0	5/24/2016	0	5/25/2017	0	5/25/2018	0	5/25/2019	0	5/24/2020	0	5/25/2021	
0	5/25/2016	0	5/26/2017	0	5/26/2018	0.02	5/26/2019	0	5/25/2020	0	5/26/2021	
0.08	5/26/2016	0	5/27/2017	0	5/27/2018	0	5/27/2019	0	5/26/2020	0	5/27/2021	
0	5/27/2016	0	5/28/2017	0.06	5/28/2018	0.58	5/28/2019	0	5/27/2020	0.54	5/28/2021	0.06
0	5/28/2016	0	5/29/2017	0.26	5/29/2018	0.13	5/29/2019	0	5/28/2020	0.35	5/29/2021	0.07
0	5/29/2016	0.95	5/30/2017	0.08	5/30/2018	0	5/30/2019	0	5/29/2020	1.26	5/30/2021	0.01
0	5/30/2016	0.12	5/31/2017	0	5/31/2018	0	5/31/2019	0.1	5/30/2020	0	5/31/2021	0
0	5/31/2016	0	6/1/2017	0	6/1/2018	0	6/1/2019	0	5/31/2020	0	6/1/2021	0
0.03	6/1/2016	0.04	6/2/2017	0	6/2/2018	0	6/2/2019	0	6/1/2020	0	6/2/2021	2.68
0.51	6/2/2016	0	6/3/2017	0.13	6/3/2018	0	6/3/2019	0	6/2/2020	0.02	6/3/2021	1.47
0	6/3/2016	0.02	6/4/2017	0	6/4/2018	0	6/4/2019	0	6/3/2020	0	6/4/2021	0.01
0	6/4/2016	0	6/5/2017	1.66	6/5/2018	0	6/5/2019	0.84	6/4/2020	0	6/5/2021	0
0	6/5/2016	1.28	6/6/2017	0	6/6/2018	0	6/6/2019	0.01	6/5/2020	0.67	6/6/2021	0
0	6/6/2016	0.26	6/7/2017	0	6/7/2018	0	6/7/2019	0	6/6/2020	0	6/7/2021	0.19
0	6/7/2016	0.26	6/8/2017	0.02	6/8/2018	0	6/8/2019	0.01	6/7/2020	0.16	6/8/2021	0.01
2.63	6/8/2016	0	6/9/2017	0	6/9/2018	0.02	6/9/2019	2.19	6/8/2020	0	6/9/2021	0
0.01	6/9/2016	0	6/10/2017	0	6/10/2018	0	6/10/2019	0.79	6/9/2020	0	6/10/2021	1.02
0	6/10/2016	0	6/11/2017	0	6/11/2018	1.81	6/11/2019	0.06	6/10/2020	0	6/11/2021	0.15
0.09	6/11/2016	0	6/12/2017	0	6/12/2018	0.73	6/12/2019	0.39	6/11/2020	1.49	6/12/2021	2.08
0	6/12/2016	0	6/13/2017	0	6/13/2018	0	6/13/2019	0.02	6/12/2020	0	6/13/2021	0
0	6/13/2016	0	6/14/2017	0.96	6/14/2018	0	6/14/2019	0	6/13/2020	0	6/14/2021	0
0	6/14/2016	0.33	6/15/2017	0.03	6/15/2018	0	6/15/2019	0	6/14/2020	0	6/15/2021	0
0	6/15/2016	0.13	6/16/2017	0.04	6/16/2018	0	6/16/2019	0	6/15/2020	3.23	6/16/2021	0
0	6/16/2016	0.04	6/17/2017	0.03	6/17/2018	0	6/17/2019	0	6/16/2020	0.29	6/17/2021	0
0.05	6/17/2016	0.01	6/18/2017	0	6/18/2018	0.35	6/18/2019	0	6/17/2020	0	6/18/2021	0
0.17	6/18/2016	0	6/19/2017	0	6/19/2018	0	6/19/2019	0	6/18/2020	0	6/19/2021	0
0.01	6/19/2016	0	6/20/2017	0.74	6/20/2018	0	6/20/2019	0.08	6/19/2020	0.76	6/20/2021	0.84
0	6/20/2016	0	6/21/2017	0.12	6/21/2018	0	6/21/2019	0	6/20/2020	0.18	6/21/2021	0.01
0	6/21/2016	0	6/22/2017	0.4	6/22/2018	0	6/22/2019	0.23	6/21/2020	0	6/22/2021	0.24
0	6/22/2016	0.01	6/23/2017	0	6/23/2018	0	6/23/2019	0	6/22/2020	0.03	6/23/2021	0
0	6/23/2016	0	6/24/2017	1.93	6/24/2018	0.07	6/24/2019	0	6/23/2020	0.42	6/24/2021	0
0	6/24/2016	0	6/25/2017	0.01	6/25/2018	0.45	6/25/2019	0	6/24/2020	0.02	6/25/2021	0.23
0.21	6/25/2016	0	6/26/2017	0	6/26/2018	0.76	6/26/2019	0	6/25/2020	0.34	6/26/2021	0.01
2.57	6/26/2016	0	6/27/2017	0	6/27/2018	0.01	6/27/2019	0	6/26/2020	0	6/27/2021	0
0.01	6/27/2016	0	6/28/2017	0	6/28/2018	0	6/28/2019	0	6/27/2020	0	6/28/2021	0
0	6/28/2016	0.4	6/29/2017	0	6/29/2018	0	6/29/2019	0	6/28/2020	0	6/29/2021	0
0.09	6/29/2016	0	6/30/2017	1.84	6/30/2018	0	6/30/2019	0	6/29/2020	0	6/30/2021	0
0	6/30/2016	0.06	7/1/2017	0.01	7/1/2018	0	7/1/2019	0	6/30/2020	0.14	7/1/2021	0
0.22	7/1/2016	0	7/2/2017	0	7/2/2018	0	7/2/2019	0.03	7/1/2020	0.02	7/2/2021	1.25

0.28	7/2/2016	0.79	7/3/2017	0.2	7/3/2018	0	7/3/2019	0	7/2/2020	0	7/3/2021	0
0	7/3/2016	0.14	7/4/2017	0.03	7/4/2018	0	7/4/2019	1.72	7/3/2020	0	7/4/2021	0
0	7/4/2016	0	7/5/2017	0	7/5/2018	0.38	7/5/2019	0	7/4/2020	0	7/5/2021	0
0	7/5/2016	0.3	7/6/2017	0	7/6/2018	0.01	7/6/2019	0	7/5/2020	0	7/6/2021	0
0	7/6/2016	0	7/7/2017	0	7/7/2018	0.16	7/7/2019	0	7/6/2020	0	7/7/2021	0.37
0	7/7/2016	0.12	7/8/2017	0	7/8/2018	0	7/8/2019	0.43	7/7/2020	0.13	7/8/2021	1.81
0	7/8/2016	0.14	7/9/2017	0	7/9/2018	0	7/9/2019	0	7/8/2020	0.03	7/9/2021	0.04
0	7/9/2016	0.12	7/10/2017	0.82	7/10/2018	0	7/10/2019	0.01	7/9/2020	0.03	7/10/2021	0
0	7/10/2016	0	7/11/2017	0	7/11/2018	0	7/11/2019	0	7/10/2020	1.03	7/11/2021	0.12
0	7/11/2016	0.3	7/12/2017	0	7/12/2018	0.12	7/12/2019	0.15	7/11/2020	0.02	7/12/2021	0.03
0.67	7/12/2016	0	7/13/2017	0	7/13/2018	0	7/13/2019	0	7/12/2020	0	7/13/2021	0
0.01	7/13/2016	0	7/14/2017	0	7/14/2018	0	7/14/2019	0	7/13/2020	0.68	7/14/2021	0
0	7/14/2016	0	7/15/2017	0.33	7/15/2018	0	7/15/2019	0	7/14/2020	0	7/15/2021	0.2
0	7/15/2016	0.02	7/16/2017	0.12	7/16/2018	0	7/16/2019	0	7/15/2020	0	7/16/2021	0
0	7/16/2016	0.22	7/17/2017	0.05	7/17/2018	0.07	7/17/2019	0	7/16/2020	0	7/17/2021	0.15
0.03	7/17/2016	0.14	7/18/2017	0.31	7/18/2018	0	7/18/2019	0	7/17/2020	0	7/18/2021	0.04
0.08	7/18/2016	0	7/19/2017	0	7/19/2018	0	7/19/2019	0	7/18/2020	0	7/19/2021	3.95
0.65	7/19/2016	0.85	7/20/2017	0	7/20/2018	0.01	7/20/2019	0	7/19/2020	0	7/20/2021	0
0	7/20/2016	0.13	7/21/2017	0	7/21/2018	0.01	7/21/2019	0	7/20/2020	0.68	7/21/2021	0.07
0	7/21/2016	0	7/22/2017	0	7/22/2018	0.01	7/22/2019	0	7/21/2020	0	7/22/2021	0
1.54	7/22/2016	0	7/23/2017	0.13	7/23/2018	0	7/23/2019	0.6	7/22/2020	0	7/23/2021	0
0	7/23/2016	0	7/24/2017	0	7/24/2018	0.02	7/24/2019	0	7/23/2020	1.2	7/24/2021	0
0	7/24/2016	0	7/25/2017	0	7/25/2018	0.09	7/25/2019	0	7/24/2020	0.14	7/25/2021	0
0	7/25/2016	0	7/26/2017	0	7/26/2018	0	7/26/2019	0	7/25/2020	0	7/26/2021	0
0	7/26/2016	0	7/27/2017	0	7/27/2018	0	7/27/2019	0	7/26/2020	0	7/27/2021	0.32
0	7/27/2016	0	7/28/2017	0	7/28/2018	1.96	7/28/2019	0	7/27/2020	0	7/28/2021	0.04
0	7/28/2016	0	7/29/2017	0.44	7/29/2018	0.06	7/29/2019	0	7/28/2020	0.01	7/29/2021	0.01
0	7/29/2016	0	7/30/2017	0	7/30/2018	0.78	7/30/2019	0	7/29/2020	0.01	7/30/2021	0
0	7/30/2016	0	7/31/2017	0	7/31/2018	0.19	7/31/2019	0	7/30/2020	0	7/31/2021	0
0	7/31/2016	0	8/1/2017	0	8/1/2018	0.43	8/1/2019	0.25	7/31/2020	0	8/1/2021	0.31
0	8/1/2016	0.28	8/2/2017	0	8/2/2018	0.66	8/2/2019	0.41	8/1/2020	0	8/2/2021	0.01
0	8/2/2016	0.3	8/3/2017	0	8/3/2018	0.46	8/3/2019	0.01	8/2/2020	0	8/3/2021	0.36
0	8/3/2016	0.02	8/4/2017	0.02	8/4/2018	0.59	8/4/2019	0.24	8/3/2020	1.84	8/4/2021	0.04
0	8/4/2016	0.21	8/5/2017	0	8/5/2018	0.08	8/5/2019	0	8/4/2020	0.36	8/5/2021	0
2.08	8/5/2016	0.05	8/6/2017	0	8/6/2018	0.01	8/6/2019	0	8/5/2020	0	8/6/2021	1.08
1.73	8/6/2016	1.2	8/7/2017	0.12	8/7/2018	0	8/7/2019	0	8/6/2020	0.02	8/7/2021	0.07
0.01	8/7/2016	0	8/8/2017	1.4	8/8/2018	0.11	8/8/2019	0	8/7/2020	1.08	8/8/2021	0
0	8/8/2016	0.17	8/9/2017	0.11	8/9/2018	0	8/9/2019	0	8/8/2020	0.01	8/9/2021	0
0	8/9/2016	0	8/10/2017	0	8/10/2018	0.12	8/10/2019	0	8/9/2020	0.07	8/10/2021	0.11
0.07	8/10/2016	0	8/11/2017	0.01	8/11/2018	0.01	8/11/2019	0	8/10/2020	1.1	8/11/2021	0
0	8/11/2016	0.04	8/12/2017	0.47	8/12/2018	0.73	8/12/2019	0	8/11/2020	0.01	8/12/2021	0
0	8/12/2016	0	8/13/2017	1.72	8/13/2018	0.43	8/13/2019	0	8/12/2020	0	8/13/2021	0
0	8/13/2016	0	8/14/2017	0.01	8/14/2018	0	8/14/2019	1.01	8/13/2020	0	8/14/2021	0
0	8/14/2016	0	8/15/2017	0.05	8/15/2018	0	8/15/2019	0.01	8/14/2020	0.05	8/15/2021	0.02
0	8/15/2016	0	8/16/2017	0	8/16/2018	0	8/16/2019	1.9	8/15/2020	0.47	8/16/2021	0.02
0	8/16/2016	0	8/17/2017	0.24	8/17/2018	0.27	8/17/2019	0.74	8/16/2020	0	8/17/2021	0.31
2.22	8/17/2016	0	8/18/2017	0	8/18/2018	0.16	8/18/2019	0.01	8/17/2020	0.81	8/18/2021	0.12

0.3	8/18/2016	0.03	8/19/2017	0	8/19/2018	0.17	8/19/2019	0	8/18/2020	0	8/19/2021	0.28
0.46	8/19/2016	0	8/20/2017	0	8/20/2018	0.55	8/20/2019	0	8/19/2020	0.22	8/20/2021	0
0	8/20/2016	0	8/21/2017	0	8/21/2018	0.01	8/21/2019	0.06	8/20/2020	0.17	8/21/2021	0
0	8/21/2016	0	8/22/2017	0	8/22/2018	0	8/22/2019	0	8/21/2020	0.06	8/22/2021	0
0	8/22/2016	0	8/23/2017	1.02	8/23/2018	0	8/23/2019	0.16	8/22/2020	0	8/23/2021	0
0	8/23/2016	0	8/24/2017	0	8/24/2018	0	8/24/2019	0.38	8/23/2020	0	8/24/2021	0
0.32	8/24/2016	0	8/25/2017	0	8/25/2018	0	8/25/2019	0.01	8/24/2020	0.2	8/25/2021	0
0.18	8/25/2016	0	8/26/2017	0	8/26/2018	0	8/26/2019	0	8/25/2020	0	8/26/2021	0
0	8/26/2016	0	8/27/2017	0	8/27/2018	0	8/27/2019	0	8/26/2020	0	8/27/2021	0
0	8/27/2016	0.5	8/28/2017	0.22	8/28/2018	0	8/28/2019	0	8/27/2020	0.01	8/28/2021	0
0	8/28/2016	0.01	8/29/2017	0.01	8/29/2018	0	8/29/2019	0	8/28/2020	0	8/29/2021	0
0.07	8/29/2016	0	8/30/2017	0	8/30/2018	0	8/30/2019	0	8/29/2020	0.04	8/30/2021	0
0.27	8/30/2016	0	8/31/2017	0.29	8/31/2018	0	8/31/2019	0	8/30/2020	0	8/31/2021	0
0	8/31/2016	0	9/1/2017	0.93	9/1/2018		9/1/2019	0	8/31/2020	0.02	9/1/2021	0
0	9/1/2016	0.03	9/2/2017	0.05	9/2/2018		9/2/2019	0.04	9/1/2020	0	9/2/2021	0.02
0	9/2/2016	5.53	9/3/2017	0	9/3/2018		9/3/2019	0	9/2/2020	0	9/3/2021	0
0	9/3/2016	0.24	9/4/2017	0	9/4/2018		9/4/2019	0.1	9/3/2020	0	9/4/2021	0
0.01	9/4/2016	0	9/5/2017	0.05	9/5/2018		9/5/2019	3.82	9/4/2020	0	9/5/2021	0
0.31	9/5/2016	0	9/6/2017	0.57	9/6/2018		9/6/2019	0.1	9/5/2020	0	9/6/2021	0
0	9/6/2016	0	9/7/2017	0	9/7/2018		9/7/2019	0	9/6/2020	0	9/7/2021	0
0.03	9/7/2016	0	9/8/2017	0	9/8/2018		9/8/2019	0	9/7/2020	0	9/8/2021	0.56
0.3	9/8/2016	0	9/9/2017	0	9/9/2018		9/9/2019	0	9/8/2020	0.02	9/9/2021	0.17
0.79	9/9/2016	0	9/10/2017	0	9/10/2018		9/10/2019	0	9/9/2020	0.37	9/10/2021	0
0.12	9/10/2016	0	9/11/2017	0.05	9/11/2018		9/11/2019	0	9/10/2020	0	9/11/2021	0
0.01	9/11/2016	0.03	9/12/2017	0.96	9/12/2018		9/12/2019	0	9/11/2020	0.65	9/12/2021	0
0	9/12/2016	0.08	9/13/2017	0	9/13/2018		9/13/2019		9/12/2020	0	9/13/2021	0
0	9/13/2016	0	9/14/2017	0	9/14/2018		9/14/2019	0	9/13/2020	0	9/14/2021	0
0	9/14/2016	0	9/15/2017	0	9/15/2018		9/15/2019	0	9/14/2020	0	9/15/2021	0
0	9/15/2016	0	9/16/2017	0	9/16/2018		9/16/2019	0	9/15/2020	0	9/16/2021	0
0	9/16/2016	0	9/17/2017	0	9/17/2018		9/17/2019	0	9/16/2020	0.02	9/17/2021	0
0	9/17/2016	0	9/18/2017	0	9/18/2018		9/18/2019	0	9/17/2020	1.69	9/18/2021	0
0	9/18/2016	0	9/19/2017	0	9/19/2018		9/19/2019	0	9/18/2020	0.09	9/19/2021	0
0	9/19/2016	1.58	9/20/2017	0.28	9/20/2018		9/20/2019	0	9/19/2020	0	9/20/2021	0
0	9/20/2016	0.01	9/21/2017	0	9/21/2018	0	9/21/2019	0	9/20/2020	0	9/21/2021	1.6
0	9/21/2016	0.3	9/22/2017	0	9/22/2018	0	9/22/2019	0	9/21/2020	0	9/22/2021	0.33
0	9/22/2016	0.7	9/23/2017	0	9/23/2018	0	9/23/2019	0	9/22/2020	0	9/23/2021	0
0.57	9/23/2016	0.05	9/24/2017	0	9/24/2018	0	9/24/2019	0	9/23/2020	0	9/24/2021	0
0.57	9/24/2016	0	9/25/2017	0	9/25/2018	0	9/25/2019	0	9/24/2020	0	9/25/2021	0
0.07	9/25/2016	0	9/26/2017	0	9/26/2018	0.35	9/26/2019	0	9/25/2020	2	9/26/2021	0
0.34	9/26/2016	0	9/27/2017	0	9/27/2018	0.13	9/27/2019	0	9/26/2020	0.01	9/27/2021	0
0.08	9/27/2016	0.55	9/28/2017	0	9/28/2018	0.28	9/28/2019	0	9/27/2020	0.02	9/28/2021	0
0.01	9/28/2016	0.02	9/29/2017	0	9/29/2018	0	9/29/2019	0	9/28/2020	0.02	9/29/2021	0
0.05	9/29/2016	2.89	9/30/2017	0	9/30/2018	0	9/30/2019	0	9/29/2020	1.82	9/30/2021	0
0.16	9/30/2016	0	10/1/2017	0	10/1/2018	0	10/1/2019	0	9/30/2020	0.01	10/1/2021	0
4.11	10/1/2016	0.01	10/2/2017	0	10/2/2018	0	10/2/2019	0	10/1/2020	0	10/2/2021	0
1.42	10/2/2016	0.02	10/3/2017	0	10/3/2018	0	10/3/2019	0	10/2/2020	0	10/3/2021	0
0.21	10/3/2016	0	10/4/2017	0	10/4/2018	0	10/4/2019	0	10/3/2020	0	10/4/2021	1.02

0.29	10/4/2016	0	10/5/2017	0	10/5/2018	0	10/5/2019	0	10/4/2020	0	10/5/2021	0
0	10/5/2016	0	10/6/2017	0	10/6/2018	0	10/6/2019	0	10/5/2020	0	10/6/2021	0
0	10/6/2016	0	10/7/2017	1.86	10/7/2018	0	10/7/2019	0	10/6/2020	0	10/7/2021	0
0	10/7/2016	0.68	10/8/2017	1.14	10/8/2018	0	10/8/2019	0	10/7/2020	0	10/8/2021	0
0	10/8/2016	16.15	10/9/2017	0.08	10/9/2018	0	10/9/2019	0	10/8/2020	0	10/9/2021	0.35
0.44	10/9/2016	0.04	10/10/2017	0	10/10/2018	0.07	10/10/2019	0	10/9/2020	0	10/10/2021	0
0	10/10/2016	0	10/11/2017	0	10/11/2018	0.67	10/11/2019	0	10/10/2020	0.02	10/11/2021	0
0	10/11/2016	0	10/12/2017	0	10/12/2018	0	10/12/2019	0	10/11/2020	1.28	10/12/2021	0
0	10/12/2016	0	10/13/2017	0	10/13/2018	0	10/13/2019	0.5	10/12/2020	0.09	10/13/2021	0
0	10/13/2016	0	10/14/2017	0	10/14/2018	0	10/14/2019	0.02	10/13/2020	0.01	10/14/2021	0
0	10/14/2016	0	10/15/2017	0	10/15/2018	0	10/15/2019	0	10/14/2020	0	10/15/2021	0
0	10/15/2016	0	10/16/2017	0.09	10/16/2018	0.24	10/16/2019	0.3	10/15/2020	0	10/16/2021	0
0	10/16/2016	0	10/17/2017	0.01	10/17/2018	0.03	10/17/2019	0	10/16/2020	0.03	10/17/2021	0
0	10/17/2016	0	10/18/2017	0	10/18/2018	0	10/18/2019	0	10/17/2020	0	10/18/2021	0
0	10/18/2016	0	10/19/2017	0	10/19/2018	0	10/19/2019	0.05	10/18/2020	0	10/19/2021	0
0	10/19/2016	0	10/20/2017	0	10/20/2018	0	10/20/2019	0.66	10/19/2020	0	10/20/2021	0
0	10/20/2016	0	10/21/2017	0	10/21/2018	0	10/21/2019	0	10/20/2020	0	10/21/2021	0
0	10/21/2016	0.02	10/22/2017	0	10/22/2018	0	10/22/2019	0	10/21/2020	0	10/22/2021	0
0	10/22/2016	0	10/23/2017	0.15	10/23/2018	0	10/23/2019	0	10/22/2020	0	10/23/2021	0
0	10/23/2016	0	10/24/2017	0.01	10/24/2018	0	10/24/2019	0	10/23/2020	0	10/24/2021	0
0	10/24/2016	0	10/25/2017	0	10/25/2018	0	10/25/2019	0	10/24/2020	0	10/25/2021	0.11
0.01	10/25/2016	0	10/26/2017	0	10/26/2018	1.05	10/26/2019	0	10/25/2020	0.22	10/26/2021	0
0.21	10/26/2016	0	10/27/2017	0	10/27/2018	0.02	10/27/2019	0	10/26/2020	0.02	10/27/2021	0
0.51	10/27/2016	0	10/28/2017	0.73	10/28/2018	0	10/28/2019	0	10/27/2020	0	10/28/2021	0.02
0.01	10/28/2016	0	10/29/2017	0.03	10/29/2018	0	10/29/2019	0	10/28/2020	0	10/29/2021	0.02
0	10/29/2016	0	10/30/2017	0	10/30/2018	0	10/30/2019	0	10/29/2020	0	10/30/2021	0
0	10/30/2016	0	10/31/2017	0	10/31/2018	0	10/31/2019	0.07	10/30/2020	0.19	10/31/2021	0
0.35	10/31/2016	0	11/1/2017	0	11/1/2018	0.11	11/1/2019	0	10/31/2020	0	11/1/2021	0
1.75	11/1/2016	0	11/2/2017	0	11/2/2018	0.04	11/2/2019	0	11/1/2020	0.22	11/2/2021	0
0.43	11/2/2016	0	11/3/2017	0	11/3/2018	0	11/3/2019	0	11/2/2020	0	11/3/2021	0
0.02	11/3/2016	0	11/4/2017	0	11/4/2018	0.08	11/4/2019	0	11/3/2020	0	11/4/2021	0
0	11/4/2016	0.01	11/5/2017	0	11/5/2018	0.18	11/5/2019	0	11/4/2020	0	11/5/2021	0
0	11/5/2016	0	11/6/2017	0	11/6/2018	0.04	11/6/2019	0	11/5/2020	0	11/6/2021	0
0.49	11/6/2016	0	11/7/2017	0	11/7/2018	0.05	11/7/2019	0.09	11/6/2020	0	11/7/2021	0
0.01	11/7/2016	0	11/8/2017	0.03	11/8/2018	0.3	11/8/2019	0.46	11/7/2020	0	11/8/2021	0
0.54	11/8/2016	0	11/9/2017	0.22	11/9/2018	0.04	11/9/2019	0	11/8/2020	0	11/9/2021	0
0.6	11/9/2016	0	11/10/2017	0.01	11/10/2018	0.01	11/10/2019	0	11/9/2020	0.03	11/10/2021	0
0	11/10/2016	0	11/11/2017	0	11/11/2018	0	11/11/2019	0	11/10/2020	0.01	11/11/2021	0.04
0	11/11/2016	0	11/12/2017	0	11/12/2018	1.5	11/12/2019	0.29	11/11/2020	2.75	11/12/2021	0.01
0	11/12/2016	0	11/13/2017	0.14	11/13/2018	1.57	11/13/2019	0	11/12/2020	5.4	11/13/2021	0
0	11/13/2016	0.42	11/14/2017	0	11/14/2018	0.07	11/14/2019	0.11	11/13/2020	0	11/14/2021	0
0	11/14/2016	0.01	11/15/2017	0	11/15/2018	0.64	11/15/2019	0.96	11/14/2020	0	11/15/2021	0
0	11/15/2016	0	11/16/2017	0	11/16/2018	0	11/16/2019	0.16	11/15/2020	0.03	11/16/2021	0
0	11/16/2016	0	11/17/2017	0	11/17/2018	0	11/17/2019	0	11/16/2020	0	11/17/2021	0
0	11/17/2016	0	11/18/2017	0	11/18/2018	0	11/18/2019	0.14	11/17/2020	0	11/18/2021	0.02
1.84	11/18/2016	0	11/19/2017	0.06	11/19/2018	0.11	11/19/2019	0.01	11/18/2020	0	11/19/2021	0
0.01	11/19/2016	0	11/20/2017	0	11/20/2018	0	11/20/2019	0	11/19/2020	0	11/20/2021	0

0.08	11/20/2016	0	11/21/2017	0	11/21/2018	0	11/21/2019	0	11/20/2020	0	11/21/2021	0
0.57	11/21/2016	0	11/22/2017	0.03	11/22/2018	0	11/22/2019	0	11/21/2020	0	11/22/2021	0.33
0	11/22/2016	0	11/23/2017	0	11/23/2018	0	11/23/2019	0.35	11/22/2020	0	11/23/2021	0
0	11/23/2016	0	11/24/2017	0	11/24/2018	1.09	11/24/2019	0	11/23/2020	0	11/24/2021	0
0	11/24/2016	0	11/25/2017	0	11/25/2018	0	11/25/2019	0	11/24/2020	0	11/25/2021	0
0	11/25/2016	0	11/26/2017	0	11/26/2018	0	11/26/2019	0	11/25/2020	0.05	11/26/2021	0.13
0	11/26/2016	0	11/27/2017	0	11/27/2018	0	11/27/2019	0	11/26/2020	0	11/27/2021	0
0	11/27/2016	0	11/28/2017	0	11/28/2018	0	11/28/2019	0	11/27/2020	0	11/28/2021	0
0	11/28/2016	0	11/29/2017	0	11/29/2018	0	11/29/2019	0	11/28/2020	0.06	11/29/2021	0
0.01	11/29/2016	0.01	11/30/2017	0	11/30/2018	0	11/30/2019	0.13	11/29/2020	0.33	11/30/2021	0
0	11/30/2016	0.02	12/1/2017	0	12/1/2018	1.11	12/1/2019	1.24	11/30/2020	0.4	12/1/2021	0
0.1	12/1/2016	0	12/2/2017	0.09	12/2/2018	0.01	12/2/2019	0	12/1/2020	0	12/2/2021	0
0	12/2/2016	0	12/3/2017	0.01	12/3/2018	0	12/3/2019	0	12/2/2020	0	12/3/2021	0
0	12/3/2016	0	12/4/2017	0	12/4/2018	0	12/4/2019	0	12/3/2020	0	12/4/2021	0
0	12/4/2016	0.31	12/5/2017	0	12/5/2018	0	12/5/2019	0	12/4/2020	0.04	12/5/2021	0
0	12/5/2016	0.69	12/6/2017	0.24	12/6/2018	0	12/6/2019	0.01	12/5/2020	0.04	12/6/2021	0
0.48	12/6/2016	0.41	12/7/2017	0.07	12/7/2018	0	12/7/2019	0	12/6/2020	0	12/7/2021	0
0	12/7/2016	0	12/8/2017	2.43	12/8/2018	0.39	12/8/2019	0.2	12/7/2020	0.25	12/8/2021	1.08
0.02	12/8/2016	0	12/9/2017	0.3	12/9/2018	1.56	12/9/2019	0	12/8/2020	0	12/9/2021	0
0.01	12/9/2016	0	12/10/2017	0	12/10/2018	0.35	12/10/2019	0	12/9/2020	0	12/10/2021	0.04
0	12/10/2016	0	12/11/2017	0	12/11/2018	0.02	12/11/2019	0.09	12/10/2020	0	12/11/2021	0.15
0	12/11/2016	0	12/12/2017	0	12/12/2018	0	12/12/2019	0	12/11/2020	0	12/12/2021	0.06
0.01	12/12/2016	0.06	12/13/2017	0	12/13/2018	0	12/13/2019	1.28	12/12/2020	0	12/13/2021	0
0.18	12/13/2016	0.28	12/14/2017	0	12/14/2018	1.49	12/14/2019	0.23	12/13/2020	0.03	12/14/2021	0
0	12/14/2016	0.01	12/15/2017	0	12/15/2018	0.43	12/15/2019	0	12/14/2020	0.34	12/15/2021	0
0	12/15/2016	0	12/16/2017	0	12/16/2018	0.01	12/16/2019	0	12/15/2020	0	12/16/2021	0
0.15	12/16/2016	0	12/17/2017	0	12/17/2018	0	12/17/2019	0.71	12/16/2020	0.6	12/17/2021	0
0.45	12/17/2016	0.01	12/18/2017	0	12/18/2018	0	12/18/2019	0	12/17/2020	0	12/18/2021	0
0	12/18/2016	0.67	12/19/2017	0	12/19/2018	0	12/19/2019	0	12/18/2020	0	12/19/2021	0.24
0	12/19/2016	0.76	12/20/2017	0.57	12/20/2018	0.39	12/20/2019	0	12/19/2020	0	12/20/2021	0
0	12/20/2016	0	12/21/2017	0	12/21/2018	0.15	12/21/2019	0	12/20/2020	0.43	12/21/2021	0.48
1.77	12/21/2016	0	12/22/2017	0	12/22/2018	0	12/22/2019	0.23	12/21/2020	0.03	12/22/2021	0.06
2.38	12/22/2016	0	12/23/2017	0	12/23/2018	0	12/23/2019	0.99	12/22/2020	0	12/23/2021	0
0.01	12/23/2016	0	12/24/2017	0.03	12/24/2018	0	12/24/2019	0	12/23/2020	0	12/24/2021	0
0	12/24/2016	0	12/25/2017	0.01	12/25/2018	0	12/25/2019	0	12/24/2020	1.33	12/25/2021	0
0	12/25/2016	0	12/26/2017	0	12/26/2018	0	12/26/2019	0	12/25/2020	0.03	12/26/2021	0
0	12/26/2016	0.03	12/27/2017	0.15	12/27/2018	0.05	12/27/2019	0	12/26/2020	0	12/27/2021	0
0.11	12/27/2016	0.01	12/28/2017	0	12/28/2018	0.6	12/28/2019	0	12/27/2020	0	12/28/2021	0
0.03	12/28/2016	0	12/29/2017	0	12/29/2018	0.01	12/29/2019	0.19	12/28/2020	0	12/29/2021	0
1.57	12/29/2016	0.63	12/30/2017	0	12/30/2018	0.2	12/30/2019	0.83	12/29/2020	0	12/30/2021	0.11
0.19	12/30/2016	0	12/31/2017	0	12/31/2018	0	12/31/2019	0	12/30/2020	0	12/31/2021	0.03
	12/31/2016	0							12/31/2020	0.73		