HABITAT CONSERVATION PLAN

BIOLOGICAL MONITORING PROGRAM

San Marcos Springs/River Aquatic Ecosystem

ANNUAL REPORT

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Prepared for:

Edwards Aquifer Authority
900 East Quincy
San Antonio, Texas 78215

Prepared by:

BIO-WEST, Inc.
1812 Central Commerce Court
Round Rock, Texas 78664

BIO-WEST

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EXECUTIVE SUMMARY

The Edwards Aquifer Habitat Conservation Plan (EAHCP) Biological Monitoring Program continued to track biota and habitat conditions of the San Marcos Springs/River ecosystem in 2024 through monitoring activities outlined in this report. Monitoring in the San Marcos system consisted of routine surveys specific to EAHCP Covered Species: Fountain Darter (*Etheostoma fonticola*), Texas Wild-rice (*Zizania texana*), and San Marcos Salamander (*Eurycea nana*). Community-level monitoring data were also collected on aquatic vegetation, fish, and benthic macroinvertebrates. In addition, reduced river discharge triggered species-specific low-flow sampling events starting in spring. The results from 2024 biological monitoring provide valuable data to further assess spatiotemporal trends of aquatic biota in the San Marcos Springs/River ecosystem, as well as an opportunity to better understand ecological responses to low-flow conditions sustained for several years.

In 2024, central Texas, including the San Marcos Springs/River ecosystem, experienced continued extreme drought conditions with low precipitation and higher than normal ambient temperatures. The year began under low-flow conditions until rain at the end of January increased total system discharge, resulting in two months of approximately historical median flows in February and March. However, flows steadily declined until October when flows were near 10th percentile conditions. Flows decreased to 120 cubic feet per second (cfs) in May triggering species-specific Texas Wild-rice physical measurements and continued to decline to ~85 cfs in September triggering a Critical Period event which was coupled with routine fall sampling. Annual median daily mean discharge was higher in 2024 (112 cfs) than in 2023 (88 cfs) and more similar to previous low-flow monitoring events in 2006 (116 cfs), 2009 (96 cfs), 2011 (117 cfs), and 2022 (119 cfs).

Vegetation coverage among the study reaches remained similar from 2020 to 2024, whereas coverages among specific taxa changed. Within the study reaches in 2024, total aquatic vegetation coverage declined from spring to fall at Spring Lake Dam and City Park but increased at I-35. Declines in vegetation coverage at the two upstream reaches were mainly attributed to decreased coverage of Texas Wild-rice due to low flows and recreation. In October 2023, Texas Wild-rice had decreased to the lowest coverage mapped since 2016; however, by August 2024, Texas Wild-rice coverage increased to levels similar to August 2023 and were still considerably above pre-EAHCP levels. Impacts of low flows were notable in the I-35 reach as reductions in wetted habitat resulted in a large dewatered area near Snake Island. More amphibious species like *Hygrophila* outcompeted Texas Wild-rice, surviving as emergent in the shallowest areas. *Hygrophila* coverage also increased in the main river channel, contributing to the increase in vegetation from spring to fall despite the large dewatered area. Deeper areas also provided ecological refugia for Texas Wild-rice to survive and expand. Continued monitoring of Texas Wild-rice will provide insight into the species response to the ongoing drought.

In addition to Texas Wild-rice, the influence of low springflows was also evident on abiotic habitat and aquatic vegetation conditions that influence Fountain Darter populations. Increases in *Cabomba* coverage in City Park and the presence of bryophytes intermixed with other vegetation taxa in riverine reaches contributed to higher Fountain Darter density estimates. Overall habitat suitability indices generally showed an increase in habitat conditions compared to 2023.

However, since these indices are based on long-term taxa-specific suitability values, they don't capture increases in habitat complexity provided by bryophytes in 2023 and 2024.

Water temperatures remained consistent in spring areas but were elevated relative to typical years in downstream areas. Under these low-flow conditions, the optimal water temperature threshold for Fountain Darter egg production (26 °C) was exceeded at City Park, Rio Vista, I-35, Thompson Island, and Wastewater Treatment Plant more commonly and for longer durations than in previous years (i.e., 2020-2021). Despite this, Fountain Darter population metrics indicated increased densities at the City Park study reach and approximated historical median densities at the I-35 study reaches in both spring and fall. This could suggest that exceedance of these laboratory-derived temperature thresholds may not be a strong predictor of wild Fountain Darter population performance. However, the health and condition of individual Fountain Darters was not analyzed, and application of laboratory derived temperature thresholds to wild populations is nuanced for several reasons. For example, although McDonald et al. (2007) did vary temperature for their laboratory trials, those temperature fluctuations do not exactly match natural diel patterns observed in the wild. Given availability of a tremendous amount of water temperature data in these systems, additional research is needed to evaluate the influence of naturally occurring diel temperature fluctuations on wild Fountain Darter population dynamics while accounting for variation in habitat quality and quantity.

Trends in San Marcos Salamander densities were variable among sites in 2024 and over the past five years. However, only Spring Lake Dam showed substantially lower densities in 2024. At a community scale, fish and macroinvertebrate community-level responses to low flows were not readily apparent. In general, no long-term temporal trends in overall or spring-associated fish diversity, richness, and relative density are evident from fish community monitoring data. Macroinvertebrate Index of Biotic Integrity (IBI) scores were generally consistent with past years.

Overall, 2024 biological monitoring provided insights into the current condition of the EAHCP Covered Species in the San Marcos Springs/River, as well as flow-ecology relationships of the broader aquatic community. Following 2023, which recorded the lowest flow conditions observed since 1956, observations from 2024 suggest the system proved resilient. Reductions in wetted habitats did not negatively impact Fountain Darter population metrics, as catch rates and percent occurrence were generally comparable to previous data and densities increased in recent years. San Marcos Salamander densities declined in Spring Lake and Spring Lake Dam in fall 2024, therefore additional monitoring is needed to examine future trends. Fish community and macroinvertebrate bioassessments revealed a healthy riverine community with a diversity of taxa similar to previous years. In summary, results from 2024 demonstrated resilience of aquatic communities and Covered Species populations to the continued low-flow conditions observed. Subsequent monitoring efforts will provide opportunities to better understand the dynamics of this complex ecological system and further examine responses to varying hydrologic conditions.

INTRODUCTION

The Edwards Aquifer Habitat Conservation Plan (EAHCP) was established in 2012 and supports the issuance of an Incidental Take Permit that allows the "incidental take" of threatened and endangered species (i.e., Covered Species) (Table 1) from otherwise lawful activities in the San Marcos Springs/River. Section 6.3.1 of the HCP established a continuation of biological monitoring in the San Marcos Springs/River. This biological monitoring program was first established in 2000 (formerly known as the Edwards Aquifer Authority [EAA] Variable Flow Study) and its original purpose was to evaluate the effects of variable flow on the biological resources, with an emphasis on threatened and endangered species. However, the utility of the HCP biological monitoring program has surpassed its initial purpose (EAHCP 2012), and biological data collected since the implementation of this monitoring program (BIO-WEST 2001–2024) now serves as the foundation for several underlying sections in the HCP, which include: (1) long-term biological goals (LTBGs) and management objectives (Section 4.1); (2) determination of potential impacts to Covered Species, "incidental take" assessment, and Environmental Impact Statement alternatives (Section 4.2); and (3) establishment of core adaptive-management activities for triggered monitoring and adaptive-management response actions (Section 6.4.4). As the HCP proceeds, biological monitoring program data, in conjunction with other available information, are essential to adaptive management. Current and future data collection will help assess the effectiveness and efficiency of certain HCP mitigation and restoration activities conducted in the San Marcos Springs/River and calculate the HCP habitat baseline and net disturbance determination and annual "incidental take" estimate (EAHCP 2012).

Table 1. Covered Species directly sampled for under the Edwards Aquifer Habitat Conservation Plan in the San Marcos Springs/River ecosystem.

SCIENTIFIC NAME	COMMON NAME	ESA STATUS
Plants		
Zizania texana	Texas Wild-rice	Endangered
Amphibians		
Eurycea nana	San Marcos Salamander	Threatened
Fish		
Etheostoma fonticola	Fountain Darter	Endangered

This report provides the methodology and results for biological monitoring activities conducted in 2024 within the San Marcos Springs/River ecosystem. In addition to routine monitoring, Critical Period and species-specific low-flow sampling was triggered. The results include summaries of current physiochemical conditions, as well as current conditions of floral and faunal communities, all of which encompasses both routine and low-flow sampling. For all aquatic organisms, historic observations (BIO-WEST 2001–2023) are also used to provide context to current conditions.

METHODS

Study Location

The upper San Marcos River (San Marcos, Hays County, Texas) is fed by the Edwards Aquifer and originates at a series of spring upwellings in Spring Lake, which was impounded in the mid-1800s (Bousman and Nickels 2003). From the headwaters, the river flows about eight kilometers (km) before its confluence with the Blanco River, traversing two additional impoundments, Rio Vista Dam and Capes Dam. The upper San Marcos River watershed is dominated by urban landcover and is subjected to recreational use. Spring inputs from the Edwards Aquifer provide stable physiochemical conditions, and springflow conditions are dictated by aquifer recharge and human water use (Sung and Li 2010). The upper San Marcos River maintains diverse assemblages of floral and faunal communities (Bowles and Arsuffi 1993; Owens et al. 2001) that include multiple endemic organisms, such as Texas Wild-rice, Comal Springs Riffle Beetle (*Heterelmis comalensis*), San Marcos Salamander, and Fountain Darter among others.

Sampling Strategy

Based on the long-term biological goals (LTBGs), and management objectives outlined in the HCP, study areas were established to conduct long-term monitoring and quantify population trends of the Covered Species (EAHCP 2012). The sampling locations selected are designed to cover the entire extent of Covered Species habitats, but they also allow for holistic ecological interpretation while maximizing resources (Figures 1–3). Comprehensive sampling within the established study area varies temporally and spatially among Covered Species. The current sampling strategy includes five spatial resolutions:

1. System-wide sampling
    a. Texas Wild-rice mapping: 1 event/year (summer)
    b. Aquatic vegetation mapping: 5-year intervals (spring)
2. Select longitudinal locations
    a. Water temperature: assessed year-round at permanent monitoring stations
3. Reach sampling
    a. Aquatic vegetation mapping: 2 events/year (spring, fall)
    b. Fountain Darter drop-net sampling: 2 events/year (spring, fall)
    c. Fountain Darter random-station dip-net surveys: 3 events/year (spring, summer, fall)
4. Springs Sampling
    a. San Marcos Salamander surveys: 2 events/year (spring, fall)
5. River section/segment
    a. Fountain Darter timed dip-net surveys: 3 events/year (spring, summer, fall)
    b. Fish community surveys: 2 events/year (spring, fall)
    c. Macroinvertebrate community sampling: 2 events/year (spring, fall)

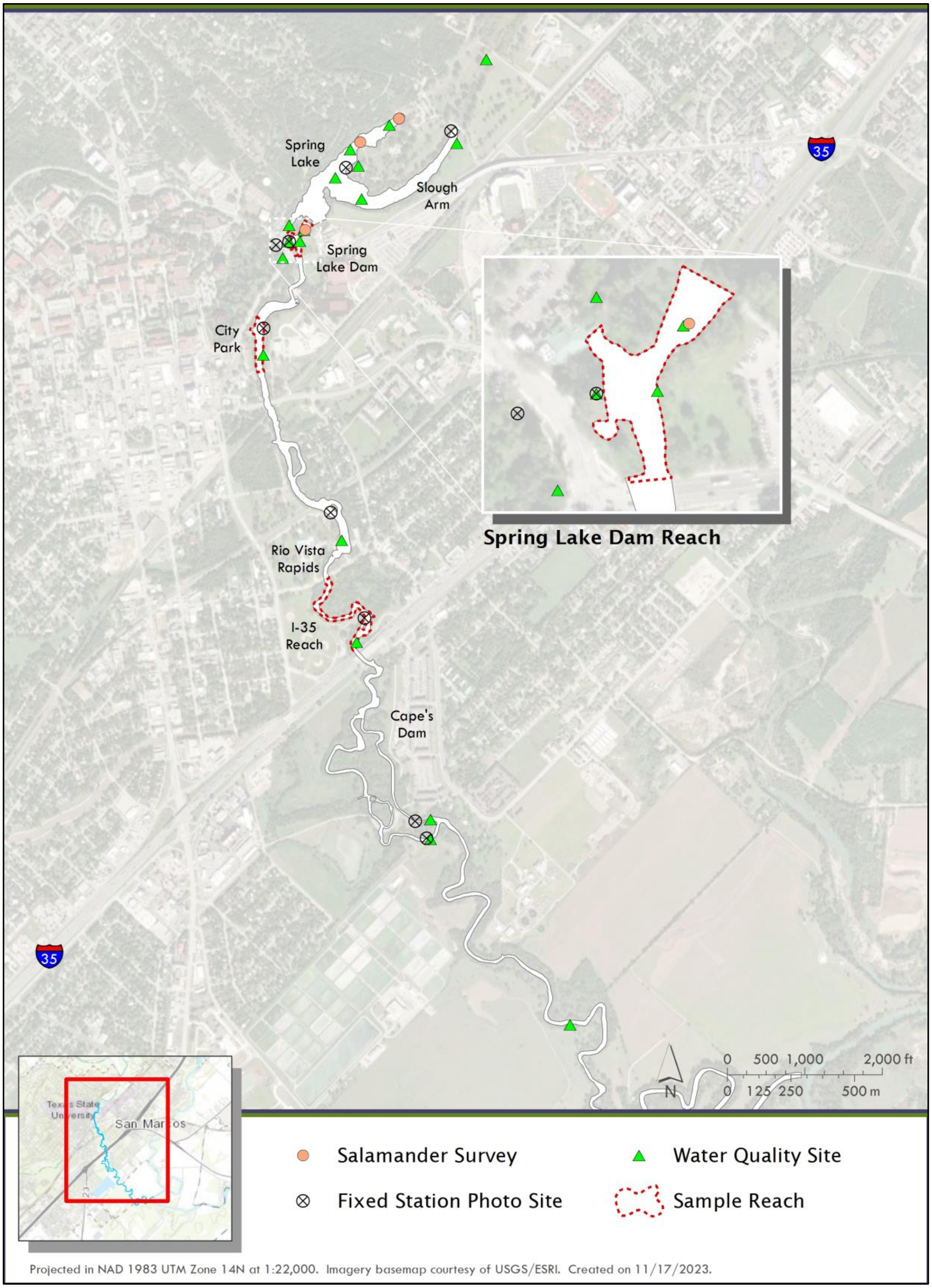

Figure 1. Upper San Marcos River sample reaches, San Marcos Salamander survey sites, water quality sampling sites, and fixed-station photography sites.

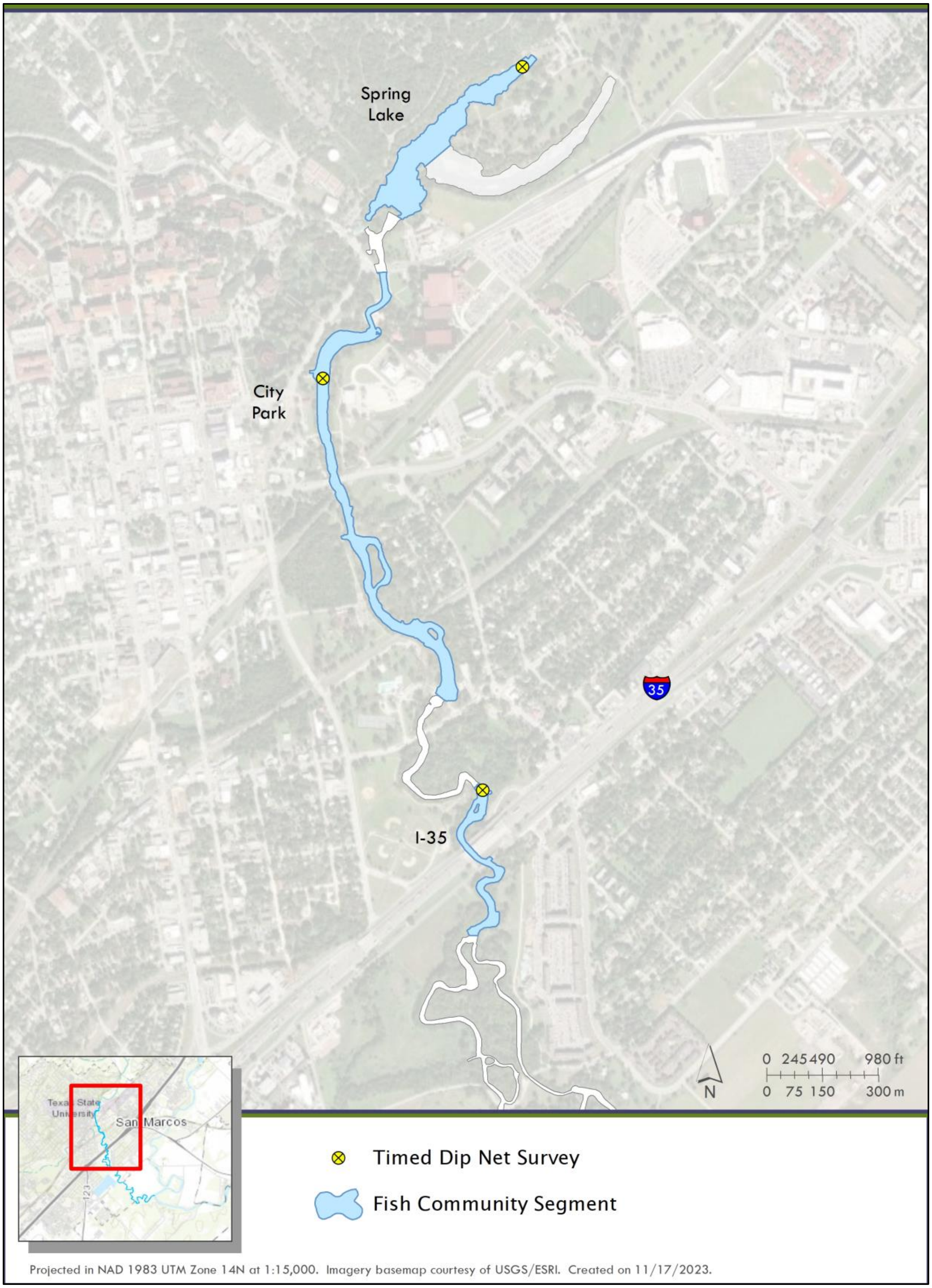

Figure 2. Fish community sampling segments and dip-net timed survey sections for the upper San Marcos River.

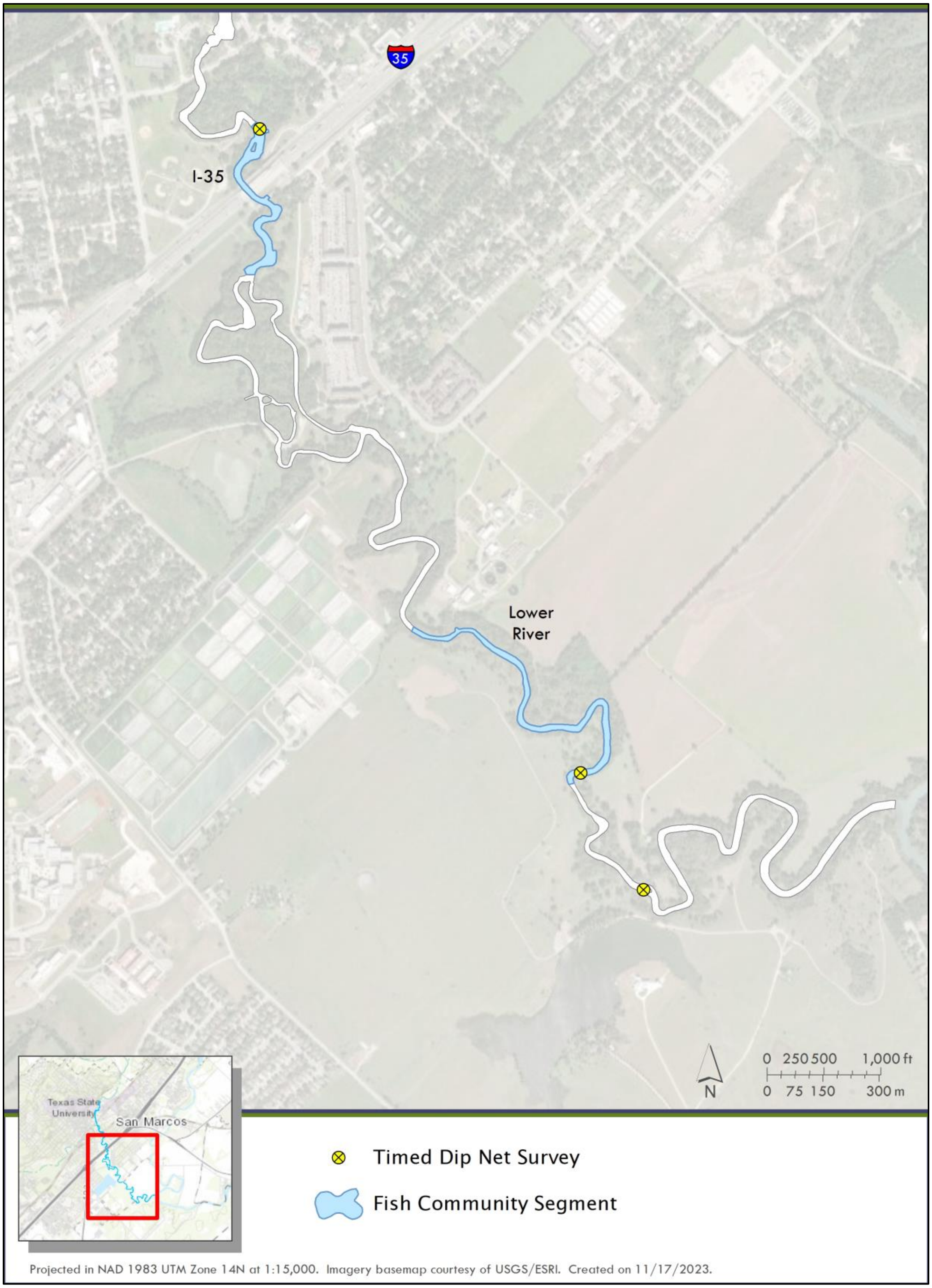

Figure 3. Fish community sampling segments and dip-net survey sections for the lower San Marcos River.

In addition to annual comprehensive sampling outlined above, low-flow sampling may also be conducted, but is dependent on HCP flow triggers, which include Critical Period low-flow sampling and species-specific sampling (EAHCP 2012). Due to decreased flows, one Critical Period monitoring event (< 85 cfs) was triggered and coupled with routine fall monitoring in October. Several species-specific, Texas Wild-rice physical measurements, were triggered in January and again from May through November. As total system discharge decreased below 120 cfs, the river was evaluated at approximately 5 cfs intervals to monitor low-flow conditions and ensure adequate habitat was maintained. In addition, thermistors were downloaded at regular intervals to monitor temperatures as flows declined.

The remaining methods sections provide brief descriptions of the procedures utilized for comprehensive routine, Critical Period, and species-specific sampling efforts. A more-detailed description of the gear types used, methodologies employed, and specific GPS coordinates can be found in the Standard Operating Procedures Manual for the HCP biological monitoring program for the San Marcos Springs/River ecosystem (EAA 2017).

San Marcos River Discharge

River hydrology in 2024 was assessed using U.S. Geological Survey (USGS) stream gage data from January 1 through October 31. Mean daily discharge expressed in cubic feet per second (cfs) was acquired from USGS gage #08170500, which represents cumulative river discharge that encompasses springflow and local runoff contributions from the Sink Creek drainage. It should be noted that some of these data are provisional and are subject to revision at a later date (USGS 2024). The annual distribution of mean daily discharge was compared for the past 5 years using boxplots. The distribution of 2024 mean daily discharge was also summarized by month using boxplots. Monthly discharge levels were compared with long-term (1956, 1994–present) 10th, 50th (i.e., median), and 90th percentiles.

Water Temperature

Spatiotemporal trends in water temperature (°C) were assessed using temperature data loggers (HOBO Tidbit v2 Temp Loggers) at the 11 permanent monitoring stations established in 2000. Data loggers recorded water temperature every 10 minutes and were downloaded at regular intervals. Prior to analysis, data processing was conducted to locate potential data logger errors per station by comparing time-series for the current year with previous years. Timeframes displaying temperatures that deviated substantially from historical data and didn’t exhibit ecologically rational trends (e.g., discontinuities, ascending drift) were considered unreliable and omitted from the dataset. For analysis, the distribution of water temperatures for the current year was assessed among stations based on 4-hour intervals and summarized using boxplots. Data from the current year were also compared to their 5-year and long-term trends. Water temperatures were also compared with maximum optimal temperature requirements for Fountain Darter larval (≥25 °C) and egg (≥26 °C) production (McDonald et al. 2007). Further, 25 °C is also the designated water temperature threshold within the HCP Fountain Darter LTBG study reaches (Spring Lake Dam, City Park, I-35) (EAHCP 2012). In the case of stations that surpassed either water temperature threshold during the year, the general timeframes in which those exceedances occurred are discussed in the text.

Aquatic Vegetation

Mapping

The team used a kayak for visual observations to complete aquatic vegetation mapping in sample reaches during the spring routine monitoring and fall low-flow/routine monitoring events. A Trimble GPS unit and external Tempest antenna set on the bow of the kayak was used to collect high accuracy (10–60 centimeter [cm]) geospatial data. A data dictionary with pre-determined attributes was loaded into the GPS unit for data collection in the field. Discrete patch dimensions and the type and density of vegetation were recorded from the kayak. In some instances, an accompanying free diver was used to provide additional detail and to verify surface observations. The discreteness of an individual vegetation patch was determined by the dominant species located within the patch compared to surrounding vegetation. Once a patch of vegetation was visually delineated, the kayak was maneuvered around the perimeter of the vegetation patch to collect geospatial data with the GPS unit, thus creating a vegetation polygon. Attributes assigned to each polygon included species type and percent cover of each of the four most-dominant species. The type of substrate (silt, sand, gravel, cobble, organic) was identified if substrate was a dominant feature within the patch. Rooted aquatic vegetation, floating aquatic vegetation, bryophytes, and algae were mapped as separate features. Only aquatic vegetation patches 1 meter (m) in diameter or larger were mapped as polygons. However, all Texas Wild-rice was recorded, with individual Texas Wild-rice plants too small to delineate as polygons mapped as points instead.

Data Processing and Analysis

During data processing, Microsoft Pathfinder was used to correct spatial data and create shapefiles. Spatial data were projected using the Projected Coordinate System NAD 1983 Zone 14N. Post processing was conducted to clean polygon intersections, check for and correct errors, and calculate cover for individual discrete polygons as well as totals for all encountered aquatic plant species.

Vegetation types are described in the Results and Discussion sections by genus, except for Texas Wild-rice for which the common name is used. Vegetation community composition among taxa and grouped by native vs. invasive taxa are compared for the last five years using stacked bar graphs. Total surface area of aquatic vegetation, measured in square meters (m^2), is presented for each season using bar graphs and is compared with long-term averages (2001–present) from spring, fall, high-flow events, and low-flow events. Since the I-35 study reach was expanded in 2014, the long-term averages for this reach were calculated from 2014-2024 to exclude years prior to the reach expansion. High-flow and low-flow averages were calculated from Critical Period events. These events are based on predetermined river discharge triggers (Appendix A), which result in additional mapping events to assess flow-related impacts to the vegetation community. All total coverages were calculated solely based on rooted plant taxa.

Texas Wild-rice Annual Observations

Mapping and Physical Observations

In addition to aquatic vegetation mapping in the LTBG study reaches, Texas Wild-rice was mapped within Spring Lake and eight river segments using the same methods described above during routine summer mapping in July/August (Figure 4). Moreover, physical measurements were quantified during routine monitoring in spring and fall. Eight additional sampling events occurred during species-specific events triggered in January (n = 1), May (n = 1), June (n = 2), July (n=1), August (n = 1), and September (n = 2).

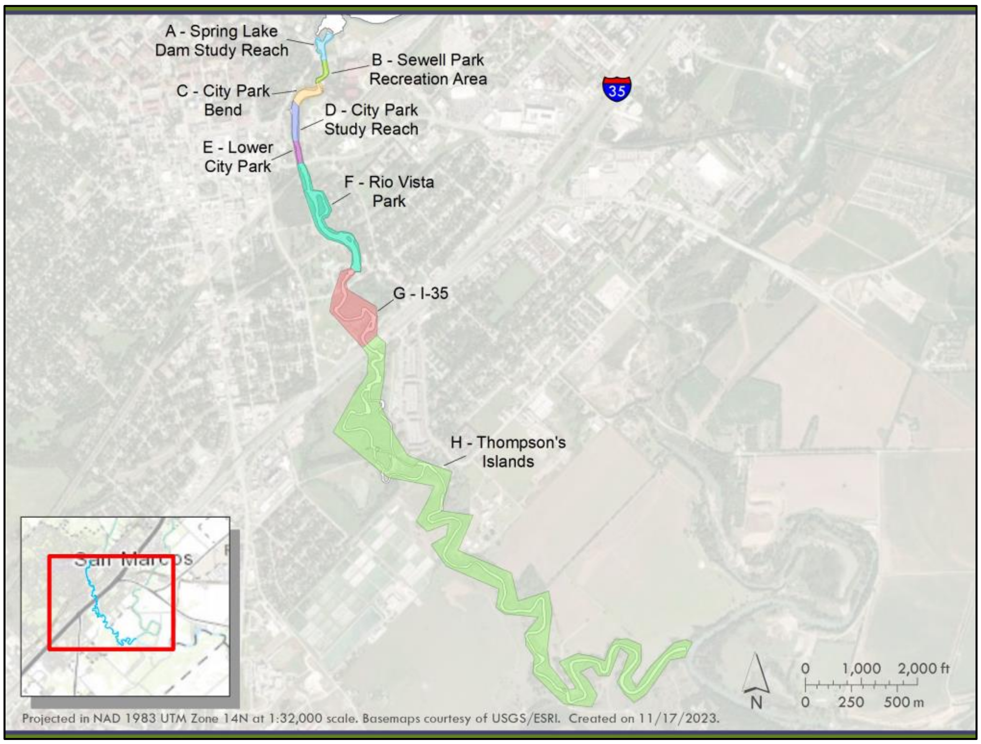

Figure 4. Designated river segments for monitoring Texas Wild-rice coverage.

At the beginning of the initial sampling activities in 2000, Texas Wild-rice stands throughout the San Marcos River were assessed and documented as being in "vulnerable" areas if they possessed one or more of the following characteristics: (1) occurred in shallow water (<0.5 feet); (2) revealed extreme root exposure because of substrate scouring; or (3) generally appeared to be in poor condition. The areal coverage of Texas Wild-rice stands in vulnerable locations were determined in 2024 by GPS mapping (see Aquatic Vegetation Mapping for details) in most instances. However, areal coverage of some smaller stands was measured using a method originally developed by the Texas Parks and Wildlife Department (J. Poole, pers. comm.). To do this, maximum length and maximum width were measured. The length measurement was taken at the water surface parallel to streamflow and included the distance between the bases of the roots to the tip of the longest leaf. The width was measured at the widest point perpendicular to the stream current. Percent cover was then estimated within the rectangle formed from the maximum length and maximum width measurements. The total area of the rectangle was then multiplied by the percent cover to estimate the areal coverage for each small stand.

Data Processing and Analysis

Annual trends in total Texas Wild-rice coverage (m^2) within Spring Lake and all river segments are presented from 2001–present. The conditions of vulnerable Texas Wild-rice stands were assessed by combining quantitative and qualitative observational measurements from the following metrics: (1) percent of stand that was emergent, (2) percent of emergent portions that were seeding, (3) percent of stand covered with vegetation mats or algae buildup, and (4) categorical estimation of root exposure. Water depth was measured in feet (ft) at the shallowest point in the Texas Wild-rice stand and velocity in feet per second (ft/s) was measured at the upstream edge of each stand. All results from the physical observations and vulnerable stands monitoring can be found in Appendix C.

Fountain Darter

Drop-Net Sampling

Drop-net sampling was utilized to quantify Fountain Darter densities and habitat utilization during the spring and fall monitoring events at established sample reaches (Figure 1). Drop-net stations were selected using a random-stratified design. In each study reach, two sample stations per vegetation strata were randomly selected based on dominant aquatic vegetation (including open areas) mapped prior to sampling (see Aquatic Vegetation Mapping for details). At each sample station, all organisms were first trapped using a 2 m^2 drop-net. Organisms were then collected by sweeping a 1 m^2 dip-net along the river bottom within the drop-net. If no fish were collected after the first ten dip-net sweeps, the station was considered complete, and if fish were collected, an additional five sweeps were conducted. If any Fountain Darters were collected on sweep 15, additional sweeps were conducted until no Fountain Darters were collected.

Most fishes collected were identified to species and enumerated. Two morphologically similar species, Western Mosquitofish (*Gambusia affinis*) and Largespring Gambusia (*Gambusia geiseri*), which are known to hybridize, were classified by genus (*Gambusia* sp.). Larval and juvenile fishes too small to confidently identify to species in the field were also classified by genus. All Fountain Darters and the first 25 individuals of other fish taxa were measured (total length expressed in millimeters [mm]).

Physiochemical habitat data were collected at each drop-net location. Water depth (ft) and velocity (ft/s) data were collected at the upstream end of drop-net samples using a HACH FH90 flowmeter and adjustable wading rod. Water-velocity measurements were collected at 15 cm above the river bottom to characterize flows that directly influence Fountain Darters. Mean-column velocity was measured at 60% of water depth when depths were less than three feet. At depths of three feet or greater, water velocities were measured at 20% and 80% of depth and averaged to estimate mean column velocity. Water quality was measured within each drop-net using a HydroTech multiprobe, which included water temperature (degrees Celsius [°C]), pH, dissolved oxygen (milligrams per liter [mg/L], percent saturation), and specific conductance (microsiemens per centimeter [µs/cm]). Mid-column water quality was measured at water depths less than three feet, whereas bottom and surface values were measured and averaged at depths of three feet or greater. Lastly, vegetation composition (%) was visually estimated and dominant substrate type was recorded within each drop-net sample.

Dip-Net Sampling

Dip-net sampling was used to provide additional metrics for assessing Fountain Darter population trends and included qualitative timed surveys and random-station presence/absence surveys. All sampling was conducted using a 40x40 cm (1.6-mm-mesh) dip-net, and surveys for both methods were conducted in spring, summer, and fall.

Timed dip-net sampling was conducted to examine patterns in Fountain Darter catch rates and size structure along a more extensive longitudinal gradient compared to drop-net sampling. Surveys were conducted within established survey sections and for a fixed amount of search effort (Spring Lake: 0.5 hour, City Park: 1.0 hour, I-35: 1.0 hour, Cypress Tree: 0.5 hour, Todd Island: 0.5 hour) (Figures 2 and 3). In each study reach, a single surveyor used a dip-net to collect Fountain Darters in a downstream to upstream fashion. Collection efforts mainly focused on suitable Fountain Darter habitat, specifically in areas with dense aquatic vegetation. Non-wadeable habitats (>1.4 m) were not sampled. All Fountain Darters collected were enumerated, measured (mm), and returned to the river at point of collection.

Random-station presence/absence surveys were implemented to assess Fountain Darter occurrence. During each monitoring event, sample stations were randomly selected within the vegetated area of each reach (Spring Lake: 10, Spring Lake Dam: 15, City Park: 20, I-35: 15) (Figure 1). At each random-station, presence/absence was recorded during four independent dips. To avoid recapture, collected Fountain Darters were returned to the river in areas adjacent to the random station being sampled. Habitat variables recorded at each station included dominant aquatic vegetation and presence/absence of bryophytes and algae.

Data Analysis

Key demographic parameters used to evaluate Fountain Darter observations included population performance, size structure, and recruitment. Population performance was assessed using drop-net, timed dip-net, and random dip-net data. Counts of darters per drop-net sample were standardized as density (darters/m^2). Timed dip-net total darter counts per study reach were standardized as catch-per-unit-effort (CPUE; darters/person-hour [p-h]) for each sampling event. Random dip-net occurrence per station was based on whether or not a Fountain Darter was observed during any of the four dips and percent occurrence was calculated per sampling event at each reach as: (sum[darter presence]/sum[random stations])*100. Fountain Darter density, CPUE, and occurrence were compared among seasons using boxplots. In addition, density and CPUE seasonal observations were compared to the past five years and long-term observations (2001–present). Occurrence values were only compared to observations from the past five years due to the fact that Texas Wild-rice was excluded from sampling prior to 2017. Lastly, temporal trends in Fountain Darter density were assessed per sampling event for each study reach for the past five years using boxplots and compared to their respective long-term (2001–present) medians and quartiles (25th and 75th percentile).

Size structure and recruitment were assessed among seasons. Fall and spring were assessed by combining drop-net and timed dip-net data, and summer was assessed using timed dip-net data only. Boxplots coupled with violin plots were used to display the distribution of darter lengths per sampling event for each season for the past five years. Boxplots show basic length-distribution statistics (i.e., median, quartiles, range) and violin plots visually display the full distribution of lengths relative to each sampling event using kernel probability density estimation

(Hintze and Nelson 1998). Recruitment was quantified as the percent of darters ≤20 mm during each sampling event. Based on a linear model built by Brandt et al. (1993) that looked at age-length relationships of laboratory-reared Fountain Darters, individuals of this size are likely less than 3 months old and not sexually mature (Brandt et al. 1993; Schenck and Whiteside 1976). Percent recruitment ±95% confidence intervals (beta distribution percentiles; McDonald 2014) were shown for the past five years by season and compared to their respective long-term averages.

Habitat use was assessed based on population performance and size structure among vegetation strata using drop-net and random station dip-net observations. Fountain Darter density by vegetation taxa was compared based on current, five-year, and long-term (2001–present) observations using boxplots. Long-term comparisons of Texas Wild-rice were not provided since 2020 was the first year this species was sampled via drop-netting. In addition, Texas Wild-rice was not sampled during fall drop-netting due to river discharge dropping below 120 cfs. Proportion of occurrence was also calculated among vegetation types sampled during random-station dip-netting for the current year. Lastly, boxplots coupled with violin plots were used to display the distribution of darter lengths by vegetation taxa using drop-net data to examine habitat use among size classes for the current year. Open habitats and Texas Wild-rice were omitted from analysis due to limited darter counts (i.e., less than 3 darters total).

Habitat suitability was quantified to examine reach-level changes in habitat quality for Fountain Darters through time. First, Habitat Suitability Criteria (HSC) ranging from 0 (unsuitable habitat) to 1 (most suitable habitat) were built based on occurrence data for all vegetation types (including open habitat) that have been sampled using logistic regression (Manly et al. 1993). Resulting HSC were then multiplied by the areal coverage of each vegetation strata mapped during a biomonitoring event, and results were summed across vegetation strata to calculate a weighted usable area for each reach. To make data comparable between reaches of different sizes, the total weighted usable area of each reach was then divided by the total area of the reach, resulting in an Overall Habitat Suitability Index (OHSI) for each reach during each sampling event. Following this method, temporal trends of Fountain Darter OHSI ±95% CI were calculated per sampling event for each study reach (Spring Lake Dam, City Park, I-35) for the past five years. Long-term (2003–present) OHSI and 95% CI averages were also calculated to provide historical context to recent observations. Specific details on the analytical framework used for developing OHSI and evaluating its efficacy as a Fountain Darter habitat index, including methods to build HSC, can be found in Appendix G.

Fish Community

Mesohabitat, Microhabitat, and Seine Sampling

Fish community sampling was conducted in the spring and fall monitoring events to quantify fish assemblage composition/structure and to assess Fountain Darters in river segments and habitats (e.g., deeper areas) not sampled during drop-net and timed dip-net surveys. The following nine monitoring segments were sampled: Spring Lake, Sewell Park, Veterans Plaza, Rio Vista Park, Crooks Park, I-35, Thompson Island, Wastewater Treatment Plant, and Smith Property (Figures 2 and 3). Deeper habitats were sampled using visual transect surveys, and shallow habitats were sampled via seining.

A total of three mesohabitat transects were sampled at each segment during visual surveys. At each transect, four divers swam from bank-to-bank at approximately mid-column depth, enumerating all fishes observed and identifying them to species. After each mesohabitat transect was completed, microhabitat sampling was also conducted along four, five-meter-long PVC pipe segments (micro-transect pipes) placed on the stream bottom and spaced evenly along the original transect. Divers started at the downstream end and swam up the pipe searching through the vegetation, if present, and substrate within approximately 1 m of the pipe. All fishes observed were identified to species and enumerated. For both surveys, any individuals that could not be identified to species were classified by genus. At each micro-transect-pipe, total area surveyed (m^2), aquatic vegetation composition (%), and substrate composition (%) were recorded. Water depth (ft) and velocity (ft/s) data were collected in the middle of each micro-transect-pipe using a Marsh McBirney Model 2000 portable flowmeter and adjustable wading rod. At each micro-transect pipe, water-velocity measurements were taken 15 cm from the bottom, mid-column, and at the surface. Standard water-quality parameters were also recorded once at each transect using a handheld water-quality sonde.

In shallow habitats, at least three transects were sampled within each monitoring segment (except Spring Lake) via seining. At each of these, multiple seine hauls were pulled until the entire wadeable area had been covered. After each seine haul, fish were identified, measured (mm), and enumerated. To prevent recapture on subsequent seine hauls, captured fish were placed in a holding bucket containing river water. After completion of the transect, all fish were released from holding buckets. Total area surveyed (m^2) was visually estimated for each seining transect. Habitat data from each seine haul location included substrate and vegetation composition (%); water depth (ft); and velocity (ft/s) measured at 15 cm above the river bottom, at mid-column, and at the surface. Fish taxonomy herein follows the most recent guide published by the American Fisheries Society (AFS 2023).

Data Analysis

To evaluate fish community results, all analyses were conducted using fishes identified to species; fishes identified to genus or family were excluded. Total counts of species from independent samples were first quantified as density (fish/m^2) to standardize abundance among the three gear types used. Results from multiple sites were combined to assess spatial longitudinal differences between Spring Lake, Upper River (Sewell Park, Veterans Plaza), Middle River (Rio Vista Park, Crooks Park, I-35), and Lower River (Thompson Island, Wastewater Treatment Plant, Smith Property) (hereafter 'study segments').

Based on microhabitat sampling, temporal trends in Fountain Darter density were assessed per sampling event for each study reach for the past five years using boxplots and compared to their respective long-term (2014–present) medians and quartiles. Overall species richness and diversity using the Shannon's diversity index (Spellerberg and Fedor 2003) for each study segment was assessed for the past five years and plotted with bar graphs. Richness and relative density (%; [sum(species *x* density)/sum(all species density)]*100) of spring-associated fishes (Table 2) were also quantified and presented in the same manner as species richness and diversity.

Table 2. Spring-associated fishes within the San Marcos Springs system based on Craig et al. (2016).

SCIENTIFIC NAME	COMMON NAME
Dionda nigrotaeniata	Guadalupe Roundnose Minnow
Notropis amabilis	Texas Shiner
Alburnops chalybaeus	Ironcolor Shiner
Astyanax argentatus	Texas Tetra
Gambusia geiseri	Largespring Gambusia
Etheostoma fonticola	Fountain Darter
Percina apristis	Guadalupe Darter
Percina carbonaria	Texas Logperch

San Marcos Salamander

Visual Surveys

Salamander surveys were conducted during the spring and fall monitoring events at three sites within Spring Lake and the San Marcos River (Figure 1), which were previously described as habitat for San Marcos Salamander (Nelson 1993). Two of the sites are located within Spring Lake: the Hotel Site is adjacent to the old hotel, and the Riverbed Site was located across from the former Aquarena Springs boat dock. The third survey area, called the Spring Lake Dam Site, is located in the main river channel immediately downstream of Spring Lake Dam in the eastern spillway. This site is subdivided into three smaller areas to allow greater coverage of suitable salamander habitat.

SCUBA gear was used to sample habitats in Spring Lake, while a mask and snorkel were used in the site below Spring Lake Dam. For each sample, an area of macrophyte-free rock was outlined using flagging tape, and three timed surveys (five minutes each) were conducted by overturning rocks >5 cm wide and counting the number of San Marcos Salamanders observed underneath. Following each timed search, the total number of rocks surveyed was recorded to estimate the number of San Marcos Salamanders per rock in the area searched. The three surveys were averaged to yield the number of San Marcos Salamanders per rock. Densities of suitably sized rocks at each sampling site were determined using quadrats (0.25 m^2). Three random samples were taken in each area by randomly throwing the quadrat into the sampling area and counting the number of appropriately sized rocks. The three samples were then averaged to yield a density estimate of the number of suitable rocks in the sampling area. The area of each site was determined by measuring each sampling area with a tape measure.

Data Analysis

Salamander densities (salamanders/m^2) are presented for each season using bar graphs and are compared with long-term (2001–present) spring, fall, high-flow event, and low-flow event averages. High-flow and low-flow averages were calculated from Critical Period events. These events are based on predetermined river discharge triggers (Appendix A), which result in additional survey events to assess flow-related impacts to the San Marcos Salamander population. Temporal trends in salamander density were also assessed per sampling event for each study site for the past five years using bar graphs.

Macroinvertebrates

Rapid Bioassessment Sampling

Rapid Bioassessment Protocols (RBPs) are tools for evaluating biotic integrity and overall habitat health, based on the community of organisms present (Barbour et al. 1999). Macroinvertebrates are the most frequently used biological units for RBPs because they are ubiquitous, diverse, and there is an acceptable working knowledge of their taxonomy and life histories (Poff et al. 2006, Merritt et al. 2008).

BIO-WEST performed sampling and processing of freshwater benthic macroinvertebrates, following Texas RBP standards (TCEQ 2014). Macroinvertebrates were sampled with a D-frame kick net (mesh size 500 micrometers [µm]) by disturbing riffle or run habitat (consisting primarily of cobble-gravel substrate) for five minutes while moving in a zig-zag fashion up-stream. Invertebrates were then randomly distributed in a tray and subsamples were taken by scooping out random portions of material and placing them into a separate sorting tray.

All macroinvertebrates were picked from the tray before another subsample was taken. This process was continued until a minimum of 140 individuals were picked to represent a sample. If the entire sample did not contain 140 individuals, the process was repeated again until this minimum count was reached. Macroinvertebrates were collected in this fashion from Spring Lake, Spring Lake Dam, City Park, and I-35 reaches, during spring and fall sampling (Figure 1).

Sample Processing and Data Analysis

Picked samples were preserved in 80% denatured ethanol, returned to the laboratory, and identified to TCEQ-recommended taxonomic levels (TCEQ 2014). This is usually genus, though members of the family Chironomidae (non-biting midges) and class Oligochaeta (worms) were retained at those taxonomic levels. The 12 ecological measures or metrics of the Texas RBP benthic index of biotic integrity (B-IBI) were calculated for each sample. Each metric represents a functional aspect of the macroinvertebrate community, related to ecosystem health, and sample values are scored from 1 to 4 based on benchmarks set by reference condition streams for the state of Texas. The aggregate of all 12 metric scores for a sample represent the B-IBI score for the reach that sample was taken from. The B-IBI point-scores for each sample are compared to benchmark ranges and are described as having aquatic-life-uses as “Exceptional”, “High”, “Intermediate”, or “Limited”. In this way, point-scores were calculated and the aquatic-life-use for each sample reach was evaluated. Temporal trends in B-IBI scores were assessed per sampling event for each study site for the past five years using bar graphs.

RESULTS and DISCUSSION

In 2024, central Texas continued to experience low precipitation and higher ambient temperatures similar to conditions observed in 2022 and 2023. Drought conditions throughout most of the Texas Hill Country deteriorated during the year, worsening to Extreme conditions (as designated by the National Weather Service [NWS]) in October. As described in the next section, river discharge in the San Marcos River increased in magnitude at the beginning of the year as regional and local rain increased springflow contributions, resulting in approximately median historical discharge in February and March. However, discharge declined well below median historical conditions through the remainder of the year. While 2024 represented another low-flow year, changes in habitat conditions and species metrics were less severe or even improved compared to 2023, a year in which the lowest flows since 1956 were observed and flows were below median historical expectations the entire year. Median mean daily discharge was higher in 2024 (112) than in 2023 (88 cfs). It was similar to previous low-flow years in 2006 (116 cfs), 2009 (96 cfs), 2011 (117 cfs), and 2022 (119 cfs). However, unlike previous low-flow years, flows did not return to normal levels by fall but actually decreased to the lowest point in October (87 cfs).

Although conditions were below long-term expectations for most of the year, impacts to habitat were not as drastic as in 2023. Habitat quality documented for the Covered Species varied spatially over the year as flows declined. Despite declining flows, habitat quality remained suitable for the San Marcos Salamander in Spring Lake and Spring Lake Dam. Suitable Fountain Darter habitat persisted at all three study reaches and was benefitted by prevalence of bryophytes intermixed with other vegetation taxa. Texas Wild-rice coverage was reduced within the study reaches under these drought conditions due to reductions in wetted area and competition with terrestrial competitors in shallow areas, though survival and even expansion was noted in deeper habitats. Warmer water temperatures above 25 °C were documented infrequently, mostly during the late spring and summer months, at all stations from Spring Lake Dam and below.

In summary, 2024 represented a third consecutive year of prolonged low flows in the San Marcos River System. Although flows were below historical expectations for most of 2024, results suggest that an increase in discharge early in the year helped maintain habitat conditions and promoted opportunities for improvement. It remains important to keep tracking the system-wide conditions for the Covered Species as these lower-than average discharge levels continue to persist. The remaining sections in the Results and Discussion describe observed patterns in river discharge, water temperature, Covered Species populations, and select floral and faunal communities through the San Marcos Springs/River system during this low-flow year.

River Discharge

Over the last five years, median annual mean daily discharge exhibited a declining trend from 2020 (149 cfs) to 2024 (112 cfs), representing a decline from ~41st to ~22nd percentile magnitudes, respectively. Minimum discharge also showed a decreasing trend from 2020 (119 cfs) to 2024 (82 cfs), but maximum discharge did not decrease substantially over the past five years. Maximum annual discharge was highest in 2021 (579 cfs), representing a >99th percentile event, and was lowest in 2023 (132 cfs). The maximum discharge in 2021 was the only time during the last five years when a >300 cfs high pulse event occurred. Variation in mean daily discharge (i.e., interquartile range) did not display any strong trends, but was highest from 2021–2022 (57–60 cfs) and lowest in 2023 (8 cfs). Despite the overall decreasing trend in annual discharge patterns, median, upper quartile, and maximum discharge increased to magnitudes >100 cfs from 2023 to 2024 (Figure 5A).

Monthly river discharge in 2024 showed an increase in magnitude at the beginning of the year that was followed by a decline. High variability in river discharge observed in January (76 cfs) indicated an increase in springflow (+ ~75 cfs; USGS 2024), which was likely explained by increased springflow contributions from both regional (J-17 Index Well: + ~9 ft; EAA 2024) and local (Blanco River gage #08171300: + ~400 cfs; USGS 2024) sources within the recharge zone. That said, local contributions from the Blanco River have minimal effects on long-term springflow trends relative to regional recharge sources (Smith et al. 2015). As such, monthly patterns reflected this short-term recharge increase early in the year. Specifically, median discharge increased from January (89 cfs) to March (157 cfs), with medians in February (170 cfs) and March representing the only months that approximated their respective long-term medians. Following March, median discharge declined the rest of the year and was roughly equal to the long-term 10th percentile magnitude by October (87 cfs) (Figure 5B).

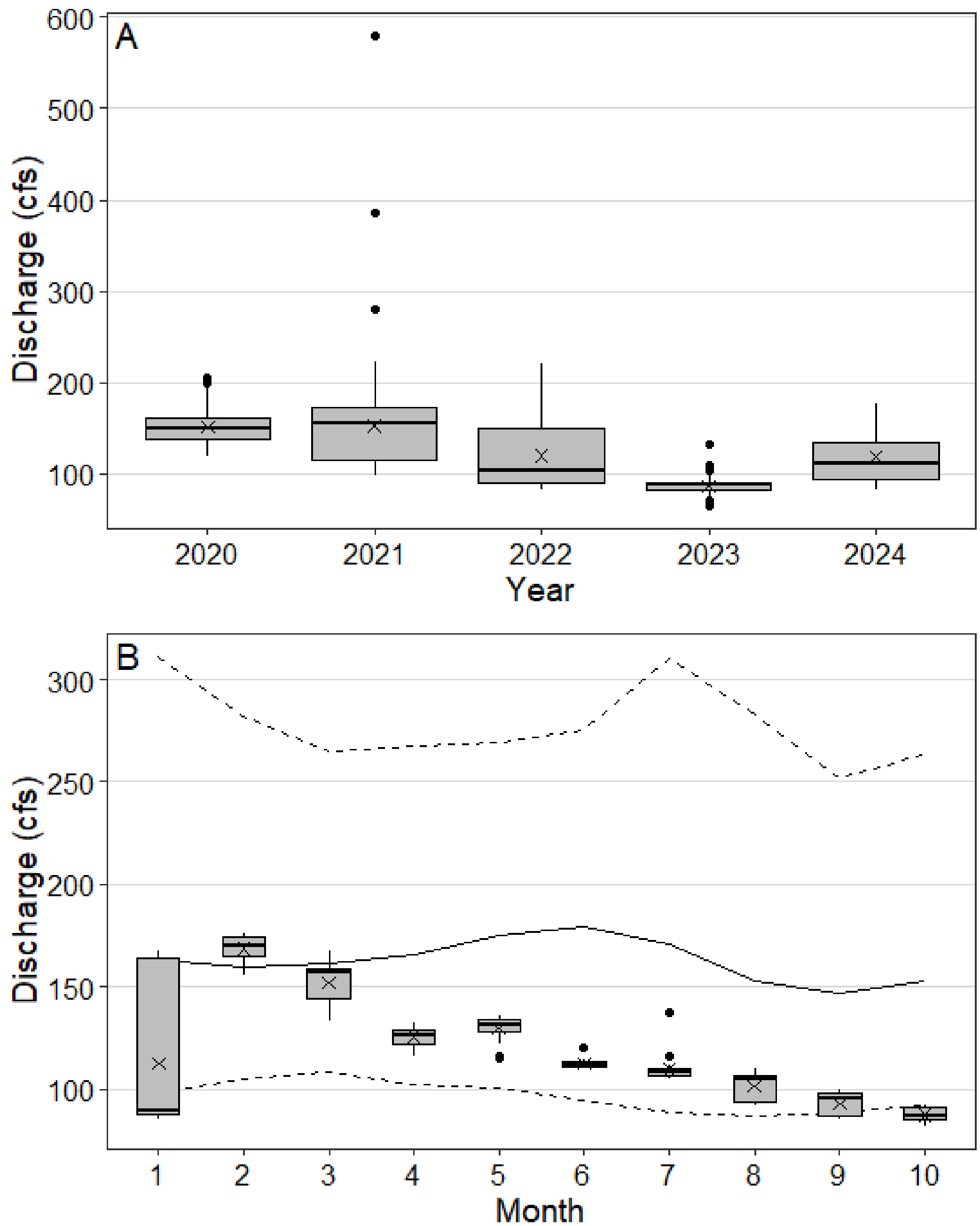

Figure 5. **Boxplots displaying San Marcos River mean daily discharge annually from 2020–2024 (A) and among months (January–October) in 2024 (B). Each month is compared to the 10th percentile (lower dashed line), median (solid line), and 90th percentile (upper dashed line) of their historical (1956, 1994–2024) daily means. The thick horizontal line in each box is the median, x represents the mean, and the upper/lower bounds of each box represents the interquartile range. Whiskers represent minimum/maximum values up to 1.5 times the interquartile range, and outliers beyond this are designated with solid black circles.**

Water Temperature

Median water temperature did not display a longitudinal trend and was stable from Spring Lake stations (21.9–22.4 °C) to Wastewater Treatment Plant (22.8 °C). Instead, water temperature illustrated a variability (i.e., interquartile range) gradient, increasing from < 1 °C in spring habitats to a maximum of ~ 3 °C at stations farthest downstream (Figure 6). This longitudinal gradient in 2024 matched 5-year and long-term data trends and is typical within spring-associated ecosystems, where water temperatures increase in magnitude and variation with increasing distance from spring inputs (Kollaus and Bonner 2012). This pattern of greater variation with increasing distance downstream coincided with more frequent measurements > 25 °C. Water temperature was never above 25 °C at Spring Lake Deep, Spring Lake, and Chute, and rarely exceeded this temperature at Spring Lake Dam. Water temperature exceeded 26 °C at the remaining stations. Measurements > 26 °C were generally rare at these stations but were most frequent at Thompson Island Artificial and Wastewater Treatment Plant (Figure 6).

The Fountain Darter larval production threshold (25 °C) was exceeded for at least one day from April to October at all riverine stations. At Spring Lake Dam, this occurred for nine days in May. For other stations, the number of days of larval temperature threshold exceedance ranged from one to ~25 days per month. Thompson Island Natural and Wastewater Treatment Plant were the only two stations where larval exceedance was > 20 days for a given month. In general, frequency of exceedance increased from April to September and decreased by October. The number of 4-hour measurements exceeding the threshold were mostly 1–2 per day, rarely increasing to 3 per day, though they were relatively more frequent at both Thompson Island stations and Wastewater Treatment Plant.

Monthly patterns in exceedance of the optimal egg production threshold (26 °C) were less frequent than the larval threshold and generally occurred from June to October at City Park and downstream. Exceedances occurred from 5–12 days/month at City Park from June to September. Egg production threshold exceedance only occurred in September at Rio Vista Park (3 days) and in July at I-35 (1 day). Temperatures above 26 °C at Thomspon Island were measured in June (1 day) and August (6 days). At Thompson Island Artificial and Wastewater Treatment Plant, the frequency of egg production temperature exceedance increased from June (~6 days) to September (~13 days), followed by a decreased frequency in October (0–5 days).

Fountain Darter reproductive thresholds within the study reaches were exceeded more frequently in low-flow years (i.e., 2022-2024) than in higher flow years (i.e., 2020-2021). For example, the egg production threshold at City Park was not exceeded in 2020 or 2021, but was exceeded for 31 days in 2022, 8 days in 2023, and 12 days in 2024. Temperature exceedances were lower in 2024 than in 2023 for some reaches. At Spring Lake Dam, the larval production threshold was exceeded for 11 fewer days in 2024. At I-35, the egg production threshold was exceeded for 13 days in 2023 but for one day in 2024. Based on patterns in Fountain Darter population demography within each of the drop-net study reaches, peak periods of elevated water temperatures in summer 2024 did not have a strong negative affect on overall population condition or recruitment rates (see subsequent sections for more details).

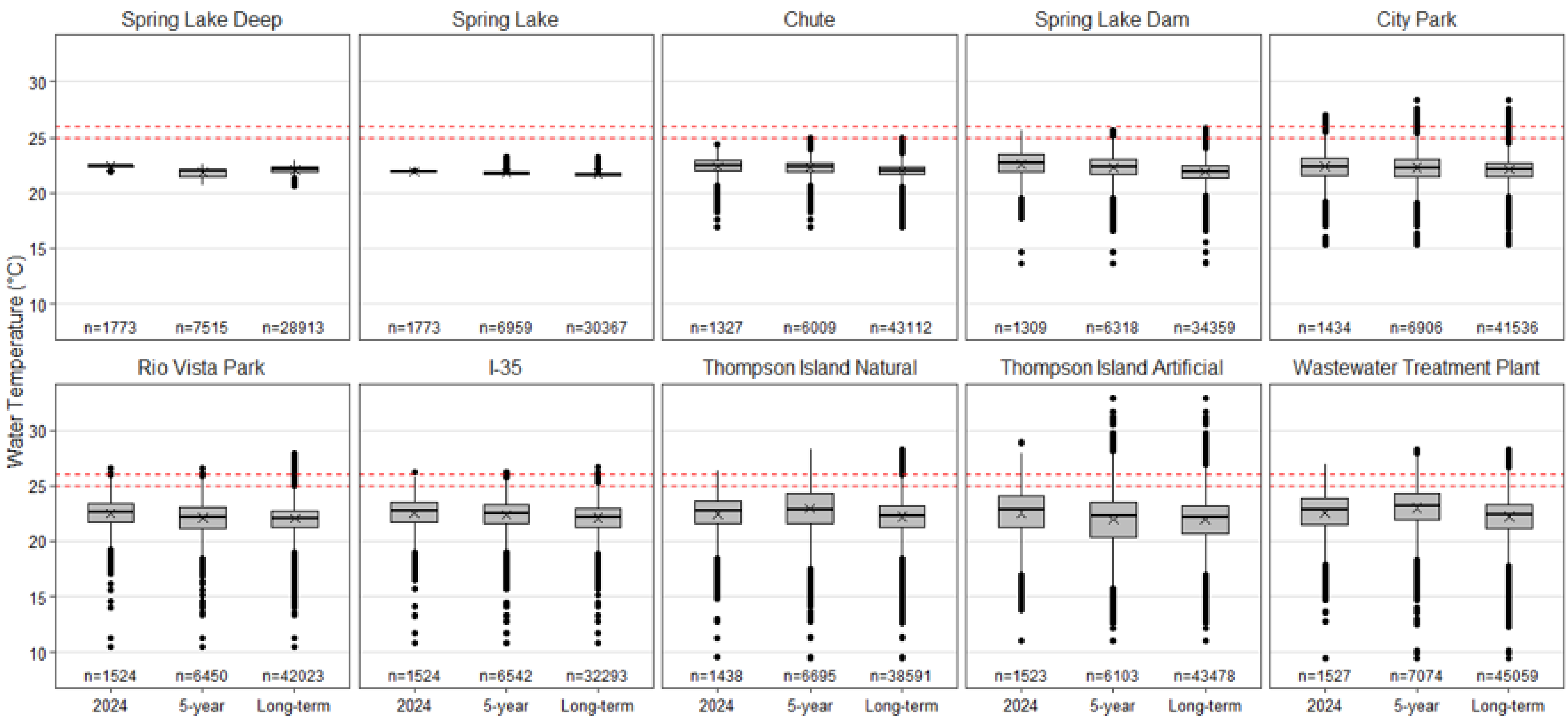

Figure 6. **Boxplots displaying 2024, 5-year (2020–2024), and long-term (2020–2024) water temperature trends in the San Marcos Springs/River. The thick horizontal line in each box is the median, x represents the mean, and the upper/lower bounds of each box represents the interquartile range. Whiskers represent minimum/maximum values up to 1.5 times the interquartile range, and outliers beyond this are designated with solid black circles. The "n" values along the x-axis represent the number of individual temperature measurements in each category. The lower and upper red dashed lines indicate maximum optimal temperatures for Fountain Darter larval (≥25 °C) and egg (≥26 °C) production (McDonald et al. 2007), respectively.**

Aquatic Vegetation

Spring Lake Dam Reach

Aquatic vegetation in the Spring Lake Dam reach remained relatively stable during 2024 compared to previous low-flow years. Total vegetation decreased in spring from 1,460 m^2 to 1,314 m^2 in the fall, with the majority of vegetation loss from Texas Wild-rice near the recreational access point. The spring total coverage was similar to the long-term average (1,486 m^2), while fall coverage was greater than the long-term average (1,202 m^2; Figure 7). Texas Wild-rice was the dominant vegetation across both seasons (85%) with other taxa, including *Potamogeton* and *Hydrocotyle*, comprising 221 m^2 (15%) in the spring and 204 m^2 (15%) in the fall (Figure 8). Vegetation loss from spring to fall was likely a combined result of both recreation and flow reduction as summer progressed. The Spring Lake Dam reach has been a popular recreation area over the past decade, when access is allowed. Low flows in the summer of 2024 produced shallower depths and slower velocities which intensified recreational impacts. However, the addition of recreation barriers around the eastern spillway presumably decreased wading in the area and protected the largest stands of Texas Wild-rice in the reach.

City Park Reach

Total vegetation coverage in this reach was lower than long-term averages in the spring and fall. Spring vegetation totaled 3,399 m^2 with Texas Wild-rice accounting for 93% (Figure 7). By fall, vegetation coverage receded to 2,510 m^2 with Texas Wild-rice representing 92%. Other taxa including *Cabomba*, *Sagittaria*, and *Ludwigia* accounted for about 200 m^2 (6-7%) in both seasons (Figure 8). *Cabomba*, which has been observed to increase in both Comal and San Marcos systems during low flows, was the second most dominant taxa throughout the year and has remained persistent in a few areas outside of the main flow path and away from heavy recreation. The bryophytes that persisted in this reach in 2023 were absent by spring 2024. However, as flows decreased throughout the year, small individual bryophyte patches and bryophytes intermixed with other taxa were observed by fall. While the City Park reach maintains the most vegetation relative to Spring Lake Dam or I-35, it also receives the most recreational impacts from wading, swimming, and tubing. As such, large seasonal fluctuations in vegetation from spring to fall have been a consistent long-term pattern observed in this reach (Figure 8). That said, the change in total coverage from spring to fall (889 m^2) was less than in 2023 (1,548 m^2). In contrast to 2023 when the lowest flows coincided with peak summer recreation, flows in 2024 did not decrease drastically until mid-August when recreation tapered off.

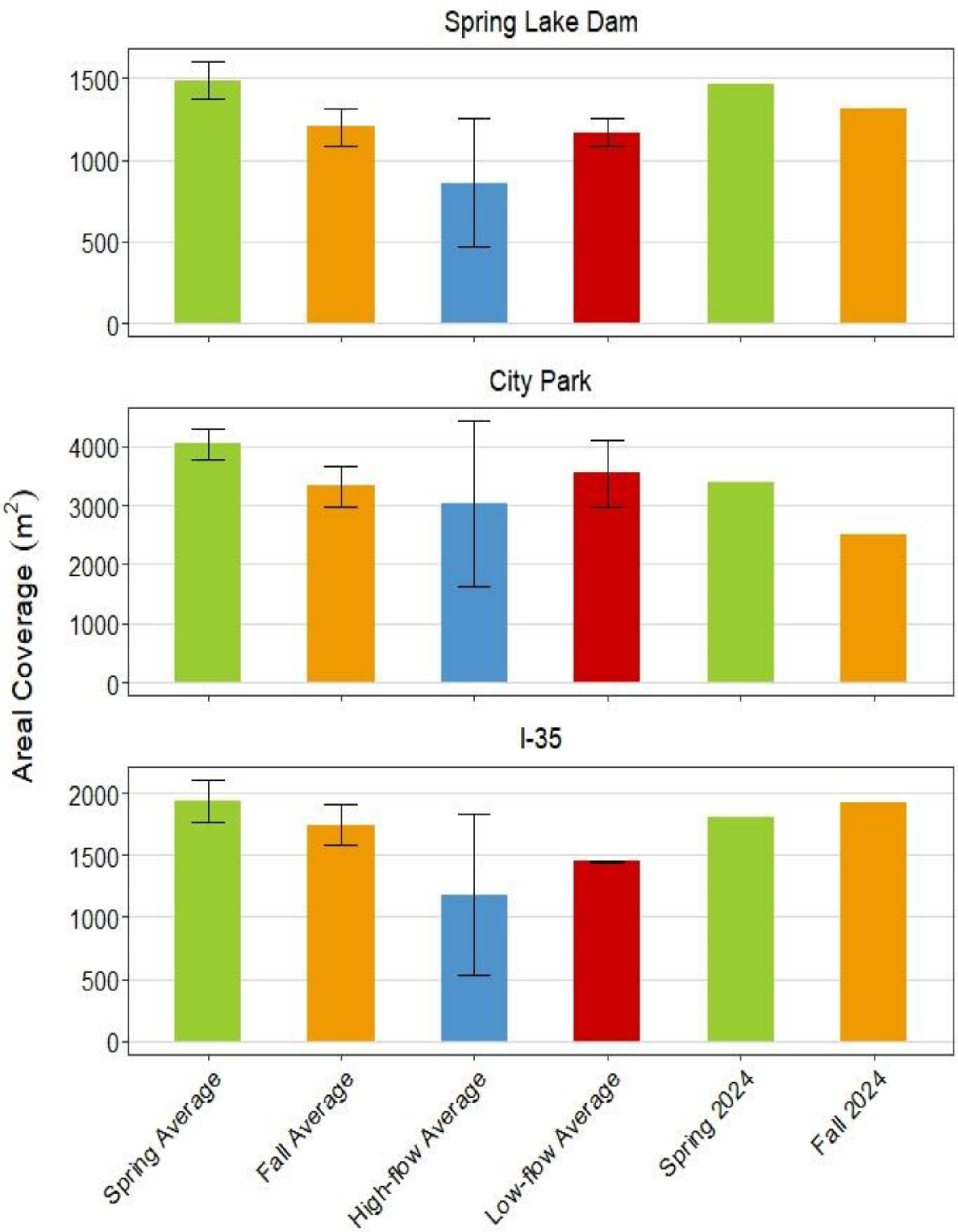

Figure 7. **Areal Coverage (m^2) of aquatic vegetation among study reaches in the San Marcos River. Long-term study averages were calculated from 2000-2024 for Spring Lake Dam and City Park and from 2014-2024 for I-35. Long-term study averages are provided with error bars representing 95% confidence intervals.**

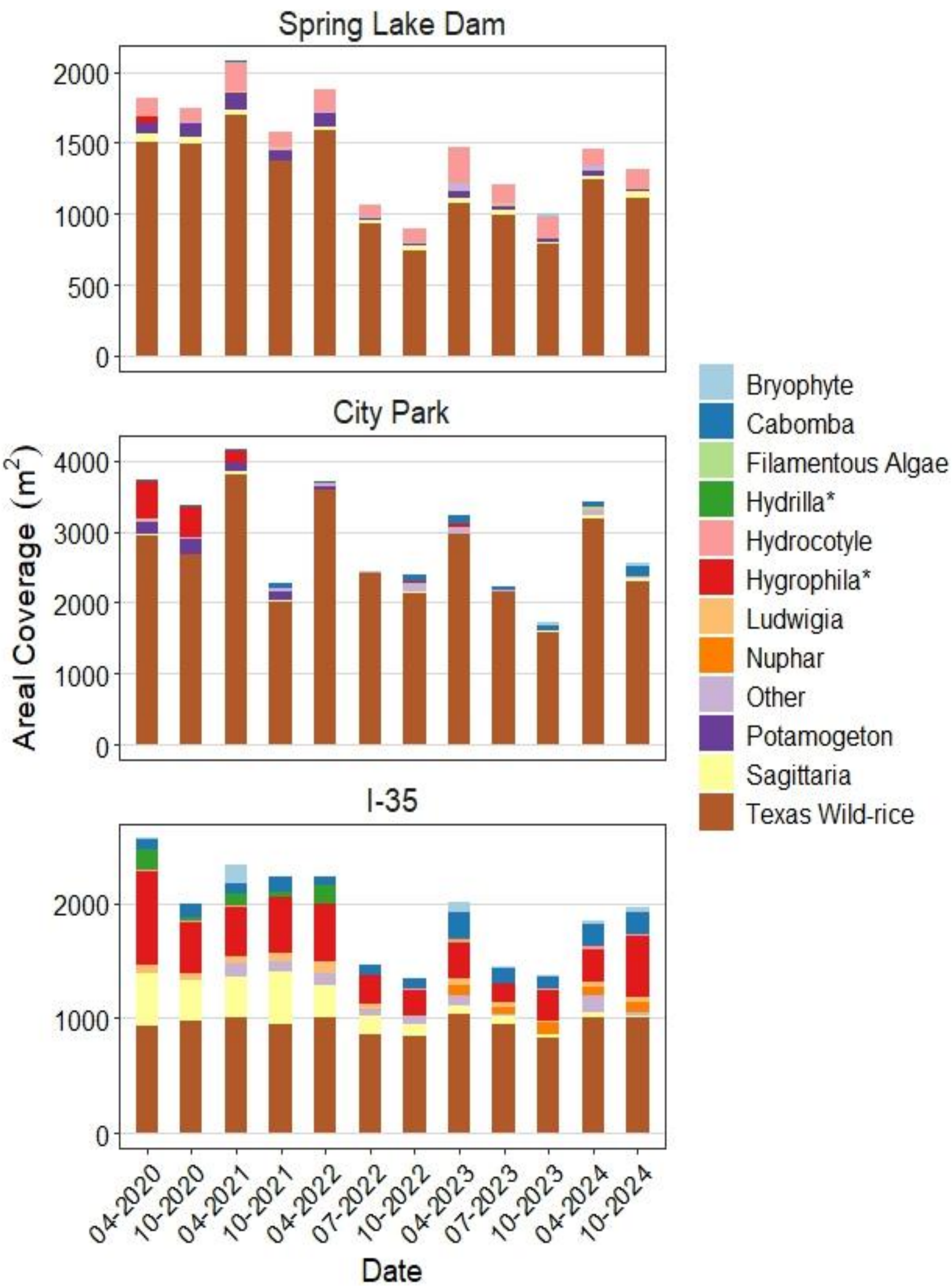

Figure 8. **Aquatic vegetation (m^2) composition among taxa (top row) from 2020–2024 in the San Marcos River. (*) in the legend denote non-native taxa.**

I-35 Reach

Total vegetation coverage at I-35 was similar to the long-term average in spring and was slightly higher than the long-term average in fall. Of the three study reaches, I-35 was the only one to show an increase in vegetation from spring to fall (Figure 7). In spring, total vegetation coverage was 1,809 m^2 and rose to 1,917 m^2 by fall. Texas Wild-rice was the most dominant taxa in the spring (56%; 1,008 m^2) and fall (53%; 1,012 m^2). Expansion of *Hygrophila* accounted for a majority of the increase in vegetation between spring and fall events as it increased from 280 m^2 (15%) in the spring to 518 m^2 (27%) in the fall (Figure 8). I-35 remains the most diverse reach with Texas Wild-rice, *Hygrophila*, *Cabomba*, *Sagittaria,* and *Nuphar* very abundant (Figure 8). Several other taxa were present in smaller abundances including *Hydrocotyle* and *Ludwigia*. Additionally, bryophytes persisted in both spring and fall in greater abundances than in higher flow years (e.g., 2019-2021). River morphology has changed in this reach over the past couple of years due to sustained low flows. In the lower half of the reach, the majority of flow has now been diverted to river right, leaving a large dewatered area on river left near Snake Island. This has allowed for littoral and terrestrial taxa to establish. Amphibious taxa such as *Hygrophila* and *Sagittaria* continued to survive as emergent plants in this area, while taxa such as *Cabomba* and Texas Wild-rice shifted to deeper water for survival. In addition to the expansion of *Hygrophila* in shallow areas along the bank, coverage of this taxa also increased in deeper areas within the main river channel, contributing to the higher vegetation coverage in fall.

Texas Wild-rice

Texas Wild-rice Mapping

In 2024, Texas Wild-rice was mapped once from Spring Lake to the confluence of the Blanco River during the annual summer mapping event in July/August. Flows decreased below 100 cfs in August and remained below 90 cfs through October (Figure 5B). The lowest flows occurred in October when total discharge decreased to about 82 cfs. Full system maps are located in Appendix B. Total coverage of Texas Wild-rice was 11,272 m^2 in 2024, a substantial increase from the September low-flow event in 2023 (8,211 m^2) but similar to the previous annual summer mapping event in 2023 (11,820 m^2; Figure 9). This increase is in part attributed to expansion below Cheatham Street bridge and areas around Purgatory Creek and Hopkins Bridge which have been cleared of *Hydrilla*. Impacts to the physical structure of Texas Wild-rice (e.g., root exposure, thickness) were observed in 2024 and most noticeable in areas adjacent to public access points in Spring Lake Dam and City Park reaches where recreation is high. However, less impacts to the structure and coverage of Texas Wild-rice stands were observed in 2024 compared to 2023 when low flows were sustained throughout the entire year. Over the long-term, coverage since 2018 has fluctuated around 10,000-15,000 m^2, approximately 2-3 times pre-HCP levels.

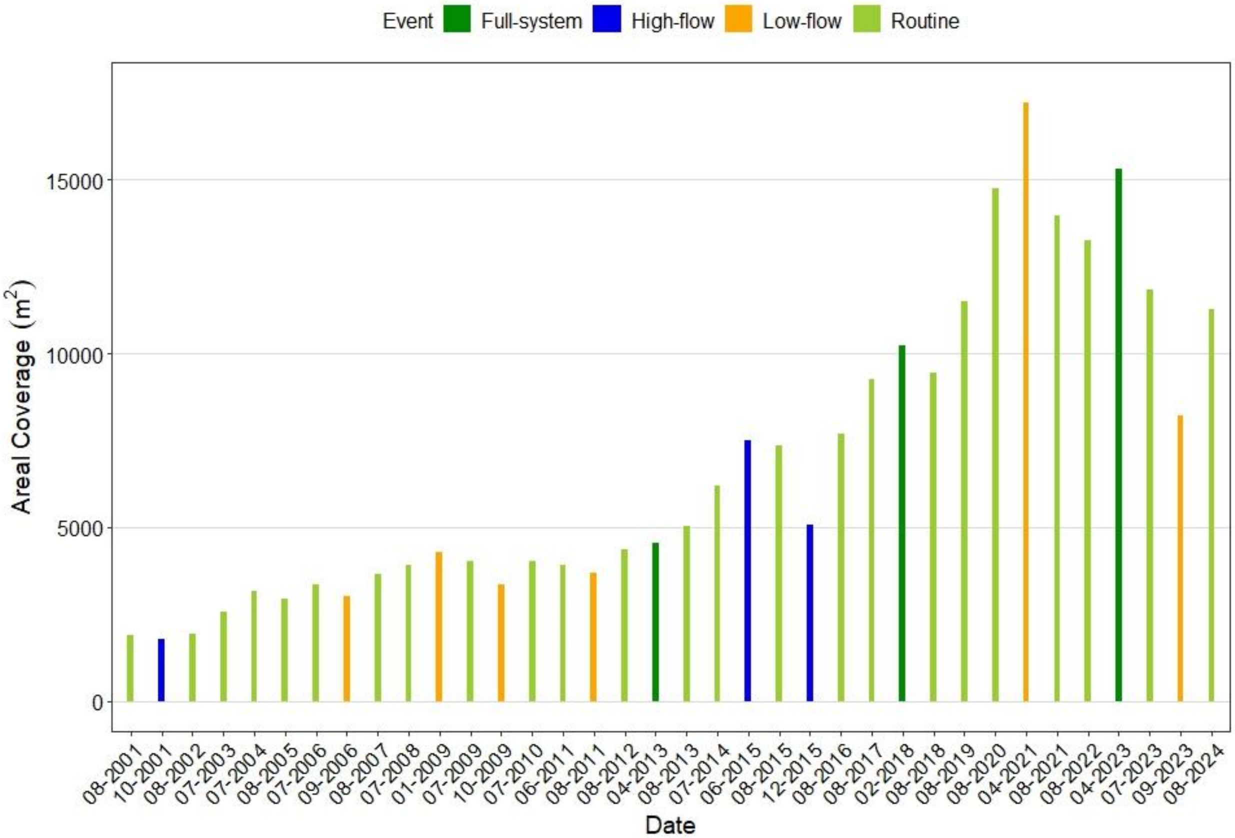

Figure 9. **Texas Wild-rice areal coverage (m^2) from 2001–2024 in the upper San Marcos River.**

Between July/August 2023 and July/August 2024, Texas Wild-rice coverage was approximately the same with changes varying by river segment (Table 3). Texas Wild-rice decreased in Segments B, C, and E. The largest loss of Texas Wild-rice occurred in Segment C (City Park Bend), with a decrease of over 1,000 m^2 since the 2023 annual mapping event. A large area has been dewatered in this segment with Texas Wild-rice remaining only in the wetted thalweg. Texas Wild-rice in Segment B, Sewell Park, continued to be outcompeted by terrestrial vegetation which expanded in exposed sediments that are typically submerged. Decreases in Segment E, Lower City Park, are attributed to recreational traffic that thins or uproots the plants.

Increases in Texas Wild-rice were observed in Segments A, D, F, G, and H (Table 3). One of the largest increases occurred in Segment F, Veramendi Park to Rio Vista Park, with 563 m^2 more Texas Wild-rice in 2024 than in July/August 2023. Expansion of Texas Wild-rice throughout this segment was aided by removal of *Hydrilla* and some planting efforts. Texas Wild-rice also increased in Segment H, below I-35, which is largely a result of natural expansion above Cape's Dam. The continued increasing trend in this segment in recent years can also be attributed to the limited nature of large flow pulses over the past few years. Exclusion zones in Segment A, Spring Lake Dam Study reach, allowed Texas Wild-rice to persist near the eastern spillway.

The Texas wild-rice population has continued to adapt to low-flow conditions which have been ongoing for three years. As the river morphology has adjusted to prolonged low flows, the deepened river channel and increase in pool habitats allowed Texas Wild-rice to persist and even expand in some areas. However, development of weedy riparian vegetation in shallow areas along the bank has outcompeted emergent Texas Wild-rice (Figure 10). If drought conditions extend beyond 2024, it is likely Texas Wild-rice colonies will persist more in the deeper areas of the river and the occurrence of emergent Texas Wild-rice along stream edges will be less common.

Table 3. Change in coverage (m^2) of Texas Wild-rice between July/August 2023 and July/August 2024 annual mapping.

RIVER SEGMENT	JULY/AUGUST 2023 COVERAGE	JULY/AUGUST 2024 COVERAGE	COVERAGE CHANGE	PERCENT CHANGE
A. Spring Lake Dam Study Reach	1,033	1,063	+30	+3
B. Sewell Park	946	732	-214	-29
C. City Park bend	3,276	2,159	-1,117	-51
D. City Park Study Reach	2,172	2,344	+172	+7
E. Lower City Park	1,223	1,095	-128	-12
F. Veramendi Park to Rio Vista Park	1,626	2,189	+563	+26
G. I-35 Study Reach	954	986	+32	+3
H. Below I-35	502	571	+69	+12
Spring Lake	88	133	+45	+34

Figure 10. **(A) A large stand of emergent Texas Wild-rice at upper City Park in May 2019. (B) The same area at upper City Park in October 2024, after dewatering led to its replacement by terrestrial vegetation (*Ceratopteris thalictroides* and *Bacopa monnieri*) in shallow areas.**

Fountain Darter

A total of 1,025 Fountain Darters were observed at 54 drop-net samples in 2024. Drop-net densities ranged from 0.00–55.50 darters/m^2. Community summaries and raw drop-net data are included in Appendix D and Appendix F, respectively. Habitat conditions observed during drop-netting are summarized in Table 4. Texas Wild-rice was only sampled in spring 2024 because river discharge decreased below 120 cfs by fall.

Table 4. Habitat conditions observed during 2024 drop-net sampling. Physical habitat parameters include counts of dominant vegetation (median % composition) and dominant substrate type sampled. Depth-velocity and water quality parameters include medians (min-max) of each variable among all drop-net samples.

HABITAT PARAMETERS	SLD	CP	I-35
Vegetation			
Cabomba[1]	0	4 (100%)	4 (100%)
Hydrocotyle[1]	4 (85%)	0	4 (75%
Hygrophila[1]	0	0	4 (98%)
Ludwigia[1]	0	4 (85%)	2 (88%)
Open	4 (100%)	4 (100%)	4 (100%)
Potamogeton[2]	4 (85%)	0	0
Sagittaria[2]	4 (95%)	2 (98%)	0
Texas Wild-rice[2]	2 (93%)	2 (85%)	2 (93%)
Substrate			
Cobble	10	2	0
Gravel	4	2	4
Sand	1	0	10
Silt	3	12	6
Depth-velocity			
Water depth (ft)	1.1 (0.4–2.3)	1.6 (0.8–2.8)	1.2 (0.4–2.7)
Mean column velocity (ft/s)	0.1 (0.0–1.6)	0.1 (0.0–0.8)	0.2 (0.0–1.1)
15-cm column velocity (ft/s)	0.1 (0.0–1.4)	0.1 (0.0–0.8)	0.3 (0.0–1.0)
Water quality			
Water temperature (°C)	22.2 (21.6–22.7)	22.7 (21.2–23.9)	22.3 (20.3–23.7)
DO (ppm)	7.8 (7.3–8.3)	8.8 (7.5–10.2)	9.0 (7.1–11.0)
DO % saturation	91.4 (82.7–96.4)	101.8 (84.4–120.2)	104.0 (79.6–129.5)
pH	7.3 (7.3–7.4)	7.5 (7.3–7.9)	8.6 (8.1–8.9)
Specific conductance (µs/cm)	648 (646–662)	647 (584–650)	643 (611–647)

[1]Denotes ornate vegetation taxa with physical characteristics that create complex structure
[2]Denotes long broad or ribbon-like, austere-leaved vegetation taxa

Timed dip-netting resulted in a total of 540 Fountain Darters during 10.50 person-hours (p-h) of effort. Site CPUE ranged from 2–102 darters/p-h. Fountain Darters were present at 68 out of 180 (38%) random-stations. Reach-level percent occurrence among monitoring events ranged from 0–87%. A summary of occurrences per reach and vegetation taxa can be found in Table 5.

Table 5. Summary of vegetation types sampled among reaches during 2024 random-station surveys in the San Marcos Springs/River and the percent occurrence of Fountain Darters in each reach and vegetation type. Raw numbers represent the sum of detections per reach-vegetation type combination and '-' denotes that the vegetation type was not sampled.

VEGETATION TYPE	SL	SLD	CP	I-35	Total	Total Samples	Occurrence (%)
Bacopa[1]	-	-	1	-	**1**	**2**	**50.0**
Bryophyte[1]	-	-	2	-	**2**	**2**	**100**
Cabomba[1]	3	-	2	3	**8**	**12**	**66.7**
Ceratophyllum[1]	2	-	-	-	**2**	**2**	**100**
Graminoid[2]	-	0	-	1	**1**	**2**	**50.0**
Heteranthera[1]	-	0	1	-	**1**	**2**	**50.0**
Hydrocotyle[1]	-	7	-	-	**7**	**8**	**87.5**
Hygrophila[1]	-	-	-	20	**20**	**22**	**90.9**
Ludwigia[1]	-	1	-	2	**3**	**3**	**100**
Myriophyllum[1]	0	-	-	-	**0**	**1**	**0.0**
Nuphar[2]	-	-	-	0	**0**	**2**	**0.0**
Sagittaria[2]	1	2	1	-	**4**	**23**	**17.4**
Texas Wild-Rice[2]	-	2	14	3	**19**	**99**	**19.2**
Total	**6**	**12**	**21**	**29**	**68**	**180**	**37.8**
Total samples	**30**	**45**	**60**	**45**	**-**	**-**	**-**
Occurrence	**20.0**	**26.7**	**35.0**	**64.4**	**-**	**-**	**-**

[1]Denotes ornate vegetation taxa with physical characteristics that create complex structure
[2]Denotes long broad or ribbon-like, austere-leaved vegetation taxa

Population Demography

Seasonal population trends

Median Fountain Darter density in 2024 increased from spring (1.75 darters/m^2) to fall (2.25 darters/m^2). Upper quartiles and variability (i.e., interquartile range) were similar between seasons (~15.00 darters/m^2) (Figure 11A). Timed and random dip-netting illustrated inverse seasonal trends in 2024. Median catch rates were highest in spring (53 darters/p-h) and decreased to equal rates in summer and fall (30 darters/p-h). Median occurrence in contrast was lowest in spring (20%) and increased in summer (43%) and fall (34%) (Figure 11B, 11C). Boxplot statistics in 2024 mostly aligned with 5-year and long-term trends across indices, though several notable discrepancies were apparent. First, upper quartile densities were ~2–3 times higher than historical upper quartiles, which supports densities were higher than expected at multiple sampling locations (Figure 11A). Increased frequency of high-density samples was ubiquitous across study reaches and can at least be partially explained by higher prevalence of bryophytes within the vegetation taxa sampled in 2024 (see next section for further discussion). Second, catch rates in summer and occurrences in spring were lower than expected, with medians being more similar to their respective lower quartiles (Figure 11B, 11C). Lower values of these seasonal indices may be influenced by several factors which are discussed below.

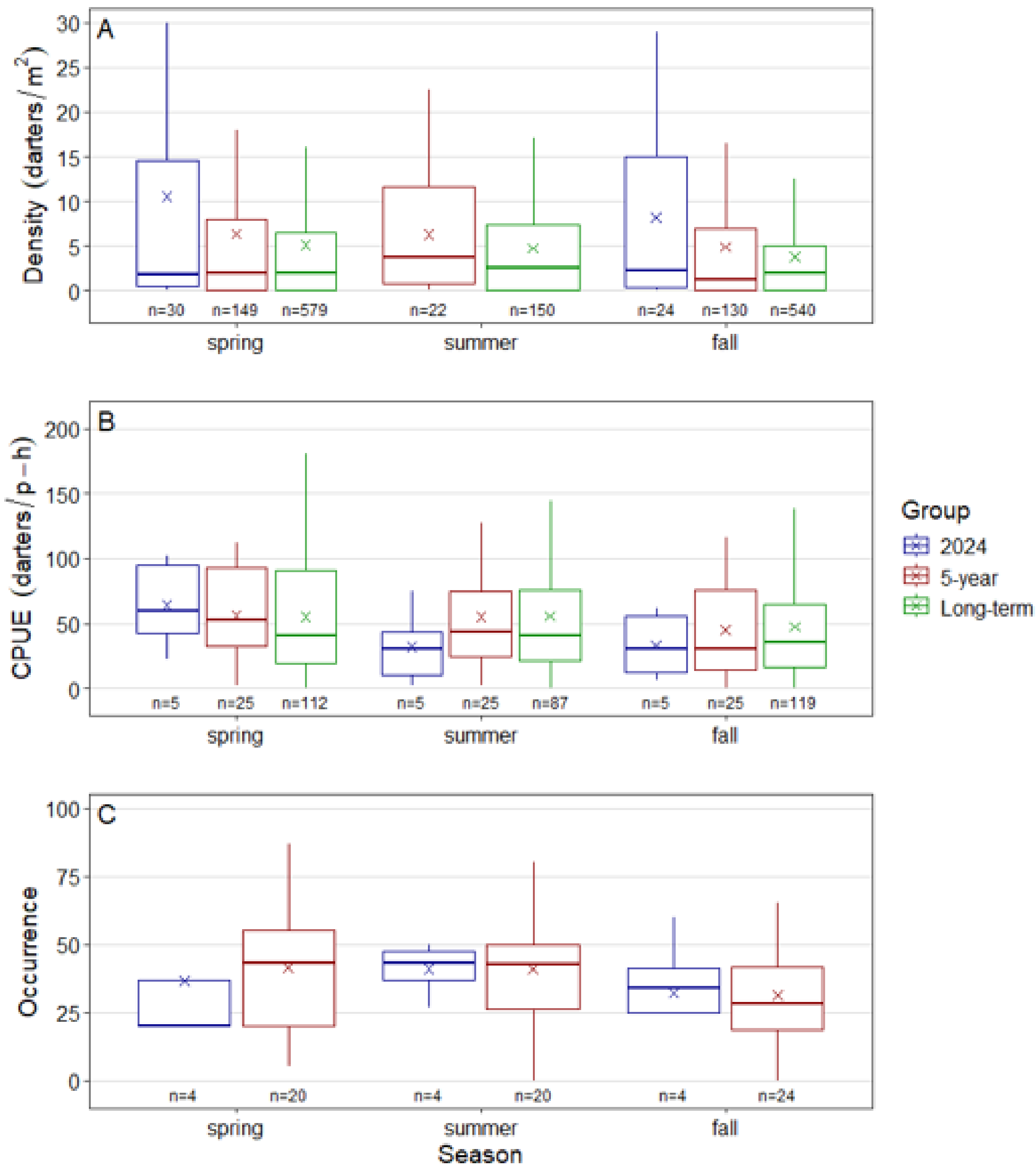

Figure 11. **Boxplots comparing Fountain Darter density from drop-net sampling (A), catch-per-unit-effort (CPUE) from timed dip-netting (B), and proportional occurrence from random-station dip-netting (C) among seasons in the San Marcos Springs/River. Temporal groups include 2024, 5-year (2020–2024), and long-term (2001–2024) observations. The thick horizontal line in each box is the median, x represents the mean, and the upper/lower bounds of each box represents the interquartile range. Whiskers represent minimum/maximum values up to 1.5 times the interquartile range. The "n" values along the x-axes represent the number of discrete samples per category.**

Catch rates and occurrences in Spring Lake were lower in 2023 and 2024 than in previous higher flow years (2017-2021), suggesting that the littoral zone around the lake perimeter has provided suboptimal habitat conditions during extended durations of reduced springflow. Fish community sampling in contrast, has shown no detectable decreases in Fountain Darter density, suggesting the local population within the lake has not experienced a declining trend and darters are instead utilizing deeper habitats (BIO-WEST 2023, 2024). Additionally, ~80% of occurrence samples at Spring Lake Dam and City Park were within Texas Wild-rice. This taxon has been found to only provide suitable Fountain Darter habitat when bryophytes increase structural complexity (Alexander and Phillips 2012; Edwards and Bonner 2022). While bryophytes were observed within most Texas Wild-rice samples at these reaches, they were mostly accumulated near the water's surface rather than the riverbed. Given that Texas Wild-rice accounts for >70% of vegetation assemblages within these reaches, lower prevalence of darters during a given season should not be viewed as an unexpected phenomenon. Additionally, given the low occurrence and occasional high densities in spring, it is possible that smaller darters aggregated in more suitable habitat such as *Sagittaria* with bryophytes which was accounted for in drop-net sampling but not random-station dip-net sampling. Regardless, values of both indices returned to more historical levels during the subsequent season.

Drop-net sampling density trends

Temporal trends in Fountain Darter density from 2020–2024 varied across reaches. Median densities over time were not strongly correlated ($r < 0.7$) between reaches, suggesting spatially asynchronous dynamics over the past five years. From 2020–2023, all reaches generally displayed cyclical changes in median density that fluctuated around their respective long-term medians. In 2024, median densities at Spring Lake Dam (0.75–2.00 darters/m^2) and I-35 (1.75–2.00 darters/m^2) approximated their long-term medians. City Park, however, illustrated increased median densities in 2024 (10.75–11.75 darters/m^2) which exceeded the long-term upper quartile. Further, City Park upper quartiles have mostly increased from 2020–2024 (3.50–16.00 darters/m^2). Upper quartile densities at I-35 (9.25–12.75 darters/m^2) were also above the long-term values this year. At Spring Lake Dam, upper quartile density increased from spring (3.38 darters/m^2) to fall (9.00 darters/m^2), when it was 2.25 times greater than the long-term value (Figure 12).

Similar to 2023, results from this year suggest that the prolonged period of reduced flows since 2022 have not had an apparent negative effect on temporal patterns of Fountain Darter density in the upper San Marcos River. In fact, higher densities observed in 2024, along with relatively stable occurrence and catch rates, provide supporting evidence that population condition has improved the past five years. Data collected in 2024 demonstrated medians and upper quartiles that consistently met or exceeded long-term values across reaches. This illustrates that high-density samples were more frequent in these reaches, likely due to improved habitat quality in certain areas. For example, densities in *Sagittaria* at Spring Lake Dam in fall 2024 (25.5–39.00 darters/m^2) were 10–15 times higher than this vegetation taxon's long-term median in this reach. This substantial increase can be best explained by increased structural complexity due to higher prevalence of bryophytes (50–70%) (Alexander and Phillips 2012; Edwards and Bonner 2022). Moreover, density patterns have steadily increased at City Park since 2022. Similar to other reaches, habitat quality appears to have benefitted from increased prevalence of bryophytes. The establishment of persistent patches of *Cabomba* since 2019 is also likely an important driver of the increasing density trend at City Park. A 300% increase in *Cabomba* coverage in the reach since 2020 may have resulted in an increase in reach-level carrying capacity at City Park (Dennis et al. 2006; Boettiger 2018).

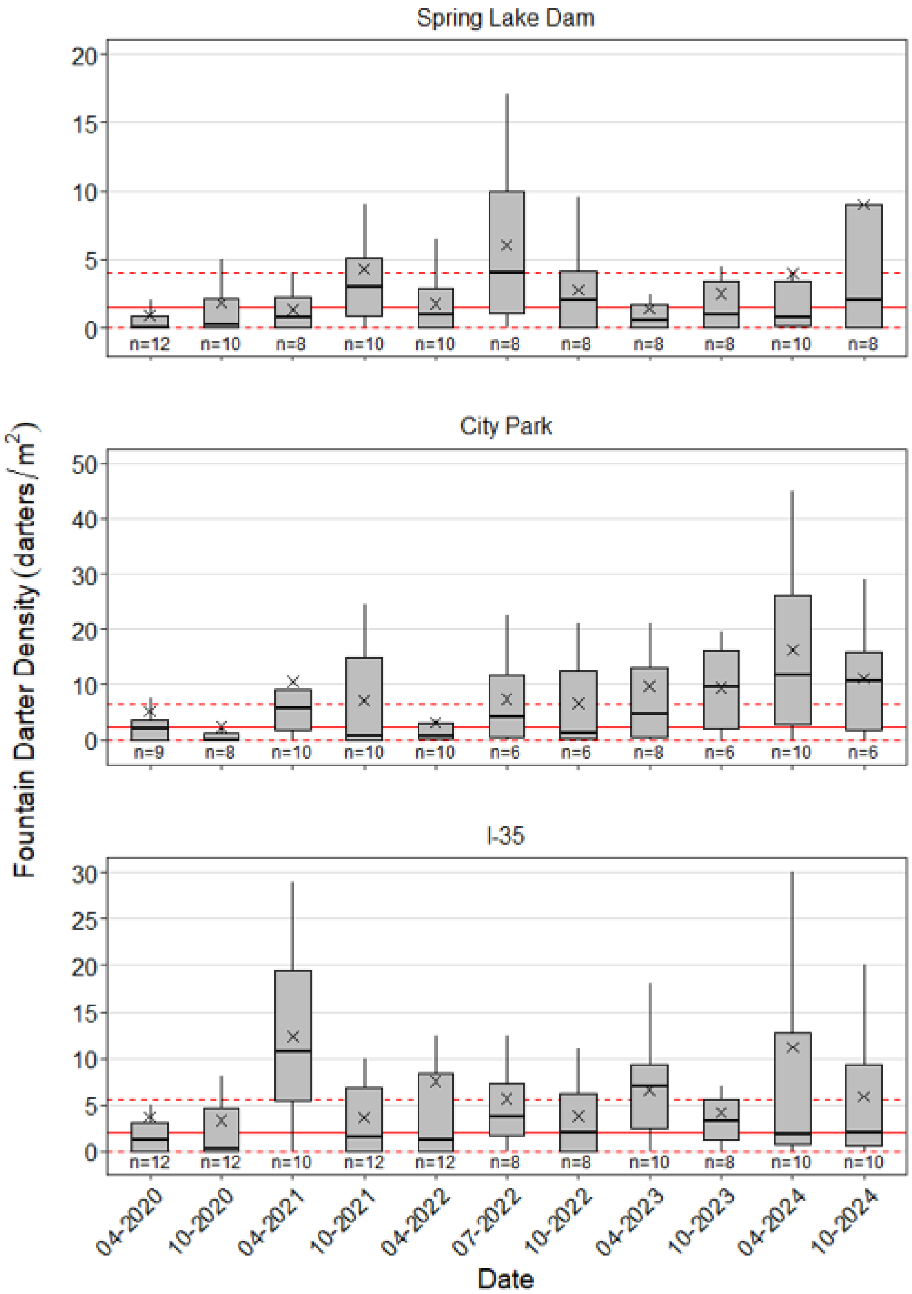

Figure 12. Boxplots displaying temporal trends in Fountain Darter density (darters/m^2) among study reaches from 2020–2024 during drop-net sampling in the San Marcos River. The thick horizontal line in each box is the median, x represents the mean, and the upper/lower bounds of each box represents the interquartile range. Whiskers represent minimum/maximum values up to 1.5 times the interquartile range. The "n" values along the x-axes represent the number of drop-net samples in each category. Solid and dashed red lines denote long-term (2001–2024) medians and interquartile ranges, respectively.

Size structure and recruitment trends

Five-year trends in Fountain Darter size structure and recruitment mostly demonstrated consistent seasonal patterns. In general, smaller darters were more frequent during peak reproduction in spring. This pattern is illustrated by lower median lengths in spring (19–21 mm) and higher prevalence of recruits (46.5–59.5%). Patterns in size structure aligned with long-term trends in spring 2024.

Median lengths were greater in summer (25–27 mm) and fall (24–29 mm) and recruitment levels were typically ~20%. Both Fountain Darter size structure and recruitment in 2024 were similar to long-term expectations across seasons. Recruitment also never dropped to meaningful levels below long-term values, though it was greater than expected during several years. In particular, recruitment in fall 2022 (39.2%) was two times greater than expected (Figure 13). This high recruitment was potentially due to low and stable flows throughout 2022, though mechanisms behind this are unclear.

Similar to five-year density trends, size structure and recruitment results do not provide evidence that the continuation of low flows altered size structure or suppressed recruitment of darters. Instead, observed data suggest that recruitment was either consistent with expectations or actually increased under low-flow conditions. Consistent patterns in size structure indicates Fountain Darter growth was not reduced in 2024. Previous studies on other riverine darters have shown reduced growth rates during periods of extreme low flows (Marsh-Matthews and Matthews 2010, Katz and Freeman 2015). Incongruency between these studies and the Fountain Darter is likely at least partially explained by the stable water temperatures in the spring-dominated upper San Marcos River, which have generally been maintained at suitable levels for the species despite prolonged low flows during this period. Fountain Darter recruitment rates were substantially higher than expected in 2022 and fell back to normal levels in 2023 and 2024, yet densities increased overall during this time period.

Potential mechanisms driving observed patterns in recruitment are poorly understood for Fountain Darters. Long-term monitoring data does illustrate higher density of recent recruits within complex vegetation, as well as the potential for greater recruitment than typical during low and stable flows (BIO-WEST 2023, 2024). That said, it remains unknown what density-independent and/or -dependent factors influence survival of recent recruits from juvenile/sub-adult life stages to sexually mature adults. Despite this lack of mechanistic knowledge, it is clear that maintaining large patches of suitable habitat is important for Fountain Darter population persistence (Duncan et al. 2016; Dunn and Angermeier 2019).

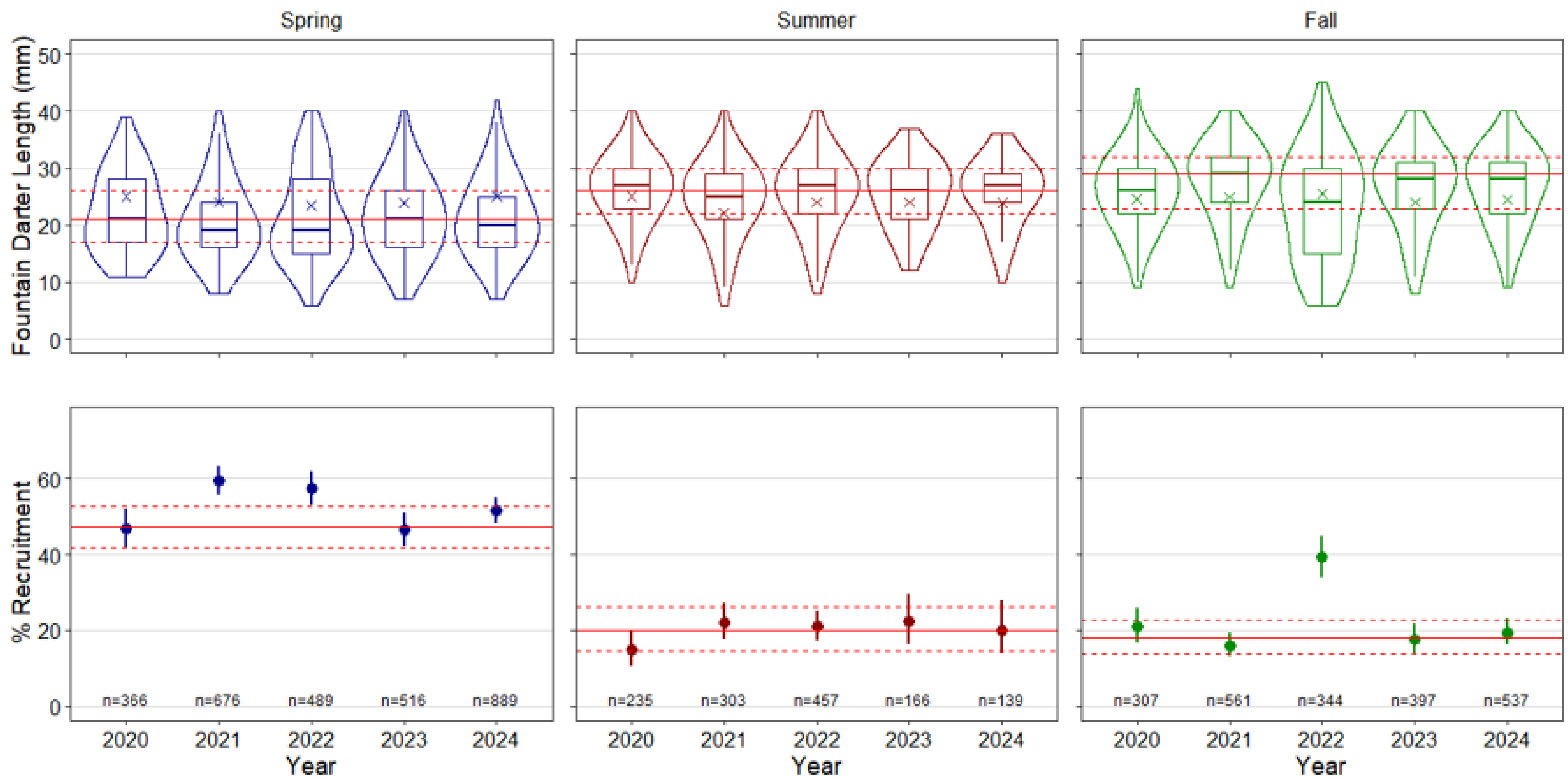

Figure 13. Seasonal trends of Fountain Darter size structure (mm; top row) and percent recruitment (bottom row) in the San Marcos River from 2020–2024. Spring and fall are based on drop-net and timed dip-net data in aggregate, whereas summer values are based on timed dip-net data only. Size structure is displayed with boxplots (median, quartiles, range) and violin plots (probability density; polygons outlining boxplots). The thick horizontal line in each box is the median, x represents the mean, and the upper/lower bounds of each box represents the interquartile range. Whiskers represent minimum/maximum values up to 1.5 times the interquartile range. The "n" values along the x-axis of the top row represent the number of Fountain Darter length measurements in each distribution. Recruitment is the percent relative abundance (± 95% CI) of darters ≤20 mm. Long-term (2001–2024) values of size structure are represented by median (solid red line) and interquartile range (dashed red lines). Recruitment is compared to the long-term mean percentage (solid red line) and 95% CI (dashed red lines).

Habitat Use and Suitability

Density trends among vegetation taxa

Median densities in 2024 were highest in *Cabomba* (24.50 darters/m^2) and *Sagittaria* (19.75 darters/m^2). Taxa with intermediate median estimates included *Ludwigia* (10.00 darters/m^2) and *Hygrophila* (6.50 darters/m^2). Estimates were lowest within Texas Wild-rice (2.33 darters/m^2), *Hydrocotyle* (2.00 darters/m^2), *Potamogeton* (1.00 darters/m^2), and open (0.08 darters/m^2). Fountain Darter densities within *Cabomba* and *Sagittaria* this year were substantially higher compared to historical data. Furthermore, densities within *Hygrophila* and *Ludwigia* in 2024 aligned with recent five-year values, which both exceeded long-term expectations. The remaining taxa generally aligned with historical expectations, though slightly increased 2024 median density in Texas Wild-rice was notable (>0.00 darters/m^2; Figure 14).

Current patterns of vegetation use continue to generally support previous research, showing that higher Fountain Darter densities occur within ornate vegetation which provides complex structure near the benthos (Schenck and Whiteside 1976; Linam et al. 1993; Alexander and Phillips 2012; Edwards and Bonner 2022). As described in previous sections, substantial deviations in taxa-specific densities from historical data in *Cabomba* and *Sagittaria* were likely related to greater structural complexity provided by bryophytes, and possibly due to increases in *Cabomba* coverage at City Park and I-35 (Alexander and Phillips 2012; Duncan et al. 2016; Dunn and Angermeier 2019; Edwards and Bonner 2022). Reduced current velocities due to persistent low flows have allowed unrooted bryophytes to proliferate in riverine areas where they are typically limited, and have also likely facilitated the expansion of *Cabomba*, which grows best in slow-moving water.

Size structure among vegetation taxa

Boxplot summary statistics and violin plots showed that Fountain Darter size structure varied among vegetation taxa sampled in 2024. The lowest median lengths occurred in open (15 mm), Texas Wild-rice (18 mm), and *Cabomba* (21 mm), were intermediate in *Hygrophila* (23 mm) and *Ludwigia* (24 mm), and highest in *Sagittaria* (25 mm), *Potamogeton* (26 mm), and *Hydrocotyle* (29 mm). Size structure distributions for *Cabomba*, *Hygrophila*, and Texas Wild-rice demonstrated greater prevalence of smaller lengths, which suggests these taxa were important habitat for recent recruits (Figure 15). This observation was surprising for Texas Wild-rice, but further demonstrates that simple-leafed taxa can provide habitat suitable for juveniles when bryophytes are present to increase complexity (Edwards and Bonner 2022). Greater number of smaller darters were observed in *Hygrophila* in 2024 compared to 2023. As in previous years, *Cabomba* continued to provide important habitat for both recruits and adults (BIO-WEST 2024). Likewise, *Ludwigia* illustrated a bimodal distribution, with peaks ~18 mm and ~30 mm, indicating it provided habitat for both recruits and adults in 2024. This size pattern aligns with observations in 2022 and 2023 in which *Ludwigia* yielded greater proportions of smaller recruits in 2022 and larger adults in 2023. The remaining taxa generally aligned with past observations (Figure 15) (BIO-WEST 2023, 2024). In summary, size structure among vegetation taxa in 2024 showed both similarities and differences compared to previous years. Differences are likely attributed to bryophyte prevalence, spatial variation in hydraulic conditions, or other stochastic processes unaccounted for.

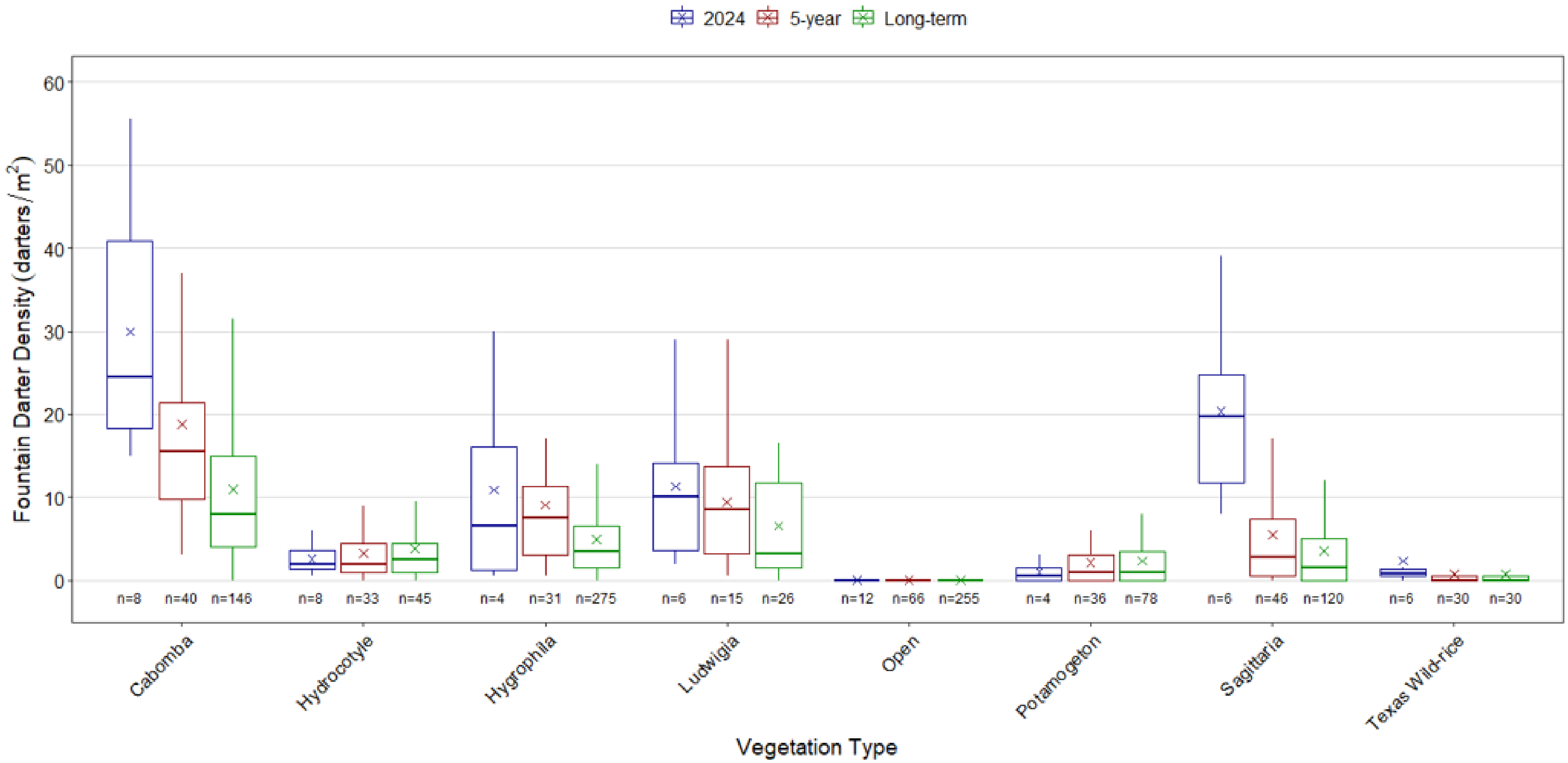

Figure 14. **Boxplots displaying 2024, 5-year (2020–2024), and long-term (2001–2024) drop-net Fountain Darter density (darters/m^2) among vegetation types in the San Marcos River. The thick horizontal line in each box is the median, x represents the mean, and the upper/lower bounds of each box represents the interquartile range. Whiskers represent minimum/maximum values up to 1.5 times the interquartile range. The "n" values along the x-axes represent drop-net sample sizes per group.**

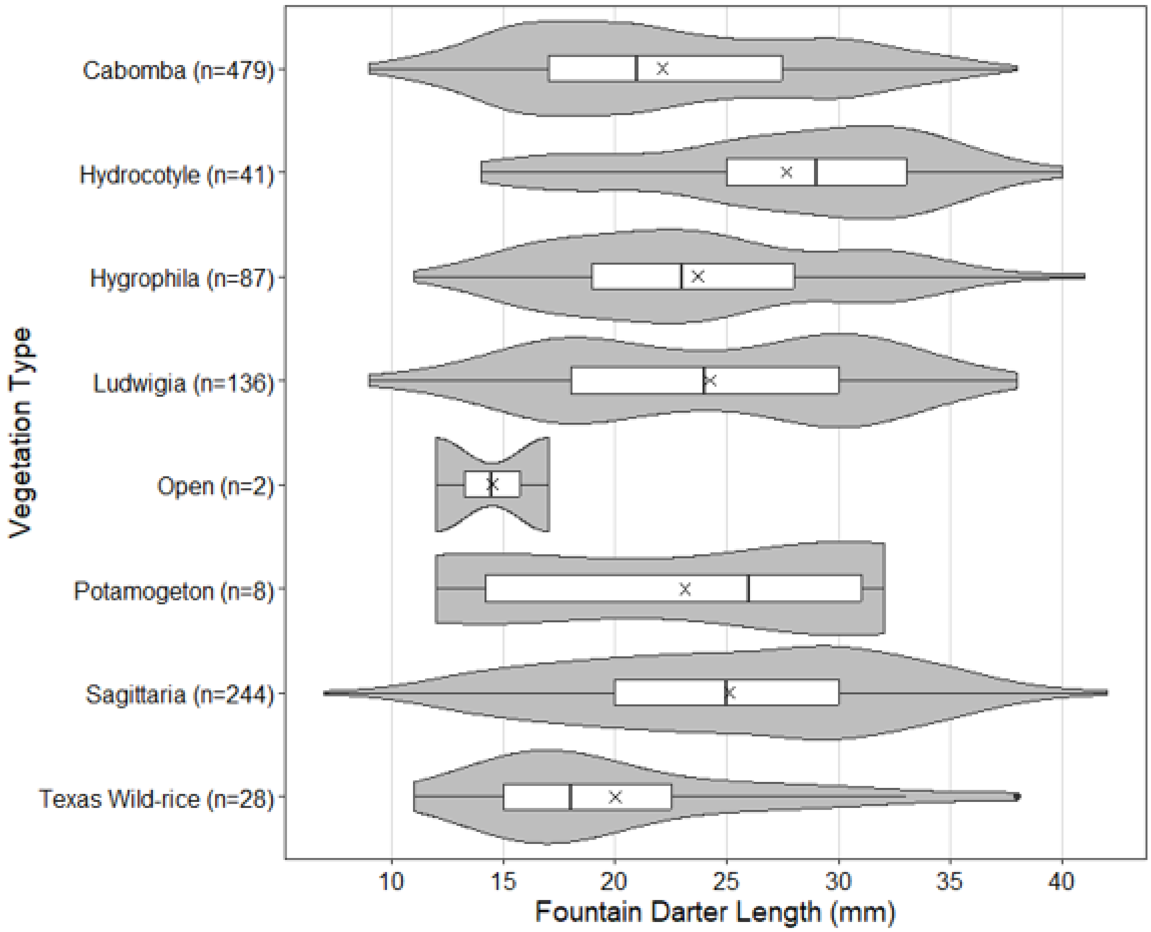

Figure 15. Boxplots and violin plots (grey polygons) displaying Fountain Darter lengths among dominant vegetation types during 2024 drop-net sampling in the San Marcos River. The thick horizontal line in each box is the median, x represents the mean, and the upper/lower bounds of each box represents the interquartile range. Whiskers represent minimum/maximum values up to 1.5 times the interquartile range, and outliers beyond this are designated with solid black circles. The "n" values represent the number of Fountain Darter length measurements per vegetation type.

Habitat suitability

Temporal trends in the Fountain Darter Overall Habitat Suitability Index (OHSI) from 2020–2024 were similar among reaches. Estimated OHSI were highly correlated ($r > 0.7$) between reaches, indicating spatially consistent patterns in habitat conditions the past five years. From 2020–2022, all reaches showed general declining trends in OHSI. Subsequent increases occurred in spring 2023, which were immediately followed by another decrease in summer 2023. OHSI displayed small to moderate increases for the remainder of the time-series. In addition, OHSI and associated confidence intervals at Spring Lake Dam and I-35 were within the bounds of their respective long-term expectations. OHSI at City Park, in contrast, remained below the lower boundary of its 95% confidence interval (Figure 16). OHSI at City Park began decreasing around 2013 and has remained below the lower boundary of its 95% confidence interval since 2016 (Appendix D, Figure D10). This is likely driven by the increase in Texas Wild-rice which began in 2013 due to planting efforts and implementation of conservation measures.

Despite the consistent trends in OHSI observed the past five years, changes in OHSI and changes in vegetation taxa coverages showed some differences among reaches. OHSI values were strongly associated with *Hydrocotyle* at Spring Lake Dam compared to *Potamogeton* and *Hygrophila* at City Park. OHSI at Spring Lake Dam and City Park was also more influenced by increases in Texas Wild-rice coverage than OHSI at I-35. Instead, changes in OHSI at I-35 were mainly due to fluctuations in coverages of *Hygrophila* and *Ludwigia*. Although increases in intermixed bryophytes resulted in increased Fountain Darter densities in 2023 and 2024, this is not captured by the OHSI which assigns long-term taxa-specific suitability criteria based on dominant vegetation. For example, a patch of *Sagittaria* with intermixed bryophytes (and thus high Fountain Darter density, as seen at Spring Lake Dam in 2024) would be assigned the long-term *Sagittaria* suitability criteria (0.59 ± 0.07) for OHSI calculations. As a result, the current OHSI framework does not accurately reflect the increased habitat structure at these microhabitat spatial resolutions. Increasing model complexity for OHSI estimates by incorporating other environmental factors (such as bryophyte presence) could provide better realizations of spatial variation in habitat suitability, both within and among reaches.

Drop-net results demonstrated darters are consistently spatially clustered within smaller patches of more suitable habitat. However, less suitable taxa may still provide important habitat to help fulfill life history requirements, such as providing dispersal corridors that facilitate connectivity among suitable habitat patches (Fagan 2002). In total, this suggests management strategies should consider expanding coverages of suitable taxa while maintaining diverse vegetation assemblages to enhance resistance and resilience during and after environmental disturbances (Duncan et al. 2016, Dunn and Angermeier 2018).

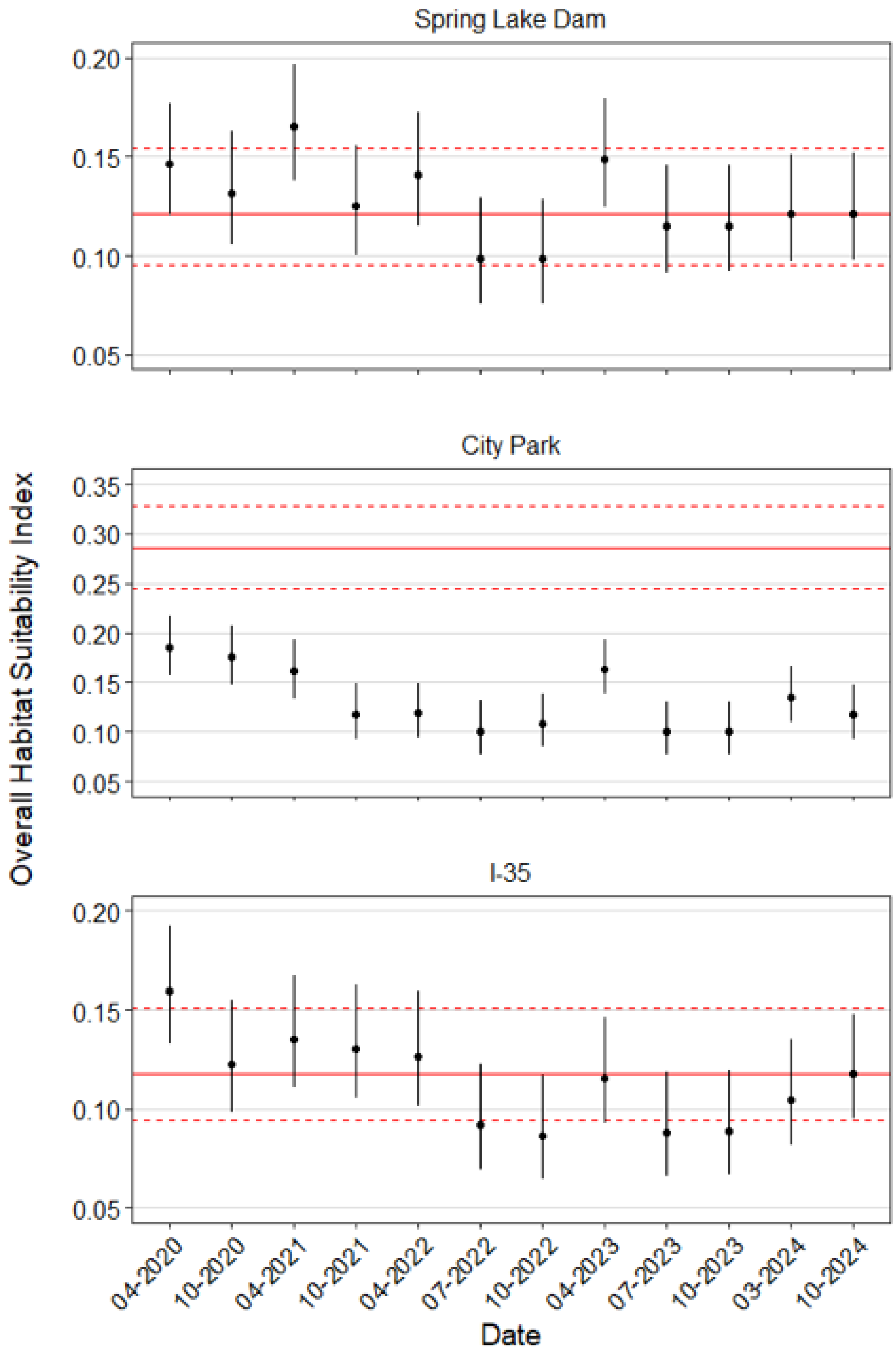

Figure 16. **Overall Habitat Suitability Index (OHSI) (±95% CI) from 2020–2024 among study reaches in the San Marcos River. Solid and dashed red lines denote means of long-term (2003–2024) OHSI and 95% CI, respectively.**

Fish Community

A total of 9,667 fishes represented by 10 families and 34 unique species were observed in the San Marcos Springs system during 2024 sampling. Mosquitofish (*Gambusia* spp.) or Largespring Gambusia (*Gambusia geiseri*) were among the top five dominant taxa in every reach, ranging from 6.5% in Lower River to 44.0% in Upper River (Appendix D, Table D2). In Spring Lake, the assemblage also primarily consisted of pelagic species such as Texas Tetra (*Astyanax argentatus;* 27.5%) and Guadalupe Roundnose Minnow (*Dionda nigrotaeniata*; 25.7%). Fountain Darter was ranked third in abundance in Upper River (9.9%) and Middle River (11.7%). The Lower River assemblage was dominated by pelagic minnows: Texas Shiner (*Notropis amabilis*; 29.9%) and Mimic Shiner (*Paranotropis volucellus*; 20.0%).

Patterns in species richness and diversity varied between and within study segments. Species richness increased at Spring Lake, Upper River, and Lower River over the course of 2024. In general, species richness and diversity were highest at Lower River. Species richness was also high at Upper River, though diversity was lower and more similar to that of Spring Lake. Middle River displayed intermediate species richness and diversity. Diversity at Middle River was fairly stable until it declined sharply in spring 2023, though it increased in fall 2024 to more typical levels. Community-based metrics at Spring Lake were lower than other segments and were generally more stable over time (Figure 17).

Spring fishes' species richness and relative density observations were incongruent with community-level observations. Spring fishes' richness was high and stable at the Upper River and Middle River. Total number of spring fish species was also stable at Spring Lake, though richness did not exceed three species. Spring fishes' richness at Lower River was more variable than upstream river segments with the most species observed in summer and fall 2022. Relative density of spring fishes was high and stable in the upstream reaches of Spring Lake and Upper River. At Middle River, relative density was also high but more variable than upstream segments. However, variability in this segment has been more stable since spring 2023 which is likely a result of prolonged low flows. Spring fishes' relative density was reduced at Lower River but accounted for 60-80% of the assemblage in fall 2021 and summer 2022 (Figure 18). Additionally, relative density has increased since fall 2023 with spring fishes accounting for nearly 60% of the assemblage in fall 2024. Decreases in total species and relative density of spring fishes with increasing distance from springflow influence is well documented (Hubbs 1995; Kollaus and Bonner 2012; Craig et al. 2016).

Temporal trends in Fountain Darter density from 2020–2024 were based on microhabitat sampling data. Median density at Spring Lake was below long-term expectations since fall 2022 but increased at or above the long-term median in 2024 (Figure 19). Variation in density (i.e., interquartile range) has decreased since spring 2022 when the upper quartile was substantially higher. At Middle River, median density was above long-term expectations in spring and fall with greater variability in the spring. Lastly, median Fountain Darter density in 2024 at Upper River and Lower River continued to show typical historical patterns with densities at or close to zero (Figure 19).

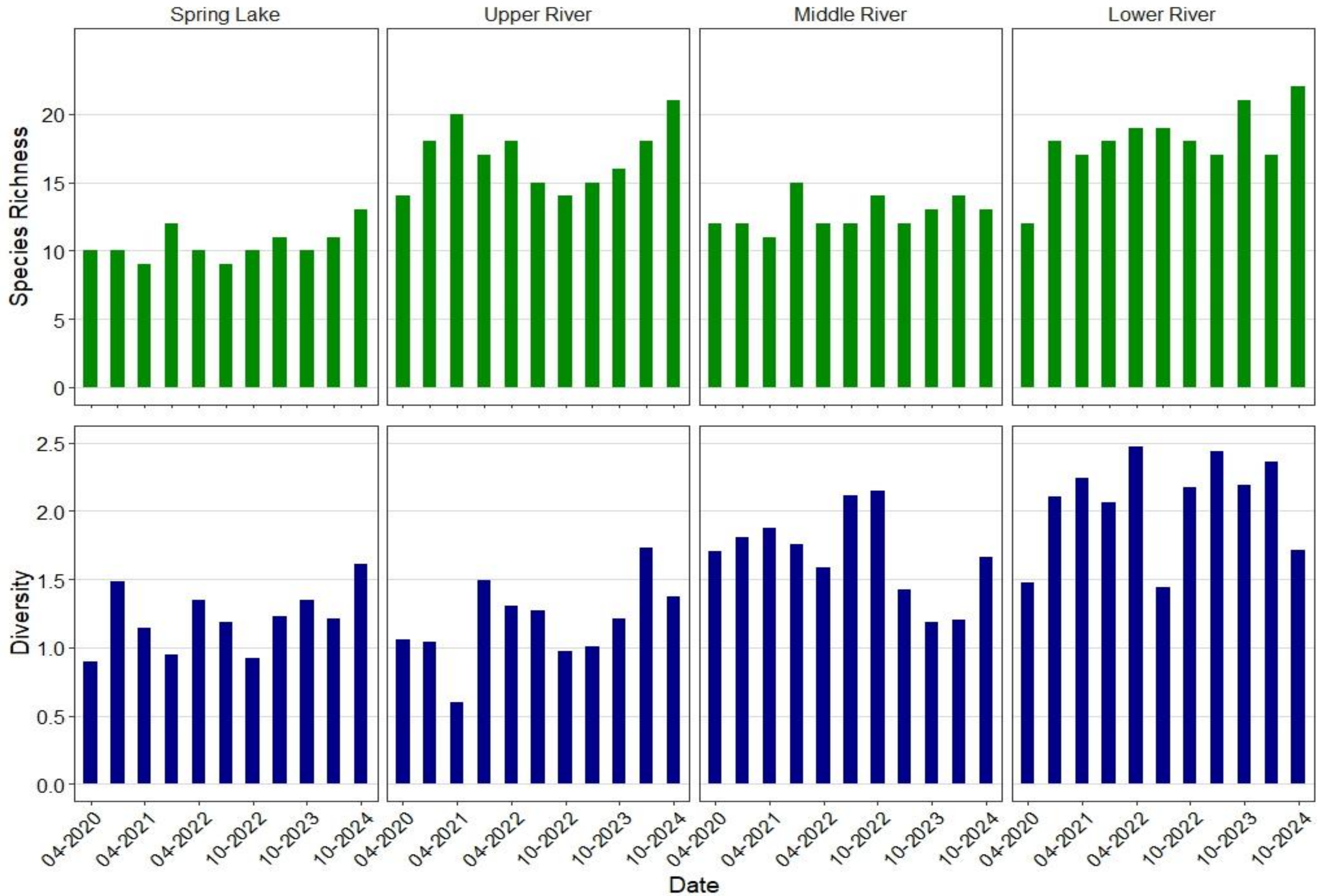

Figure 17. **Bar graphs displaying species richness (top row) and diversity (bottom row) from 2020–2024 based on all three fish community sampling methods in the San Marcos Springs/River.**

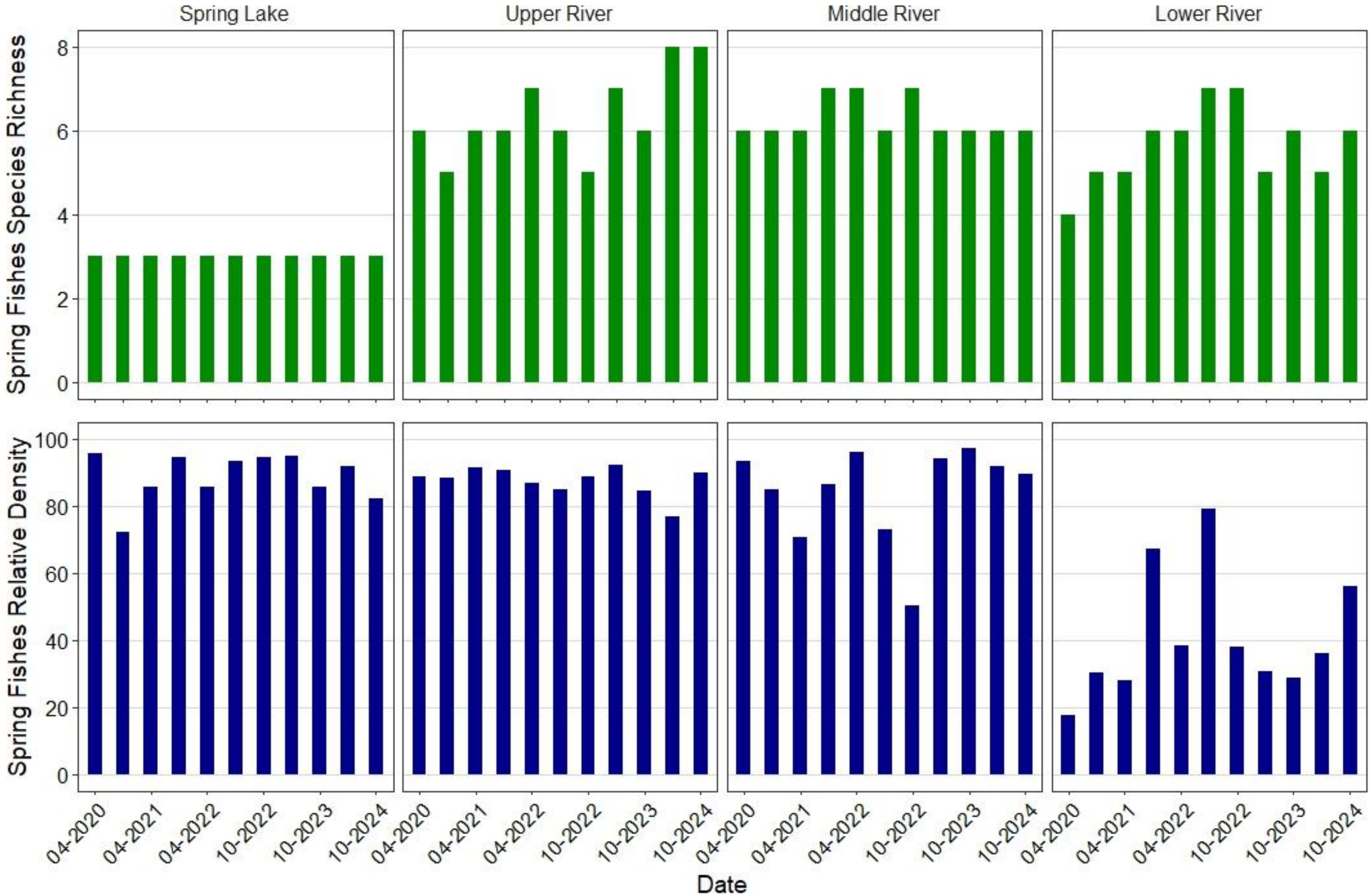

Figure 18. **Bar graphs displaying spring fish richness (top row) and relative density (RD; %) (bottom row) from 2020–2024 based on all three fish community sampling methods in the upper San Marcos Springs/River.**

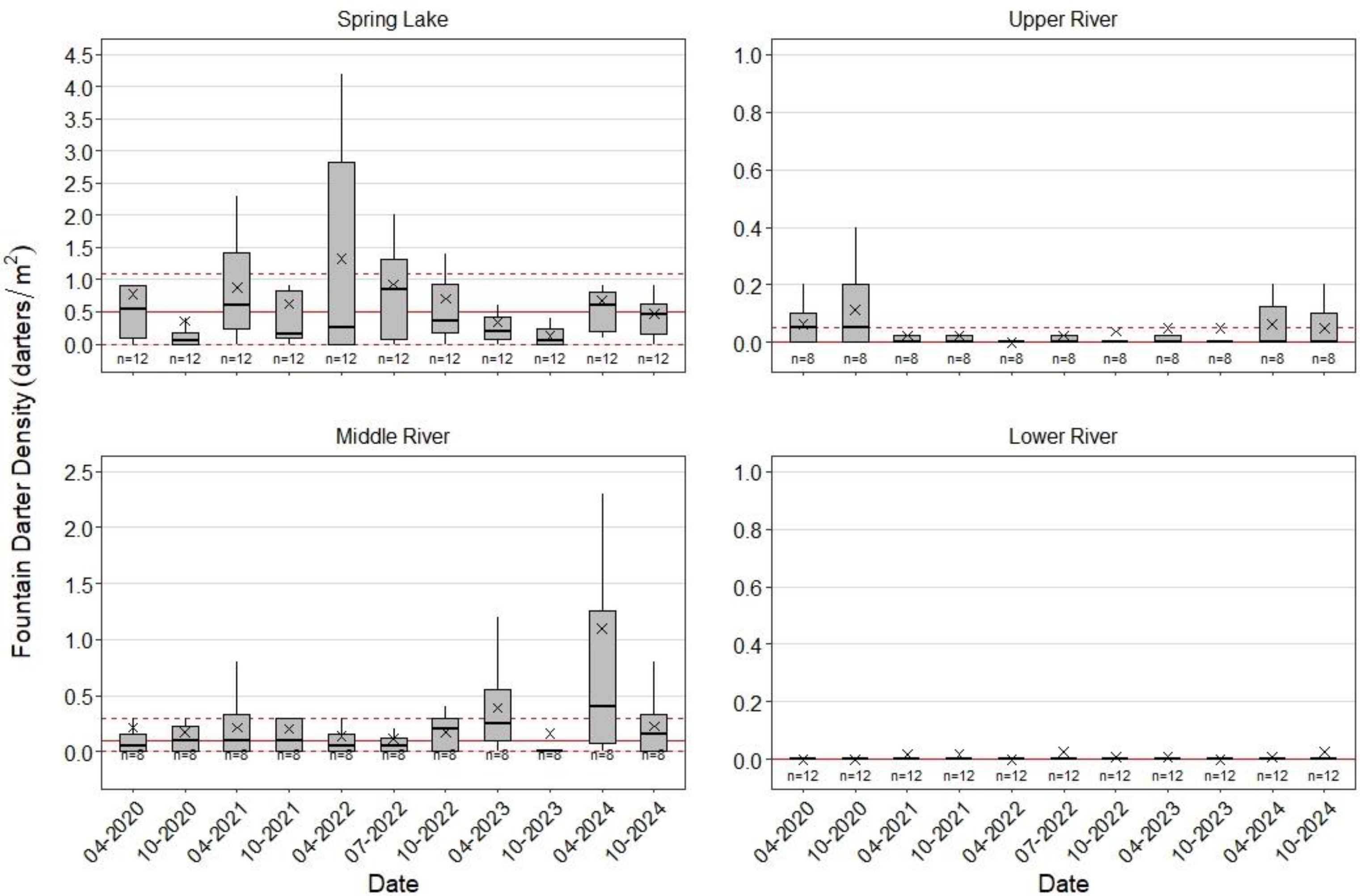

Figure 19. **Boxplots displaying temporal trends in Fountain Darter density (darters/m²) among study reaches from 2020–2024 during fish community microhabitat sampling in the San Marcos Springs/River. The thick horizontal line in each box is the median, x represents the mean, and the upper/lower bounds of each box represents the interquartile range. Whiskers represent minimum/maximum values up to 1.5 times the interquartile range. The "n" values along the x-axes represent the number of microhabitat samples per category. Solid and dashed red lines denote long-term (2014–2024) medians and interquartile ranges, respectively.**

Macroinvertebrates

Benthic Macroinvertebrate Rapid Bioassessment

Benthic macroinvertebrate rapid bioassessment data was collected during both the spring and fall sampling events in 2024 (raw data presented in Appendix E). At Spring Lake, habitats sampled this year included emergent vegetation, root wads, and sand. Similar habitats were sampled at City Park, with the addition of debris jams. Cobble/gravel habitats were sampled at Spring Lake Dam and I-35 in addition to what was sampled at City Park. No supplemental snag samples were taken. A total of 908 and 658 individual macroinvertebrates, representing 31 and 35 unique taxa were sampled in spring and fall, respectively. Metric scoring criteria for calculating the B-IBI can be found in Table 6. The cumulative scores and corresponding aquatic-life-use designations are displayed in Figure 20. Altogether, 41 unique taxa were represented among all samples from 2024. Overall scores and aquatic-life-use designations in 2024 generally aligned with the previous four years and indicate stable patterns among benthic macroinvertebrate communities. Scores at three out of four sites were consistent across both seasons. Spring Lake was described as “Intermediate”, Spring Lake Dam was described as “High”, and I-35 was described as “Exceptional”. Aquatic-life-use at City Park was “Limited” in spring and “Intermediate” in fall (Figure 20).

Table 6. Metric value scoring ranges for calculating the Texas RBP B-IBI (TCEQ 2014).

METRIC	SCORING CRITERIA			
	4	3	2	1
Taxa richness	>21	15–21	8–14	<8
EPT taxa abundance	>9	7–9	4–6	<4
Biotic index (HBI)	<3.77	3.77–4.52	4.56–5.27	>5.27
% Chironomidae	0.79–4.10	4.11–9.48	9.49–16.19	<0.79 or >16.19
% Dominant taxon	<22.15	22.15–31.01	31.02–39.88	>39.88
% Dominant FFG	<36.50	36.50–45.30	45.31–54.12	>54.12
% Predators	4.73–15.20	15.21–25.67	25.68–36.14	<4.73 or >36.14
Ratio of intolerant: tolerant taxa	>4.79	3.21–4.79	1.63–3.20	<1.63
% of total Trichoptera as Hydropsychidae	<25.50	25.51–50.50	50.51–75.50	>75.50 or no Trichoptera
# of non–insect taxa	>5	4–5	2–3	<2
% Collector–gatherers	8.00–19.23	19.24–30.46	30.47–41.68	<8.00 or >41.68
% of total number as Elmidae	0.88–10.04	10.05–20.08	20.09–30.12	<0.88 or >30.12

Spring Lake and City Park scored lower than the other sites, likely due to differences in available habitats. Lower scores were expected at Spring Lake as these lentic communities are naturally different compared to swift flowing “least-disturbed reference streams”. At City Park, lower scores in fall compared to Spring Lake Dam and I-35 were also not surprising. Of the three riverine sites, City Park has consistently scored the lowest over the past five years, likely due to differences in habitat and recreation. Lotic habitats at City Park consist of runs, whereas lotic habitats at Spring Lake Dam and I-35 consist of riffles with cobble and gravel substrates more similar to reference streams. Higher scores at Spring Lake Dam and I-35 are best explained by greater prevalence of fluvial specialists, resulting in greater taxa diversity overall. Additionally, most reference streams do not exhibit the stenothermal conditions present within the upper San Marcos River which may contribute to differing community composition. As such, patterns of results per reach over time in the spring-fed San Marcos River are more important than the level of score. Continued monitoring will create a robust reference dataset and allow for the development of scoring criteria specific to this unique ecosystem, providing a more accurate realization of ecological health through time.

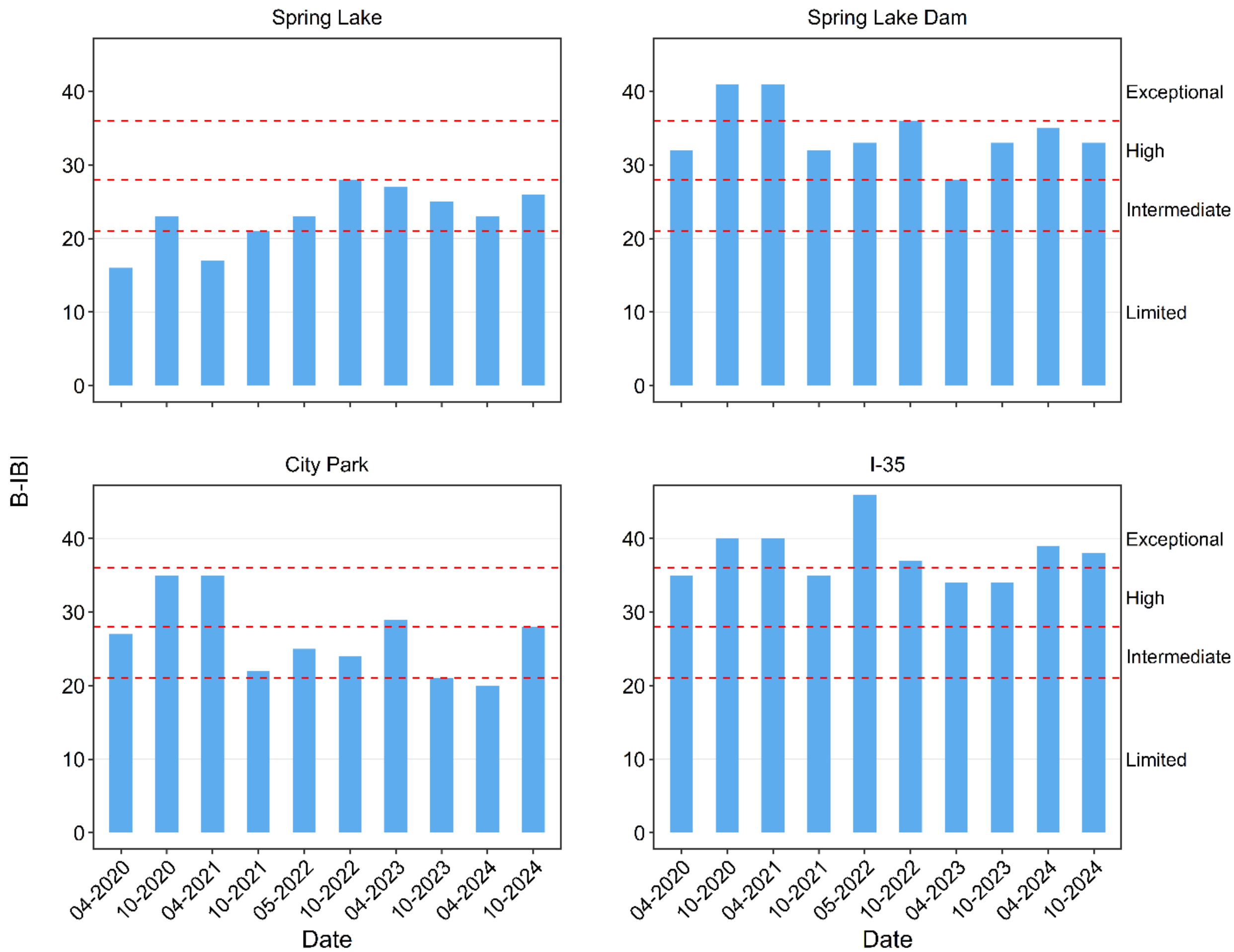

Figure 20. **Benthic macroinvertebrate Index of Biotic Integrity (B-IBI) scores and aquatic-life-use categories from 2020–2024 in the San Marcos Springs/River.**

San Marcos Salamander

A total of 394 salamanders were observed in spring (200 salamanders) and fall (194 salamanders) during routine monitoring events in 2024. Salamander densities ranged from 1.62–16.87 salamanders/m^2 (Figure 21). Salamander densities decreased from spring to fall at Hotel and Spring Lake Dam sites but increased at Riverbed. At Hotel, spring salamander densities (14.8 salamanders/m^2) were similar to long-term expectations (15.5 salamanders/m^2); whereas, fall densities (8.5 salamanders/m^2) were well below the long-term average (14.4 salamanders/m^2). Fall 2024 density observations at Hotel fell outside the confidence interval boundary, suggesting a meaningful difference. In contrast, spring salamander densities at Riverbed (12.0 salamanders/m^2) were lower than the long-term average (14.5 salamanders/m^2), while fall densities (16.9 salamanders/m^2) exceeded expectations (12.6 salamanders/m^2). Both spring and fall 2024 densities fell outside the confidence interval boundaries at Riverbed. At Spring Lake Dam in 2024, densities in spring (3.61 salamanders/m^2) and fall (1.62 salamanders/m^2) were lower than the respective long-term averages (Figure 21).

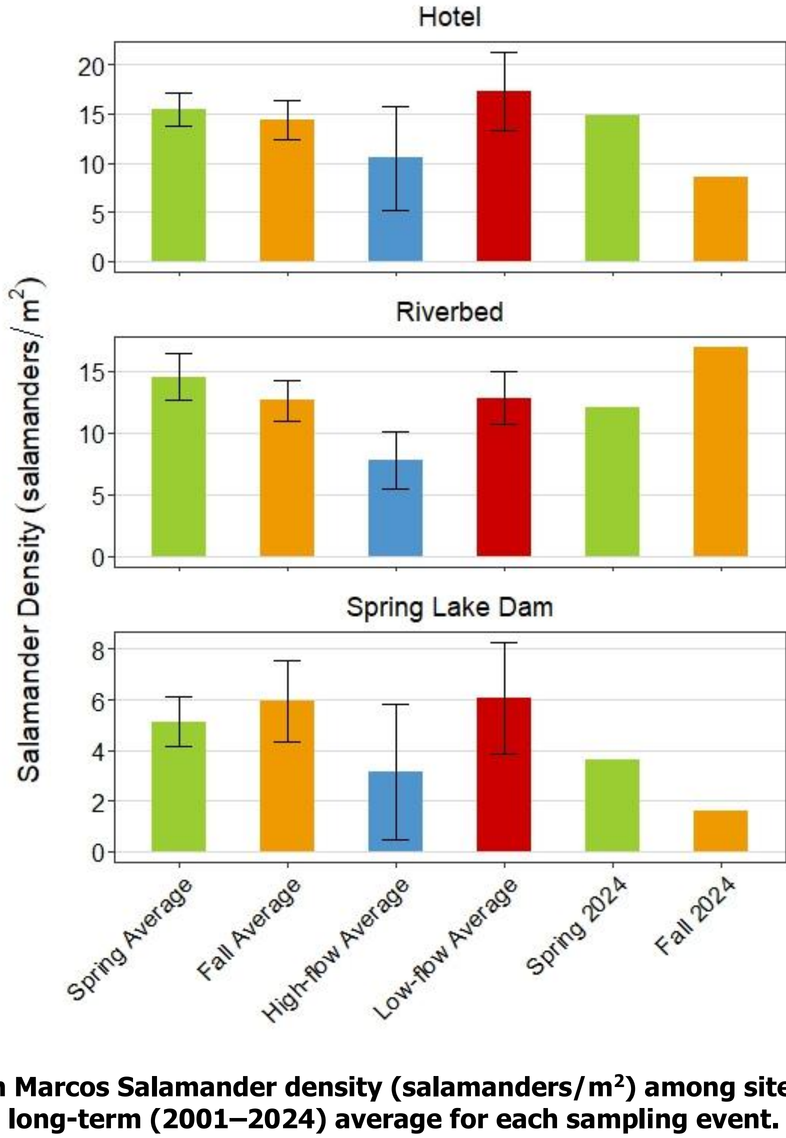

Figure 21. **San Marcos Salamander density (salamanders/m^2) among sites in 2024, with the long-term (2001–2024) average for each sampling event. Error bars for long-term averages represent 95% confidence intervals.**

Five-year trends at Hotel demonstrated decreasing densities beginning in fall 2020, followed by a noticeable increase during the last two events in 2022. After this increase, densities in 2023 decreased again and generally remained lower than the previous five years. At Riverbed, density was variable. The fall 2023 event had the lowest densities observed over the past five years; however, densities increased to more typical levels in 2024. Density at Spring Lake Dam demonstrated a cyclical but decreasing pattern over the past five years (Figure 22). Subsequent monitoring will help provide insights on how salamander densities change following the low flows in fall 2024.

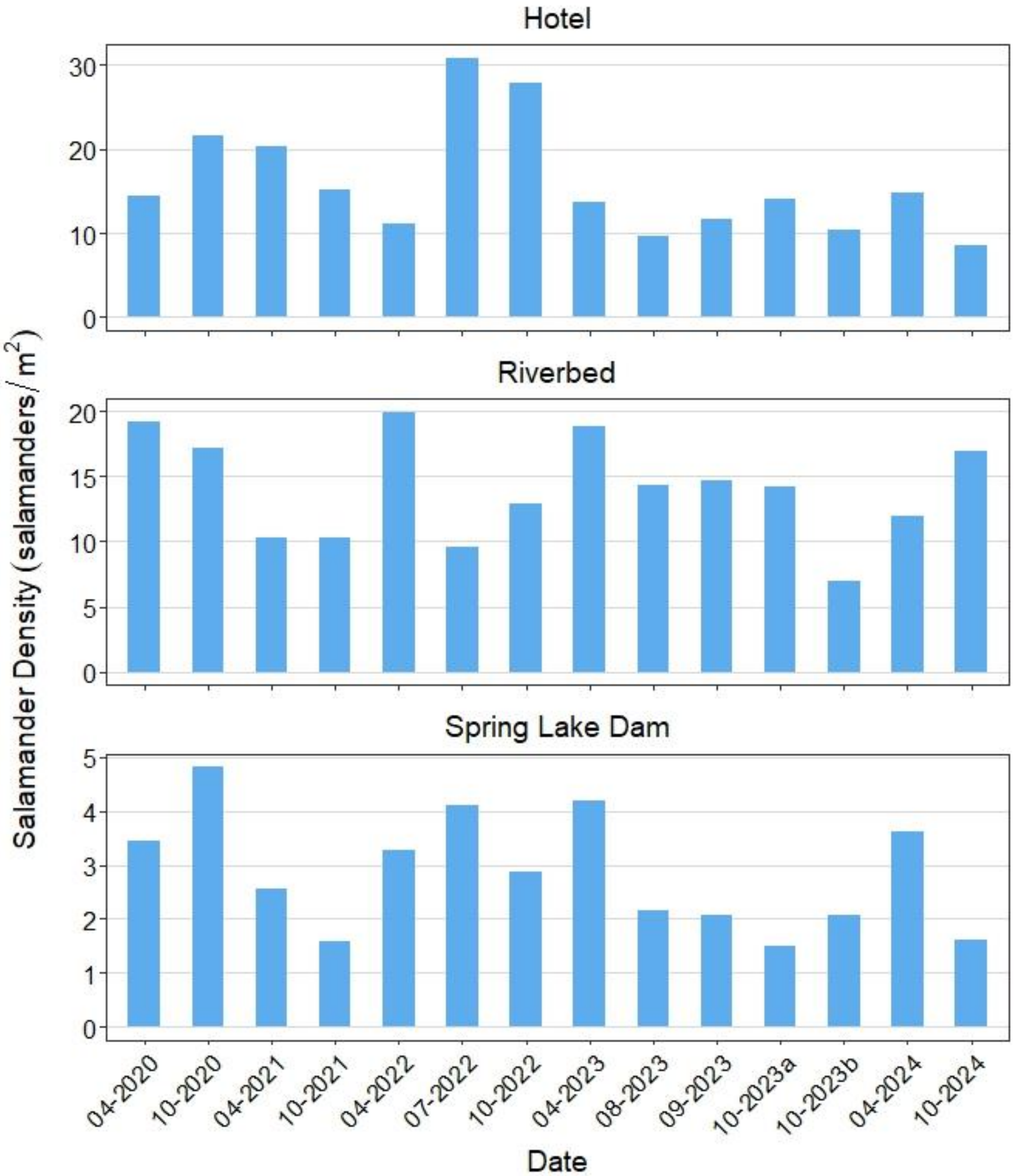

Figure 22. **San Marcos Salamander density (salamanders/m^2) among sites from 2020–2024 in the San Marcos Springs/River.**

CONCLUSION

Results from the 2024 biological monitoring in the San Marcos Springs/River system indicated overall declining trends in discharge and variable trends in Covered Species population metrics. Based on monthly analysis of daily mean discharge, the system was near historical median flow conditions early in the year but declined near 10th percentile flow conditions by October. Low variation in water temperature continued to occur at reaches closer to springs (i.e., Spring Lake), whereas higher variation occurred at reaches farther downstream (i.e., Wastewater Treatment Plant). Although exceedance frequency and duration of Fountain Darter larval and egg production thresholds increased throughout the summer, impacts to Fountain Darter population metrics were not observed.

Total aquatic vegetation coverage declined from spring to fall at Spring Lake Dam and City Park but increased at I-35. Declines in the two upstream reaches were mainly attributed to decreased coverage of Texas Wild-rice due to low flows and recreation. At I-35, however, increases in vegetation can be attributed to both the expansion of amphibious species (e.g., *Sagittaria*) that could survive as emergent and outcompete other taxa in the shallowest areas and expansion of slackwater tolerant species (e.g., *Hygrophila*) in the main river channel. Texas Wild-rice continued to dominate assemblage structure throughout the upper reaches of the system, and full-system coverage recovered from September 2023 when the lowest coverage since 2016 was observed. Reduced river discharge led to some Texas Wild-rice becoming dewatered and outcompeted by terrestrial vegetation, yet Texas Wild-rice survived and expanded in deeper areas. Vegetation varied at City Park as established patches of *Cabomba* persisted throughout the year and bryophyte abundance increased as flows declined, resulting in enhanced habitat and contributing to higher Fountain Darter density estimates. Likewise, higher prevalence of bryophytes associated with *Sagittaria* in Spring Lake Dam contributed to substantially higher darter densities than previously observed in *Sagittaria*. However, overall habitat suitability indices did not pick up on this observed habitat improvement, since they are based on long-term taxa-specific suitability indices. San Marcos Salamander densities were variable among sites in 2024 and over the past five years, but the species persists within all monitored habitats.

Overall, 2024 biological monitoring captured the response of the San Marcos Springs/River aquatic community to a third year of sustained low flows. Results indicated that the San Marcos Springs/River was resilient to the low-flow conditions, with some Covered Species showing improvements from 2023. Texas Wild-rice coverage remains well above pre-HCP levels despite reduced wetted habitat and alterations in river morphology. Vegetation coverage varied throughout the system, yet low flows allowed patches of *Cabomba* to persist and bryophytes to establish throughout rooted vegetation and along the benthos. This increased benthic habitat complexity provided by bryophytes positively impacted Fountain Darter density estimates over the past two years. With some minor deviations, Fountain Darter catch rates and percent occurrence were comparable to previous years. No obvious trends in salamanders, fish assemblage composition, spring fishes, or macroinvertebrates were noted. Despite declines in flow throughout the year, populations persist and demonstrate the potential for improvement when typical flows return. Subsequent monitoring efforts will provide opportunities to better understand the dynamics of this complex ecological system and how it responds to future hydrologic conditions.

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APPENDIX A: CRITICAL PERIOD MONITORING SCHEDULE

SAN MARCOS RIVER/SPRINGS
Critical Period Low-Flow Sampling – Schedule and Parameters

FLOW TRIGGER (+ or - 5 cfs)	PARAMETERS
120 cfs	Wild-Rice vulnerable stands - Every 5 cfs decline (maximum weekly)
100 cfs	Full Sampling Event
100 - 85 cfs	Habitat Evaluations - Every 5 cfs decline (maximum weekly)
85 cfs	Full Sampling Event
85 - 60 cfs	Habitat Evaluations - Every 5 cfs decline (maximum weekly)
60 cfs	Full Sampling Event
60 - 25 cfs	Habitat Evaluations - Every 5 cfs decline (maximum weekly)
25 cfs	Full Sampling Event
25 - 0 cfs	Habitat Evaluations - Every 5 cfs decline (maximum weekly)
10 - 0 cfs	Full Sampling Event
RECOVERY	
25 - 85 cfs	Full Sampling Event (dependent on flow stabilization)
85 - 125 cfs	Full Sampling Event (dependent on flow stabilization)

PARAMETER DESCRIPTION

Wild-Rice Monitoring	Physical changes vulnerable stands
Fall Sampling Event	Aquatic Vegetation Mapping - including Texas Wild-Rice Fountain Darter Sampling Drop Net, Dip net (Presence/Absence), and Visual Parasite evaluations Fish Community Sampling Salamander Sampling - Visual Fish Sampling - Exotics/Predation (85 cfs and below) Water Quality - Suite I and Suite II
Habitat Evaluations	Photographs

SAN MARCOS RIVER/SPRINGS
Species-Specific Triggered Sampling

FLOW RATE (+ or – 10 cfs)	SPECIES	FREQUENCY	PARAMETERS
≤80 cfs or ≥ 50 cfs continuing until flow rate restores to ≥100 cfs	Fountain Darter	Every other month	Aquatic vegetation mapping at Spring Lake Dam reach, City Park reach, and IH-35 reach
≤80 cfs or ≥ 50 cfs continuing until flow rate restores to ≥100 cfs	Fountain Darter	Every other month	Conduct dip net sampling/visual parasite evaluations at 50 sites in high quality habitat to include fifteen (15) sites in Spring Lake Dam reach; twenty (20) sites in City Park reach, and fifteen (15) sites in IH-35 reach.
≤50 cfs	Fountain Darter	Monthly	Aquatic vegetation mapping at Spring Lake Dam reach, City Park reach, and IH-35 reach
≤50 cfs	Fountain Darter	Weekly	Conduct dip net sampling/visual parasite evaluations at 50 sites in high quality habitat to include fifteen (15) sites in Spring Lake Dam reach; twenty (20) sites in City Park reach, and fifteen (15) sites in IH-35 reach.
≤80 cfs or ≥ 50 cfs	San Marcos Salamander	Every other week	Salamander surveys (SCUBA and snorkel) will be conducted at the Hotel Area, Riverbed area, and eastern spillway of Spring Lake Dam
<50 cfs	San Marcos Salamander	Weekly	Salamander surveys (SCUBA and snorkel) will be conducted at the Hotel Area, Riverbed area, and eastern spillway of Spring Lake Dam
100 cfs	Texas Wild-Rice	Once	Mapping of Texas Wild-Rice coverage for the entire San Marcos River will be conducted
≤100 cfs or ≥60 cfs	Texas Wild-Rice	Every other week	Physical parameters of Texas Wild-Rice will be monitored in designated "vulnerable" areas
<80 cfs	Texas Wild-Rice	Monthly	Mapping of Texas Wild-Rice coverage for the entire San Marcos River will be conducted
<80 cfs	Texas Wild-Rice	Weekly	Physical visual observations of Texas Wild-Rice will occur

APPENDIX B: AQUATIC VEGETATION MAPS

Long-term Biological Goals Study Reaches

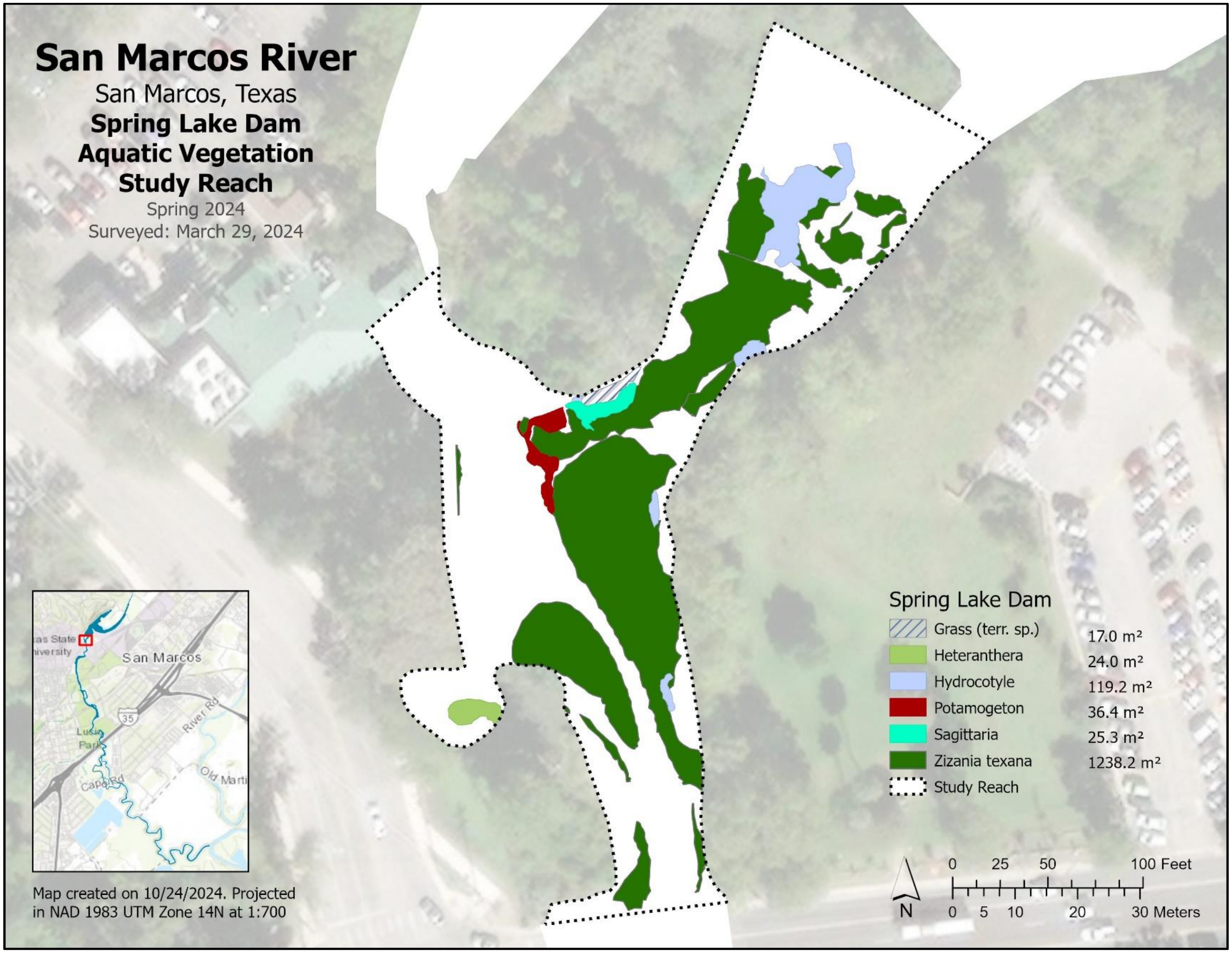

Figure C1. Map of aquatic vegetation coverage at Spring Lake Dam Study Reach in spring 2024.

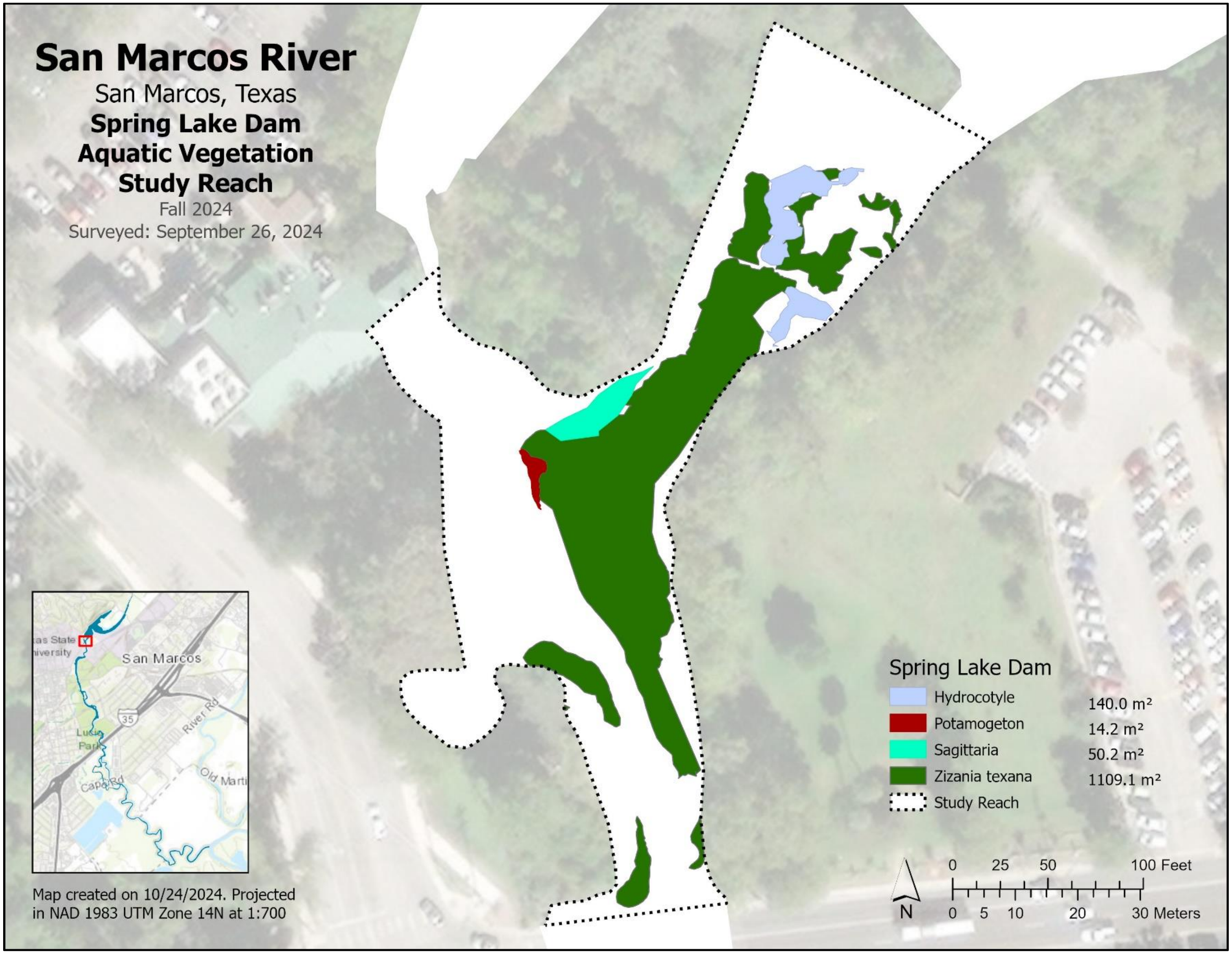

Figure C2. **Map of aquatic vegetation coverage at Spring Lake Dam Study Reach in fall 2024.**

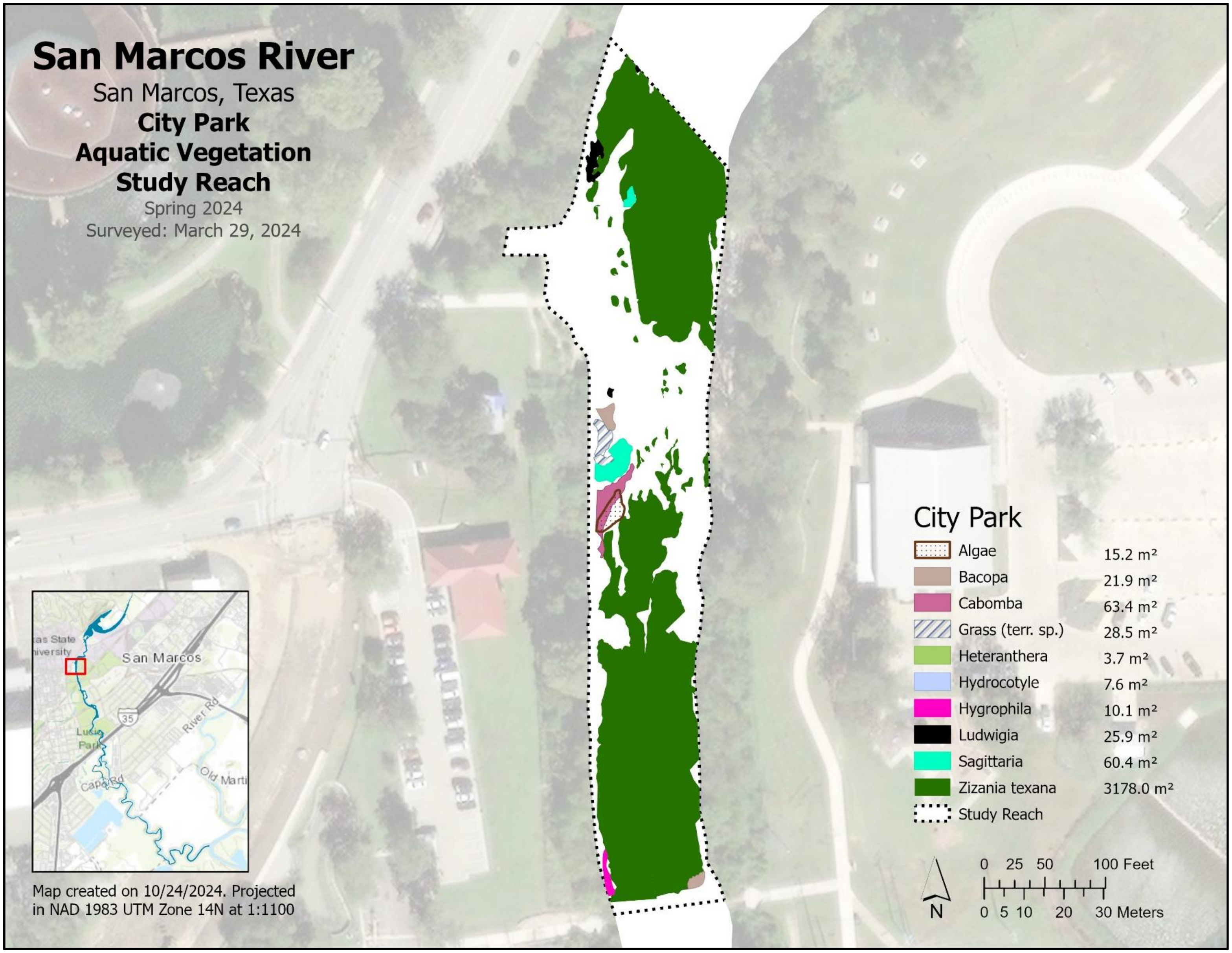

Figure C3. Map of aquatic vegetation coverage at City Park Study Reach in spring 2024.

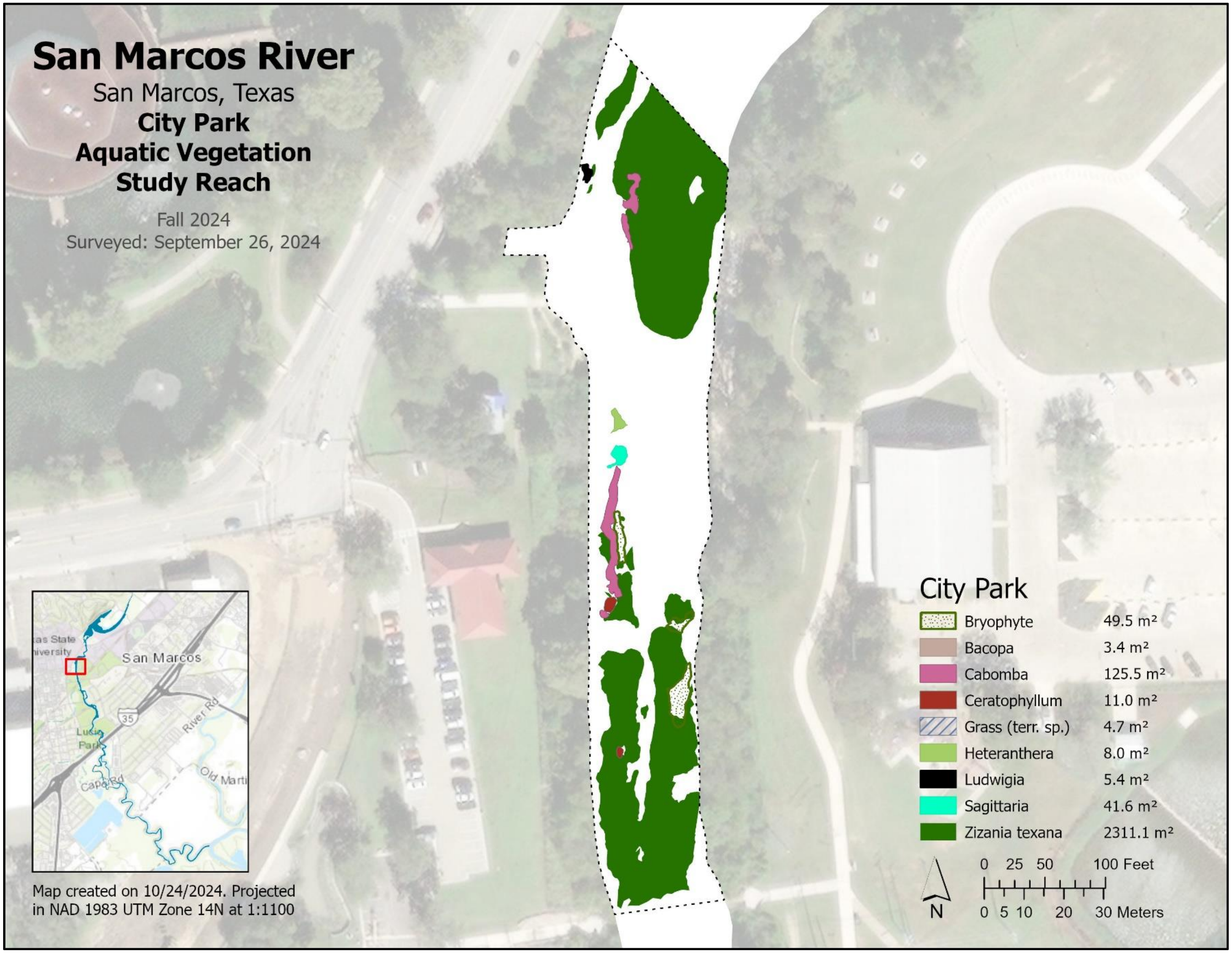

Figure C4. **Map of aquatic vegetation coverage at City Park Study Reach in fall 2024.**

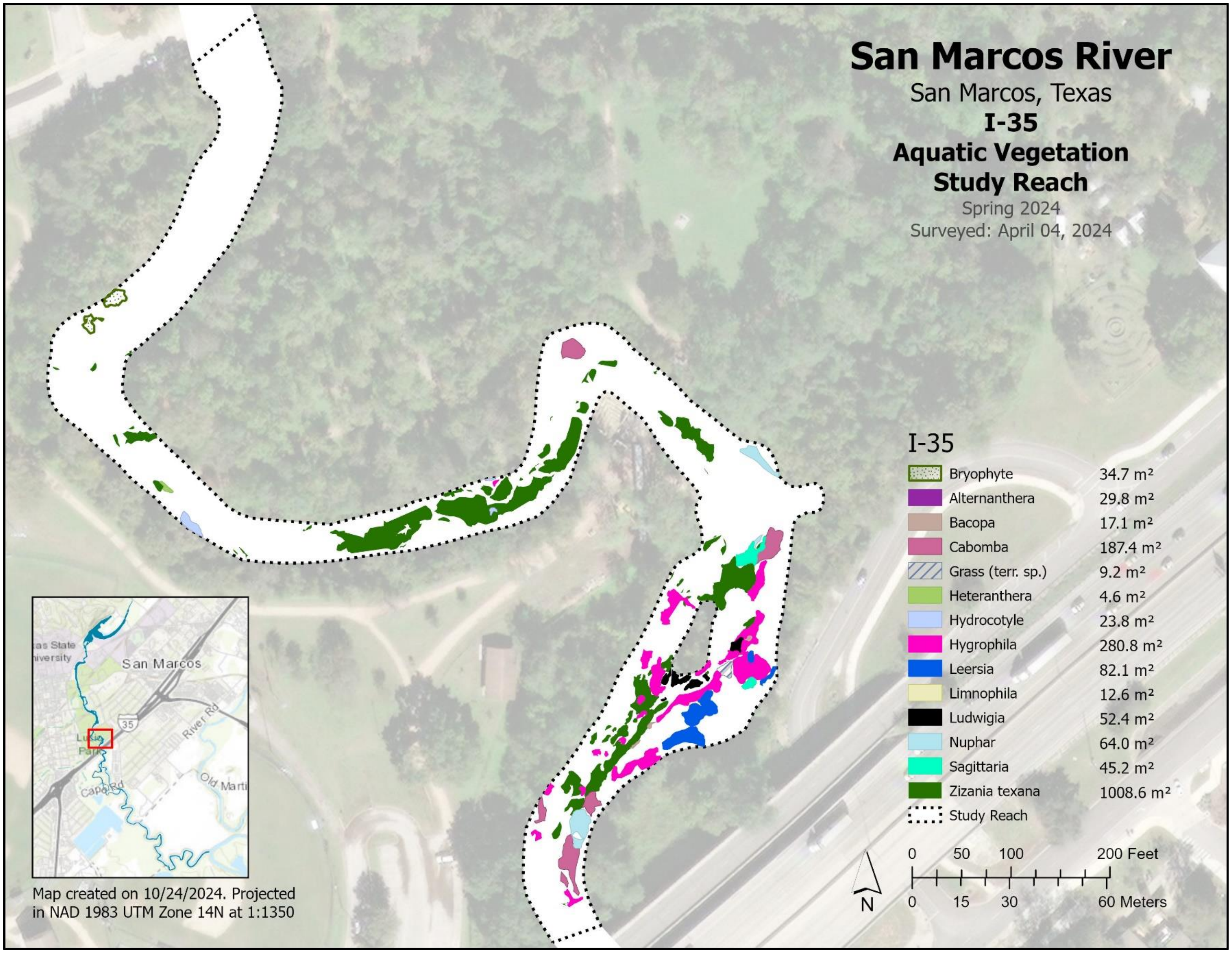

Figure C5. Map of aquatic vegetation coverage at I-35 Study Reach in spring 2024.

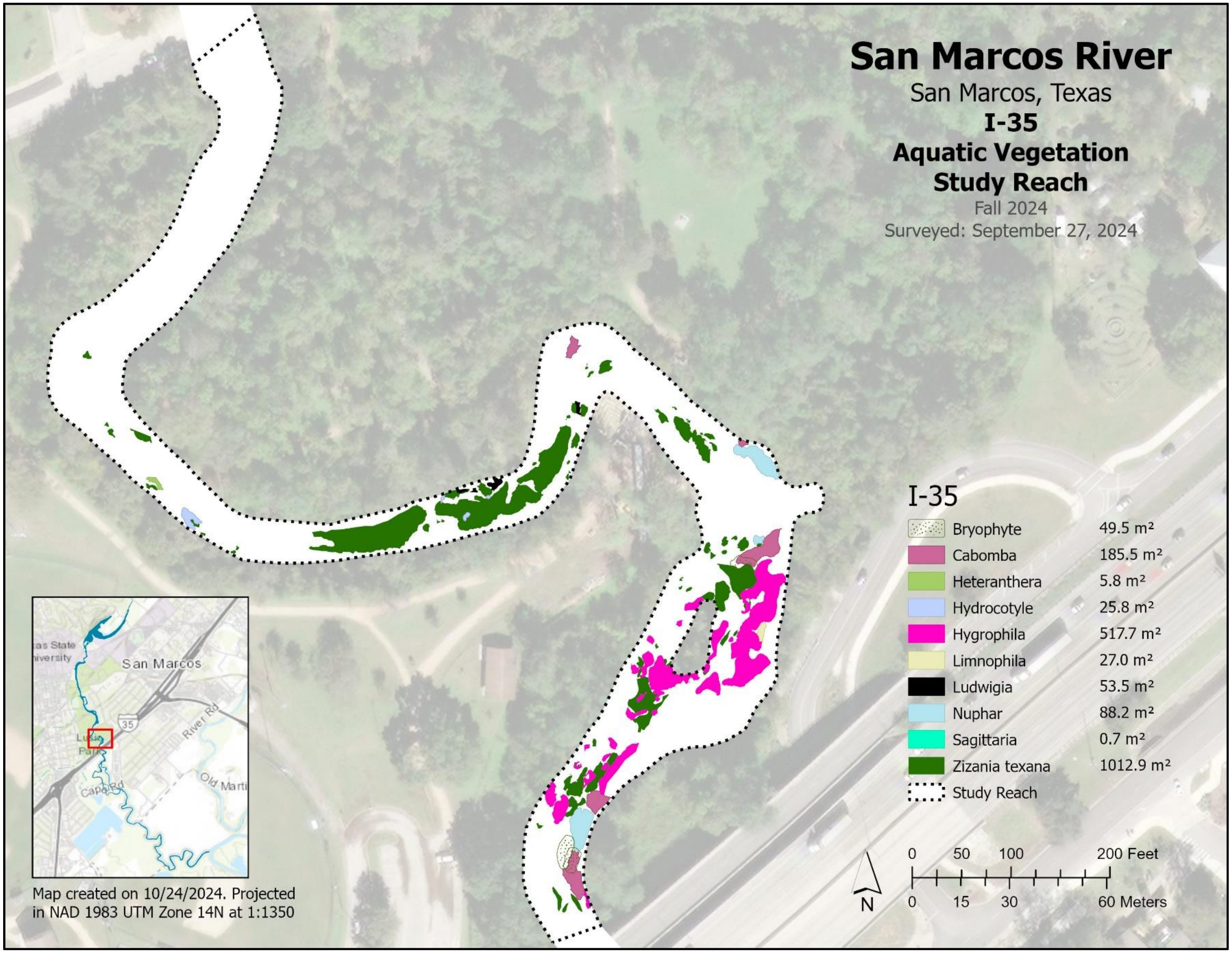

Figure C6. Map of aquatic vegetation coverage at I-35 Study Reach in fall 2024.

Texas Wild-rice Annual Mapping

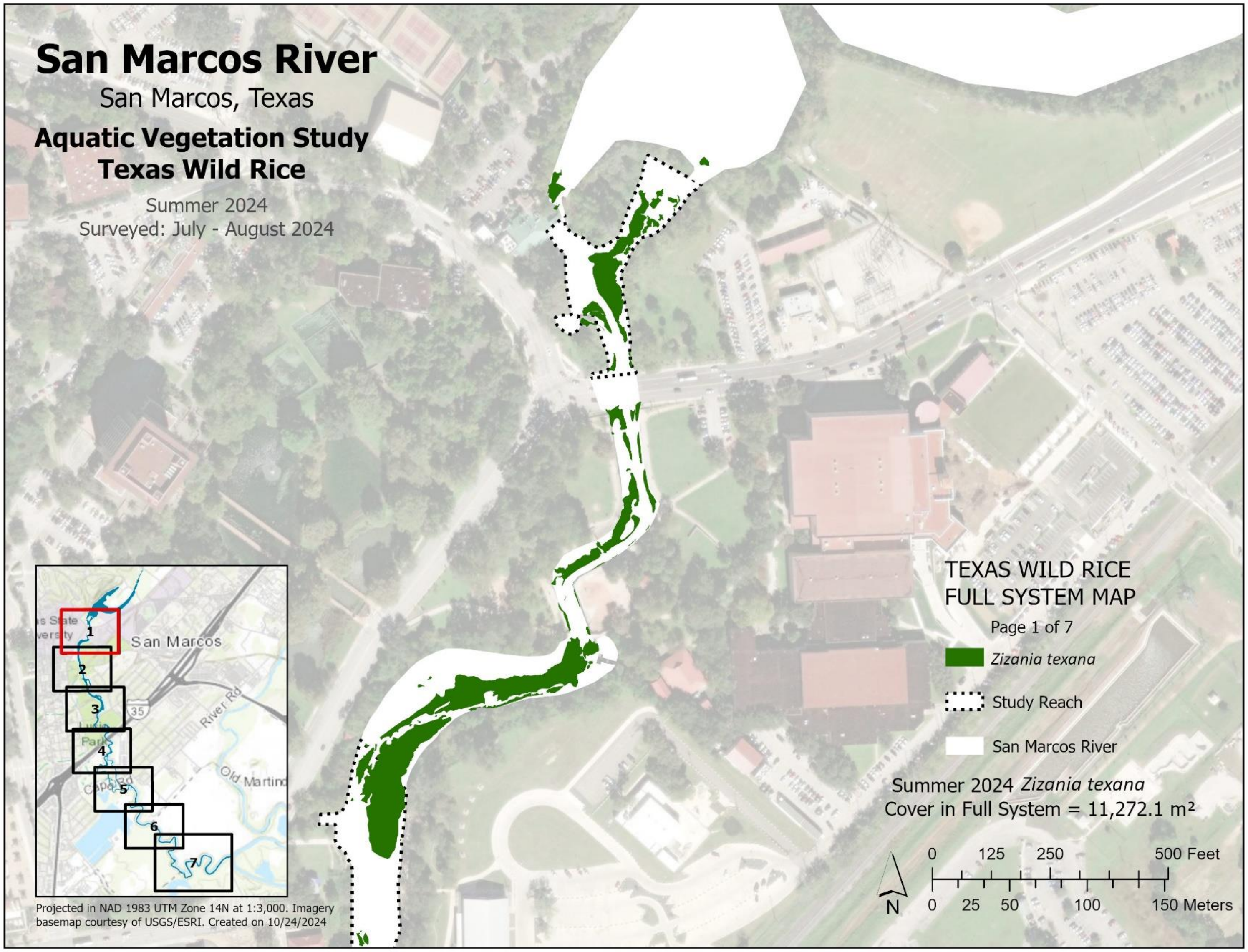

Figure C7. **Map of Texas Wild-rice coverage from Spring Lake to City Park in summer 2024.**

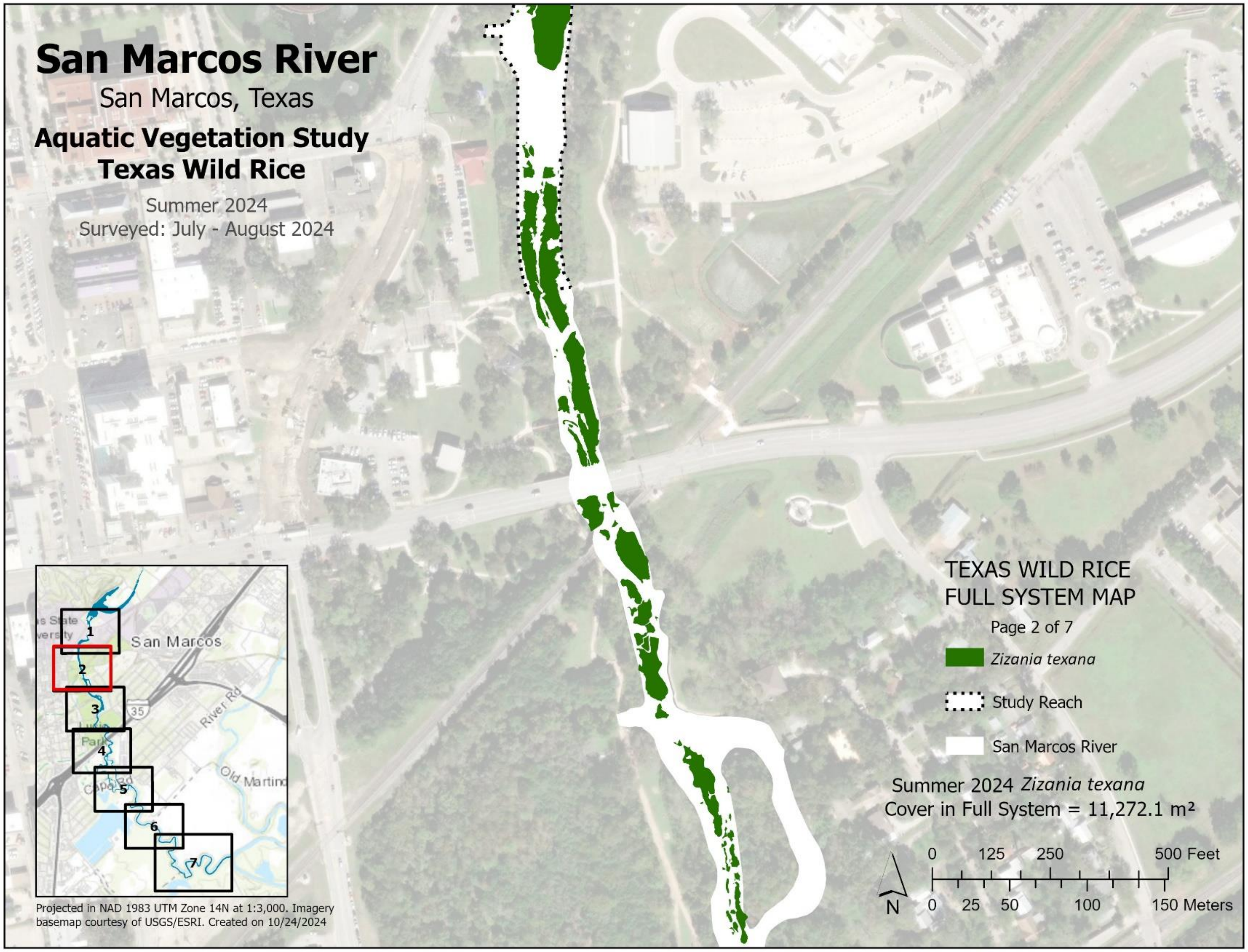

Figure C8. Map of Texas Wild-rice coverage from City Park to Cheatham Street in summer 2024.

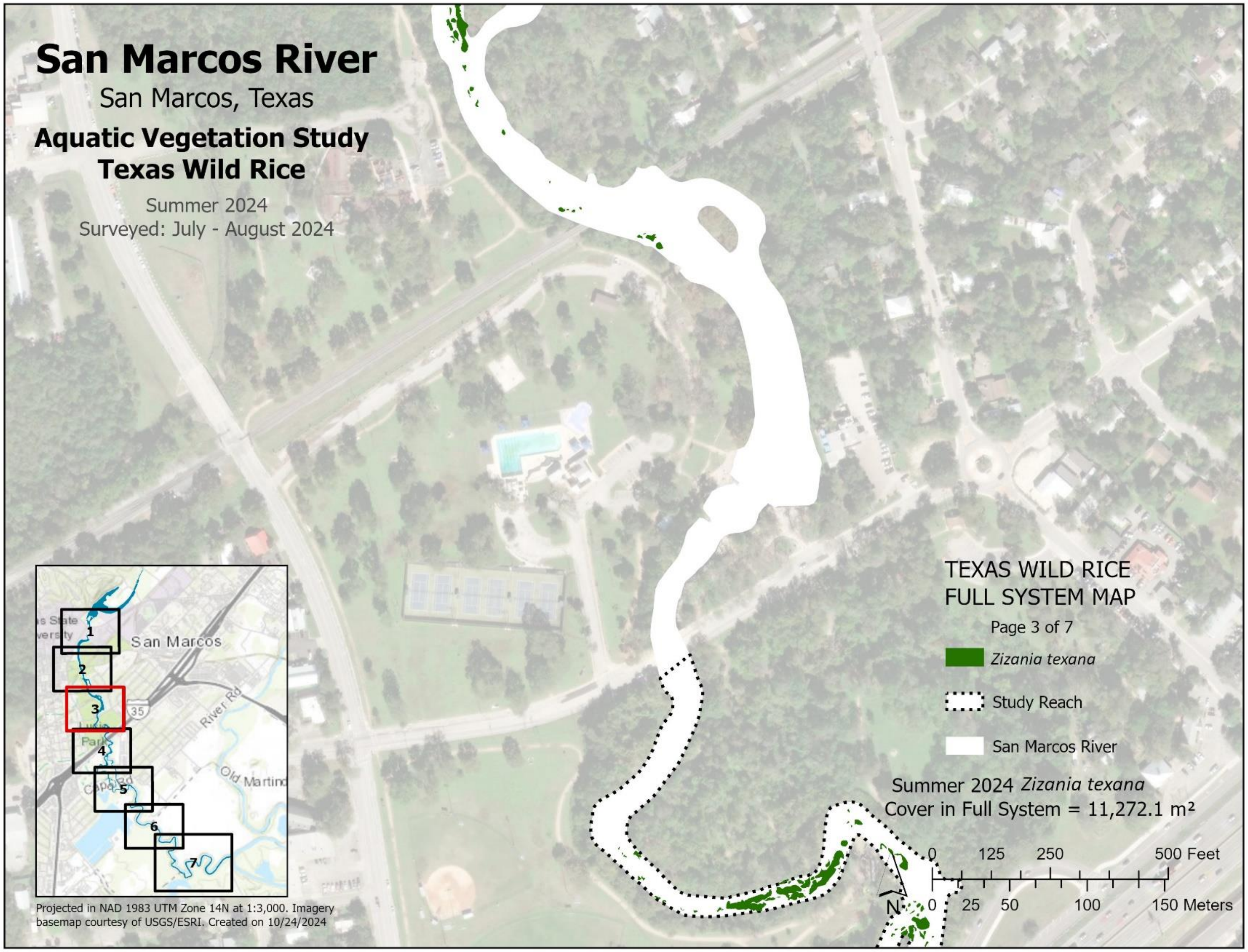

Figure C9. Map of Texas Wild-rice coverage from Cheatham Street to I-35 in summer 2024.

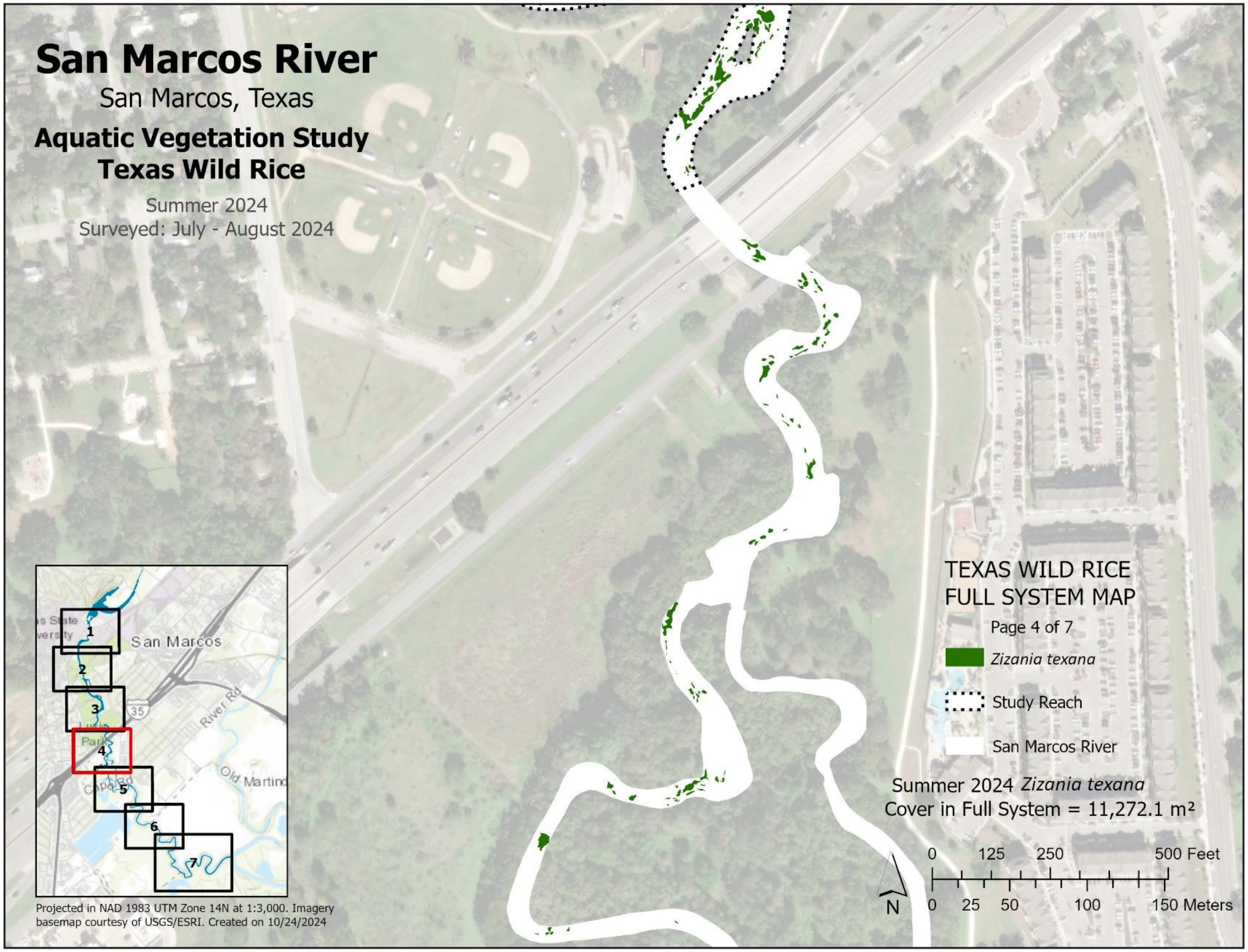

Figure C10. **Map of Texas Wild-rice coverage from Cheatham Street to about Stokes Park in summer 2024.**

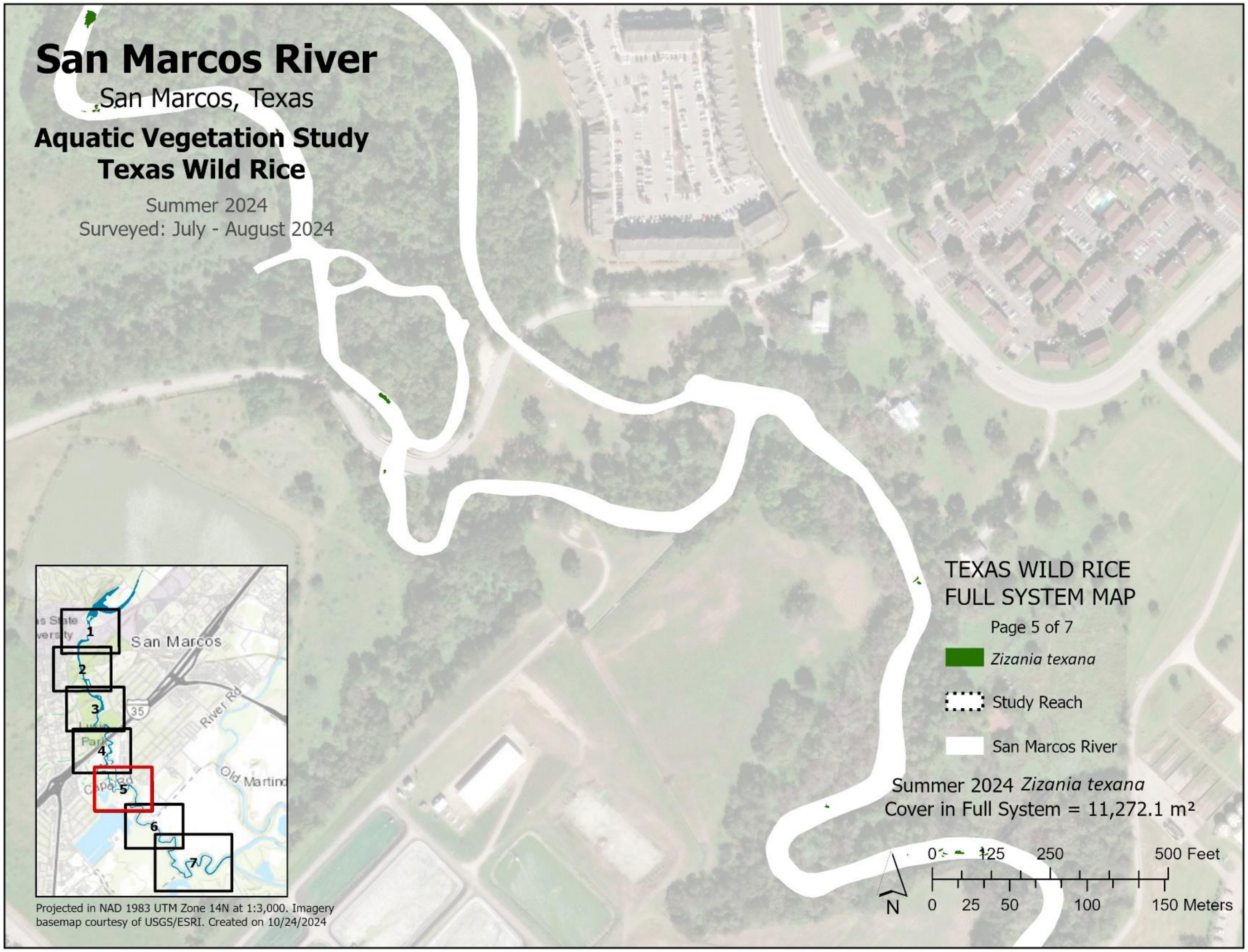

Figure C11. Map of Texas Wild-rice coverage from about Stokes Park to Wastewater Treatment Plant in summer 2024.

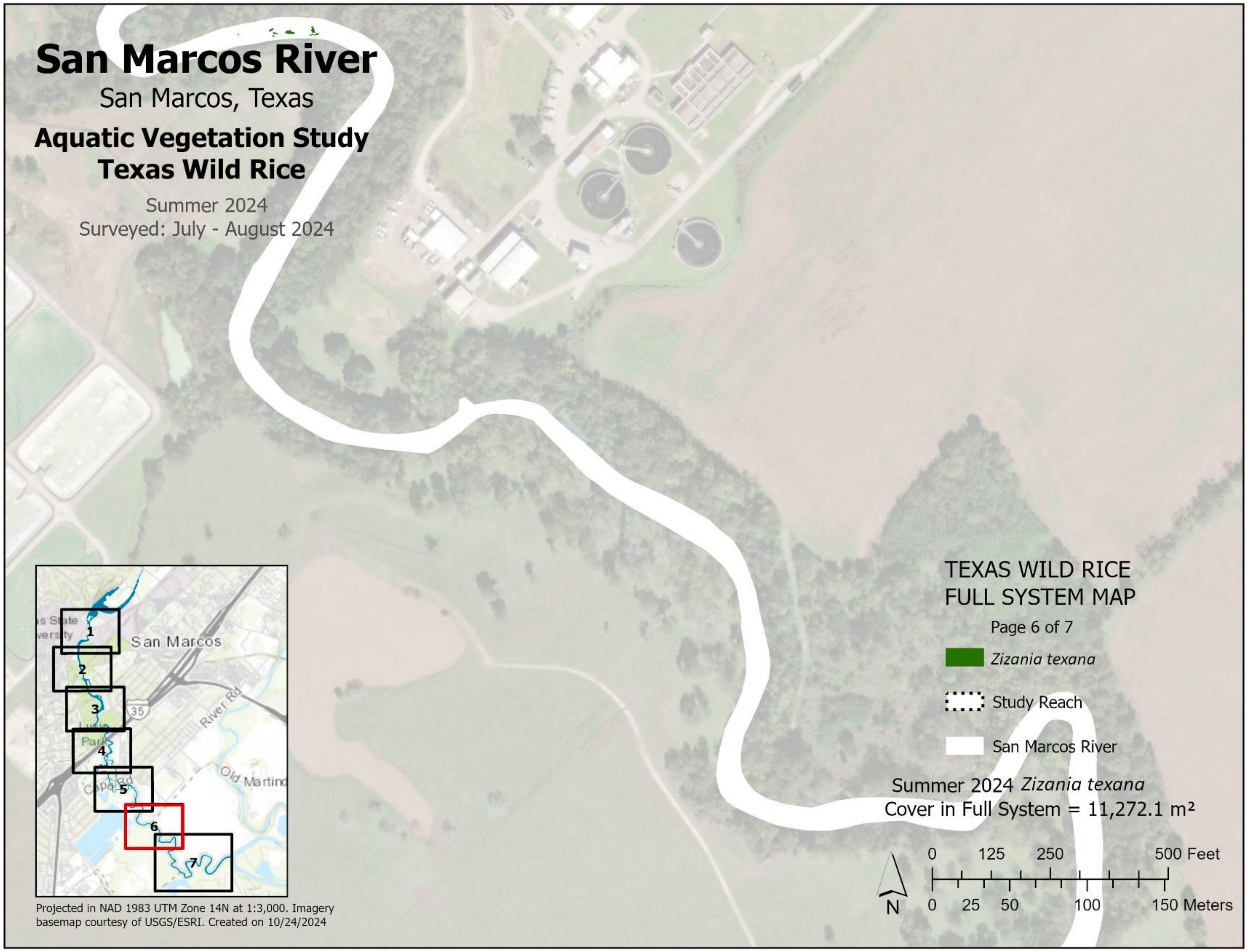

Figure C12. Map of Texas Wild-rice coverage from Wastewater Treatment Plant to about Cypress Tree Island in summer 2024.

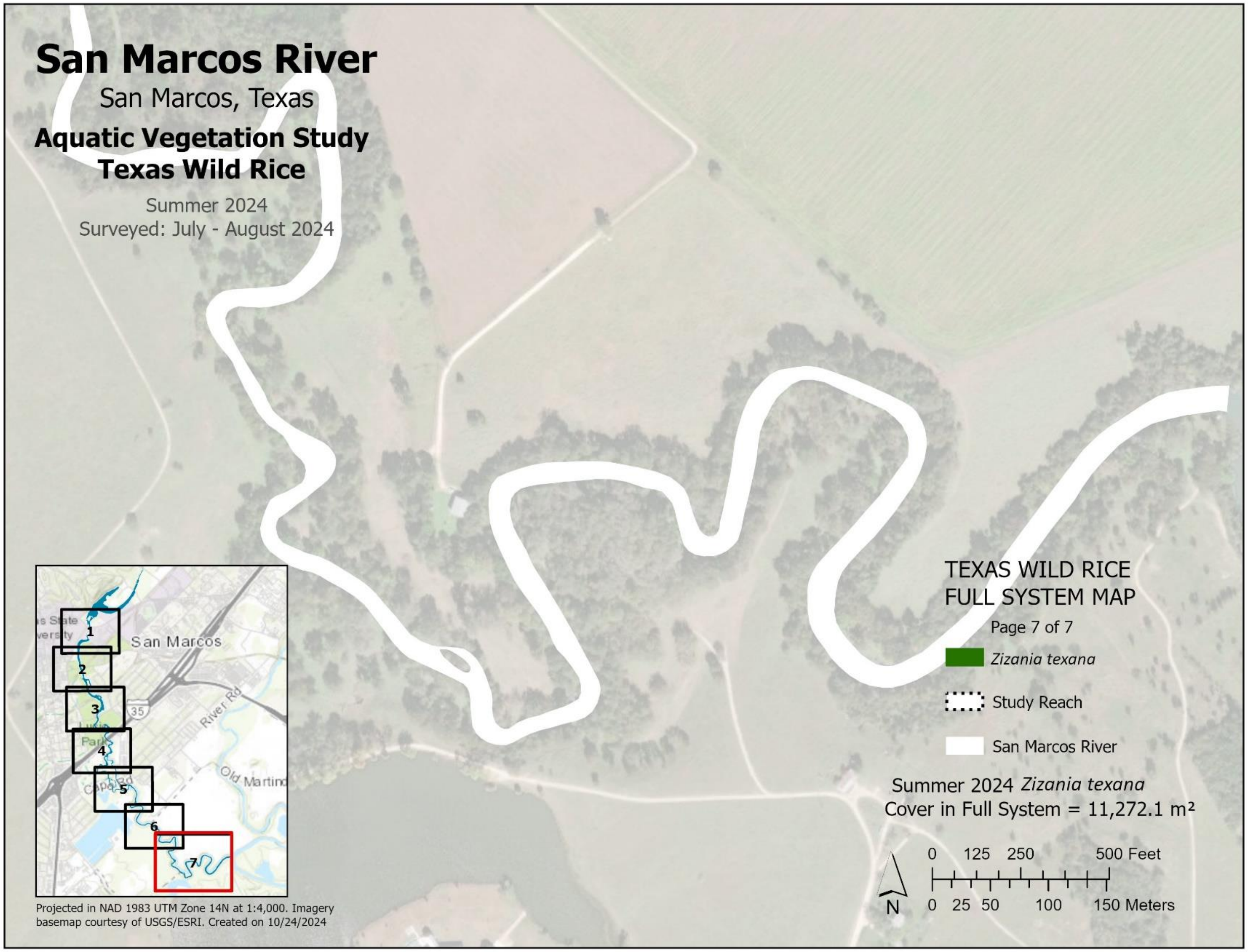

Figure C13. Map of Texas Wild-rice coverage from about Cypress Tree to the Blanco River confluence in summer 2024.

APPENDIX C: TEXAS WILD-RICE PHYSICAL OBSERVATIONS

For the 2024 annual mapping event, 289 stands and 281 points of Texas Wild-rice (TWR) were mapped. The extent of Texas Wild-rice was unchanged compared to previous years and the most downstream extent of rice was located at the power line right-of-way as it crosses the river at A.E. Wood State Fish Hatchery (29.8664456N; -97.9271326W). The majority (53%) of Texas Wild-rice stands were documented at water depths ≥ 3 ft. Texas Wild-rice stands were found at similar frequencies between 0 to 2.9 ft (Table D1). Approximately 28% of Texas Wild-rice stands were found to be associated with another aquatic plant species, which was lower compared to the previous year (37%). One non-native aquatic plant species, *Hygrophila polysperma*, and one native aquatic plant species, *Cabomba caroliniana*, were the most commonly associated taxa with Texas Wild-rice (Table D2). Plant community associations have changed considerably over the last few years, as native plants have become more widespread throughout the river. Lastly, there were 22 Texas Wild-rice stands in bloom at the time of mapping and bloom percentage ranged from 10 to 100%.

Table D1. Distribution of Texas Wild-rice stands based on water depth (n=289) during annual mapping in July/August 2024.

WATER DEPTH (ft)	# OF TWR STANDS	FREQUENCY (%)
0 to 0.9	48	17
1.0-1.9	48	17
2.0-2.9	40	13
3.0 +	153	53

Table D2. Associated species found with Texas Wild-rice stands (n=80) during annual mapping in July/August 2024.

SPECIES	# OF TWR STANDS	FREQUENCY (%)
Hygrophila polysperma	34	43
Cabomba caroliniana	17	21
Sagittaria platyphylla	7	9
Heteranthera dubia	6	7
Other species	16	20

Observations for vulnerable Texas Wild-rice stands were conducted 10 times during 2024 (Table D3). These qualitative measurements included the following categories: 1) the percent of the stand that was emergent (including the percent with seed or flower); and 2) the percent covered with vegetation mats or algae buildup and a categorical estimation of root exposure. Rectangular study plots, established around chosen vulnerable stands in GIS were used to locate and identify vulnerable Texas Wild-rice stands for sampling. Individual stands are mapped in GIS to provide length, width, and cover estimates. Water depth and flow measurements were taken at the upstream edge of each Texas Wild-rice stand. San Marcos River mean daily discharge during the monitoring events ranged from 131 cfs in the spring to 82 cfs in the fall. Although discharge during both events was still below the historical mean daily discharge (186 cfs), conditions through most of 2024 were better than 2023 until August (Table D3).

As in the previous year, physical observations were made for vulnerable Texas Wild-rice stands within three general study areas: 1) Spring Lake Dam / Sewell Park; 2) Veramendi Park; and 3) I-35. These study areas are heavily trafficked with river recreation due to their location near river access points that allow recreationists to enter, exit or linger for the duration of a given day. Therefore, during peak recreation season, Texas Wild-rice patches at these locations are typically subjected to harsher disturbances compared to patches located in other reaches of the river. At the end of this appendix, coverage of each vulnerable stand, percent of stands at water depths less than 0.50 feet (ft), and index of root exposure for stands can be found in Table D4, Figure D4, and Figure D5, respectively.

Table D3. The dates of Texas Wild-rice observations conducted in 2024 with corresponding average daily discharge in the San Marcos River.

PHYSICAL OBSERVATIONS EVENT	EVENT TYPE	DATE	MEAN DAILY DISCHARGE (cfs)
1	Low Flow Physical Observation	January 11	90
2	Spring Biological Monitoring	May 3	131*
3	Low Flow Physical Observation	May 8	129*
4	Low Flow Physical Observation	June 10	112
5	Low Flow Physical Observation	June 21	112
6	Low Flow Physical Observation	July 3	114
7	Low Flow Physical Observation	August 23	93
8	Low Flow Physical Observation	September 3	95
9	Low Flow Physical Observation	September 27	85
10	Fall Biological Monitoring	November 8	82

http://nwis.waterdata.usgs.gov/tx *Discharge was calibrated to above 120 cfs after sampling event.

Spring Lake Dam/Sewell Park Reach

The Texas Wild-rice stands in this reach varied in coverage and health throughout 2024, with the highest total coverage noted during low flow event 8 (165 m^2; Table D4). In general, Texas Wild-rice stands in this reach were negatively impacted primarily by foot traffic followed by silt accretion and dewatering. In January, Texas Wild-rice was mostly emergent with large amounts of mature seeds. As the year progressed, stands became less dense and eventually completely fragmented by foot traffic. One stand on river right completely disappeared by fall (Figure D2). Stand #7 had large percentages of the stand elevated above the water surface causing the stand to perish as flows continued to decrease. This stand was highly eroded along the long edge with clear walking paths throughout (Figure D2). Stands that were not in the path of recreation (e.g., stand #2 and stand #4/5) maintained their footprint.

During low flow event 1, velocity at individual stands ranged from 0.14 to 1.03 ft/s. All stands were in water depths greater than 0.5 ft except Stand #8 in which about 80% of the stand was in water less than 0.50 ft. Root exposure from scouring was noted in this section, with heavy scouring at stand #4/5 and #7. Fall sampling velocity ranged from 0.54 to 1.95 ft/s. By this time, Stand #8 was very thin and mostly in less than 0.50 ft of water. Root exposure was extreme around all stands except for stand #1 (Figure D1). Additionally, this reach had the most vegetation mat cover compared to all other reaches.

Figure D1. Event 6 2024 (left); Event 8 2024 (middle); fall biological monitoring event (right) vulnerable Texas Wild-rice plots in the Spring Lake dam / Sewell Park location. Yellow rectangles indicate stand plots. Red polygons indicate individual Texas Wild-rice stands.

Veramendi Park

Total cover of vulnerable Texas Wild-rice stands in Veramendi Park was highest in event 10 (fall biological monitoring). Stand #1 was absent from sampling events early in the year but re-established by event 6. This stand is typically located in the footpath of recreationists. Although flows decreased through the late summer and fall, all other stands maintained their footprint throughout the year.

During low flow event 1, velocities ranged from 0.16 to 0.78 ft/s. All stands occurred in water depths greater than 0.50 ft. Root exposure was moderate across all stands and blooming was minimal. During the fall biological monitoring event, sampling velocities ranged from 0.30 to 1.48 ft/s. No stands occurred in water less than 0.50 ft in water depth. Root exposure ranged from moderate to extreme. Stand #2, located away from the main channel and recreational pathway, was maintained through most of the year and Stand #3 expanded into the river channel (Figure D2).

Figure D2. **Event 6 2024 (left); Event 8 2024 (middle); fall biological monitoring event (right) vulnerable Texas wild-rice plots in the Veramendi Park area. Yellow rectangles indicate stand plots. Red polygons indicate individual Texas Wild-rice stands.**

I-35 Reach

The coverages of vulnerable Texas Wild-rice stands in this reach varied throughout the year. Coverage was lowest during low flow event 6, increased during low flow event 8 and decreased again during fall (Figure D3). The vulnerable stands were more impacted by recreational wading compared to previous years as more people utilize William & Eleanor Crook Park for river access. Texas Wild-rice stands in deeper pools were less impacted.

Current velocities during low flow event 1 in January ranged from 0.0 to 1.54 ft/s. Stand #3 was the only stand observed in water depths 0.50 ft or less. On average, root exposure was moderate around all stands. During fall sampling, velocities ranged from 0.13 to 1.52 ft/s. Root exposure was noted as moderate across all stands except for stand #8 in which most roots were entirely exposed. Additionally, stand #5 was completely dewatered during fall sampling. Flowering was minimal in both spring and fall sampling.

Figure D3. **Event 6 2024 (left); Event 8 2024 (middle); fall biological monitoring event (right) vulnerable Texas wild-rice plots in the I-35 area. Yellow rectangles indicate stand plots. Red polygons indicate individual Texas Wild-rice stands.**

Table D4. **Cover (m^2) of individual vulnerable Texas Wild-rice stands during selected sampling events throughout 2024. Sites labeled 'Gone' denotes vulnerable stands were absent and 'Point' denotes vulnerable stands were present, but cover was not large enough to calculate an area.**

LOCATION	LOW-FLOW EVENT VI	LOW-FLOW EVENT VIII	FALL 2024
Sewell Park 1	65	82	68
Sewell Park 2	7	11	7
Sewell Park 3	Gone	Gone	Gone
Sewell Park 4/5	29	23	31
Sewell Park 6	Gone	Gone	Gone
Sewell Park 7	33	41	17
Sewell Park 8	4	8	11
Sum of Cover	**138**	**165**	**134**
Veramendi 1	4	3	9
Veramendi 2	42	37	34
Veramendi 3	48	41	59
Sum of Cover	**94**	**81**	**102**
I-35-1	4	8	5
I-35-2	0	4	2
I-35-3	0	0	2
I-35-4	82	119	88
I-35-5	2	1	1
I-35-6	3	8	Point
I-35-7	Gone	Gone	Gone
I-35-8	23	7	18
I-35-9	Gone	1	Gone
I-35-10	Gone	Gone	Gone
Sum of Cover	**114**	**148**	**116**

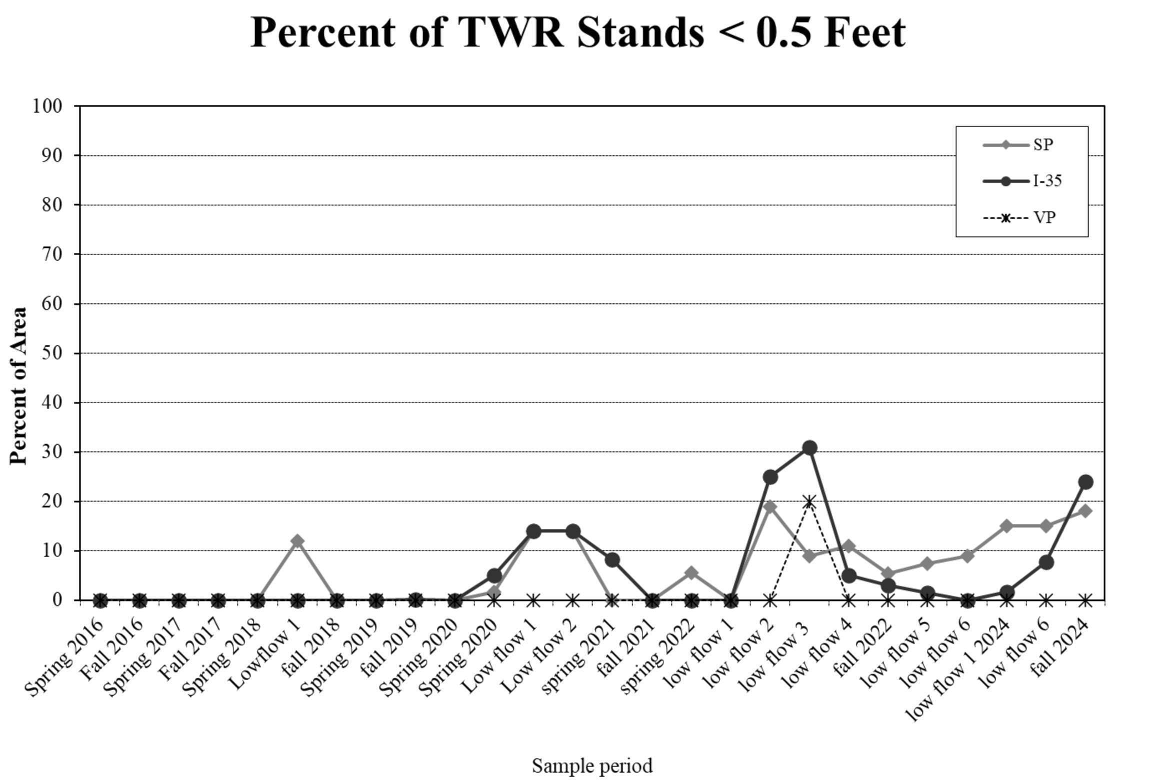

Figure D4. **Percent of Texas Wild-rice stands at water depths less than 0.5 feet 2016–2024.**

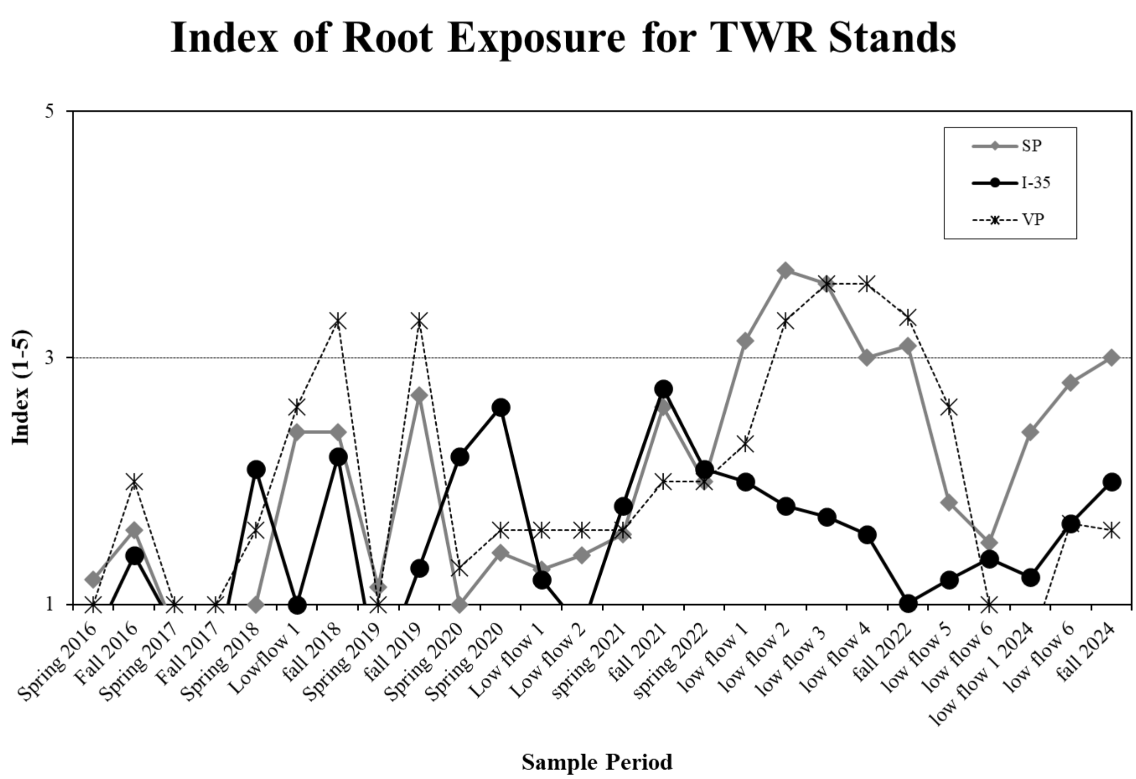

Figure D5. **Index for root exposure of Texas Wild-rice stands from 2016–2024.**

APPENDIX D: TABLES AND FIGURES

Fish Assemblage Results:
Drop-Net and Fish Community Sampling

Table E1. **Overall number (#) and percent relative abundance (%) of fishes collected from the three long-term biological goals study reaches during drop-net sampling in 2024.**

TAXA	SPRING LAKE DAM		CITY PARK		I-35	
	#	%	#	%	#	%
<u>Lepisosteidae</u>						
Lepisosteus oculatus	0	0.00	0	0.00	1	0.13
<u>Leuciscidae</u>						
Alburnops chalybaeus	0	0.00	26	1.75	2	0.25
Dionda nigrotaeniata	2	0.35	0	0.00	3	0.38
Notropis amabilis	0	0.00	0	0.00	26	3.26
<u>Characidae</u>						
*Astyanax argentatus**	0	0.00	3	0.20	0	0.00
<u>Ictaluridae</u>						
Ameiurus natalis	1	0.17	0	0.00	5	0.63
<u>Loricariidae</u>						
*Hypostomus plecostomus**	0	0.00	0	0.00	6	0.75
<u>Fundulidae</u>						
Fundulus chrysotus	0	0.00	0	0.00	1	0.13
<u>Poeciliidae</u>						
Gambusia sp.	329	56.82	992	66.67	337	42.28
<u>Centrarchidae</u>						
*Ambloplites rupestris**	3	0.52	1	0.07	11	1.38
Lepomis cyanellus	0	0.00	0	0.00	1	0.13
Lepomis gulosus	1	0.17	0	0.00	1	0.13
Lepomis miniatus	10	1.73	4	0.27	14	1.76
Lepomis sp.	3	0.52	2	0.13	40	5.02
Micropterus salmoides	1	0.17	0	0.00	3	0.38
<u>Percidae</u>						
Etheostoma fonticola	224	38.69	460	30.91	341	42.79
Percina apristis	0	0.00	0	0.00	1	0.13
<u>Cichlidae</u>						
*Herichthys cyanoguttatus**	5	0.86	0	0.00	4	0.50
TOTAL	**579**		**1488**		**797**	

Asterisks (*) denotes introduced species

Table E2. **Overall number (#) and percent relative abundance (%) of fishes collected during fish community sampling in 2024.**

TAXA	SPRING LAKE		UPPER RIVER		MIDDLE RIVER		LOWER RIVER	
	#	%	#	%	#	%	#	%
Lepisosteidae								
Lepisosteus oculatus	3	0.1	0	0.0	0	0.0	0	0.0
Leuciscidae								
*Alburnops chalybaeus**	0	0.0	6	0.3	10	0.7	0	0.0
Cyprinella venusta	0	0.0	0	0.0	0	0.0	26	2.8
Dionda nigrotaeniata	1451	25.7	75	4.2	141	10.5	2	0.2
Pimephales vigilax	0	0.0	0	0.0	0	0.0	2	0.2
Notropis amabilis	0	0.0	24	1.4	103	7.7	275	29.9
Paranotropis volucellus	0	0.0	0	0.0	0	0.0	184	20.0
Characidae								
*Astyanax argentatus**	1552	27.5	92	5.2	16	1.2	9	1.0
Ictaluridae								
Ameiurus natalis	0	0.0	4	0.2	0	0.0	0	0.0
Ictalurus punctatus	0	0.0	0	0.0	0	0.0	1	0.1
Loricariidae								
Loricariidae sp.	0	0.0	9	0.5	10	0.7	43	4.7
Fundulidae								
Fundulus notatus	0	0.0	0	0.0	0	0.0	1	0.1
Poeciliidae								
Gambusia affinis	0	0.0	57	3.2	17	1.3	9	1.0
Gambusia geiseri	0	0.0	781	44.0	433	32.3	0	0.0
Gambusia sp.	1782	31.6	3	0.2	265	19.8	60	6.5
*Poecilia latipinna**	0	0.0	2	0.1	4	0.3	0	0.0
Centrarchidae								
*Ambloplites rupestris**	0	0.0	2	0.1	2	0.1	7	0.8
*Lepomis auritus**	49	0.9	213	12.0	67	5.0	51	5.5
Lepomis cyanellus	32	0.6	0	0.0	0	0.0	0	0.0
Lepomis gulosus	0	0.0	0	0.0	0	0.0	1	0.1
Lepomis macrochirus	56	1.0	3	0.2	0	0.0	47	5.1
Lepomis megalotis	34	0.6	21	1.2	1	0.1	2	0.2
Lepomis microlophus	150	2.7	4	0.2	1	0.1	4	0.4
Lepomis miniatus	42	0.7	70	3.9	22	1.6	8	0.9
Lepomis sp.	141	2.5	138	7.8	32	2.4	36	3.9
Micropterus punctatus	3	0.1	0	0.0	0	0.0	2	0.2
Micropterus salmoides	191	3.4	56	3.2	45	3.4	16	1.7
Micropterus treculii	0	0.0	0	0.0	0	0.0	1	0.1
Micropterus sp.	0	0.0	0	0.0	1	0.1	0	0.0
Percidae								

Etheostoma fonticola	136	2.4	176	9.9	157	11.7	38	4.1
Etheostoma spectabile	0	0.0	0	0.0	0	0.0	30	3.3
Etheostoma sp.	0	0.0	0	0.0	0	0.0	1	0.1
Percina aptristis	0	0.0	18	1.0	11	0.8	54	5.9
Percina carbonaria	0	0.0	4	0.2	0	0.0	6	0.7
Cichlidae								
*Herichthys cyanoguttatus**	13	0.2	5	0.3	3	0.2	3	0.3
*Oreochromis aureus**	7	0.1	2	0.1	0	0.0	0	0.0
Total	**5,642**		**1,765**		**1,341**		**919**	

Asterisks (*) denotes introduced species

FIGURES

Aquatic Vegetation

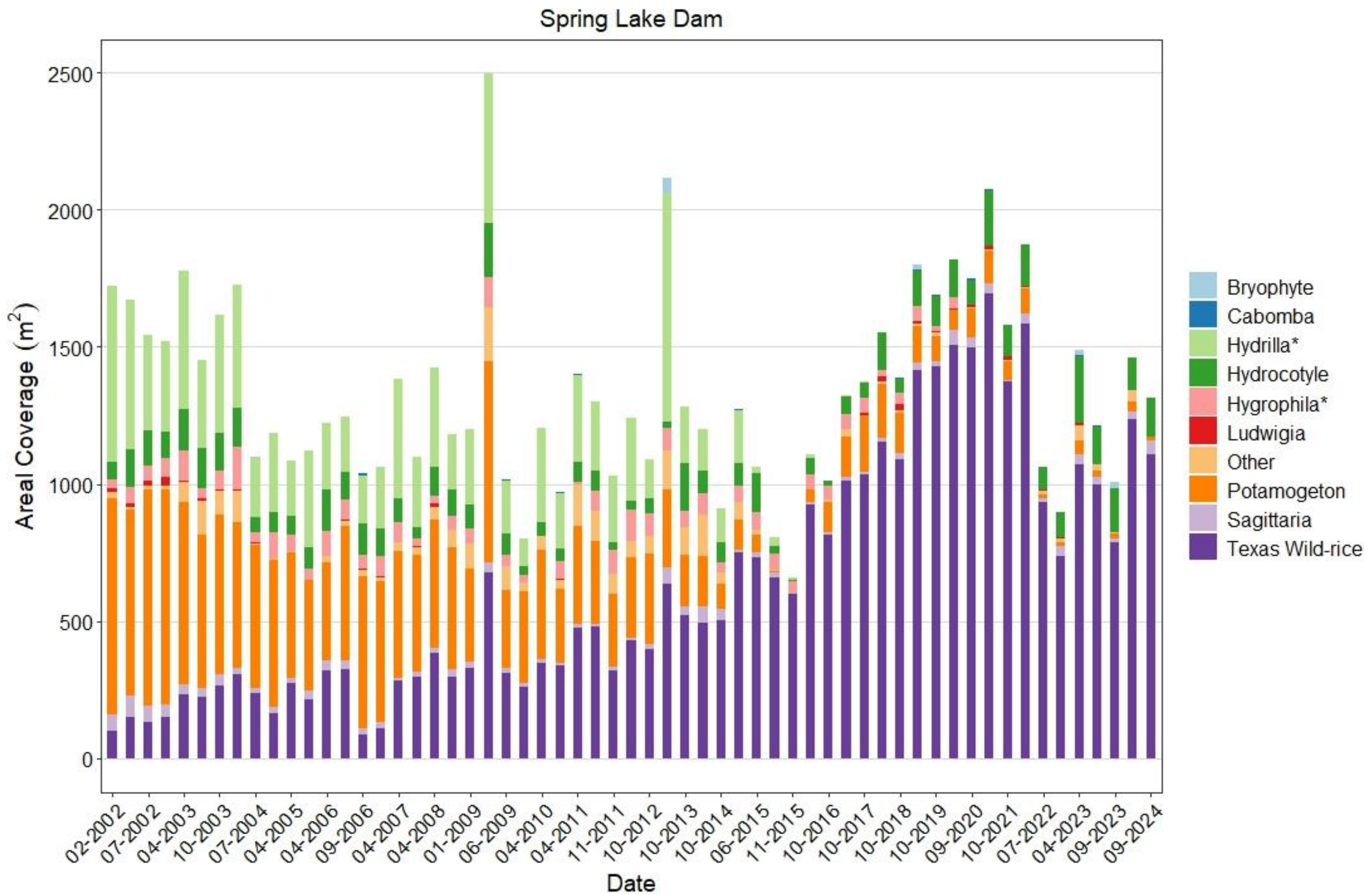

Figure E1. **Aquatic vegetation composition (m^2) among select taxa from 2002–2024 at Spring Lake Dam.**

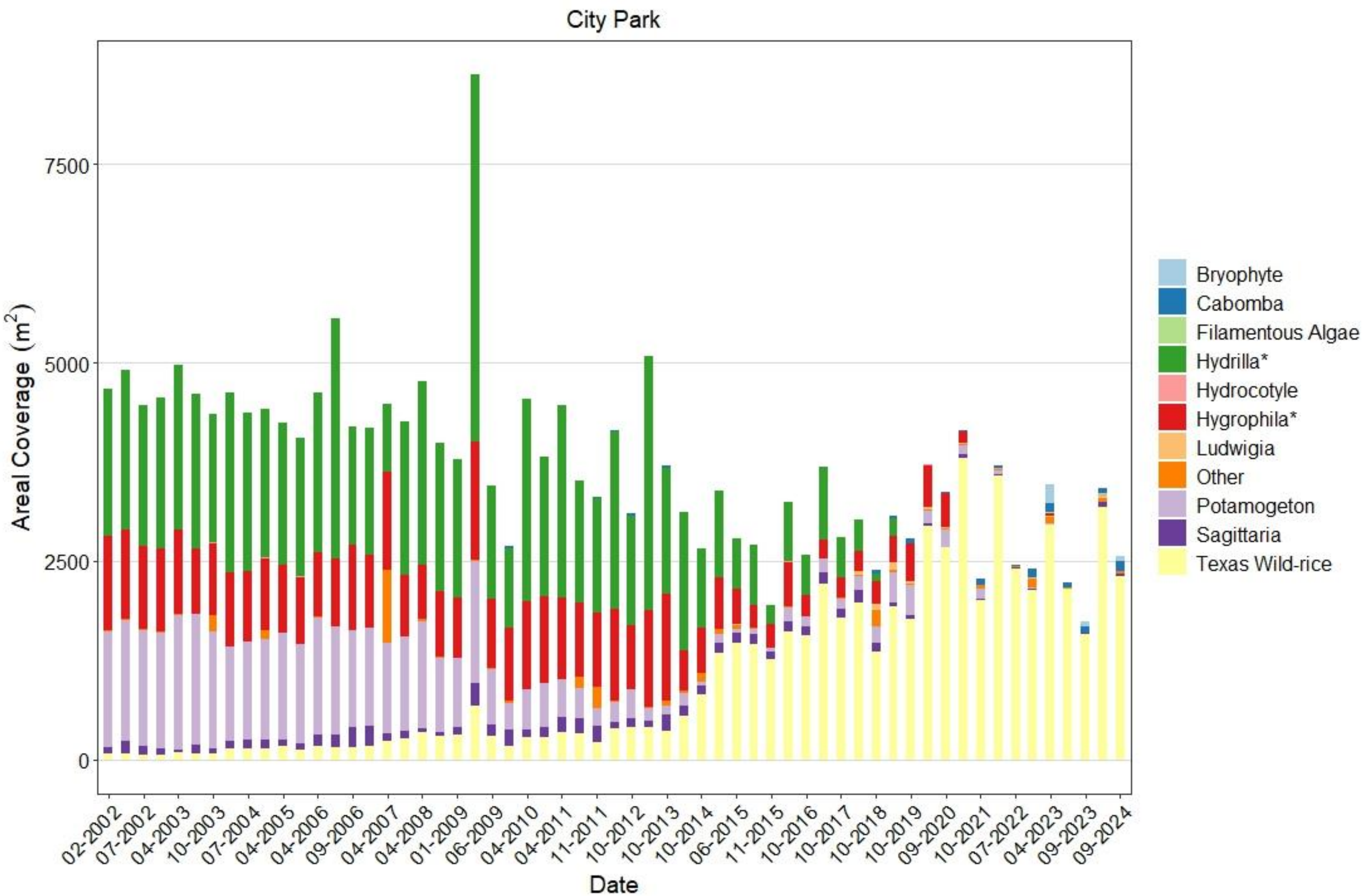

Figure E2. **Aquatic vegetation composition (m^2) among select taxa from 2002–2024 at City Park.**

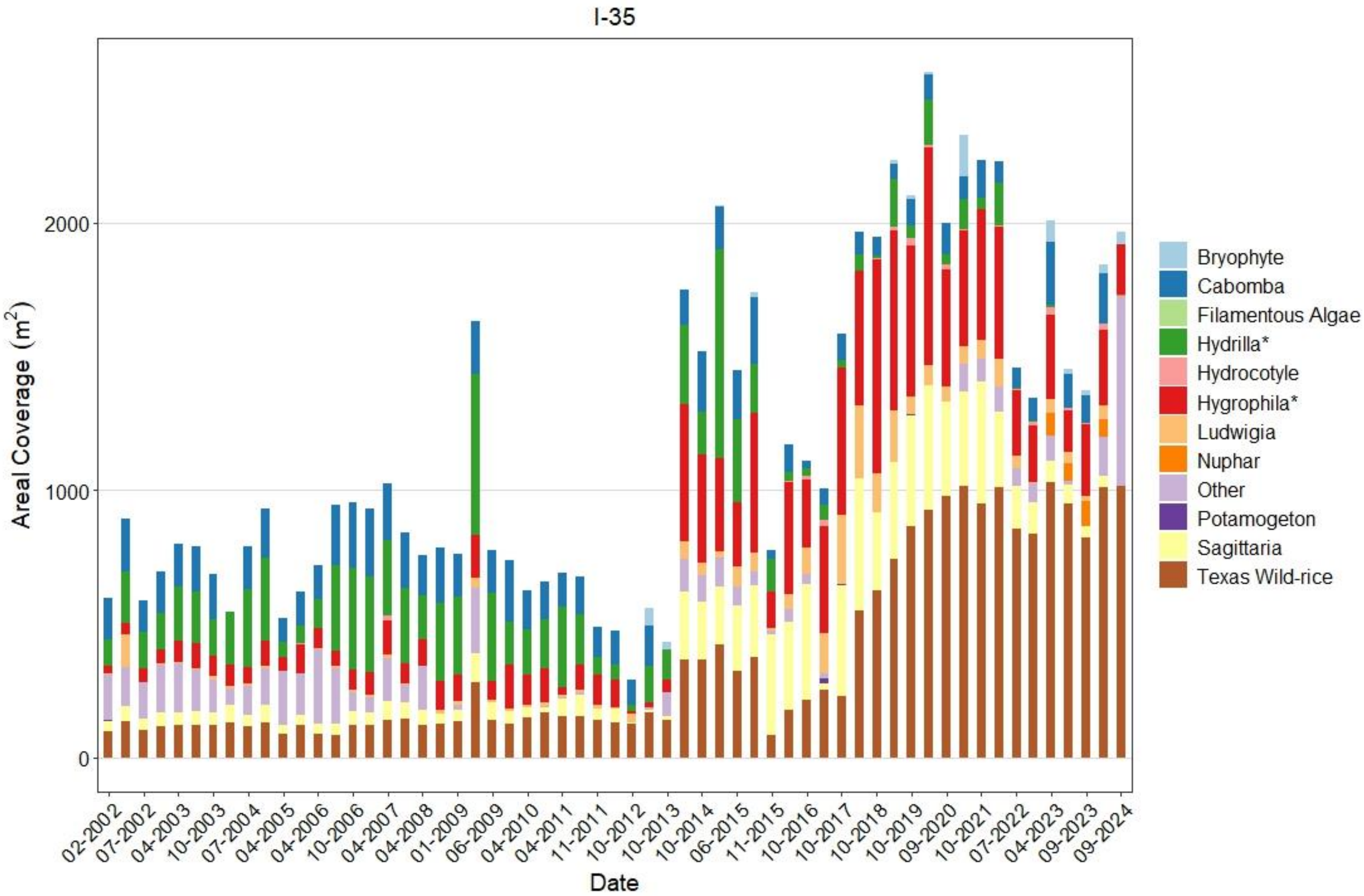

Figure E3. Aquatic vegetation composition (m^2) among select taxa from 2002–2024 at I-35.

Fountain Darter

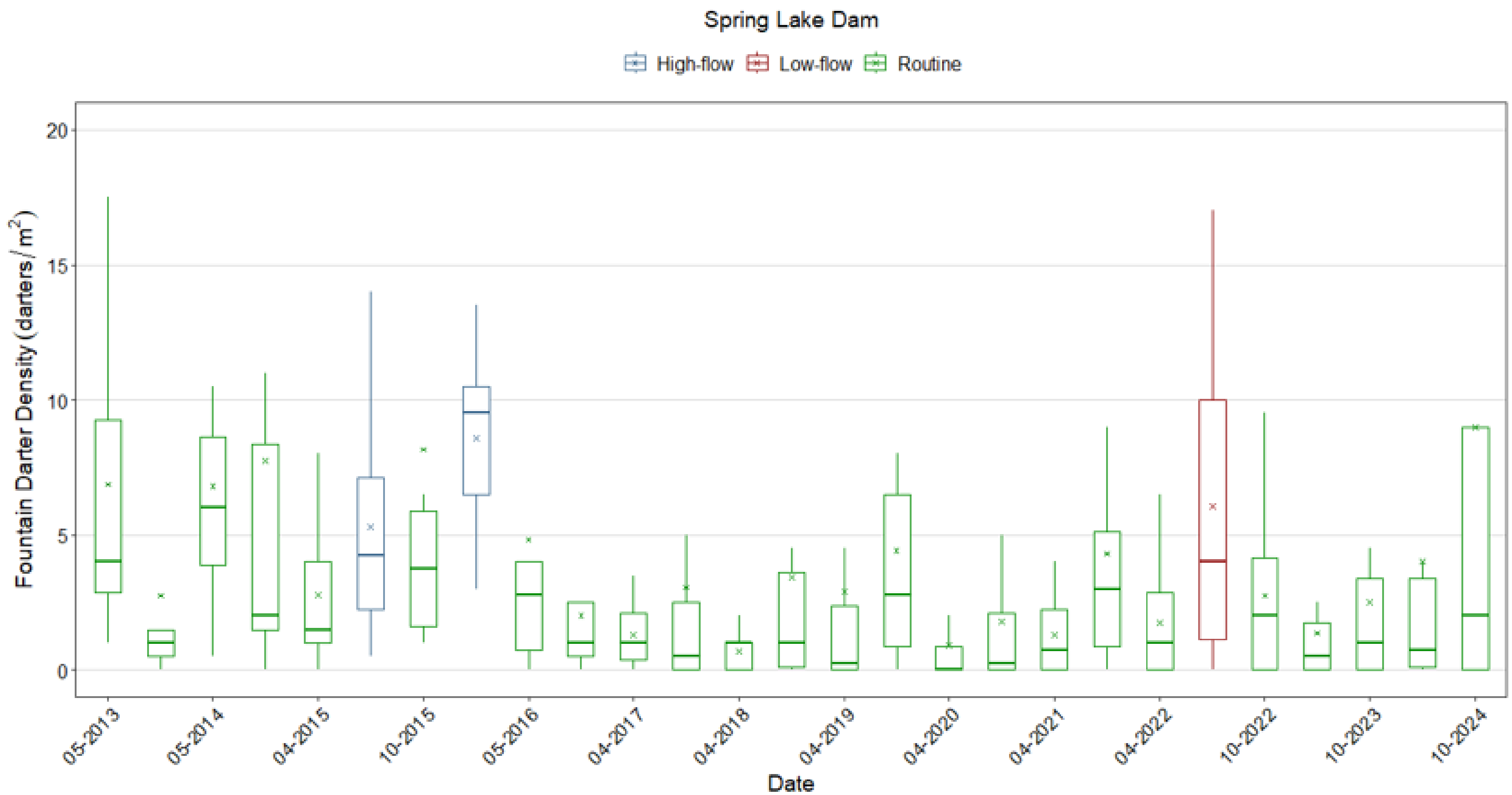

Figure E4. **Boxplots displaying temporal trends in Fountain Darter density (darters/m^2) from 2013–2024 during drop-net sampling at Spring Lake Dam. The thick horizontal line in each box is the median, x represents the mean, and the upper/lower bounds of each box represents the interquartile range. Whiskers represent minimum/maximum values up to 1.5 times the interquartile range.**

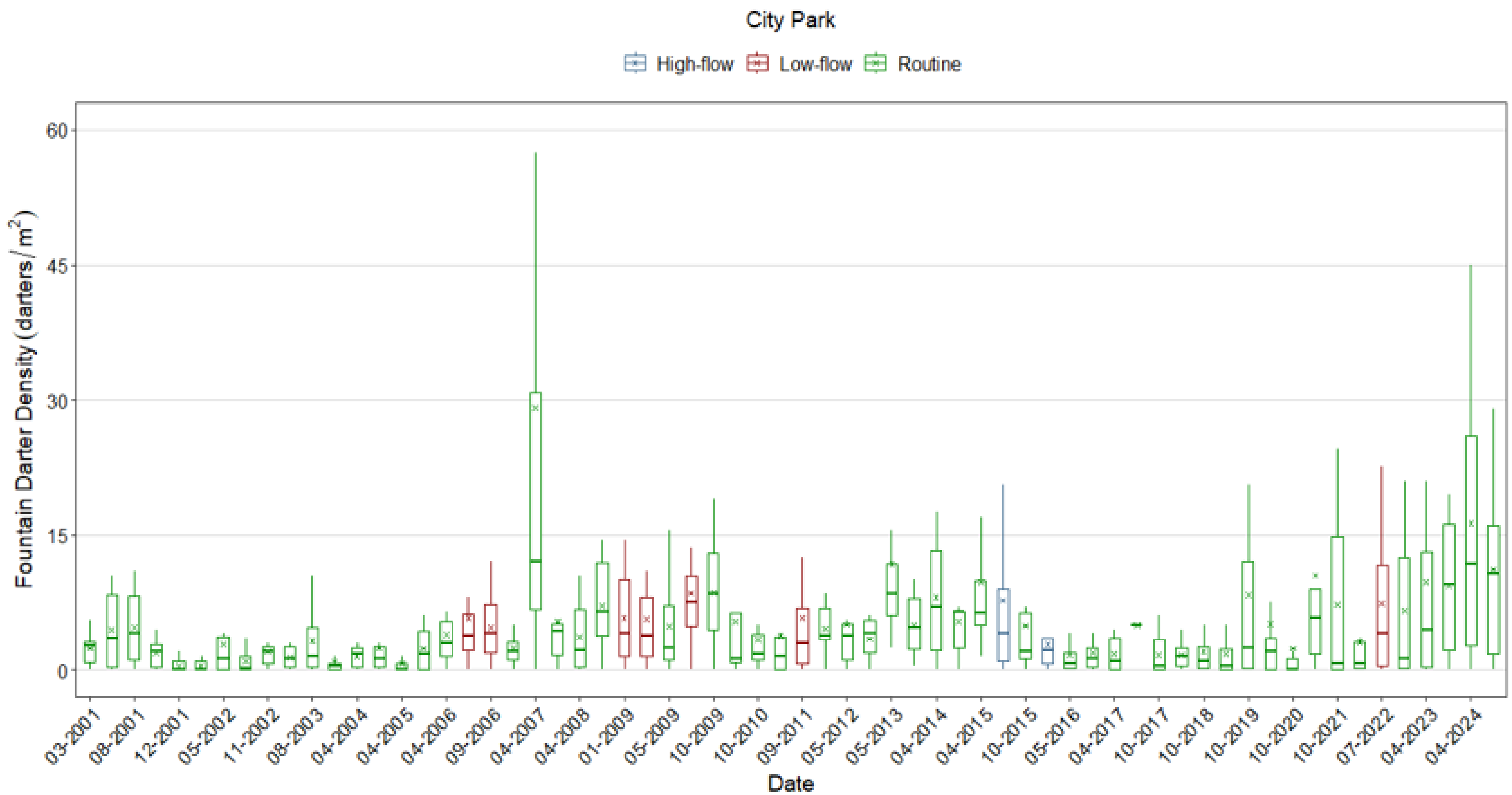

Figure E5. **Boxplots displaying temporal trends in Fountain Darter density (darters/m^2) from 2001–2024 during drop-net sampling at City Park. The thick horizontal line in each box is the median, x represents the mean, and the upper/lower bounds of each box represents the interquartile range. Whiskers represent minimum/maximum values up to 1.5 times the interquartile range.**

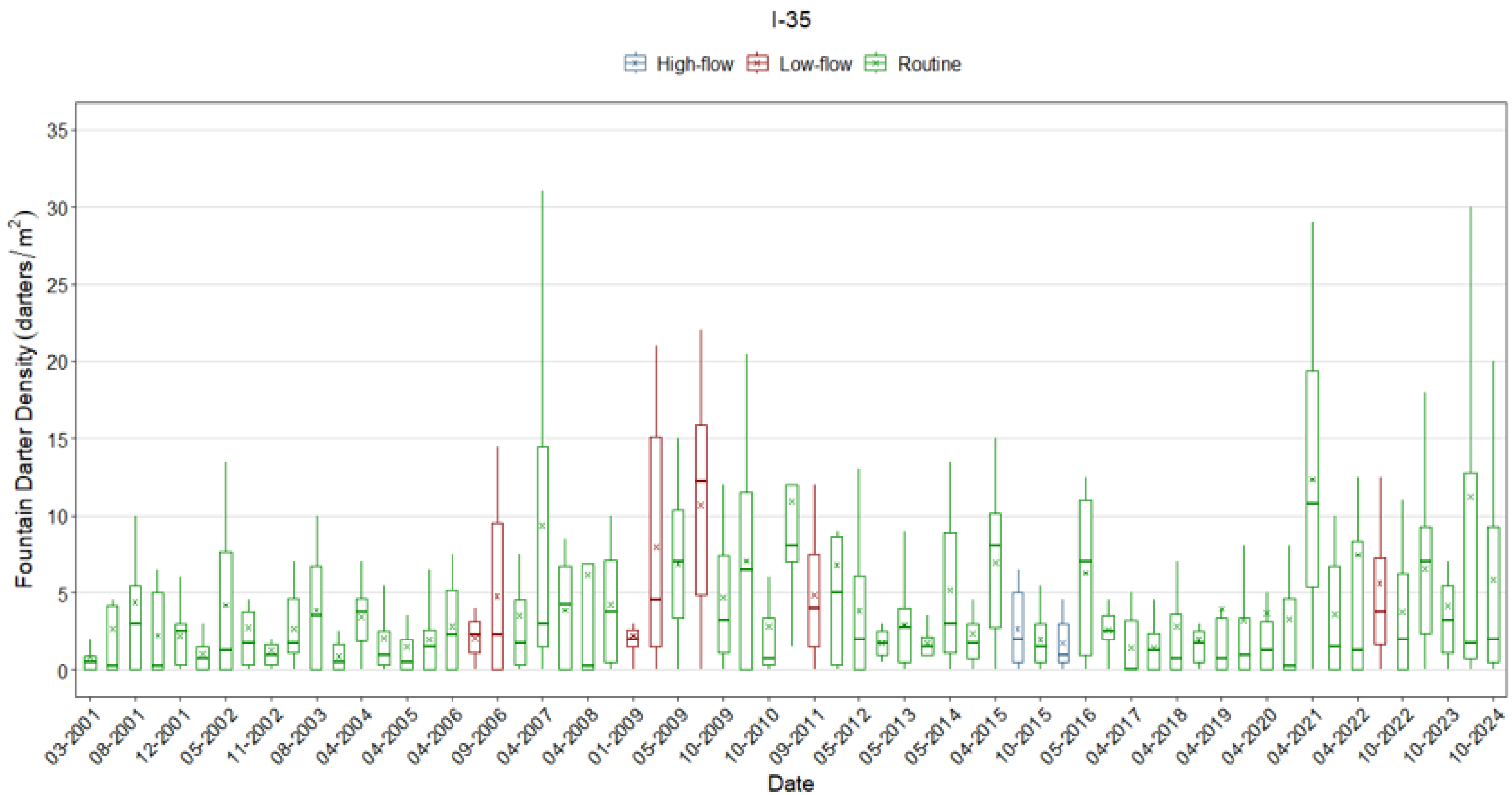

Figure E6. **Boxplots displaying temporal trends in Fountain Darter density (darters/m^2) from 2001–2024 during drop-net sampling at I-35. The thick horizontal line in each box is the median, x represents the mean, and the upper/lower bounds of each box represents the interquartile range. Whiskers represent minimum/maximum values up to 1.5 times the interquartile range.**

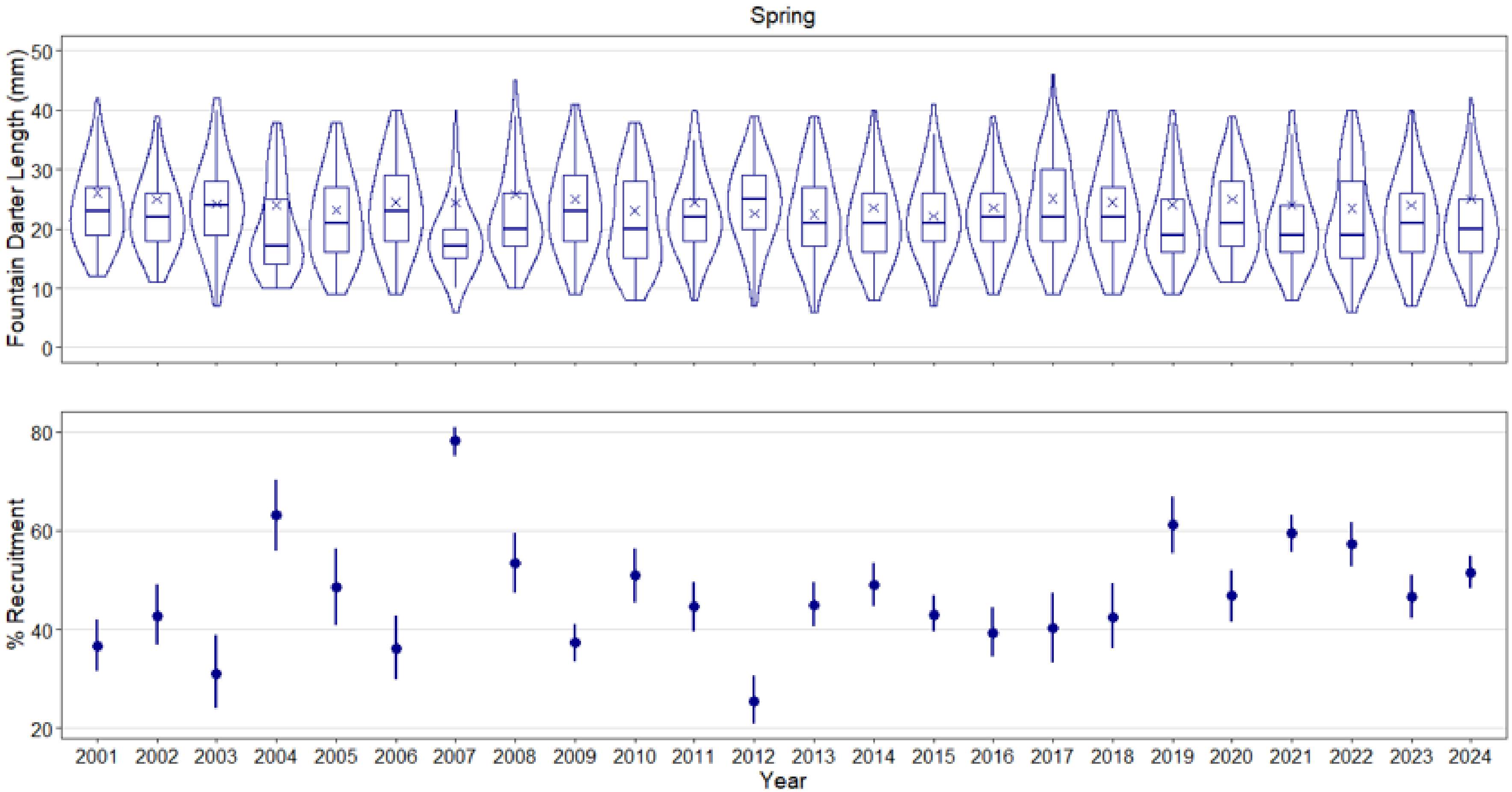

Figure E7. **Fountain Darter size structure (mm; top row) and percent recruitment (bottom row) in the San Marcos Springs and River during spring sampling (i.e., drop-net and timed dip-net data) events from 2001–2024. Size structure is displayed with boxplots (median, quartiles, range) and violin plots (probability density; polygons outlining boxplots). The thick horizontal line in each box is the median, x represents the mean, and the upper/lower bounds of each box represents the interquartile range. Whiskers represent minimum/maximum values up to 1.5 times the interquartile range. Recruitment is the percent relative abundance (± 95% CI) of darters ≤20 mm.**

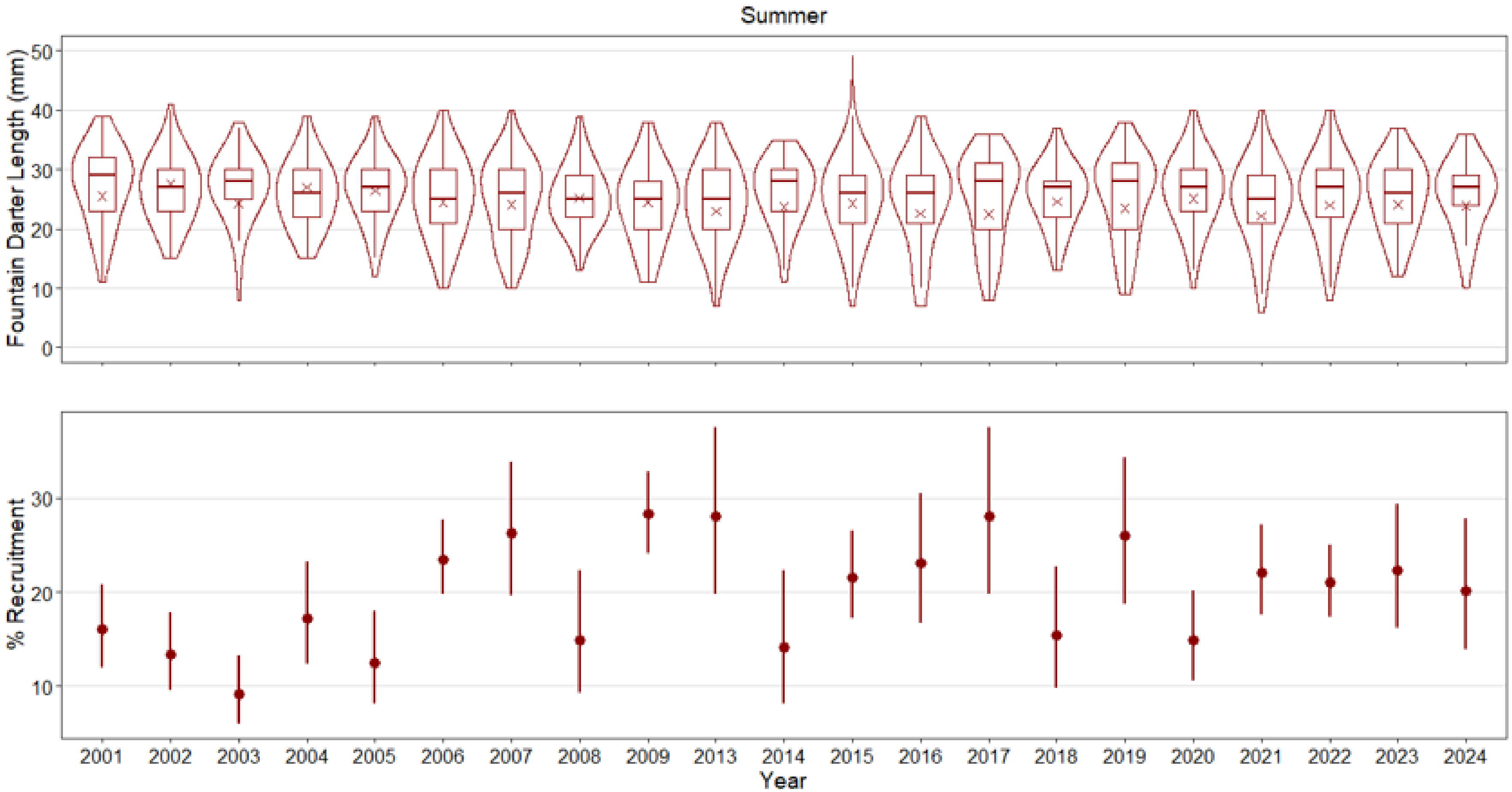

Figure E8. **Fountain Darter size structure (mm; top row) and percent recruitment (bottom row) in the San Marcos Springs and River during summer sampling (i.e., drop-net and timed dip-net data) events from 2001–2024. Size structure is displayed with boxplots (median, quartiles, range) and violin plots (probability density; polygons outlining boxplots). The thick horizontal line in each box is the median, x represents the mean, and the upper/lower bounds of each box represents the interquartile range. Whiskers represent minimum/maximum values up to 1.5 times the interquartile range. Recruitment is the percent relative abundance (± 95% CI) of darters ≤20 mm.**

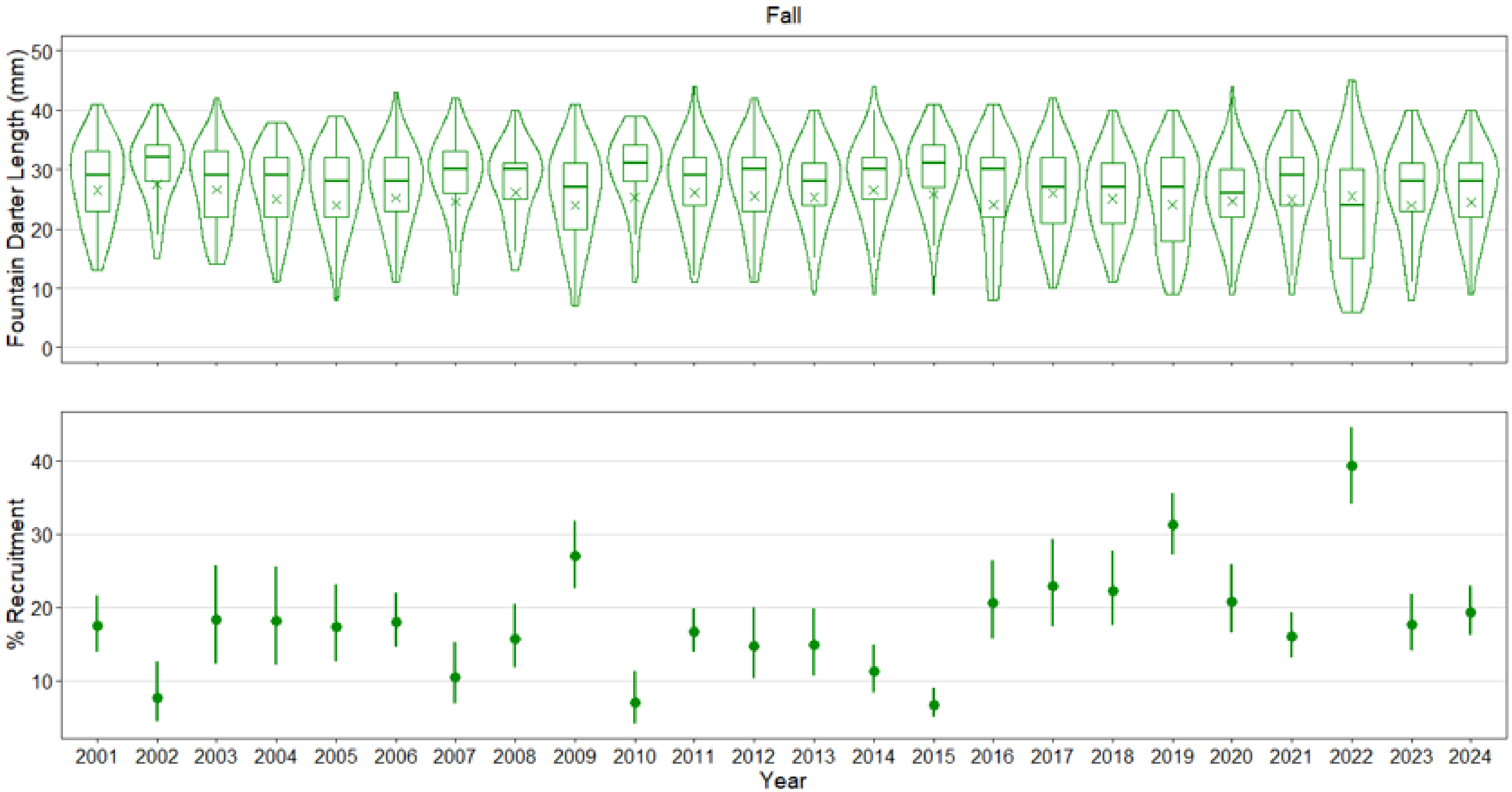

Figure E9. **Fountain Darter size structure (mm; top row) and percent recruitment (bottom row) in the San Marcos Springs and River during fall sampling (i.e., drop-net and timed dip-net data) events from 2001–2024. Size structure is displayed with boxplots (median, quartiles, range) and violin plots (probability density; polygons outlining boxplots). The thick horizontal line in each box is the median, x represents the mean, and the upper/lower bounds of each box represents the interquartile range. Whiskers represent minimum/maximum values up to 1.5 times the interquartile range. Recruitment is the percent relative abundance (± 95% CI) of darters ≤20 mm.**

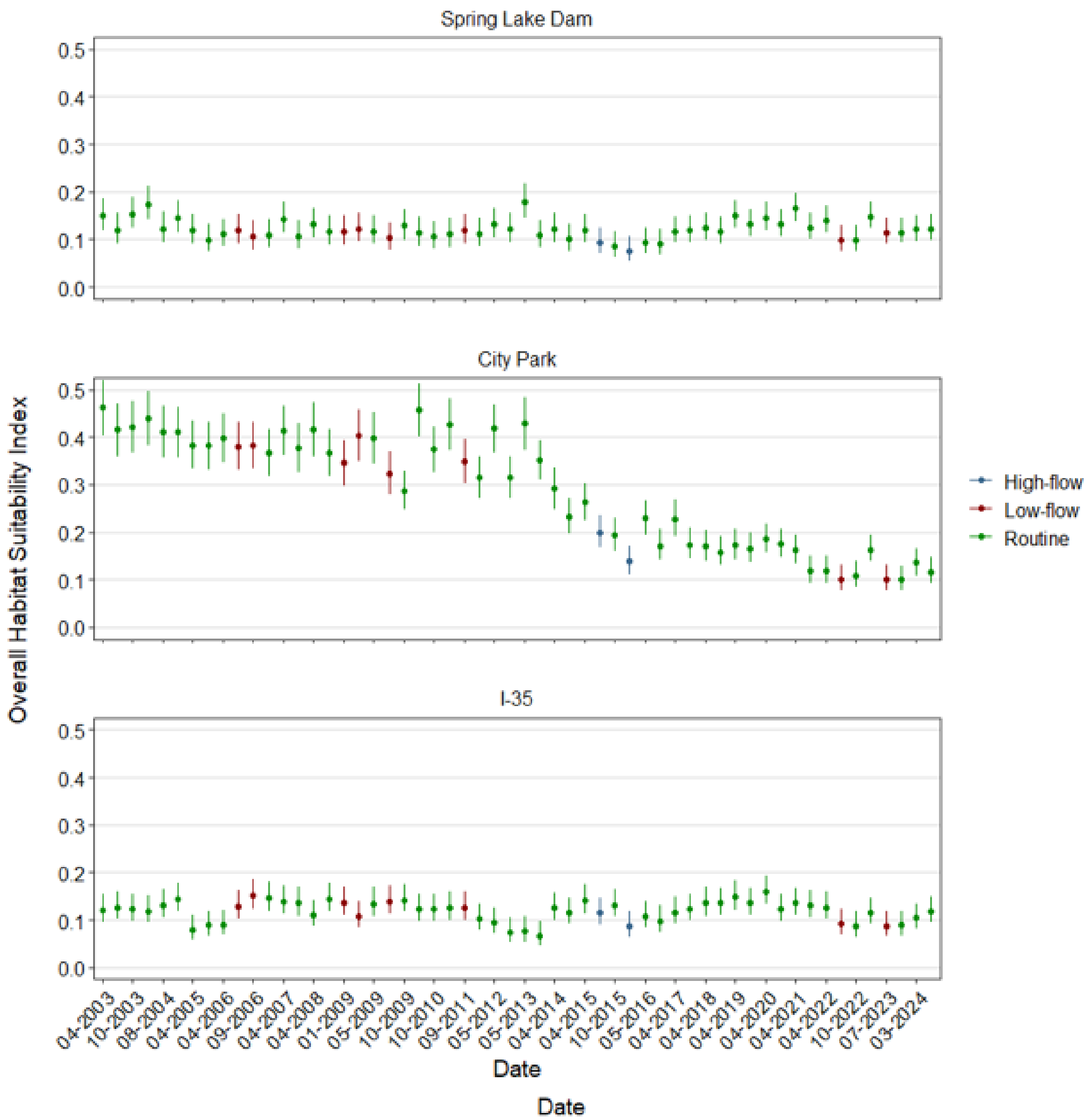

Figure E10. Overall Habitat Suitability Index (OHSI) (±95% CI) from 2003–2024 among study reaches in the San Marcos River.

Fish Community

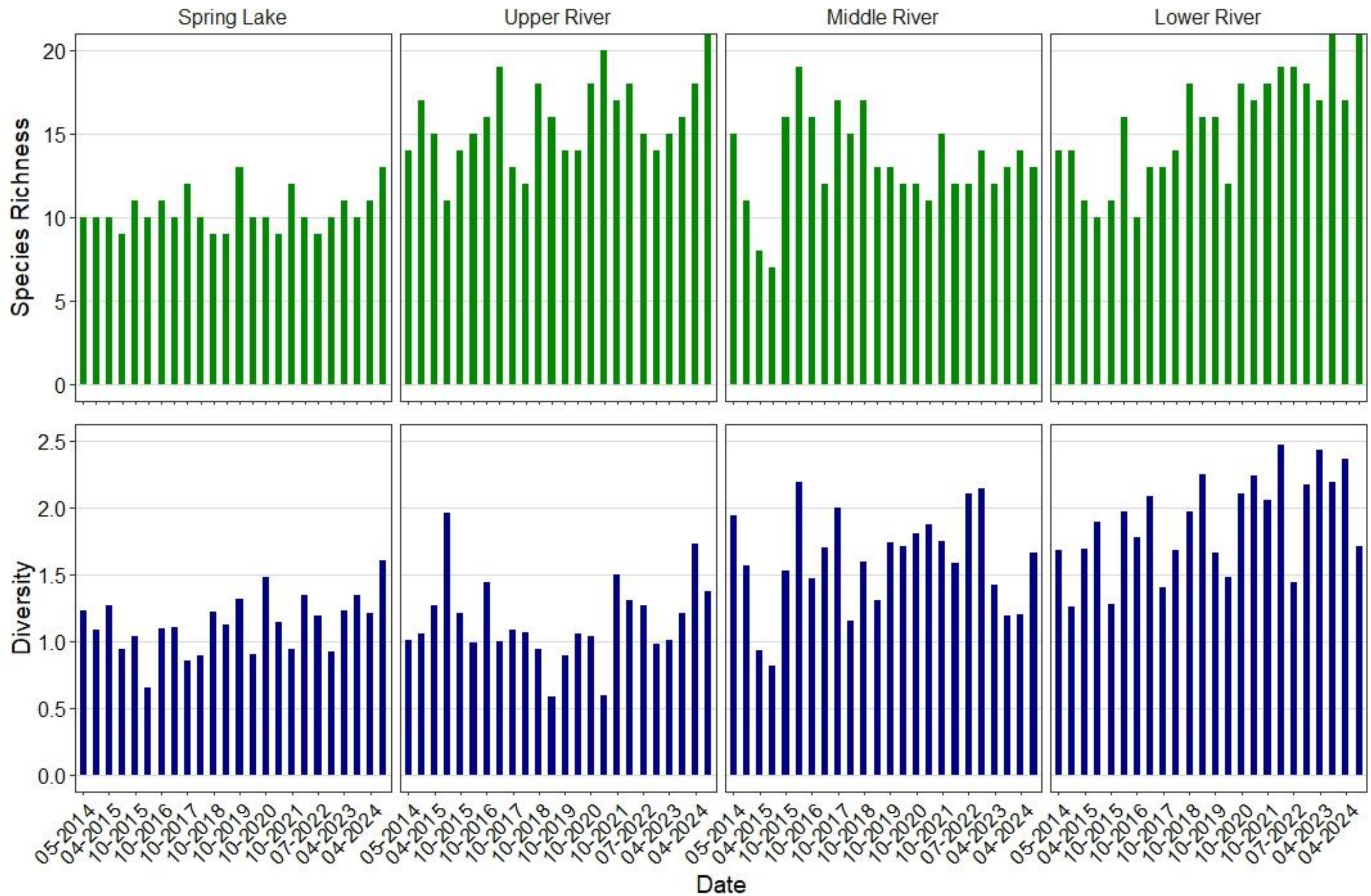

Figure E11. **Bar graphs displaying temporal trends in species richness and diversity among study reaches from 2014–2024 during fish community sampling in the San Marcos Springs/River.**

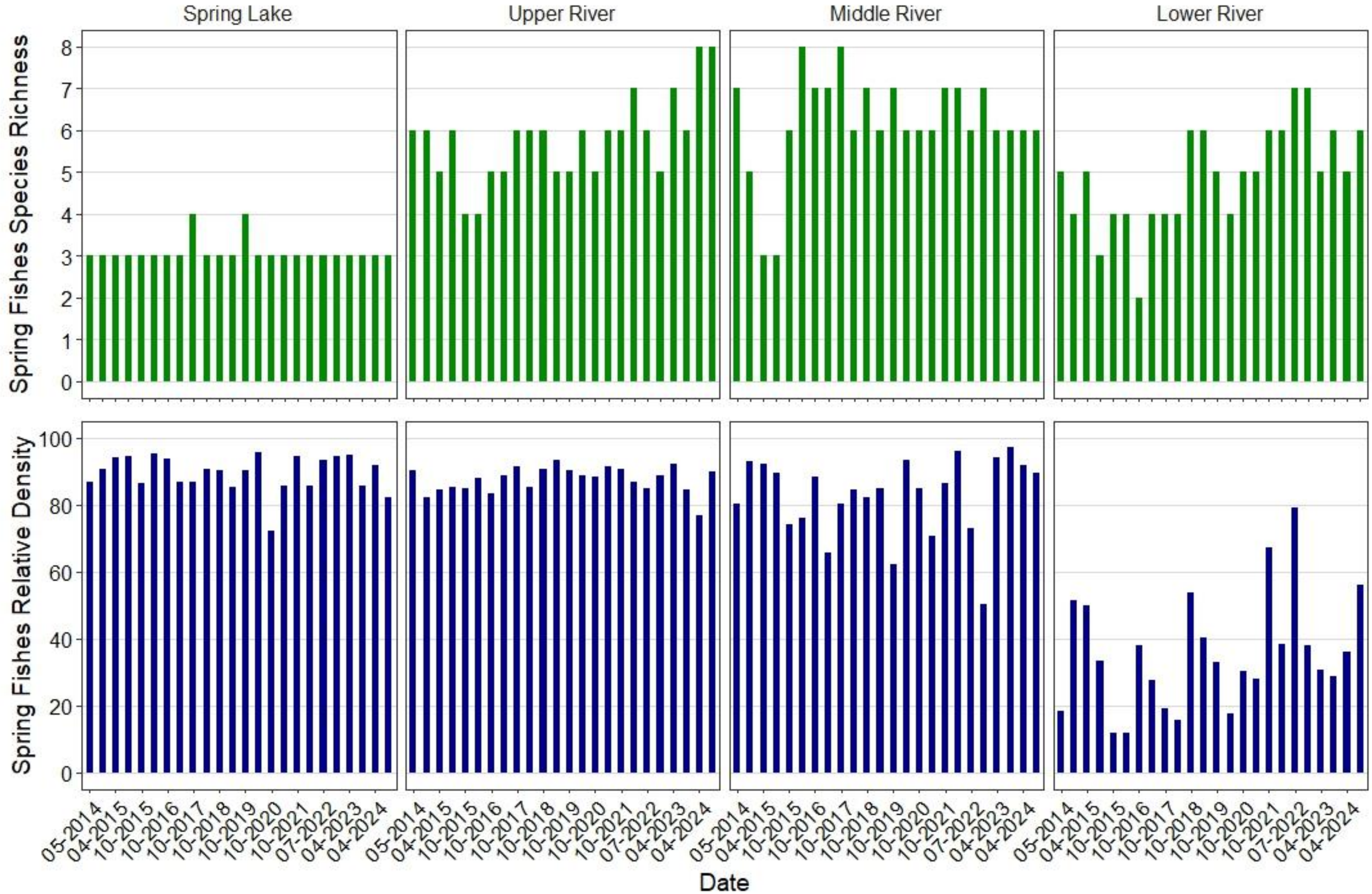

Figure E12. **Bar graphs displaying temporal trends in spring fishes species richness and percent relative density among study reaches from 2014–2024 during fish community sampling in the San Marcos Springs/River.**

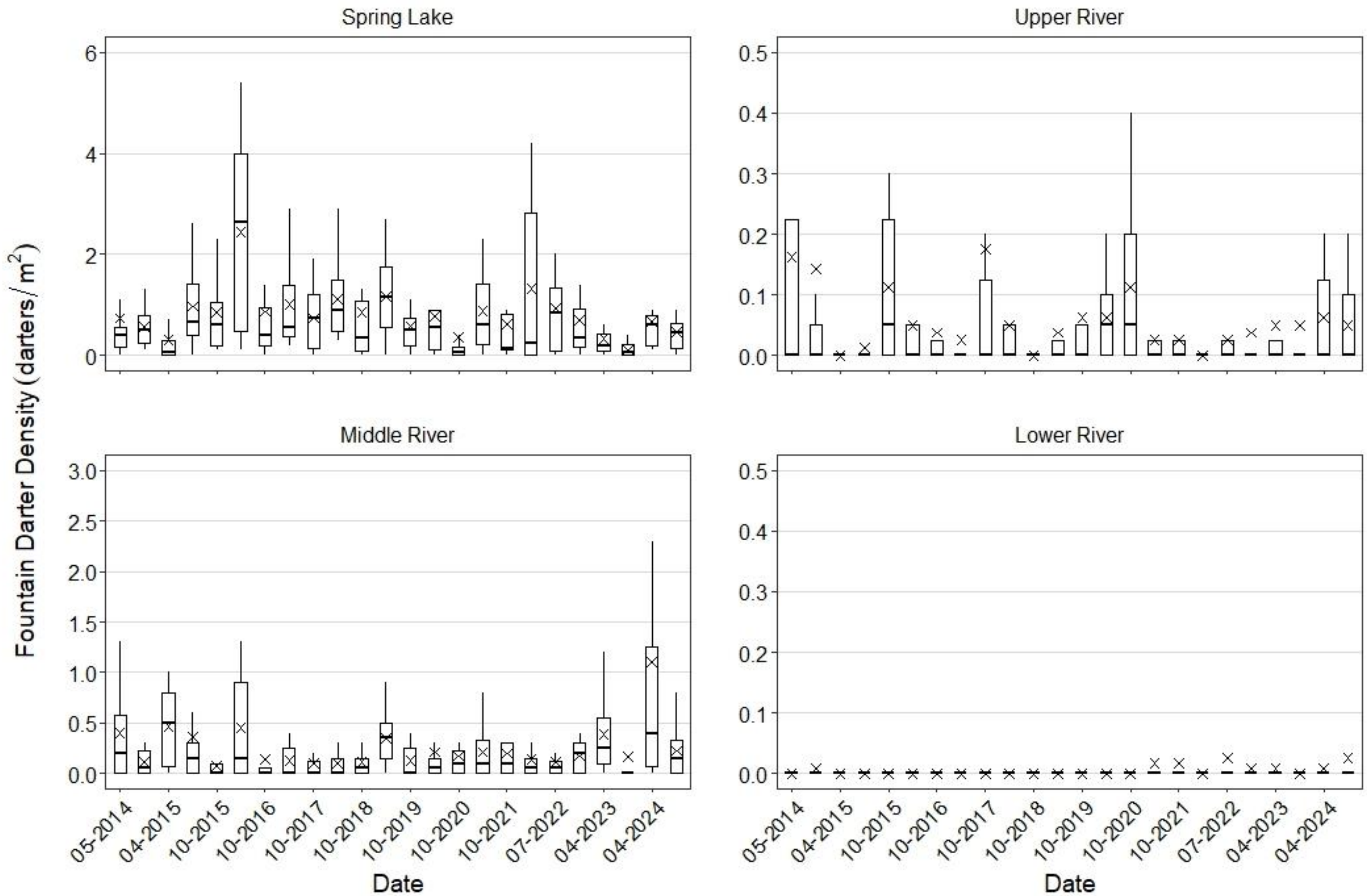

Figure E13. **Boxplots displaying temporal trends in Fountain Darter density (darters/m^2) among study reaches from 2014–2024 during fish community microhabitat sampling in the San Marcos Springs/River. The thick horizontal line in each box is the median, x represents the mean, and the upper/lower bounds of each box represents the interquartile range. Whiskers represent minimum/maximum values up to 1.5 times the interquartile range.**

San Marcos Salamander

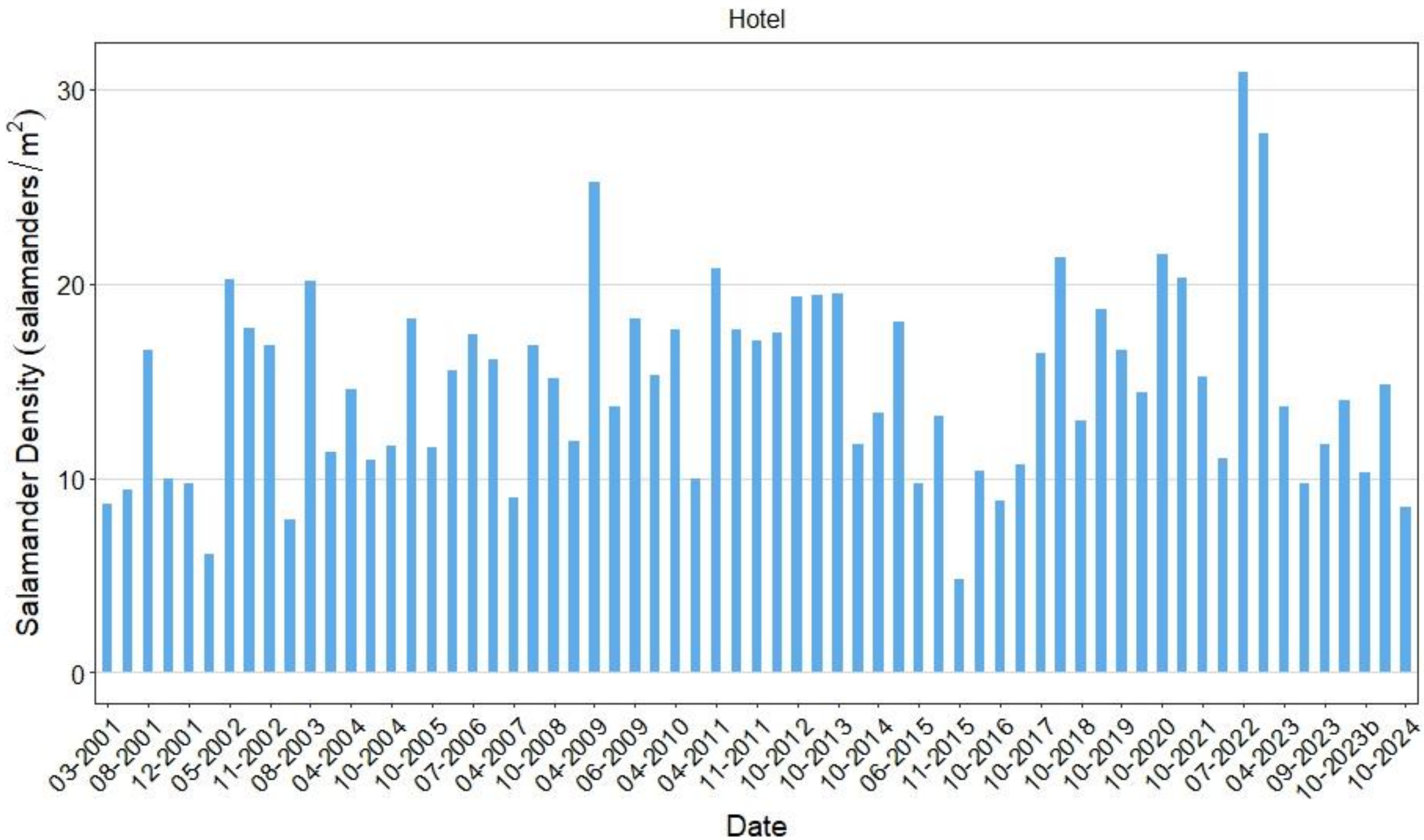

Figure E14. **San Marcos Salamander density from 2001–2024 at the Hotel Site.**

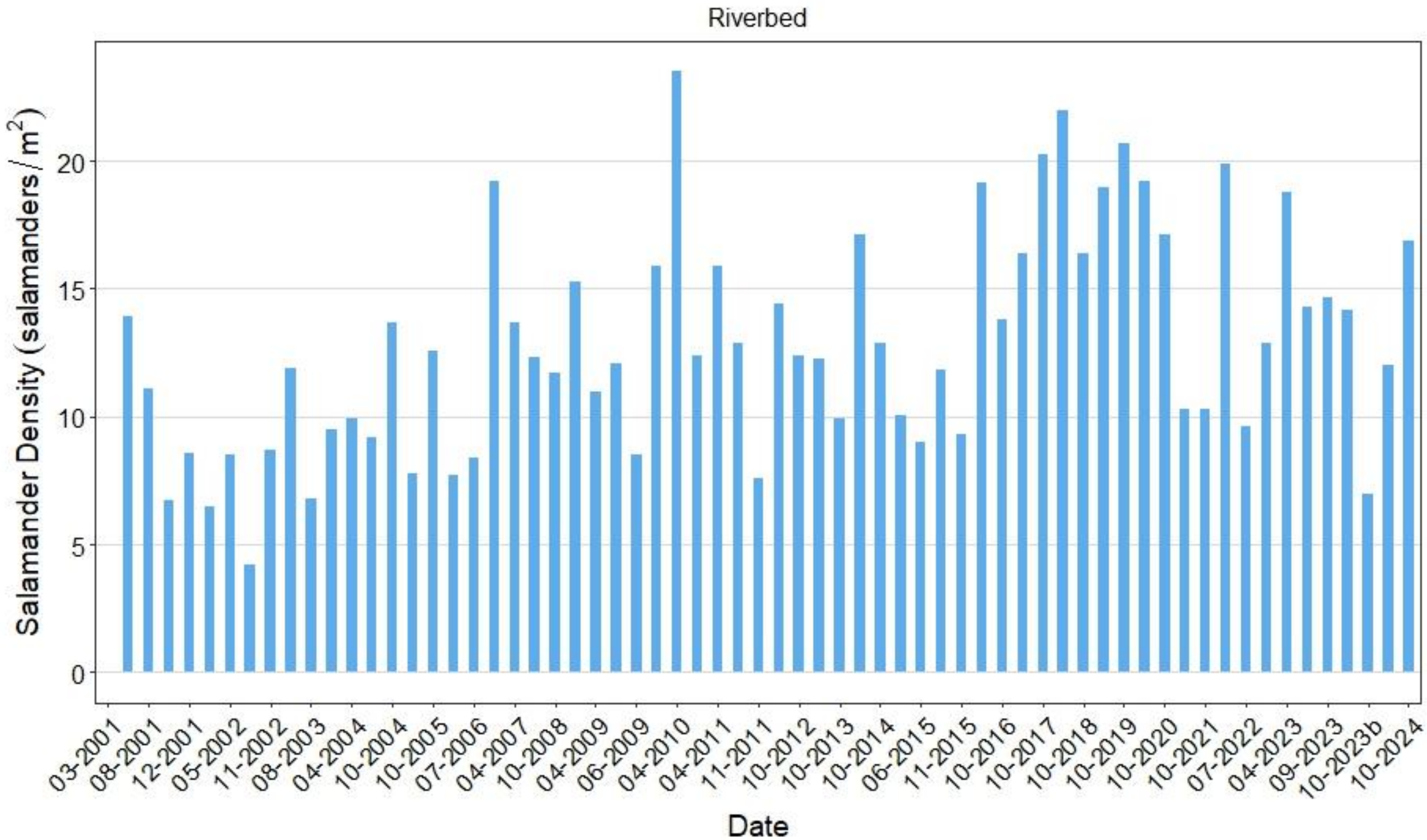

Figure E15. **San Marcos Salamander density from 2001–2024 at the Riverbed Site.**

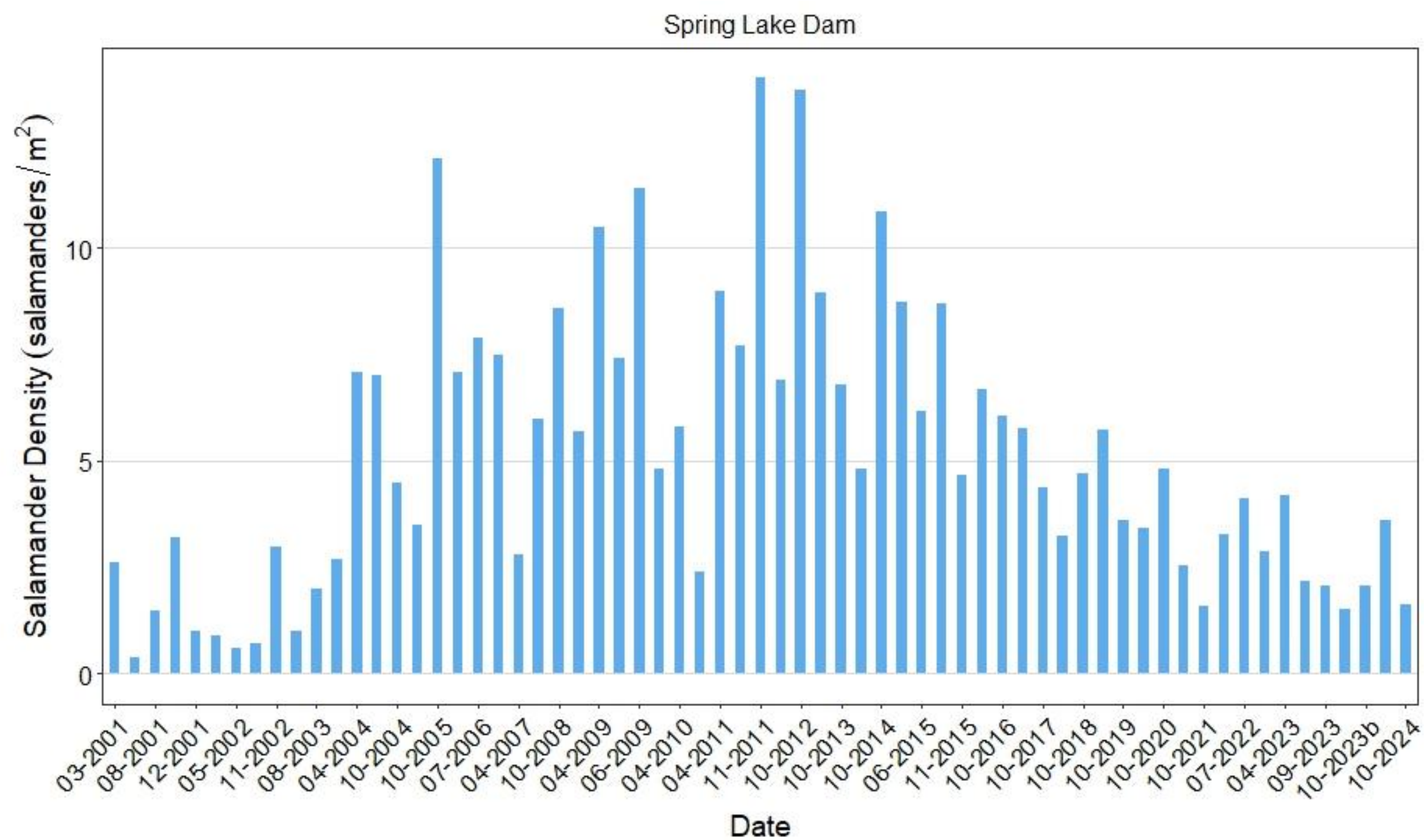

Figure E16. **San Marcos Salamander density from 2001–2024 at the Spring Lake Dam Site.**

APPENDIX E: MACROINVERTEBRATE RAW DATA

Site	Date	Season	Class	Order	Family	FinalID	Counts
Spring Lake	4/24/2024	Spring	Malacostraca	Amphipoda	Hyalellidae	Hyalella	321
Spring Lake	4/24/2024	Spring	Insecta	Coleoptera	Psephenidae	Psephenus texanus	2
Spring Lake	4/24/2024	Spring	Insecta	Ephemeroptera	Baetidae	Callibaetis	2
Spring Lake	4/24/2024	Spring	Insecta	Ephemeroptera	Heptageniidae	Stenonema	1
Spring Lake	4/24/2024	Spring	Insecta	Ephemeroptera	Leptohyphidae	Tricorythodes	7
Spring Lake	4/24/2024	Spring	Insecta	Hemiptera	Naucoridae	Ambrysus	1
Spring Lake	4/24/2024	Spring	Insecta	Odonata	Coenagrionidae	Enallagma	2
Spring Lake	4/24/2024	Spring	Insecta	Trichoptera	Helicopsychidae	Helicopsyche	4
Spring Lake	4/24/2024	Spring	Insecta	Trichoptera	Leptoceridae	Nectopsyche	1
Spring Lake	4/24/2024	Spring		Tricladida	Dugesiidae	Dugesia	1
Spring Lake	4/24/2024	Spring	Gastropoda		Pleuroceridae	Elimia	3
Spring Lake	4/24/2024	Spring	Clitellata			Hirudinea	1
Spring Lake	4/24/2024	Spring	Clitellata			Oligochaeta	10
Spring Lake	10/21/2024	Fall	Malacostraca	Amphipoda	Hyalellidae	Hyalella	94
Spring Lake	10/21/2024	Fall	Malacostraca	Decapoda	Cambaridae	Cambaridae	7
Spring Lake	10/21/2024	Fall	Insecta	Diptera	Chironomidae	Chironomidae	5
Spring Lake	10/21/2024	Fall	Insecta	Ephemeroptera	Baetidae	Callibaetis	10
Spring Lake	10/21/2024	Fall	Insecta	Ephemeroptera	Leptohyphidae	Tricorythodes	21
Spring Lake	10/21/2024	Fall	Insecta	Hemiptera	Naucoridae	Ambrysus	1
Spring Lake	10/21/2024	Fall	Annelida	Hirudinea	Glossosiphonidae	Glossosiphonidae	1
Spring Lake	10/21/2024	Fall	Insecta	Odonata	Coenagrionidae	Enallagma	2
Spring Lake	10/21/2024	Fall	Insecta	Odonata	Corduliidae	Epitheca	1
Spring Lake	10/21/2024	Fall	Insecta	Trichoptera	Helicopsychidae	Helicopsyche	1
Spring Lake	10/21/2024	Fall		Tricladida	Dugesiidae	Dugesia	2
Spring Lake	10/21/2024	Fall	Gastropoda		Pleuroceridae	Elimia	7
Spring Lake	10/21/2024	Fall	Clitellata			Oligochaeta	5
Spring Lake Dam	4/24/2024	Spring	Malacostraca	Amphipoda	Hyalellidae	Hyalella	30
Spring Lake Dam	4/24/2024	Spring	Insecta	Coleoptera	Elmidae	Macrelmis	1
Spring Lake Dam	4/24/2024	Spring	Insecta	Coleoptera	Psephenidae	Psephenus texanus	5

Spring Lake Dam	4/24/2024	Spring	Insecta	Decapoda	Simuliidae	Simulium	29
Spring Lake Dam	4/24/2024	Spring	Insecta	Diptera	Chironomidae	Chironomidae	1
Spring Lake Dam	4/24/2024	Spring	Insecta	Diptera	Stratiomyidae	Euparyphus	1
Spring Lake Dam	4/24/2024	Spring	Insecta	Ephemeroptera	Baetidae	Baetodes	2
Spring Lake Dam	4/24/2024	Spring	Insecta	Ephemeroptera	Baetidae	Fallceon	6
Spring Lake Dam	4/24/2024	Spring	Insecta	Ephemeroptera	Leptohyphidae	Leptohyphes	50
Spring Lake Dam	4/24/2024	Spring	Insecta	Ephemeroptera	Leptophlebiidae	Thraulodes	12
Spring Lake Dam	4/24/2024	Spring	Insecta	Hemiptera	Naucoridae	Ambrysus	21
Spring Lake Dam	4/24/2024	Spring	Insecta	Odonata	Calopterygidae	Hetaerina	1
Spring Lake Dam	4/24/2024	Spring	Insecta	Odonata	Coenagrionidae	Argia	1
Spring Lake Dam	4/24/2024	Spring	Insecta	Odonata	Coenagrionidae	Enallagma	1
Spring Lake Dam	4/24/2024	Spring	Insecta	Trichoptera	Helicopsychidae	Helicopsyche	4
Spring Lake Dam	4/24/2024	Spring	Insecta	Trichoptera	Hydropsychidae	Smicridea	4
Spring Lake Dam	4/24/2024	Spring	Insecta	Trichoptera	Leptoceridae	Nectopsyche	2
Spring Lake Dam	4/24/2024	Spring	Insecta	Trichoptera	Philopotamidae	Chimarra	12
Spring Lake Dam	4/24/2024	Spring		Tricladida	Dugesiidae	Dugesia	11
Spring Lake Dam	4/24/2024	Spring	Gastropoda		Planorbidae	Planorbella	1
Spring Lake Dam	4/24/2024	Spring	Gastropoda		Pleuroceridae	Elimia	4
Spring Lake Dam	4/24/2024	Spring	Clitellata			Hirudinea	1
Spring Lake Dam	4/24/2024	Spring	Clitellata			Oligochaeta	4
Spring Lake Dam	10/21/2024	Fall	Malacostraca	Amphipoda	Hyalellidae	Hyalella	4
Spring Lake Dam	10/21/2024	Fall	Insecta	Coleoptera	Elmidae	Macrelmis	1
Spring Lake Dam	10/21/2024	Fall	Insecta	Coleoptera	Psephenidae	Psephenus texanus	2
Spring Lake Dam	10/21/2024	Fall	Insecta	Decapoda	Simuliidae	Simulium	18
Spring Lake Dam	10/21/2024	Fall	Insecta	Diptera	Chironomidae	Chironomidae	1
Spring Lake Dam	10/21/2024	Fall	Insecta	Ephemeroptera	Baetidae	Baetis	2
Spring Lake Dam	10/21/2024	Fall	Insecta	Ephemeroptera	Baetidae	Baetodes	7
Spring Lake Dam	10/21/2024	Fall	Insecta	Ephemeroptera	Baetidae	Fallceon	2
Spring Lake Dam	10/21/2024	Fall	Insecta	Ephemeroptera	Leptohyphidae	Leptohyphes	10
Spring Lake Dam	10/21/2024	Fall	Insecta	Ephemeroptera	Leptophlebiidae	Thraulodes	4

Spring Lake Dam	10/21/2024	Fall	Insecta	Hemiptera	Naucoridae	Ambrysus	17
Spring Lake Dam	10/21/2024	Fall	Insecta	Megaloptera	Corydalidae	Corydalus	8
Spring Lake Dam	10/21/2024	Fall	Insecta	Odonata	Calopterygidae	Hetaerina	2
Spring Lake Dam	10/21/2024	Fall	Insecta	Odonata	Coenagrionidae	Argia	6
Spring Lake Dam	10/21/2024	Fall	Insecta	Odonata	Libellulidae	Brechmorhoga	9
Spring Lake Dam	10/21/2024	Fall	Insecta	Trichoptera	Glossosomatidae	Protoptila	1
Spring Lake Dam	10/21/2024	Fall	Insecta	Trichoptera	Helicopsychidae	Helicopsyche	8
Spring Lake Dam	10/21/2024	Fall	Insecta	Trichoptera	Hydropsychidae	Smicridea	1
Spring Lake Dam	10/21/2024	Fall	Insecta	Trichoptera	Leptoceridae	Nectopsyche	1
Spring Lake Dam	10/21/2024	Fall	Insecta	Trichoptera	Philopotamidae	Chimarra	46
Spring Lake Dam	10/21/2024	Fall		Tricladida	Dugesiidae	Dugesia	9
Spring Lake Dam	10/21/2024	Fall	Gastropoda		Pleuroceridae	Elimia	9
Spring Lake Dam	10/21/2024	Fall	Gastropoda		Thiaridae	Melanoides tuberculata	2
Spring Lake Dam	10/21/2024	Fall	Clitellata			Oligochaeta	16
City Park	4/24/2024	Spring	Malacostraca	Amphipoda	Hyalellidae	Hyalella	57
City Park	4/24/2024	Spring	Insecta	Ephemeroptera	Baetidae	Fallceon	2
City Park	4/24/2024	Spring	Insecta	Ephemeroptera	Leptohyphidae	Tricorythodes	42
City Park	4/24/2024	Spring	Insecta	Odonata	Coenagrionidae	Argia	1
City Park	4/24/2024	Spring	Insecta	Trichoptera	Glossosomatidae	Protoptila	4
City Park	4/24/2024	Spring	Insecta	Trichoptera	Helicopsychidae	Helicopsyche	2
City Park	4/24/2024	Spring	Insecta	Trichoptera	Leptoceridae	Nectopsyche	24
City Park	4/24/2024	Spring	Gastropoda		Pleuroceridae	Elimia	19
City Park	4/24/2024	Spring	Gastropoda		Thiaridae	Melanoides tuberculata	13
City Park	4/24/2024	Spring	Clitellata			Hirudinea	3
City Park	4/24/2024	Spring	Clitellata			Oligochaeta	4
City Park	10/21/2024	Fall	Malacostraca	Amphipoda	Hyalellidae	Hyalella	33
City Park	10/21/2024	Fall	Insecta	Diptera	Chironomidae	Chironomidae	2
City Park	10/21/2024	Fall	Insecta	Ephemeroptera	Baetidae	Baetis	7
City Park	10/21/2024	Fall	Insecta	Ephemeroptera	Leptohyphidae	Tricorythodes	53
City Park	10/21/2024	Fall	Insecta	Hemiptera	Corixidae	Trichocorixa	1

City Park	10/21/2024	Fall	Annelida	Hirudinea	Glossosiphonidae	Glossosiphonidae	3
City Park	10/21/2024	Fall	Insecta	Odonata	Aeshnidae	Aeshnidae	4
City Park	10/21/2024	Fall	Insecta	Trichoptera	Glossosomatidae	Protoptila	1
City Park	10/21/2024	Fall	Insecta	Trichoptera	Leptoceridae	Nectopsyche	7
City Park	10/21/2024	Fall		Tricladida	Dugesiidae	Dugesia	1
City Park	10/21/2024	Fall	Gastropoda		Pleuroceridae	Elimia	26
City Park	10/21/2024	Fall	Gastropoda		Thiaridae	Melanoides tuberculata	19
I-35	4/24/2024	Spring	Malacostraca	Amphipoda	Hyalellidae	Hyalella	4
I-35	4/24/2024	Spring	Insecta	Coleoptera	Elmidae	Macrelmis	1
I-35	4/24/2024	Spring	Insecta	Coleoptera	Elmidae	Stenelmis	1
I-35	4/24/2024	Spring	Insecta	Ephemeroptera	Baetidae	Fallceon	1
I-35	4/24/2024	Spring	Insecta	Ephemeroptera	Leptohyphidae	Leptohyphes	1
I-35	4/24/2024	Spring	Insecta	Ephemeroptera	Leptohyphidae	Tricorythodes	1
I-35	4/24/2024	Spring	Insecta	Ephemeroptera	Leptophlebiidae	Thraulodes	17
I-35	4/24/2024	Spring	Insecta	Hemiptera	Naucoridae	Ambrysus	1
I-35	4/24/2024	Spring	Insecta	Hemiptera	Naucoridae	Limnocoris lutzi	5
I-35	4/24/2024	Spring	Insecta	Trichoptera	Glossosomatidae	Protoptila	35
I-35	4/24/2024	Spring	Insecta	Trichoptera	Helicopsychidae	Helicopsyche	45
I-35	4/24/2024	Spring	Insecta	Trichoptera	Leptoceridae	Nectopsyche	6
I-35	4/24/2024	Spring	Insecta	Trichoptera	Rhyacophilidae	Rhyacophila	2
I-35	4/24/2024	Spring		Tricladida	Dugesiidae	Dugesia	6
I-35	4/24/2024	Spring	Gastropoda		Pleuroceridae	Elimia	20
I-35	4/24/2024	Spring	Gastropoda		Thiaridae	Melanoides tuberculata	28
I-35	4/24/2024	Spring	Clitellata			Hirudinea	1
I-35	4/24/2024	Spring	Clitellata			Oligochaeta	2
I-35	10/21/2024	Fall	Malacostraca	Amphipoda	Hyalellidae	Hyalella	2
I-35	10/21/2024	Fall	Malacostraca	Decapoda	Cambaridae	Cambaridae	2
I-35	10/21/2024	Fall	Insecta	Diptera	Chironomidae	Chironomidae	2
I-35	10/21/2024	Fall	Insecta	Ephemeroptera	Baetidae	Baetis	1
I-35	10/21/2024	Fall	Insecta	Ephemeroptera	Leptophlebiidae	Thraulodes	15

I-35	10/21/2024	Fall	Insecta	Hemiptera	Naucoridae	Ambrysus	1
I-35	10/21/2024	Fall	Insecta	Hemiptera	Naucoridae	Limnocoris lutzi	13
I-35	10/21/2024	Fall	Annelida	Hirudinea	Glossosiphonidae	Glossosiphonidae	1
I-35	10/21/2024	Fall	Insecta	Odonata	Gomphidae	Hagenius brevistylus	1
I-35	10/21/2024	Fall	Insecta	Trichoptera	Glossosomatidae	Protoptila	13
I-35	10/21/2024	Fall	Insecta	Trichoptera	Helicopsychidae	Helicopsyche	47
I-35	10/21/2024	Fall	Insecta	Trichoptera	Hydroptilidae	Hydroptila	1
I-35	10/21/2024	Fall	Insecta	Trichoptera	Leptoceridae	Nectopsyche	9
I-35	10/21/2024	Fall	Insecta	Trichoptera	Philopotamidae	Chimarra	1
I-35	10/21/2024	Fall		Tricladida	Dugesiidae	Dugesia	5
I-35	10/21/2024	Fall	Gastropoda		Pleuroceridae	Elimia	23
I-35	10/21/2024	Fall	Gastropoda		Thiaridae	Melanoides tuberculata	20
I-35	10/21/2024	Fall	Clitellata			Oligochaeta	1

APPENDIX F: DROP-NET RAW DATA

SiteCode	Reach	Site_No	Date	Dip_Net	Species	Length	Count
3103	Spring Lake Dam	Open-1	2024-04-17	1	No fish collected		
3103	Spring Lake Dam	Open-1	2024-04-17	2	Etheostoma fonticola	12	1
3103	Spring Lake Dam	Open-1	2024-04-17	3	No fish collected		
3103	Spring Lake Dam	Open-1	2024-04-17	4	No fish collected		
3103	Spring Lake Dam	Open-1	2024-04-17	5	No fish collected		
3103	Spring Lake Dam	Open-1	2024-04-17	6	No fish collected		
3103	Spring Lake Dam	Open-1	2024-04-17	7	No fish collected		
3103	Spring Lake Dam	Open-1	2024-04-17	8	No fish collected		
3103	Spring Lake Dam	Open-1	2024-04-17	9	No fish collected		
3103	Spring Lake Dam	Open-1	2024-04-17	10	No fish collected		
3103	Spring Lake Dam	Open-1	2024-04-17	11	No fish collected		
3103	Spring Lake Dam	Open-1	2024-04-17	12	No fish collected		
3104	Spring Lake Dam	Ziz-1	2024-04-17	1	No fish collected		
3104	Spring Lake Dam	Ziz-1	2024-04-17	2	Gambusia sp.	33	1
3104	Spring Lake Dam	Ziz-1	2024-04-17	3	No fish collected		
3104	Spring Lake Dam	Ziz-1	2024-04-17	4	Gambusia sp.	37	1
3104	Spring Lake Dam	Ziz-1	2024-04-17	5	Gambusia sp.	42	1
3104	Spring Lake Dam	Ziz-1	2024-04-17	6	Gambusia sp.	38	1
3104	Spring Lake Dam	Ziz-1	2024-04-17	6	Gambusia sp.	32	1
3104	Spring Lake Dam	Ziz-1	2024-04-17	6	Gambusia sp.	25	1
3104	Spring Lake Dam	Ziz-1	2024-04-17	6	Gambusia sp.	24	1
3104	Spring Lake Dam	Ziz-1	2024-04-17	7	No fish collected		
3104	Spring Lake Dam	Ziz-1	2024-04-17	8	No fish collected		
3104	Spring Lake Dam	Ziz-1	2024-04-17	9	Gambusia sp.	26	1
3104	Spring Lake Dam	Ziz-1	2024-04-17	9	Gambusia sp.	21	1
3104	Spring Lake Dam	Ziz-1	2024-04-17	10	Gambusia sp.	25	1
3104	Spring Lake Dam	Ziz-1	2024-04-17	11	No fish collected		
3104	Spring Lake Dam	Ziz-1	2024-04-17	12	Lepomis miniatus	25	1
3104	Spring Lake Dam	Ziz-1	2024-04-17	13	Gambusia sp.	30	1

3104	Spring Lake Dam	Ziz-1	2024-04-17	14	No fish collected		
3104	Spring Lake Dam	Ziz-1	2024-04-17	15	No fish collected		
3105	Spring Lake Dam	Ziz-2	2024-04-17	1	Gambusia sp.	20	1
3105	Spring Lake Dam	Ziz-2	2024-04-17	1	Gambusia sp.	13	1
3105	Spring Lake Dam	Ziz-2	2024-04-17	1	Gambusia sp.	24	1
3105	Spring Lake Dam	Ziz-2	2024-04-17	1	Gambusia sp.	22	1
3105	Spring Lake Dam	Ziz-2	2024-04-17	1	Gambusia sp.	23	1
3105	Spring Lake Dam	Ziz-2	2024-04-17	1	Gambusia sp.	10	1
3105	Spring Lake Dam	Ziz-2	2024-04-17	2	Gambusia sp.	33	1
3105	Spring Lake Dam	Ziz-2	2024-04-17	2	Gambusia sp.	21	1
3105	Spring Lake Dam	Ziz-2	2024-04-17	2	Gambusia sp.	22	1
3105	Spring Lake Dam	Ziz-2	2024-04-17	2	Gambusia sp.	28	1
3105	Spring Lake Dam	Ziz-2	2024-04-17	3	Gambusia sp.	15	1
3105	Spring Lake Dam	Ziz-2	2024-04-17	4	Gambusia sp.	24	1
3105	Spring Lake Dam	Ziz-2	2024-04-17	5	Gambusia sp.	28	1
3105	Spring Lake Dam	Ziz-2	2024-04-17	5	Gambusia sp.	12	1
3105	Spring Lake Dam	Ziz-2	2024-04-17	6	No fish collected		
3105	Spring Lake Dam	Ziz-2	2024-04-17	7	No fish collected		
3105	Spring Lake Dam	Ziz-2	2024-04-17	8	Etheostoma fonticola	19	1
3105	Spring Lake Dam	Ziz-2	2024-04-17	9	No fish collected		
3105	Spring Lake Dam	Ziz-2	2024-04-17	10	No fish collected		
3105	Spring Lake Dam	Ziz-2	2024-04-17	11	No fish collected		
3105	Spring Lake Dam	Ziz-2	2024-04-17	12	No fish collected		
3105	Spring Lake Dam	Ziz-2	2024-04-17	13	No fish collected		
3105	Spring Lake Dam	Ziz-2	2024-04-17	14	No fish collected		
3105	Spring Lake Dam	Ziz-2	2024-04-17	15	No fish collected		
3106	Spring Lake Dam	Pota-1	2024-04-17	1	Gambusia sp.	18	1
3106	Spring Lake Dam	Pota-1	2024-04-17	1	Gambusia sp.	20	1
3106	Spring Lake Dam	Pota-1	2024-04-17	2	Gambusia sp.	20	1
3106	Spring Lake Dam	Pota-1	2024-04-17	3	Dionda nigrotaeniata	31	1

3106	Spring Lake Dam	Pota-1	2024-04-17	4	Gambusia sp.	40	1
3106	Spring Lake Dam	Pota-1	2024-04-17	5	No fish collected		
3106	Spring Lake Dam	Pota-1	2024-04-17	6	No fish collected		
3106	Spring Lake Dam	Pota-1	2024-04-17	7	No fish collected		
3106	Spring Lake Dam	Pota-1	2024-04-17	8	No fish collected		
3106	Spring Lake Dam	Pota-1	2024-04-17	9	No fish collected		
3106	Spring Lake Dam	Pota-1	2024-04-17	10	No fish collected		
3106	Spring Lake Dam	Pota-1	2024-04-17	11	No fish collected		
3106	Spring Lake Dam	Pota-1	2024-04-17	12	No fish collected		
3106	Spring Lake Dam	Pota-1	2024-04-17	13	No fish collected		
3106	Spring Lake Dam	Pota-1	2024-04-17	14	No fish collected		
3106	Spring Lake Dam	Pota-1	2024-04-17	15	No fish collected		
3107	Spring Lake Dam	Pota-2	2024-04-17	1	Gambusia sp.	28	1
3107	Spring Lake Dam	Pota-2	2024-04-17	1	Gambusia sp.	30	1
3107	Spring Lake Dam	Pota-2	2024-04-17	1	Gambusia sp.	40	1
3107	Spring Lake Dam	Pota-2	2024-04-17	1	Gambusia sp.	25	1
3107	Spring Lake Dam	Pota-2	2024-04-17	1	Gambusia sp.	22	1
3107	Spring Lake Dam	Pota-2	2024-04-17	1	Etheostoma fonticola	12	1
3107	Spring Lake Dam	Pota-2	2024-04-17	2	No fish collected		
3107	Spring Lake Dam	Pota-2	2024-04-17	3	Procambarus sp.		1
3107	Spring Lake Dam	Pota-2	2024-04-17	3	Gambusia sp.	21	1
3107	Spring Lake Dam	Pota-2	2024-04-17	3	Gambusia sp.	33	1
3107	Spring Lake Dam	Pota-2	2024-04-17	4	Etheostoma fonticola	12	1
3107	Spring Lake Dam	Pota-2	2024-04-17	5	Procambarus sp.		1
3107	Spring Lake Dam	Pota-2	2024-04-17	6	No fish collected		
3107	Spring Lake Dam	Pota-2	2024-04-17	7	Gambusia sp.	25	1
3107	Spring Lake Dam	Pota-2	2024-04-17	8	Gambusia sp.	32	1
3107	Spring Lake Dam	Pota-2	2024-04-17	8	Gambusia sp.	32	1
3107	Spring Lake Dam	Pota-2	2024-04-17	9	No fish collected		
3107	Spring Lake Dam	Pota-2	2024-04-17	10	No fish collected		

3107	Spring Lake Dam	Pota-2	2024-04-17	11	No fish collected		
3107	Spring Lake Dam	Pota-2	2024-04-17	12	No fish collected		
3107	Spring Lake Dam	Pota-2	2024-04-17	13	No fish collected		
3107	Spring Lake Dam	Pota-2	2024-04-17	14	No fish collected		
3107	Spring Lake Dam	Pota-2	2024-04-17	15	No fish collected		
3108	Spring Lake Dam	Open-2	2024-04-17	1	No fish collected		
3108	Spring Lake Dam	Open-2	2024-04-17	2	No fish collected		
3108	Spring Lake Dam	Open-2	2024-04-17	3	No fish collected		
3108	Spring Lake Dam	Open-2	2024-04-17	4	No fish collected		
3108	Spring Lake Dam	Open-2	2024-04-17	5	No fish collected		
3108	Spring Lake Dam	Open-2	2024-04-17	6	No fish collected		
3108	Spring Lake Dam	Open-2	2024-04-17	7	No fish collected		
3108	Spring Lake Dam	Open-2	2024-04-17	8	No fish collected		
3108	Spring Lake Dam	Open-2	2024-04-17	9	No fish collected		
3108	Spring Lake Dam	Open-2	2024-04-17	10	No fish collected		
3109	Spring Lake Dam	Sag-1	2024-04-17	1	Gambusia sp.	37	1
3109	Spring Lake Dam	Sag-1	2024-04-17	1	Gambusia sp.	21	1
3109	Spring Lake Dam	Sag-1	2024-04-17	1	Gambusia sp.	22	1
3109	Spring Lake Dam	Sag-1	2024-04-17	1	Gambusia sp.	20	1
3109	Spring Lake Dam	Sag-1	2024-04-17	1	Gambusia sp.	20	1
3109	Spring Lake Dam	Sag-1	2024-04-17	1	Gambusia sp.	11	1
3109	Spring Lake Dam	Sag-1	2024-04-17	1	Gambusia sp.	20	1
3109	Spring Lake Dam	Sag-1	2024-04-17	1	Gambusia sp.	18	1
3109	Spring Lake Dam	Sag-1	2024-04-17	1	Gambusia sp.	14	1
3109	Spring Lake Dam	Sag-1	2024-04-17	1	Gambusia sp.	18	1
3109	Spring Lake Dam	Sag-1	2024-04-17	1	Gambusia sp.	35	1
3109	Spring Lake Dam	Sag-1	2024-04-17	1	Gambusia sp.	10	1
3109	Spring Lake Dam	Sag-1	2024-04-17	1	Etheostoma fonticola	13	1
3109	Spring Lake Dam	Sag-1	2024-04-17	1	Etheostoma fonticola	14	1
3109	Spring Lake Dam	Sag-1	2024-04-17	1	Etheostoma fonticola	32	1

3109	Spring Lake Dam	Sag-1	2024-04-17	1	Etheostoma fonticola	25	1
3109	Spring Lake Dam	Sag-1	2024-04-17	1	Etheostoma fonticola	12	1
3109	Spring Lake Dam	Sag-1	2024-04-17	1	Etheostoma fonticola	15	1
3109	Spring Lake Dam	Sag-1	2024-04-17	1	Etheostoma fonticola	13	1
3109	Spring Lake Dam	Sag-1	2024-04-17	1	Palaemonetes sp.		1
3109	Spring Lake Dam	Sag-1	2024-04-17	2	Gambusia sp.	22	1
3109	Spring Lake Dam	Sag-1	2024-04-17	2	Gambusia sp.	13	1
3109	Spring Lake Dam	Sag-1	2024-04-17	2	Etheostoma fonticola	29	1
3109	Spring Lake Dam	Sag-1	2024-04-17	2	Etheostoma fonticola	19	1
3109	Spring Lake Dam	Sag-1	2024-04-17	2	Etheostoma fonticola	15	1
3109	Spring Lake Dam	Sag-1	2024-04-17	2	Etheostoma fonticola	16	1
3109	Spring Lake Dam	Sag-1	2024-04-17	2	Etheostoma fonticola	31	1
3109	Spring Lake Dam	Sag-1	2024-04-17	2	Etheostoma fonticola	13	1
3109	Spring Lake Dam	Sag-1	2024-04-17	2	Etheostoma fonticola	25	1
3109	Spring Lake Dam	Sag-1	2024-04-17	2	Etheostoma fonticola	18	1
3109	Spring Lake Dam	Sag-1	2024-04-17	2	Etheostoma fonticola	12	1
3109	Spring Lake Dam	Sag-1	2024-04-17	2	Etheostoma fonticola	16	1
3109	Spring Lake Dam	Sag-1	2024-04-17	2	Etheostoma fonticola	11	1
3109	Spring Lake Dam	Sag-1	2024-04-17	2	Etheostoma fonticola	13	1
3109	Spring Lake Dam	Sag-1	2024-04-17	2	Lepomis sp.	16	1
3109	Spring Lake Dam	Sag-1	2024-04-17	2	Lepomis sp.	10	1
3109	Spring Lake Dam	Sag-1	2024-04-17	2	Palaemonetes sp.		1
3109	Spring Lake Dam	Sag-1	2024-04-17	3	Gambusia sp.	16	1
3109	Spring Lake Dam	Sag-1	2024-04-17	3	Gambusia sp.	10	1
3109	Spring Lake Dam	Sag-1	2024-04-17	3	Etheostoma fonticola	18	1
3109	Spring Lake Dam	Sag-1	2024-04-17	3	Etheostoma fonticola	24	1
3109	Spring Lake Dam	Sag-1	2024-04-17	3	Etheostoma fonticola	22	1
3109	Spring Lake Dam	Sag-1	2024-04-17	3	Etheostoma fonticola	18	1
3109	Spring Lake Dam	Sag-1	2024-04-17	3	Etheostoma fonticola	12	1
3109	Spring Lake Dam	Sag-1	2024-04-17	3	Palaemonetes sp.		1

3109	Spring Lake Dam	Sag-1	2024-04-17	4	Etheostoma fonticola	35	1
3109	Spring Lake Dam	Sag-1	2024-04-17	4	Etheostoma fonticola	28	1
3109	Spring Lake Dam	Sag-1	2024-04-17	4	Etheostoma fonticola	20	1
3109	Spring Lake Dam	Sag-1	2024-04-17	5	Gambusia sp.	22	1
3109	Spring Lake Dam	Sag-1	2024-04-17	5	Lepomis miniatus	28	1
3109	Spring Lake Dam	Sag-1	2024-04-17	5	Etheostoma fonticola	40	1
3109	Spring Lake Dam	Sag-1	2024-04-17	5	Etheostoma fonticola	32	1
3109	Spring Lake Dam	Sag-1	2024-04-17	5	Etheostoma fonticola	19	1
3109	Spring Lake Dam	Sag-1	2024-04-17	5	Etheostoma fonticola	19	1
3109	Spring Lake Dam	Sag-1	2024-04-17	5	Etheostoma fonticola	12	1
3109	Spring Lake Dam	Sag-1	2024-04-17	5	Etheostoma fonticola	32	1
3109	Spring Lake Dam	Sag-1	2024-04-17	5	Etheostoma fonticola	16	1
3109	Spring Lake Dam	Sag-1	2024-04-17	5	Procambarus sp.		1
3109	Spring Lake Dam	Sag-1	2024-04-17	5	Lepomis sp.	16	1
3109	Spring Lake Dam	Sag-1	2024-04-17	6	Gambusia sp.	25	1
3109	Spring Lake Dam	Sag-1	2024-04-17	6	Etheostoma fonticola	42	1
3109	Spring Lake Dam	Sag-1	2024-04-17	7	Procambarus sp.		1
3109	Spring Lake Dam	Sag-1	2024-04-17	7	Etheostoma fonticola	25	1
3109	Spring Lake Dam	Sag-1	2024-04-17	7	Gambusia sp.	15	1
3109	Spring Lake Dam	Sag-1	2024-04-17	8	No fish collected		
3109	Spring Lake Dam	Sag-1	2024-04-17	9	Procambarus sp.		1
3109	Spring Lake Dam	Sag-1	2024-04-17	9	Etheostoma fonticola	20	1
3109	Spring Lake Dam	Sag-1	2024-04-17	9	Etheostoma fonticola	19	1
3109	Spring Lake Dam	Sag-1	2024-04-17	9	Etheostoma fonticola	33	1
3109	Spring Lake Dam	Sag-1	2024-04-17	9	Etheostoma fonticola	26	1
3109	Spring Lake Dam	Sag-1	2024-04-17	10	Etheostoma fonticola	29	1
3109	Spring Lake Dam	Sag-1	2024-04-17	10	Etheostoma fonticola	28	1
3109	Spring Lake Dam	Sag-1	2024-04-17	10	Gambusia sp.	37	1
3109	Spring Lake Dam	Sag-1	2024-04-17	10	Lepomis miniatus	60	1
3109	Spring Lake Dam	Sag-1	2024-04-17	11	Procambarus sp.		1

3109	Spring Lake Dam	Sag-1	2024-04-17	11	Etheostoma fonticola	23	1
3109	Spring Lake Dam	Sag-1	2024-04-17	12	Gambusia sp.	25	1
3109	Spring Lake Dam	Sag-1	2024-04-17	13	No fish collected		
3109	Spring Lake Dam	Sag-1	2024-04-17	14	No fish collected		
3109	Spring Lake Dam	Sag-1	2024-04-17	15	Etheostoma fonticola	30	1
3109	Spring Lake Dam	Sag-1	2024-04-17	15	Etheostoma fonticola	21	1
3109	Spring Lake Dam	Sag-1	2024-04-17	16	No fish collected		
3110	Spring Lake Dam	Sag-2	2024-04-17	1	Gambusia sp.	32	1
3110	Spring Lake Dam	Sag-2	2024-04-17	1	Gambusia sp.	35	1
3110	Spring Lake Dam	Sag-2	2024-04-17	1	Gambusia sp.	10	1
3110	Spring Lake Dam	Sag-2	2024-04-17	1	Gambusia sp.	21	1
3110	Spring Lake Dam	Sag-2	2024-04-17	1	Gambusia sp.	32	1
3110	Spring Lake Dam	Sag-2	2024-04-17	1	Gambusia sp.	22	1
3110	Spring Lake Dam	Sag-2	2024-04-17	1	Gambusia sp.	15	1
3110	Spring Lake Dam	Sag-2	2024-04-17	1	Gambusia sp.	25	1
3110	Spring Lake Dam	Sag-2	2024-04-17	1	Gambusia sp.	18	1
3110	Spring Lake Dam	Sag-2	2024-04-17	1	Gambusia sp.	12	1
3110	Spring Lake Dam	Sag-2	2024-04-17	1	Gambusia sp.	21	1
3110	Spring Lake Dam	Sag-2	2024-04-17	1	Gambusia sp.	15	1
3110	Spring Lake Dam	Sag-2	2024-04-17	1	Gambusia sp.	32	1
3110	Spring Lake Dam	Sag-2	2024-04-17	1	Gambusia sp.	32	1
3110	Spring Lake Dam	Sag-2	2024-04-17	1	Gambusia sp.	30	1
3110	Spring Lake Dam	Sag-2	2024-04-17	1	Gambusia sp.	20	1
3110	Spring Lake Dam	Sag-2	2024-04-17	1	Gambusia sp.	35	1
3110	Spring Lake Dam	Sag-2	2024-04-17	1	Gambusia sp.	15	1
3110	Spring Lake Dam	Sag-2	2024-04-17	1	Gambusia sp.	22	1
3110	Spring Lake Dam	Sag-2	2024-04-17	1	Gambusia sp.	27	1
3110	Spring Lake Dam	Sag-2	2024-04-17	1	Gambusia sp.		1
3110	Spring Lake Dam	Sag-2	2024-04-17	1	Gambusia sp.		1
3110	Spring Lake Dam	Sag-2	2024-04-17	1	Gambusia sp.		1

3110	Spring Lake Dam	Sag-2	2024-04-17	1	Gambusia sp.		1
3110	Spring Lake Dam	Sag-2	2024-04-17	1	Gambusia sp.		1
3110	Spring Lake Dam	Sag-2	2024-04-17	1	Gambusia sp.		1
3110	Spring Lake Dam	Sag-2	2024-04-17	1	Gambusia sp.		1
3110	Spring Lake Dam	Sag-2	2024-04-17	1	Gambusia sp.		1
3110	Spring Lake Dam	Sag-2	2024-04-17	1	Gambusia sp.		1
3110	Spring Lake Dam	Sag-2	2024-04-17	1	Gambusia sp.		1
3110	Spring Lake Dam	Sag-2	2024-04-17	1	Gambusia sp.		1
3110	Spring Lake Dam	Sag-2	2024-04-17	1	Gambusia sp.		1
3110	Spring Lake Dam	Sag-2	2024-04-17	1	Gambusia sp.		1
3110	Spring Lake Dam	Sag-2	2024-04-17	1	Gambusia sp.		1
3110	Spring Lake Dam	Sag-2	2024-04-17	1	Gambusia sp.		1
3110	Spring Lake Dam	Sag-2	2024-04-17	1	Gambusia sp.		1
3110	Spring Lake Dam	Sag-2	2024-04-17	1	Gambusia sp.		1
3110	Spring Lake Dam	Sag-2	2024-04-17	1	Gambusia sp.		1
3110	Spring Lake Dam	Sag-2	2024-04-17	1	Procambarus sp.		7
3110	Spring Lake Dam	Sag-2	2024-04-17	1	Etheostoma fonticola	31	1
3110	Spring Lake Dam	Sag-2	2024-04-17	1	Etheostoma fonticola	26	1
3110	Spring Lake Dam	Sag-2	2024-04-17	1	Etheostoma fonticola	16	1
3110	Spring Lake Dam	Sag-2	2024-04-17	1	Etheostoma fonticola	9	1
3110	Spring Lake Dam	Sag-2	2024-04-17	1	Ambloplites rupestris	21	1
3110	Spring Lake Dam	Sag-2	2024-04-17	1	Dionda nigrotaeniata	21	1
3110	Spring Lake Dam	Sag-2	2024-04-17	2	Procambarus sp.		3
3110	Spring Lake Dam	Sag-2	2024-04-17	2	Gambusia sp.		1
3110	Spring Lake Dam	Sag-2	2024-04-17	2	Gambusia sp.		1
3110	Spring Lake Dam	Sag-2	2024-04-17	2	Gambusia sp.		1
3110	Spring Lake Dam	Sag-2	2024-04-17	2	Gambusia sp.		1
3110	Spring Lake Dam	Sag-2	2024-04-17	2	Gambusia sp.		1
3110	Spring Lake Dam	Sag-2	2024-04-17	2	Gambusia sp.		1
3110	Spring Lake Dam	Sag-2	2024-04-17	2	Gambusia sp.		1

3110	Spring Lake Dam	Sag-2	2024-04-17	2	Gambusia sp.		1
3110	Spring Lake Dam	Sag-2	2024-04-17	2	Gambusia sp.		1
3110	Spring Lake Dam	Sag-2	2024-04-17	2	Etheostoma fonticola	15	1
3110	Spring Lake Dam	Sag-2	2024-04-17	2	Etheostoma fonticola	39	1
3110	Spring Lake Dam	Sag-2	2024-04-17	2	Etheostoma fonticola	35	1
3110	Spring Lake Dam	Sag-2	2024-04-17	2	Etheostoma fonticola	15	1
3110	Spring Lake Dam	Sag-2	2024-04-17	2	Etheostoma fonticola	34	1
3110	Spring Lake Dam	Sag-2	2024-04-17	2	Etheostoma fonticola	16	1
3110	Spring Lake Dam	Sag-2	2024-04-17	3	Procambarus sp.		6
3110	Spring Lake Dam	Sag-2	2024-04-17	3	Palaemonetes sp.		1
3110	Spring Lake Dam	Sag-2	2024-04-17	3	Gambusia sp.		1
3110	Spring Lake Dam	Sag-2	2024-04-17	3	Gambusia sp.		1
3110	Spring Lake Dam	Sag-2	2024-04-17	3	Gambusia sp.		1
3110	Spring Lake Dam	Sag-2	2024-04-17	3	Etheostoma fonticola	36	1
3110	Spring Lake Dam	Sag-2	2024-04-17	4	Etheostoma fonticola	29	1
3110	Spring Lake Dam	Sag-2	2024-04-17	4	Etheostoma fonticola	15	1
3110	Spring Lake Dam	Sag-2	2024-04-17	4	Procambarus sp.		4
3110	Spring Lake Dam	Sag-2	2024-04-17	4	Gambusia sp.		1
3110	Spring Lake Dam	Sag-2	2024-04-17	4	Gambusia sp.		1
3110	Spring Lake Dam	Sag-2	2024-04-17	4	Gambusia sp.		1
3110	Spring Lake Dam	Sag-2	2024-04-17	5	Gambusia sp.		1
3110	Spring Lake Dam	Sag-2	2024-04-17	5	Gambusia sp.		1
3110	Spring Lake Dam	Sag-2	2024-04-17	5	Gambusia sp.		1
3110	Spring Lake Dam	Sag-2	2024-04-17	5	Gambusia sp.		1
3110	Spring Lake Dam	Sag-2	2024-04-17	5	Etheostoma fonticola	29	1
3110	Spring Lake Dam	Sag-2	2024-04-17	5	Etheostoma fonticola	14	1
3110	Spring Lake Dam	Sag-2	2024-04-17	5	Procambarus sp.		2
3110	Spring Lake Dam	Sag-2	2024-04-17	6	Gambusia sp.		1
3110	Spring Lake Dam	Sag-2	2024-04-17	6	Gambusia sp.		1
3110	Spring Lake Dam	Sag-2	2024-04-17	7	Gambusia sp.		1

3110	Spring Lake Dam	Sag-2	2024-04-17	7	Gambusia sp.		1
3110	Spring Lake Dam	Sag-2	2024-04-17	7	Gambusia sp.		1
3110	Spring Lake Dam	Sag-2	2024-04-17	7	Gambusia sp.		1
3110	Spring Lake Dam	Sag-2	2024-04-17	7	Gambusia sp.		1
3110	Spring Lake Dam	Sag-2	2024-04-17	8	Procambarus sp.		1
3110	Spring Lake Dam	Sag-2	2024-04-17	8	Palaemonetes sp.		1
3110	Spring Lake Dam	Sag-2	2024-04-17	9	Procambarus sp.		2
3110	Spring Lake Dam	Sag-2	2024-04-17	9	Lepomis miniatus	85	1
3110	Spring Lake Dam	Sag-2	2024-04-17	9	Etheostoma fonticola	28	1
3110	Spring Lake Dam	Sag-2	2024-04-17	10	Procambarus sp.		3
3110	Spring Lake Dam	Sag-2	2024-04-17	10	Etheostoma fonticola	33	1
3110	Spring Lake Dam	Sag-2	2024-04-17	11	Gambusia sp.		1
3110	Spring Lake Dam	Sag-2	2024-04-17	12	Procambarus sp.		1
3110	Spring Lake Dam	Sag-2	2024-04-17	13	Etheostoma fonticola	32	1
3110	Spring Lake Dam	Sag-2	2024-04-17	13	Etheostoma fonticola	33	1
3110	Spring Lake Dam	Sag-2	2024-04-17	13	Etheostoma fonticola	25	1
3110	Spring Lake Dam	Sag-2	2024-04-17	13	Gambusia sp.		1
3110	Spring Lake Dam	Sag-2	2024-04-17	14	Procambarus sp.		1
3110	Spring Lake Dam	Sag-2	2024-04-17	15	No fish collected		
3111	Spring Lake Dam	Hydro-1	2024-04-17	1	Gambusia sp.	26	1
3111	Spring Lake Dam	Hydro-1	2024-04-17	1	Procambarus sp.		1
3111	Spring Lake Dam	Hydro-1	2024-04-17	1	Etheostoma fonticola	34	1
3111	Spring Lake Dam	Hydro-1	2024-04-17	1	Etheostoma fonticola	27	1
3111	Spring Lake Dam	Hydro-1	2024-04-17	2	No fish collected		
3111	Spring Lake Dam	Hydro-1	2024-04-17	3	Procambarus sp.		3
3111	Spring Lake Dam	Hydro-1	2024-04-17	3	Gambusia sp.	22	1
3111	Spring Lake Dam	Hydro-1	2024-04-17	4	No fish collected		
3111	Spring Lake Dam	Hydro-1	2024-04-17	5	Gambusia sp.	19	1
3111	Spring Lake Dam	Hydro-1	2024-04-17	6	No fish collected		
3111	Spring Lake Dam	Hydro-1	2024-04-17	7	Procambarus sp.		2

3111	Spring Lake Dam	Hydro-1	2024-04-17	8	No fish collected		
3111	Spring Lake Dam	Hydro-1	2024-04-17	9	Etheostoma fonticola	19	1
3111	Spring Lake Dam	Hydro-1	2024-04-17	10	No fish collected		
3111	Spring Lake Dam	Hydro-1	2024-04-17	11	No fish collected		
3111	Spring Lake Dam	Hydro-1	2024-04-17	12	Procambarus sp.		2
3111	Spring Lake Dam	Hydro-1	2024-04-17	13	Procambarus sp.		1
3111	Spring Lake Dam	Hydro-1	2024-04-17	14	No fish collected		
3111	Spring Lake Dam	Hydro-1	2024-04-17	15	Gambusia sp.	42	1
3112	Spring Lake Dam	Hydro-2	2024-04-17	1	Gambusia sp.	21	1
3112	Spring Lake Dam	Hydro-2	2024-04-17	1	Gambusia sp.	20	1
3112	Spring Lake Dam	Hydro-2	2024-04-17	1	Gambusia sp.	26	1
3112	Spring Lake Dam	Hydro-2	2024-04-17	1	Etheostoma fonticola	30	1
3112	Spring Lake Dam	Hydro-2	2024-04-17	1	Etheostoma fonticola	19	1
3112	Spring Lake Dam	Hydro-2	2024-04-17	2	No fish collected		
3112	Spring Lake Dam	Hydro-2	2024-04-17	3	No fish collected		
3112	Spring Lake Dam	Hydro-2	2024-04-17	4	No fish collected		
3112	Spring Lake Dam	Hydro-2	2024-04-17	5	Etheostoma fonticola	18	1
3112	Spring Lake Dam	Hydro-2	2024-04-17	6	No fish collected		
3112	Spring Lake Dam	Hydro-2	2024-04-17	7	No fish collected		
3112	Spring Lake Dam	Hydro-2	2024-04-17	8	No fish collected		
3112	Spring Lake Dam	Hydro-2	2024-04-17	9	No fish collected		
3112	Spring Lake Dam	Hydro-2	2024-04-17	10	No fish collected		
3112	Spring Lake Dam	Hydro-2	2024-04-17	11	Etheostoma fonticola	16	1
3112	Spring Lake Dam	Hydro-2	2024-04-17	11	Etheostoma fonticola	29	1
3112	Spring Lake Dam	Hydro-2	2024-04-17	11	Etheostoma fonticola	32	1
3112	Spring Lake Dam	Hydro-2	2024-04-17	12	Etheostoma fonticola	35	1
3112	Spring Lake Dam	Hydro-2	2024-04-17	12	Etheostoma fonticola	14	1
3112	Spring Lake Dam	Hydro-2	2024-04-17	13	No fish collected		
3112	Spring Lake Dam	Hydro-2	2024-04-17	14	No fish collected		
3112	Spring Lake Dam	Hydro-2	2024-04-17	15	No fish collected		

3113	City Park	Open-1	2024-04-17	1	No fish collected		
3113	City Park	Open-1	2024-04-17	2	No fish collected		
3113	City Park	Open-1	2024-04-17	3	No fish collected		
3113	City Park	Open-1	2024-04-17	4	No fish collected		
3113	City Park	Open-1	2024-04-17	5	No fish collected		
3113	City Park	Open-1	2024-04-17	6	No fish collected		
3113	City Park	Open-1	2024-04-17	7	No fish collected		
3113	City Park	Open-1	2024-04-17	8	No fish collected		
3113	City Park	Open-1	2024-04-17	9	No fish collected		
3113	City Park	Open-1	2024-04-17	10	No fish collected		
3114	City Park	Open-2	2024-04-17	1	No fish collected		
3114	City Park	Open-2	2024-04-17	2	No fish collected		
3114	City Park	Open-2	2024-04-17	3	No fish collected		
3114	City Park	Open-2	2024-04-17	4	No fish collected		
3114	City Park	Open-2	2024-04-17	5	No fish collected		
3114	City Park	Open-2	2024-04-17	6	No fish collected		
3114	City Park	Open-2	2024-04-17	7	No fish collected		
3114	City Park	Open-2	2024-04-17	8	No fish collected		
3114	City Park	Open-2	2024-04-17	9	No fish collected		
3114	City Park	Open-2	2024-04-17	10	No fish collected		
3115	City Park	Cab-1	2024-04-17	1	Gambusia sp.	25	1
3115	City Park	Cab-1	2024-04-17	1	Gambusia sp.	26	1
3115	City Park	Cab-1	2024-04-17	1	Gambusia sp.	32	1
3115	City Park	Cab-1	2024-04-17	1	Gambusia sp.	30	1
3115	City Park	Cab-1	2024-04-17	1	Gambusia sp.	27	1
3115	City Park	Cab-1	2024-04-17	1	Gambusia sp.	26	1
3115	City Park	Cab-1	2024-04-17	1	Gambusia sp.	20	1
3115	City Park	Cab-1	2024-04-17	1	Gambusia sp.	25	1
3115	City Park	Cab-1	2024-04-17	1	Gambusia sp.	17	1
3115	City Park	Cab-1	2024-04-17	1	Gambusia sp.	10	1

3115	City Park	Cab-1	2024-04-17	1	Gambusia sp.	10	1
3115	City Park	Cab-1	2024-04-17	1	Gambusia sp.	15	1
3115	City Park	Cab-1	2024-04-17	1	Gambusia sp.	21	1
3115	City Park	Cab-1	2024-04-17	1	Gambusia sp.	20	1
3115	City Park	Cab-1	2024-04-17	1	Gambusia sp.	25	1
3115	City Park	Cab-1	2024-04-17	1	Gambusia sp.	21	1
3115	City Park	Cab-1	2024-04-17	1	Gambusia sp.	21	1
3115	City Park	Cab-1	2024-04-17	1	Gambusia sp.	10	1
3115	City Park	Cab-1	2024-04-17	1	Gambusia sp.	24	1
3115	City Park	Cab-1	2024-04-17	1	Gambusia sp.	25	1
3115	City Park	Cab-1	2024-04-17	1	Gambusia sp.		1
3115	City Park	Cab-1	2024-04-17	1	Gambusia sp.		1
3115	City Park	Cab-1	2024-04-17	1	Gambusia sp.		1
3115	City Park	Cab-1	2024-04-17	1	Gambusia sp.		1
3115	City Park	Cab-1	2024-04-17	1	Gambusia sp.		1
3115	City Park	Cab-1	2024-04-17	1	Gambusia sp.		1
3115	City Park	Cab-1	2024-04-17	1	Gambusia sp.		1
3115	City Park	Cab-1	2024-04-17	1	Gambusia sp.		1
3115	City Park	Cab-1	2024-04-17	1	Gambusia sp.		1
3115	City Park	Cab-1	2024-04-17	1	Gambusia sp.		1
3115	City Park	Cab-1	2024-04-17	1	Gambusia sp.		1
3115	City Park	Cab-1	2024-04-17	1	Gambusia sp.		1
3115	City Park	Cab-1	2024-04-17	1	Gambusia sp.		1
3115	City Park	Cab-1	2024-04-17	1	Gambusia sp.		1
3115	City Park	Cab-1	2024-04-17	1	Gambusia sp.		1
3115	City Park	Cab-1	2024-04-17	1	Gambusia sp.		1
3115	City Park	Cab-1	2024-04-17	1	Gambusia sp.		1
3115	City Park	Cab-1	2024-04-17	1	Gambusia sp.		1
3115	City Park	Cab-1	2024-04-17	1	Gambusia sp.		1
3115	City Park	Cab-1	2024-04-17	1	Gambusia sp.		1

3115	City Park	Cab-1	2024-04-17	1	Gambusia sp.		1
3115	City Park	Cab-1	2024-04-17	1	Gambusia sp.		1
3115	City Park	Cab-1	2024-04-17	1	Gambusia sp.		1
3115	City Park	Cab-1	2024-04-17	1	Gambusia sp.		1
3115	City Park	Cab-1	2024-04-17	1	Gambusia sp.		1
3115	City Park	Cab-1	2024-04-17	1	Gambusia sp.		1
3115	City Park	Cab-1	2024-04-17	1	Gambusia sp.		1
3115	City Park	Cab-1	2024-04-17	1	Gambusia sp.		1
3115	City Park	Cab-1	2024-04-17	1	Gambusia sp.		1
3115	City Park	Cab-1	2024-04-17	1	Gambusia sp.		1
3115	City Park	Cab-1	2024-04-17	1	Gambusia sp.		1
3115	City Park	Cab-1	2024-04-17	1	Gambusia sp.		1
3115	City Park	Cab-1	2024-04-17	1	Gambusia sp.		1
3115	City Park	Cab-1	2024-04-17	1	Gambusia sp.		1
3115	City Park	Cab-1	2024-04-17	1	Gambusia sp.		1
3115	City Park	Cab-1	2024-04-17	1	Gambusia sp.		1
3115	City Park	Cab-1	2024-04-17	1	Gambusia sp.		1
3115	City Park	Cab-1	2024-04-17	1	Gambusia sp.		1
3115	City Park	Cab-1	2024-04-17	1	Gambusia sp.		1
3115	City Park	Cab-1	2024-04-17	1	Gambusia sp.		1
3115	City Park	Cab-1	2024-04-17	1	Gambusia sp.		1
3115	City Park	Cab-1	2024-04-17	1	Gambusia sp.		1
3115	City Park	Cab-1	2024-04-17	1	Gambusia sp.		1
3115	City Park	Cab-1	2024-04-17	1	Gambusia sp.		1
3115	City Park	Cab-1	2024-04-17	1	Gambusia sp.		1
3115	City Park	Cab-1	2024-04-17	1	Etheostoma fonticola	26	1
3115	City Park	Cab-1	2024-04-17	1	Etheostoma fonticola	19	1
3115	City Park	Cab-1	2024-04-17	1	Etheostoma fonticola	16	1
3115	City Park	Cab-1	2024-04-17	1	Etheostoma fonticola	10	1
3115	City Park	Cab-1	2024-04-17	1	Etheostoma fonticola	16	1

3115	City Park	Cab-1	2024-04-17	1	Etheostoma fonticola	10	1
3115	City Park	Cab-1	2024-04-17	1	Etheostoma fonticola	21	1
3115	City Park	Cab-1	2024-04-17	1	Etheostoma fonticola	15	1
3115	City Park	Cab-1	2024-04-17	1	Etheostoma fonticola	17	1
3115	City Park	Cab-1	2024-04-17	1	Etheostoma fonticola	24	1
3115	City Park	Cab-1	2024-04-17	1	Etheostoma fonticola	28	1
3115	City Park	Cab-1	2024-04-17	1	Etheostoma fonticola	23	1
3115	City Park	Cab-1	2024-04-17	1	Etheostoma fonticola	24	1
3115	City Park	Cab-1	2024-04-17	1	Etheostoma fonticola	12	1
3115	City Park	Cab-1	2024-04-17	1	Notropis chalybaeus	21	1
3115	City Park	Cab-1	2024-04-17	1	Notropis chalybaeus	16	1
3115	City Park	Cab-1	2024-04-17	1	Notropis chalybaeus	25	1
3115	City Park	Cab-1	2024-04-17	1	Notropis chalybaeus	18	1
3115	City Park	Cab-1	2024-04-17	1	Palaemonetes sp.		2
3115	City Park	Cab-1	2024-04-17	1	Procambarus sp.		1
3115	City Park	Cab-1	2024-04-17	2	Gambusia sp.		1
3115	City Park	Cab-1	2024-04-17	2	Gambusia sp.		1
3115	City Park	Cab-1	2024-04-17	2	Gambusia sp.		1
3115	City Park	Cab-1	2024-04-17	2	Gambusia sp.		1
3115	City Park	Cab-1	2024-04-17	2	Gambusia sp.		1
3115	City Park	Cab-1	2024-04-17	2	Gambusia sp.		1
3115	City Park	Cab-1	2024-04-17	2	Gambusia sp.		1
3115	City Park	Cab-1	2024-04-17	2	Gambusia sp.		1
3115	City Park	Cab-1	2024-04-17	2	Gambusia sp.		1
3115	City Park	Cab-1	2024-04-17	2	Gambusia sp.		1
3115	City Park	Cab-1	2024-04-17	2	Gambusia sp.		1
3115	City Park	Cab-1	2024-04-17	2	Etheostoma fonticola	30	1
3115	City Park	Cab-1	2024-04-17	2	Etheostoma fonticola	27	1
3115	City Park	Cab-1	2024-04-17	2	Etheostoma fonticola	17	1
3115	City Park	Cab-1	2024-04-17	2	Etheostoma fonticola	21	1

3115	City Park	Cab-1	2024-04-17	2	Etheostoma fonticola	26	1
3115	City Park	Cab-1	2024-04-17	2	Etheostoma fonticola	25	1
3115	City Park	Cab-1	2024-04-17	2	Etheostoma fonticola	29	1
3115	City Park	Cab-1	2024-04-17	2	Etheostoma fonticola	33	1
3115	City Park	Cab-1	2024-04-17	2	Etheostoma fonticola	27	1
3115	City Park	Cab-1	2024-04-17	2	Etheostoma fonticola	24	1
3115	City Park	Cab-1	2024-04-17	2	Etheostoma fonticola	22	1
3115	City Park	Cab-1	2024-04-17	2	Etheostoma fonticola	24	1
3115	City Park	Cab-1	2024-04-17	2	Etheostoma fonticola	20	1
3115	City Park	Cab-1	2024-04-17	2	Etheostoma fonticola	12	1
3115	City Park	Cab-1	2024-04-17	2	Etheostoma fonticola	25	1
3115	City Park	Cab-1	2024-04-17	2	Etheostoma fonticola	19	1
3115	City Park	Cab-1	2024-04-17	2	Etheostoma fonticola	17	1
3115	City Park	Cab-1	2024-04-17	2	Etheostoma fonticola	20	1
3115	City Park	Cab-1	2024-04-17	2	Etheostoma fonticola	20	1
3115	City Park	Cab-1	2024-04-17	2	Etheostoma fonticola	15	1
3115	City Park	Cab-1	2024-04-17	2	Etheostoma fonticola	17	1
3115	City Park	Cab-1	2024-04-17	2	Etheostoma fonticola	24	1
3115	City Park	Cab-1	2024-04-17	2	Etheostoma fonticola	16	1
3115	City Park	Cab-1	2024-04-17	2	Etheostoma fonticola	16	1
3115	City Park	Cab-1	2024-04-17	2	Etheostoma fonticola	12	1
3115	City Park	Cab-1	2024-04-17	2	Etheostoma fonticola	12	1
3115	City Park	Cab-1	2024-04-17	2	Procambarus sp.		1
3115	City Park	Cab-1	2024-04-17	2	Palaemonetes sp.		2
3115	City Park	Cab-1	2024-04-17	2	Notropis chalybaeus	21	1
3115	City Park	Cab-1	2024-04-17	3	Etheostoma fonticola	14	1
3115	City Park	Cab-1	2024-04-17	3	Etheostoma fonticola	23	1
3115	City Park	Cab-1	2024-04-17	3	Etheostoma fonticola	25	1
3115	City Park	Cab-1	2024-04-17	3	Etheostoma fonticola	18	1
3115	City Park	Cab-1	2024-04-17	3	Gambusia sp.		1

3115	City Park	Cab-1	2024-04-17	3	Gambusia sp.		1
3115	City Park	Cab-1	2024-04-17	3	Gambusia sp.		1
3115	City Park	Cab-1	2024-04-17	3	Gambusia sp.		1
3115	City Park	Cab-1	2024-04-17	3	Gambusia sp.		1
3115	City Park	Cab-1	2024-04-17	3	Gambusia sp.		1
3115	City Park	Cab-1	2024-04-17	3	Gambusia sp.		1
3115	City Park	Cab-1	2024-04-17	3	Gambusia sp.		1
3115	City Park	Cab-1	2024-04-17	3	Gambusia sp.		1
3115	City Park	Cab-1	2024-04-17	3	Gambusia sp.		1
3115	City Park	Cab-1	2024-04-17	3	Gambusia sp.		1
3115	City Park	Cab-1	2024-04-17	3	Gambusia sp.		1
3115	City Park	Cab-1	2024-04-17	3	Gambusia sp.		1
3115	City Park	Cab-1	2024-04-17	4	Gambusia sp.		1
3115	City Park	Cab-1	2024-04-17	4	Gambusia sp.		1
3115	City Park	Cab-1	2024-04-17	4	Gambusia sp.		1
3115	City Park	Cab-1	2024-04-17	4	Gambusia sp.		1
3115	City Park	Cab-1	2024-04-17	4	Gambusia sp.		1
3115	City Park	Cab-1	2024-04-17	4	Procambarus sp.		3
3115	City Park	Cab-1	2024-04-17	4	Etheostoma fonticola	20	1
3115	City Park	Cab-1	2024-04-17	4	Etheostoma fonticola	27	1
3115	City Park	Cab-1	2024-04-17	4	Etheostoma fonticola	12	1
3115	City Park	Cab-1	2024-04-17	5	Etheostoma fonticola	21	1
3115	City Park	Cab-1	2024-04-17	5	Etheostoma fonticola	22	1
3115	City Park	Cab-1	2024-04-17	5	Etheostoma fonticola	30	1
3115	City Park	Cab-1	2024-04-17	5	Notropis chalybaeus	20	1
3115	City Park	Cab-1	2024-04-17	6	Etheostoma fonticola	16	1
3115	City Park	Cab-1	2024-04-17	6	Etheostoma fonticola	15	1
3115	City Park	Cab-1	2024-04-17	6	Etheostoma fonticola	19	1
3115	City Park	Cab-1	2024-04-17	6	Etheostoma fonticola	16	1
3115	City Park	Cab-1	2024-04-17	6	Etheostoma fonticola	18	1

3115	City Park	Cab-1	2024-04-17	6	Gambusia sp.		1
3115	City Park	Cab-1	2024-04-17	7	Procambarus sp.		1
3115	City Park	Cab-1	2024-04-17	7	Lepomis miniatus	56	1
3115	City Park	Cab-1	2024-04-17	7	Etheostoma fonticola	24	1
3115	City Park	Cab-1	2024-04-17	7	Etheostoma fonticola	35	1
3115	City Park	Cab-1	2024-04-17	7	Etheostoma fonticola	28	1
3115	City Park	Cab-1	2024-04-17	8	Etheostoma fonticola	15	1
3115	City Park	Cab-1	2024-04-17	8	Etheostoma fonticola	15	1
3115	City Park	Cab-1	2024-04-17	8	Etheostoma fonticola	22	1
3115	City Park	Cab-1	2024-04-17	8	Etheostoma fonticola	16	1
3115	City Park	Cab-1	2024-04-17	8	Gambusia sp.		1
3115	City Park	Cab-1	2024-04-17	9	Etheostoma fonticola	22	1
3115	City Park	Cab-1	2024-04-17	9	Etheostoma fonticola	11	1
3115	City Park	Cab-1	2024-04-17	9	Etheostoma fonticola	15	1
3115	City Park	Cab-1	2024-04-17	9	Etheostoma fonticola	25	1
3115	City Park	Cab-1	2024-04-17	9	Etheostoma fonticola	18	1
3115	City Park	Cab-1	2024-04-17	10	Gambusia sp.		1
3115	City Park	Cab-1	2024-04-17	10	Etheostoma fonticola	15	1
3115	City Park	Cab-1	2024-04-17	11	Etheostoma fonticola	22	1
3115	City Park	Cab-1	2024-04-17	11	Etheostoma fonticola	31	1
3115	City Park	Cab-1	2024-04-17	11	Etheostoma fonticola	31	1
3115	City Park	Cab-1	2024-04-17	11	Etheostoma fonticola	25	1
3115	City Park	Cab-1	2024-04-17	11	Etheostoma fonticola	29	1
3115	City Park	Cab-1	2024-04-17	11	Etheostoma fonticola	18	1
3115	City Park	Cab-1	2024-04-17	11	Gambusia sp.		1
3115	City Park	Cab-1	2024-04-17	12	Etheostoma fonticola	16	1
3115	City Park	Cab-1	2024-04-17	13	Etheostoma fonticola	16	1
3115	City Park	Cab-1	2024-04-17	13	Gambusia sp.		1
3115	City Park	Cab-1	2024-04-17	14	Etheostoma fonticola	29	1
3115	City Park	Cab-1	2024-04-17	14	Gambusia sp.		1

3115	City Park	Cab-1	2024-04-17	15	Etheostoma fonticola	26	1
3115	City Park	Cab-1	2024-04-17	15	Etheostoma fonticola	16	1
3115	City Park	Cab-1	2024-04-17	15	Etheostoma fonticola	20	1
3115	City Park	Cab-1	2024-04-17	15	Etheostoma fonticola	14	1
3115	City Park	Cab-1	2024-04-17	15	Etheostoma fonticola	19	1
3115	City Park	Cab-1	2024-04-17	15	Etheostoma fonticola	20	1
3115	City Park	Cab-1	2024-04-17	15	Gambusia sp.		1
3115	City Park	Cab-1	2024-04-17	15	Gambusia sp.		1
3115	City Park	Cab-1	2024-04-17	16	Etheostoma fonticola	33	1
3115	City Park	Cab-1	2024-04-17	16	Etheostoma fonticola	12	1
3115	City Park	Cab-1	2024-04-17	16	Etheostoma fonticola	19	1
3115	City Park	Cab-1	2024-04-17	17	Etheostoma fonticola	17	1
3115	City Park	Cab-1	2024-04-17	18	Etheostoma fonticola	16	1
3115	City Park	Cab-1	2024-04-17	19	Etheostoma fonticola	17	1
3115	City Park	Cab-1	2024-04-17	20	Etheostoma fonticola	26	1
3115	City Park	Cab-1	2024-04-17	21	No fish collected		
3116	City Park	Cab-2	2024-04-17	1	Etheostoma fonticola	31	1
3116	City Park	Cab-2	2024-04-17	1	Etheostoma fonticola	16	1
3116	City Park	Cab-2	2024-04-17	1	Etheostoma fonticola	14	1
3116	City Park	Cab-2	2024-04-17	1	Etheostoma fonticola	19	1
3116	City Park	Cab-2	2024-04-17	1	Etheostoma fonticola	18	1
3116	City Park	Cab-2	2024-04-17	1	Etheostoma fonticola	11	1
3116	City Park	Cab-2	2024-04-17	1	Etheostoma fonticola	14	1
3116	City Park	Cab-2	2024-04-17	1	Notropis chalybaeus	18	1
3116	City Park	Cab-2	2024-04-17	1	Notropis chalybaeus	21	1
3116	City Park	Cab-2	2024-04-17	1	Notropis chalybaeus	12	1
3116	City Park	Cab-2	2024-04-17	1	Notropis chalybaeus	13	1
3116	City Park	Cab-2	2024-04-17	1	Gambusia sp.	26	1
3116	City Park	Cab-2	2024-04-17	1	Gambusia sp.	23	1
3116	City Park	Cab-2	2024-04-17	1	Gambusia sp.	20	1

3116	City Park	Cab-2	2024-04-17	1	Gambusia sp.	22	1
3116	City Park	Cab-2	2024-04-17	1	Gambusia sp.	20	1
3116	City Park	Cab-2	2024-04-17	1	Gambusia sp.	12	1
3116	City Park	Cab-2	2024-04-17	1	Gambusia sp.	19	1
3116	City Park	Cab-2	2024-04-17	1	Gambusia sp.	24	1
3116	City Park	Cab-2	2024-04-17	1	Gambusia sp.	13	1
3116	City Park	Cab-2	2024-04-17	1	Gambusia sp.	10	1
3116	City Park	Cab-2	2024-04-17	1	Gambusia sp.	12	1
3116	City Park	Cab-2	2024-04-17	1	Gambusia sp.	11	1
3116	City Park	Cab-2	2024-04-17	1	Gambusia sp.	10	1
3116	City Park	Cab-2	2024-04-17	1	Gambusia sp.	10	1
3116	City Park	Cab-2	2024-04-17	1	Gambusia sp.	10	1
3116	City Park	Cab-2	2024-04-17	1	Gambusia sp.	9	1
3116	City Park	Cab-2	2024-04-17	1	Gambusia sp.	10	1
3116	City Park	Cab-2	2024-04-17	1	Gambusia sp.	12	1
3116	City Park	Cab-2	2024-04-17	1	Gambusia sp.	12	1
3116	City Park	Cab-2	2024-04-17	1	Gambusia sp.	10	1
3116	City Park	Cab-2	2024-04-17	1	Gambusia sp.		1
3116	City Park	Cab-2	2024-04-17	1	Gambusia sp.		1
3116	City Park	Cab-2	2024-04-17	1	Gambusia sp.		1
3116	City Park	Cab-2	2024-04-17	2	Etheostoma fonticola	20	1
3116	City Park	Cab-2	2024-04-17	2	Etheostoma fonticola	18	1
3116	City Park	Cab-2	2024-04-17	2	Etheostoma fonticola	19	1
3116	City Park	Cab-2	2024-04-17	2	Etheostoma fonticola	31	1
3116	City Park	Cab-2	2024-04-17	2	Etheostoma fonticola	22	1
3116	City Park	Cab-2	2024-04-17	2	Etheostoma fonticola	26	1
3116	City Park	Cab-2	2024-04-17	2	Etheostoma fonticola	17	1
3116	City Park	Cab-2	2024-04-17	2	Etheostoma fonticola	17	1
3116	City Park	Cab-2	2024-04-17	2	Etheostoma fonticola	20	1
3116	City Park	Cab-2	2024-04-17	2	Etheostoma fonticola	19	1

3116	City Park	Cab-2	2024-04-17	2	Etheostoma fonticola	16	1
3116	City Park	Cab-2	2024-04-17	2	Etheostoma fonticola	15	1
3116	City Park	Cab-2	2024-04-17	2	Etheostoma fonticola	19	1
3116	City Park	Cab-2	2024-04-17	2	Etheostoma fonticola	21	1
3116	City Park	Cab-2	2024-04-17	2	Etheostoma fonticola	15	1
3116	City Park	Cab-2	2024-04-17	2	Etheostoma fonticola	21	1
3116	City Park	Cab-2	2024-04-17	2	Etheostoma fonticola	18	1
3116	City Park	Cab-2	2024-04-17	2	Etheostoma fonticola	22	1
3116	City Park	Cab-2	2024-04-17	2	Etheostoma fonticola	16	1
3116	City Park	Cab-2	2024-04-17	2	Etheostoma fonticola	20	1
3116	City Park	Cab-2	2024-04-17	2	Notropis chalybaeus	20	1
3116	City Park	Cab-2	2024-04-17	2	Notropis chalybaeus	17	1
3116	City Park	Cab-2	2024-04-17	2	Notropis chalybaeus	18	1
3116	City Park	Cab-2	2024-04-17	2	Notropis chalybaeus	20	1
3116	City Park	Cab-2	2024-04-17	2	Notropis chalybaeus	20	1
3116	City Park	Cab-2	2024-04-17	2	Notropis chalybaeus	16	1
3116	City Park	Cab-2	2024-04-17	2	Gambusia sp.		1
3116	City Park	Cab-2	2024-04-17	2	Gambusia sp.		1
3116	City Park	Cab-2	2024-04-17	2	Gambusia sp.		1
3116	City Park	Cab-2	2024-04-17	2	Gambusia sp.		1
3116	City Park	Cab-2	2024-04-17	2	Gambusia sp.		1
3116	City Park	Cab-2	2024-04-17	2	Gambusia sp.		1
3116	City Park	Cab-2	2024-04-17	2	Gambusia sp.		1
3116	City Park	Cab-2	2024-04-17	2	Gambusia sp.		1
3116	City Park	Cab-2	2024-04-17	2	Gambusia sp.		1
3116	City Park	Cab-2	2024-04-17	2	Gambusia sp.		1
3116	City Park	Cab-2	2024-04-17	2	Gambusia sp.		1
3116	City Park	Cab-2	2024-04-17	2	Gambusia sp.		1
3116	City Park	Cab-2	2024-04-17	2	Gambusia sp.		1
3116	City Park	Cab-2	2024-04-17	2	Gambusia sp.		1

3116	City Park	Cab-2	2024-04-17	2	Gambusia sp.		1
3116	City Park	Cab-2	2024-04-17	2	Gambusia sp.		1
3116	City Park	Cab-2	2024-04-17	2	Gambusia sp.		1
3116	City Park	Cab-2	2024-04-17	2	Gambusia sp.		1
3116	City Park	Cab-2	2024-04-17	2	Gambusia sp.		1
3116	City Park	Cab-2	2024-04-17	2	Gambusia sp.		1
3116	City Park	Cab-2	2024-04-17	2	Gambusia sp.		1
3116	City Park	Cab-2	2024-04-17	2	Gambusia sp.		1
3116	City Park	Cab-2	2024-04-17	2	Gambusia sp.		1
3116	City Park	Cab-2	2024-04-17	2	Gambusia sp.		1
3116	City Park	Cab-2	2024-04-17	2	Gambusia sp.		1
3116	City Park	Cab-2	2024-04-17	2	Gambusia sp.		1
3116	City Park	Cab-2	2024-04-17	2	Gambusia sp.		1
3116	City Park	Cab-2	2024-04-17	2	Gambusia sp.		1
3116	City Park	Cab-2	2024-04-17	2	Gambusia sp.		1
3116	City Park	Cab-2	2024-04-17	2	Gambusia sp.		1
3116	City Park	Cab-2	2024-04-17	2	Gambusia sp.		1
3116	City Park	Cab-2	2024-04-17	2	Gambusia sp.		1
3116	City Park	Cab-2	2024-04-17	2	Gambusia sp.		1
3116	City Park	Cab-2	2024-04-17	2	Gambusia sp.		1
3116	City Park	Cab-2	2024-04-17	2	Gambusia sp.		1
3116	City Park	Cab-2	2024-04-17	2	Gambusia sp.		1
3116	City Park	Cab-2	2024-04-17	2	Gambusia sp.		1
3116	City Park	Cab-2	2024-04-17	2	Gambusia sp.		1
3116	City Park	Cab-2	2024-04-17	2	Gambusia sp.		1
3116	City Park	Cab-2	2024-04-17	2	Gambusia sp.		1
3116	City Park	Cab-2	2024-04-17	2	Gambusia sp.		1
3116	City Park	Cab-2	2024-04-17	2	Gambusia sp.		1
3116	City Park	Cab-2	2024-04-17	2	Gambusia sp.		1
3116	City Park	Cab-2	2024-04-17	2	Gambusia sp.		1

3116	City Park	Cab-2	2024-04-17	2	Gambusia sp.		1
3116	City Park	Cab-2	2024-04-17	2	Gambusia sp.		1
3116	City Park	Cab-2	2024-04-17	2	Gambusia sp.		1
3116	City Park	Cab-2	2024-04-17	2	Gambusia sp.		1
3116	City Park	Cab-2	2024-04-17	2	Gambusia sp.		1
3116	City Park	Cab-2	2024-04-17	2	Gambusia sp.		1
3116	City Park	Cab-2	2024-04-17	3	Etheostoma fonticola	24	1
3116	City Park	Cab-2	2024-04-17	3	Etheostoma fonticola	16	1
3116	City Park	Cab-2	2024-04-17	3	Etheostoma fonticola	19	1
3116	City Park	Cab-2	2024-04-17	3	Etheostoma fonticola	12	1
3116	City Park	Cab-2	2024-04-17	3	Etheostoma fonticola	12	1
3116	City Park	Cab-2	2024-04-17	3	Etheostoma fonticola	15	1
3116	City Park	Cab-2	2024-04-17	3	Etheostoma fonticola	14	1
3116	City Park	Cab-2	2024-04-17	3	Etheostoma fonticola	13	1
3116	City Park	Cab-2	2024-04-17	3	Gambusia sp.		1
3116	City Park	Cab-2	2024-04-17	3	Gambusia sp.		1
3116	City Park	Cab-2	2024-04-17	3	Gambusia sp.		1
3116	City Park	Cab-2	2024-04-17	3	Gambusia sp.		1
3116	City Park	Cab-2	2024-04-17	3	Gambusia sp.		1
3116	City Park	Cab-2	2024-04-17	3	Gambusia sp.		1
3116	City Park	Cab-2	2024-04-17	3	Gambusia sp.		1
3116	City Park	Cab-2	2024-04-17	3	Gambusia sp.		1
3116	City Park	Cab-2	2024-04-17	3	Gambusia sp.		1
3116	City Park	Cab-2	2024-04-17	3	Gambusia sp.		1
3116	City Park	Cab-2	2024-04-17	3	Gambusia sp.		1
3116	City Park	Cab-2	2024-04-17	3	Gambusia sp.		1
3116	City Park	Cab-2	2024-04-17	3	Gambusia sp.		1
3116	City Park	Cab-2	2024-04-17	3	Gambusia sp.		1
3116	City Park	Cab-2	2024-04-17	3	Gambusia sp.		1
3116	City Park	Cab-2	2024-04-17	3	Gambusia sp.		1

3116	City Park	Cab-2	2024-04-17	3	Gambusia sp.		1
3116	City Park	Cab-2	2024-04-17	3	Gambusia sp.		1
3116	City Park	Cab-2	2024-04-17	3	Gambusia sp.		1
3116	City Park	Cab-2	2024-04-17	3	Gambusia sp.		1
3116	City Park	Cab-2	2024-04-17	3	Gambusia sp.		1
3116	City Park	Cab-2	2024-04-17	3	Gambusia sp.		1
3116	City Park	Cab-2	2024-04-17	3	Gambusia sp.		1
3116	City Park	Cab-2	2024-04-17	3	Gambusia sp.		1
3116	City Park	Cab-2	2024-04-17	3	Gambusia sp.		1
3116	City Park	Cab-2	2024-04-17	3	Gambusia sp.		1
3116	City Park	Cab-2	2024-04-17	3	Gambusia sp.		1
3116	City Park	Cab-2	2024-04-17	3	Gambusia sp.		1
3116	City Park	Cab-2	2024-04-17	3	Gambusia sp.		1
3116	City Park	Cab-2	2024-04-17	3	Gambusia sp.		1
3116	City Park	Cab-2	2024-04-17	3	Gambusia sp.		1
3116	City Park	Cab-2	2024-04-17	3	Gambusia sp.		1
3116	City Park	Cab-2	2024-04-17	3	Gambusia sp.		1
3116	City Park	Cab-2	2024-04-17	3	Gambusia sp.		1
3116	City Park	Cab-2	2024-04-17	3	Gambusia sp.		1
3116	City Park	Cab-2	2024-04-17	3	Gambusia sp.		1
3116	City Park	Cab-2	2024-04-17	3	Gambusia sp.		1
3116	City Park	Cab-2	2024-04-17	3	Gambusia sp.		1
3116	City Park	Cab-2	2024-04-17	3	Gambusia sp.		1
3116	City Park	Cab-2	2024-04-17	3	Gambusia sp.		1
3116	City Park	Cab-2	2024-04-17	3	Gambusia sp.		1
3116	City Park	Cab-2	2024-04-17	3	Gambusia sp.		1
3116	City Park	Cab-2	2024-04-17	3	Gambusia sp.		1
3116	City Park	Cab-2	2024-04-17	3	Gambusia sp.		1
3116	City Park	Cab-2	2024-04-17	3	Gambusia sp.		1
3116	City Park	Cab-2	2024-04-17	3	Gambusia sp.		1

3116	City Park	Cab-2	2024-04-17	3	Gambusia sp.		1
3116	City Park	Cab-2	2024-04-17	3	Gambusia sp.		1
3116	City Park	Cab-2	2024-04-17	3	Gambusia sp.		1
3116	City Park	Cab-2	2024-04-17	3	Gambusia sp.		1
3116	City Park	Cab-2	2024-04-17	3	Gambusia sp.		1
3116	City Park	Cab-2	2024-04-17	3	Gambusia sp.		1
3116	City Park	Cab-2	2024-04-17	3	Gambusia sp.		1
3116	City Park	Cab-2	2024-04-17	3	Gambusia sp.		1
3116	City Park	Cab-2	2024-04-17	3	Gambusia sp.		1
3116	City Park	Cab-2	2024-04-17	3	Gambusia sp.		1
3116	City Park	Cab-2	2024-04-17	3	Gambusia sp.		1
3116	City Park	Cab-2	2024-04-17	3	Gambusia sp.		1
3116	City Park	Cab-2	2024-04-17	3	Gambusia sp.		1
3116	City Park	Cab-2	2024-04-17	3	Gambusia sp.		1
3116	City Park	Cab-2	2024-04-17	3	Gambusia sp.		1
3116	City Park	Cab-2	2024-04-17	3	Gambusia sp.		1
3116	City Park	Cab-2	2024-04-17	4	Etheostoma fonticola	26	1
3116	City Park	Cab-2	2024-04-17	4	Etheostoma fonticola	20	1
3116	City Park	Cab-2	2024-04-17	4	Etheostoma fonticola	22	1
3116	City Park	Cab-2	2024-04-17	4	Etheostoma fonticola	22	1
3116	City Park	Cab-2	2024-04-17	4	Etheostoma fonticola	30	1
3116	City Park	Cab-2	2024-04-17	4	Etheostoma fonticola	17	1
3116	City Park	Cab-2	2024-04-17	4	Etheostoma fonticola	21	1
3116	City Park	Cab-2	2024-04-17	4	Etheostoma fonticola	15	1
3116	City Park	Cab-2	2024-04-17	4	Etheostoma fonticola	17	1
3116	City Park	Cab-2	2024-04-17	4	Gambusia sp.		1
3116	City Park	Cab-2	2024-04-17	4	Gambusia sp.		1
3116	City Park	Cab-2	2024-04-17	4	Gambusia sp.		1
3116	City Park	Cab-2	2024-04-17	4	Gambusia sp.		1
3116	City Park	Cab-2	2024-04-17	4	Gambusia sp.		1

3116	City Park	Cab-2	2024-04-17	4	Gambusia sp.		1
3116	City Park	Cab-2	2024-04-17	4	Gambusia sp.		1
3116	City Park	Cab-2	2024-04-17	4	Gambusia sp.		1
3116	City Park	Cab-2	2024-04-17	4	Gambusia sp.		1
3116	City Park	Cab-2	2024-04-17	4	Gambusia sp.		1
3116	City Park	Cab-2	2024-04-17	4	Gambusia sp.		1
3116	City Park	Cab-2	2024-04-17	4	Gambusia sp.		1
3116	City Park	Cab-2	2024-04-17	4	Gambusia sp.		1
3116	City Park	Cab-2	2024-04-17	4	Gambusia sp.		1
3116	City Park	Cab-2	2024-04-17	4	Gambusia sp.		1
3116	City Park	Cab-2	2024-04-17	4	Gambusia sp.		1
3116	City Park	Cab-2	2024-04-17	4	Gambusia sp.		1
3116	City Park	Cab-2	2024-04-17	5	Gambusia sp.		1
3116	City Park	Cab-2	2024-04-17	5	Gambusia sp.		1
3116	City Park	Cab-2	2024-04-17	5	Gambusia sp.		1
3116	City Park	Cab-2	2024-04-17	5	Etheostoma fonticola	30	1
3116	City Park	Cab-2	2024-04-17	5	Etheostoma fonticola	21	1
3116	City Park	Cab-2	2024-04-17	5	Etheostoma fonticola	33	1
3116	City Park	Cab-2	2024-04-17	5	Etheostoma fonticola	18	1
3116	City Park	Cab-2	2024-04-17	5	Etheostoma fonticola	13	1
3116	City Park	Cab-2	2024-04-17	5	Etheostoma fonticola	13	1
3116	City Park	Cab-2	2024-04-17	5	Etheostoma fonticola	16	1
3116	City Park	Cab-2	2024-04-17	5	Etheostoma fonticola	18	1
3116	City Park	Cab-2	2024-04-17	5	Procambarus sp.		1
3116	City Park	Cab-2	2024-04-17	6	Astyanax mexicanus	22	1
3116	City Park	Cab-2	2024-04-17	6	Etheostoma fonticola	20	1
3116	City Park	Cab-2	2024-04-17	6	Etheostoma fonticola	23	1
3116	City Park	Cab-2	2024-04-17	6	Etheostoma fonticola	14	1
3116	City Park	Cab-2	2024-04-17	6	Etheostoma fonticola	18	1
3116	City Park	Cab-2	2024-04-17	6	Etheostoma fonticola	17	1

3116	City Park	Cab-2	2024-04-17	6	Etheostoma fonticola	20	1
3116	City Park	Cab-2	2024-04-17	6	Etheostoma fonticola	20	1
3116	City Park	Cab-2	2024-04-17	6	Etheostoma fonticola	11	1
3116	City Park	Cab-2	2024-04-17	6	Gambusia sp.		1
3116	City Park	Cab-2	2024-04-17	6	Gambusia sp.		1
3116	City Park	Cab-2	2024-04-17	6	Gambusia sp.		1
3116	City Park	Cab-2	2024-04-17	6	Gambusia sp.		1
3116	City Park	Cab-2	2024-04-17	6	Gambusia sp.		1
3116	City Park	Cab-2	2024-04-17	6	Gambusia sp.		1
3116	City Park	Cab-2	2024-04-17	7	Gambusia sp.		1
3116	City Park	Cab-2	2024-04-17	7	Etheostoma fonticola	17	1
3116	City Park	Cab-2	2024-04-17	8	Etheostoma fonticola	20	1
3116	City Park	Cab-2	2024-04-17	8	Etheostoma fonticola	24	1
3116	City Park	Cab-2	2024-04-17	8	Etheostoma fonticola	11	1
3116	City Park	Cab-2	2024-04-17	8	Gambusia sp.		1
3116	City Park	Cab-2	2024-04-17	9	Etheostoma fonticola	15	1
3116	City Park	Cab-2	2024-04-17	9	Etheostoma fonticola	14	1
3116	City Park	Cab-2	2024-04-17	9	Etheostoma fonticola	17	1
3116	City Park	Cab-2	2024-04-17	9	Etheostoma fonticola	15	1
3116	City Park	Cab-2	2024-04-17	9	Etheostoma fonticola	15	1
3116	City Park	Cab-2	2024-04-17	9	Etheostoma fonticola	12	1
3116	City Park	Cab-2	2024-04-17	9	Gambusia sp.		1
3116	City Park	Cab-2	2024-04-17	9	Gambusia sp.		1
3116	City Park	Cab-2	2024-04-17	9	Gambusia sp.		1
3116	City Park	Cab-2	2024-04-17	10	Etheostoma fonticola	19	1
3116	City Park	Cab-2	2024-04-17	10	Etheostoma fonticola	17	1
3116	City Park	Cab-2	2024-04-17	10	Etheostoma fonticola	12	1
3116	City Park	Cab-2	2024-04-17	11	Gambusia sp.		1
3116	City Park	Cab-2	2024-04-17	11	Etheostoma fonticola	12	1
3116	City Park	Cab-2	2024-04-17	12	Etheostoma fonticola	26	1

3116	City Park	Cab-2	2024-04-17	12	Etheostoma fonticola	11	1
3116	City Park	Cab-2	2024-04-17	13	Etheostoma fonticola	18	1
3116	City Park	Cab-2	2024-04-17	14	No fish collected		
3116	City Park	Cab-2	2024-04-17	15	Gambusia sp.		1
3116	City Park	Cab-2	2024-04-17	15	Etheostoma fonticola	22	1
3116	City Park	Cab-2	2024-04-17	15	Etheostoma fonticola	15	1
3116	City Park	Cab-2	2024-04-17	16	Gambusia sp.		1
3117	City Park	Lud-1	2024-04-17	1	Etheostoma fonticola	24	1
3117	City Park	Lud-1	2024-04-17	1	Etheostoma fonticola	28	1
3117	City Park	Lud-1	2024-04-17	1	Etheostoma fonticola	24	1
3117	City Park	Lud-1	2024-04-17	1	Gambusia sp.	23	1
3117	City Park	Lud-1	2024-04-17	1	Gambusia sp.	12	1
3117	City Park	Lud-1	2024-04-17	1	Gambusia sp.	22	1
3117	City Park	Lud-1	2024-04-17	1	Gambusia sp.	11	1
3117	City Park	Lud-1	2024-04-17	1	Gambusia sp.	10	1
3117	City Park	Lud-1	2024-04-17	1	Gambusia sp.	10	1
3117	City Park	Lud-1	2024-04-17	1	Gambusia sp.	12	1
3117	City Park	Lud-1	2024-04-17	1	Gambusia sp.	12	1
3117	City Park	Lud-1	2024-04-17	1	Gambusia sp.	10	1
3117	City Park	Lud-1	2024-04-17	1	Gambusia sp.	10	1
3117	City Park	Lud-1	2024-04-17	1	Gambusia sp.	11	1
3117	City Park	Lud-1	2024-04-17	1	Procambarus sp.		1
3117	City Park	Lud-1	2024-04-17	2	Gambusia sp.	20	1
3117	City Park	Lud-1	2024-04-17	2	Gambusia sp.	15	1
3117	City Park	Lud-1	2024-04-17	2	Gambusia sp.	30	1
3117	City Park	Lud-1	2024-04-17	2	Gambusia sp.	36	1
3117	City Park	Lud-1	2024-04-17	2	Gambusia sp.	28	1
3117	City Park	Lud-1	2024-04-17	2	Gambusia sp.	22	1
3117	City Park	Lud-1	2024-04-17	2	Gambusia sp.	12	1
3117	City Park	Lud-1	2024-04-17	2	Gambusia sp.	10	1

3117	City Park	Lud-1	2024-04-17	2	Etheostoma fonticola	23	1
3117	City Park	Lud-1	2024-04-17	2	Etheostoma fonticola	24	1
3117	City Park	Lud-1	2024-04-17	2	Procambarus sp.		1
3117	City Park	Lud-1	2024-04-17	3	Gambusia sp.	25	1
3117	City Park	Lud-1	2024-04-17	3	Gambusia sp.		1
3117	City Park	Lud-1	2024-04-17	3	Gambusia sp.		1
3117	City Park	Lud-1	2024-04-17	3	Gambusia sp.		1
3117	City Park	Lud-1	2024-04-17	4	Gambusia sp.		1
3117	City Park	Lud-1	2024-04-17	4	Gambusia sp.		1
3117	City Park	Lud-1	2024-04-17	4	Procambarus sp.		1
3117	City Park	Lud-1	2024-04-17	4	Astyanax mexicanus	30	1
3117	City Park	Lud-1	2024-04-17	5	Procambarus sp.		1
3117	City Park	Lud-1	2024-04-17	5	Etheostoma fonticola	13	1
3117	City Park	Lud-1	2024-04-17	6	Procambarus sp.		2
3117	City Park	Lud-1	2024-04-17	6	Etheostoma fonticola	31	1
3117	City Park	Lud-1	2024-04-17	6	Etheostoma fonticola	29	1
3117	City Park	Lud-1	2024-04-17	6	Etheostoma fonticola	27	1
3117	City Park	Lud-1	2024-04-17	6	Etheostoma fonticola	29	1
3117	City Park	Lud-1	2024-04-17	6	Etheostoma fonticola	28	1
3117	City Park	Lud-1	2024-04-17	6	Etheostoma fonticola	23	1
3117	City Park	Lud-1	2024-04-17	6	Etheostoma fonticola	31	1
3117	City Park	Lud-1	2024-04-17	6	Etheostoma fonticola	15	1
3117	City Park	Lud-1	2024-04-17	6	Gambusia sp.		1
3117	City Park	Lud-1	2024-04-17	6	Gambusia sp.		1
3117	City Park	Lud-1	2024-04-17	7	Lepomis miniatus	89	1
3117	City Park	Lud-1	2024-04-17	7	Gambusia sp.		1
3117	City Park	Lud-1	2024-04-17	7	Etheostoma fonticola	20	1
3117	City Park	Lud-1	2024-04-17	7	Etheostoma fonticola	22	1
3117	City Park	Lud-1	2024-04-17	7	Etheostoma fonticola	12	1
3117	City Park	Lud-1	2024-04-17	8	Procambarus sp.		1

3117	City Park	Lud-1	2024-04-17	8	Etheostoma fonticola	15	1
3117	City Park	Lud-1	2024-04-17	8	Gambusia sp.		1
3117	City Park	Lud-1	2024-04-17	8	Gambusia sp.		1
3117	City Park	Lud-1	2024-04-17	9	Procambarus sp.		1
3117	City Park	Lud-1	2024-04-17	9	Etheostoma fonticola	30	1
3117	City Park	Lud-1	2024-04-17	10	Etheostoma fonticola	37	1
3117	City Park	Lud-1	2024-04-17	10	Etheostoma fonticola	31	1
3117	City Park	Lud-1	2024-04-17	10	Gambusia sp.		1
3117	City Park	Lud-1	2024-04-17	11	Gambusia sp.		1
3117	City Park	Lud-1	2024-04-17	11	Etheostoma fonticola	30	1
3117	City Park	Lud-1	2024-04-17	11	Etheostoma fonticola	18	1
3117	City Park	Lud-1	2024-04-17	12	Gambusia sp.		1
3117	City Park	Lud-1	2024-04-17	13	Etheostoma fonticola	18	1
3117	City Park	Lud-1	2024-04-17	13	Procambarus sp.		1
3117	City Park	Lud-1	2024-04-17	14	Procambarus sp.		2
3117	City Park	Lud-1	2024-04-17	15	Etheostoma fonticola	31	1
3117	City Park	Lud-1	2024-04-17	15	Etheostoma fonticola	34	1
3117	City Park	Lud-1	2024-04-17	16	No fish collected		
3118	City Park	Lud-2	2024-04-17	1	Lepomis miniatus	107	1
3118	City Park	Lud-2	2024-04-17	1	Ambloplites rupestris	30	1
3118	City Park	Lud-2	2024-04-17	1	Gambusia sp.	10	1
3118	City Park	Lud-2	2024-04-17	1	Gambusia sp.	26	1
3118	City Park	Lud-2	2024-04-17	1	Gambusia sp.	35	1
3118	City Park	Lud-2	2024-04-17	1	Gambusia sp.	28	1
3118	City Park	Lud-2	2024-04-17	1	Gambusia sp.	24	1
3118	City Park	Lud-2	2024-04-17	1	Gambusia sp.	15	1
3118	City Park	Lud-2	2024-04-17	1	Gambusia sp.	24	1
3118	City Park	Lud-2	2024-04-17	1	Gambusia sp.	15	1
3118	City Park	Lud-2	2024-04-17	1	Gambusia sp.	18	1
3118	City Park	Lud-2	2024-04-17	1	Gambusia sp.	32	1

3118	City Park	Lud-2	2024-04-17	1	Gambusia sp.	23	1
3118	City Park	Lud-2	2024-04-17	1	Gambusia sp.	18	1
3118	City Park	Lud-2	2024-04-17	1	Gambusia sp.	12	1
3118	City Park	Lud-2	2024-04-17	1	Gambusia sp.	27	1
3118	City Park	Lud-2	2024-04-17	1	Gambusia sp.	24	1
3118	City Park	Lud-2	2024-04-17	1	Gambusia sp.	20	1
3118	City Park	Lud-2	2024-04-17	1	Gambusia sp.	12	1
3118	City Park	Lud-2	2024-04-17	1	Gambusia sp.	13	1
3118	City Park	Lud-2	2024-04-17	1	Gambusia sp.	10	1
3118	City Park	Lud-2	2024-04-17	1	Gambusia sp.	15	1
3118	City Park	Lud-2	2024-04-17	1	Gambusia sp.	24	1
3118	City Park	Lud-2	2024-04-17	1	Gambusia sp.		1
3118	City Park	Lud-2	2024-04-17	1	Gambusia sp.		1
3118	City Park	Lud-2	2024-04-17	1	Gambusia sp.		1
3118	City Park	Lud-2	2024-04-17	1	Gambusia sp.		1
3118	City Park	Lud-2	2024-04-17	1	Gambusia sp.		1
3118	City Park	Lud-2	2024-04-17	1	Gambusia sp.		1
3118	City Park	Lud-2	2024-04-17	1	Gambusia sp.		1
3118	City Park	Lud-2	2024-04-17	1	Etheostoma fonticola	17	1
3118	City Park	Lud-2	2024-04-17	1	Etheostoma fonticola	33	1
3118	City Park	Lud-2	2024-04-17	1	Etheostoma fonticola	16	1
3118	City Park	Lud-2	2024-04-17	1	Etheostoma fonticola	27	1
3118	City Park	Lud-2	2024-04-17	1	Etheostoma fonticola	20	1
3118	City Park	Lud-2	2024-04-17	1	Etheostoma fonticola	19	1
3118	City Park	Lud-2	2024-04-17	1	Etheostoma fonticola	15	1
3118	City Park	Lud-2	2024-04-17	1	Etheostoma fonticola	26	1
3118	City Park	Lud-2	2024-04-17	1	Etheostoma fonticola	26	1
3118	City Park	Lud-2	2024-04-17	1	Etheostoma fonticola	20	1
3118	City Park	Lud-2	2024-04-17	1	Etheostoma fonticola	28	1
3118	City Park	Lud-2	2024-04-17	1	Etheostoma fonticola	19	1

3118	City Park	Lud-2	2024-04-17	1	Etheostoma fonticola	12	1
3118	City Park	Lud-2	2024-04-17	1	Etheostoma fonticola	15	1
3118	City Park	Lud-2	2024-04-17	1	Etheostoma fonticola	30	1
3118	City Park	Lud-2	2024-04-17	1	Etheostoma fonticola	35	1
3118	City Park	Lud-2	2024-04-17	1	Etheostoma fonticola	23	1
3118	City Park	Lud-2	2024-04-17	1	Etheostoma fonticola	15	1
3118	City Park	Lud-2	2024-04-17	1	Etheostoma fonticola	29	1
3118	City Park	Lud-2	2024-04-17	1	Etheostoma fonticola	34	1
3118	City Park	Lud-2	2024-04-17	1	Etheostoma fonticola	19	1
3118	City Park	Lud-2	2024-04-17	1	Etheostoma fonticola	18	1
3118	City Park	Lud-2	2024-04-17	1	Procambarus sp.		7
3118	City Park	Lud-2	2024-04-17	2	Etheostoma fonticola	30	1
3118	City Park	Lud-2	2024-04-17	2	Etheostoma fonticola	15	1
3118	City Park	Lud-2	2024-04-17	2	Etheostoma fonticola	17	1
3118	City Park	Lud-2	2024-04-17	2	Etheostoma fonticola	18	1
3118	City Park	Lud-2	2024-04-17	2	Etheostoma fonticola	18	1
3118	City Park	Lud-2	2024-04-17	2	Gambusia sp.		1
3118	City Park	Lud-2	2024-04-17	2	Gambusia sp.		1
3118	City Park	Lud-2	2024-04-17	2	Gambusia sp.		1
3118	City Park	Lud-2	2024-04-17	2	Gambusia sp.		1
3118	City Park	Lud-2	2024-04-17	2	Gambusia sp.		1
3118	City Park	Lud-2	2024-04-17	2	Gambusia sp.		1
3118	City Park	Lud-2	2024-04-17	2	Gambusia sp.		1
3118	City Park	Lud-2	2024-04-17	2	Gambusia sp.		1
3118	City Park	Lud-2	2024-04-17	2	Gambusia sp.		1
3118	City Park	Lud-2	2024-04-17	2	Gambusia sp.		1
3118	City Park	Lud-2	2024-04-17	3	Gambusia sp.		1
3118	City Park	Lud-2	2024-04-17	3	Gambusia sp.		1
3118	City Park	Lud-2	2024-04-17	3	Gambusia sp.		1
3118	City Park	Lud-2	2024-04-17	3	Gambusia sp.		1

3118	City Park	Lud-2	2024-04-17	3	Gambusia sp.		1
3118	City Park	Lud-2	2024-04-17	3	Gambusia sp.		1
3118	City Park	Lud-2	2024-04-17	3	Gambusia sp.		1
3118	City Park	Lud-2	2024-04-17	3	Etheostoma fonticola	29	1
3118	City Park	Lud-2	2024-04-17	3	Etheostoma fonticola	22	1
3118	City Park	Lud-2	2024-04-17	3	Procambarus sp.		5
3118	City Park	Lud-2	2024-04-17	4	Procambarus sp.		4
3118	City Park	Lud-2	2024-04-17	4	Etheostoma fonticola	38	1
3118	City Park	Lud-2	2024-04-17	4	Etheostoma fonticola	19	1
3118	City Park	Lud-2	2024-04-17	4	Gambusia sp.		1
3118	City Park	Lud-2	2024-04-17	4	Gambusia sp.		1
3118	City Park	Lud-2	2024-04-17	4	Gambusia sp.		1
3118	City Park	Lud-2	2024-04-17	4	Gambusia sp.		1
3118	City Park	Lud-2	2024-04-17	4	Gambusia sp.		1
3118	City Park	Lud-2	2024-04-17	4	Gambusia sp.		1
3118	City Park	Lud-2	2024-04-17	5	Procambarus sp.		2
3118	City Park	Lud-2	2024-04-17	5	Etheostoma fonticola	16	1
3118	City Park	Lud-2	2024-04-17	5	Etheostoma fonticola	18	1
3118	City Park	Lud-2	2024-04-17	5	Gambusia sp.		1
3118	City Park	Lud-2	2024-04-17	6	No fish collected		
3118	City Park	Lud-2	2024-04-17	7	Gambusia sp.		1
3118	City Park	Lud-2	2024-04-17	8	Procambarus sp.		1
3118	City Park	Lud-2	2024-04-17	8	Etheostoma fonticola	32	1
3118	City Park	Lud-2	2024-04-17	9	Procambarus sp.		1
3118	City Park	Lud-2	2024-04-17	9	Etheostoma fonticola	33	1
3118	City Park	Lud-2	2024-04-17	10	Etheostoma fonticola	29	1
3118	City Park	Lud-2	2024-04-17	10	Etheostoma fonticola	18	1
3118	City Park	Lud-2	2024-04-17	10	Etheostoma fonticola	17	1
3118	City Park	Lud-2	2024-04-17	10	Etheostoma fonticola	16	1
3118	City Park	Lud-2	2024-04-17	11	Procambarus sp.		2

3118	City Park	Lud-2	2024-04-17	11	Etheostoma fonticola	32	1
3118	City Park	Lud-2	2024-04-17	11	Etheostoma fonticola	32	1
3118	City Park	Lud-2	2024-04-17	11	Etheostoma fonticola	20	1
3118	City Park	Lud-2	2024-04-17	11	Etheostoma fonticola	20	1
3118	City Park	Lud-2	2024-04-17	11	Etheostoma fonticola	24	1
3118	City Park	Lud-2	2024-04-17	11	Etheostoma fonticola	18	1
3118	City Park	Lud-2	2024-04-17	11	Gambusia sp.		1
3118	City Park	Lud-2	2024-04-17	12	Etheostoma fonticola	29	1
3118	City Park	Lud-2	2024-04-17	12	Gambusia sp.		1
3118	City Park	Lud-2	2024-04-17	13	Etheostoma fonticola	31	1
3118	City Park	Lud-2	2024-04-17	13	Etheostoma fonticola	23	1
3118	City Park	Lud-2	2024-04-17	13	Procambarus sp.		1
3118	City Park	Lud-2	2024-04-17	14	Procambarus sp.		3
3118	City Park	Lud-2	2024-04-17	14	Etheostoma fonticola	21	1
3118	City Park	Lud-2	2024-04-17	14	Etheostoma fonticola	25	1
3118	City Park	Lud-2	2024-04-17	14	Etheostoma fonticola	15	1
3118	City Park	Lud-2	2024-04-17	15	Procambarus sp.		1
3118	City Park	Lud-2	2024-04-17	15	Etheostoma fonticola	33	1
3118	City Park	Lud-2	2024-04-17	15	Etheostoma fonticola	29	1
3118	City Park	Lud-2	2024-04-17	15	Etheostoma fonticola	34	1
3118	City Park	Lud-2	2024-04-17	15	Etheostoma fonticola	26	1
3118	City Park	Lud-2	2024-04-17	15	Etheostoma fonticola	22	1
3118	City Park	Lud-2	2024-04-17	16	Procambarus sp.		1
3118	City Park	Lud-2	2024-04-17	16	Etheostoma fonticola	14	1
3118	City Park	Lud-2	2024-04-17	16	Etheostoma fonticola	29	1
3118	City Park	Lud-2	2024-04-17	17	No fish collected		
3118	City Park	Lud-2	2024-04-17				
3119	City Park	Sag-1	2024-04-18	1	Gambusia sp.	22	1
3119	City Park	Sag-1	2024-04-18	1	Gambusia sp.	21	1
3119	City Park	Sag-1	2024-04-18	1	Gambusia sp.	12	1

3119	City Park	Sag-1	2024-04-18	1	Gambusia sp.	16	1
3119	City Park	Sag-1	2024-04-18	1	Gambusia sp.	20	1
3119	City Park	Sag-1	2024-04-18	1	Gambusia sp.	22	1
3119	City Park	Sag-1	2024-04-18	1	Gambusia sp.	15	1
3119	City Park	Sag-1	2024-04-18	1	Gambusia sp.	10	1
3119	City Park	Sag-1	2024-04-18	1	Gambusia sp.	12	1
3119	City Park	Sag-1	2024-04-18	1	Gambusia sp.	22	1
3119	City Park	Sag-1	2024-04-18	1	Gambusia sp.	22	1
3119	City Park	Sag-1	2024-04-18	1	Gambusia sp.	10	1
3119	City Park	Sag-1	2024-04-18	1	Gambusia sp.	20	1
3119	City Park	Sag-1	2024-04-18	1	Gambusia sp.	18	1
3119	City Park	Sag-1	2024-04-18	1	Gambusia sp.	10	1
3119	City Park	Sag-1	2024-04-18	1	Gambusia sp.	12	1
3119	City Park	Sag-1	2024-04-18	1	Gambusia sp.	15	1
3119	City Park	Sag-1	2024-04-18	1	Gambusia sp.	12	1
3119	City Park	Sag-1	2024-04-18	1	Gambusia sp.	22	1
3119	City Park	Sag-1	2024-04-18	1	Gambusia sp.	28	1
3119	City Park	Sag-1	2024-04-18	1	Gambusia sp.		1
3119	City Park	Sag-1	2024-04-18	1	Gambusia sp.		1
3119	City Park	Sag-1	2024-04-18	1	Gambusia sp.		1
3119	City Park	Sag-1	2024-04-18	1	Gambusia sp.		1
3119	City Park	Sag-1	2024-04-18	1	Gambusia sp.		1
3119	City Park	Sag-1	2024-04-18	1	Gambusia sp.		1
3119	City Park	Sag-1	2024-04-18	1	Gambusia sp.		1
3119	City Park	Sag-1	2024-04-18	1	Gambusia sp.		1
3119	City Park	Sag-1	2024-04-18	1	Gambusia sp.		1
3119	City Park	Sag-1	2024-04-18	1	Gambusia sp.		1
3119	City Park	Sag-1	2024-04-18	1	Gambusia sp.		1
3119	City Park	Sag-1	2024-04-18	1	Gambusia sp.		1
3119	City Park	Sag-1	2024-04-18	1	Gambusia sp.		1

3119	City Park	Sag-1	2024-04-18	1	Gambusia sp.		1
3119	City Park	Sag-1	2024-04-18	1	Gambusia sp.		1
3119	City Park	Sag-1	2024-04-18	1	Gambusia sp.		1
3119	City Park	Sag-1	2024-04-18	1	Gambusia sp.		1
3119	City Park	Sag-1	2024-04-18	1	Gambusia sp.		1
3119	City Park	Sag-1	2024-04-18	1	Gambusia sp.		1
3119	City Park	Sag-1	2024-04-18	1	Gambusia sp.		1
3119	City Park	Sag-1	2024-04-18	1	Gambusia sp.		1
3119	City Park	Sag-1	2024-04-18	1	Gambusia sp.		1
3119	City Park	Sag-1	2024-04-18	1	Gambusia sp.		1
3119	City Park	Sag-1	2024-04-18	1	Gambusia sp.		1
3119	City Park	Sag-1	2024-04-18	1	Gambusia sp.		1
3119	City Park	Sag-1	2024-04-18	1	Gambusia sp.		1
3119	City Park	Sag-1	2024-04-18	1	Gambusia sp.		1
3119	City Park	Sag-1	2024-04-18	1	Gambusia sp.		1
3119	City Park	Sag-1	2024-04-18	1	Gambusia sp.		1
3119	City Park	Sag-1	2024-04-18	1	Gambusia sp.		1
3119	City Park	Sag-1	2024-04-18	1	Gambusia sp.		1
3119	City Park	Sag-1	2024-04-18	1	Notropis chalybaeus	16	1
3119	City Park	Sag-1	2024-04-18	1	Notropis chalybaeus	13	1
3119	City Park	Sag-1	2024-04-18	2	Gambusia sp.		1
3119	City Park	Sag-1	2024-04-18	2	Gambusia sp.		1
3119	City Park	Sag-1	2024-04-18	2	Gambusia sp.		1
3119	City Park	Sag-1	2024-04-18	2	Gambusia sp.		1
3119	City Park	Sag-1	2024-04-18	2	Gambusia sp.		1
3119	City Park	Sag-1	2024-04-18	2	Gambusia sp.		1
3119	City Park	Sag-1	2024-04-18	2	Gambusia sp.		1
3119	City Park	Sag-1	2024-04-18	2	Gambusia sp.		1
3119	City Park	Sag-1	2024-04-18	2	Gambusia sp.		1
3119	City Park	Sag-1	2024-04-18	2	Gambusia sp.		1

3119	City Park	Sag-1	2024-04-18	2	Gambusia sp.		1
3119	City Park	Sag-1	2024-04-18	2	Gambusia sp.		1
3119	City Park	Sag-1	2024-04-18	2	Gambusia sp.		1
3119	City Park	Sag-1	2024-04-18	2	Gambusia sp.		1
3119	City Park	Sag-1	2024-04-18	2	Gambusia sp.		1
3119	City Park	Sag-1	2024-04-18	2	Gambusia sp.		1
3119	City Park	Sag-1	2024-04-18	2	Gambusia sp.		1
3119	City Park	Sag-1	2024-04-18	2	Gambusia sp.		1
3119	City Park	Sag-1	2024-04-18	2	Gambusia sp.		1
3119	City Park	Sag-1	2024-04-18	2	Gambusia sp.		1
3119	City Park	Sag-1	2024-04-18	2	Gambusia sp.		1
3119	City Park	Sag-1	2024-04-18	2	Gambusia sp.		1
3119	City Park	Sag-1	2024-04-18	2	Gambusia sp.		1
3119	City Park	Sag-1	2024-04-18	2	Gambusia sp.		1
3119	City Park	Sag-1	2024-04-18	2	Gambusia sp.		1
3119	City Park	Sag-1	2024-04-18	2	Gambusia sp.		1
3119	City Park	Sag-1	2024-04-18	2	Gambusia sp.		1
3119	City Park	Sag-1	2024-04-18	2	Gambusia sp.		1
3119	City Park	Sag-1	2024-04-18	2	Gambusia sp.		1
3119	City Park	Sag-1	2024-04-18	2	Lepomis sp.	16	1
3119	City Park	Sag-1	2024-04-18	2	Notropis chalybaeus	14	1
3119	City Park	Sag-1	2024-04-18	3	Gambusia sp.		1
3119	City Park	Sag-1	2024-04-18	3	Gambusia sp.		1
3119	City Park	Sag-1	2024-04-18	3	Gambusia sp.		1
3119	City Park	Sag-1	2024-04-18	3	Gambusia sp.		1
3119	City Park	Sag-1	2024-04-18	3	Gambusia sp.		1
3119	City Park	Sag-1	2024-04-18	3	Gambusia sp.		1
3119	City Park	Sag-1	2024-04-18	3	Gambusia sp.		1
3119	City Park	Sag-1	2024-04-18	4	Etheostoma fonticola	19	1
3119	City Park	Sag-1	2024-04-18	4	Etheostoma fonticola	25	1

3119	City Park	Sag-1	2024-04-18	4	Etheostoma fonticola	22	1
3119	City Park	Sag-1	2024-04-18	4	Gambusia sp.		1
3119	City Park	Sag-1	2024-04-18	4	Gambusia sp.		1
3119	City Park	Sag-1	2024-04-18	4	Gambusia sp.		1
3119	City Park	Sag-1	2024-04-18	4	Gambusia sp.		1
3119	City Park	Sag-1	2024-04-18	4	Gambusia sp.		1
3119	City Park	Sag-1	2024-04-18	4	Gambusia sp.		1
3119	City Park	Sag-1	2024-04-18	4	Gambusia sp.		1
3119	City Park	Sag-1	2024-04-18	5	Gambusia sp.		1
3119	City Park	Sag-1	2024-04-18	5	Gambusia sp.		1
3119	City Park	Sag-1	2024-04-18	5	Gambusia sp.		1
3119	City Park	Sag-1	2024-04-18	5	Gambusia sp.		1
3119	City Park	Sag-1	2024-04-18	5	Gambusia sp.		1
3119	City Park	Sag-1	2024-04-18	5	Gambusia sp.		1
3119	City Park	Sag-1	2024-04-18	5	Gambusia sp.		1
3119	City Park	Sag-1	2024-04-18	5	Gambusia sp.		1
3119	City Park	Sag-1	2024-04-18	5	Gambusia sp.		1
3119	City Park	Sag-1	2024-04-18	5	Gambusia sp.		1
3119	City Park	Sag-1	2024-04-18	5	Gambusia sp.		1
3119	City Park	Sag-1	2024-04-18	6	Gambusia sp.		1
3119	City Park	Sag-1	2024-04-18	6	Gambusia sp.		1
3119	City Park	Sag-1	2024-04-18	6	Gambusia sp.		1
3119	City Park	Sag-1	2024-04-18	6	Gambusia sp.		1
3119	City Park	Sag-1	2024-04-18	6	Gambusia sp.		1
3119	City Park	Sag-1	2024-04-18	6	Gambusia sp.		1
3119	City Park	Sag-1	2024-04-18	6	Gambusia sp.		1
3119	City Park	Sag-1	2024-04-18	6	Gambusia sp.		1
3119	City Park	Sag-1	2024-04-18	7	Gambusia sp.		1
3119	City Park	Sag-1	2024-04-18	7	Gambusia sp.		1
3119	City Park	Sag-1	2024-04-18	7	Gambusia sp.		1

3119	City Park	Sag-1	2024-04-18	7	Astyanax mexicanus	20	1
3119	City Park	Sag-1	2024-04-18	8	Gambusia sp.		1
3119	City Park	Sag-1	2024-04-18	8	Gambusia sp.		1
3119	City Park	Sag-1	2024-04-18	8	Gambusia sp.		1
3119	City Park	Sag-1	2024-04-18	8	Gambusia sp.		1
3119	City Park	Sag-1	2024-04-18	8	Gambusia sp.		1
3119	City Park	Sag-1	2024-04-18	8	Etheostoma fonticola	17	1
3119	City Park	Sag-1	2024-04-18	8	Etheostoma fonticola	24	1
3119	City Park	Sag-1	2024-04-18	8	Etheostoma fonticola	12	1
3119	City Park	Sag-1	2024-04-18	9	Procambarus sp.		1
3119	City Park	Sag-1	2024-04-18	10	Lepomis sp.	17	1
3119	City Park	Sag-1	2024-04-18	11	Etheostoma fonticola	28	1
3119	City Park	Sag-1	2024-04-18	11	Etheostoma fonticola	24	1
3119	City Park	Sag-1	2024-04-18	11	Etheostoma fonticola	17	1
3119	City Park	Sag-1	2024-04-18	11	Procambarus sp.		1
3119	City Park	Sag-1	2024-04-18	11	Gambusia sp.		1
3119	City Park	Sag-1	2024-04-18	12	Gambusia sp.		1
3119	City Park	Sag-1	2024-04-18	12	Gambusia sp.		1
3119	City Park	Sag-1	2024-04-18	13	Procambarus sp.		1
3119	City Park	Sag-1	2024-04-18	13	Etheostoma fonticola	17	1
3119	City Park	Sag-1	2024-04-18	13	Gambusia sp.		1
3119	City Park	Sag-1	2024-04-18	13	Gambusia sp.		1
3119	City Park	Sag-1	2024-04-18	14	Gambusia sp.		1
3119	City Park	Sag-1	2024-04-18	14	Etheostoma fonticola	24	1
3119	City Park	Sag-1	2024-04-18	14	Etheostoma fonticola	23	1
3119	City Park	Sag-1	2024-04-18	14	Etheostoma fonticola	19	1
3119	City Park	Sag-1	2024-04-18	15	Gambusia sp.		1
3119	City Park	Sag-1	2024-04-18	15	Etheostoma fonticola	24	1
3119	City Park	Sag-1	2024-04-18	15	Etheostoma fonticola	18	1
3119	City Park	Sag-1	2024-04-18	15	Etheostoma fonticola	18	1

3119	City Park	Sag-1	2024-04-18	16	No fish collected		
3120	City Park	Sag-2	2024-04-18	1	Gambusia sp.	32	1
3120	City Park	Sag-2	2024-04-18	1	Gambusia sp.	27	1
3120	City Park	Sag-2	2024-04-18	1	Gambusia sp.	15	1
3120	City Park	Sag-2	2024-04-18	1	Gambusia sp.	20	1
3120	City Park	Sag-2	2024-04-18	1	Gambusia sp.	21	1
3120	City Park	Sag-2	2024-04-18	1	Gambusia sp.	20	1
3120	City Park	Sag-2	2024-04-18	1	Gambusia sp.	24	1
3120	City Park	Sag-2	2024-04-18	1	Gambusia sp.	18	1
3120	City Park	Sag-2	2024-04-18	1	Gambusia sp.	24	1
3120	City Park	Sag-2	2024-04-18	1	Gambusia sp.	23	1
3120	City Park	Sag-2	2024-04-18	1	Gambusia sp.	22	1
3120	City Park	Sag-2	2024-04-18	1	Gambusia sp.	20	1
3120	City Park	Sag-2	2024-04-18	1	Gambusia sp.	15	1
3120	City Park	Sag-2	2024-04-18	1	Gambusia sp.	25	1
3120	City Park	Sag-2	2024-04-18	1	Gambusia sp.	16	1
3120	City Park	Sag-2	2024-04-18	1	Gambusia sp.	28	1
3120	City Park	Sag-2	2024-04-18	1	Gambusia sp.	17	1
3120	City Park	Sag-2	2024-04-18	1	Gambusia sp.	19	1
3120	City Park	Sag-2	2024-04-18	1	Gambusia sp.	32	1
3120	City Park	Sag-2	2024-04-18	1	Gambusia sp.	22	1
3120	City Park	Sag-2	2024-04-18	1	Gambusia sp.		1
3120	City Park	Sag-2	2024-04-18	1	Gambusia sp.		1
3120	City Park	Sag-2	2024-04-18	1	Gambusia sp.		1
3120	City Park	Sag-2	2024-04-18	1	Gambusia sp.		1
3120	City Park	Sag-2	2024-04-18	1	Gambusia sp.		1
3120	City Park	Sag-2	2024-04-18	1	Gambusia sp.		1
3120	City Park	Sag-2	2024-04-18	1	Gambusia sp.		1
3120	City Park	Sag-2	2024-04-18	1	Gambusia sp.		1
3120	City Park	Sag-2	2024-04-18	1	Gambusia sp.		1

3120	City Park	Sag-2	2024-04-18	1	Gambusia sp.		1
3120	City Park	Sag-2	2024-04-18	1	Gambusia sp.		1
3120	City Park	Sag-2	2024-04-18	1	Gambusia sp.		1
3120	City Park	Sag-2	2024-04-18	1	Gambusia sp.		1
3120	City Park	Sag-2	2024-04-18	1	Gambusia sp.		1
3120	City Park	Sag-2	2024-04-18	1	Gambusia sp.		1
3120	City Park	Sag-2	2024-04-18	1	Gambusia sp.		1
3120	City Park	Sag-2	2024-04-18	1	Gambusia sp.		1
3120	City Park	Sag-2	2024-04-18	1	Gambusia sp.		1
3120	City Park	Sag-2	2024-04-18	1	Gambusia sp.		1
3120	City Park	Sag-2	2024-04-18	1	Gambusia sp.		1
3120	City Park	Sag-2	2024-04-18	1	Gambusia sp.		1
3120	City Park	Sag-2	2024-04-18	1	Gambusia sp.		1
3120	City Park	Sag-2	2024-04-18	1	Gambusia sp.		1
3120	City Park	Sag-2	2024-04-18	1	Gambusia sp.		1
3120	City Park	Sag-2	2024-04-18	1	Gambusia sp.		1
3120	City Park	Sag-2	2024-04-18	1	Gambusia sp.		1
3120	City Park	Sag-2	2024-04-18	1	Gambusia sp.		1
3120	City Park	Sag-2	2024-04-18	1	Gambusia sp.		1
3120	City Park	Sag-2	2024-04-18	1	Gambusia sp.		1
3120	City Park	Sag-2	2024-04-18	1	Gambusia sp.		1
3120	City Park	Sag-2	2024-04-18	1	Gambusia sp.		1
3120	City Park	Sag-2	2024-04-18	1	Gambusia sp.		1
3120	City Park	Sag-2	2024-04-18	1	Gambusia sp.		1
3120	City Park	Sag-2	2024-04-18	1	Gambusia sp.		1
3120	City Park	Sag-2	2024-04-18	1	Gambusia sp.		1
3120	City Park	Sag-2	2024-04-18	1	Gambusia sp.		1
3120	City Park	Sag-2	2024-04-18	1	Gambusia sp.		1
3120	City Park	Sag-2	2024-04-18	1	Gambusia sp.		1
3120	City Park	Sag-2	2024-04-18	1	Gambusia sp.		1

3120	City Park	Sag-2	2024-04-18	1	Gambusia sp.		1
3120	City Park	Sag-2	2024-04-18	1	Gambusia sp.		1
3120	City Park	Sag-2	2024-04-18	1	Gambusia sp.		1
3120	City Park	Sag-2	2024-04-18	1	Gambusia sp.		1
3120	City Park	Sag-2	2024-04-18	1	Gambusia sp.		1
3120	City Park	Sag-2	2024-04-18	1	Gambusia sp.		1
3120	City Park	Sag-2	2024-04-18	1	Gambusia sp.		1
3120	City Park	Sag-2	2024-04-18	1	Gambusia sp.		1
3120	City Park	Sag-2	2024-04-18	1	Gambusia sp.		1
3120	City Park	Sag-2	2024-04-18	1	Gambusia sp.		1
3120	City Park	Sag-2	2024-04-18	1	Gambusia sp.		1
3120	City Park	Sag-2	2024-04-18	1	Gambusia sp.		1
3120	City Park	Sag-2	2024-04-18	1	Gambusia sp.		1
3120	City Park	Sag-2	2024-04-18	1	Gambusia sp.		1
3120	City Park	Sag-2	2024-04-18	1	Procambarus sp.		1
3120	City Park	Sag-2	2024-04-18	1	Etheostoma fonticola	30	1
3120	City Park	Sag-2	2024-04-18	1	Etheostoma fonticola	28	1
3120	City Park	Sag-2	2024-04-18	1	Etheostoma fonticola	21	1
3120	City Park	Sag-2	2024-04-18	1	Etheostoma fonticola	28	1
3120	City Park	Sag-2	2024-04-18	1	Etheostoma fonticola	21	1
3120	City Park	Sag-2	2024-04-18	1	Etheostoma fonticola	25	1
3120	City Park	Sag-2	2024-04-18	1	Notropis chalybaeus	15	1
3120	City Park	Sag-2	2024-04-18	2	Etheostoma fonticola	16	1
3120	City Park	Sag-2	2024-04-18	2	Etheostoma fonticola	19	1
3120	City Park	Sag-2	2024-04-18	2	Notropis chalybaeus	20	1
3120	City Park	Sag-2	2024-04-18	2	Gambusia sp.		1
3120	City Park	Sag-2	2024-04-18	2	Gambusia sp.		1
3120	City Park	Sag-2	2024-04-18	2	Gambusia sp.		1
3120	City Park	Sag-2	2024-04-18	2	Gambusia sp.		1
3120	City Park	Sag-2	2024-04-18	2	Gambusia sp.		1

3120	City Park	Sag-2	2024-04-18	2	Gambusia sp.		1
3120	City Park	Sag-2	2024-04-18	2	Gambusia sp.		1
3120	City Park	Sag-2	2024-04-18	2	Gambusia sp.		1
3120	City Park	Sag-2	2024-04-18	2	Gambusia sp.		1
3120	City Park	Sag-2	2024-04-18	3	Gambusia sp.		1
3120	City Park	Sag-2	2024-04-18	3	Gambusia sp.		1
3120	City Park	Sag-2	2024-04-18	3	Gambusia sp.		1
3120	City Park	Sag-2	2024-04-18	3	Gambusia sp.		1
3120	City Park	Sag-2	2024-04-18	3	Gambusia sp.		1
3120	City Park	Sag-2	2024-04-18	3	Gambusia sp.		1
3120	City Park	Sag-2	2024-04-18	3	Gambusia sp.		1
3120	City Park	Sag-2	2024-04-18	3	Gambusia sp.		1
3120	City Park	Sag-2	2024-04-18	3	Gambusia sp.		1
3120	City Park	Sag-2	2024-04-18	3	Gambusia sp.		1
3120	City Park	Sag-2	2024-04-18	3	Procambarus sp.		1
3120	City Park	Sag-2	2024-04-18	3	Notropis chalybaeus	20	1
3120	City Park	Sag-2	2024-04-18	3	Notropis chalybaeus	22	1
3120	City Park	Sag-2	2024-04-18	4	Gambusia sp.		1
3120	City Park	Sag-2	2024-04-18	4	Gambusia sp.		1
3120	City Park	Sag-2	2024-04-18	4	Gambusia sp.		1
3120	City Park	Sag-2	2024-04-18	4	Gambusia sp.		1
3120	City Park	Sag-2	2024-04-18	4	Gambusia sp.		1
3120	City Park	Sag-2	2024-04-18	4	Gambusia sp.		1
3120	City Park	Sag-2	2024-04-18	4	Gambusia sp.		1
3120	City Park	Sag-2	2024-04-18	4	Gambusia sp.		1
3120	City Park	Sag-2	2024-04-18	4	Gambusia sp.		1
3120	City Park	Sag-2	2024-04-18	4	Gambusia sp.		1
3120	City Park	Sag-2	2024-04-18	4	Gambusia sp.		1
3120	City Park	Sag-2	2024-04-18	4	Gambusia sp.		1
3120	City Park	Sag-2	2024-04-18	4	Gambusia sp.		1

3120	City Park	Sag-2	2024-04-18	4	Gambusia sp.		1
3120	City Park	Sag-2	2024-04-18	4	Gambusia sp.		1
3120	City Park	Sag-2	2024-04-18	4	Gambusia sp.		1
3120	City Park	Sag-2	2024-04-18	4	Procambarus sp.		1
3120	City Park	Sag-2	2024-04-18	4	Etheostoma fonticola	7	1
3120	City Park	Sag-2	2024-04-18	4	Etheostoma fonticola	18	1
3120	City Park	Sag-2	2024-04-18	4	Etheostoma fonticola	14	1
3120	City Park	Sag-2	2024-04-18	4	Notropis chalybaeus	19	1
3120	City Park	Sag-2	2024-04-18	4	Notropis chalybaeus	24	1
3120	City Park	Sag-2	2024-04-18	5	Procambarus sp.		1
3120	City Park	Sag-2	2024-04-18	5	Etheostoma fonticola	29	1
3120	City Park	Sag-2	2024-04-18	5	Etheostoma fonticola	13	1
3120	City Park	Sag-2	2024-04-18	5	Etheostoma fonticola	13	1
3120	City Park	Sag-2	2024-04-18	5	Gambusia sp.		1
3120	City Park	Sag-2	2024-04-18	5	Gambusia sp.		1
3120	City Park	Sag-2	2024-04-18	6	Gambusia sp.		1
3120	City Park	Sag-2	2024-04-18	6	Gambusia sp.		1
3120	City Park	Sag-2	2024-04-18	6	Gambusia sp.		1
3120	City Park	Sag-2	2024-04-18	6	Gambusia sp.		1
3120	City Park	Sag-2	2024-04-18	6	Gambusia sp.		1
3120	City Park	Sag-2	2024-04-18	6	Gambusia sp.		1
3120	City Park	Sag-2	2024-04-18	6	Gambusia sp.		1
3120	City Park	Sag-2	2024-04-18	6	Procambarus sp.		1
3120	City Park	Sag-2	2024-04-18	6	Etheostoma fonticola	27	1
3120	City Park	Sag-2	2024-04-18	6	Etheostoma fonticola	16	1
3120	City Park	Sag-2	2024-04-18	6	Etheostoma fonticola	18	1
3120	City Park	Sag-2	2024-04-18	7	Gambusia sp.		1
3120	City Park	Sag-2	2024-04-18	7	Gambusia sp.		1
3120	City Park	Sag-2	2024-04-18	7	Gambusia sp.		1
3120	City Park	Sag-2	2024-04-18	7	Gambusia sp.		1

3120	City Park	Sag-2	2024-04-18	7	Gambusia sp.		1
3120	City Park	Sag-2	2024-04-18	7	Gambusia sp.		1
3120	City Park	Sag-2	2024-04-18	7	Gambusia sp.		1
3120	City Park	Sag-2	2024-04-18	7	Gambusia sp.		1
3120	City Park	Sag-2	2024-04-18	7	Gambusia sp.		1
3120	City Park	Sag-2	2024-04-18	8	Gambusia sp.		1
3120	City Park	Sag-2	2024-04-18	8	Gambusia sp.		1
3120	City Park	Sag-2	2024-04-18	8	Gambusia sp.		1
3120	City Park	Sag-2	2024-04-18	8	Etheostoma fonticola	25	1
3120	City Park	Sag-2	2024-04-18	8	Etheostoma fonticola	18	1
3120	City Park	Sag-2	2024-04-18	9	Procambarus sp.		2
3120	City Park	Sag-2	2024-04-18	9	Notropis chalybaeus	25	1
3120	City Park	Sag-2	2024-04-18	9	Etheostoma fonticola	28	1
3120	City Park	Sag-2	2024-04-18	9	Etheostoma fonticola	15	1
3120	City Park	Sag-2	2024-04-18	9	Etheostoma fonticola	14	1
3120	City Park	Sag-2	2024-04-18	9	Etheostoma fonticola	22	1
3120	City Park	Sag-2	2024-04-18	9	Gambusia sp.		1
3120	City Park	Sag-2	2024-04-18	9	Gambusia sp.		1
3120	City Park	Sag-2	2024-04-18	9	Gambusia sp.		1
3120	City Park	Sag-2	2024-04-18	9	Gambusia sp.		1
3120	City Park	Sag-2	2024-04-18	9	Gambusia sp.		1
3120	City Park	Sag-2	2024-04-18	9	Gambusia sp.		1
3120	City Park	Sag-2	2024-04-18	9	Gambusia sp.		1
3120	City Park	Sag-2	2024-04-18	9	Gambusia sp.		1
3120	City Park	Sag-2	2024-04-18	10	Procambarus sp.		2
3120	City Park	Sag-2	2024-04-18	10	Etheostoma fonticola	12	1
3120	City Park	Sag-2	2024-04-18	10	Etheostoma fonticola	20	1
3120	City Park	Sag-2	2024-04-18	10	Gambusia sp.		1
3120	City Park	Sag-2	2024-04-18	10	Gambusia sp.		1
3120	City Park	Sag-2	2024-04-18	10	Gambusia sp.		1

3120	City Park	Sag-2	2024-04-18	11	Gambusia sp.		1
3120	City Park	Sag-2	2024-04-18	11	Etheostoma fonticola	16	1
3120	City Park	Sag-2	2024-04-18	12	Etheostoma fonticola	20	1
3120	City Park	Sag-2	2024-04-18	12	Etheostoma fonticola	16	1
3120	City Park	Sag-2	2024-04-18	12	Etheostoma fonticola	26	1
3120	City Park	Sag-2	2024-04-18	12	Gambusia sp.		1
3120	City Park	Sag-2	2024-04-18	12	Gambusia sp.		1
3120	City Park	Sag-2	2024-04-18	13	Gambusia sp.		1
3120	City Park	Sag-2	2024-04-18	14	Etheostoma fonticola	25	1
3120	City Park	Sag-2	2024-04-18	15	Etheostoma fonticola	16	1
3120	City Park	Sag-2	2024-04-18	15	Etheostoma fonticola	24	1
3120	City Park	Sag-2	2024-04-18	15	Etheostoma fonticola	28	1
3120	City Park	Sag-2	2024-04-18	16	Procambarus sp.		1
3120	City Park	Sag-2	2024-04-18	16	Etheostoma fonticola	39	1
3120	City Park	Sag-2	2024-04-18	16	Gambusia sp.		1
3120	City Park	Sag-2	2024-04-18	17	No fish collected		
3121	City Park	Ziz-1	2024-04-18	1	Gambusia sp.	10	1
3121	City Park	Ziz-1	2024-04-18	1	Gambusia sp.	20	1
3121	City Park	Ziz-1	2024-04-18	1	Gambusia sp.	10	1
3121	City Park	Ziz-1	2024-04-18	1	Gambusia sp.	22	1
3121	City Park	Ziz-1	2024-04-18	1	Gambusia sp.	20	1
3121	City Park	Ziz-1	2024-04-18	1	Gambusia sp.	22	1
3121	City Park	Ziz-1	2024-04-18	1	Gambusia sp.	28	1
3121	City Park	Ziz-1	2024-04-18	1	Gambusia sp.	31	1
3121	City Park	Ziz-1	2024-04-18	1	Gambusia sp.	10	1
3121	City Park	Ziz-1	2024-04-18	1	Gambusia sp.	30	1
3121	City Park	Ziz-1	2024-04-18	1	Gambusia sp.	29	1
3121	City Park	Ziz-1	2024-04-18	1	Gambusia sp.	24	1
3121	City Park	Ziz-1	2024-04-18	1	Gambusia sp.	28	1
3121	City Park	Ziz-1	2024-04-18	1	Gambusia sp.	20	1

3121	City Park	Ziz-1	2024-04-18	1	Gambusia sp.	19	1
3121	City Park	Ziz-1	2024-04-18	1	Gambusia sp.	22	1
3121	City Park	Ziz-1	2024-04-18	1	Gambusia sp.	32	1
3121	City Park	Ziz-1	2024-04-18	1	Gambusia sp.	22	1
3121	City Park	Ziz-1	2024-04-18	1	Gambusia sp.	14	1
3121	City Park	Ziz-1	2024-04-18	1	Gambusia sp.	10	1
3121	City Park	Ziz-1	2024-04-18	1	Gambusia sp.		1
3121	City Park	Ziz-1	2024-04-18	1	Gambusia sp.		1
3121	City Park	Ziz-1	2024-04-18	1	Gambusia sp.		1
3121	City Park	Ziz-1	2024-04-18	1	Gambusia sp.		1
3121	City Park	Ziz-1	2024-04-18	1	Gambusia sp.		1
3121	City Park	Ziz-1	2024-04-18	1	Gambusia sp.		1
3121	City Park	Ziz-1	2024-04-18	1	Gambusia sp.		1
3121	City Park	Ziz-1	2024-04-18	1	Gambusia sp.		1
3121	City Park	Ziz-1	2024-04-18	1	Gambusia sp.		1
3121	City Park	Ziz-1	2024-04-18	1	Gambusia sp.		1
3121	City Park	Ziz-1	2024-04-18	1	Gambusia sp.		1
3121	City Park	Ziz-1	2024-04-18	1	Gambusia sp.		1
3121	City Park	Ziz-1	2024-04-18	1	Etheostoma fonticola	18	1
3121	City Park	Ziz-1	2024-04-18	1	Procambarus sp.		2
3121	City Park	Ziz-1	2024-04-18	2	Gambusia sp.		1
3121	City Park	Ziz-1	2024-04-18	2	Gambusia sp.		1
3121	City Park	Ziz-1	2024-04-18	2	Gambusia sp.		1
3121	City Park	Ziz-1	2024-04-18	2	Gambusia sp.		1
3121	City Park	Ziz-1	2024-04-18	2	Gambusia sp.		1
3121	City Park	Ziz-1	2024-04-18	2	Gambusia sp.		1
3121	City Park	Ziz-1	2024-04-18	2	Gambusia sp.		1
3121	City Park	Ziz-1	2024-04-18	2	Gambusia sp.		1
3121	City Park	Ziz-1	2024-04-18	2	Gambusia sp.		1
3121	City Park	Ziz-1	2024-04-18	2	Gambusia sp.		1

3121	City Park	Ziz-1	2024-04-18	2	Gambusia sp.		1
3121	City Park	Ziz-1	2024-04-18	2	Gambusia sp.		1
3121	City Park	Ziz-1	2024-04-18	2	Gambusia sp.		1
3121	City Park	Ziz-1	2024-04-18	3	Gambusia sp.		1
3121	City Park	Ziz-1	2024-04-18	3	Gambusia sp.		1
3121	City Park	Ziz-1	2024-04-18	3	Gambusia sp.		1
3121	City Park	Ziz-1	2024-04-18	3	Gambusia sp.		1
3121	City Park	Ziz-1	2024-04-18	3	Gambusia sp.		1
3121	City Park	Ziz-1	2024-04-18	3	Gambusia sp.		1
3121	City Park	Ziz-1	2024-04-18	4	Gambusia sp.		1
3121	City Park	Ziz-1	2024-04-18	4	Gambusia sp.		1
3121	City Park	Ziz-1	2024-04-18	4	Gambusia sp.		1
3121	City Park	Ziz-1	2024-04-18	4	Gambusia sp.		1
3121	City Park	Ziz-1	2024-04-18	4	Gambusia sp.		1
3121	City Park	Ziz-1	2024-04-18	4	Gambusia sp.		1
3121	City Park	Ziz-1	2024-04-18	4	Gambusia sp.		1
3121	City Park	Ziz-1	2024-04-18	4	Gambusia sp.		1
3121	City Park	Ziz-1	2024-04-18	4	Gambusia sp.		1
3121	City Park	Ziz-1	2024-04-18	4	Gambusia sp.		1
3121	City Park	Ziz-1	2024-04-18	5	Gambusia sp.		1
3121	City Park	Ziz-1	2024-04-18	5	Gambusia sp.		1
3121	City Park	Ziz-1	2024-04-18	5	Gambusia sp.		1
3121	City Park	Ziz-1	2024-04-18	6	Gambusia sp.		1
3121	City Park	Ziz-1	2024-04-18	6	Gambusia sp.		1
3121	City Park	Ziz-1	2024-04-18	7	Gambusia sp.		1
3121	City Park	Ziz-1	2024-04-18	7	Gambusia sp.		1
3121	City Park	Ziz-1	2024-04-18	8	Gambusia sp.		1
3121	City Park	Ziz-1	2024-04-18	8	Gambusia sp.		1
3121	City Park	Ziz-1	2024-04-18	9	No fish collected		
3121	City Park	Ziz-1	2024-04-18	10	Gambusia sp.		1

3121	City Park	Ziz-1	2024-04-18	10	Gambusia sp.		1
3121	City Park	Ziz-1	2024-04-18	10	Gambusia sp.		1
3121	City Park	Ziz-1	2024-04-18	10	Etheostoma fonticola	15	1
3121	City Park	Ziz-1	2024-04-18	11	Gambusia sp.		1
3121	City Park	Ziz-1	2024-04-18	12	No fish collected		
3121	City Park	Ziz-1	2024-04-18	13	No fish collected		
3121	City Park	Ziz-1	2024-04-18	14	Gambusia sp.		1
3121	City Park	Ziz-1	2024-04-18	15	No fish collected		
3122	City Park	Ziz-2	2024-04-18	1	Etheostoma fonticola	16	1
3122	City Park	Ziz-2	2024-04-18	1	Gambusia sp.	33	1
3122	City Park	Ziz-2	2024-04-18	1	Gambusia sp.	21	1
3122	City Park	Ziz-2	2024-04-18	1	Gambusia sp.	15	1
3122	City Park	Ziz-2	2024-04-18	1	Gambusia sp.	12	1
3122	City Park	Ziz-2	2024-04-18	1	Gambusia sp.	10	1
3122	City Park	Ziz-2	2024-04-18	2	Gambusia sp.	15	1
3122	City Park	Ziz-2	2024-04-18	2	Gambusia sp.	10	1
3122	City Park	Ziz-2	2024-04-18	2	Gambusia sp.	11	1
3122	City Park	Ziz-2	2024-04-18	2	Gambusia sp.	18	1
3122	City Park	Ziz-2	2024-04-18	2	Etheostoma fonticola	22	1
3122	City Park	Ziz-2	2024-04-18	3	Gambusia sp.	28	1
3122	City Park	Ziz-2	2024-04-18	3	Gambusia sp.	24	1
3122	City Park	Ziz-2	2024-04-18	3	Gambusia sp.	24	1
3122	City Park	Ziz-2	2024-04-18	3	Gambusia sp.	13	1
3122	City Park	Ziz-2	2024-04-18	3	Gambusia sp.	25	1
3122	City Park	Ziz-2	2024-04-18	3	Gambusia sp.	22	1
3122	City Park	Ziz-2	2024-04-18	3	Etheostoma fonticola	15	1
3122	City Park	Ziz-2	2024-04-18	3	Etheostoma fonticola	30	1
3122	City Park	Ziz-2	2024-04-18	3	Etheostoma fonticola	15	1
3122	City Park	Ziz-2	2024-04-18	4	Etheostoma fonticola	20	1
3122	City Park	Ziz-2	2024-04-18	4	Etheostoma fonticola	18	1

3122	City Park	Ziz-2	2024-04-18	4	Gambusia sp.	23	1
3122	City Park	Ziz-2	2024-04-18	4	Gambusia sp.	24	1
3122	City Park	Ziz-2	2024-04-18	4	Gambusia sp.	12	1
3122	City Park	Ziz-2	2024-04-18	4	Gambusia sp.	12	1
3122	City Park	Ziz-2	2024-04-18	5	Etheostoma fonticola	22	1
3122	City Park	Ziz-2	2024-04-18	5	Etheostoma fonticola	26	1
3122	City Park	Ziz-2	2024-04-18	5	Etheostoma fonticola	38	1
3122	City Park	Ziz-2	2024-04-18	5	Etheostoma fonticola	20	1
3122	City Park	Ziz-2	2024-04-18	5	Gambusia sp.	28	1
3122	City Park	Ziz-2	2024-04-18	5	Gambusia sp.	32	1
3122	City Park	Ziz-2	2024-04-18	6	Etheostoma fonticola	11	1
3122	City Park	Ziz-2	2024-04-18	7	No fish collected		
3122	City Park	Ziz-2	2024-04-18	8	Etheostoma fonticola	29	1
3122	City Park	Ziz-2	2024-04-18	9	Procambarus sp.		2
3122	City Park	Ziz-2	2024-04-18	9	Etheostoma fonticola	18	1
3122	City Park	Ziz-2	2024-04-18	9	Etheostoma fonticola	18	1
3122	City Park	Ziz-2	2024-04-18	10	Gambusia sp.	25	1
3122	City Park	Ziz-2	2024-04-18	10	Gambusia sp.	20	1
3122	City Park	Ziz-2	2024-04-18	10	Etheostoma fonticola	15	1
3122	City Park	Ziz-2	2024-04-18	10	Etheostoma fonticola	18	1
3122	City Park	Ziz-2	2024-04-18	11	Etheostoma fonticola	33	1
3122	City Park	Ziz-2	2024-04-18	11	Etheostoma fonticola	11	1
3122	City Park	Ziz-2	2024-04-18	11	Gambusia sp.	20	1
3122	City Park	Ziz-2	2024-04-18	11	Gambusia sp.		1
3122	City Park	Ziz-2	2024-04-18	12	No fish collected		
3122	City Park	Ziz-2	2024-04-18	13	Procambarus sp.		1
3122	City Park	Ziz-2	2024-04-18	13	Etheostoma fonticola	15	1
3122	City Park	Ziz-2	2024-04-18	14	Etheostoma fonticola	15	1
3122	City Park	Ziz-2	2024-04-18	15	No fish collected		
3123	I-35	Cab-1	2024-04-18	1	Procambarus sp.		4

3123	I-35	Cab-1	2024-04-18	1	Ambloplites rupestris	28	1
3123	I-35	Cab-1	2024-04-18	1	Ambloplites rupestris	21	1
3123	I-35	Cab-1	2024-04-18	1	Gambusia sp.	29	1
3123	I-35	Cab-1	2024-04-18	1	Gambusia sp.	11	1
3123	I-35	Cab-1	2024-04-18	1	Gambusia sp.	38	1
3123	I-35	Cab-1	2024-04-18	1	Gambusia sp.	13	1
3123	I-35	Cab-1	2024-04-18	1	Gambusia sp.	10	1
3123	I-35	Cab-1	2024-04-18	1	Lepomis sp.	18	1
3123	I-35	Cab-1	2024-04-18	1	Dionda nigrotaeniata	25	1
3123	I-35	Cab-1	2024-04-18	1	Dionda nigrotaeniata	12	1
3123	I-35	Cab-1	2024-04-18	1	Etheostoma fonticola	24	1
3123	I-35	Cab-1	2024-04-18	1	Etheostoma fonticola	18	1
3123	I-35	Cab-1	2024-04-18	1	Etheostoma fonticola	18	1
3123	I-35	Cab-1	2024-04-18	2	Procambarus sp.		1
3123	I-35	Cab-1	2024-04-18	2	Lepomis sp.	15	1
3123	I-35	Cab-1	2024-04-18	2	Etheostoma fonticola	22	1
3123	I-35	Cab-1	2024-04-18	2	Etheostoma fonticola	11	1
3123	I-35	Cab-1	2024-04-18	2	Gambusia sp.	11	1
3123	I-35	Cab-1	2024-04-18	2	Ambloplites rupestris	11	1
3123	I-35	Cab-1	2024-04-18	3	Gambusia sp.	28	1
3123	I-35	Cab-1	2024-04-18	3	Gambusia sp.	36	1
3123	I-35	Cab-1	2024-04-18	3	Gambusia sp.	10	1
3123	I-35	Cab-1	2024-04-18	3	Gambusia sp.	20	1
3123	I-35	Cab-1	2024-04-18	3	Procambarus sp.		1
3123	I-35	Cab-1	2024-04-18	4	Lepomis sp.	21	1
3123	I-35	Cab-1	2024-04-18	4	Lepomis sp.	15	1
3123	I-35	Cab-1	2024-04-18	4	Lepomis sp.	12	1
3123	I-35	Cab-1	2024-04-18	4	Etheostoma fonticola	33	1
3123	I-35	Cab-1	2024-04-18	4	Etheostoma fonticola	22	1
3123	I-35	Cab-1	2024-04-18	4	Etheostoma fonticola	21	1

3123	I-35	Cab-1	2024-04-18	4	Etheostoma fonticola	12	1
3123	I-35	Cab-1	2024-04-18	4	Gambusia sp.	10	1
3123	I-35	Cab-1	2024-04-18	5	Gambusia sp.	33	1
3123	I-35	Cab-1	2024-04-18	5	Gambusia sp.	10	1
3123	I-35	Cab-1	2024-04-18	5	Gambusia sp.	15	1
3123	I-35	Cab-1	2024-04-18	5	Gambusia sp.	11	1
3123	I-35	Cab-1	2024-04-18	5	Gambusia sp.	11	1
3123	I-35	Cab-1	2024-04-18	5	Ambloplites rupestris	25	1
3123	I-35	Cab-1	2024-04-18	5	Etheostoma fonticola	23	1
3123	I-35	Cab-1	2024-04-18	5	Etheostoma fonticola	16	1
3123	I-35	Cab-1	2024-04-18	6	Gambusia sp.	30	1
3123	I-35	Cab-1	2024-04-18	6	Gambusia sp.	13	1
3123	I-35	Cab-1	2024-04-18	6	Gambusia sp.	10	1
3123	I-35	Cab-1	2024-04-18	6	Procambarus sp.		4
3123	I-35	Cab-1	2024-04-18	6	Etheostoma fonticola	16	1
3123	I-35	Cab-1	2024-04-18	6	Etheostoma fonticola	22	1
3123	I-35	Cab-1	2024-04-18	6	Etheostoma fonticola	31	1
3123	I-35	Cab-1	2024-04-18	6	Etheostoma fonticola	10	1
3123	I-35	Cab-1	2024-04-18	6	Etheostoma fonticola	22	1
3123	I-35	Cab-1	2024-04-18	6	Lepomis sp.	11	1
3123	I-35	Cab-1	2024-04-18	7	Gambusia sp.	11	1
3123	I-35	Cab-1	2024-04-18	7	Procambarus sp.		1
3123	I-35	Cab-1	2024-04-18	8	Procambarus sp.		2
3123	I-35	Cab-1	2024-04-18	8	Etheostoma fonticola	22	1
3123	I-35	Cab-1	2024-04-18	8	Etheostoma fonticola	28	1
3123	I-35	Cab-1	2024-04-18	8	Etheostoma fonticola	29	1
3123	I-35	Cab-1	2024-04-18	8	Etheostoma fonticola	18	1
3123	I-35	Cab-1	2024-04-18	8	Etheostoma fonticola	22	1
3123	I-35	Cab-1	2024-04-18	8	Etheostoma fonticola	17	1
3123	I-35	Cab-1	2024-04-18	8	Etheostoma fonticola	15	1

3123	I-35	Cab-1	2024-04-18	8	Lepomis sp.	11	1
3123	I-35	Cab-1	2024-04-18	8	Lepomis sp.	15	1
3123	I-35	Cab-1	2024-04-18	8	Lepomis sp.	12	1
3123	I-35	Cab-1	2024-04-18	8	Ameiurus natalis	19	1
3123	I-35	Cab-1	2024-04-18	9	Gambusia sp.		1
3123	I-35	Cab-1	2024-04-18	9	Gambusia sp.		1
3123	I-35	Cab-1	2024-04-18	9	Gambusia sp.		1
3123	I-35	Cab-1	2024-04-18	9	Gambusia sp.		1
3123	I-35	Cab-1	2024-04-18	9	Lepomis sp.	10	1
3123	I-35	Cab-1	2024-04-18	10	Procambarus sp.		1
3123	I-35	Cab-1	2024-04-18	10	Etheostoma fonticola	27	1
3123	I-35	Cab-1	2024-04-18	10	Lepomis sp.	12	1
3123	I-35	Cab-1	2024-04-18	11	Etheostoma fonticola	20	1
3123	I-35	Cab-1	2024-04-18	11	Etheostoma fonticola	20	1
3123	I-35	Cab-1	2024-04-18	11	Procambarus sp.		1
3123	I-35	Cab-1	2024-04-18	11	Lepomis sp.	15	1
3123	I-35	Cab-1	2024-04-18	12	No fish collected		
3123	I-35	Cab-1	2024-04-18	13	No fish collected		
3123	I-35	Cab-1	2024-04-18	14	Etheostoma fonticola	28	1
3123	I-35	Cab-1	2024-04-18	14	Etheostoma fonticola	21	1
3123	I-35	Cab-1	2024-04-18	14	Etheostoma fonticola	26	1
3123	I-35	Cab-1	2024-04-18	14	Etheostoma fonticola	21	1
3123	I-35	Cab-1	2024-04-18	14	Ameiurus natalis	18	1
3123	I-35	Cab-1	2024-04-18	15	No fish collected		
3124	I-35	Hyg-1	2024-04-18	1	Procambarus sp.		13
3124	I-35	Hyg-1	2024-04-18	1	Etheostoma fonticola	18	1
3124	I-35	Hyg-1	2024-04-18	1	Etheostoma fonticola	17	1
3124	I-35	Hyg-1	2024-04-18	1	Etheostoma fonticola	23	1
3124	I-35	Hyg-1	2024-04-18	1	Etheostoma fonticola	14	1
3124	I-35	Hyg-1	2024-04-18	1	Etheostoma fonticola	26	1

3124	I-35	Hyg-1	2024-04-18	1	Etheostoma fonticola	19	1
3124	I-35	Hyg-1	2024-04-18	1	Etheostoma fonticola	19	1
3124	I-35	Hyg-1	2024-04-18	1	Etheostoma fonticola	25	1
3124	I-35	Hyg-1	2024-04-18	1	Etheostoma fonticola	17	1
3124	I-35	Hyg-1	2024-04-18	1	Etheostoma fonticola	23	1
3124	I-35	Hyg-1	2024-04-18	1	Etheostoma fonticola	21	1
3124	I-35	Hyg-1	2024-04-18	1	Etheostoma fonticola	26	1
3124	I-35	Hyg-1	2024-04-18	1	Etheostoma fonticola	16	1
3124	I-35	Hyg-1	2024-04-18	1	Etheostoma fonticola	16	1
3124	I-35	Hyg-1	2024-04-18	1	Etheostoma fonticola	15	1
3124	I-35	Hyg-1	2024-04-18	1	Etheostoma fonticola	23	1
3124	I-35	Hyg-1	2024-04-18	1	Etheostoma fonticola	22	1
3124	I-35	Hyg-1	2024-04-18	1	Etheostoma fonticola	23	1
3124	I-35	Hyg-1	2024-04-18	1	Etheostoma fonticola	22	1
3124	I-35	Hyg-1	2024-04-18	1	Etheostoma fonticola	23	1
3124	I-35	Hyg-1	2024-04-18	1	Etheostoma fonticola	21	1
3124	I-35	Hyg-1	2024-04-18	1	Etheostoma fonticola	17	1
3124	I-35	Hyg-1	2024-04-18	1	Etheostoma fonticola	22	1
3124	I-35	Hyg-1	2024-04-18	1	Etheostoma fonticola	13	1
3124	I-35	Hyg-1	2024-04-18	1	Etheostoma fonticola	22	1
3124	I-35	Hyg-1	2024-04-18	1	Etheostoma fonticola	20	1
3124	I-35	Hyg-1	2024-04-18	1	Etheostoma fonticola	31	1
3124	I-35	Hyg-1	2024-04-18	1	Etheostoma fonticola	22	1
3124	I-35	Hyg-1	2024-04-18	1	Etheostoma fonticola	15	1
3124	I-35	Hyg-1	2024-04-18	1	Gambusia sp.	16	1
3124	I-35	Hyg-1	2024-04-18	1	Gambusia sp.	22	1
3124	I-35	Hyg-1	2024-04-18	1	Gambusia sp.	24	1
3124	I-35	Hyg-1	2024-04-18	1	Gambusia sp.	20	1
3124	I-35	Hyg-1	2024-04-18	1	Gambusia sp.	13	1
3124	I-35	Hyg-1	2024-04-18	2	Gambusia sp.	40	1

3124	I-35	Hyg-1	2024-04-18	2	Gambusia sp.	10	1
3124	I-35	Hyg-1	2024-04-18	2	Gambusia sp.	15	1
3124	I-35	Hyg-1	2024-04-18	2	Gambusia sp.	17	1
3124	I-35	Hyg-1	2024-04-18	2	Gambusia sp.	16	1
3124	I-35	Hyg-1	2024-04-18	2	Gambusia sp.	17	1
3124	I-35	Hyg-1	2024-04-18	2	Procambarus sp.		3
3124	I-35	Hyg-1	2024-04-18	2	Etheostoma fonticola	17	1
3124	I-35	Hyg-1	2024-04-18	2	Etheostoma fonticola	20	1
3124	I-35	Hyg-1	2024-04-18	2	Etheostoma fonticola	19	1
3124	I-35	Hyg-1	2024-04-18	3	Etheostoma fonticola	23	1
3124	I-35	Hyg-1	2024-04-18	3	Etheostoma fonticola	17	1
3124	I-35	Hyg-1	2024-04-18	3	Etheostoma fonticola	22	1
3124	I-35	Hyg-1	2024-04-18	3	Etheostoma fonticola	19	1
3124	I-35	Hyg-1	2024-04-18	3	Etheostoma fonticola	23	1
3124	I-35	Hyg-1	2024-04-18	3	Etheostoma fonticola	15	1
3124	I-35	Hyg-1	2024-04-18	3	Etheostoma fonticola	16	1
3124	I-35	Hyg-1	2024-04-18	3	Etheostoma fonticola	16	1
3124	I-35	Hyg-1	2024-04-18	3	Etheostoma fonticola	23	1
3124	I-35	Hyg-1	2024-04-18	3	Etheostoma fonticola	25	1
3124	I-35	Hyg-1	2024-04-18	3	Etheostoma fonticola	18	1
3124	I-35	Hyg-1	2024-04-18	3	Etheostoma fonticola	11	1
3124	I-35	Hyg-1	2024-04-18	3	Gambusia sp.	25	1
3124	I-35	Hyg-1	2024-04-18	3	Gambusia sp.	21	1
3124	I-35	Hyg-1	2024-04-18	3	Procambarus sp.		5
3124	I-35	Hyg-1	2024-04-18	4	Procambarus sp.		2
3124	I-35	Hyg-1	2024-04-18	4	Etheostoma fonticola	26	1
3124	I-35	Hyg-1	2024-04-18	4	Gambusia sp.	20	1
3124	I-35	Hyg-1	2024-04-18	5	Procambarus sp.		3
3124	I-35	Hyg-1	2024-04-18	5	Etheostoma fonticola	18	1
3124	I-35	Hyg-1	2024-04-18	5	Etheostoma fonticola	41	1

3124	I-35	Hyg-1	2024-04-18	5	Etheostoma fonticola	31	1
3124	I-35	Hyg-1	2024-04-18	5	Etheostoma fonticola	21	1
3124	I-35	Hyg-1	2024-04-18	5	Etheostoma fonticola	19	1
3124	I-35	Hyg-1	2024-04-18	5	Etheostoma fonticola	21	1
3124	I-35	Hyg-1	2024-04-18	5	Etheostoma fonticola	25	1
3124	I-35	Hyg-1	2024-04-18	5	Etheostoma fonticola	20	1
3124	I-35	Hyg-1	2024-04-18	5	Etheostoma fonticola	25	1
3124	I-35	Hyg-1	2024-04-18	5	Etheostoma fonticola	21	1
3124	I-35	Hyg-1	2024-04-18	6	Procambarus sp.		5
3124	I-35	Hyg-1	2024-04-18	7	Etheostoma fonticola	28	1
3124	I-35	Hyg-1	2024-04-18	8	Etheostoma fonticola	25	1
3124	I-35	Hyg-1	2024-04-18	8	Etheostoma fonticola	16	1
3124	I-35	Hyg-1	2024-04-18	8	Procambarus sp.		1
3124	I-35	Hyg-1	2024-04-18	9	Procambarus sp.		3
3124	I-35	Hyg-1	2024-04-18	9	Etheostoma fonticola	24	1
3124	I-35	Hyg-1	2024-04-18	10	Etheostoma fonticola	16	1
3124	I-35	Hyg-1	2024-04-18	10	Procambarus sp.		1
3124	I-35	Hyg-1	2024-04-18	11	Procambarus sp.		1
3124	I-35	Hyg-1	2024-04-18	12	Procambarus sp.		1
3124	I-35	Hyg-1	2024-04-18	13	No fish collected		
3124	I-35	Hyg-1	2024-04-18	14	Procambarus sp.		1
3124	I-35	Hyg-1	2024-04-18	15	Procambarus sp.		1
3125	I-35	Hyg-2	2024-04-18	1	Etheostoma fonticola	25	1
3125	I-35	Hyg-2	2024-04-18	1	Etheostoma fonticola	19	1
3125	I-35	Hyg-2	2024-04-18	1	Hypostomus plecostomus	25	1
3125	I-35	Hyg-2	2024-04-18	1	Procambarus sp.		1
3125	I-35	Hyg-2	2024-04-18	1	Gambusia sp.	25	1
3125	I-35	Hyg-2	2024-04-18	2	Gambusia sp.	26	1
3125	I-35	Hyg-2	2024-04-18	3	No fish collected		
3125	I-35	Hyg-2	2024-04-18	4	No fish collected		

3125	I-35	Hyg-2	2024-04-18	5	No fish collected		
3125	I-35	Hyg-2	2024-04-18	6	Hypostomus plecostomus	26	1
3125	I-35	Hyg-2	2024-04-18	7	No fish collected		
3125	I-35	Hyg-2	2024-04-18	8	Lepomis miniatus	89	1
3125	I-35	Hyg-2	2024-04-18	8	Procambarus sp.		1
3125	I-35	Hyg-2	2024-04-18	9	No fish collected		
3125	I-35	Hyg-2	2024-04-18	10	No fish collected		
3125	I-35	Hyg-2	2024-04-18	11	Etheostoma fonticola	25	1
3125	I-35	Hyg-2	2024-04-18	12	No fish collected		
3125	I-35	Hyg-2	2024-04-18	13	No fish collected		
3125	I-35	Hyg-2	2024-04-18	14	No fish collected		
3125	I-35	Hyg-2	2024-04-18	15	Gambusia sp.	21	1
3126	I-35	Open-1	2024-04-18	1	No fish collected		
3126	I-35	Open-1	2024-04-18	2	No fish collected		
3126	I-35	Open-1	2024-04-18	3	No fish collected		
3126	I-35	Open-1	2024-04-18	4	No fish collected		
3126	I-35	Open-1	2024-04-18	5	No fish collected		
3126	I-35	Open-1	2024-04-18	6	No fish collected		
3126	I-35	Open-1	2024-04-18	7	No fish collected		
3126	I-35	Open-1	2024-04-18	8	No fish collected		
3126	I-35	Open-1	2024-04-18	9	No fish collected		
3126	I-35	Open-1	2024-04-18	10	No fish collected		
3127	I-35	Cab-2	2024-04-18	1	Etheostoma fonticola	22	1
3127	I-35	Cab-2	2024-04-18	1	Etheostoma fonticola	30	1
3127	I-35	Cab-2	2024-04-18	1	Etheostoma fonticola	22	1
3127	I-35	Cab-2	2024-04-18	1	Etheostoma fonticola	20	1
3127	I-35	Cab-2	2024-04-18	1	Etheostoma fonticola	16	1
3127	I-35	Cab-2	2024-04-18	1	Etheostoma fonticola	16	1
3127	I-35	Cab-2	2024-04-18	1	Etheostoma fonticola	19	1
3127	I-35	Cab-2	2024-04-18	1	Micropterus salmoides	26	1

3127	I-35	Cab-2	2024-04-18	1	Unidentified fish	61	1
3127	I-35	Cab-2	2024-04-18	1	Gambusia sp.	29	1
3127	I-35	Cab-2	2024-04-18	1	Gambusia sp.	22	1
3127	I-35	Cab-2	2024-04-18	1	Gambusia sp.	8	1
3127	I-35	Cab-2	2024-04-18	1	Gambusia sp.	12	1
3127	I-35	Cab-2	2024-04-18	1	Gambusia sp.	20	1
3127	I-35	Cab-2	2024-04-18	1	Gambusia sp.	10	1
3127	I-35	Cab-2	2024-04-18	1	Gambusia sp.	10	1
3127	I-35	Cab-2	2024-04-18	1	Gambusia sp.	11	1
3127	I-35	Cab-2	2024-04-18	1	Gambusia sp.	10	1
3127	I-35	Cab-2	2024-04-18	1	Gambusia sp.	11	1
3127	I-35	Cab-2	2024-04-18	1	Gambusia sp.	10	1
3127	I-35	Cab-2	2024-04-18	1	Gambusia sp.	10	1
3127	I-35	Cab-2	2024-04-18	1	Gambusia sp.	10	1
3127	I-35	Cab-2	2024-04-18	1	Gambusia sp.	12	1
3127	I-35	Cab-2	2024-04-18	1	Gambusia sp.	9	1
3127	I-35	Cab-2	2024-04-18	1	Lepomis sp.	10	1
3127	I-35	Cab-2	2024-04-18	1	Lepomis sp.	14	1
3127	I-35	Cab-2	2024-04-18	1	Lepomis sp.	15	1
3127	I-35	Cab-2	2024-04-18	1	Lepomis sp.	10	1
3127	I-35	Cab-2	2024-04-18	1	Dionda nigrotaeniata	34	1
3127	I-35	Cab-2	2024-04-18	2	Gambusia sp.	28	1
3127	I-35	Cab-2	2024-04-18	2	Gambusia sp.	21	1
3127	I-35	Cab-2	2024-04-18	2	Gambusia sp.	44	1
3127	I-35	Cab-2	2024-04-18	2	Gambusia sp.	33	1
3127	I-35	Cab-2	2024-04-18	2	Gambusia sp.	30	1
3127	I-35	Cab-2	2024-04-18	2	Gambusia sp.		1
3127	I-35	Cab-2	2024-04-18	2	Gambusia sp.		1
3127	I-35	Cab-2	2024-04-18	2	Gambusia sp.		1
3127	I-35	Cab-2	2024-04-18	2	Gambusia sp.		1

3127	I-35	Cab-2	2024-04-18	2	Gambusia sp.		1
3127	I-35	Cab-2	2024-04-18	2	Gambusia sp.		1
3127	I-35	Cab-2	2024-04-18	2	Gambusia sp.		1
3127	I-35	Cab-2	2024-04-18	2	Gambusia sp.		1
3127	I-35	Cab-2	2024-04-18	2	Gambusia sp.		1
3127	I-35	Cab-2	2024-04-18	2	Gambusia sp.		1
3127	I-35	Cab-2	2024-04-18	2	Gambusia sp.		1
3127	I-35	Cab-2	2024-04-18	2	Gambusia sp.		1
3127	I-35	Cab-2	2024-04-18	2	Gambusia sp.		1
3127	I-35	Cab-2	2024-04-18	2	Gambusia sp.		1
3127	I-35	Cab-2	2024-04-18	2	Gambusia sp.		1
3127	I-35	Cab-2	2024-04-18	2	Gambusia sp.		1
3127	I-35	Cab-2	2024-04-18	2	Gambusia sp.		1
3127	I-35	Cab-2	2024-04-18	2	Gambusia sp.		1
3127	I-35	Cab-2	2024-04-18	2	Gambusia sp.		1
3127	I-35	Cab-2	2024-04-18	2	Gambusia sp.		1
3127	I-35	Cab-2	2024-04-18	2	Gambusia sp.		1
3127	I-35	Cab-2	2024-04-18	2	Gambusia sp.		1
3127	I-35	Cab-2	2024-04-18	2	Etheostoma fonticola	16	1
3127	I-35	Cab-2	2024-04-18	2	Etheostoma fonticola	17	1
3127	I-35	Cab-2	2024-04-18	2	Etheostoma fonticola	23	1
3127	I-35	Cab-2	2024-04-18	2	Etheostoma fonticola	22	1
3127	I-35	Cab-2	2024-04-18	2	Etheostoma fonticola	14	1
3127	I-35	Cab-2	2024-04-18	2	Etheostoma fonticola	20	1
3127	I-35	Cab-2	2024-04-18	3	Etheostoma fonticola	35	1
3127	I-35	Cab-2	2024-04-18	3	Etheostoma fonticola	24	1
3127	I-35	Cab-2	2024-04-18	3	Etheostoma fonticola	23	1
3127	I-35	Cab-2	2024-04-18	3	Etheostoma fonticola	16	1
3127	I-35	Cab-2	2024-04-18	3	Etheostoma fonticola	19	1
3127	I-35	Cab-2	2024-04-18	3	Etheostoma fonticola	22	1

3127	I-35	Cab-2	2024-04-18	3	Etheostoma fonticola	25	1
3127	I-35	Cab-2	2024-04-18	3	Etheostoma fonticola	17	1
3127	I-35	Cab-2	2024-04-18	3	Etheostoma fonticola	25	1
3127	I-35	Cab-2	2024-04-18	3	Etheostoma fonticola	14	1
3127	I-35	Cab-2	2024-04-18	3	Etheostoma fonticola	18	1
3127	I-35	Cab-2	2024-04-18	3	Lepomis sp.	12	1
3127	I-35	Cab-2	2024-04-18	3	Lepomis sp.	20	1
3127	I-35	Cab-2	2024-04-18	3	Lepomis sp.	9	1
3127	I-35	Cab-2	2024-04-18	3	Lepomis sp.	10	1
3127	I-35	Cab-2	2024-04-18	3	Gambusia sp.		1
3127	I-35	Cab-2	2024-04-18	3	Gambusia sp.		1
3127	I-35	Cab-2	2024-04-18	3	Gambusia sp.		1
3127	I-35	Cab-2	2024-04-18	3	Gambusia sp.		1
3127	I-35	Cab-2	2024-04-18	4	Gambusia sp.		1
3127	I-35	Cab-2	2024-04-18	4	Gambusia sp.		1
3127	I-35	Cab-2	2024-04-18	4	Gambusia sp.		1
3127	I-35	Cab-2	2024-04-18	4	Gambusia sp.		1
3127	I-35	Cab-2	2024-04-18	4	Gambusia sp.		1
3127	I-35	Cab-2	2024-04-18	4	Gambusia sp.		1
3127	I-35	Cab-2	2024-04-18	4	Gambusia sp.		1
3127	I-35	Cab-2	2024-04-18	4	Gambusia sp.		1
3127	I-35	Cab-2	2024-04-18	4	Gambusia sp.		1
3127	I-35	Cab-2	2024-04-18	4	Gambusia sp.		1
3127	I-35	Cab-2	2024-04-18	4	Gambusia sp.		1
3127	I-35	Cab-2	2024-04-18	4	Lepomis sp.	12	1
3127	I-35	Cab-2	2024-04-18	4	Lepomis sp.	19	1
3127	I-35	Cab-2	2024-04-18	4	Lepomis sp.	15	1
3127	I-35	Cab-2	2024-04-18	4	Etheostoma fonticola	22	1
3127	I-35	Cab-2	2024-04-18	4	Etheostoma fonticola	21	1
3127	I-35	Cab-2	2024-04-18	4	Etheostoma fonticola	21	1

3127	I-35	Cab-2	2024-04-18	4	Etheostoma fonticola	24	1
3127	I-35	Cab-2	2024-04-18	4	Etheostoma fonticola	24	1
3127	I-35	Cab-2	2024-04-18	4	Etheostoma fonticola	16	1
3127	I-35	Cab-2	2024-04-18	4	Etheostoma fonticola	18	1
3127	I-35	Cab-2	2024-04-18	4	Etheostoma fonticola	20	1
3127	I-35	Cab-2	2024-04-18	4	Etheostoma fonticola	15	1
3127	I-35	Cab-2	2024-04-18	4	Etheostoma fonticola	13	1
3127	I-35	Cab-2	2024-04-18	4	Palaemonetes sp.		2
3127	I-35	Cab-2	2024-04-18	5	Procambarus sp.		1
3127	I-35	Cab-2	2024-04-18	5	Lepomis sp.	12	1
3127	I-35	Cab-2	2024-04-18	5	Lepomis sp.	19	1
3127	I-35	Cab-2	2024-04-18	5	Lepomis sp.	15	1
3127	I-35	Cab-2	2024-04-18	5	Etheostoma fonticola	19	1
3127	I-35	Cab-2	2024-04-18	5	Etheostoma fonticola	22	1
3127	I-35	Cab-2	2024-04-18	5	Etheostoma fonticola	36	1
3127	I-35	Cab-2	2024-04-18	5	Etheostoma fonticola	30	1
3127	I-35	Cab-2	2024-04-18	5	Etheostoma fonticola	19	1
3127	I-35	Cab-2	2024-04-18	5	Etheostoma fonticola	23	1
3127	I-35	Cab-2	2024-04-18	5	Gambusia sp.		1
3127	I-35	Cab-2	2024-04-18	5	Gambusia sp.		1
3127	I-35	Cab-2	2024-04-18	5	Gambusia sp.		1
3127	I-35	Cab-2	2024-04-18	5	Gambusia sp.		1
3127	I-35	Cab-2	2024-04-18	5	Gambusia sp.		1
3127	I-35	Cab-2	2024-04-18	5	Gambusia sp.		1
3127	I-35	Cab-2	2024-04-18	5	Gambusia sp.		1
3127	I-35	Cab-2	2024-04-18	5	Ambloplites rupestris	17	1
3127	I-35	Cab-2	2024-04-18	6	Etheostoma fonticola	29	1
3127	I-35	Cab-2	2024-04-18	6	Etheostoma fonticola	21	1
3127	I-35	Cab-2	2024-04-18	6	Etheostoma fonticola	15	1
3127	I-35	Cab-2	2024-04-18	6	Etheostoma fonticola	15	1

3127	I-35	Cab-2	2024-04-18	6	Etheostoma fonticola	15	1
3127	I-35	Cab-2	2024-04-18	6	Etheostoma fonticola	22	1
3127	I-35	Cab-2	2024-04-18	6	Etheostoma fonticola	14	1
3127	I-35	Cab-2	2024-04-18	6	Etheostoma fonticola	20	1
3127	I-35	Cab-2	2024-04-18	6	Etheostoma fonticola	20	1
3127	I-35	Cab-2	2024-04-18	6	Etheostoma fonticola	21	1
3127	I-35	Cab-2	2024-04-18	6	Etheostoma fonticola	15	1
3127	I-35	Cab-2	2024-04-18	6	Etheostoma fonticola	24	1
3127	I-35	Cab-2	2024-04-18	6	Etheostoma fonticola	14	1
3127	I-35	Cab-2	2024-04-18	6	Etheostoma fonticola	16	1
3127	I-35	Cab-2	2024-04-18	6	Etheostoma fonticola	21	1
3127	I-35	Cab-2	2024-04-18	6	Etheostoma fonticola	17	1
3127	I-35	Cab-2	2024-04-18	6	Lepomis sp.	20	1
3127	I-35	Cab-2	2024-04-18	6	Lepomis sp.	10	1
3127	I-35	Cab-2	2024-04-18	7	Notropis chalybaeus	55	1
3127	I-35	Cab-2	2024-04-18	7	Etheostoma fonticola	27	1
3127	I-35	Cab-2	2024-04-18	7	Etheostoma fonticola	27	1
3127	I-35	Cab-2	2024-04-18	7	Etheostoma fonticola	20	1
3127	I-35	Cab-2	2024-04-18	7	Etheostoma fonticola	15	1
3127	I-35	Cab-2	2024-04-18	7	Etheostoma fonticola	16	1
3127	I-35	Cab-2	2024-04-18	7	Etheostoma fonticola	22	1
3127	I-35	Cab-2	2024-04-18	7	Etheostoma fonticola	24	1
3127	I-35	Cab-2	2024-04-18	7	Etheostoma fonticola	15	1
3127	I-35	Cab-2	2024-04-18	7	Etheostoma fonticola	22	1
3127	I-35	Cab-2	2024-04-18	7	Lepomis sp.	18	1
3127	I-35	Cab-2	2024-04-18	7	Lepomis sp.	12	1
3127	I-35	Cab-2	2024-04-18	7	Gambusia sp.		1
3127	I-35	Cab-2	2024-04-18	7	Gambusia sp.		1
3127	I-35	Cab-2	2024-04-18	7	Gambusia sp.		1
3127	I-35	Cab-2	2024-04-18	7	Gambusia sp.		1

3127	I-35	Cab-2	2024-04-18	8	Gambusia sp.		1
3127	I-35	Cab-2	2024-04-18	8	Gambusia sp.		1
3127	I-35	Cab-2	2024-04-18	8	Gambusia sp.		1
3127	I-35	Cab-2	2024-04-18	8	Gambusia sp.		1
3127	I-35	Cab-2	2024-04-18	8	Gambusia sp.		1
3127	I-35	Cab-2	2024-04-18	8	Gambusia sp.		1
3127	I-35	Cab-2	2024-04-18	8	Gambusia sp.		1
3127	I-35	Cab-2	2024-04-18	8	Procambarus sp.		1
3127	I-35	Cab-2	2024-04-18	8	Lepomis sp.	12	1
3127	I-35	Cab-2	2024-04-18	8	Lepomis sp.	15	1
3127	I-35	Cab-2	2024-04-18	8	Lepomis sp.	16	1
3127	I-35	Cab-2	2024-04-18	8	Lepomis sp.	22	1
3127	I-35	Cab-2	2024-04-18	8	Etheostoma fonticola	21	1
3127	I-35	Cab-2	2024-04-18	8	Etheostoma fonticola	15	1
3127	I-35	Cab-2	2024-04-18	8	Etheostoma fonticola	25	1
3127	I-35	Cab-2	2024-04-18	8	Etheostoma fonticola	22	1
3127	I-35	Cab-2	2024-04-18	9	Lepisosteus sp.	780	1
3127	I-35	Cab-2	2024-04-18	9	Etheostoma fonticola	21	1
3127	I-35	Cab-2	2024-04-18	9	Etheostoma fonticola	24	1
3127	I-35	Cab-2	2024-04-18	9	Etheostoma fonticola	25	1
3127	I-35	Cab-2	2024-04-18	9	Etheostoma fonticola	21	1
3127	I-35	Cab-2	2024-04-18	9	Etheostoma fonticola	24	1
3127	I-35	Cab-2	2024-04-18	9	Etheostoma fonticola	21	1
3127	I-35	Cab-2	2024-04-18	9	Etheostoma fonticola	14	1
3127	I-35	Cab-2	2024-04-18	9	Lepomis sp.	16	1
3127	I-35	Cab-2	2024-04-18	9	Procambarus sp.		1
3127	I-35	Cab-2	2024-04-18	10	Etheostoma fonticola	18	1
3127	I-35	Cab-2	2024-04-18	10	Etheostoma fonticola	30	1
3127	I-35	Cab-2	2024-04-18	10	Etheostoma fonticola	20	1
3127	I-35	Cab-2	2024-04-18	10	Etheostoma fonticola	21	1

3127	I-35	Cab-2	2024-04-18	10	Etheostoma fonticola	32	1
3127	I-35	Cab-2	2024-04-18	10	Etheostoma fonticola	30	1
3127	I-35	Cab-2	2024-04-18	10	Etheostoma fonticola	23	1
3127	I-35	Cab-2	2024-04-18	10	Lepomis gulosus	169	1
3127	I-35	Cab-2	2024-04-18	10	Lepomis sp.	16	1
3127	I-35	Cab-2	2024-04-18	10	Gambusia sp.		1
3127	I-35	Cab-2	2024-04-18	11	Etheostoma fonticola	20	1
3127	I-35	Cab-2	2024-04-18	11	Etheostoma fonticola	26	1
3127	I-35	Cab-2	2024-04-18	11	Etheostoma fonticola	24	1
3127	I-35	Cab-2	2024-04-18	11	Etheostoma fonticola	18	1
3127	I-35	Cab-2	2024-04-18	11	Etheostoma fonticola	19	1
3127	I-35	Cab-2	2024-04-18	11	Etheostoma fonticola	25	1
3127	I-35	Cab-2	2024-04-18	12	Etheostoma fonticola	15	1
3127	I-35	Cab-2	2024-04-18	12	Etheostoma fonticola	26	1
3127	I-35	Cab-2	2024-04-18	12	Etheostoma fonticola	18	1
3127	I-35	Cab-2	2024-04-18	12	Etheostoma fonticola	16	1
3127	I-35	Cab-2	2024-04-18	12	Etheostoma fonticola	29	1
3127	I-35	Cab-2	2024-04-18	12	Etheostoma fonticola	15	1
3127	I-35	Cab-2	2024-04-18	12	Etheostoma fonticola	15	1
3127	I-35	Cab-2	2024-04-18	12	Etheostoma fonticola	15	1
3127	I-35	Cab-2	2024-04-18	12	Lepomis miniatus	82	1
3127	I-35	Cab-2	2024-04-18	12	Procambarus sp.		1
3127	I-35	Cab-2	2024-04-18	13	Lepomis miniatus	46	1
3127	I-35	Cab-2	2024-04-18	13	Lepomis sp.	12	1
3127	I-35	Cab-2	2024-04-18	13	Lepomis sp.	13	1
3127	I-35	Cab-2	2024-04-18	13	Etheostoma fonticola	24	1
3127	I-35	Cab-2	2024-04-18	13	Etheostoma fonticola	15	1
3127	I-35	Cab-2	2024-04-18	13	Etheostoma fonticola	16	1
3127	I-35	Cab-2	2024-04-18	14	Etheostoma fonticola	27	1
3127	I-35	Cab-2	2024-04-18	15	Etheostoma fonticola	19	1

3127	I-35	Cab-2	2024-04-18	15	Etheostoma fonticola	20	1
3127	I-35	Cab-2	2024-04-18	16	Etheostoma fonticola	23	1
3127	I-35	Cab-2	2024-04-18	17	Lepomis miniatus	86	1
3127	I-35	Cab-2	2024-04-18	17	Etheostoma fonticola	15	1
3127	I-35	Cab-2	2024-04-18	17	Etheostoma fonticola	30	1
3127	I-35	Cab-2	2024-04-18	17	Etheostoma fonticola	24	1
3127	I-35	Cab-2	2024-04-18	17	Etheostoma fonticola	18	1
3127	I-35	Cab-2	2024-04-18	17	Etheostoma fonticola	21	1
3127	I-35	Cab-2	2024-04-18	17	Etheostoma fonticola	20	1
3127	I-35	Cab-2	2024-04-18	18	Etheostoma fonticola	17	1
3127	I-35	Cab-2	2024-04-18	19	No fish collected		
3128	I-35	Ziz-1	2024-04-18	1	Procambarus sp.		1
3128	I-35	Ziz-1	2024-04-18	1	Ambloplites rupestris	23	1
3128	I-35	Ziz-1	2024-04-18	1	Etheostoma fonticola	26	1
3128	I-35	Ziz-1	2024-04-18	1	Gambusia sp.	26	1
3128	I-35	Ziz-1	2024-04-18	1	Gambusia sp.	20	1
3128	I-35	Ziz-1	2024-04-18	1	Gambusia sp.	12	1
3128	I-35	Ziz-1	2024-04-18	2	Micropterus salmoides	51	1
3128	I-35	Ziz-1	2024-04-18	3	Notropis chalybaeus	60	1
3128	I-35	Ziz-1	2024-04-18	4	No fish collected		
3128	I-35	Ziz-1	2024-04-18	5	Etheostoma fonticola	24	1
3128	I-35	Ziz-1	2024-04-18	6	Lepomis sp.	7	1
3128	I-35	Ziz-1	2024-04-18	7	No fish collected		
3128	I-35	Ziz-1	2024-04-18	8	No fish collected		
3128	I-35	Ziz-1	2024-04-18	9	Procambarus sp.		1
3128	I-35	Ziz-1	2024-04-18	10	Etheostoma fonticola	15	1
3128	I-35	Ziz-1	2024-04-18	11	No fish collected		
3128	I-35	Ziz-1	2024-04-18	12	Gambusia sp.	9	1
3128	I-35	Ziz-1	2024-04-18	13	No fish collected		
3128	I-35	Ziz-1	2024-04-18	14	No fish collected		

3128	I-35	Ziz-1	2024-04-18	15	No fish collected		
3129	I-35	Ziz-2	2024-04-18	1	Gambusia sp.	20	1
3129	I-35	Ziz-2	2024-04-18	1	Gambusia sp.	29	1
3129	I-35	Ziz-2	2024-04-18	1	Gambusia sp.	18	1
3129	I-35	Ziz-2	2024-04-18	1	Gambusia sp.	8	1
3129	I-35	Ziz-2	2024-04-18	1	Gambusia sp.	9	1
3129	I-35	Ziz-2	2024-04-18	1	Gambusia sp.	14	1
3129	I-35	Ziz-2	2024-04-18	1	Gambusia sp.	10	1
3129	I-35	Ziz-2	2024-04-18	1	Gambusia sp.	19	1
3129	I-35	Ziz-2	2024-04-18	1	Gambusia sp.	13	1
3129	I-35	Ziz-2	2024-04-18	1	Gambusia sp.	10	1
3129	I-35	Ziz-2	2024-04-18	1	Gambusia sp.	9	1
3129	I-35	Ziz-2	2024-04-18	1	Gambusia sp.	10	1
3129	I-35	Ziz-2	2024-04-18	1	Gambusia sp.	10	1
3129	I-35	Ziz-2	2024-04-18	1	Gambusia sp.	21	1
3129	I-35	Ziz-2	2024-04-18	1	Gambusia sp.	10	1
3129	I-35	Ziz-2	2024-04-18	1	Gambusia sp.	11	1
3129	I-35	Ziz-2	2024-04-18	1	Gambusia sp.	10	1
3129	I-35	Ziz-2	2024-04-18	1	Gambusia sp.	8	1
3129	I-35	Ziz-2	2024-04-18	1	Gambusia sp.	10	1
3129	I-35	Ziz-2	2024-04-18	1	Gambusia sp.	10	1
3129	I-35	Ziz-2	2024-04-18	1	Gambusia sp.		1
3129	I-35	Ziz-2	2024-04-18	1	Gambusia sp.		1
3129	I-35	Ziz-2	2024-04-18	1	Gambusia sp.		1
3129	I-35	Ziz-2	2024-04-18	1	Gambusia sp.		1
3129	I-35	Ziz-2	2024-04-18	1	Gambusia sp.		1
3129	I-35	Ziz-2	2024-04-18	1	Gambusia sp.		1
3129	I-35	Ziz-2	2024-04-18	1	Lepomis miniatus	83	1
3129	I-35	Ziz-2	2024-04-18	1	Procambarus sp.		1
3129	I-35	Ziz-2	2024-04-18	2	Ambloplites rupestris	21	1

3129	I-35	Ziz-2	2024-04-18	2	Gambusia sp.		1
3129	I-35	Ziz-2	2024-04-18	2	Gambusia sp.		1
3129	I-35	Ziz-2	2024-04-18	2	Gambusia sp.		1
3129	I-35	Ziz-2	2024-04-18	2	Gambusia sp.		1
3129	I-35	Ziz-2	2024-04-18	2	Gambusia sp.		1
3129	I-35	Ziz-2	2024-04-18	2	Gambusia sp.		1
3129	I-35	Ziz-2	2024-04-18	2	Gambusia sp.		1
3129	I-35	Ziz-2	2024-04-18	2	Procambarus sp.		1
3129	I-35	Ziz-2	2024-04-18	3	Gambusia sp.		1
3129	I-35	Ziz-2	2024-04-18	3	Gambusia sp.		1
3129	I-35	Ziz-2	2024-04-18	3	Gambusia sp.		1
3129	I-35	Ziz-2	2024-04-18	3	Gambusia sp.		1
3129	I-35	Ziz-2	2024-04-18	3	Gambusia sp.		1
3129	I-35	Ziz-2	2024-04-18	3	Gambusia sp.		1
3129	I-35	Ziz-2	2024-04-18	3	Gambusia sp.		1
3129	I-35	Ziz-2	2024-04-18	3	Gambusia sp.		1
3129	I-35	Ziz-2	2024-04-18	3	Gambusia sp.		1
3129	I-35	Ziz-2	2024-04-18	3	Gambusia sp.		1
3129	I-35	Ziz-2	2024-04-18	3	Gambusia sp.		1
3129	I-35	Ziz-2	2024-04-18	4	Gambusia sp.		1
3129	I-35	Ziz-2	2024-04-18	5	Lepomis miniatus	80	1
3129	I-35	Ziz-2	2024-04-18	5	Gambusia sp.		1
3129	I-35	Ziz-2	2024-04-18	5	Gambusia sp.		1
3129	I-35	Ziz-2	2024-04-18	5	Gambusia sp.		1
3129	I-35	Ziz-2	2024-04-18	6	Procambarus sp.		1
3129	I-35	Ziz-2	2024-04-18	6	Lepomis sp.	15	1
3129	I-35	Ziz-2	2024-04-18	7	Gambusia sp.		1
3129	I-35	Ziz-2	2024-04-18	7	Gambusia sp.		1
3129	I-35	Ziz-2	2024-04-18	8	Ambloplites rupestris	18	1
3129	I-35	Ziz-2	2024-04-18	8	Gambusia sp.		1

3129	I-35	Ziz-2	2024-04-18	9	Gambusia sp.		1
3129	I-35	Ziz-2	2024-04-18	9	Gambusia sp.		1
3129	I-35	Ziz-2	2024-04-18	10	Gambusia sp.		1
3129	I-35	Ziz-2	2024-04-18	11	No fish collected		
3129	I-35	Ziz-2	2024-04-18	12	No fish collected		
3129	I-35	Ziz-2	2024-04-18	13	Gambusia sp.		1
3129	I-35	Ziz-2	2024-04-18	13	Gambusia sp.		1
3129	I-35	Ziz-2	2024-04-18	13	Gambusia sp.		1
3129	I-35	Ziz-2	2024-04-18	13	Etheostoma fonticola	18	1
3129	I-35	Ziz-2	2024-04-18	14	No fish collected		
3129	I-35	Ziz-2	2024-04-18	15	No fish collected		
3130	I-35	Hyd-1	2024-04-18	1	Procambarus sp.		5
3130	I-35	Hyd-1	2024-04-18	1	Gambusia sp.	15	1
3130	I-35	Hyd-1	2024-04-18	1	Gambusia sp.	12	1
3130	I-35	Hyd-1	2024-04-18	1	Gambusia sp.	9	1
3130	I-35	Hyd-1	2024-04-18	1	Etheostoma fonticola	20	1
3130	I-35	Hyd-1	2024-04-18	1	Etheostoma fonticola	15	1
3130	I-35	Hyd-1	2024-04-18	2	Etheostoma fonticola	26	1
3130	I-35	Hyd-1	2024-04-18	2	Procambarus sp.		5
3130	I-35	Hyd-1	2024-04-18	2	Gambusia sp.	15	1
3130	I-35	Hyd-1	2024-04-18	3	Etheostoma fonticola	25	1
3130	I-35	Hyd-1	2024-04-18	3	Etheostoma fonticola	26	1
3130	I-35	Hyd-1	2024-04-18	3	Hypostomus plecostomus	25	1
3130	I-35	Hyd-1	2024-04-18	3	Procambarus sp.		5
3130	I-35	Hyd-1	2024-04-18	3	Gambusia sp.	16	1
3130	I-35	Hyd-1	2024-04-18	4	Procambarus sp.		3
3130	I-35	Hyd-1	2024-04-18	5	Procambarus sp.		5
3130	I-35	Hyd-1	2024-04-18	5	Etheostoma fonticola	22	1
3130	I-35	Hyd-1	2024-04-18	6	Etheostoma fonticola	30	1
3130	I-35	Hyd-1	2024-04-18	6	Etheostoma fonticola	25	1

3130	I-35	Hyd-1	2024-04-18	6	Procambarus sp.		2
3130	I-35	Hyd-1	2024-04-18	7	Procambarus sp.		1
3130	I-35	Hyd-1	2024-04-18	7	Etheostoma fonticola	25	1
3130	I-35	Hyd-1	2024-04-18	8	Etheostoma fonticola	30	1
3130	I-35	Hyd-1	2024-04-18	9	No fish collected		
3130	I-35	Hyd-1	2024-04-18	10	Procambarus sp.		2
3130	I-35	Hyd-1	2024-04-18	10	Etheostoma fonticola	31	1
3130	I-35	Hyd-1	2024-04-18	11	Procambarus sp.		2
3130	I-35	Hyd-1	2024-04-18	12	Procambarus sp.		1
3130	I-35	Hyd-1	2024-04-18	13	No fish collected		
3130	I-35	Hyd-1	2024-04-18	14	Procambarus sp.		3
3130	I-35	Hyd-1	2024-04-18	15	Procambarus sp.		4
3130	I-35	Hyd-1	2024-04-18	15	Gambusia sp.	14	1
3130	I-35	Hyd-1	2024-04-18	15	Etheostoma fonticola	25	1
3130	I-35	Hyd-1	2024-04-18	16	Procambarus sp.		1
3131	I-35	Hyd-2	2024-04-18	1	No fish collected		
3131	I-35	Hyd-2	2024-04-18	2	Etheostoma fonticola	34	1
3131	I-35	Hyd-2	2024-04-18	2	Etheostoma fonticola	34	1
3131	I-35	Hyd-2	2024-04-18	3	Procambarus sp.		1
3131	I-35	Hyd-2	2024-04-18	4	Procambarus sp.		1
3131	I-35	Hyd-2	2024-04-18	4	Etheostoma fonticola	26	1
3131	I-35	Hyd-2	2024-04-18	5	Etheostoma fonticola	35	1
3131	I-35	Hyd-2	2024-04-18	6	No fish collected		
3131	I-35	Hyd-2	2024-04-18	7	Percina apristis	80	1
3131	I-35	Hyd-2	2024-04-18	8	No fish collected		
3131	I-35	Hyd-2	2024-04-18	9	No fish collected		
3131	I-35	Hyd-2	2024-04-18	10	No fish collected		
3131	I-35	Hyd-2	2024-04-18	11	No fish collected		
3131	I-35	Hyd-2	2024-04-18	12	No fish collected		
3131	I-35	Hyd-2	2024-04-18	13	No fish collected		

3131	I-35	Hyd-2	2024-04-18	14	No fish collected		
3131	I-35	Hyd-2	2024-04-18	15	No fish collected		
3132	I-35	Open-2	2024-04-18	1	No fish collected		
3132	I-35	Open-2	2024-04-18	2	No fish collected		
3132	I-35	Open-2	2024-04-18	3	No fish collected		
3132	I-35	Open-2	2024-04-18	4	No fish collected		
3132	I-35	Open-2	2024-04-18	5	No fish collected		
3132	I-35	Open-2	2024-04-18	6	No fish collected		
3132	I-35	Open-2	2024-04-18	7	No fish collected		
3132	I-35	Open-2	2024-04-18	8	No fish collected		
3132	I-35	Open-2	2024-04-18	9	No fish collected		
3132	I-35	Open-2	2024-04-18	10	No fish collected		
3197	Spring Lake Dam	Open-1	2024-10-15	1	No fish collected		
3197	Spring Lake Dam	Open-1	2024-10-15	2	No fish collected		
3197	Spring Lake Dam	Open-1	2024-10-15	3	No fish collected		
3197	Spring Lake Dam	Open-1	2024-10-15	4	No fish collected		
3197	Spring Lake Dam	Open-1	2024-10-15	5	No fish collected		
3197	Spring Lake Dam	Open-1	2024-10-15	6	No fish collected		
3197	Spring Lake Dam	Open-1	2024-10-15	7	No fish collected		
3197	Spring Lake Dam	Open-1	2024-10-15	8	No fish collected		
3197	Spring Lake Dam	Open-1	2024-10-15	9	No fish collected		
3197	Spring Lake Dam	Open-1	2024-10-15	10	No fish collected		
3198	Spring Lake Dam	Pota-1	2024-10-15	1	Gambusia sp.	38	1
3198	Spring Lake Dam	Pota-1	2024-10-15	1	Gambusia sp.	36	1
3198	Spring Lake Dam	Pota-1	2024-10-15	1	Gambusia sp.	21	1
3198	Spring Lake Dam	Pota-1	2024-10-15	1	Gambusia sp.	39	1
3198	Spring Lake Dam	Pota-1	2024-10-15	1	Gambusia sp.	42	1
3198	Spring Lake Dam	Pota-1	2024-10-15	1	Gambusia sp.	31	1
3198	Spring Lake Dam	Pota-1	2024-10-15	1	Gambusia sp.	20	1
3198	Spring Lake Dam	Pota-1	2024-10-15	1	Gambusia sp.	19	1

3198	Spring Lake Dam	Pota-1	2024-10-15	1	Gambusia sp.	19	1
3198	Spring Lake Dam	Pota-1	2024-10-15	1	Gambusia sp.	25	1
3198	Spring Lake Dam	Pota-1	2024-10-15	1	Gambusia sp.	24	1
3198	Spring Lake Dam	Pota-1	2024-10-15	1	Gambusia sp.	25	1
3198	Spring Lake Dam	Pota-1	2024-10-15	1	Gambusia sp.	24	1
3198	Spring Lake Dam	Pota-1	2024-10-15	1	Gambusia sp.	12	1
3198	Spring Lake Dam	Pota-1	2024-10-15	1	Gambusia sp.	21	1
3198	Spring Lake Dam	Pota-1	2024-10-15	1	Gambusia sp.	18	1
3198	Spring Lake Dam	Pota-1	2024-10-15	1	Gambusia sp.	11	1
3198	Spring Lake Dam	Pota-1	2024-10-15	1	Gambusia sp.	18	1
3198	Spring Lake Dam	Pota-1	2024-10-15	1	Procambarus sp.		3
3198	Spring Lake Dam	Pota-1	2024-10-15	2	Gambusia sp.	25	1
3198	Spring Lake Dam	Pota-1	2024-10-15	2	Gambusia sp.	29	1
3198	Spring Lake Dam	Pota-1	2024-10-15	2	Gambusia sp.		1
3198	Spring Lake Dam	Pota-1	2024-10-15	2	Gambusia sp.		1
3198	Spring Lake Dam	Pota-1	2024-10-15	2	Gambusia sp.		1
3198	Spring Lake Dam	Pota-1	2024-10-15	2	Gambusia sp.		1
3198	Spring Lake Dam	Pota-1	2024-10-15	2	Procambarus sp.		1
3198	Spring Lake Dam	Pota-1	2024-10-15	3	Procambarus sp.		2
3198	Spring Lake Dam	Pota-1	2024-10-15	3	Gambusia sp.		1
3198	Spring Lake Dam	Pota-1	2024-10-15	4	Gambusia sp.		1
3198	Spring Lake Dam	Pota-1	2024-10-15	5	Gambusia sp.		1
3198	Spring Lake Dam	Pota-1	2024-10-15	5	Gambusia sp.		1
3198	Spring Lake Dam	Pota-1	2024-10-15	5	Gambusia sp.		1
3198	Spring Lake Dam	Pota-1	2024-10-15	5	Gambusia sp.		1
3198	Spring Lake Dam	Pota-1	2024-10-15	6	Gambusia sp.		1
3198	Spring Lake Dam	Pota-1	2024-10-15	7	Gambusia sp.		1
3198	Spring Lake Dam	Pota-1	2024-10-15	8	No fish collected		
3198	Spring Lake Dam	Pota-1	2024-10-15	9	Gambusia sp.		1
3198	Spring Lake Dam	Pota-1	2024-10-15	10	No fish collected		

3198	Spring Lake Dam	Pota-1	2024-10-15	11	Gambusia sp.		1
3198	Spring Lake Dam	Pota-1	2024-10-15	12	Procambarus sp.		1
3198	Spring Lake Dam	Pota-1	2024-10-15	13	No fish collected		
3198	Spring Lake Dam	Pota-1	2024-10-15	14	No fish collected		
3198	Spring Lake Dam	Pota-1	2024-10-15	15	No fish collected		
3199	Spring Lake Dam	Pota-2	2024-10-15	1	Ameiurus natalis	65	1
3199	Spring Lake Dam	Pota-2	2024-10-15	1	Herichthys cyanoguttatus	46	1
3199	Spring Lake Dam	Pota-2	2024-10-15	1	Gambusia sp.	35	1
3199	Spring Lake Dam	Pota-2	2024-10-15	1	Gambusia sp.	24	1
3199	Spring Lake Dam	Pota-2	2024-10-15	1	Gambusia sp.	31	1
3199	Spring Lake Dam	Pota-2	2024-10-15	1	Gambusia sp.	25	1
3199	Spring Lake Dam	Pota-2	2024-10-15	1	Gambusia sp.	28	1
3199	Spring Lake Dam	Pota-2	2024-10-15	1	Gambusia sp.	15	1
3199	Spring Lake Dam	Pota-2	2024-10-15	1	Gambusia sp.	20	1
3199	Spring Lake Dam	Pota-2	2024-10-15	1	Gambusia sp.	28	1
3199	Spring Lake Dam	Pota-2	2024-10-15	1	Gambusia sp.	28	1
3199	Spring Lake Dam	Pota-2	2024-10-15	1	Gambusia sp.	18	1
3199	Spring Lake Dam	Pota-2	2024-10-15	1	Gambusia sp.	20	1
3199	Spring Lake Dam	Pota-2	2024-10-15	1	Gambusia sp.	25	1
3199	Spring Lake Dam	Pota-2	2024-10-15	1	Gambusia sp.	15	1
3199	Spring Lake Dam	Pota-2	2024-10-15	1	Gambusia sp.	18	1
3199	Spring Lake Dam	Pota-2	2024-10-15	1	Gambusia sp.	35	1
3199	Spring Lake Dam	Pota-2	2024-10-15	1	Gambusia sp.	22	1
3199	Spring Lake Dam	Pota-2	2024-10-15	1	Gambusia sp.	20	1
3199	Spring Lake Dam	Pota-2	2024-10-15	1	Gambusia sp.	25	1
3199	Spring Lake Dam	Pota-2	2024-10-15	1	Gambusia sp.	21	1
3199	Spring Lake Dam	Pota-2	2024-10-15	1	Gambusia sp.	20	1
3199	Spring Lake Dam	Pota-2	2024-10-15	1	Gambusia sp.		1
3199	Spring Lake Dam	Pota-2	2024-10-15	1	Gambusia sp.		1
3199	Spring Lake Dam	Pota-2	2024-10-15	1	Gambusia sp.		1

3199	Spring Lake Dam	Pota-2	2024-10-15	1	Gambusia sp.		1
3199	Spring Lake Dam	Pota-2	2024-10-15	1	Gambusia sp.		1
3199	Spring Lake Dam	Pota-2	2024-10-15	1	Gambusia sp.		1
3199	Spring Lake Dam	Pota-2	2024-10-15	1	Gambusia sp.		1
3199	Spring Lake Dam	Pota-2	2024-10-15	1	Gambusia sp.		1
3199	Spring Lake Dam	Pota-2	2024-10-15	1	Gambusia sp.		1
3199	Spring Lake Dam	Pota-2	2024-10-15	1	Gambusia sp.		1
3199	Spring Lake Dam	Pota-2	2024-10-15	1	Gambusia sp.		1
3199	Spring Lake Dam	Pota-2	2024-10-15	1	Gambusia sp.		1
3199	Spring Lake Dam	Pota-2	2024-10-15	1	Gambusia sp.		1
3199	Spring Lake Dam	Pota-2	2024-10-15	1	Gambusia sp.		1
3199	Spring Lake Dam	Pota-2	2024-10-15	1	Gambusia sp.		1
3199	Spring Lake Dam	Pota-2	2024-10-15	1	Gambusia sp.		1
3199	Spring Lake Dam	Pota-2	2024-10-15	1	Gambusia sp.		1
3199	Spring Lake Dam	Pota-2	2024-10-15	1	Gambusia sp.		1
3199	Spring Lake Dam	Pota-2	2024-10-15	1	Gambusia sp.		1
3199	Spring Lake Dam	Pota-2	2024-10-15	1	Gambusia sp.		1
3199	Spring Lake Dam	Pota-2	2024-10-15	1	Etheostoma fonticola	15	1
3199	Spring Lake Dam	Pota-2	2024-10-15	1	Procambarus sp.		1
3199	Spring Lake Dam	Pota-2	2024-10-15	1	Palaemonetes sp.		2
3199	Spring Lake Dam	Pota-2	2024-10-15	2	Etheostoma fonticola	31	1
3199	Spring Lake Dam	Pota-2	2024-10-15	2	Gambusia sp.		1
3199	Spring Lake Dam	Pota-2	2024-10-15	2	Gambusia sp.		1
3199	Spring Lake Dam	Pota-2	2024-10-15	2	Gambusia sp.		1
3199	Spring Lake Dam	Pota-2	2024-10-15	2	Gambusia sp.		1
3199	Spring Lake Dam	Pota-2	2024-10-15	2	Gambusia sp.		1
3199	Spring Lake Dam	Pota-2	2024-10-15	2	Gambusia sp.		1
3199	Spring Lake Dam	Pota-2	2024-10-15	2	Gambusia sp.		1
3199	Spring Lake Dam	Pota-2	2024-10-15	2	Gambusia sp.		1
3199	Spring Lake Dam	Pota-2	2024-10-15	2	Gambusia sp.		1

3199	Spring Lake Dam	Pota-2	2024-10-15	2	Gambusia sp.		1
3199	Spring Lake Dam	Pota-2	2024-10-15	2	Gambusia sp.		1
3199	Spring Lake Dam	Pota-2	2024-10-15	2	Gambusia sp.		1
3199	Spring Lake Dam	Pota-2	2024-10-15	2	Gambusia sp.		1
3199	Spring Lake Dam	Pota-2	2024-10-15	2	Gambusia sp.		1
3199	Spring Lake Dam	Pota-2	2024-10-15	2	Gambusia sp.		1
3199	Spring Lake Dam	Pota-2	2024-10-15	2	Gambusia sp.		1
3199	Spring Lake Dam	Pota-2	2024-10-15	2	Gambusia sp.		1
3199	Spring Lake Dam	Pota-2	2024-10-15	2	Gambusia sp.		1
3199	Spring Lake Dam	Pota-2	2024-10-15	3	Gambusia sp.		1
3199	Spring Lake Dam	Pota-2	2024-10-15	3	Gambusia sp.		1
3199	Spring Lake Dam	Pota-2	2024-10-15	3	Gambusia sp.		1
3199	Spring Lake Dam	Pota-2	2024-10-15	3	Gambusia sp.		1
3199	Spring Lake Dam	Pota-2	2024-10-15	3	Procambarus sp.		1
3199	Spring Lake Dam	Pota-2	2024-10-15	4	Etheostoma fonticola	30	1
3199	Spring Lake Dam	Pota-2	2024-10-15	4	Etheostoma fonticola	22	1
3199	Spring Lake Dam	Pota-2	2024-10-15	4	Etheostoma fonticola	32	1
3199	Spring Lake Dam	Pota-2	2024-10-15	4	Herichthys cyanoguttatus	49	1
3199	Spring Lake Dam	Pota-2	2024-10-15	4	Gambusia sp.		1
3199	Spring Lake Dam	Pota-2	2024-10-15	4	Gambusia sp.		1
3199	Spring Lake Dam	Pota-2	2024-10-15	4	Gambusia sp.		1
3199	Spring Lake Dam	Pota-2	2024-10-15	4	Gambusia sp.		1
3199	Spring Lake Dam	Pota-2	2024-10-15	4	Gambusia sp.		1
3199	Spring Lake Dam	Pota-2	2024-10-15	4	Gambusia sp.		1
3199	Spring Lake Dam	Pota-2	2024-10-15	4	Gambusia sp.		1
3199	Spring Lake Dam	Pota-2	2024-10-15	4	Gambusia sp.		1
3199	Spring Lake Dam	Pota-2	2024-10-15	4	Gambusia sp.		1
3199	Spring Lake Dam	Pota-2	2024-10-15	4	Gambusia sp.		1
3199	Spring Lake Dam	Pota-2	2024-10-15	4	Gambusia sp.		1
3199	Spring Lake Dam	Pota-2	2024-10-15	4	Gambusia sp.		1

3199	Spring Lake Dam	Pota-2	2024-10-15	4	Gambusia sp.		1
3199	Spring Lake Dam	Pota-2	2024-10-15	4	Gambusia sp.		1
3199	Spring Lake Dam	Pota-2	2024-10-15	4	Gambusia sp.		1
3199	Spring Lake Dam	Pota-2	2024-10-15	4	Gambusia sp.		1
3199	Spring Lake Dam	Pota-2	2024-10-15	4	Procambarus sp.		4
3199	Spring Lake Dam	Pota-2	2024-10-15	4	Palaemonetes sp.		1
3199	Spring Lake Dam	Pota-2	2024-10-15	5	Gambusia sp.		1
3199	Spring Lake Dam	Pota-2	2024-10-15	5	Gambusia sp.		1
3199	Spring Lake Dam	Pota-2	2024-10-15	6	Etheostoma fonticola	31	1
3199	Spring Lake Dam	Pota-2	2024-10-15	6	Gambusia sp.		1
3199	Spring Lake Dam	Pota-2	2024-10-15	6	Gambusia sp.		1
3199	Spring Lake Dam	Pota-2	2024-10-15	6	Gambusia sp.		1
3199	Spring Lake Dam	Pota-2	2024-10-15	7	No fish collected		
3199	Spring Lake Dam	Pota-2	2024-10-15	8	No fish collected		
3199	Spring Lake Dam	Pota-2	2024-10-15	9	No fish collected		
3199	Spring Lake Dam	Pota-2	2024-10-15	10	Procambarus sp.		1
3199	Spring Lake Dam	Pota-2	2024-10-15	11	No fish collected		
3199	Spring Lake Dam	Pota-2	2024-10-15	12	No fish collected		
3199	Spring Lake Dam	Pota-2	2024-10-15	13	No fish collected		
3199	Spring Lake Dam	Pota-2	2024-10-15	14	No fish collected		
3199	Spring Lake Dam	Pota-2	2024-10-15	15	No fish collected		
3200	Spring Lake Dam	Sag-1	2024-10-15	1	Etheostoma fonticola	22	1
3200	Spring Lake Dam	Sag-1	2024-10-15	1	Etheostoma fonticola	30	1
3200	Spring Lake Dam	Sag-1	2024-10-15	1	Etheostoma fonticola	23	1
3200	Spring Lake Dam	Sag-1	2024-10-15	1	Etheostoma fonticola	34	1
3200	Spring Lake Dam	Sag-1	2024-10-15	1	Etheostoma fonticola	36	1
3200	Spring Lake Dam	Sag-1	2024-10-15	1	Etheostoma fonticola	35	1
3200	Spring Lake Dam	Sag-1	2024-10-15	1	Etheostoma fonticola	29	1
3200	Spring Lake Dam	Sag-1	2024-10-15	1	Etheostoma fonticola	21	1
3200	Spring Lake Dam	Sag-1	2024-10-15	1	Etheostoma fonticola	19	1

3200	Spring Lake Dam	Sag-1	2024-10-15	1	Etheostoma fonticola	25	1
3200	Spring Lake Dam	Sag-1	2024-10-15	1	Etheostoma fonticola	21	1
3200	Spring Lake Dam	Sag-1	2024-10-15	1	Etheostoma fonticola	20	1
3200	Spring Lake Dam	Sag-1	2024-10-15	1	Etheostoma fonticola	20	1
3200	Spring Lake Dam	Sag-1	2024-10-15	1	Gambusia sp.	42	1
3200	Spring Lake Dam	Sag-1	2024-10-15	1	Gambusia sp.	25	1
3200	Spring Lake Dam	Sag-1	2024-10-15	1	Gambusia sp.	9	1
3200	Spring Lake Dam	Sag-1	2024-10-15	1	Gambusia sp.	18	1
3200	Spring Lake Dam	Sag-1	2024-10-15	1	Gambusia sp.	15	1
3200	Spring Lake Dam	Sag-1	2024-10-15	1	Gambusia sp.	38	1
3200	Spring Lake Dam	Sag-1	2024-10-15	1	Gambusia sp.	24	1
3200	Spring Lake Dam	Sag-1	2024-10-15	1	Gambusia sp.	16	1
3200	Spring Lake Dam	Sag-1	2024-10-15	1	Gambusia sp.	16	1
3200	Spring Lake Dam	Sag-1	2024-10-15	1	Gambusia sp.	15	1
3200	Spring Lake Dam	Sag-1	2024-10-15	1	Gambusia sp.	17	1
3200	Spring Lake Dam	Sag-1	2024-10-15	1	Gambusia sp.	21	1
3200	Spring Lake Dam	Sag-1	2024-10-15	1	Gambusia sp.	16	1
3200	Spring Lake Dam	Sag-1	2024-10-15	1	Gambusia sp.	20	1
3200	Spring Lake Dam	Sag-1	2024-10-15	1	Gambusia sp.	14	1
3200	Spring Lake Dam	Sag-1	2024-10-15	1	Gambusia sp.	10	1
3200	Spring Lake Dam	Sag-1	2024-10-15	1	Gambusia sp.	10	1
3200	Spring Lake Dam	Sag-1	2024-10-15	1	Procambarus sp.		11
3200	Spring Lake Dam	Sag-1	2024-10-15	2	Etheostoma fonticola	30	1
3200	Spring Lake Dam	Sag-1	2024-10-15	2	Etheostoma fonticola	30	1
3200	Spring Lake Dam	Sag-1	2024-10-15	2	Etheostoma fonticola	30	1
3200	Spring Lake Dam	Sag-1	2024-10-15	2	Etheostoma fonticola	30	1
3200	Spring Lake Dam	Sag-1	2024-10-15	2	Etheostoma fonticola	28	1
3200	Spring Lake Dam	Sag-1	2024-10-15	2	Etheostoma fonticola	34	1
3200	Spring Lake Dam	Sag-1	2024-10-15	2	Etheostoma fonticola	30	1
3200	Spring Lake Dam	Sag-1	2024-10-15	2	Etheostoma fonticola	35	1

3200	Spring Lake Dam	Sag-1	2024-10-15	2	Etheostoma fonticola	26	1
3200	Spring Lake Dam	Sag-1	2024-10-15	2	Etheostoma fonticola	36	1
3200	Spring Lake Dam	Sag-1	2024-10-15	2	Etheostoma fonticola	29	1
3200	Spring Lake Dam	Sag-1	2024-10-15	2	Etheostoma fonticola	34	1
3200	Spring Lake Dam	Sag-1	2024-10-15	2	Etheostoma fonticola	32	1
3200	Spring Lake Dam	Sag-1	2024-10-15	2	Etheostoma fonticola	21	1
3200	Spring Lake Dam	Sag-1	2024-10-15	2	Etheostoma fonticola	24	1
3200	Spring Lake Dam	Sag-1	2024-10-15	2	Etheostoma fonticola	23	1
3200	Spring Lake Dam	Sag-1	2024-10-15	2	Etheostoma fonticola	24	1
3200	Spring Lake Dam	Sag-1	2024-10-15	2	Etheostoma fonticola	19	1
3200	Spring Lake Dam	Sag-1	2024-10-15	2	Etheostoma fonticola	33	1
3200	Spring Lake Dam	Sag-1	2024-10-15	2	Etheostoma fonticola	29	1
3200	Spring Lake Dam	Sag-1	2024-10-15	2	Etheostoma fonticola	26	1
3200	Spring Lake Dam	Sag-1	2024-10-15	2	Gambusia sp.	21	1
3200	Spring Lake Dam	Sag-1	2024-10-15	2	Gambusia sp.	18	1
3200	Spring Lake Dam	Sag-1	2024-10-15	2	Gambusia sp.	12	1
3200	Spring Lake Dam	Sag-1	2024-10-15	2	Gambusia sp.		1
3200	Spring Lake Dam	Sag-1	2024-10-15	2	Gambusia sp.		1
3200	Spring Lake Dam	Sag-1	2024-10-15	2	Gambusia sp.		1
3200	Spring Lake Dam	Sag-1	2024-10-15	2	Gambusia sp.		1
3200	Spring Lake Dam	Sag-1	2024-10-15	2	Procambarus sp.		7
3200	Spring Lake Dam	Sag-1	2024-10-15	2	Palaemonetes sp.		1
3200	Spring Lake Dam	Sag-1	2024-10-15	3	Etheostoma fonticola	28	1
3200	Spring Lake Dam	Sag-1	2024-10-15	3	Etheostoma fonticola	30	1
3200	Spring Lake Dam	Sag-1	2024-10-15	3	Etheostoma fonticola	34	1
3200	Spring Lake Dam	Sag-1	2024-10-15	3	Etheostoma fonticola	31	1
3200	Spring Lake Dam	Sag-1	2024-10-15	3	Etheostoma fonticola	35	1
3200	Spring Lake Dam	Sag-1	2024-10-15	3	Etheostoma fonticola	22	1
3200	Spring Lake Dam	Sag-1	2024-10-15	3	Etheostoma fonticola	32	1
3200	Spring Lake Dam	Sag-1	2024-10-15	3	Etheostoma fonticola	33	1

3200	Spring Lake Dam	Sag-1	2024-10-15	3	Etheostoma fonticola	31	1
3200	Spring Lake Dam	Sag-1	2024-10-15	3	Etheostoma fonticola	25	1
3200	Spring Lake Dam	Sag-1	2024-10-15	3	Etheostoma fonticola	34	1
3200	Spring Lake Dam	Sag-1	2024-10-15	3	Gambusia sp.		1
3200	Spring Lake Dam	Sag-1	2024-10-15	3	Gambusia sp.		1
3200	Spring Lake Dam	Sag-1	2024-10-15	3	Procambarus sp.		7
3200	Spring Lake Dam	Sag-1	2024-10-15	4	Etheostoma fonticola	30	1
3200	Spring Lake Dam	Sag-1	2024-10-15	4	Etheostoma fonticola	31	1
3200	Spring Lake Dam	Sag-1	2024-10-15	4	Etheostoma fonticola	26	1
3200	Spring Lake Dam	Sag-1	2024-10-15	4	Etheostoma fonticola	18	1
3200	Spring Lake Dam	Sag-1	2024-10-15	4	Etheostoma fonticola	24	1
3200	Spring Lake Dam	Sag-1	2024-10-15	4	Etheostoma fonticola	25	1
3200	Spring Lake Dam	Sag-1	2024-10-15	4	Gambusia sp.		1
3200	Spring Lake Dam	Sag-1	2024-10-15	4	Procambarus sp.		6
3200	Spring Lake Dam	Sag-1	2024-10-15	4	Palaemonetes sp.		1
3200	Spring Lake Dam	Sag-1	2024-10-15	5	Etheostoma fonticola	36	1
3200	Spring Lake Dam	Sag-1	2024-10-15	5	Etheostoma fonticola	22	1
3200	Spring Lake Dam	Sag-1	2024-10-15	5	Etheostoma fonticola	35	1
3200	Spring Lake Dam	Sag-1	2024-10-15	5	Etheostoma fonticola	22	1
3200	Spring Lake Dam	Sag-1	2024-10-15	5	Etheostoma fonticola	26	1
3200	Spring Lake Dam	Sag-1	2024-10-15	5	Etheostoma fonticola	21	1
3200	Spring Lake Dam	Sag-1	2024-10-15	5	Etheostoma fonticola	24	1
3200	Spring Lake Dam	Sag-1	2024-10-15	5	Gambusia sp.		1
3200	Spring Lake Dam	Sag-1	2024-10-15	5	Gambusia sp.		1
3200	Spring Lake Dam	Sag-1	2024-10-15	5	Gambusia sp.		1
3200	Spring Lake Dam	Sag-1	2024-10-15	5	Gambusia sp.		1
3200	Spring Lake Dam	Sag-1	2024-10-15	5	Procambarus sp.		9
3200	Spring Lake Dam	Sag-1	2024-10-15	6	Etheostoma fonticola	22	1
3200	Spring Lake Dam	Sag-1	2024-10-15	6	Etheostoma fonticola	27	1
3200	Spring Lake Dam	Sag-1	2024-10-15	6	Gambusia sp.		1

3200	Spring Lake Dam	Sag-1	2024-10-15	6	Procambarus sp.		5
3200	Spring Lake Dam	Sag-1	2024-10-15	7	Etheostoma fonticola	28	1
3200	Spring Lake Dam	Sag-1	2024-10-15	7	Etheostoma fonticola	36	1
3200	Spring Lake Dam	Sag-1	2024-10-15	7	Etheostoma fonticola	31	1
3200	Spring Lake Dam	Sag-1	2024-10-15	7	Procambarus sp.		1
3200	Spring Lake Dam	Sag-1	2024-10-15	8	Etheostoma fonticola	32	1
3200	Spring Lake Dam	Sag-1	2024-10-15	8	Etheostoma fonticola	28	1
3200	Spring Lake Dam	Sag-1	2024-10-15	8	Etheostoma fonticola	34	1
3200	Spring Lake Dam	Sag-1	2024-10-15	8	Etheostoma fonticola	21	1
3200	Spring Lake Dam	Sag-1	2024-10-15	8	Etheostoma fonticola	23	1
3200	Spring Lake Dam	Sag-1	2024-10-15	8	Gambusia sp.		1
3200	Spring Lake Dam	Sag-1	2024-10-15	8	Gambusia sp.		1
3200	Spring Lake Dam	Sag-1	2024-10-15	8	Procambarus sp.		5
3200	Spring Lake Dam	Sag-1	2024-10-15	9	Etheostoma fonticola	28	1
3200	Spring Lake Dam	Sag-1	2024-10-15	9	Etheostoma fonticola	34	1
3200	Spring Lake Dam	Sag-1	2024-10-15	9	Etheostoma fonticola	24	1
3200	Spring Lake Dam	Sag-1	2024-10-15	9	Etheostoma fonticola	28	1
3200	Spring Lake Dam	Sag-1	2024-10-15	9	Etheostoma fonticola	34	1
3200	Spring Lake Dam	Sag-1	2024-10-15	9	Procambarus sp.		3
3200	Spring Lake Dam	Sag-1	2024-10-15	10	Etheostoma fonticola	35	1
3200	Spring Lake Dam	Sag-1	2024-10-15	11	No fish collected		
3200	Spring Lake Dam	Sag-1	2024-10-15	12	Procambarus sp.		5
3200	Spring Lake Dam	Sag-1	2024-10-15	13	Etheostoma fonticola	31	1
3200	Spring Lake Dam	Sag-1	2024-10-15	13	Procambarus sp.		1
3200	Spring Lake Dam	Sag-1	2024-10-15	14	Etheostoma fonticola	25	1
3200	Spring Lake Dam	Sag-1	2024-10-15	15	Procambarus sp.		2
3200	Spring Lake Dam	Sag-1	2024-10-15	15	Etheostoma fonticola	30	1
3200	Spring Lake Dam	Sag-1	2024-10-15	15	Etheostoma fonticola	28	1
3200	Spring Lake Dam	Sag-1	2024-10-15	16	Procambarus sp.		1
3201	Spring Lake Dam	Sag-2	2024-10-15	1	Etheostoma fonticola	20	1

3201	Spring Lake Dam	Sag-2	2024-10-15	1	Etheostoma fonticola	36	1
3201	Spring Lake Dam	Sag-2	2024-10-15	1	Etheostoma fonticola	30	1
3201	Spring Lake Dam	Sag-2	2024-10-15	1	Etheostoma fonticola	36	1
3201	Spring Lake Dam	Sag-2	2024-10-15	1	Etheostoma fonticola	30	1
3201	Spring Lake Dam	Sag-2	2024-10-15	1	Etheostoma fonticola	22	1
3201	Spring Lake Dam	Sag-2	2024-10-15	1	Etheostoma fonticola	21	1
3201	Spring Lake Dam	Sag-2	2024-10-15	1	Etheostoma fonticola	32	1
3201	Spring Lake Dam	Sag-2	2024-10-15	1	Etheostoma fonticola	22	1
3201	Spring Lake Dam	Sag-2	2024-10-15	1	Etheostoma fonticola	22	1
3201	Spring Lake Dam	Sag-2	2024-10-15	1	Etheostoma fonticola	15	1
3201	Spring Lake Dam	Sag-2	2024-10-15	1	Etheostoma fonticola	28	1
3201	Spring Lake Dam	Sag-2	2024-10-15	1	Lepomis miniatus	32	1
3201	Spring Lake Dam	Sag-2	2024-10-15	1	Lepomis miniatus	48	1
3201	Spring Lake Dam	Sag-2	2024-10-15	1	Lepomis miniatus	40	1
3201	Spring Lake Dam	Sag-2	2024-10-15	1	Gambusia sp.	10	1
3201	Spring Lake Dam	Sag-2	2024-10-15	1	Gambusia sp.	9	1
3201	Spring Lake Dam	Sag-2	2024-10-15	1	Gambusia sp.	10	1
3201	Spring Lake Dam	Sag-2	2024-10-15	1	Herichthys cyanoguttatus	44	1
3201	Spring Lake Dam	Sag-2	2024-10-15	1	Procambarus sp.		22
3201	Spring Lake Dam	Sag-2	2024-10-15	1	Palaemonetes sp.		1
3201	Spring Lake Dam	Sag-2	2024-10-15	2	Procambarus sp.		5
3201	Spring Lake Dam	Sag-2	2024-10-15	2	Palaemonetes sp.		1
3201	Spring Lake Dam	Sag-2	2024-10-15	2	Etheostoma fonticola	27	1
3201	Spring Lake Dam	Sag-2	2024-10-15	2	Etheostoma fonticola	32	1
3201	Spring Lake Dam	Sag-2	2024-10-15	2	Etheostoma fonticola	22	1
3201	Spring Lake Dam	Sag-2	2024-10-15	2	Etheostoma fonticola	37	1
3201	Spring Lake Dam	Sag-2	2024-10-15	2	Etheostoma fonticola	30	1
3201	Spring Lake Dam	Sag-2	2024-10-15	2	Etheostoma fonticola	16	1
3201	Spring Lake Dam	Sag-2	2024-10-15	2	Etheostoma fonticola	28	1
3201	Spring Lake Dam	Sag-2	2024-10-15	2	Etheostoma fonticola	20	1

3201	Spring Lake Dam	Sag-2	2024-10-15	2	Etheostoma fonticola	20	1
3201	Spring Lake Dam	Sag-2	2024-10-15	2	Etheostoma fonticola	18	1
3201	Spring Lake Dam	Sag-2	2024-10-15	2	Gambusia sp.	10	1
3201	Spring Lake Dam	Sag-2	2024-10-15	2	Gambusia sp.	24	1
3201	Spring Lake Dam	Sag-2	2024-10-15	2	Gambusia sp.	8	1
3201	Spring Lake Dam	Sag-2	2024-10-15	2	Gambusia sp.	10	1
3201	Spring Lake Dam	Sag-2	2024-10-15	2	Lepomis miniatus	28	1
3201	Spring Lake Dam	Sag-2	2024-10-15	3	Procambarus sp.		10
3201	Spring Lake Dam	Sag-2	2024-10-15	3	Herichthys cyanoguttatus	36	1
3201	Spring Lake Dam	Sag-2	2024-10-15	3	Herichthys cyanoguttatus	30	1
3201	Spring Lake Dam	Sag-2	2024-10-15	3	Etheostoma fonticola	32	1
3201	Spring Lake Dam	Sag-2	2024-10-15	3	Etheostoma fonticola	29	1
3201	Spring Lake Dam	Sag-2	2024-10-15	3	Etheostoma fonticola	33	1
3201	Spring Lake Dam	Sag-2	2024-10-15	4	Etheostoma fonticola	33	1
3201	Spring Lake Dam	Sag-2	2024-10-15	4	Etheostoma fonticola	28	1
3201	Spring Lake Dam	Sag-2	2024-10-15	4	Etheostoma fonticola	28	1
3201	Spring Lake Dam	Sag-2	2024-10-15	4	Etheostoma fonticola	26	1
3201	Spring Lake Dam	Sag-2	2024-10-15	4	Procambarus sp.		1
3201	Spring Lake Dam	Sag-2	2024-10-15	5	Procambarus sp.		7
3201	Spring Lake Dam	Sag-2	2024-10-15	5	Etheostoma fonticola	24	1
3201	Spring Lake Dam	Sag-2	2024-10-15	5	Etheostoma fonticola	30	1
3201	Spring Lake Dam	Sag-2	2024-10-15	5	Etheostoma fonticola	29	1
3201	Spring Lake Dam	Sag-2	2024-10-15	5	Etheostoma fonticola	38	1
3201	Spring Lake Dam	Sag-2	2024-10-15	6	Procambarus sp.		4
3201	Spring Lake Dam	Sag-2	2024-10-15	6	Etheostoma fonticola	24	1
3201	Spring Lake Dam	Sag-2	2024-10-15	6	Etheostoma fonticola	32	1
3201	Spring Lake Dam	Sag-2	2024-10-15	6	Etheostoma fonticola	31	1
3201	Spring Lake Dam	Sag-2	2024-10-15	6	Gambusia sp.	10	1
3201	Spring Lake Dam	Sag-2	2024-10-15	6	Gambusia sp.	7	1
3201	Spring Lake Dam	Sag-2	2024-10-15	7	Procambarus sp.		6

3201	Spring Lake Dam	Sag-2	2024-10-15	7	Etheostoma fonticola	25	1
3201	Spring Lake Dam	Sag-2	2024-10-15	7	Etheostoma fonticola	30	1
3201	Spring Lake Dam	Sag-2	2024-10-15	7	Etheostoma fonticola	32	1
3201	Spring Lake Dam	Sag-2	2024-10-15	7	Gambusia sp.	10	1
3201	Spring Lake Dam	Sag-2	2024-10-15	8	Ambloplites rupestris	76	1
3201	Spring Lake Dam	Sag-2	2024-10-15	8	Ambloplites rupestris	83	1
3201	Spring Lake Dam	Sag-2	2024-10-15	8	Procambarus sp.		4
3201	Spring Lake Dam	Sag-2	2024-10-15	9	Micropterus salmoides	136	1
3201	Spring Lake Dam	Sag-2	2024-10-15	9	Procambarus sp.		2
3201	Spring Lake Dam	Sag-2	2024-10-15	10	Procambarus sp.		3
3201	Spring Lake Dam	Sag-2	2024-10-15	10	Etheostoma fonticola	25	1
3201	Spring Lake Dam	Sag-2	2024-10-15	11	Etheostoma fonticola	22	1
3201	Spring Lake Dam	Sag-2	2024-10-15	11	Etheostoma fonticola	31	1
3201	Spring Lake Dam	Sag-2	2024-10-15	11	Etheostoma fonticola	18	1
3201	Spring Lake Dam	Sag-2	2024-10-15	11	Etheostoma fonticola	29	1
3201	Spring Lake Dam	Sag-2	2024-10-15	11	Etheostoma fonticola	33	1
3201	Spring Lake Dam	Sag-2	2024-10-15	11	Etheostoma fonticola	24	1
3201	Spring Lake Dam	Sag-2	2024-10-15	11	Lepomis miniatus	28	1
3201	Spring Lake Dam	Sag-2	2024-10-15	11	Lepomis miniatus	107	1
3201	Spring Lake Dam	Sag-2	2024-10-15	11	Procambarus sp.		3
3201	Spring Lake Dam	Sag-2	2024-10-15	12	Procambarus sp.		3
3201	Spring Lake Dam	Sag-2	2024-10-15	12	Etheostoma fonticola	37	1
3201	Spring Lake Dam	Sag-2	2024-10-15	13	Procambarus sp.		2
3201	Spring Lake Dam	Sag-2	2024-10-15	13	Etheostoma fonticola	28	1
3201	Spring Lake Dam	Sag-2	2024-10-15	13	Etheostoma fonticola	28	1
3201	Spring Lake Dam	Sag-2	2024-10-15	14	Procambarus sp.		3
3201	Spring Lake Dam	Sag-2	2024-10-15	14	Etheostoma fonticola	33	1
3201	Spring Lake Dam	Sag-2	2024-10-15	14	Etheostoma fonticola	30	1
3201	Spring Lake Dam	Sag-2	2024-10-15	15	Procambarus sp.		2
3202	Spring Lake Dam	Hydro-1	2024-10-15	1	Lepomis gulosus	190	1

3202	Spring Lake Dam	Hydro-1	2024-10-15	1	Gambusia sp.	35	1
3202	Spring Lake Dam	Hydro-1	2024-10-15	1	Gambusia sp.	30	1
3202	Spring Lake Dam	Hydro-1	2024-10-15	1	Gambusia sp.	25	1
3202	Spring Lake Dam	Hydro-1	2024-10-15	1	Gambusia sp.	10	1
3202	Spring Lake Dam	Hydro-1	2024-10-15	1	Gambusia sp.	38	1
3202	Spring Lake Dam	Hydro-1	2024-10-15	1	Gambusia sp.	15	1
3202	Spring Lake Dam	Hydro-1	2024-10-15	1	Gambusia sp.	28	1
3202	Spring Lake Dam	Hydro-1	2024-10-15	1	Gambusia sp.	23	1
3202	Spring Lake Dam	Hydro-1	2024-10-15	1	Gambusia sp.	23	1
3202	Spring Lake Dam	Hydro-1	2024-10-15	1	Gambusia sp.	39	1
3202	Spring Lake Dam	Hydro-1	2024-10-15	1	Gambusia sp.	22	1
3202	Spring Lake Dam	Hydro-1	2024-10-15	1	Gambusia sp.	39	1
3202	Spring Lake Dam	Hydro-1	2024-10-15	1	Gambusia sp.	19	1
3202	Spring Lake Dam	Hydro-1	2024-10-15	1	Gambusia sp.	10	1
3202	Spring Lake Dam	Hydro-1	2024-10-15	1	Gambusia sp.	10	1
3202	Spring Lake Dam	Hydro-1	2024-10-15	1	Etheostoma fonticola	36	1
3202	Spring Lake Dam	Hydro-1	2024-10-15	2	Gambusia sp.	32	1
3202	Spring Lake Dam	Hydro-1	2024-10-15	2	Gambusia sp.	25	1
3202	Spring Lake Dam	Hydro-1	2024-10-15	2	Gambusia sp.	22	1
3202	Spring Lake Dam	Hydro-1	2024-10-15	2	Gambusia sp.	21	1
3202	Spring Lake Dam	Hydro-1	2024-10-15	2	Gambusia sp.	22	1
3202	Spring Lake Dam	Hydro-1	2024-10-15	2	Gambusia sp.	20	1
3202	Spring Lake Dam	Hydro-1	2024-10-15	2	Gambusia sp.	20	1
3202	Spring Lake Dam	Hydro-1	2024-10-15	2	Gambusia sp.		1
3202	Spring Lake Dam	Hydro-1	2024-10-15	2	Gambusia sp.		1
3202	Spring Lake Dam	Hydro-1	2024-10-15	2	Procambarus sp.		1
3202	Spring Lake Dam	Hydro-1	2024-10-15	2	Palaemonetes sp.		1
3202	Spring Lake Dam	Hydro-1	2024-10-15	3	Procambarus sp.		1
3202	Spring Lake Dam	Hydro-1	2024-10-15	3	Palaemonetes sp.		3
3202	Spring Lake Dam	Hydro-1	2024-10-15	4	Etheostoma fonticola	18	1

3202	Spring Lake Dam	Hydro-1	2024-10-15	4	Gambusia sp.		1
3202	Spring Lake Dam	Hydro-1	2024-10-15	4	Gambusia sp.		1
3202	Spring Lake Dam	Hydro-1	2024-10-15	4	Gambusia sp.		1
3202	Spring Lake Dam	Hydro-1	2024-10-15	5	Gambusia sp.		1
3202	Spring Lake Dam	Hydro-1	2024-10-15	5	Palaemonetes sp.		1
3202	Spring Lake Dam	Hydro-1	2024-10-15	6	No fish collected		
3202	Spring Lake Dam	Hydro-1	2024-10-15	7	Palaemonetes sp.		1
3202	Spring Lake Dam	Hydro-1	2024-10-15	7	Gambusia sp.		1
3202	Spring Lake Dam	Hydro-1	2024-10-15	8	Gambusia sp.		1
3202	Spring Lake Dam	Hydro-1	2024-10-15	9	Gambusia sp.		1
3202	Spring Lake Dam	Hydro-1	2024-10-15	9	Gambusia sp.		1
3202	Spring Lake Dam	Hydro-1	2024-10-15	9	Gambusia sp.		1
3202	Spring Lake Dam	Hydro-1	2024-10-15	10	Gambusia sp.		1
3202	Spring Lake Dam	Hydro-1	2024-10-15	11	No fish collected		
3202	Spring Lake Dam	Hydro-1	2024-10-15	12	No fish collected		
3202	Spring Lake Dam	Hydro-1	2024-10-15	13	No fish collected		
3202	Spring Lake Dam	Hydro-1	2024-10-15	14	No fish collected		
3202	Spring Lake Dam	Hydro-1	2024-10-15	15	No fish collected		
3203	Spring Lake Dam	Open-2	2024-10-15	6	No fish collected		
3203	Spring Lake Dam	Open-2	2024-10-15	7	No fish collected		
3203	Spring Lake Dam	Open-2	2024-10-15	8	No fish collected		
3203	Spring Lake Dam	Open-2	2024-10-15	9	No fish collected		
3203	Spring Lake Dam	Open-2	2024-10-15	10	No fish collected		
3203	Spring Lake Dam	Open-2	2024-10-15				
3203	Spring Lake Dam	Open-2	2024-10-15	1	No fish collected		
3203	Spring Lake Dam	Open-2	2024-10-15	2	No fish collected		
3203	Spring Lake Dam	Open-2	2024-10-15	3	No fish collected		
3203	Spring Lake Dam	Open-2	2024-10-15	4	No fish collected		
3203	Spring Lake Dam	Open-2	2024-10-15	5	No fish collected		
3206	City Park	Open-2	2024-10-16	1	No fish collected		

3206	City Park	Open-2	2024-10-16	2	No fish collected		
3206	City Park	Open-2	2024-10-16	3	No fish collected		
3206	City Park	Open-2	2024-10-16	4	No fish collected		
3206	City Park	Open-2	2024-10-16	5	No fish collected		
3206	City Park	Open-2	2024-10-16	6	No fish collected		
3206	City Park	Open-2	2024-10-16	7	No fish collected		
3206	City Park	Open-2	2024-10-16	8	No fish collected		
3206	City Park	Open-2	2024-10-16	9	No fish collected		
3206	City Park	Open-2	2024-10-16	10	No fish collected		
3207	City Park	Cab-1	2024-10-16	1	Gambusia sp.	10	1
3207	City Park	Cab-1	2024-10-16	1	Gambusia sp.	12	1
3207	City Park	Cab-1	2024-10-16	1	Gambusia sp.	25	1
3207	City Park	Cab-1	2024-10-16	1	Gambusia sp.	15	1
3207	City Park	Cab-1	2024-10-16	1	Gambusia sp.	20	1
3207	City Park	Cab-1	2024-10-16	1	Gambusia sp.	10	1
3207	City Park	Cab-1	2024-10-16	1	Gambusia sp.	10	1
3207	City Park	Cab-1	2024-10-16	1	Gambusia sp.	10	1
3207	City Park	Cab-1	2024-10-16	1	Gambusia sp.	15	1
3207	City Park	Cab-1	2024-10-16	1	Gambusia sp.	24	1
3207	City Park	Cab-1	2024-10-16	1	Gambusia sp.	16	1
3207	City Park	Cab-1	2024-10-16	1	Gambusia sp.	13	1
3207	City Park	Cab-1	2024-10-16	1	Gambusia sp.	13	1
3207	City Park	Cab-1	2024-10-16	1	Gambusia sp.	17	1
3207	City Park	Cab-1	2024-10-16	1	Gambusia sp.	10	1
3207	City Park	Cab-1	2024-10-16	1	Gambusia sp.	10	1
3207	City Park	Cab-1	2024-10-16	1	Gambusia sp.	15	1
3207	City Park	Cab-1	2024-10-16	1	Gambusia sp.	20	1
3207	City Park	Cab-1	2024-10-16	1	Gambusia sp.	15	1
3207	City Park	Cab-1	2024-10-16	1	Gambusia sp.	10	1
3207	City Park	Cab-1	2024-10-16	1	Gambusia sp.		1

3207	City Park	Cab-1	2024-10-16	1	Gambusia sp.		1
3207	City Park	Cab-1	2024-10-16	1	Gambusia sp.		1
3207	City Park	Cab-1	2024-10-16	1	Gambusia sp.		1
3207	City Park	Cab-1	2024-10-16	1	Gambusia sp.		1
3207	City Park	Cab-1	2024-10-16	1	Gambusia sp.		1
3207	City Park	Cab-1	2024-10-16	1	Gambusia sp.		1
3207	City Park	Cab-1	2024-10-16	1	Gambusia sp.		1
3207	City Park	Cab-1	2024-10-16	1	Gambusia sp.		1
3207	City Park	Cab-1	2024-10-16	1	Gambusia sp.		1
3207	City Park	Cab-1	2024-10-16	1	Gambusia sp.		1
3207	City Park	Cab-1	2024-10-16	1	Gambusia sp.		1
3207	City Park	Cab-1	2024-10-16	1	Gambusia sp.		1
3207	City Park	Cab-1	2024-10-16	1	Gambusia sp.		1
3207	City Park	Cab-1	2024-10-16	1	Gambusia sp.		1
3207	City Park	Cab-1	2024-10-16	1	Gambusia sp.		1
3207	City Park	Cab-1	2024-10-16	1	Gambusia sp.		1
3207	City Park	Cab-1	2024-10-16	1	Gambusia sp.		1
3207	City Park	Cab-1	2024-10-16	1	Gambusia sp.		1
3207	City Park	Cab-1	2024-10-16	1	Gambusia sp.		1
3207	City Park	Cab-1	2024-10-16	1	Gambusia sp.		1
3207	City Park	Cab-1	2024-10-16	1	Gambusia sp.		1
3207	City Park	Cab-1	2024-10-16	1	Etheostoma fonticola	27	1
3207	City Park	Cab-1	2024-10-16	1	Etheostoma fonticola	31	1
3207	City Park	Cab-1	2024-10-16	1	Etheostoma fonticola	30	1
3207	City Park	Cab-1	2024-10-16	1	Etheostoma fonticola	31	1
3207	City Park	Cab-1	2024-10-16	1	Etheostoma fonticola	28	1
3207	City Park	Cab-1	2024-10-16	1	Etheostoma fonticola	25	1
3207	City Park	Cab-1	2024-10-16	1	Etheostoma fonticola	31	1
3207	City Park	Cab-1	2024-10-16	1	Etheostoma fonticola	27	1
3207	City Park	Cab-1	2024-10-16	1	Etheostoma fonticola	29	1

3207	City Park	Cab-1	2024-10-16	1	Etheostoma fonticola	28	1
3207	City Park	Cab-1	2024-10-16	1	Palaemonetes sp.		4
3207	City Park	Cab-1	2024-10-16	1	Procambarus sp.		16
3207	City Park	Cab-1	2024-10-16	2	Gambusia sp.		1
3207	City Park	Cab-1	2024-10-16	2	Gambusia sp.		1
3207	City Park	Cab-1	2024-10-16	2	Gambusia sp.		1
3207	City Park	Cab-1	2024-10-16	2	Gambusia sp.		1
3207	City Park	Cab-1	2024-10-16	2	Gambusia sp.		1
3207	City Park	Cab-1	2024-10-16	2	Gambusia sp.		1
3207	City Park	Cab-1	2024-10-16	2	Gambusia sp.		1
3207	City Park	Cab-1	2024-10-16	2	Etheostoma fonticola	30	1
3207	City Park	Cab-1	2024-10-16	2	Etheostoma fonticola	26	1
3207	City Park	Cab-1	2024-10-16	2	Etheostoma fonticola	28	1
3207	City Park	Cab-1	2024-10-16	2	Etheostoma fonticola	14	1
3207	City Park	Cab-1	2024-10-16	2	Procambarus sp.		1
3207	City Park	Cab-1	2024-10-16	2	Palaemonetes sp.		1
3207	City Park	Cab-1	2024-10-16	3	Procambarus sp.		5
3207	City Park	Cab-1	2024-10-16	3	Gambusia sp.		1
3207	City Park	Cab-1	2024-10-16	3	Gambusia sp.		1
3207	City Park	Cab-1	2024-10-16	3	Gambusia sp.		1
3207	City Park	Cab-1	2024-10-16	1	Etheostoma fonticola	30	1
3207	City Park	Cab-1	2024-10-16	3	Gambusia sp.		1
3207	City Park	Cab-1	2024-10-16	3	Gambusia sp.		1
3207	City Park	Cab-1	2024-10-16	3	Gambusia sp.		1
3207	City Park	Cab-1	2024-10-16	3	Gambusia sp.		1
3207	City Park	Cab-1	2024-10-16	3	Gambusia sp.		1
3207	City Park	Cab-1	2024-10-16	3	Gambusia sp.		1
3207	City Park	Cab-1	2024-10-16	3	Gambusia sp.		1
3207	City Park	Cab-1	2024-10-16	3	Gambusia sp.		1
3207	City Park	Cab-1	2024-10-16	3	Gambusia sp.		1

3207	City Park	Cab-1	2024-10-16	3	Gambusia sp.		1
3207	City Park	Cab-1	2024-10-16	3	Gambusia sp.		1
3207	City Park	Cab-1	2024-10-16	3	Gambusia sp.		1
3207	City Park	Cab-1	2024-10-16	3	Gambusia sp.		1
3207	City Park	Cab-1	2024-10-16	3	Gambusia sp.		1
3207	City Park	Cab-1	2024-10-16	3	Etheostoma fonticola	35	1
3207	City Park	Cab-1	2024-10-16	3	Etheostoma fonticola	30	1
3207	City Park	Cab-1	2024-10-16	3	Etheostoma fonticola	13	1
3207	City Park	Cab-1	2024-10-16	4	Procambarus sp.		4
3207	City Park	Cab-1	2024-10-16	4	Gambusia sp.		1
3207	City Park	Cab-1	2024-10-16	4	Gambusia sp.		1
3207	City Park	Cab-1	2024-10-16	4	Gambusia sp.		1
3207	City Park	Cab-1	2024-10-16	4	Gambusia sp.		1
3207	City Park	Cab-1	2024-10-16	4	Gambusia sp.		1
3207	City Park	Cab-1	2024-10-16	4	Gambusia sp.		1
3207	City Park	Cab-1	2024-10-16	4	Gambusia sp.		1
3207	City Park	Cab-1	2024-10-16	4	Gambusia sp.		1
3207	City Park	Cab-1	2024-10-16	4	Gambusia sp.		1
3207	City Park	Cab-1	2024-10-16	4	Gambusia sp.		1
3207	City Park	Cab-1	2024-10-16	4	Gambusia sp.		1
3207	City Park	Cab-1	2024-10-16	4	Gambusia sp.		1
3207	City Park	Cab-1	2024-10-16	4	Gambusia sp.		1
3207	City Park	Cab-1	2024-10-16	4	Gambusia sp.		1
3207	City Park	Cab-1	2024-10-16	4	Gambusia sp.		1
3207	City Park	Cab-1	2024-10-16	4	Gambusia sp.		1
3207	City Park	Cab-1	2024-10-16	4	Gambusia sp.		1
3207	City Park	Cab-1	2024-10-16	4	Gambusia sp.		1
3207	City Park	Cab-1	2024-10-16	4	Gambusia sp.		1
3207	City Park	Cab-1	2024-10-16	4	Gambusia sp.		1
3207	City Park	Cab-1	2024-10-16	4	Gambusia sp.		1

3207	City Park	Cab-1	2024-10-16	4	Gambusia sp.		1
3207	City Park	Cab-1	2024-10-16	4	Etheostoma fonticola	34	1
3207	City Park	Cab-1	2024-10-16	4	Etheostoma fonticola	31	1
3207	City Park	Cab-1	2024-10-16	4	Etheostoma fonticola	34	1
3207	City Park	Cab-1	2024-10-16	4	Etheostoma fonticola	16	1
3207	City Park	Cab-1	2024-10-16	5	Etheostoma fonticola	28	1
3207	City Park	Cab-1	2024-10-16	5	Etheostoma fonticola	30	1
3207	City Park	Cab-1	2024-10-16	5	Etheostoma fonticola	32	1
3207	City Park	Cab-1	2024-10-16	5	Gambusia sp.		1
3207	City Park	Cab-1	2024-10-16	5	Gambusia sp.		1
3207	City Park	Cab-1	2024-10-16	5	Gambusia sp.		1
3207	City Park	Cab-1	2024-10-16	5	Gambusia sp.		1
3207	City Park	Cab-1	2024-10-16	5	Gambusia sp.		1
3207	City Park	Cab-1	2024-10-16	5	Gambusia sp.		1
3207	City Park	Cab-1	2024-10-16	5	Gambusia sp.		1
3207	City Park	Cab-1	2024-10-16	5	Gambusia sp.		1
3207	City Park	Cab-1	2024-10-16	5	Gambusia sp.		1
3207	City Park	Cab-1	2024-10-16	5	Palaemonetes sp.		1
3207	City Park	Cab-1	2024-10-16	5	Procambarus sp.		4
3207	City Park	Cab-1	2024-10-16	6	Lepomis miniatus	99	1
3207	City Park	Cab-1	2024-10-16	6	Procambarus sp.		3
3207	City Park	Cab-1	2024-10-16	6	Etheostoma fonticola	20	1
3207	City Park	Cab-1	2024-10-16	6	Etheostoma fonticola	31	1
3207	City Park	Cab-1	2024-10-16	6	Etheostoma fonticola	30	1
3207	City Park	Cab-1	2024-10-16	6	Gambusia sp.		1
3207	City Park	Cab-1	2024-10-16	6	Gambusia sp.		1
3207	City Park	Cab-1	2024-10-16	6	Gambusia sp.		1
3207	City Park	Cab-1	2024-10-16	6	Gambusia sp.		1
3207	City Park	Cab-1	2024-10-16	6	Gambusia sp.		1
3207	City Park	Cab-1	2024-10-16	6	Gambusia sp.		1

3207	City Park	Cab-1	2024-10-16	6	Gambusia sp.		1
3207	City Park	Cab-1	2024-10-16	7	Gambusia sp.		1
3207	City Park	Cab-1	2024-10-16	8	Procambarus sp.		1
3207	City Park	Cab-1	2024-10-16	8	Etheostoma fonticola	36	1
3207	City Park	Cab-1	2024-10-16	9	Procambarus sp.		1
3207	City Park	Cab-1	2024-10-16	9	Gambusia sp.		1
3207	City Park	Cab-1	2024-10-16	9	Gambusia sp.		1
3207	City Park	Cab-1	2024-10-16	9	Gambusia sp.		1
3207	City Park	Cab-1	2024-10-16	9	Etheostoma fonticola	32	1
3207	City Park	Cab-1	2024-10-16	10	Gambusia sp.		1
3207	City Park	Cab-1	2024-10-16	11	Procambarus sp.		2
3207	City Park	Cab-1	2024-10-16	12	Etheostoma fonticola	32	1
3207	City Park	Cab-1	2024-10-16	12	Etheostoma fonticola	25	1
3207	City Park	Cab-1	2024-10-16	13	Gambusia sp.		1
3207	City Park	Cab-1	2024-10-16	14	Etheostoma fonticola	30	1
3207	City Park	Cab-1	2024-10-16	14	Gambusia sp.		1
3207	City Park	Cab-1	2024-10-16	14	Gambusia sp.		1
3207	City Park	Cab-1	2024-10-16	14	Gambusia sp.		1
3207	City Park	Cab-1	2024-10-16	14	Palaemonetes sp.		1
3207	City Park	Cab-1	2024-10-16	15	No fish collected		
3208	City Park	Lud-1	2024-10-16	1	Gambusia sp.		1
3208	City Park	Lud-1	2024-10-16	1	Gambusia sp.		1
3208	City Park	Lud-1	2024-10-16	1	Gambusia sp.		1
3208	City Park	Lud-1	2024-10-16	1	Gambusia sp.		1
3208	City Park	Lud-1	2024-10-16	1	Gambusia sp.		1
3208	City Park	Lud-1	2024-10-16	1	Gambusia sp.		1
3208	City Park	Lud-1	2024-10-16	1	Gambusia sp.		1
3208	City Park	Lud-1	2024-10-16	1	Gambusia sp.		1
3208	City Park	Lud-1	2024-10-16	1	Gambusia sp.		1
3208	City Park	Lud-1	2024-10-16	1	Gambusia sp.		1

3208	City Park	Lud-1	2024-10-16	1	Gambusia sp.		1
3208	City Park	Lud-1	2024-10-16	1	Gambusia sp.		1
3208	City Park	Lud-1	2024-10-16	1	Gambusia sp.		1
3208	City Park	Lud-1	2024-10-16	1	Gambusia sp.		1
3208	City Park	Lud-1	2024-10-16	1	Gambusia sp.		1
3208	City Park	Lud-1	2024-10-16	1	Gambusia sp.		1
3208	City Park	Lud-1	2024-10-16	1	Gambusia sp.		1
3208	City Park	Lud-1	2024-10-16	1	Gambusia sp.		1
3208	City Park	Lud-1	2024-10-16	1	Gambusia sp.		1
3208	City Park	Lud-1	2024-10-16	1	Gambusia sp.		1
3208	City Park	Lud-1	2024-10-16	1	Gambusia sp.		1
3208	City Park	Lud-1	2024-10-16	1	Gambusia sp.		1
3208	City Park	Lud-1	2024-10-16	1	Gambusia sp.		1
3208	City Park	Lud-1	2024-10-16	1	Gambusia sp.		1
3208	City Park	Lud-1	2024-10-16	1	Gambusia sp.		1
3208	City Park	Lud-1	2024-10-16	1	Gambusia sp.		1
3208	City Park	Lud-1	2024-10-16	1	Gambusia sp.		1
3208	City Park	Lud-1	2024-10-16	1	Gambusia sp.		1
3208	City Park	Lud-1	2024-10-16	1	Gambusia sp.		1
3208	City Park	Lud-1	2024-10-16	1	Gambusia sp.		1
3208	City Park	Lud-1	2024-10-16	1	Gambusia sp.		1
3208	City Park	Lud-1	2024-10-16	1	Gambusia sp.		1
3208	City Park	Lud-1	2024-10-16	1	Gambusia sp.		1
3208	City Park	Lud-1	2024-10-16	1	Gambusia sp.		1
3208	City Park	Lud-1	2024-10-16	1	Gambusia sp.		1
3208	City Park	Lud-1	2024-10-16	1	Gambusia sp.		1
3208	City Park	Lud-1	2024-10-16	1	Gambusia sp.		1
3208	City Park	Lud-1	2024-10-16	1	Gambusia sp.		1
3208	City Park	Lud-1	2024-10-16	1	Gambusia sp.		1
3208	City Park	Lud-1	2024-10-16	1	Gambusia sp.		1

3208	City Park	Lud-1	2024-10-16	1	Gambusia sp.		1
3208	City Park	Lud-1	2024-10-16	1	Gambusia sp.		1
3208	City Park	Lud-1	2024-10-16	1	Gambusia sp.		1
3208	City Park	Lud-1	2024-10-16	1	Gambusia sp.		1
3208	City Park	Lud-1	2024-10-16	1	Gambusia sp.		1
3208	City Park	Lud-1	2024-10-16	1	Gambusia sp.		1
3208	City Park	Lud-1	2024-10-16	1	Etheostoma fonticola	10	1
3208	City Park	Lud-1	2024-10-16	1	Etheostoma fonticola	18	1
3208	City Park	Lud-1	2024-10-16	1	Procambarus sp.		1
3208	City Park	Lud-1	2024-10-16	2	Procambarus sp.		1
3208	City Park	Lud-1	2024-10-16	2	Gambusia sp.		1
3208	City Park	Lud-1	2024-10-16	2	Gambusia sp.		1
3208	City Park	Lud-1	2024-10-16	2	Gambusia sp.		1
3208	City Park	Lud-1	2024-10-16	2	Gambusia sp.		1
3208	City Park	Lud-1	2024-10-16	2	Gambusia sp.		1
3208	City Park	Lud-1	2024-10-16	2	Gambusia sp.		1
3208	City Park	Lud-1	2024-10-16	2	Gambusia sp.		1
3208	City Park	Lud-1	2024-10-16	2	Gambusia sp.		1
3208	City Park	Lud-1	2024-10-16	2	Gambusia sp.		1
3208	City Park	Lud-1	2024-10-16	2	Gambusia sp.		1
3208	City Park	Lud-1	2024-10-16	2	Gambusia sp.		1
3208	City Park	Lud-1	2024-10-16	2	Gambusia sp.		1
3208	City Park	Lud-1	2024-10-16	2	Gambusia sp.		1
3208	City Park	Lud-1	2024-10-16	2	Gambusia sp.		1
3208	City Park	Lud-1	2024-10-16	2	Gambusia sp.		1
3208	City Park	Lud-1	2024-10-16	2	Gambusia sp.		1
3208	City Park	Lud-1	2024-10-16	2	Gambusia sp.		1
3208	City Park	Lud-1	2024-10-16	2	Gambusia sp.		1
3208	City Park	Lud-1	2024-10-16	3	Etheostoma fonticola	35	1
3208	City Park	Lud-1	2024-10-16	3	Etheostoma fonticola	28	1

3208	City Park	Lud-1	2024-10-16	3	Etheostoma fonticola	15	1
3208	City Park	Lud-1	2024-10-16	3	Gambusia sp.		1
3208	City Park	Lud-1	2024-10-16	3	Gambusia sp.		1
3208	City Park	Lud-1	2024-10-16	3	Procambarus sp.		2
3208	City Park	Lud-1	2024-10-16	4	Gambusia sp.		1
3208	City Park	Lud-1	2024-10-16	4	Gambusia sp.		1
3208	City Park	Lud-1	2024-10-16	4	Gambusia sp.		1
3208	City Park	Lud-1	2024-10-16	4	Gambusia sp.		1
3208	City Park	Lud-1	2024-10-16	5	Gambusia sp.		1
3208	City Park	Lud-1	2024-10-16	5	Gambusia sp.		1
3208	City Park	Lud-1	2024-10-16	5	Gambusia sp.		1
3208	City Park	Lud-1	2024-10-16	5	Gambusia sp.		1
3208	City Park	Lud-1	2024-10-16	5	Gambusia sp.		1
3208	City Park	Lud-1	2024-10-16	5	Gambusia sp.		1
3208	City Park	Lud-1	2024-10-16	5	Gambusia sp.		1
3208	City Park	Lud-1	2024-10-16	5	Gambusia sp.		1
3208	City Park	Lud-1	2024-10-16	5	Gambusia sp.		1
3208	City Park	Lud-1	2024-10-16	5	Gambusia sp.		1
3208	City Park	Lud-1	2024-10-16	6	Etheostoma fonticola	34	1
3208	City Park	Lud-1	2024-10-16	6	Etheostoma fonticola	30	1
3208	City Park	Lud-1	2024-10-16	7	Gambusia sp.		1
3208	City Park	Lud-1	2024-10-16	7	Etheostoma fonticola	9	1
3208	City Park	Lud-1	2024-10-16	8	Etheostoma fonticola	34	1
3208	City Park	Lud-1	2024-10-16	8	Etheostoma fonticola	26	1
3208	City Park	Lud-1	2024-10-16	8	Etheostoma fonticola	18	1
3208	City Park	Lud-1	2024-10-16	8	Etheostoma fonticola	22	1
3208	City Park	Lud-1	2024-10-16	8	Procambarus sp.		1
3208	City Park	Lud-1	2024-10-16	9	No fish collected		
3208	City Park	Lud-1	2024-10-16	10	Gambusia sp.		1
3208	City Park	Lud-1	2024-10-16	11	Gambusia sp.		1

3208	City Park	Lud-1	2024-10-16	12	Procambarus sp.		1
3208	City Park	Lud-1	2024-10-16	12	Etheostoma fonticola	32	1
3208	City Park	Lud-1	2024-10-16	13	Gambusia sp.		1
3208	City Park	Lud-1	2024-10-16	13	Gambusia sp.		1
3208	City Park	Lud-1	2024-10-16	14	No fish collected		
3208	City Park	Lud-1	2024-10-16	15	No fish collected		
3208	City Park	Lud-1	2024-10-16	1	Etheostoma fonticola	26	1
3208	City Park	Lud-1	2024-10-16	1	Gambusia sp.	26	1
3208	City Park	Lud-1	2024-10-16	1	Gambusia sp.	18	1
3208	City Park	Lud-1	2024-10-16	1	Gambusia sp.	15	1
3208	City Park	Lud-1	2024-10-16	1	Gambusia sp.	35	1
3208	City Park	Lud-1	2024-10-16	1	Gambusia sp.	22	1
3208	City Park	Lud-1	2024-10-16	1	Gambusia sp.	22	1
3208	City Park	Lud-1	2024-10-16	1	Gambusia sp.	20	1
3208	City Park	Lud-1	2024-10-16	1	Gambusia sp.	33	1
3208	City Park	Lud-1	2024-10-16	1	Gambusia sp.	15	1
3208	City Park	Lud-1	2024-10-16	1	Gambusia sp.	17	1
3208	City Park	Lud-1	2024-10-16	1	Gambusia sp.	38	1
3208	City Park	Lud-1	2024-10-16	1	Gambusia sp.	26	1
3208	City Park	Lud-1	2024-10-16	1	Gambusia sp.	26	1
3208	City Park	Lud-1	2024-10-16	1	Gambusia sp.	28	1
3208	City Park	Lud-1	2024-10-16	1	Gambusia sp.	20	1
3208	City Park	Lud-1	2024-10-16	1	Gambusia sp.	30	1
3208	City Park	Lud-1	2024-10-16	1	Gambusia sp.	22	1
3208	City Park	Lud-1	2024-10-16	1	Gambusia sp.	22	1
3208	City Park	Lud-1	2024-10-16	1	Gambusia sp.	32	1
3208	City Park	Lud-1	2024-10-16	1	Gambusia sp.	32	1
3208	City Park	Lud-1	2024-10-16	1	Gambusia sp.		1
3208	City Park	Lud-1	2024-10-16	1	Gambusia sp.		1
3208	City Park	Lud-1	2024-10-16	1	Gambusia sp.		1

3208	City Park	Lud-1	2024-10-16	1	Gambusia sp.		1
3208	City Park	Lud-1	2024-10-16	1	Gambusia sp.		1
3208	City Park	Lud-1	2024-10-16	1	Gambusia sp.		1
3209	City Park	Lud-2	2024-10-16	1	Procambarus sp.		4
3209	City Park	Lud-2	2024-10-16	1	Etheostoma fonticola	24	1
3209	City Park	Lud-2	2024-10-16	1	Etheostoma fonticola	30	1
3209	City Park	Lud-2	2024-10-16	1	Etheostoma fonticola	21	1
3209	City Park	Lud-2	2024-10-16	1	Etheostoma fonticola	31	1
3209	City Park	Lud-2	2024-10-16	1	Etheostoma fonticola	28	1
3209	City Park	Lud-2	2024-10-16	1	Etheostoma fonticola	18	1
3209	City Park	Lud-2	2024-10-16	1	Etheostoma fonticola	17	1
3209	City Park	Lud-2	2024-10-16	1	Etheostoma fonticola	18	1
3209	City Park	Lud-2	2024-10-16	1	Etheostoma fonticola	12	1
3209	City Park	Lud-2	2024-10-16	1	Etheostoma fonticola	20	1
3209	City Park	Lud-2	2024-10-16	1	Etheostoma fonticola	10	1
3209	City Park	Lud-2	2024-10-16	1	Etheostoma fonticola	17	1
3209	City Park	Lud-2	2024-10-16	1	Gambusia sp.	10	1
3209	City Park	Lud-2	2024-10-16	1	Gambusia sp.	12	1
3209	City Park	Lud-2	2024-10-16	1	Gambusia sp.	10	1
3209	City Park	Lud-2	2024-10-16	2	Procambarus sp.		6
3209	City Park	Lud-2	2024-10-16	2	Etheostoma fonticola	33	1
3209	City Park	Lud-2	2024-10-16	2	Etheostoma fonticola	16	1
3209	City Park	Lud-2	2024-10-16	2	Gambusia sp.	10	1
3209	City Park	Lud-2	2024-10-16	2	Gambusia sp.	10	1
3209	City Park	Lud-2	2024-10-16	2	Gambusia sp.	10	1
3209	City Park	Lud-2	2024-10-16	3	Etheostoma fonticola	28	1
3209	City Park	Lud-2	2024-10-16	3	Etheostoma fonticola	31	1
3209	City Park	Lud-2	2024-10-16	3	Etheostoma fonticola	32	1
3209	City Park	Lud-2	2024-10-16	3	Gambusia sp.	12	1
3209	City Park	Lud-2	2024-10-16	3	Gambusia sp.	10	1

3209	City Park	Lud-2	2024-10-16	3	Gambusia sp.	10	1
3209	City Park	Lud-2	2024-10-16	4	Etheostoma fonticola	27	1
3209	City Park	Lud-2	2024-10-16	4	Etheostoma fonticola	31	1
3209	City Park	Lud-2	2024-10-16	4	Procambarus sp.		1
3209	City Park	Lud-2	2024-10-16	5	Etheostoma fonticola	28	1
3209	City Park	Lud-2	2024-10-16	5	Etheostoma fonticola	31	1
3209	City Park	Lud-2	2024-10-16	5	Procambarus sp.		2
3209	City Park	Lud-2	2024-10-16	6	Procambarus sp.		2
3209	City Park	Lud-2	2024-10-16	6	Etheostoma fonticola	22	1
3209	City Park	Lud-2	2024-10-16	6	Etheostoma fonticola	30	1
3209	City Park	Lud-2	2024-10-16	6	Gambusia sp.	15	1
3209	City Park	Lud-2	2024-10-16	7	Etheostoma fonticola	20	1
3209	City Park	Lud-2	2024-10-16	7	Etheostoma fonticola	25	1
3209	City Park	Lud-2	2024-10-16	8	Procambarus sp.		2
3209	City Park	Lud-2	2024-10-16	9	Etheostoma fonticola	18	1
3209	City Park	Lud-2	2024-10-16	9	Etheostoma fonticola	19	1
3209	City Park	Lud-2	2024-10-16	10	Procambarus sp.		2
3209	City Park	Lud-2	2024-10-16	11	Etheostoma fonticola	19	1
3209	City Park	Lud-2	2024-10-16	12	Procambarus sp.		2
3209	City Park	Lud-2	2024-10-16	13	Procambarus sp.		2
3209	City Park	Lud-2	2024-10-16	14	Etheostoma fonticola	22	1
3209	City Park	Lud-2	2024-10-16	15	Procambarus sp.		1
3210	City Park	Cab-2	2024-10-16	1	Etheostoma fonticola	35	1
3210	City Park	Cab-2	2024-10-16	1	Etheostoma fonticola	27	1
3210	City Park	Cab-2	2024-10-16	1	Etheostoma fonticola	31	1
3210	City Park	Cab-2	2024-10-16	1	Etheostoma fonticola	26	1
3210	City Park	Cab-2	2024-10-16	1	Etheostoma fonticola	23	1
3210	City Park	Cab-2	2024-10-16	1	Etheostoma fonticola	22	1
3210	City Park	Cab-2	2024-10-16	1	Etheostoma fonticola	34	1
3210	City Park	Cab-2	2024-10-16	1	Etheostoma fonticola	27	1

3210	City Park	Cab-2	2024-10-16	1	Etheostoma fonticola	16	1
3210	City Park	Cab-2	2024-10-16	1	Etheostoma fonticola	29	1
3210	City Park	Cab-2	2024-10-16	1	Etheostoma fonticola	33	1
3210	City Park	Cab-2	2024-10-16	1	Etheostoma fonticola	28	1
3210	City Park	Cab-2	2024-10-16	1	Etheostoma fonticola	30	1
3210	City Park	Cab-2	2024-10-16	1	Etheostoma fonticola	27	1
3210	City Park	Cab-2	2024-10-16	1	Etheostoma fonticola	29	1
3210	City Park	Cab-2	2024-10-16	1	Etheostoma fonticola	20	1
3210	City Park	Cab-2	2024-10-16	1	Etheostoma fonticola	28	1
3210	City Park	Cab-2	2024-10-16	1	Etheostoma fonticola	30	1
3210	City Park	Cab-2	2024-10-16	1	Etheostoma fonticola	12	1
3210	City Park	Cab-2	2024-10-16	1	Etheostoma fonticola	25	1
3210	City Park	Cab-2	2024-10-16	1	Etheostoma fonticola	28	1
3210	City Park	Cab-2	2024-10-16	1	Etheostoma fonticola	26	1
3210	City Park	Cab-2	2024-10-16	1	Etheostoma fonticola	30	1
3210	City Park	Cab-2	2024-10-16	1	Etheostoma fonticola	19	1
3210	City Park	Cab-2	2024-10-16	1	Gambusia sp.	10	1
3210	City Park	Cab-2	2024-10-16	1	Gambusia sp.	25	1
3210	City Park	Cab-2	2024-10-16	1	Gambusia sp.	10	1
3210	City Park	Cab-2	2024-10-16	1	Gambusia sp.	10	1
3210	City Park	Cab-2	2024-10-16	1	Gambusia sp.	32	1
3210	City Park	Cab-2	2024-10-16	1	Gambusia sp.	31	1
3210	City Park	Cab-2	2024-10-16	1	Gambusia sp.	14	1
3210	City Park	Cab-2	2024-10-16	1	Gambusia sp.	10	1
3210	City Park	Cab-2	2024-10-16	1	Gambusia sp.	18	1
3210	City Park	Cab-2	2024-10-16	1	Gambusia sp.	12	1
3210	City Park	Cab-2	2024-10-16	1	Gambusia sp.	12	1
3210	City Park	Cab-2	2024-10-16	1	Gambusia sp.	10	1
3210	City Park	Cab-2	2024-10-16	1	Gambusia sp.	15	1
3210	City Park	Cab-2	2024-10-16	1	Procambarus sp.		12

3210	City Park	Cab-2	2024-10-16	2	Etheostoma fonticola	34	1
3210	City Park	Cab-2	2024-10-16	2	Etheostoma fonticola	21	1
3210	City Park	Cab-2	2024-10-16	2	Etheostoma fonticola	35	1
3210	City Park	Cab-2	2024-10-16	2	Etheostoma fonticola	30	1
3210	City Park	Cab-2	2024-10-16	2	Etheostoma fonticola	16	1
3210	City Park	Cab-2	2024-10-16	2	Etheostoma fonticola	29	1
3210	City Park	Cab-2	2024-10-16	2	Gambusia sp.	25	1
3210	City Park	Cab-2	2024-10-16	2	Gambusia sp.	13	1
3210	City Park	Cab-2	2024-10-16	2	Gambusia sp.	10	1
3210	City Park	Cab-2	2024-10-16	2	Gambusia sp.	10	1
3210	City Park	Cab-2	2024-10-16	2	Gambusia sp.	15	1
3210	City Park	Cab-2	2024-10-16	2	Gambusia sp.	13	1
3210	City Park	Cab-2	2024-10-16	2	Procambarus sp.		5
3210	City Park	Cab-2	2024-10-16	3	Procambarus sp.		3
3210	City Park	Cab-2	2024-10-16	3	Gambusia sp.	10	1
3210	City Park	Cab-2	2024-10-16	3	Gambusia sp.		1
3210	City Park	Cab-2	2024-10-16	3	Gambusia sp.		1
3210	City Park	Cab-2	2024-10-16	3	Etheostoma fonticola	29	1
3210	City Park	Cab-2	2024-10-16	3	Etheostoma fonticola	20	1
3210	City Park	Cab-2	2024-10-16	3	Etheostoma fonticola	15	1
3210	City Park	Cab-2	2024-10-16	4	Procambarus sp.		3
3210	City Park	Cab-2	2024-10-16	4	Etheostoma fonticola	24	1
3210	City Park	Cab-2	2024-10-16	4	Gambusia sp.		1
3210	City Park	Cab-2	2024-10-16	5	Procambarus sp.		9
3210	City Park	Cab-2	2024-10-16	5	Etheostoma fonticola	28	1
3210	City Park	Cab-2	2024-10-16	5	Etheostoma fonticola	30	1
3210	City Park	Cab-2	2024-10-16	5	Etheostoma fonticola	31	1
3210	City Park	Cab-2	2024-10-16	5	Etheostoma fonticola	24	1
3210	City Park	Cab-2	2024-10-16	5	Etheostoma fonticola	24	1
3210	City Park	Cab-2	2024-10-16	5	Etheostoma fonticola	22	1

3210	City Park	Cab-2	2024-10-16	5	Etheostoma fonticola	10	1
3210	City Park	Cab-2	2024-10-16	5	Etheostoma fonticola	19	1
3210	City Park	Cab-2	2024-10-16	5	Etheostoma fonticola	9	1
3210	City Park	Cab-2	2024-10-16	5	Etheostoma fonticola	15	1
3210	City Park	Cab-2	2024-10-16	5	Gambusia sp.		1
3210	City Park	Cab-2	2024-10-16	6	Etheostoma fonticola	34	1
3210	City Park	Cab-2	2024-10-16	6	Etheostoma fonticola	24	1
3210	City Park	Cab-2	2024-10-16	6	Etheostoma fonticola	25	1
3210	City Park	Cab-2	2024-10-16	1	Gambusia sp.	10	1
3210	City Park	Cab-2	2024-10-16	7	Procambarus sp.		3
3210	City Park	Cab-2	2024-10-16	8	Procambarus sp.		1
3210	City Park	Cab-2	2024-10-16	8	Etheostoma fonticola	31	1
3210	City Park	Cab-2	2024-10-16	8	Etheostoma fonticola	25	1
3210	City Park	Cab-2	2024-10-16	8	Etheostoma fonticola	19	1
3210	City Park	Cab-2	2024-10-16	9	Etheostoma fonticola	31	1
3210	City Park	Cab-2	2024-10-16	9	Etheostoma fonticola	32	1
3210	City Park	Cab-2	2024-10-16	9	Etheostoma fonticola	28	1
3210	City Park	Cab-2	2024-10-16	9	Etheostoma fonticola	25	1
3210	City Park	Cab-2	2024-10-16	9	Procambarus sp.		1
3210	City Park	Cab-2	2024-10-16	10	Etheostoma fonticola	21	1
3210	City Park	Cab-2	2024-10-16	10	Etheostoma fonticola	32	1
3210	City Park	Cab-2	2024-10-16	10	Procambarus sp.		1
3210	City Park	Cab-2	2024-10-16	11	Etheostoma fonticola	26	1
3210	City Park	Cab-2	2024-10-16	11	Procambarus sp.		2
3210	City Park	Cab-2	2024-10-16	12	Procambarus sp.		1
3210	City Park	Cab-2	2024-10-16	13	Procambarus sp.		1
3210	City Park	Cab-2	2024-10-16	14	Procambarus sp.		2
3210	City Park	Cab-2	2024-10-16	15	Gambusia sp.		1
3210	City Park	Cab-2	2024-10-16	15	Etheostoma fonticola	27	1
3210	City Park	Cab-2	2024-10-16	16	No fish collected		

3211	I-35	Hyg-1	2024-10-17	1	Procambarus sp.		7
3211	I-35	Hyg-1	2024-10-17	1	Gambusia sp.	22	1
3211	I-35	Hyg-1	2024-10-17	2	Gambusia sp.	22	1
3211	I-35	Hyg-1	2024-10-17	2	Gambusia sp.	18	1
3211	I-35	Hyg-1	2024-10-17	2	Gambusia sp.	22	1
3211	I-35	Hyg-1	2024-10-17	2	Gambusia sp.	20	1
3211	I-35	Hyg-1	2024-10-17	3	Gambusia sp.	18	1
3211	I-35	Hyg-1	2024-10-17	3	Procambarus sp.		1
3211	I-35	Hyg-1	2024-10-17	4	Procambarus sp.		5
3211	I-35	Hyg-1	2024-10-17	4	Ameiurus natalis	15	1
3211	I-35	Hyg-1	2024-10-17	4	Gambusia sp.	10	1
3211	I-35	Hyg-1	2024-10-17	5	Etheostoma fonticola	34	1
3211	I-35	Hyg-1	2024-10-17	6	No fish collected		
3211	I-35	Hyg-1	2024-10-17	7	Procambarus sp.		1
3211	I-35	Hyg-1	2024-10-17	8	Gambusia sp.	28	1
3211	I-35	Hyg-1	2024-10-17	9	No fish collected		
3211	I-35	Hyg-1	2024-10-17	10	Gambusia sp.	22	1
3211	I-35	Hyg-1	2024-10-17	11	No fish collected		
3211	I-35	Hyg-1	2024-10-17	12	No fish collected		
3211	I-35	Hyg-1	2024-10-17	13	No fish collected		
3211	I-35	Hyg-1	2024-10-17	14	No fish collected		
3211	I-35	Hyg-1	2024-10-17	15	No fish collected		
3212	I-35	Hyg-2	2024-10-17	1	Procambarus sp.		6
3212	I-35	Hyg-2	2024-10-17	1	Etheostoma fonticola	34	1
3212	I-35	Hyg-2	2024-10-17	1	Etheostoma fonticola	33	1
3212	I-35	Hyg-2	2024-10-17	1	Etheostoma fonticola	34	1
3212	I-35	Hyg-2	2024-10-17	1	Etheostoma fonticola	32	1
3212	I-35	Hyg-2	2024-10-17	1	Gambusia sp.	24	1
3212	I-35	Hyg-2	2024-10-17	1	Gambusia sp.	28	1
3212	I-35	Hyg-2	2024-10-17	1	Gambusia sp.	15	1

3212	I-35	Hyg-2	2024-10-17	1	Gambusia sp.	17	1
3212	I-35	Hyg-2	2024-10-17	1	Gambusia sp.	20	1
3212	I-35	Hyg-2	2024-10-17	1	Gambusia sp.	24	1
3212	I-35	Hyg-2	2024-10-17	1	Gambusia sp.	15	1
3212	I-35	Hyg-2	2024-10-17	1	Gambusia sp.	15	1
3212	I-35	Hyg-2	2024-10-17	1	Gambusia sp.	15	1
3212	I-35	Hyg-2	2024-10-17	1	Gambusia sp.	18	1
3212	I-35	Hyg-2	2024-10-17	1	Gambusia sp.	18	1
3212	I-35	Hyg-2	2024-10-17	1	Gambusia sp.	15	1
3212	I-35	Hyg-2	2024-10-17	1	Gambusia sp.	16	1
3212	I-35	Hyg-2	2024-10-17	1	Gambusia sp.	11	1
3212	I-35	Hyg-2	2024-10-17	1	Gambusia sp.	18	1
3212	I-35	Hyg-2	2024-10-17	1	Hypostomus plecostomus	26	1
3212	I-35	Hyg-2	2024-10-17	2	Etheostoma fonticola	35	1
3212	I-35	Hyg-2	2024-10-17	2	Etheostoma fonticola	28	1
3212	I-35	Hyg-2	2024-10-17	2	Etheostoma fonticola	37	1
3212	I-35	Hyg-2	2024-10-17	2	Etheostoma fonticola	31	1
3212	I-35	Hyg-2	2024-10-17	2	Etheostoma fonticola	24	1
3212	I-35	Hyg-2	2024-10-17	2	Etheostoma fonticola	25	1
3212	I-35	Hyg-2	2024-10-17	2	Etheostoma fonticola	31	1
3212	I-35	Hyg-2	2024-10-17	2	Etheostoma fonticola	25	1
3212	I-35	Hyg-2	2024-10-17	2	Procambarus sp.		4
3212	I-35	Hyg-2	2024-10-17	2	Gambusia sp.	20	1
3212	I-35	Hyg-2	2024-10-17	2	Gambusia sp.	21	1
3212	I-35	Hyg-2	2024-10-17	2	Gambusia sp.	18	1
3212	I-35	Hyg-2	2024-10-17	2	Gambusia sp.	15	1
3212	I-35	Hyg-2	2024-10-17	2	Gambusia sp.	22	1
3212	I-35	Hyg-2	2024-10-17	3	Procambarus sp.		2
3212	I-35	Hyg-2	2024-10-17	3	Gambusia sp.		1
3212	I-35	Hyg-2	2024-10-17	3	Etheostoma fonticola	29	1

3212	I-35	Hyg-2	2024-10-17	4	Gambusia sp.		1
3212	I-35	Hyg-2	2024-10-17	4	Gambusia sp.		1
3212	I-35	Hyg-2	2024-10-17	4	Procambarus sp.		8
3212	I-35	Hyg-2	2024-10-17	4	Etheostoma fonticola	33	1
3212	I-35	Hyg-2	2024-10-17	4	Etheostoma fonticola	32	1
3212	I-35	Hyg-2	2024-10-17	4	Etheostoma fonticola	27	1
3212	I-35	Hyg-2	2024-10-17	5	Etheostoma fonticola	31	1
3212	I-35	Hyg-2	2024-10-17	5	Procambarus sp.		10
3212	I-35	Hyg-2	2024-10-17	5	Gambusia sp.		1
3212	I-35	Hyg-2	2024-10-17	5	Gambusia sp.		1
3212	I-35	Hyg-2	2024-10-17	5	Gambusia sp.		1
3212	I-35	Hyg-2	2024-10-17	6	Procambarus sp.		8
3212	I-35	Hyg-2	2024-10-17	7	Etheostoma fonticola	33	1
3212	I-35	Hyg-2	2024-10-17	7	Etheostoma fonticola	32	1
3212	I-35	Hyg-2	2024-10-17	7	Gambusia sp.		1
3212	I-35	Hyg-2	2024-10-17	7	Procambarus sp.		2
3212	I-35	Hyg-2	2024-10-17	8	Etheostoma fonticola	31	1
3212	I-35	Hyg-2	2024-10-17	8	Etheostoma fonticola	30	1
3212	I-35	Hyg-2	2024-10-17	8	Etheostoma fonticola	28	1
3212	I-35	Hyg-2	2024-10-17	8	Gambusia sp.		1
3212	I-35	Hyg-2	2024-10-17	8	Gambusia sp.		1
3212	I-35	Hyg-2	2024-10-17	8	Gambusia sp.		1
3212	I-35	Hyg-2	2024-10-17	9	No fish collected		
3212	I-35	Hyg-2	2024-10-17	10	Gambusia sp.		1
3212	I-35	Hyg-2	2024-10-17	11	Procambarus sp.		2
3212	I-35	Hyg-2	2024-10-17	11	Etheostoma fonticola	32	1
3212	I-35	Hyg-2	2024-10-17	12	Procambarus sp.		1
3212	I-35	Hyg-2	2024-10-17	13	Procambarus sp.		2
3212	I-35	Hyg-2	2024-10-17	14	Procambarus sp.		2
3212	I-35	Hyg-2	2024-10-17	15	Procambarus sp.		1

3213	I-35	Open-1	2024-10-17	1	Gambusia sp.	44	1
3213	I-35	Open-1	2024-10-17	1	Gambusia sp.	35	1
3213	I-35	Open-1	2024-10-17	1	Gambusia sp.	35	1
3213	I-35	Open-1	2024-10-17	1	Gambusia sp.	20	1
3213	I-35	Open-1	2024-10-17	1	Gambusia sp.	24	1
3213	I-35	Open-1	2024-10-17	1	Gambusia sp.	30	1
3213	I-35	Open-1	2024-10-17	1	Gambusia sp.	25	1
3213	I-35	Open-1	2024-10-17	1	Gambusia sp.	21	1
3213	I-35	Open-1	2024-10-17	1	Gambusia sp.	34	1
3213	I-35	Open-1	2024-10-17	1	Gambusia sp.	25	1
3213	I-35	Open-1	2024-10-17	1	Gambusia sp.	25	1
3213	I-35	Open-1	2024-10-17	1	Gambusia sp.	17	1
3213	I-35	Open-1	2024-10-17	1	Gambusia sp.	16	1
3213	I-35	Open-1	2024-10-17	1	Gambusia sp.	18	1
3213	I-35	Open-1	2024-10-17	1	Gambusia sp.	10	1
3213	I-35	Open-1	2024-10-17	1	Gambusia sp.	23	1
3213	I-35	Open-1	2024-10-17	1	Gambusia sp.	24	1
3213	I-35	Open-1	2024-10-17	1	Gambusia sp.	18	1
3213	I-35	Open-1	2024-10-17	1	Gambusia sp.	10	1
3213	I-35	Open-1	2024-10-17	1	Gambusia sp.	19	1
3213	I-35	Open-1	2024-10-17	1	Gambusia sp.	17	1
3213	I-35	Open-1	2024-10-17	1	Gambusia sp.	20	1
3213	I-35	Open-1	2024-10-17	1	Gambusia sp.	12	1
3213	I-35	Open-1	2024-10-17	1	Gambusia sp.		1
3213	I-35	Open-1	2024-10-17	1	Gambusia sp.		1
3213	I-35	Open-1	2024-10-17	1	Gambusia sp.		1
3213	I-35	Open-1	2024-10-17	1	Gambusia sp.		1
3213	I-35	Open-1	2024-10-17	1	Gambusia sp.		1
3213	I-35	Open-1	2024-10-17	1	Gambusia sp.		1
3213	I-35	Open-1	2024-10-17	1	Gambusia sp.		1

3213	I-35	Open-1	2024-10-17	1	Gambusia sp.		1
3213	I-35	Open-1	2024-10-17	1	Gambusia sp.		1
3213	I-35	Open-1	2024-10-17	1	Gambusia sp.		1
3213	I-35	Open-1	2024-10-17	1	Gambusia sp.		1
3213	I-35	Open-1	2024-10-17	2	Gambusia sp.		1
3213	I-35	Open-1	2024-10-17	2	Gambusia sp.		1
3213	I-35	Open-1	2024-10-17	2	Gambusia sp.		1
3213	I-35	Open-1	2024-10-17	2	Gambusia sp.		1
3213	I-35	Open-1	2024-10-17	2	Gambusia sp.		1
3213	I-35	Open-1	2024-10-17	2	Gambusia sp.		1
3213	I-35	Open-1	2024-10-17	2	Gambusia sp.		1
3213	I-35	Open-1	2024-10-17	2	Gambusia sp.		1
3213	I-35	Open-1	2024-10-17	2	Gambusia sp.		1
3213	I-35	Open-1	2024-10-17	2	Gambusia sp.		1
3213	I-35	Open-1	2024-10-17	2	Gambusia sp.		1
3213	I-35	Open-1	2024-10-17	2	Gambusia sp.		1
3213	I-35	Open-1	2024-10-17	2	Gambusia sp.		1
3213	I-35	Open-1	2024-10-17	2	Gambusia sp.		1
3213	I-35	Open-1	2024-10-17	2	Gambusia sp.		1
3213	I-35	Open-1	2024-10-17	2	Gambusia sp.		1
3213	I-35	Open-1	2024-10-17	2	Gambusia sp.		1
3213	I-35	Open-1	2024-10-17	2	Gambusia sp.		1
3213	I-35	Open-1	2024-10-17	2	Gambusia sp.		1
3213	I-35	Open-1	2024-10-17	2	Gambusia sp.		1
3213	I-35	Open-1	2024-10-17	3	Gambusia sp.		1
3213	I-35	Open-1	2024-10-17	3	Gambusia sp.		1
3213	I-35	Open-1	2024-10-17	3	Gambusia sp.		1
3213	I-35	Open-1	2024-10-17	4	Gambusia sp.		1
3213	I-35	Open-1	2024-10-17	4	Gambusia sp.		1
3213	I-35	Open-1	2024-10-17	4	Gambusia sp.		1

3213	I-35	Open-1	2024-10-17	4	Gambusia sp.		1
3213	I-35	Open-1	2024-10-17	4	Gambusia sp.		1
3213	I-35	Open-1	2024-10-17	5	Gambusia sp.		1
3213	I-35	Open-1	2024-10-17	5	Gambusia sp.		1
3213	I-35	Open-1	2024-10-17	5	Gambusia sp.		1
3213	I-35	Open-1	2024-10-17	6	Gambusia sp.		1
3213	I-35	Open-1	2024-10-17	6	Gambusia sp.		1
3213	I-35	Open-1	2024-10-17	7	No fish collected		
3213	I-35	Open-1	2024-10-17	8	No fish collected		
3213	I-35	Open-1	2024-10-17	9	No fish collected		
3213	I-35	Open-1	2024-10-17	10	Gambusia sp.		1
3213	I-35	Open-1	2024-10-17	11	No fish collected		
3213	I-35	Open-1	2024-10-17	12	No fish collected		
3213	I-35	Open-1	2024-10-17	13	No fish collected		
3213	I-35	Open-1	2024-10-17	14	Gambusia sp.		1
3213	I-35	Open-1	2024-10-17	15	No fish collected		
3214	I-35	Open-2	2024-10-17	1	Gambusia sp.	20	1
3214	I-35	Open-2	2024-10-17	2	No fish collected		
3214	I-35	Open-2	2024-10-17	3	Gambusia sp.	12	1
3214	I-35	Open-2	2024-10-17	4	No fish collected		
3214	I-35	Open-2	2024-10-17	5	No fish collected		
3214	I-35	Open-2	2024-10-17	6	No fish collected		
3214	I-35	Open-2	2024-10-17	7	No fish collected		
3214	I-35	Open-2	2024-10-17	8	No fish collected		
3214	I-35	Open-2	2024-10-17	9	No fish collected		
3214	I-35	Open-2	2024-10-17	10	No fish collected		
3214	I-35	Open-2	2024-10-17	11	No fish collected		
3214	I-35	Open-2	2024-10-17	12	No fish collected		
3214	I-35	Open-2	2024-10-17	13	Gambusia sp.	32	1
3214	I-35	Open-2	2024-10-17	14	Gambusia sp.	37	1

3214	I-35	Open-2	2024-10-17	15	Etheostoma fonticola	17	1
3214	I-35	Open-2	2024-10-17	16	No fish collected		
3215	I-35	Cab-1	2024-10-17	4	Palaemonetes sp.		1
3215	I-35	Cab-1	2024-10-17	5	Ambloplites rupestris	66	1
3215	I-35	Cab-1	2024-10-17	5	Etheostoma fonticola	32	1
3215	I-35	Cab-1	2024-10-17	5	Etheostoma fonticola	30	1
3215	I-35	Cab-1	2024-10-17	5	Etheostoma fonticola	26	1
3215	I-35	Cab-1	2024-10-17	5	Etheostoma fonticola	38	1
3215	I-35	Cab-1	2024-10-17	5	Etheostoma fonticola	32	1
3215	I-35	Cab-1	2024-10-17	5	Etheostoma fonticola	32	1
3215	I-35	Cab-1	2024-10-17	5	Herichthys cyanoguttatus	38	1
3215	I-35	Cab-1	2024-10-17	5	Procambarus sp.		5
3215	I-35	Cab-1	2024-10-17	6	Micropterus salmoides	45	1
3215	I-35	Cab-1	2024-10-17	6	Ameiurus natalis	42	1
3215	I-35	Cab-1	2024-10-17	6	Etheostoma fonticola	28	1
3215	I-35	Cab-1	2024-10-17	6	Etheostoma fonticola	35	1
3215	I-35	Cab-1	2024-10-17	6	Etheostoma fonticola	35	1
3215	I-35	Cab-1	2024-10-17	6	Etheostoma fonticola	30	1
3215	I-35	Cab-1	2024-10-17	6	Procambarus sp.		2
3215	I-35	Cab-1	2024-10-17	6	Gambusia sp.	16	1
3215	I-35	Cab-1	2024-10-17	6	Gambusia sp.	12	1
3215	I-35	Cab-1	2024-10-17	7	Etheostoma fonticola	35	1
3215	I-35	Cab-1	2024-10-17	7	Etheostoma fonticola	36	1
3215	I-35	Cab-1	2024-10-17	7	Etheostoma fonticola	12	1
3215	I-35	Cab-1	2024-10-17	7	Etheostoma fonticola	14	1
3215	I-35	Cab-1	2024-10-17	7	Procambarus sp.		2
3215	I-35	Cab-1	2024-10-17	8	Procambarus sp.		6
3215	I-35	Cab-1	2024-10-17	8	Etheostoma fonticola	16	1
3215	I-35	Cab-1	2024-10-17	8	Etheostoma fonticola	34	1
3215	I-35	Cab-1	2024-10-17	8	Etheostoma fonticola	18	1

3215	I-35	Cab-1	2024-10-17	8	Etheostoma fonticola	17	1
3215	I-35	Cab-1	2024-10-17	9	Etheostoma fonticola	32	1
3215	I-35	Cab-1	2024-10-17	9	Etheostoma fonticola	20	1
3215	I-35	Cab-1	2024-10-17	9	Etheostoma fonticola	20	1
3215	I-35	Cab-1	2024-10-17	9	Procambarus sp.		1
3215	I-35	Cab-1	2024-10-17	9	Gambusia sp.	11	1
3215	I-35	Cab-1	2024-10-17	10	Procambarus sp.		3
3215	I-35	Cab-1	2024-10-17	10	Etheostoma fonticola	19	1
3215	I-35	Cab-1	2024-10-17	10	Gambusia sp.	15	1
3215	I-35	Cab-1	2024-10-17	11	Procambarus sp.		2
3215	I-35	Cab-1	2024-10-17	12	Lepomis miniatus	65	1
3215	I-35	Cab-1	2024-10-17	12	Etheostoma fonticola	28	1
3215	I-35	Cab-1	2024-10-17	12	Etheostoma fonticola	17	1
3215	I-35	Cab-1	2024-10-17	12	Etheostoma fonticola	10	1
3215	I-35	Cab-1	2024-10-17	12	Procambarus sp.		2
3215	I-35	Cab-1	2024-10-17	13	Procambarus sp.		1
3215	I-35	Cab-1	2024-10-17	13	Etheostoma fonticola	18	1
3215	I-35	Cab-1	2024-10-17	14	Procambarus sp.		1
3215	I-35	Cab-1	2024-10-17	15	Etheostoma fonticola	28	1
3215	I-35	Cab-1	2024-10-17	15	Gambusia sp.	11	1
3215	I-35	Cab-1	2024-10-17	15	Procambarus sp.		1
3215	I-35	Cab-1	2024-10-17	16	No fish collected		
3215	I-35	Cab-1	2024-10-17	1	Etheostoma fonticola	34	1
3215	I-35	Cab-1	2024-10-17	1	Etheostoma fonticola	16	1
3215	I-35	Cab-1	2024-10-17	1	Etheostoma fonticola	17	1
3215	I-35	Cab-1	2024-10-17	1	Etheostoma fonticola	16	1
3215	I-35	Cab-1	2024-10-17	1	Gambusia sp.	19	1
3215	I-35	Cab-1	2024-10-17	1	Gambusia sp.	16	1
3215	I-35	Cab-1	2024-10-17	1	Palaemonetes sp.		1
3215	I-35	Cab-1	2024-10-17	1	Procambarus sp.		6

3215	I-35	Cab-1	2024-10-17	2	Lepomis cyanellus	56	1
3215	I-35	Cab-1	2024-10-17	2	Etheostoma fonticola	32	1
3215	I-35	Cab-1	2024-10-17	2	Etheostoma fonticola	27	1
3215	I-35	Cab-1	2024-10-17	2	Etheostoma fonticola	19	1
3215	I-35	Cab-1	2024-10-17	2	Etheostoma fonticola	16	1
3215	I-35	Cab-1	2024-10-17	2	Etheostoma fonticola	15	1
3215	I-35	Cab-1	2024-10-17	2	Gambusia sp.	17	1
3215	I-35	Cab-1	2024-10-17	2	Gambusia sp.	16	1
3215	I-35	Cab-1	2024-10-17	2	Gambusia sp.	8	1
3215	I-35	Cab-1	2024-10-17	2	Gambusia sp.	12	1
3215	I-35	Cab-1	2024-10-17	2	Gambusia sp.	11	1
3215	I-35	Cab-1	2024-10-17	2	Gambusia sp.	10	1
3215	I-35	Cab-1	2024-10-17	2	Procambarus sp.		3
3215	I-35	Cab-1	2024-10-17	3	Procambarus sp.		2
3215	I-35	Cab-1	2024-10-17	3	Etheostoma fonticola	28	1
3215	I-35	Cab-1	2024-10-17	4	Etheostoma fonticola	33	1
3215	I-35	Cab-1	2024-10-17	4	Etheostoma fonticola	31	1
3215	I-35	Cab-1	2024-10-17	4	Etheostoma fonticola	31	1
3215	I-35	Cab-1	2024-10-17	4	Procambarus sp.		3
3216	I-35	Cab-2	2024-10-17	1	Herichthys cyanoguttatus	35	1
3216	I-35	Cab-2	2024-10-17	1	Herichthys cyanoguttatus	55	1
3216	I-35	Cab-2	2024-10-17	1	Lepomis miniatus	64	1
3216	I-35	Cab-2	2024-10-17	1	Ambloplites rupestris	35	1
3216	I-35	Cab-2	2024-10-17	1	Etheostoma fonticola	36	1
3216	I-35	Cab-2	2024-10-17	1	Etheostoma fonticola	18	1
3216	I-35	Cab-2	2024-10-17	1	Etheostoma fonticola	21	1
3216	I-35	Cab-2	2024-10-17	1	Etheostoma fonticola	30	1
3216	I-35	Cab-2	2024-10-17	1	Etheostoma fonticola	26	1
3216	I-35	Cab-2	2024-10-17	1	Gambusia sp.	15	1
3216	I-35	Cab-2	2024-10-17	1	Gambusia sp.	18	1

3216	I-35	Cab-2	2024-10-17	1	Procambarus sp.		6
3216	I-35	Cab-2	2024-10-17	2	Lepomis miniatus	122	1
3216	I-35	Cab-2	2024-10-17	2	Lepomis miniatus	85	1
3216	I-35	Cab-2	2024-10-17	2	Etheostoma fonticola	31	1
3216	I-35	Cab-2	2024-10-17	2	Etheostoma fonticola	28	1
3216	I-35	Cab-2	2024-10-17	2	Etheostoma fonticola	32	1
3216	I-35	Cab-2	2024-10-17	2	Etheostoma fonticola	18	1
3216	I-35	Cab-2	2024-10-17	2	Etheostoma fonticola	14	1
3216	I-35	Cab-2	2024-10-17	2	Gambusia sp.	10	1
3216	I-35	Cab-2	2024-10-17	2	Procambarus sp.		5
3216	I-35	Cab-2	2024-10-17	3	Procambarus sp.		4
3216	I-35	Cab-2	2024-10-17	3	Etheostoma fonticola	29	1
3216	I-35	Cab-2	2024-10-17	3	Etheostoma fonticola	26	1
3216	I-35	Cab-2	2024-10-17	3	Etheostoma fonticola	21	1
3216	I-35	Cab-2	2024-10-17	3	Etheostoma fonticola	22	1
3216	I-35	Cab-2	2024-10-17	4	Procambarus sp.		6
3216	I-35	Cab-2	2024-10-17	4	Etheostoma fonticola	19	1
3216	I-35	Cab-2	2024-10-17	4	Etheostoma fonticola	34	1
3216	I-35	Cab-2	2024-10-17	4	Etheostoma fonticola	15	1
3216	I-35	Cab-2	2024-10-17	4	Gambusia sp.	17	1
3216	I-35	Cab-2	2024-10-17	5	Procambarus sp.		2
3216	I-35	Cab-2	2024-10-17	5	Gambusia sp.	17	1
3216	I-35	Cab-2	2024-10-17	5	Etheostoma fonticola	35	1
3216	I-35	Cab-2	2024-10-17	5	Etheostoma fonticola	30	1
3216	I-35	Cab-2	2024-10-17	5	Etheostoma fonticola	15	1
3216	I-35	Cab-2	2024-10-17	5	Etheostoma fonticola	18	1
3216	I-35	Cab-2	2024-10-17	6	Procambarus sp.		2
3216	I-35	Cab-2	2024-10-17	6	Lepomis miniatus	34	1
3216	I-35	Cab-2	2024-10-17	6	Etheostoma fonticola	31	1
3216	I-35	Cab-2	2024-10-17	6	Etheostoma fonticola	21	1

3216	I-35	Cab-2	2024-10-17	6	Etheostoma fonticola	29	1
3216	I-35	Cab-2	2024-10-17	6	Gambusia sp.	16	1
3216	I-35	Cab-2	2024-10-17	7	Procambarus sp.		5
3216	I-35	Cab-2	2024-10-17	7	Etheostoma fonticola	23	1
3216	I-35	Cab-2	2024-10-17	7	Etheostoma fonticola	34	1
3216	I-35	Cab-2	2024-10-17	7	Etheostoma fonticola	22	1
3216	I-35	Cab-2	2024-10-17	7	Etheostoma fonticola	33	1
3216	I-35	Cab-2	2024-10-17	8	Lepomis miniatus	52	1
3216	I-35	Cab-2	2024-10-17	8	Etheostoma fonticola	18	1
3216	I-35	Cab-2	2024-10-17	8	Etheostoma fonticola	31	1
3216	I-35	Cab-2	2024-10-17	9	No fish collected		
3216	I-35	Cab-2	2024-10-17	10	Procambarus sp.		2
3216	I-35	Cab-2	2024-10-17	10	Etheostoma fonticola	19	1
3216	I-35	Cab-2	2024-10-17	11	Etheostoma fonticola	18	1
3216	I-35	Cab-2	2024-10-17	11	Procambarus sp.		1
3216	I-35	Cab-2	2024-10-17	12	No fish collected		
3216	I-35	Cab-2	2024-10-17	13	Lepomis miniatus	105	1
3216	I-35	Cab-2	2024-10-17	13	Lepomis miniatus	124	1
3216	I-35	Cab-2	2024-10-17	13	Procambarus sp.		3
3216	I-35	Cab-2	2024-10-17	14	Procambarus sp.		1
3216	I-35	Cab-2	2024-10-17	15	Procambarus sp.		2
3216	I-35	Cab-2	2024-10-17	15	Etheostoma fonticola	35	1
3216	I-35	Cab-2	2024-10-17	15	Etheostoma fonticola	29	1
3216	I-35	Cab-2	2024-10-17	15	Etheostoma fonticola	18	1
3216	I-35	Cab-2	2024-10-17	15	Etheostoma fonticola	35	1
3216	I-35	Cab-2	2024-10-17	15	Etheostoma fonticola	21	1
3216	I-35	Cab-2	2024-10-17	15	Etheostoma fonticola	19	1
3216	I-35	Cab-2	2024-10-17	16	Procambarus sp.		4
3217	I-35	Lud-1	2024-10-17	1	Hypostomus plecostomus	18	1
3217	I-35	Lud-1	2024-10-17	1	Gambusia sp.	25	1

3217	I-35	Lud-1	2024-10-17	1	Gambusia sp.	20	1
3217	I-35	Lud-1	2024-10-17	1	Gambusia sp.	20	1
3217	I-35	Lud-1	2024-10-17	1	Gambusia sp.	10	1
3217	I-35	Lud-1	2024-10-17	1	Gambusia sp.	20	1
3217	I-35	Lud-1	2024-10-17	1	Gambusia sp.	10	1
3217	I-35	Lud-1	2024-10-17	1	Gambusia sp.	9	1
3217	I-35	Lud-1	2024-10-17	1	Procambarus sp.		3
3217	I-35	Lud-1	2024-10-17	2	Etheostoma fonticola	31	1
3217	I-35	Lud-1	2024-10-17	2	Procambarus sp.		1
3217	I-35	Lud-1	2024-10-17	2	Gambusia sp.	10	1
3217	I-35	Lud-1	2024-10-17	3	Etheostoma fonticola	28	1
3217	I-35	Lud-1	2024-10-17	3	Etheostoma fonticola	31	1
3217	I-35	Lud-1	2024-10-17	3	Etheostoma fonticola	37	1
3217	I-35	Lud-1	2024-10-17	3	Procambarus sp.		2
3217	I-35	Lud-1	2024-10-17	3	Herichthys cyanoguttatus	28	1
3217	I-35	Lud-1	2024-10-17	4	No fish collected		
3217	I-35	Lud-1	2024-10-17	5	Procambarus sp.		2
3217	I-35	Lud-1	2024-10-17	6	No fish collected		
3217	I-35	Lud-1	2024-10-17	7	Procambarus sp.		1
3217	I-35	Lud-1	2024-10-17	8	No fish collected		
3217	I-35	Lud-1	2024-10-17	9	Etheostoma fonticola	15	1
3217	I-35	Lud-1	2024-10-17	9	Procambarus sp.		1
3217	I-35	Lud-1	2024-10-17	10	Ameiurus natalis	50	1
3217	I-35	Lud-1	2024-10-17	11	Procambarus sp.		1
3217	I-35	Lud-1	2024-10-17	12	No fish collected		
3217	I-35	Lud-1	2024-10-17	13	Procambarus sp.		1
3217	I-35	Lud-1	2024-10-17	14	No fish collected		
3217	I-35	Lud-1	2024-10-17	15	No fish collected		
3218	I-35	Hydro-1	2024-10-17	1	Notropis amabilis	48	1
3218	I-35	Hydro-1	2024-10-17	1	Notropis amabilis	50	1

3218	I-35	Hydro-1	2024-10-17	1	Notropis amabilis	51	1
3218	I-35	Hydro-1	2024-10-17	1	Notropis amabilis	45	1
3218	I-35	Hydro-1	2024-10-17	1	Notropis amabilis	55	1
3218	I-35	Hydro-1	2024-10-17	1	Notropis amabilis	37	1
3218	I-35	Hydro-1	2024-10-17	1	Notropis amabilis	50	1
3218	I-35	Hydro-1	2024-10-17	1	Notropis amabilis	45	1
3218	I-35	Hydro-1	2024-10-17	1	Notropis amabilis	45	1
3218	I-35	Hydro-1	2024-10-17	1	Notropis amabilis	45	1
3218	I-35	Hydro-1	2024-10-17	1	Notropis amabilis	54	1
3218	I-35	Hydro-1	2024-10-17	1	Notropis amabilis	28	1
3218	I-35	Hydro-1	2024-10-17	1	Notropis amabilis	36	1
3218	I-35	Hydro-1	2024-10-17	1	Notropis amabilis	40	1
3218	I-35	Hydro-1	2024-10-17	1	Notropis amabilis	32	1
3218	I-35	Hydro-1	2024-10-17	1	Notropis amabilis	40	1
3218	I-35	Hydro-1	2024-10-17	2	Notropis amabilis	40	1
3218	I-35	Hydro-1	2024-10-17	2	Notropis amabilis	50	1
3218	I-35	Hydro-1	2024-10-17	2	Notropis amabilis	32	1
3218	I-35	Hydro-1	2024-10-17	2	Notropis amabilis	35	1
3218	I-35	Hydro-1	2024-10-17	2	Notropis amabilis	35	1
3218	I-35	Hydro-1	2024-10-17	2	Notropis amabilis	40	1
3218	I-35	Hydro-1	2024-10-17	2	Notropis amabilis	41	1
3218	I-35	Hydro-1	2024-10-17	2	Etheostoma fonticola	31	1
3218	I-35	Hydro-1	2024-10-17	2	Procambarus sp.		1
3218	I-35	Hydro-1	2024-10-17	3	Notropis amabilis	33	1
3218	I-35	Hydro-1	2024-10-17	4	Procambarus sp.		1
3218	I-35	Hydro-1	2024-10-17	5	No fish collected		
3218	I-35	Hydro-1	2024-10-17	6	Procambarus sp.		2
3218	I-35	Hydro-1	2024-10-17	7	Procambarus sp.		1
3218	I-35	Hydro-1	2024-10-17	7	Notropis amabilis		1
3218	I-35	Hydro-1	2024-10-17	8	No fish collected		

3218	I-35	Hydro-1	2024-10-17	9	No fish collected		
3218	I-35	Hydro-1	2024-10-17	10	Notropis amabilis		1
3218	I-35	Hydro-1	2024-10-17	11	Procambarus sp.		1
3218	I-35	Hydro-1	2024-10-17	12	No fish collected		
3218	I-35	Hydro-1	2024-10-17	13	No fish collected		
3218	I-35	Hydro-1	2024-10-17	14	Procambarus sp.		2
3218	I-35	Hydro-1	2024-10-17	15	No fish collected		
3219	I-35	Lud-2	2024-10-17	1	Ambloplites rupestris	69	1
3219	I-35	Lud-2	2024-10-17	1	Gambusia sp.	15	1
3219	I-35	Lud-2	2024-10-17	1	Gambusia sp.	22	1
3219	I-35	Lud-2	2024-10-17	1	Gambusia sp.	14	1
3219	I-35	Lud-2	2024-10-17	1	Gambusia sp.	10	1
3219	I-35	Lud-2	2024-10-17	1	Gambusia sp.	15	1
3219	I-35	Lud-2	2024-10-17	1	Gambusia sp.	10	1
3219	I-35	Lud-2	2024-10-17	1	Gambusia sp.	10	1
3219	I-35	Lud-2	2024-10-17	1	Procambarus sp.		8
3219	I-35	Lud-2	2024-10-17	2	Procambarus sp.		7
3219	I-35	Lud-2	2024-10-17	2	Gambusia sp.	24	1
3219	I-35	Lud-2	2024-10-17	2	Gambusia sp.	15	1
3219	I-35	Lud-2	2024-10-17	2	Gambusia sp.	15	1
3219	I-35	Lud-2	2024-10-17	3	Procambarus sp.		3
3219	I-35	Lud-2	2024-10-17	4	Procambarus sp.		17
3219	I-35	Lud-2	2024-10-17	4	Etheostoma fonticola	32	1
3219	I-35	Lud-2	2024-10-17	4	Gambusia sp.	10	1
3219	I-35	Lud-2	2024-10-17	5	Procambarus sp.		3
3219	I-35	Lud-2	2024-10-17	5	Etheostoma fonticola	30	1
3219	I-35	Lud-2	2024-10-17	5	Gambusia sp.	10	1
3219	I-35	Lud-2	2024-10-17	6	Etheostoma fonticola	35	1
3219	I-35	Lud-2	2024-10-17	6	Etheostoma fonticola	36	1
3219	I-35	Lud-2	2024-10-17	6	Procambarus sp.		4

3219	I-35	Lud-2	2024-10-17	7	No fish collected		
3219	I-35	Lud-2	2024-10-17	8	Procambarus sp.		2
3219	I-35	Lud-2	2024-10-17	9	No fish collected		
3219	I-35	Lud-2	2024-10-17	10	Procambarus sp.		4
3219	I-35	Lud-2	2024-10-17	11	No fish collected		
3219	I-35	Lud-2	2024-10-17	12	Procambarus sp.		1
3219	I-35	Lud-2	2024-10-17	13	No fish collected		
3219	I-35	Lud-2	2024-10-17	14	Procambarus sp.		9
3219	I-35	Lud-2	2024-10-17	15	No fish collected		
3220	I-35	Hydro-2	2024-10-17	1	Procambarus sp.		2
3220	I-35	Hydro-2	2024-10-17	2	Etheostoma fonticola	34	1
3220	I-35	Hydro-2	2024-10-17	2	Procambarus sp.		1
3220	I-35	Hydro-2	2024-10-17	3	Gambusia sp.	25	1
3220	I-35	Hydro-2	2024-10-17	3	Etheostoma fonticola	25	1
3220	I-35	Hydro-2	2024-10-17	3	Procambarus sp.		1
3220	I-35	Hydro-2	2024-10-17	4	Procambarus sp.		1
3220	I-35	Hydro-2	2024-10-17	5	Procambarus sp.		1
3220	I-35	Hydro-2	2024-10-17	5	Hypostomus plecostomus	21	1
3220	I-35	Hydro-2	2024-10-17	6	Procambarus sp.		1
3220	I-35	Hydro-2	2024-10-17	7	No fish collected		
3220	I-35	Hydro-2	2024-10-17	8	Procambarus sp.		1
3220	I-35	Hydro-2	2024-10-17	9	Etheostoma fonticola	28	1
3220	I-35	Hydro-2	2024-10-17	10	No fish collected		
3220	I-35	Hydro-2	2024-10-17	11	Procambarus sp.		1
3220	I-35	Hydro-2	2024-10-17	12	No fish collected		
3220	I-35	Hydro-2	2024-10-17	13	Procambarus sp.		1
3220	I-35	Hydro-2	2024-10-17	14	Etheostoma fonticola	33	1
3220	I-35	Hydro-2	2024-10-17	14	Procambarus sp.		1
3220	I-35	Hydro-2	2024-10-17	15	No fish collected		
3204	Spring Lake Dam	Hydro-2	2024-10-15	1	Etheostoma fonticola	30	1

3204	Spring Lake Dam	Hydro-2	2024-10-15	1	Gambusia sp.	20	1
3204	Spring Lake Dam	Hydro-2	2024-10-15	2	Etheostoma fonticola	33	1
3204	Spring Lake Dam	Hydro-2	2024-10-15	2	Etheostoma fonticola	32	1
3204	Spring Lake Dam	Hydro-2	2024-10-15	2	Procambarus sp.		1
3204	Spring Lake Dam	Hydro-2	2024-10-15	3	Etheostoma fonticola	31	1
3204	Spring Lake Dam	Hydro-2	2024-10-15	3	Procambarus sp.		1
3204	Spring Lake Dam	Hydro-2	2024-10-15	4	Etheostoma fonticola	29	1
3204	Spring Lake Dam	Hydro-2	2024-10-15	5	No fish collected		
3204	Spring Lake Dam	Hydro-2	2024-10-15	6	Procambarus sp.		2
3204	Spring Lake Dam	Hydro-2	2024-10-15	7	No fish collected		
3204	Spring Lake Dam	Hydro-2	2024-10-15	8	No fish collected		
3204	Spring Lake Dam	Hydro-2	2024-10-15	9	Etheostoma fonticola	33	1
3204	Spring Lake Dam	Hydro-2	2024-10-15	10	No fish collected		
3204	Spring Lake Dam	Hydro-2	2024-10-15	11	Etheostoma fonticola	40	1
3204	Spring Lake Dam	Hydro-2	2024-10-15	12	Procambarus sp.		1
3204	Spring Lake Dam	Hydro-2	2024-10-15	13	No fish collected		
3204	Spring Lake Dam	Hydro-2	2024-10-15	14	No fish collected		
3204	Spring Lake Dam	Hydro-2	2024-10-15	15	No fish collected		
3205	City Park	Open-1	2024-10-16	1	No fish collected		
3205	City Park	Open-1	2024-10-16	2	No fish collected		
3205	City Park	Open-1	2024-10-16	3	No fish collected		
3205	City Park	Open-1	2024-10-16	4	No fish collected		
3205	City Park	Open-1	2024-10-16	5	No fish collected		
3205	City Park	Open-1	2024-10-16	6	No fish collected		
3205	City Park	Open-1	2024-10-16	7	No fish collected		
3205	City Park	Open-1	2024-10-16	8	No fish collected		
3205	City Park	Open-1	2024-10-16	9	No fish collected		
3205	City Park	Open-1	2024-10-16	10	No fish collected		

APPENDIX G: FOUNTAIN DARTER HABITAT SUITABILITY ANALYTICAL FRAMEWORK

OBJECTIVES

The goal of this analysis was to develop an index to quantify Fountain Darter habitat suitability within biological monitoring study reaches based on aquatic vegetation composition. Specific objectives included: (1) build Habitat Suitability Criteria (HSC) for each vegetation taxa; (2) use HSC to calculate an Overall Habitat Suitability Index (OHSI) based on vegetation community composition mapped at a given study reach during each monitoring event; (3) evaluate the efficacy of OHSI as a measure of Fountain Darter habitat suitability by testing whether Fountain Darter occurrence can be predicted based on OHSI.

METHODS

Habitat Suitability Criteria

HSC are a form of resource selection function (RSF) defined as any function that is proportional to the probability of use by an organism (Manly et al. 1993). HSC were built separately for the Comal and San Marcos river/springs systems using logistic regression based on random-station dip-net data and drop-net data converted to presence/absence. Logistic regression is a form of classification model that uses presence/absence data to predict probabilities based on a set of covariates (Hastie et al. 2009). The response variable for this analysis, probability of darter occurrence, was used to quantify criteria for each vegetation type, ranging from 0 (i.e., not suitable) to 1 (i.e., most suitable) (Figure G1).

OHSI Calculation

To calculate the OHSI for each monitoring event, HSC values for each vegetation strata were first multiplied by the areal coverage of that vegetation strata, and these values were summed across all vegetation strata within each study reach, to generate a Weighted Usable Area (WUA) of vegetation only as follows:

Eq. 1
$$WUA = \sum_{i=1}^{N}(A_i \ x \ HSC_i)$$

where N is the total number of vegetation types, A_i is the areal coverage of a single vegetation type, and HSC_i is the habitat suitability criteria of that single vegetation type (Yao & Bamal 2014).

This WUA was then divided by the total wetted area within the reach to generate OHSI, as follows:

Eq. 2
$$OHSI = \frac{WUA}{\sum_{i=1}^{N}(A_i)}$$

In this way, OHSI can also be thought of as the proportion of weighted usable area (Yao & Bamal 2014), ranging from 0 (unsuitable overall habitat) to 1 (most suitable overall habitat). Standardizing by reach size allows for a comparison of habitat quality between reaches of different sizes.

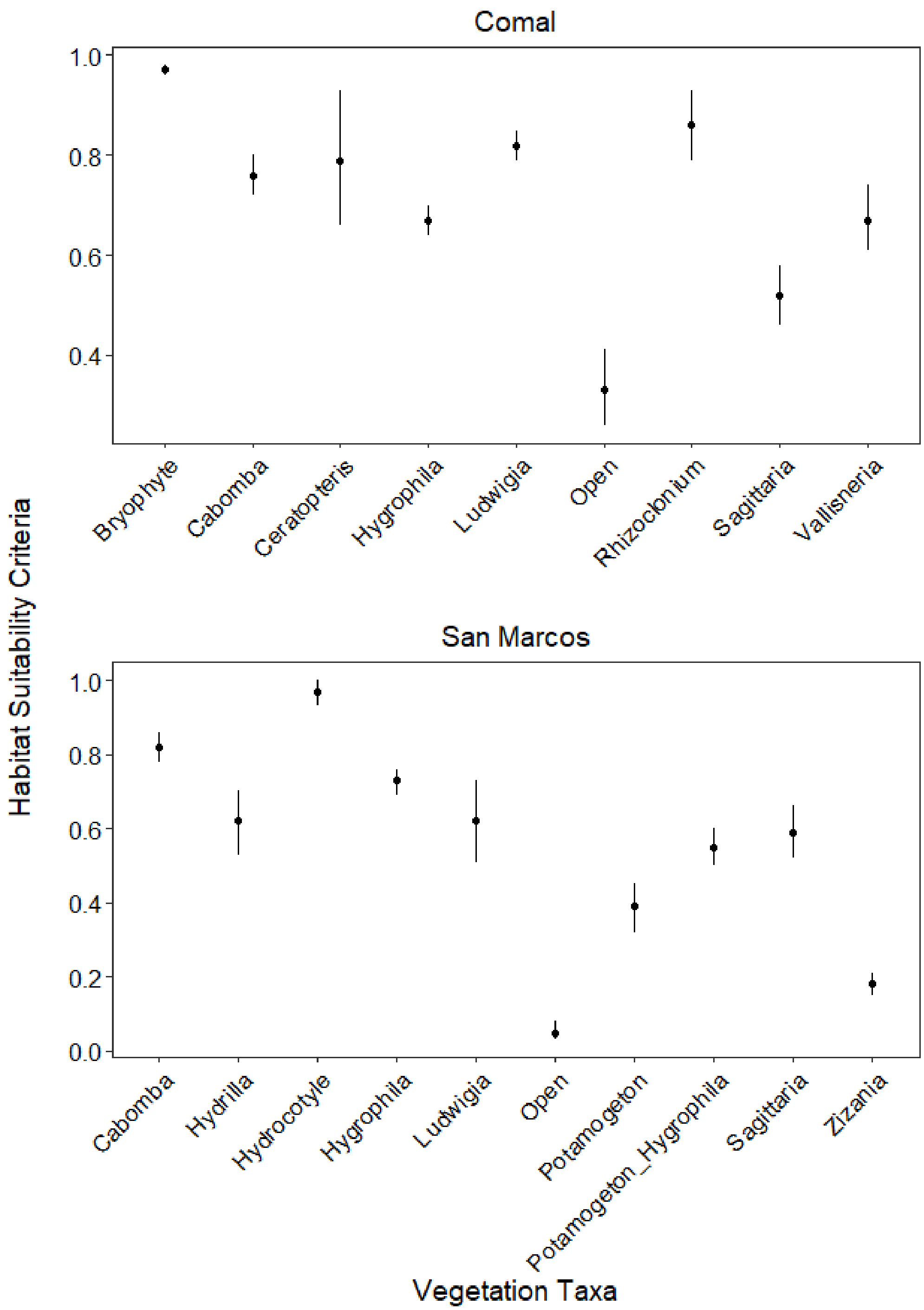

Figure H1. **Aquatic vegetation habitat suitability criteria (±95% CI) built with drop-net and random dip-net datasets using logistic regression.**

OHSI Evaluation

OHSI Evaluation Methods

To examine the relationship between OHSI and Fountain Darter population metrics, random-station dip-net data from 2017-2020 was organized in a way that treats each monitoring event per study reach as independent. This results in the response variable quantified as the proportional occurrence of Fountain Darters per reach at a given monitoring event based on the independent variable OHSI.

To predict Fountain Darter occurrence, two modeling approaches that are able to analyze proportions were used, which included: (1) GLM with a binomial distribution and (2) Random Forest Regression (RF). RF is an ensemble learning technique that builds many decision trees to predict a response variable (Breiman et al. 1984). Each decision tree of the "forest" is built by selecting a random subset of the dataset with replacement and a random set of covariates (Liaw & Wiener 2002). RF are considered more advantageous compared to traditional decision tree models and GLM because they correct for overfitting (Breiman 2001) and can provide more accurate predictions with many covariates (Cutler et al. 2007). For this analysis, we built RF models with 500 trees.

GLMs and RFs were built separately for the Comal and San Marcos systems. First, 50% of each dataset was randomly selected to train each model. Second, 5-fold cross validation (CV) was used to independently test the predictive performance of each model with the remaining 50% of the dataset (i.e., test data). Predictive performance was compared among models based on the correlation (R) and deviance (D) between observed and predicted values. Mean CV R ± standard error (SE) and CV D ± SE were calculated based on predictions from the 5 CV folds. Models with the highest CV R were considered as the best models for making predictions and elaborated on further in the results.

Lastly, figures were built to display fitted predictions across observed OHSI values to examine if there was a positive relationship between Fountain Darter occurrence and OHSI. Fitted predictions were also presented with a LOWESS smoothed function to visualize if trends of OHSI are linear or nonlinear (Milborrow 2020). In sum, if the models displayed strong predictive power and Fountain Darter occurrence showed a positive relationship with OHSI, then OHSI was considered a useful measurement of habitat suitability for Fountain Darters.

OHSI Evaluation Results

Predictive performance for the Comal models showed that RF (0.81 ± 0.18) predictions were more accurate than GLM (0.62 ± 0.20). San Marcos models were similar, showing better predictive accuracy for RF (0.97 ± 0.02) compared to GLM (0.93 ± 0.06) (Table G1). Comparisons between observed vs. predicted occurrence for the RF 5-fold CV demonstrated lowest predictive accuracy at observed proportions about 0.20 or less for the Comal and San Marcos (Figure G2).

Fitted predictions of occurrence as a function of OHSI showed that occurrence increased with increasing OHSI for the Comal and San Marcos. In the Comal, LOWESS smoothed predictions exhibited a non-linear asymptotic trend. Occurrence increased about 0.60 to 0.80 when OHSI increased from about 0.65 to 0.75 and remained around 0.80 at OHSI values >0.75. In the San Marcos, LOWESS smoothed predictions exhibited a more linear trend compared to the Comal and occurrence increased from about 0.25 to 0.55 as OHSI increased from 0.25 to 0.60 (Figure G3).

Table H1. Summary model performance statistics for predicting Fountain Darter occurrence based on OHSI. Summary statistics includes deviance (D) and correlation (R) for training data and 5-fold cross-validation (SE).

	Comal		San Marcos	
	GLM	RF	GLM	RF
Training Data				
Deviance	1.10	1.03	1.23	1.20
Correlation	0.48	0.77	0.70	0.89
Cross-Validation				
Deviance	1.12 (0.05)	1.05 (0.06)	1.24 (0.07)	1.21 (0.05)
Correlation	0.62 (0.20)	0.81 (0.18)	0.93 (0.06)	0.97 (0.02)

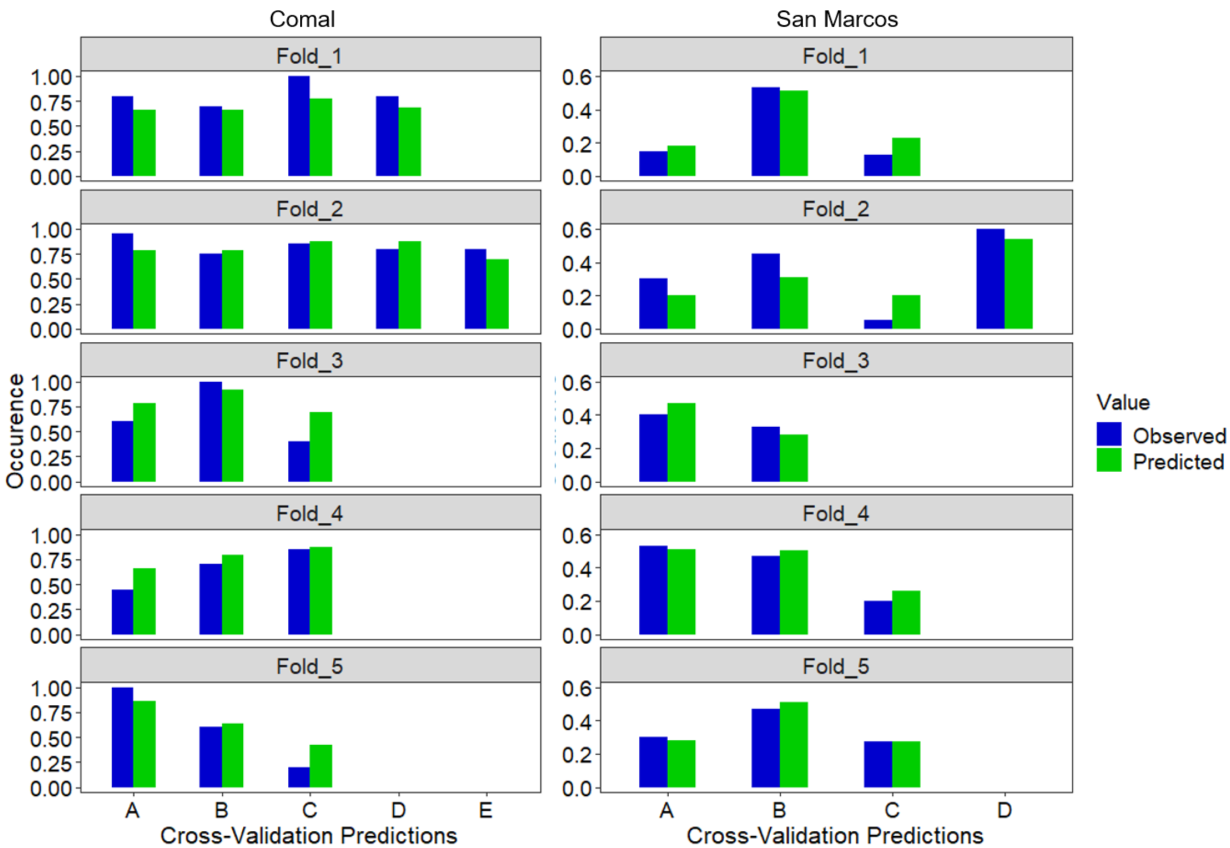

Figure H2. Observed vs. predicted Fountain Darter occurrence in relationship to OHSI from Random Forest 5-fold cross-validation.

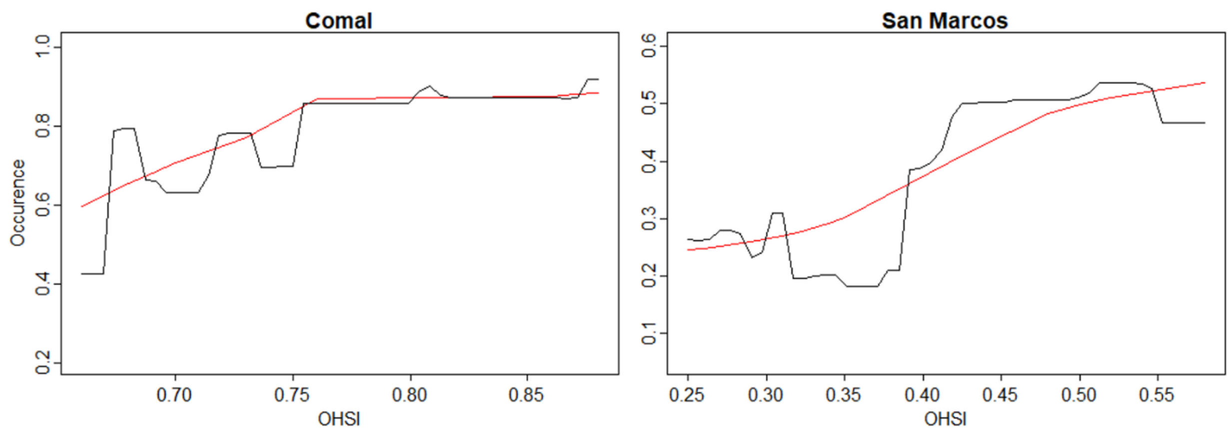

Figure H3. Fitted occurrence predictions for OHSI in the Comal Springs/River and San Marcos River. The red lines are LOWESS smoothed fitted predictions used to visualize nonlinear trends.

OHSI EVALUATION DISCUSSION

Model CV R >0.80 for all RFs demonstrate good model performance and that Fountain Darter occurrence can be accurately predicted based on OHSI. Further, similar performance statistics for training data and test data via cross-validation indicated that the training models were not overfit and can reliably predict independent observations in the future. That being said, predictions were least accurate at observed occurrence values about 0.20 or less, which is likely due to smaller sample sizes in this range. As random station dip-net sampling continues during future biomonitoring activities, predictions at these lower occurrence values will likely improve. Fountain Darter occurrence also increased with increasing OHSI. The positive relationship between occurrence and OHSI and good model performance supports that OHSI is an ecologically relevant index for evaluating Fountain Darter habitat suitability based on vegetation community composition.

In sum, this analysis demonstrated that OHSI based on vegetation-specific HSC and reach-level vegetation composition data can accurately predict Fountain Darter occurrence and is a useful measurement for quantifying habitat suitability. However, additional data collection can assist in addressing multiple limitations of this analysis. Firstly, random station dip-net data with simple random sampling is only available from about 2017-2020, which limits the ability to predict occurrence from historical observations. Further, model performance would likely improve at lower occurrence values as additional data are collected and a more robust dataset is generated. Secondly, this analysis assumed that vegetation alone determines Fountain Darter occurrence. For example, decreased predictive accuracy at lower darter occurrence values may be due to other habitat factors (e.g., depth-flow conditions, river discharge) or biotic factors (e.g., competition, predation) rather than due to smaller sample sizes of lower occurrence values; however, a multi-factor ecological model is beyond the scope of this work. In addition, OHSI can only be assessed for vegetation taxa that have been sampled previously and building HSC for rare vegetation taxa not represented may improve predictions. That being said, RF models demonstrated that occurrence can be predicted accurately without including additional habitat variables or vegetation types, supporting that this assumption does not hinder this analysis and does not appear to restrict the inference value of OHSI.

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