Attachment B – Lake Alice Watershed – Data Inventory and Analysis

Prepared for

University of Florida

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Prepared by

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Section 1.0 Data Inventory and Analysis

The University of Florida has been located on the current main campus since approximately 1905. Since that time the University has grown from an incoming class of about 100 to almost 50,000. This substantial growth has been accompanied by large shifts in the development of an interest in the land on which the University sits. During various periods in the University's history data have been collected and studies have been undertaken on the campus. While not continuous, these data and studies provide snapshots through time that show how the University and its natural resources have changed.

In addition to the data that have been collected and the studies that have been completed, the University at the administrative level has prepared and implemented planning documents to guide the ongoing development of campus to meet its current and future educational goals. This section provides a review of existing electronically available data that pertain to Lake Alice, the Lake Alice Watershed, and stormwater on campus.

1.1 Geographic Data

This study used various geographic data, identified in Table 1, to conduct spatial analyses and mapping with ArcGIS Pro. The data came from multiple sources including the University of Florida (UF), Florida Department of Environmental Protection (FDEP), Natural Resources Conservation Service (NRCS), U.S. Census Bureau Department of Commerce, and Florida Geographic Information Office (FGIO). The year of the data indicates the most recent update or acquisition date.

Table 1. Inventory of Available Data, Year, and Sources

Data Type	Year	Source
Alachua County Roads	2023	U.S. Census Bureau
Florida National Hydrography Dataset	2018	FDEP
Floridan Aquifer System Contamination Potential	2017	AGI
Lake Alice Watershed Boundary	2024	Jones Edmunds
Lake Alice Watershed Impervious Surface	2023 / 2024	UF / WSI
Land Use – Land Cover	2019-2020	FDEP
LiDAR	2018	FGIO
Soil Survey	2019	USDA NRCS
UF Conservation Areas	2023	UF
UF Stormwater Drop Inlet	2023	UF
UF Stormwater Gravity Main	2023	UF
UF Stormwater Low Impact Development	2023	UF
UF Stormwater Ponds	2023	UF

AGI - Advanced GeoSpatial, Inc.
FDEP - Florida Department of Environmental Protection
FGIO - Florida Geographic Information Office
NRCS - Natural Resources Conservation Service
UF - University of Florida
WSI – Wetland Solutions, Inc.

1.1.1 LiDAR Dataset

High-resolution LiDAR (Light Detection and Ranging) for the Lake Alice Watershed from 2018 is provided in Figure 1. LiDAR is a remote sensing method that uses light in the form of a pulse laser to generate a precise, three-dimensional surface. Using statewide LiDAR data, a digital elevation model (DEM) of the watershed was developed and used to analyze the topography, hydrology, and vegetation of the watershed, as well as to identify potential sources of erosion, sedimentation, and flooding. Figure 2 shows an elevation profile along a transect across the watershed (Figure 1, A-A'). Elevations varied 104 ft along the transect with elevations ranging between 68.5 and 172 ft NAVD88. The elevations within the entire Lake Alice Watershed ranged between 61.9 and 172 ft NAVD88, or 110 ft.

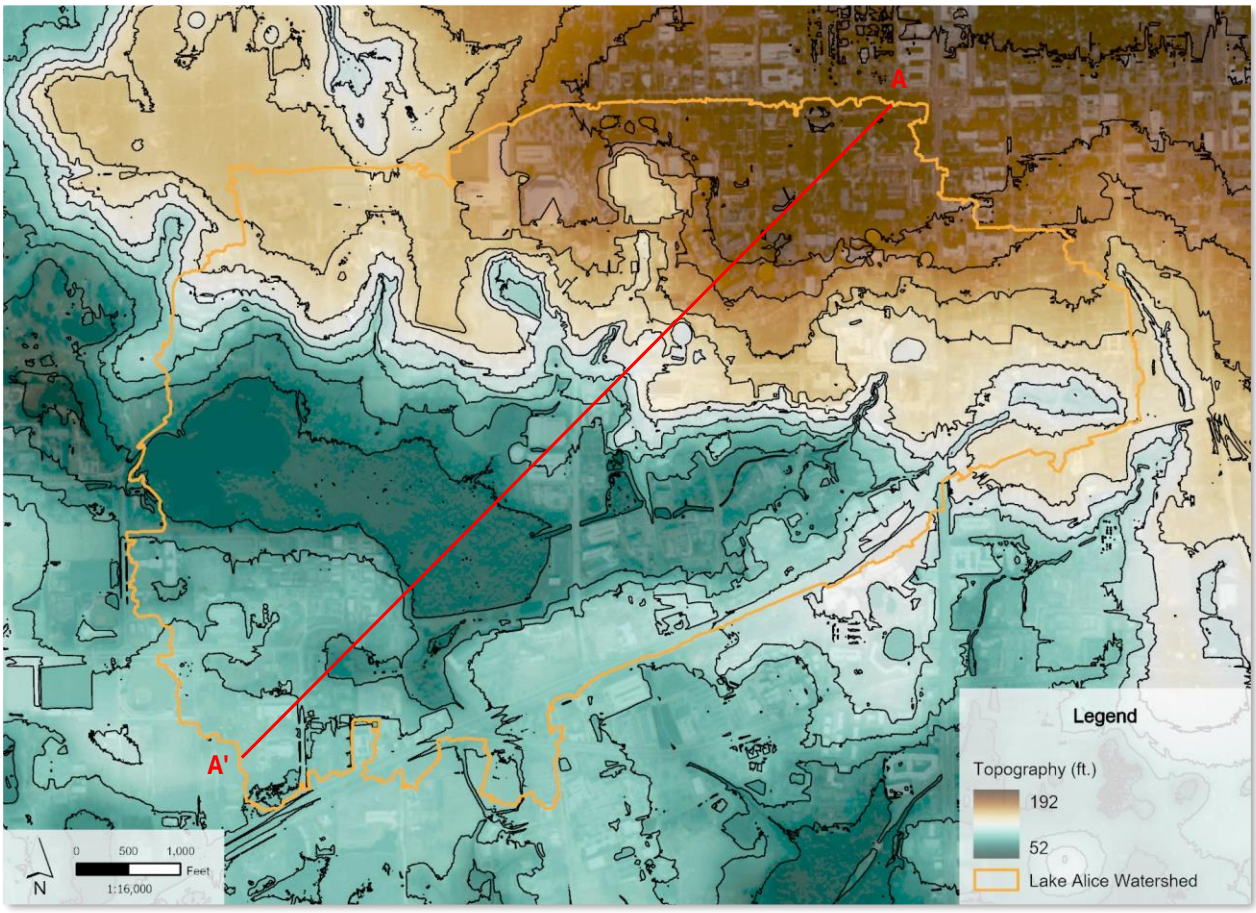

Figure 1. Lake Alice LiDAR Topography Map (2018)

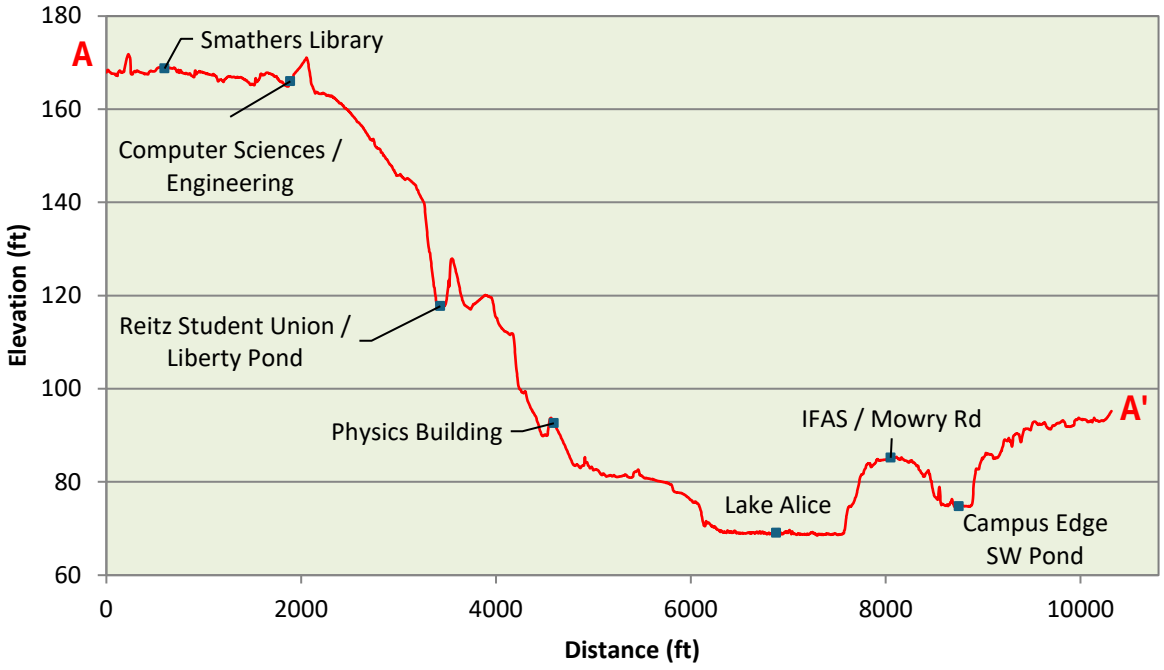

Figure 2. Lake Alice LiDAR Topographic Profile

1.1.2 Stormwater Infrastructure

Stormwater management on the UF campus is designed for flood control, water quality enhancement, groundwater recharge, habitat creation, and aesthetic improvement. The Lake Alice Watershed is a closed system within the UF campus that includes a network of stormwater infrastructure including drainage structures, conveyance systems, stormwater ponds, and green infrastructure. The stormwater infrastructure manages runoff from the campus and adjacent city areas, ultimately directing it to Lake Alice.

UF has developed and maintains a comprehensive inventory of the stormwater system components on campus as part of the National Pollutant Discharge Elimination System (NPDES) campus stormwater sewer system enhanced mapping project. The project involves collecting, verifying, and updating data on the location, type, size, condition, and connectivity of the stormwater system components. The project also involves creating and maintaining an ArcGIS geodatabase that stores and organizes the stormwater system data and allows for spatial analysis and mapping. This inventory is constantly updated as infrastructure improvements and modifications are made.

1.1.2.1 Drainage

A map of the stormwater drainage structures in the Lake Alice Watershed is displayed in Figure 3. The UF stormwater mapping project estimated that there are 1,766 stormwater drop inlet structures on the UF campus within the Lake Alice Watershed. The database contains information such as material and type of structure access, wall material, grate dimensions, number of pipe connections, and structure elevations.

Figure 3. UF Stormwater Drainage Structures within the Lake Alice Watershed (2023)

1.1.2.2 Conveyance

Figure 4 shows a map of the stormwater conveyance features in the Lake Alice Watershed that move stormwater from the stormwater drainage structures to stormwater ponds. This network has about 42 miles of gravity main pipes, with circular pipe being the most frequent (41 miles) followed by elliptical (0.81 miles) and box (0.28 miles). The database indicates circular gravity mains have pipe diameters from 1 to 68 inches, with 18 inches being the most common (Figure 6). The box and elliptical pipes varied from 60 x 36 to 128 x 53 inches (WxH), and 18 x 12 to 53 x 38 inches (WxH), respectively. The most common pipe material was reinforced concrete pipe (RCP).

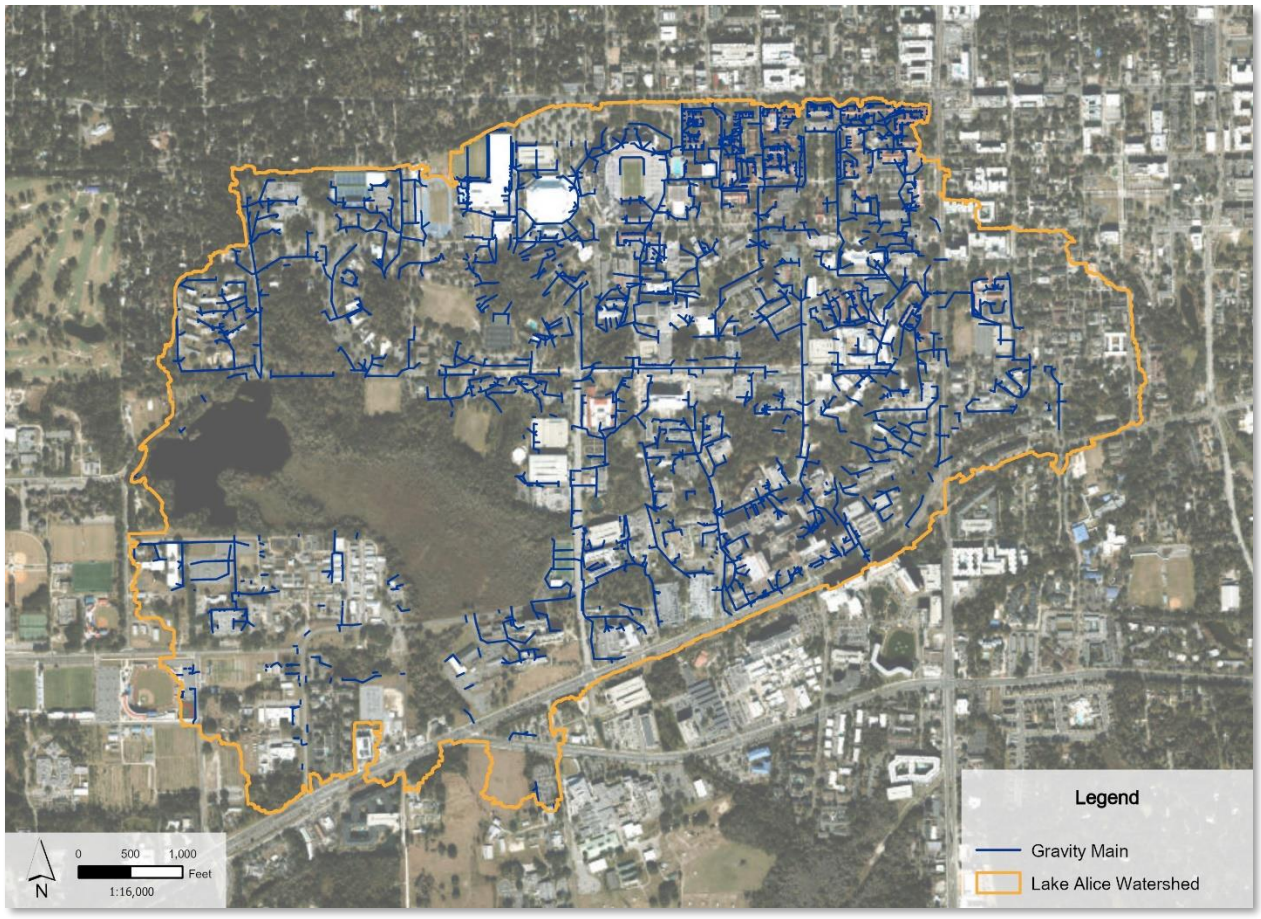

Figure 4. UF Stormwater Conveyance within the Lake Alice Watershed (2023)

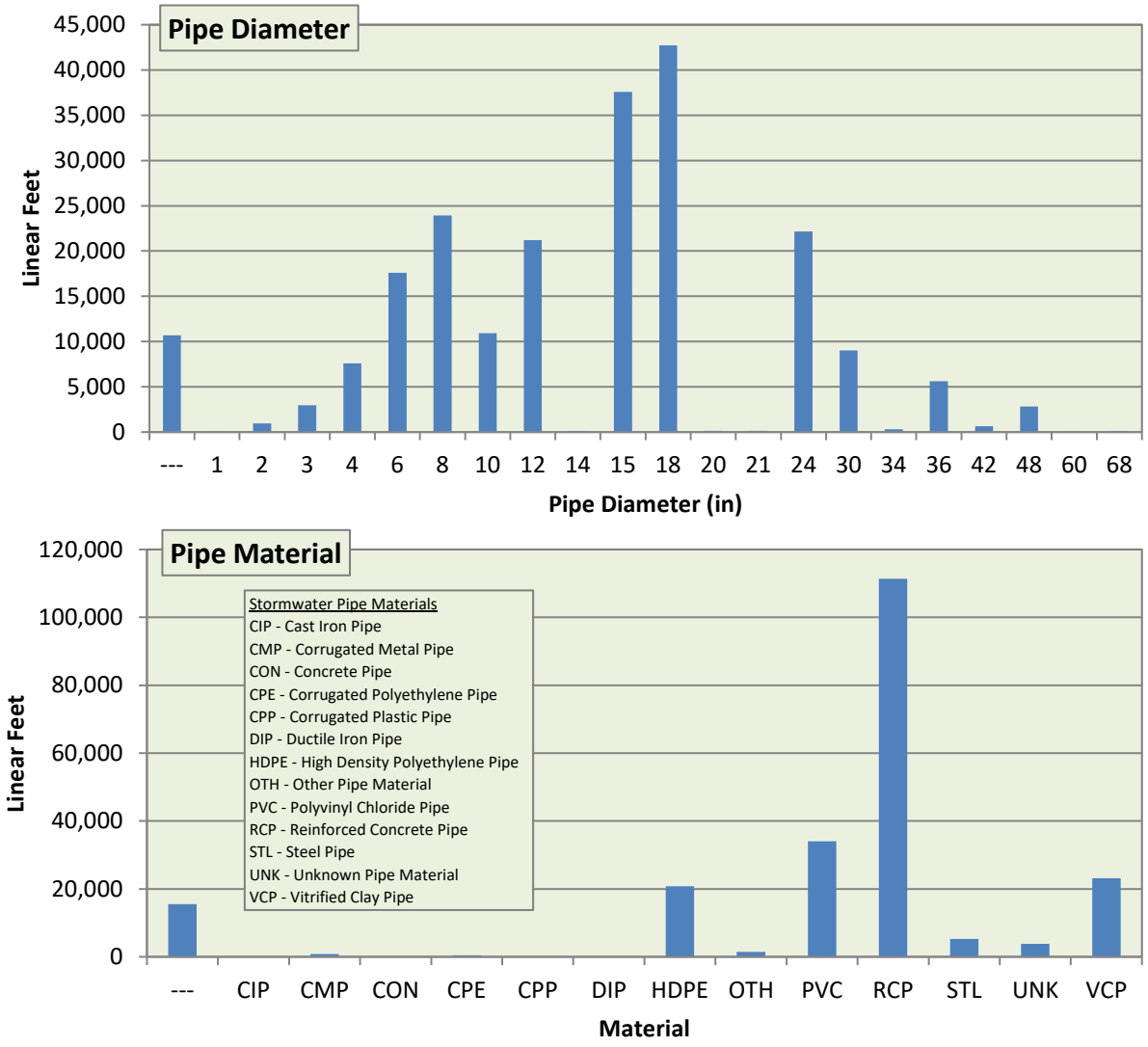

Figure 5. UF Stormwater Conveyance – Circular Pipe Diameter and Material Inventory (2023)

1.1.2.3 Storage

Stormwater ponds are the most visible features of the UF campus stormwater infrastructure network. They are designed to store and treat stormwater runoff before it is discharged into the natural water bodies or infiltrated into the ground. The Lake Alice Watershed has 26 stormwater pond features, a total area of about 27.4 acres, with Lake Alice being the most prominent. Stormwater ponds within the Lake Alice Watershed are classified into the following types: retention ponds (22.1 ac), wet detention (4.07 ac), dry detention (0.77 ac), and depressions (0.51 ac). Retention ponds are ponds that have a permanent pool of water, while wet detention ponds temporarily hold water for days or weeks after a storm event. Dry detention ponds drain quickly, within hours or days, following a storm. Stormwater depressions can be natural or artificial low areas in the land surface that have no outlet structure and depend on infiltration to remove water.

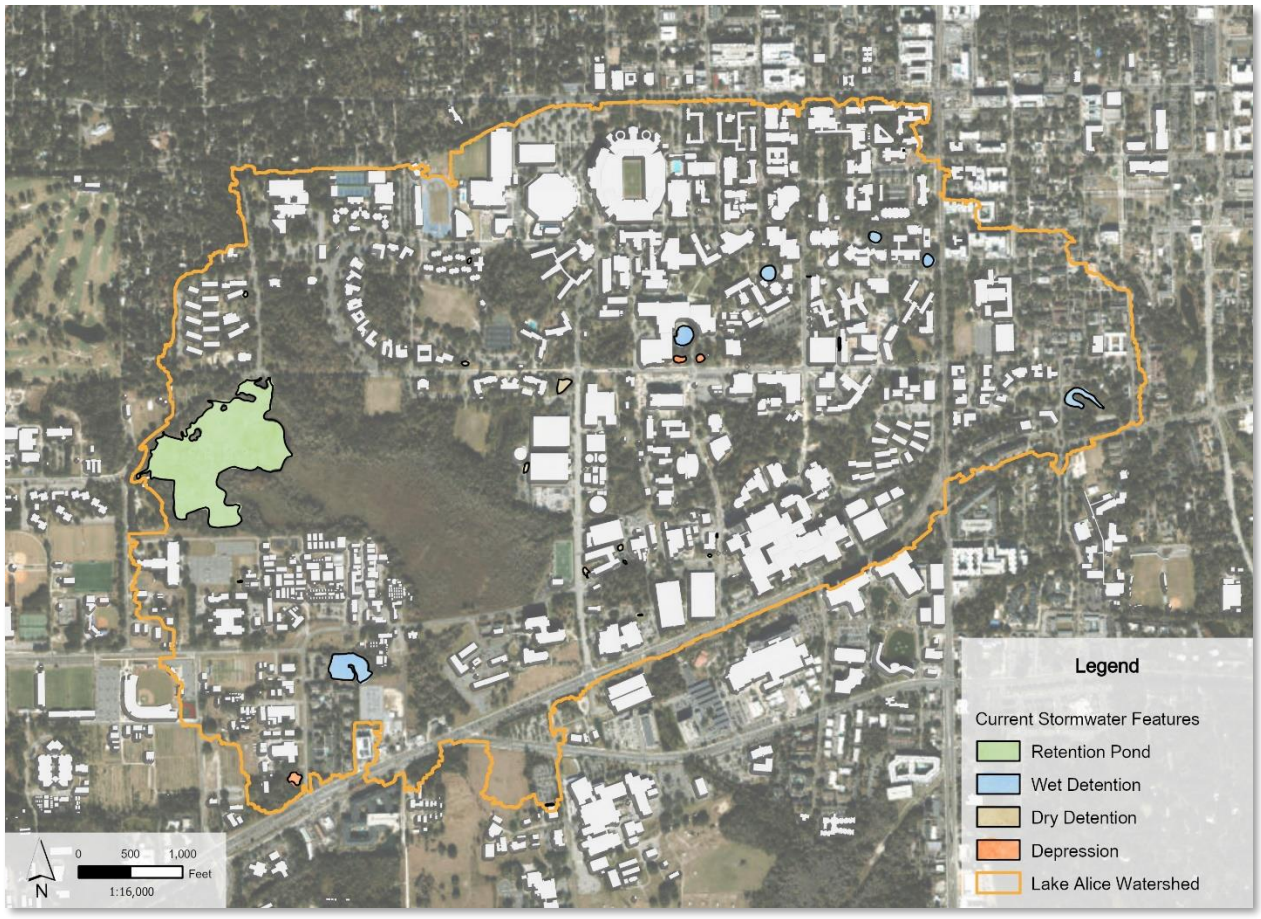

Figure 6. UF Stormwater Ponds within the Lake Alice Watershed (2023)

1.1.2.4 Green Stormwater Infrastructure

Green stormwater infrastructure uses technologies that use natural or engineered systems to mimic or enhance the natural hydrologic cycle, such as infiltration, evapotranspiration, and reuse. GSI can reduce the volume and improve the quality of stormwater runoff, as well as provide other benefits, such as urban greening and wildlife habitats. UF campus has implemented various types of green stormwater infrastructure, including bioswales and bioretention cells (Figure 7). Bioswales are shallow, vegetated channels that convey stormwater along a linear path, while bioretention cells are landscaped depressions that store stormwater temporarily and allow it to infiltrate into the ground.

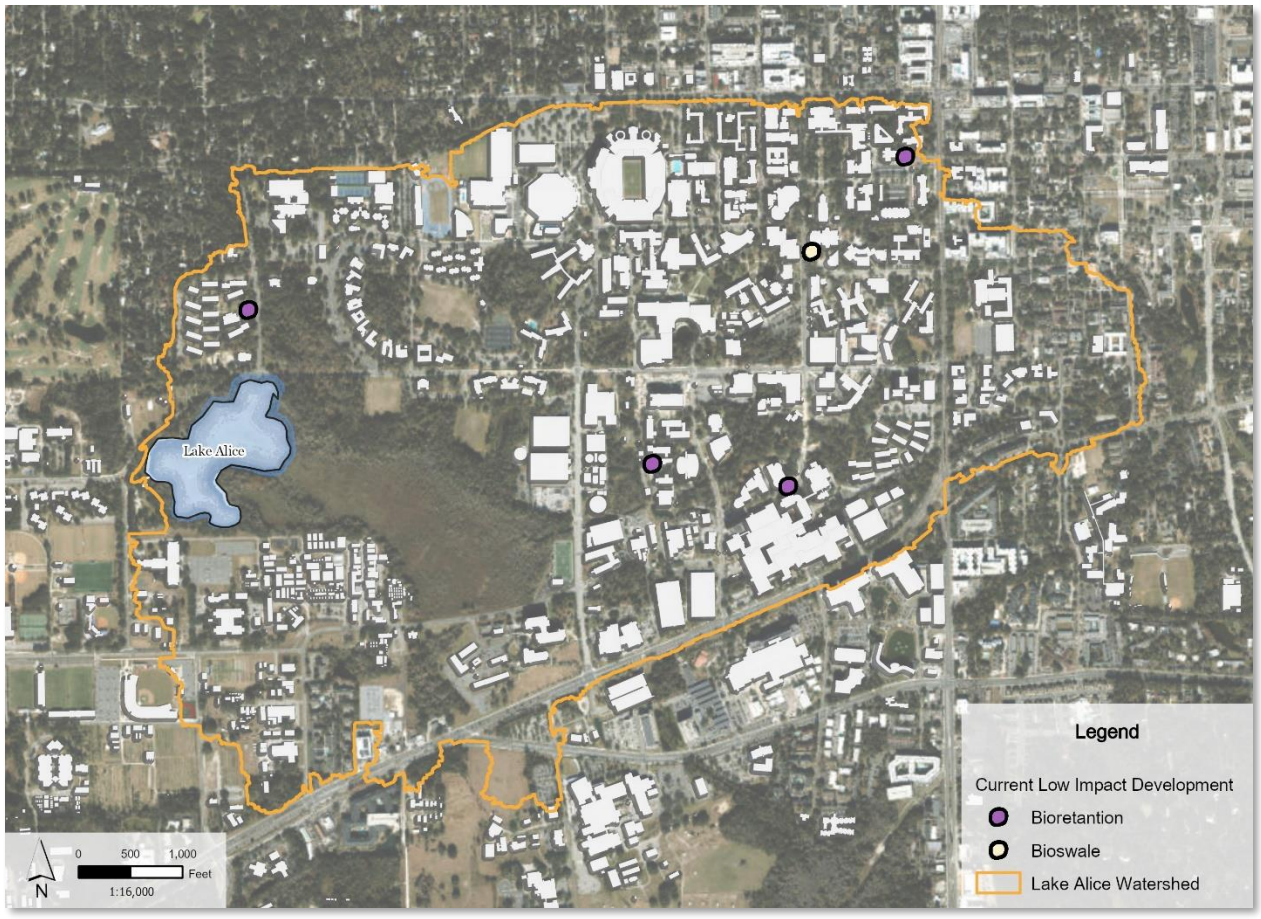

Figure 7. UF Green Stormwater Infrastructure Map within the Lake Alice Watershed (2023)

1.1.3 Soils

The soil coverage for the Lake Alice Watershed was obtained from the USDA Natural Resources Conservation Service (NRCS) soil survey (Figure 8). Table 2 shows the breakdown by soil group with generally well drained soils for most of the watershed and poorly drained soils adjacent to Lake Alice to the east and south. The hydrologic soil groups within the Lake Alice Watershed are as follows with dual hydrologic groups assigned for soils under both drained and undrained conditions.

- Group A (high infiltration rate and low runoff potential) - 66%, 666 ac
- Group B (moderate infiltration rate) – 0.2%, 2.4 ac
- Group C (slow infiltration rate) – 0.7%, 6.8 ac
- Group D (very slow infiltration rate and high runoff potential)
  - A/D – 6.4%, 63 ac
  - C/D – 14%, 140 ac

The most common soil groups within the Lake Alice Watershed are Urban land-Millhopper complex (37%, 364 ac), Millhopper-Urban land complex, 0 to 5 percent slopes (11%, 114 ac), Blichton-Urban land complex, 0 to 5 percent slopes (11%, 112 ac), and Arredondo-Urban land complex, 0 to 5 percent slopes (7.9%, 78.7 ac).

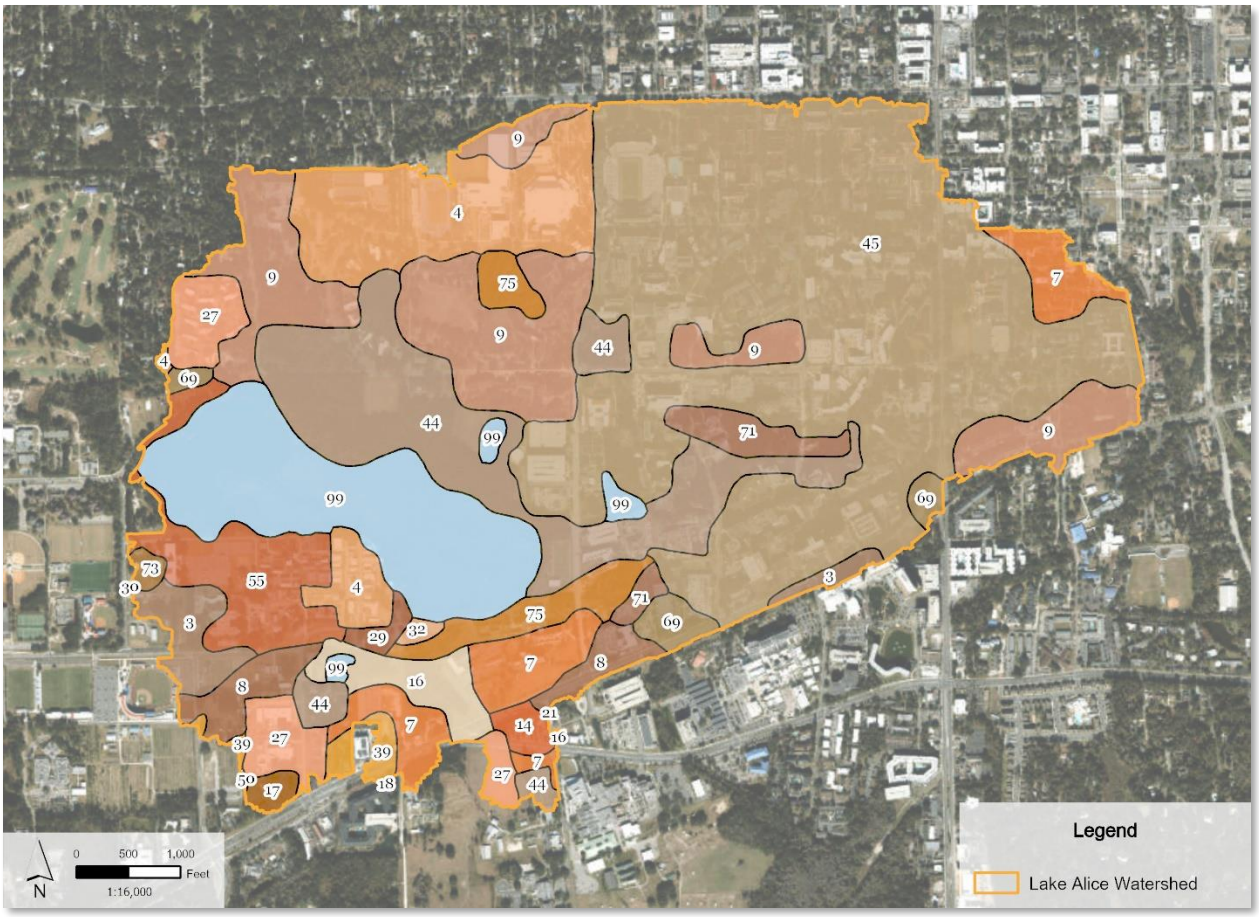

Figure 8. Lake Alice Watershed Soils Map (2019)

Table 2. Lake Alice Watershed Soils Summary (2019)

Soil Group	Code	Hydric Soil Rating	Hydric Soil Group	Area (ac)	% of Total
Arredondo fine sand, 0-5 % slopes	3	N	A	18.7	1.86
Arredondo fine sand, 5-8 % slopes	69	N	A	11.4	1.13
Arredondo-Urban land complex, 0-5 % slopes	4	N	A	78.7	7.83
Bivans sand, 2-5 % slopes	32	Y	C/D	1.73	0.17
Blichton sand, 5-8 % slopes	75	N	C/D	22.9	2.28
Blichton-Urban land complex, 0-5 % slopes	44	N	C/D	112	11.1
Bonneau fine sand, 2-5 % slopes	39	N	C	6.81	0.68
Kanapaha sand, 0-5 % slopes	7	N	A/D	41.7	4.15
Kendrick sand, 2-5 % slopes	30	N	B	0.02	0.00
Kendrick sand, 5-8 % slopes	73	N	B	2.41	0.24
Lake sand, 0-5 % slopes	55	N	A	39.4	3.92
Lochloosa fine sand, 2-5 % slopes	29	N	A	3.66	0.36
Millhopper sand, 0-5 % slopes	8	N	A	20.6	2.05

Soil Group	Code	Hydric Soil Rating	Hydric Soil Group	Area (ac)	% of Total
Millhopper sand, 5-8 % slopes	71	N	A	15.0	1.49
Millhopper-Urban land complex, 0-5 % slopes	9	N	A	114	11.4
Newnan sand	21	N	A	0.02	0.00
Pomona sand, 0-2 % slopes	14	N	A/D	5.04	0.50
Sparr fine sand	50	N	A	0.12	0.01
Surrency sand	16	Y	A/D	16.6	1.65
Urban land	27	---	---	28.6	2.84
Urban land-Millhopper complex	45	N	A	364	36.3
Wauchula sand	17	Y	C/D	3.58	0.36
Wauchula-Urban land complex	18	N	C/D	0.02	0.00
Water	99	---	---	97.7	9.72
Total				1,005	100

1.1.3.1 Impervious Surfaces

A breakdown of the impervious surfaces in the Lake Alice Watershed, based on modified GIS data from the University of Florida, is summarized in Table 3 and shown in Figure 9. The figure reveals that most of the impervious area (397 ac, 39% of the watershed) is concentrated in the eastern and central parts of the watershed, where the UF campus and its associated facilities are located. Building footprints (149 ac) and transportation (roads, parking lots, etc.) (143 ac) account for the largest share of the impervious surfaces, followed by paths (trails, sidewalks, etc.) (74 ac). These impervious surfaces can increase runoff and pollution to the lake and reduce groundwater recharge and infiltration.

The total impervious area reflects more than a hundred years of urban development, which affects stormwater management and the ecological health of Lake Alice. The ongoing challenge is to find a careful balance between the needs for institutional and recreational infrastructure and the need to protect the quality of natural habitats, especially in areas where impervious materials are needed for building walkways and similar facilities.

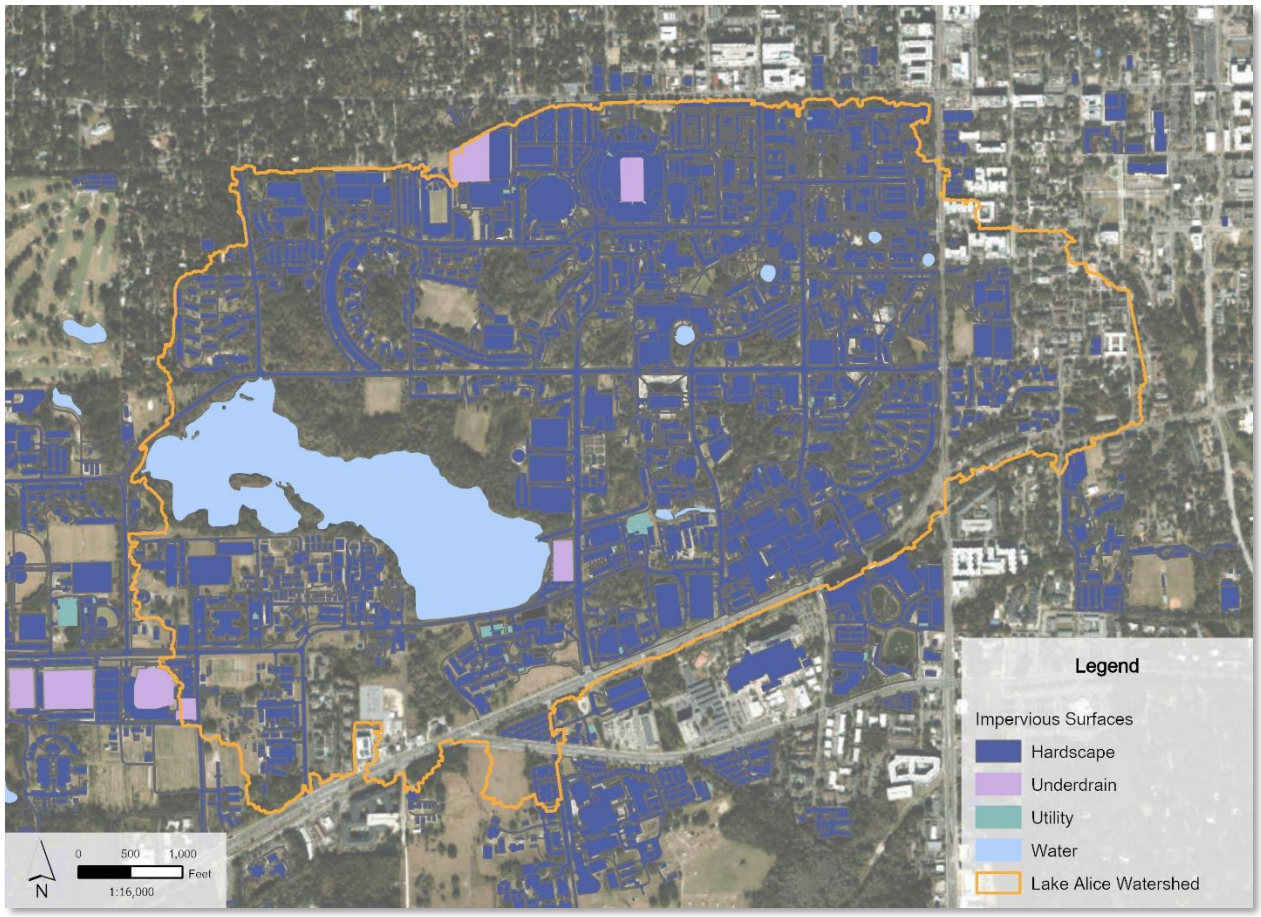

Figure 9. Lake Alice Watershed Impervious Surfaces Map

Table 3. Lake Alice Watershed Impervious Surfaces Summary

Surface Type	Area (ac)
Hardscape	387
Building Footprints	149
Transportation	143
Paths	74.3
Other	21.4
Underdrain	7.56
Utility	2.02
Water	83.6
Total	480

1.1.4 Land Use

Land use for the Lake Alice Watershed was based on the 2019-20 land use coverage developed by FDEP (Figure 10) using the Florida Land Use and Cover Classification System (FLUCCS). The figure shows the general land use (FLUCCS Level 1) with individual polygon labels identifying the FLUCCS Level 2 detail. Table 4 shows that land use is comprised of a mixture of classifications but is primarily comprised of urban and built-up (83%), wetlands (12.1%), transportation, communication, and utilities (2.9%), and water (2.4%).

The largest portion of the urban and built-up land in the watershed is classified as institutional (749 ac), while medium density, high density, and commercial services have comparable sizes (21 to 30 ac). Wetlands are mostly made up of mixed wetland hardwoods (58 ac), while freshwater marshes and mixed scrub-shrub wetlands range from 29 to 35 ac, respectively.

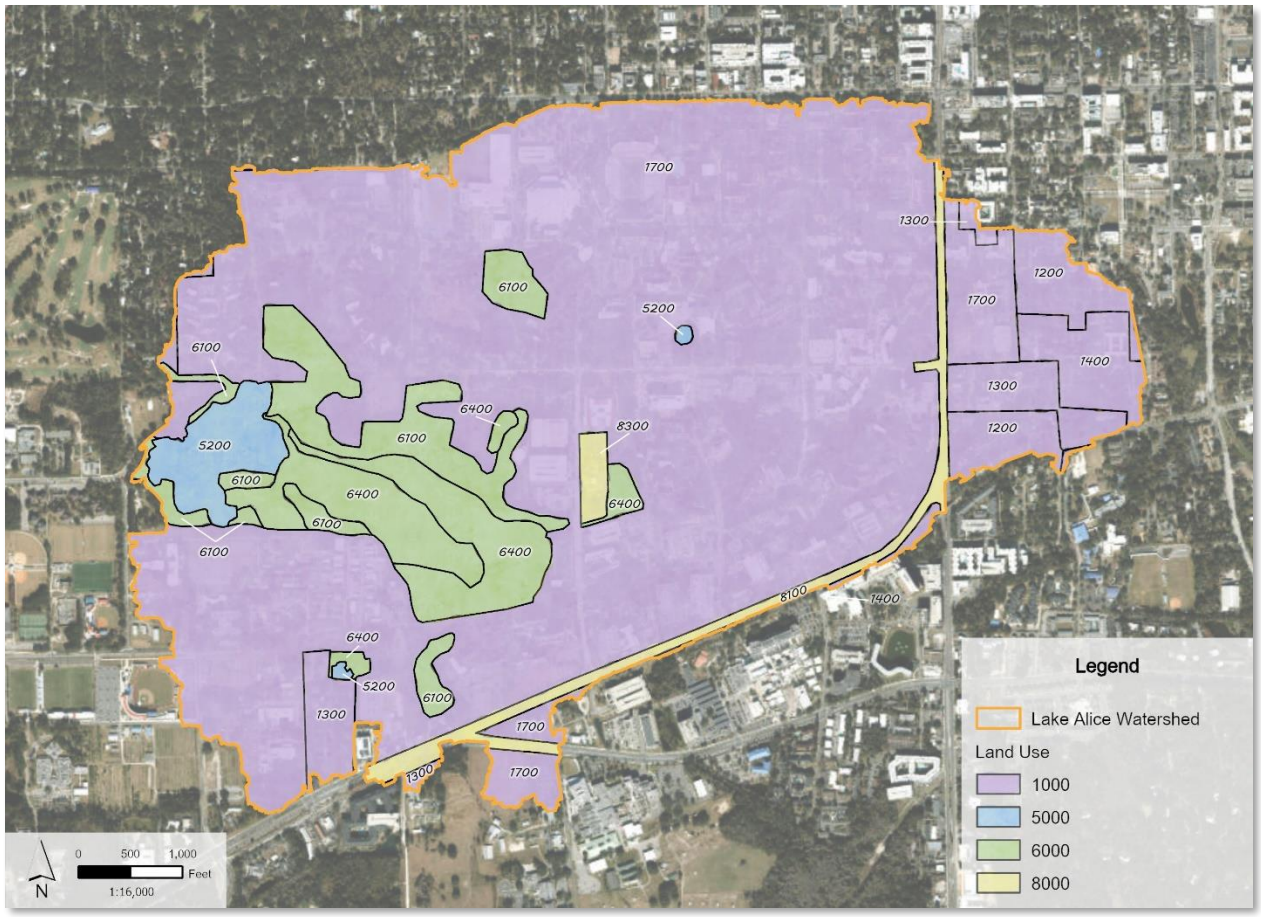

Figure 10. Lake Alice Watershed Land Use Map (2019 - 2020)

Table 4. Lake Alice Watershed Land Use Summary (2019 – 2020)

FLUCCS	Description	Area (ac)	
		(ac)	(%)
Urban and Built-Up		830	82.6
1200	Medium Density, 2-5 dwelling units/acre	30.0	2.98
1300	High Density, ≥ 6 dwelling units/acre	29.9	2.97
1400	Commercial and Services	21.1	2.10
1700	Institutional	749	74.6
Water		23.7	2.36
5200	Lakes	22.5	2.24
5300	Reservoirs	1.17	0.12
Wetlands		121	12.1
6170	Mixed Wetland Hardwoods	57.7	5.74
6410	Freshwater Marshes	28.9	2.88
6460	Mixed Scrub-shrub Wetland	34.8	3.46
Transportation, Communication, and Utilities		29.6	2.93
8140	Roads and Highways	24.5	2.43
8340	Sewage Treatment	5.04	0.50
Watershed Total		1,005	100

1.1.5 Archaeological Resources

The UF campus is rich in archaeological history with sites having been identified across campus. The specific locations of these archaeological sites are shared on a need-to-know basis to protect them from damage and theft. Locations of the archaeological sites are maintained as part of the State of Florida Division of Historical Resources – Master Site File. These data were not accessed for this project because no specific design plans were developed that might impact a site. However, these data are critical information during project development to ensure that cultural resources are not impacted.

1.2 Physical Data

To better understand the current condition of Lake Alice, and to both compare the lake to historical conditions and evaluate potential drivers of water quality changes, available hydrologic and water quality data were compiled and summarized. Existing data were available from a variety of organizations including Alachua County Environmental Protection Department (ACEPD), Florida Department of Environmental Protection (FDEP), Florida LAKEWATCH (FLW), St. Johns River Water Management District (SJRWMD), and the University of Florida (UF). Data from these sources spanned variable time periods at a variety of stations. The following sections describe the available data and present summaries for the period-of-record.

1.2.1 Hydrologic Data

The Lake Alice Watershed has limited hydrologic data available. The only hydrologic data that exist are related to permit FLA011322 monitoring for the UF Water Reclamation Facility (UFWRF), a facility that

treats wastewater to an advanced secondary level with a design capacity of 3.0 million gallons per day (MGD) annual average daily flow (Figure 11). This facility has a priority to supply reclaimed water for public access reuse (R-001) to golf courses, landscaped athletic fields, horticultural agriculture tracts, and cooling towers on the UF Campus. The alternative option is to inject reclaimed water into an underground injection well system (U-001) through injection well R-2, which consists of a single 20-inch diameter well with casing to 243 feet below land surface. The third option is to use reclaimed water public access system R-002 to increase the water levels of Lake Alice.

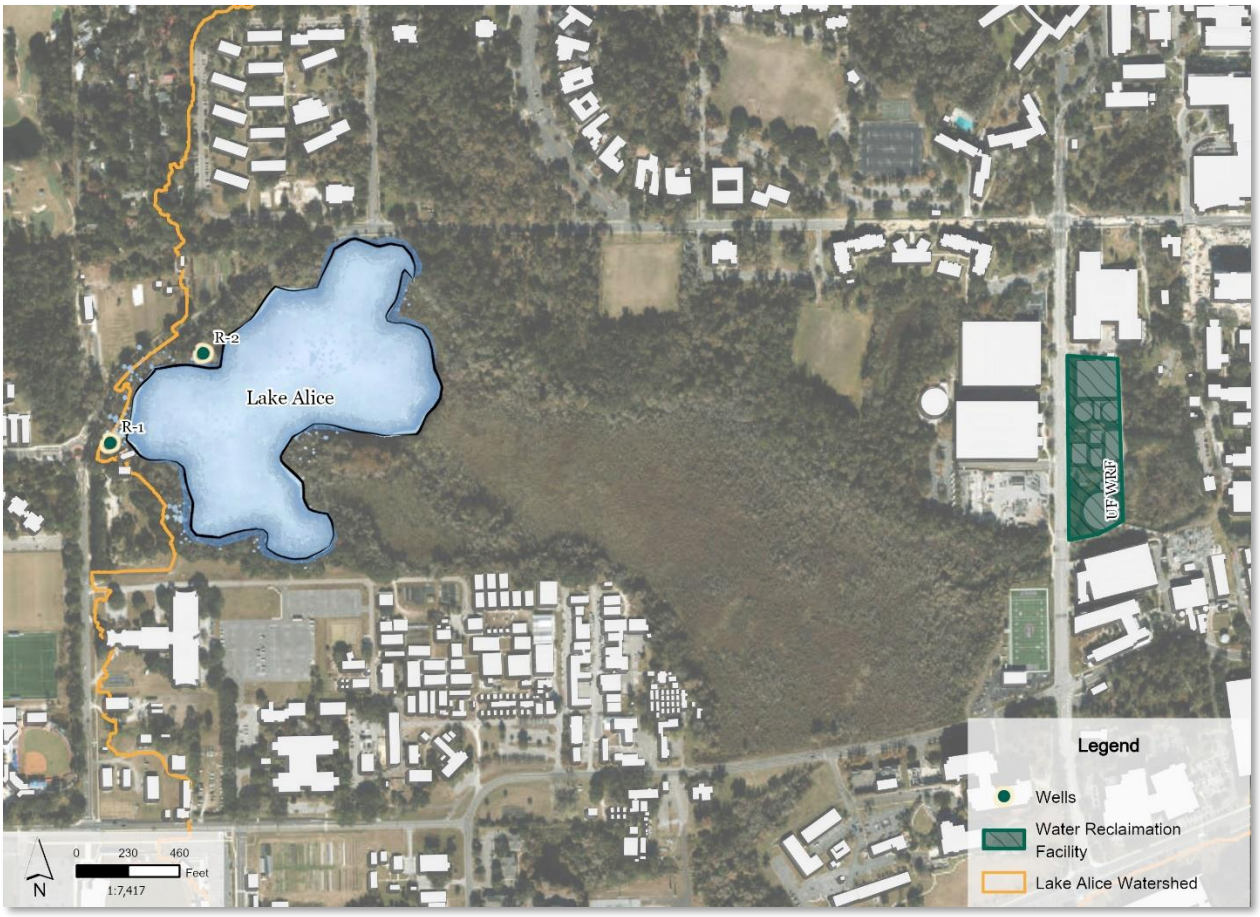

Figure 11. UF Water Reclamation Facility and Injection Well Locations

1.2.1.1 Flows

Figure 12 shows the average monthly flows of reclaimed water from the UFWRF Discharge Monitoring Reports (DMRs) submitted to FDEP (FLA011322 – EFA1/EFD1), which consist of public access reuse (R-001), injection well discharge (U-001), and Lake Alice water level management (R-002). There is a seasonal pattern in injection well discharges (U-001), with higher average flows observed in September (2.10 ± 0.07 MGD) and lower average flows in December (1.43 ± 0.06 MGD). Average discharges from February 1999 to May 2023 were 1.14 ± 0.05, 1.73 ± 0.02, and 0.18 ± 0.14 MGD for public access reuse (R-001), injection well discharge (U-001), and Lake Alice water level management (R-002), respectively. However, a large

data gap from January 2011 to July 2021 exists in the DMRs for public access reuse (R-001). This gap is unrealistic since it is known that reclaimed water is used for irrigation across much of the campus. The reasons for this data gap are not clear and require further investigation. Figure 12 reports data available at the time of this draft report. Any additional clarification will be included before the report is completed and the findings will be presented in the final report.

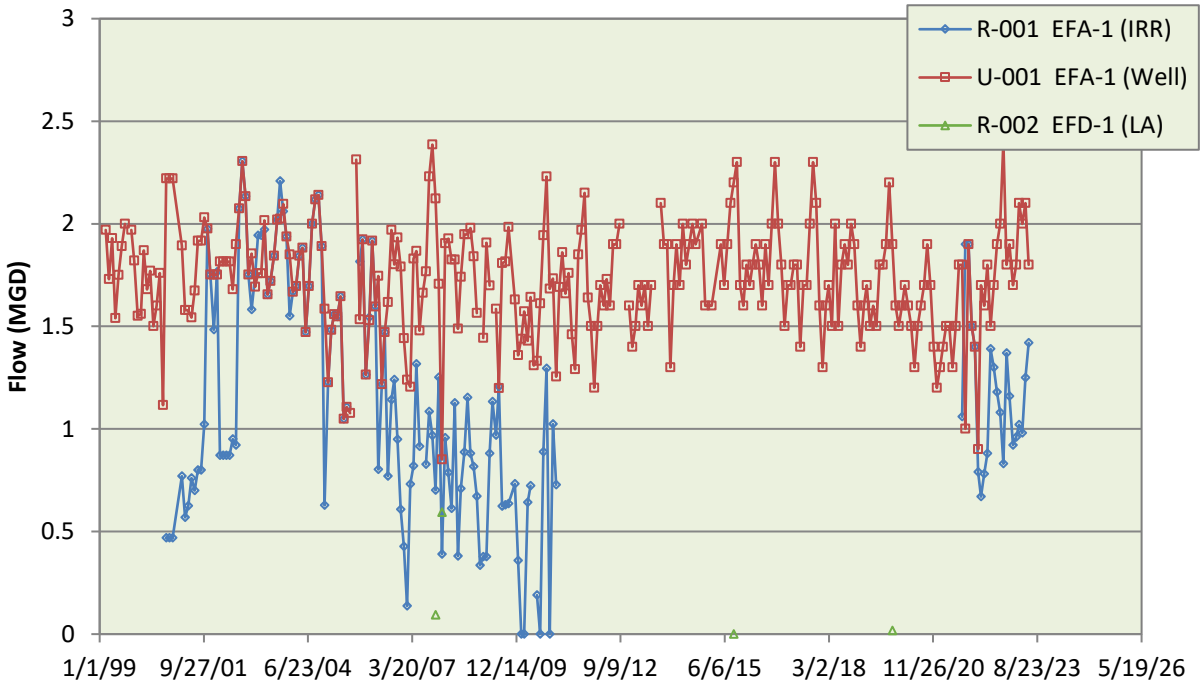

Figure 12. Monthly Average Flow from the University of Florida Water Reclamation Facility (FLA011322 - EFA-1, February 1999 – May 2023)

1.2.1.2 Stage

As part of the underground injection well system (U-001, R-2), water stage is measured in Lake Alice, with data available from January 2012 to March 2024. There are two injection wells, R-1 and R-2, each with weirs that regulate water levels in Lake Alice (Figure 11). Figure 13 displays Lake Alice water stage data over time. The average water level over the period-of-record was 68.5 ft NGVD29, fluctuating 4.6 ft with a range from 66.4 to 71.0 ft NGVD29. Over the first 10 years, water levels rose gradually between 67.4 and 69.3 ft NGVD29 on average. In February 2024, inlet screens in the control structure to Well R-1 were cleaned of accumulated debris, resulting in a 0.83-foot drop in stage in Lake Alice over 2.4 weeks.

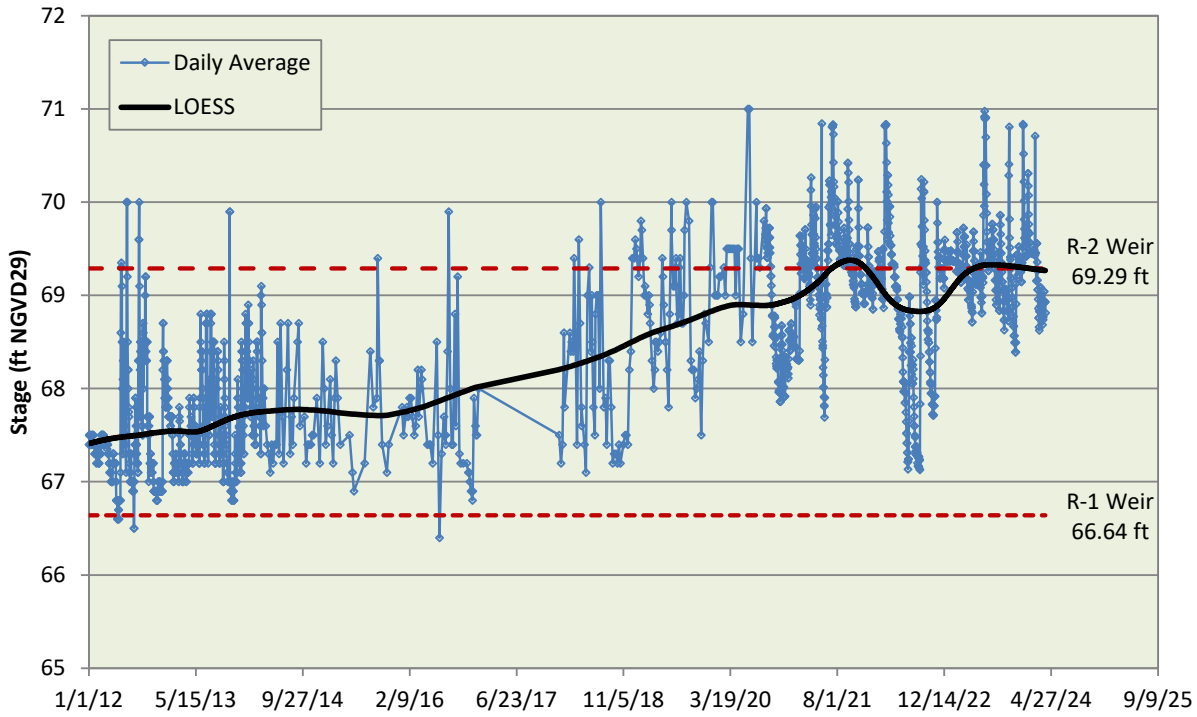

Figure 13. Lake Alice Stage (January 2012 – March 2024)

1.2.1.2.1 Bathymetric Survey

A bathymetric map of Lake Alice, developed by FLW in May 2000, is shown in Figure 14 (LakeWatch, 2000). The survey mainly covered the open water areas and did not include the vegetated edges or wetland areas to the south. The deepest point at the time of the survey was 10 feet for an estimated volume of 87.4 ac-ft and open water surface area of 21.3 acres.

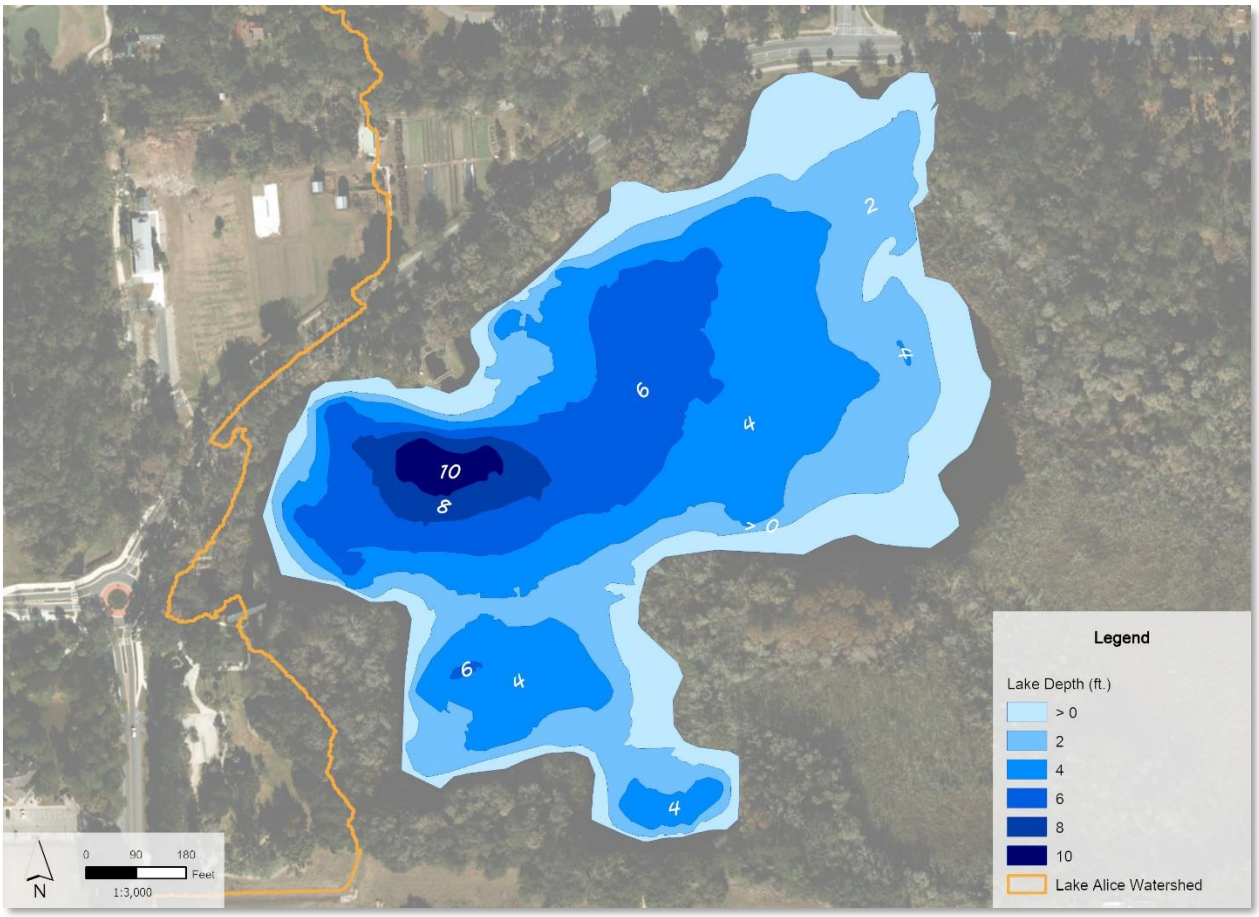

Figure 14. Lake Alice Bathymetry (2000)

1.2.2 Water Quality Data

Water quality data for this study were collected from a variety of organizations[1] including the ACEPD, FDEP, FLW, SJRWMD, and the UF. These data go as far back as 1997 and include a wide array of parameters across many stations in and around the Lake Alice Watershed. Water quality sampling, frequency, and locations have varied over the period of record. This is often the case in waterbodies that have had short intensive studies and associated sampling for limited periods of time or that have had samples collected a small number of times for a specific analyte. Because of the variability of sampling location and frequency, station groups were developed based on monitoring location. Station groups are described below, with station details provided in Table 5, and illustrated in Figure 15. The main UF Campus is divided into four watersheds: Lake Alice, Tumblin, Hogtown, and several basins that drain internally. Most of the main campus, over 60 percent, is part of the Lake Alice Watershed, which means that most of the water from rain and excess irrigation on campus ends up in Lake Alice.

Additional site descriptions for the UF stations collected as part of the Campus Water Quality monitoring program, including sampling methods and monitoring period summaries, can be found in Lenta & Clark (2010), Moran & Clark, (2010), and Azeem-Angel & Reisinger (2021).

[1] From data sources including the Water Quality Portal (https://www.waterqualitydata.us) and Steering Committee members.

- Lake Alice – includes stations within Lake Alice (FDEP / FLW) and the Baughman Center (UF) where surface waters discharge into the Floridian Aquifer via gravity infiltration well.
- Golf Course – includes the Golf Course Pond, lined pond that receives treated wastewater from the UFWRF and used for golf course irrigation; Golf View Creek, residential creek that terminates in the Golf Course Pond; and two stormwater features including the 7th Fairway stormwater drainage pipe and Shop Stormwater Pond located in the northwest corner of the golf course (UF).
- Univ Gardens – includes stations from University Gardens creek (UF), upstream and downstream of the pond.
- Hume Creek – includes a station within Hume Creek (UF), upstream from Hume Pond after the confluence of two creeks.
- Jennings Creek – includes stations on Jennings Creek at Newell Drive (FDEP[2], Brain Institute [UF]), Center Drive (FDEP, New Engineering Building [UF]), and Gale Lemerand Drive (FDEP, UF).
- Pony Field – includes a creek station located at Mowry Road – historically was from an improved horse pasture (Pony Field [UF]) which is now the UF Cancer and Genetics Research Complex.
- SEEP – include UF stations collected within the Stormwater Ecological Enhancement Project site.
- NATL Sink – includes a station within the Natural Areas Teaching Lab (NATL) Surge Area (UF) located at Natural Area Drive and Archer Road.
- Ritchey Road – includes a station at Ritchey Road (UF) near Animal Science facilities.
- Elizabeth Creek – is a tributary of Hogtown Creek, located outside of the UF Campus watersheds (north), and includes ACEPD stations on Elizabeth Creek (UF Arboretum, University Avenue, and Powell University House). Provided as a general reference of water quality conditions near the UF Campus, not examined in detail.
- Tumblin Creek – located outside of the UF Campus watersheds (east) and includes ACEPD, FDEP, and SJRWMD monitoring stations between SW 1st Avenue and Depot Avenue. Provided as a general reference of water quality conditions near the UF Campus, not examined in detail.

In the following section, analytes of particular interest are presented with detailed summary statistics and box plots provided in Appendix A.

Table 5. Station Groups and Associated Stations

Stn Group	Stn ID	Latitude	Longitude	Monitoring Location Name	Organization
Elizabeth Creek	EC	29.65235	-82.35682	Elizabeth Creek	ACEPD
Golf Course	7FW	29.64557	-82.36677	UF #7 Fairway	UF
	GOLFC	29.64577	-82.36475	Golf View Creek	UF
	GOLFP	29.64577	-82.36475	Golf Course Pond	UF
	SHOP	29.64859	-82.37063	Shop Stormwater Pond	UF
Hume Creek	HUME	29.64400	-82.35168	Hume Creek	UF
Jennings Creek	BIN	29.64240	-82.34357	Brain Institute North	UF
	BIS	29.64240	-82.34357	Brain Institute South	UF

[2] FDEP stations on Jennings Creek (LA Out 1-3) identified as Lake Alice 'Outlet', while these stations represent inputs to Lake Alice via Jennings Creek.

Stn Group	Stn ID	Latitude	Longitude	Monitoring Location Name	Organization
	GALE	29.64093	-82.35064	Gale Lemerand Drive	UF
	LA-Out1	29.64077	-82.35060	Lake Alice Outlet @ Gale Lemerand Dr.	FDEP
	LA-Out2	29.64122	-82.34609	Lake Alice Outlet @ Center Dr.	FDEP
	LA-Out3	29.64251	-82.34380	Lake Alice Outlet @ Newell Dr.	FDEP
	NEB	29.64115	-82.34625	New Engineering Building	UF
Lake Alice	BAUGH	29.64263	-82.36391	Baughman Center	UF
	LA-Cntr	29.64272	-82.36163	Lake Alice Center	FDEP / FLW
	LA-East	29.64319	-82.36047	Lake Alice East	FLW
	LA-South	29.64108	-82.36128	Lake Alice @ boat ramp on SW side	FDEP
	LA-West	29.64336	-82.36239	Lake Alice @ parking area on north side	FDEP / FLW
NATL Sink	SURGE	29.63076	-82.36610	Surge Area - NATL Sink	UF
Pony Field	PONY	29.63831	-82.35401	Pony Field	UF
Ritchey Road	RITCH	29.63033	-82.35322	Ritchey Road, near Animal Science	UF
SEEP	SEEPBERM	29.63408	-82.36837	Berm - SEEP	UF
	SEEPFB	29.63395	-82.36842	Forebay - SEEP	UF
	SEEPPOND	29.63408	-82.36837	Pond - SEEP	UF
	SEEPSINK	29.63408	-82.36837	Sinkhole - SEEP	UF
	SEEPWEIR	29.63395	-82.36842	Weir d/s - SEEP	UF
Tumblin Creek	TC-SWPond-1stAve	29.65085	-82.33401	Tumblin Creek - stormwater pond, south of SW 1st Avenue	ACEPD
	StrmSwr-2ndAve	29.65024	-82.33404	Stormwater manhole on SW 2nd Ave.	ACEPD
	TC-5thAve	29.64705	-82.33366	Tumblin Creek @ SW 5th Avenue	ACEPD / FDEP / SJRWMD
	TC-72DS	29.64559	-82.33274	Tumblin Creek - downstream of 72 stormpipe	ACEPD / FDEP
	TC-Porters	29.64423	-82.33176	Tumblin Creek - Porters Neighborhood	ACEPD
	TC-DepotAve	29.64321	-82.33202	Tumblin Creek @ Depot Ave.	FDEP
Univ Gardens	UNIG	29.64477	-82.35731	University Gardens	UF
	UNIGDn	29.64477	-82.35731	University Gardens, downstream	UF

Organizations:
ACEPD - Alachua County Environmental Protection Department
FDEP - Florida Department of Environmental Protection
FLW - Florida LAKEWATCH
SJRWMD - St. Johns River Water Management District
UF – University of Florida

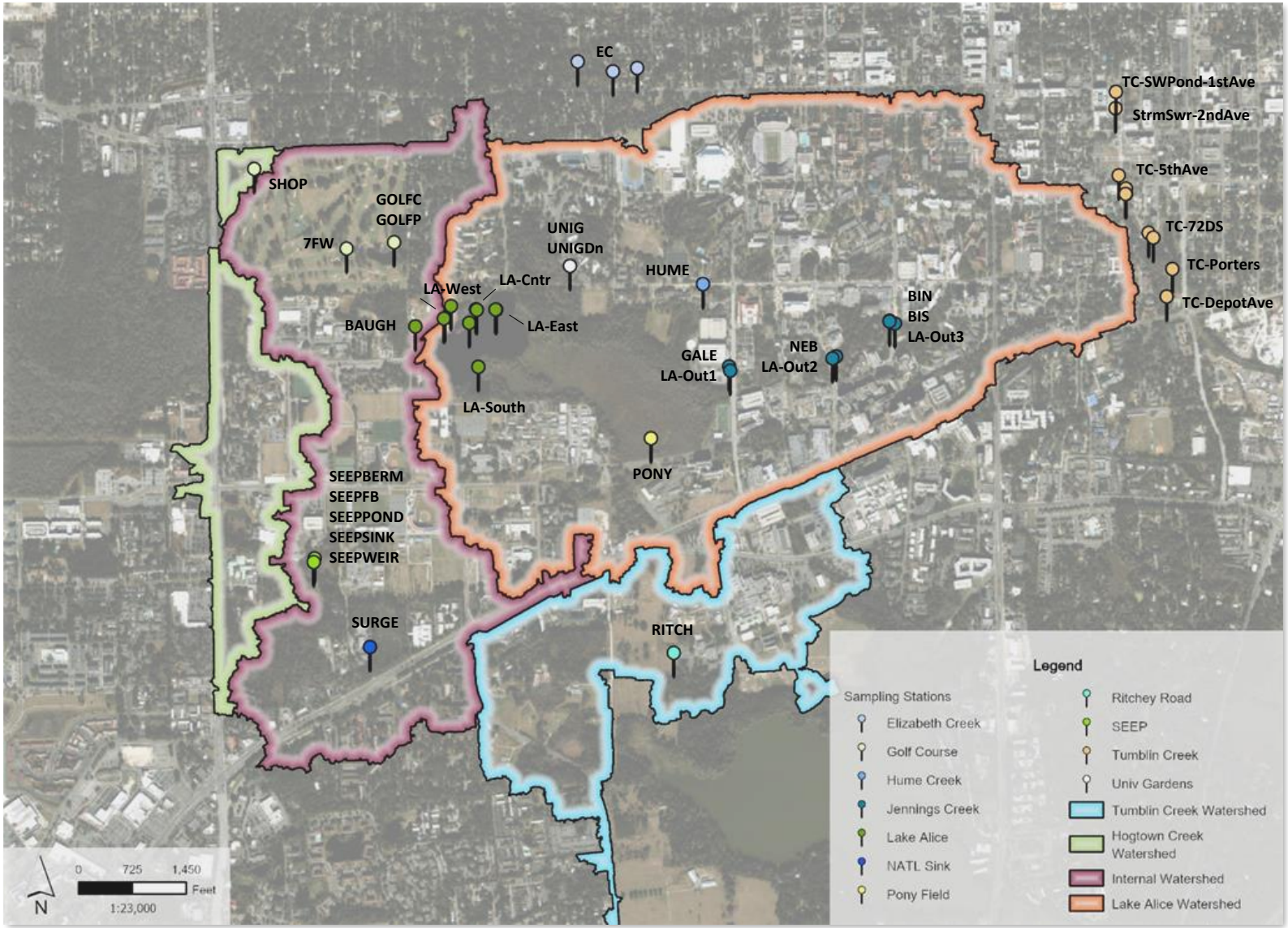

Figure 15. UF Campus Water Quality Stations and Grouping

1.2.2.1 Nutrients

1.2.2.1.1 Nitrogen

Lake Alice was listed as an impaired water on the 303(d) list by the state of Florida in 1998 due to high nutrient levels. It was de-listed in 2002 because it met the water quality standards for its classification (Class III Freshwater). For this reason, a detailed inventory and analysis of nitrogen data was prepared. This included an analysis of ammonia (NH4-N), nitrate + nitrite-N (NOx-N), organic nitrogen (Org-N), and total nitrogen (TN). The concentrations of the different constituents can provide an indication of source, treatability, and potential impacts in aquatic ecosystems. Furthermore, sustainable nitrogen removal relies on conversion of Org-N to NH4-N to NOx-N to nitrogen gas. While NH4-N and NOx-N can be treated to less than 0.1 mg/L, Org-N is made up of many constituents, some of which are recalcitrant and not easily converted to available forms (e.g. complex organics). The following section discusses the individual forms of nitrogen and concentrations that have been observed within the watershed of Lake Alice and within the lake.

Figure 16 provides a summary of average TN concentrations with the different constituents for station groups within the UF Campus and surrounding watershed. As described above, water quality data have been collected by different organizations over varying time periods, with TN data available from 1997 to 2022. The figure presents the average concentrations of each constituent (Org-N, NOx-N, and NH4-N), based on all available data. Therefore, the reported TN concentrations may not align with the sum of these constituents, due to inconsistencies in the number of records for each station. Detailed statistics and period-of-record for each station group and parameter are provided in Appendix A. TN concentrations in the UF Campus watersheds has been highly variable, with higher concentrations in University Gardens, Hume Creek, and Golf Course (Figure 17). Elevated concentrations in University Gardens and Hume Creek are largely driven by high concentrations of NOx-N, from reclaimed water use for irrigation within these subbasins. Monthly average nitrogen concentrations from January 2011 to May 2023 for the UFWRF reuse water (FLA011322 – EFA-1) were as follows:

- TN Average – 4.72 mg/L (range 0.48 – 12.5 mg/L)
- NOx-N Average – 3.21 mg/L (range 0.67 – 7.90 mg/L)
- TKN Average – 1.72 mg/L (range 0.30 – 12.0 mg/L)

Lake Alice TN time series concentration data (Figure 18) show an average concentration of 0.96 mg/L with a range from 0.18 to 10.8 mg/L. Within the lake, elevated concentrations of TN are driven primarily by Org-N and algal growth, with the summer months having the highest variability (Figure 19).

For available Lake Alice data between 2012 to 2022, results of the Pearson correlation indicated that there was a significant negative relationship between TN concentrations and lake stage, $r(18) = -.60$, $p = .006$ (Figure 20). This type of relationship is commonly seen in Florida lakes when higher water levels flood fringing wetlands, resulting in improved water quality.

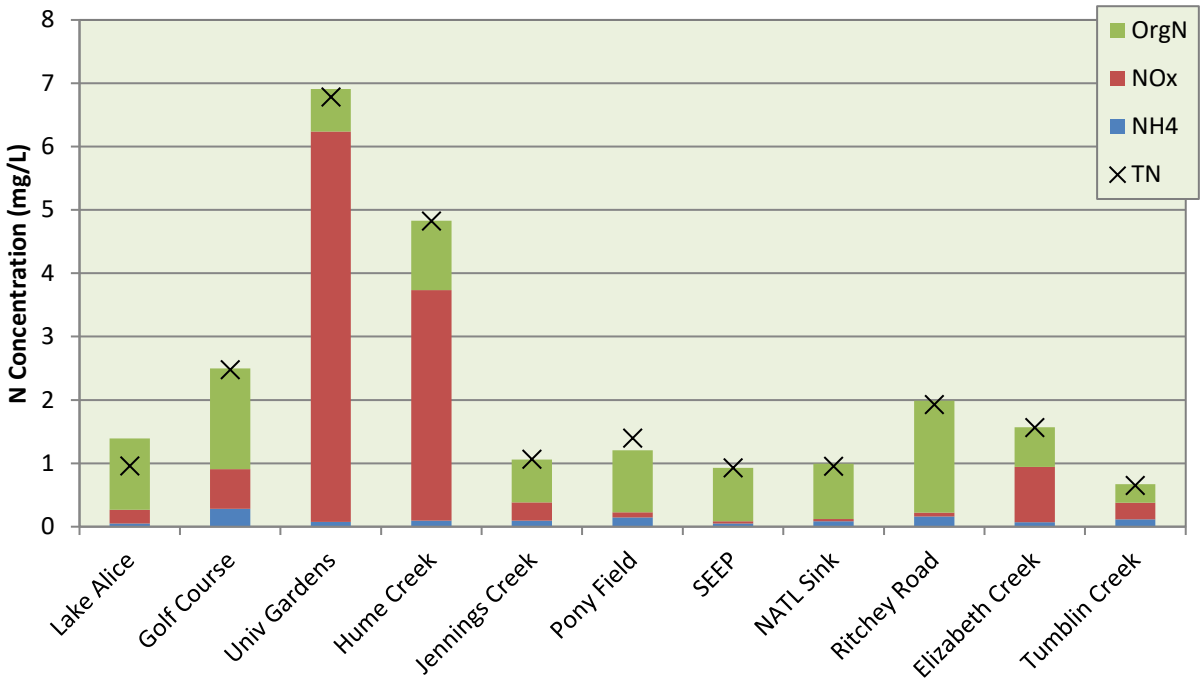

Figure 16. Average Nitrogen Concentrations by Station Group (1997 – 2022)

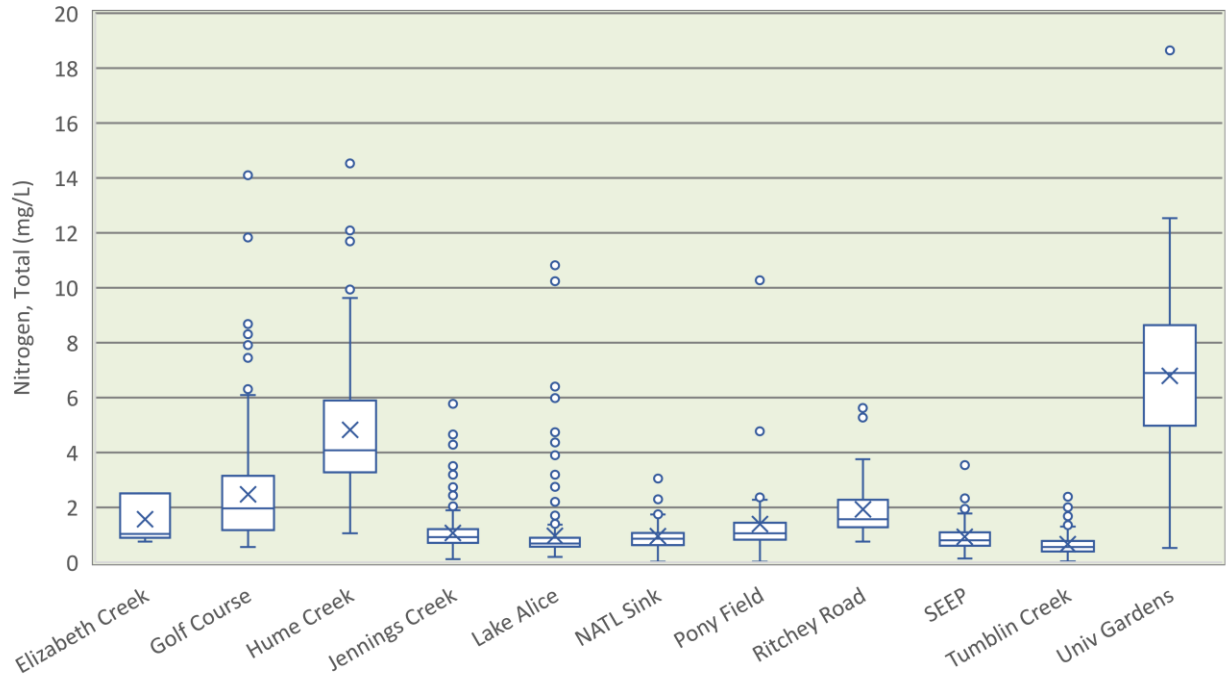

Figure 17. Total Nitrogen Concentration Box Plots by Station Group (1997 – 2022)

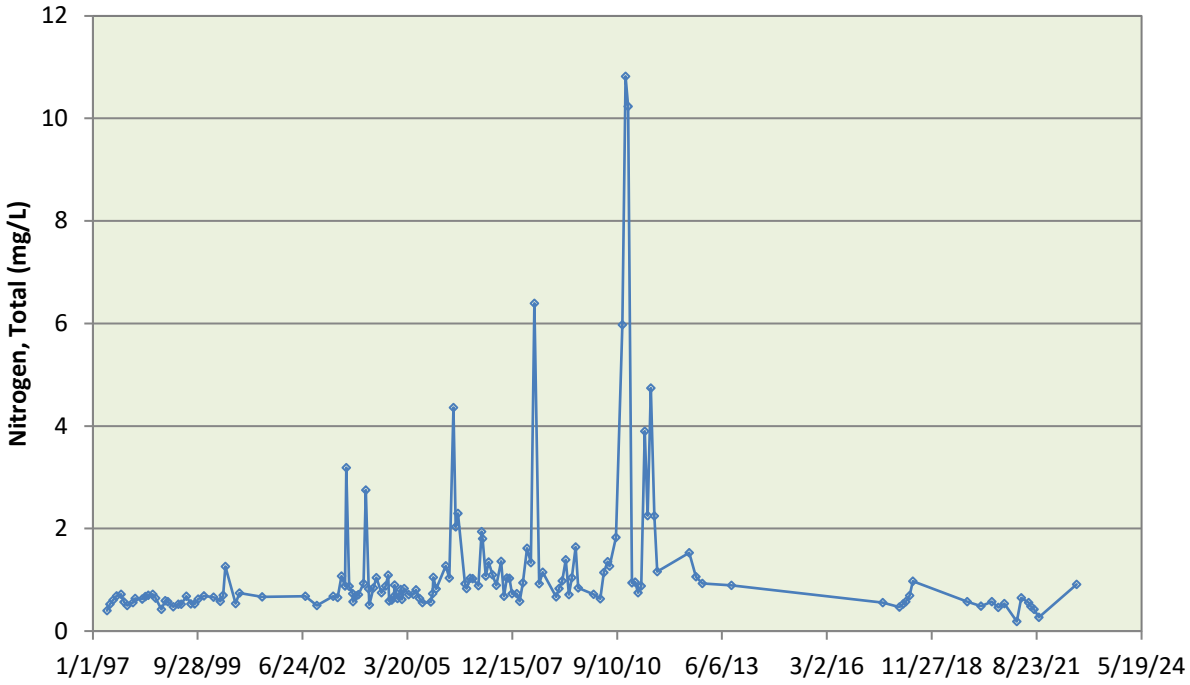

Figure 18. Lake Alice Total Nitrogen Concentrations over the Period-of-Record (1997 – 2022)

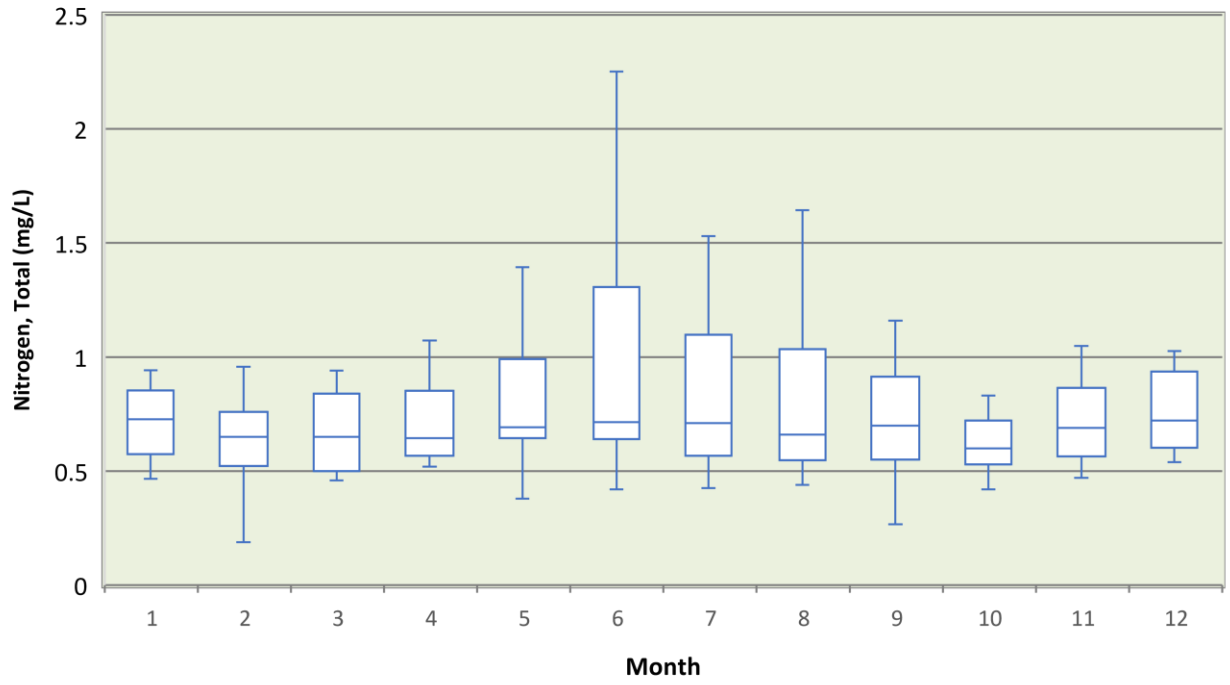

Figure 19. Lake Alice Total Nitrogen Concentration Box Plots by Month (1997 – 2022)

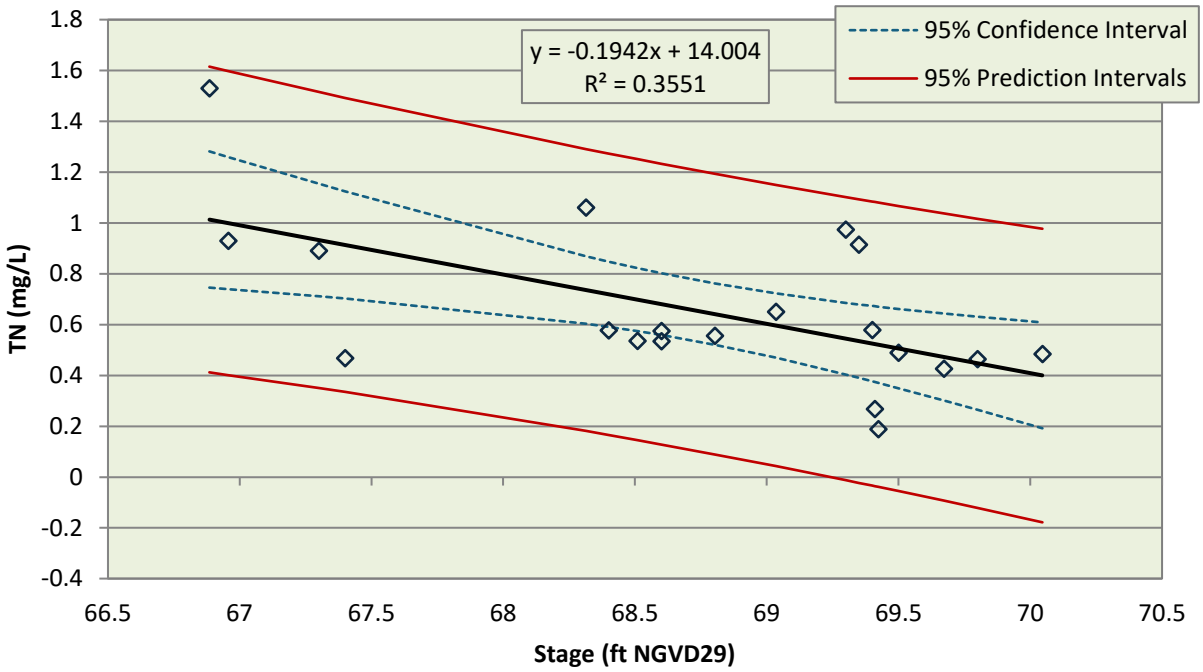

Figure 20. Relationship Between Lake Alice Stage and TN Concentrations (2012 – 2022)

Generally, NH4-N samples have exhibited low concentrations (less than 0.2 mg/L) with occasional higher values at some stations (Figure 21). In particular, the Golf Course, Ritchey Road, and Pony Field stations have had higher concentrations of NH4-N that are likely the result of golf course fertilization practices and loading from animal pastures in the watershed. The recommended EPA chronic criterion concentration for ammonia in freshwater is 1.9 mg/L at a pH 7.0 and a temperature of 20 °C. This criterion serves to protect aquatic organisms from potential toxic effects of ammonia exposure over an extended period[3] (U.S. Environmental Protection Agency, 2013).

[3] Not to exceed 2.5 times the criterion continuous concentration as a 4-day average within a 30-day period.

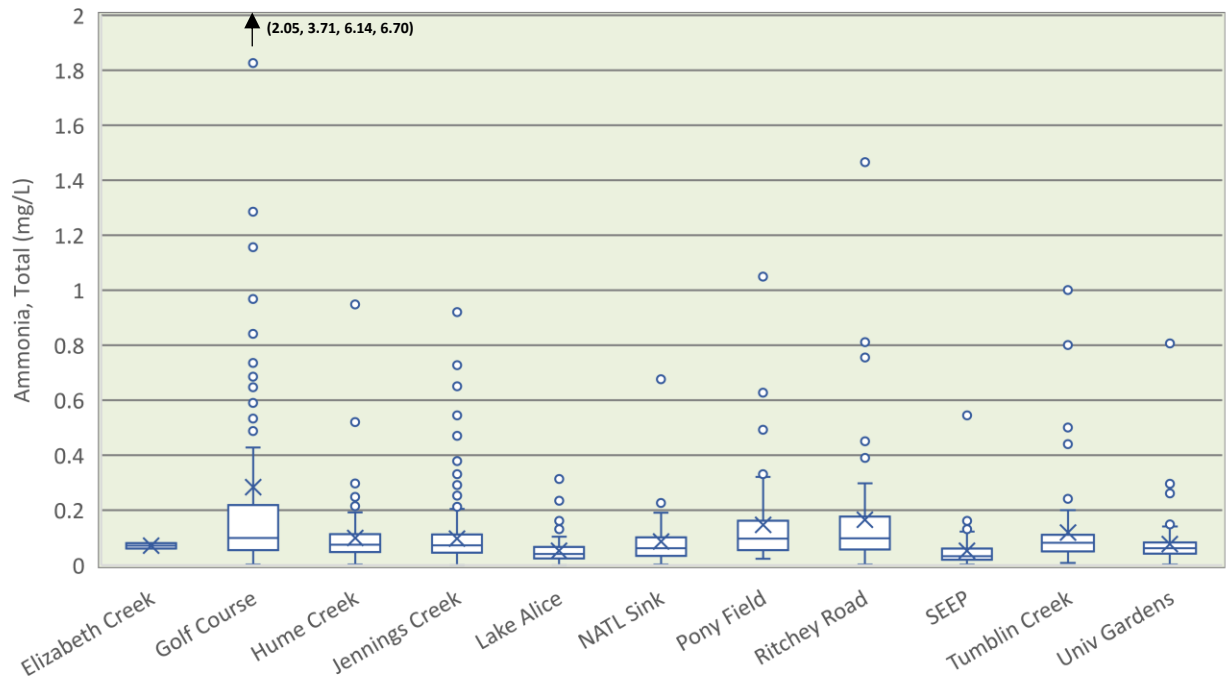

Figure 21. Total Ammonia Concentration Box Plots by Station Group (2001 – 2022)

Nitrate is typically sampled and reported as the combination of nitrate and nitrite (an intermediate product of nitrification) and reported as NOx-N. NOx-N represents one of the most bioavailable forms of nitrogen and is readily available to plants as a nutrient. As such, NOx-N concentrations are particularly important with regard to potential cultural eutrophication. Within the UF Campus watersheds, concentrations of NOx-N were observed to be generally low (less than 0.3 mg/L, Figure 22) with the exception of higher concentrations from stations within University Gardens, Hume Creek, and the Golf Course, as a result of reclaimed water irrigation as mentioned above.

Organic nitrogen is unlike NH4-N and NOx-N in that it is made up of a wide variety of constituents that vary from readily biologically available (e.g. urea) to extremely recalcitrant (e.g. complex organics). Elevated concentrations of Org-N within the UF Campus watersheds were observed at the Ritchey Road and Golf Course stations while the remaining stations were generally around 1.0 mg/L (Figure 23). Within Lake Alice, the summer months had the highest Org-N variability with elevated concentrations likely associated with increased algal growth (Figure 24).

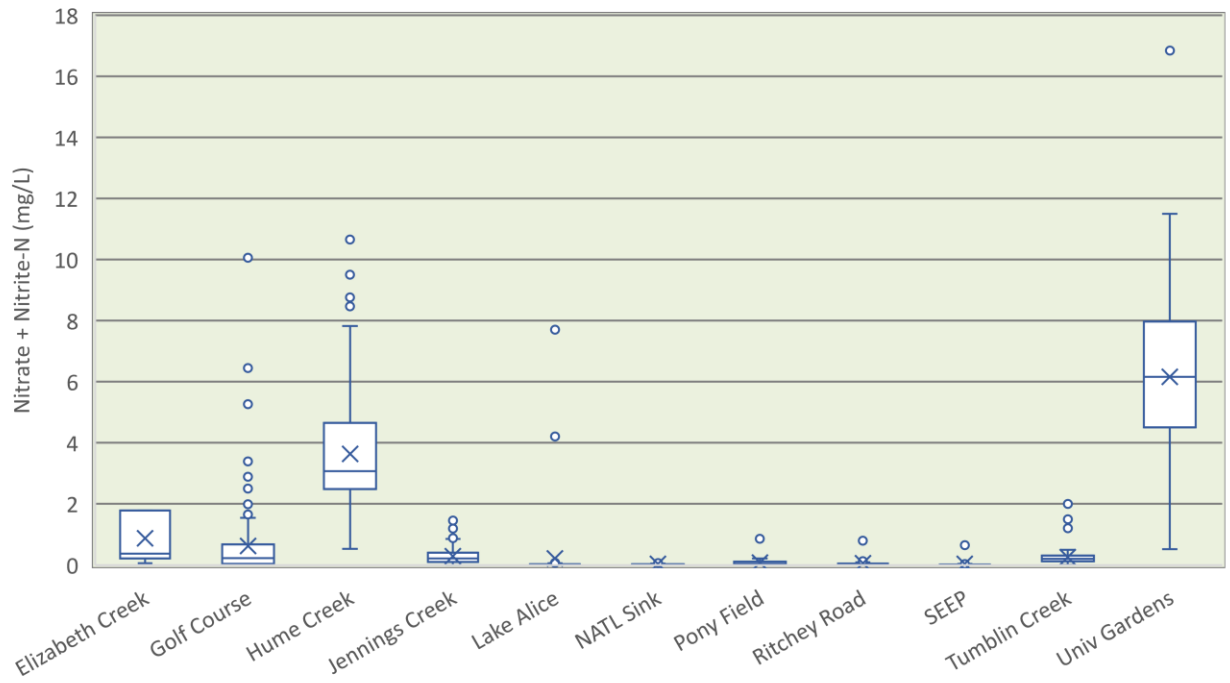

Figure 22. Nitrate+Nitrite- Nitrogen Concentration Box Plots by Station Group (2001 – 2022)

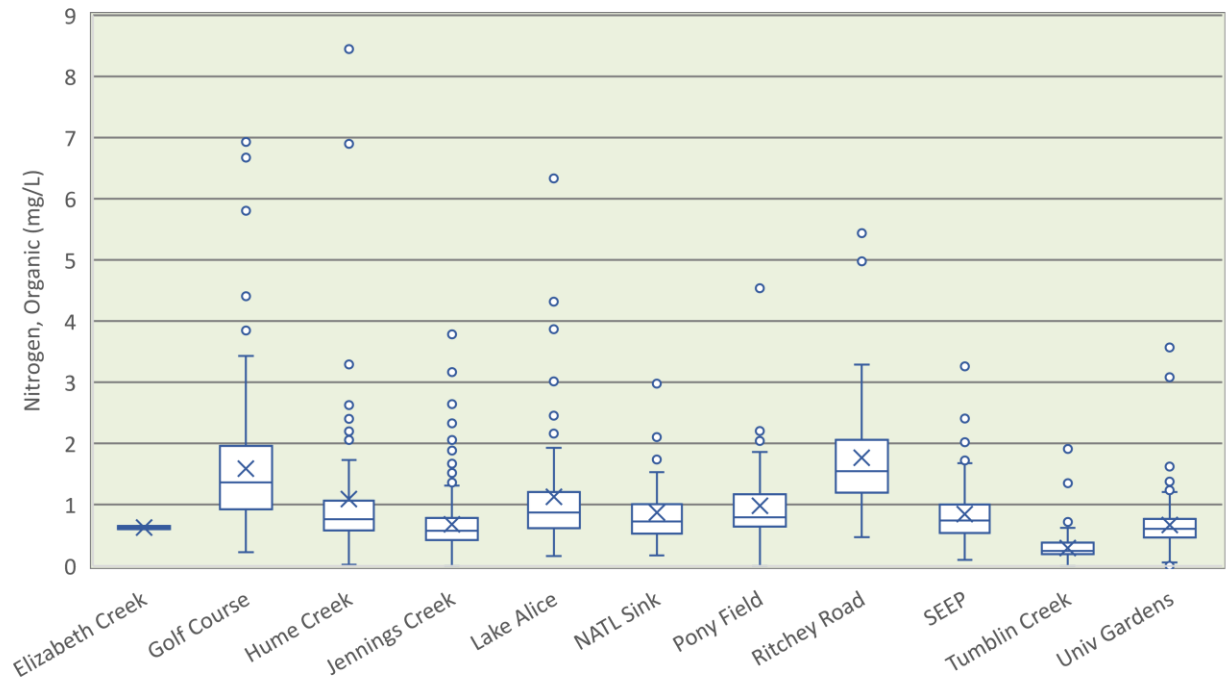

Figure 23. Organic Nitrogen Concentration Box Plots by Station Group (2001 – 2022)

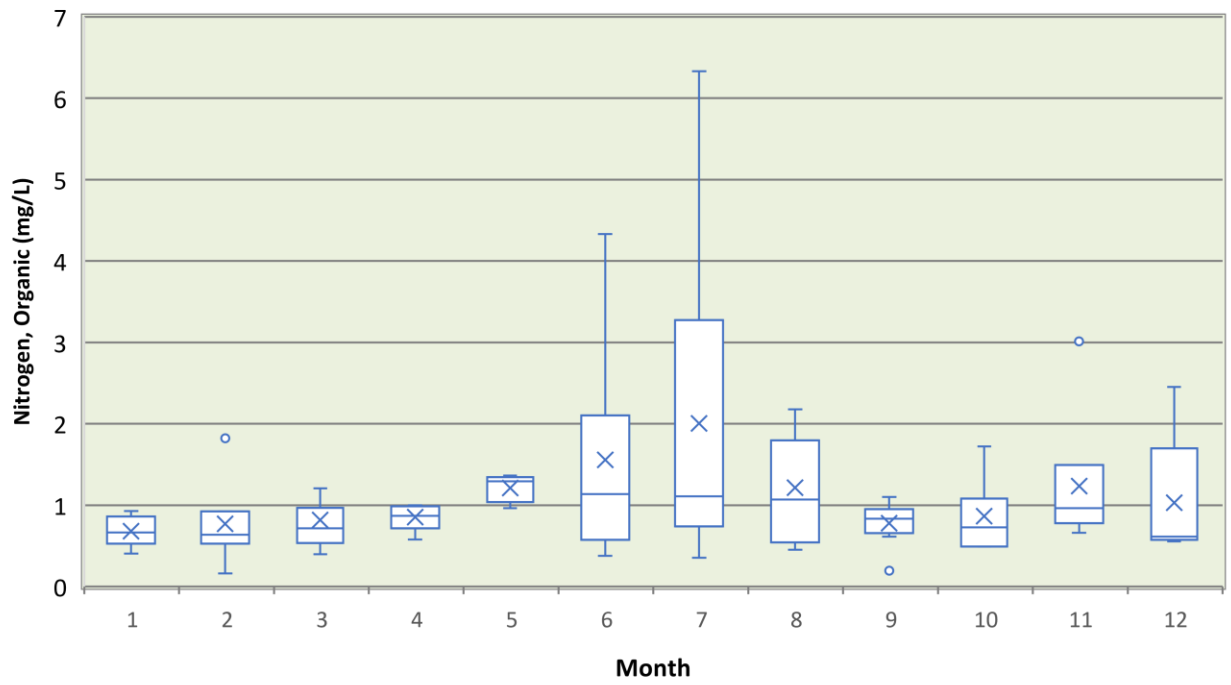

Figure 24. Lake Alice Organic Nitrogen Concentration Box Plots by Month (2004 – 2022)

1.2.2.1.2 Phosphorus

Phosphorus is the other nutrient of primary interest in Lake Alice. Unlike nitrogen, phosphorus does not have an atmospheric sink and relies on mechanisms that deposit phosphorus in sediments or biomass. While phosphorus can be deposited from the atmosphere in the form of fallout, it does not have a process that is equivalent to nitrogen fixation. Two primary analytes exist for phosphorus: orthophosphate (Ortho-P) and total phosphorus (TP). Ortho-P is the dissolved phosphorus fraction and equivalent to soluble reactive inorganic phosphorus (SRP). Total particulate phosphorus (TPP) is estimated as the difference between TP and Ortho-P.

Figure 25 provides a summary of average TP concentrations with the different constituents for station groups within Lake Alice and surrounding watershed. As described above, water quality data has been collected by different organizations over varying time periods. The figure presents the average concentrations of Ortho-P and TPP based on all available data from 1997 to 2022. Ortho-P is the dominant fraction of TP for all the station groups. Detailed statistics and period-of-record for each station group and parameter are provided in Appendix A. TP concentrations in the UF Campus watersheds can be seen to be highly variable, with higher concentrations in the Golf Course, Ritchey Road, Pony Field, and University Gardens stations (Figure 26). Elevated phosphorus concentrations are largely driven by erosion of the Hawthorn Formation in the incised creek channels within the watershed. The Hawthorn is a clay layer that is naturally rich in phosphorus and bank erosion has been implicated as a source of phosphorus in other Alachua County streams (Environmental Consulting & Technology, Inc., 2017).

Lake Alice TP time series concentration data (Figure 27) show an average concentration of 0.493 mg/L with a range from 0.108 to 0.969 mg/L. No apparent seasonal pattern was observed with available in lake

TP data (Figure 28). There was also no significant relationship between Lake Alice TP concentration and lake stage (2012 – 2022).

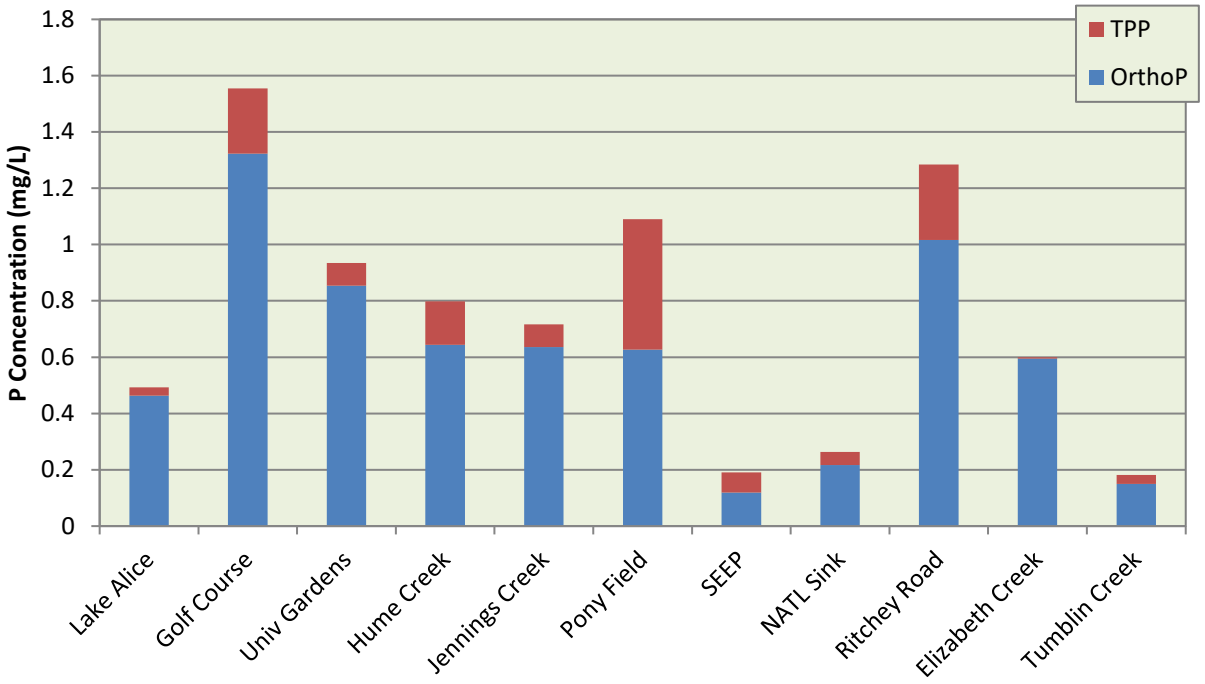

Figure 25. Average Phosphorus Concentrations by Station Group (1997 – 2022)

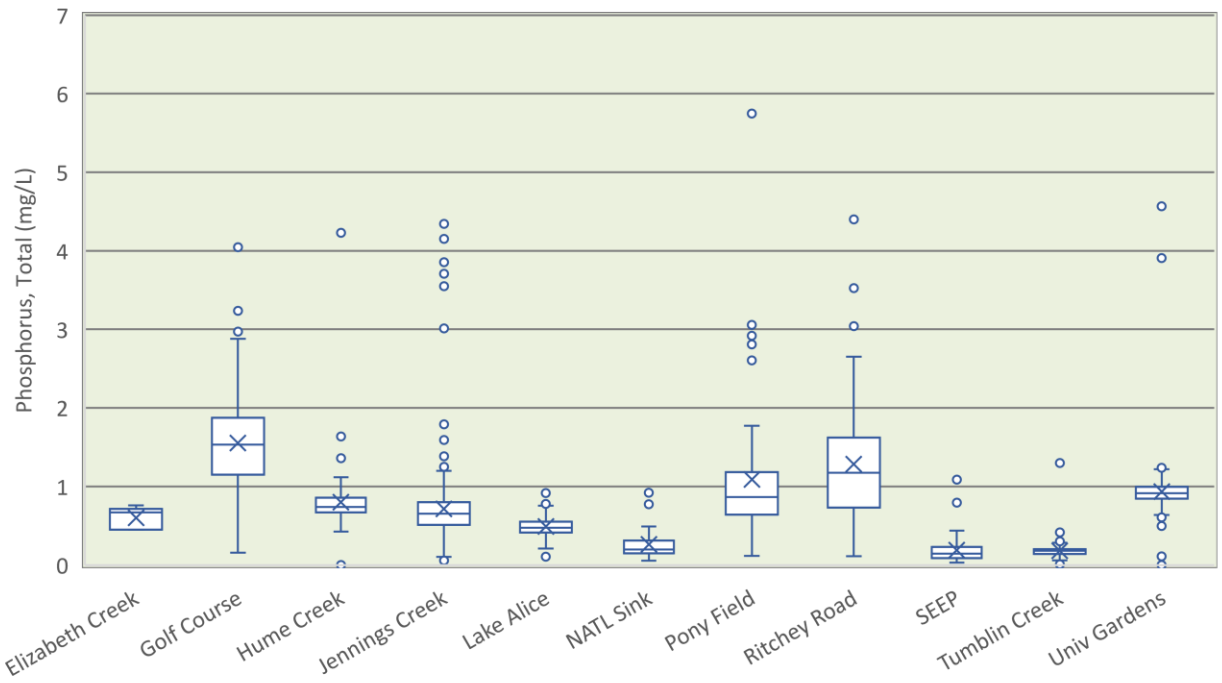

Figure 26. Total Phosphorus Concentration Box Plots by Station Group (1997 – 2022)

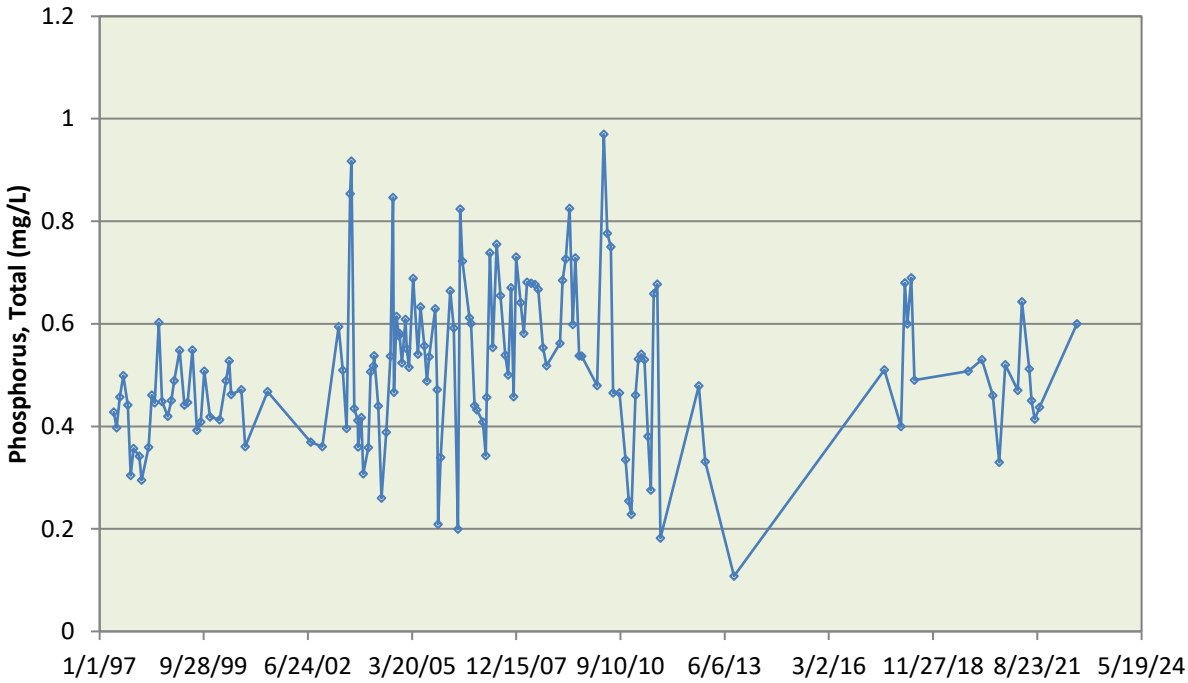

Figure 27. Lake Alice Total Phosphorus Concentrations over the Period-of-Record (1997 – 2022)

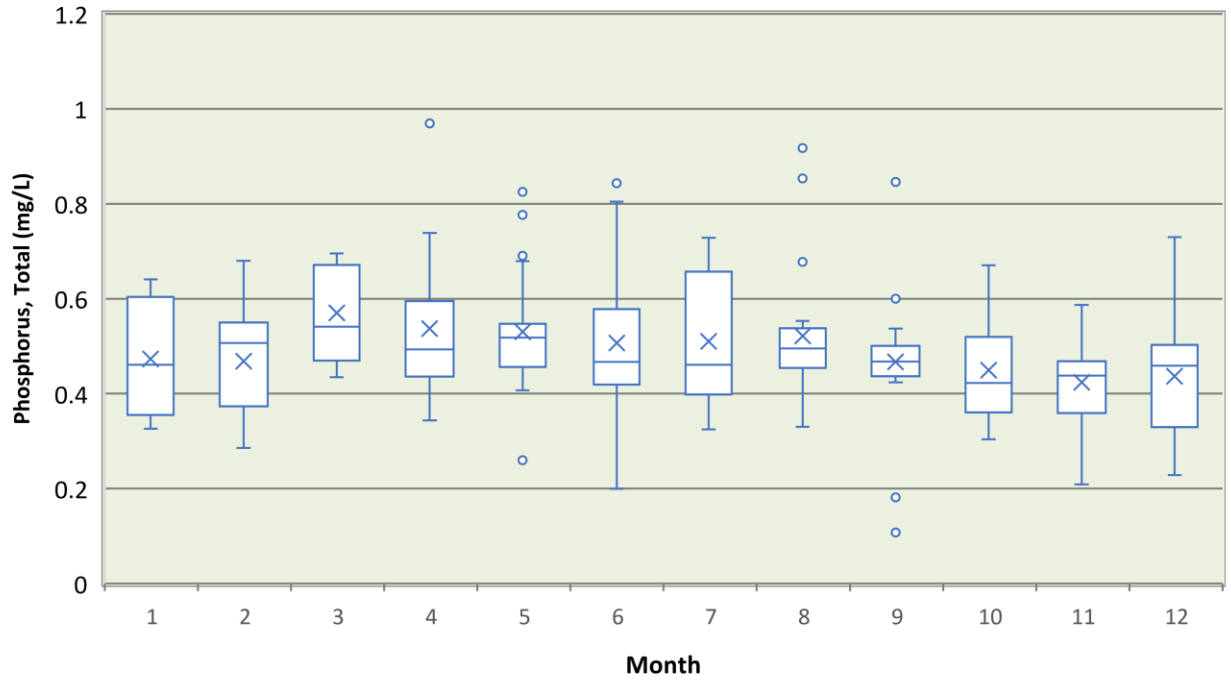

Figure 28. Lake Alice Total Phosphorus Concentration Box Plots by Month (1997 – 2022)

Orthophosphate is the most biologically available form of phosphorus and was the dominant fraction of TP for all the station groups. Ortho-P is an inorganic dissolved phosphorus form sampled following filtration, which excludes algal solids that contain organic phosphorus. As with TP, Ortho-P was observed to be elevated in a large number of the samples collected in the Golf Course, Ritchey Road, Pony Field, and University Gardens stations (Figure 29). Ortho-P concentrations in Lake Alice are comparably lower given that the algal biomass that grows within the lake incorporates any readily available Ortho-P.

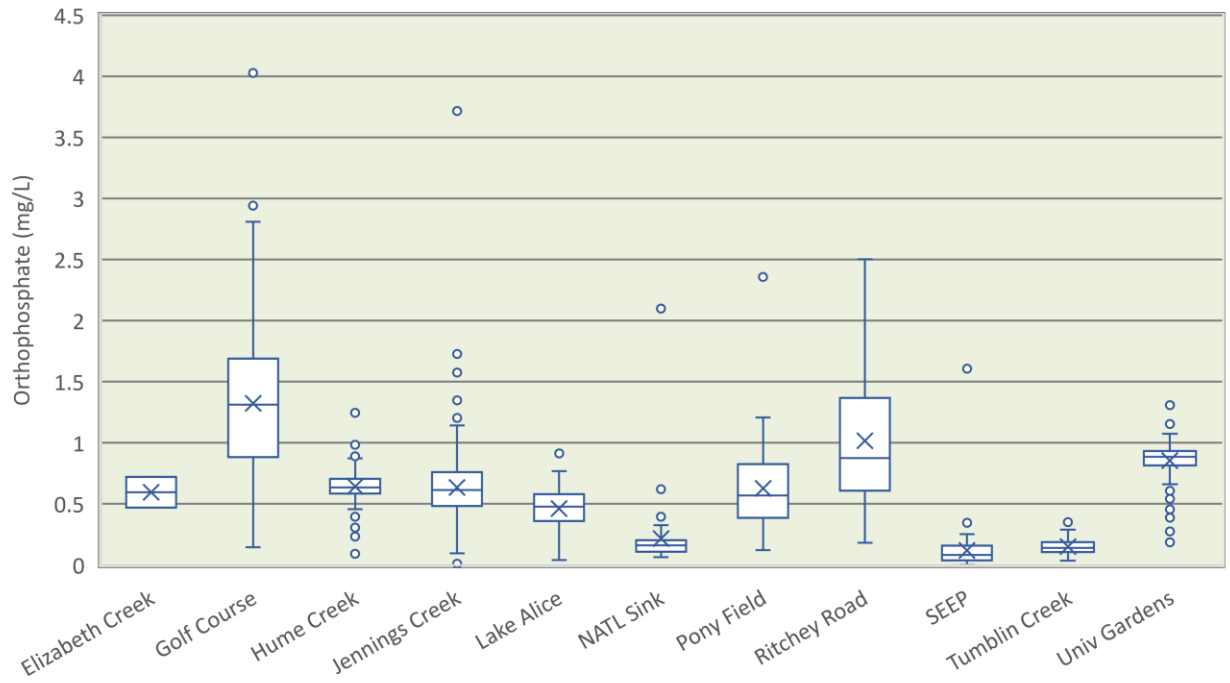

Figure 29. Orthophosphate Concentration Box Plots by Station Group (2001 – 2022)

1.2.2.2 Chlorophyll

Chlorophyll is an important parameter used in assessing lake water quality. Chlorophyll is found in algae and other phytoplankton and can be used as an indicator to estimate algal biomass in surface waters. Elevated chlorophyll concentrations typically indicate an abundance of nutrients, which can lead to algal blooms and subsequently reduced water clarity.

Figure 30 displays Lake Alice chlorophyll-*a* concentration data over time. The average concentration measured was 13.2 mg/m^3, fluctuating between 2.0 and 57 mg/m^3. Throughout the period-of-record, the data did not exhibit any apparent trends or seasonal patterns (Figure 31). There was no significant relationship between Lake Alice chlorophyll-*a* concentration and lake stage (2012 – 2022). However, results of the Pearson correlation, for available data between 1997 to 2019, indicated that there was a significant negative relationship between chlorophyll-*a* concentrations and secchi depth, $r(42) = -.64$, $p < .001$ (Figure 32).

For available Lake Alice data between 1997 to 2022, results of the Pearson correlation indicated that there was a significant positive relationship between TN and chlorophyll-*a* concentrations [$r(55) = .58$, $p < .001$; Figure 33], while no significant relationship was observed between TP and chlorophyll-*a* concentrations.

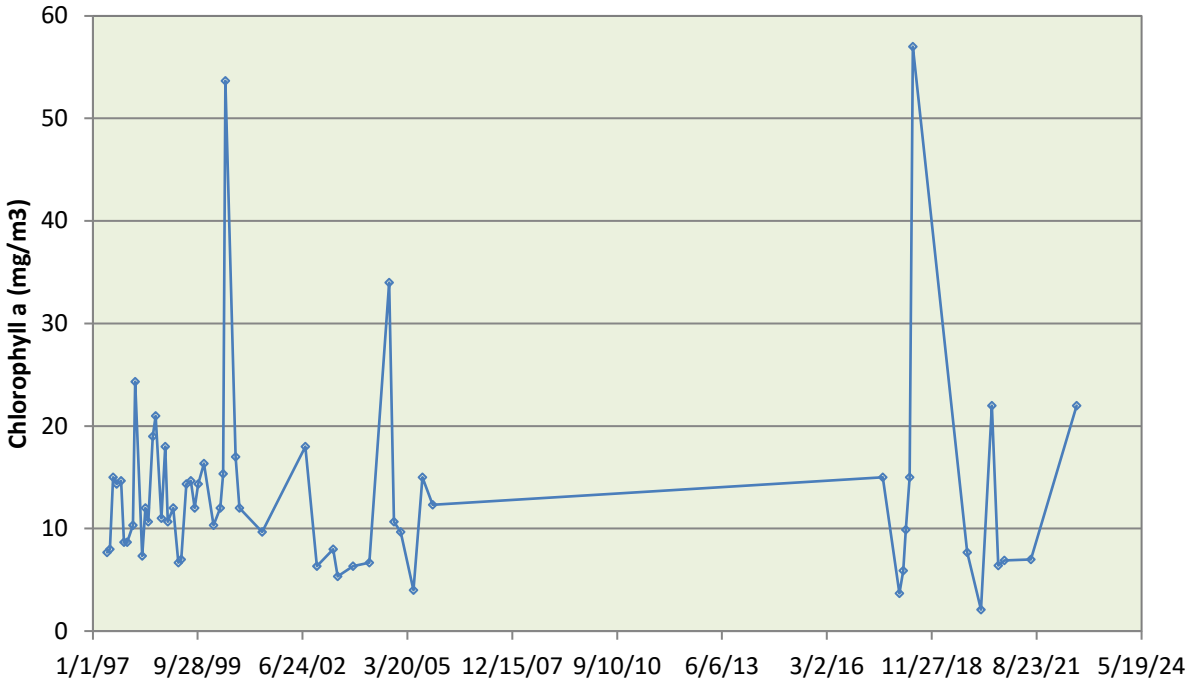

Figure 30. Lake Alice Chlorophyll-*a* Concentrations over the Period-of-Record (1997 – 2022)

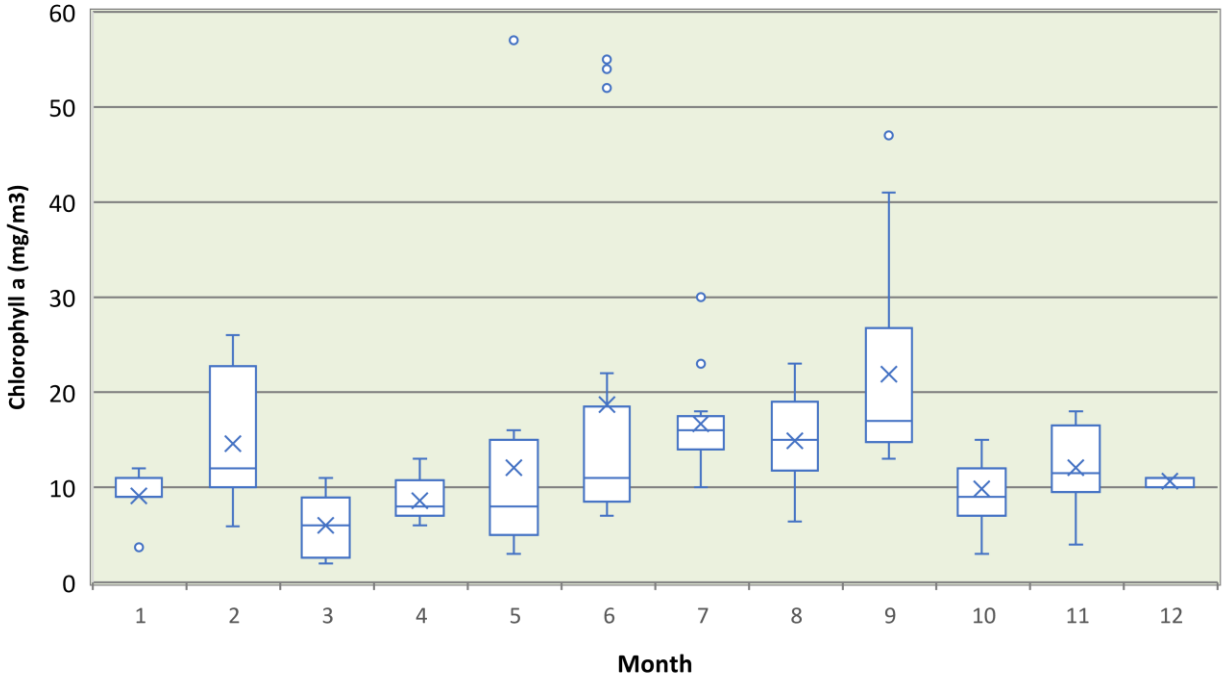

Figure 31. Lake Alice Chlorophyll-*a* Concentration Box Plots by Month (1997 – 2022)

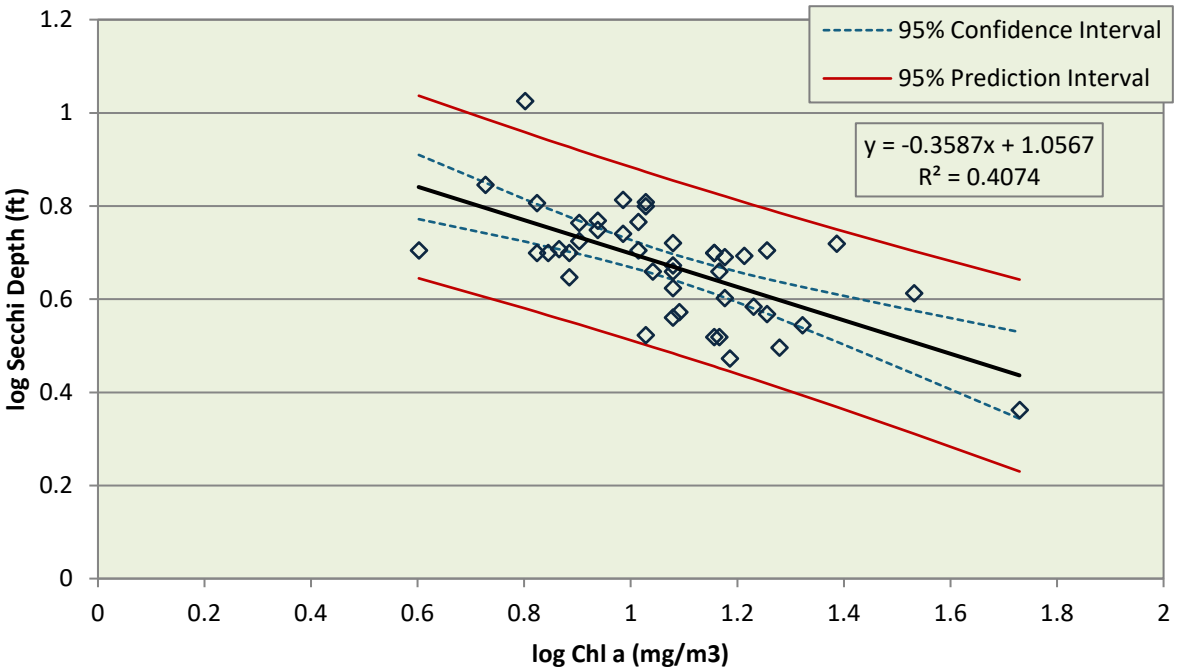

Figure 32. Relationship Between Lake Alice Chlorophyll-a Concentrations and Secchi Depth (1997 – 2019)

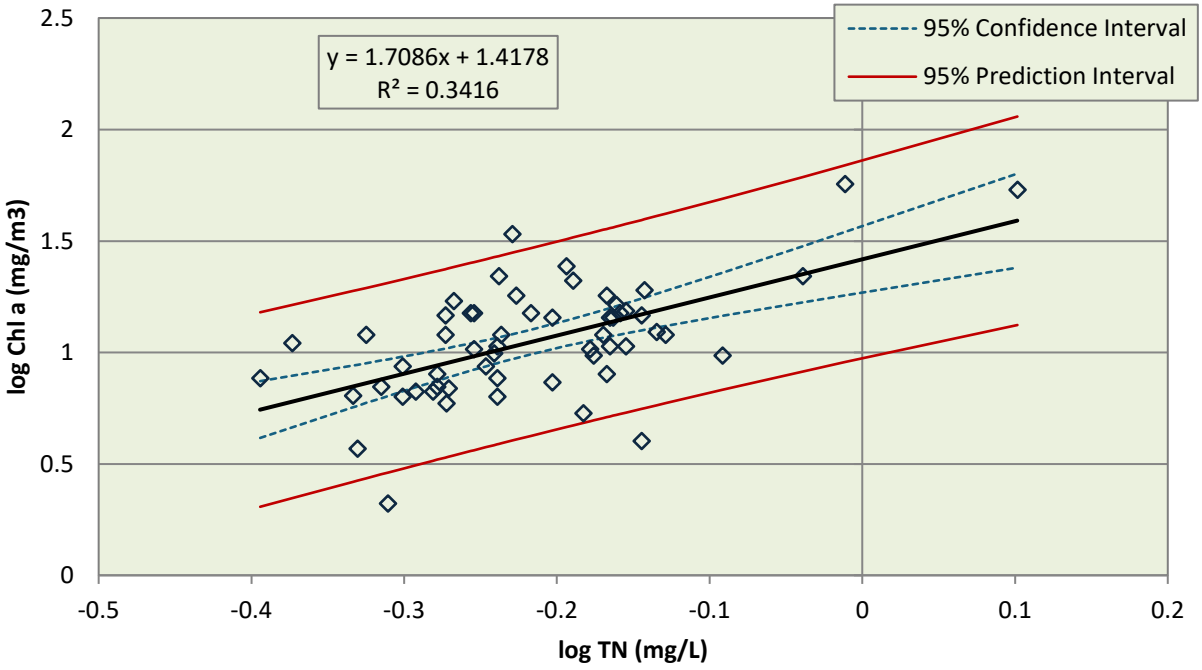

Figure 33. Relationship Between Lake Alice TN and Chlorophyll-a Concentrations (1997 – 2022)

1.2.2.3 Trophic State Index

Trophic state index (TSI) is a metric used to describe the trophic state (e.g. oligotrophic, eutrophic, or hypereutrophic) of a waterbody. The TSI is a calculated metric based on chlorophyll-*a*, TN, and TP. The calculation also relies on the limitation for the waterbody with a TN/TP ratio greater than 30 indicating TP limitation, a ratio of less than 10 indicating TN limitation, and the intermediate range being associated with co-limitation. A TSI of 0-59 is associated with oligotrophic to mid-eutrophic (good), 60-69 being associated with mid-eutrophic to eutrophic conditions (fair), and 70-100 representing hypereutrophic conditions (poor). Based on available data, Lake Alice indicates a nitrogen limitation (average TN/TP ratio = 2.7) with TSI generally observed within the good range (average TSI = 50.3), with occasional monthly conditions in the fair and poor range (Figure 34). Based on the observed relationship between TN and lake level, the calculated TSI was also compared to lake level and showed no significant relationship (2018 – 2022).

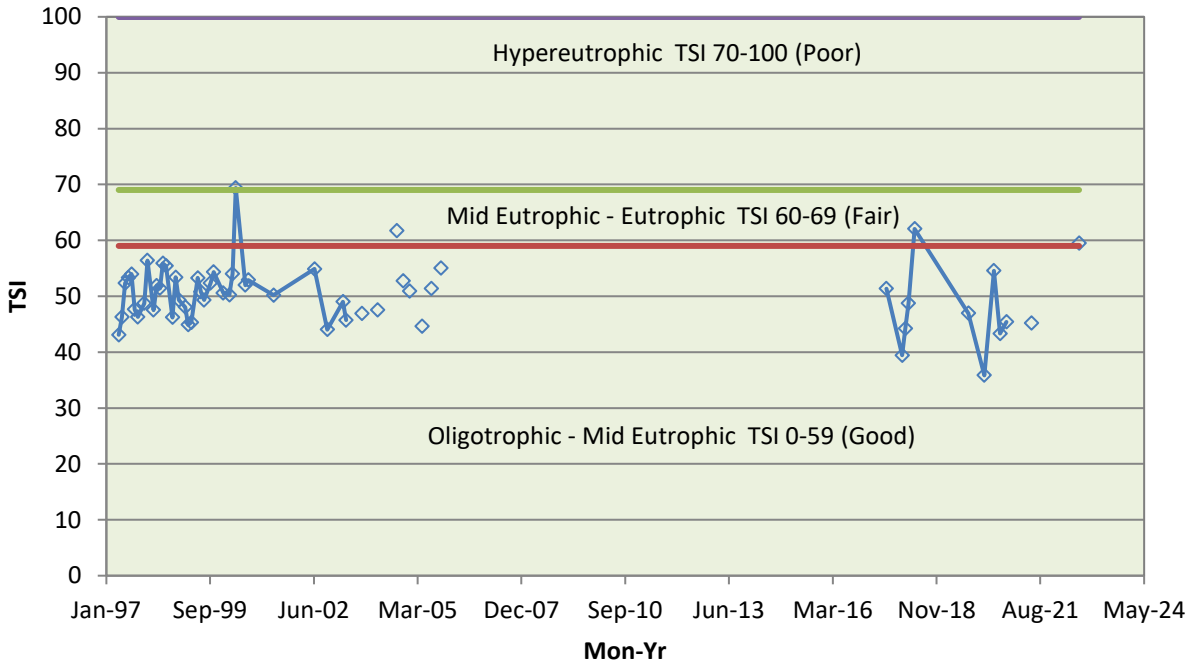

Figure 34. Lake Alice Trophic State Index (1997 – 2022)

1.2.2.4 Numeric Nutrient Criteria

Numeric criteria, contained within 62-302.531 FAC, for lakes in Florida are based on the stressor-response relationship between nutrients (TN and TP) and phytoplankton (chlorophyll-*a*). The FDEP has classified lakes into three categories: colored lakes, clear lakes with high alkalinity, and clear lakes with low alkalinity (Florida Department of Environmental Protection, 2013). Lake Alice is a clear lake (≤ 40 PCU) with high alkalinity (> 20 mg/L) resulting in numeric nutrient criteria (NNC) of 20 µg/L, 0.03 mg/L, and 1.05 mg/L for chlorophyll-*a*, TP, and TN, respectively. All numeric nutrient criteria are expressed as annual geometric means that are not to be exceeded more than once in any consecutive three-year period. However, if there are sufficient data to calculate the annual geometric mean for chlorophyll-*a* and the mean does not

exceed the chlorophyll-*a* criteria for a given year, FDEP allows for a maximum acceptable range up to 0.09 mg/L and 1.91 mg/L for TP and TN in that same year, respectively.

Figure 35 shows a summary of the annual geometric means for Lake Alice from 1997 to 2021, along with the current NNC. Based on available historic data, chlorophyll-a and TN levels met the NNC for most years. TP levels were higher than the NNC for the period of record, likely because of the erosion of the Hawthorn Formation in the eroded creek channels within the watershed, as mentioned above. The NNC for TP may not be suitable and a "natural background" Site Specific Alternative Criterion (SSAC) may be warranted.

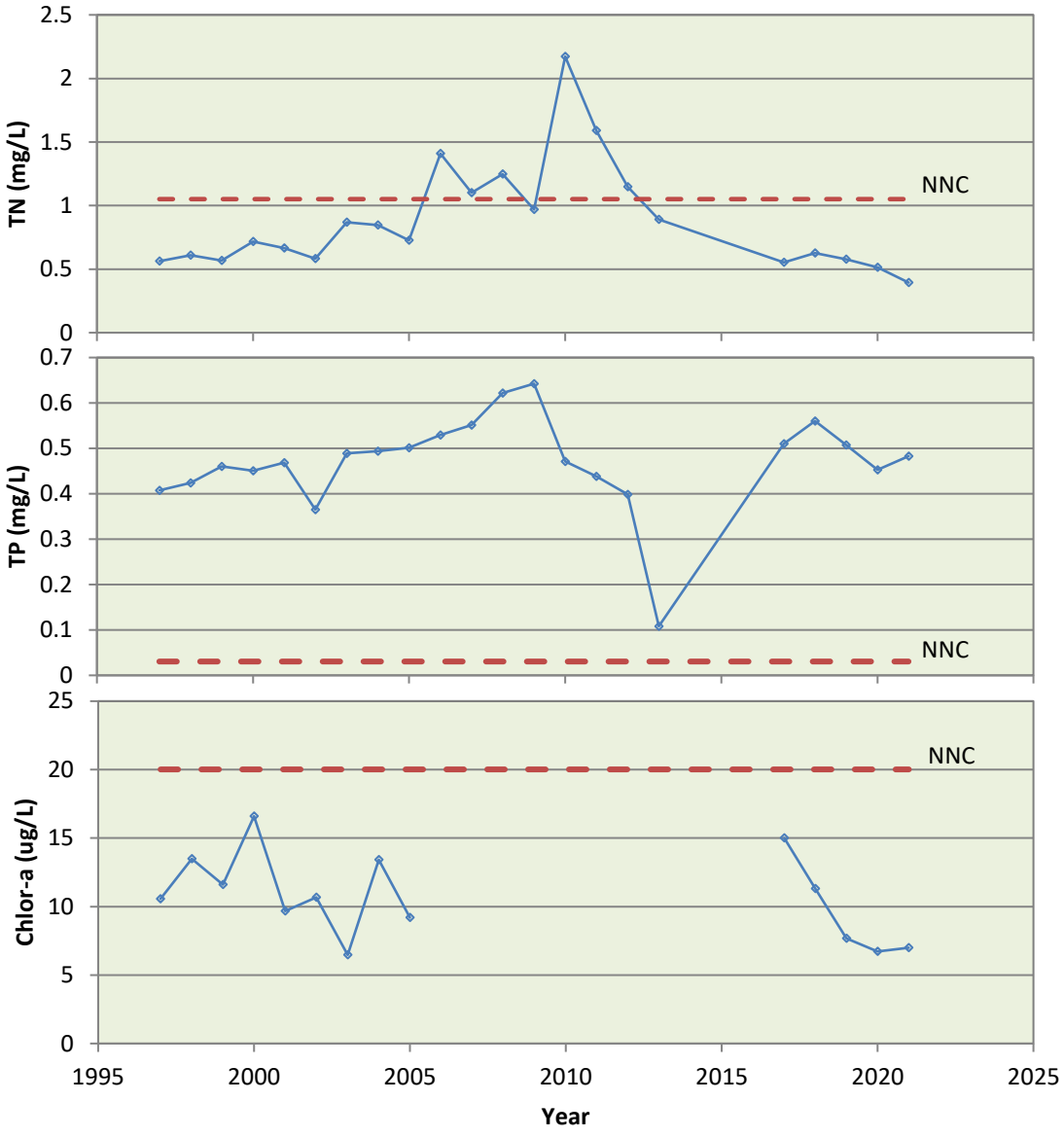

Figure 35. Lake Alice Annual Geometric Means with Numeric Nutrient Criteria (1997 – 2021)

1.2.2.5 Metals

Table 6 provides a summary of heavy metal concentration data available from 2017 to 2022 within the Lake Alice Watershed, including Lake Alice and Jenning Creek, along with the acute and chronic criteria.

The criteria are from the U.S. Environmental Protection Agency (EPA) National Recommended Water Quality Criteria Table[4] and are the maximum allowable concentrations that protect aquatic life from short-term and long-term effects, respectively. The criteria are derived from scientific studies of the toxicity of each metal to various aquatic organisms. Lake Alice is classified as a Class III waterbody, according to 62-302.530 FAC, which means it has uses for "Fish Consumption, Recreation, Propagation and Maintenance of a Healthy, Well-Balanced Population of Fish and Wildlife". Therefore, the table also includes the standards for Class III waterbodies. The results indicate that none of the metals exceeded the acute or chronic criteria or Class III standards at any of the sampling sites, suggesting that the water quality of Lake Alice is not impaired by heavy metal pollution.

Table 6. Heavy Metal Concentrations in Lake Alice and Jennings Creek (2017 – 2022)

Pollutant	CAS Number	Average (± Standard Error)		Freshwater (EPA)		Freshwater (FAC)
		Lake Alice µg/L	Jennings Creek µg/L	CMC (acute) µg/L	CCC (chronic) µg/L	Class III µg/L
Arsenic	7440382	0.58 ± 0.04	0.81 ± 0.05	340	150	50
Cadmium	7440439	<0.020	0.107 ± 0.068	1.8	0.72	LA: 0.27 JC: 0.35
Copper	7440508	0.92 ± 0.13	2.91 ± 0.93	LA: 19.9 JC: 12.2	LA: 13.2 JC: 8.0	LA: 9.17 JC: 12.7
Lead	7439921	<0.20	0.56 ± 0.12	65	2.5	LA: 3.10 JC: 5.04
Nickel	7440020	0.39 ± 0.11	0.57 ± 0.03	470	52	LA: 51.3 JC: 70.8
Zinc	7440666	<5.0	8.8 ± 2.1	120	120	LA: 118 JC: 163

Notes:
CMC – criterion maximum concentration
CCC – criterion continuous concentration
Copper site specific freshwater criteria were calculated using the Biotic Ligand Model using average concentrations.
Class III site specific freshwater criteria were calculated using average site water hardness concentrations.

1.2.2.5.1 Sediment

As part of the UF Campus Water Quality Monitoring Program, Azeem-Angel & Reisinger (2021) also studied the concentrations of heavy metals in stream sediments on UF Campus. The focus was on lead, zinc, copper, and cadmium with results summarized in Table 7. Heavy metal concentrations in the sediments were compared against the Sediment Quality Guidelines for Freshwater Ecosystems (MacDonald et al., 2003), which provide the Threshold Effect Concentration (TEC) and Lowest Effect Level (LEL). Lowest effect level sediments are considered to be clean to marginally polluted, with no effects on the majority of sediment-dwelling organisms below this concentration. Despite the higher levels of some metals, concentrations were well below the LEL limits, suggesting that benthic organisms are unlikely to experience adverse biological effects.

[4] National Recommended Water Quality Criteria - Aquatic Life Criteria Table (https://www.epa.gov/wqc/national-recommended-water-quality-criteria-aquatic-life-criteria-table)

Table 7. Heavy Metal Sediment Concentrations in the Lake Alice Watershed (2021)

Station	Cadmium mg/kg	Copper mg/kg	Lead mg/kg	Zinc mg/kg
Hume Creek (HUME)	BDL	1.49	1.60	11.4
Jennings Creek	0.170	1.08	2.03	7.26
BIN	0.165	0.83	2.04	4.91
BIS	0.165	0.54	1.42	4.79
GALE	0.185	2.35	3.13	11.5
NEB	0.165	0.61	1.55	7.76
Pony Field (PONY)	0.170	1.35	5.09	10.7
Univ Gardens (UNIG)	0.185	0.85	1.47	17.4
Threshold Effect Concentration - Lowest Effect Level	0.60	16	31	120

BDL – below detection limit

A joint sediment sampling effort by UF FLW, Department of Geological Sciences, and the Land Use and Environmental Change Institute (LUECI) in August 2023 yielded preliminary results that indicated no concerning levels of heavy metals in Lake Alice (Brenner, 2023). Two soil core samples were collected between 0 and 83 cm and one used for laboratory analyses. Lead concentrations in the sediment core were generally higher in the deeper layers, consistent with the historical use of leaded gasoline in the US, which peaked in the 1970s and was banned in 1996. Cyanobacteria (*Aphanothece sp*.) were found to be more common in the top layers (0-32 cm) with a calculated sediment accumulation rate of 1 cm/yr. The amount of organic matter was highest in the sediments near the surface and decreased with depth (Loss on ignition of 75% 0-4 cm; 37% 40-44 cm; 30% 80-83 cm).

1.2.2.6 Pesticides

Pesticides are chemical substances that consist of insecticides, herbicides, and fungicides that are commonly applied to eliminate undesired plants and pests in farming, forest management, and urban settings. These chemicals, however, can also contaminate surface water and groundwater and pose risks to human health and the environment. A summary of available pesticide data within the Lake Alice Watershed, which include Lake Alice and Jennings Creek, from 2016 to 2022, is shown in Figure 36. None of the pesticides identified in this figure exceeded the listed US EPA maximum contaminant level (MCL) or state/local health advisory level (HAL) for drinking water quality, and some were below the detection limit.

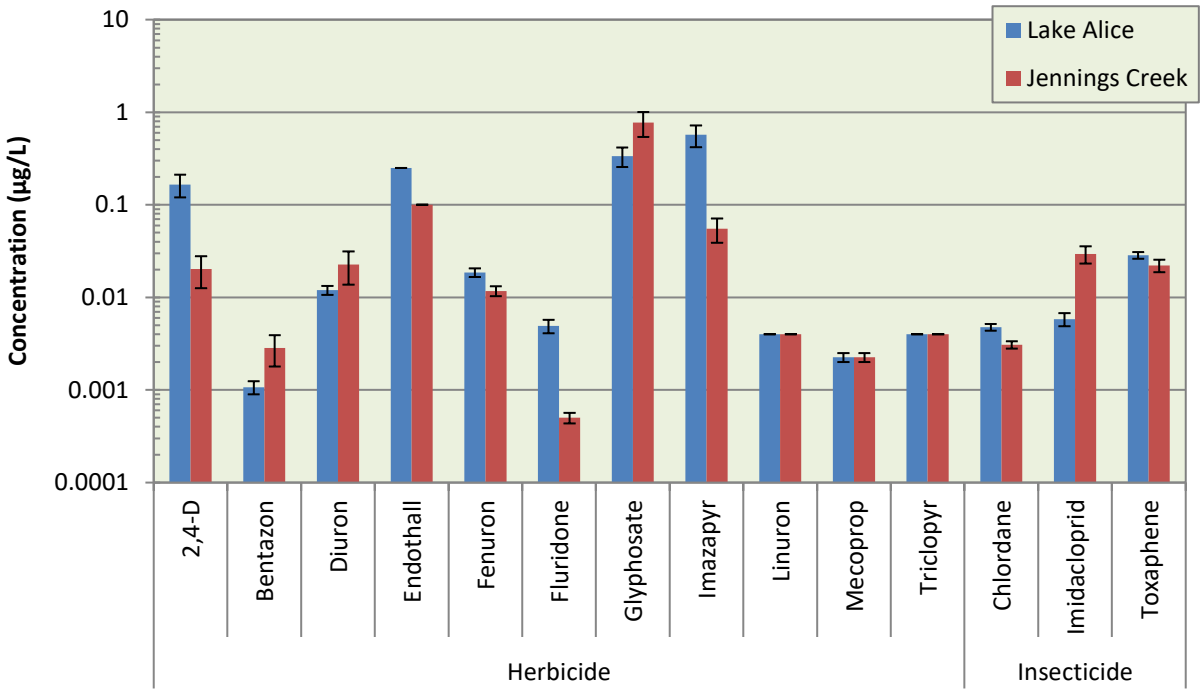

Figure 36. Pesticide Concentrations in Lake Alice and Jennings Creek (2016 – 2022)

1.2.2.7 Bacteriological

Coliforms are a type of bacteria normally present in large numbers in the intestines of humans and other warm-blooded animals. Coliform count data are a key indicator of the condition and health of surface waters and can come from various sources, such as animal feces, sewage, agricultural runoff, or stormwater. Escherichia coli (E. coli) is the main species in the fecal coliform group and can cause stomach illness and other infections in humans and animals. Therefore, tracking the level and trend of these bacteria in surface waters can help identify possible sources of contamination, assess the risk of exposure, and evaluate the effectiveness of stormwater management practices.

Figure 37 provides a summary of E. coli and fecal coliform counts for station groups within UF Campus and surrounding watersheds. The median counts of E. coli for data that were available from 2017 to 2018 in the Lake Alice Watershed were 20 and 920/100mL for Lake Alice and Jennings Creek, respectively. Fecal coliform data were only available from 2011 for Jennings Creek with a median count of 1,855/100mL.

According to 62-302.530 FAC Class III criteria, monthly geometric means of E. coli counts must be below 126/100mL or the Ten Percent Threshold Value (TPTV) of 410/100mL in at least 10% of the samples, based on at least 10 samples collected over 30 days. Insufficient data were available from Lake Alice or Jennings Creek to calculate required geometric means to adequately compare against the Class III E. coli standard.

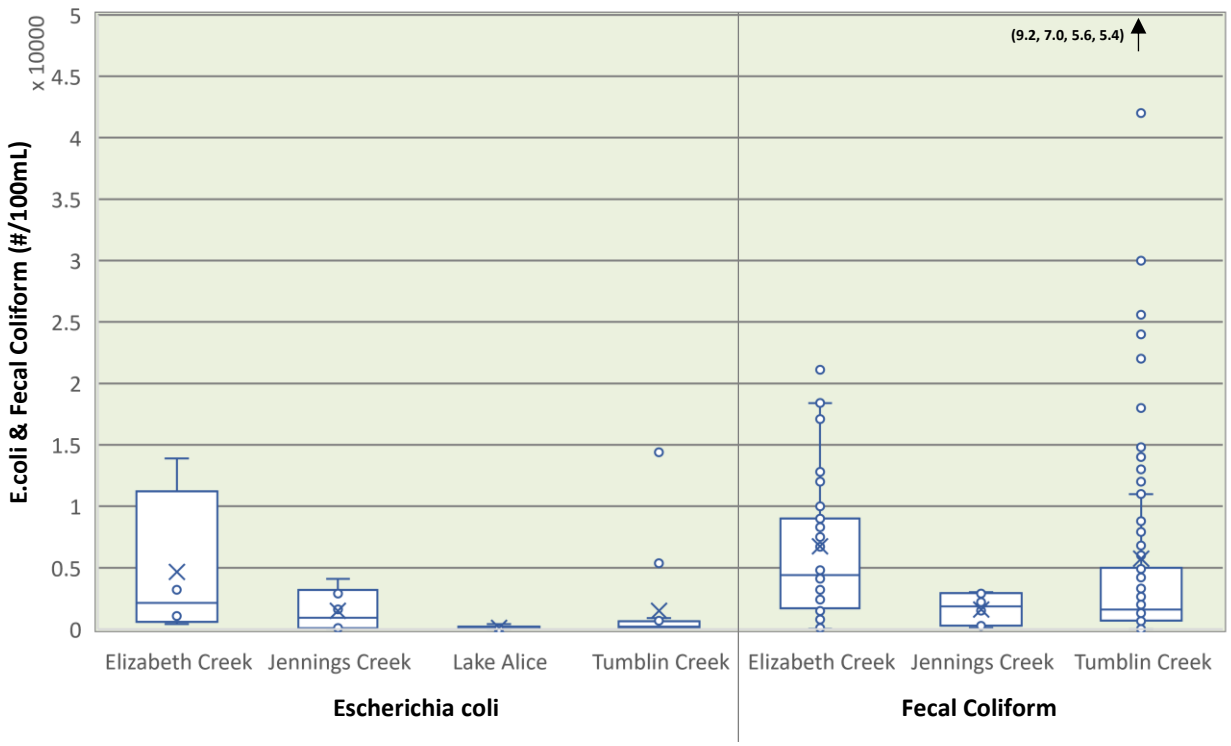

Figure 37. Escherichia coli and Fecal Coliform Counts Box Plots by Station Group (1999 – 2019)

1.2.2.8 Emerging Contaminants

Contaminants of emerging concern (CECs) are substances that have no regulatory standard, have been recently detected in natural water bodies, and may pose a risk to aquatic life or human health. They come from various sources, including wastewater, animal feeding operations, and land-applied biosolids, and include persistent organic pollutants, pharmaceuticals and personal care products, veterinary medicines, endocrine-disrupting chemicals, and nanomaterials (Florida Department of Environmental Protection, 2008; U.S. Environmental Protection Agency, 2008). CECs are of concern because they are increasingly being detected at low levels in surface water, may have adverse effects on aquatic life and human health, and they are not currently included in routine monitoring programs or regulations. The emerging contaminants may also demonstrate low acute toxicity but cause significant reproductive effects at very low levels of exposure. The EPA is currently developing criteria to assess and manage the potential risk of some CECs in the aquatic environment. Figure 38 provides a summary of available CEC data within the Lake Alice Watershed, which include Lake Alice and Jennings Creek, from 2016 to 2022. The analysis showed that many of the CECs reported were present at concentrations too low to be detected.

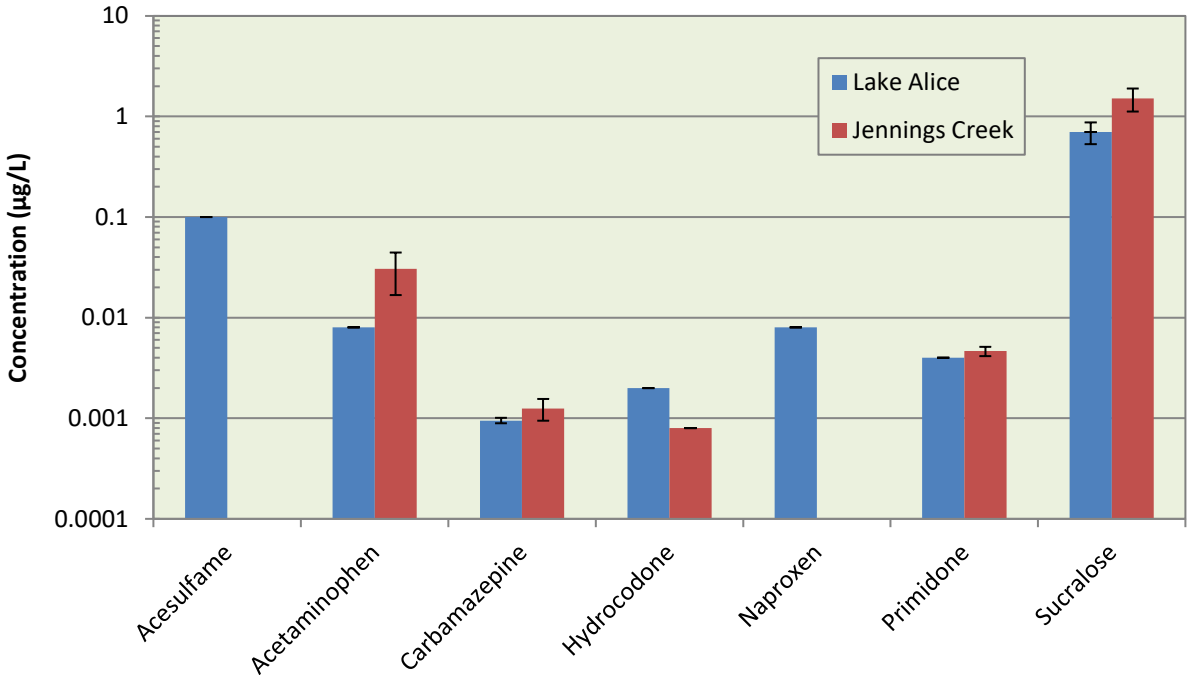

Figure 38. Contaminants of Emerging Concern Concentrations in Lake Alice and Jennings Creek (2016 – 2022)

1.2.3 Biological Data

Biodiversity data from the UF BioGator web portal[5] was used to summarize vegetation and wildlife in the Lake Alice Watershed. BioGator is a resource for learning about the species on UF campus and provides checklists for each UF conservation area and dynamic checklists for any location in Florida. It sources data from various places, such as museums, community science platforms such as iNaturalist and eBird, classes and student projects, and published and unpublished checklists. The project covers all of Florida, but only includes eBird data for the UF Gainesville campus. Figure 39 identifies the nineteen BioGator UF Conservation Areas within the Lake Alice Watershed with a detailed species inventory provided in Appendix B.

[5] https://biogator.org (accessed September 2023)

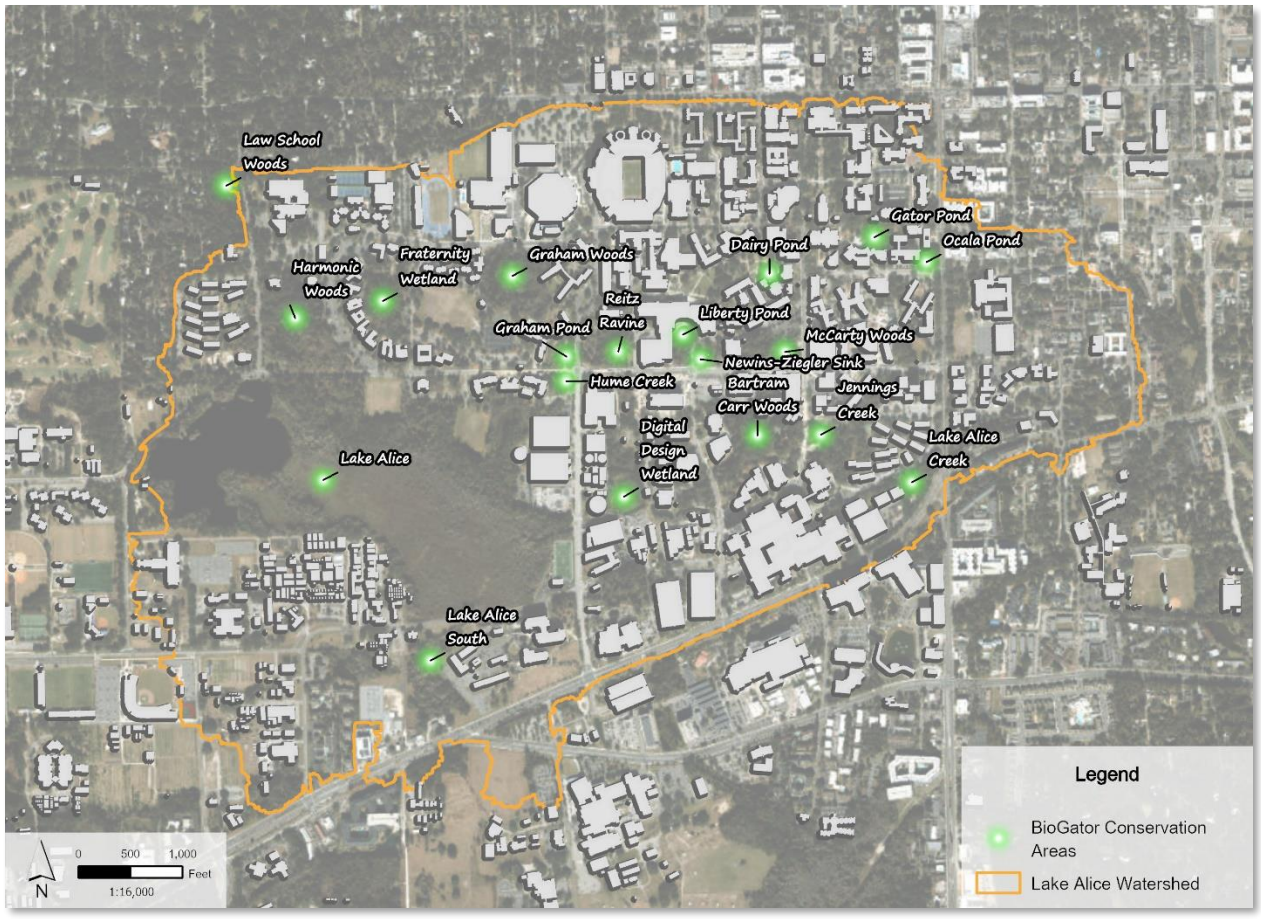

Figure 39. BioGator UF Conservation Area within the Lake Alice Watershed

1.2.3.1 Vegetation

As part of this study, the types of vegetation communities that occur in each of the UF Conservation Area within the Lake Alice Watershed were evaluated and summarized in Attachment E. This section of the report contains detailed vegetation data for each community type, as well as suggestions for future monitoring and maintenance.

An inventory of the number of plant and fungi species identified on the BioGator web portal for each of the UF Conservation Areas is provided in Table 8. Across the UF Conservation Areas within the Lake Alice Watershed, 483 plant and 31 fungi species were found, belonging to 65 taxonomic orders. The taxonomic orders with the most observations and the highest species diversity across the sites were the following:

- Number of Conservation Areas: Lamiales (15), Asterales (13), Fabales (13), Malpighiales (13), Poales (12), Rosales (12), Polypodiales (12), Sapindales (11), and Caryophyllales (10)
- Number of Species: Asterales (49), Poales (49), Lamiales (45), Fabales (35), and Rosales (30)

The Lake Alice, Bantram-Carr, and Harmonic Woods Conservation Areas had the highest number of observed plant species, with 195, 183, and 124 species, respectively (Table 8). A detailed plant species inventory is provided in Appendix B.

Table 8. BioGator Number of Species for Plant and Fungi Taxonomic Classes by UF Conservation Area within the Lake Alice Watershed

Kingdom	Phylum	Class	Bantram-Carr	Dairy Pond	Digital Design Wetland	Fraternity Wetland	Gator Pond	Graham Woods	Harmonic Woods	Hume Creek	Jennings Creek	Lake Alice	Lake Alice South	Law School Woods	Liberty Pond	McCarty Woods	Newnins-Ziegler Sink	Ocala Pond	Reitz Ravine
Plantae	Bryophyta	Bryopsida										1							
	Coniferophyta	Pinopsida	2		2	1			2		1	6				1	1		
	Magnoliophyta	Liliopsida	3			4		2	6			7				3			1
		Magnoliopsida	2			1			2			6							
	Spermatophyta	Dicotyledonae	3	2								1							
		Magnoliopsida	4	2	4	3	1	1	5	2	2	7	2	2	1	4	1		
	Tracheophyta	Cycadopsida													1				
		Liliopsida	23		6	20	2	6	31	2	5	34	2	5	2	14		1	1
		Lycopodiopsida										1							
		Magnoliopsida	137	15	38	60	10	23	76	18	28	124	8	33	13	64	2	2	17
		Polypodiopsida	9		2	3		1	2	2	1	8		2	1	1		1	1
	Total		183	19	52	92	13	33	124	24	37	195	12	42	18	87	4	4	20
Fungi	Ascomycota	Dothideomycetes														1			
		Leotiomycetes										1							
		Orbiliomycetes														2			
		Sordariomycetes														1			
	Basidiomycota	Agaricomycetes									1	6				18			
		Pucciniomycetes														1			
	Total										1	7				23			

1.2.3.2 Wildlife

The BioGator web portal provided wildlife data for each of the UF Conservation Areas that included the following taxonomic classes: Arachnida (arachnids), Insecta (insects), Malacostraca (crustaceans), Actinopterygii (fish), Amphibia (amphibians), Aves (birds), Mammalia (mammals), Reptilia (reptiles), and Gastropoda (mollusks). Appendix B has a detailed wildlife species inventory by Conservation Area with some taxonomic classes discussed below.

1.2.3.2.1 Fish

The Florida Museum ichthyology collection web portal[6] provided fish data within the Lake Alice Watershed. The inventory of 30 stations (Figure 40) revealed 27 species from 1939 to 2017. Table 9 summarize the collected fish species by decade with the most observed species being variable platyfish (*Xiphophorus variatus*), eastern mosquitofish (*Gambusia holbrooki*), sailfin molly (*Poecilia latipinna*), blue tilapia (*Oreochromis aureus*), jack dempsey (*Rocio octofasciata*), least killifish (*Heterandria formosa*), and bluegill (*Lepomis macrochirus*). The decades with the most observed species were during the 1990s and 2000s. These data are also included in the biodiversity dataset from the UF BioGator web portal.

Nonindigenous aquatic species (NAS) have been observed within the Lake Alice Watershed including fish from the Cichlidae family, native to Central and South America, North and Southeastern Africa, and the Middle East; Serrasalmidae family, native to South America; Poeciliidae family, native to northeastern Mexico; and Cyprinidae family, native to Eastern Asia. Many of these species are common in the aquaculture and aquarium trades. Observed NAS fish species and area collected within the Lake Alice Watershed include the following:

- Convict Cichlid (*Amatitlania nigrofasciata*) – Reitz Union Pond
- Oscar (*Astronotus ocellatus*) – Hume Creek
- Blue Tilapia (*Oreochromis aureus*) – UF WRF ponds, Lake Alice Creek, Hume Pond
- Mozambique Tilapia (*Oreochromis mossambicus*) – UF WRF ponds
- Nile Tilapia (*Oreochromis niloticus*) – Dairy Pond, Lake Alice Creek
- Jack Dempsey (*Rocio octofasciata*) – Lake Alice Creek, Jennings Creek, UF WRF ponds
- Variable Platyfish (*Xiphophorus variatus*) – Lake Alice Creek, Graham Pond, University Gardens, Hume Pond, Fraternity Creek
- Goldfish (*Carassius auratus*) – Lake Alice Creek
- Common Carp (*Cyprinus carpio*) – Hume Pond
- Tambaqui (Colossoma macropomum) – Reitz Union Pond
- Red-Bellied Pacu (Piaractus brachypomus) – Lake Alice

[6] http://specifyportal.flmnh.ufl.edu/fishes/

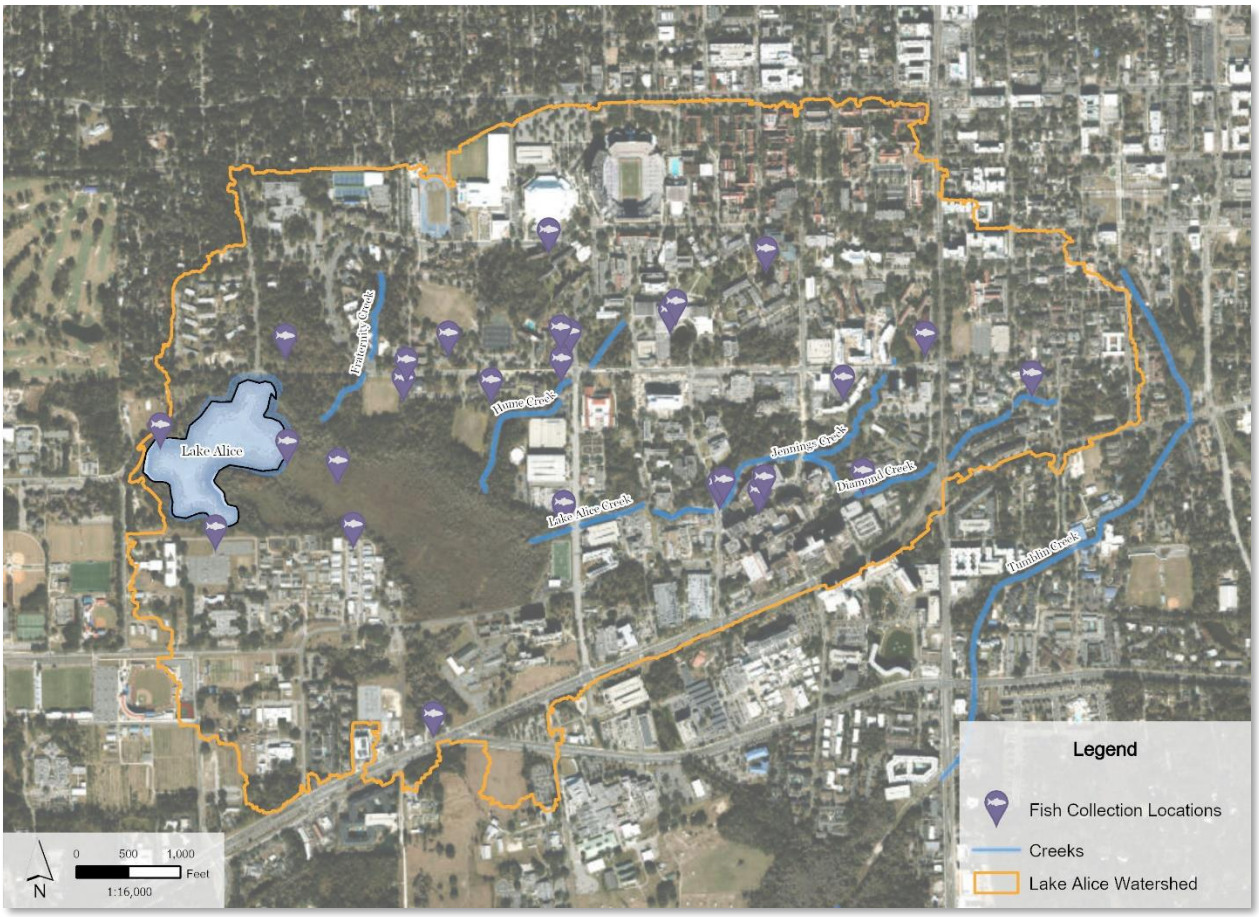

Figure 40. Florida Museum Fish Collection Locations within the Lake Alice Watershed (1939 – 2017)

Table 9. Florida Museum Fish Collection Species within the Lake Alice Watershed by Decade (1939 – 2017)

Family	Genus	Species	Common Name	1930	1940	1950	1960	1970	1980	1990	2000	2010
Amiidae	*Amia*	*calva*	Bowfin								X	
Centrarchidae	*Lepomis*	*gulosus*	Warmouth						X			X
		macrochirus	Bluegill		X			X	X	X		X
		microlophus	Redear Sunfish					X				
		punctatus	Spotted Sunfish					X			X	X
	Micropterus	*salmoides*	Largemouth Bass	X	X	X						
	Pomoxis	*nigromaculatus*	Black Crappie								X	
Cichlidae	*Amatitlania*	*nigrofasciata*	Convict Cichlid							X	X	
	Astronotus	*ocellatus*	Oscar						X			
	Oreochromis	*aureus*	Blue Tilapia				X	X	X	X		X
		mossambicus	Mozambique Tilapia					X				
		niloticus	Nile Tilapia									X
	Rocio	*octofasciata*	Jack Dempsey						X	X		
Cyprinidae	*Carassius*	*auratus*	Goldfish							X		
	Cyprinus	*carpio*	Common Carp							X		
Fundulidae	*Fundulus*	*chrysotus*	Golden Topminnow					X				
	Lucania	*parva*	Rainwater Killifish								X	
Ictaluridae	*Ameiurus*	*natalis*	Yellow Bullhead							X	X	
		nebulosus	Brown Bullhead								X	
Lepisosteidae	*Lepisosteus*	*platyrhincus*	Florida Gar								X	
Leuciscidae	*Notemigonus*	*crysoleucas*	Golden Shiner						X	X	X	
Poeciliidae	*Gambusia*	*holbrooki*	Eastern Mosquitofish						X	X	X	X
	Heterandria	*formosa*	Least Killifish						X	X	X	X
	Poecilia	*latipinna*	Sailfin Molly						X	X	X	X
	Xiphophorus	*variatus*	Variable Platyfish					X	X	X		X
Serrasalmidae	*Colossoma*	*macropomum*	Tambaqui								X	
	Piaractus	brachypomus	Red-Bellied Pacu							X		

1.2.3.2.2 Birds

Table 10 provides a summary of the number of bird species identified on the BioGator web portal for each of the UF Conservation Areas. There were 176 bird species from 18 orders observed in the UF Conservation Areas within the Lake Alice Watershed (Figure 41). The taxonomic orders with the most observations and the highest species diversity across the sites were the following:

- Number of Conservation Areas: Accipitriformes (15), Passeriformes (15), and Piciformes (14), Pelecaniformes (11)
- Number of Species: Passeriformes (96), Anseriformes (15), Pelecaniformes (12), and Accipitriformes (11)

The Lake Alice, Bantram-Carr, McCarty Woods, Dairy Pond, and Liberty Pond Conservation Areas had the highest number of observed bird species, with 166, 99, 84, 65, and 61 species, respectively (Table 10). A detailed bird species inventory is provided in Appendix B.

Table 10. BioGator Number of Species for Bird Taxonomic Orders by UF Conservation Area within the Lake Alice Watershed

Order	Bantram-Carr	Dairy Pond	Digital Design Wetland	Fraternity Wetland	Gator Pond	Graham Pond	Graham Woods	Harmonic Woods	Hume Creek	Jennings Creek	Lake Alice	Lake Alice South	Law School Woods	Liberty Pond	McCarty Woods	Newnins-Ziegler Sink	Ocala Pond	Reitz Ravine
Accipitriformes	8	8	4	1	2	1		1		1	11	3	6	9	9	1	4	
Anseriformes	1	3			1	1					14			3	1		2	
Apodiformes	2	1	1		1						2		2	2	1		1	
Caprimulgiformes					1					1	2				1			
Charadriiformes	1	1									7				1			
Ciconiiformes	1		1								1				1		1	
Columbiformes	3	2	1		1						4		1	1	1		1	
Coraciiformes		1			1						1			1				
Cuculiformes	1										1							
Falconiformes	3	1									1				1			
Galliformes	1										2							
Gruiformes	1	1			1						6		1					
Passeriformes	65	34	21		20	10	1			3	89	12	24	33	58	11	28	6
Pelecaniformes	6	6	7		5	1			2		12		6	8	5		5	
Piciformes	4	4	2		2	1		1			6	2	4	2	4	1	3	2
Podicipediformes		1									2							
Strigiformes	1				1						3		1				2	
Suliformes	1	2	1								2		1	2	1			
Total	99	65	38	1	36	14	1	2	2	5	166	17	46	61	84	13	47	8

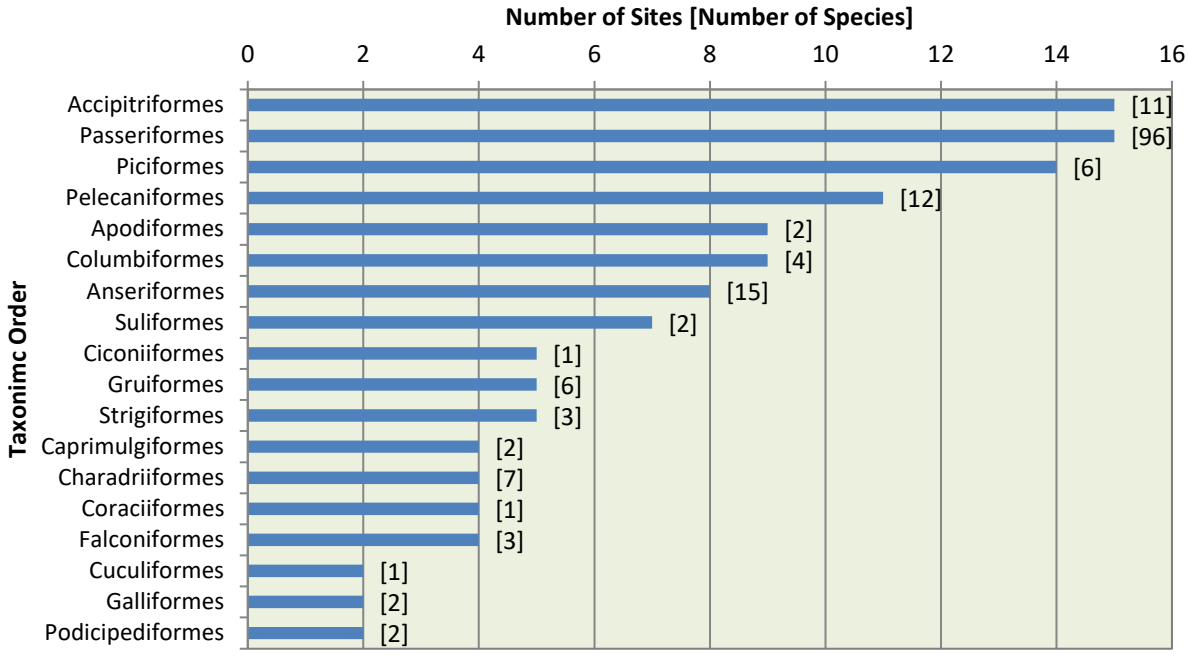

Figure 41. BioGator Bird Taxonomic Order Summary – Total Number of Conservation Areas and Number of Species

1.2.3.2.3 Reptiles and Amphibians

A summary of the reptile and amphibian species found on the BioGator web portal for each of the UF Conservation Areas is provided in Table 11. Within the Lake Alice Watershed, 42 reptile and 14 amphibian species from 5 orders were recorded in the UF Conservation Areas (Figure 42). The order with the most species diversity and the widest distribution across 12 Conservation Areas was Squamata, which includes lizards and snakes, with 28 species.

Lake Alice, Reitz Ravine, Graham Woods, Liberty Pond, and Bartram-Carr Conservation Areas had the highest number of observed reptile and amphibian species, with 41, 15, 14, 13, and 11 species, respectively (Table 11). A detailed bird species inventory is provided in Appendix B.

Table 11. BioGator Number of Species for Reptile and Amphibian Taxonomic Orders by UF Conservation Area within the Lake Alice Watershed

	Amphibia		Reptilia			
Conservation Areas	**Anura**	**Caudata**	**Crocodylia**	**Squamata**	**Testudines**	**Total**
Bartram-Carr				10	1	11
Dairy Pond			1	2	2	5
Digital Design Wetland			1	2	4	7
Gator Pond	1			1		2
Graham Woods	1	2		4	7	14
Harmonic Woods	1			4		5

Conservation Areas	Amphibia		Reptilia			Total
	Anura	Caudata	Crocodylia	Squamata	Testudines	
Hume Creek	1				2	3
Lake Alice	6	2	1	20	12	41
Lake Alice South				2		2
Liberty Pond	3		1	5	4	13
McCarty Woods	2			5		7
Ocala Pond			1	1	1	3
Reitz Ravine	1	4		4	6	15

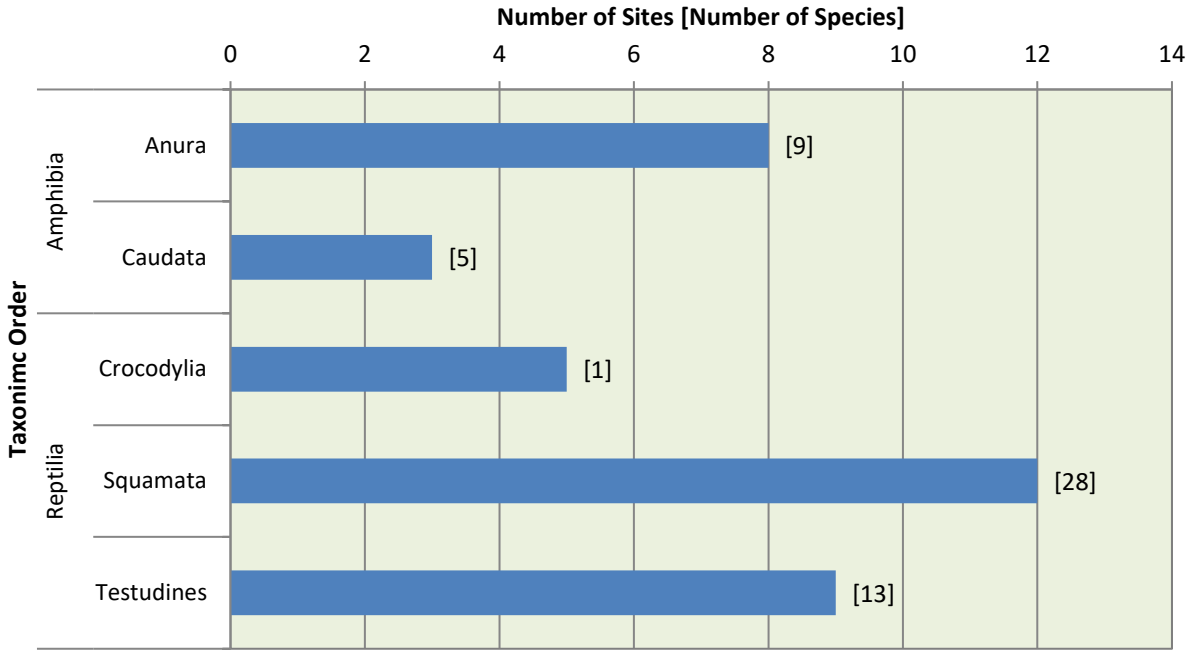

Figure 42. BioGator Reptile and Amphibian Taxonomic Order Summary – Total Number of Conservation Areas and Species

1.3 Climate Data

1.3.1 Rainfall

Historic rainfall conditions for Lake Alice were assessed using daily rainfall data from the National Climatic Data Center (NCDC)[7] for the Gainesville Regional Airport Weather Station from 1984 to 2023. This weather station is approximately 5.8 miles northeast of Lake Alice. The average annual rainfall for this 40-year period was 48.6 ± 1.3 inches, with a range from 33.4 to 71.3 inches in 2011 and 2017, respectively (Figure

[7] via iAIMS Climatic Data - Texas A&M AgriLIFE Research Center at Beaumont https://beaumont.tamu.edu/ClimaticData/ (Station – GAINESVILLE RGNL AP)

43). Figure 44 shows the monthly total rainfall summary, which indicates that the wet season is from June to September and the dry season is from October to May.

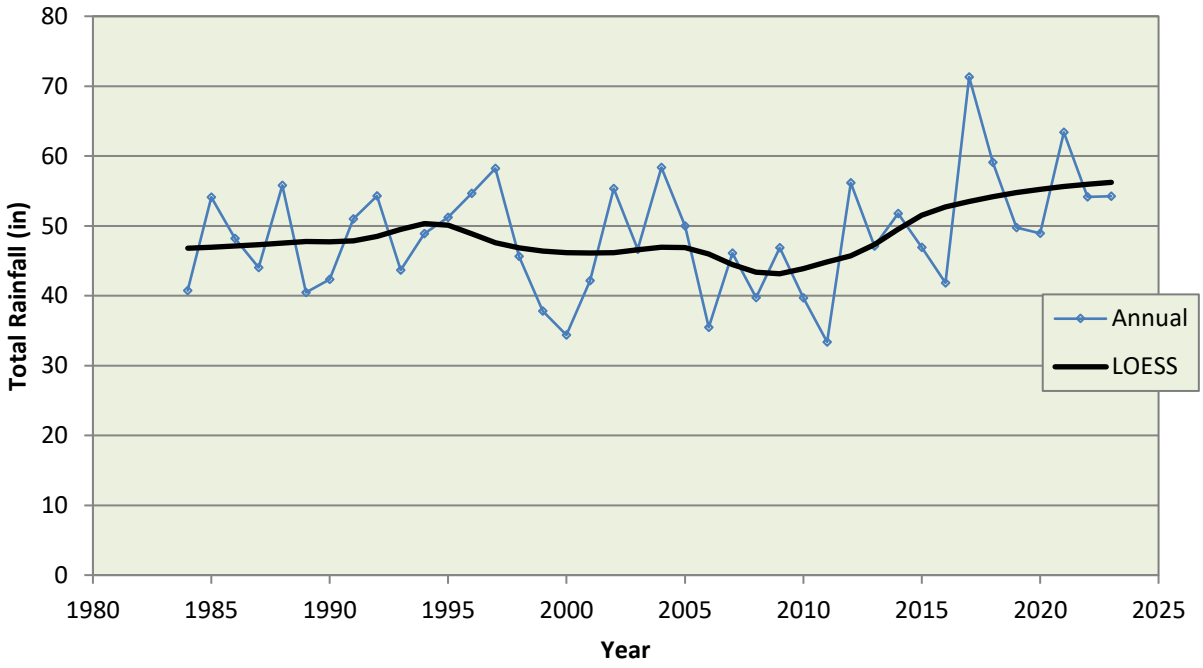

Figure 43. Annual Rainfall from the Gainesville Regional Airport Weather Station (1984 – 2023)

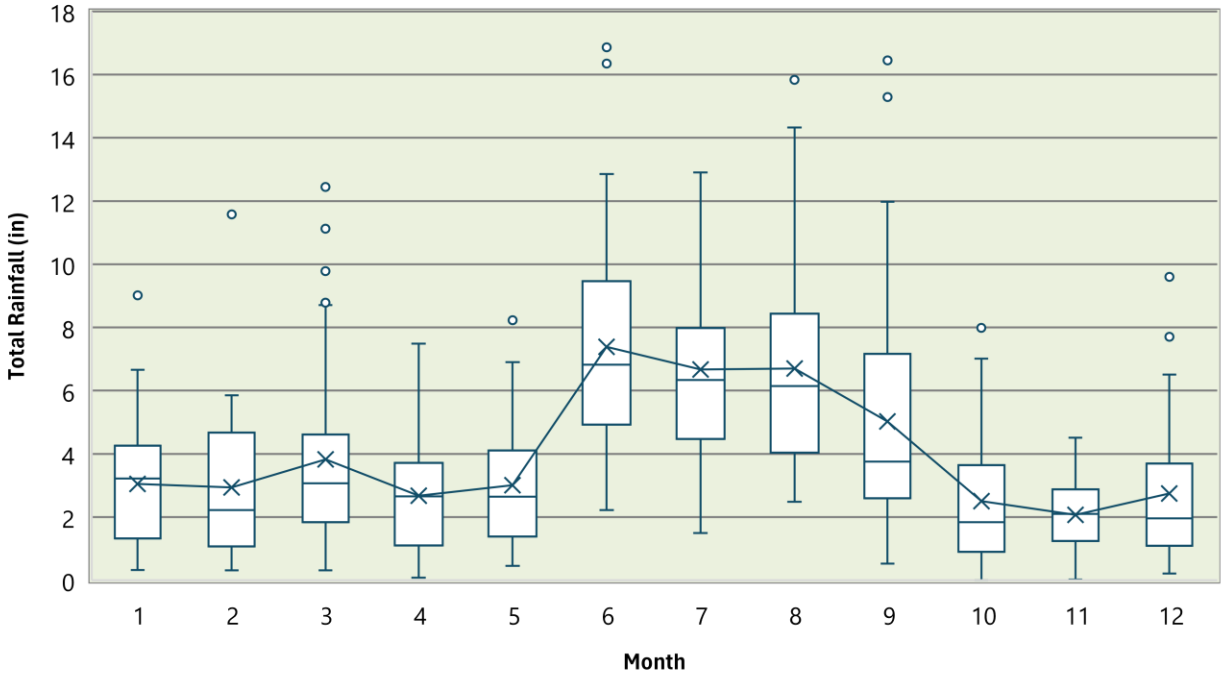

Figure 44. Monthly Rainfall Box Plots from the Gainesville Regional Airport Weather Station (1984 – 2023)

The effect of rainfall on Lake Alice water quality parameters was investigated. The main source of nutrients in a watershed is the runoff that flows from the nearby land, which carries along different materials, such as fertilizers from agriculture or urban areas, that can cause eutrophication. The first flush of nutrient-rich runoff from the surrounding watershed can have high concentration but tends to decrease over time as more rainfall occurs and the lake's volume increases. However, the Lake Alice volume is limited by the two gravity infiltration wells, which leads to a volume turnover with continuous rainfall.

The Pearson correlation, using the data from 1997 to 2022, showed that there was a significant positive association between chlorophyll-*a* levels and the amount of rain in the week before sampling, $r(55) = .28$, $p = .032$ (Figure 45). However, rainfall totals for the two weeks prior to sampling did not have a significant relationship with lake chlorophyll-*a* levels. Lake Alice nutrient concentration (nitrogen and phosphorus) did not show a significant correlation with rainfall.

The same rainfall totals, from 2002 to 2022, were also compared with specific conductance, and showed a significant negative correlation for both the one and two week rainfall totals, $r(81) = -.34$, $p = .001$ (Figure 46) and $r(81) = -.34$, $p = .002$ (Figure 47), respectively. The conductivity decrease is likely due to the dilution effect in the lake from increased rainfall.

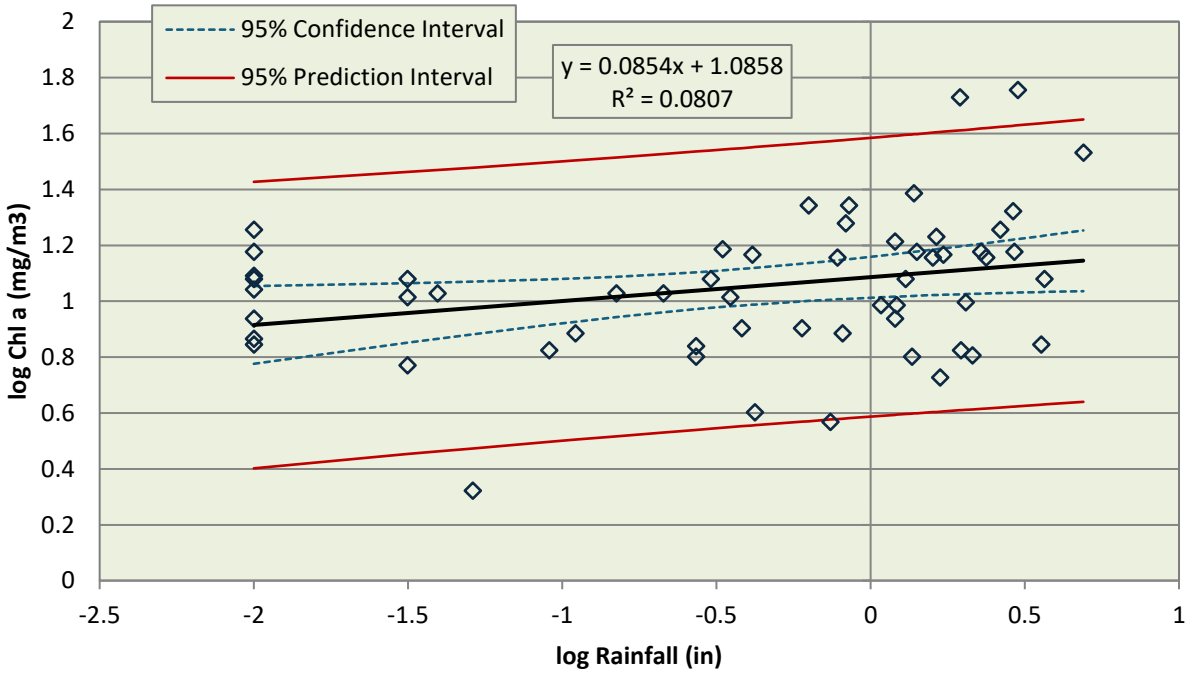

Figure 45. Relationship Between Rainfall (1 week) and Lake Alice Chlorophyll-a Concentrations (1997 – 2019)

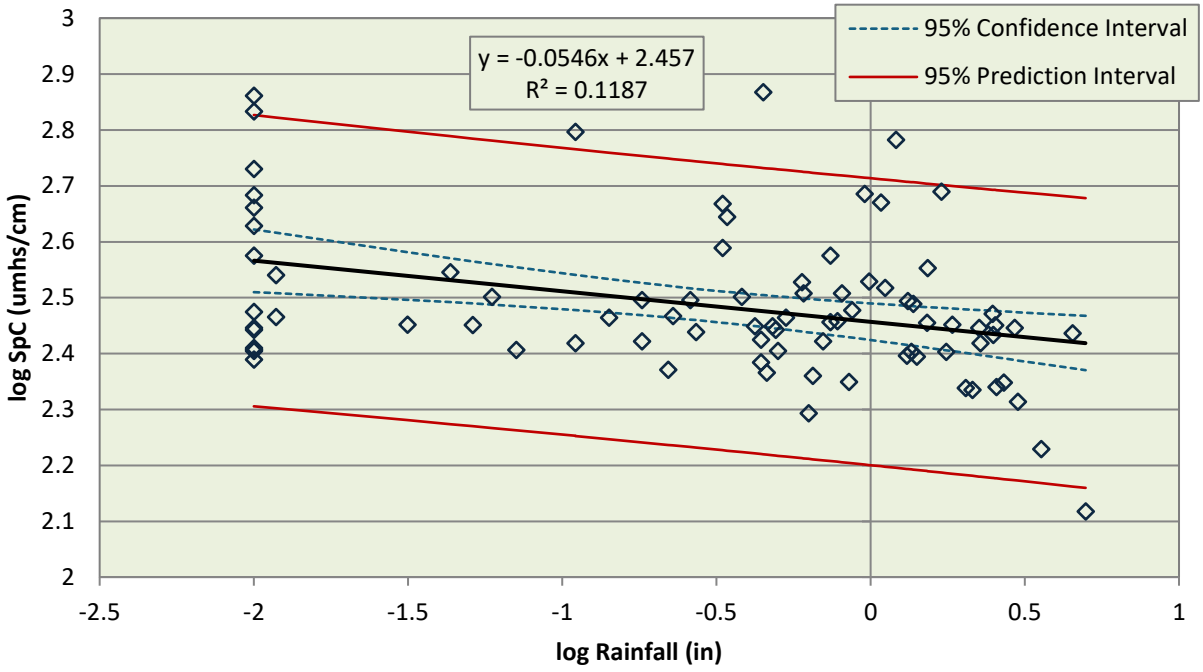

Figure 46. Relationship Between Rainfall (1 week) and Lake Alice Conductivity (2002 – 2022)

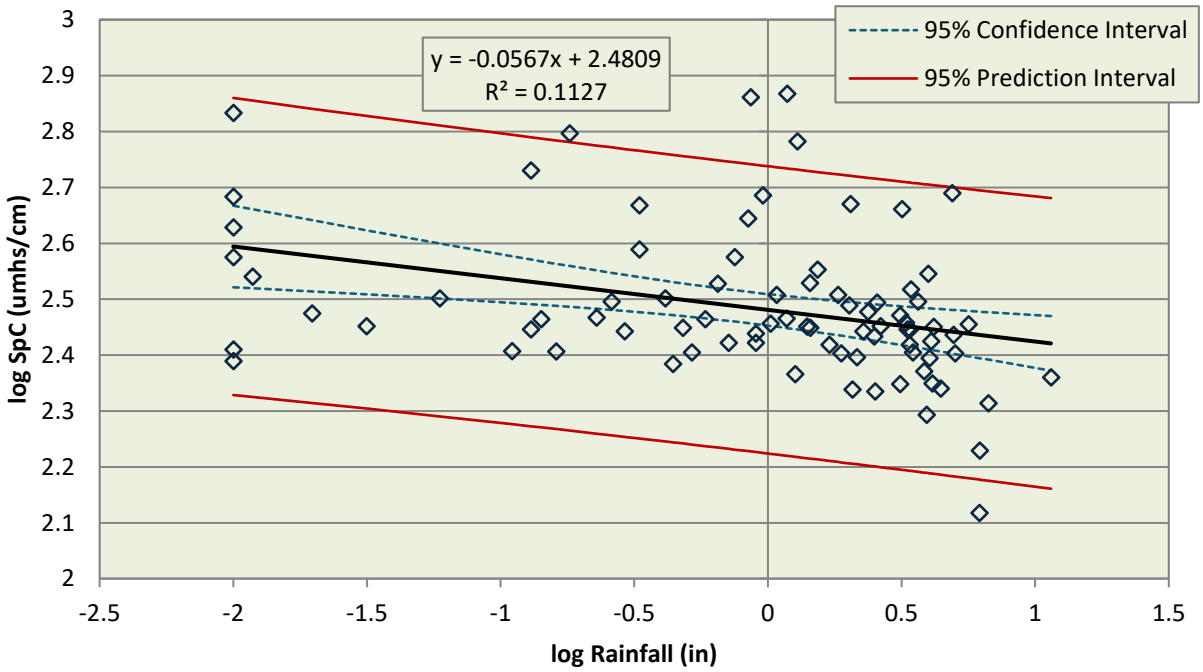

Figure 47. Relationship Between Rainfall (2 week) and Lake Alice Conductivity (2002 – 2022)

1.3.2 Evapotranspiration

Daily statewide reference evapotranspiration (RET) data provided by the U.S. Geological Survey (USGS)[8], computed at a 2-kilometer spatial resolution, were used for the period from 1985 to 2021. Daily RET data specific to the Lake Alice Watershed were obtained from this dataset.

RET is a measure of the evaporative demand of the atmosphere, representing the amount of water that would be lost from a reference surface, such as a well-watered grass surface. The average annual RET for this 37-year period was 51.6 ± 0.37 inches, with a range from 46.4 to 57.0 inches in 2003 and 2006, respectively (Figure 48). Climatic factors such as temperature, humidity, wind speed, and solar radiation affect RET and cause it to have a clear seasonal pattern (Figure 49).

[8] https://www.usgs.gov/centers/cfwsc/science/

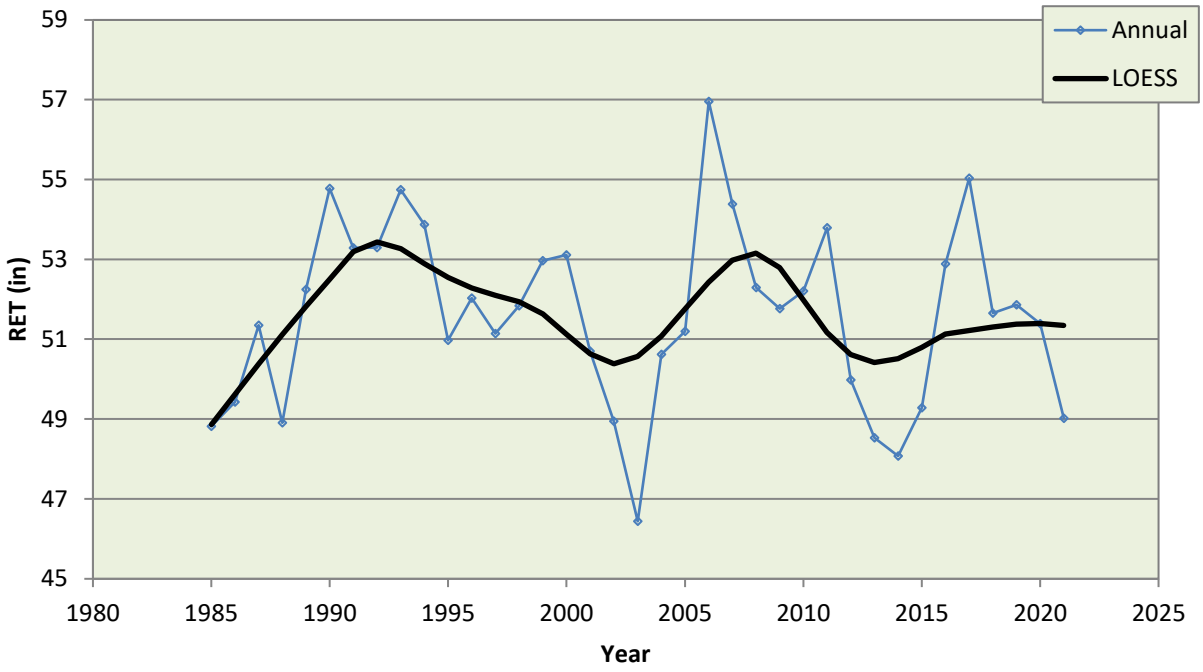

Figure 48. Annual Reference Evapotranspiration for the Lake Alice Watershed (1985 – 2021)

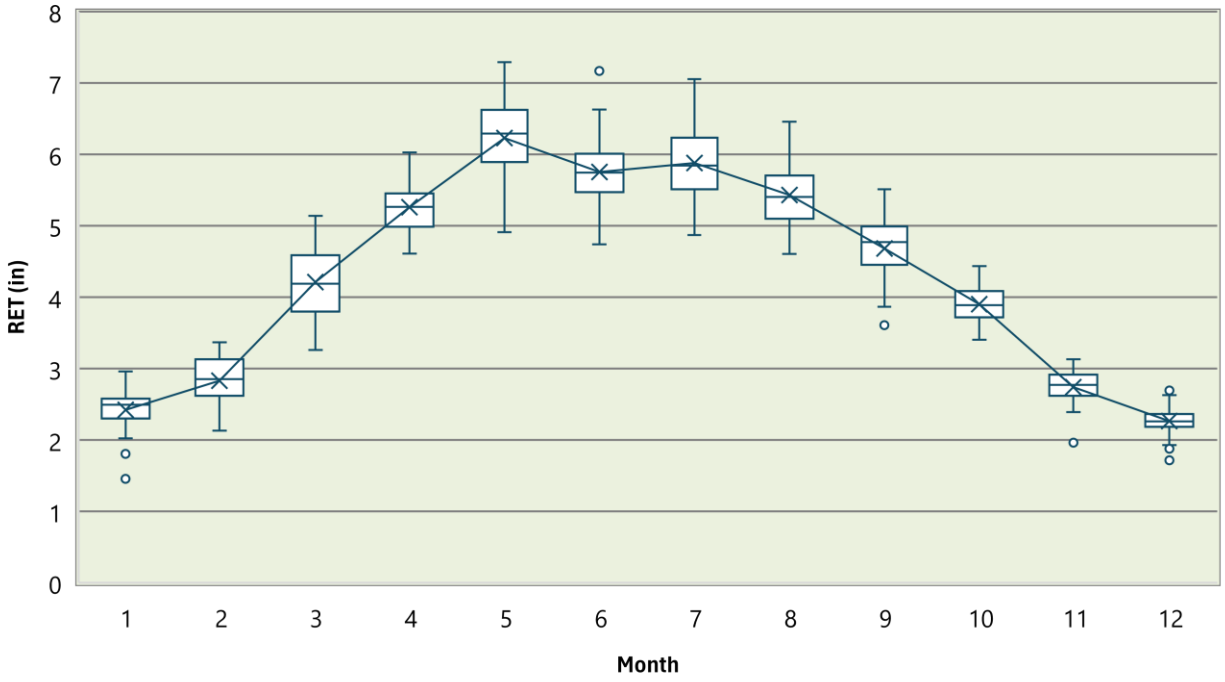

Figure 49. Monthly Reference Evapotranspiration Box Plots for the Lake Alice Watershed (1985 – 2021)

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Appendix A

Water Quality / Sediment Data

Lake Alice Watershed Water Quality / Sediment Statistics

Parameter Group	Parameter	Units	StnGroup	Average	Max	Min	StdDev	Count	Period of Record	
Bacteriological	Escherichia coli	#/100mL	Elizabeth Creek	4,645	13,900	420	6,283	4	3/2014	11/2016
			Jennings Creek	1,490	4,100	10.0	1,704	6	10/2017	5/2018
			Lake Alice	94.0	400	10.0	171	5	1/2018	5/2018
			Tumblin Creek	1,483	14,400	14.0	3,680	16	2/2014	11/2019
	Fecal Coliform	#/100mL	Elizabeth Creek	6,741	21,100	37.0	6,142	61	7/2005	11/2016
			Jennings Creek	1,596	3,000	113	1,215	10	2/2011	11/2011
			Tumblin Creek	5,745	92,000	10.0	12,043	330	9/1999	8/2015
	Total Coliform	#/100mL	Elizabeth Creek	870	870	870	0.00	2	7/2005	7/2005
			Tumblin Creek	28,977	160,000	410	45,150	21	9/1999	1/2006
Biological	Chlorophyll a	mg/m^3	Lake Alice	13.3	55.0	3.00	8.76	132	5/1997	11/2005
			Tumblin Creek	5.02	83.8	0.049	18.7	36	8/2001	9/2002
	Chlorophyll a, corrected	mg/m^3	Jennings Creek	4.19	16.0	0.550	4.15	20	2/2011	5/2018
			Lake Alice	12.4	57.0	2.00	13.4	16	8/2017	9/2022
			Tumblin Creek	2.68	17.6	0.690	5.26	10	10/2004	11/2019
	Chlorophyll a, uncorrected	mg/m^3	Jennings Creek	7.14	18.0	0.400	6.36	9	9/2016	5/2018
			Lake Alice	13.7	62.0	2.00	14.5	16	8/2017	9/2022
			Tumblin Creek	0.990	2.50	0.500	0.636	8	3/2018	11/2019
	Chlorophyll b	mg/m^3	Tumblin Creek	0.339	2.05	0.149	0.427	18	8/2001	9/2002
	Chlorophyll c	mg/m^3	Tumblin Creek	0.641	4.99	0.136	1.20	18	8/2001	9/2002
	Pheophytin a	mg/m^3	Jennings Creek	1.47	11.0	0.400	2.33	20	2/2011	5/2018
			Lake Alice	1.57	5.50	0.400	1.32	13	8/2017	9/2022
			Tumblin Creek	0.903	8.49	0.00	1.77	28	8/2001	11/2019
Dissolved Oxygen	DO	%	Elizabeth Creek	10.4	22.7	3.20	10.7	3	11/2011	10/2012
			Golf Course	79.3	236	3.97	51.5	170	11/2003	11/2011
			Hume Creek	76.1	264	21.4	26.6	91	5/2003	7/2021
			Jennings Creek	65.7	197	1.00	31.8	405	5/2003	9/2021
			Lake Alice	95.3	236	2.90	45.1	107	5/2003	9/2022
			NATL Sink	35.9	135	3.10	23.3	52	8/2003	9/2013
			Pony Field	36.0	190	4.70	31.7	64	6/2003	9/2021
			Ritchey Road	57.5	130	11.1	31.9	55	6/2003	9/2013
			SEEP	75.1	183	4.80	48.9	85	8/2008	9/2013
			Tumblin Creek	62.3	92.4	25.1	15.5	45	11/2012	11/2021
			Univ Gardens	67.7	141	8.01	22.0	178	5/2003	9/2021
		mg/L	Elizabeth Creek	3.13	7.10	0.26	2.44	19	4/2006	10/2012
			Golf Course	6.90	17.4	0.48	4.20	170	11/2003	11/2011
			Hume Creek	6.73	26.1	1.70	2.66	91	5/2003	7/2021
			Jennings Creek	5.94	19.7	0.08	3.07	414	5/2003	9/2021
			Lake Alice	7.98	17.5	0.24	3.96	113	4/2002	9/2022
			NATL Sink	3.35	13.6	0.25	2.45	52	8/2003	9/2013
			Pony Field	3.07	14.1	0.40	2.43	64	6/2003	9/2021
			Ritchey Road	5.39	13.4	0.91	3.35	55	6/2003	9/2013
			SEEP	6.38	15.9	0.40	3.99	85	8/2008	9/2013
			Tumblin Creek	5.38	8.02	2.15	1.23	162	2/1998	11/2021
			Univ Gardens	6.15	13.6	1.56	2.25	178	5/2003	9/2021
Flow	Flow	cfs	Elizabeth Creek	0.048	0.221	0.00	0.067	19	9/2005	6/2011
			Tumblin Creek	0.143	1.05	0.006	0.184	78	2/1998	8/2020
General Inorganic	Alkalinity, Total	mg/L	Elizabeth Creek	115	132	96.0	18.2	5	5/2007	10/2012
			Jennings Creek	83.8	112	37.0	30.7	9	9/2016	5/2018
			Lake Alice	68.0	81.0	54.0	9.54	13	8/2017	9/2022
			Tumblin Creek	132	173	22.0	28.8	107	8/2001	11/2021
	Chloride, Dissolved	mg/L	Elizabeth Creek	30.0	30.0	30.0	0.00	4	5/2007	5/2007
			Tumblin Creek	24.5	37.0	16.0	5.29	30	10/2003	10/2007
	Chloride, Total	mg/L	Elizabeth Creek	36.0	36.0	36.0	---	1	10/2012	10/2012
			Jennings Creek	22.7	34.0	3.40	11.5	20	2/2011	5/2018
			Lake Alice	15.7	21.0	9.60	4.49	13	8/2017	9/2022
			Tumblin Creek	23.9	37.0	4.20	4.84	78	8/2001	11/2021

Parameter Group	Parameter	Units	StnGroup	Average	Max	Min	StdDev	Count	Period of Record	
General Inorganic	Fluoride, Total	mg/L	Elizabeth Creek	0.320	0.440	0.230	0.110	5	5/2007	10/2012
			Jennings Creek	0.337	0.500	0.130	0.134	20	2/2011	5/2018
			Lake Alice	0.256	0.310	0.200	0.037	13	8/2017	9/2022
			Tumblin Creek	0.342	0.480	0.099	0.142	6	4/2002	8/2019
	Hardness, Total	mg/L	Lake Alice	90.7	90.7	90.7	---	1	9/2022	9/2022
			Tumblin Creek	183	219	100	23.2	50	8/2001	11/2021
	Sulfate, Dissolved	mg/L	Elizabeth Creek	34.7	36.8	32.6	2.42	4	5/2007	5/2007
			Tumblin Creek	35.5	64.0	5.00	15.4	32	10/2003	10/2007
	Sulfate, Total	mg/L	Elizabeth Creek	36.0	36.0	36.0	---	1	10/2012	10/2012
			Jennings Creek	34.8	60.0	5.80	17.3	20	2/2011	5/2018
			Lake Alice	21.8	34.0	12.0	6.50	13	8/2017	9/2022
			Tumblin Creek	43.0	96.0	8.80	12.9	78	8/2001	11/2021
General Organic	Organic Carbon, Dissolved	mg/L	Tumblin Creek	3.83	6.07	2.35	0.999	30	8/2001	9/2003
	Organic Carbon, Total	mg/L	Elizabeth Creek	7.83	9.28	6.37	1.68	4	5/2007	5/2007
			Jennings Creek	5.41	13.0	3.50	2.03	20	2/2011	5/2018
			Lake Alice	6.91	8.00	5.80	0.598	13	8/2017	9/2022
			Tumblin Creek	4.54	24.0	1.24	2.35	109	8/2001	11/2021
Metal	Aluminum, Total	ug/L	Lake Alice	23.0	23.0	23.0	---	1	9/2022	9/2022
			Tumblin Creek	126	390	23.0	152	5	3/2019	11/2019
	Arsenic, Total	ug/L	Jennings Creek	0.810	1.00	0.490	0.160	8	10/2017	5/2018
			Lake Alice	0.580	0.620	0.540	0.057	2	8/2017	9/2022
			Tumblin Creek	0.752	0.800	0.690	0.041	5	3/2019	11/2019
	Barium, Total	ug/L	Lake Alice	15.1	15.1	15.1	---	1	9/2022	9/2022
			Tumblin Creek	25.0	27.7	23.3	1.77	5	3/2019	11/2019
	Cadmium, Total	ug/L	Jennings Creek	0.107	0.572	0.020	0.193	8	10/2017	5/2018
			Lake Alice	0.020	0.020	0.020	0.00	2	8/2017	9/2022
			Tumblin Creek	0.022	0.031	0.020	0.005	5	3/2019	11/2019
		mg/kg	Hume Creek	0.00	0.00	0.00	---	1	3/2021	3/2021
			Jennings Creek	0.170	0.370	0.00	0.182	8	3/2021	9/2021
			Pony Field	0.170	0.340	0.00	0.240	2	3/2021	9/2021
			Univ Gardens	0.185	0.370	0.00	0.262	2	3/2021	9/2021
	Calcium, Total	mg/L	Elizabeth Creek	54.7	61.4	47.9	6.75	5	5/2007	10/2012
			Jennings Creek	44.3	56.1	19.0	15.2	8	10/2017	5/2018
			Lake Alice	30.6	32.7	28.5	2.97	2	8/2017	9/2022
			Tumblin Creek	57.0	77.0	29.0	8.55	112	8/2001	11/2021
	Copper, Total	ug/L	Jennings Creek	2.91	8.41	0.800	2.64	8	10/2017	5/2018
			Lake Alice	0.920	1.05	0.790	0.184	2	8/2017	9/2022
			Tumblin Creek	1.02	1.71	0.690	0.408	5	3/2019	11/2019
		mg/kg	Hume Creek	1.49	1.49	1.49	---	1	3/2021	3/2021
			Jennings Creek	1.08	2.87	0.510	0.841	8	3/2021	9/2021
			Pony Field	1.35	1.36	1.34	0.014	2	3/2021	9/2021
			Univ Gardens	0.845	1.26	0.430	0.587	2	3/2021	9/2021
	Iron, Total	ug/L	Elizabeth Creek	120	270	62.7	86.2	5	5/2007	10/2012
			Jennings Creek	173	360	63.0	104	8	10/2017	5/2018
			Lake Alice	58.5	64.0	53.0	7.78	2	8/2017	9/2022
			Tumblin Creek	208	630	0.130	104	56	12/2005	11/2021
	Lead, Total	ug/L	Jennings Creek	0.555	1.05	0.170	0.345	8	10/2017	5/2018
			Lake Alice	0.200	0.200	0.200	0.00	2	8/2017	9/2022
			Tumblin Creek	3.03	10.0	0.100	2.66	40	10/2003	11/2019
		mg/kg	Hume Creek	1.60	1.60	1.60	---	1	3/2021	3/2021
			Jennings Creek	2.03	3.96	1.20	0.874	8	3/2021	9/2021
			Pony Field	5.09	5.90	4.28	1.15	2	3/2021	9/2021
			Univ Gardens	1.47	2.12	0.820	0.919	2	3/2021	9/2021
	Magnesium, Total	mg/L	Elizabeth Creek	9.04	11.3	7.04	2.15	5	5/2007	10/2012
			Jennings Creek	8.01	10.5	2.95	3.22	8	10/2017	5/2018
			Lake Alice	5.25	5.74	4.75	0.700	2	8/2017	9/2022
			Tumblin Creek	9.12	16.0	2.00	1.89	116	8/2001	11/2021
	Nickel, Total	ug/L	Jennings Creek	0.574	0.720	0.450	0.089	8	10/2017	5/2018
			Lake Alice	0.390	0.500	0.280	0.156	2	8/2017	9/2022
			Tumblin Creek	0.508	0.540	0.500	0.018	5	3/2019	11/2019

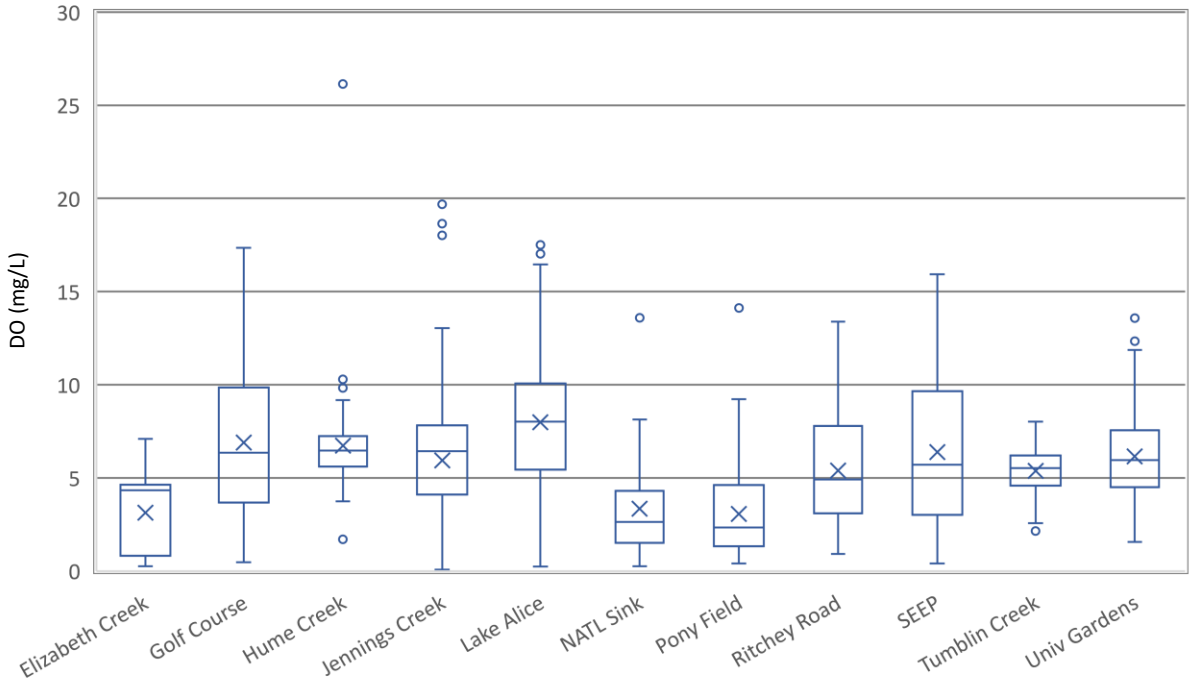
Parameter Group	Parameter	Units	StnGroup	Average	Max	Min	StdDev	Count	Period of Record	
Metal	Potassium, Total	mg/L	Elizabeth Creek	1.84	2.20	1.72	0.205	5	5/2007	10/2012
			Jennings Creek	2.15	2.90	1.30	0.595	8	10/2017	5/2018
			Lake Alice	2.05	2.50	1.60	0.636	2	8/2017	9/2022
			Tumblin Creek	3.07	6.10	1.50	1.06	65	12/2004	11/2021
	Sodium, Total	mg/L	Elizabeth Creek	15.0	15.0	15.0	---	1	10/2012	10/2012
			Jennings Creek	14.1	19.9	4.20	6.07	8	10/2017	5/2018
			Lake Alice	8.05	8.50	7.60	0.636	2	8/2017	9/2022
			Tumblin Creek	14.6	22.0	3.20	2.99	41	7/2012	11/2021
	Zinc, Total	ug/L	Jennings Creek	8.81	22.0	5.00	5.94	8	10/2017	5/2018
			Lake Alice	5.00	5.00	5.00	0.00	2	8/2017	9/2022
			Tumblin Creek	6.54	12.0	5.00	3.07	5	3/2019	11/2019
		mg/kg	Hume Creek	11.4	11.4	11.4	---	1	3/2021	3/2021
			Jennings Creek	7.26	12.9	4.24	3.06	8	3/2021	9/2021
			Pony Field	10.7	11.1	10.4	0.509	2	3/2021	9/2021
			Univ Gardens	17.4	24.6	10.2	10.2	2	3/2021	9/2021
Nitrogen	Ammonia, Dissolved	mg/L	Tumblin Creek	0.075	0.500	0.015	0.077	39	8/2001	12/2004
	Ammonia, Total	mg/L	Elizabeth Creek	0.070	0.080	0.060	0.014	2	5/2007	5/2007
			Golf Course	0.283	6.70	0.002	0.764	177	11/2003	9/2011
			Hume Creek	0.098	0.948	0.002	0.110	104	3/2004	7/2021
			Jennings Creek	0.096	0.920	0.00	0.098	332	10/2003	9/2021
			Lake Alice	0.052	0.313	0.00	0.049	92	3/2004	9/2022
			NATL Sink	0.086	0.676	0.002	0.099	50	3/2004	9/2013
			Pony Field	0.147	1.05	0.023	0.169	55	3/2004	9/2021
			Ritchey Road	0.164	1.47	0.002	0.240	53	3/2004	9/2013
			SEEP	0.052	0.545	0.002	0.067	83	8/2008	9/2013
			Tumblin Creek	0.118	1.00	0.008	0.166	94	8/2001	11/2021
			Univ Gardens	0.076	0.834	0.002	0.094	158	3/2004	9/2021
	Nitrate + Nitrite-N	mg/L	Elizabeth Creek	0.872	1.78	0.060	0.838	5	5/2007	10/2012
			Golf Course	0.628	10.1	0.002	1.19	175	11/2003	1/2012
			Hume Creek	3.64	10.7	0.530	1.85	118	6/2003	7/2021
			Jennings Creek	0.286	1.69	0.00	0.264	387	6/2003	9/2021
			Lake Alice	0.216	7.77	0.00	1.12	106	6/2003	9/2022
			NATL Sink	0.035	0.220	0.002	0.048	55	8/2003	9/2013
			Pony Field	0.079	0.860	0.002	0.117	63	8/2003	9/2021
			Ritchey Road	0.058	0.796	0.002	0.118	56	6/2003	9/2013
			SEEP	0.035	0.650	0.002	0.078	86	8/2008	9/2013
			Tumblin Creek	0.261	2.00	0.004	0.254	142	8/2001	11/2021
			Univ Gardens	6.16	16.8	0.520	2.51	183	6/2003	9/2021
	Nitrogen, Organic	mg/L	Elizabeth Creek	0.625	0.650	0.600	0.035	2	5/2007	5/2007
			Golf Course	1.59	6.93	0.222	1.05	168	11/2003	9/2011
			Hume Creek	1.09	8.44	0.018	1.24	75	3/2004	7/2021
			Jennings Creek	0.679	3.79	0.00	0.461	326	10/2003	9/2021
			Lake Alice	1.13	6.33	0.162	0.964	87	3/2004	9/2022
			NATL Sink	0.874	2.98	0.173	0.571	43	3/2004	9/2013
			Pony Field	0.980	4.54	0.00	0.664	53	3/2004	9/2021
			Ritchey Road	1.77	5.44	0.470	0.980	51	3/2004	9/2013
			SEEP	0.844	3.26	0.099	0.481	83	8/2008	9/2013
			Tumblin Creek	0.292	1.91	0.00	0.258	89	8/2001	11/2021
			Univ Gardens	0.670	3.57	0.00	0.432	148	3/2004	9/2021
	Nitrogen, Total	mg/L	Elizabeth Creek	1.57	2.51	0.750	0.869	5	5/2007	10/2012
			Golf Course	2.48	14.1	0.552	1.99	173	11/2003	9/2011
			Hume Creek	4.82	14.8	1.05	2.49	117	6/2003	7/2021
			Jennings Creek	1.07	5.77	0.114	0.626	384	6/2003	9/2021
			Lake Alice	0.959	10.8	0.188	1.15	240	5/1997	9/2022
			NATL Sink	0.952	3.05	0.020	0.546	59	8/2003	9/2013
			Pony Field	1.40	10.3	0.020	1.37	65	8/2003	9/2021
			Ritchey Road	1.93	5.65	0.750	1.06	58	6/2003	9/2013
			SEEP	0.931	3.54	0.135	0.517	83	8/2008	9/2013
			Tumblin Creek	0.653	2.38	0.030	0.446	107	8/2001	11/2021
			Univ Gardens	6.78	18.6	0.516	2.65	181	6/2003	9/2021

Parameter Group	Parameter	Units	StnGroup	Average	Max	Min	StdDev	Count	Period of Record	
Nitrogen	TKN	mg/L	Elizabeth Creek	0.692	0.730	0.660	0.036	5	5/2007	10/2012
			Golf Course	1.87	13.6	0.476	1.49	172	11/2003	9/2011
			Hume Creek	1.21	9.03	0.020	1.28	117	6/2003	7/2021
			Jennings Creek	0.784	4.58	0.020	0.512	383	6/2003	9/2021
			Lake Alice	1.16	6.38	0.162	0.938	106	6/2003	9/2022
			NATL Sink	0.952	3.04	0.204	0.532	57	8/2003	9/2013
			Pony Field	1.32	10.1	0.020	1.36	65	8/2003	9/2021
			Ritchey Road	1.87	5.64	0.590	1.02	58	6/2003	9/2013
			SEEP	0.896	3.40	0.125	0.501	83	8/2008	9/2013
			Tumblin Creek	0.386	2.02	0.060	0.298	116	8/2001	11/2021
			Univ Gardens	0.758	3.64	0.045	0.423	180	6/2003	9/2021
	TKN, Dissolved	mg/L	Tumblin Creek	0.318	0.599	0.030	0.118	30	8/2001	9/2003
Other	Acetaminophen	ug/L	Jennings Creek	0.031	0.099	0.008	0.039	8	9/2016	5/2018
			Lake Alice	0.008	0.008	0.008	0.00	8	8/2017	9/2022
			Tumblin Creek	0.049	0.250	0.008	0.099	6	3/2018	11/2019
	Sucralose, Total	ug/L	Jennings Creek	1.51	3.00	0.310	1.03	7	10/2017	5/2018
			Lake Alice	0.701	1.50	0.230	0.485	8	8/2017	9/2022
			Tumblin Creek	0.550	0.770	0.250	0.208	6	3/2018	11/2019
Oxygen Demand	BOD	mg/L	Jennings Creek	2.29	5.10	0.970	1.15	11	2/2011	11/2011
			Tumblin Creek	1.01	2.90	0.400	0.818	8	8/2001	9/2006
Pesticide	2,4-D	ug/L	Jennings Creek	0.020	0.066	0.002	0.022	8	9/2016	5/2018
			Lake Alice	0.166	0.310	0.003	0.129	8	8/2017	9/2022
			Tumblin Creek	0.170	1.00	0.002	0.407	6	3/2018	11/2019
	Bentazon	ug/L	Jennings Creek	0.0029	0.0089	0.0008	0.0030	8	9/2016	5/2018
			Lake Alice	0.0011	0.0022	0.0008	0.0005	8	8/2017	9/2022
			Tumblin Creek	0.0034	0.0130	0.0008	0.0048	6	3/2018	11/2019
	Diuron	ug/L	Jennings Creek	0.023	0.073	0.005	0.025	8	9/2016	5/2018
			Lake Alice	0.012	0.015	0.004	0.004	8	8/2017	9/2022
			Tumblin Creek	0.034	0.110	0.003	0.040	6	3/2018	11/2019
	Fenuron	ug/L	Jennings Creek	0.012	0.016	0.008	0.004	8	9/2016	5/2018
			Lake Alice	0.019	0.032	0.016	0.006	8	8/2017	9/2022
			Tumblin Creek	0.016	0.016	0.016	0.00	6	3/2018	11/2019
	Fluridone	ug/L	Jennings Creek	0.0005	0.0008	0.0004	0.0002	8	9/2016	5/2018
			Lake Alice	0.0049	0.0100	0.0026	0.0023	8	8/2017	9/2022
			Tumblin Creek	0.0007	0.0008	0.0004	0.0002	6	3/2018	11/2019
	Imidacloprid	ug/L	Jennings Creek	0.029	0.065	0.014	0.017	8	9/2016	5/2018
			Lake Alice	0.006	0.010	0.003	0.003	8	8/2017	9/2022
			Tumblin Creek	0.114	0.310	0.035	0.106	6	3/2018	11/2019
	Linuron	ug/L	Jennings Creek	0.004	0.004	0.004	0.000	8	9/2016	5/2018
			Lake Alice	0.004	0.004	0.004	0.000	8	8/2017	9/2022
			Tumblin Creek	0.004	0.004	0.004	0.000	6	3/2018	11/2019
	Mecoprop	ug/L	Jennings Creek	0.0023	0.0040	0.0020	0.0007	8	9/2016	5/2018
			Lake Alice	0.0023	0.0040	0.0020	0.0007	8	8/2017	9/2022
			Tumblin Creek	0.0085	0.0320	0.0020	0.0121	6	3/2018	11/2019
	Triclopyr	ug/L	Jennings Creek	0.004	0.004	0.004	0.000	8	9/2016	5/2018
			Lake Alice	0.004	0.004	0.004	0.000	8	8/2017	9/2022
			Tumblin Creek	0.004	0.004	0.004	0.000	6	3/2018	11/2019
Phosphorus	Orthophosphate	mg/L	Elizabeth Creek	0.595	0.720	0.470	0.177	2	5/2007	5/2007
			Golf Course	1.32	4.03	0.145	0.606	174	11/2003	9/2011
			Hume Creek	0.643	1.25	0.092	0.152	102	10/2004	7/2021
			Jennings Creek	0.636	3.72	0.011	0.283	322	10/2004	9/2021
			Lake Alice	0.463	0.914	0.040	0.167	91	10/2004	9/2022
			NATL Sink	0.217	2.10	0.063	0.301	46	10/2004	9/2013
			Pony Field	0.626	2.36	0.121	0.364	53	10/2004	9/2021
			Ritchey Road	1.02	2.50	0.181	0.538	51	10/2004	9/2013
			SEEP	0.119	1.61	0.001	0.186	78	8/2008	9/2013
			Tumblin Creek	0.150	0.350	0.036	0.060	119	8/2001	11/2021
			Univ Gardens	0.854	1.31	0.187	0.150	152	10/2004	9/2021
	Phosphorus, Dissolved	mg/L	Tumblin Creek	0.162	0.248	0.105	0.034	30	8/2001	9/2003

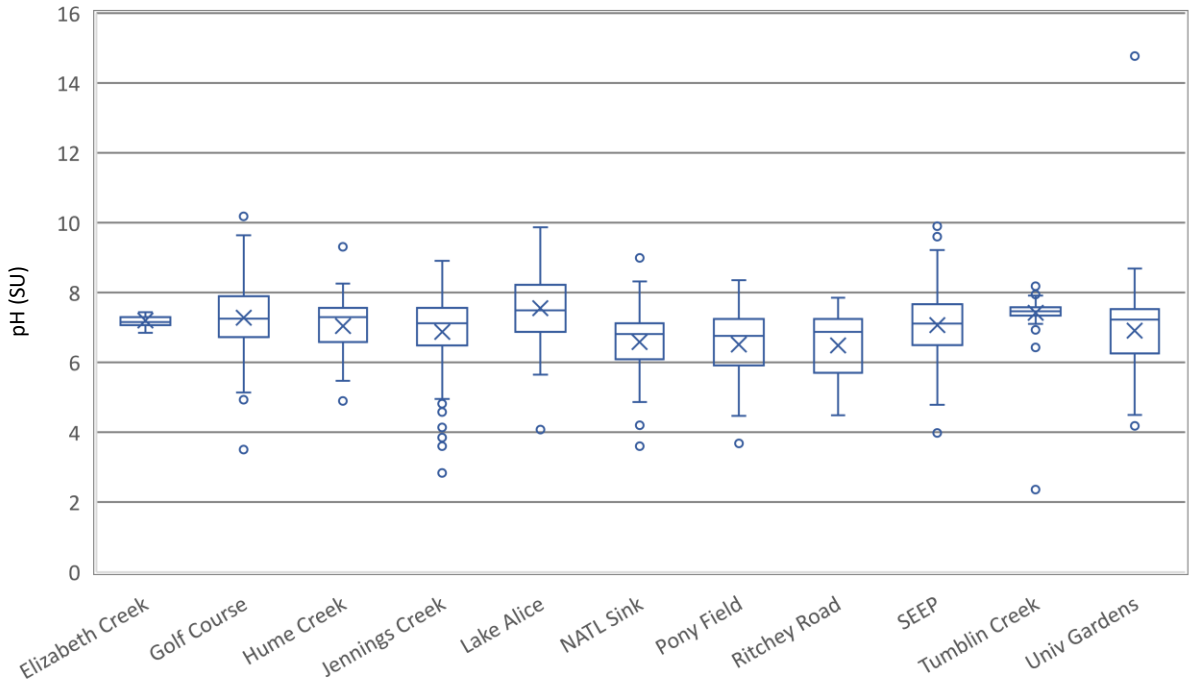
Parameter Group	Parameter	Units	StnGroup	Average	Max	Min	StdDev	Count	Period of Record	
Phosphorus	Phosphorus, Total	mg/L	Elizabeth Creek	0.600	0.760	0.450	0.142	5	5/2007	10/2012
			Golf Course	1.55	4.05	0.158	0.620	175	11/2003	9/2011
			Hume Creek	0.799	4.23	0.002	0.372	117	6/2003	7/2021
			Jennings Creek	0.716	4.34	0.058	0.451	385	6/2003	9/2021
			Lake Alice	0.493	0.969	0.108	0.132	242	5/1997	9/2022
			NATL Sink	0.263	0.919	0.057	0.190	57	8/2003	9/2013
			Pony Field	1.09	5.75	0.117	0.876	65	8/2003	9/2021
			Ritchey Road	1.28	4.40	0.113	0.799	59	6/2003	9/2013
			SEEP	0.190	1.12	0.031	0.187	78	8/2008	9/2013
			Tumblin Creek	0.182	1.30	0.010	0.119	113	8/2001	4/2021
			Univ Gardens	0.934	4.57	0.001	0.403	179	6/2003	9/2021
Physical	pH	SU	Elizabeth Creek	7.20	7.44	6.85	0.156	19	4/2006	10/2012
			Golf Course	7.28	10.2	3.51	1.08	163	11/2003	6/2011
			Hume Creek	7.04	9.31	4.90	0.800	86	5/2003	7/2021
			Jennings Creek	6.88	8.91	2.84	0.975	403	5/2003	9/2021
			Lake Alice	7.55	9.87	4.08	1.00	109	4/2002	9/2022
			NATL Sink	6.58	8.99	3.60	1.03	50	8/2003	9/2013
			Pony Field	6.51	8.35	3.68	1.01	62	6/2003	9/2021
			Ritchey Road	6.49	7.85	4.49	0.922	53	6/2003	9/2013
			SEEP	7.06	9.90	3.65	1.29	70	8/2008	9/2013
			Tumblin Creek	7.42	8.18	2.36	0.471	162	2/1998	11/2021
			Univ Gardens	6.91	14.8	4.18	1.14	170	5/2003	9/2021
	Secchi Depth	ft	Elizabeth Creek	0.58	1.20	0.20	0.35	12	3/2010	10/2012
			Jennings Creek	0.87	1.31	0.33	0.37	9	9/2016	5/2018
			Lake Alice	4.44	10.6	0.82	1.40	125	5/1997	9/2022
			Tumblin Creek	0.66	2.10	0.00	0.33	55	8/2001	7/2021
	Specific Conductance	umho/cm	Elizabeth Creek	378	660	253	90.9	19	4/2006	10/2012
			Golf Course	471	1,590	8.41	301	117	11/2003	11/2011
			Hume Creek	692	1,854	67.0	340	67	5/2003	7/2021
			Jennings Creek	434	1,470	6.00	197	322	5/2003	9/2021
			Lake Alice	322	737	131	120	90	4/2002	9/2022
			NATL Sink	253	646	56.0	138	36	8/2003	9/2013
			Pony Field	300	807	103	124	44	6/2003	9/2021
			Ritchey Road	420	1,740	160	287	35	6/2003	9/2013
			SEEP	142	725	7.00	127	65	5/2009	9/2013
			Tumblin Creek	391	921	37.8	107	223	2/1998	11/2021
			Univ Gardens	437	940	76.0	170	130	5/2003	9/2021
	True Color	PCU	Elizabeth Creek	25.0	30.0	20.0	5.77	4	5/2007	5/2007
			Jennings Creek	24.4	34.0	13.0	6.53	19	2/2011	5/2018
			Lake Alice	39.1	60.0	20.0	10.4	20	4/2002	9/2022
			Tumblin Creek	14.6	50.0	5.00	7.00	81	8/2001	11/2014
	Turbidity	NTU	Elizabeth Creek	4.18	62.3	0.300	9.42	59	4/2006	11/2018
			Hume Creek	18.8	41.2	5.75	19.5	3	2/2021	7/2021
			Jennings Creek	3.97	14.0	0.900	3.67	40	2/2011	9/2021
			Lake Alice	1.71	6.30	0.160	1.58	18	8/2017	9/2022
			Pony Field	2.16	4.43	0.600	1.44	5	2/2021	9/2021
			Tumblin Creek	5.12	378	0.420	27.3	215	2/1998	11/2021
			Univ Gardens	2.27	2.80	1.90	0.382	5	2/2021	9/2021
Solid	Total Dissolved Solids	mg/L	Elizabeth Creek	228	245	210	20.2	4	5/2007	5/2007
			Jennings Creek	183	265	69.0	73.2	20	2/2011	5/2018
			Lake Alice	138	163	99.0	22.5	13	8/2017	9/2022
			Tumblin Creek	251	350	120	39.1	110	8/2001	11/2021

Parameter Group	Parameter	Units	StnGroup	Average	Max	Min	StdDev	Count	Period of Record	
Solid	Total Suspended Solids	mg/L	Elizabeth Creek	5.50	8.00	3.00	2.89	4	5/2007	5/2007
			Golf Course	12.0	189	0.001	21.3	147	11/2003	1/2012
			Hume Creek	8.53	219	0.001	25.4	98	8/2003	9/2013
			Jennings Creek	3.52	37.7	0.001	4.70	299	8/2003	5/2018
			Lake Alice	7.50	57.3	0.001	9.30	83	10/2003	9/2022
			NATL Sink	6.50	63.4	0.001	11.3	49	10/2003	9/2013
			Pony Field	21.5	198	0.001	35.3	52	10/2003	7/2012
			Ritchey Road	70.5	2,266	0.001	324	50	11/2003	9/2013
			SEEP	5.01	43.5	0.001	6.62	69	8/2008	9/2013
			Tumblin Creek	4.91	54.0	0.010	7.63	108	8/2001	11/2021
			Univ Gardens	3.10	42.1	0.001	5.64	144	8/2003	9/2013
Temperature	Temperature, Water	deg C	Elizabeth Creek	22.2	25.4	17.9	1.96	19	4/2006	10/2012
			Golf Course	23.0	32.9	10.1	5.63	170	11/2003	11/2011
			Hume Creek	21.8	29.4	12.3	4.24	91	5/2003	7/2021
			Jennings Creek	21.1	29.3	8.50	4.75	418	5/2003	9/2021
			Lake Alice	24.6	33.8	12.1	5.32	113	4/2002	9/2022
			NATL Sink	20.8	27.9	9.48	5.50	52	8/2003	9/2013
			Pony Field	20.5	28.5	10.2	5.15	64	6/2003	9/2021
			Ritchey Road	19.9	31.4	8.57	6.20	55	6/2003	9/2013
			SEEP	23.6	34.3	6.67	6.24	85	8/2008	9/2013
			Tumblin Creek	23.0	31.0	12.4	3.62	162	2/1998	11/2021
			Univ Gardens	21.1	28.5	8.10	4.62	178	5/2003	9/2021

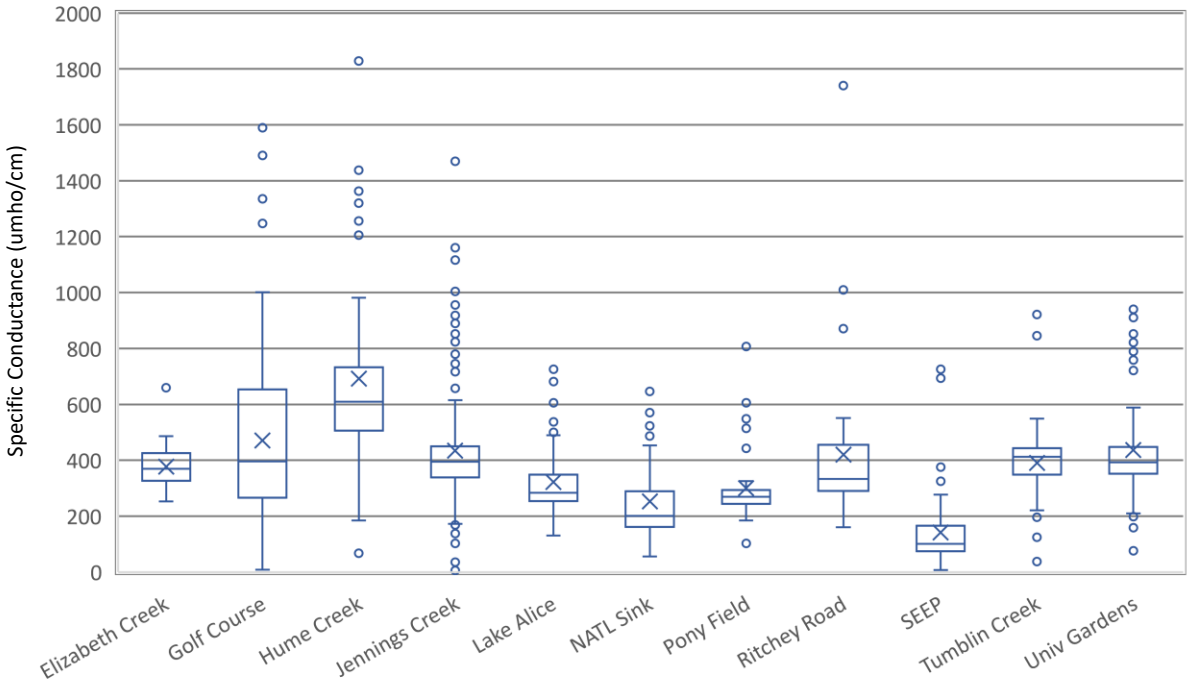
Lake Alice Watershed Water Quality Box Plots by Station Group



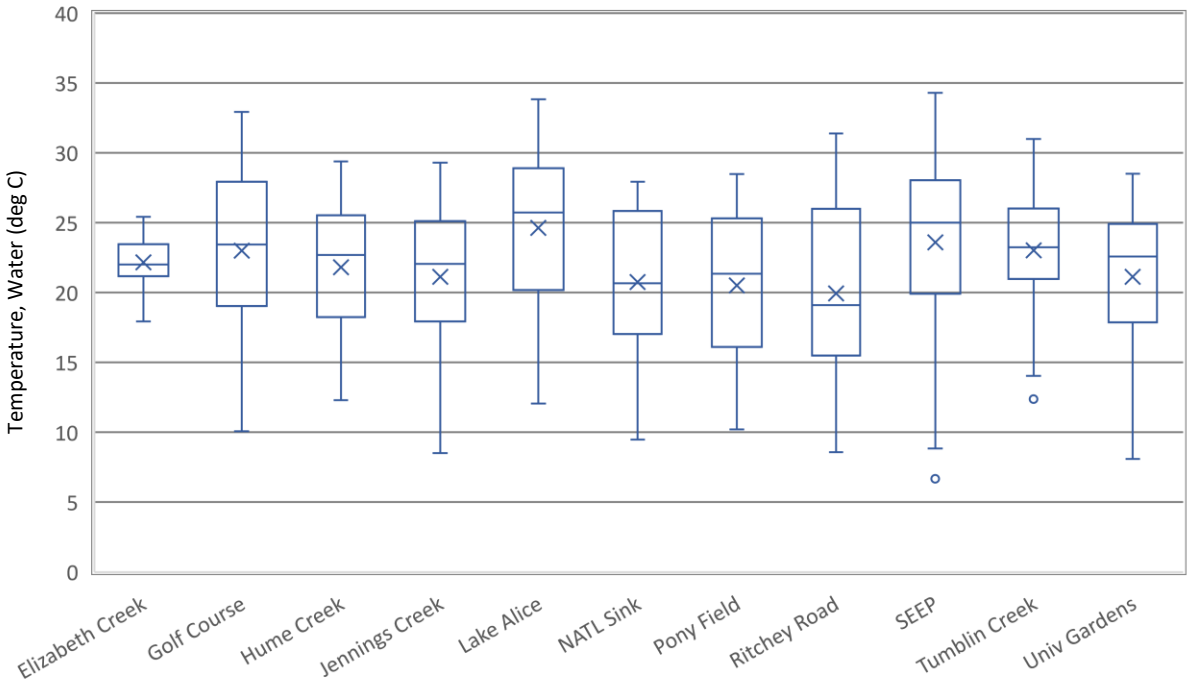
Stn Group	Average	Min	Max	StdDev	Count	Period-of-Record	
Elizabeth Creek	3.13	0.26	7.10	2.44	19	Apr-06	Oct-12
Golf Course	6.90	0.48	17.35	4.20	170	Nov-03	Nov-11
Hume Creek	6.73	1.70	26.14	2.66	91	May-03	Jul-21
Jennings Creek	5.94	0.08	19.69	3.07	414	May-03	Sep-21
Lake Alice	7.98	0.24	17.50	3.96	113	Apr-02	Sep-22
NATL Sink	3.35	0.25	13.59	2.45	52	Aug-03	Sep-13
Pony Field	3.07	0.40	14.12	2.43	64	Jun-03	Sep-21
Ritchey Road	5.39	0.91	13.38	3.35	55	Jun-03	Sep-13
SEEP	6.38	0.40	15.93	3.99	85	Aug-08	Sep-13
Tumblin Creek	5.38	2.15	8.02	1.23	162	Feb-98	Nov-21
Univ Gardens	6.15	1.56	13.63	2.25	178	May-03	Sep-21



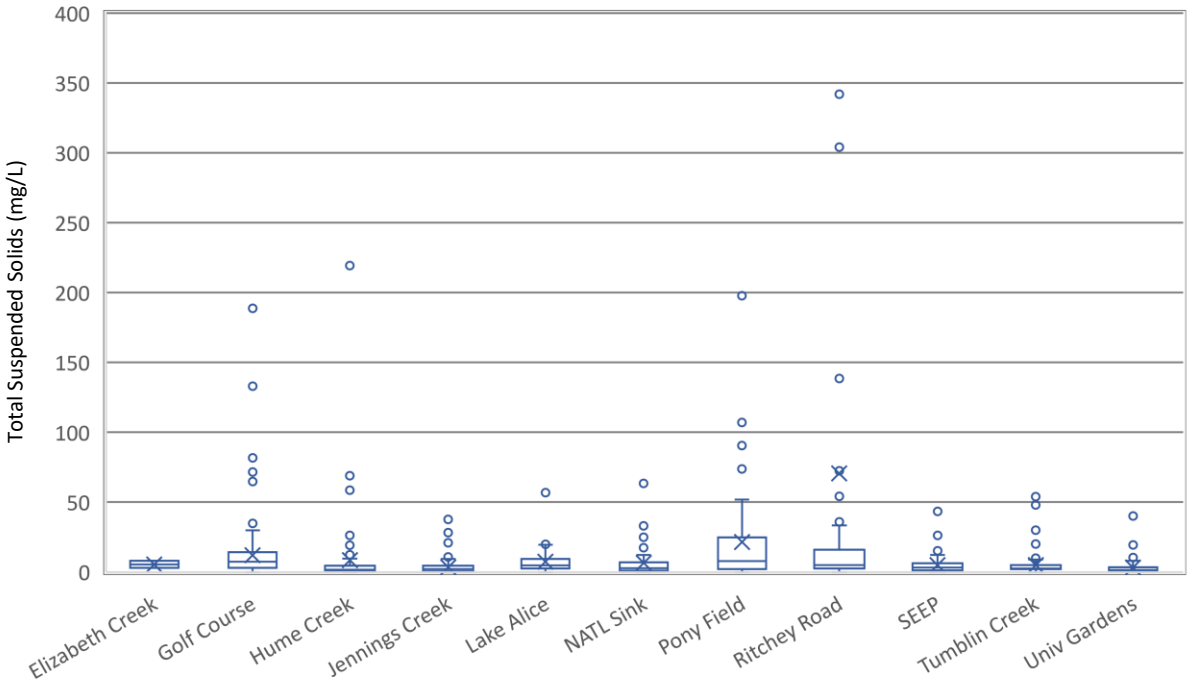
Stn Group	Average	Min	Max	StdDev	Count	Period-of-Record	
Elizabeth Creek	7.20	6.85	7.44	0.16	19	Apr-06	Oct-12
Golf Course	7.28	3.51	10.18	1.08	163	Nov-03	Jun-11
Hume Creek	7.04	4.90	9.31	0.80	86	May-03	Jul-21
Jennings Creek	6.88	2.84	8.91	0.97	403	May-03	Sep-21
Lake Alice	7.55	4.08	9.87	1.00	109	Apr-02	Sep-22
NATL Sink	6.58	3.60	8.99	1.03	50	Aug-03	Sep-13
Pony Field	6.51	3.68	8.35	1.01	62	Jun-03	Sep-21
Ritchey Road	6.49	4.49	7.85	0.92	53	Jun-03	Sep-13
SEEP	7.06	3.65	9.90	1.29	70	Aug-08	Sep-13
Tumblin Creek	7.42	2.36	8.18	0.47	162	Feb-98	Nov-21
Univ Gardens	6.91	4.18	14.77	1.14	170	May-03	Sep-21



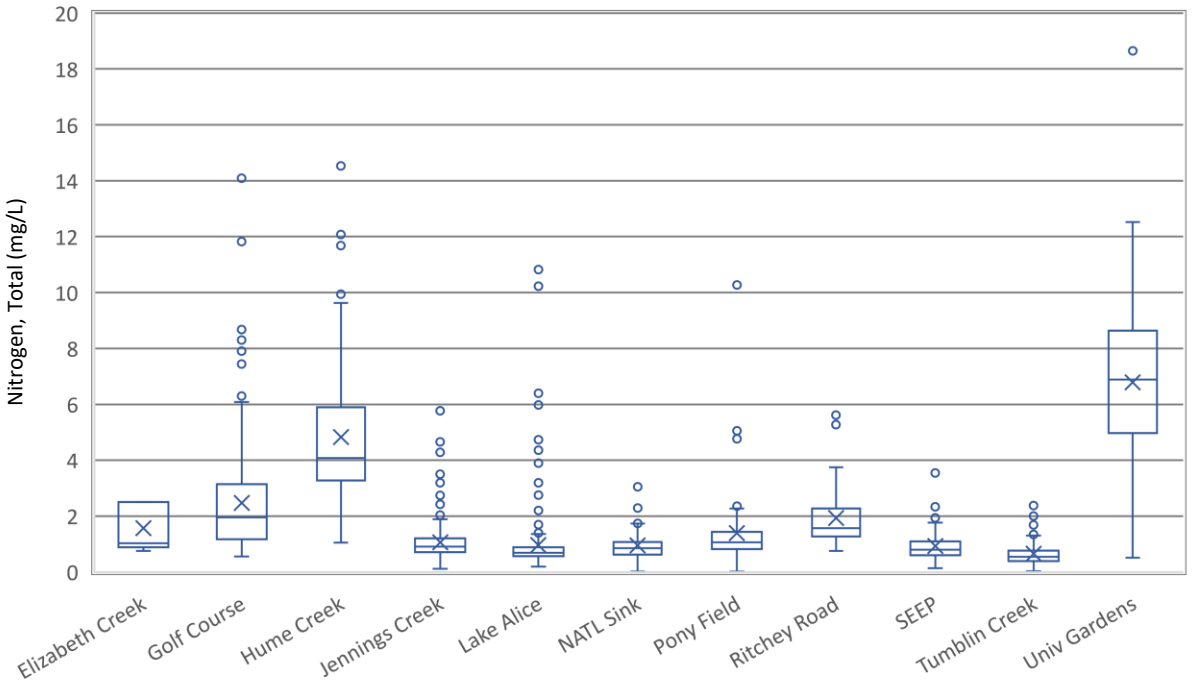
Stn Group	Average	Min	Max	StdDev	Count	Period-of-Record	
Elizabeth Creek	377.5	253.0	660.0	90.9	19	Apr-06	Oct-12
Golf Course	471.2	8.4	1590.0	300.6	117	Nov-03	Nov-11
Hume Creek	692.1	67.0	1854.0	339.5	67	May-03	Jul-21
Jennings Creek	433.9	6.0	1470.0	197.3	322	May-03	Sep-21
Lake Alice	321.5	131.0	737.0	119.7	90	Apr-02	Sep-22
NATL Sink	252.9	56.0	646.0	138.3	36	Aug-03	Sep-13
Pony Field	299.9	103.0	807.0	124.3	44	Jun-03	Sep-21
Ritchey Road	419.5	160.0	1740.0	286.8	35	Jun-03	Sep-13
SEEP	142.0	7.0	725.0	126.8	65	May-09	Sep-13
Tumblin Creek	390.7	37.8	921.0	106.9	223	Feb-98	Nov-21
Univ Gardens	436.9	76.0	940.0	169.9	130	May-03	Sep-21



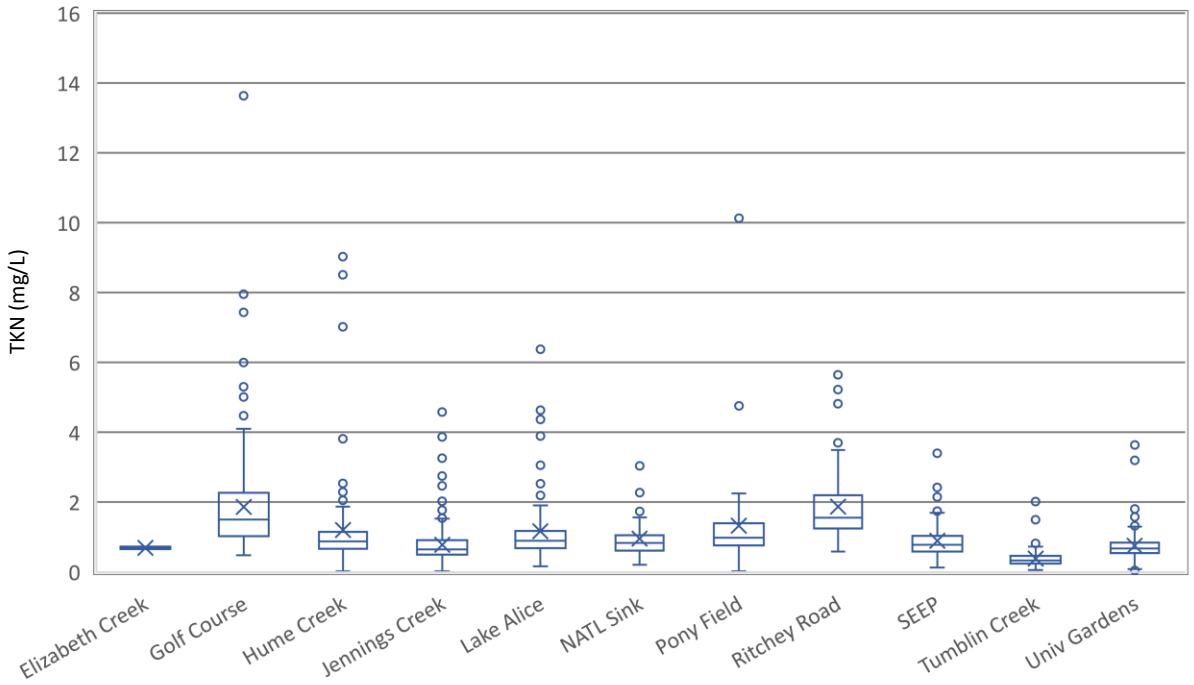
Stn Group	Average	Min	Max	StdDev	Count	Period-of-Record	
Elizabeth Creek	22.17	17.93	25.42	1.96	19	Apr-06	Oct-12
Golf Course	22.99	10.08	32.92	5.63	170	Nov-03	Nov-11
Hume Creek	21.81	12.29	29.39	4.24	91	May-03	Jul-21
Jennings Creek	21.12	8.50	29.30	4.75	418	May-03	Sep-21
Lake Alice	24.62	12.06	33.83	5.32	113	Apr-02	Sep-22
NATL Sink	20.76	9.48	27.94	5.50	52	Aug-03	Sep-13
Pony Field	20.52	10.20	28.48	5.15	64	Jun-03	Sep-21
Ritchey Road	19.94	8.57	31.39	6.20	55	Jun-03	Sep-13
SEEP	23.60	6.67	34.30	6.24	85	Aug-08	Sep-13
Tumblin Creek	23.01	12.37	31.00	3.62	162	Feb-98	Nov-21
Univ Gardens	21.13	8.10	28.50	4.62	178	May-03	Sep-21



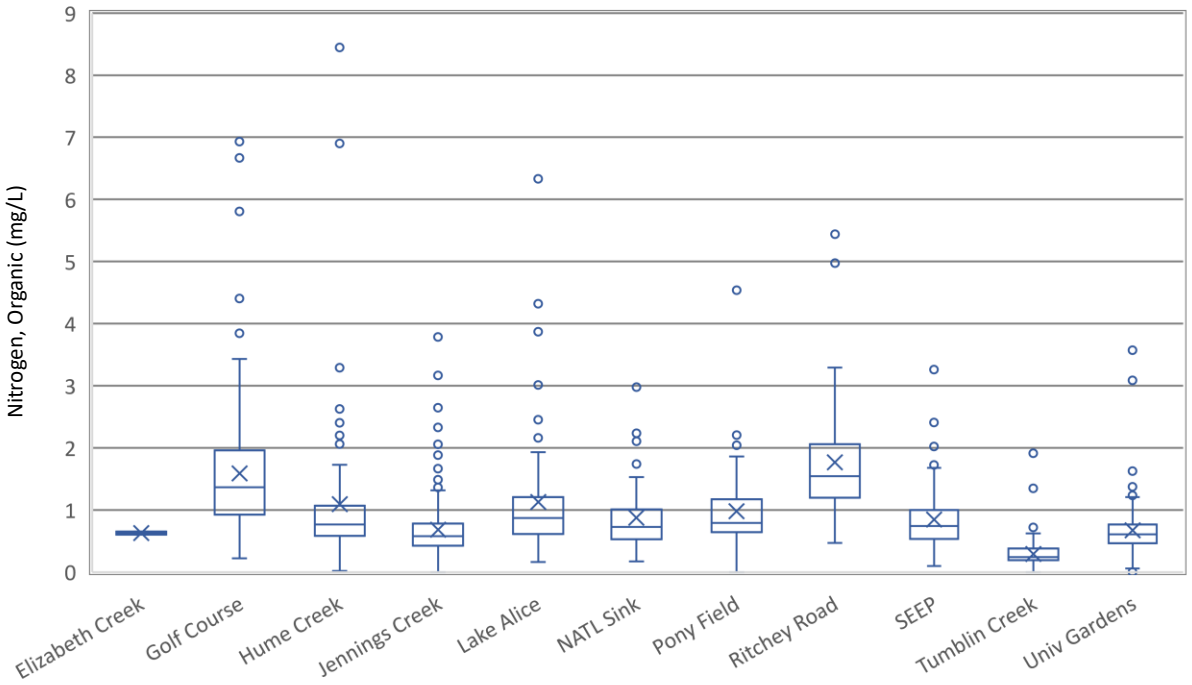
Stn Group	Average	Min	Max	StdDev	Count	Period-of-Record	
Elizabeth Creek	5.50	3.00	8.00	2.89	4	May-07	May-07
Golf Course	12.02	0.00	188.76	21.26	147	Nov-03	Jan-12
Hume Creek	8.53	0.00	219.33	25.37	98	Aug-03	Sep-13
Jennings Creek	3.52	0.00	37.72	4.70	299	Aug-03	May-18
Lake Alice	7.50	0.00	57.29	9.30	83	Oct-03	Sep-22
NATL Sink	6.50	0.00	63.43	11.33	49	Oct-03	Sep-13
Pony Field	21.45	0.00	197.83	35.30	52	Oct-03	Jul-12
Ritchey Road	70.54	0.00	2266.18	323.55	50	Nov-03	Sep-13
SEEP	5.01	0.00	43.48	6.62	69	Aug-08	Sep-13
Tumblin Creek	4.91	0.01	54.00	7.63	108	Aug-01	Nov-21
Univ Gardens	3.10	0.00	42.12	5.64	144	Aug-03	Sep-13



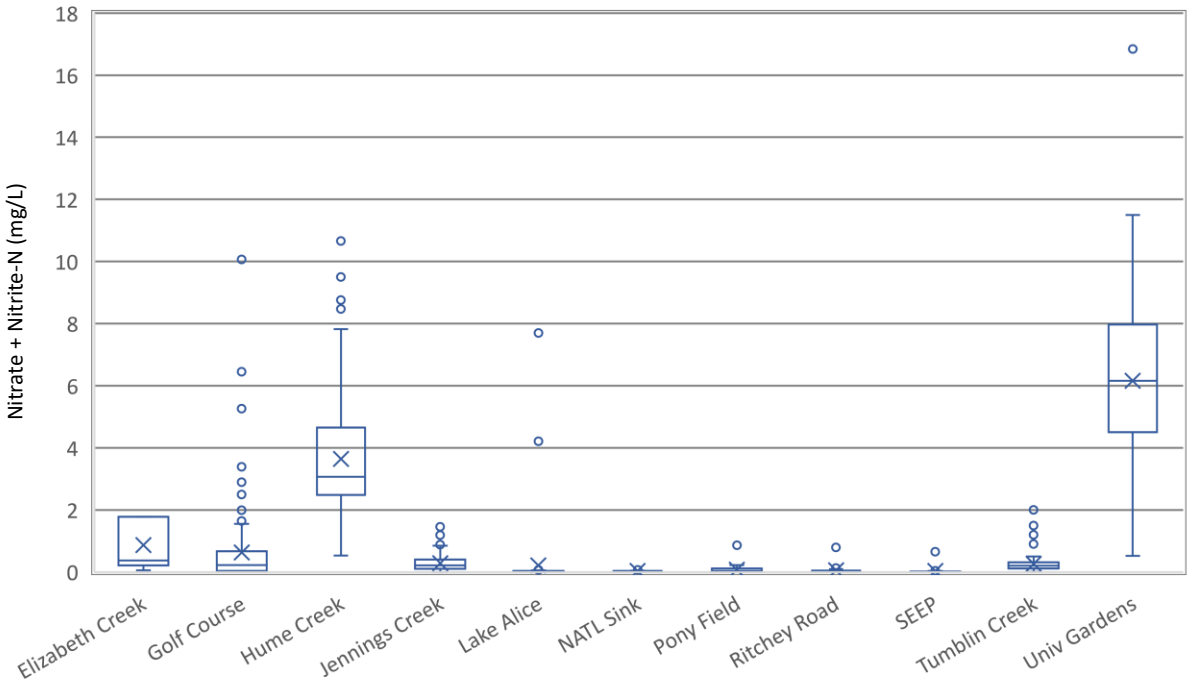
Stn Group	Average	Min	Max	StdDev	Count	Period-of-Record	
Elizabeth Creek	1.57	0.75	2.51	0.87	5	May-07	Oct-12
Golf Course	2.48	0.55	14.09	1.99	173	Nov-03	Sep-11
Hume Creek	4.82	1.05	14.76	2.49	117	Jun-03	Jul-21
Jennings Creek	1.07	0.11	5.77	0.63	384	Jun-03	Sep-21
Lake Alice	0.96	0.19	10.82	1.15	240	May-97	Sep-22
NATL Sink	0.95	0.02	3.05	0.55	59	Aug-03	Sep-13
Pony Field	1.40	0.02	10.27	1.37	65	Aug-03	Sep-21
Ritchey Road	1.93	0.75	5.65	1.06	58	Jun-03	Sep-13
SEEP	0.93	0.14	3.54	0.52	83	Aug-08	Sep-13
Tumblin Creek	0.65	0.03	2.38	0.45	107	Aug-01	Nov-21
Univ Gardens	6.78	0.52	18.65	2.65	181	Jun-03	Sep-21



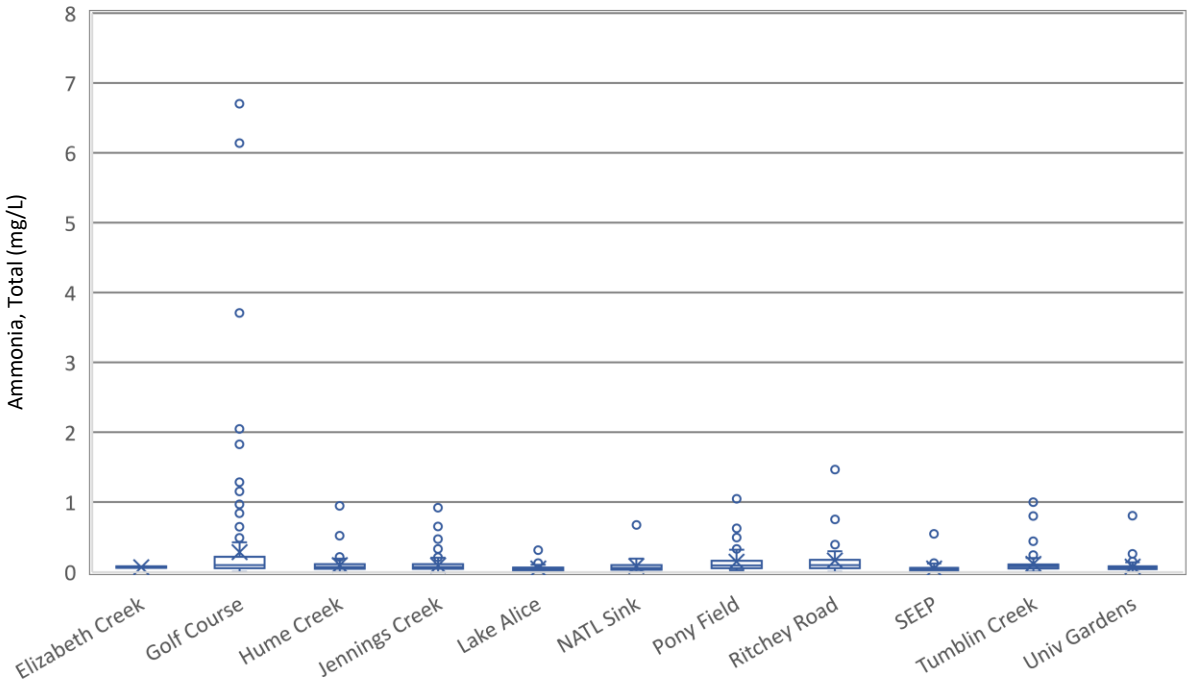
Stn Group	Average	Min	Max	StdDev	Count	Period-of-Record	
Elizabeth Creek	0.69	0.66	0.73	0.04	5	May-07	Oct-12
Golf Course	1.87	0.48	13.63	1.49	172	Nov-03	Sep-11
Hume Creek	1.21	0.02	9.03	1.28	117	Jun-03	Jul-21
Jennings Creek	0.78	0.02	4.58	0.51	383	Jun-03	Sep-21
Lake Alice	1.16	0.16	6.38	0.94	106	Jun-03	Sep-22
NATL Sink	0.95	0.20	3.04	0.53	57	Aug-03	Sep-13
Pony Field	1.32	0.02	10.13	1.36	65	Aug-03	Sep-21
Ritchey Road	1.87	0.59	5.64	1.02	58	Jun-03	Sep-13
SEEP	0.90	0.13	3.40	0.50	83	Aug-08	Sep-13
Tumblin Creek	0.39	0.06	2.02	0.30	116	Aug-01	Nov-21
Univ Gardens	0.76	0.04	3.64	0.42	180	Jun-03	Sep-21



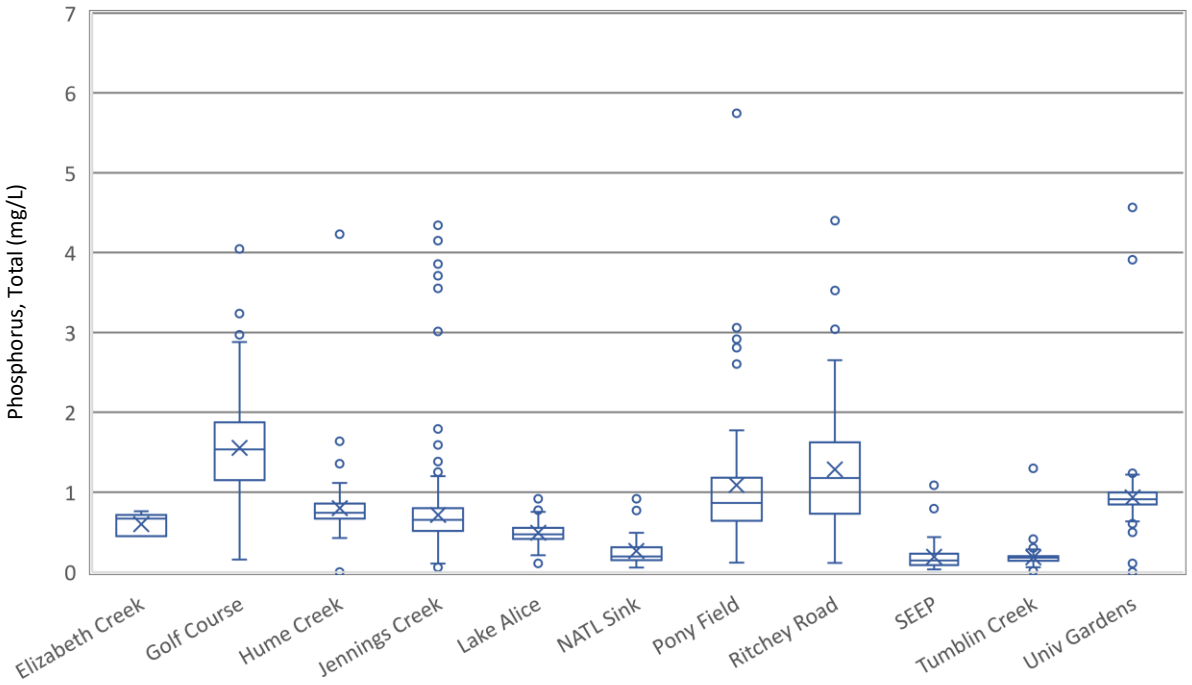
Stn Group	Average	Min	Max	StdDev	Count	Period-of-Record	
Elizabeth Creek	0.63	0.60	0.65	0.04	2	May-07	May-07
Golf Course	1.59	0.22	6.93	1.05	168	Nov-03	Sep-11
Hume Creek	1.09	0.02	8.44	1.24	75	Mar-04	Jul-21
Jennings Creek	0.68	0.00	3.79	0.46	326	Oct-03	Sep-21
Lake Alice	1.13	0.16	6.33	0.96	87	Mar-04	Sep-22
NATL Sink	0.87	0.17	2.98	0.57	43	Mar-04	Sep-13
Pony Field	0.98	0.00	4.54	0.66	53	Mar-04	Sep-21
Ritchey Road	1.77	0.47	5.44	0.98	51	Mar-04	Sep-13
SEEP	0.84	0.10	3.26	0.48	83	Aug-08	Sep-13
Tumblin Creek	0.29	0.00	1.91	0.26	89	Aug-01	Nov-21
Univ Gardens	0.67	0.00	3.57	0.43	148	Mar-04	Sep-21



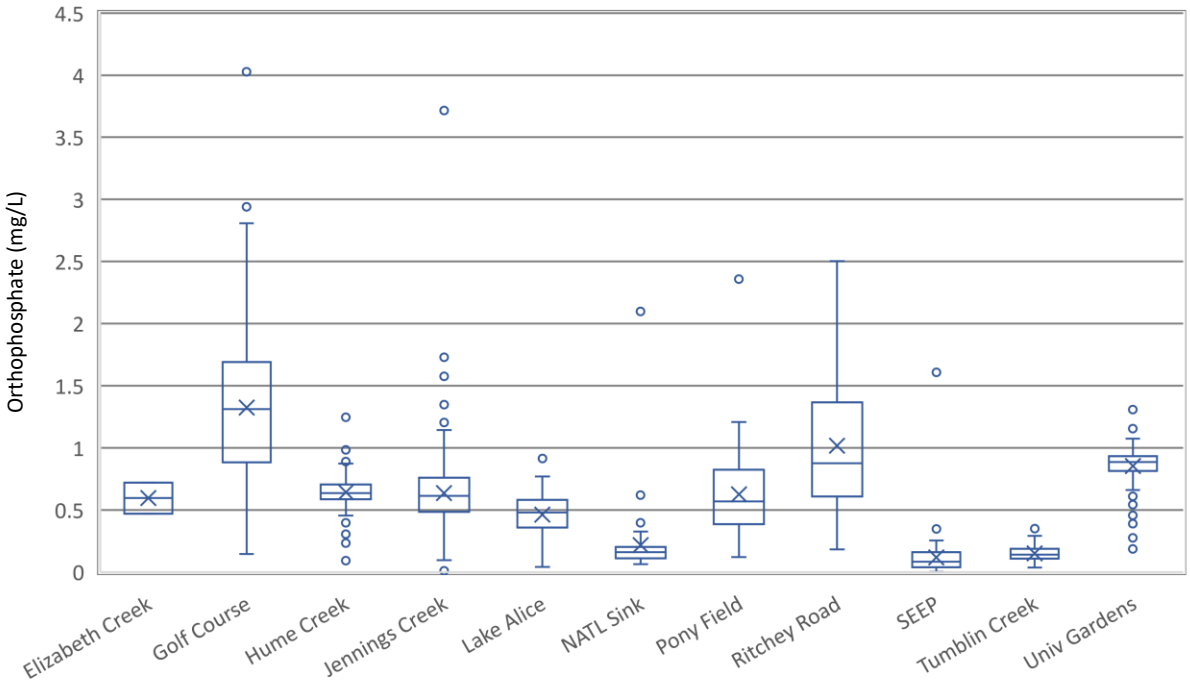
Stn Group	Average	Min	Max	StdDev	Count	Period-of-Record	
Elizabeth Creek	0.87	0.06	1.78	0.84	5	May-07	Oct-12
Golf Course	0.63	0.00	10.06	1.19	175	Nov-03	Jan-12
Hume Creek	3.64	0.53	10.66	1.85	118	Jun-03	Jul-21
Jennings Creek	0.29	0.00	1.69	0.26	387	Jun-03	Sep-21
Lake Alice	0.22	0.00	7.77	1.12	106	Jun-03	Sep-22
NATL Sink	0.04	0.00	0.22	0.05	55	Aug-03	Sep-13
Pony Field	0.08	0.00	0.86	0.12	63	Aug-03	Sep-21
Ritchey Road	0.06	0.00	0.80	0.12	56	Jun-03	Sep-13
SEEP	0.04	0.00	0.65	0.08	86	Aug-08	Sep-13
Tumblin Creek	0.26	0.00	2.00	0.25	142	Aug-01	Nov-21
Univ Gardens	6.16	0.52	16.84	2.51	183	Jun-03	Sep-21



Stn Group	Average	Min	Max	StdDev	Count	Period-of-Record	
Elizabeth Creek	0.07	0.06	0.08	0.01	2	May-07	May-07
Golf Course	0.28	0.00	6.70	0.76	177	Nov-03	Sep-11
Hume Creek	0.10	0.00	0.95	0.11	104	Mar-04	Jul-21
Jennings Creek	0.10	0.00	0.92	0.10	332	Oct-03	Sep-21
Lake Alice	0.05	0.00	0.31	0.05	92	Mar-04	Sep-22
NATL Sink	0.09	0.00	0.68	0.10	50	Mar-04	Sep-13
Pony Field	0.15	0.02	1.05	0.17	55	Mar-04	Sep-21
Ritchey Road	0.16	0.00	1.47	0.24	53	Mar-04	Sep-13
SEEP	0.05	0.00	0.54	0.07	83	Aug-08	Sep-13
Tumblin Creek	0.12	0.01	1.00	0.17	94	Aug-01	Nov-21
Univ Gardens	0.08	0.00	0.83	0.09	158	Mar-04	Sep-21

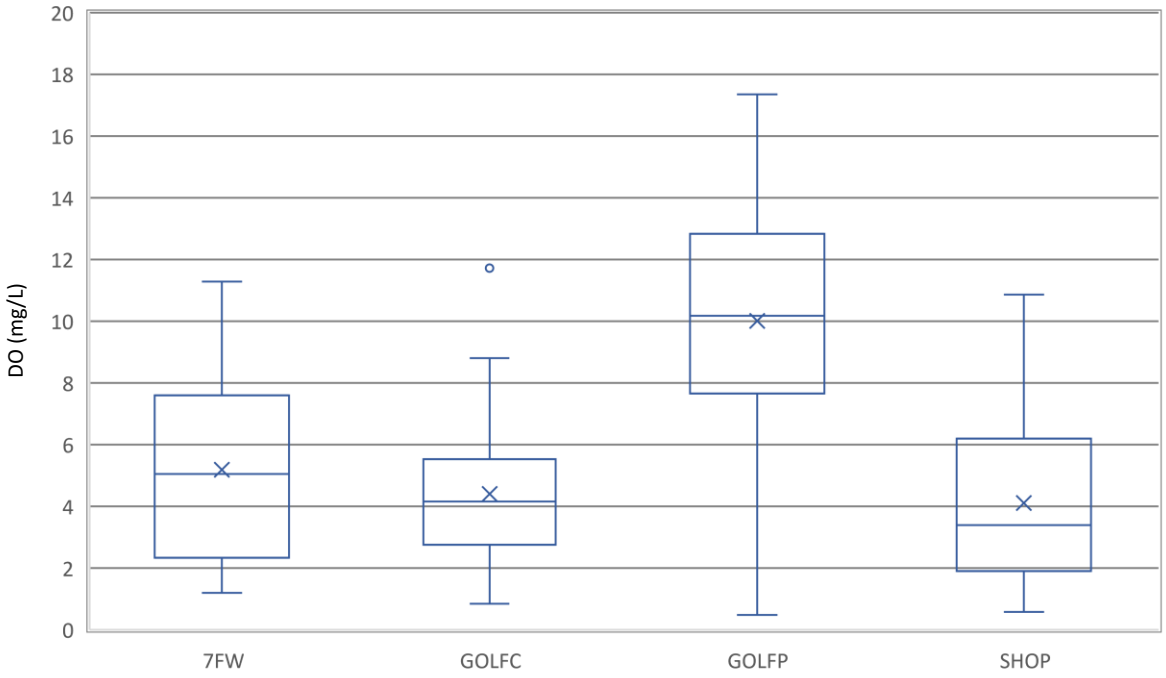


Stn Group	Average	Min	Max	StdDev	Count	Period-of-Record	
Elizabeth Creek	0.600	0.450	0.760	0.142	5	May-07	Oct-12
Golf Course	1.554	0.158	4.046	0.620	175	Nov-03	Sep-11
Hume Creek	0.799	0.002	4.231	0.372	117	Jun-03	Jul-21
Jennings Creek	0.716	0.058	4.343	0.451	385	Jun-03	Sep-21
Lake Alice	0.493	0.108	0.969	0.132	242	May-97	Sep-22
NATL Sink	0.263	0.057	0.919	0.190	57	Aug-03	Sep-13
Pony Field	1.090	0.117	5.747	0.876	65	Aug-03	Sep-21
Ritchey Road	1.284	0.113	4.399	0.799	59	Jun-03	Sep-13
SEEP	0.190	0.031	1.115	0.187	78	Aug-08	Sep-13
Tumblin Creek	0.182	0.010	1.300	0.119	113	Aug-01	Apr-21
Univ Gardens	0.934	0.001	4.567	0.403	179	Jun-03	Sep-21

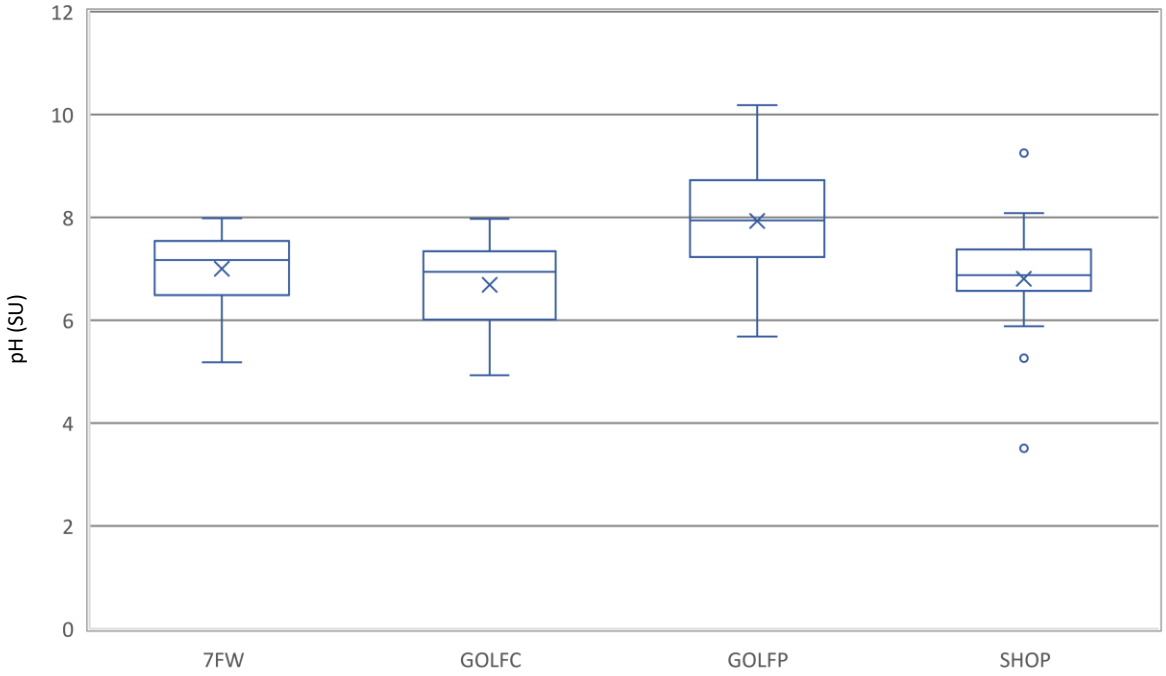


Stn Group	Average	Min	Max	StdDev	Count	Period-of-Record	
Elizabeth Creek	0.595	0.470	0.720	0.177	2	May-07	May-07
Golf Course	1.323	0.145	4.028	0.606	174	Nov-03	Sep-11
Hume Creek	0.643	0.092	1.246	0.152	102	Oct-04	Jul-21
Jennings Creek	0.636	0.011	3.715	0.283	322	Oct-04	Sep-21
Lake Alice	0.463	0.040	0.914	0.167	91	Oct-04	Sep-22
NATL Sink	0.217	0.063	2.098	0.301	46	Oct-04	Sep-13
Pony Field	0.626	0.121	2.359	0.364	53	Oct-04	Sep-21
Ritchey Road	1.016	0.181	2.502	0.538	51	Oct-04	Sep-13
SEEP	0.119	0.001	1.608	0.186	78	Aug-08	Sep-13
Tumblin Creek	0.150	0.036	0.350	0.060	119	Aug-01	Nov-21
Univ Gardens	0.854	0.187	1.308	0.150	152	Oct-04	Sep-21

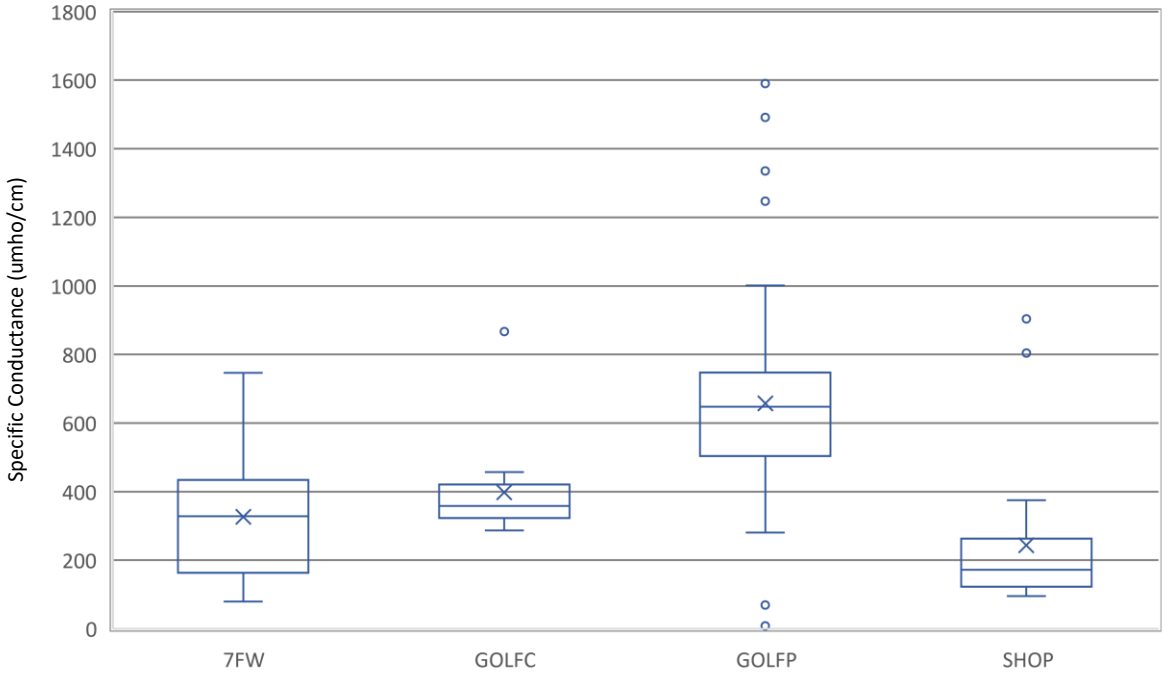
Golf Course Water Quality Box Plots by Station Detail



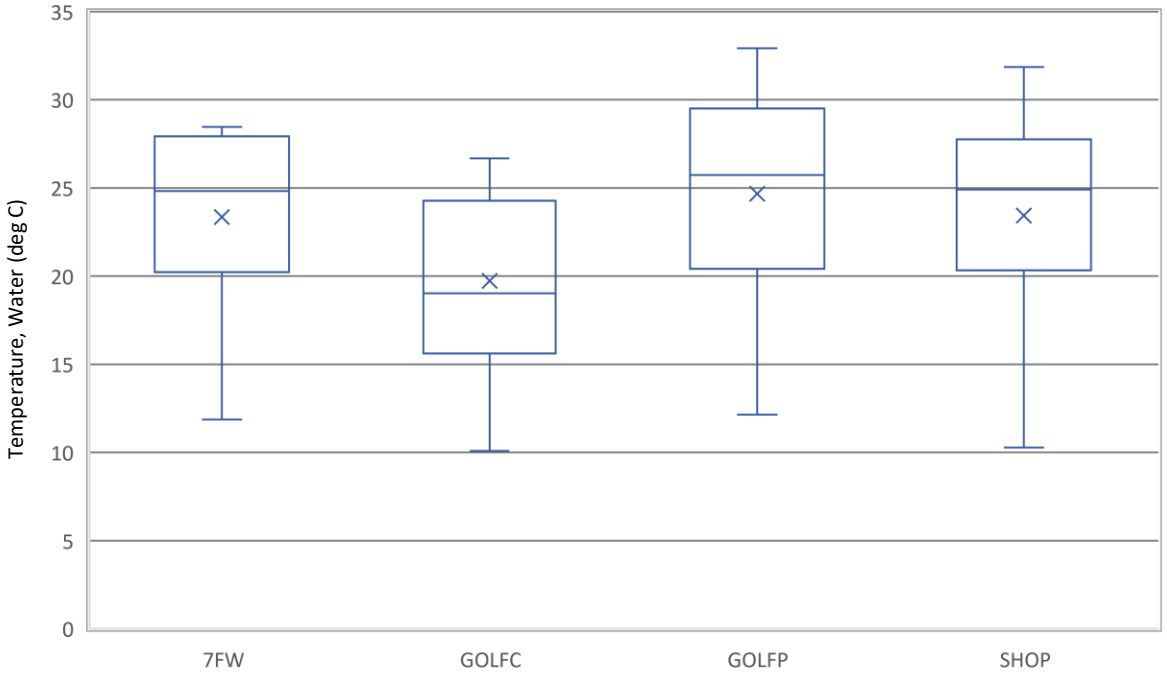
Stn ID	Average	Min	Max	StdDev	Count	Period-of-Record	
7FW	5.19	1.20	11.28	3.08	18	Nov-03	Jun-11
GOLFC	4.40	0.84	11.72	2.15	45	Nov-03	Aug-10
GOLFP	10.01	0.48	17.35	3.78	75	Nov-03	Nov-11
SHOP	4.10	0.58	10.86	2.84	32	Nov-03	Jun-11



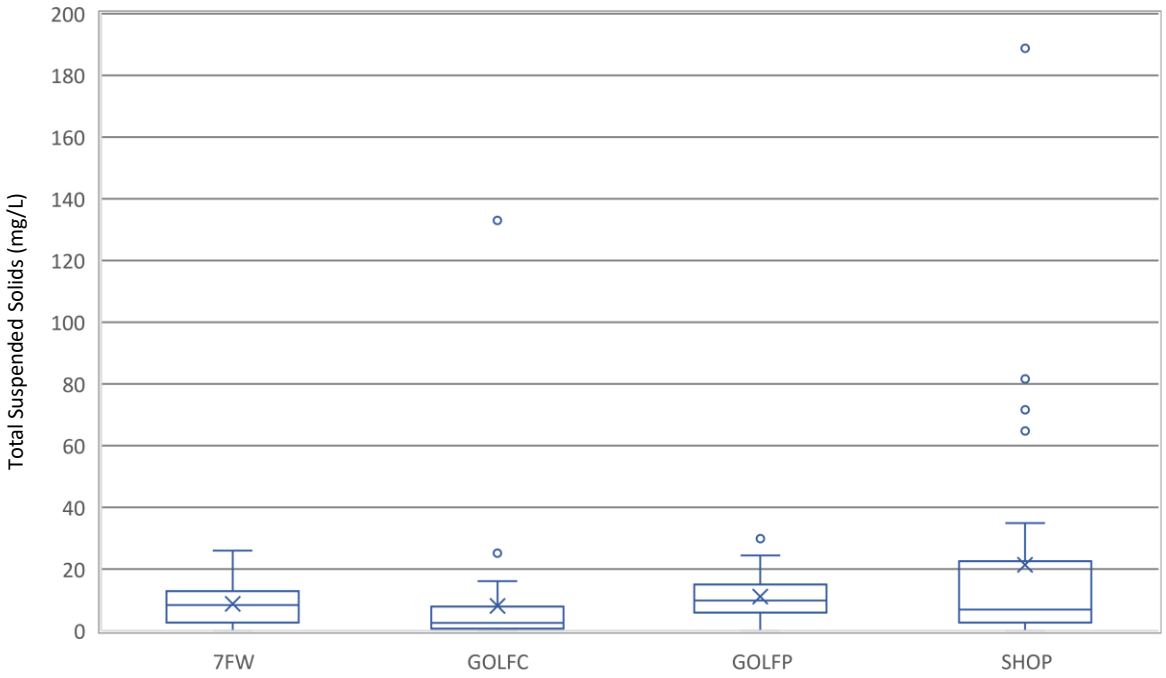
Stn ID	Average	Min	Max	StdDev	Count	Period-of-Record	
7FW	7.00	5.18	7.98	0.70	18	Nov-03	Jun-11
GOLFC	6.69	4.93	7.97	0.85	43	Nov-03	Aug-10
GOLFP	7.93	5.68	10.18	0.92	70	Nov-03	Jun-11
SHOP	6.81	3.51	9.25	1.11	32	Nov-03	Jun-11



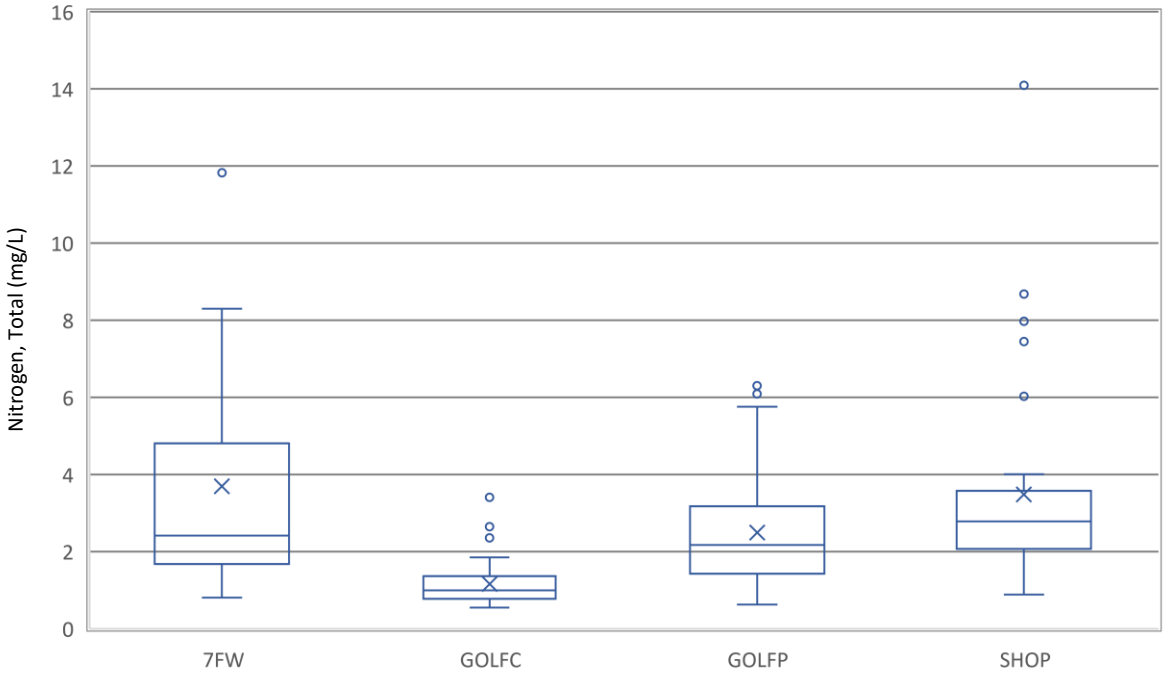
Stn ID	Average	Min	Max	StdDev	Count	Period-of-Record	
7FW	326.47	79.00	746.00	185.76	15	Nov-03	Jun-11
GOLFC	397.61	287.00	877.00	141.51	28	Nov-03	Aug-10
GOLFP	656.85	8.41	1590.00	319.41	51	Nov-03	Nov-11
SHOP	243.52	95.00	904.00	206.71	23	Nov-03	Jun-11



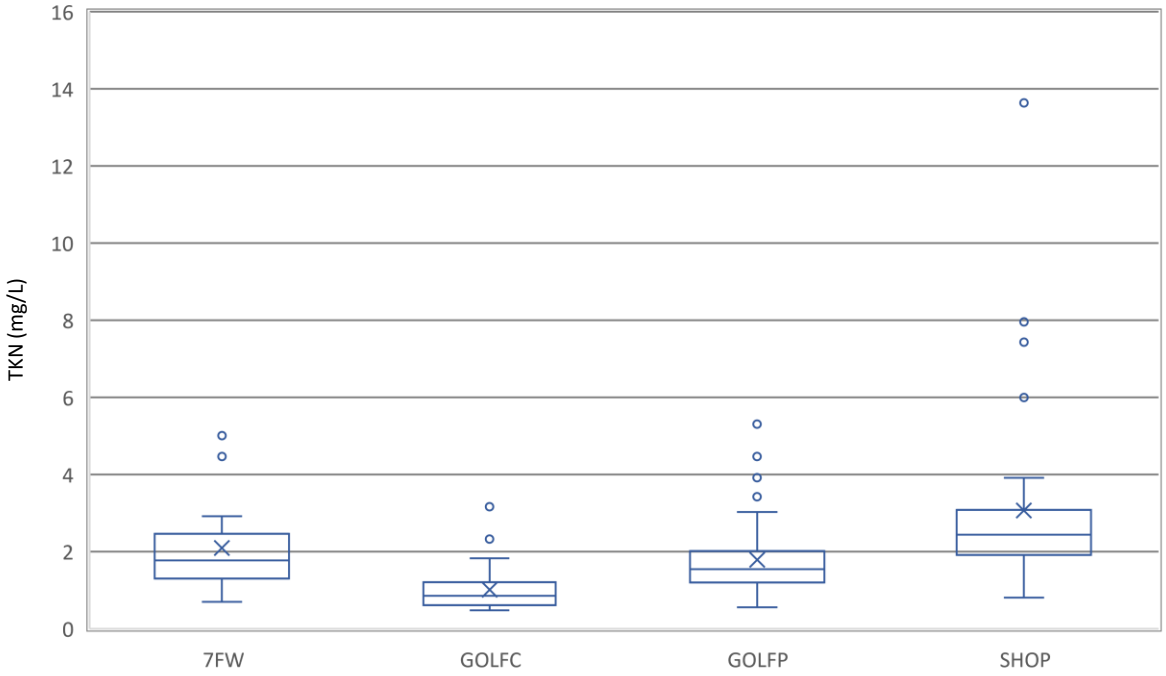
Stn ID	Average	Min	Max	StdDev	Count	Period-of-Record	
7FW	23.34	11.87	28.46	5.03	18	Nov-03	Jun-11
GOLFC	19.73	10.08	26.68	4.58	45	Nov-03	Aug-10
GOLFP	24.67	12.14	32.92	5.59	75	Nov-03	Nov-11
SHOP	23.44	10.27	31.85	5.68	32	Nov-03	Jun-11



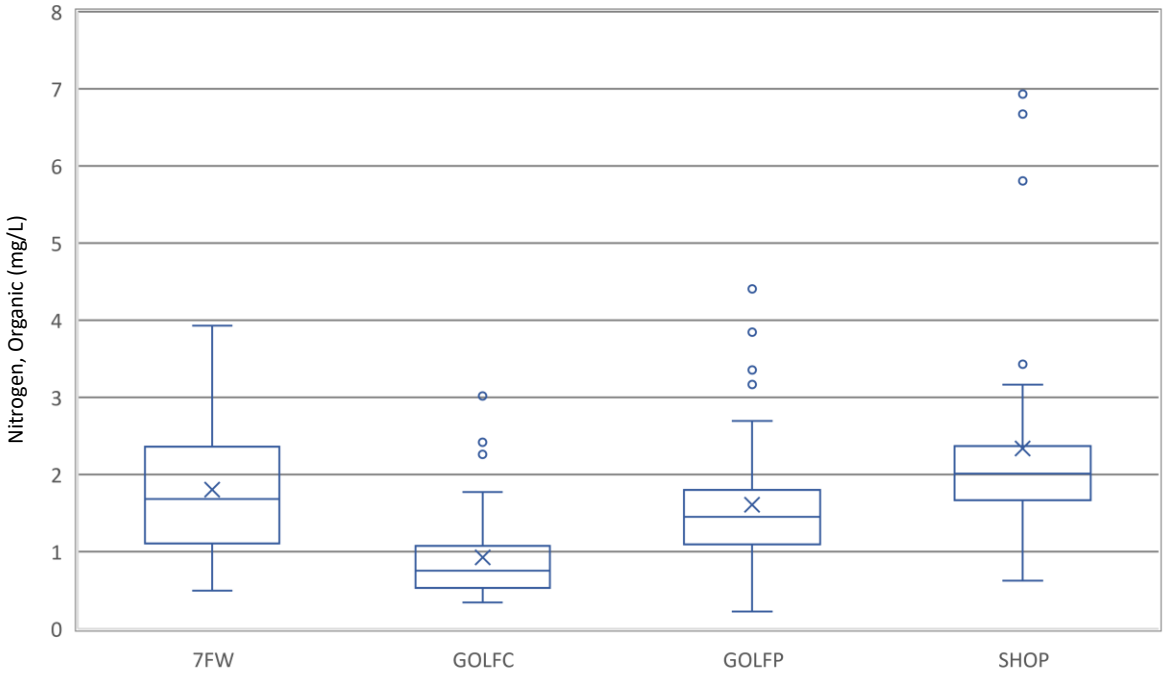
Stn ID	Average	Min	Max	StdDev	Count	Period-of-Record	
7FW	8.69	0.00	26.00	6.71	16	Nov-03	Aug-08
GOLFC	8.08	0.00	132.96	21.07	40	Nov-03	Aug-10
GOLFP	11.04	0.00	29.83	6.12	62	Nov-03	Jan-12
SHOP	21.40	0.00	188.76	38.87	29	Nov-03	Aug-10



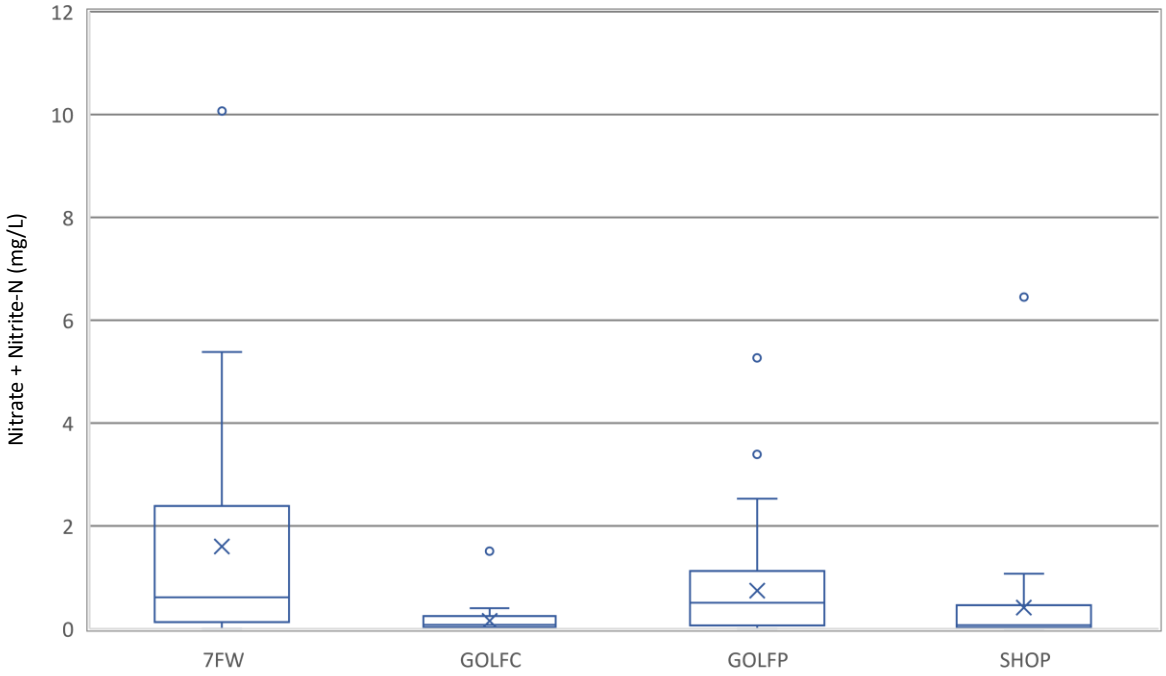
Stn ID	Average	Min	Max	StdDev	Count	Period-of-Record	
7FW	3.70	0.81	11.83	2.85	20	Nov-03	Jun-11
GOLFC	1.16	0.55	3.41	0.60	45	Nov-03	Aug-10
GOLFP	2.49	0.63	6.48	1.38	75	Nov-03	Sep-11
SHOP	3.48	0.88	14.09	2.67	33	Nov-03	Jun-11



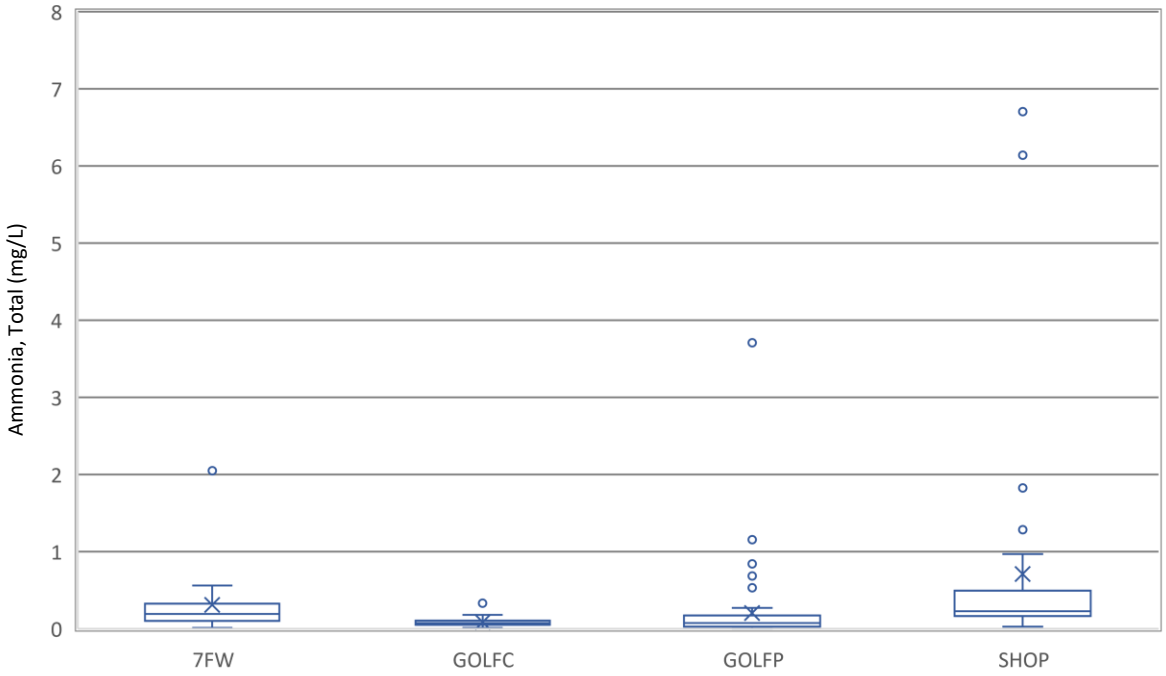
Stn ID	Average	Min	Max	StdDev	Count	Period-of-Record	
7FW	2.10	0.70	5.01	1.10	20	Nov-03	Jun-11
GOLFC	1.01	0.48	3.17	0.56	45	Nov-03	Aug-10
GOLFP	1.79	0.55	5.30	0.94	74	Nov-03	Sep-11
SHOP	3.07	0.81	13.63	2.48	33	Nov-03	Jun-11



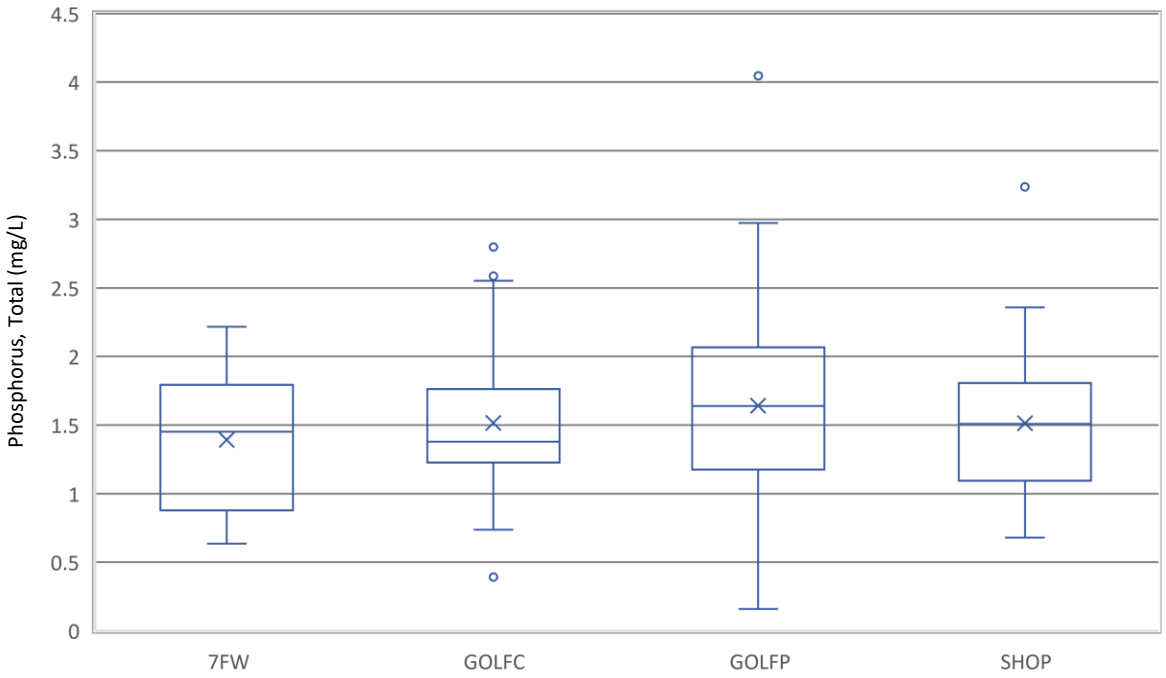
Stn ID	Average	Min	Max	StdDev	Count	Period-of-Record	
7FW	1.80	0.49	3.93	0.85	19	Nov-03	Jun-11
GOLFC	0.92	0.34	3.02	0.56	44	Nov-03	Aug-10
GOLFP	1.61	0.22	4.42	0.83	73	Nov-03	Sep-11
SHOP	2.34	0.62	6.93	1.48	32	Nov-03	Jun-11



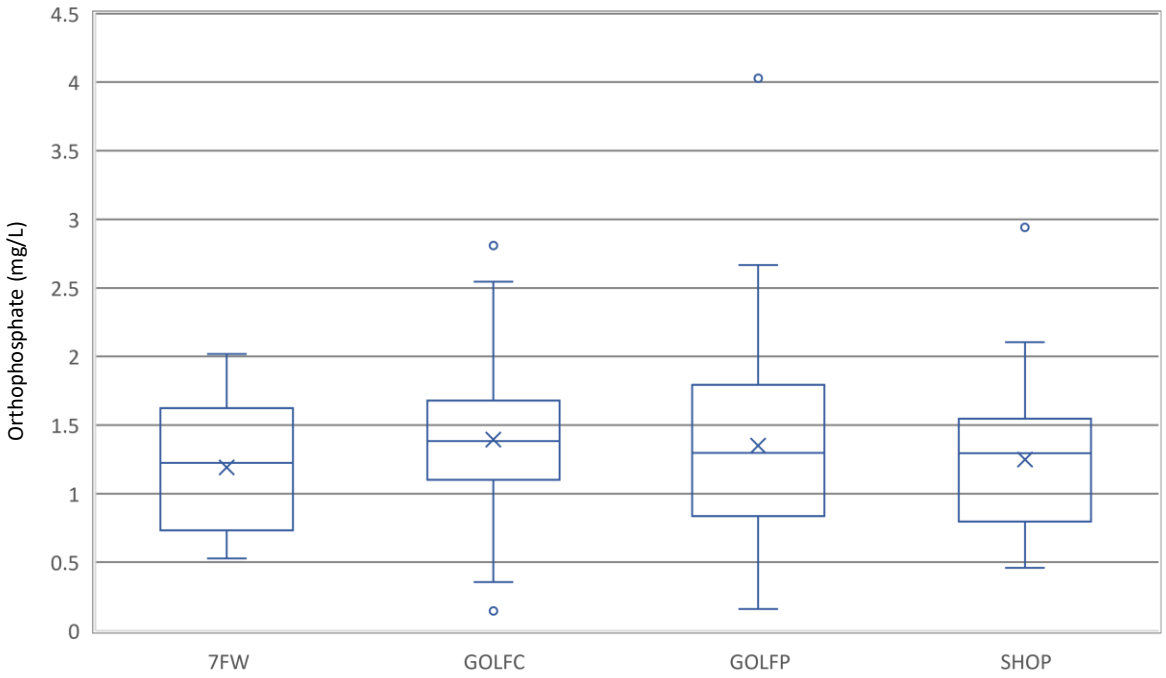
Stn ID	Average	Min	Max	StdDev	Count	Period-of-Record	
7FW	1.60	0.00	10.06	2.45	20	Nov-03	Jun-11
GOLFC	0.15	0.01	1.51	0.24	45	Nov-03	Aug-10
GOLFP	0.74	0.00	5.27	0.89	77	Nov-03	Jan-12
SHOP	0.41	0.00	6.45	1.12	33	Nov-03	Jun-11



Stn ID	Average	Min	Max	StdDev	Count	Period-of-Record	
7FW	0.31	0.01	2.05	0.43	21	Nov-03	Jun-11
GOLFC	0.09	0.01	0.33	0.06	47	Nov-03	Aug-10
GOLFP	0.20	0.00	3.71	0.47	75	Nov-03	Sep-11
SHOP	0.71	0.03	6.70	1.50	34	Nov-03	Jun-11

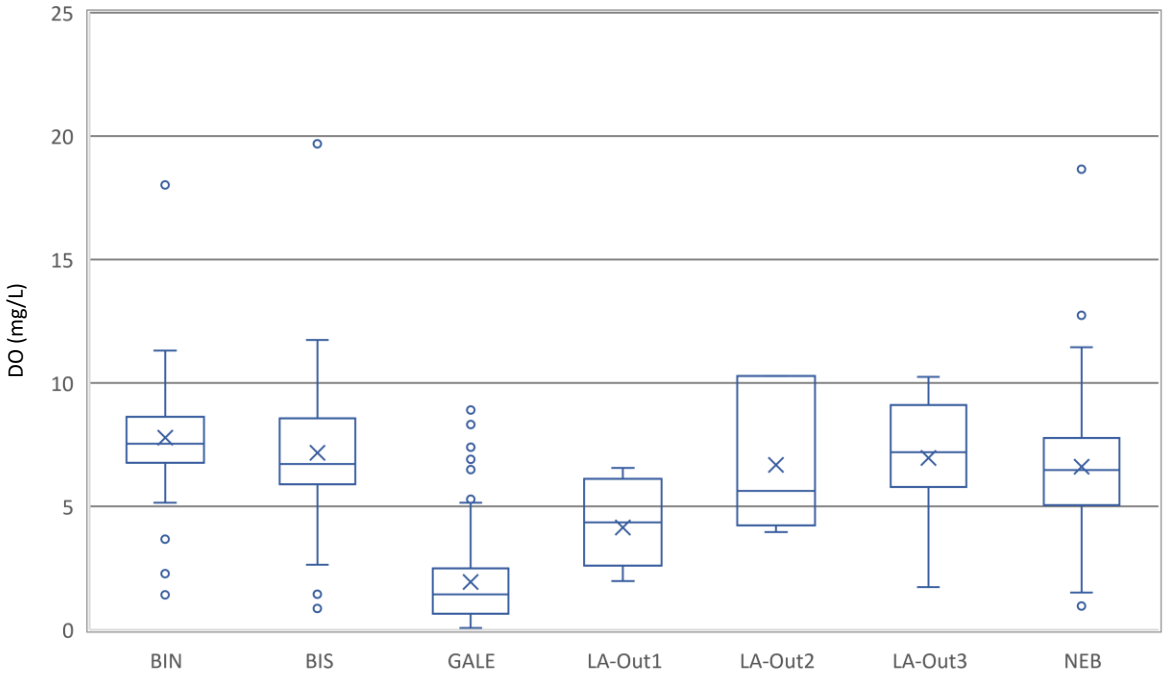


Stn ID	Average	Min	Max	StdDev	Count	Period-of-Record	
7FW	1.39	0.64	2.22	0.51	21	Nov-03	Jun-11
GOLFC	1.52	0.39	2.83	0.52	45	Nov-03	Aug-10
GOLFP	1.64	0.16	4.05	0.73	75	Nov-03	Sep-11
SHOP	1.51	0.68	3.24	0.52	34	Nov-03	Jun-11

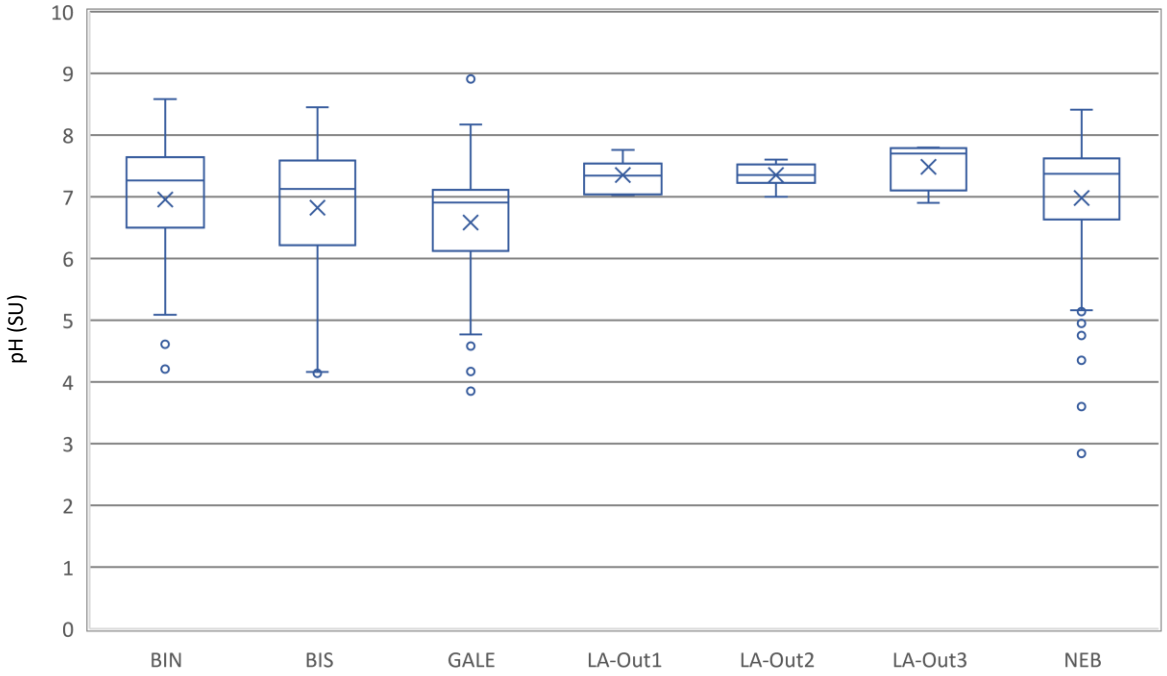


Stn ID	Average	Min	Max	StdDev	Count	Period-of-Record	
7FW	1.19	0.53	2.02	0.48	21	Nov-03	Jun-11
GOLFC	1.39	0.15	2.81	0.52	46	Nov-03	Aug-10
GOLFP	1.35	0.16	4.03	0.71	74	Nov-03	Sep-11
SHOP	1.25	0.46	2.94	0.54	33	Nov-03	Jun-11

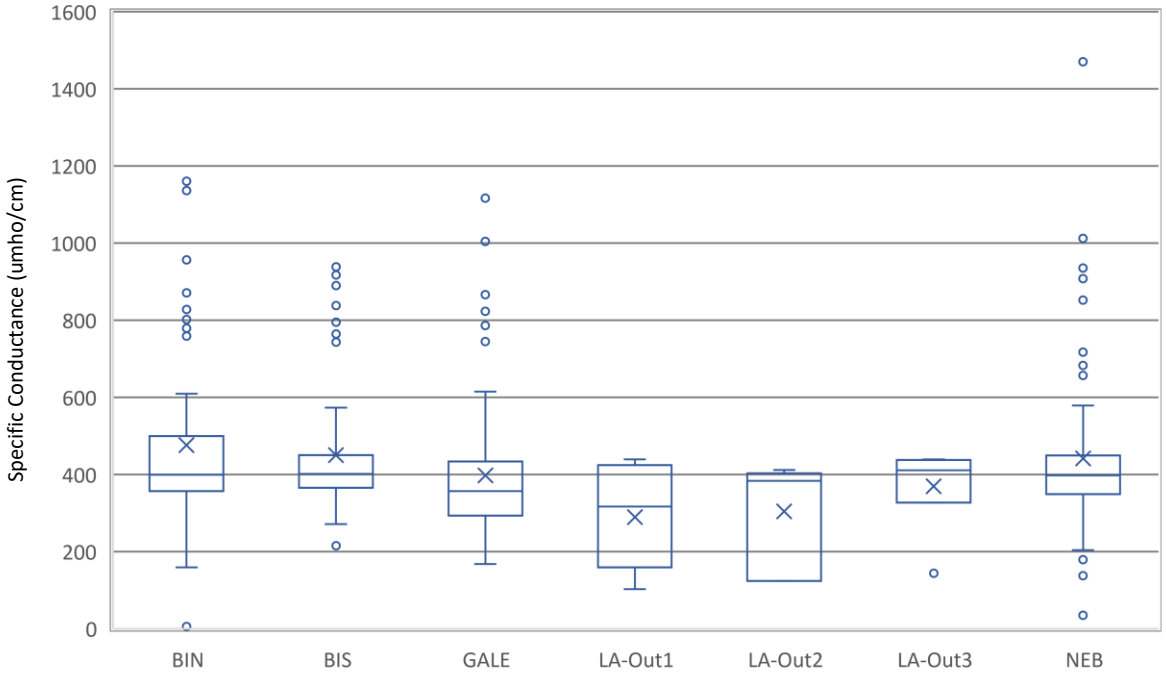
Jennings Creek Water Quality Box Plots by Station Detail



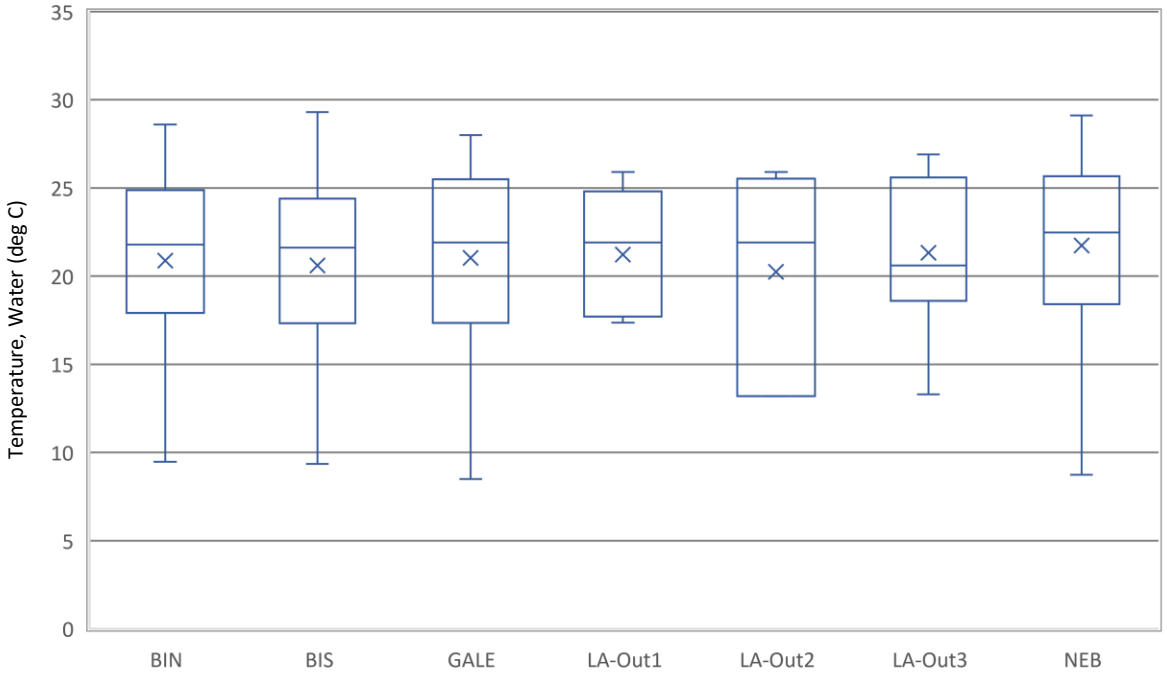
Stn ID	Average	Min	Max	StdDev	Count	Period-of-Record	
BIN	7.79	1.41	18.02	2.07	89	May-03	Sep-21
BIS	7.17	0.86	19.69	2.36	90	May-03	Sep-21
GALE	1.93	0.08	8.90	1.82	89	Jun-03	Sep-21
LA-Out1	4.14	1.97	6.56	1.76	7	Sep-16	May-18
LA-Out2	6.68	3.96	10.28	2.87	6	Feb-11	Nov-11
LA-Out3	6.96	1.73	10.24	2.76	7	Feb-11	May-18
NEB	6.60	0.96	18.65	2.29	126	Jun-03	Sep-21



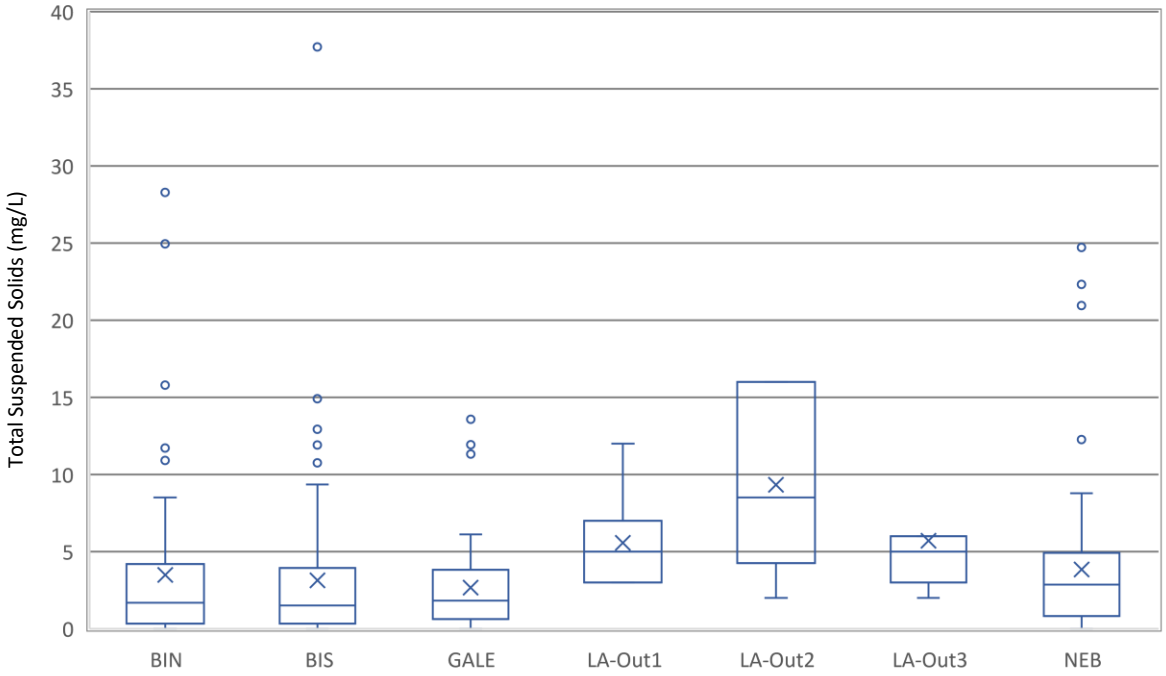
Stn ID	Average	Min	Max	StdDev	Count	Period-of-Record	
BIN	6.95	4.21	8.58	0.97	86	May-03	Sep-21
BIS	6.82	4.14	8.45	0.99	88	May-03	Sep-21
GALE	6.58	3.85	8.91	0.96	86	Jun-03	Sep-21
LA-Out1	7.35	7.03	7.76	0.27	7	Sep-16	May-18
LA-Out2	7.35	7.00	7.60	0.21	6	Feb-11	Nov-11
LA-Out3	7.49	6.90	7.80	0.36	7	Feb-11	May-18
NEB	6.98	2.84	8.41	1.00	123	Jun-03	Sep-21



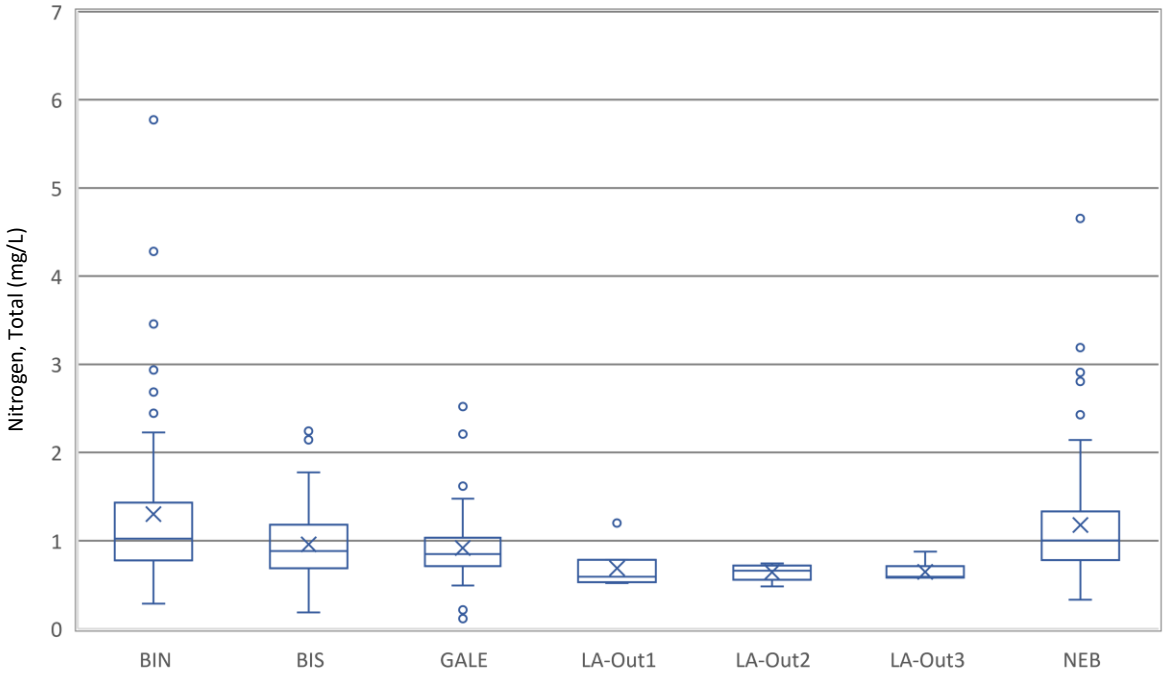
Stn ID	Average	Min	Max	StdDev	Count	Period-of-Record	
BIN	475.7	6.0	1160.0	223.9	65	May-03	Sep-21
BIS	450.3	215.0	938.0	162.3	68	May-03	Sep-21
GALE	397.7	168.0	1116.0	185.5	66	Jun-03	Sep-21
LA-Out1	289.1	103.0	439.0	140.3	7	Sep-16	May-18
LA-Out2	304.5	124.0	412.0	140.3	6	Feb-11	Nov-11
LA-Out3	369.7	144.0	439.0	106.5	7	Feb-11	May-18
NEB	441.8	35.0	1470.0	209.9	103	Jun-03	Sep-21



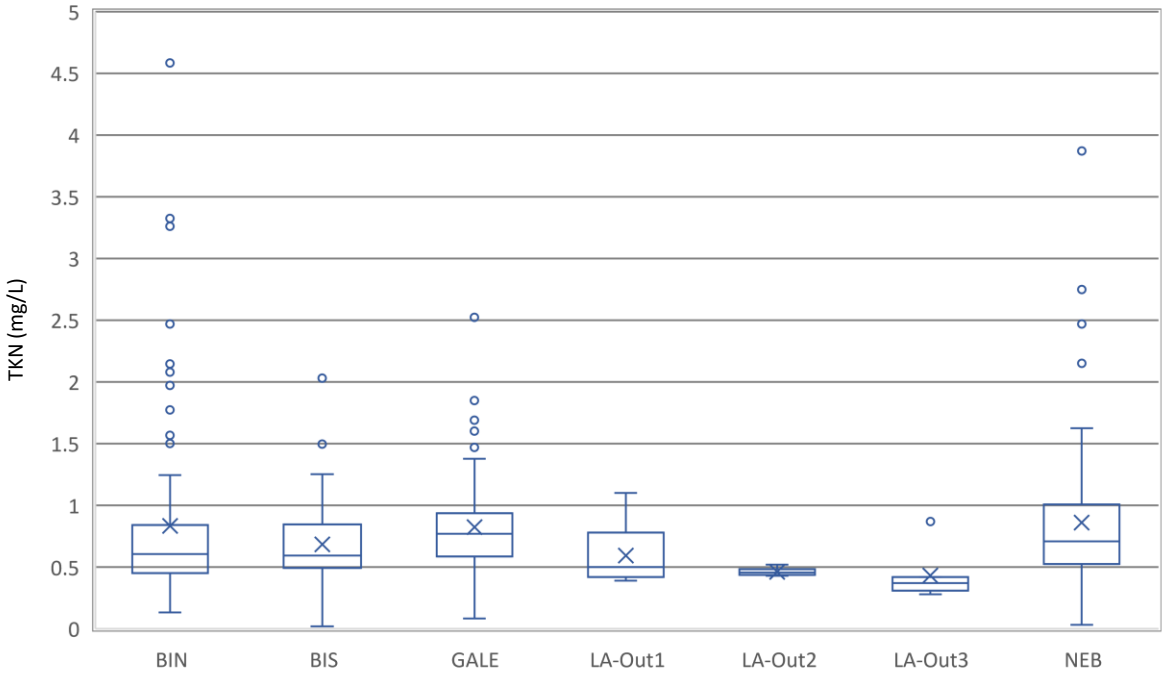
Stn ID	Average	Min	Max	StdDev	Count	Period-of-Record	
BIN	20.88	9.47	28.59	4.64	89	May-03	Sep-21
BIS	20.61	9.35	29.30	4.65	91	May-03	Sep-21
GALE	21.03	8.50	28.00	5.19	91	Jun-03	Sep-21
LA-Out1	21.22	17.36	25.90	3.55	7	Sep-16	May-18
LA-Out2	20.25	13.20	25.90	6.00	6	Feb-11	Nov-11
LA-Out3	21.33	13.30	26.90	4.78	7	Feb-11	May-18
NEB	21.74	8.73	29.12	4.60	127	Jun-03	Sep-21



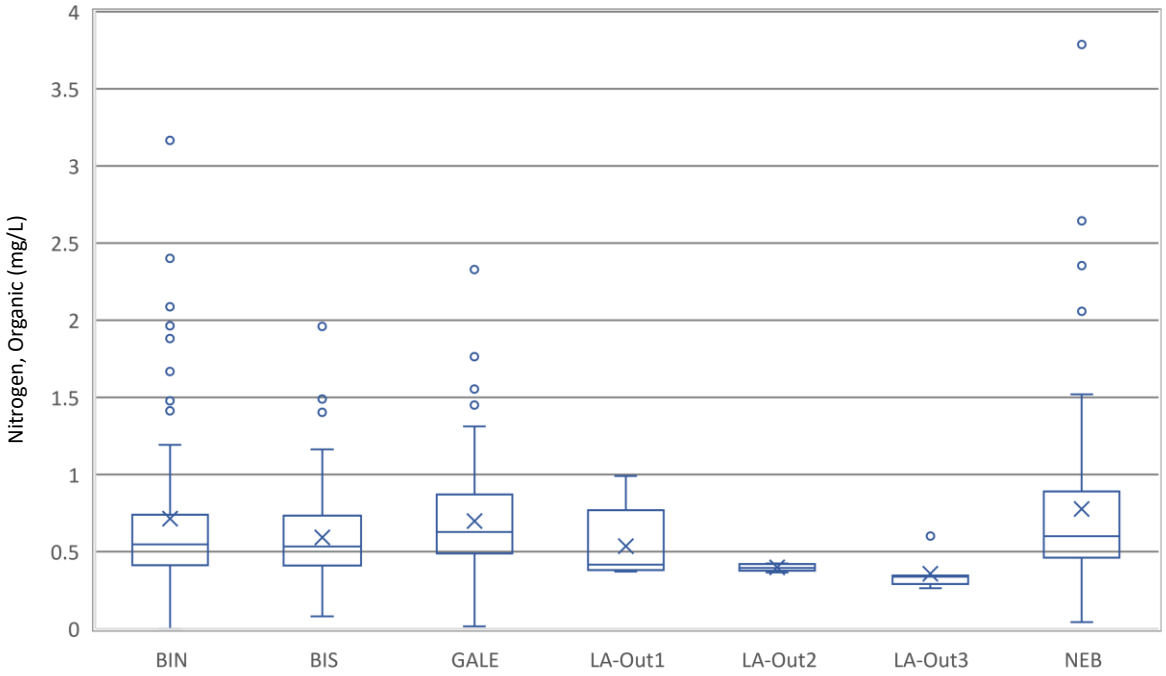
Stn ID	Average	Min	Max	StdDev	Count	Period-of-Record	
BIN	3.48	0.00	28.28	5.32	69	Aug-03	Sep-13
BIS	3.14	0.00	37.72	5.32	70	Aug-03	Sep-13
GALE	2.67	0.00	13.58	2.75	70	Aug-03	Sep-13
LA-Out1	5.57	3.00	12.00	3.26	7	Sep-16	May-18
LA-Out2	9.33	2.00	16.00	5.92	6	Feb-11	Nov-11
LA-Out3	5.71	2.00	14.00	3.95	7	Feb-11	May-18
NEB	3.85	0.00	24.72	4.71	70	Aug-03	Sep-13



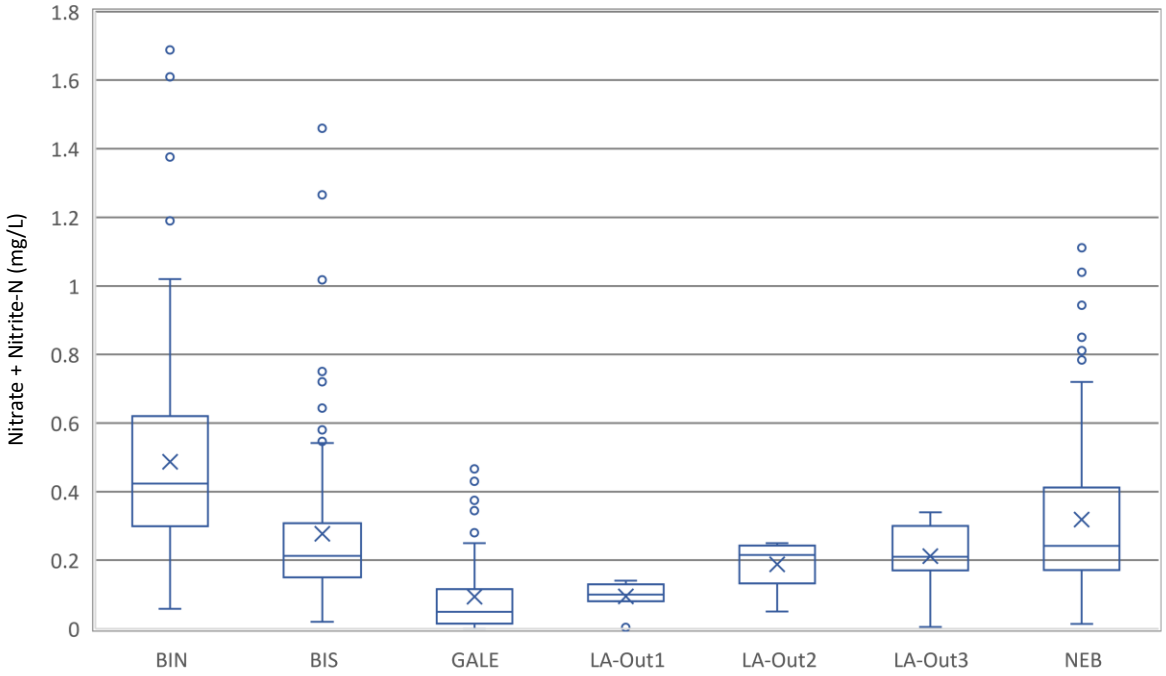
Stn ID	Average	Min	Max	StdDev	Count	Period-of-Record	
BIN	1.30	0.28	5.77	0.88	89	Jun-03	Sep-21
BIS	0.96	0.18	2.30	0.42	92	Jun-03	Sep-21
GALE	0.92	0.11	2.52	0.36	92	Jun-03	Sep-21
LA-Out1	0.69	0.52	1.20	0.24	7	Sep-16	May-18
LA-Out2	0.64	0.48	0.74	0.10	5	Feb-11	Nov-11
LA-Out3	0.64	0.58	0.88	0.11	7	Feb-11	May-18
NEB	1.18	0.33	4.65	0.67	92	Jun-03	Sep-21



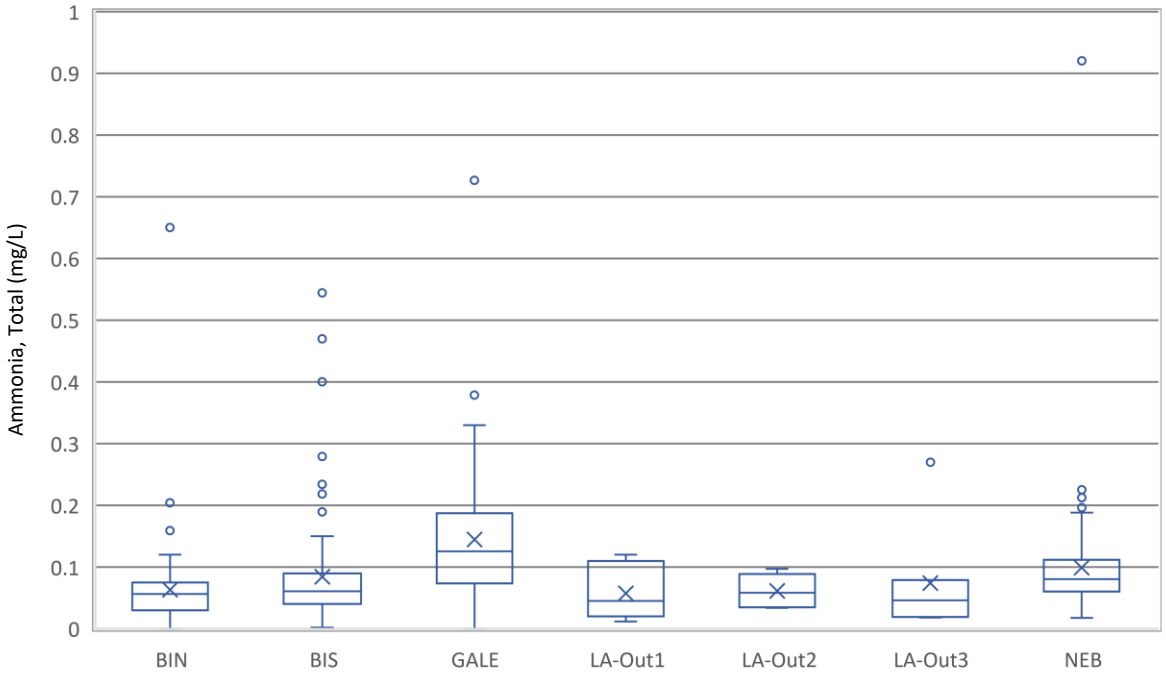
Stn ID	Average	Min	Max	StdDev	Count	Period-of-Record	
BIN	0.83	0.13	4.58	0.73	87	Jun-03	Sep-21
BIS	0.68	0.02	2.03	0.32	92	Jun-03	Sep-21
GALE	0.82	0.08	2.52	0.37	92	Jun-03	Sep-21
LA-Out1	0.59	0.39	1.10	0.26	7	Sep-16	May-18
LA-Out2	0.46	0.43	0.52	0.03	6	Feb-11	Nov-11
LA-Out3	0.43	0.28	0.87	0.20	7	Feb-11	May-18
NEB	0.86	0.03	3.87	0.57	92	Jun-03	Sep-21



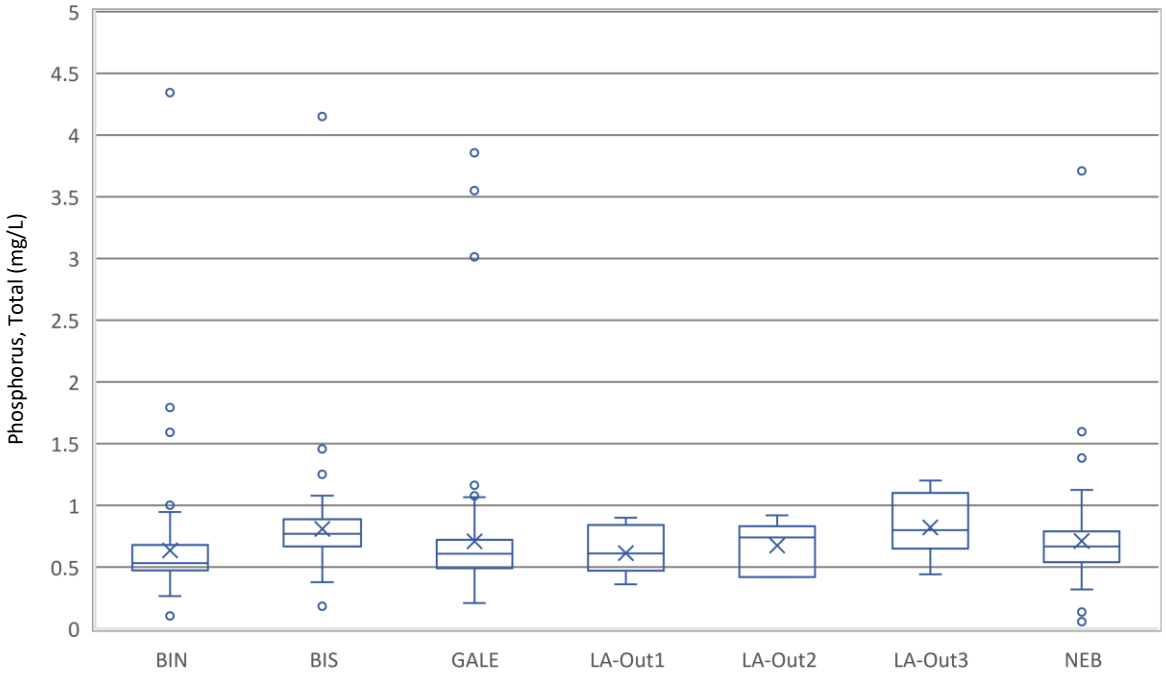
Stn ID	Average	Min	Max	StdDev	Count	Period-of-Record	
BIN	0.71	0.00	3.17	0.56	75	Mar-04	Sep-21
BIS	0.59	0.08	1.96	0.31	78	Oct-03	Sep-21
GALE	0.70	0.02	2.33	0.36	77	Mar-04	Sep-21
LA-Out1	0.54	0.37	0.99	0.24	7	Sep-16	May-18
LA-Out2	0.40	0.36	0.42	0.02	5	Feb-11	Nov-11
LA-Out3	0.36	0.26	0.60	0.11	7	Feb-11	May-18
NEB	0.78	0.04	3.79	0.57	77	Mar-04	Sep-21



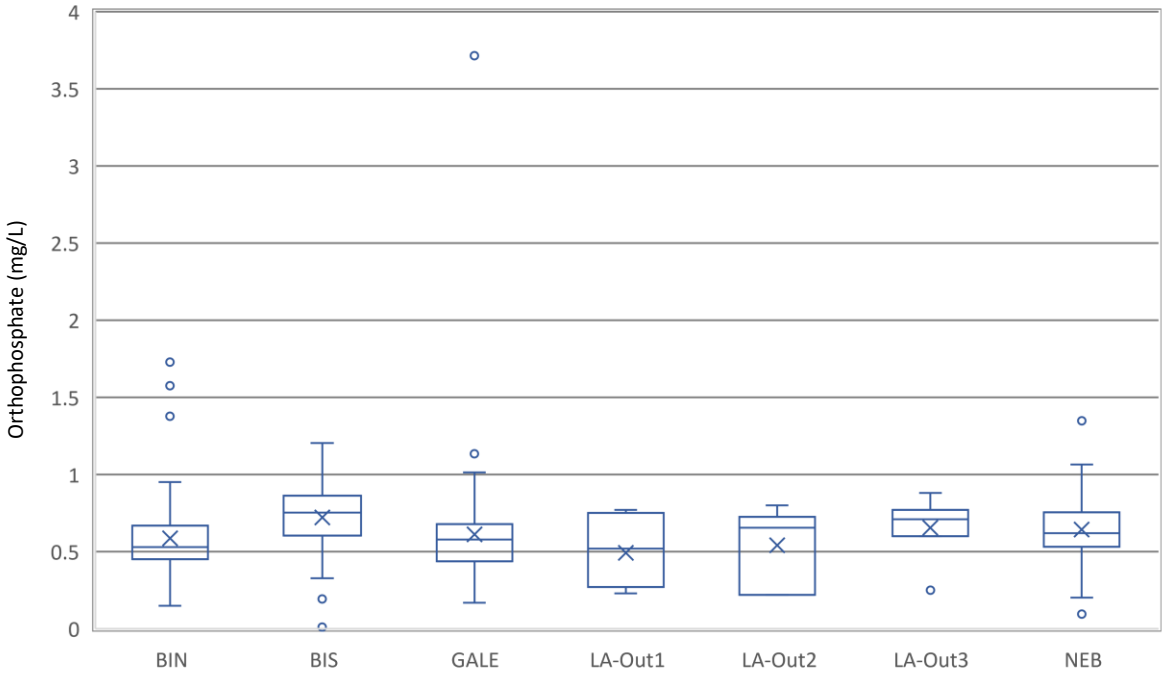
Stn ID	Average	Min	Max	StdDev	Count	Period-of-Record	
BIN	0.49	0.06	1.69	0.30	90	Jun-03	Sep-21
BIS	0.28	0.02	1.46	0.24	92	Jun-03	Sep-21
GALE	0.09	0.00	0.47	0.11	92	Jun-03	Sep-21
LA-Out1	0.09	0.00	0.14	0.04	7	Sep-16	May-18
LA-Out2	0.19	0.05	0.25	0.07	6	Feb-11	Nov-11
LA-Out3	0.21	0.01	0.34	0.11	7	Feb-11	May-18
NEB	0.32	0.01	1.11	0.22	93	Jun-03	Sep-21



Stn ID	Average	Min	Max	StdDev	Count	Period-of-Record	
BIN	0.06	0.00	0.65	0.08	76	Mar-04	Sep-21
BIS	0.08	0.00	0.54	0.09	79	Oct-03	Sep-21
GALE	0.14	0.00	0.73	0.10	79	Mar-04	Sep-21
LA-Out1	0.06	0.01	0.12	0.04	7	Sep-16	May-18
LA-Out2	0.06	0.03	0.10	0.03	6	Feb-11	Nov-11
LA-Out3	0.07	0.02	0.27	0.09	7	Feb-11	May-18
NEB	0.10	0.02	0.92	0.10	78	Mar-04	Sep-21

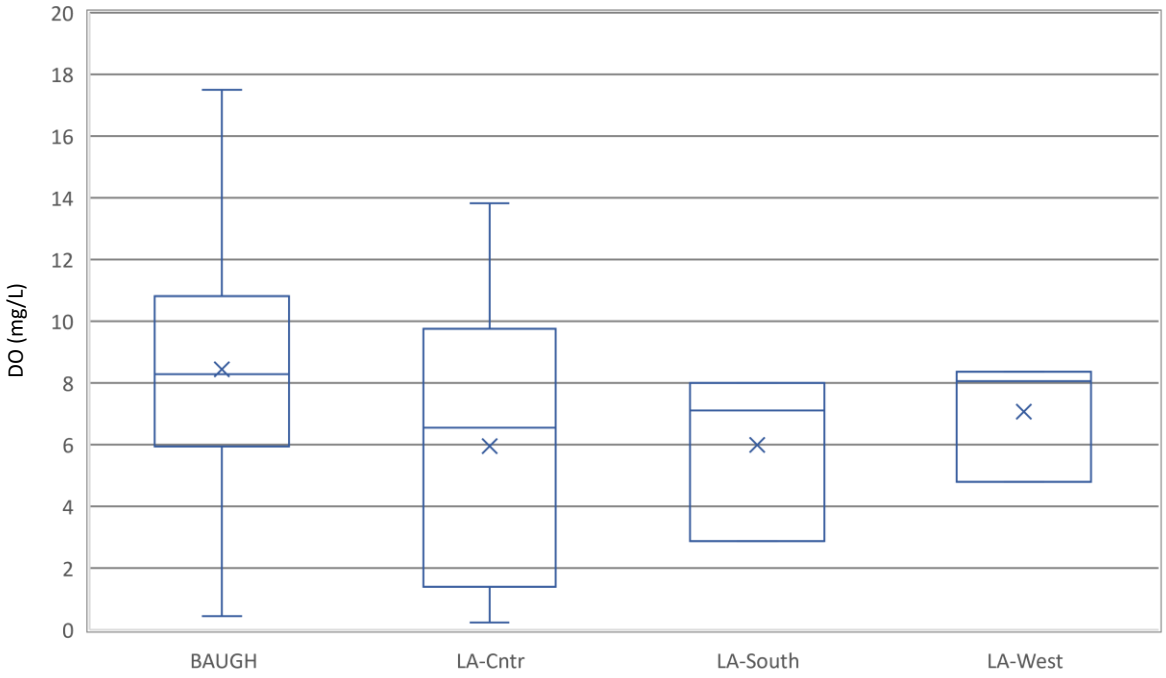


Stn ID	Average	Min	Max	StdDev	Count	Period-of-Record	
BIN	0.634	0.105	4.343	0.474	89	Jun-03	Sep-21
BIS	0.809	0.184	4.151	0.407	92	Jun-03	Sep-21
GALE	0.708	0.207	3.856	0.547	92	Jun-03	Sep-21
LA-Out1	0.613	0.360	0.900	0.197	7	Sep-16	May-18
LA-Out2	0.673	0.420	0.920	0.209	6	Feb-11	Nov-11
LA-Out3	0.820	0.440	1.200	0.268	7	Feb-11	May-18
NEB	0.712	0.058	3.709	0.388	92	Jun-03	Sep-21

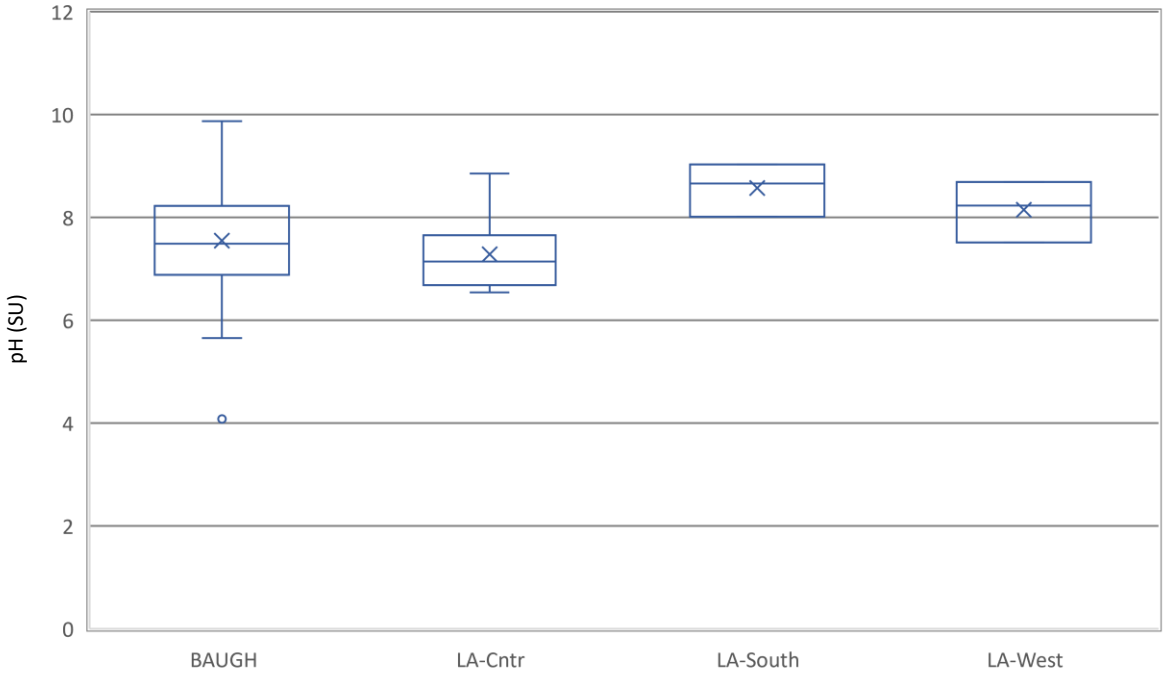


Stn ID	Average	Min	Max	StdDev	Count	Period-of-Record	
BIN	0.586	0.149	1.728	0.255	74	Oct-04	Sep-21
BIS	0.721	0.011	1.203	0.206	76	Oct-04	Sep-21
GALE	0.612	0.168	3.715	0.409	76	Oct-04	Sep-21
LA-Out1	0.493	0.230	0.770	0.216	7	Sep-16	May-18
LA-Out2	0.542	0.220	0.800	0.256	6	Feb-11	Nov-11
LA-Out3	0.656	0.250	0.880	0.203	7	Feb-11	May-18
NEB	0.643	0.095	1.355	0.211	76	Oct-04	Sep-21

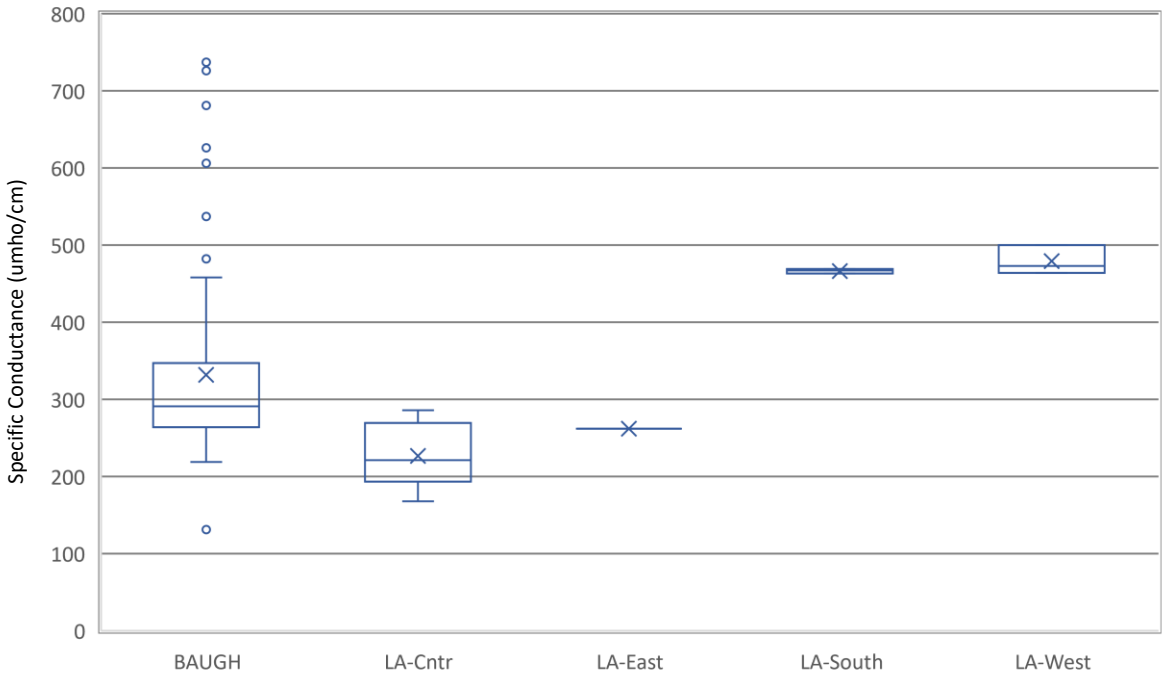
Lake Alice Water Quality Box Plots by Station Detail



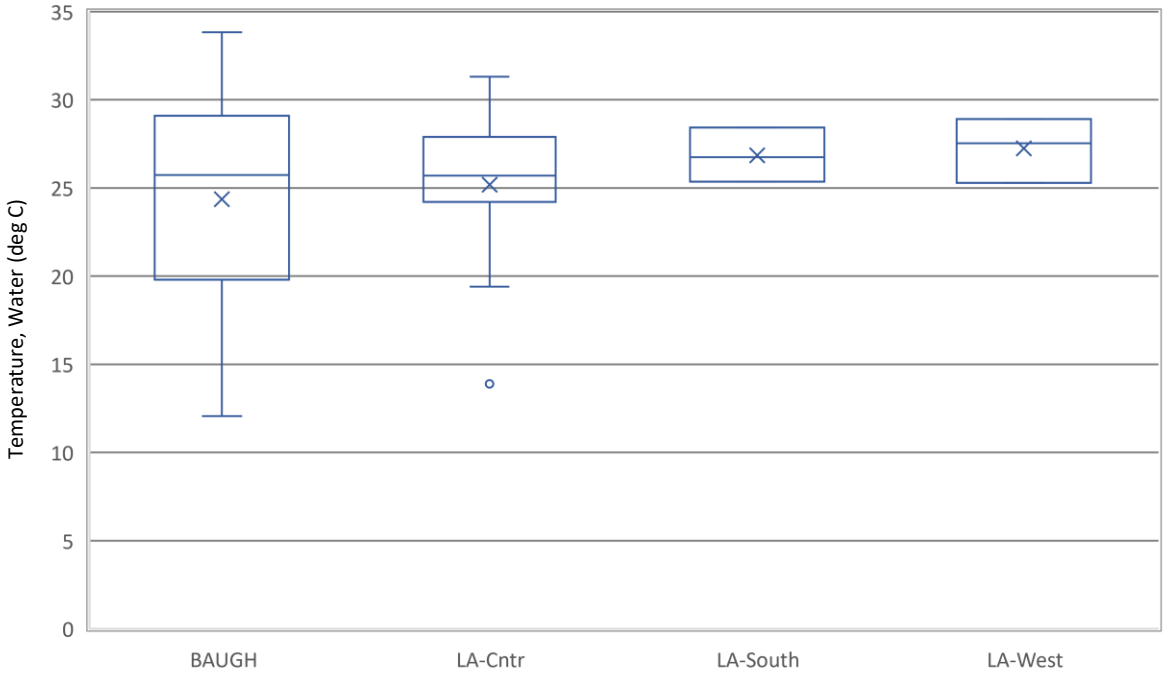
Stn ID	Average	Min	Max	StdDev	Count	Period-of-Record	
BAUGH	8.44	0.44	17.50	3.88	91	May-03	Sep-21
LA-Cntr	5.95	0.24	13.82	4.30	16	Aug-17	Sep-22
LA-South	5.99	2.87	8.00	2.74	3	Apr-02	Jun-02
LA-West	7.07	4.79	8.36	1.98	3	Apr-02	Jun-02



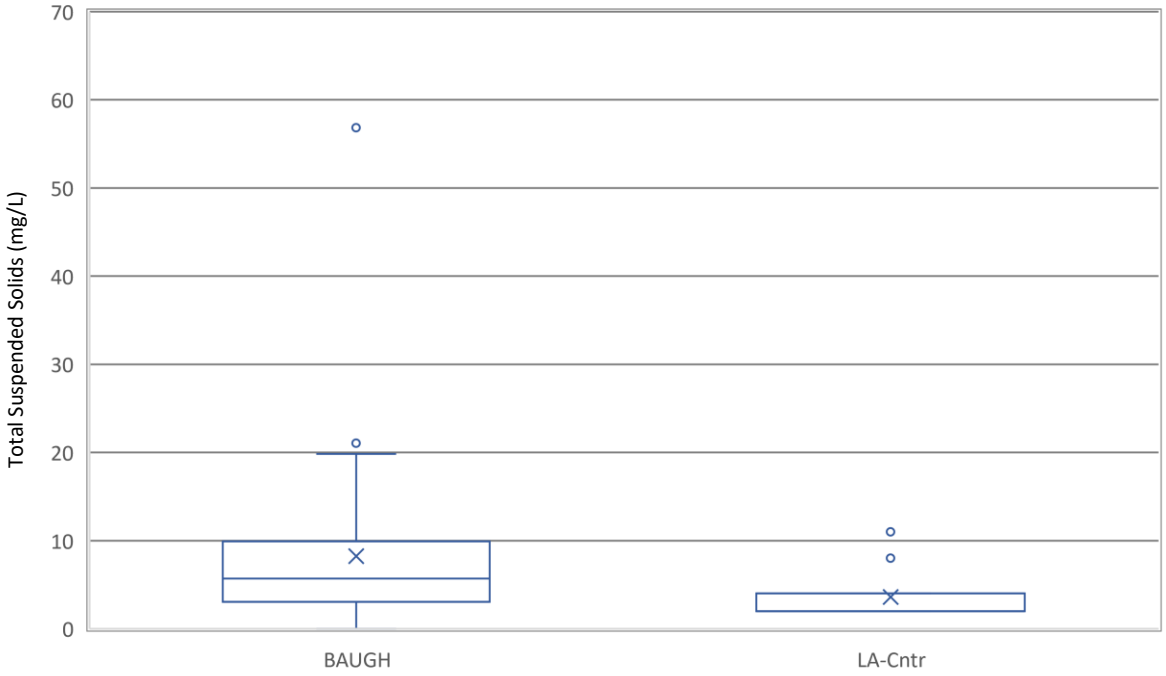
Stn ID	Average	Min	Max	StdDev	Count	Period-of-Record	
BAUGH	7.55	4.08	9.87	1.05	87	May-03	Sep-21
LA-Cntr	7.28	6.54	8.85	0.68	16	Aug-17	Sep-22
LA-South	8.57	8.01	9.03	0.52	3	Apr-02	Jun-02
LA-West	8.14	7.51	8.69	0.59	3	Apr-02	Jun-02



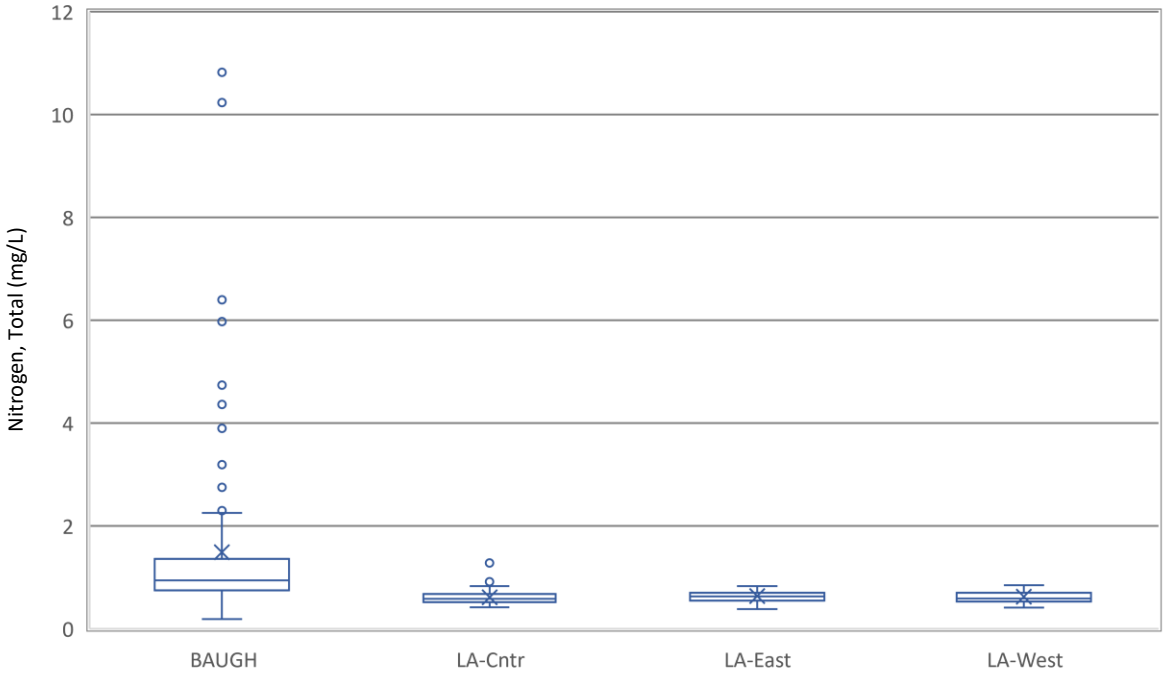
Stn ID	Average	Min	Max	StdDev	Count	Period-of-Record	
BAUGH	331.6	131.0	737.0	120.4	67	May-03	Sep-21
LA-Cntr	226.6	168.0	286.0	41.3	16	Aug-17	Sep-22
LA-East	262.0	262.0	262.0		1	Oct-19	Oct-19
LA-South	466.3	463.0	469.0	3.1	3	Apr-02	Jun-02
LA-West	479.0	464.0	500.0	18.7	3	Apr-02	Jun-02



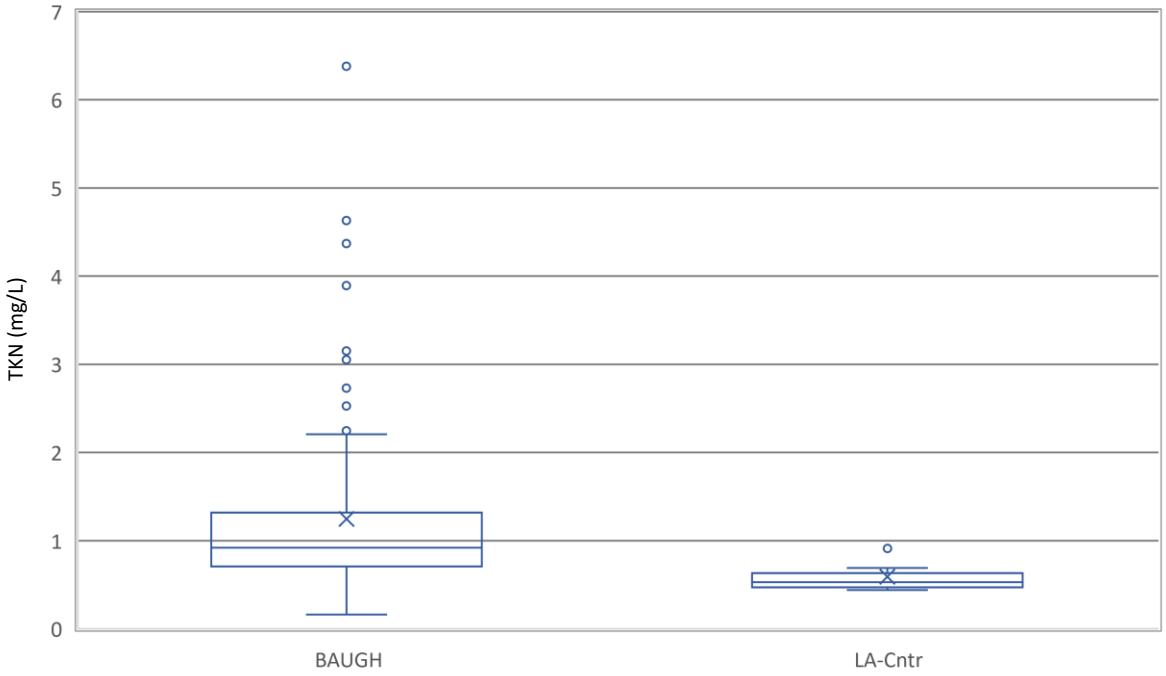
Stn ID	Average	Min	Max	StdDev	Count	Period-of-Record	
BAUGH	24.36	12.06	33.83	5.60	91	May-03	Sep-21
LA-Cntr	25.19	13.88	31.30	4.39	16	Aug-17	Sep-22
LA-South	26.84	25.35	28.43	1.54	3	Apr-02	Jun-02
LA-West	27.24	25.28	28.90	1.83	3	Apr-02	Jun-02



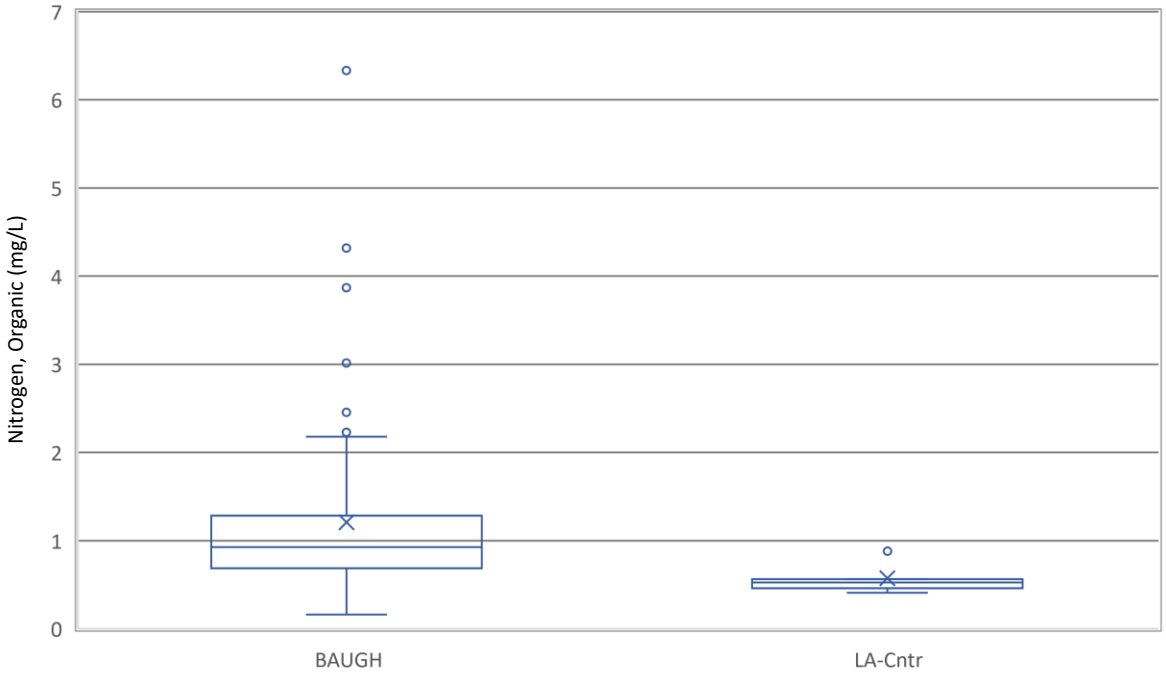
Stn ID	Average	Min	Max	StdDev	Count	Period-of-Record	
BAUGH	8.22	0.00	57.29	9.91	70	Oct-03	Sep-13
LA-Cntr	3.62	2.00	11.00	2.79	13	Aug-17	Sep-22



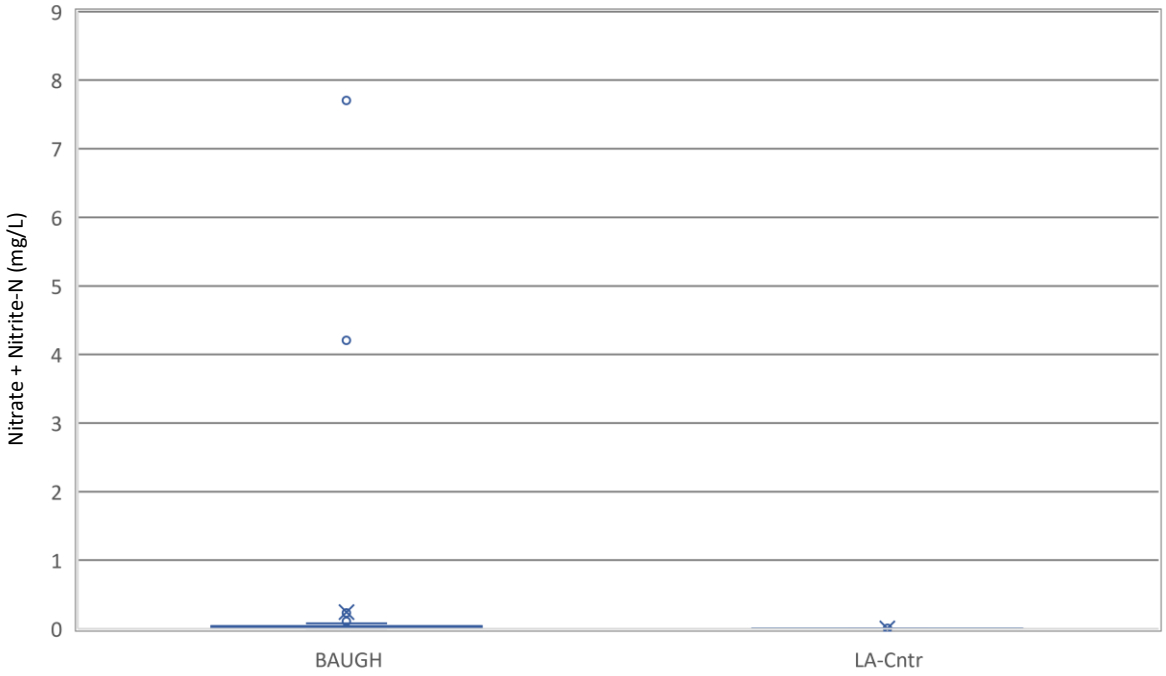
Stn ID	Average	Min	Max	StdDev	Count	Period-of-Record	
BAUGH	1.49	0.19	10.82	1.72	93	Jun-03	Sep-21
LA-Cntr	0.61	0.42	1.28	0.15	57	May-97	Sep-22
LA-East	0.64	0.38	1.25	0.13	45	May-97	Oct-19
LA-West	0.63	0.41	1.26	0.14	45	May-97	Oct-19



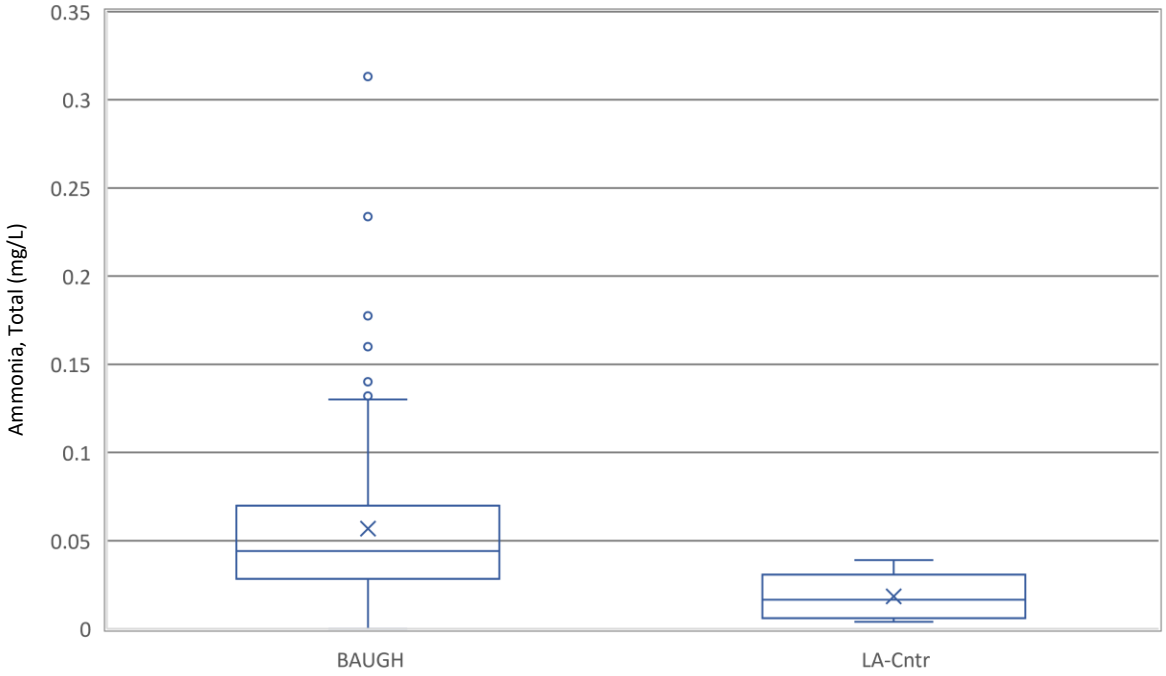
Stn ID	Average	Min	Max	StdDev	Count	Period-of-Record	
BAUGH	1.24	0.16	6.38	0.97	93	Jun-03	Sep-21
LA-Cntr	0.59	0.44	0.97	0.17	13	Aug-17	Sep-22



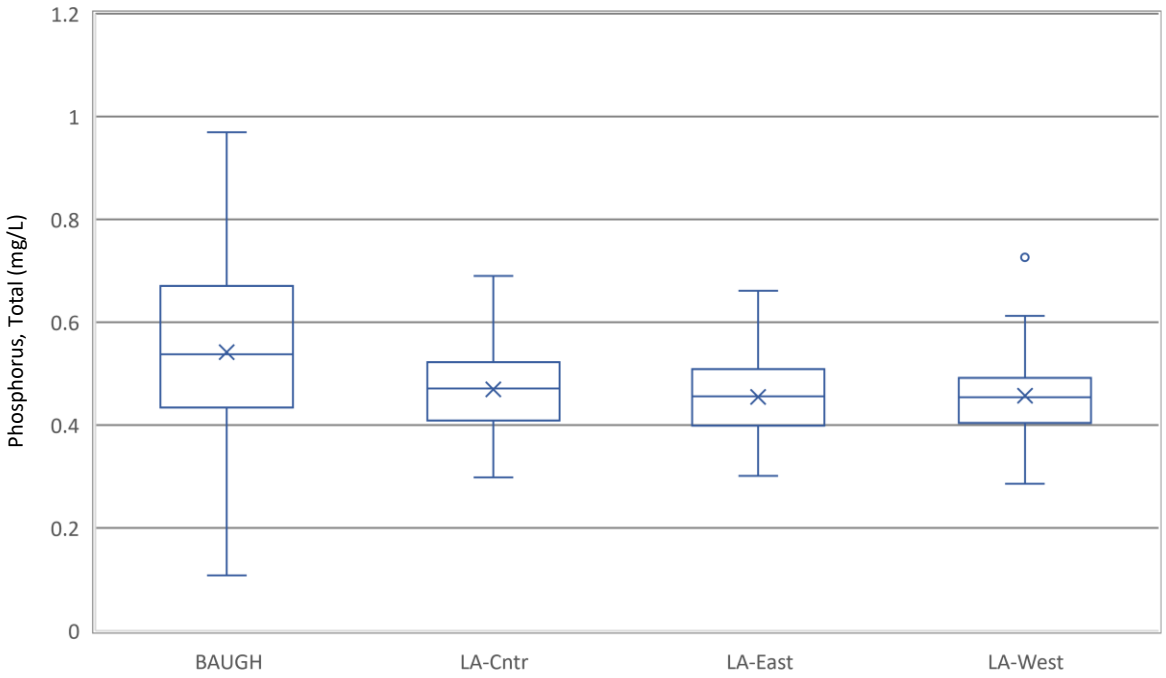
Stn ID	Average	Min	Max	StdDev	Count	Period-of-Record	
BAUGH	1.21	0.16	6.33	1.01	76	Mar-04	Sep-21
LA-Cntr	0.57	0.41	0.96	0.18	11	Aug-17	Sep-22



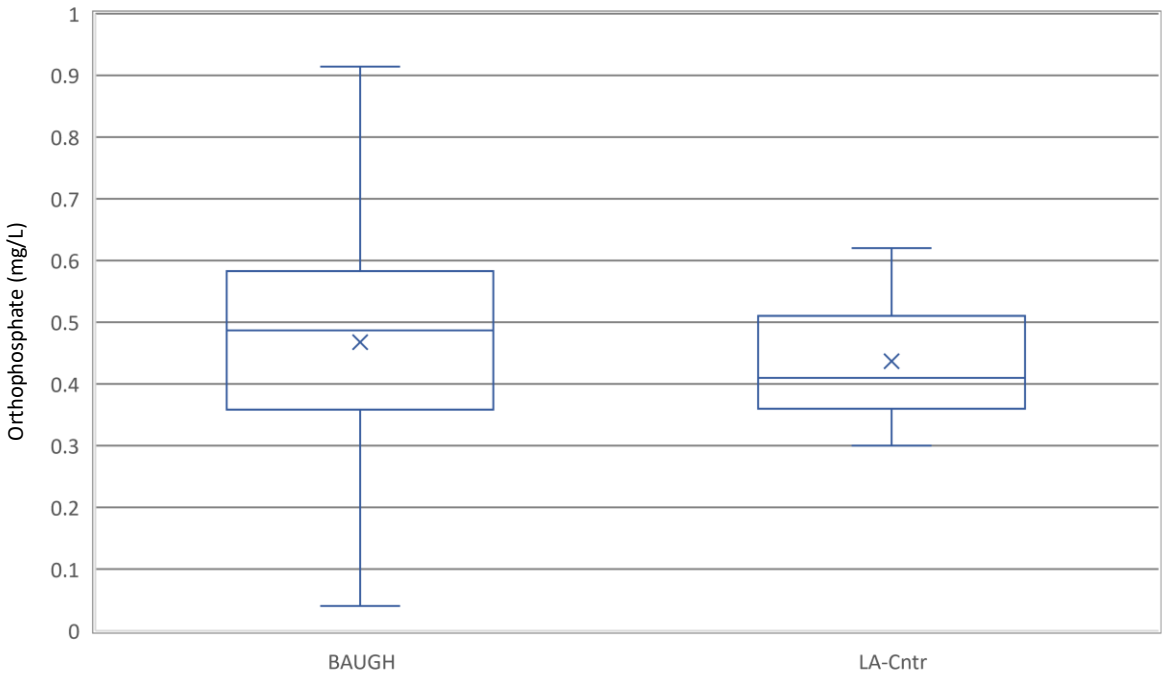
Stn ID	Average	Min	Max	StdDev	Count	Period-of-Record	
BAUGH	0.24	0.00	7.77	1.20	93	Jun-03	Sep-21
LA-Cntr	0.01	0.00	0.03	0.01	13	Aug-17	Sep-22



Stn ID	Average	Min	Max	StdDev	Count	Period-of-Record	
BAUGH	0.06	0.00	0.31	0.05	80	Mar-04	Sep-21
LA-Cntr	0.02	0.00	0.04	0.01	12	Aug-17	Sep-22

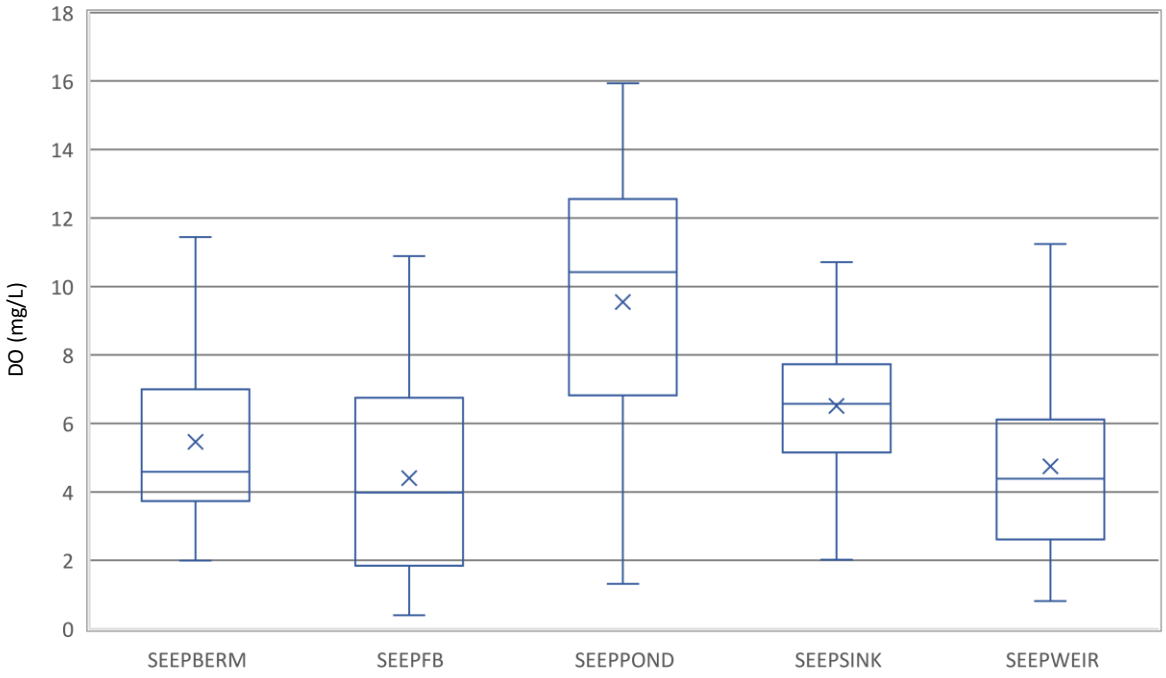


Stn ID	Average	Min	Max	StdDev	Count	Period-of-Record	
BAUGH	0.542	0.108	0.969	0.173	94	Jun-03	Sep-21
LA-Cntr	0.469	0.298	0.690	0.086	58	May-97	Sep-22
LA-East	0.455	0.301	0.661	0.082	45	May-97	Oct-19
LA-West	0.457	0.286	0.726	0.083	45	May-97	Oct-19

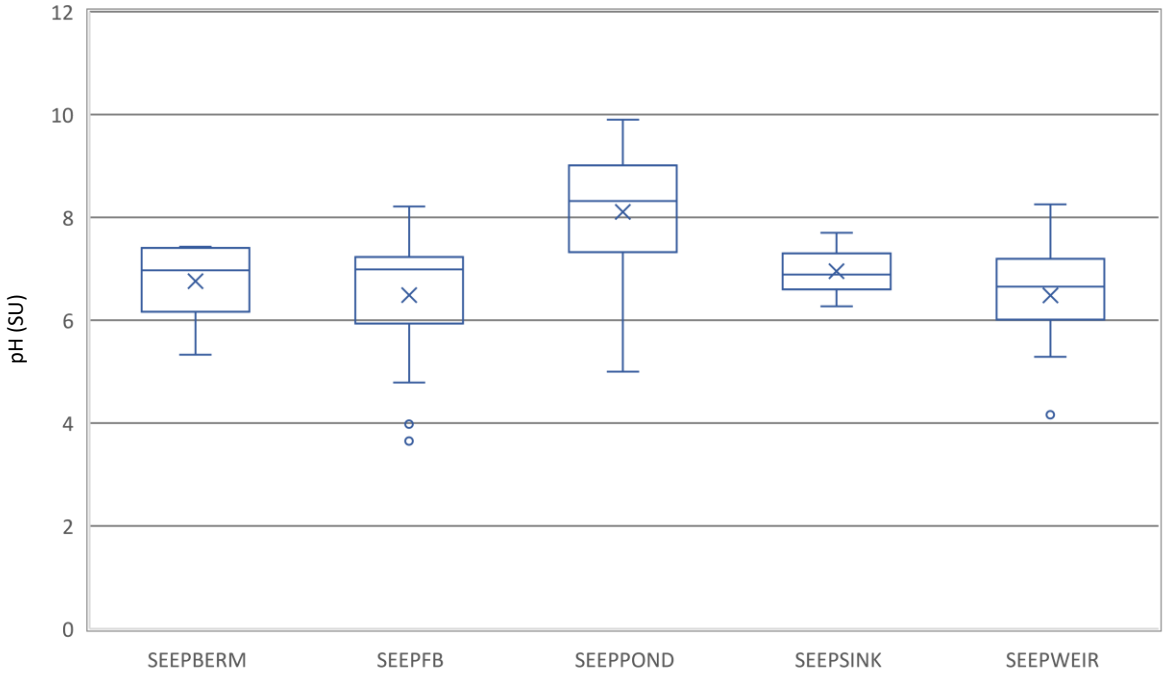


Stn ID	Average	Min	Max	StdDev	Count	Period-of-Record	
BAUGH	0.467	0.040	0.914	0.176	78	Oct-04	Sep-21
LA-Cntr	0.437	0.300	0.620	0.095	13	Aug-17	Sep-22

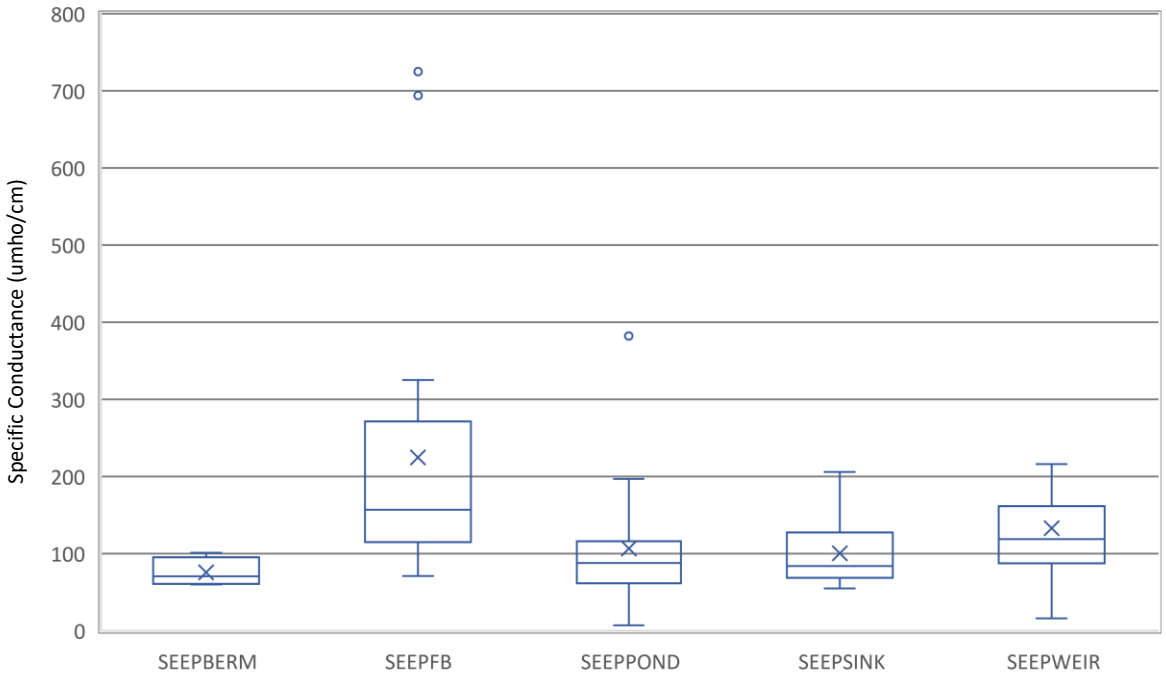
SEEP Water Quality Box Plots by Station Detail



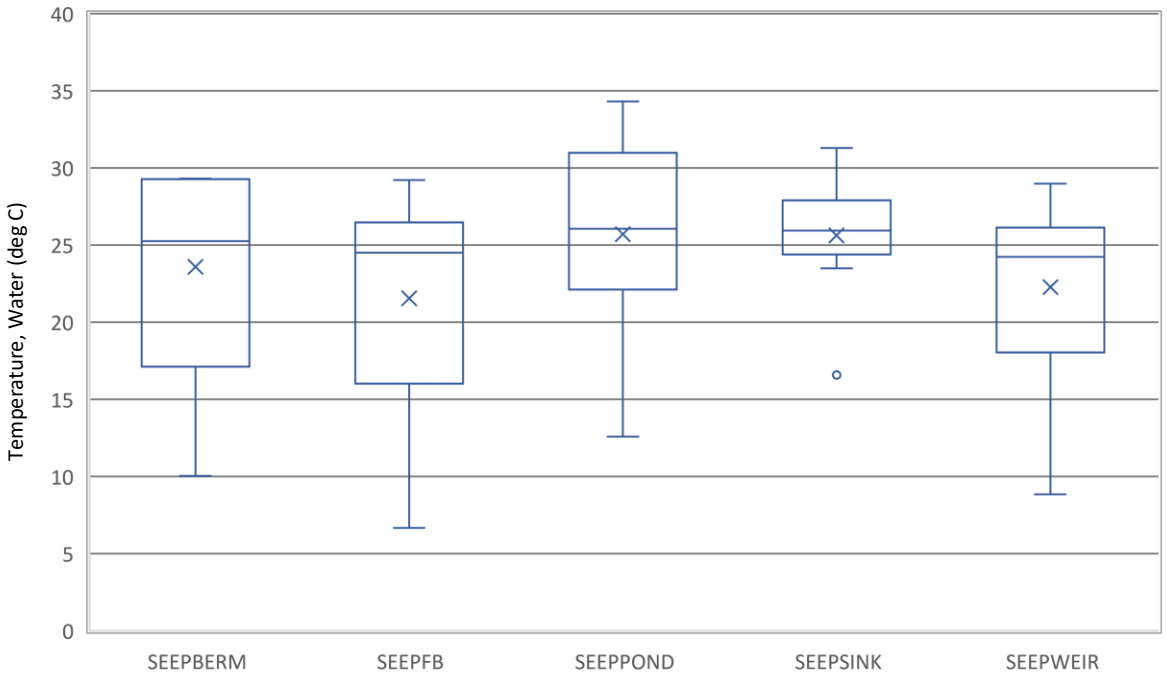
Stn ID	Average	Min	Max	StdDev	Count	Period-of-Record	
SEEPBERM	5.46	1.99	11.44	3.04	7	Aug-08	Jan-10
SEEPFB	4.40	0.40	10.89	3.21	21	Aug-08	Sep-13
SEEPPOND	9.54	1.31	15.93	4.28	26	Aug-08	Sep-13
SEEPSINK	6.51	2.02	10.71	2.40	9	Feb-09	Sep-13
SEEPWEIR	4.75	0.81	11.24	2.77	22	Aug-08	Sep-13



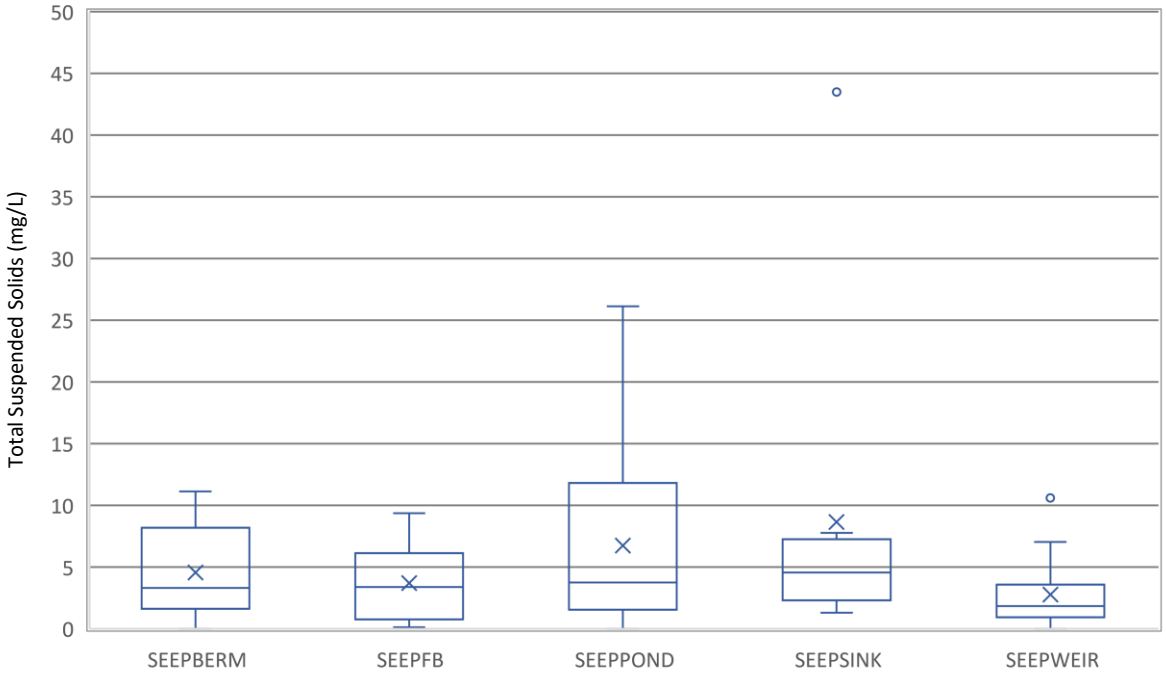
Stn ID	Average	Min	Max	StdDev	Count	Period-of-Record	
SEEPBERM	6.76	5.33	7.43	0.79	6	Aug-08	Jan-10
SEEPFB	6.49	3.65	8.21	1.27	17	Aug-08	Sep-13
SEEPPOND	8.10	5.00	9.90	1.16	22	Aug-08	Sep-13
SEEPSINK	6.95	6.27	7.70	0.49	7	Apr-09	Sep-13
SEEPWEIR	6.48	4.16	8.25	1.10	18	Aug-08	Sep-13



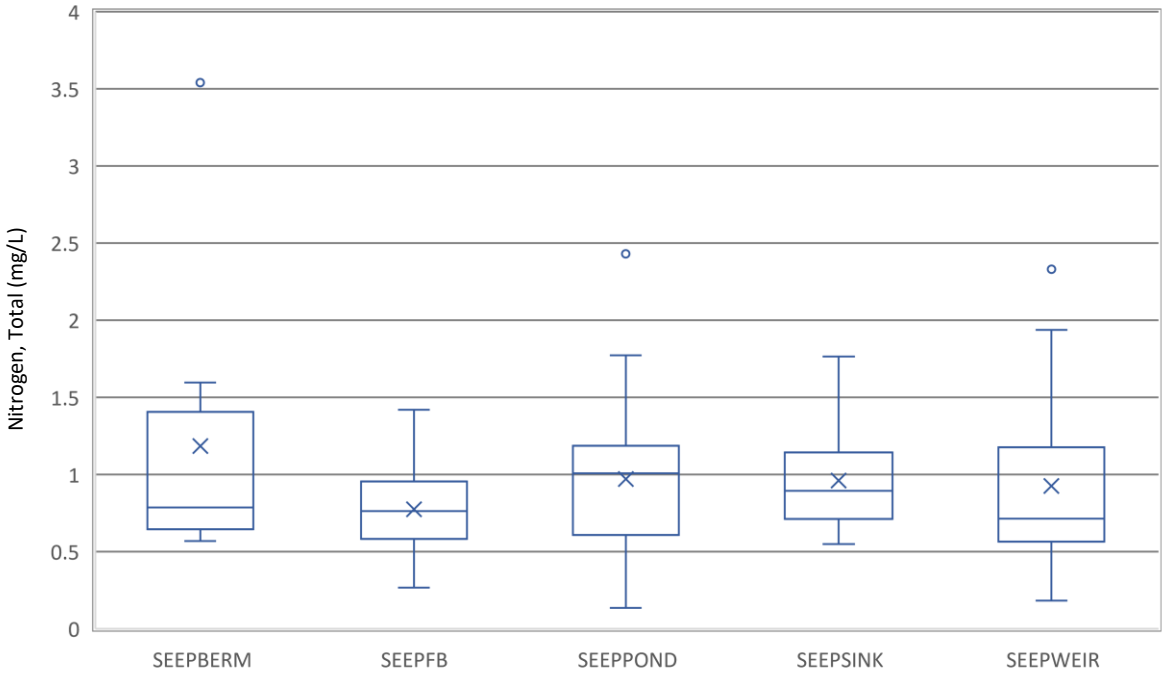
Stn ID	Average	Min	Max	StdDev	Count	Period-of-Record	
SEEPBERM	75.5	60.0	101.0	18.7	4	Jun-09	Jan-10
SEEPFB	224.5	71.0	725.0	196.2	17	Jun-09	Sep-13
SEEPPOND	106.8	7.0	382.0	79.9	21	May-09	Sep-13
SEEPSINK	100.5	55.0	206.0	54.2	6	Jun-09	Sep-13
SEEPWEIR	133.1	16.0	376.0	78.2	17	Jun-09	Sep-13



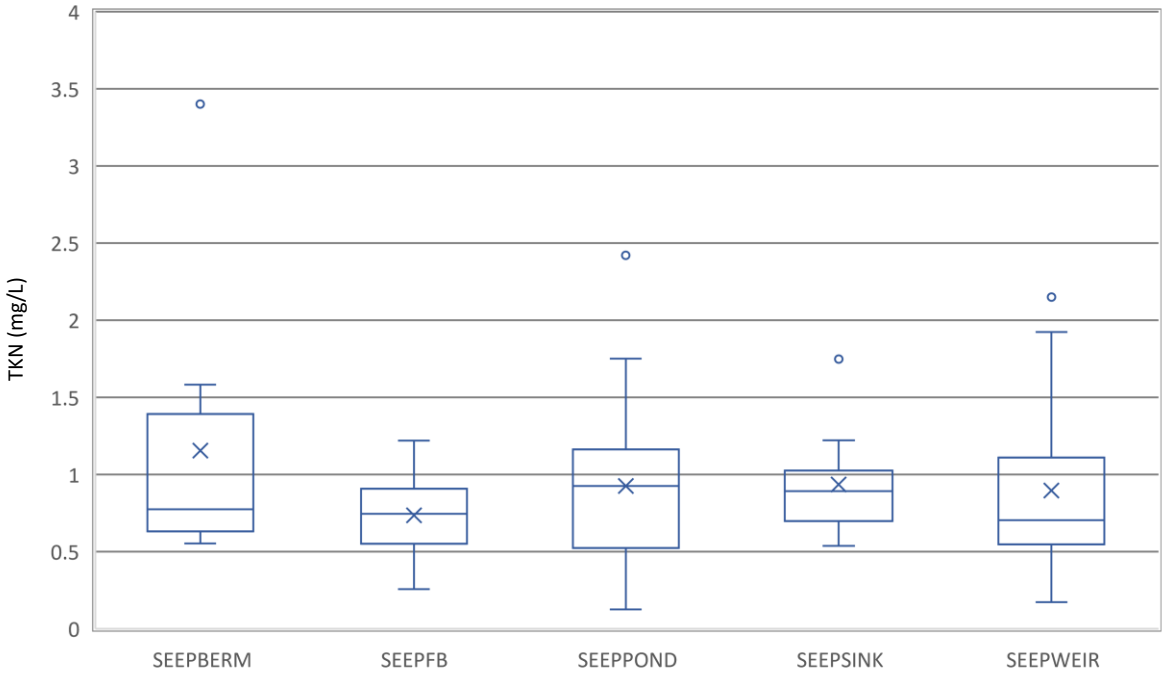
Stn ID	Average	Min	Max	StdDev	Count	Period-of-Record	
SEEPBERM	23.58	10.03	29.31	7.37	7	Aug-08	Jan-10
SEEPFB	21.55	6.67	29.21	6.86	21	Aug-08	Sep-13
SEEPPOND	25.69	12.59	34.30	6.10	26	Aug-08	Sep-13
SEEPSINK	25.62	16.58	31.29	4.06	9	Feb-09	Sep-13
SEEPWEIR	22.27	8.84	28.98	5.64	22	Aug-08	Sep-13



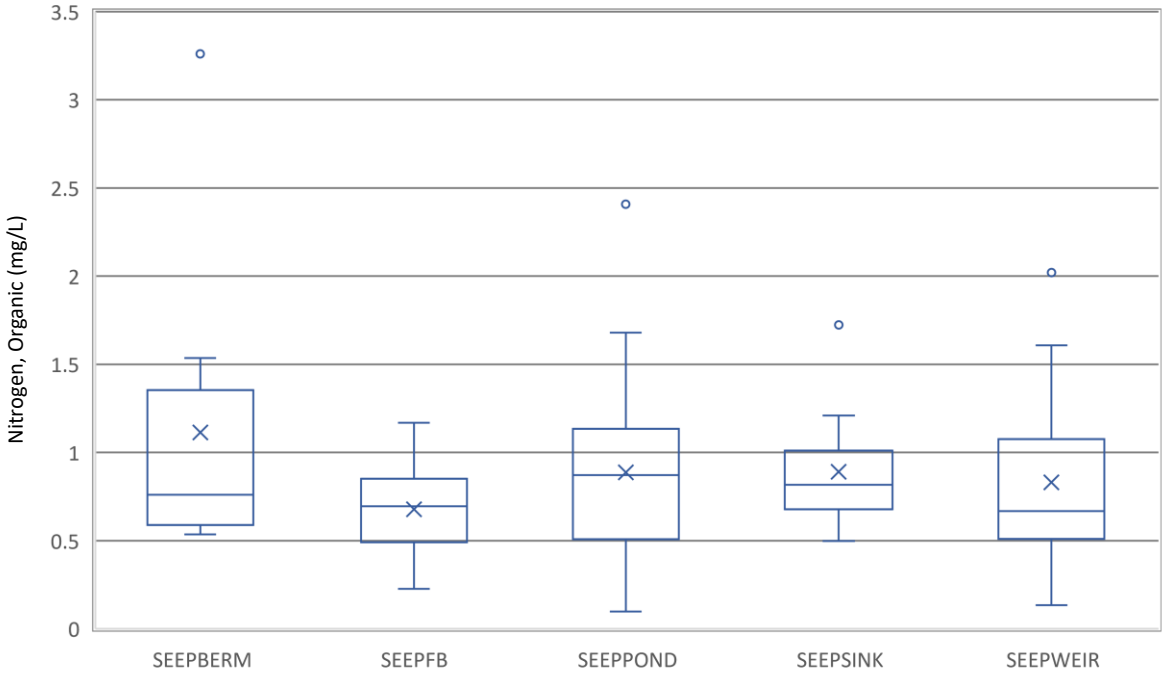
Stn ID	Average	Min	Max	StdDev	Count	Period-of-Record	
SEEPBERM	4.56	0.00	11.12	3.92	8	Aug-08	Jul-12
SEEPFB	3.71	0.12	9.36	3.01	17	Aug-08	Sep-13
SEEPPOND	6.75	0.00	26.13	7.34	18	Aug-08	Sep-13
SEEPSINK	8.65	1.30	43.48	13.25	9	Feb-09	Jul-12
SEEPWEIR	2.78	0.00	10.59	2.74	17	Aug-08	Sep-13



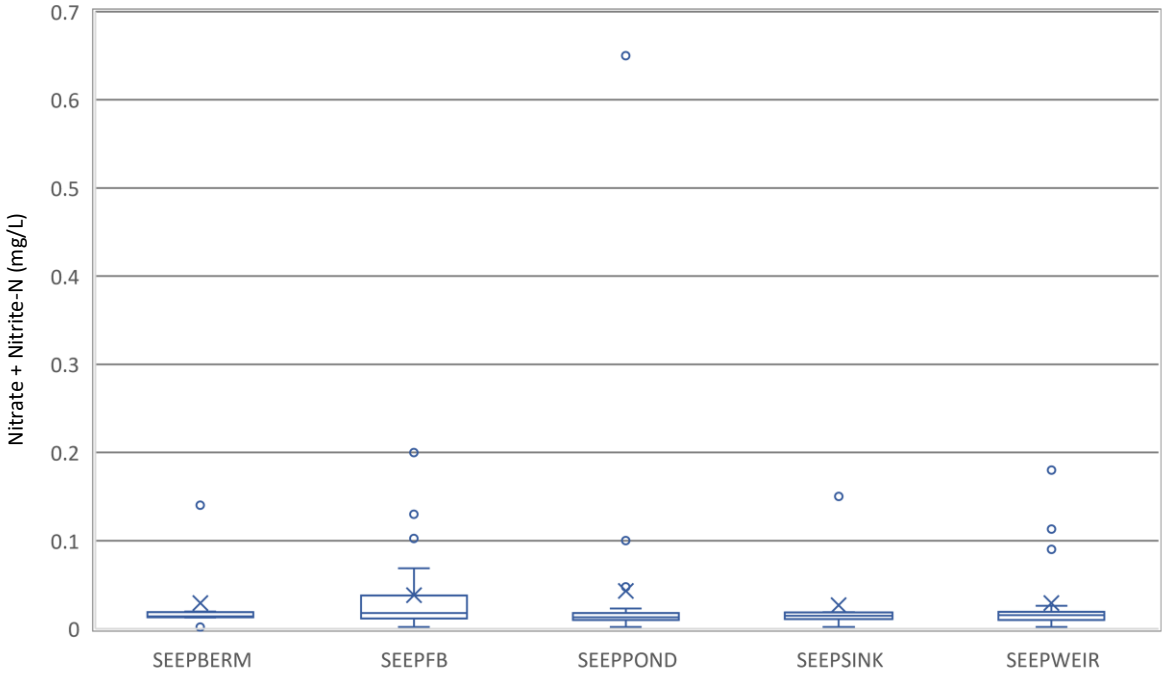
Stn ID	Average	Min	Max	StdDev	Count	Period-of-Record	
SEEPBERM	1.18	0.57	3.54	1.00	8	Aug-08	Jul-12
SEEPFB	0.77	0.27	1.42	0.30	20	Aug-08	Sep-13
SEEPPOND	0.97	0.14	2.43	0.48	24	Aug-08	Sep-13
SEEPSINK	0.96	0.55	1.77	0.35	10	Feb-09	Sep-13
SEEPWEIR	0.92	0.18	2.33	0.54	21	Aug-08	Sep-13



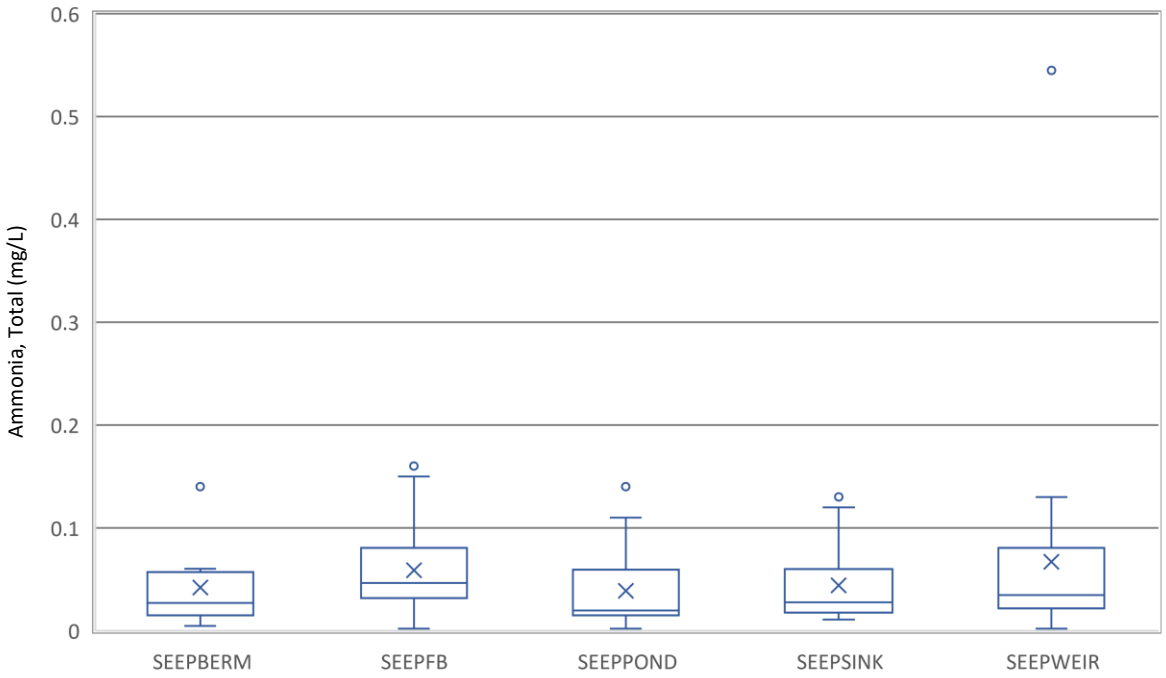
Stn ID	Average	Min	Max	StdDev	Count	Period-of-Record	
SEEPBERM	1.16	0.55	3.40	0.96	8	Aug-08	Jul-12
SEEPFB	0.74	0.26	1.22	0.26	20	Aug-08	Sep-13
SEEPPOND	0.93	0.13	2.42	0.49	24	Aug-08	Sep-13
SEEPSINK	0.93	0.54	1.75	0.34	10	Feb-09	Sep-13
SEEPWEIR	0.90	0.17	2.15	0.51	21	Aug-08	Sep-13



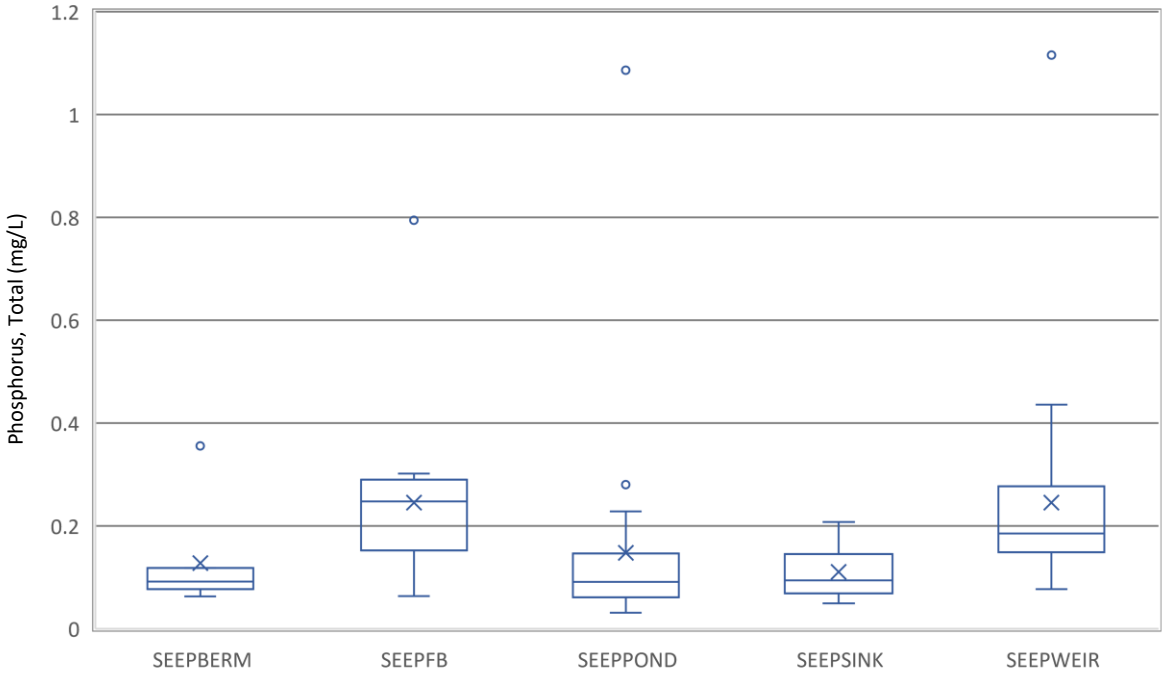
Stn ID	Average	Min	Max	StdDev	Count	Period-of-Record	
SEEPBERM	1.11	0.53	3.26	0.92	8	Aug-08	Jul-12
SEEPFB	0.68	0.23	1.17	0.25	20	Aug-08	Sep-13
SEEPPOND	0.89	0.10	2.41	0.49	24	Aug-08	Sep-13
SEEPSINK	0.89	0.50	1.72	0.35	10	Feb-09	Sep-13
SEEPWEIR	0.83	0.13	2.02	0.45	21	Aug-08	Sep-13



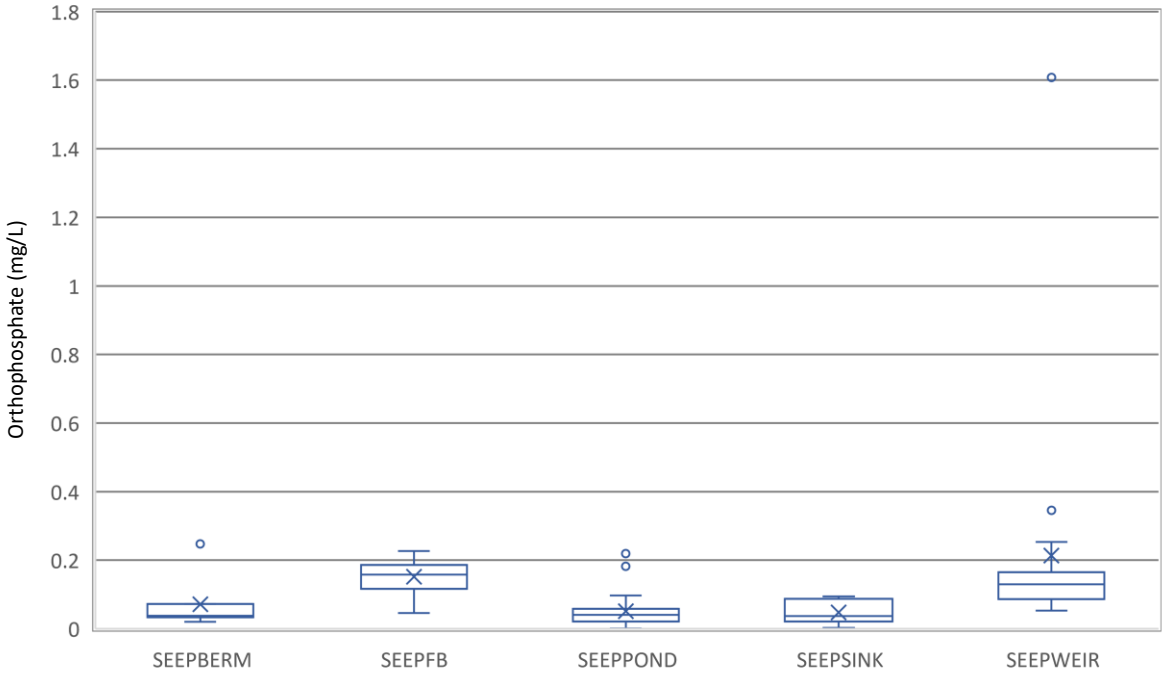
Stn ID	Average	Min	Max	StdDev	Count	Period-of-Record	
SEEPBERM	0.03	0.00	0.14	0.05	8	Aug-08	Jul-12
SEEPFB	0.04	0.00	0.20	0.05	21	Aug-08	Sep-13
SEEPPOND	0.04	0.00	0.65	0.13	25	Aug-08	Sep-13
SEEPSINK	0.03	0.00	0.15	0.04	10	Feb-09	Sep-13
SEEPWEIR	0.03	0.00	0.18	0.04	22	Aug-08	Sep-13



Stn ID	Average	Min	Max	StdDev	Count	Period-of-Record	
SEEPBERM	0.04	0.00	0.14	0.04	8	Aug-08	Jul-12
SEEPFB	0.06	0.00	0.16	0.04	20	Aug-08	Sep-13
SEEPPOND	0.04	0.00	0.14	0.04	24	Aug-08	Sep-13
SEEPSINK	0.04	0.01	0.13	0.04	10	Feb-09	Sep-13
SEEPWEIR	0.07	0.00	0.54	0.11	21	Aug-08	Sep-13

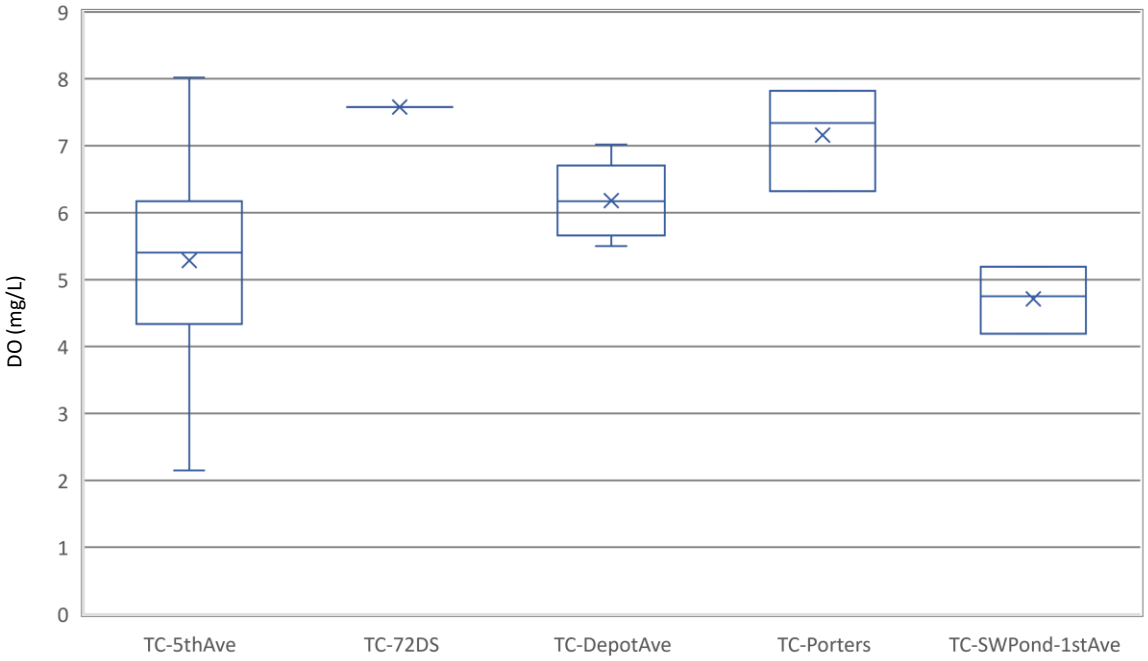


Stn ID	Average	Min	Max	StdDev	Count	Period-of-Record	
SEEPBERM	0.128	0.063	0.355	0.102	7	Aug-08	Jan-10
SEEPFB	0.245	0.064	0.794	0.153	19	Aug-08	Sep-13
SEEPPOND	0.148	0.031	1.086	0.214	23	Aug-08	Sep-13
SEEPSINK	0.111	0.049	0.208	0.050	9	Feb-09	Sep-13
SEEPWEIR	0.245	0.077	1.115	0.222	20	Aug-08	Sep-13

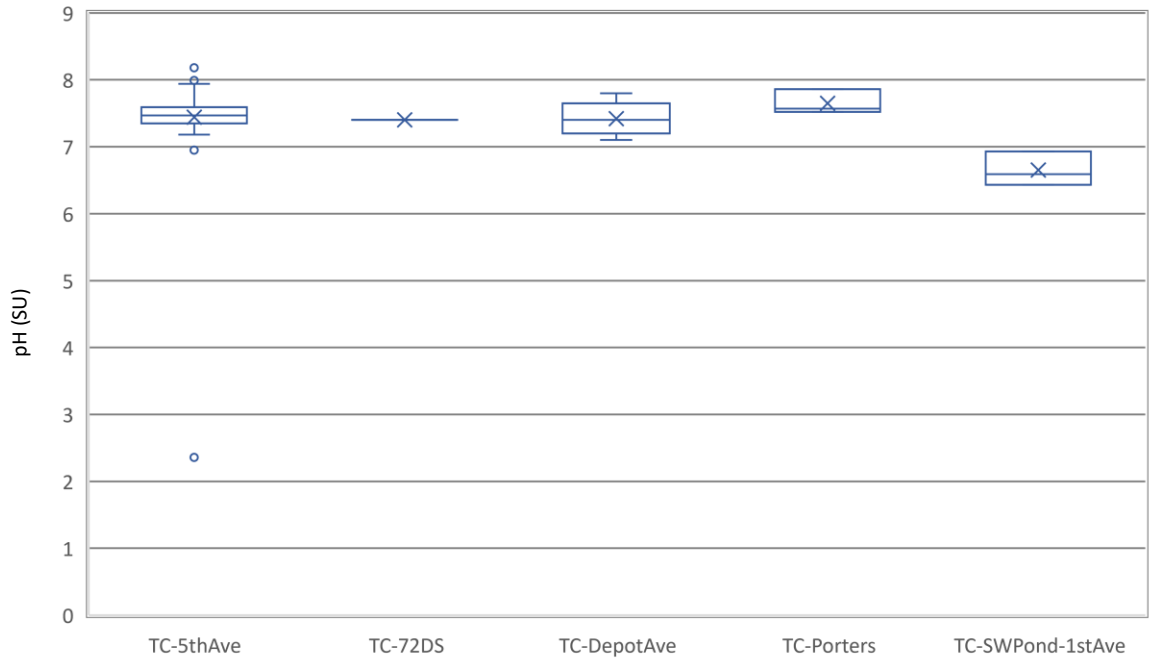


Stn ID	Average	Min	Max	StdDev	Count	Period-of-Record	
SEEPBERM	0.071	0.021	0.247	0.079	7	Aug-08	Jan-10
SEEPFB	0.152	0.046	0.227	0.051	19	Aug-08	Sep-13
SEEPPOND	0.052	0.001	0.220	0.053	23	Aug-08	Sep-13
SEEPSINK	0.047	0.003	0.094	0.034	9	Feb-09	Sep-13
SEEPWEIR	0.213	0.053	1.608	0.335	20	Aug-08	Sep-13

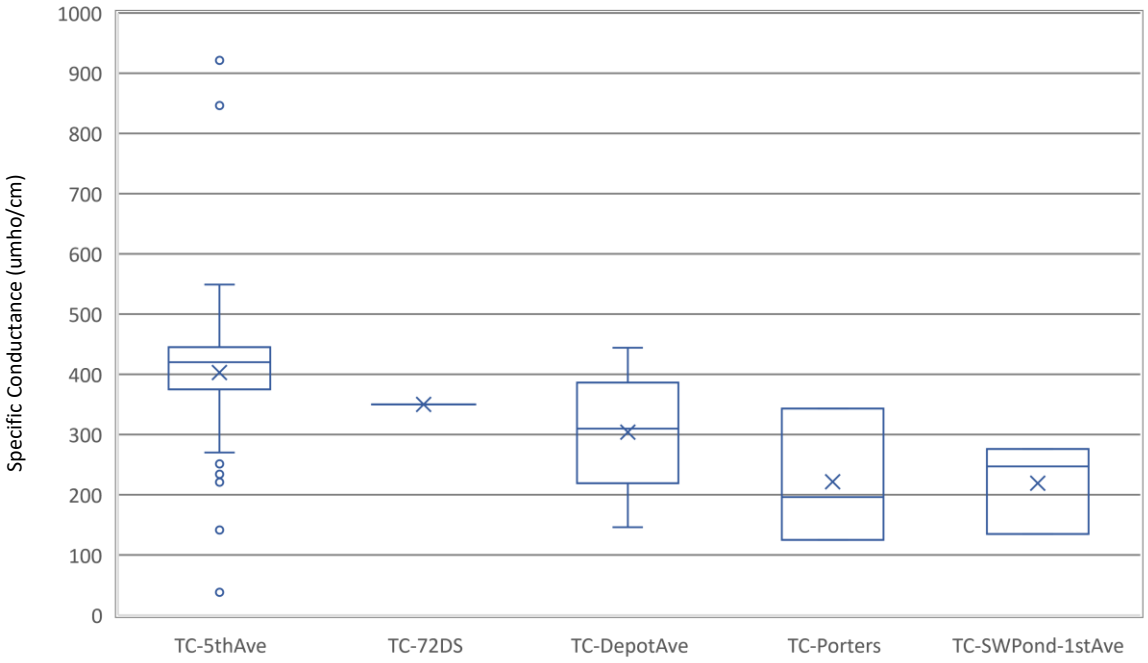
Tumblin Creek Water Quality Box Plots by Station Detail



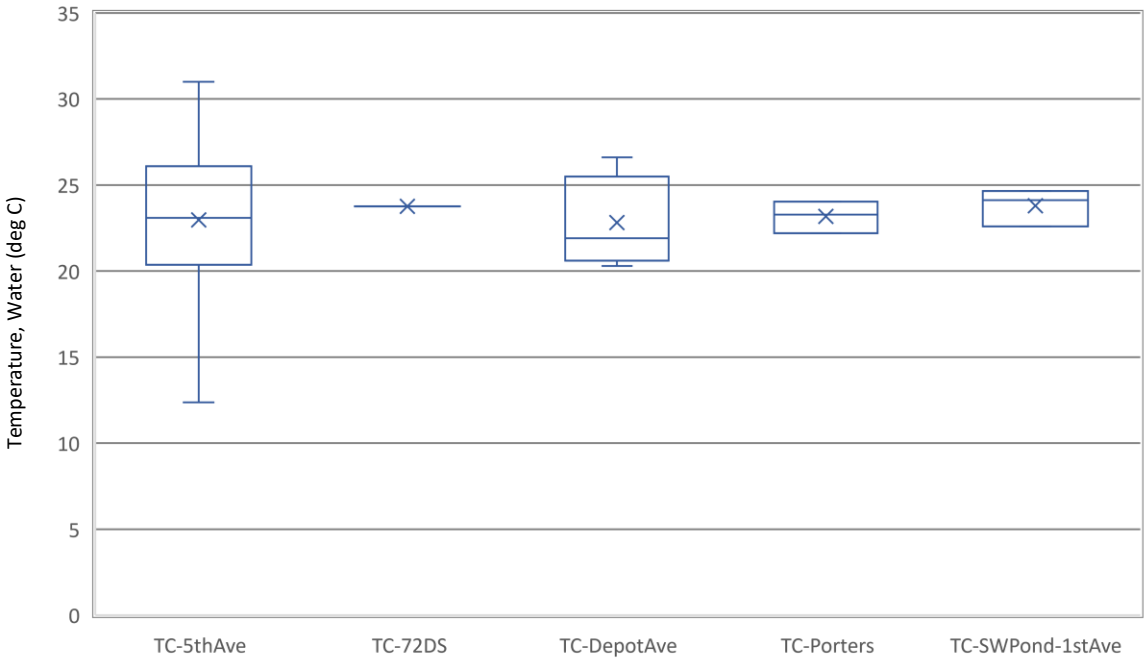
Stn ID	Average	Min	Max	StdDev	Count	Period-of-Record	
TC-5thAve	5.29	2.15	8.02	1.21	144	Feb-98	Nov-21
TC-72DS	7.58	7.58	7.58		1	Oct-04	Oct-04
TC-DepotAve	6.18	5.50	7.02	0.58	5	Jan-06	Oct-06
TC-Porters	7.16	6.32	7.82	0.69	6	Apr-06	May-06
TC-SWPond-1stAve	4.71	4.19	5.19	0.45	6	Apr-06	May-06



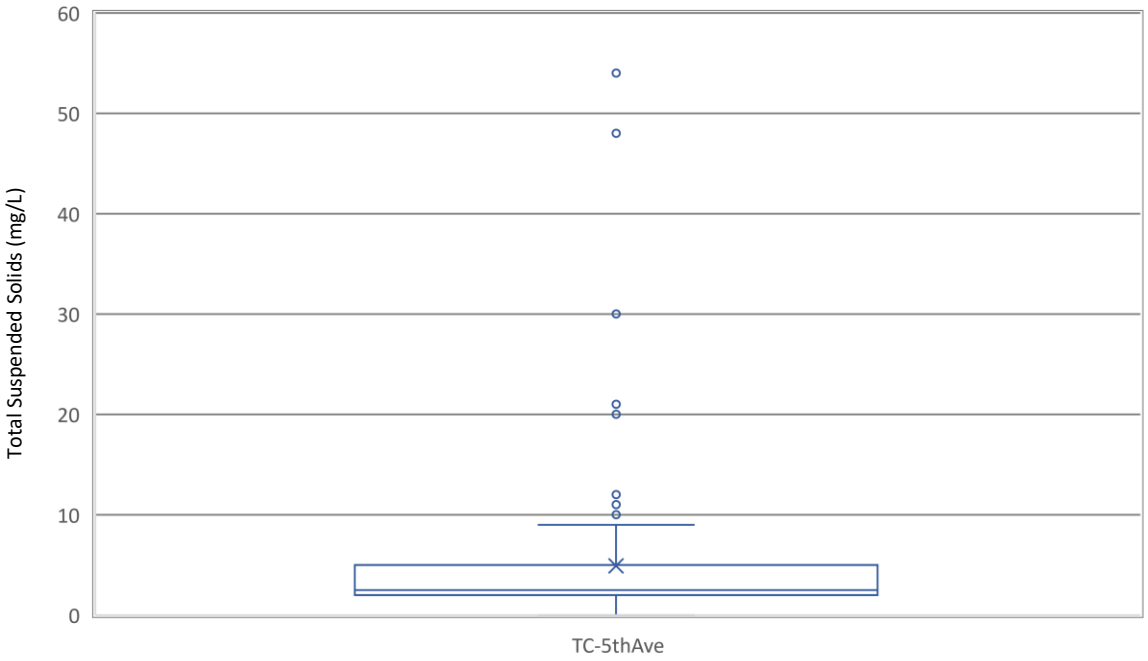
Stn ID	Average	Min	Max	StdDev	Count	Period-of-Record	
TC-5thAve	7.44	2.36	8.18	0.47	144	Feb-98	Nov-21
TC-72DS	7.40	7.40	7.40		1	Oct-04	Oct-04
TC-DepotAve	7.42	7.10	7.80	0.26	5	Jan-06	Oct-06
TC-Porters	7.65	7.52	7.86	0.16	6	Apr-06	May-06
TC-SWPond-1stAve	6.65	6.43	6.93	0.23	6	Apr-06	May-06



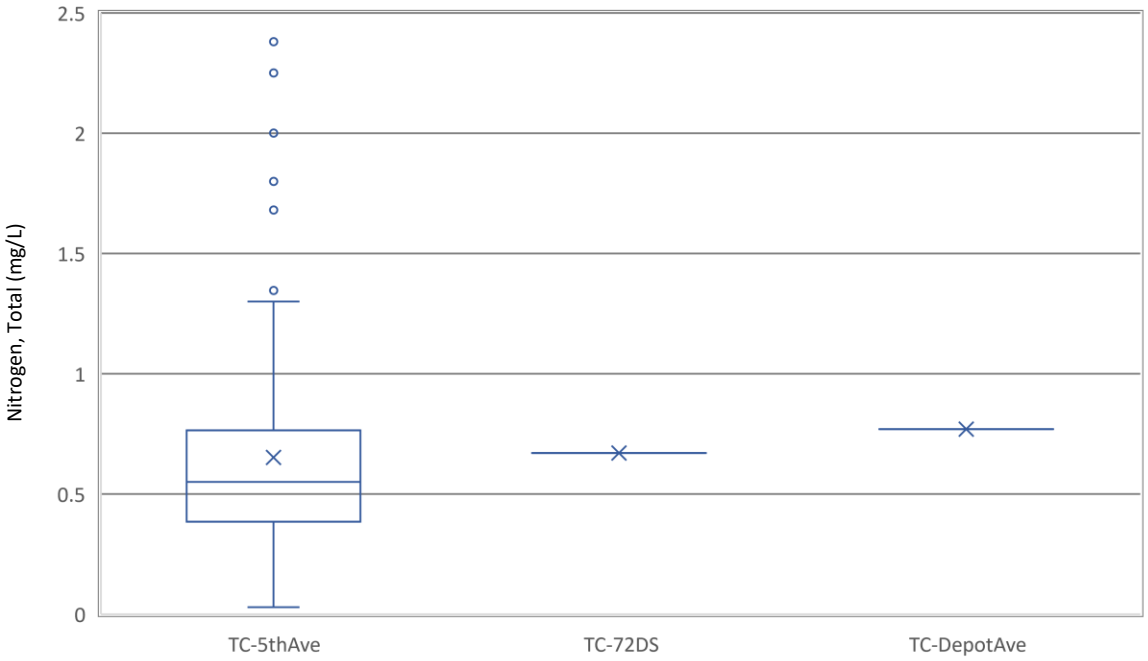
Stn ID	Average	Min	Max	StdDev	Count	Period-of-Record	
TC-5thAve	403.0	37.8	921.0	99.0	205	Feb-98	Nov-21
TC-72DS	350.0	350.0	350.0		1	Oct-04	Oct-04
TC-DepotAve	304.0	146.0	444.0	106.4	5	Jan-06	Oct-06
TC-Porters	221.3	125.0	343.0	99.4	6	Apr-06	May-06
TC-SWPond-1stAve	219.3	135.0	276.0	66.6	6	Apr-06	May-06



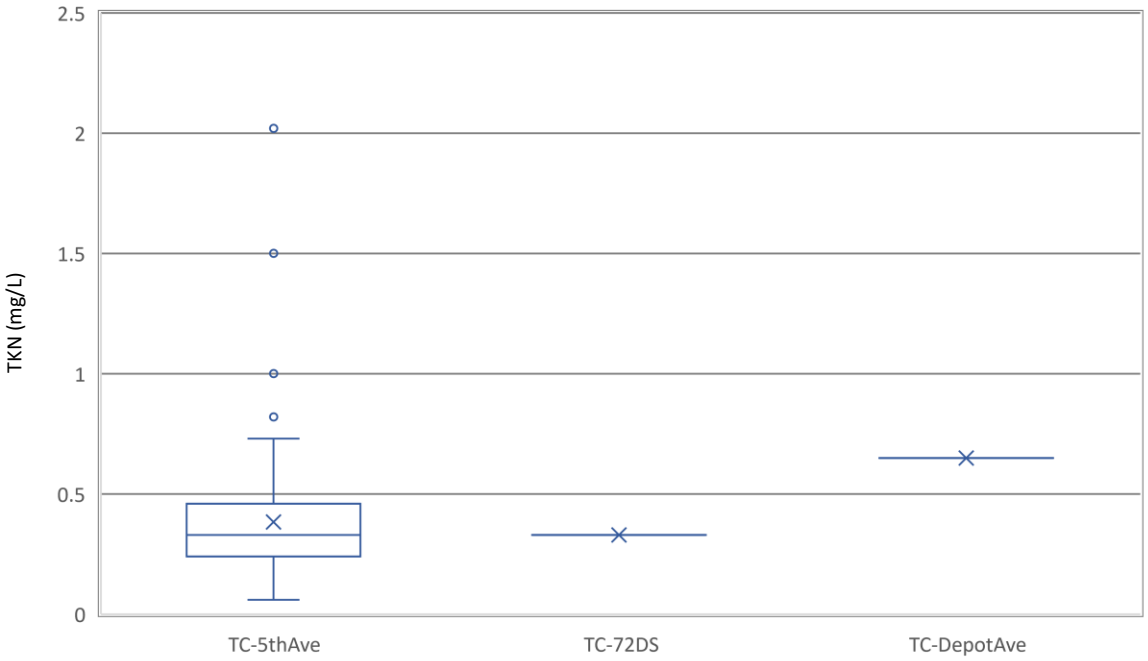
Stn ID	Average	Min	Max	StdDev	Count	Period-of-Record	
TC-5thAve	22.98	12.37	31.00	3.81	144	Feb-98	Nov-21
TC-72DS	23.76	23.76	23.76		1	Oct-04	Oct-04
TC-DepotAve	22.82	20.30	26.60	2.63	5	Jan-06	Oct-06
TC-Porters	23.17	22.20	24.04	0.83	6	Apr-06	May-06
TC-SWPond-1stAve	23.79	22.60	24.65	0.95	6	Apr-06	May-06



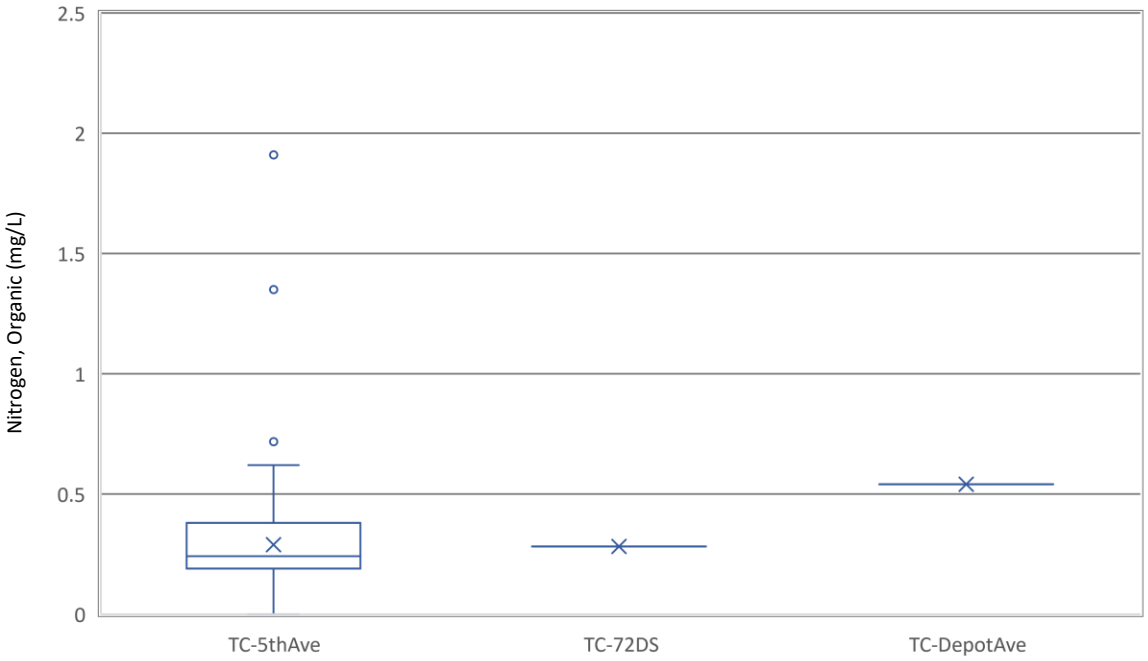
Stn ID	Average	Min	Max	StdDev	Count	Period-of-Record	
TC-5thAve	4.91	0.01	54.00	7.63	108	Aug-01	Nov-21



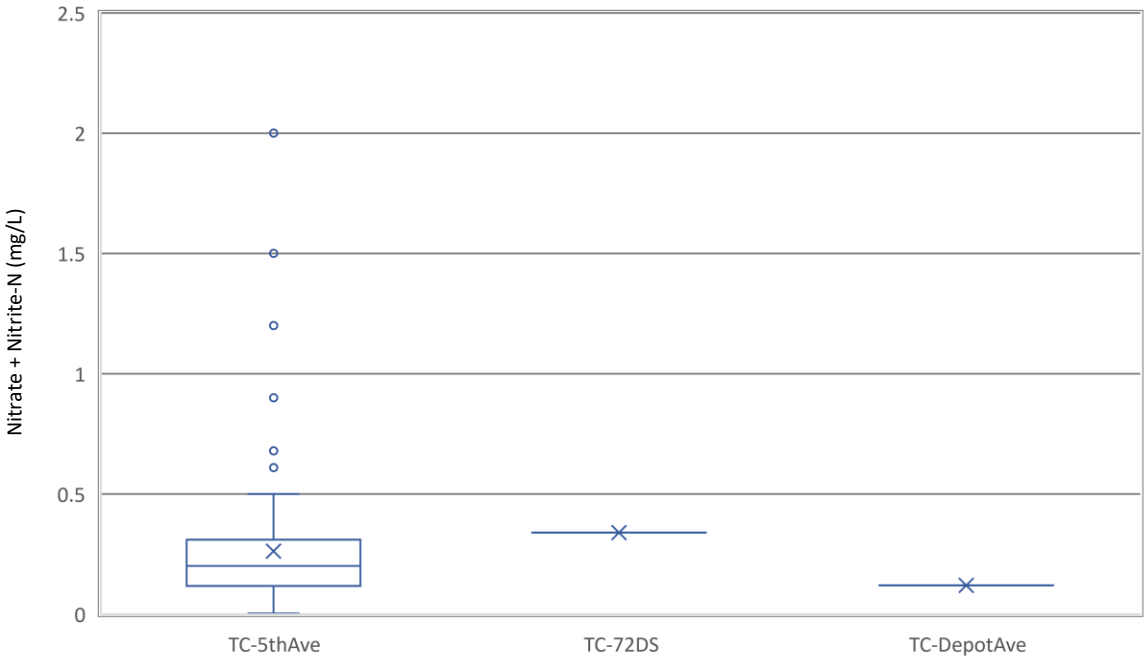
Stn ID	Average	Min	Max	StdDev	Count	Period-of-Record	
TC-5thAve	0.65	0.03	2.38	0.45	105	Aug-01	Nov-21
TC-72DS	0.67	0.67	0.67		1	Oct-04	Oct-04
TC-DepotAve	0.77	0.77	0.77		1	Sep-06	Sep-06



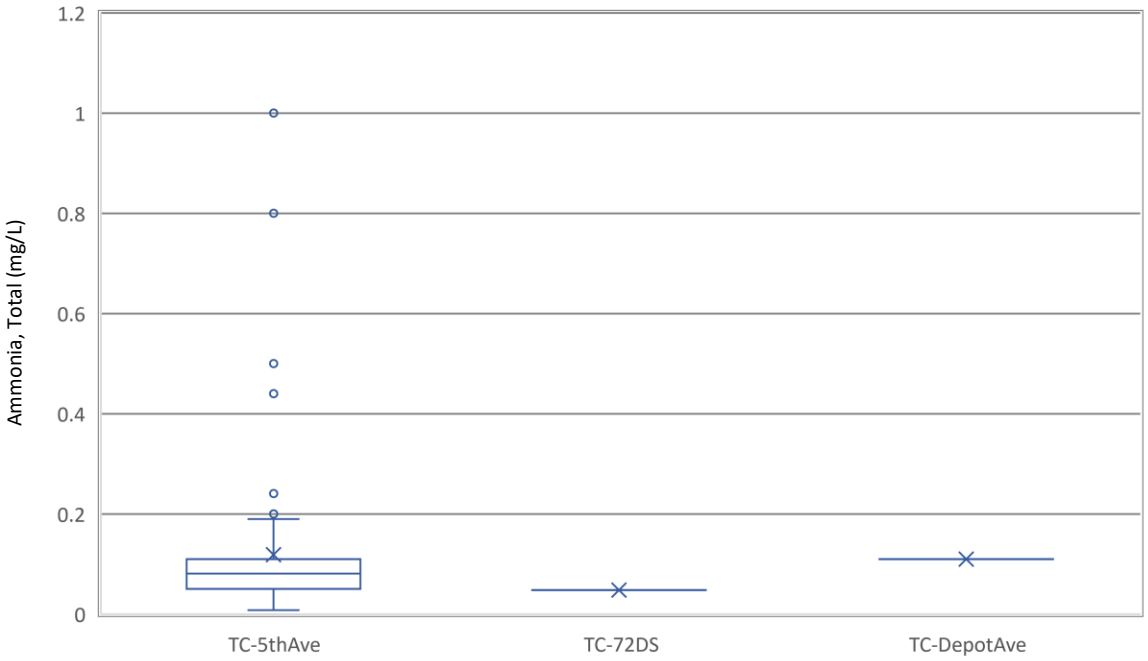
Stn ID	Average	Min	Max	StdDev	Count	Period-of-Record	
TC-5thAve	0.38	0.06	2.02	0.30	114	Aug-01	Nov-21
TC-72DS	0.33	0.33	0.33		1	Oct-04	Oct-04
TC-DepotAve	0.65	0.65	0.65		1	Sep-06	Sep-06



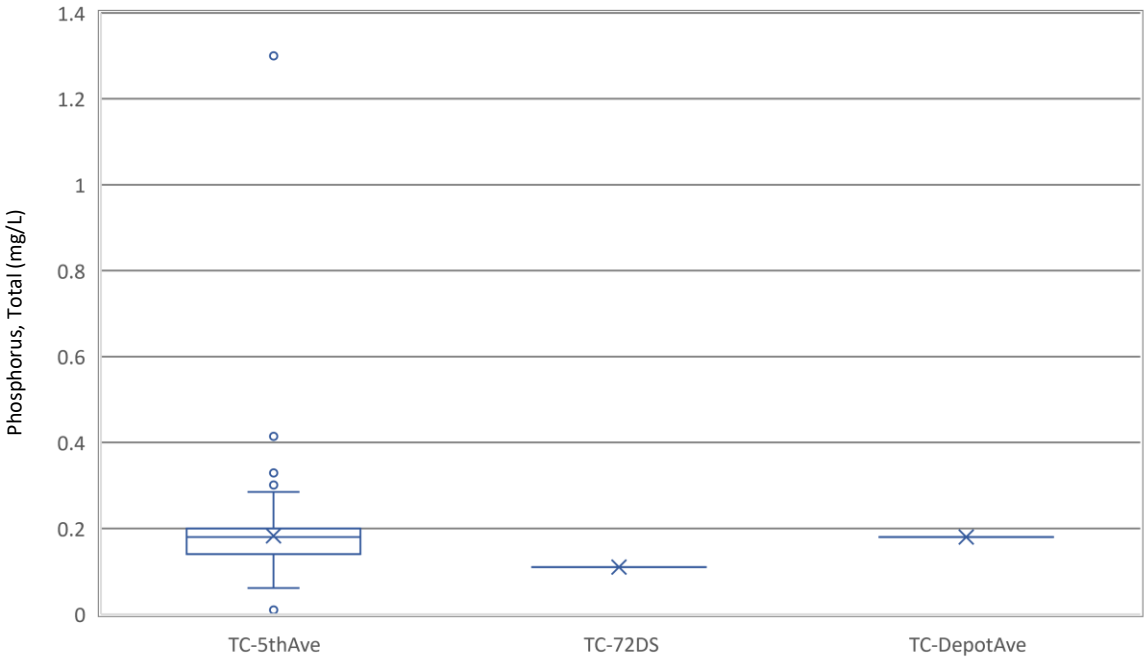
Stn ID	Average	Min	Max	StdDev	Count	Period-of-Record	
TC-5thAve	0.29	0.00	1.91	0.26	87	Aug-01	Nov-21
TC-72DS	0.28	0.28	0.28		1	Oct-04	Oct-04
TC-DepotAve	0.54	0.54	0.54		1	Sep-06	Sep-06



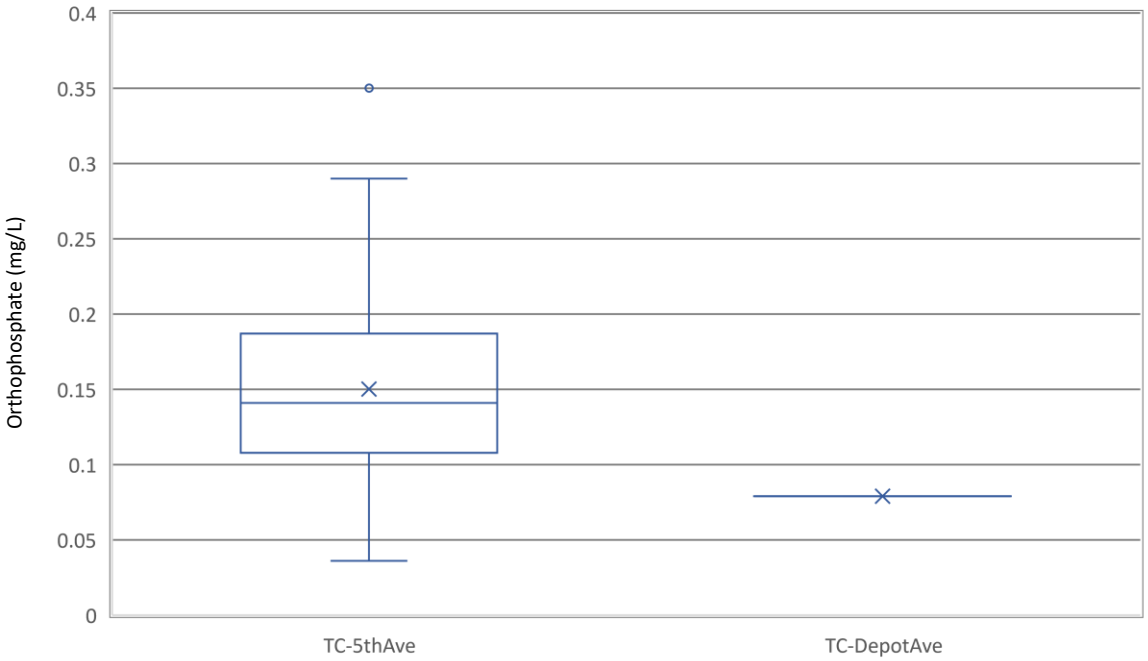
Stn ID	Average	Min	Max	StdDev	Count	Period-of-Record	
TC-5thAve	0.26	0.00	2.00	0.26	140	Aug-01	Nov-21
TC-72DS	0.34	0.34	0.34		1	Oct-04	Oct-04
TC-DepotAve	0.12	0.12	0.12		1	Sep-06	Sep-06



Stn ID	Average	Min	Max	StdDev	Count	Period-of-Record	
TC-5thAve	0.12	0.01	1.00	0.17	92	Aug-01	Nov-21
TC-72DS	0.05	0.05	0.05		1	Oct-04	Oct-04
TC-DepotAve	0.11	0.11	0.11		1	Sep-06	Sep-06

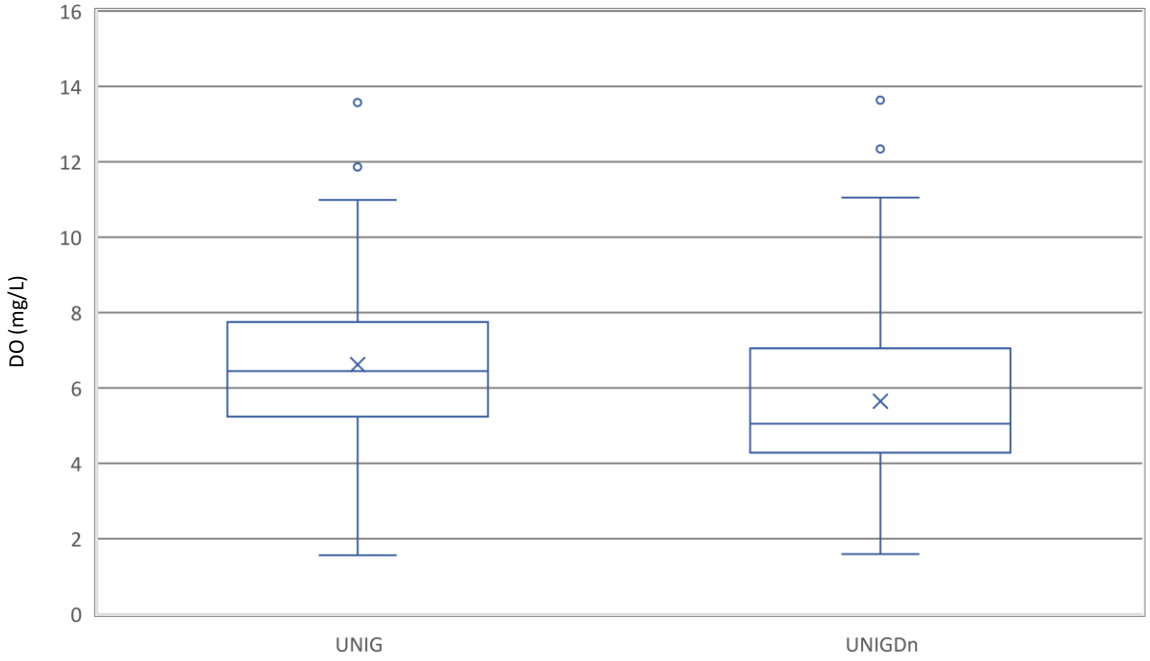


Stn ID	Average	Min	Max	StdDev	Count	Period-of-Record	
TC-5thAve	0.182	0.010	1.300	0.120	111	Aug-01	Apr-21
TC-72DS	0.110	0.110	0.110		1	Oct-04	Oct-04
TC-DepotAve	0.180	0.180	0.180		1	Sep-06	Sep-06

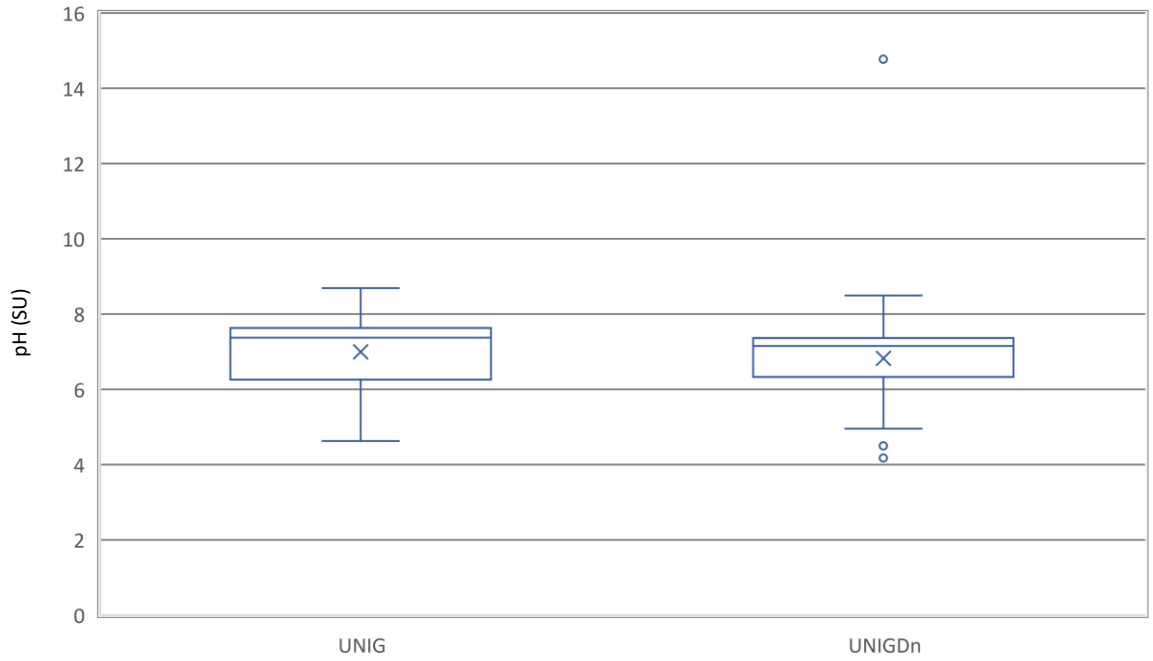


Stn ID	Average	Min	Max	StdDev	Count	Period-of-Record	
TC-5thAve	0.150	0.036	0.350	0.060	118	Aug-01	Nov-21
TC-DepotAve	0.079	0.079	0.079		1	Sep-06	Sep-06

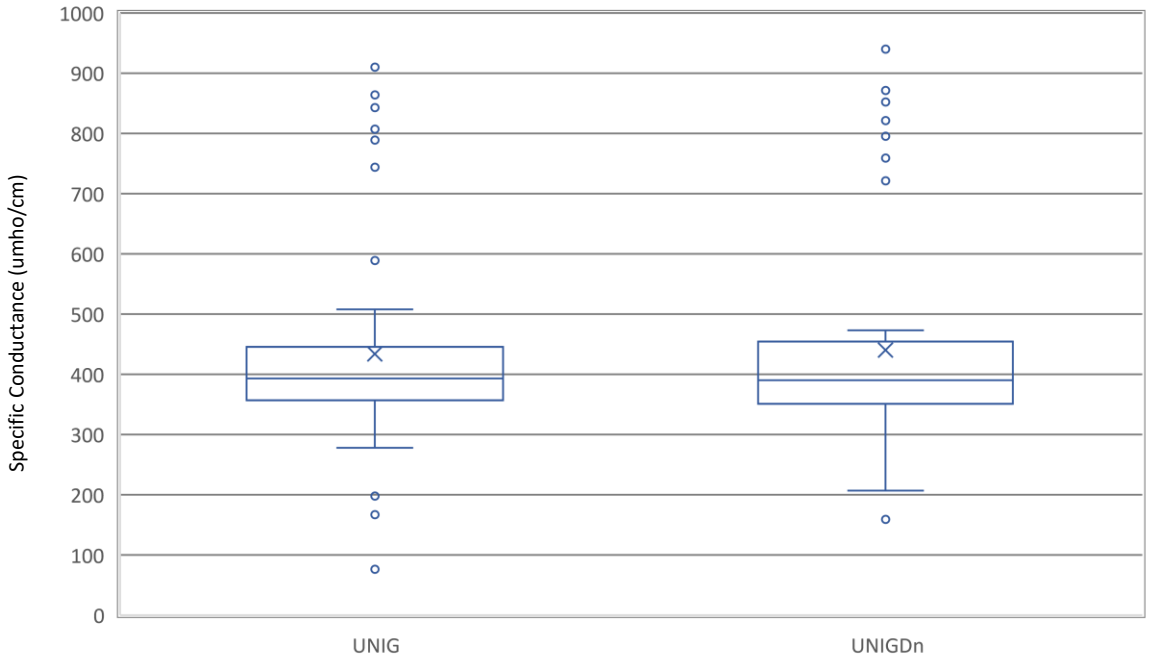
Univ Gardens Water Quality Box Plots by Station Detail



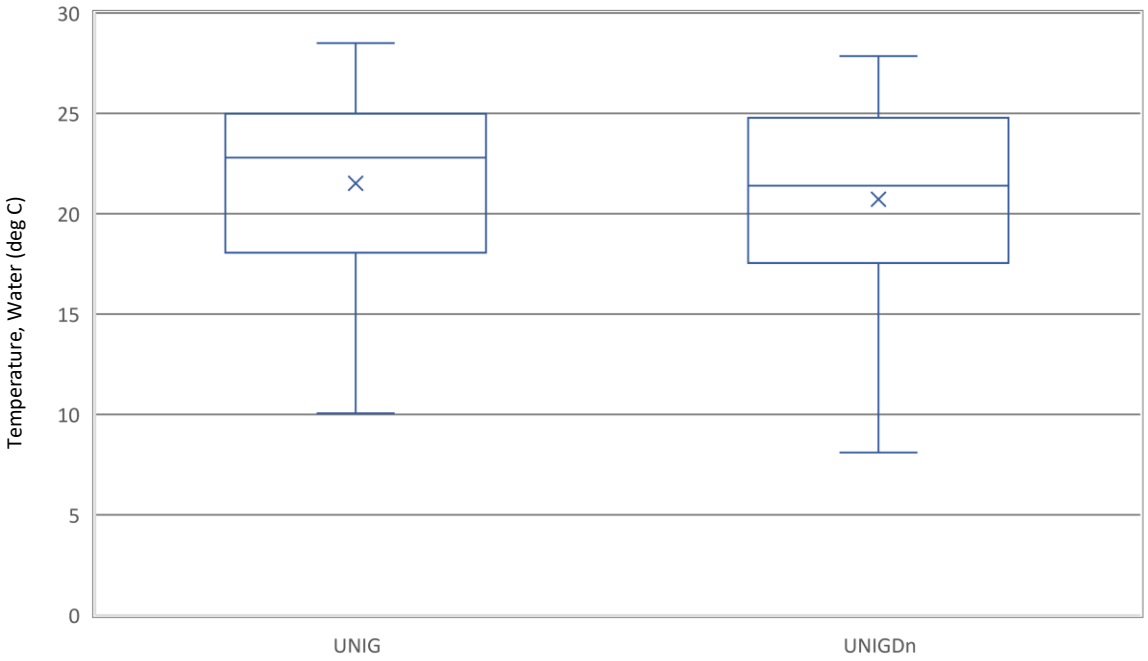
Stn ID	Average	Min	Max	StdDev	Count	Period-of-Record	
UNIG	6.62	1.56	13.57	2.14	92	May-03	Sep-21
UNIGDn	5.64	1.59	13.63	2.28	86	May-03	Sep-13



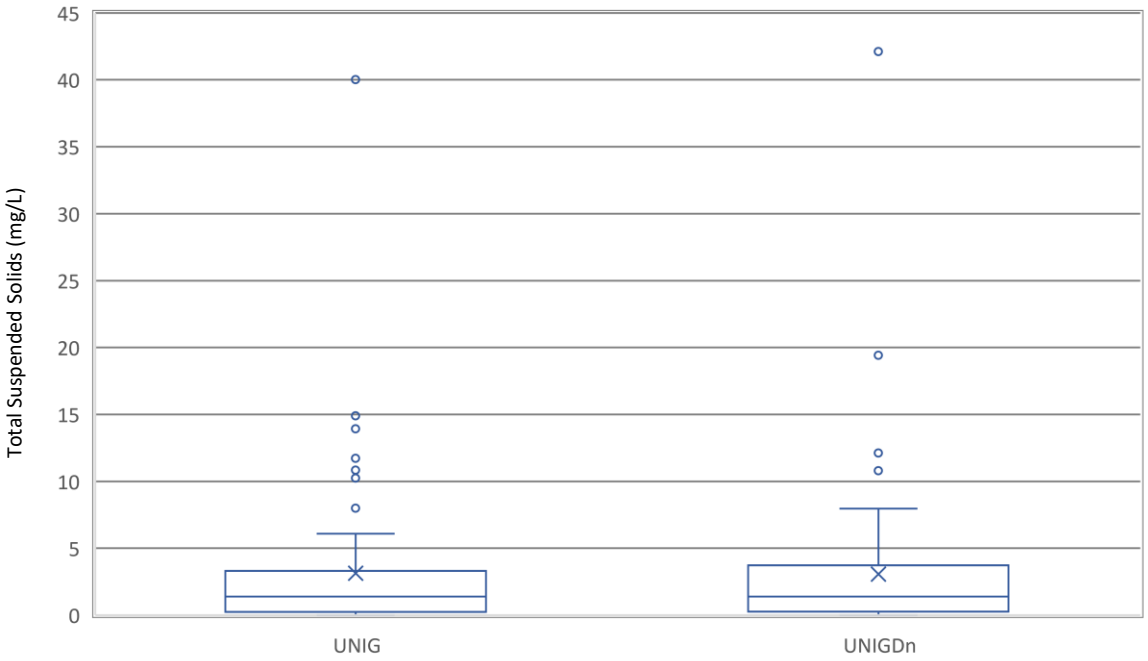
Stn ID	Average	Min	Max	StdDev	Count	Period-of-Record	
UNIG	7.00	4.63	8.69	0.98	87	May-03	Sep-21
UNIGDn	6.82	4.18	14.77	1.29	83	May-03	Sep-13



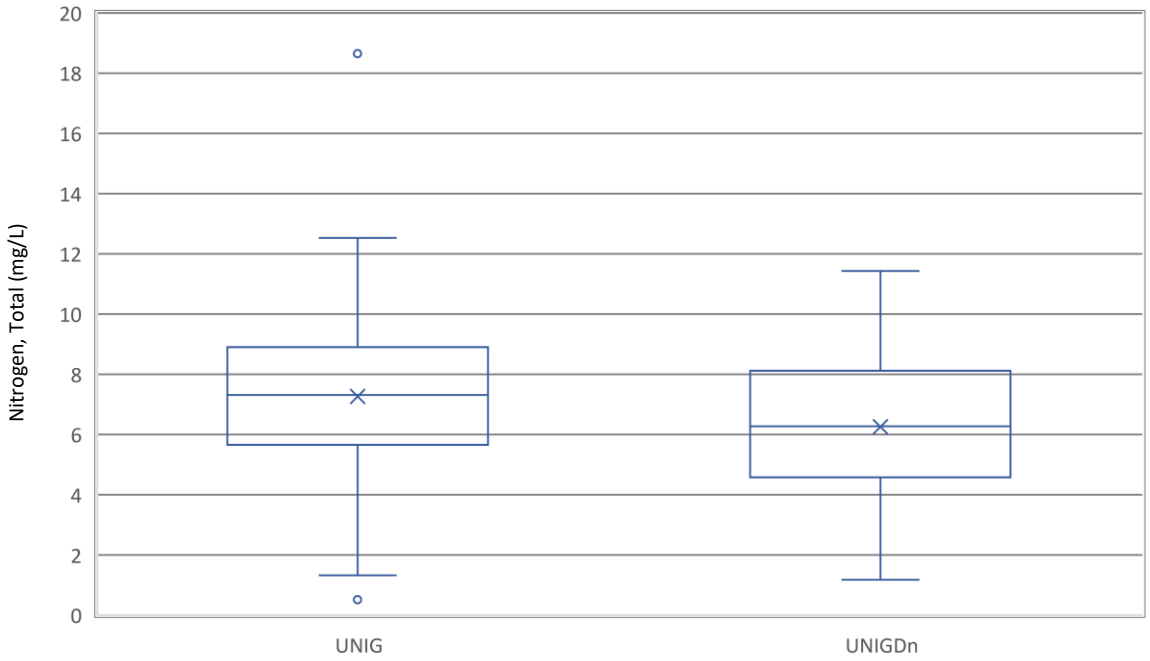
Stn ID	Average	Min	Max	StdDev	Count	Period-of-Record	
UNIG	433.9	76.0	910.0	166.1	68	May-03	Sep-21
UNIGDn	440.0	159.0	940.0	175.3	62	May-03	Sep-13



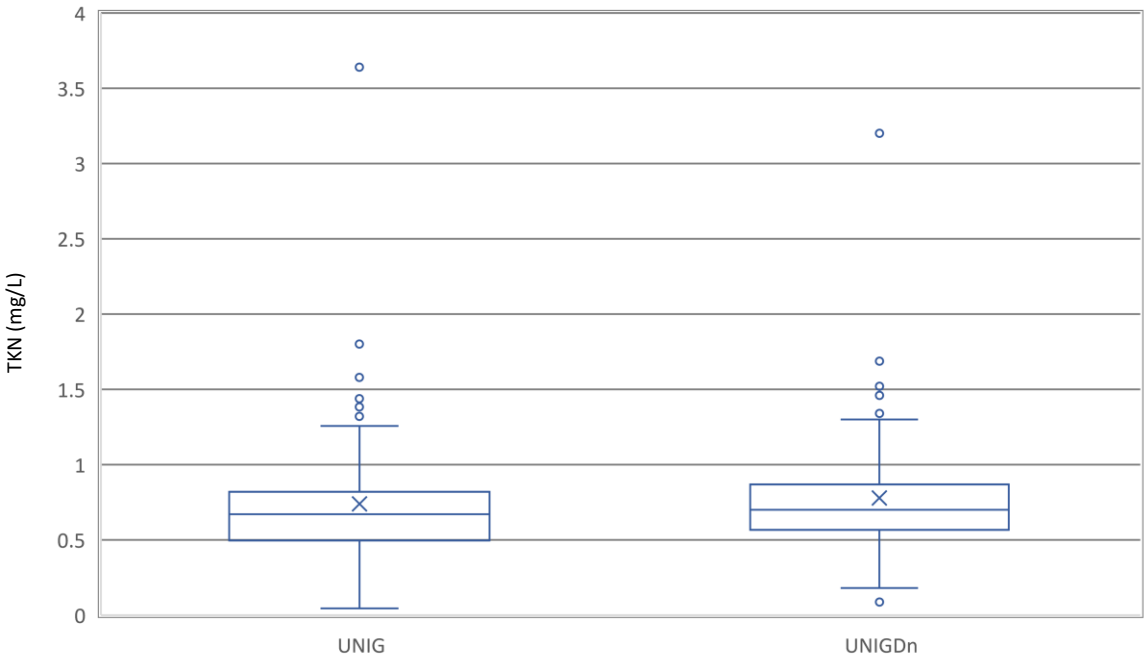
Stn ID	Average	Min	Max	StdDev	Count	Period-of-Record	
UNIG	21.51	10.06	28.50	4.39	92	May-03	Sep-21
UNIGDn	20.72	8.10	27.85	4.86	86	May-03	Sep-13



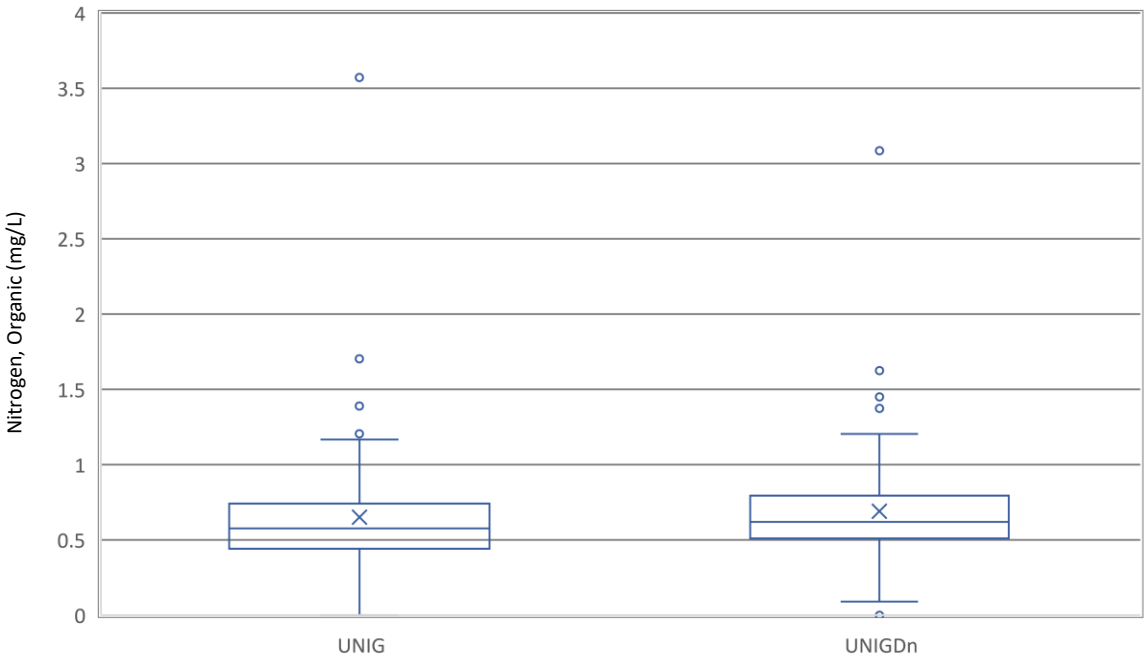
Stn ID	Average	Min	Max	StdDev	Count	Period-of-Record	
UNIG	3.12	0.00	40.03	5.54	75	Aug-03	Sep-13
UNIGDn	3.07	0.00	42.12	5.79	69	Oct-03	Sep-13



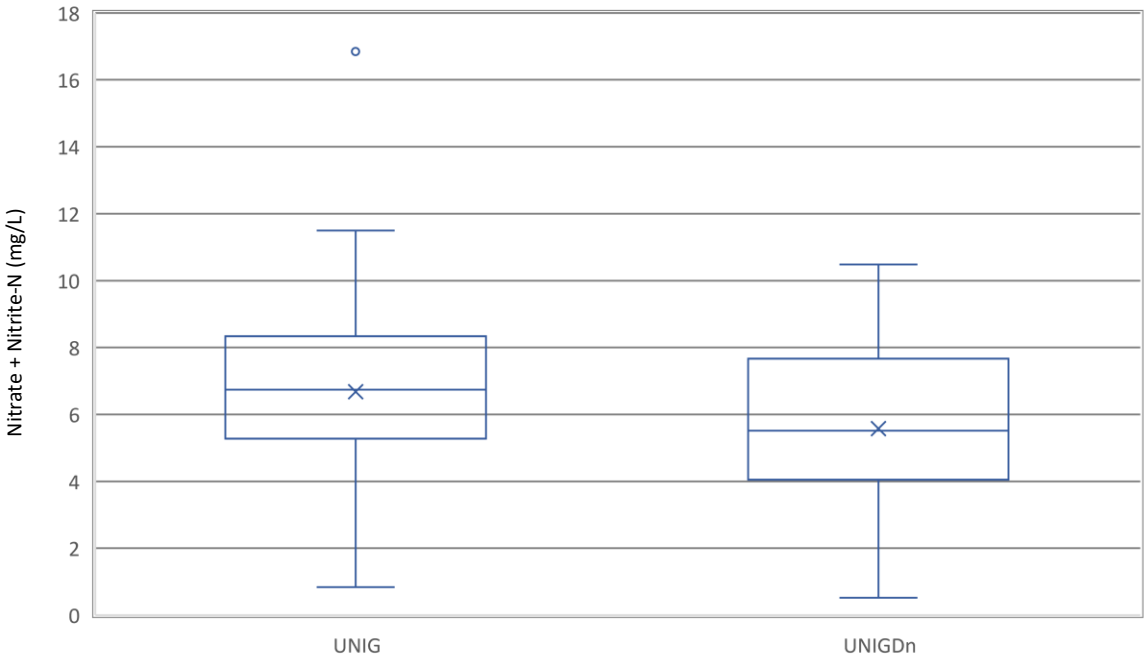
Stn ID	Average	Min	Max	StdDev	Count	Period-of-Record	
UNIG	7.27	0.52	18.65	2.76	95	Jun-03	Sep-21
UNIGDn	6.25	1.18	11.43	2.42	86	Jun-03	Sep-13



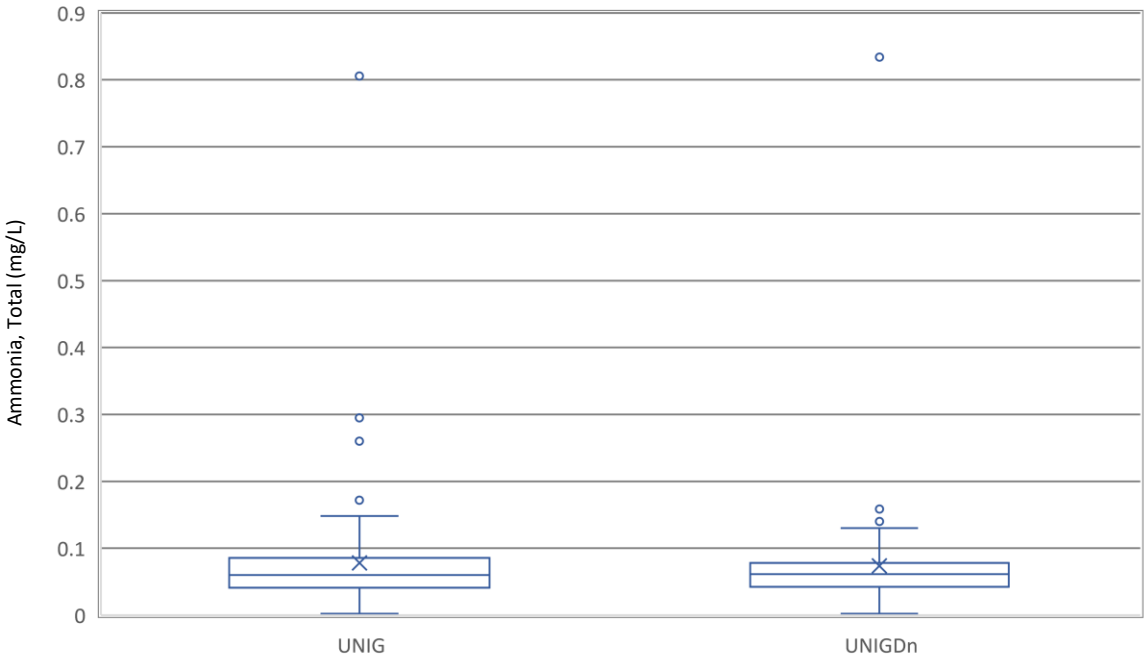
Stn ID	Average	Min	Max	StdDev	Count	Period-of-Record	
UNIG	0.74	0.04	3.64	0.43	95	Jun-03	Sep-21
UNIGDn	0.78	0.09	3.20	0.41	85	Jun-03	Sep-13



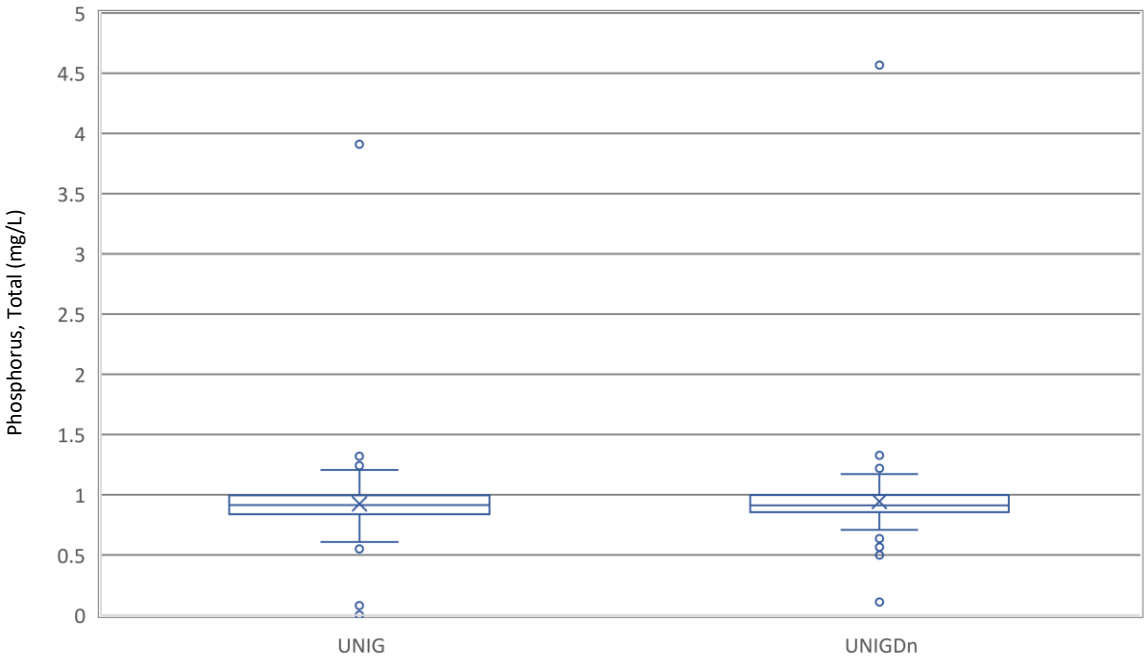
Stn ID	Average	Min	Max	StdDev	Count	Period-of-Record	
UNIG	0.65	0.00	3.57	0.45	77	Mar-04	Sep-21
UNIGDn	0.69	0.00	3.08	0.41	71	Mar-04	Sep-13



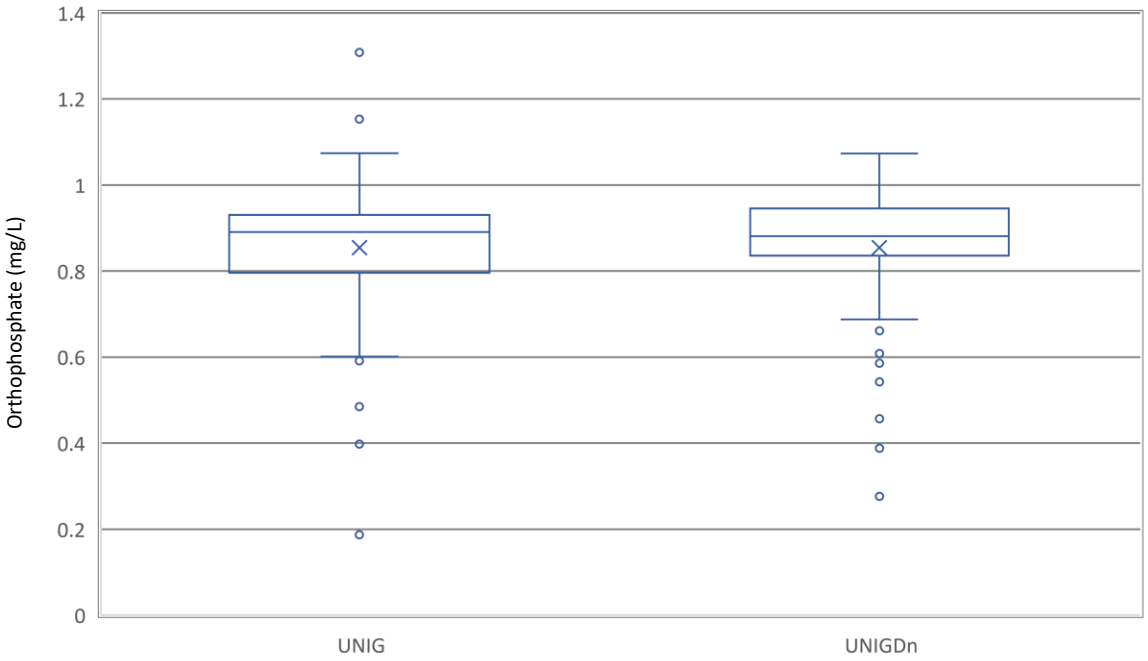
Stn ID	Average	Min	Max	StdDev	Count	Period-of-Record	
UNIG	6.68	0.84	16.84	2.54	97	Jun-03	Sep-21
UNIGDn	5.58	0.52	10.48	2.36	86	Jun-03	Sep-13



Stn ID	Average	Min	Max	StdDev	Count	Period-of-Record	
UNIG	0.08	0.00	0.81	0.09	85	Mar-04	Sep-21
UNIGDn	0.07	0.00	0.83	0.10	73	Mar-04	Sep-13



Stn ID	Average	Min	Max	StdDev	Count	Period-of-Record	
UNIG	0.925	0.001	3.909	0.370	94	Jun-03	Sep-21
UNIGDn	0.945	0.109	4.567	0.439	85	Jun-03	Sep-13



Stn ID	Average	Min	Max	StdDev	Count	Period-of-Record	
UNIG	0.854	0.187	1.308	0.154	82	Oct-04	Sep-21
UNIGDn	0.854	0.276	1.073	0.147	70	Oct-04	Sep-13

Appendix B

UF BioGator UF Conservation Area Species Inventory

Kingdom Animalia Inventory

Phylum	Class	Order	Scientific Name	Bantram-Carr	Dairy Pond	Digital Design Wetland	Fraternity Wetland	Gator Pond	Graham Pond	Graham Woods	Harmonic Woods	Hume Creek	Jennings Creek	Lake Alice	Lake Alice Creek	Lake Alice South	Law School Woods	Liberty Pond	McCarty Woods	Newnins-Ziegler Sink	Ocala Pond	Reitz Ravine
Arthropoda	Arachnida	Araneae	*Anasaitis canosa*											X								
			Argiope argentata					X														
			Argiope aurantia											X								
			Crossopriza lyoni															X				
			Frontinella pyramitela	X																		
			Gasteracantha cancriformis								X			X								
			Leucauge argyrobapta	X						X				X					X			
			Lyssomanes viridis	X										X								
			Menemerus bivittatus															X				
			Metacyrba floridana															X				
			Metazygia zilloides															X				
			Micrathena sagittata											X								
			Neoscona arabesca											X								
			Spintharus flavidus											X								
			Trichonephila clavipes											X								
	Insecta	Blattodea	*Blattella asahinai*											X								
			Ischnoptera deropeltiformis											X								
		Coleoptera	*Dendroctonus terebrans*														X					
			Pachnaeus opalus										X									

Phylum	Class	Order	Scientific Name	Bantram-Carr	Dairy Pond	Digital Design Wetland	Fraternity Wetland	Gator Pond	Graham Pond	Graham Woods	Harmonic Woods	Hume Creek	Jennings Creek	Lake Alice	Lake Alice Creek	Lake Alice South	Law School Woods	Liberty Pond	McCarty Woods	Newnins-Ziegler Sink	Ocala Pond	Reitz Ravine
			Thermonectus basillaris											X								
		Diptera	*Celticecis subulata*										X									
			Imatissma posticata											X								
			Palpada agrorum											X								
			Sargus fasciatus																X			
			Tabanus (Tabanus) lineola															X				
			Taeniaptera trivittata											X								
		Hemiptera	*Acanthocephala declivis*											X								
			Arilus cristatus											X								
			Pachypsylla celtidismamma											X								
			Pintalia vibex											X								
			Sephina gundlachii																X			
			Tylozygus bifidus											X								
		Hymenoptera	*Agapostemon splendens*		X																	
			Apis mellifera	X										X		X						
			Bombus impatiens											X								
			Camponotus floridanus											X								
			Camponotus snellingi																X			
			Melissodes bimaculatus	X																		
			Odontomachus brunneus								X											
			Polistes fuscatus														X					

Phylum	Class	Order	Scientific Name	Bantram-Carr	Dairy Pond	Digital Design Wetland	Fraternity Wetland	Gator Pond	Graham Pond	Graham Woods	Harmonic Woods	Hume Creek	Jennings Creek	Lake Alice	Lake Alice Creek	Lake Alice South	Law School Woods	Liberty Pond	McCarty Woods	Newnins-Ziegler Sink	Ocala Pond	Reitz Ravine
			Polistes metricus											X					X			
			Pseudomyrmex ejectus																X			
			Pseudomyrmex gracilis											X								
			Solenopsis invicta											X								
			Tetramorium bicarinatum											X								
			Xylocopa micans	X																		
		Lepidoptera	*Acronicta rubricoma*											X								
			Actias luna										X									
			Anartia jatrophae			X								X								
			Anicla infecta											X								
			Asterocampa clyton			X													X			
			Atlides halesus			X																
			Calycopis cecrops																X			
			Cameraria caryaefoliella											X								
			Catocala ilia								X											
			Dahana atripennis																X			
			Deidamia inscriptum											X								
			Erynnis horatius			X													X			
			Eupithecia miserulata											X								
			Eurema daira																X			
			Heliconius charithonia										X	X					X			

Phylum	Class	Order	Scientific Name	Bantram-Carr	Dairy Pond	Digital Design Wetland	Fraternity Wetland	Gator Pond	Graham Pond	Graham Woods	Harmonic Woods	Hume Creek	Jennings Creek	Lake Alice	Lake Alice Creek	Lake Alice South	Law School Woods	Liberty Pond	McCarty Woods	Newnins-Ziegler Sink	Ocala Pond	Reitz Ravine
			Herpetogramma phaeopteralis															X				
			Homaledra sabalella											X								
			Idaea scintillularia											X								
			Idia aemula															X				
			Isturgia dislocaria											X								
			Junonia coenia											X								
			Lerema accius											X								
			Libytheana carinenta																X			
			Limenitis arthemis														X					
			Malacosoma americana											X								
			Malacosoma disstria											X								
			Orgyia detrita											X								
			Palthis asopialis											X								
			Papilio glaucus																X			
			Papilio troilus			X								X								
			Pleuroprucha insulsaria											X								
			Strymon melinus		X																	
			Synclita obliteralis											X								
			Urbanus proteus											X								
			Vanessa atalanta		X																	
		Mantodea	*Gonatista grisea*											X								
		Odonata	*Arigomphus pallidus*		X																	

Phylum	Class	Order	Scientific Name	Bantram-Carr	Dairy Pond	Digital Design Wetland	Fraternity Wetland	Gator Pond	Graham Pond	Graham Woods	Harmonic Woods	Hume Creek	Jennings Creek	Lake Alice	Lake Alice Creek	Lake Alice South	Law School Woods	Liberty Pond	McCarty Woods	Newnins-Ziegler Sink	Ocala Pond	Reitz Ravine
			Calopteryx maculata											X								
			Coryphaeschna ingens																X			
			Erythemis simplicicollis			X								X					X			
			Erythrodiplax minuscula		X																	
			Gynacantha nervosa											X								
			Ischnura hastata		X																	
			Ischnura posita																X			
			Libellula needhami											X								
			Libellula vibrans											X								
			Orthemis ferruginea		X									X								
			Pachydiplax longipennis	X	X						X			X				X	X			
			Tramea carolina											X								
		Orthoptera	*Neoconocephalus triops*											X								
			Stilpnochlora couloniana			X					X											
		Phasmatodea	*Anisomorpha buprestoides*											X								
	Malacostraca	Decapoda	*Procambarus paeninsulanus*											X								
Chordata	Actinopterygii	Amiiformes	*Amia calva*											X								
		Characiformes	*Piaractus brachypomus*											X								
		Cypriniformes	*Cyprinus carpio*									X		X								

Phylum	Class	Order	Scientific Name	Bantram-Carr	Dairy Pond	Digital Design Wetland	Fraternity Wetland	Gator Pond	Graham Pond	Graham Woods	Harmonic Woods	Hume Creek	Jennings Creek	Lake Alice	Lake Alice Creek	Lake Alice South	Law School Woods	Liberty Pond	McCarty Woods	Newnins-Ziegler Sink	Ocala Pond	Reitz Ravine
			Notemigonus crysoleucas											X								
		Cyprinodontiformes	*Fundulus chrysotus*											X								
			Gambusia holbrooki	X					X					X	X							
			Heterandria formosa	X										X	X							
			Lucania parva											X								
			Poecilia latipinna											X	X							
		Lepisosteiformes	*Lepisosteus platyrhincus*											X								
		Perciformes	*Astronotus ocellatus*											X								
			Lepomis gulosus	X										X								
			Lepomis macrochirus	X										X								
			Lepomis punctatus											X								
			Micropterus salmoides											X								
			Oreochromis aureus	X										X								
			Oreochromis niloticus		X									X								
			Pomoxis nigromaculatus											X								
			Rocio octofasciata	X										X	X							
		Siluriformes	*Ameiurus natalis*	X																		
			Ameiurus nebulosus											X								
	Amphibia	Anura	*Anaxyrus punctatus*											X								
			Anaxyrus terrestris								X			X								

Phylum	Class	Order	Scientific Name	Bantram-Carr	Dairy Pond	Digital Design Wetland	Fraternity Wetland	Gator Pond	Graham Pond	Graham Woods	Harmonic Woods	Hume Creek	Jennings Creek	Lake Alice	Lake Alice Creek	Lake Alice South	Law School Woods	Liberty Pond	McCarty Woods	Newnins-Ziegler Sink	Ocala Pond	Reitz Ravine
			Eleutherodactylus planirostris															X	X			
			Gastrophryne carolinensis							X												X
			Lithobates catesbeianus					X										X				
			Lithobates clamitans									X		X								
			Lithobates sphenocephalus											X				X				
			Osteopilus septentrionalis											X					X			
			Scaphiopus holbrookii											X								
		Caudata	*Desmognathus auriculatus*							X				X								X
			Eurycea quadridigitata											X								
			Notophthalmus viridescens																			X
			Pseudotriton montanus							X												X
			Siren lacertina																			X
	Aves	Accipitriformes	*Accipiter cooperii*		X									X				X	X			
			Accipiter striatus											X				X				
			Buteo jamaicensis	X	X	X							X	X			X	X	X			
			Buteo lineatus	X	X			X			X			X		X	X	X	X	X	X	
			Cathartes aura	X	X	X		X	X					X		X	X	X	X		X	
			Coragyps atratus	X	X	X								X			X	X	X		X	

Phylum	Class	Order	Scientific Name	Bantram-Carr	Dairy Pond	Digital Design Wetland	Fraternity Wetland	Gator Pond	Graham Pond	Graham Woods	Harmonic Woods	Hume Creek	Jennings Creek	Lake Alice	Lake Alice Creek	Lake Alice South	Law School Woods	Liberty Pond	McCarty Woods	Newnins-Ziegler Sink	Ocala Pond	Reitz Ravine
			Elanoides forficatus	X	X		X							X				X	X			
			Haliaeetus leucocephalus	X	X									X					X			
			Ictinia mississippiensis	X										X			X	X	X			
			Pandion haliaetus	X	X	X								X		X	X	X	X		X	
			Pandion haliaetus carolinensis											X								
		Anseriformes	*Aix sponsa*											X								
			Alopochen aegyptiaca											X								
			Anas americana											X								
			Anas crecca											X								
			Anas platyrhynchos											X				X				
			Aythya affinis											X								
			Aythya collaris											X								
			Aythya valisineria											X								
			Bucephala albeola		X									X				X				
			Bucephala clangula		X																	
			Cairina moschata											X								
			Dendrocygna autumnalis	X										X					X		X	
			Lophodytes cucullatus		X			X	X					X				X			X	
			Mergus serrator											X								
			Oxyura jamaicensis											X								
		Apodiformes	*Archilochus colubris*	X										X			X	X				

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			Chaetura pelagica	X	X	X		X						X			X	X	X		X	
		Caprimulgiformes	*Antrostomus carolinensis*										X	X					X			
			Chordeiles minor					X						X								
		Charadriiformes	*Actitis macularius*											X								
			Bartramia longicauda											X								
			Charadrius vociferus											X								
			Gallinago delicata											X								
			Hydroprogne caspia											X								
			Larus delawarensis	X	X									X					X			
			Tringa solitaria											X								
		Ciconiiformes	*Mycteria americana*	X		X								X					X		X	
		Columbiformes	*Columba livia*	X	X	X								X								
			Columbina passerina											X								
			Streptopelia decaocto	X										X								
			Zenaida macroura	X	X			X						X			X	X	X		X	
		Coraciiformes	*Megaceryle alcyon*		X			X						X				X				
		Cuculiformes	*Coccyzus americanus*	X										X								
		Falconiformes	*Falco columbarius*	X																		
			Falco peregrinus	X																		
			Falco sparverius	X	X									X					X			
		Galliformes	*Colinus virginianus*											X								

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			Meleagris gallopavo	X										X								
		Gruiformes	*Aramus guarauna*											X								
			Fulica americana											X								
			Grus canadensis	X	X			X						X			X					
			Porphyrio martinica											X								
			Porzana carolina											X								
			Rallus limicola											X								
		Passeriformes	*Agelaius phoeniceus*	X		X								X			X		X		X	
			Agelaius phoeniceus mearnsi											X								
			Baeolophus bicolor	X	X	X		X						X		X	X	X	X	X	X	
			Bombycilla cedrorum	X	X			X	X					X				X	X		X	
			Cardellina canadensis											X								
			Cardellina pusilla	X										X								
			Cardinalis cardinalis	X	X	X		X	X	X				X		X	X	X	X	X	X	X
			Catharus fuscescens	X										X								
			Catharus guttatus	X		X								X					X			
			Catharus minimus																X			
			Catharus ustulatus	X										X					X			
			Cistothorus palustris	X										X								
			Contopus virens					X						X								
			Corvus brachyrhynchos	X	X	X		X	X					X			X	X	X		X	X
			Corvus ossifragus	X	X			X						X			X	X	X		X	

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			Cyanocitta cristata	X	X	X		X	X					X		X	X	X	X	X	X	
			Dolichonyx oryzivorus											X								
			Dumetella carolinensis	X	X	X		X						X		X	X	X	X		X	
			Empidonax alnorum											X								
			Empidonax virescens	X										X					X			
			Euphagus carolinus											X								
			Geothlypis formosa											X								
			Geothlypis trichas	X		X		X						X			X	X	X			
			Haemorhous mexicanus	X	X	X			X					X		X	X	X	X	X	X	
			Helmitheros vermivorum	X									X	X					X			
			Hirundo rustica	X										X					X			
			Hylocichla mustelina	X										X								
			Icteria virens		X																	
			Icterus galbula	X	X									X					X			
			Icterus spurius											X								
			Junco hyemalis																		X	
			Lanius ludovicianus											X								
			Leiothlypis celata	X	X									X				X	X			
			Leiothlypis peregrina	X									X	X								
			Melospiza georgiana	X										X								
			Melospiza melodia											X								
			Mimus polyglottos	X	X	X		X						X		X		X	X	X	X	

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			Mniotilta varia	X	X	X								X			X	X	X			X
			Molothrus ater	X										X		X		X				
			Myiarchus crinitus	X	X			X						X			X	X	X	X	X	
			Parkesia motacilla	X	X									X								
			Parkesia noveboracensis											X						X		
			Passer domesticus	X	X	X								X				X	X		X	
			Passerculus sandwichensis											X								
			Passerina caerulea											X								
			Passerina cyanea											X					X			
			Pheucticus ludovicianus	X										X								
			Pipilo erythrophthalmus	X	X									X								
			Piranga olivacea	X										X					X		X	
			Piranga rubra	X				X						X			X		X			
			Poecile carolinensis	X	X			X						X		X	X	X	X	X	X	
			Polioptila caerulea	X	X	X								X				X	X		X	
			Progne subis	X										X					X			
			Protonotaria citrea											X								
			Quiscalus major	X										X				X				
			Quiscalus quiscula	X	X									X					X			
			Regulus calendula	X										X								
			Sayornis phoebe	X	X	X		X	X					X				X	X		X	
			Seiurus aurocapilla	X										X		X	X		X	X		

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			Setophaga americana	X	X								X	X		X	X	X	X		X	
			Setophaga caerulescens											X			X		X			
			Setophaga citrina	X										X					X			
			Setophaga coronata	X	X	X		X	X					X				X	X	X	X	
			Setophaga discolor	X										X					X			
			Setophaga dominica	X	X	X								X				X	X		X	
			Setophaga fusca	X										X					X			
			Setophaga magnolia	X										X					X			
			Setophaga palmarum	X	X	X			X					X			X		X		X	
			Setophaga palmarum palmarum			X																
			Setophaga pensylvanica											X					X			
			Setophaga petechia	X										X					X			
			Setophaga pinus	X	X									X			X		X		X	X
			Setophaga ruticilla	X	X									X			X		X			
			Setophaga striata	X																		
			Setophaga tigrina														X					
			Sialia sialis	X	X									X		X	X	X	X			
			Spinus tristis	X				X						X				X	X			
			Spizella passerina	X	X									X				X	X		X	
			Stelgidopteryx serripennis	X										X				X				
			Sturnella magna											X								

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			Sturnus vulgaris											X								
			Tachycineta bicolor	X	X									X					X			
			Thryothorus ludovicianus	X	X	X		X	X					X		X	X	X	X	X	X	X
			Toxostoma rufum	X	X	X		X						X			X	X	X		X	
			Troglodytes aedon	X										X					X			
			Troglodytes hiemalis											X								
			Turdus migratorius	X	X			X	X					X				X	X		X	
			Tyrannus tyrannus																X			
			Vermivora chrysoptera											X								
			Vermivora cyanoptera											X								
			Vireo flavifrons											X				X	X		X	
			Vireo griseus	X		X								X				X	X			
			Vireo olivaceus	X				X						X			X	X	X			X
			Vireo solitarius	X	X									X				X	X		X	
			Zonotrichia albicollis											X					X			
			Zonotrichia leucophrys											X								
		Pelecaniformes	*Ardea alba*	X	X	X		X						X			X	X	X		X	
			Ardea herodias	X	X	X		X						X				X			X	
			Bubulcus ibis	X										X				X	X			
			Butorides virescens		X	X								X			X	X				
			Egretta caerulea	X	X	X		X	X			X		X			X	X			X	
			Egretta thula	X	X	X		X						X			X	X	X		X	

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			Egretta tricolor					X						X			X		X			
			Eudocimus albus	X	X	X						X		X			X	X	X		X	
			Ixobrychus exilis			X								X								
			Nycticorax nycticorax											X								
			Platalea ajaja											X								
			Plegadis falcinellus											X				X				
		Piciformes	*Colaptes auratus*											X								
			Dryobates pubescens	X	X	X		X						X			X	X	X		X	X
			Dryocopus pileatus	X	X									X		X	X		X			
			Melanerpes carolinus	X	X	X		X	X					X		X	X	X	X	X	X	X
			Melanerpes erythrocephalus											X			X					
			Sphyrapicus varius	X	X						X			X					X		X	
		Podicipediformes	*Podiceps auritus*											X								
			Podilymbus podiceps		X									X								
		Strigiformes	*Bubo virginianus*											X							X	
			Strix varia	X				X						X			X				X	
			Tyto alba											X								
		Suliformes	*Anhinga anhinga*	X	X	X								X			X	X	X			
			Phalacrocorax auritus		X									X				X				
	Mammalia	Artiodactyla	*Bos taurus*											X								
			Odocoileus virginianus											X								

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			Sus scrofa											X								
		Carnivora	*Canis latrans*											X								
			Canis lupus											X								
			Canis lupus familiaris											X								
			Felis catus	X						X			X	X								X
			Lontra canadensis											X								
			Lynx rufus											X								
			Lynx rufus floridanus											X								
			Mephitis mephitis											X								
			Mephitis mephitis elongata											X								
			Mustela frenata											X								
			Mustela frenata peninsulae											X								
			Procyon lotor	X										X				X				
			Procyon lotor elucus											X								
			Urocyon cinereoargenteus											X								
			Urocyon cinereoargenteus floridanus											X								
			Vulpes vulpes											X								
		Chiroptera	*Dasypterus intermedius*											X								
			Lasiurus borealis											X								

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			Lasiurus seminolus											X								
			Nycticeius humeralis											X								
			Perimyotis subflavus											X								
			Perimyotis subflavus subflavus											X								
			Tadarida brasiliensis											X								
			Tadarida brasiliensis cynocephala											X								
		Cingulata	*Dasypus novemcinctus*			X						X	X	X				X	X			X
		Didelphimorphia	*Didelphis virginiana*					X						X								
			Didelphis virginiana pigra											X								
		Lagomorpha	*Sylvilagus floridanus*											X								
			Sylvilagus palustris											X								
			Sylvilagus palustris paludicola											X								
			Sylvilagus palustris palustris											X								
		Primates	*Homo sapiens*											X								
		Rodentia	*Chinchilla lanigera*											X								
			Coendou prehensilis											X								
			Geomys pinetis											X								
			Geomys pinetis pinetis											X								
			Glaucomys volans											X								

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			Glaucomys volans querceti											X								
			Microtus pinetorum											X								
			Mus musculus											X								
			Neofiber alleni											X								
			Neofiber alleni alleni											X								
			Neotoma floridana											X								
			Ochrotomys nuttalli											X								
			Oryzomys palustris											X								
			Peromyscus gossypinus											X								
			Peromyscus gossypinus gossypinus											X								
			Peromyscus polionotus											X								
			Podomys floridanus											X								
			Rattus norvegicus											X								
			Rattus rattus											X								
			Sciurus carolinensis	X	X			X		X	X			X				X	X	X	X	
			Sciurus carolinensis carolinensis											X								
			Sciurus niger											X								
			Sciurus niger shermani											X								
			Sigmodon hispidus											X								
		Soricomorpha	*Blarina carolinensis*											X								

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			Blarina carolinensis carolinensis											X								
			Cryptotis parva											X								
			Cryptotis parva floridana											X								
			Scalopus aquaticus											X								
			Scalopus aquaticus australis											X								
	Reptilia	Crocodylia	*Alligator mississippiensis*		X	X								X				X			X	
		Squamata	*Anolis carolinensis*	X	X	X					X			X				X				
			Anolis sagrei	X	X	X		X						X				X	X		X	
			Coluber constrictor								X			X		X						
			Coluber constrictor priapus								X			X		X						
			Diadophis punctatus	X										X				X	X			
			Diadophis punctatus punctatus																X			
			Farancia abacura											X								
			Hemidactylus platyurus							X												
			Hemidactylus turcicus											X								
			Liodytes pygaea											X								X
			Micrurus fulvius							X								X				X
			Nerodia fasciata							X				X								X
			Nerodia fasciata pictiventris							X												X

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			Nerodia floridana											X								
			Nerodia taxispilota	X										X								
			Opheodrys aestivus	X																		
			Ophisaurus ventralis	X										X								
			Pantherophis alleghaniensis											X					X			
			Plestiodon inexpectatus											X								
			Plestiodon laticeps	X							X			X				X	X			
			Python bivittatus											X								
			Rhadinaea flavilata	X																		
			Scincella lateralis											X								
			Storeria victa											X								
			Tantilla relicta	X																		
			Tantilla relicta neilli	X																		
			Thamnophis saurita											X								
			Thamnophis sirtalis											X								
		Testudines	*Apalone ferox*			X								X								
			Chelydra serpentina	X		X				X				X								
			Deirochelys reticularia											X								
			Kinosternon baurii							X				X								X
			Kinosternon subrubrum							X												X
			Pseudemys concinna											X								
			Pseudemys nelsoni							X				X								X

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			Pseudemys peninsularis											X				X				
			Sternotherus minor											X								
			Sternotherus odoratus							X				X								X
			Trachemys scripta		X	X				X		X		X				X			X	X
			Trachemys scripta elegans		X	X								X				X				
			Trachemys scripta scripta							X		X		X				X				X
Mollusca	Gastropoda	Architaeniogl ossa	*Pomacea paludosa*											X								
		Cerithiida	*Melanoides tuberculata*											X								
		Stylommatop hora	*Drymaeus dormani*										X									
			Gulella bicolor											X								
			Polygyra septemvolva											X								
			Ventridens demissus											X								
			Zonitoides arboreus											X								
		Systellommat ophora	*Leidyula floridana*								X											

Kingdom Plantae Inventory

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Bryophyta	Bryopsida	Funariales	*Physcomitrium pyriforme*										X							
Coniferophyta	Pinopsida	Araucariales	*Podocarpus macrophyllus*										X							
		Cupressales	*Juniperus sp.*							X										
			Juniperus virginiana							X			X				X			
			Juniperus virginiana var. silicicola										X							
			Taxodium distichum	X		X							X							
			Taxodium sp.	X		X														
		Pinales	*Pinus palustris*										X							
			Pinus taeda				X					X	X					X		
Magnoliophyta	Liliopsida	Liliales	*Smilax auriculata*				X						X							X
			Smilax bona-nox	X					X				X				X			
			Smilax glauca				X													
			Smilax lasioneura										X							
			Smilax lasioneuron										X							
			Smilax maritima										X							
			Smilax pumila							X										
			Smilax smallii				X			X							X			
			Smilax sp.	X					X	X										
			Smilax tamnoides	X			X			X							X			
			Trillium maculatum							X			X							

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			Trillium sp.							X										
		Zingiberales	*Zingiber zerumbet*										X							
	Magnoliopsida	Papaveraceae	*Corydalis micrantha*							X			X							
			Corydalis micrantha subsp. australis										X							
			Fumaria muralis										X							
		Piperales	*Saururus cernuus*				X						X							
		Proteales	*Platanus occidentalis*	X									X							
			Platanus sp.	X																
		Rosales	*Elaeagnus pungens*							X			X							
Spermatophyta	Dicotyledonae	Lamiales	*Clerodendrum bungei*	X									X							
			Clerodendrum indicum	X	X															
			Clerodendrum sp.	X	X															
	Magnoliopsida	Aquifoliales	*Ilex sp.*	X						X										
			Ilex vomitoria	X			X			X			X				X			
		Cornales	*Cornus foemina*				X													
			Hydrangea quercifolia												X					
			Hydrangea sp.												X					
		Dipsacales	*Lonicera japonica*										X							
			Lonicera sempervirens										X				X			
			Sambucus canadensis			X						X	X							

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			Sambucus sp.			X						X								
			Viburnum obovatum							X										
			Viburnum odoratissimum		X								X							
			Viburnum rufidulum							X										
			Viburnum sp.		X					X										
		Santalales	*Phoradendron leucarpum*					X									X	X		
		Saxifragales	*Liquidambar sp.*	X							X			X						
			Liquidambar styraciflua	X			X		X		X		X	X		X	X			
			Myriophyllum aquaticum			X							X							
			Myriophyllum sp.			X														
Tracheophyta	Cycadopsida	Cycadales	*Zamia integrifolia*													X				
	Liliopsida	Alismatales	*Arisaema dracontium*			X	X			X										
			Arisaema sp.			X				X										
			Arisaema triphyllum				X			X			X				X			
			Colocasia esculenta				X				X		X							
			Colocasia sp.								X									
			Lemna minor										X							
			Lemna obscura										X							
			Pistia stratiotes										X							
			Syngonium podophyllum				X					X								
			Syngonium sp.									X								
			Xanthosoma robustum										X							

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			Xanthosoma sagittifolium				X						X							
		Arecales	*Sabal minor*				X			X			X							
			Sabal palmetto	X			X			X			X				X			
			Sabal sp.	X						X										
		Asparagales	*Asparagus aethiopicus*					X												
			Asparagus sp.					X												
			Freesia laxa	X																
			Freesia sp.	X																
			Habenaria repens										X							
			Hypoxis curtissii										X							
			Polygonatum biflorum							X										
			Polygonatum sp.							X										
		Commelinales	*Commelina communis*	X																
			Commelina diffusa				X													
			Commelina erecta														X			
			Commelina virginica							X										
			Pontederia cordata			X														
			Pontederia crassipes	X																
			Pontederia sp.	X		X														
			Tradescantia fluminensis	X			X		X				X							X
			Tradescantia ohiensis	X			X													
			Tradescantia sp.	X																

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		Dioscoreales	*Dioscorea bulbifera*	X					X				X		X		X			
			Dioscorea floridana							X							X			
			Dioscorea sp.	X					X	X					X					
		Poales	*Andropogon glomeratus*	X																
			Arundinaria gigantea				X						X							
			Carex basiantha				X			X			X							
			Carex bromoides				X													
			Carex dasycarpa										X				X			
			Carex debilis				X						X							
			Carex digitalis				X			X			X							
			Carex digitalis var. floridana							X										
			Carex floridana							X			X							
			Carex frankii														X			
			Carex intumescens										X							
			Carex oxylepis				X													
			Carex sp.							X										
			Carex striatula							X										
			Chasmanthium latifolium	X																
			Chasmanthium sessiliflorum							X			X							
			Cyperus croceus	X									X							
			Cyperus tetragonus													X				
			Dichanthelium boscii				X			X										

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			Dichanthelium commutatum						X	X		X					X			
			Dichanthelium laxiflorum							X		X	X							
			Dichanthelium sp.							X										
			Eleusine indica										X							
			Megathyrsus maximus	X			X			X			X							
			Oplismenus burmanni	X																
			Oplismenus compositus							X										
			Oplismenus hirtellus	X								X	X				X			
			Oplismenus sp.	X						X										
			Panicum miliaceum														X			
			Panicum sp.	X																
			Panicum virgatum	X																
			Paspalum conjugatum										X							
			Paspalum floridanum														X			
			Paspalum notatum										X							
			Paspalum setaceum														X			
			Poa annua				X													
			Rhynchospora caduca							X										
			Schoenoplectus tabernaemontani										X							
			Scirpus sp.				X													
			Scleria oligantha							X										
			Scleria sp.							X										

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			Scleria triglomerata							X			X							
			Setaria parviflora							X										
			Sporobolus indicus							X										
			Tillandsia bartramii										X							
			Tillandsia recurvata										X		X		X			
			Tillandsia sp.	X		X			X					X	X					
			Tillandsia usneoides	X		X			X				X	X	X	X	X		X	
			Urochloa plantaginea										X							
	Lycopodiopsida	Selaginellales	*Selaginella apoda*										X							
	Magnoliopsida	Apiales	*Aralia sp.*							X					X					
			Aralia spinosa							X					X					
			Hedera helix										X							X
			Ptilimnium capillaceum						X											
			Sanicula canadensis				X						X							
		Asterales	*Ageratina jucunda*							X										
			Ambrosia artemisiifolia							X										
			Ampelaster carolinianus			X							X							
			Ampelaster sp.			X														
			Baccharis glomeruliflora										X							
			Baccharis halimifolia	X									X							
			Baccharis sp.	X																

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			Bidens alba	X		X			X				X				X			
			Bidens bipinnata										X							
			Bidens sp.	X		X			X											
			Calyptocarpus sp.	X																
			Calyptocarpus vialis	X			X				X		X							
			Cirsium nuttalii										X							
			Coreopsis basalis										X							
			Elephantopus carolinianus	X								X	X							
			Elephantopus elatus										X							
			Emilia fosbergii	X	X								X			X	X			
			Emilia sonchifolia	X		X							X						X	
			Emilia sp.	X	X	X														
			Erigeron quercifolius		X															
			Erigeron sp.		X															
			Eupatorium capillifolium	X			X													
			Eupatorium sp.							X										
			Gaillardia pulchella										X							
			Gamochaeta pensylvanica							X			X							
			Lactuca floridana							X										
			Lobelia feayana			X														
			Lobelia sp.			X														
			Melanthera nivea							X			X							
			Mikania cordifolia							X										

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			Mikania scandens							X			X							
			Mikania sp.							X										
			Smallanthus sp.							X										
			Smallanthus uvedalia							X										
			Solidago canadensis				X													
			Sonchus oleraceus				X													
			Sphagneticola trilobata				X													
			Symphyotrichum carolinianum				X													
			Symphyotrichum dumosum	X						X										
			Symphyotrichum lateriflorum				X													
			Taraxacum officinale														X			
			Triodanis perfoliata	X																
			Triodanis sp.	X																
			Verbesina sp.							X										
			Verbesina virginica							X			X							
			Vernonia gigantea	X		X	X					X	X		X	X				
			Vernonia sp.	X		X									X					
			Youngia japonica	X									X				X			
			Youngia sp.	X																
		Austrobailes yales	*Illicium parviflorum*										X							
			Kadsura japonica	X																

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			Kadsura sp.	X																
		Boraginales	*Ehretia acuminata*										X							
			Lithospermum caroliniense							X										
		Brassicales	*Capsella bursa-pastoris*	X									X							
			Capsella sp.	X																
			Cardamine pensylvanica						X											
			Lepidium virginicum							X							X			
			Nasturtium officinale										X							
			Raphanus raphanistrum														X			
		Buxales	*Buxus microphylla*										X							
		Caryophyllales	*Antigonon leptopus*										X				X			
			Cyathula prostrata	X																
			Drymaria cordata	X			X			X			X		X					
			Drymaria sp.												X					
			Gomphrena serrata														X			
			Iresine diffusa							X										
			Petiveria alliacea	X									X				X	X		
			Petiveria sp.	X																
			Phytolacca americana	X					X	X			X				X			X
			Phytolacca americana var. rigida														X			X
			Phytolacca sp.	X					X											

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			Plumbago auriculata		X															
			Plumbago sp.		X															
			Rivina humilis	X									X							
			Talinum paniculatum	X																
			Talinum sp.	X																
		Celastrales	*Euonymus americanus*				X			X			X							
		Cucurbitales	*Melothria pendula*	X									X							
			Melothria sp.	X																
		Ericales	*Ardisia crenata*	X				X	X	X		X	X				X			
			Ardisia sp.	X				X	X	X		X								
			Diospyros sp.			X														
			Diospyros virginiana			X														
			Sideroxylon lanuginosum														X			
			Sinojackia sp.	X																
			Sinojackia xylocarpa	X																
		Fabales	*Aeschynomene americana*	X									X							
			Albizia julibrissin			X						X				X	X			
			Albizia sp.			X						X								
			Apios americana			X	X			X				X						
			Apios sp.			X								X						
			Arachis hypogaea	X																
			Arachis sp.	X																

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			Cercis canadensis	X												X	X			
			Cercis sp.	X																
			Crotalaria pallida	X																
			Crotalaria sp.								X									
			Crotalaria spectabilis								X		X							
			Desmodium glabellum							X										
			Desmodium paniculatum							X										
			Desmodium triflorum				X													
			Erythrina herbacea	X				X		X			X		X	X	X			
			Erythrina sp.	X				X		X					X					
			Galactia regularis	X																
			Galactia sp.	X																
			Indigofera hirsuta	X									X							
			Indigofera sp.	X				X												
			Indigofera spicata	X			X	X									X			
			Leucaena leucocephala	X		X														
			Leucaena sp.	X		X														
			Medicago lupulina			X							X				X			
			Medicago polymorpha				X		X				X							
			Medicago sp.			X														
			Melilotus albus										X							
			Senna alata										X							
			Sesbania herbacea										X							

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			Trifolium dubium										X							
			Trifolium repens	X					X				X				X			
			Trifolium sp.	X																
			Vicia sativa										X							
			Wisteria sinensis										X							
		Fagales	*Alnus serrulata*							X										
			Betula nigra							X										
			Carpinus caroliniana										X				X			
			Carya glabra				X			X			X				X			
			Carya illinoinensis									X								
			Carya sp.							X										
			Morella cerifera			X							X							
			Morella sp.			X														
			Ostrya virginiana				X										X			
			Quercus austrina														X			
			Quercus hemisphaerica				X					X	X							
			Quercus laurifolia												X		X			
			Quercus michauxii	X			X						X				X			X
			Quercus nigra	X						X			X							
			Quercus shumardii									X	X				X			
			Quercus sinuata														X			
			Quercus sp.	X								X			X					
			Quercus virginiana	X								X	X							

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		Gentianales	*Apocynum cannabinum*														X			
			Asclepias curassavica								X		X							
			Asclepias sp.								X									
			Asclepias tuberosa								X									
			Cephalanthus occidentalis										X							
			Diodia virginiana										X							
			Galium aparine													X				
			Galium hispidulum							X										
			Gelsemium sempervirens				X			X			X							
			Gelsemium sp.							X										
			Hamelia patens			X														
			Hamelia sp.			X														
			Hedyotis corymbosa														X			
			Mitchella repens							X										
			Oldenlandia corymbosa				X													
			Paederia foetida	X																
			Paederia sp.	X																
			Richardia brasiliensis				X										X			
			Richardia scabra														X			
			Spermacoce remota	X			X						X							
		Geraniales	*Geranium carolinianum*	X									X							
			Geranium sp.	X																
		Lamiales	*Bignonia capreolata*	X			X						X				X			

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			Bignonia sp.	X																
			Callicarpa americana	X	X		X						X		X					
			Callicarpa sp.	X	X										X					
			Campsis radicans	X			X			X			X				X			
			Campsis sp.	X						X										
			Cantinoa mutabilis	X						X		X	X		X					
			Cantinoa sp.	X											X					
			Chionanthus virginicus										X				X			
			Clinopodium brownei										X							
			Collinsonia canadensis							X										
			Collinsonia serotina							X										
			Collinsonia sp.							X										
			Dolichandra sp.	X					X			X								
			Dolichandra unguis-cati	X			X		X			X	X				X			
			Fraxinus americana														X			
			Justicia brandegeeana												X					
			Justicia sp.												X					
			Lamium amplexicaule			X							X							
			Lamium sp.			X														
			Lantana camara	X									X				X			X
			Lantana sp.	X																
			Ligustrum lucidum	X		X	X			X	X	X	X	X			X		X	X
			Ligustrum sp.	X		X				X	X	X		X						

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			Lindernia crustacea				X													
			Lindernia grandiflora										X							
			Macfadyena unguis-cati														X			
			Plantago virginica														X			
			Polypremum procumbens				X													
			Ruellia blechum	X							X									
			Ruellia brevifolia	X																
			Ruellia caroliniensis	X		X	X			X			X				X			X
			Ruellia simplex	X									X							
			Ruellia sp.	X		X	X			X	X									
			Salvia lyrata	X									X							
			Salvia sp.	X																
			Stachys floridana	X			X		X				X		X					
			Stachys sp.	X											X					
			Thunbergia alata	X																
			Thunbergia sp.	X																
			Torenia crustacea										X							
			Vitex agnus-castus													X				
		Laurales	*Cinnamomum camphora*	X			X				X		X		X		X			
			Cinnamomum sp.	X							X				X					
			Persea americana		X															
			Persea borbonia														X			
			Persea sp.		X															

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		Magnoliales	*Asimina parviflora*				X													
			Liriodendron sp.	X																
			Liriodendron tulipifera	X																X
			Magnolia grandiflora	X			X			X			X				X	X		
			Magnolia sp.	X						X										
		Malpighiales	*Cnidoscolus sp.*												X					
			Cnidoscolus stimulosus												X					
			Euphorbia graminea							X										
			Euphorbia heterophylla	X			X								X		X			X
			Euphorbia heterophylla var. cyathophora	X											X		X			X
			Euphorbia hirta				X													
			Euphorbia hyssopifolia	X																
			Euphorbia sp.	X						X					X					
			Galphimia gracilis													X				
			Passiflora lutea							X			X				X			
			Passiflora sp.							X										
			Phyllanthus tenellus									X	X				X			
			Phyllanthus urinaria									X								
			Populus deltoides									X	X			X				
			Populus sp.									X								
			Triadica sebifera			X		X			X		X	X						

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			Triadica sp.			X		X			X			X						
			Viola palmata							X										
			Viola septemloba				X													
			Viola sororia				X			X			X							
			Viola sp.							X										
			Viola villosa							X										
			Viola walteri							X										
		Malvales	*Corchorus aestuans*										X							
			Firmiana simplex	X													X			
			Firmiana sp.	X																
			Grewia occidentalis														X			
			Sida rhombifolia	X													X			
			Sida sp.	X																
			Sida ulmifolia	X									X							
			Tilia americana													X	X			
			Urena lobata	X			X			X			X							
			Urena sp.	X						X										
		Myrtales	*Ludwigia octovalvis*										X							
			Ludwigia peruviana										X			X				
		Oxalidales	*Oxalis articulata*							X										
			Oxalis corniculata	X			X										X			
			Oxalis debilis	X			X						X			X	X			
			Oxalis latifolia										X							X

Phylum	Class	Order	Scientific Name	Bantram-Carr	Dairy Pond	Digital Design Wetland	Fraternity Wetland	Gator Pond	Graham Woods	Harmonic Woods	Hume Creek	Jennings Creek	Lake Alice	Lake Alice South	Law School Woods	Liberty Pond	McCarty Woods	Newnins-Ziegler Sink	Ocala Pond	Reitz Ravine
			Oxalis sp.	X																
			Oxalis violacea														X			
		Ranunculales	*Clematis catesbyana*				X			X										
			Clematis terniflora										X							
			Clematis virginiana										X							
			Nandina domestica										X							
		Rosales	*Broussonetia papyrifera*	X								X		X	X		X			
			Broussonetia sp.	X								X		X	X					
			Ceanothus microphyllus						X											
			Ceanothus sp.						X											
			Celtis laevigata	X			X		X			X	X				X			
			Celtis sp.						X											
			Celtis tenuifolia										X							
			Crataegus marshallii				X													
			Crataegus sp.							X										
			Crataegus uniflora							X							X			
			Eriobotrya japonica				X						X							
			Morus rubra				X						X							
			Parietaria floridana				X		X											
			Pilea microphylla					X					X			X	X			
			Pilea sp.					X												
			Prunus caroliniana	X					X				X				X			

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			Prunus serotina										X							
			Prunus sp.	X					X											
			Prunus umbellata							X										
			Rhaphiolepis indica							X			X							X
			Rhaphiolepis indica var. umbellata							X			X							X
			Rhaphiolepis sp.							X										
			Rubus flagellaris				X						X							
			Rubus sp.	X																
			Rubus trivialis	X						X			X							
			Sageretia minutiflora												X					
			Sageretia sp.												X					
			Ulmus alata				X						X				X			X
			Ulmus americana										X							
		Sapindales	*Acer negundo*	X		X	X				X		X							
			Acer rubrum										X							X
			Acer sp.	X		X					X									
			Aesculus pavia				X			X			X				X			
			Aesculus sp.							X										
			Atalantia buxifolia										X							
			Koelreuteria elegans	X																
			Koelreuteria elegans subsp. formosana	X																

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			Koelreuteria paniculata										X							
			Koelreuteria sp.	X																
			Melia azedarach														X			
			Sapindus saponaria	X	X		X						X				X			
			Sapindus saponaria subsp. saponaria		X															
			Sapindus sp.	X	X															
			Severinia buxifolia				X					X								
			Toxicodendron radicans	X			X			X			X		X					X
			Toxicodendron sp.	X						X					X					
		Solanales	*Cuscuta gronovii*										X							
			Dichondra carolinensis	X		X							X							
			Dichondra sp.	X		X														
			Ipomoea cairica	X	X				X			X	X							X
			Ipomoea cordatotriloba				X					X	X							
			Ipomoea pandurata	X									X							
			Ipomoea sp.	X	X				X			X								
			Solanum americanum						X				X							
			Solanum diphyllum	X									X							
			Solanum sp.	X																
		Vitales	*Nekemias arborea*	X								X	X							
			Nekemias sp.	X																
			Parthenocissus quinquefolia	X			X				X		X							

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			Parthenocissus sp.	X			X				X									
			Vitis cinerea				X													
			Vitis rotundifolia	X		X				X			X		X					
			Vitis sp.	X		X				X					X					
	Polypodiopsida	Osmundales	*Osmunda regalis*				X													
			Osmunda spectabilis										X							
		Polypodiales	*Asplenium platyneuron*							X										X
			Athyrium filix-femina				X													
			Christella dentata	X			X				X	X	X							
			Christella sp.	X							X									
			Cyrtomium falcatum										X							
			Macrothelypteris torresiana										X							
			Microsorum grossum	X																
			Microsorum sp.	X																
			Nephrolepis cordifolia	X					X						X					
			Nephrolepis sp.	X											X					
			Pleopeltis michauxiana										X			X	X		X	
			Pleopeltis polypodioides							X										
			Pteridium aquilinum										X							
		Salviniales	*Salvinia minima*	X									X							
			Salvinia sp.	X																

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		Schizaeales	*Lygodium japonicum*	X		X							X							
			Lygodium sp.			X														

Kingdom Fungi Inventory

Phylum	Class	Order	Scientific Name	Jennings Creek	Lake Alice	McCarty Woods
Ascomycota	Dothideomycetes	Pleosporales	*Curvularia lunata*			X
	Leotiomycetes	Helotiales	*Diplocarpon rosae*		X	
	Orbiliomycetes	Orbiliales	*Hyalorbilia oreadum*			X
			Orbilia rubella			X
	Sordariomycetes	Xylariales	*Xylosphaera poitei*			X
Basidiomycota	Agaricomycetes	Agaricales	*Agaricus alachuanus*		X	
			Agaricus alligator		X	
			Agaricus arvensis		X	
			Agaricus auresiccescens			X
			Agaricus blazei		X	
			Agaricus blockii		X	
			Agaricus comtulus			X
			Agaricus pocillator		X	
			Agaricus praemagniceps			X
			Amanita gemmata			X
			Coprinopsis atramentaria			X
			Cyathus olla			X
			Desarmillaria tabescens			X
			Gymnopilus underwoodii			X
			Mycena filopes			X
			Pleurotus cornucopiae			X
			Pluteus admirabilis			X
			Pluteus cervinus			X
		Boletales	*Tylopilus minor*			X
		Cantharellales	*Haplotrichum croceum*			X
		Hymenochaetales	*Cerrena hydnoides*			X
			Pycnoporus sanguineus	X		
		Polyporales	*Climacodon pulcherrimus*			X
			Ganoderma applanatum			X
		Russulales	*Stereum hirsutum*			X
	Pucciniomycetes	Pucciniales	*Uromyces commelinae*			X