

HABITAT CONSERVATION PLAN BIOLOGICAL MONITORING PROGRAM San Marcos Springs/River 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**



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EXECUTIVE SUMMARY

The Edwards Aquifer Habitat Conservation Plan (HCP) Biological Monitoring Program continued to track biota and habitat conditions of the San Marcos Springs/River ecosystem in 2020 through a series of monitoring activities outlined in this report. Monitoring in the San Marcos system consisted of surveys specific to HCP Covered Species—Fountain Darter (*Etheostoma fonticola*), Texas Wild-Rice (*Zizania texana*), and San Marcos Salamander (*Eurycea nana*). Additional community-level monitoring data were also collected on aquatic vegetation, fish, and benthic macroinvertebrates. City access points were closed to the public from late March to mid-September due to the COVID-19 pandemic, which provided a unique opportunity to assess aquatic floral and faunal communities with limited recreational disturbance. The results from 2020 biological monitoring provide valuable data to further assess spatiotemporal trends of aquatic biota in the San Marcos Springs/River ecosystem under varying conditions.

In 2020, San Marcos River monthly median discharge varied minimally from historical values, ranging from 140 cubic feet per second (cfs) in August to 191 cfs in June. The highest mean daily discharge observed in 2020 was in May, and the lowest mean daily discharge occurred in December. As is typical in this spring-dominated system, median water temperature increased from upstream to downstream. Maximum optimal thresholds for Fountain Darter larval and egg production were not exceeded within study reaches at Spring Lake Dam, City Park, and I-35, but exceeded the egg production threshold for part of the year at Thompson Island and near the Waste Water Treatment Plant.

Aquatic vegetation coverage in 2020 was higher than long-term seasonal averages at Spring Lake Dam and I-35, and were similar to long-term averages at City Park. Increased total coverage at Spring Lake Dam may be attributed to minimal recreational disturbance due to park closures related to the COVID-19 pandemic. Similarly, limited recreation at City Park is one potential factor contributing to expansion of Texas Wild-Rice into new areas. Texas Wild-Rice was the most dominant species among all reaches, and annual mapping of Texas Wild-Rice showed a coverage of 14,747 square meters (m²), the highest recorded to date. Since 2015, Texas Wild-Rice coverage within the San Marcos River has tripled, due in large part to HCP restoration activities in the system.

Fountain Darter density and occurrence in 2020 were higher in ornate vegetation compared to long, austere-leaved taxa, which supports previous research. Specifically, smaller darters with lengths of 20 mm or less were more frequently encountered in ornate vegetation as the complex leaf structure provides sufficient cover for these smaller size classes. Among seasons, darters 20 mm or less were more frequent in spring, which is consistent with previous years and suggests a late-winter/early spring reproductive peak. Fountain Darter median density from drop-net sampling was below historical spring levels and well below historical fall levels. However, inclusion of density data from Texas Wild-Rice in 2020, which exhibited a low density compared to other vegetation types, likely drove down seasonal medians compared to previous years that did not include these data. Similar to density observations, occurrence percentages from random-station dip-netting were below spring historical levels and well below fall historical levels. Again, this is likely related to the inclusion of Texas Wild-Rice into random-station dip-netting, which began in 2017. Because Texas Wild-Rice has become the dominant vegetation in

the study reaches, and occurrence is low in this vegetation type, current occurrence percentages are lower than historical values. In contrast to the other sampling techniques, median catch rates were above historical levels for all seasons based on timed dip-netting. Timed dip-netting is not stratified by vegetation type and does not involve random site selection. Therefore, surveyors tend to focus efforts on the best available habitat. Increases in catch rates demonstrate that despite changes to habitat availability, Fountain Darters are continuing to do well in the quality habitat available. In the future, assessing habitat use versus availability (i.e., relative habitat use) may prove useful for elucidating potential mechanisms of observed trends during annual sampling efforts.

Fish community sampling demonstrated that median species richness and diversity generally increased from upstream to downstream, with the exception of Veterans Plaza, which had lower diversity. Fountain Darter relative abundance was variable among sites, but highest in the Middle River. Lastly, relative abundance of spring-associated fishes generally declined from upstream to downstream, as expected. San Marcos Salamander densities were variable among sites, being higher than long-term averages at some sites and lower at others. Overall, monitoring suggests that San Marcos Salamanders continue to persist at densities similar to those previously observed.

Macroinvertebrate sampling showed that areas of more lentic-type habitat (e.g., Spring Lake), scored lower because these communities exhibit different habitat conditions compared to the swift-flowing, least-disturbed reference streams used in development of biotic indices. Downstream areas with lotic conditions generally scored higher, because habitat is more similar to the reference streams. It is interesting to note that the City Park fall sample was included in the “High” classification for the first time since these protocols have been implemented. It is possible that reduced recreational activity due to COVID-19 lockdown measures decreased substrate disturbance, and thus, improved the habitat quality of this site.

Overall, 2020 biological monitoring documented the persistence of appropriate habitat conditions to support the Covered Species as well as a diverse community of other native organisms. Texas Wild-Rice coverage is higher than ever, thanks in part to HCP restoration activities. This change to the vegetation community has influenced habitat availability for Fountain Darters, and metrics comparing Fountain Darter populations to historical values show variable responses. However, Fountain Darters continue to persist throughout the study area and do well in areas of quality habitat. Overall, San Marcos Salamander monitoring suggests that they continue to persist at densities similar to those previously observed. Continued monitoring is paramount in evaluating responses of this diverse and dynamic system to a suite of ever-changing hydrologic, climatic, and anthropogenic conditions.

INTRODUCTION

The Edwards Aquifer Habitat Conservation Plan (HCP) 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 these biological data collected since the implementation of this monitoring program (BIO-WEST 2000–2020) now serves as the foundation for several underlying sections in the HCP, which include the following: (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 and river ecosystems.

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

This report provides the methodology and results for biological monitoring activities conducted in 2020 within the San Marcos Springs/River ecosystem. The results include summaries of current physiochemical conditions, as well as current conditions of floral and faunal communities. For all aquatic organisms, historical observations (BIO-WEST 2000–2020) are also used in various manners 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 8 kilometers (km) before its confluence with the Blanco River, traversing three additional impoundments, Rio Vista Dam, Capes Dam and Cummings 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) and include multiple endemic organisms, such as Texas Wild-Rice (*Zizania texana*), Comal Springs Riffle Beetle (*Heterelmis comalensis*), San Marcos Salamander (*Eurycea nana*), and Fountain Darter (*Etheostoma fonticola*) among others.

Sampling Strategy

Based on the LTBGs and management objectives outlined in the HCP, representative 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 (summer)
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)
 - b. Fountain Darter visual 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)

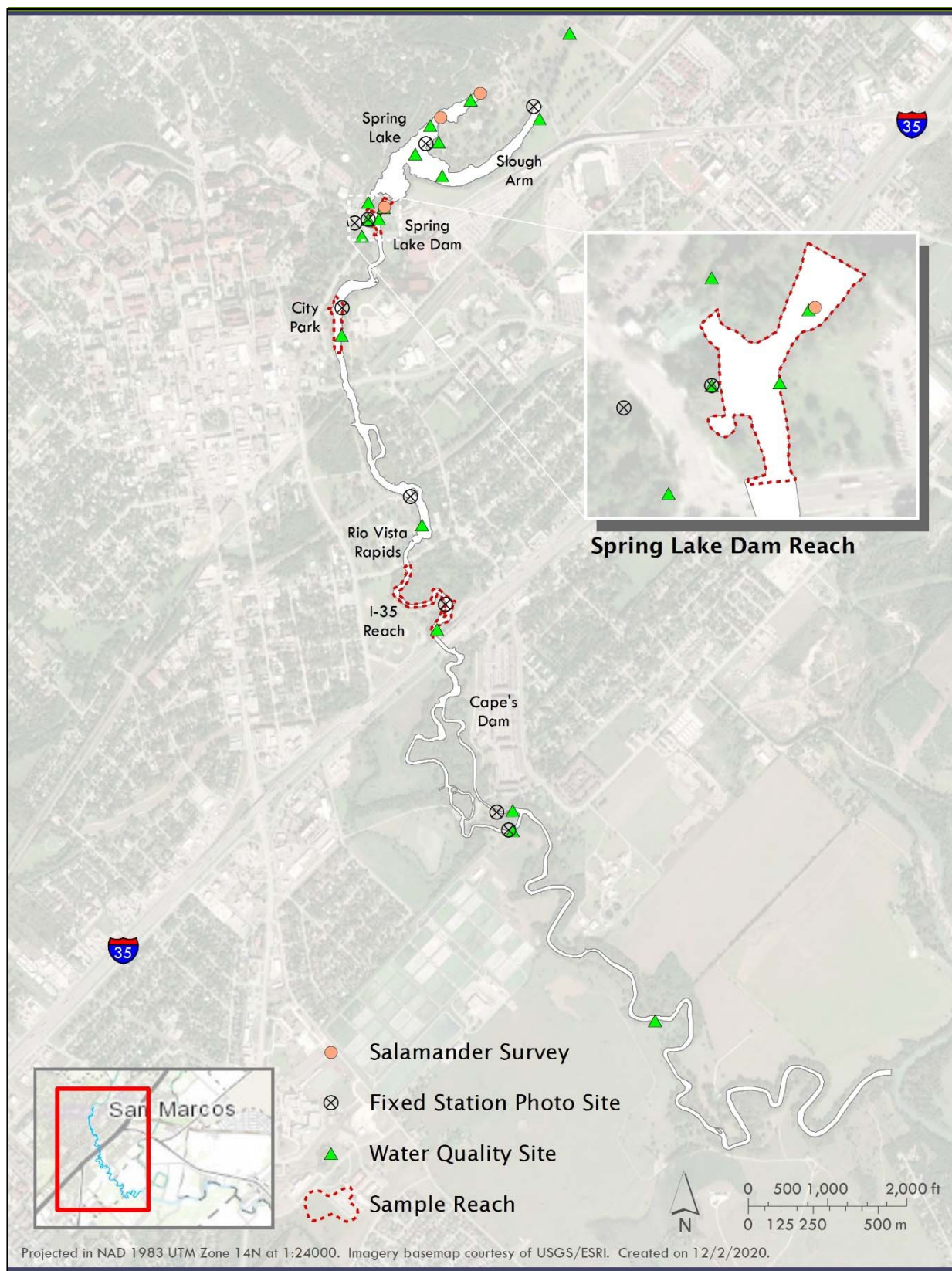


Figure 1. Upper San Marcos River sample reaches, San Marcos Salamander survey sites, water quality sampling sites, and fixed-station photography sites.

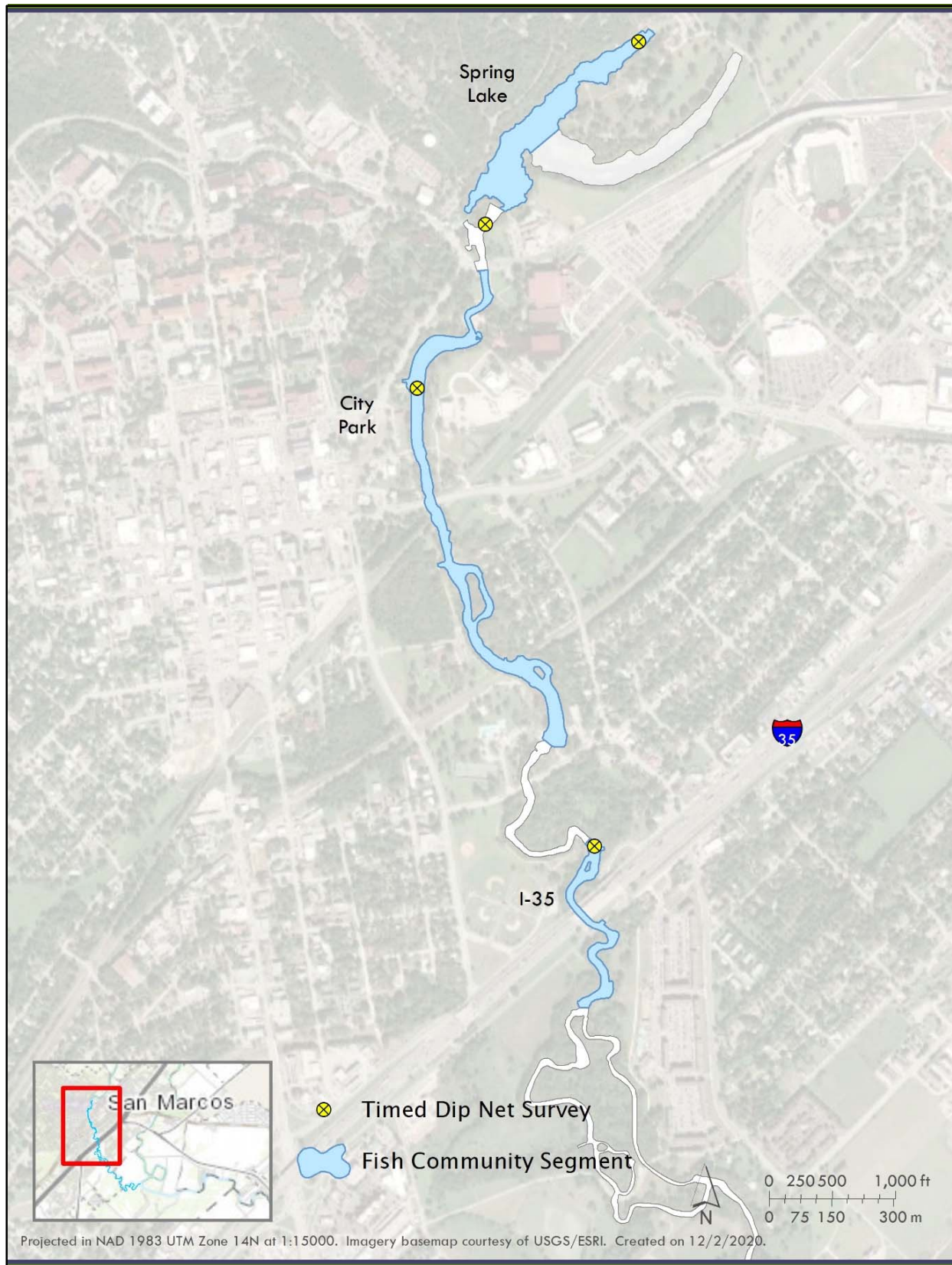


Figure 2. Fish community sampling segments and dip-net timed survey sections for the upper San Marcos River.

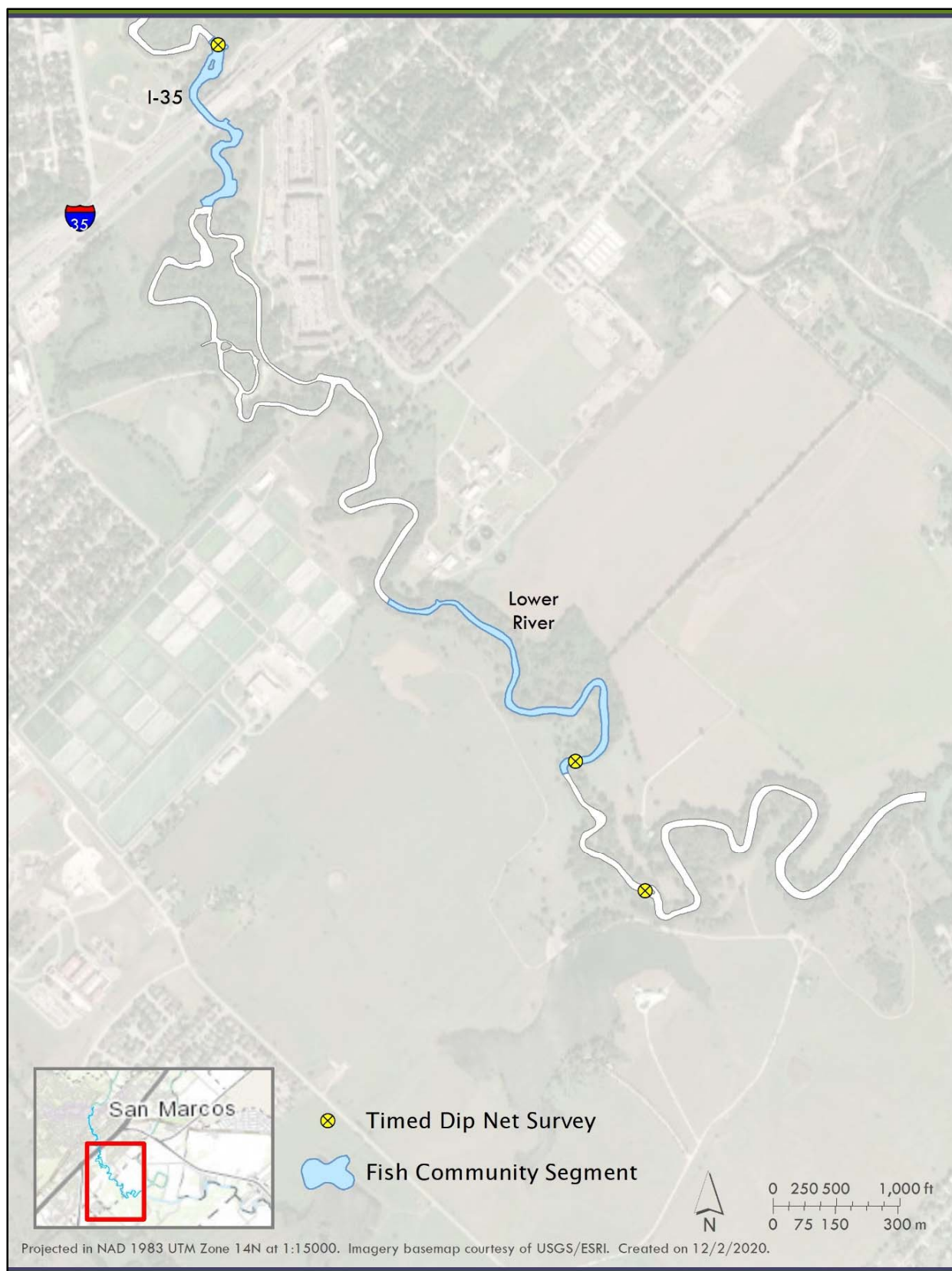


Figure 3. Fish community sampling segments and dip-net survey sections for the lower San Marcos River.

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). No low-flow sampling was conducted in 2020 and further details regarding species-specific triggers can be found in Appendix A.

The remaining methods sections provide brief descriptions of the procedures utilized for 2020 comprehensive 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 2020 was assessed using U.S. Geological Survey (USGS) stream gage data from January to October. 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 2020). For analysis, the distribution of 2020 mean daily discharge was summarized by month using boxplots. Monthly discharge levels were compared with historical (1956–2019) 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. The following four sites were selected to characterize longitudinal variation in water temperature regimes (January 1–October 15): Spring Lake, Spring Lake Dam, City Park, I-35, Thompson Island Natural Channel, and Waste Water Treatment Plant. Results of the remaining sites can be found in Appendix B. The distribution of 2020 water temperatures for the selected stations were assessed based on 4-hour intervals and summarized using boxplots. 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 threshold within the HCP Fountain Darter LTBG study reaches (Spring Lake Dam, City Park, I-35) (EAHCP 2012). In the case of the selected stations that surpassed either water temperature threshold in 2020, the general timeframes in which those exceedances occurred are discussed in the text.

Aquatic Vegetation Mapping

The team used a 10-foot sit-in kayak with a plexiglass window for visual observations to complete aquatic vegetation mapping (Figure 1). 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.

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 Observations text, figures, and tables by genus except for Texas Wild-Rice. Total surface area of aquatic vegetation, measured in square meters (m²), is presented for each season in 2020 using bar graphs and is compared with long-term averages (2001–2020) from spring, fall, high-flow events, and low-flow events. 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.

Texas Wild-Rice Annual Observations

Texas Wild-Rice Mapping

In addition to aquatic vegetation mapping in the LTBG study reaches, Texas Wild-Rice was mapped within eight river segments (Figure 4). Annual trends in total Texas Wild-Rice coverage (m²) among all river segments are presented, and changes in Texas Wild-Rice coverage (m², %) from 2019 to 2020 are also compared between river segments.

Texas Wild-Rice Physical Observations

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 2020 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

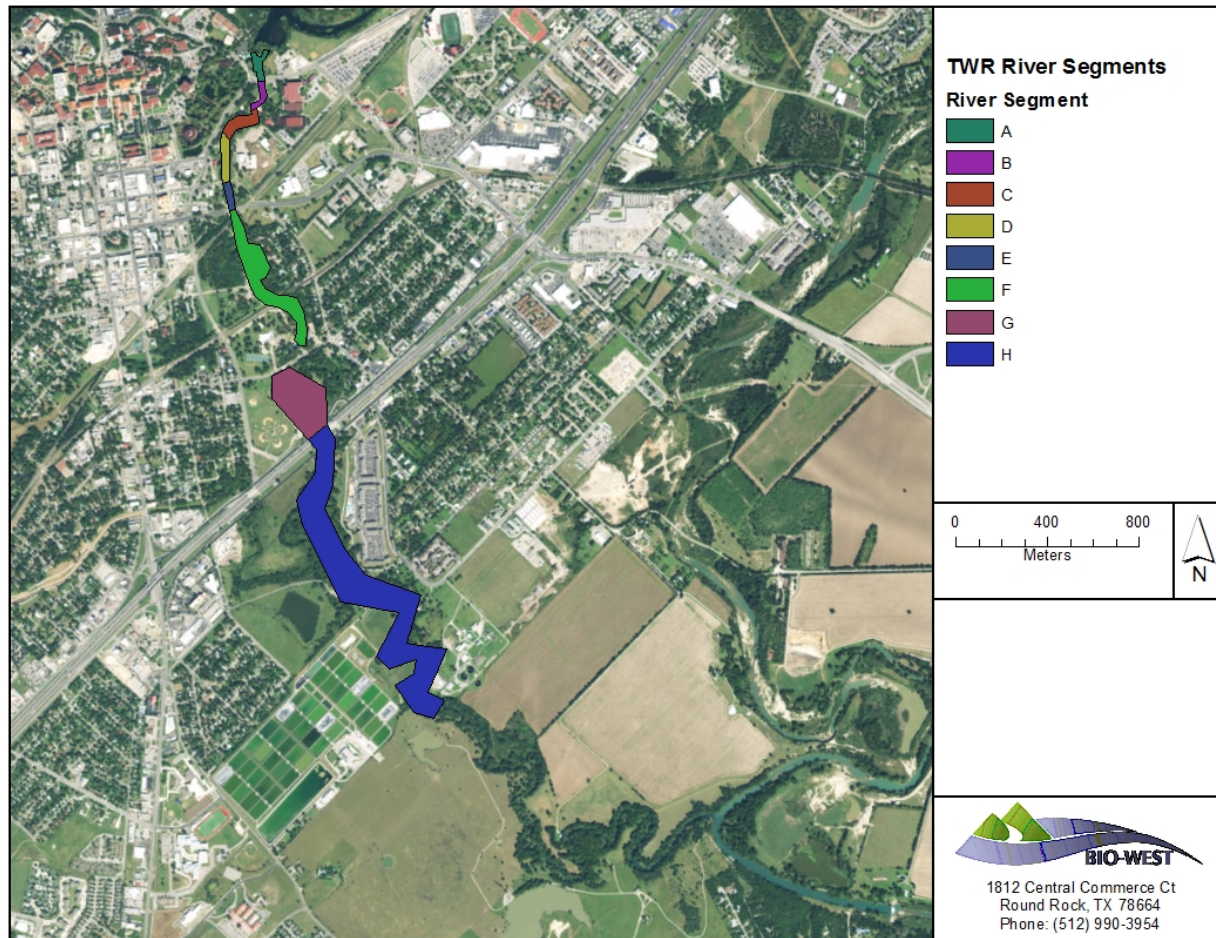


Figure 4. Designated river segments for monitoring Texas Wild-Rice coverage.

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.

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.

Fountain Darter Sampling

Drop-Net Sampling

Drop-net sampling was utilized to quantify Fountain Darter densities and habitat utilization during the spring and fall monitoring events (Figure 1). Sample sites were selected using a random-stratified design. In each study reach, sample sites were randomly selected based on dominant aquatic vegetation (including open areas) mapped prior to sampling (see Aquatic Vegetation Mapping for details), totaling two sites per vegetation strata. At each sample site, all organisms were first trapped using a 2 m² drop-net. Organisms were then collected by sweeping a 1 m² dip-net along the river bottom within the drop-net. If no fish were collected after the first 10 dip-net sweeps, the site was considered complete, and if fish were collected, an additional 5 sweeps were conducted. If any Fountain Darters were collected on sweep 15, additional sweeps were conducted until no 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. Mid-column velocity (60% water depth) was measured at water depths <3 ft. Water velocities at 20% and 80% water depths were measured and averaged at depths ≥3 ft. Water quality was measured within each drop-net using a HydroTech multiprobe, which included water temperature (measured in degrees Celsius [°C]), pH, dissolved oxygen (measured in milligrams per liter [mg/L], percent saturation), and specific conductance (measured in microsiemens per centimeter [μs/cm]). Mid-column water quality was measured at water depths of <3 ft, whereas bottom and surface values were measured and averaged at depths of ≥3 ft. Lastly, vegetation composition (%) was visually estimated and dominate substrate type was recorded within each drop-net sample.

To evaluate 2020 drop-net results in context with historical (2001–2019) observations, median Fountain Darter densities were calculated between seasons and vegetation types. Vegetation types are described in the text by genus except for Texas Wild-Rice. Further, no historical comparison is provided for Texas Wild-Rice because 2020 was the first year this vegetation type was sampled with drop-nets. Among reaches, annual median densities from 2013 to 2020 and their respective long-term (2001–2020) medians were also calculated to assess temporal trends. This timeframe was chosen because sampling at Spring Lake Dam began in 2013. Medians and associated 95% confidence intervals (percentiles) were calculated using bootstrap resampling with replacement (replicates=10,000). Bootstrapping is a useful technique for improving the inference value of central tendencies when datasets are skewed or have a limited sample size

(McDonald 2014). Historical observations used for this analysis included data from spring and fall monitoring events for symmetric comparison.

Length-frequency (%) histograms using 2-mm bins were constructed to assess seasonal differences in Fountain Darter lengths and are compared with historical (2001–2019) observations. Boxplots coupled with violin plots were also used to display the distribution of darter lengths by dominant vegetation types and examine habitat use among size classes. Boxplots show basic length-distribution statistics (i.e., median, quartile, range) and violin plots visually display the full distribution of lengths relative to each vegetation using kernel probability density estimation (Hintze and Nelson 1998).

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 Surveys

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 long-term study reaches 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. Deeper habitats (>1.4 m) were not sampled. All Fountain Darters collected were enumerated, measured (mm), and returned to the river at point of collection.

To evaluate 2020 timed dip-net results in context with historical (2001–2019) observations, raw Fountain Darter abundances per study reach were first standardized as catch-per-unit-effort (CPUE; [fish/person-hour]) for each sampling event. Results for Cypress Tree and Todd Island were combined for analysis (hereafter, “Lower River”). Median Fountain Darter CPUEs were calculated between seasons. Among reaches, annual median CPUE from 2013 to 2020 and their respective long-term (2001–2020) medians were also calculated to assess temporal trends. Medians and associated 95% confidence intervals (percentiles) were calculated using bootstrap resampling with replacement (replicates=10,000). Historical observations used for analysis included data from the spring, summer, and fall monitoring events for symmetric comparison. Length-frequency (%) histograms using 2-mm bins were also constructed to assess seasonal differences in Fountain Darter lengths and are compared with historical (2001–2019) observations. Boxplots coupled with violin plots were also used to display the distribution of darter lengths by study reach and examine longitudinal variation in size structure.

Random-Station Dip-Net Surveys

Random-station presence/absence surveys were implemented to assess Fountain Darter occurrence. During each monitoring event, sample sites were randomly selected within the vegetated area of each reach (Spring Lake: 10 sites, Spring Lake Dam: 25 sites, City Park: 20

sites, I-35: 15 sites) (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.

To analyze 2020 Fountain Darter random-station results, presence/absence per sample was based on whether or not a Fountain Darter was observed during any of the four dips. Occurrence (%; $[\text{sum}(\text{darter presence})/\text{sum}(\text{random stations})]*100$) was then calculated among seasons and vegetation types to compare 2020 and historical (2006–2019) observations. Vegetation types that lack replication (i.e., $n=1$) were not included in this analysis and historical comparisons for Texas Wild-Rice are from 2017–2019. Among reaches, annual occurrences from 2017–2020 and their respective long-term occurrence were also calculated to assess temporal trends. Long-term trends were also calculated from 2017–2020 due to the fact that Texas Wild-Rice was not sampled prior to 2017 and currently represents the most sampled vegetation type. Bootstrap resampling with replacement (replicates=10,000) was used to calculate 95% confidence intervals (percentile) due to its more reliable estimate of variation for binomial data compared to traditional methods (McDonald 2014). Historical observations used for analysis included data from the spring, summer, and fall monitoring events for symmetric comparison.

Fish Community Sampling

Fish community sampling was conducted in the spring and fall 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, Wastewater Treatment Plant, Smith Property, and Thompson Island (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, 5-meter-long PVC pipe segments (micro-transect pipes) placed on the stream bottom, 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, aquatic 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 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 random longitudinal transects were sampled within each monitoring segment via seining, except for Spring Lake. 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. 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.

To evaluate 2020 fish community results in context with historical (2014–2019) observations, all analyses were conducted using fishes identified to species; fishes identified to genus or family were excluded. Species raw abundances from all sampling methods used in each river segment were first combined per monitoring event, and relative abundance (%; $[\text{sum}(\text{species } x)/\text{sum}(\text{all species})]*100$) was then quantified for all species. Results were combined for Rio Vista Park, Crooks Park, and I-35 (hereafter, “Middle River”), and for Waste Water Treatment Plant, Smith Property, and Thompson Island (hereafter, “Lower River”). Overall community composition for each reach was assessed for species richness and diversity using the Shannon’s diversity index (Spellerberg and Fedor 2003). Relative abundance of spring fishes (Table 2) was also quantified for comparison with Fountain Darters. Lastly, median species richness, diversity, Fountain Darter relative abundance, and spring fish relative abundance were calculated among reaches. Medians and associated 95% confidence intervals (percentiles) were calculated using bootstrap resampling with replacement (replicates=10,000). Historical observations used for analysis included data from the spring and fall monitoring events for symmetric comparison.

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

SCIENTIFIC NAME	COMMON NAME
<i>Dionda nigrotaeniata</i>	Guadalupe Roundnose Minnow
<i>Notropis amabilis</i>	Texas Shiner
<i>Notropis chalybaeus</i>	Ironcolor Shiner
<i>Astyanax mexicanus</i>	Mexican Tetra
<i>Gambusia geiseri</i>	Largespring Gambusia
<i>Etheostoma fonticola</i>	Fountain Darter
<i>Percina apristis</i>	Guadalupe Darter
<i>Percina carbonaria</i>	Texas Logperch

San Marcos Salamander Surveys

Visual surveys for salamanders were conducted in 2020 at three sites within Spring Lake and the San Marcos River for each routine sampling effort (Figure 1). Visual observations were made in areas previously described as habitat for San Marcos Salamander (Nelson 1993) (Figure 1). Two of the sites are located within Spring Lake: the Hotel Site is adjacent to the old hotel and was identified as Site 2 in Nelson (1993), and the Riverbed Site was located across from the former Aquarena Springs boat dock and was identified as Site 14 in Nelson (1993). 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 was identified as Site 21 in Nelson (1993) and 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 (5 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 m²). 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.

Salamander densities (salamanders/m²) are presented for each season using bar graphs and are compared with long-term (2001–2020) 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.

Macroinvertebrate 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 5 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 (April 20) and fall (October 19) (Figure 1).

Picked samples were preserved in 70% isopropyl, returned to the laboratory, and identified to TCEQ taxonomic effort 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.

OBSERVATIONS

San Marcos River Discharge Results

Median daily discharge in the San Marcos River showed minimal variation from the historical median in 2020 and did not fall outside of 10th-percentile or 90th-percentile flow levels.

Monthly median discharge ranged from 140 cfs in August to 191 cfs in June. Spring sampling was conducted in April, where discharge ranged from 141 to 168 cfs (median=144). The greatest variation in discharge occurred between spring and summer sampling in May and ranged from 143 to 205 cfs (median=172), which included the highest observed mean daily discharge in 2020. During summer sampling in August, discharge ranged from 131 to 155 cfs (median=140), which encompassed some of the lowest mean daily discharges in 2020. Fall sampling was conducted in October, with discharges ranging from 136 to 169 cfs (median=141) (Figure 5).

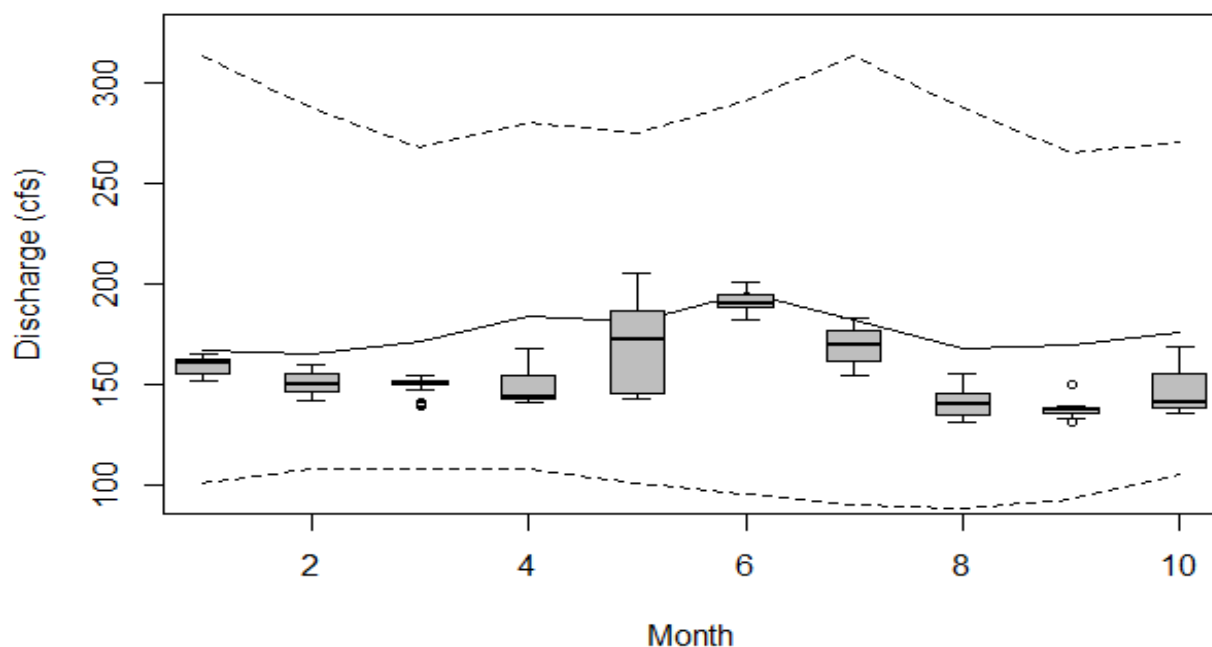


Figure 5. Boxplots (median, quartile, range) displaying the distribution of 2020 mean daily discharge among months (January–October) in comparison to the 10th percentile (lower dashed line), median (solid line), and 90th percentile (upper dashed line) of historical (1956–2019) daily means for each month.

Water Temperature Results

Water temperature in 2020 did not exceed the 25 °C maximum optimal temperature for Fountain Darter larval production (McDonald et al. 2007) and designated HCP threshold within Fountain Darter Study Reaches in 2020. Median water temperature increased with downstream distance from Spring Lake (21.60 °C) to Thompson Island (25.33 °C). Similarly, the range of observed water temperatures increased downstream of the springs. Spring Lake temperatures were the least variable, ranging from 21.56 to 21.65 °C. Water temperature variation was similar at Spring Lake Dam, City Park, and I-35, ranging from about 20.00 to 24.00 °C over the course of 2020. Thompson Island Natural Channel temperatures were the most variable and ranged from 17.62 to 28.30 °C, exceeding the 26 °C maximum optimal temperature for Fountain Darter egg production (McDonald et al. 2007) at one to six (i.e., within 24-hours) 4-hour measurements for 133 days between April and October. Waste Water Treatment Plant water temperature also exceeded the egg production threshold at one to six 4-hour measurements for 86 days from July to October (Figure 6). Lastly, water temperature surpassed the larval production threshold in August at one 4-hour measurement for 1 and 5 days at Thompson Island Artificial Channel and Rio Vista Park, respectively (Appendix B, Figure B1).

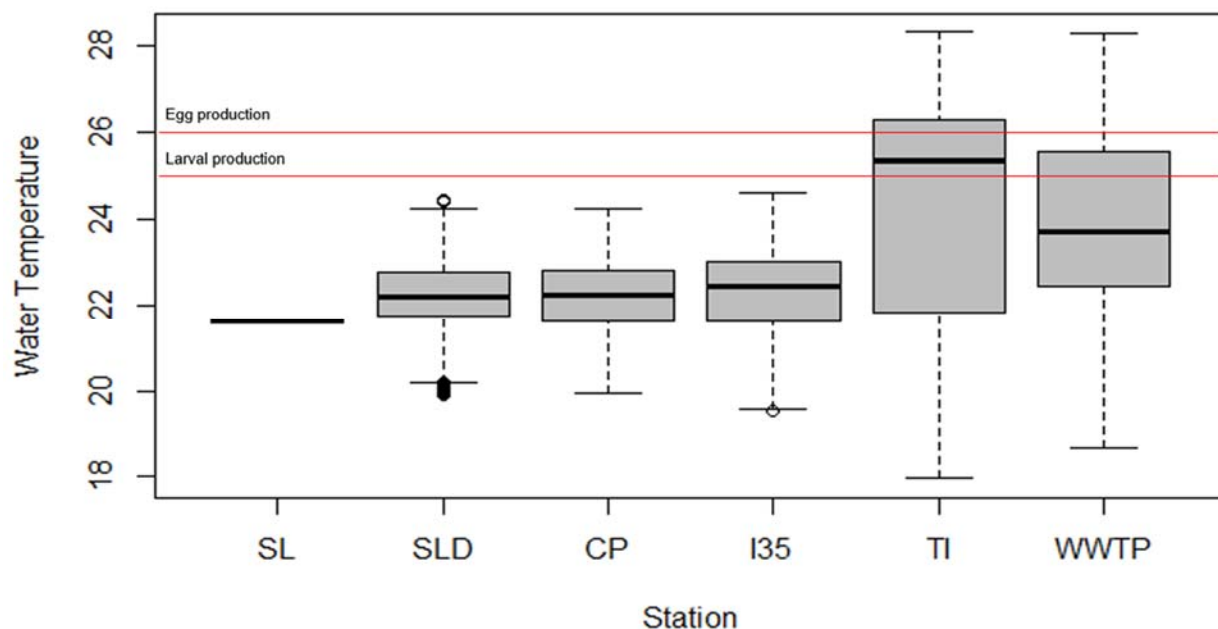


Figure 6. Boxplots (median, quartile, range) displaying 2020 water temperatures at Spring Lake (SL), Spring Lake Dam (SLD), City Park (CP), I-35, Thompson Island Natural Channel (TI), and Waste Water Treatment Plant (WWTP). The red lines indicate maximum optimal temperatures for Fountain Darter larval (≥ 25 °C) and egg (≥ 26 °C) production (McDonald et al. 2007).

Aquatic Vegetation Mapping Results

Aquatic vegetation maps for each study reach and for both sampling periods are presented in Appendix B. The maps are organized by individual reach. Successive mapping events are ordered chronologically. It is important to note that maps highlight only the single dominant plant species. While less-dominant species may not be represented on the maps, their coverage is estimated and included into the total vegetation calculations.

Spring Lake Dam Reach

Both the spring and fall mapping events showed large increases in total aquatic vegetation cover that were above long-term averages (Figure 7). The vegetation community in the Spring Lake Dam Reach is dominated almost entirely by native aquatic plant species. Texas Wild-Rice was the dominant species in spring (1,509.06 m²) and fall (1,496 m²) (Table 3). From spring 2019 to spring 2020, Texas Wild-Rice cover increased nearly 1,000 m². *Potamogeton* (72.72–103.63 m²) and *Hydrocotyle* (86.80–134.97 m²) were also dominant taxa (Table 3), which is similar to recent years (BIO-WEST 2019, 2020).

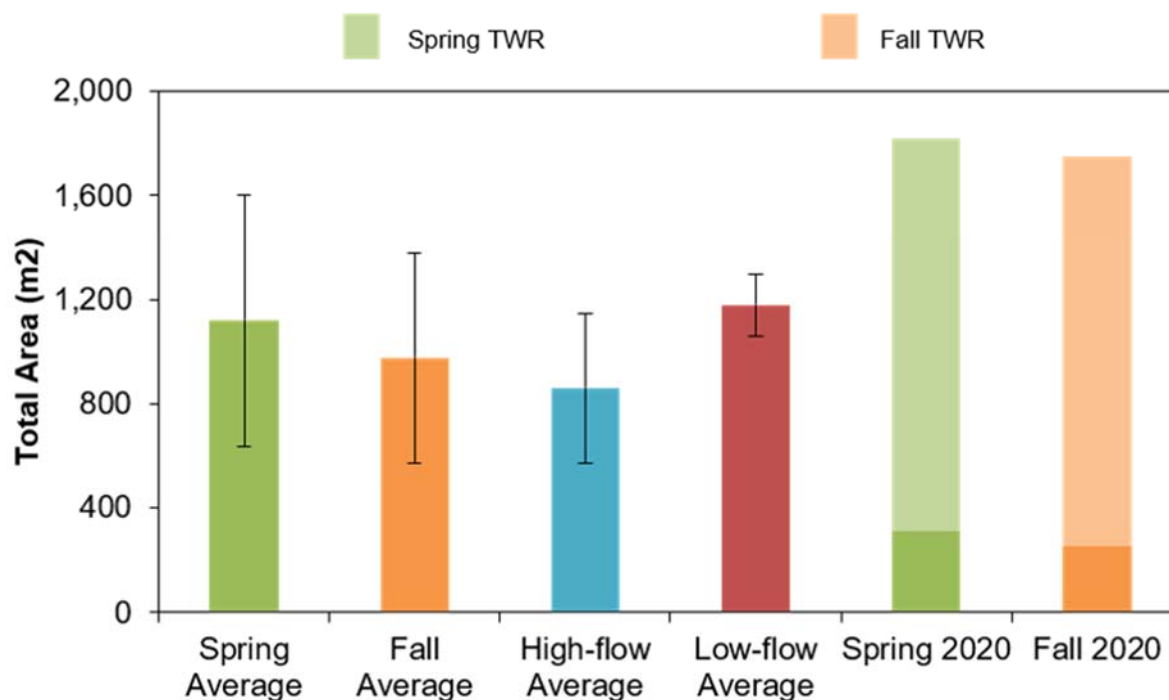


Figure 7. Total surface area (m²) of aquatic vegetation and Texas Wild-Rice (TWR) in the Spring Lake Dam study reach. Long-term (2001–2020) study averages are provided with error bars representing one standard deviation from the mean.

Table 3. Cover amount of each aquatic vegetation species observed in the Spring Lake Dam reach during spring and fall 2020 sampling.

SPECIES	SPRING COVER (m ²)	FALL COVER (m ²)
<i>Cabomba</i>	0.00	11.00
<i>Ceratophyllum</i>	0.00	1.56
<i>Heteranthera</i>	0.00	1.36
<i>Hydrocotyle</i>	134.97	86.8
<i>Hygrophila</i>	40.63	0.00
<i>Ludwigia</i>	5.75	8.81
<i>Potamogeton</i>	72.72	103.63
<i>Sagittaria</i>	53.98	39.58
Texas Wild-Rice	1,509.06	1,496.11
Total	1,817.11	1,748.85

City Park Reach

This year's total vegetation cover for both spring and fall remained similar to long-term averages (Figure 8). Similar to historical observations, fall cover decreased from spring cover, although to a lesser degree than the fall long-term average. The overall species composition in this reach remained similar to previous years as well. Texas Wild-Rice (2,676.90–2,946.75 m²), *Hygrophila* (425.57–532.21 m²), and *Potamogeton* (161.66–220.21 m²) dominated the plant community (Table 4).

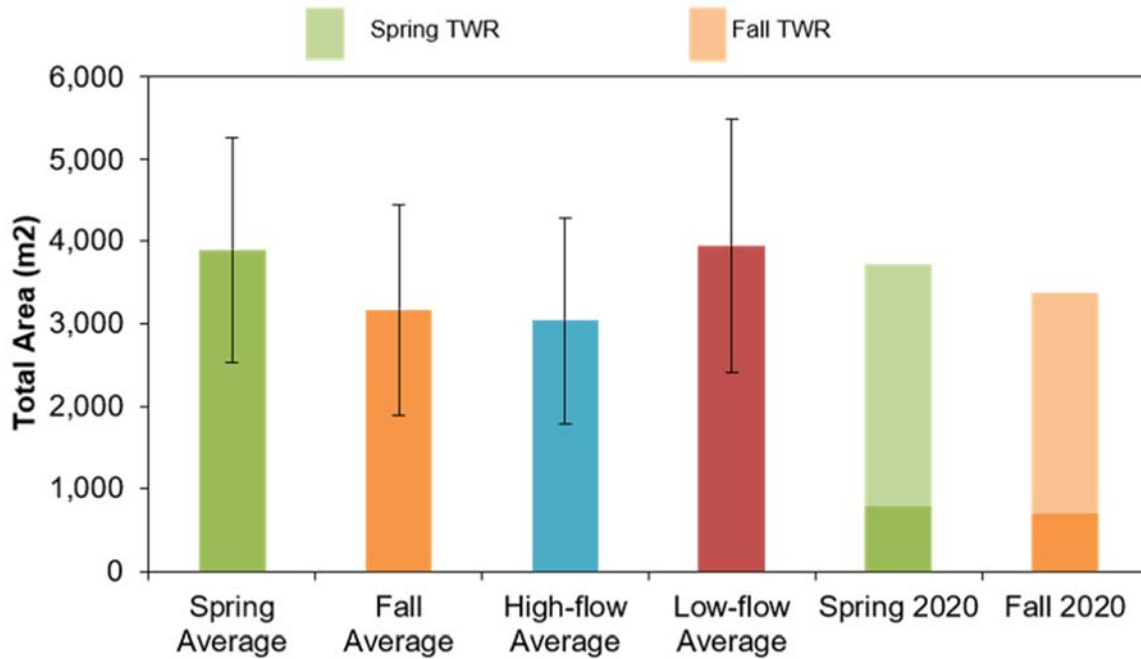


Figure 8. Total surface area (m²) of aquatic vegetation and Texas Wild-Rice (TWR) in the City Park study reach. Long-term (2001–2020) study averages are provided with error bars representing one standard deviation from the mean.

Table 4. Cover of each aquatic vegetation species observed in the City Park reach during spring and fall sampling.

SPECIES	SPRING COVER (m ²)	FALL COVER (m ²)
<i>Cabomba</i>	9.39	26.54
<i>Ceratophyllum</i>	5.70	0.00
<i>Ceratopteris</i>	2.82	3.09
<i>Hydrilla</i>	1.14	0.00
<i>Hydrocotyle</i>	4.25	0.00
<i>Hygrophila</i>	532.21	425.57
<i>Ludwigia</i>	21.48	8.26
<i>Myriophyllum</i>	18.78	15.40
<i>Potamogeton</i>	161.66	220.21
<i>Sagittaria</i>	18.71	0.13
Texas Wild-Rice	2,946.75	2,676.90
Total	3,722.89	3,376.10

In 2020, City Park and all other city river access points were closed to the public from late March to mid-September (except part of June). This lengthy closure provided an unprecedented glimpse into how the vegetation community reacts to a more-natural growth cycle and lack of recreational disturbance over a full growing season. For the City Park Reach, the aquatic plant species that benefited the most from the lack of activity was Texas Wild-Rice, which saw a 30% increase in cover from a year prior (BIO-WEST 2020). Generally, the middle section of City Park Reach is kept void of any vegetation due to repeated entry and exit by recreationalists. Over the winter months, aquatic plants will sometimes expand from upstream and downstream into the middle area, and Texas Wild-Rice plants will appear. This growth is all but eliminated once recreational activities commence in spring. However, this year those activities did not occur, and Texas Wild-Rice expanded into the middle of the reach, creating an almost continuous, single, contiguous patch from the upstream end of the reach to the downstream end. Other vegetation types did not seem to expand into the same area, mostly staying within their normal distributions. The density of some species did increase and was maintained for longer periods than normal. *Hygrophila* remains the dominant aquatic plant species other than Texas Wild-Rice (Table 4). This species can expand rapidly into dense colonies and overtake other native species.

I-35 Reach

This year's total vegetation cover for both spring and fall greatly exceeded long-term averages. Spring vegetation coverage exceeded 2,600 m², which is the highest total recorded to date (Figure 9). Although this amount trended down toward fall, the coverage of dominant species shifted slightly towards native plants, like *Cabomba*. Dominant species included Texas Wild-Rice (924.65–975.89 m²), *Hygrophila* (437.74–812.98 m²), and *Sagittaria* (352.62–465.21 m²) (Table 5).

The I-35 study reach has changed considerably over the past few years. Recreation has become more popular in this area, challenging vegetation sustainability and expansion. Although the official City of San Marcos access sites along this reach were mostly closed from April to September 2020, during the COVID-19 shutdown, access to this site continued from a private access point downstream and from an unofficial access point underneath the I-35 bridge. With available access, the reach still experienced some recreational pressure. Fewer effects were seen in the upstream portion of the reach, from Cheatham Street bridge to the second bend, and more impacts were seen around the I-35 bridge and the island located upstream of I-35. As is typical, patches of *Ludwigia*, *Sagittaria*, and *Hygrophila* were notably scoured and reduced by the fall mapping event. Scouring extent is captured in the photograph below (Figure 10). The reduction in *Hygrophila* could also be attributed to EAHCP control efforts.

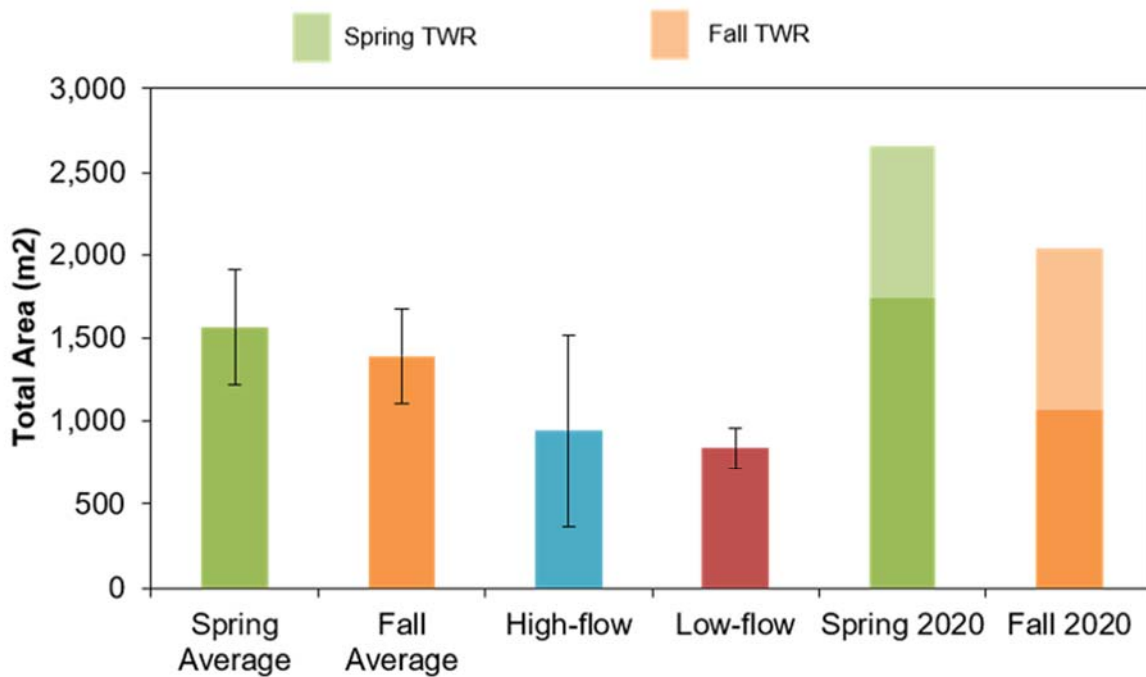


Figure 9. Total surface area (m²) of aquatic vegetation and Texas Wild-Rice (TWR) in the I-35 reach. Long-term (2001–2020) study averages are provided with error bars representing one standard deviation from the mean.

Table 5. Cover amount of each aquatic vegetation species observed in the I-35 reach during spring and fall sampling.

SPECIES	SPRING COVER (m ²)	FALL COVER (m ²)
Bryophyte	10.43	0.00
<i>Cabomba</i>	90.10	117.79
<i>Ceratophyllum</i>	7.76	0.00
<i>Heteranthera</i>	1.74	1.81
<i>Hydrilla</i>	168.65	38.31
<i>Hydrocotyle</i>	13.88	17.16
<i>Hygrophila</i>	812.98	437.74
<i>Ludwigia</i>	75.49	58.36
<i>Nasturtium</i>	18.24	0.00
<i>Nuphar</i>	71.97	39.53
<i>Sagittaria</i>	465.21	352.62
Texas Wild-Rice	924.65	975.89
Total	2,661.10	2,039.21



Figure 10. Photograph showing scoured areas of vegetation in the I-35 reach.

Texas Wild-Rice Annual Observations Results

Texas Wild-Rice Mapping

Results of the 2020 annual mapping event showed an overall areal coverage of 14,747 m². This is the highest coverage of Texas Wild-Rice mapped by BIO-WEST to date and a significant increase from the previous year (Figure 11). The full system map set for 2020 can be found in Appendix B.

All river segments mapped saw an increase in Texas Wild-Rice cover from 2019 to 2020 (Table 6). Segment E saw the largest percent gain in Texas Wild-Rice; cover increased from 695 m² to over 1,000 m² within the year. Recreation activities occur in this section, but usually not heavily, even during busy seasons. Segment D had the second-highest coverage increase. This section typically experiences heavy recreation, which results in significant damage to Texas Wild-Rice during a normal year. In this reach, a portion of Texas Wild-Rice typically remains all year, whereas another portion typically appears and expands over the winter months, but is then damaged and disappears during summer recreation. Due to the COVID-19 shutdown, more rice patches were able to escape damage and continue expanding into areas that are normally absent of any vegetation during the recreational months (Figure 12).

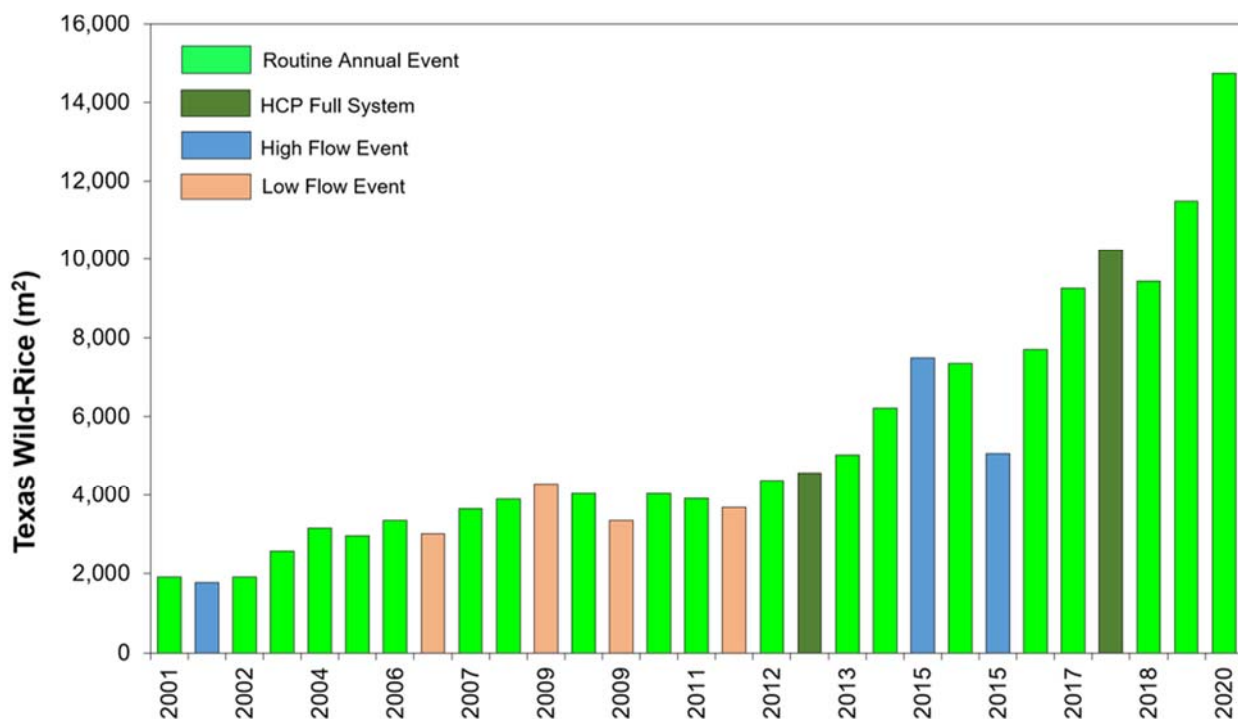


Figure 11. Cover amount of Texas Wild-Rice across selected years.

Table 6. Change in cover amount (m²) of Texas Wild-Rice between August 2019 and August 2020 mapping.

RIVER SEGMENT	2019 COVERAGE	2020 COVERAGE	COVERAGE CHANGE	PERCENT CHANGE
A. Spring Lake Dam Study Reach	1,376	1,732	+356	+21%
B. Sewell Park	1,160	1,598	+438	+27%
C. City Park bend	2,996	3,712	+716	+19%
D. City Park Study Reach	1,944	2,780	+836	+30%
E. Lower City Park	695	1,307	+612	+47%
F. Veramendi Park to Rio Vista Park	2,055	2,187	+132	+6%
G. I-35 Study Reach	892	960	+68	+7%
H. Below I-35	179	246	+67	+27%

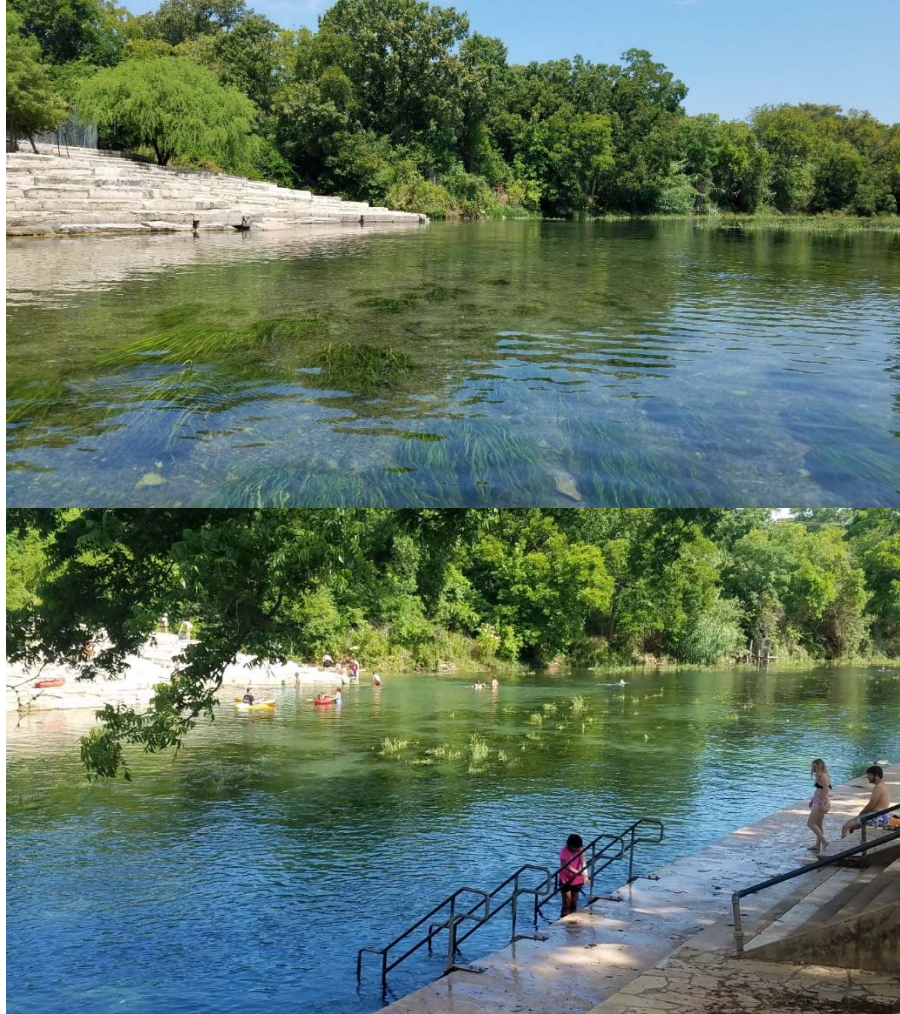


Figure 12. Texas Wild-Rice growing in areas of City Park LTBG (Section D, Figure 4) where it does not normally persist.

Texas Wild-Rice coverage downstream of the I-35 bridge declined significantly after the 2015 Memorial Day floods with many stands extirpated. The current cover of Texas Wild-Rice in this segment records an expansion above pre-flood coverage, from 191 m² in 2014 to 246 m² for this year. In recent years, Texas Wild-Rice has been steadily increasing in this section mostly as a result of heightened natural expansion. Some Texas Wild-Rice was replanted into several of the locations lost during the 2015 flood, including between I-35 bridge and Cape's Dam, and along the A.E. Wood Fish Hatchery property. Notable natural expansion occurred in persistent individual stands of Texas Wild-Rice, such as those above Cape's Dam. Until this year, little expansion was seen in these stands. Texas Wild-Rice stands in the mill race below Cheatham Street and in the Thompson's Island mill race were observed again in 2020 for the third consecutive year.

For the 2020 mapping event, 595 polygons and 396 points of Texas Wild-Rice were mapped compared to 587 polygons and 337 points mapped in 2019. The longitudinal extent of Texas Wild-Rice was similar to previous years. Of the 595 mapped polygons, 384 were found to be in

water deeper than 3 feet and 211 stands were found to be in water less than 3 feet in depth (Table 7). Approximately 50% of Texas Wild-Rice stands were found to be associated with another aquatic plant species. Two nonnative aquatic plant species, *Hydrilla* and *Hygrophila*, remain the aquatic plant species most commonly associated with Texas Wild-Rice (Table 8), although the association with native aquatic plant species has increased over the last few years. There were 84 Texas Wild-Rice stands in bloom at the time of mapping, and bloom percent ranged from 5 to 100%.

Table 7. Distribution of Texas Wild-Rice (TWR) stands based on water depth (n=595).

DEPTH (feet)	NO. OF TWR STANDS	FREQUENCY (%)
0.0–0.9	11	2
1.1–1.9	100	16
2.0–2.9	100	16
≥3.0	384	65

Table 8. Associated species found with Texas Wild-Rice (TWR) stands (n=226).

SPECIES	NO. OF TWR STANDS	FREQUENCY (%)
<i>Hygrophila</i>	84	37
<i>Hydrilla</i>	69	31
<i>Potamogeton</i>	37	16
<i>Sagittaria</i>	23	10
<i>Hydrocotyle</i>	9	4
<i>Cabomba</i>	2	<1
<i>Ludwigia</i>	2	<1

Texas Wild-Rice Physical Observations Results

Mean daily discharge for the San Marcos River at the time of spring sampling (April 20) was 144 cfs, which was below the historical April median discharge of 184 cfs. Mean daily discharge during the fall sampling event (October 5) was 137 cfs, which is again below the historical October median discharge of 176 cfs (Figure 5).

As in the previous year, physical observations were made for vulnerable Texas Wild-Rice stands within the three following general study areas: Spring Lake Dam/Sewell Park location, Veramendi Park, and the I-35 location. These locations are located near river access points where river users enter the water, exit, or swim and wade. Therefore, during peak recreation season, Texas Wild-Rice patches at these locations are subjected to harsher disturbances compared to Texas Wild-Rice located in any other part of the river.

Coverage of each vulnerable stand in the San Marcos River is presented in Table 9, and discussed in the sections below. Maps of vulnerable stands during each monitoring event as well as graphs illustrating the trend of selected physical conditions of Texas Wild-Rice in these three locations are found in appendices B and C, respectively.

Table 9. Coverage (m²) of individual vulnerable Texas Wild-Rice stands during each sampling event.

LOCATION	FALL 2019	SPRING 2020	FALL 2020
Sewell Park 1	85.56	144.00	114.71
Sewell Park 2	5.01	4.38	8.53
Sewell Park 3	0.66	2.48	3.00
Sewell Park 4/5	26.84	45.10	55.70
Sewell Park 6	3.45	6.30	3.32
Sewell Park 7	48.40	47.86	156.00
Sewell Park 8	3.46	6.00	9.04
Total Coverage	173.18	256.12	350.30
Veramendi 1	19.47	19.70	16.14
Veramendi 2	20.82	23.16	26.93
Veramendi 3	71.14	61.12	56.64
Total Coverage	111.43	103.89	99.71
I-35-1	1.95	1.20	3.70
I-35-2	Gone	0.77	0.50
I-35-3	2.74	1.12	1.21
I-35-4	69.34	67.62	61.39
I-35-5	Gone	Gone	Gone
I-35-6	Gone	Gone	Gone
I-35-7	25.93	24.19	22.67
I-35-8	17.80	17.54	23.83
I-35-9	Gone	Gone	Gone
I-35-10	Gone	1.12	1.28
Total Coverage	117.01	113.56	114.58

Spring Lake Dam/Sewell Park Reach

The stands in this reach have shown an overall increase in coverage in recent years due to the decrease in recreational pressure since river access has been limited around Spring Lake Dam over the past several years. This year saw even more growth as Texas Wild-Rice stands expanded into areas where they do not normally occur, with multiple Texas Wild-Rice stands combining into larger stands. Although this was already the case upstream Aquarena Springs Drive Bridge before this year, downstream Aquarena Springs Drive Bridge Texas Wild-Rice expanded so much by fall that it occurred as one continuous stand from river left to river right at some points (Figure 13). The coverage of vulnerable stands saw a 26% increase from spring to fall, with Stand 7 accounting for most of the increase. This particular stand is usually fragmented and reduced by the fall sampling event. Yet this year, the Texas Wild-Rice footprint in Sewell Park was larger than normally observed.



Figure 13. Texas Wild-Rice below Aquarena Springs Drive Bridge extended to the bridge and completely across the river channel. This area is typically interspersed with bare areas and wading trails.

During spring sampling, velocity at individual stands ranged from 0.31 to 2.24 ft/s, and depths at all stands were deeper than 0.5 ft. Little root exposure from scouring was noted in this section, with only moderate scouring at Stand 2. Six stands (1, 2, 4/5, 6, 7, and 8) were noted in bloom. Blooming was quite prolific in most of these. For the fall sampling event, velocity ranged from 0.21 to 1.53 ft/s. One stand was occurring in water depth less than 0.5 ft. Root exposure had notably worsened at a few stands. Stand 4 and 7 had moderate amounts of exposed roots on the upstream edges. It is important to note that Texas Wild-Rice stands expanded into sections of the riverbed not normally occupied, thus less scouring and riverbed erosion was observed compared to previous years.

Veramendi Park

Total cover of vulnerable Texas Wild-Rice stands in Veramendi Park was highest in the spring sampling period and decreased slightly by fall. During the spring sample period, velocities ranged from 0.49 to 1.09 ft/s. All stands were noted occurring in water depths deeper than 0.5 ft. Root exposure was minimal across all stands. Only a few plants were noted in bloom. During the fall sampling event, velocities ranged from 1.0 to 1.5 ft/s. No stands were noted occurring in water less than 0.5 ft in depth. Root exposure was moderate in Stand 1 with areas of streambed eroding from around the upstream edge of the stand. The other stands were quite healthy. As noted in Sewell Park, the stands here were also growing into each other to form larger combined patches. But riverbed erosion was still prominent at this location.

I-35 Reach

The coverage amounts of vulnerable Texas Wild-Rice stands in this reach did not change. The vulnerable stands here continue to be impacted by recreation and riverbed scouring as recreationalists from downstream access points congregated here. Additionally, most stands are located in shallow water, making them more prone to recreational impacts. While most stands have maintained their locations, several have fragmented into smaller individuals. This is a reoccurring observation from year to year. Despite some loss, planted Texas Wild-Rice has merged with some vulnerable stands adding some cover.

Velocities for the spring sampling event ranged from 0.60 to 2.62 ft/s with no stands observed in water 0.5 ft deep or less. Root exposure was minimal around all stands. During fall sampling, velocities ranged from 0.08 to 1.96 ft/s. Root exposure was noted as moderate and portions of Stand 7 were noted as being almost completely exposed with up to 30% of its cover occurring in water less than 0.5 ft in depth.

Overall, the vulnerable Texas Wild-Rice stands located in this area have maintained cover well compared to prior years when a number of stands fragmented and disappeared. Restoration plantings have helped re-colonize previously occupied areas as well as new areas with Texas Wild-Rice.

Fountain Darter Sampling Results

Drop-Net Sampling

A total of 355 Fountain Darters were observed at 63 drop-net samples in 2020. Drop-net densities ranged from 0.00 to 29.00 fish/m². Community summaries and raw drop-net data are included in appendices C and D, respectively. A summary of dominant vegetation (and their median % coverage) and substrate types sampled, as well as ranges of depth-velocity and water quality parameters observed among all drop-net locations are provided in Table 10.

Table 10. Habitat conditions observed during 2020 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 observed ranges (min-max) of each variable among all drop-net samples.

HABITAT PARAMETERS	SLD	CP	I35
Vegetation			
<i>Cabomba</i> ¹	0	0	4 (100%)
<i>Hydrocotyle</i> ¹	4 (95%)	1 (90%)	4 (70%)
<i>Hygrophila</i> ¹	2 (100%)	4 (100%)	4 (100%)
Open	4 (100%)	4 (100%)	4 (100%)
<i>Potamogeton</i> ²	4 (98%)	4 (100%)	0
<i>Sagittaria</i> ²	4 (90%)	0	4 (100%)
Texas Wild-Rice ²	4 (100%)	4 (100%)	4 (100%)
Substrate			
Clay	0	1	0
Cobble	7	0	0
Gravel	5	3	6
Sand	2	1	7
Silt	8	11	11
Depth-velocity			
Water depth (ft)	0.5–3.3	1.2–3.5	0.6–2.7
Mean column velocity (ft/s)	0.00–4.85	0.03–1.81	0.00–2.68
15-cm column velocity (ft/s)	0.00–4.85	0.00–0.98	0.00–2.68
Water quality			
Water temperature (°C)	21.7–22.3	21.1–22.2	21.1–22.6
DO (ppm)	7.2–9.1	7.1–8.6	6.8–10.3
DO % saturation	81.2–104.0	82.0–97.1	77.5–119.1
pH	7.7–8.5	7.3–7.6	7.5–7.6
Specific conductance (µs/cm)	610–631	596–620	596–620

¹Denotes ornate vegetation taxa with complex leaf structure

²Denotes long broad or ribbon-like, austere-leaved vegetation taxa

Among seasons, median density was lower in fall (0.24 fish/m²) than spring (0.79 fish/m²). Median densities observed in 2020 were lower than historical fall (1.90 fish/m²) and spring (2.20 fish/m²) observations and fall confidence intervals did not overlap. Among vegetation types, median densities were greatest in *Cabomba* (15.00 fish/m²). Median densities were intermediate but variable in *Hygrophila* (4.10 fish/m²) and *Hydrocotyle* (2.50 fish/m²), although considerably less than *Cabomba*. Median density was lowest in open (0.00 fish/m²), Texas Wild-Rice (0.02 fish/m²), *Potamogeton* (0.26 fish/m²), and *Sagittaria* (0.35 fish/m²) drop-net samples. Most vegetation types exhibited similar median densities compared to historical medians, except for

Cabomba, which in 2020 was about 10 fish/m² greater than previous observations with no confidence interval overlap (Figure 14). Current patterns of vegetation utilization align with previous research that observed Fountain Darter densities highest within ornate vegetation compared to long, austere-leaved taxa (Schenck and Whiteside 1976; Linam et al. 1993; Alexander and Phillips 2012). Because this was the first year Texas Wild-Rice was sampled, no historical data are available for comparison. Given that 2020 densities for each previously sampled vegetation type were similar or considerably higher (i.e., *Cabomba*) than historical values, the decreases in seasonal densities compared to historical data can likely be attributed to inclusion of Texas Wild-Rice data in 2020 seasonal estimates. For example, bootstrapping fall observations without Texas Wild-Rice resulted in an increased 2020 estimate of median density from 0.24 to 0.53 fish/m² and a larger confidence interval (0.00–2.50 fish/m²) that overlaps with historical observations (Figure 14).

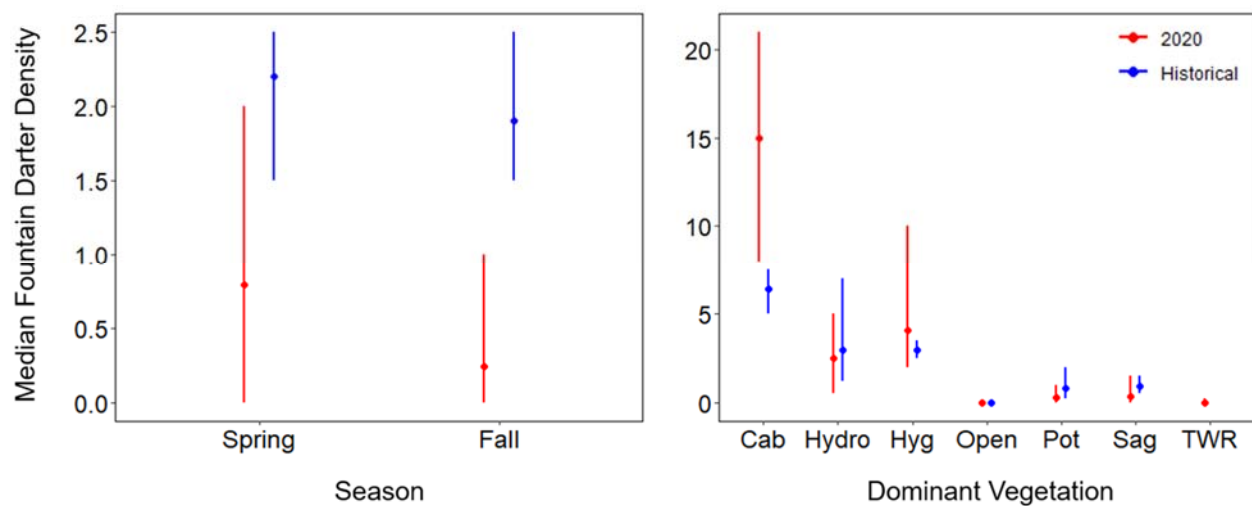


Figure 14. Current and historical (2001–2019) median Fountain Darter density (fish/m² ± 95% CI) among seasons and dominant vegetation types observed during drop-net sampling. Error bars denote 95% confidence intervals. Vegetation abbreviations include *Cabomba* (Cab), *Hydrocotyle* (Hydro), *Hygrophila* (Hyg), *Potamogeton* (Pot), *Sagittaria* (Sag), and Texas Wild-Rice (TWR).

Annual trends among reaches demonstrated that median densities in 2020 were about 1 fish/m² less than the long-term median for all reaches, although current and long-term confidence intervals did overlap. Spring Lake Dam median densities were highest in 2014 (4.80 fish/m²) and 2015 (4.10 fish/m²), which were about 3 fish/m² greater than the long-term median (1.60 fish/m²). Since 2016, median density has been similar or below the long-term median at Spring Lake Dam. Trends were similar at City Park, with annual median density above the long-term median (2.20 fish/m²) from 2013 to 2015 (3.50–6.80 fish/m²), and below from 2016 to 2020 (0.87–1.40 fish/m²). At I-35, median density was above the long-term median (1.70 fish/m²) from 2013 to 2016 (1.80–3.50 fish/m²) and lower from 2017 to 2020 (0.25–1.20 fish/m²) (Figure 15). It should be noted that a variety of potential factors influence annual median Fountain Darter density within each study reach, including changes to the type and number of vegetation strata sampled. For example, inclusion of Texas Wild-Rice data in 2020 likely resulted in a decrease in annual medians within each reach compared to previous years, when Texas Wild-Rice was not sampled.

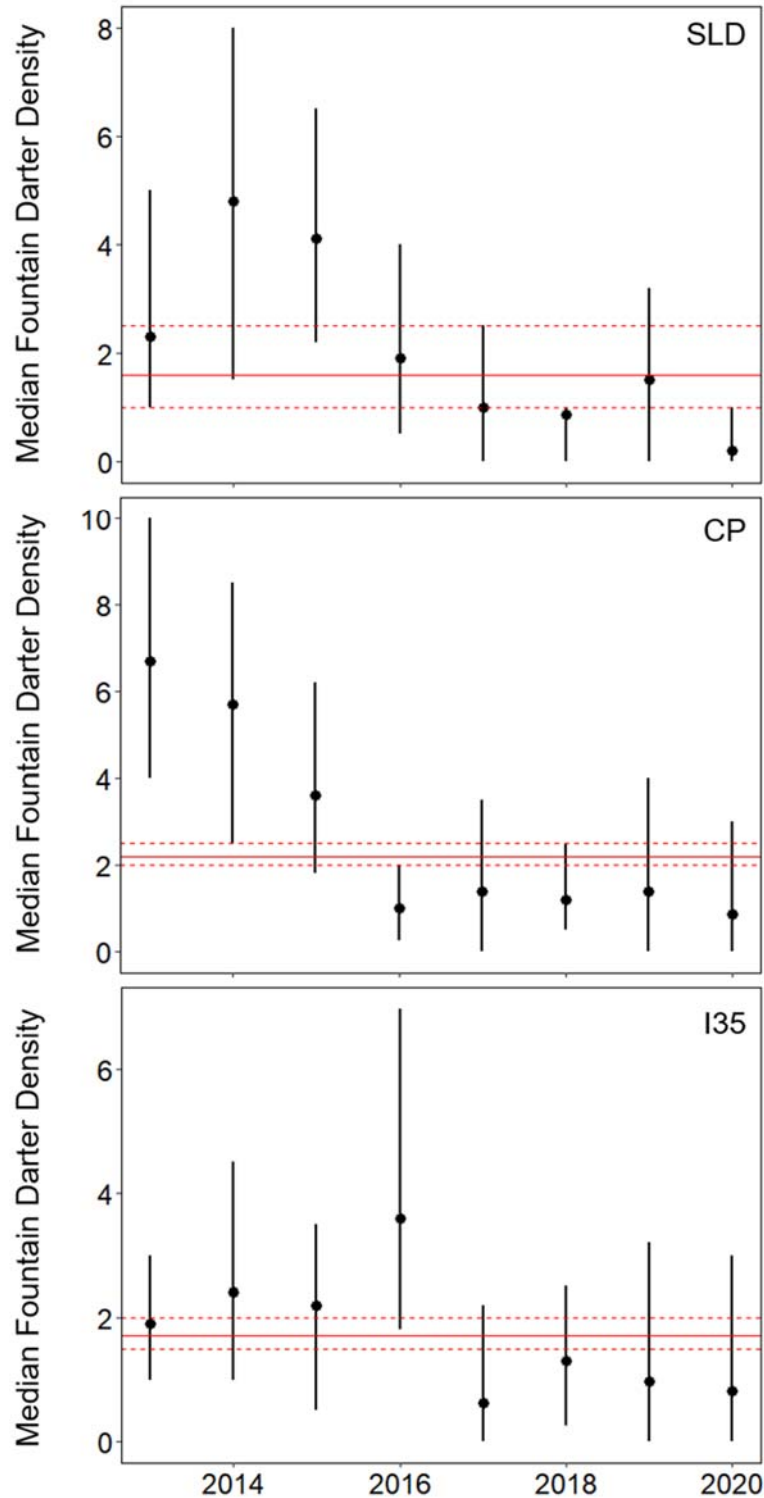


Figure 15. Annual trends of median Fountain Darter density (fish/m² ± 95% CI) at Spring Lake Dam (SLD), City Park (CP), and I-35 from 2013–2020 during drop-net sampling. Solid and dashed red lines denote long-term (2001–2020) medians and 95% confidence intervals, respectively.

Fountain Darter lengths in spring ranged from 11 to 38 mm (median=19). The spring length-frequency histogram exhibited a right-skewed distribution and displayed that individuals at length bins of 14 to 20 mm contained the majority of observations (52.97%). In comparison to historical spring length-frequency distributions, 2020 collections included increased relative abundance of Fountain Darters less than 20 mm total length (Figure 16). In fall, Fountain Darter lengths ranged from 10 to 44 mm (median=26). Contrary to spring observations, the fall length-frequency histogram displayed a normal distribution that showed most individuals in bins from 24 to 32 mm. When compared to historical distributions, fall length-frequency distributions exhibited increased frequency of Fountain Darters from 18 to 28 mm, and a reduction in larger darters from 30 to 38 mm (Figure 16). This logically follows from spring data, in which distributions also showed a peak at smaller sizes compared to historical data.

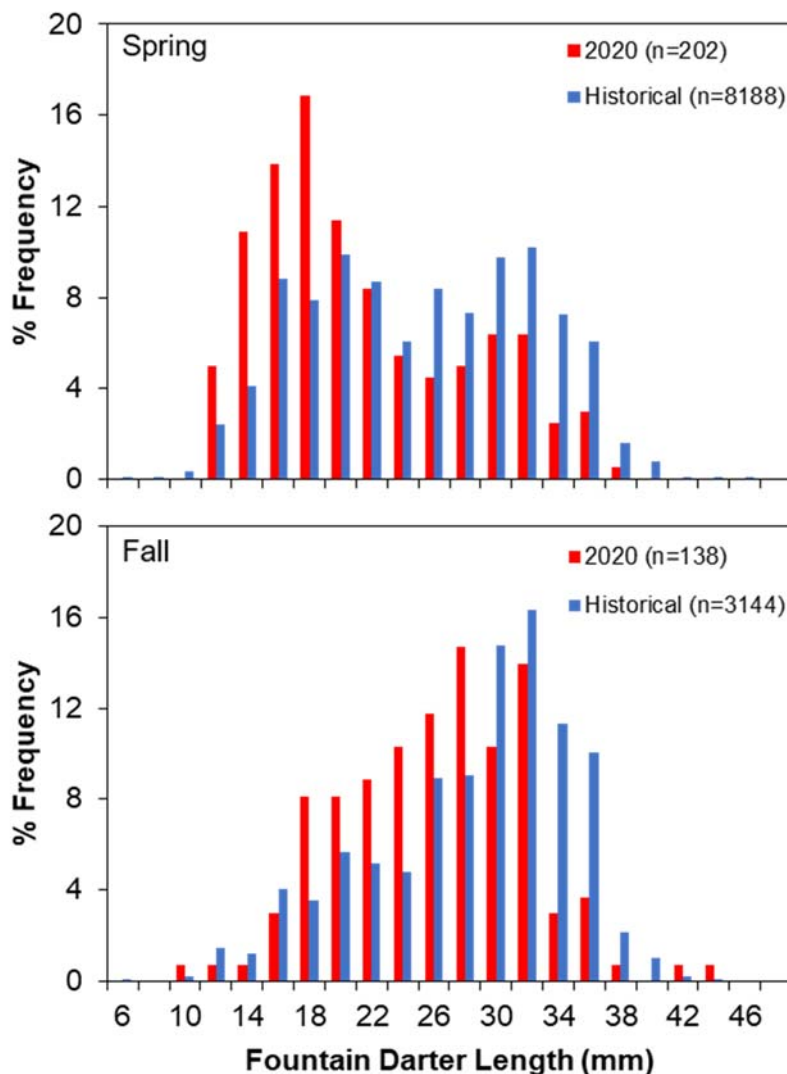


Figure 16. Length-frequency (%) histograms comparing 2020 and historical (2001–2019) Fountain Darter lengths among seasons based on drop-net sampling.

Among vegetation types, median darter length was lowest in *Hygrophila* (20 mm) and highest in *Sagittaria* (31 mm) (Figure 17). For violin plots, wider gray sections denote higher probabilities of observations at a given length (Hintze and Nelson 1998). The majority of Fountain Darters occurred in *Cabomba* and *Hygrophila*, and within these vegetation types, a greater probability of observations occurred at lengths of approximately 20 mm or less. In contrast, the majority of darters in *Hydrocotyle* were at lengths of approximately 25 mm or greater (Figure 17). Previous research found that increased representation of smaller individuals may be attributed to slower current velocities within vegetation patches (Alexander and Phillips 2012), which may partially explain current observations. For example, mean-column velocities were less variable in *Cabomba* (0.00–0.17 ft/s) and *Hygrophila* (0.03–0.38 ft/s), compared to *Hydrocotyle* (0.05–1.66 ft/s).

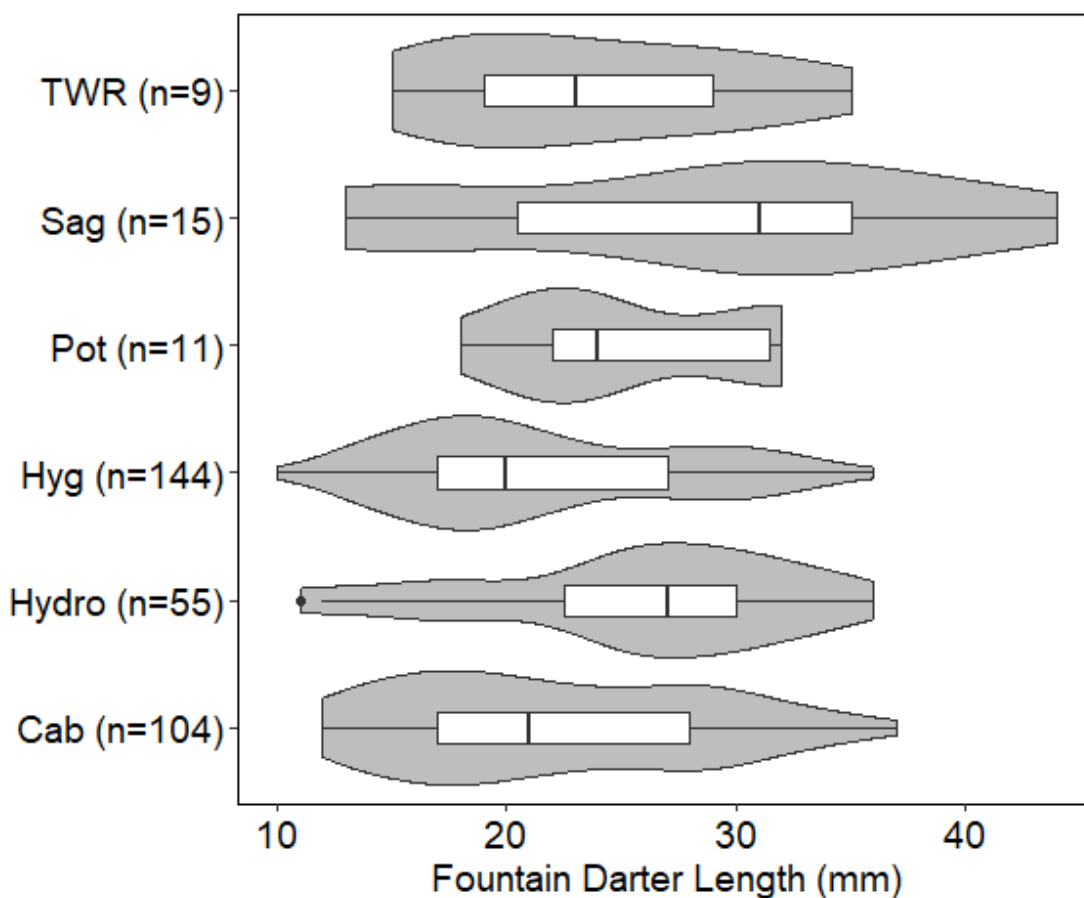


Figure 17. Box (median, quartile, range) and violin (probability density; grey polygons) plots displaying Fountain Darter lengths among dominant vegetation types during 2020 drop-net sampling. Vegetation abbreviations include *Cabomba* (Cab), *Hydrocotyle* (Hydro), *Hygrophila* (Hyg), *Potamogeton* (Pot), *Sagittaria* (Sag), and Texas Wild-Rice (TWR).

Timed Dip-Net Surveys

A total of 765 Fountain Darters were observed during 10.50 person-hours (ph) of timed dip-netting effort in 2020. Site CPUE ranged from 6.00 to 188.00 fish/ph. Median CPUE was greater in summer (76.70 fish/ph) compared to spring (50.40 fish/ph) and fall (55.70 fish/ph). Median densities in 2020 were greater than historical observations by about 10 to 35 fish/ph and confidence intervals overlapped (Figure 18).

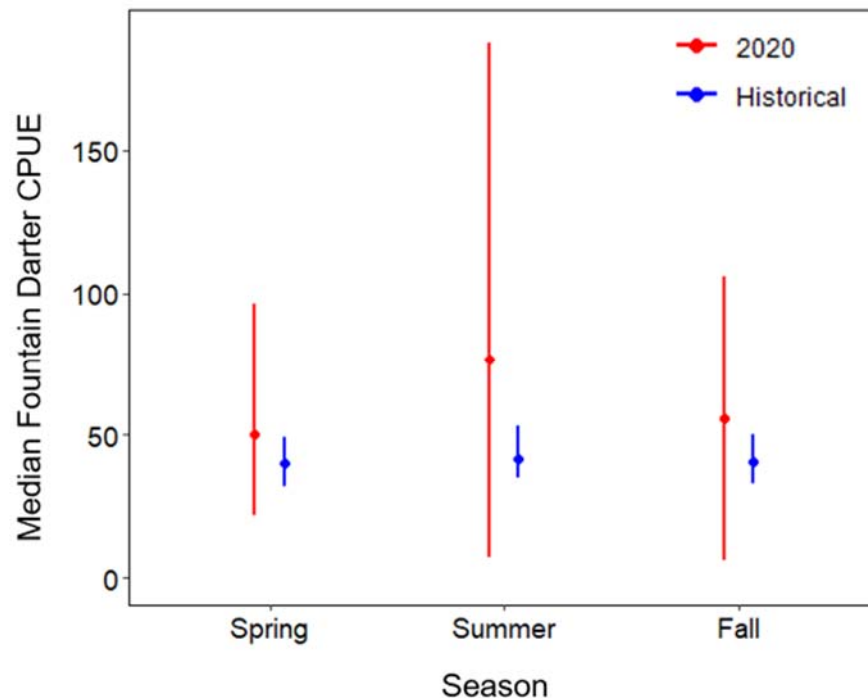


Figure 18. Current and historical (2001–2019) median Fountain Darter CPUE (fish/ph \pm 95% CI) among seasons during timed surveys.

Annual trends showed that median CPUE in 2020 were above the long-term median for all reaches. At Spring Lake, median CPUE was highest in 2016 (140.00 fish/ph), and lowest in 2013 (92.00 fish/ph) and 2014 (71.00 fish/ph). At City Park, median Fountain Darter CPUE was greatest in 2014 (53.00 fish/ph) and 2020 (51.00 fish/ph), about 20 fish/ph higher than the long-term median. The lowest median density at City Park occurred in 2017 (12.00 fish/ph) and confidence intervals did not overlap. At I-35, median CPUE generally increased over time, being well below the lower long-term median (36.00 fish/ph) without confidence interval overlap in 2013 (18.00 fish/ph) and highest in 2020 (63.00 fish/ph). Median CPUE at the Lower River was below the long-term median (5.20 fish/ph) in 2015 to 2019 (0.00–3.20 fish/ph) and above in 2013 (12.00 fish/ph), 2014 (11.00 fish/ph), and 2020 (11.00 fish/ph). Confidence intervals overlapped all years except 2018 (Figure 19).

Fountain Darter lengths in the spring ranged from 10 to 39 mm (median=24). The spring length-frequency histogram displayed that individuals at length bins 22 to 30 mm contained the majority of observations (54.17%). In summer, lengths ranged from 10 to 40 mm (median=27), and the length-frequency histogram exhibited a slightly left-skewed distribution. Length frequencies were highest in bins 28 mm (20.00%) and 30 mm (16.17%). Fall lengths ranged from 9 to 35 mm (median=25) and also exhibited a left-skewed distribution. Length frequencies were highest in bins 30 mm (17.54%) and 28 mm (15.20%). Distributional shapes were similar to historical observations among all seasons (Figure 20).

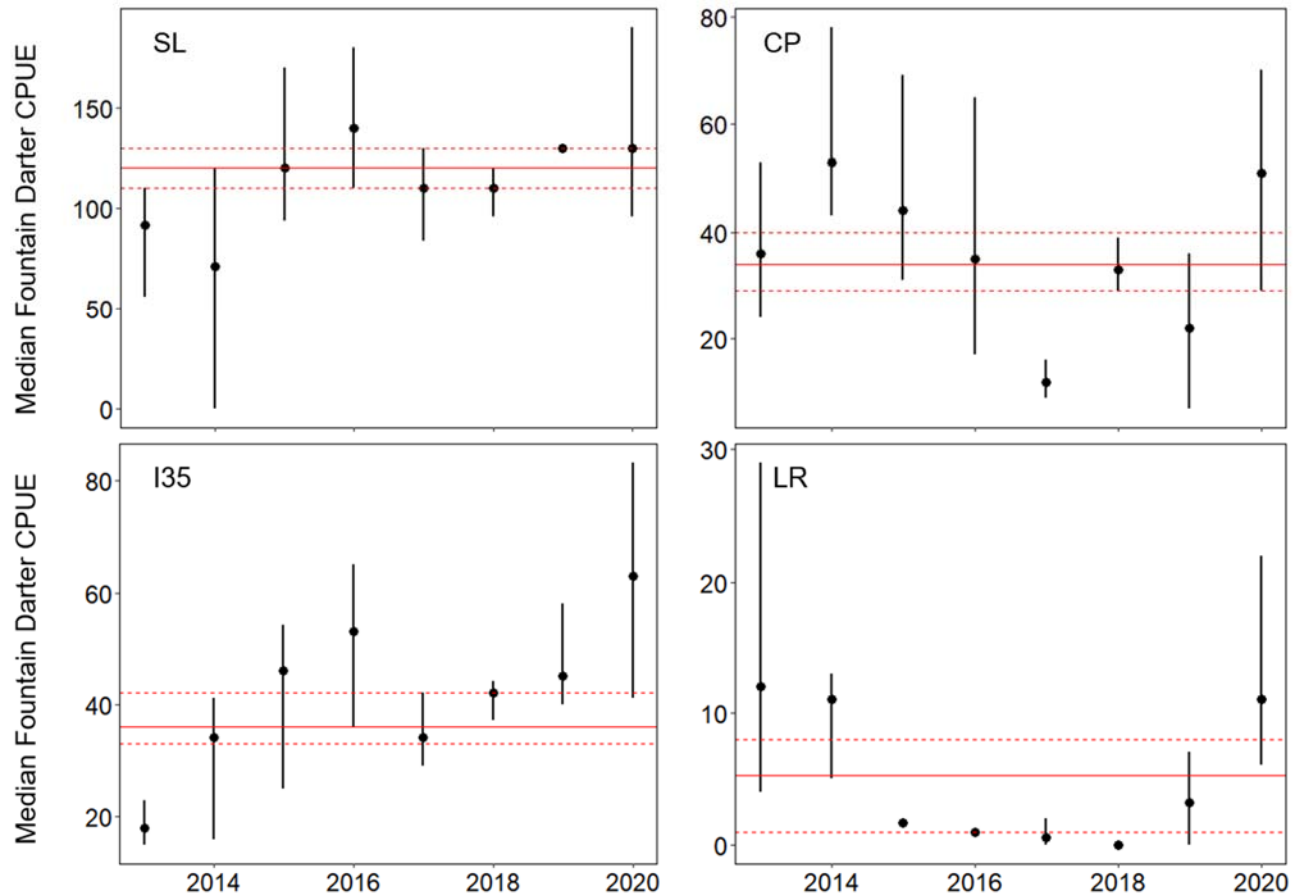


Figure 19. Annual trends of median Fountain Darter CPUE (fish/ph \pm 95% CI) at Spring Lake (SL), City Park (CP), I-35, and Lower River (LR) from 2013–2020 during timed surveys. Solid and dashed red lines denote long-term (2001–2020) medians and 95% confidence intervals, respectively.

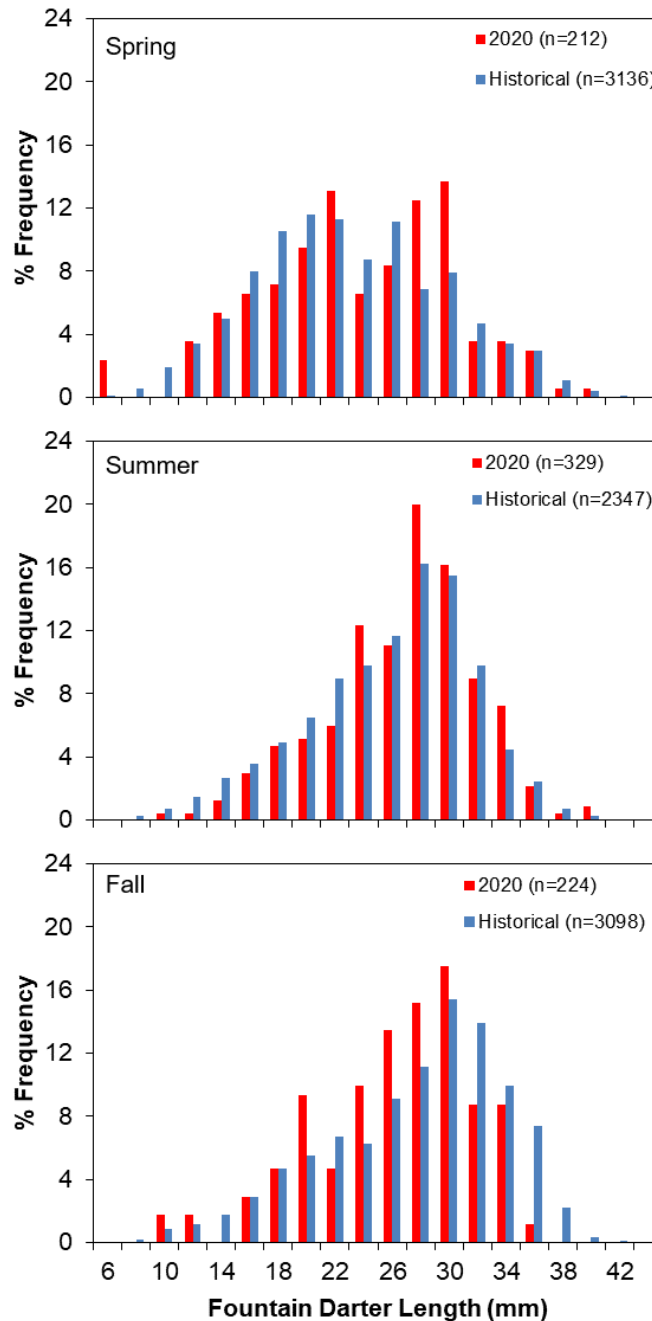


Figure 20. Length-frequency (%) histograms comparing 2020 and historical (2001–2019) Fountain Darter lengths among seasons based on timed dip surveys.

Among reaches, median darter length was lowest at Spring Lake and I-35 (26 mm) and highest at Lower River (29 mm). The greatest length probability at all reaches occurred at or above their median, demonstrating that darters from approximately 25 to 30 mm are the most commonly collected size class. Individuals less than 10 mm were observed only at Spring Lake. However, probabilities at observations below the median were higher in City Park and I-35 compared to Spring Lake and Lower River, which demonstrates a greater representation of smaller darters of approximately 20 mm or less (Figure 21).

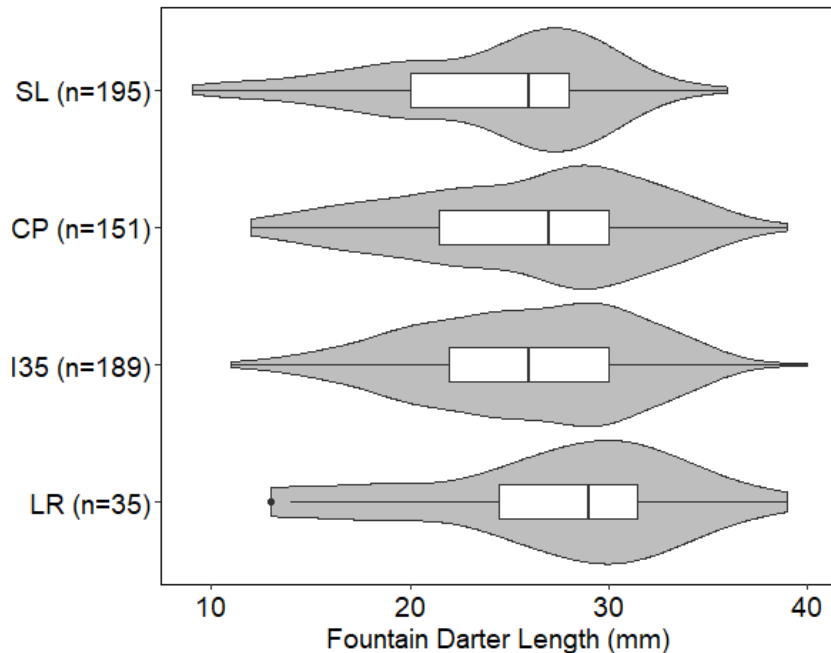


Figure 21. Box (median, quartile, range) and violin (probability density) plots displaying Fountain Darter lengths among reaches during 2020 timed surveys. Reach abbreviations include Spring Lake (SL), City Park (CP), and Lower River (LR).

Random-Station Dip-Net Surveys

A total of 93 Fountain Darter occurrences were observed at 210 random-stations for an overall occurrence of 44.29%. A summary of the vegetation types sampled can be found in Table 11.

Table 11. Summary of vegetation types sampled among reaches during 2020 random-station surveys.

VEGETATION TYPE	SL	SLD	CP	I35
<i>Cabomba</i> ¹	14	14	0	0
<i>Hydrilla</i> ¹	0	0	0	1
<i>Hydrocotyle</i> ¹	0	4	0	1
<i>Hygrophila</i> ¹	0	0	7	18
<i>Ludwigia</i> ¹	0	0	0	1
<i>Myriophyllum</i> ¹	1	1	0	0
<i>Potamogeton</i> ²	0	2	4	0
<i>Rhizoclonium</i> ¹	2	2	0	0
<i>Sagittaria</i> ²	13	18	0	11
Texas Wild-Rice ²	0	34	49	13

¹Denotes ornate vegetation taxa with complex filamentous or leaf structure

²Denotes long broad or ribbon-like, austere-leaved vegetation taxa

Among seasons, occurrence was greater in summer (57.14%) than spring (45.71%) and fall (30.00%). Further, 2020 occurrence was lower than historical trends in fall (53.15%) and spring (55.33%), and fall confidence intervals lacked overlap (Figure 22).

Among vegetation types, occurrence was highest in *Hydrocotyle* (80.00%), *Hygrophila* (72.00%), and *Cabomba* (71.43%). Occurrence was lowest in Texas Wild-Rice (22.92%) and *Potamogeton* (33.33%). Most 2020 observations were similar to historical observations. *Hydrocotyle* and *Rhizoclonium* in 2020 were about 18% and 43% less than historical observations, respectively, while *Hygrophila* was about 11% greater, although confidence intervals overlapped for all three taxa (Figure 22).

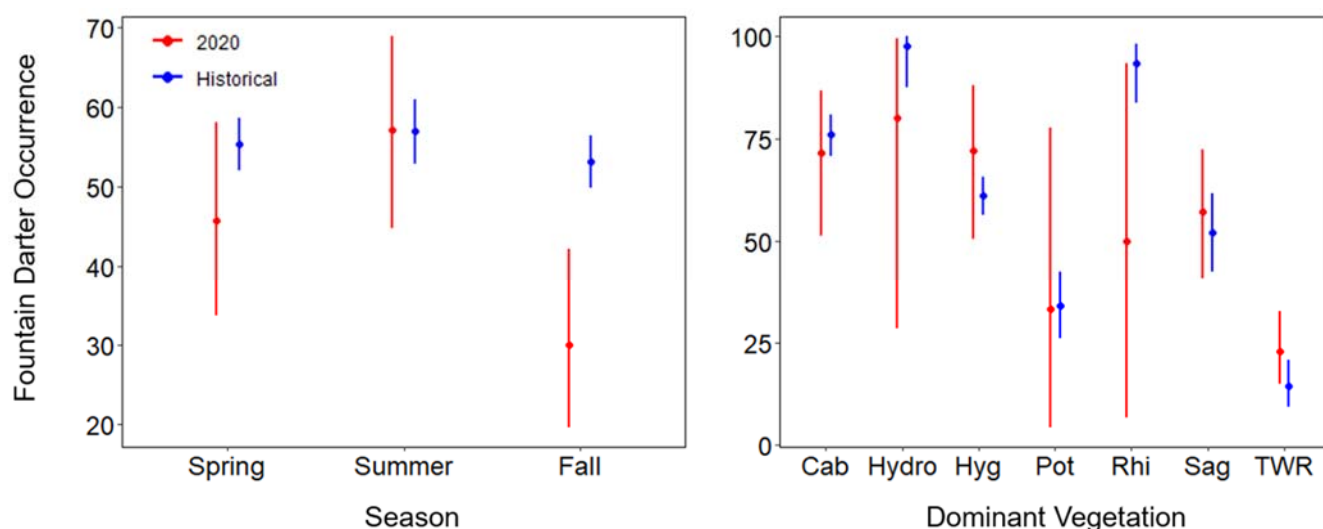


Figure 22. Current and historical (2001–2019) Fountain Darter occurrence (% \pm 95% CI) among seasons and dominant vegetation types observed during random-station sampling. Error bars denote 95% confidence intervals. Vegetation abbreviations include *Cabomba* (Cab), *Hydrocotyle* (Hydro), *Hygrophila* (Hyg), *Potamogeton* (Pot), *Rhizoclonium* (Rhi), *Sagittaria* (Sag), and Texas Wild-Rice (TWR). Results for *Hydrilla*, *Ludwigia*, and *Myriophyllum* are not presented due to the lack of replicates ($n=1$) for each taxon.

Annual trends showed that differences in occurrence between 2020 and long-term trends were about 10% or less at all reaches and confidence intervals overlapped. Spring Lake occurrence was highest in 2019 (76.67%), about 8% greater than long-term occurrence. Annual occurrence at Spring Lake Dam was greater than the long-term occurrence (51.33%) in 2017 (61.33%) and similar or slightly below long-term occurrence from 2018 to 2020 (46.67–50.67%). At City Park, the greatest differences in annual occurrence from the long-term occurrence (28.33%) was in 2018 (35.00%) and 2019 (21.67%), although their confidence intervals did overlap. Annual trends at I-35 were similar to long-term occurrence (47.78%) from 2017 to 2020 (44.44–51.11%) (Figure 23).

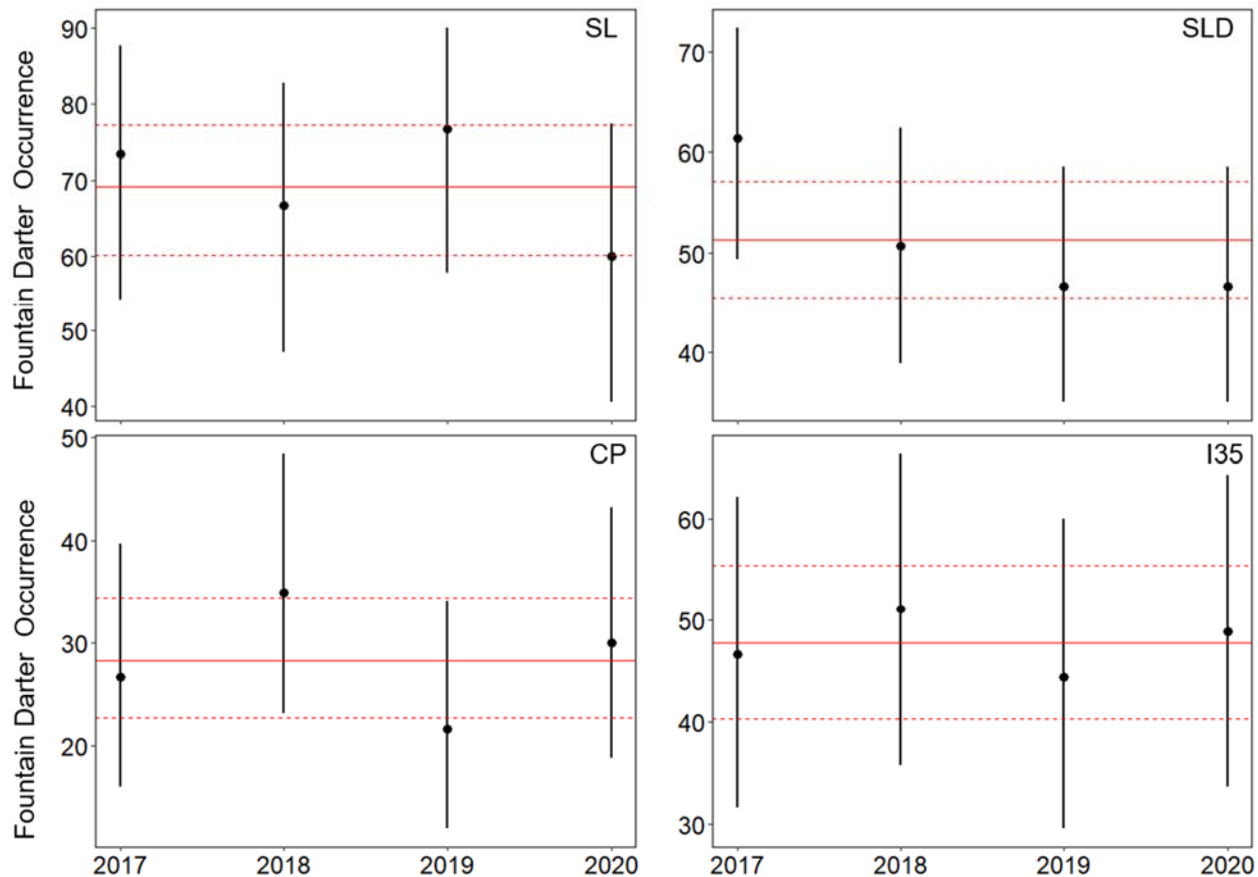


Figure 23. Annual trends of Fountain Darter occurrence (% \pm 95% CI) at Spring Lake (SL), Spring Lake Dam (SLD), City Park (CP), and I-35 from 2013–2020 during random-station sampling. Solid and dashed red lines denote long-term (2017–2020) medians and 95% confidence intervals, respectively.

Fish Community Sampling Results

A total of 5,413 fishes, represented by 10 families and 30 species, were observed during 2020 sampling. Overall community summaries can be found in Appendix C. Among reaches, median species richness was higher in the Lower River (15 species) compared to all other reaches (10–12 species) and generally increased from upstream to downstream. Median diversity was highest in the Middle River (2.00) and Lower River (1.70), and was lowest at Veterans Plaza (0.75). At all reaches, median species richness and diversity were similar to historical observations (Figure 24).

Fountain Darter relative abundance was greatest in the Middle River (18.00%) and lower at Spring Lake (4.60%), Sewell Park (5.10%), and Lower River (4.30%). Fountain Darters in 2020 represented a higher percentage of the overall fish community compared to historical observations by about 5 to 10% at Veterans Plaza, Middle River, and Lower River. Fountain Darters in 2020 were a smaller component of the assemblage at Spring Lake and Sewell Park, but only by about 3 to 5%. It should be noted that % relative abundance is not a measure of population performance and is instead a metric that assesses relative community composition. Median spring fish relative abundance was lower at Sewell Park (41.00%) and the Lower River

(21.00%) compared to other reaches (83.00–93.00%). Lastly, median spring fish relative abundance was higher than historical observations at the Middle River and lower than historical observations at Sewell Park (Figure 24).

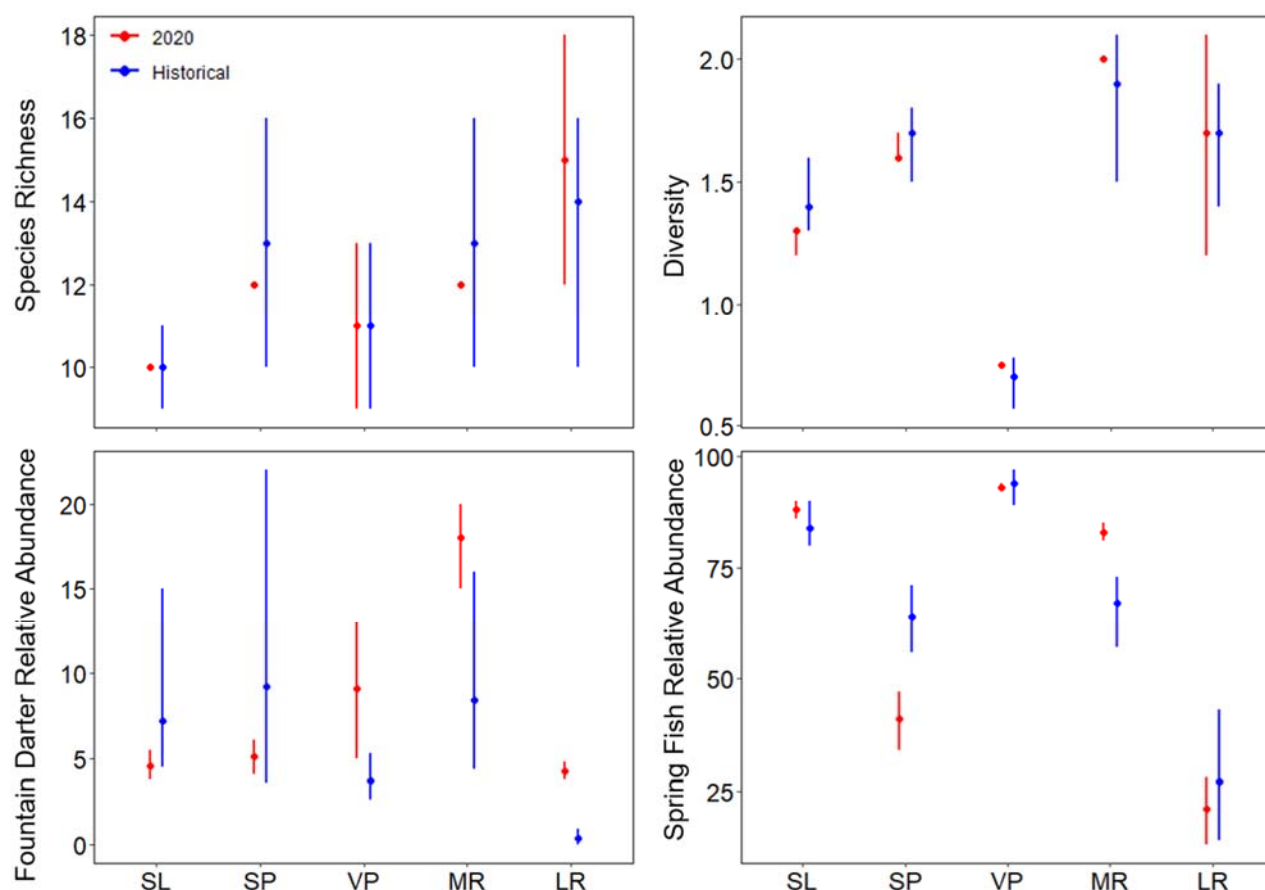


Figure 24. Current and historical (2014–2019) median species richness, diversity, Fountain Darter relative abundance (%), and spring fish relative abundance (%) among reaches. Error bars denote 95% confidence intervals. Abbreviations include Spring Lake (SL), Sewell Park (SP), Veterans Plaza (VP), Middle River (MR), and Lower River (LR).

San Marcos Salamander Survey Results

Biologists observed 253 San Marcos salamanders in spring and 226 salamanders in fall, totaling 479 salamander observations. At the Hotel Site (Site 2), salamander densities were lower than the long-term average for spring (still within one standard deviation from the mean) but increased in fall to above the long-term average. San Marcos salamander densities observed during spring and fall 2020 were lower than the long-term averages at the Spring Lake Dam Site (Site 21) and higher than the long-term averages at the Riverbed Site (Site 14) (Figure 25).

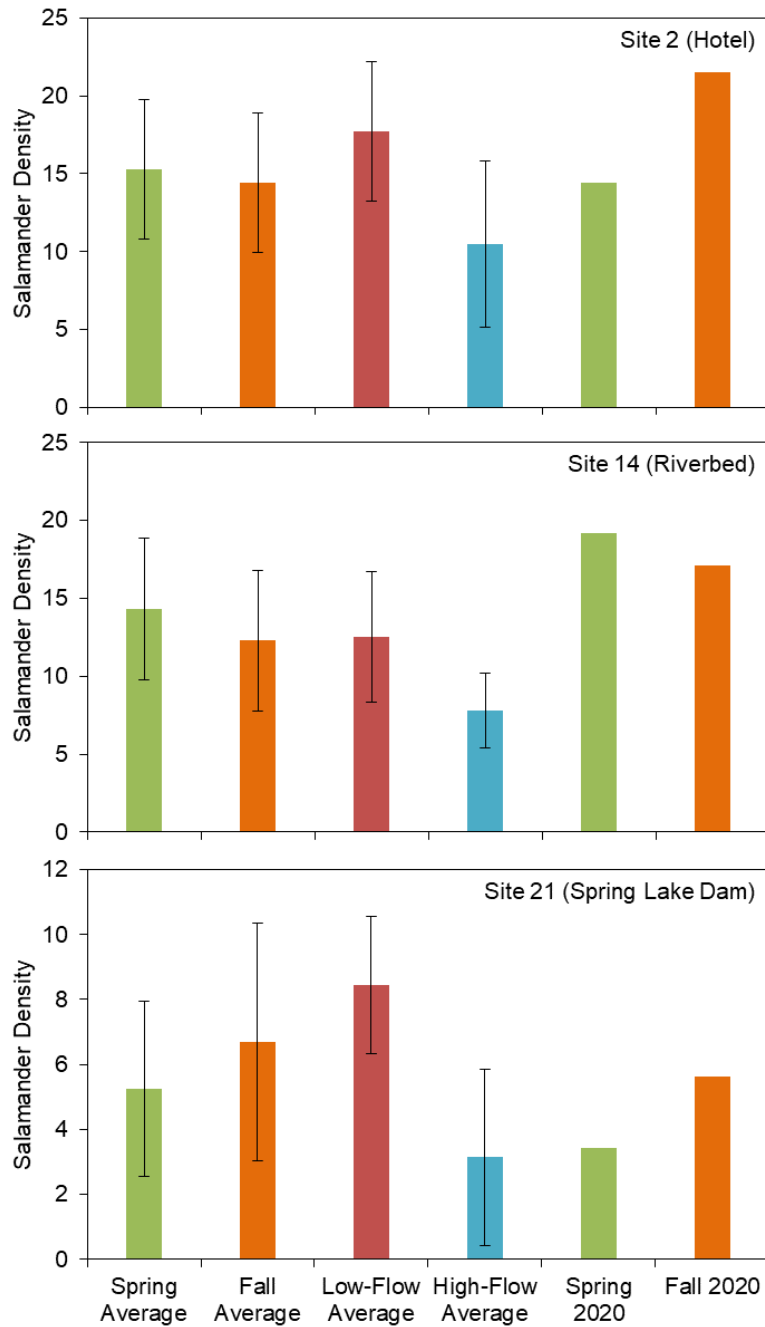


Figure 25. San Marcos Salamander densities (salamanders/m²) at Site 2 (Hotel Site), Site 14 (Riverbed), and Site 21 (Spring Lake Dam) in 2020, with the long-term (2001–2020) average for each sampling event. Error bars for long-term averages represent the standard deviation of the mean.

Macroinvertebrate Sampling Results

Benthic macroinvertebrate rapid bioassessment data were collected during both the spring and fall sampling events in 2020 (raw data presented in Appendix C). A total of 646 and 671 individual macroinvertebrates, representing 33 and 40 unique taxa, were sampled in spring and fall, respectively. Altogether, 44 unique taxa were represented among all samples from 2020. All samples in 2020 consisted of kick samples in suitable cobble-gravel habitat with no snag-sampling supplements.

Metric scores for calculating the B-IBI can be found in Table 12. The overall results of this metric analysis contribute to the B-IBI scores and assessment of the aquatic-life- use (Figure 26). The spring sample from Spring Lake was “Limited”. The fall sample from Spring Lake and spring sample from City Park were described from these assessments as “Intermediate” in supporting a balanced, integrated, adaptive community of organisms. The fall samples from Spring Lake Dam, and I-35 showed “Exceptional” support for aquatic life. All other samples were found to be “High” in terms of supporting aquatic life.

Table 12. 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
No. 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

In summary, similar to years past, areas of more lentic-type habitat (e.g., Spring Lake), scored lower because these communities are naturally different compared to the swift-flowing, least-disturbed reference streams upon which the scoring metrics are based. Downstream and tailwater areas with more-lotic conditions generally scored higher because the habitat is more similar to the reference streams. It is interesting to note that the City Park fall sample was included in the “High” classification for the first time since these protocols were implemented. It is possible that reduced recreational activity due to COVID-19 restrictions improved the habitat quality of this site by limiting substrate disturbance. It should also be noted that most reference streams do not exhibit the stenothermal conditions that are present within the upper San Marcos River, and this may result in differing community composition. Additional monitoring will allow development of a reference dataset, one that is specific to this unique ecosystem. Comparison to other spring systems not as strongly influenced by anthropogenic activities could be useful for developing a more-specific assessment tool for these systems.

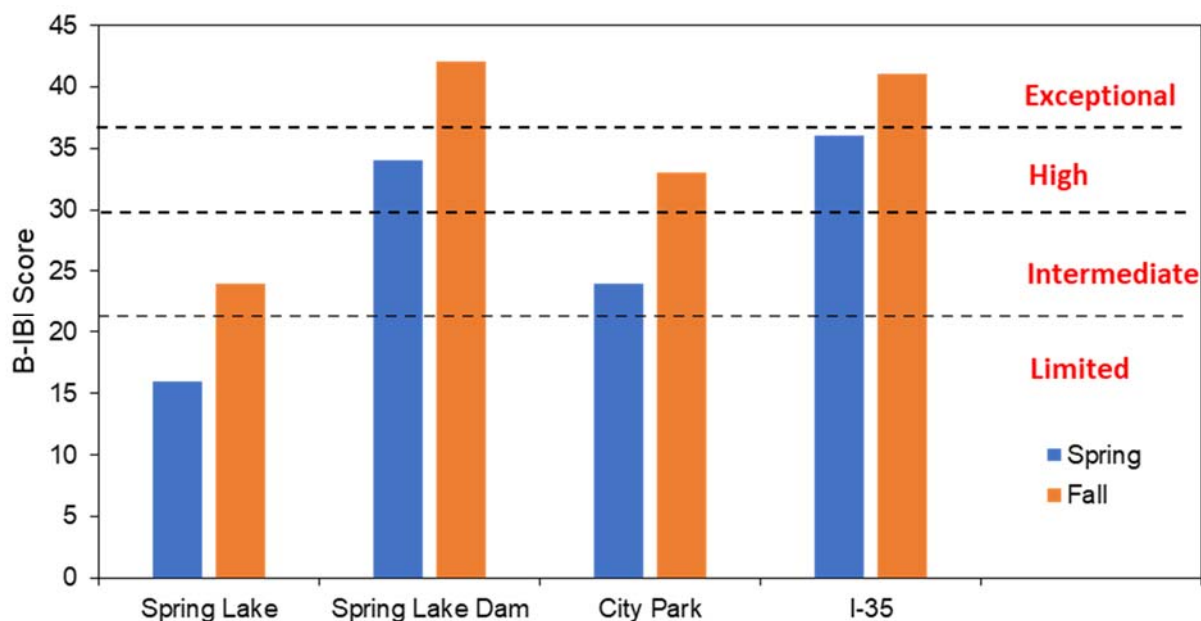


Figure 26. Benthic macroinvertebrate Index of Biotic Integrity (B-IBI) scores and aquatic-life-use point-score ranges for San Marcos River sample sites. "Exceptional" indicates highest quality habitats.

CONCLUSIONS

Aquatic vegetation coverage in 2020 was higher than long-term seasonal averages at Spring Lake Dam and I-35, and were similar to long-term averages at City Park. Increased total coverage at Spring Lake Dam may be attributed to minimal recreational disturbance during COVID-19 restrictions. Similarly, limited recreation at City Park resulted in expansion of Texas Wild-Rice into new areas. Texas Wild-Rice was the most dominant species among all reaches. Annual mapping of Texas Wild-Rice showed coverage of 14,747.10 m², which is the highest record. Since 2015, Texas Wild-Rice coverage in the upper San Marcos River has increased about 10,000 m².

Fountain Darter densities and occurrence in 2020 were higher in ornate vegetation (e.g., *Cabomba* and *Hygrophila*) compared to long, austere-leaved taxa (e.g., *Sagittaria* and Texas Wild-Rice), which supports previous research (Schenck and Whiteside 1976; Linam et al. 1993; Alexander and Phillips 2012). Further, smaller darters at lengths of approximately 20 mm or less were more frequently observed in ornate vegetation (Alexander & Phillips 2012). Among seasons, darters 20 mm or less were more frequent in spring. Fountain Darter median density and occurrence were below spring and fall historical trends during drop-net and random dip-net sampling, respectively. In contrast, median catch rates were above historical medians for all seasons during timed dip-net surveys. Annual trends in 2020 showed that Fountain Darter drop-net densities were lower than the long-term median at all reaches, while catch rates from timed dip-netting were above long-term medians. Fountain Darter occurrence from random-station dip-netting was generally similar to long-term trends for all reaches. The differences in seasonal and annual trends between these population metrics utilized in this program shows the importance of using multiple sampling methods to assess Fountain Darter populations. For example, Texas Wild-Rice was the most-sampled vegetation type for random-station dip-net surveys and is less-

suitable habitat compared to other vegetation. Timed dip-net surveys focus mainly on more-suitable ornate vegetated habitats, which is likely why catch rate results were different from the other sampling methods. In sum, the vegetation types sampled each year appear to have a large influence on Fountain Darter population trends. In the future, assessing habitat use versus availability (i.e., relative habitat use) may prove useful for elucidating potential mechanisms of observed trends during annual sampling efforts.

San Marcos Salamander densities at the Hotel Site were lower than the long-term average for spring but increased above the long-term average in fall. San Marcos salamander densities observed during the spring and fall sampling events in 2020 were lower than the long-term averages at the Spring Lake Dam Site and higher than the long-term averages at the Riverbed Site. Similar to Fountain Darters, future assessments of San Marcos Salamander population trends would benefit from analyzing relative habitat use. As in years past, macroinvertebrate sampling showed that areas of more lentic-type habitat (e.g., Spring Lake), scored lower because these communities are naturally different than the swift-flowing, least-disturbed reference streams. Downstream and tailwater areas with more-lotic conditions generally scored higher because the habitat is more similar to the reference streams.

Overall, 2020 observations of habitat and species condition remain stable in Spring Lake, while variable conditions continue in the San Marcos river. Continued monitoring is paramount in evaluating responses of this diverse and dynamic system to a suite of ever-changing hydrologic, climatic, and anthropogenic 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: FIGURES AND AQUATIC VEGETATION MAPS

FIGURES

Water Temperature Results

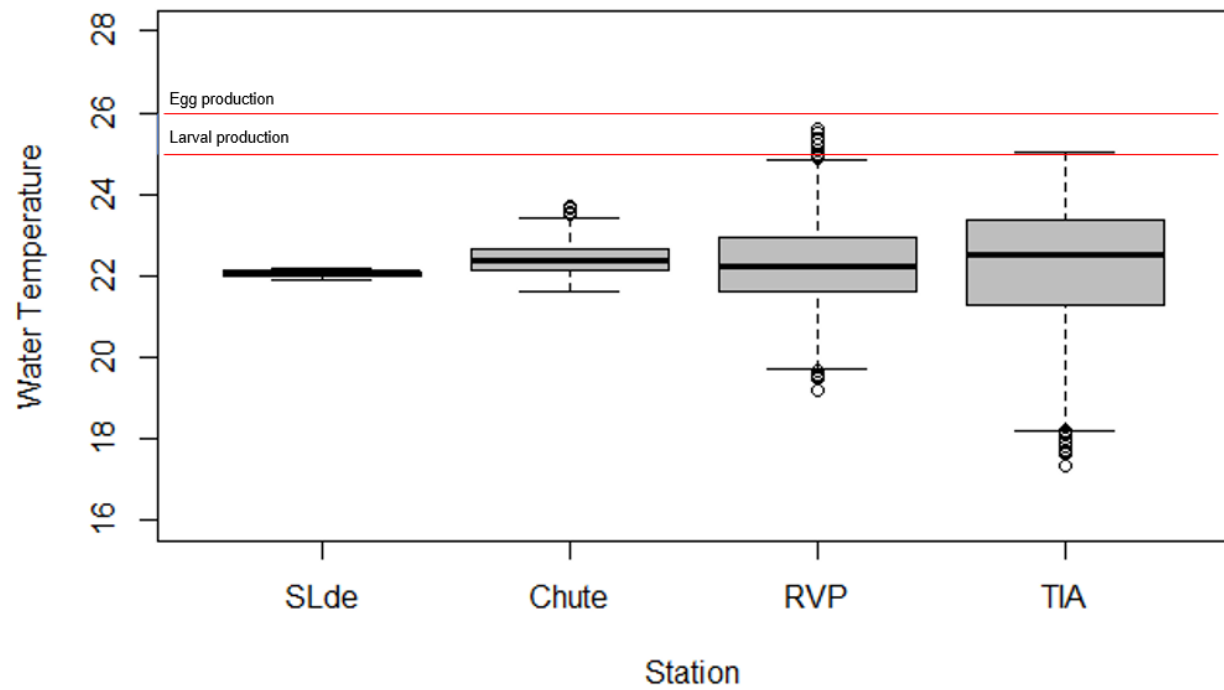


Figure B1. Boxplots (median, quantile, range) displaying 2020 water temperatures at Spring Lake Deep (SLde; 1/1-8/11), Chute (4/28-9/18), Rio Vista Park (RVP; 1/1-10/15), and Thompson Island Artificial (TIA; 1/1-10/15).

Texas Wild-Rice Annual Observations Results

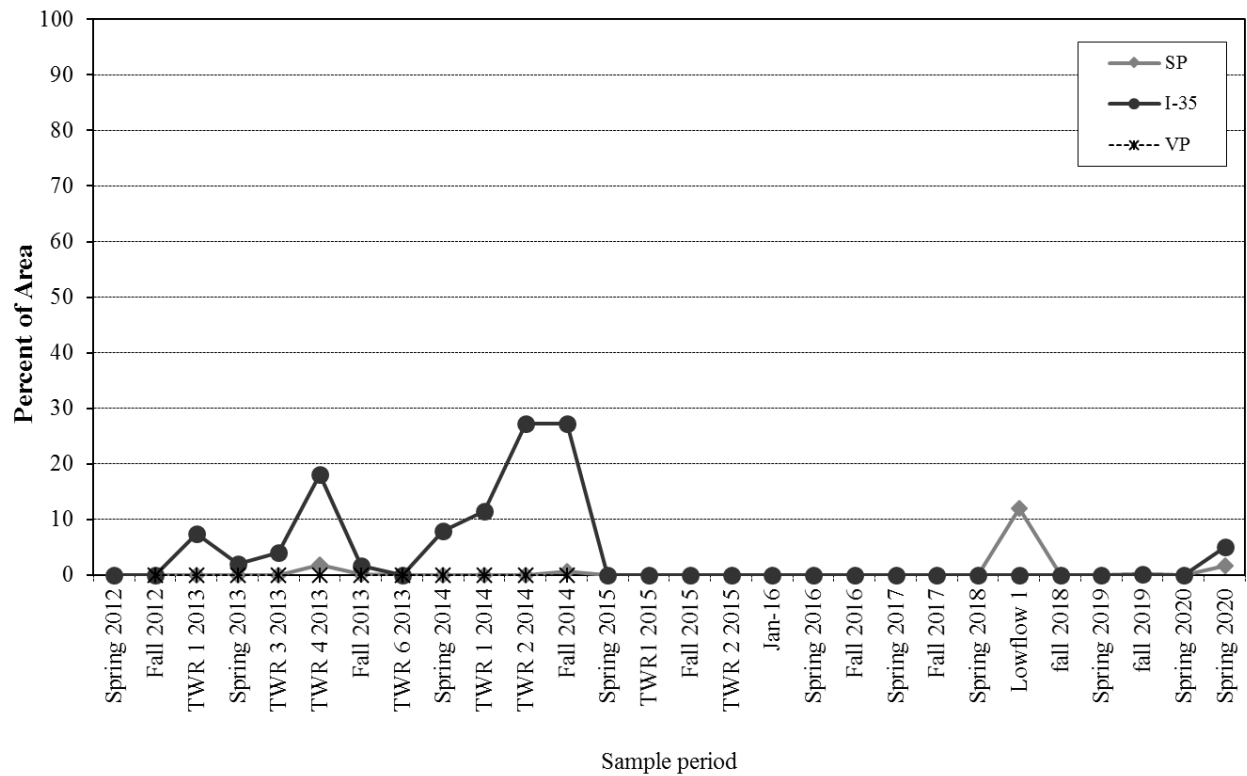


Figure B2. Percent (%) of Texas Wild-Rice stands < 0.5 feet at Sewell Park (SP), I-35, and Veterans Plaza (VP) from 2012-2020.

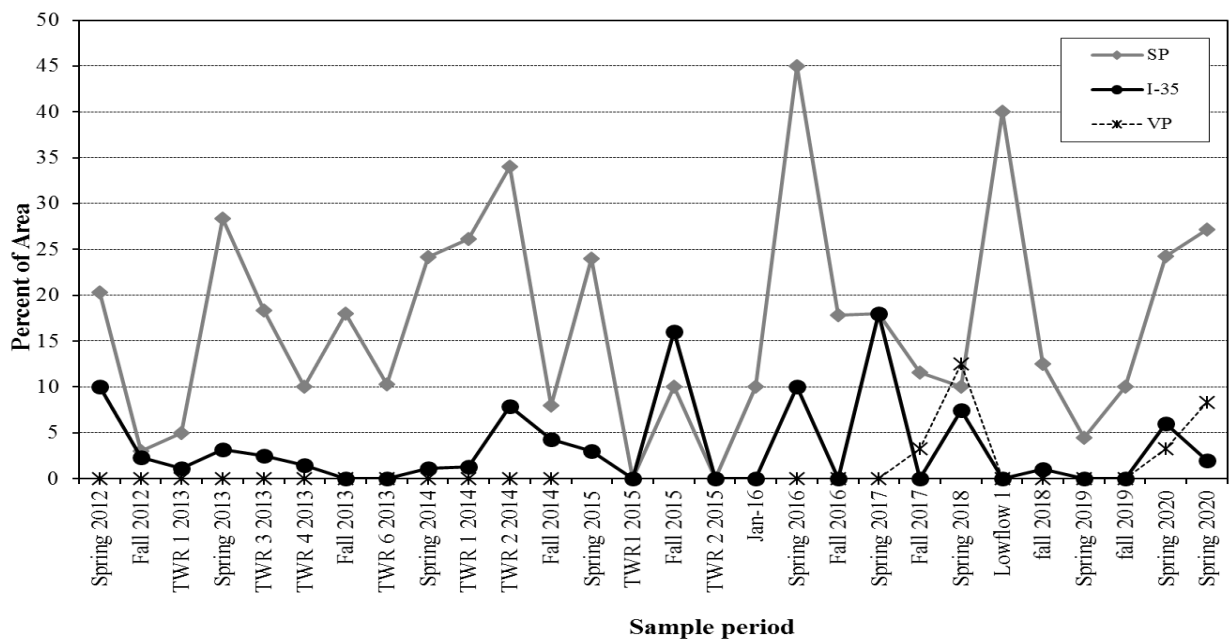


Figure B3. Percent (%) of flowering and seeding Texas Wild-Rice stands at Sewell Park (SP), I-35, and Veterans Plaza (VP) from 2012-2020.

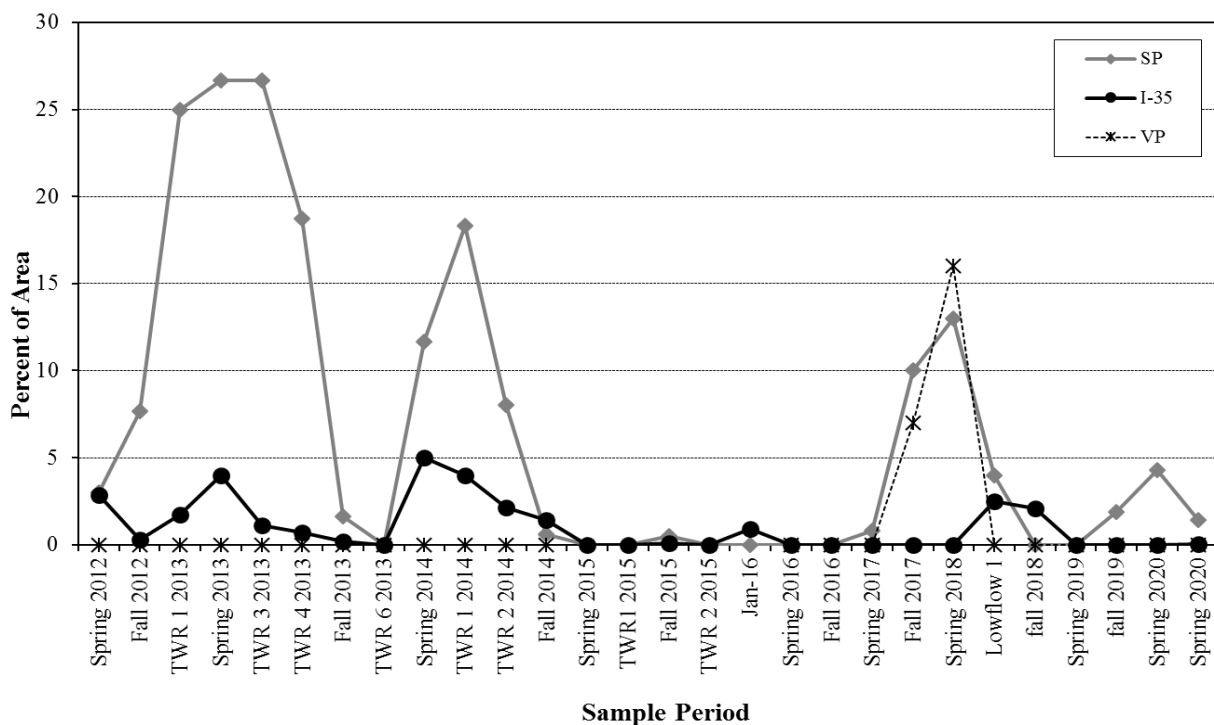


Figure B4. Percent (%) of Texas Wild-Rice stands covered by vegetation mats at Sewell Park (SP), I-35, and Veterans Plaza (VP) from 2012-2020.

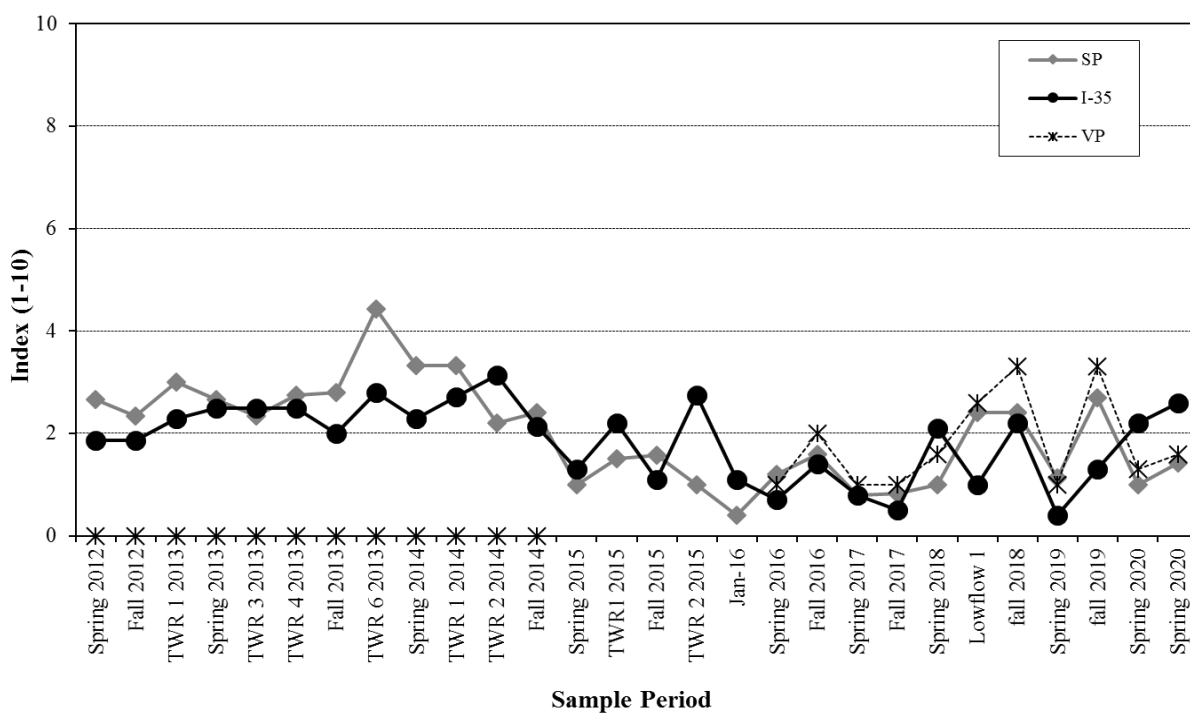


Figure B5. Index of Root Exposure for Texas Wild-Rice stands at Sewell Park (SP), I-35, and Veterans Plaza (VP) from 2012-2020.

AQUATIC VEGETATION MAPS

Long-Term Biological Goals Study Reaches

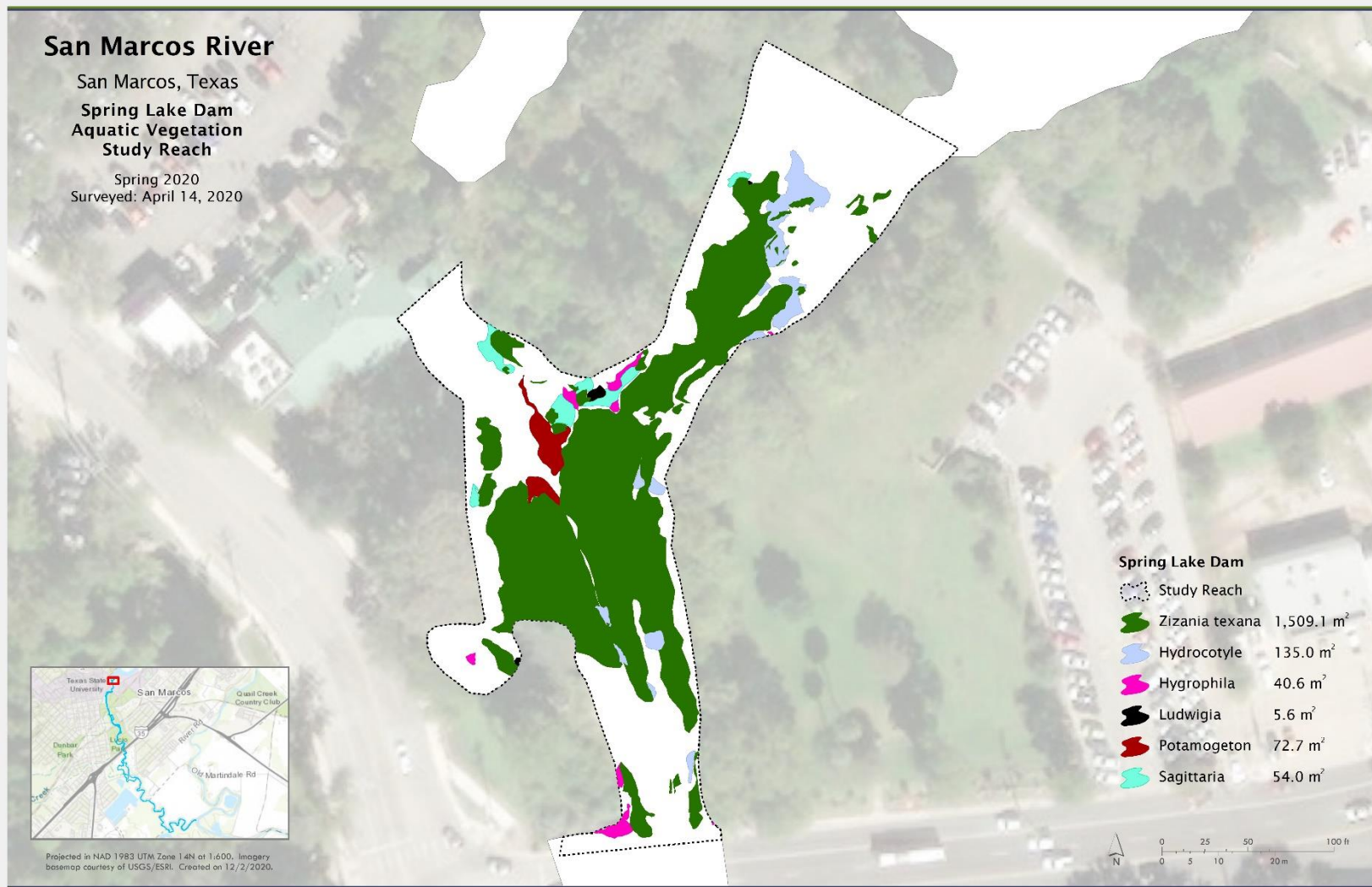


Figure B6. Map of aquatic vegetation coverage at Spring Lake Dam Study Reach in spring 2020.

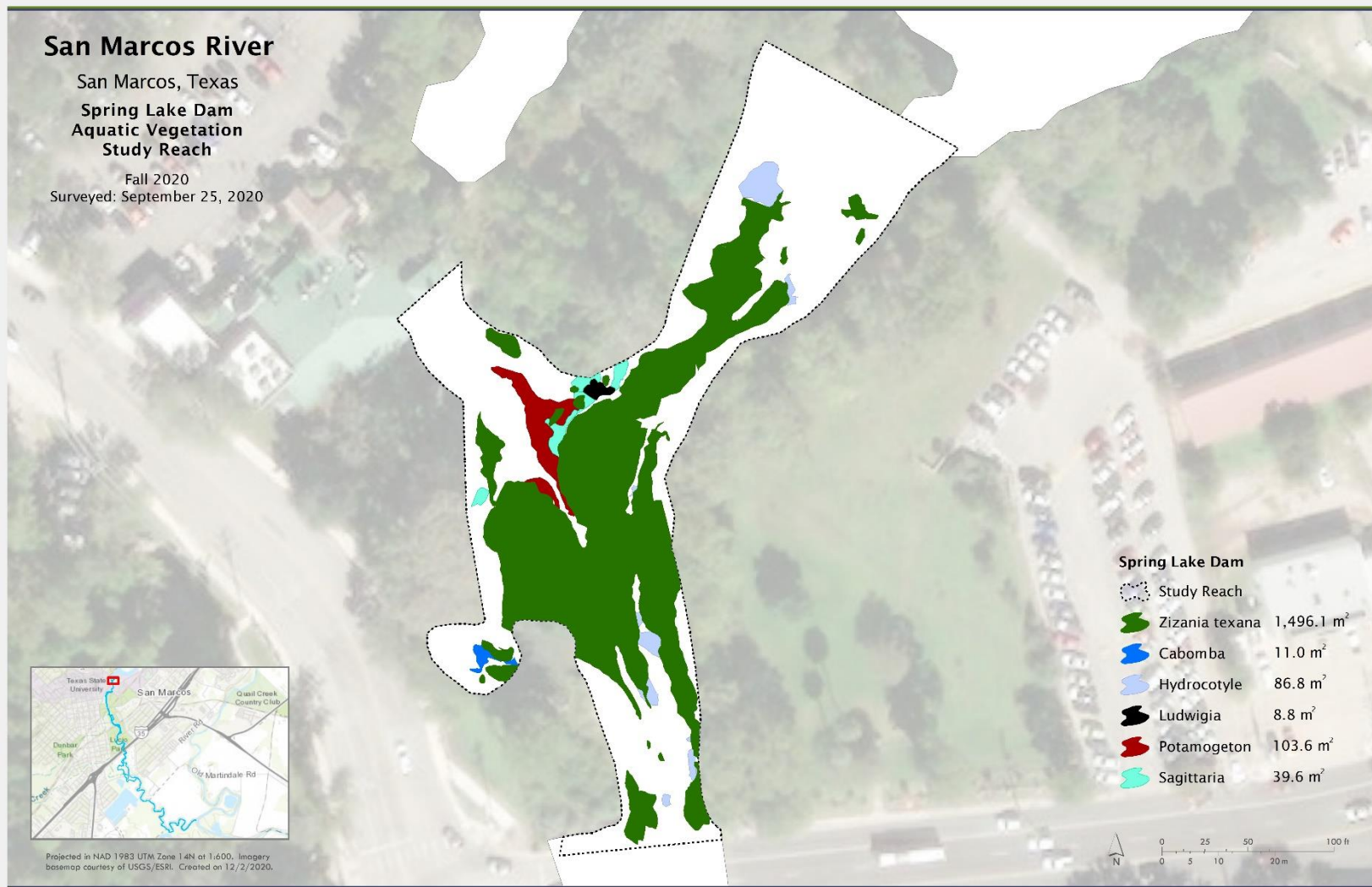


Figure B7. Map of aquatic vegetation coverage at Spring Lake Dam Study Reach in fall 2020.

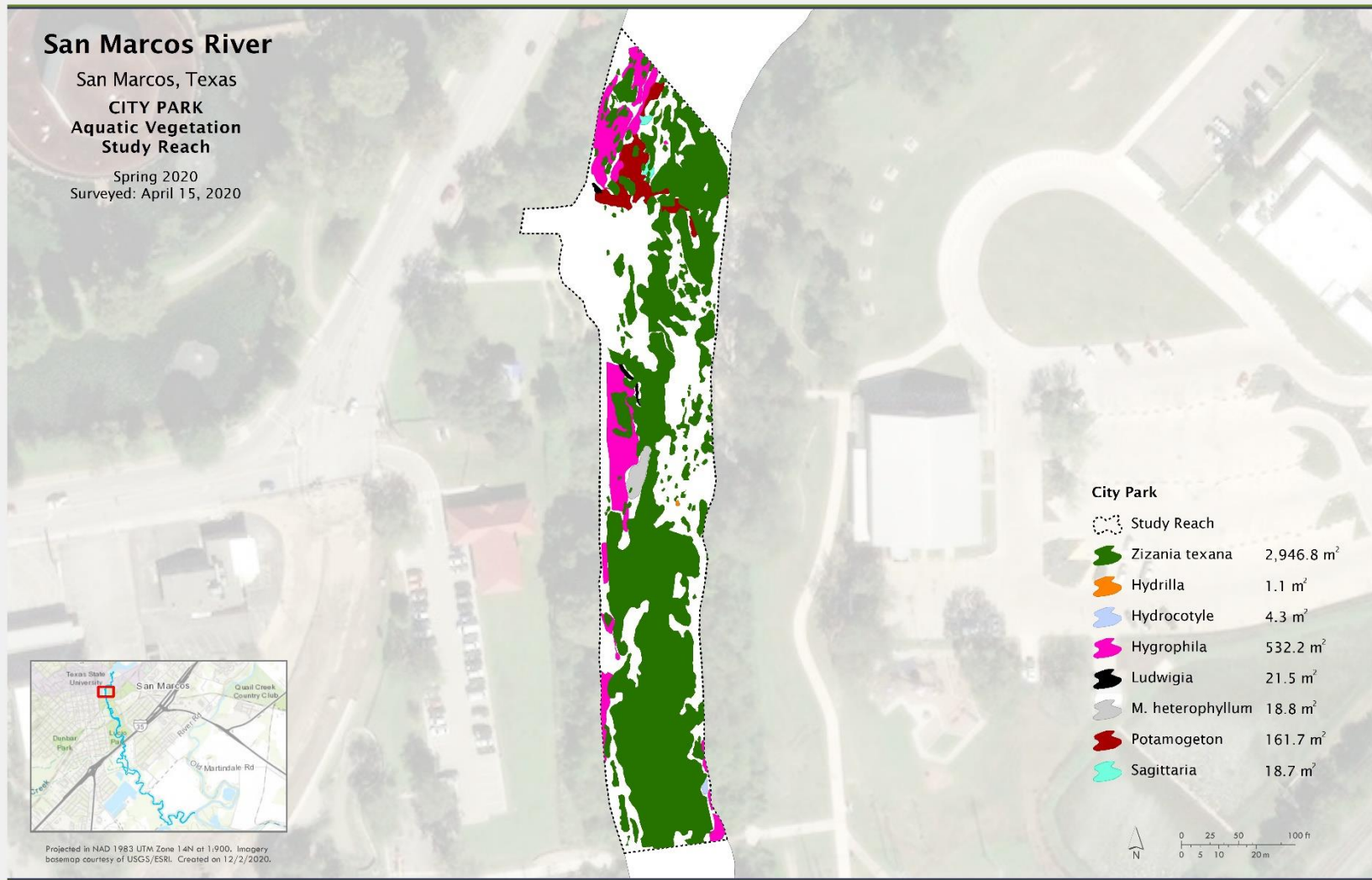


Figure B8. Map of aquatic vegetation coverage at City Park Study Reach in spring 2020.

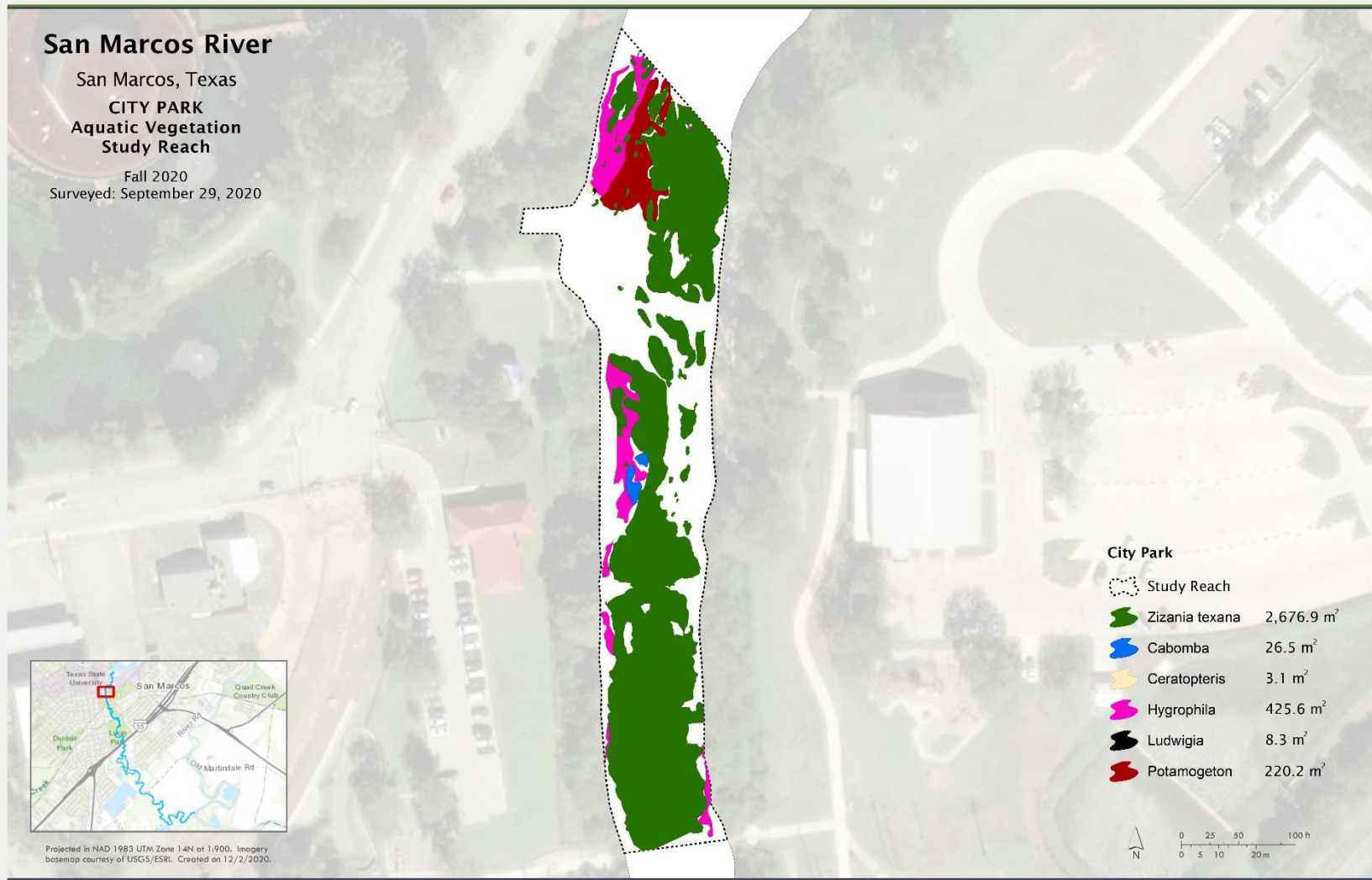


Figure B9. Map of aquatic vegetation coverage at City Park Study Reach in fall 2020.

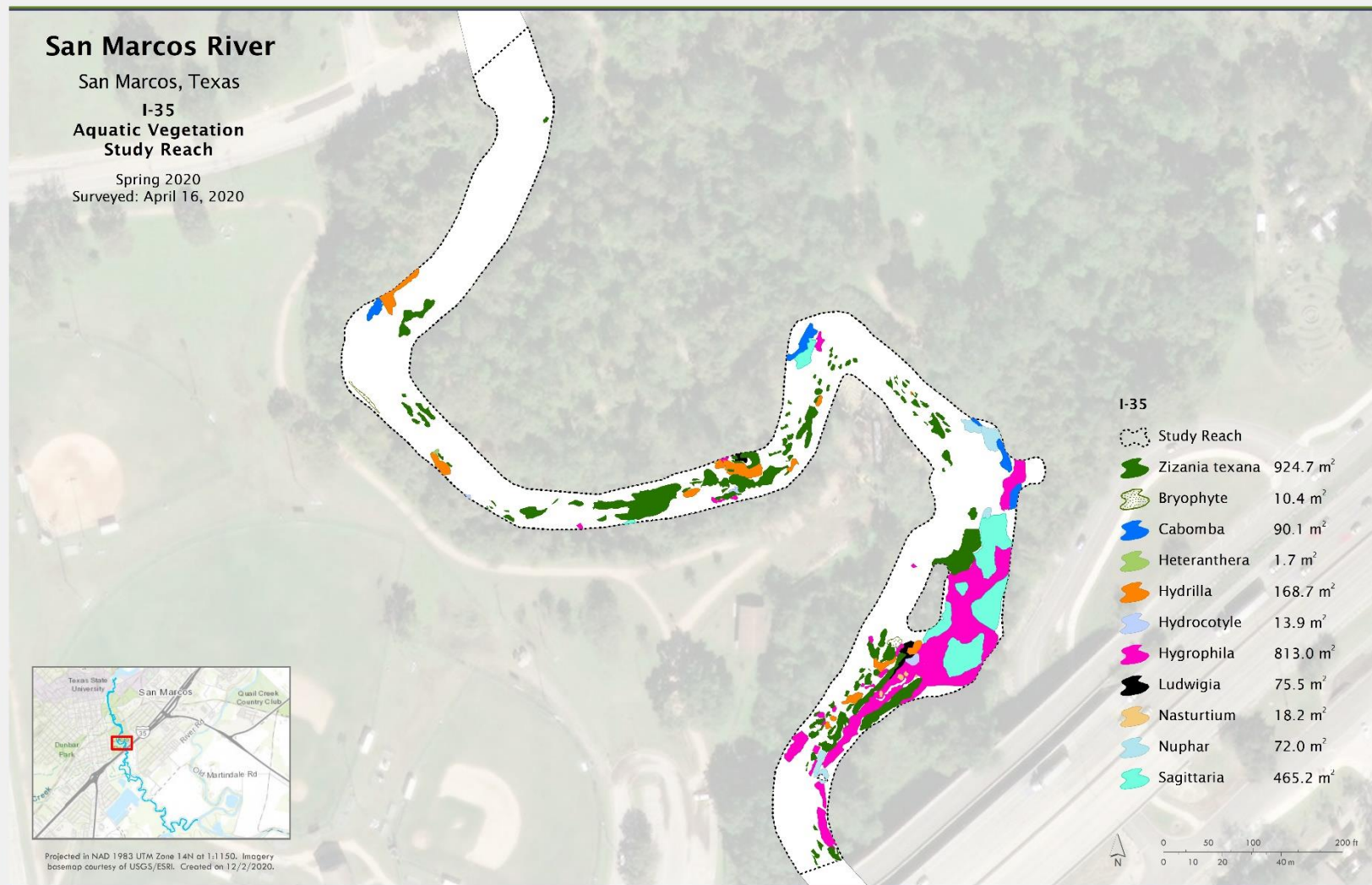


Figure B10. Map of aquatic vegetation coverage at I-35 Study Reach in spring 2020.

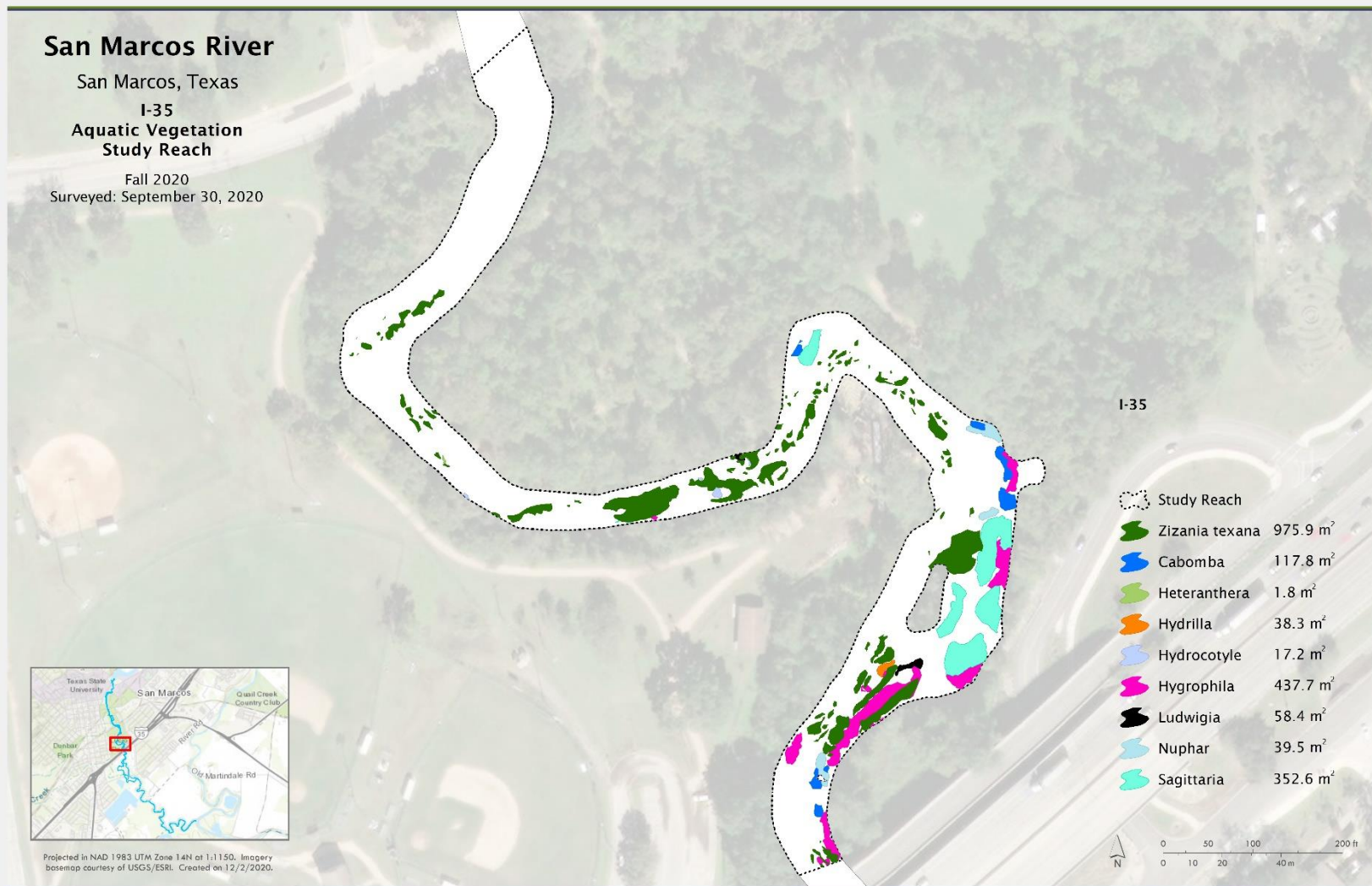


Figure B11. Map of aquatic vegetation coverage at I-35 Study Reach in fall 2020.

Texas Wild-Rice Annual Mapping

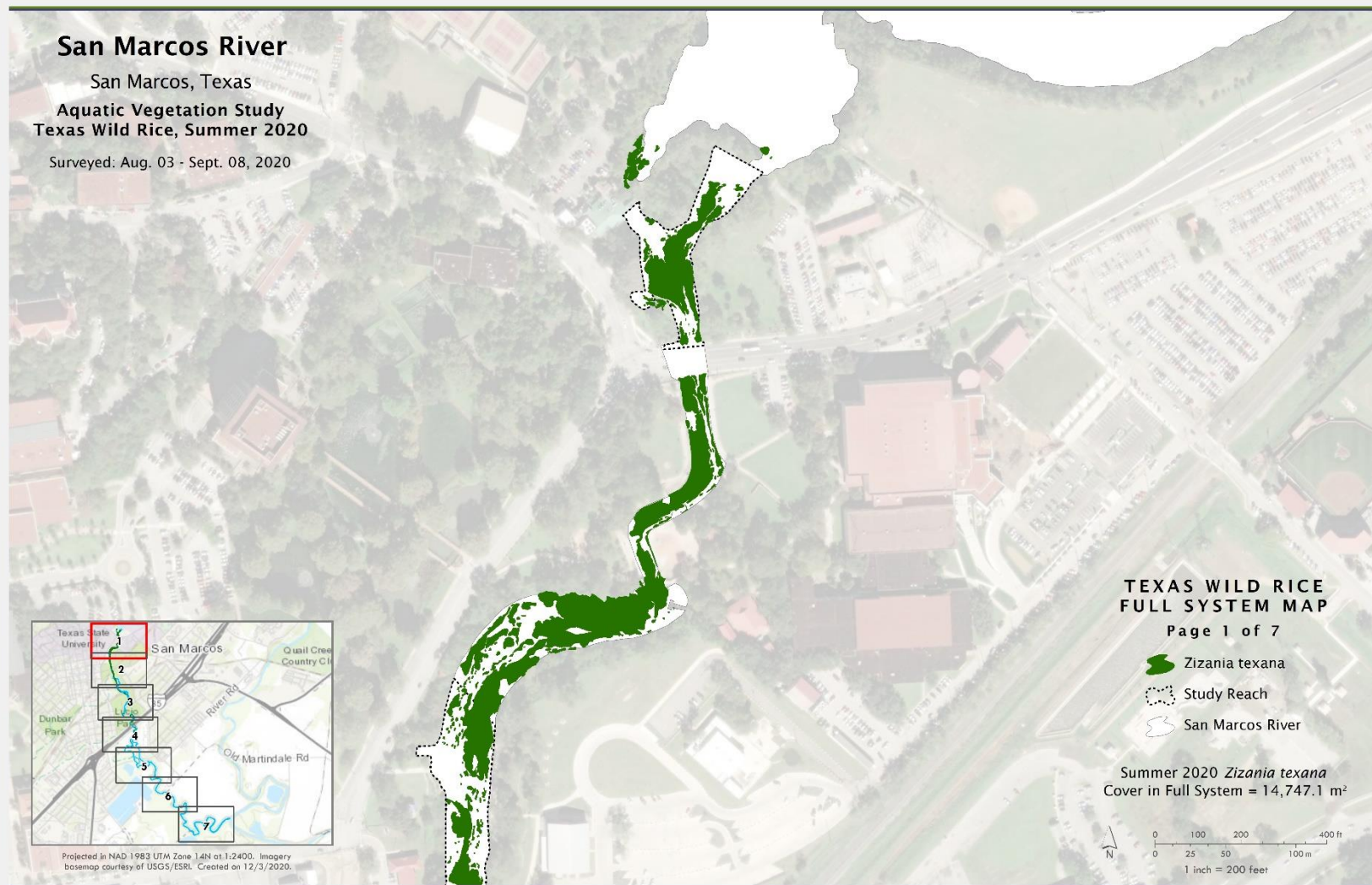


Figure B12. Map of Texas Wild-Rice coverage from Spring Lake to City Park.

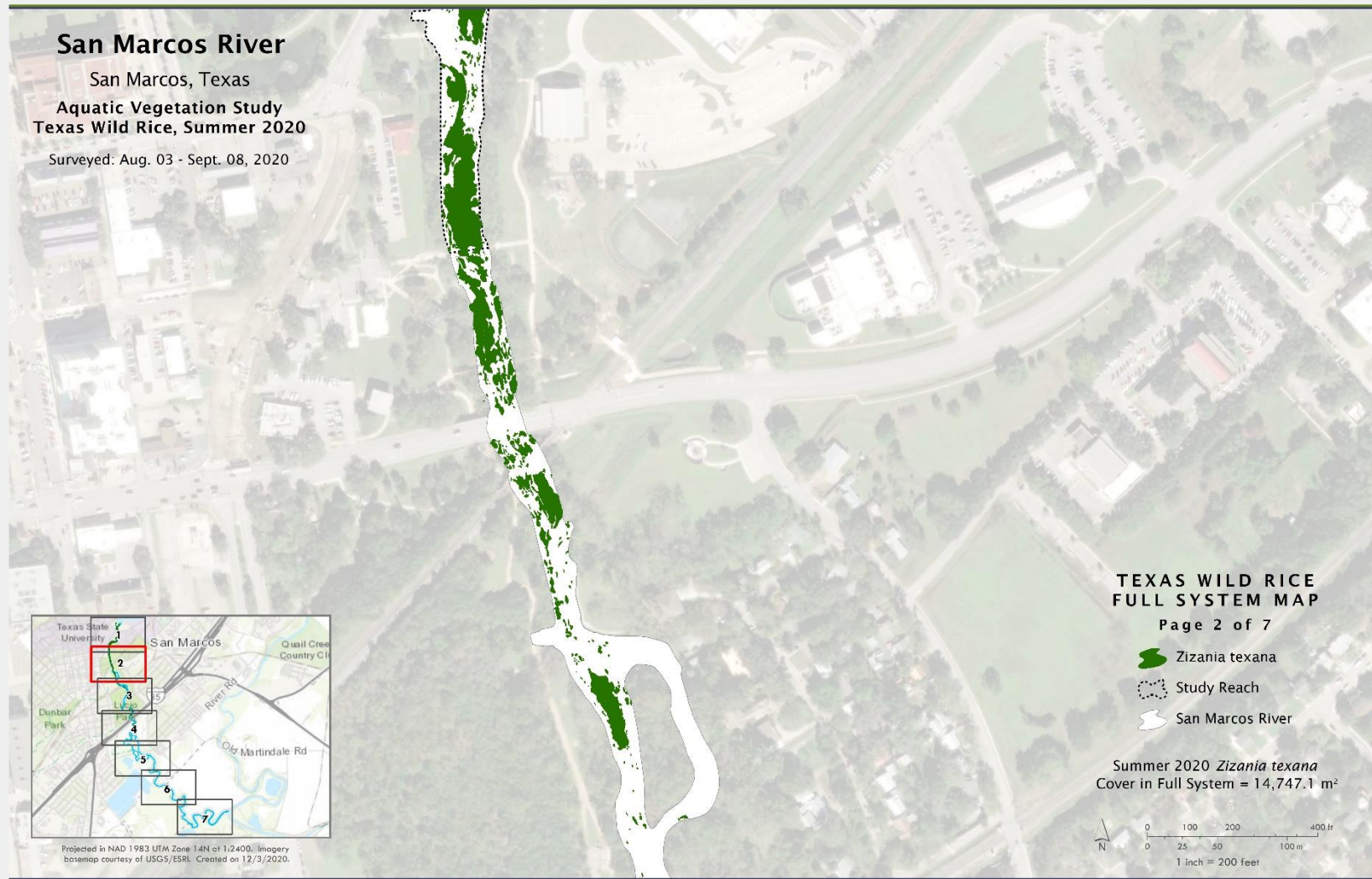


Figure B13. Map of Texas Wild-Rice coverage from City Park Cheatham Street.

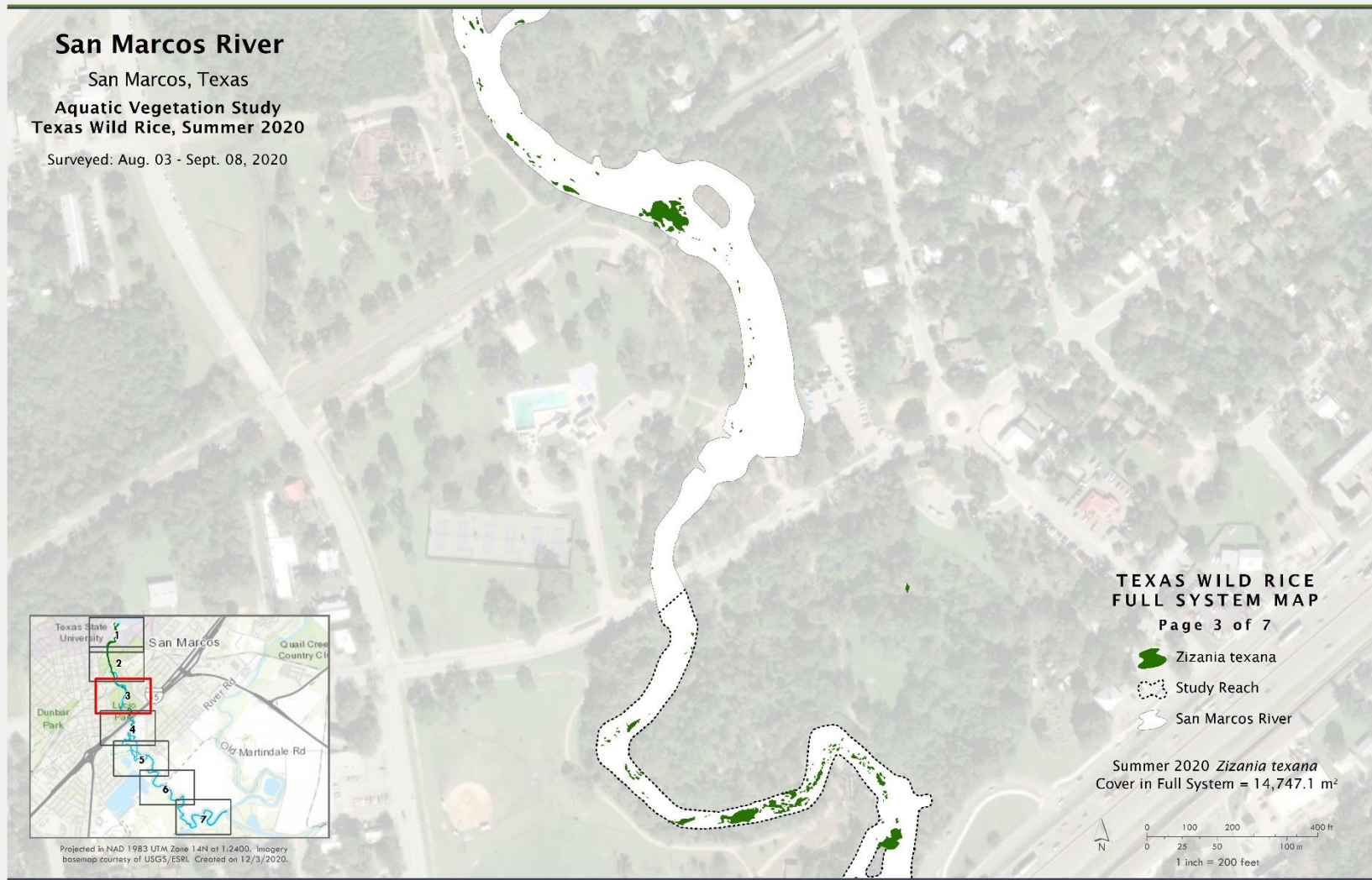


Figure B14. Map of Texas Wild-Rice coverage from Cheatham Street to I-35.



Figure B15. Map of Texas Wild-Rice coverage from Cheatham Street to about Stokes Park.

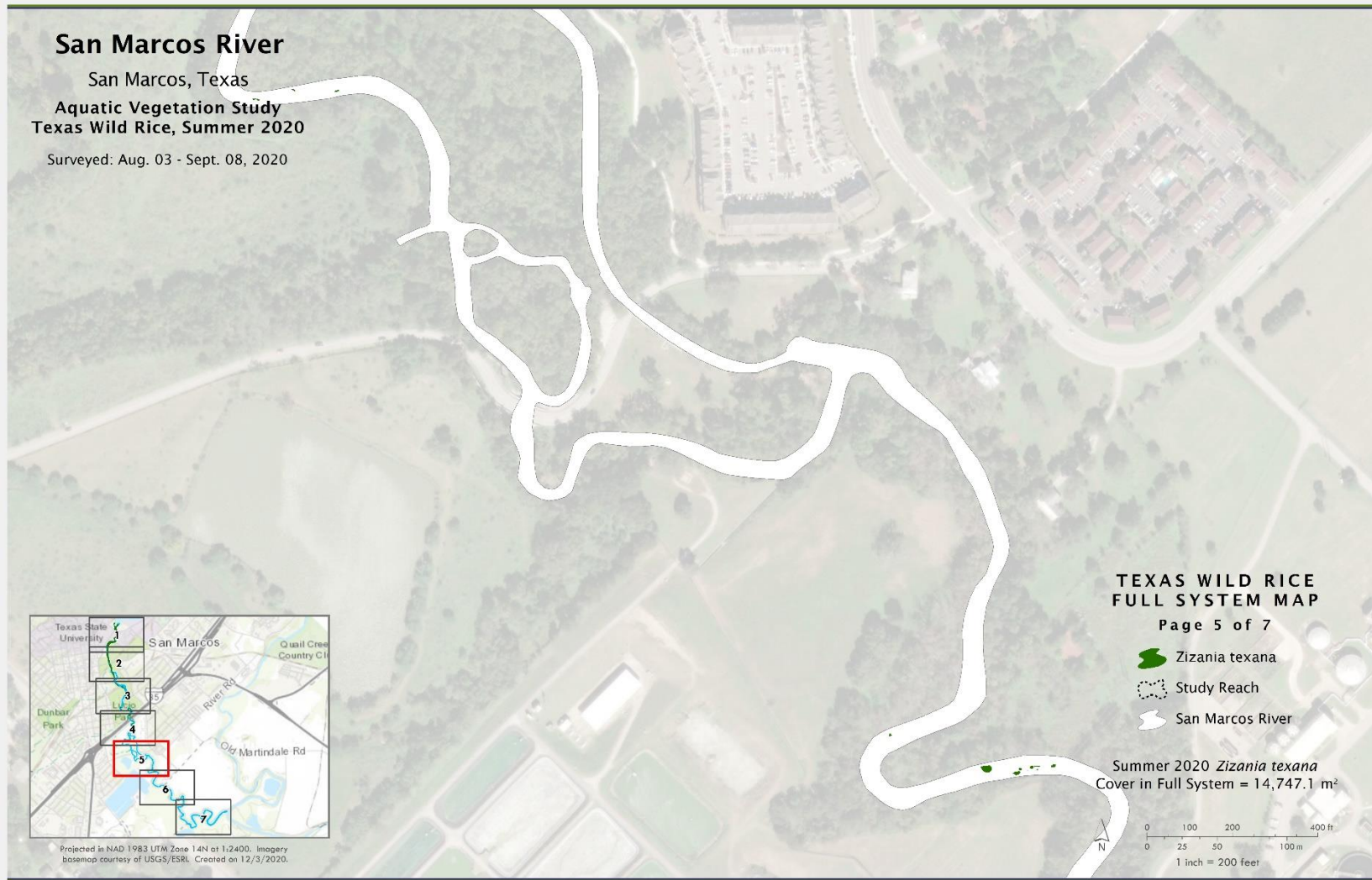


Figure B16. Map of Texas Wild-Rice coverage from about Stokes park to Waste Water Treatment Plant.

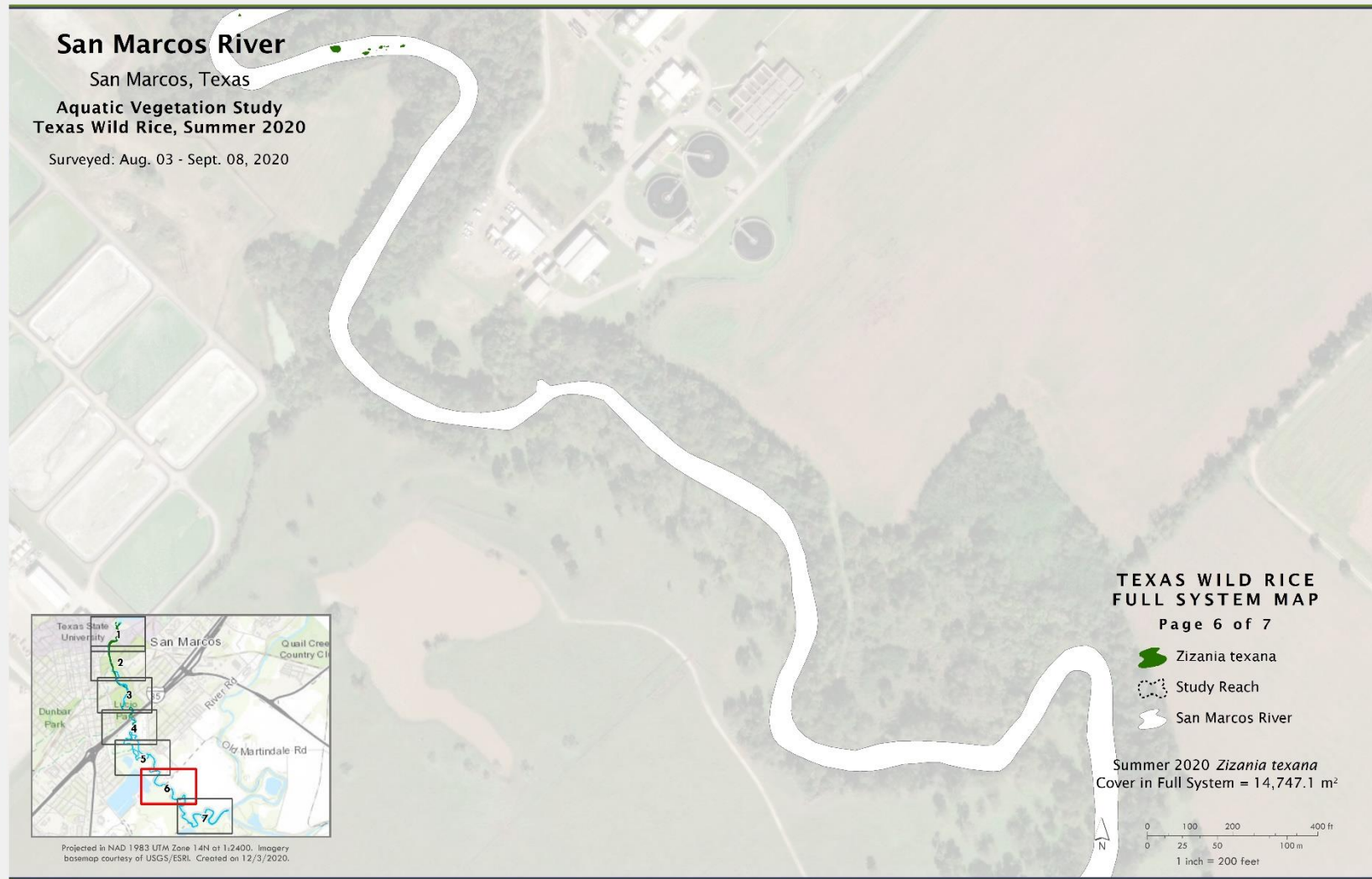


Figure B17. Map of Texas Wild-Rice coverage from Waste Water Treatment Plant to about Cypress Tree Island.

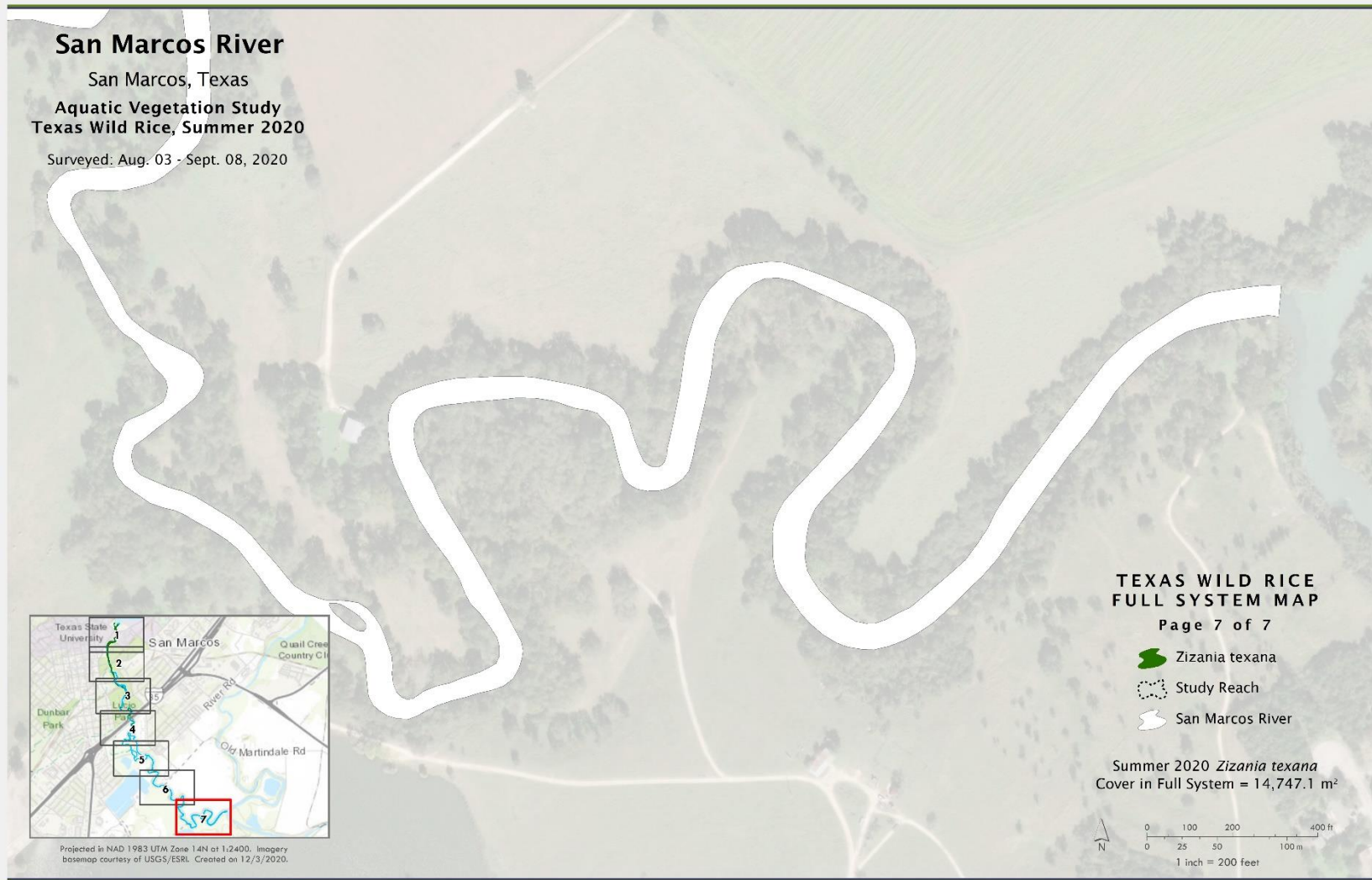


Figure B18. Map of Texas Wild-Rice coverage from about Cypress Tree to the Blanco River confluence.

APPENDIX C: TABLES AND DATA

TABLES

**Fish Assemblage Results:
Drop-Net and Fish Community Sampling**

Table C1. Overall number (#) and percent relative abundance (%) of fishes collected from the three long-term biological goals study reaches during drop-net sampling in 2020.

TAXA	SPRING LAKE DAM		CITY PARK		I-35	
	#	%	#	%	#	%
<i>Ambloplites rupestris</i>	0	0.0	1	0.1	9	1.3
<i>Ameiurus natalis</i>	4	1.1	0	0.0	1	0.1
<i>Astyanax mexicanus</i> *	5	1.4	1	0.1	3	0.4
<i>Dionda nigrotaeniata</i>	5	1.4	0	0.0	1	0.1
<i>Etheostoma fonticola</i>	58	15.7	130	13.7	167	24.7
<i>Gambusia</i> sp.	234	63.2	789	83.1	472	69.8
<i>Herichthys cyanoguttatus</i> *	2	0.5	0	0.0	1	0.1
<i>Lepomis gulosus</i>	2	0.5	2	0.2	0	0.0
<i>Lepomis macrochirus</i>	2	0.5	0	0.0	0	0.0
<i>Lepomis miniatus</i>	47	12.7	13	1.4	10	1.5
<i>Lepomis</i> sp.	3	0.8	12	1.3	6	0.9
<i>Micropterus salmoides</i>	5	1.4	0	0.0	0	0.0
<i>Notropis amabilis</i>	3	0.8	0	0.0	0	0.0
<i>Notropis chalybaeus</i>	0	0.0	2	0.2	6	0.9
Total	370		950		676	

Asterisks (*) denotes introduced species

Table C2. Overall number (#) and percent relative abundance (%) of fishes collected from Spring Lake, Sewell Park, Veterans Plaza, and Rio Vista Park during fish community sampling in 2020.

TAXA	SPRING LAKE		SEWELL PARK		VETERANS PLAZA		RIO VISTA PARK	
	#	%	#	%	#	%	#	%
<i>Lepisosteus oculatus</i>	4	0.1	0	0.0	0	0.0	0	0.0
<i>Campostoma anomalum</i>	0	0.0	0	0.0	0	0.0	0	0.0
<i>Cyprinus carpio</i> *	0	0.0	0	0.0	0	0.0	0	0.0
<i>Cyprinella venusta</i>	0	0.0	0	0.0	0	0.0	0	0.0
<i>Dionda nigrotaeniata</i>	1235	36.4	1	0.2	0	0.0	9	5.8
<i>Notropis amabilis</i>	0	0.0	0	0.0	0	0.0	0	0.0
<i>Notropis chalybaeus</i>	0	0.0	0	0.0	4	0.5	12	7.7
<i>Moxostoma congestum</i>	0	0.0	0	0.0	0	0.0	2	1.3
<i>Astyanax mexicanus</i> *	1118	32.9	13	3.1	11	1.5	0	0.0
<i>Ameiurus melas</i>	0	0.0	0	0.0	1	0.1	0	0.0
<i>Ameiurus natalis</i>	0	0.0	0	0.0	2	0.3	0	0.0
Loricariidae sp.*	0	0.0	2	0.5	1	0.1	1	0.6
<i>Fundulus chrysotus</i>	0	0.0	0	0.0	1	0.1	0	0.0
<i>Gambusia</i> sp.	289	8.5	3	0.7	1	0.1	16	10.3
<i>Gambusia affinis</i>	0	0.0	12	2.8	0	0.0	0	0.0
<i>Gambusia geiseri</i>	0	0.0	114	26.8	609	82.6	0	0.0
<i>Poecilia formosa</i>	0	0.0	0	0.0	0	0.0	0	0.0
<i>Poecilia latipinna</i> *	0	0.0	0	0.0	9	1.2	0	0.0
<i>Ambloplites rupestris</i>	0	0.0	2	0.5	7	0.9	0	0.0
<i>Lepomis</i> sp.	273	8.0	19	4.5	0	0.0	72	46.5
<i>Lepomis auritus</i>	28	0.8	172	40.5	11	1.5	1	0.6
<i>Lepomis gulosus</i>	1	0.0	1	0.2	0	0.0	0	0.0
<i>Lepomis macrochirus</i>	159	4.7	5	1.2	0	0.0	3	1.9
<i>Lepomis megalotis</i>	2	0.1	6	1.4	0	0.0	0	0.0
<i>Lepomis microlophus</i>	34	1.0	0	0.0	0	0.0	1	0.6
<i>Lepomis miniatus</i>	2	0.1	15	3.5	8	1.1	1	0.6
<i>Micropterus</i> sp.	0	0.0	0	0.0	0	0.0	0	0.0
<i>Micropterus salmoides</i>	112	3.3	28	6.6	7	0.9	11	7.1
<i>Micropterus treculii</i>	0	0.0	0	0.0	0	0.0	0	0.0
<i>Etheostoma fonticola</i>	136	4.0	21	4.9	60	8.1	24	15.5
<i>Etheostoma spectabile</i>	0	0.0	0	0.0	0	0.0	0	0.0
<i>Percina apristis</i>	0	0.0	10	2.4	0	0.0	0	0.0
<i>Percina carbonaria</i>	0	0.0	0	0.0	0	0.0	0	0.0
<i>Herichthys cyanoguttatus</i> *	1	0.0	1	0.2	5	0.7	2	1.3
Total	3394		425		737		155	

Asterisks (*) denotes introduced species.

Table C3. Overall number (#) and percent relative abundance (%) of fishes collected from I-35/Crooks Parks, Wastewater Treatment Plant (WWTP), Smith Property, and Thompson Island during fish community sampling in 2020.

TAXA	I-35/CROOKS PARK		WWTP		SMITH PROPERTY		THOMPSON ISLAND	
	#	%	#	%	#	%	#	%
<i>Lepisosteus oculatus</i>	0	0.0	0	0.0	0	0.0	0	0.0
<i>Campostoma anomalum</i>	0	0.0	1	0.6	0	0.0	0	0.0
<i>Cyprinus carpio</i> *	0	0.0	0	0.0	0	0.0	1	1.1
<i>Cyprinella venusta</i>	0	0.0	88	48.9	126	50.8	5	5.7
<i>Dionda nigrotaeniata</i>	33	17.6	0	0.0	0	0.0	0	0.0
<i>Notropis amabilis</i>	21	11.2	18	10.0	5	2.0	0	0.0
<i>Notropis chalybaeus</i>	10	5.3	0	0.0	0	0.0	0	0.0
<i>Moxostoma congestum</i>	1	0.5	0	0.0	0	0.0	0	0.0
<i>Astyanax mexicanus</i> *	0	0.0	0	0.0	0	0.0	0	0.0
<i>Ameiurus melas</i>	0	0.0	0	0.0	0	0.0	0	0.0
<i>Ameiurus natalis</i>	0	0.0	0	0.0	0	0.0	0	0.0
Loricariidae sp.*	8	4.3	7	3.9	25	10.1	57	65.5
<i>Fundulus chrysotus</i>	0	0.0	0	0.0	0	0.0	0	0.0
<i>Gambusia</i> sp.	0	0.0	0	0.0	0	0.0	0	0.0
<i>Gambusia affinis</i>	0	0.0	3	1.7	3	1.2	0	0.0
<i>Gambusia geiseri</i>	60	32.1	7	3.9	20	8.1	0	0.0
<i>Poecilia formosa</i>	0	0.0	0	0.0	2	0.8	0	0.0
<i>Poecilia latipinna</i> *	0	0.0	0	0.0	1	0.4	0	0.0
<i>Ambloplites rupestris</i>	1	0.5	0	0.0	0	0.0	0	0.0
<i>Lepomis</i> sp.	15	8.0	0	0.0	15	6.0	11	12.6
<i>Lepomis auritus</i>	7	3.7	4	2.2	18	7.3	1	1.1
<i>Lepomis gulosus</i>	0	0.0	0	0.0	0	0.0	0	0.0
<i>Lepomis macrochirus</i>	2	1.1	2	1.1	6	2.4	0	0.0
<i>Lepomis megalotis</i>	0	0.0	0	0.0	5	2.0	0	0.0
<i>Lepomis microlophus</i>	0	0.0	0	0.0	0	0.0	0	0.0
<i>Lepomis miniatus</i>	4	2.1	0	0.0	1	0.4	0	0.0
<i>Micropterus</i> sp.	0	0.0	1	0.6	0	0.0	0	0.0
<i>Micropterus salmoides</i>	4	2.1	0	0.0	6	2.4	4	4.6
<i>Micropterus treculii</i>	0	0.0	1	0.6	0	0.0	0	0.0
<i>Etheostoma fonticola</i>	15	8.0	11	6.1	6	2.4	0	0.0
<i>Etheostoma spectabile</i>	0	0.0	28	15.6	4	1.6	0	0.0
<i>Percina apristis</i>	6	3.2	6	3.3	0	0.0	1	1.1
<i>Percina carbonaria</i>	0	0.0	1	0.6	3	1.2	6	6.9
<i>Herichthys cyanoguttatus</i> *	0	0.0	2	1.1	2	0.8	1	1.1
Total	187		180		248		87	

DATA

**Macroinvertebrate Raw Data:
TCEQ RBP**

Location	Site	Date	Class	Order	Family	FinalID	num	ToITX	FFGTX	FFGTX2
San Marcos	Spring Lake	19-Oct-20	Malacostraca	Decapoda	Palaemonidae	Palaemonetes	2	4	Gather/Collector	
San Marcos	Spring Lake	19-Oct-20	Malacostraca	Amphipoda	Talitridae	Hyalella	125	8	Gather/Collector	Shredder
San Marcos	Spring Lake	19-Oct-20	Insecta	Diptera	Chironomidae	Chironomidae	12	6	Gather/Collector	Filterer/Collector
San Marcos	Spring Lake	19-Oct-20	Turbellaria	Tricladida		Planariidae	1			
San Marcos	Spring Lake	19-Oct-20	Clitellata			Hirudinea	1	8	Predator	
San Marcos	Spring Lake	19-Oct-20	Malacostraca	Decapoda	Cambaridae	Cambarinae	2			
San Marcos	Spring Lake	19-Oct-20	Gastropoda	Basommatophora	Physidae	Physa	1	9	Scraper	
San Marcos	Spring Lake	19-Oct-20	Insecta	Trichoptera	Heliocopsychidae	Helicopsyche	3	2	Scraper	
San Marcos	Spring Lake	19-Oct-20	Insecta	Ephemeroptera	Tricorythidae	Tricorythodes	10	5	Gather/Collector	
San Marcos	Spring Lake	19-Oct-20	Insecta	Odonata	Coenagrionidae	Argia	2	6	Predator	
San Marcos	Spring Lake	19-Oct-20	Insecta	Odonata	Coenagrionidae	Enallagma	2	6	Predator	
San Marcos	Spring Lake	19-Oct-20	Insecta	Ephemeroptera	Baetidae	Callibaetis	17	4	Gather/Collector	
San Marcos	Spring Lake	19-Oct-20	Insecta	Trichoptera	Hydroptilidae	Oxyethira	1	2	Gather/Collector	
San Marcos	I-35	19-Oct-20	Insecta	Coleoptera	Elmidae	Neelmis	1	2	Scraper	
San Marcos	I-35	19-Oct-20	Insecta	Coleoptera	Elmidae	Macrelmis	3	4	Scraper	
San Marcos	I-35	19-Oct-20	Gastropoda	Neotaenioglossa	Thiaridae	Tarebia	6		Scraper	
San Marcos	I-35	19-Oct-20	Insecta	Odonata	Libellulidae	Libellulidae	2		Predator	
San Marcos	I-35	19-Oct-20	Insecta	Coleoptera	Elmidae	Hexacyloepus ferrugineus	8	2	Scraper	
San Marcos	I-35	19-Oct-20	Malacostraca	Amphipoda	Talitridae	Hyalella	6	8	Gather/Collector	Shredder
San Marcos	I-35	19-Oct-20	Gastropoda	Neotaenioglossa	Pleuroceridae	Elimia	8	2.5	Scraper	
San Marcos	I-35	19-Oct-20	Turbellaria	Tricladida		Planariidae	13			
San Marcos	I-35	19-Oct-20	Clitellata			Oligochaeta	7	8	Gather/Collector	
San Marcos	I-35	19-Oct-20	Insecta	Diptera	Chironomidae	Chironomidae	1	6	Gather/Collector	Filterer/Collector
San Marcos	I-35	19-Oct-20	Insecta	Ephemeroptera	Baetidae	Acentrella	1			
San Marcos	I-35	19-Oct-20	Insecta	Trichoptera	Glossosomatidae	Protoptila	2	1	Scraper	
San Marcos	I-35	19-Oct-20	Insecta	Hemiptera	Naucoridae	Ambrysus	6	5	Predator	
San Marcos	I-35	19-Oct-20	Insecta	Ephemeroptera	Leptophlebiidae	Thraulodes	33	2	Gather/Collector	
San Marcos	I-35	19-Oct-20	Insecta	Trichoptera	Leptoceridae	Nectopsyche	4	3	Shredder	Gather/Collector
San Marcos	I-35	19-Oct-20	Insecta	Trichoptera	Leptoceridae	Oecetis	1			
San Marcos	I-35	19-Oct-20	Insecta	Ephemeroptera	Leptohyphidae	Leptohyphes	2	2	Gather/Collector	

San Marcos	I-35	19-Oct-20	Insecta	Coleoptera	Psephenidae	Psephenus	2	4	Scraper	
San Marcos	I-35	19-Oct-20	Insecta	Ephemeroptera	Tricorythidae	Tricorythodes	2	5	Gather/Collector	
San Marcos	I-35	19-Oct-20	Insecta	Trichoptera	Philopotamidae	Chimarra	5	2	Filterer/Collector	
San Marcos	I-35	19-Oct-20	Insecta	Hemiptera	Naucoridae	Limnocoris	16	5	Predator	
San Marcos	I-35	19-Oct-20	Insecta	Trichoptera	Heliocopsychidae	Helicopsyche	19	2	Scraper	
San Marcos	I-35	19-Oct-20	Insecta	Odonata	Coenagrionidae	Argia	7	6	Predator	
San Marcos	I-35	19-Oct-20	Clitellata			Hirudinea	1	8	Predator	
San Marcos	I-35	20-Apr-20	Malacostraca	Amphipoda	Talitridae	Hyaella	20	8	Gather/Collector	Shredder
San Marcos	I-35	20-Apr-20	Insecta	Diptera	Chironomidae	Chironomidae	4	6	Gather/Collector	Filterer/Collector
San Marcos	I-35	20-Apr-20	Gastropoda	Neotaenioglossa	Pleuroceridae	Elimia	4	2.5	Scraper	
San Marcos	I-35	20-Apr-20	Clitellata			Oligochaeta	4	8	Gather/Collector	
San Marcos	I-35	20-Apr-20	Gastropoda	Basommatophora	Planorbidae	Helisoma	1			
San Marcos	I-35	20-Apr-20	Gastropoda	Neotaenioglossa	Thiaridae	Tarebia	2		Scraper	
San Marcos	I-35	20-Apr-20	Insecta	Trichoptera	Heliocopsychidae	Helicopsyche	3	2	Scraper	
San Marcos	I-35	20-Apr-20	Insecta	Trichoptera	Glossosomatidae	Protoptila	4	1	Scraper	
San Marcos	I-35	20-Apr-20	Insecta	Ephemeroptera	Tricorythidae	Tricorythodes	7	5	Gather/Collector	
San Marcos	I-35	20-Apr-20	Insecta	Trichoptera	Philopotamidae	Chimarra	1	2	Filterer/Collector	
San Marcos	I-35	20-Apr-20	Gastropoda	Basommatophora	Physidae	Physa	1	9	Scraper	
San Marcos	I-35	20-Apr-20	Insecta	Diptera	Simuliidae	Simuliidae	9			
San Marcos	I-35	20-Apr-20	Insecta	Odonata	Coenagrionidae	Argia	1	6	Predator	
San Marcos	I-35	20-Apr-20	Malacostraca	Decapoda	Cambaridae	Cambarinae	1			
San Marcos	I-35	20-Apr-20	Insecta	Coleoptera	Elmidae	Stenelmis	1	7	Gather/Collector	Scraper
San Marcos	I-35	20-Apr-20	Insecta	Trichoptera	Leptoceridae	Nectopsyche	5	3	Shredder	Gather/Collector
San Marcos	I-35	20-Apr-20	Insecta	Ephemeroptera	Leptophlebiidae	Thraulodes	28	2	Gather/Collector	
San Marcos	I-35	20-Apr-20	Clitellata			Hirudinea	4	8	Predator	
San Marcos	I-35	20-Apr-20	Turbellaria	Tricladida		Planariidae	4			
San Marcos	I-35	20-Apr-20	Insecta	Hemiptera	Naucoridae	Limnocoris	18	5	Predator	
San Marcos	I-35	20-Apr-20	Insecta	Hemiptera	Naucoridae	Ambrysus	6	5	Predator	
San Marcos	I-35	20-Apr-20	Insecta	Ephemeroptera	Baetidae	Acentrella	17			
San Marcos	City Park	20-Apr-20	Malacostraca	Amphipoda	Talitridae	Hyaella	55	8	Gather/Collector	Shredder
San Marcos	City Park	20-Apr-20	Insecta	Trichoptera	Glossosomatidae	Protoptila	3	1	Scraper	

San Marcos	City Park	20-Apr-20	Clitellata			Hirudinea	2	8	Predator	
San Marcos	City Park	20-Apr-20	Insecta	Hemiptera	Naucoridae	Limnocoris	1	5	Predator	
San Marcos	City Park	20-Apr-20	Gastropoda	Neotaenioglossa	Pleuroceridae	Elimia	2	2.5	Scraper	
San Marcos	City Park	20-Apr-20	Gastropoda	Neotaenioglossa	Thiaridae	Tarebia	2		Scraper	
San Marcos	City Park	20-Apr-20	Insecta	Trichoptera	Philopotamidae	Chimarra	1	2	Filterer/Collector	
San Marcos	City Park	20-Apr-20	Insecta	Trichoptera	Helicopsychidae	Helicopsyche	2	2	Scraper	
San Marcos	City Park	20-Apr-20	Insecta	Trichoptera	Leptoceridae	Nectopsyche	5	3	Shredder	Gather/Collector
San Marcos	City Park	20-Apr-20	Insecta	Odonata	Coenagrionidae	Enallagma	2	6	Predator	
San Marcos	City Park	20-Apr-20	Turbellaria	Tricladida		Planariidae	8			
San Marcos	City Park	20-Apr-20	Clitellata			Oligochaeta	13	8	Gather/Collector	
San Marcos	City Park	20-Apr-20	Insecta	Ephemeroptera	Tricorythidae	Tricorythodes	45	5	Gather/Collector	
San Marcos	City Park	20-Apr-20	Insecta	Ephemeroptera	Leptohyphidae	Leptohyphes	1	2	Gather/Collector	
San Marcos	City Park	20-Apr-20	Insecta	Ephemeroptera	Baetidae	Fallceon	32	4	Gather/Collector	Scraper
San Marcos	City Park	20-Apr-20	Insecta	Ephemeroptera	Baetidae	Acentrella	5			
San Marcos	City Park	20-Apr-20	Insecta	Coleoptera	Elmidae	Hexacyloepus ferrugineus	1	2	Scraper	
San Marcos	Headwaters	20-Apr-20	Turbellaria	Tricladida		Planariidae	7			
San Marcos	Headwaters	20-Apr-20	Clitellata			Oligochaeta	8	8	Gather/Collector	
San Marcos	Spring Lake	19-Oct-20	Gastropoda	Neotaenioglossa	Pleuroceridae	Elimia	2	2.5	Scraper	
San Marcos	Spring Lake	19-Oct-20	Insecta	Hemiptera	Naucoridae	Ambrysus	2	5	Predator	
San Marcos	Headwaters	20-Apr-20	Malacostraca	Amphipoda	Talitridae	Hyalella	40	8	Gather/Collector	Shredder
San Marcos	Headwaters	20-Apr-20	Insecta	Trichoptera	Philopotamidae	Chimarra	23	2	Filterer/Collector	
San Marcos	Headwaters	20-Apr-20	Gastropoda	Neotaenioglossa	Pleuroceridae	Elimia	5	2.5	Scraper	
San Marcos	Headwaters	20-Apr-20	Insecta	Trichoptera	Hydropsychidae	Smicridea	9	4	Filterer/Collector	
San Marcos	Headwaters	20-Apr-20	Insecta	Odonata	Coenagrionidae	Argia	1	6	Predator	
San Marcos	Headwaters	20-Apr-20	Insecta	Ephemeroptera	Leptohyphidae	Leptohyphes	4	2	Gather/Collector	
San Marcos	Headwaters	20-Apr-20	Insecta	Ephemeroptera	Tricorythidae	Tricorythodes	8	5	Gather/Collector	
San Marcos	Headwaters	20-Apr-20	Insecta	Ephemeroptera	Baetidae	Baetodes	3	4	Scraper	
San Marcos	Headwaters	20-Apr-20	Insecta	Diptera	Simuliidae	Simuliidae	7			
San Marcos	Headwaters	20-Apr-20	Insecta	Coleoptera	Psephenidae	Psephenus	4	4	Scraper	
San Marcos	Headwaters	20-Apr-20	Insecta	Trichoptera	Helicopsychidae	Helicopsyche	2	2	Scraper	
San Marcos	Headwaters	20-Apr-20	Insecta	Ephemeroptera	Baetidae	Fallceon	12	4	Gather/Collector	Scraper

San Marcos	Headwaters	20-Apr-20	Insecta	Diptera	Chironomidae	Chironomidae	8	6	Gather/Collector	Filterer/Collector
San Marcos	Headwaters	20-Apr-20	Malacostraca	Decapoda	Cambaridae	Cambarinae	1			
San Marcos	Headwaters	20-Apr-20	Insecta	Hemiptera	Naucoridae	Ambrysus	23	5	Predator	
San Marcos	Headwaters	20-Apr-20	Insecta	Coleoptera	Elmidae	Macrelmis	1	4	Scraper	
San Marcos	Headwaters	20-Apr-20	Insecta	Ephemeroptera	Baetidae	Acentrella	1			
San Marcos	Spring Lake	20-Apr-20	Malacostraca	Amphipoda	Talitridae	Hyaella	133	8	Gather/Collector	Shredder
San Marcos	Spring Lake	20-Apr-20	Malacostraca	Decapoda	Palaemonidae	Palaemonetes	3	4	Gather/Collector	
San Marcos	Spring Lake	20-Apr-20	Malacostraca	Decapoda	Cambaridae	Cambarinae	2			
San Marcos	Spring Lake	20-Apr-20	Clitellata			Oligochaeta	7	8	Gather/Collector	
San Marcos	Spring Lake	20-Apr-20	Insecta	Odonata	Coenagrionidae	Argia	1	6	Predator	
San Marcos	Spring Lake	20-Apr-20	Insecta	Diptera	Ceratopogonidae	Bezzia complex	1	7	Predator	
San Marcos	Spring Lake	20-Apr-20	Insecta	Odonata	Coenagrionidae	Ischnura	2	9	Predator	
San Marcos	Spring Lake	20-Apr-20	Turbellaria	Tricladida		Planariidae	1			
San Marcos	Spring Lake	20-Apr-20	Insecta	Ephemeroptera	Tricorythidae	Tricorythodes	4	5	Gather/Collector	
San Marcos	Headwaters	19-Oct-20	Malacostraca	Amphipoda	Talitridae	Hyaella	15	8	Gather/Collector	Shredder
San Marcos	Headwaters	19-Oct-20	Gastropoda	Neotaenioglossa	Pleuroceridae	Elimia	5	2.5	Scraper	
San Marcos	Headwaters	19-Oct-20	Clitellata			Oligochaeta	9	8	Gather/Collector	
San Marcos	Headwaters	19-Oct-20	Turbellaria	Tricladida		Planariidae	19			
San Marcos	Headwaters	19-Oct-20	Insecta	Diptera	Chironomidae	Chironomidae	14	6	Gather/Collector	Filterer/Collector
San Marcos	Headwaters	19-Oct-20	Insecta	Hemiptera	Naucoridae	Ambrysus	15	5	Predator	
San Marcos	Headwaters	19-Oct-20	Insecta	Trichoptera	Hydrobiosidae	Atopsyche	1	0	Predator	
San Marcos	Headwaters	19-Oct-20	Insecta	Lepidoptera	Crambidae	Crambidae	1			
San Marcos	Headwaters	19-Oct-20	Insecta	Ephemeroptera	Baetidae	Acentrella	1			
San Marcos	Headwaters	19-Oct-20	Insecta	Coleoptera	Elmidae	Macrelmis	2	4	Scraper	
San Marcos	Headwaters	19-Oct-20	Clitellata			Hirudinea	1	8	Predator	
San Marcos	Headwaters	19-Oct-20	Insecta	Ephemeroptera	Leptohyphidae	Leptohyphes	24	2	Gather/Collector	
San Marcos	Headwaters	19-Oct-20	Insecta	Ephemeroptera	Baetidae	Baetodes	3	4	Scraper	
San Marcos	Headwaters	19-Oct-20	Insecta	Ephemeroptera	Tricorythidae	Tricorythodes	7	5	Gather/Collector	
San Marcos	Headwaters	19-Oct-20	Insecta	Trichoptera	Philopotamidae	Chimarra	17	2	Filterer/Collector	
San Marcos	Headwaters	19-Oct-20	Insecta	Trichoptera	Hydropsychidae	Smicridea	2	4	Filterer/Collector	
San Marcos	Headwaters	19-Oct-20	Insecta	Trichoptera	Heliocopsychidae	Helicopsyche	8	2	Scraper	

San Marcos	Headwaters	19-Oct-20	Insecta	Ephemeroptera	Baetidae	Fallceon	4	4	Gather/Collector	Scraper
San Marcos	Headwaters	19-Oct-20	Gastropoda	Neotaenioglossa	Hydrobiidae	Hydrobiidae	1	7	Scraper	
San Marcos	Headwaters	19-Oct-20	Gastropoda	Neotaenioglossa	Thiaridae	Tarebia	1		Scraper	
San Marcos	Headwaters	19-Oct-20	Insecta	Trichoptera	Leptoceridae	Nectopsyche	2	3	Shredder	Gather/Collector
San Marcos	Headwaters	19-Oct-20	Insecta	Diptera	Simuliidae	Simuliidae	13			
San Marcos	Headwaters	19-Oct-20	Insecta	Odonata	Coenagrionidae	Argia	1	6	Predator	
San Marcos	Headwaters	19-Oct-20	Insecta	Odonata	Libellulidae	Brechmorhoga	4	6	Predator	
San Marcos	City Park	19-Oct-20	Malacostraca	Amphipoda	Talitridae	Hyaella	33	8	Gather/Collector	Shredder
San Marcos	City Park	19-Oct-20	Gastropoda	Neotaenioglossa	Pleuroceridae	Elimia	25	2.5	Scraper	
San Marcos	City Park	19-Oct-20	Clitellata			Oligochaeta	7	8	Gather/Collector	
San Marcos	City Park	19-Oct-20	Turbellaria	Tricladida		Planariidae	7			
San Marcos	City Park	19-Oct-20	Gastropoda	Neotaenioglossa	Thiaridae	Tarebia	1		Scraper	
San Marcos	City Park	19-Oct-20	Insecta	Diptera	Chironomidae	Chironomidae	5	6	Gather/Collector	Filterer/Collector
San Marcos	City Park	19-Oct-20	Insecta	Ephemeroptera	Leptophlebiidae	Thraulodes	2	2	Gather/Collector	
San Marcos	City Park	19-Oct-20	Insecta	Trichoptera	Glossosomatidae	Protoptila	9	1	Scraper	
San Marcos	City Park	19-Oct-20	Insecta	Ephemeroptera	Baetidae	Fallceon	1	4	Gather/Collector	Scraper
San Marcos	City Park	19-Oct-20	Insecta	Coleoptera	Elmidae	Hexacyloepus ferrugineus	1	2	Scraper	
San Marcos	City Park	19-Oct-20	Insecta	Ephemeroptera	Tricorythidae	Tricorythodes	23	5	Gather/Collector	
San Marcos	City Park	19-Oct-20	Insecta	Ephemeroptera	Leptohyphidae	Leptohyphes	1	2	Gather/Collector	
San Marcos	City Park	19-Oct-20	Insecta	Trichoptera	Hydropsychidae	Smicridea	2	4	Filterer/Collector	
San Marcos	City Park	19-Oct-20	Clitellata			Hirudinea	2	8	Predator	
San Marcos	City Park	19-Oct-20	Insecta	Ephemeroptera	Baetidae	Acentrella	25			
San Marcos	City Park	19-Oct-20	Insecta	Trichoptera	Leptoceridae	Nectopsyche	8	3	Shredder	Gather/Collector
San Marcos	City Park	19-Oct-20	Insecta	Odonata	Coenagrionidae	Argia	2	6	Predator	
San Marcos	City Park	19-Oct-20	Insecta	Odonata	Gomphidae	Gomphidae	1			
San Marcos	City Park	19-Oct-20	Insecta	Odonata	Aeshnidae	Aeshnidae	1			
San Marcos	City Park	19-Oct-20	Malacostraca	Decapoda	Cambaridae	Cambarinae	2			
San Marcos	City Park	19-Oct-20	Insecta	Trichoptera	Heliocopsychidae	Helicopsyche	4	2	Scraper	

APPENDIX D: DROP NET RAW DATA

SiteCode	Reach	Site_No	Date	Dip_Net	Species	Length	Count
2503	I-35	Cabo-1	23-Apr-20	1	Etheostoma fonticola	18	1
2503	I-35	Cabo-1	23-Apr-20	1	Etheostoma fonticola	18	1
2503	I-35	Cabo-1	23-Apr-20	1	Etheostoma fonticola	29	1
2503	I-35	Cabo-1	23-Apr-20	1	Etheostoma fonticola	22	1
2503	I-35	Cabo-1	23-Apr-20	1	Etheostoma fonticola	12	1
2503	I-35	Cabo-1	23-Apr-20	1	Etheostoma fonticola	15	1
2503	I-35	Cabo-1	23-Apr-20	1	Etheostoma fonticola	28	1
2503	I-35	Cabo-1	23-Apr-20	1	Etheostoma fonticola	32	1
2503	I-35	Cabo-1	23-Apr-20	1	Etheostoma fonticola	18	1
2503	I-35	Cabo-1	23-Apr-20	1	Etheostoma fonticola	17	1
2503	I-35	Cabo-1	23-Apr-20	1	Etheostoma fonticola	13	1
2503	I-35	Cabo-1	23-Apr-20	1	Etheostoma fonticola	12	1
2503	I-35	Cabo-1	23-Apr-20	1	Etheostoma fonticola	13	1
2503	I-35	Cabo-1	23-Apr-20	2	Procambarus sp.		4
2503	I-35	Cabo-1	23-Apr-20	2	Notropis chalybaeus	22	1
2503	I-35	Cabo-1	23-Apr-20	2	Notropis chalybaeus	20	1
2503	I-35	Cabo-1	23-Apr-20	2	Notropis chalybaeus	20	1
2503	I-35	Cabo-1	23-Apr-20	2	Notropis chalybaeus	15	1
2503	I-35	Cabo-1	23-Apr-20	2	Notropis chalybaeus	16	1
2503	I-35	Cabo-1	23-Apr-20	2	Notropis chalybaeus	13	1
2503	I-35	Cabo-1	23-Apr-20	2	Lepomis sp.	10	1
2503	I-35	Cabo-1	23-Apr-20	3	Procambarus sp.		3
2503	I-35	Cabo-1	23-Apr-20	3	Etheostoma fonticola	20	1
2503	I-35	Cabo-1	23-Apr-20	3	Etheostoma fonticola	13	1
2503	I-35	Cabo-1	23-Apr-20	3	Etheostoma fonticola	13	1
2503	I-35	Cabo-1	23-Apr-20	3	Gambusia sp.	12	1
2503	I-35	Cabo-1	23-Apr-20	3	Palaemonetes sp.		1
2503	I-35	Cabo-1	23-Apr-20	4	Etheostoma fonticola	21	1
2503	I-35	Cabo-1	23-Apr-20	4	Etheostoma fonticola	13	1
2503	I-35	Cabo-1	23-Apr-20	4	Etheostoma fonticola	30	1
2503	I-35	Cabo-1	23-Apr-20	4	Palaemonetes sp.		1
2503	I-35	Cabo-1	23-Apr-20	4	Procambarus sp.		3
2503	I-35	Cabo-1	23-Apr-20	5	Etheostoma fonticola	21	1
2503	I-35	Cabo-1	23-Apr-20	5	Etheostoma fonticola	17	1
2503	I-35	Cabo-1	23-Apr-20	5	Etheostoma fonticola	18	1
2503	I-35	Cabo-1	23-Apr-20	5	Etheostoma fonticola	14	1
2503	I-35	Cabo-1	23-Apr-20	5	Etheostoma fonticola	17	1
2503	I-35	Cabo-1	23-Apr-20	5	Etheostoma fonticola	12	1
2503	I-35	Cabo-1	23-Apr-20	5	Procambarus sp.		1
2503	I-35	Cabo-1	23-Apr-20	5	Lepomis miniatus	34	1

2503	I-35	Cabo-1	23-Apr-20	5	Lepomis sp.	10	1
2503	I-35	Cabo-1	23-Apr-20	5	Gambusia sp.	22	1
2503	I-35	Cabo-1	23-Apr-20	5	Palaemonetes sp.		1
2503	I-35	Cabo-1	23-Apr-20	6	Procambarus sp.		2
2503	I-35	Cabo-1	23-Apr-20	6	No fish collected		
2503	I-35	Cabo-1	23-Apr-20	7	Procambarus sp.		2
2503	I-35	Cabo-1	23-Apr-20	7	Etheostoma fonticola	28	1
2503	I-35	Cabo-1	23-Apr-20	8	Procambarus sp.		2
2503	I-35	Cabo-1	23-Apr-20	8	No fish collected		
2503	I-35	Cabo-1	23-Apr-20	9	Procambarus sp.		2
2503	I-35	Cabo-1	23-Apr-20	9	Lepomis sp.	10	1
2503	I-35	Cabo-1	23-Apr-20	9	Lepomis sp.	10	1
2503	I-35	Cabo-1	23-Apr-20	9	Etheostoma fonticola	14	1
2503	I-35	Cabo-1	23-Apr-20	9	Etheostoma fonticola	28	1
2503	I-35	Cabo-1	23-Apr-20	10	Lepomis miniatus	39	1
2503	I-35	Cabo-1	23-Apr-20	10	Dionda nigrotaeniata	31	1
2503	I-35	Cabo-1	23-Apr-20	10	Procambarus sp.		4
2503	I-35	Cabo-1	23-Apr-20	10	Etheostoma fonticola	18	1
2503	I-35	Cabo-1	23-Apr-20	10	Etheostoma fonticola	13	1
2503	I-35	Cabo-1	23-Apr-20	11	Procambarus sp.		5
2503	I-35	Cabo-1	23-Apr-20	11	Etheostoma fonticola	32	1
2503	I-35	Cabo-1	23-Apr-20	11	Etheostoma fonticola	21	1
2503	I-35	Cabo-1	23-Apr-20	11	Etheostoma fonticola	28	1
2503	I-35	Cabo-1	23-Apr-20	11	Etheostoma fonticola	19	1
2503	I-35	Cabo-1	23-Apr-20	12	Etheostoma fonticola	15	1
2503	I-35	Cabo-1	23-Apr-20	12	Procambarus sp.		1
2503	I-35	Cabo-1	23-Apr-20	13	Procambarus sp.		2
2503	I-35	Cabo-1	23-Apr-20	13	Etheostoma fonticola	17	1
2503	I-35	Cabo-1	23-Apr-20	14	Procambarus sp.		1
2503	I-35	Cabo-1	23-Apr-20	14	No fish collected		
2503	I-35	Cabo-1	23-Apr-20	15	No fish collected		
2504	I-35	TWR-1	23-Apr-20	1	No fish collected		
2504	I-35	TWR-1	23-Apr-20	2	No fish collected		
2504	I-35	TWR-1	23-Apr-20	3	No fish collected		
2504	I-35	TWR-1	23-Apr-20	4	No fish collected		
2504	I-35	TWR-1	23-Apr-20	5	No fish collected		
2504	I-35	TWR-1	23-Apr-20	6	No fish collected		
2504	I-35	TWR-1	23-Apr-20	7	No fish collected		
2504	I-35	TWR-1	23-Apr-20	8	No fish collected		
2504	I-35	TWR-1	23-Apr-20	9	No fish collected		
2504	I-35	TWR-1	23-Apr-20	10	No fish collected		

2504	I-35	TWR-1	23-Apr-20				
2505	I-35	Cabo-2	23-Apr-20	1	Lepomis miniatus	58	1
2505	I-35	Cabo-2	23-Apr-20	1	Lepomis miniatus	75	1
2505	I-35	Cabo-2	23-Apr-20	1	Lepomis miniatus	25	1
2505	I-35	Cabo-2	23-Apr-20	1	Procambarus sp.		8
2505	I-35	Cabo-2	23-Apr-20	1	Palaemonetes sp.		2
2505	I-35	Cabo-2	23-Apr-20	1	Etheostoma fonticola	21	1
2505	I-35	Cabo-2	23-Apr-20	1	Etheostoma fonticola	16	1
2505	I-35	Cabo-2	23-Apr-20	1	Etheostoma fonticola	17	1
2505	I-35	Cabo-2	23-Apr-20	1	Etheostoma fonticola	16	1
2505	I-35	Cabo-2	23-Apr-20	1	Etheostoma fonticola	15	1
2505	I-35	Cabo-2	23-Apr-20	1	Lepomis sp.	10	1
2505	I-35	Cabo-2	23-Apr-20	1	Gambusia sp.	15	1
2505	I-35	Cabo-2	23-Apr-20	1	Gambusia sp.	13	1
2505	I-35	Cabo-2	23-Apr-20	1	Gambusia sp.	10	1
2505	I-35	Cabo-2	23-Apr-20	1	Gambusia sp.	10	1
2505	I-35	Cabo-2	23-Apr-20	2	Procambarus sp.		5
2505	I-35	Cabo-2	23-Apr-20	2	Palaemonetes sp.		2
2505	I-35	Cabo-2	23-Apr-20	2	Etheostoma fonticola	15	1
2505	I-35	Cabo-2	23-Apr-20	2	Etheostoma fonticola	20	1
2505	I-35	Cabo-2	23-Apr-20	2	Gambusia sp.	18	1
2505	I-35	Cabo-2	23-Apr-20	2	Ambloplites rupestris	20	1
2505	I-35	Cabo-2	23-Apr-20	3	Etheostoma fonticola	30	1
2505	I-35	Cabo-2	23-Apr-20	3	Etheostoma fonticola	27	1
2505	I-35	Cabo-2	23-Apr-20	3	Etheostoma fonticola	17	1
2505	I-35	Cabo-2	23-Apr-20	3	Etheostoma fonticola	19	1
2505	I-35	Cabo-2	23-Apr-20	3	Etheostoma fonticola	23	1
2505	I-35	Cabo-2	23-Apr-20	3	Etheostoma fonticola	15	1
2505	I-35	Cabo-2	23-Apr-20	3	Etheostoma fonticola	18	1
2505	I-35	Cabo-2	23-Apr-20	3	Etheostoma fonticola	17	1
2505	I-35	Cabo-2	23-Apr-20	3	Etheostoma fonticola	20	1
2505	I-35	Cabo-2	23-Apr-20	3	Etheostoma fonticola	13	1
2505	I-35	Cabo-2	23-Apr-20	3	Procambarus sp.		8
2505	I-35	Cabo-2	23-Apr-20	3	Lepomis miniatus	70	1
2505	I-35	Cabo-2	23-Apr-20	3	Gambusia sp.	10	1
2505	I-35	Cabo-2	23-Apr-20	3	Gambusia sp.	15	1
2505	I-35	Cabo-2	23-Apr-20	4	Etheostoma fonticola	25	1
2505	I-35	Cabo-2	23-Apr-20	4	Etheostoma fonticola	14	1
2505	I-35	Cabo-2	23-Apr-20	4	Etheostoma fonticola	18	1
2505	I-35	Cabo-2	23-Apr-20	4	Etheostoma fonticola	12	1
2505	I-35	Cabo-2	23-Apr-20	4	Lepomis sp.	15	1

2505	I-35	Cabo-2	23-Apr-20	4	Palaemonetes sp.		1
2505	I-35	Cabo-2	23-Apr-20	4	Gambusia sp.	10	1
2505	I-35	Cabo-2	23-Apr-20	5	Etheostoma fonticola	34	1
2505	I-35	Cabo-2	23-Apr-20	5	Gambusia sp.	23	1
2505	I-35	Cabo-2	23-Apr-20	5	Procambarus sp.		2
2505	I-35	Cabo-2	23-Apr-20	6	Procambarus sp.		10
2505	I-35	Cabo-2	23-Apr-20	6	Etheostoma fonticola	32	1
2505	I-35	Cabo-2	23-Apr-20	7	Procambarus sp.		6
2505	I-35	Cabo-2	23-Apr-20	7	No fish collected		
2505	I-35	Cabo-2	23-Apr-20	8	Procambarus sp.		4
2505	I-35	Cabo-2	23-Apr-20	8	No fish collected		
2505	I-35	Cabo-2	23-Apr-20	9	Procambarus sp.		2
2505	I-35	Cabo-2	23-Apr-20	9	No fish collected		
2505	I-35	Cabo-2	23-Apr-20	10	Procambarus sp.		3
2505	I-35	Cabo-2	23-Apr-20	10	No fish collected		
2505	I-35	Cabo-2	23-Apr-20	11	Procambarus sp.		3
2505	I-35	Cabo-2	23-Apr-20	11	No fish collected		
2505	I-35	Cabo-2	23-Apr-20	12	No fish collected		
2505	I-35	Cabo-2	23-Apr-20	13	Etheostoma fonticola	25	1
2505	I-35	Cabo-2	23-Apr-20	14	Ambloplites rupestris	86	1
2505	I-35	Cabo-2	23-Apr-20	15	Etheostoma fonticola	15	1
2505	I-35	Cabo-2	23-Apr-20	16	Etheostoma fonticola	23	1
2505	I-35	Cabo-2	23-Apr-20	17	Procambarus sp.		2
2505	I-35	Cabo-2	23-Apr-20	17	No fish collected		
2506	I-35	Open-2	23-Apr-20	1	No fish collected		
2506	I-35	Open-2	23-Apr-20	2	No fish collected		
2506	I-35	Open-2	23-Apr-20	3	No fish collected		
2506	I-35	Open-2	23-Apr-20	4	No fish collected		
2506	I-35	Open-2	23-Apr-20	5	Procambarus sp.		1
2506	I-35	Open-2	23-Apr-20	5	No fish collected		
2506	I-35	Open-2	23-Apr-20	6	No fish collected		
2506	I-35	Open-2	23-Apr-20	7	No fish collected		
2506	I-35	Open-2	23-Apr-20	8	No fish collected		
2506	I-35	Open-2	23-Apr-20	9	No fish collected		
2506	I-35	Open-2	23-Apr-20	10	No fish collected		
2507	I-35	Hygro-1	23-Apr-20	1	Procambarus sp.		21
2507	I-35	Hygro-1	23-Apr-20	1	Etheostoma fonticola	26	1
2507	I-35	Hygro-1	23-Apr-20	1	Gambusia sp.	16	1
2507	I-35	Hygro-1	23-Apr-20	1	Gambusia sp.	18	1
2507	I-35	Hygro-1	23-Apr-20	1	Gambusia sp.	20	1
2507	I-35	Hygro-1	23-Apr-20	2	Procambarus sp.		5

2507	I-35	Hygro-1	23-Apr-20	2	Gambusia sp.	26	1
2507	I-35	Hygro-1	23-Apr-20	2	Gambusia sp.	24	1
2507	I-35	Hygro-1	23-Apr-20	2	Gambusia sp.	15	1
2507	I-35	Hygro-1	23-Apr-20	3	Etheostoma fonticola	32	1
2507	I-35	Hygro-1	23-Apr-20	3	Etheostoma fonticola	22	1
2507	I-35	Hygro-1	23-Apr-20	4	Procambarus sp.		1
2507	I-35	Hygro-1	23-Apr-20	4	Etheostoma fonticola	23	1
2507	I-35	Hygro-1	23-Apr-20	5	Procambarus sp.		1
2507	I-35	Hygro-1	23-Apr-20	5	No fish collected		
2507	I-35	Hygro-1	23-Apr-20	6	Procambarus sp.		1
2507	I-35	Hygro-1	23-Apr-20	6	No fish collected		
2507	I-35	Hygro-1	23-Apr-20	7	No fish collected		
2507	I-35	Hygro-1	23-Apr-20	8	Etheostoma fonticola	31	1
2507	I-35	Hygro-1	23-Apr-20	9	Procambarus sp.		2
2507	I-35	Hygro-1	23-Apr-20	9	No fish collected		
2507	I-35	Hygro-1	23-Apr-20	10	Procambarus sp.		1
2507	I-35	Hygro-1	23-Apr-20	10	No fish collected		
2507	I-35	Hygro-1	23-Apr-20	11	Gambusia sp.	34	1
2507	I-35	Hygro-1	23-Apr-20	12	No fish collected		
2507	I-35	Hygro-1	23-Apr-20	13	Gambusia sp.	27	1
2507	I-35	Hygro-1	23-Apr-20	14	No fish collected		
2507	I-35	Hygro-1	23-Apr-20	15	No fish collected		
2508	I-35	Hygro-2	23-Apr-20	1	Gambusia sp.	22	1
2508	I-35	Hygro-2	23-Apr-20	1	Gambusia sp.	34	1
2508	I-35	Hygro-2	23-Apr-20	1	Ambloplites rupestris	95	1
2508	I-35	Hygro-2	23-Apr-20	1	Procambarus sp.		2
2508	I-35	Hygro-2	23-Apr-20	1	Etheostoma fonticola	22	1
2508	I-35	Hygro-2	23-Apr-20	2	Gambusia sp.	1	28
2508	I-35	Hygro-2	23-Apr-20	2	Gambusia sp.	1	17
2508	I-35	Hygro-2	23-Apr-20	2	Gambusia sp.	1	15
2508	I-35	Hygro-2	23-Apr-20	2	Astyanax mexicanus	47	1
2508	I-35	Hygro-2	23-Apr-20	2	Procambarus sp.		5
2508	I-35	Hygro-2	23-Apr-20	2	Etheostoma fonticola	19	1
2508	I-35	Hygro-2	23-Apr-20	3	Gambusia sp.	28	1
2508	I-35	Hygro-2	23-Apr-20	3	Gambusia sp.	28	1
2508	I-35	Hygro-2	23-Apr-20	3	Gambusia sp.	16	1
2508	I-35	Hygro-2	23-Apr-20	3	Gambusia sp.	16	1
2508	I-35	Hygro-2	23-Apr-20	3	Procambarus sp.		4
2508	I-35	Hygro-2	23-Apr-20	4	Procambarus sp.		5
2508	I-35	Hygro-2	23-Apr-20	4	Gambusia sp.	15	1
2508	I-35	Hygro-2	23-Apr-20	5	Procambarus sp.		3

2508	I-35	Hygro-2	23-Apr-20	5	Gambusia sp.	15	1
2508	I-35	Hygro-2	23-Apr-20	5	Gambusia sp.	21	1
2508	I-35	Hygro-2	23-Apr-20	6	Procambarus sp.		1
2508	I-35	Hygro-2	23-Apr-20	6	No fish collected		
2508	I-35	Hygro-2	23-Apr-20	7	Gambusia sp.	20	1
2508	I-35	Hygro-2	23-Apr-20	7	Gambusia sp.	12	1
2508	I-35	Hygro-2	23-Apr-20	8	Procambarus sp.		1
2508	I-35	Hygro-2	23-Apr-20	8	Gambusia sp.	35	1
2508	I-35	Hygro-2	23-Apr-20	9	Procambarus sp.		2
2508	I-35	Hygro-2	23-Apr-20	9	No fish collected		
2508	I-35	Hygro-2	23-Apr-20	10	Procambarus sp.		1
2508	I-35	Hygro-2	23-Apr-20	10	No fish collected		
2508	I-35	Hygro-2	23-Apr-20	11	No fish collected		
2508	I-35	Hygro-2	23-Apr-20	12	No fish collected		
2508	I-35	Hygro-2	23-Apr-20	13	Procambarus sp.		1
2508	I-35	Hygro-2	23-Apr-20	14	No fish collected		
2508	I-35	Hygro-2	23-Apr-20	15	Procambarus sp.		1
2508	I-35	Hygro-2	23-Apr-20	15	No fish collected		
2509	I-35	Hydr-1	23-Apr-20	7	No fish collected		
2509	I-35	Hydr-1	23-Apr-20	8	Procambarus sp.		1
2509	I-35	Hydr-1	23-Apr-20	8	No fish collected		
2509	I-35	Hydr-1	23-Apr-20	9	Procambarus sp.		2
2509	I-35	Hydr-1	23-Apr-20	9	No fish collected		
2509	I-35	Hydr-1	23-Apr-20	10	Procambarus sp.		1
2509	I-35	Hydr-1	23-Apr-20	10	No fish collected		
2509	I-35	Hydr-1	23-Apr-20	11	Procambarus sp.		1
2509	I-35	Hydr-1	23-Apr-20	11	No fish collected		
2509	I-35	Hydr-1	23-Apr-20	12	Etheostoma fonticola	29	1
2509	I-35	Hydr-1	23-Apr-20	12	Procambarus sp.		2
2509	I-35	Hydr-1	23-Apr-20	13	Procambarus sp.		1
2509	I-35	Hydr-1	23-Apr-20	13	No fish collected		
2509	I-35	Hydr-1	23-Apr-20	14	No fish collected		
2509	I-35	Hydr-1	23-Apr-20	15	No fish collected		
2509	I-35	Hydr-1	23-Apr-20	1	Etheostoma fonticola	35	1
2509	I-35	Hydr-1	23-Apr-20	1	Etheostoma fonticola	25	1
2509	I-35	Hydr-1	23-Apr-20	1	Etheostoma fonticola	20	1
2509	I-35	Hydr-1	23-Apr-20	1	Procambarus sp.		14
2509	I-35	Hydr-1	23-Apr-20	1	Gambusia sp.	19	1
2509	I-35	Hydr-1	23-Apr-20	1	Gambusia sp.	20	1
2509	I-35	Hydr-1	23-Apr-20	1	Gambusia sp.	20	1
2509	I-35	Hydr-1	23-Apr-20	1	Gambusia sp.	24	1

2509	I-35	Hydr-1	23-Apr-20	1	Gambusia sp.	16	1
2509	I-35	Hydr-1	23-Apr-20	1	Gambusia sp.	17	1
2509	I-35	Hydr-1	23-Apr-20	2	Gambusia sp.	20	10
2509	I-35	Hydr-1	23-Apr-20	2	Gambusia sp.	21	1
2509	I-35	Hydr-1	23-Apr-20	2	Gambusia sp.	25	1
2509	I-35	Hydr-1	23-Apr-20	2	Gambusia sp.	16	1
2509	I-35	Hydr-1	23-Apr-20	2	Gambusia sp.	18	1
2509	I-35	Hydr-1	23-Apr-20	2	Gambusia sp.	15	1
2509	I-35	Hydr-1	23-Apr-20	2	Gambusia sp.	18	1
2509	I-35	Hydr-1	23-Apr-20	2	Gambusia sp.	17	1
2509	I-35	Hydr-1	23-Apr-20	2	Gambusia sp.	15	1
2509	I-35	Hydr-1	23-Apr-20	2	Gambusia sp.	15	1
2509	I-35	Hydr-1	23-Apr-20	2	Gambusia sp.	10	1
2509	I-35	Hydr-1	23-Apr-20	2	Etheostoma fonticola	12	1
2509	I-35	Hydr-1	23-Apr-20	3	Procambarus sp.		10
2509	I-35	Hydr-1	23-Apr-20	3	Etheostoma fonticola	28	1
2509	I-35	Hydr-1	23-Apr-20	3	Etheostoma fonticola	22	1
2509	I-35	Hydr-1	23-Apr-20	3	Etheostoma fonticola	18	1
2509	I-35	Hydr-1	23-Apr-20	3	Etheostoma fonticola	17	1
2509	I-35	Hydr-1	23-Apr-20	3	Gambusia sp.	20	1
2509	I-35	Hydr-1	23-Apr-20	3	Gambusia sp.	13	1
2509	I-35	Hydr-1	23-Apr-20	4	Procambarus sp.		5
2509	I-35	Hydr-1	23-Apr-20	4	Gambusia sp.	20	1
2509	I-35	Hydr-1	23-Apr-20	4	Gambusia sp.	14	1
2509	I-35	Hydr-1	23-Apr-20	4	Etheostoma fonticola	11	1
2509	I-35	Hydr-1	23-Apr-20	5	Procambarus sp.		1
2509	I-35	Hydr-1	23-Apr-20	5	No fish collected		
2509	I-35	Hydr-1	23-Apr-20	6	Procambarus sp.		5
2509	I-35	Hydr-1	23-Apr-20	6	No fish collected		
2509	I-35	Hydr-1	23-Apr-20	7	Procambarus sp.		2
2510	I-35	Hydr-2	23-Apr-20	1	Etheostoma fonticola	16	1
2510	I-35	Hydr-2	23-Apr-20	1	Etheostoma fonticola	29	1
2510	I-35	Hydr-2	23-Apr-20	1	Etheostoma fonticola	11	1
2510	I-35	Hydr-2	23-Apr-20	1	Procambarus sp.		10
2510	I-35	Hydr-2	23-Apr-20	1	Gambusia sp.	20	1
2510	I-35	Hydr-2	23-Apr-20	1	Gambusia sp.	20	1
2510	I-35	Hydr-2	23-Apr-20	1	Gambusia sp.	15	1
2510	I-35	Hydr-2	23-Apr-20	1	Gambusia sp.	15	1
2510	I-35	Hydr-2	23-Apr-20	1	Gambusia sp.	15	1
2510	I-35	Hydr-2	23-Apr-20	1	Gambusia sp.	10	1
2510	I-35	Hydr-2	23-Apr-20	1	Gambusia sp.	10	1

2510	I-35	Hydr-2	23-Apr-20	1	Gambusia sp.	10	1
2510	I-35	Hydr-2	23-Apr-20	1	Gambusia sp.	14	1
2510	I-35	Hydr-2	23-Apr-20	1	Gambusia sp.	20	1
2510	I-35	Hydr-2	23-Apr-20	1	Gambusia sp.	10	1
2510	I-35	Hydr-2	23-Apr-20	1	Gambusia sp.	10	1
2510	I-35	Hydr-2	23-Apr-20	1	Gambusia sp.	10	1
2510	I-35	Hydr-2	23-Apr-20	1	Gambusia sp.	12	1
2510	I-35	Hydr-2	23-Apr-20	1	Gambusia sp.	9	1
2510	I-35	Hydr-2	23-Apr-20	2	Etheostoma fonticola	26	1
2510	I-35	Hydr-2	23-Apr-20	2	Procambarus sp.		9
2510	I-35	Hydr-2	23-Apr-20	2	Gambusia sp.	20	1
2510	I-35	Hydr-2	23-Apr-20	2	Gambusia sp.	22	1
2510	I-35	Hydr-2	23-Apr-20	2	Gambusia sp.	14	1
2510	I-35	Hydr-2	23-Apr-20	2	Gambusia sp.	10	1
2510	I-35	Hydr-2	23-Apr-20	2	Gambusia sp.	11	1
2510	I-35	Hydr-2	23-Apr-20	2	Gambusia sp.	14	1
2510	I-35	Hydr-2	23-Apr-20	3	Gambusia sp.	10	1
2510	I-35	Hydr-2	23-Apr-20	3	Gambusia sp.	10	1
2510	I-35	Hydr-2	23-Apr-20	3	Procambarus sp.		5
2510	I-35	Hydr-2	23-Apr-20	3	Etheostoma fonticola	12	1
2510	I-35	Hydr-2	23-Apr-20	4	Gambusia sp.	25	1
2510	I-35	Hydr-2	23-Apr-20	4	Gambusia sp.	20	1
2510	I-35	Hydr-2	23-Apr-20	4	Gambusia sp.	17	1
2510	I-35	Hydr-2	23-Apr-20	4	Procambarus sp.		5
2510	I-35	Hydr-2	23-Apr-20	5	Gambusia sp.	20	1
2510	I-35	Hydr-2	23-Apr-20	5	Procambarus sp.		4
2510	I-35	Hydr-2	23-Apr-20	6	Gambusia sp.	18	1
2510	I-35	Hydr-2	23-Apr-20	6	Procambarus sp.		5
2510	I-35	Hydr-2	23-Apr-20	7	Procambarus sp.		3
2510	I-35	Hydr-2	23-Apr-20	7	Gambusia sp.	16	1
2510	I-35	Hydr-2	23-Apr-20	8	Procambarus sp.		4
2510	I-35	Hydr-2	23-Apr-20	8	No fish collected		
2510	I-35	Hydr-2	23-Apr-20	9	Procambarus sp.		1
2510	I-35	Hydr-2	23-Apr-20	9	No fish collected		
2510	I-35	Hydr-2	23-Apr-20	10	No fish collected		
2510	I-35	Hydr-2	23-Apr-20	11	Procambarus sp.		3
2510	I-35	Hydr-2	23-Apr-20	11	No fish collected		
2510	I-35	Hydr-2	23-Apr-20	12	Procambarus sp.		3
2510	I-35	Hydr-2	23-Apr-20	12	No fish collected		
2510	I-35	Hydr-2	23-Apr-20	13	Procambarus sp.		2

2510	I-35	Hydr-2	23-Apr-20	13	No fish collected		
2510	I-35	Hydr-2	23-Apr-20	14	No fish collected		
2510	I-35	Hydr-2	23-Apr-20	15	Procambarus sp.		1
2510	I-35	Hydr-2	23-Apr-20	15	No fish collected		
2481	Spring Lake Dam	Open-1	21-Apr-20	1	No fish collected		
2481	Spring Lake Dam	Open-1	21-Apr-20	2	No fish collected		
2481	Spring Lake Dam	Open-1	21-Apr-20	3	No fish collected		
2481	Spring Lake Dam	Open-1	21-Apr-20	4	No fish collected		
2481	Spring Lake Dam	Open-1	21-Apr-20	5	No fish collected		
2481	Spring Lake Dam	Open-1	21-Apr-20	6	No fish collected		
2481	Spring Lake Dam	Open-1	21-Apr-20	6	Procambarus sp.		1
2481	Spring Lake Dam	Open-1	21-Apr-20	7	No fish collected		
2481	Spring Lake Dam	Open-1	21-Apr-20	8	No fish collected		
2481	Spring Lake Dam	Open-1	21-Apr-20	9	No fish collected		
2481	Spring Lake Dam	Open-1	21-Apr-20	10	No fish collected		
2482	Spring Lake Dam	Hygr-1	21-Apr-20	1	Lepomis macrochirus	91	1
2482	Spring Lake Dam	Hygr-1	21-Apr-20	1	Dionda nigrotaeniata	30	1
2482	Spring Lake Dam	Hygr-1	21-Apr-20	1	Lepomis miniatus	94	1
2482	Spring Lake Dam	Hygr-1	21-Apr-20	1	Lepomis miniatus	45	1
2482	Spring Lake Dam	Hygr-1	21-Apr-20	1	Gambusia sp.	19	1
2482	Spring Lake Dam	Hygr-1	21-Apr-20	1	Gambusia sp.	35	1
2482	Spring Lake Dam	Hygr-1	21-Apr-20	1	Gambusia sp.	13	1
2482	Spring Lake Dam	Hygr-1	21-Apr-20	1	Gambusia sp.	22	1
2482	Spring Lake Dam	Hygr-1	21-Apr-20	1	Gambusia sp.	25	1
2482	Spring Lake Dam	Hygr-1	21-Apr-20	1	Gambusia sp.	21	1
2482	Spring Lake Dam	Hygr-1	21-Apr-20	1	Gambusia sp.	18	1
2482	Spring Lake Dam	Hygr-1	21-Apr-20	1	Gambusia sp.	12	1
2482	Spring Lake Dam	Hygr-1	21-Apr-20	1	Notropis amabilis	25	1
2482	Spring Lake Dam	Hygr-1	21-Apr-20	1	Etheostoma fonticola	19	1
2482	Spring Lake Dam	Hygr-1	21-Apr-20	1	Micropterus salmoides	31	1
2482	Spring Lake Dam	Hygr-1	21-Apr-20	1	Lepomis sp.	13	1
2482	Spring Lake Dam	Hygr-1	21-Apr-20	1	Procambarus sp.		1
2482	Spring Lake Dam	Hygr-1	21-Apr-20	2	Micropterus salmoides	121	1
2482	Spring Lake Dam	Hygr-1	21-Apr-20	2	Herichthys cyanoguttatus	48	1
2482	Spring Lake Dam	Hygr-1	21-Apr-20	2	Gambusia sp.	12	1
2482	Spring Lake Dam	Hygr-1	21-Apr-20	2	Gambusia sp.	18	1
2482	Spring Lake Dam	Hygr-1	21-Apr-20	2	Notropis amabilis	31	1
2482	Spring Lake Dam	Hygr-1	21-Apr-20	2	Notropis amabilis	35	1
2482	Spring Lake Dam	Hygr-1	21-Apr-20	2	Dionda nigrotaeniata	31	1

2482	Spring Lake Dam	Hygr-1	21-Apr-20	2	Etheostoma fonticola	18	1
2482	Spring Lake Dam	Hygr-1	21-Apr-20	3	Gambusia sp.	12	1
2482	Spring Lake Dam	Hygr-1	21-Apr-20	3	Gambusia sp.	18	1
2482	Spring Lake Dam	Hygr-1	21-Apr-20	3	Procambarus sp.		1
2482	Spring Lake Dam	Hygr-1	21-Apr-20	4	Lepomis miniatus	56	1
2482	Spring Lake Dam	Hygr-1	21-Apr-20	5	Gambusia sp.	31	1
2482	Spring Lake Dam	Hygr-1	21-Apr-20	5	Gambusia sp.	28	1
2482	Spring Lake Dam	Hygr-1	21-Apr-20	6	Lepomis miniatus	55	1
2482	Spring Lake Dam	Hygr-1	21-Apr-20	6	Etheostoma fonticola	31	1
2482	Spring Lake Dam	Hygr-1	21-Apr-20	7	Etheostoma fonticola	24	1
2482	Spring Lake Dam	Hygr-1	21-Apr-20	8	Lepomis miniatus	55	1
2482	Spring Lake Dam	Hygr-1	21-Apr-20	8	Etheostoma fonticola	29	1
2482	Spring Lake Dam	Hygr-1	21-Apr-20	9	Lepomis miniatus	98	1
2482	Spring Lake Dam	Hygr-1	21-Apr-20	9	Gambusia sp.	30	1
2482	Spring Lake Dam	Hygr-1	21-Apr-20	10	Procambarus sp.		1
2482	Spring Lake Dam	Hygr-1	21-Apr-20	11	Lepomis miniatus	58	1
2482	Spring Lake Dam	Hygr-1	21-Apr-20	11	Gambusia sp.	25	1
2482	Spring Lake Dam	Hygr-1	21-Apr-20	12	Lepomis miniatus	58	1
2482	Spring Lake Dam	Hygr-1	21-Apr-20	12	Etheostoma fonticola	16	1
2482	Spring Lake Dam	Hygr-1	21-Apr-20	13	No fish collected		
2482	Spring Lake Dam	Hygr-1	21-Apr-20	14	No fish collected		
2482	Spring Lake Dam	Hygr-1	21-Apr-20	15	No fish collected		
2483	Spring Lake Dam	Hygr-2	21-Apr-20	1	Gambusia sp.	36	1
2483	Spring Lake Dam	Hygr-2	21-Apr-20	1	Gambusia sp.	10	1
2483	Spring Lake Dam	Hygr-2	21-Apr-20	1	Gambusia sp.	15	1
2483	Spring Lake Dam	Hygr-2	21-Apr-20	1	Gambusia sp.	17	1
2483	Spring Lake Dam	Hygr-2	21-Apr-20	1	Gambusia sp.	10	1
2483	Spring Lake Dam	Hygr-2	21-Apr-20	1	Gambusia sp.	23	1
2483	Spring Lake Dam	Hygr-2	21-Apr-20	1	Gambusia sp.	15	1
2483	Spring Lake Dam	Hygr-2	21-Apr-20	1	Gambusia sp.	12	1
2483	Spring Lake Dam	Hygr-2	21-Apr-20	1	Gambusia sp.	10	1
2483	Spring Lake Dam	Hygr-2	21-Apr-20	1	Gambusia sp.	26	1
2483	Spring Lake Dam	Hygr-2	21-Apr-20	1	Gambusia sp.	15	1
2483	Spring Lake Dam	Hygr-2	21-Apr-20	1	Gambusia sp.	10	1
2483	Spring Lake Dam	Hygr-2	21-Apr-20	1	Gambusia sp.	20	1
2483	Spring Lake Dam	Hygr-2	21-Apr-20	1	Gambusia sp.	8	1
2483	Spring Lake Dam	Hygr-2	21-Apr-20	1	Gambusia sp.	12	1
2483	Spring Lake Dam	Hygr-2	21-Apr-20	1	Procambarus sp.		1
2483	Spring Lake Dam	Hygr-2	21-Apr-20	2	Gambusia sp.	12	1
2483	Spring Lake Dam	Hygr-2	21-Apr-20	2	Gambusia sp.	8	1
2483	Spring Lake Dam	Hygr-2	21-Apr-20	2	Gambusia sp.	35	1

2483	Spring Lake Dam	Hygr-2	21-Apr-20	2	Gambusia sp.	25	1
2483	Spring Lake Dam	Hygr-2	21-Apr-20	2	Gambusia sp.	25	1
2483	Spring Lake Dam	Hygr-2	21-Apr-20	2	Gambusia sp.	15	1
2483	Spring Lake Dam	Hygr-2	21-Apr-20	2	Gambusia sp.	25	1
2483	Spring Lake Dam	Hygr-2	21-Apr-20	2	Gambusia sp.	25	1
2483	Spring Lake Dam	Hygr-2	21-Apr-20	2	Gambusia sp.	21	1
2483	Spring Lake Dam	Hygr-2	21-Apr-20	2	Gambusia sp.	20	1
2483	Spring Lake Dam	Hygr-2	21-Apr-20	2	Gambusia sp.	20	1
2483	Spring Lake Dam	Hygr-2	21-Apr-20	2	Gambusia sp.	24	1
2483	Spring Lake Dam	Hygr-2	21-Apr-20	2	Gambusia sp.	18	1
2483	Spring Lake Dam	Hygr-2	21-Apr-20	2	Etheostoma fonticola	17	1
2483	Spring Lake Dam	Hygr-2	21-Apr-20	2	Etheostoma fonticola	21	1
2483	Spring Lake Dam	Hygr-2	21-Apr-20	2	Etheostoma fonticola	29	1
2483	Spring Lake Dam	Hygr-2	21-Apr-20	2	Lepomis sp.	12	1
2483	Spring Lake Dam	Hygr-2	21-Apr-20	2	Procambarus sp.		1
2483	Spring Lake Dam	Hygr-2	21-Apr-20	3	Procambarus sp.		3
2483	Spring Lake Dam	Hygr-2	21-Apr-20	3	Gambusia sp.	25	1
2483	Spring Lake Dam	Hygr-2	21-Apr-20	3	Gambusia sp.	29	1
2483	Spring Lake Dam	Hygr-2	21-Apr-20	3	Gambusia sp.	25	1
2483	Spring Lake Dam	Hygr-2	21-Apr-20	4	Procambarus sp.		1
2483	Spring Lake Dam	Hygr-2	21-Apr-20	4	Gambusia sp.		1
2483	Spring Lake Dam	Hygr-2	21-Apr-20	4	Gambusia sp.		1
2483	Spring Lake Dam	Hygr-2	21-Apr-20	4	Gambusia sp.		1
2483	Spring Lake Dam	Hygr-2	21-Apr-20	5	Ameiurus natalis	91	1
2483	Spring Lake Dam	Hygr-2	21-Apr-20	5	Gambusia sp.		1
2483	Spring Lake Dam	Hygr-2	21-Apr-20	5	Gambusia sp.		1
2483	Spring Lake Dam	Hygr-2	21-Apr-20	5	Gambusia sp.		1
2483	Spring Lake Dam	Hygr-2	21-Apr-20	5	Gambusia sp.		1
2483	Spring Lake Dam	Hygr-2	21-Apr-20	5	Gambusia sp.		1
2483	Spring Lake Dam	Hygr-2	21-Apr-20	6	Etheostoma fonticola	17	1
2483	Spring Lake Dam	Hygr-2	21-Apr-20	7	Procambarus sp.		1
2483	Spring Lake Dam	Hygr-2	21-Apr-20	7	Lepomis miniatus	75	1
2483	Spring Lake Dam	Hygr-2	21-Apr-20	8	No fish collected		
2483	Spring Lake Dam	Hygr-2	21-Apr-20	9	Gambusia sp.		1
2483	Spring Lake Dam	Hygr-2	21-Apr-20	10	Procambarus sp.		2
2483	Spring Lake Dam	Hygr-2	21-Apr-20	10	Gambusia sp.		1
2483	Spring Lake Dam	Hygr-2	21-Apr-20	10	Gambusia sp.		1
2483	Spring Lake Dam	Hygr-2	21-Apr-20	11	Procambarus sp.		1
2483	Spring Lake Dam	Hygr-2	21-Apr-20	12	No fish collected		
2483	Spring Lake Dam	Hygr-2	21-Apr-20	13	Gambusia sp.		1
2483	Spring Lake Dam	Hygr-2	21-Apr-20	14	No fish collected		

2483	Spring Lake Dam	Hygr-2	21-Apr-20	15	No fish collected		
2484	Spring Lake Dam	Pota-1	21-Apr-20	1	No fish collected		
2484	Spring Lake Dam	Pota-1	21-Apr-20	2	No fish collected		
2484	Spring Lake Dam	Pota-1	21-Apr-20	3	No fish collected		
2484	Spring Lake Dam	Pota-1	21-Apr-20	3	Palaemonetes sp.		1
2484	Spring Lake Dam	Pota-1	21-Apr-20	4	No fish collected		
2484	Spring Lake Dam	Pota-1	21-Apr-20	5	No fish collected		
2484	Spring Lake Dam	Pota-1	21-Apr-20	6	No fish collected		
2484	Spring Lake Dam	Pota-1	21-Apr-20	7	No fish collected		
2484	Spring Lake Dam	Pota-1	21-Apr-20	8	No fish collected		
2484	Spring Lake Dam	Pota-1	21-Apr-20	9	No fish collected		
2484	Spring Lake Dam	Pota-1	21-Apr-20	10	No fish collected		
2485	Spring Lake Dam	Pota-2	21-Apr-20	1	No fish collected		
2485	Spring Lake Dam	Pota-2	21-Apr-20	2	Lepomis miniatus	79	1
2485	Spring Lake Dam	Pota-2	21-Apr-20	3	No fish collected		
2485	Spring Lake Dam	Pota-2	21-Apr-20	4	No fish collected		
2485	Spring Lake Dam	Pota-2	21-Apr-20	5	No fish collected		
2485	Spring Lake Dam	Pota-2	21-Apr-20	6	No fish collected		
2485	Spring Lake Dam	Pota-2	21-Apr-20	7	No fish collected		
2485	Spring Lake Dam	Pota-2	21-Apr-20	8	No fish collected		
2485	Spring Lake Dam	Pota-2	21-Apr-20	9	No fish collected		
2485	Spring Lake Dam	Pota-2	21-Apr-20	10	Lepomis sp.	23	1
2485	Spring Lake Dam	Pota-2	21-Apr-20	11	No fish collected		
2485	Spring Lake Dam	Pota-2	21-Apr-20	12	No fish collected		
2485	Spring Lake Dam	Pota-2	21-Apr-20	13	No fish collected		
2485	Spring Lake Dam	Pota-2	21-Apr-20	14	No fish collected		
2485	Spring Lake Dam	Pota-2	21-Apr-20	15	No fish collected		
2486	Spring Lake Dam	Sagi-1	21-Apr-20	1	Gambusia sp.	12	1
2486	Spring Lake Dam	Sagi-1	21-Apr-20	1	Gambusia sp.	12	1
2486	Spring Lake Dam	Sagi-1	21-Apr-20	1	Gambusia sp.	12	1
2486	Spring Lake Dam	Sagi-1	21-Apr-20	1	Gambusia sp.	12	1
2486	Spring Lake Dam	Sagi-1	21-Apr-20	1	Gambusia sp.	10	1
2486	Spring Lake Dam	Sagi-1	21-Apr-20	1	Gambusia sp.	12	1
2486	Spring Lake Dam	Sagi-1	21-Apr-20	1	Gambusia sp.	10	1
2486	Spring Lake Dam	Sagi-1	21-Apr-20	1	Gambusia sp.	10	1
2486	Spring Lake Dam	Sagi-1	21-Apr-20	1	Gambusia sp.	18	1
2486	Spring Lake Dam	Sagi-1	21-Apr-20	1	Gambusia sp.	11	1
2486	Spring Lake Dam	Sagi-1	21-Apr-20	1	Gambusia sp.	11	1
2486	Spring Lake Dam	Sagi-1	21-Apr-20	1	Gambusia sp.	15	1
2486	Spring Lake Dam	Sagi-1	21-Apr-20	1	Gambusia sp.	13	1
2486	Spring Lake Dam	Sagi-1	21-Apr-20	1	Gambusia sp.	15	1

2486	Spring Lake Dam	Sagi-1	21-Apr-20	1	Gambusia sp.	15	1
2486	Spring Lake Dam	Sagi-1	21-Apr-20	1	Gambusia sp.	13	1
2486	Spring Lake Dam	Sagi-1	21-Apr-20	1	Gambusia sp.	17	1
2486	Spring Lake Dam	Sagi-1	21-Apr-20	1	Gambusia sp.	11	1
2486	Spring Lake Dam	Sagi-1	21-Apr-20	1	Gambusia sp.	11	1
2486	Spring Lake Dam	Sagi-1	21-Apr-20	2	Procambarus sp.		1
2486	Spring Lake Dam	Sagi-1	21-Apr-20	2	Gambusia sp.	17	1
2486	Spring Lake Dam	Sagi-1	21-Apr-20	3	Gambusia sp.	10	1
2486	Spring Lake Dam	Sagi-1	21-Apr-20	4	No fish collected		
2486	Spring Lake Dam	Sagi-1	21-Apr-20	5	No fish collected		
2486	Spring Lake Dam	Sagi-1	21-Apr-20	6	No fish collected		
2486	Spring Lake Dam	Sagi-1	21-Apr-20	7	Gambusia sp.	34	1
2486	Spring Lake Dam	Sagi-1	21-Apr-20	8	No fish collected		
2486	Spring Lake Dam	Sagi-1	21-Apr-20	9	Lepomis miniatus	43	1
2486	Spring Lake Dam	Sagi-1	21-Apr-20	10	No fish collected		
2486	Spring Lake Dam	Sagi-1	21-Apr-20	11	No fish collected		
2486	Spring Lake Dam	Sagi-1	21-Apr-20	12	Gambusia sp.	17	1
2486	Spring Lake Dam	Sagi-1	21-Apr-20	13	No fish collected		
2486	Spring Lake Dam	Sagi-1	21-Apr-20	14	No fish collected		
2486	Spring Lake Dam	Sagi-1	21-Apr-20	15	No fish collected		
2487	Spring Lake Dam	Sagi-2	21-Apr-20	1	Lepomis miniatus	38	1
2487	Spring Lake Dam	Sagi-2	21-Apr-20	1	Lepomis miniatus	57	1
2487	Spring Lake Dam	Sagi-2	21-Apr-20	1	Procambarus sp.		1
2487	Spring Lake Dam	Sagi-2	21-Apr-20	2	Gambusia sp.	12	1
2487	Spring Lake Dam	Sagi-2	21-Apr-20	2	Etheostoma fonticola	16	1
2487	Spring Lake Dam	Sagi-2	21-Apr-20	3	Lepomis miniatus	57	1
2487	Spring Lake Dam	Sagi-2	21-Apr-20	3	Lepomis miniatus	55	1
2487	Spring Lake Dam	Sagi-2	21-Apr-20	3	Procambarus sp.		1
2487	Spring Lake Dam	Sagi-2	21-Apr-20	4	No fish collected		
2487	Spring Lake Dam	Sagi-2	21-Apr-20	5	No fish collected		
2487	Spring Lake Dam	Sagi-2	21-Apr-20	6	Lepomis miniatus	32	1
2487	Spring Lake Dam	Sagi-2	21-Apr-20	6	Lepomis miniatus	40	1
2487	Spring Lake Dam	Sagi-2	21-Apr-20	7	No fish collected		
2487	Spring Lake Dam	Sagi-2	21-Apr-20	8	Lepomis miniatus	90	1
2487	Spring Lake Dam	Sagi-2	21-Apr-20	9	No fish collected		
2487	Spring Lake Dam	Sagi-2	21-Apr-20	10	No fish collected		
2487	Spring Lake Dam	Sagi-2	21-Apr-20	11	No fish collected		
2487	Spring Lake Dam	Sagi-2	21-Apr-20	12	No fish collected		
2487	Spring Lake Dam	Sagi-2	21-Apr-20	13	No fish collected		
2487	Spring Lake Dam	Sagi-2	21-Apr-20	14	Lepomis macrochirus	98	1
2487	Spring Lake Dam	Sagi-2	21-Apr-20	15	No fish collected		

2488	Spring Lake Dam	Hydr-1	21-Apr-20	1	Gambusia sp.	11	1
2488	Spring Lake Dam	Hydr-1	21-Apr-20	1	Gambusia sp.	16	1
2488	Spring Lake Dam	Hydr-1	21-Apr-20	1	Gambusia sp.	15	1
2488	Spring Lake Dam	Hydr-1	21-Apr-20	1	Gambusia sp.	12	1
2488	Spring Lake Dam	Hydr-1	21-Apr-20	1	Gambusia sp.	15	1
2488	Spring Lake Dam	Hydr-1	21-Apr-20	1	Procambarus sp.		1
2488	Spring Lake Dam	Hydr-1	21-Apr-20	2	Gambusia sp.	18	1
2488	Spring Lake Dam	Hydr-1	21-Apr-20	2	Gambusia sp.	15	1
2488	Spring Lake Dam	Hydr-1	21-Apr-20	2	Gambusia sp.	15	1
2488	Spring Lake Dam	Hydr-1	21-Apr-20	2	Gambusia sp.	20	1
2488	Spring Lake Dam	Hydr-1	21-Apr-20	2	Procambarus sp.		1
2488	Spring Lake Dam	Hydr-1	21-Apr-20	3	Procambarus sp.		1
2488	Spring Lake Dam	Hydr-1	21-Apr-20	3	Gambusia sp.	15	1
2488	Spring Lake Dam	Hydr-1	21-Apr-20	3	Gambusia sp.	10	1
2488	Spring Lake Dam	Hydr-1	21-Apr-20	3	Gambusia sp.	10	1
2488	Spring Lake Dam	Hydr-1	21-Apr-20	4	Procambarus sp.		3
2488	Spring Lake Dam	Hydr-1	21-Apr-20	4	Gambusia sp.	15	1
2488	Spring Lake Dam	Hydr-1	21-Apr-20	4	Gambusia sp.	15	1
2488	Spring Lake Dam	Hydr-1	21-Apr-20	5	Procambarus sp.		2
2488	Spring Lake Dam	Hydr-1	21-Apr-20	5	Lepomis miniatus	55	1
2488	Spring Lake Dam	Hydr-1	21-Apr-20	5	Lepomis miniatus	40	1
2488	Spring Lake Dam	Hydr-1	21-Apr-20	5	Gambusia sp.	15	1
2488	Spring Lake Dam	Hydr-1	21-Apr-20	5	Gambusia sp.	15	1
2488	Spring Lake Dam	Hydr-1	21-Apr-20	5	Etheostoma fonticola	18	1
2488	Spring Lake Dam	Hydr-1	21-Apr-20	6	Procambarus sp.		3
2488	Spring Lake Dam	Hydr-1	21-Apr-20	6	Gambusia sp.	26	1
2488	Spring Lake Dam	Hydr-1	21-Apr-20	6	Gambusia sp.	15	1
2488	Spring Lake Dam	Hydr-1	21-Apr-20	7	Procambarus sp.		4
2488	Spring Lake Dam	Hydr-1	21-Apr-20	7	Lepomis miniatus	42	1
2488	Spring Lake Dam	Hydr-1	21-Apr-20	7	Gambusia sp.	25	1
2488	Spring Lake Dam	Hydr-1	21-Apr-20	8	Gambusia sp.	16	1
2488	Spring Lake Dam	Hydr-1	21-Apr-20	8	Gambusia sp.	15	1
2488	Spring Lake Dam	Hydr-1	21-Apr-20	8	Gambusia sp.	15	1
2488	Spring Lake Dam	Hydr-1	21-Apr-20	9	No fish collected		
2488	Spring Lake Dam	Hydr-1	21-Apr-20	10	Procambarus sp.		2
2488	Spring Lake Dam	Hydr-1	21-Apr-20	10	Gambusia sp.	19	1
2488	Spring Lake Dam	Hydr-1	21-Apr-20	11	Gambusia sp.	20	1
2488	Spring Lake Dam	Hydr-1	21-Apr-20	11	Gambusia sp.		1
2488	Spring Lake Dam	Hydr-1	21-Apr-20	12	Procambarus sp.		1
2488	Spring Lake Dam	Hydr-1	21-Apr-20	12	No fish collected		
2488	Spring Lake Dam	Hydr-1	21-Apr-20	13	No fish collected		

2488	Spring Lake Dam	Hydr-1	21-Apr-20	14	No fish collected		
2488	Spring Lake Dam	Hydr-1	21-Apr-20	15	No fish collected		
2489	Spring Lake Dam	Hydr-2	21-Apr-20	1	Gambusia sp.	25	1
2489	Spring Lake Dam	Hydr-2	21-Apr-20	1	Gambusia sp.	31	1
2489	Spring Lake Dam	Hydr-2	21-Apr-20	1	Gambusia sp.	15	1
2489	Spring Lake Dam	Hydr-2	21-Apr-20	1	Gambusia sp.	20	1
2489	Spring Lake Dam	Hydr-2	21-Apr-20	1	Gambusia sp.		1
2489	Spring Lake Dam	Hydr-2	21-Apr-20	1	Gambusia sp.		1
2489	Spring Lake Dam	Hydr-2	21-Apr-20	1	Etheostoma fonticola	30	1
2489	Spring Lake Dam	Hydr-2	21-Apr-20	2	Procambarus sp.		2
2489	Spring Lake Dam	Hydr-2	21-Apr-20	2	Gambusia sp.	18	1
2489	Spring Lake Dam	Hydr-2	21-Apr-20	3	Gambusia sp.	16	1
2489	Spring Lake Dam	Hydr-2	21-Apr-20	4	Gambusia sp.	20	1
2489	Spring Lake Dam	Hydr-2	21-Apr-20	4	Gambusia sp.	25	1
2489	Spring Lake Dam	Hydr-2	21-Apr-20	4	Etheostoma fonticola	30	1
2489	Spring Lake Dam	Hydr-2	21-Apr-20	5	Etheostoma fonticola	36	1
2489	Spring Lake Dam	Hydr-2	21-Apr-20	5	Etheostoma fonticola	30	1
2489	Spring Lake Dam	Hydr-2	21-Apr-20	5	Procambarus sp.		3
2489	Spring Lake Dam	Hydr-2	21-Apr-20	5	Gambusia sp.	20	1
2489	Spring Lake Dam	Hydr-2	21-Apr-20	5	Gambusia sp.	20	1
2489	Spring Lake Dam	Hydr-2	21-Apr-20	5	Gambusia sp.	20	1
2489	Spring Lake Dam	Hydr-2	21-Apr-20	6	Etheostoma fonticola	32	1
2489	Spring Lake Dam	Hydr-2	21-Apr-20	7	Procambarus sp.		1
2489	Spring Lake Dam	Hydr-2	21-Apr-20	7	No fish collected		
2489	Spring Lake Dam	Hydr-2	21-Apr-20	8	Etheostoma fonticola	21	1
2489	Spring Lake Dam	Hydr-2	21-Apr-20	8	Etheostoma fonticola	36	1
2489	Spring Lake Dam	Hydr-2	21-Apr-20	8	Procambarus sp.		2
2489	Spring Lake Dam	Hydr-2	21-Apr-20	9	Etheostoma fonticola	25	1
2489	Spring Lake Dam	Hydr-2	21-Apr-20	9	Gambusia sp.	25	1
2489	Spring Lake Dam	Hydr-2	21-Apr-20	10	Etheostoma fonticola	34	1
2489	Spring Lake Dam	Hydr-2	21-Apr-20	10	Etheostoma fonticola	31	1
2489	Spring Lake Dam	Hydr-2	21-Apr-20	11	No fish collected		
2489	Spring Lake Dam	Hydr-2	21-Apr-20	12	Gambusia sp.	25	1
2489	Spring Lake Dam	Hydr-2	21-Apr-20	13	Procambarus sp.		2
2489	Spring Lake Dam	Hydr-2	21-Apr-20	13	No fish collected		
2489	Spring Lake Dam	Hydr-2	21-Apr-20	14	Gambusia sp.	19	1
2489	Spring Lake Dam	Hydr-2	21-Apr-20	15	No fish collected		
2490	Spring Lake Dam	Open-2	21-Apr-20	1	No fish collected		
2490	Spring Lake Dam	Open-2	21-Apr-20	2	No fish collected		
2490	Spring Lake Dam	Open-2	21-Apr-20	3	No fish collected		
2490	Spring Lake Dam	Open-2	21-Apr-20	4	Gambusia sp.	30	1

2490	Spring Lake Dam	Open-2	21-Apr-20	5	No fish collected		
2490	Spring Lake Dam	Open-2	21-Apr-20	6	No fish collected		
2490	Spring Lake Dam	Open-2	21-Apr-20	7	No fish collected		
2490	Spring Lake Dam	Open-2	21-Apr-20	8	No fish collected		
2490	Spring Lake Dam	Open-2	21-Apr-20	9	No fish collected		
2490	Spring Lake Dam	Open-2	21-Apr-20	10	No fish collected		
2490	Spring Lake Dam	Open-2	21-Apr-20	11	No fish collected		
2490	Spring Lake Dam	Open-2	21-Apr-20	12	No fish collected		
2490	Spring Lake Dam	Open-2	21-Apr-20	13	No fish collected		
2490	Spring Lake Dam	Open-2	21-Apr-20	14	No fish collected		
2490	Spring Lake Dam	Open-2	21-Apr-20	15	No fish collected		
2491	Spring Lake Dam	TWR-1	21-Apr-20	1	Astyanax mexicanus	68	1
2491	Spring Lake Dam	TWR-1	21-Apr-20	1	Astyanax mexicanus	78	1
2491	Spring Lake Dam	TWR-1	21-Apr-20	2	No fish collected		
2491	Spring Lake Dam	TWR-1	21-Apr-20	3	Astyanax mexicanus	76	1
2491	Spring Lake Dam	TWR-1	21-Apr-20	3	Gambusia sp.	22	1
2491	Spring Lake Dam	TWR-1	21-Apr-20	4	No fish collected		
2491	Spring Lake Dam	TWR-1	21-Apr-20	5	No fish collected		
2491	Spring Lake Dam	TWR-1	21-Apr-20	6	No fish collected		
2491	Spring Lake Dam	TWR-1	21-Apr-20	7	No fish collected		
2491	Spring Lake Dam	TWR-1	21-Apr-20	8	No fish collected		
2491	Spring Lake Dam	TWR-1	21-Apr-20	9	No fish collected		
2491	Spring Lake Dam	TWR-1	21-Apr-20	10	No fish collected		
2491	Spring Lake Dam	TWR-1	21-Apr-20	11	No fish collected		
2491	Spring Lake Dam	TWR-1	21-Apr-20	12	No fish collected		
2491	Spring Lake Dam	TWR-1	21-Apr-20	13	No fish collected		
2491	Spring Lake Dam	TWR-1	21-Apr-20	14	No fish collected		
2491	Spring Lake Dam	TWR-1	21-Apr-20	15	No fish collected		
2511	I-35	Sagi-1	23-Apr-20	1	Ambloplites rupestris	95	1
2511	I-35	Sagi-1	23-Apr-20	1	Ambloplites rupestris	30	1
2511	I-35	Sagi-1	23-Apr-20	1	Procambarus sp.		2
2511	I-35	Sagi-1	23-Apr-20	2	Lepomis miniatus	44	1
2511	I-35	Sagi-1	23-Apr-20	2	Etheostoma fonticola	14	1
2511	I-35	Sagi-1	23-Apr-20	2	Etheostoma fonticola	13	1
2511	I-35	Sagi-1	23-Apr-20	3	Procambarus sp.		5
2511	I-35	Sagi-1	23-Apr-20	3	No fish collected		
2511	I-35	Sagi-1	23-Apr-20	4	Astyanax mexicanus	92	1
2511	I-35	Sagi-1	23-Apr-20	5	Procambarus sp.		2
2511	I-35	Sagi-1	23-Apr-20	5	Ambloplites rupestris	94	1
2511	I-35	Sagi-1	23-Apr-20	5	Gambusia sp.	1	24
2511	I-35	Sagi-1	23-Apr-20	6	Procambarus sp.		2

2511	I-35	Sagi-1	23-Apr-20	7	No fish collected		
2511	I-35	Sagi-1	23-Apr-20	8	Procambarus sp.		2
2511	I-35	Sagi-1	23-Apr-20	8	No fish collected		
2511	I-35	Sagi-1	23-Apr-20	9	Procambarus sp.		1
2511	I-35	Sagi-1	23-Apr-20	9	No fish collected		
2511	I-35	Sagi-1	23-Apr-20	10	No fish collected		
2511	I-35	Sagi-1	23-Apr-20	11	Procambarus sp.		1
2511	I-35	Sagi-1	23-Apr-20	11	No fish collected		
2511	I-35	Sagi-1	23-Apr-20	12	Procambarus sp.		2
2511	I-35	Sagi-1	23-Apr-20	12	No fish collected		
2511	I-35	Sagi-1	23-Apr-20	13	Ambloplites rupestris	87	1
2511	I-35	Sagi-1	23-Apr-20	13	Etheostoma fonticola	38	1
2511	I-35	Sagi-1	23-Apr-20	14	No fish collected		
2511	I-35	Sagi-1	23-Apr-20	15	No fish collected		
2512	I-35	Sagi-2	23-Apr-20	1	Gambusia sp.	36	1
2512	I-35	Sagi-2	23-Apr-20	2	Procambarus sp.		5
2512	I-35	Sagi-2	23-Apr-20	2	No fish collected		
2512	I-35	Sagi-2	23-Apr-20	3	Procambarus sp.		1
2512	I-35	Sagi-2	23-Apr-20	3	Herichthys cyanoguttatus	47	1
2512	I-35	Sagi-2	23-Apr-20	4	Procambarus sp.		2
2512	I-35	Sagi-2	23-Apr-20	4	No fish collected		
2512	I-35	Sagi-2	23-Apr-20	5	Procambarus sp.		1
2512	I-35	Sagi-2	23-Apr-20	5	No fish collected		
2512	I-35	Sagi-2	23-Apr-20	6	Procambarus sp.		2
2512	I-35	Sagi-2	23-Apr-20	6	No fish collected		
2512	I-35	Sagi-2	23-Apr-20	7	Procambarus sp.		3
2512	I-35	Sagi-2	23-Apr-20	7	No fish collected		
2512	I-35	Sagi-2	23-Apr-20	8	Procambarus sp.		1
2512	I-35	Sagi-2	23-Apr-20	8	No fish collected		
2512	I-35	Sagi-2	23-Apr-20	9	Procambarus sp.		2
2512	I-35	Sagi-2	23-Apr-20	9	No fish collected		
2512	I-35	Sagi-2	23-Apr-20	10	Etheostoma fonticola	36	1
2512	I-35	Sagi-2	23-Apr-20	11	Procambarus sp.		1
2512	I-35	Sagi-2	23-Apr-20	11	No fish collected		
2512	I-35	Sagi-2	23-Apr-20	12	Procambarus sp.		1
2512	I-35	Sagi-2	23-Apr-20	12	No fish collected		
2512	I-35	Sagi-2	23-Apr-20	13	No fish collected		
2512	I-35	Sagi-2	23-Apr-20	14	Procambarus sp.		2
2512	I-35	Sagi-2	23-Apr-20	14	No fish collected		
2512	I-35	Sagi-2	23-Apr-20	15	No fish collected		
2513	I-35	TWR-2	23-Apr-20	1	No fish collected		

2513	I-35	TWR-2	23-Apr-20	2	No fish collected		
2513	I-35	TWR-2	23-Apr-20	3	No fish collected		
2513	I-35	TWR-2	23-Apr-20	3	No fish collected		
2513	I-35	TWR-2	23-Apr-20	5	Gambusia sp.	24	1
2513	I-35	TWR-2	23-Apr-20	6	No fish collected		
2513	I-35	TWR-2	23-Apr-20	7	No fish collected		
2513	I-35	TWR-2	23-Apr-20	8	No fish collected		
2513	I-35	TWR-2	23-Apr-20	9	No fish collected		
2513	I-35	TWR-2	23-Apr-20	10	No fish collected		
2513	I-35	TWR-2	23-Apr-20	11	No fish collected		
2513	I-35	TWR-2	23-Apr-20	12	No fish collected		
2513	I-35	TWR-2	23-Apr-20	13	No fish collected		
2513	I-35	TWR-2	23-Apr-20	14	No fish collected		
2513	I-35	TWR-2	23-Apr-20	15	No fish collected		
2492	Spring Lake Dam	TWR-2	21-Apr-20	1	Gambusia sp.	13	1
2492	Spring Lake Dam	TWR-2	21-Apr-20	2	Gambusia sp.	22	1
2492	Spring Lake Dam	TWR-2	21-Apr-20	2	Gambusia sp.	29	1
2492	Spring Lake Dam	TWR-2	21-Apr-20	2	Gambusia sp.	38	1
2492	Spring Lake Dam	TWR-2	21-Apr-20	2	Gambusia sp.	30	1
2492	Spring Lake Dam	TWR-2	21-Apr-20	2	Gambusia sp.	15	1
2492	Spring Lake Dam	TWR-2	21-Apr-20	2	Gambusia sp.	15	1
2492	Spring Lake Dam	TWR-2	21-Apr-20	2	Gambusia sp.	12	1
2492	Spring Lake Dam	TWR-2	21-Apr-20	2	Gambusia sp.	28	1
2492	Spring Lake Dam	TWR-2	21-Apr-20	2	Gambusia sp.	14	1
2492	Spring Lake Dam	TWR-2	21-Apr-20	3	Gambusia sp.	15	1
2492	Spring Lake Dam	TWR-2	21-Apr-20	3	Gambusia sp.	8	1
2492	Spring Lake Dam	TWR-2	21-Apr-20	3	Gambusia sp.	14	1
2492	Spring Lake Dam	TWR-2	21-Apr-20	3	Ameiurus natalis	18	1
2492	Spring Lake Dam	TWR-2	21-Apr-20	4	Gambusia sp.	15	1
2492	Spring Lake Dam	TWR-2	21-Apr-20	5	Ameiurus natalis	18	1
2492	Spring Lake Dam	TWR-2	21-Apr-20	5	Gambusia sp.	18	1
2492	Spring Lake Dam	TWR-2	21-Apr-20	6	Gambusia sp.	20	1
2492	Spring Lake Dam	TWR-2	21-Apr-20	6	Gambusia sp.	15	1
2492	Spring Lake Dam	TWR-2	21-Apr-20	7	Gambusia sp.	22	1
2492	Spring Lake Dam	TWR-2	21-Apr-20	7	Gambusia sp.	18	1
2492	Spring Lake Dam	TWR-2	21-Apr-20	8	No fish collected		
2492	Spring Lake Dam	TWR-2	21-Apr-20	9	Gambusia sp.	16	1
2492	Spring Lake Dam	TWR-2	21-Apr-20	10	No fish collected		
2492	Spring Lake Dam	TWR-2	21-Apr-20	11	No fish collected		
2492	Spring Lake Dam	TWR-2	21-Apr-20	12	Gambusia sp.	32	1
2492	Spring Lake Dam	TWR-2	21-Apr-20	12	Gambusia sp.	25	1

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2494	City Park	Open-1	22-Apr-20	2	No fish collected		
2494	City Park	Open-1	22-Apr-20	3	No fish collected		
2494	City Park	Open-1	22-Apr-20	4	No fish collected		
2494	City Park	Open-1	22-Apr-20	5	No fish collected		
2494	City Park	Open-1	22-Apr-20	6	No fish collected		
2494	City Park	Open-1	22-Apr-20	7	No fish collected		
2494	City Park	Open-1	22-Apr-20	8	No fish collected		
2494	City Park	Open-1	22-Apr-20	9	No fish collected		
2494	City Park	Open-1	22-Apr-20	10	No fish collected		
2495	City Park	Open-2	22-Apr-20	1	No fish collected		
2495	City Park	Open-2	22-Apr-20	2	No fish collected		
2495	City Park	Open-2	22-Apr-20	3	No fish collected		
2495	City Park	Open-2	22-Apr-20	4	No fish collected		
2495	City Park	Open-2	22-Apr-20	5	No fish collected		
2495	City Park	Open-2	22-Apr-20	6	No fish collected		
2495	City Park	Open-2	22-Apr-20	7	No fish collected		
2495	City Park	Open-2	22-Apr-20	8	No fish collected		
2495	City Park	Open-2	22-Apr-20	9	No fish collected		
2495	City Park	Open-2	22-Apr-20	10	No fish collected		
2496	City Park	Hygr-1	22-Apr-20	1	Gambusia sp.	10	1
2496	City Park	Hygr-1	22-Apr-20	1	Gambusia sp.	10	1
2496	City Park	Hygr-1	22-Apr-20	1	Gambusia sp.	10	1
2496	City Park	Hygr-1	22-Apr-20	1	Gambusia sp.	32	1
2496	City Park	Hygr-1	22-Apr-20	1	Gambusia sp.	22	1
2496	City Park	Hygr-1	22-Apr-20	1	Gambusia sp.	24	1
2496	City Park	Hygr-1	22-Apr-20	1	Gambusia sp.	36	1
2496	City Park	Hygr-1	22-Apr-20	1	Gambusia sp.	10	1
2496	City Park	Hygr-1	22-Apr-20	1	Gambusia sp.	29	1
2496	City Park	Hygr-1	22-Apr-20	1	Gambusia sp.	20	1
2496	City Park	Hygr-1	22-Apr-20	1	Gambusia sp.	22	1
2496	City Park	Hygr-1	22-Apr-20	1	Gambusia sp.	19	1
2496	City Park	Hygr-1	22-Apr-20	1	Gambusia sp.	18	1
2496	City Park	Hygr-1	22-Apr-20	1	Gambusia sp.	20	1
2496	City Park	Hygr-1	22-Apr-20	1	Gambusia sp.	15	1
2496	City Park	Hygr-1	22-Apr-20	1	Gambusia sp.	12	1
2496	City Park	Hygr-1	22-Apr-20	1	Gambusia sp.	15	1
2496	City Park	Hygr-1	22-Apr-20	1	Gambusia sp.	12	1
2496	City Park	Hygr-1	22-Apr-20	1	Gambusia sp.	25	1
2496	City Park	Hygr-1	22-Apr-20	1	Gambusia sp.	18	1
2496	City Park	Hygr-1	22-Apr-20	1	Gambusia sp.	15	1
2496	City Park	Hygr-1	22-Apr-20	1	Gambusia sp.	10	1

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2496	City Park	Hygr-1	22-Apr-20	6	Gambusia sp.		1
2496	City Park	Hygr-1	22-Apr-20	6	Gambusia sp.		1
2496	City Park	Hygr-1	22-Apr-20	6	Gambusia sp.		1
2496	City Park	Hygr-1	22-Apr-20	6	Gambusia sp.		1
2496	City Park	Hygr-1	22-Apr-20	6	Gambusia sp.		1
2496	City Park	Hygr-1	22-Apr-20	6	Gambusia sp.		1
2496	City Park	Hygr-1	22-Apr-20	6	Gambusia sp.		1
2496	City Park	Hygr-1	22-Apr-20	6	Gambusia sp.		1
2496	City Park	Hygr-1	22-Apr-20	6	Gambusia sp.		1
2496	City Park	Hygr-1	22-Apr-20	6	Gambusia sp.		1
2496	City Park	Hygr-1	22-Apr-20	6	Gambusia sp.		1
2496	City Park	Hygr-1	22-Apr-20	6	Gambusia sp.		1
2496	City Park	Hygr-1	22-Apr-20	6	Gambusia sp.		1
2496	City Park	Hygr-1	22-Apr-20	6	Gambusia sp.		1
2496	City Park	Hygr-1	22-Apr-20	6	Gambusia sp.		1
2496	City Park	Hygr-1	22-Apr-20	6	Gambusia sp.		1
2496	City Park	Hygr-1	22-Apr-20	6	Gambusia sp.		1
2496	City Park	Hygr-1	22-Apr-20	6	Gambusia sp.		1
2496	City Park	Hygr-1	22-Apr-20	6	Gambusia sp.		1
2496	City Park	Hygr-1	22-Apr-20	6	Gambusia sp.		1
2496	City Park	Hygr-1	22-Apr-20	7	Notropis chalybaeus	54	1
2496	City Park	Hygr-1	22-Apr-20	7	Etheostoma fonticola	31	1
2496	City Park	Hygr-1	22-Apr-20	7	Etheostoma fonticola	21	1
2496	City Park	Hygr-1	22-Apr-20	7	Etheostoma fonticola	22	1
2496	City Park	Hygr-1	22-Apr-20	7	Etheostoma fonticola	19	1
2496	City Park	Hygr-1	22-Apr-20	7	Etheostoma fonticola	15	1
2496	City Park	Hygr-1	22-Apr-20	7	Etheostoma fonticola	18	1
2496	City Park	Hygr-1	22-Apr-20	7	Etheostoma fonticola	13	1
2496	City Park	Hygr-1	22-Apr-20	7	Etheostoma fonticola	14	1
2496	City Park	Hygr-1	22-Apr-20	7	Procambarus sp.		1
2496	City Park	Hygr-1	22-Apr-20	7	Lepomis miniatus	27	1
2496	City Park	Hygr-1	22-Apr-20	7	Gambusia sp.		1
2496	City Park	Hygr-1	22-Apr-20	7	Gambusia sp.		1
2496	City Park	Hygr-1	22-Apr-20	7	Gambusia sp.		1
2496	City Park	Hygr-1	22-Apr-20	8	Etheostoma fonticola	26	1
2496	City Park	Hygr-1	22-Apr-20	8	Lepomis sp.	10	1
2496	City Park	Hygr-1	22-Apr-20	8	Lepomis sp.	10	1
2496	City Park	Hygr-1	22-Apr-20	8	Procambarus sp.		1
2496	City Park	Hygr-1	22-Apr-20	8	Gambusia sp.		1

2496	City Park	Hygr-1	22-Apr-20	8	Gambusia sp.		1
2496	City Park	Hygr-1	22-Apr-20	8	Gambusia sp.		1
2496	City Park	Hygr-1	22-Apr-20	8	Gambusia sp.		1
2496	City Park	Hygr-1	22-Apr-20	8	Gambusia sp.		1
2496	City Park	Hygr-1	22-Apr-20	8	Gambusia sp.		1
2496	City Park	Hygr-1	22-Apr-20	8	Gambusia sp.		1
2496	City Park	Hygr-1	22-Apr-20	8	Gambusia sp.		1
2496	City Park	Hygr-1	22-Apr-20	8	Gambusia sp.		1
2496	City Park	Hygr-1	22-Apr-20	8	Gambusia sp.		1
2496	City Park	Hygr-1	22-Apr-20	8	Gambusia sp.		1
2496	City Park	Hygr-1	22-Apr-20	8	Gambusia sp.		1
2496	City Park	Hygr-1	22-Apr-20	9	Gambusia sp.		1
2496	City Park	Hygr-1	22-Apr-20	10	Lepomis sp.	12	1
2496	City Park	Hygr-1	22-Apr-20	10	Procambarus sp.		1
2496	City Park	Hygr-1	22-Apr-20	10	Gambusia sp.		1
2496	City Park	Hygr-1	22-Apr-20	10	Gambusia sp.		1
2496	City Park	Hygr-1	22-Apr-20	10	Gambusia sp.		1
2496	City Park	Hygr-1	22-Apr-20	11	Etheostoma fonticola	22	1
2496	City Park	Hygr-1	22-Apr-20	12	Etheostoma fonticola	19	1
2496	City Park	Hygr-1	22-Apr-20	13	No fish collected		
2496	City Park	Hygr-1	22-Apr-20	14	No fish collected		
2496	City Park	Hygr-1	22-Apr-20	15	No fish collected		
2496	City Park	Hygr-1	22-Apr-20	1	Etheostoma fonticola	18	1
2496	City Park	Hygr-1	22-Apr-20	1	Etheostoma fonticola	17	1
2496	City Park	Hygr-1	22-Apr-20	1	Etheostoma fonticola	15	1
2496	City Park	Hygr-1	22-Apr-20	1	Etheostoma fonticola	19	1
2496	City Park	Hygr-1	22-Apr-20	1	Etheostoma fonticola	18	1
2496	City Park	Hygr-1	22-Apr-20	1	Etheostoma fonticola	22	1
2496	City Park	Hygr-1	22-Apr-20	1	Etheostoma fonticola	23	1
2496	City Park	Hygr-1	22-Apr-20	1	Etheostoma fonticola	14	1
2496	City Park	Hygr-1	22-Apr-20	1	Etheostoma fonticola	18	1
2496	City Park	Hygr-1	22-Apr-20	1	Etheostoma fonticola	19	1
2496	City Park	Hygr-1	22-Apr-20	1	Etheostoma fonticola	16	1
2496	City Park	Hygr-1	22-Apr-20	1	Etheostoma fonticola	16	1
2496	City Park	Hygr-1	22-Apr-20	1	Etheostoma fonticola	19	1
2496	City Park	Hygr-1	22-Apr-20	1	Etheostoma fonticola	15	1
2496	City Park	Hygr-1	22-Apr-20	1	Etheostoma fonticola	15	1
2496	City Park	Hygr-1	22-Apr-20	1	Procambarus sp.		1
2496	City Park	Hygr-1	22-Apr-20	1	Lepomis gulosus	73	1
2497	City Park	Hygr-2	22-Apr-20	1	Lepomis sp.	70	1
2497	City Park	Hygr-2	22-Apr-20	1	Gambusia sp.	30	1

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2497	City Park	Hygr-2	22-Apr-20	5	Gambusia sp.		1
2497	City Park	Hygr-2	22-Apr-20	5	Gambusia sp.		1
2497	City Park	Hygr-2	22-Apr-20	5	Gambusia sp.		1
2497	City Park	Hygr-2	22-Apr-20	5	Gambusia sp.		1
2497	City Park	Hygr-2	22-Apr-20	5	Gambusia sp.		1
2497	City Park	Hygr-2	22-Apr-20	5	Gambusia sp.		1
2497	City Park	Hygr-2	22-Apr-20	5	Gambusia sp.		1
2497	City Park	Hygr-2	22-Apr-20	5	Gambusia sp.		1
2497	City Park	Hygr-2	22-Apr-20	6	Procambarus sp.		1
2497	City Park	Hygr-2	22-Apr-20	6	Gambusia sp.		1
2497	City Park	Hygr-2	22-Apr-20	6	Gambusia sp.		1
2497	City Park	Hygr-2	22-Apr-20	6	Etheostoma fonticola	14	1
2497	City Park	Hygr-2	22-Apr-20	7	Gambusia sp.		1
2497	City Park	Hygr-2	22-Apr-20	7	Gambusia sp.		1
2497	City Park	Hygr-2	22-Apr-20	7	Gambusia sp.		1
2497	City Park	Hygr-2	22-Apr-20	8	Etheostoma fonticola	28	1
2497	City Park	Hygr-2	22-Apr-20	8	Procambarus sp.		1
2497	City Park	Hygr-2	22-Apr-20	9	Gambusia sp.		1
2497	City Park	Hygr-2	22-Apr-20	9	Gambusia sp.		1
2497	City Park	Hygr-2	22-Apr-20	9	Gambusia sp.		1
2497	City Park	Hygr-2	22-Apr-20	9	Gambusia sp.		1
2497	City Park	Hygr-2	22-Apr-20	9	Gambusia sp.		1
2497	City Park	Hygr-2	22-Apr-20	9	Gambusia sp.		1
2497	City Park	Hygr-2	22-Apr-20	10	Procambarus sp.		1
2497	City Park	Hygr-2	22-Apr-20	10	Etheostoma fonticola	35	1
2497	City Park	Hygr-2	22-Apr-20	10	Etheostoma fonticola	17	1
2497	City Park	Hygr-2	22-Apr-20	10	Gambusia sp.		1
2497	City Park	Hygr-2	22-Apr-20	11	Etheostoma fonticola	34	1
2497	City Park	Hygr-2	22-Apr-20	11	Gambusia sp.		1
2497	City Park	Hygr-2	22-Apr-20	11	Gambusia sp.		1
2497	City Park	Hygr-2	22-Apr-20	11	Gambusia sp.		1
2497	City Park	Hygr-2	22-Apr-20	11	Procambarus sp.		1
2497	City Park	Hygr-2	22-Apr-20	12	Gambusia sp.		1
2497	City Park	Hygr-2	22-Apr-20	13	Procambarus sp.		1
2497	City Park	Hygr-2	22-Apr-20	13	Etheostoma fonticola	17	1
2497	City Park	Hygr-2	22-Apr-20	13	Gambusia sp.		1
2497	City Park	Hygr-2	22-Apr-20	14	Procambarus sp.		1
2497	City Park	Hygr-2	22-Apr-20	14	Gambusia sp.		1
2497	City Park	Hygr-2	22-Apr-20	15	No fish collected		
2498	City Park	Pota-1	22-Apr-20	3	Gambusia sp.	20	1
2498	City Park	Pota-1	22-Apr-20	3	Gambusia sp.	20	1

2498	City Park	Pota-1	22-Apr-20	3	Gambusia sp.	24	1
2498	City Park	Pota-1	22-Apr-20	3	Procambarus sp.		1
2498	City Park	Pota-1	22-Apr-20	4	Procambarus sp.		2
2498	City Park	Pota-1	22-Apr-20	5	No fish collected		
2498	City Park	Pota-1	22-Apr-20	6	No fish collected		
2498	City Park	Pota-1	22-Apr-20	7	No fish collected		
2498	City Park	Pota-1	22-Apr-20	8	Etheostoma fonticola	24	1
2498	City Park	Pota-1	22-Apr-20	8	Etheostoma fonticola	23	1
2498	City Park	Pota-1	22-Apr-20	8	Etheostoma fonticola	23	1
2498	City Park	Pota-1	22-Apr-20	8	Procambarus sp.		1
2498	City Park	Pota-1	22-Apr-20	9	No fish collected		
2498	City Park	Pota-1	22-Apr-20	10	No fish collected		
2498	City Park	Pota-1	22-Apr-20	11	Etheostoma fonticola	21	1
2498	City Park	Pota-1	22-Apr-20	12	No fish collected		
2498	City Park	Pota-1	22-Apr-20	13	No fish collected		
2498	City Park	Pota-1	22-Apr-20	14	No fish collected		
2498	City Park	Pota-1	22-Apr-20	15	No fish collected		
2498	City Park	Pota-1	22-Apr-20	4	No fish collected		
2498	City Park	Pota-1	22-Apr-20	1	Etheostoma fonticola	32	1
2498	City Park	Pota-1	22-Apr-20	1	Etheostoma fonticola	32	1
2498	City Park	Pota-1	22-Apr-20	1	Gambusia sp.	16	1
2498	City Park	Pota-1	22-Apr-20	2	Gambusia sp.	23	1
2498	City Park	Pota-1	22-Apr-20	2	Gambusia sp.	21	1
2498	City Park	Pota-1	22-Apr-20	2	Gambusia sp.	20	1
2498	City Park	Pota-1	22-Apr-20	2	Gambusia sp.		
2498	City Park	Pota-1	22-Apr-20	3	Palaemonetes sp.		2
2498	City Park	Pota-1	22-Apr-20	3	Etheostoma fonticola	24	1
2498	City Park	Pota-1	22-Apr-20	3	Gambusia sp.	22	1
2550	I-35	Open-1	15-Oct-20	1	No fish collected		
2550	I-35	Open-1	15-Oct-20	2	No fish collected		
2550	I-35	Open-1	15-Oct-20	3	No fish collected		
2550	I-35	Open-1	15-Oct-20	4	No fish collected		
2550	I-35	Open-1	15-Oct-20	5	No fish collected		
2550	I-35	Open-1	15-Oct-20	6	No fish collected		
2550	I-35	Open-1	15-Oct-20	7	No fish collected		
2550	I-35	Open-1	15-Oct-20	8	No fish collected		
2550	I-35	Open-1	15-Oct-20	9	No fish collected		
2550	I-35	Open-1	15-Oct-20	10	No fish collected		
2551	I-35	Open-2	15-Oct-20	1	No fish collected		
2551	I-35	Open-2	15-Oct-20	2	No fish collected		
2551	I-35	Open-2	15-Oct-20	3	No fish collected		

2551	I-35	Open-2	15-Oct-20	4	No fish collected		
2551	I-35	Open-2	15-Oct-20	5	No fish collected		
2551	I-35	Open-2	15-Oct-20	6	No fish collected		
2551	I-35	Open-2	15-Oct-20	7	No fish collected		
2551	I-35	Open-2	15-Oct-20	8	No fish collected		
2551	I-35	Open-2	15-Oct-20	9	No fish collected		
2551	I-35	Open-2	15-Oct-20	10	No fish collected		
2552	I-35	Hydr-1	15-Oct-20	1	No fish collected		
2552	I-35	Hydr-1	15-Oct-20	2	No fish collected		
2552	I-35	Hydr-1	15-Oct-20	3	Gambusia sp.	19	1
2552	I-35	Hydr-1	15-Oct-20	3	Procambarus sp.		1
2552	I-35	Hydr-1	15-Oct-20	4	No fish collected		
2552	I-35	Hydr-1	15-Oct-20	4	No fish collected		
2552	I-35	Hydr-1	15-Oct-20	5	No fish collected		
2552	I-35	Hydr-1	15-Oct-20	6	Etheostoma fonticola	31	1
2552	I-35	Hydr-1	15-Oct-20	7	Gambusia sp.	24	1
2552	I-35	Hydr-1	15-Oct-20	8	No fish collected		
2552	I-35	Hydr-1	15-Oct-20	9	No fish collected		
2552	I-35	Hydr-1	15-Oct-20	10	No fish collected		
2552	I-35	Hydr-1	15-Oct-20	11	No fish collected		
2552	I-35	Hydr-1	15-Oct-20	12	No fish collected		
2552	I-35	Hydr-1	15-Oct-20	13	No fish collected		
2552	I-35	Hydr-1	15-Oct-20	14	No fish collected		
2552	I-35	Hydr-1	15-Oct-20	15	No fish collected		
2553	I-35	Hydr-2	15-Oct-20	1	No fish collected		
2553	I-35	Hydr-2	15-Oct-20	2	Etheostoma fonticola	27	1
2553	I-35	Hydr-2	15-Oct-20	2	Gambusia sp.	26	1
2553	I-35	Hydr-2	15-Oct-20	2	Procambarus sp.		1
2553	I-35	Hydr-2	15-Oct-20	3	Procambarus sp.		1
2553	I-35	Hydr-2	15-Oct-20	3	No fish collected		
2553	I-35	Hydr-2	15-Oct-20	4	No fish collected		
2553	I-35	Hydr-2	15-Oct-20	5	Procambarus sp.		1
2553	I-35	Hydr-2	15-Oct-20	5	No fish collected		
2553	I-35	Hydr-2	15-Oct-20	6	No fish collected		
2553	I-35	Hydr-2	15-Oct-20	7	No fish collected		
2553	I-35	Hydr-2	15-Oct-20	8	No fish collected		
2553	I-35	Hydr-2	15-Oct-20	9	No fish collected		
2553	I-35	Hydr-2	15-Oct-20	10	No fish collected		
2553	I-35	Hydr-2	15-Oct-20	11	No fish collected		
2553	I-35	Hydr-2	15-Oct-20	12	No fish collected		
2553	I-35	Hydr-2	15-Oct-20	13	No fish collected		

2553	I-35	Hydr-2	15-Oct-20	14	No fish collected		
2553	I-35	Hydr-2	15-Oct-20	15	No fish collected		
2554	I-35	Ziz-1	15-Oct-20	1	No fish collected		
2554	I-35	Ziz-1	15-Oct-20	2	No fish collected		
2554	I-35	Ziz-1	15-Oct-20	3	No fish collected		
2554	I-35	Ziz-1	15-Oct-20	4	No fish collected		
2554	I-35	Ziz-1	15-Oct-20	5	No fish collected		
2554	I-35	Ziz-1	15-Oct-20	6	No fish collected		
2554	I-35	Ziz-1	15-Oct-20	7	No fish collected		
2554	I-35	Ziz-1	15-Oct-20	8	No fish collected		
2554	I-35	Ziz-1	15-Oct-20	9	No fish collected		
2554	I-35	Ziz-1	15-Oct-20	10	No fish collected		
2555	I-35	Cabo-1	15-Oct-20	1	Gambusia sp.	21	1
2555	I-35	Cabo-1	15-Oct-20	1	Gambusia sp.	25	1
2555	I-35	Cabo-1	15-Oct-20	1	Gambusia sp.	15	1
2555	I-35	Cabo-1	15-Oct-20	1	Gambusia sp.	32	1
2555	I-35	Cabo-1	15-Oct-20	1	Gambusia sp.	25	1
2555	I-35	Cabo-1	15-Oct-20	1	Gambusia sp.	5	1
2555	I-35	Cabo-1	15-Oct-20	1	Gambusia sp.	5	1
2555	I-35	Cabo-1	15-Oct-20	1	Gambusia sp.	10	1
2555	I-35	Cabo-1	15-Oct-20	1	Gambusia sp.	29	1
2555	I-35	Cabo-1	15-Oct-20	1	Gambusia sp.	24	1
2555	I-35	Cabo-1	15-Oct-20	1	Gambusia sp.	32	1
2555	I-35	Cabo-1	15-Oct-20	1	Gambusia sp.	20	1
2555	I-35	Cabo-1	15-Oct-20	1	Gambusia sp.	22	1
2555	I-35	Cabo-1	15-Oct-20	1	Gambusia sp.	10	1
2555	I-35	Cabo-1	15-Oct-20	1	Gambusia sp.	10	1
2555	I-35	Cabo-1	15-Oct-20	1	Gambusia sp.	25	1
2555	I-35	Cabo-1	15-Oct-20	1	Gambusia sp.	15	1
2555	I-35	Cabo-1	15-Oct-20	1	Gambusia sp.	30	1
2555	I-35	Cabo-1	15-Oct-20	1	Gambusia sp.	28	1
2555	I-35	Cabo-1	15-Oct-20	1	Gambusia sp.	15	1
2555	I-35	Cabo-1	15-Oct-20	1	Gambusia sp.	30	1
2555	I-35	Cabo-1	15-Oct-20	1	Gambusia sp.	32	1
2555	I-35	Cabo-1	15-Oct-20	1	Gambusia sp.	10	1
2555	I-35	Cabo-1	15-Oct-20	1	Gambusia sp.	10	1
2555	I-35	Cabo-1	15-Oct-20	1	Gambusia sp.	15	1
2555	I-35	Cabo-1	15-Oct-20	1	Gambusia sp.		1
2555	I-35	Cabo-1	15-Oct-20	1	Gambusia sp.		1
2555	I-35	Cabo-1	15-Oct-20	1	Gambusia sp.		1
2555	I-35	Cabo-1	15-Oct-20	1	Gambusia sp.		1

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2555	I-35	Cabo-1	15-Oct-20	3	Gambusia sp.		1
2555	I-35	Cabo-1	15-Oct-20	3	Gambusia sp.		1
2555	I-35	Cabo-1	15-Oct-20	3	Gambusia sp.		1
2555	I-35	Cabo-1	15-Oct-20	3	Gambusia sp.		1
2555	I-35	Cabo-1	15-Oct-20	3	Gambusia sp.		1
2555	I-35	Cabo-1	15-Oct-20	3	Gambusia sp.		1
2555	I-35	Cabo-1	15-Oct-20	3	Gambusia sp.		1
2555	I-35	Cabo-1	15-Oct-20	3	Gambusia sp.		1
2555	I-35	Cabo-1	15-Oct-20	3	Gambusia sp.		1
2555	I-35	Cabo-1	15-Oct-20	3	Gambusia sp.		1
2555	I-35	Cabo-1	15-Oct-20	3	Gambusia sp.		1
2555	I-35	Cabo-1	15-Oct-20	3	Gambusia sp.		1
2555	I-35	Cabo-1	15-Oct-20	4	Procambarus sp.		4
2555	I-35	Cabo-1	15-Oct-20	4	Gambusia sp.		1
2555	I-35	Cabo-1	15-Oct-20	4	Gambusia sp.		1
2555	I-35	Cabo-1	15-Oct-20	4	Gambusia sp.		1
2555	I-35	Cabo-1	15-Oct-20	4	Gambusia sp.		1
2555	I-35	Cabo-1	15-Oct-20	4	Gambusia sp.		1
2555	I-35	Cabo-1	15-Oct-20	5	Procambarus sp.		4
2555	I-35	Cabo-1	15-Oct-20	5	Etheostoma fonticola		16
2555	I-35	Cabo-1	15-Oct-20	5	Gambusia sp.		1
2555	I-35	Cabo-1	15-Oct-20	5	Gambusia sp.		1
2555	I-35	Cabo-1	15-Oct-20	6	Etheostoma fonticola	26	1
2555	I-35	Cabo-1	15-Oct-20	6	Etheostoma fonticola	33	1
2555	I-35	Cabo-1	15-Oct-20	6	Gambusia sp.		1
2555	I-35	Cabo-1	15-Oct-20	7	Etheostoma fonticola	30	1
2555	I-35	Cabo-1	15-Oct-20	7	Etheostoma fonticola	28	1
2555	I-35	Cabo-1	15-Oct-20	7	Etheostoma fonticola	25	1
2555	I-35	Cabo-1	15-Oct-20	7	Procambarus sp.		4
2555	I-35	Cabo-1	15-Oct-20	7	Gambusia sp.		1
2555	I-35	Cabo-1	15-Oct-20	7	Gambusia sp.		1
2555	I-35	Cabo-1	15-Oct-20	7	Gambusia sp.		1
2555	I-35	Cabo-1	15-Oct-20	7	Gambusia sp.		1
2555	I-35	Cabo-1	15-Oct-20	7	Gambusia sp.		1
2555	I-35	Cabo-1	15-Oct-20	8	Etheostoma fonticola	24	1
2555	I-35	Cabo-1	15-Oct-20	8	Etheostoma fonticola	20	1
2555	I-35	Cabo-1	15-Oct-20	8	Etheostoma fonticola	29	1
2555	I-35	Cabo-1	15-Oct-20	9	No fish collected		
2555	I-35	Cabo-1	15-Oct-20	10	Etheostoma fonticola	23	1
2555	I-35	Cabo-1	15-Oct-20	10	Etheostoma fonticola	24	1
2555	I-35	Cabo-1	15-Oct-20	11	No fish collected		

2555	I-35	Cabo-1	15-Oct-20	12	No fish collected		
2555	I-35	Cabo-1	15-Oct-20	13	Gambusia sp.		1
2555	I-35	Cabo-1	15-Oct-20	14	Etheostoma fonticola	37	1
2555	I-35	Cabo-1	15-Oct-20	14	Etheostoma fonticola	35	1
2555	I-35	Cabo-1	15-Oct-20	15	Procambarus sp.		1
2555	I-35	Cabo-1	15-Oct-20	15	No fish collected		
2556	I-35	Hygr-1	15-Oct-20	1	Gambusia sp.	26	
2556	I-35	Hygr-1	15-Oct-20	1	Gambusia sp.	10	
2556	I-35	Hygr-1	15-Oct-20	1	Gambusia sp.	15	
2556	I-35	Hygr-1	15-Oct-20	1	Gambusia sp.	18	
2556	I-35	Hygr-1	15-Oct-20	1	Gambusia sp.	15	
2556	I-35	Hygr-1	15-Oct-20	1	Gambusia sp.	15	
2556	I-35	Hygr-1	15-Oct-20	1	Gambusia sp.	10	
2556	I-35	Hygr-1	15-Oct-20	1	Gambusia sp.	10	
2556	I-35	Hygr-1	15-Oct-20	1	Gambusia sp.	10	
2556	I-35	Hygr-1	15-Oct-20	1	Gambusia sp.	10	
2556	I-35	Hygr-1	15-Oct-20	1	Gambusia sp.	15	
2556	I-35	Hygr-1	15-Oct-20	2	Procambarus sp.		4
2556	I-35	Hygr-1	15-Oct-20	2	Etheostoma fonticola	19	1
2556	I-35	Hygr-1	15-Oct-20	3	Etheostoma fonticola	32	1
2556	I-35	Hygr-1	15-Oct-20	3	Etheostoma fonticola	32	1
2556	I-35	Hygr-1	15-Oct-20	3	Procambarus sp.		5
2556	I-35	Hygr-1	15-Oct-20	3	Gambusia sp.	18	1
2556	I-35	Hygr-1	15-Oct-20	4	Gambusia sp.	16	1
2556	I-35	Hygr-1	15-Oct-20	4	Gambusia sp.	13	1
2556	I-35	Hygr-1	15-Oct-20	4	Gambusia sp.	13	1
2556	I-35	Hygr-1	15-Oct-20	4	Procambarus sp.		5
2556	I-35	Hygr-1	15-Oct-20	4	Etheostoma fonticola	15	1
2556	I-35	Hygr-1	15-Oct-20	5	Etheostoma fonticola	30	1
2556	I-35	Hygr-1	15-Oct-20	5	Etheostoma fonticola	22	1
2556	I-35	Hygr-1	15-Oct-20	5	Procambarus sp.		5
2556	I-35	Hygr-1	15-Oct-20	6	Procambarus sp.		3
2556	I-35	Hygr-1	15-Oct-20	6	No fish collected		
2556	I-35	Hygr-1	15-Oct-20	7	No fish collected		
2556	I-35	Hygr-1	15-Oct-20	8	Etheostoma fonticola	31	1
2556	I-35	Hygr-1	15-Oct-20	8	Procambarus sp.		1
2556	I-35	Hygr-1	15-Oct-20	9	No fish collected		
2556	I-35	Hygr-1	15-Oct-20	10	No fish collected		
2556	I-35	Hygr-1	15-Oct-20	10	Procambarus sp.		1
2556	I-35	Hygr-1	15-Oct-20	11	Procambarus sp.		1
2556	I-35	Hygr-1	15-Oct-20	11	No fish collected		

2556	I-35	Hygr-1	15-Oct-20	12	No fish collected		
2556	I-35	Hygr-1	15-Oct-20	13	Etheostoma fonticola	17	1
2556	I-35	Hygr-1	15-Oct-20	14	No fish collected		
2556	I-35	Hygr-1	15-Oct-20	15	Etheostoma fonticola	24	1
2556	I-35	Hygr-1	15-Oct-20	16	Procambarus sp.		1
2556	I-35	Hygr-1	15-Oct-20	16	No fish collected		
2557	I-35	Cabo-2	15-Oct-20	1	Etheostoma fonticola	28	1
2557	I-35	Cabo-2	15-Oct-20	1	Etheostoma fonticola	27	1
2557	I-35	Cabo-2	15-Oct-20	1	Etheostoma fonticola	30	1
2557	I-35	Cabo-2	15-Oct-20	1	Etheostoma fonticola	35	1
2557	I-35	Cabo-2	15-Oct-20	1	Procambarus sp.		16
2557	I-35	Cabo-2	15-Oct-20	1	Gambusia sp.	28	1
2557	I-35	Cabo-2	15-Oct-20	1	Gambusia sp.	10	1
2557	I-35	Cabo-2	15-Oct-20	1	Gambusia sp.	10	1
2557	I-35	Cabo-2	15-Oct-20	1	Gambusia sp.	18	1
2557	I-35	Cabo-2	15-Oct-20	1	Gambusia sp.	18	1
2557	I-35	Cabo-2	15-Oct-20	1	Gambusia sp.	28	1
2557	I-35	Cabo-2	15-Oct-20	1	Gambusia sp.	22	1
2557	I-35	Cabo-2	15-Oct-20	1	Gambusia sp.	12	1
2557	I-35	Cabo-2	15-Oct-20	1	Gambusia sp.	25	1
2557	I-35	Cabo-2	15-Oct-20	1	Gambusia sp.	18	1
2557	I-35	Cabo-2	15-Oct-20	1	Gambusia sp.	8	1
2557	I-35	Cabo-2	15-Oct-20	1	Gambusia sp.	10	1
2557	I-35	Cabo-2	15-Oct-20	1	Gambusia sp.	20	1
2557	I-35	Cabo-2	15-Oct-20	1	Gambusia sp.	18	1
2557	I-35	Cabo-2	15-Oct-20	1	Gambusia sp.	15	1
2557	I-35	Cabo-2	15-Oct-20	1	Gambusia sp.	15	1
2557	I-35	Cabo-2	15-Oct-20	1	Gambusia sp.	10	1
2557	I-35	Cabo-2	15-Oct-20	1	Gambusia sp.	12	1
2557	I-35	Cabo-2	15-Oct-20	1	Gambusia sp.	10	1
2557	I-35	Cabo-2	15-Oct-20	1	Gambusia sp.	10	1
2557	I-35	Cabo-2	15-Oct-20	1	Gambusia sp.	15	1
2557	I-35	Cabo-2	15-Oct-20	1	Gambusia sp.	18	1
2557	I-35	Cabo-2	15-Oct-20	1	Gambusia sp.	10	1
2557	I-35	Cabo-2	15-Oct-20	1	Gambusia sp.	10	1
2557	I-35	Cabo-2	15-Oct-20	1	Gambusia sp.	10	1
2557	I-35	Cabo-2	15-Oct-20	1	Gambusia sp.	10	1
2557	I-35	Cabo-2	15-Oct-20	1	Gambusia sp.	15	1
2557	I-35	Cabo-2	15-Oct-20	1	Gambusia sp.		1
2557	I-35	Cabo-2	15-Oct-20	1	Gambusia sp.		1
2557	I-35	Cabo-2	15-Oct-20	1	Gambusia sp.		1

[illegible]

2557	I-35	Cabo-2	15-Oct-20	3	Gambusia sp.		1
2557	I-35	Cabo-2	15-Oct-20	3	Gambusia sp.		1
2557	I-35	Cabo-2	15-Oct-20	4	Etheostoma fonticola	22	1
2557	I-35	Cabo-2	15-Oct-20	4	Procambarus sp.		6
2557	I-35	Cabo-2	15-Oct-20	4	Gambusia sp.		1
2557	I-35	Cabo-2	15-Oct-20	4	Gambusia sp.		1
2557	I-35	Cabo-2	15-Oct-20	5	Gambusia sp.		1
2557	I-35	Cabo-2	15-Oct-20	5	Gambusia sp.		1
2557	I-35	Cabo-2	15-Oct-20	5	Gambusia sp.		1
2557	I-35	Cabo-2	15-Oct-20	5	Gambusia sp.		1
2557	I-35	Cabo-2	15-Oct-20	5	Procambarus sp.		8
2557	I-35	Cabo-2	15-Oct-20	6	Etheostoma fonticola	19	1
2557	I-35	Cabo-2	15-Oct-20	6	Procambarus sp.		6
2557	I-35	Cabo-2	15-Oct-20	6	Gambusia sp.		1
2557	I-35	Cabo-2	15-Oct-20	6	Gambusia sp.		1
2557	I-35	Cabo-2	15-Oct-20	6	Gambusia sp.		1
2557	I-35	Cabo-2	15-Oct-20	6	Gambusia sp.		1
2557	I-35	Cabo-2	15-Oct-20	6	Gambusia sp.		1
2557	I-35	Cabo-2	15-Oct-20	7	Palaemonetes sp.		1
2557	I-35	Cabo-2	15-Oct-20	7	Procambarus sp.		3
2557	I-35	Cabo-2	15-Oct-20	7	No fish collected		
2557	I-35	Cabo-2	15-Oct-20	8	Etheostoma fonticola	29	1
2557	I-35	Cabo-2	15-Oct-20	8	Etheostoma fonticola	23	1
2557	I-35	Cabo-2	15-Oct-20	8	Etheostoma fonticola	25	1
2557	I-35	Cabo-2	15-Oct-20	8	Etheostoma fonticola	22	1
2557	I-35	Cabo-2	15-Oct-20	8	Etheostoma fonticola	31	1
2557	I-35	Cabo-2	15-Oct-20	8	Etheostoma fonticola	19	1
2557	I-35	Cabo-2	15-Oct-20	8	Procambarus sp.		5
2557	I-35	Cabo-2	15-Oct-20	9	Etheostoma fonticola	31	1
2557	I-35	Cabo-2	15-Oct-20	9	Procambarus sp.		1
2557	I-35	Cabo-2	15-Oct-20	10	Gambusia sp.		1
2557	I-35	Cabo-2	15-Oct-20	10	Gambusia sp.		1
2557	I-35	Cabo-2	15-Oct-20	10	Gambusia sp.		1
2557	I-35	Cabo-2	15-Oct-20	10	Gambusia sp.		1
2557	I-35	Cabo-2	15-Oct-20	10	Gambusia sp.		1
2557	I-35	Cabo-2	15-Oct-20	10	Gambusia sp.		1
2557	I-35	Cabo-2	15-Oct-20	11	Etheostoma fonticola	35	1
2557	I-35	Cabo-2	15-Oct-20	11	Procambarus sp.		1
2557	I-35	Cabo-2	15-Oct-20	12	Etheostoma fonticola	32	1
2557	I-35	Cabo-2	15-Oct-20	12	Gambusia sp.		1

2557	I-35	Cabo-2	15-Oct-20	12	Gambusia sp.		1
2557	I-35	Cabo-2	15-Oct-20	13	Procambarus sp.		1
2557	I-35	Cabo-2	15-Oct-20	13	Lepomis miniatus	36	1
2557	I-35	Cabo-2	15-Oct-20	14	No fish collected		
2557	I-35	Cabo-2	15-Oct-20	15	No fish collected		
2558	I-35	Sagi-1	15-Oct-20	1	Procambarus sp.		2
2558	I-35	Sagi-1	15-Oct-20	1	No fish collected		
2558	I-35	Sagi-1	15-Oct-20	2	Ameiurus natalis	115	1
2558	I-35	Sagi-1	15-Oct-20	2	Procambarus sp.		3
2558	I-35	Sagi-1	15-Oct-20	3	Ambloplites rupestris	129	1
2558	I-35	Sagi-1	15-Oct-20	4	No fish collected		
2558	I-35	Sagi-1	15-Oct-20	5	Procambarus sp.		1
2558	I-35	Sagi-1	15-Oct-20	5	No fish collected		
2558	I-35	Sagi-1	15-Oct-20	6	Lepomis miniatus	60	1
2558	I-35	Sagi-1	15-Oct-20	6	Ambloplites rupestris	62	1
2558	I-35	Sagi-1	15-Oct-20	6	Procambarus sp.		4
2558	I-35	Sagi-1	15-Oct-20	7	No fish collected		
2558	I-35	Sagi-1	15-Oct-20	8	Procambarus sp.		3
2558	I-35	Sagi-1	15-Oct-20	8	No fish collected		
2558	I-35	Sagi-1	15-Oct-20	9	No fish collected		
2558	I-35	Sagi-1	15-Oct-20	10	No fish collected		
2558	I-35	Sagi-1	15-Oct-20	11	No fish collected		
2558	I-35	Sagi-1	15-Oct-20	12	Procambarus sp.		2
2558	I-35	Sagi-1	15-Oct-20	12	No fish collected		
2558	I-35	Sagi-1	15-Oct-20	13	No fish collected		
2558	I-35	Sagi-1	15-Oct-20	14	Procambarus sp.		2
2558	I-35	Sagi-1	15-Oct-20	14	No fish collected		
2558	I-35	Sagi-1	15-Oct-20	15	No fish collected		
2559	I-35	Sagi-2	15-Oct-20	1	Procambarus sp.		1
2559	I-35	Sagi-2	15-Oct-20	1	No fish collected		
2559	I-35	Sagi-2	15-Oct-20	2	No fish collected		
2559	I-35	Sagi-2	15-Oct-20	3	No fish collected		
2559	I-35	Sagi-2	15-Oct-20	4	No fish collected		
2559	I-35	Sagi-2	15-Oct-20	5	No fish collected		
2559	I-35	Sagi-2	15-Oct-20	6	No fish collected		
2559	I-35	Sagi-2	15-Oct-20	7	No fish collected		
2559	I-35	Sagi-2	15-Oct-20	8	No fish collected		
2559	I-35	Sagi-2	15-Oct-20	9	No fish collected		
2559	I-35	Sagi-2	15-Oct-20	10	No fish collected		
2559	I-35	Sagi-2	15-Oct-20	11	No fish collected		
2559	I-35	Sagi-2	15-Oct-20	12	No fish collected		

2559	I-35	Sagi-2	15-Oct-20	13	No fish collected		
2559	I-35	Sagi-2	15-Oct-20	14	No fish collected		
2559	I-35	Sagi-2	15-Oct-20	15	No fish collected		
2560	I-35	Hygr-2	15-Oct-20	1	Gambusia sp.	10	1
2560	I-35	Hygr-2	15-Oct-20	1	Gambusia sp.	20	1
2560	I-35	Hygr-2	15-Oct-20	1	Gambusia sp.	10	1
2560	I-35	Hygr-2	15-Oct-20	1	Gambusia sp.	10	1
2560	I-35	Hygr-2	15-Oct-20	1	Gambusia sp.	15	1
2560	I-35	Hygr-2	15-Oct-20	1	Gambusia sp.	15	1
2560	I-35	Hygr-2	15-Oct-20	1	Gambusia sp.	8	1
2560	I-35	Hygr-2	15-Oct-20	1	Gambusia sp.	10	1
2560	I-35	Hygr-2	15-Oct-20	1	Gambusia sp.	10	1
2560	I-35	Hygr-2	15-Oct-20	1	Gambusia sp.	10	1
2560	I-35	Hygr-2	15-Oct-20	1	Gambusia sp.	10	1
2560	I-35	Hygr-2	15-Oct-20	1	Gambusia sp.	16	1
2560	I-35	Hygr-2	15-Oct-20	1	Gambusia sp.	15	1
2560	I-35	Hygr-2	15-Oct-20	1	Gambusia sp.	10	1
2560	I-35	Hygr-2	15-Oct-20	1	Gambusia sp.	10	1
2560	I-35	Hygr-2	15-Oct-20	1	Gambusia sp.	10	1
2560	I-35	Hygr-2	15-Oct-20	1	Gambusia sp.	10	1
2560	I-35	Hygr-2	15-Oct-20	1	Gambusia sp.	10	1
2560	I-35	Hygr-2	15-Oct-20	1	Gambusia sp.	10	1
2560	I-35	Hygr-2	15-Oct-20	1	Etheostoma fonticola	12	1
2560	I-35	Hygr-2	15-Oct-20	1	Procambarus sp.		5
2560	I-35	Hygr-2	15-Oct-20	2	Procambarus sp.		9
2560	I-35	Hygr-2	15-Oct-20	2	Gambusia sp.	10	1
2560	I-35	Hygr-2	15-Oct-20	2	Gambusia sp.	10	1
2560	I-35	Hygr-2	15-Oct-20	3	Gambusia sp.	10	1
2560	I-35	Hygr-2	15-Oct-20	3	Gambusia sp.	15	1
2560	I-35	Hygr-2	15-Oct-20	3	Etheostoma fonticola	28	1
2560	I-35	Hygr-2	15-Oct-20	3	Etheostoma fonticola	22	1
2560	I-35	Hygr-2	15-Oct-20	3	Procambarus sp.		2
2560	I-35	Hygr-2	15-Oct-20	4	Procambarus sp.		8
2560	I-35	Hygr-2	15-Oct-20	4	No fish collected		
2560	I-35	Hygr-2	15-Oct-20	5	Procambarus sp.		5
2560	I-35	Hygr-2	15-Oct-20	5	Etheostoma fonticola	25	1
2560	I-35	Hygr-2	15-Oct-20	6	Procambarus sp.		6
2560	I-35	Hygr-2	15-Oct-20	6	No fish collected		
2560	I-35	Hygr-2	15-Oct-20	7	Gambusia sp.	15	1
2560	I-35	Hygr-2	15-Oct-20	8	Etheostoma fonticola	18	1

2560	I-35	Hygr-2	15-Oct-20	8	Procambarus sp.		2
2560	I-35	Hygr-2	15-Oct-20	9	Etheostoma fonticola	28	1
2560	I-35	Hygr-2	15-Oct-20	9	Etheostoma fonticola	20	1
2560	I-35	Hygr-2	15-Oct-20	9	Gambusia sp.	12	1
2560	I-35	Hygr-2	15-Oct-20	10	Procambarus sp.		3
2560	I-35	Hygr-2	15-Oct-20	10	No fish collected		
2560	I-35	Hygr-2	15-Oct-20	11	No fish collected		
2560	I-35	Hygr-2	15-Oct-20	12	Gambusia sp.	10	1
2560	I-35	Hygr-2	15-Oct-20	12	Procambarus sp.		1
2560	I-35	Hygr-2	15-Oct-20	13	Procambarus sp.		1
2560	I-35	Hygr-2	15-Oct-20	13	No fish collected		
2560	I-35	Hygr-2	15-Oct-20	14	Etheostoma fonticola	22	1
2560	I-35	Hygr-2	15-Oct-20	14	Etheostoma fonticola	27	1
2560	I-35	Hygr-2	15-Oct-20	14	Procambarus sp.		1
2560	I-35	Hygr-2	15-Oct-20	14	Gambusia sp.	12	1
2560	I-35	Hygr-2	15-Oct-20	15	Etheostoma fonticola	20	1
2560	I-35	Hygr-2	15-Oct-20	16	No fish collected		
2561	I-35	Ziz-2	15-Oct-20	1	Astyanax mexicanus	103	1
2561	I-35	Ziz-2	15-Oct-20	1	Gambusia sp.	19	1
2561	I-35	Ziz-2	15-Oct-20	1	Gambusia sp.	25	1
2561	I-35	Ziz-2	15-Oct-20	1	Gambusia sp.	15	1
2561	I-35	Ziz-2	15-Oct-20	1	Gambusia sp.	10	1
2561	I-35	Ziz-2	15-Oct-20	2	Gambusia sp.	20	1
2561	I-35	Ziz-2	15-Oct-20	2	Gambusia sp.	23	1
2561	I-35	Ziz-2	15-Oct-20	2	Gambusia sp.	15	1
2561	I-35	Ziz-2	15-Oct-20	2	Gambusia sp.	10	1
2561	I-35	Ziz-2	15-Oct-20	2	Gambusia sp.	33	1
2561	I-35	Ziz-2	15-Oct-20	2	Gambusia sp.	35	1
2561	I-35	Ziz-2	15-Oct-20	2	Gambusia sp.	28	1
2561	I-35	Ziz-2	15-Oct-20	2	Gambusia sp.	28	1
2561	I-35	Ziz-2	15-Oct-20	2	Gambusia sp.	26	1
2561	I-35	Ziz-2	15-Oct-20	2	Gambusia sp.	19	1
2561	I-35	Ziz-2	15-Oct-20	2	Gambusia sp.	24	1
2561	I-35	Ziz-2	15-Oct-20	2	Gambusia sp.	10	1
2561	I-35	Ziz-2	15-Oct-20	2	Gambusia sp.	10	1
2561	I-35	Ziz-2	15-Oct-20	2	Gambusia sp.	30	1
2561	I-35	Ziz-2	15-Oct-20	3	Gambusia sp.	20	1
2561	I-35	Ziz-2	15-Oct-20	3	Gambusia sp.	26	1
2561	I-35	Ziz-2	15-Oct-20	3	Gambusia sp.	10	1
2561	I-35	Ziz-2	15-Oct-20	3	Gambusia sp.	35	1
2561	I-35	Ziz-2	15-Oct-20	3	Gambusia sp.	15	1

2561	I-35	Ziz-2	15-Oct-20	3	Gambusia sp.	23	1
2561	I-35	Ziz-2	15-Oct-20	3	Gambusia sp.	10	1
2561	I-35	Ziz-2	15-Oct-20	3	Gambusia sp.		1
2561	I-35	Ziz-2	15-Oct-20	3	Gambusia sp.		1
2561	I-35	Ziz-2	15-Oct-20	3	Gambusia sp.		1
2561	I-35	Ziz-2	15-Oct-20	3	Procambarus sp.		3
2561	I-35	Ziz-2	15-Oct-20	4	Gambusia sp.		1
2561	I-35	Ziz-2	15-Oct-20	4	Gambusia sp.		1
2561	I-35	Ziz-2	15-Oct-20	4	Gambusia sp.		1
2561	I-35	Ziz-2	15-Oct-20	4	Gambusia sp.		1
2561	I-35	Ziz-2	15-Oct-20	4	Gambusia sp.		1
2561	I-35	Ziz-2	15-Oct-20	4	Procambarus sp.		4
2561	I-35	Ziz-2	15-Oct-20	5	No fish collected		
2561	I-35	Ziz-2	15-Oct-20	6	Gambusia sp.		1
2561	I-35	Ziz-2	15-Oct-20	6	Gambusia sp.		1
2561	I-35	Ziz-2	15-Oct-20	6	Gambusia sp.		1
2561	I-35	Ziz-2	15-Oct-20	6	Procambarus sp.		1
2561	I-35	Ziz-2	15-Oct-20	7	Gambusia sp.		1
2561	I-35	Ziz-2	15-Oct-20	7	Gambusia sp.		1
2561	I-35	Ziz-2	15-Oct-20	7	Gambusia sp.		1
2561	I-35	Ziz-2	15-Oct-20	7	Gambusia sp.		1
2561	I-35	Ziz-2	15-Oct-20	7	Gambusia sp.		1
2561	I-35	Ziz-2	15-Oct-20	7	Gambusia sp.		1
2561	I-35	Ziz-2	15-Oct-20	7	Gambusia sp.		1
2561	I-35	Ziz-2	15-Oct-20	7	Gambusia sp.		1
2561	I-35	Ziz-2	15-Oct-20	7	Gambusia sp.		1
2561	I-35	Ziz-2	15-Oct-20	8	Gambusia sp.		1
2561	I-35	Ziz-2	15-Oct-20	9	Gambusia sp.		1
2561	I-35	Ziz-2	15-Oct-20	10	Gambusia sp.		1
2561	I-35	Ziz-2	15-Oct-20	10	Gambusia sp.		1
2561	I-35	Ziz-2	15-Oct-20	11	Gambusia sp.		1
2561	I-35	Ziz-2	15-Oct-20	12	Gambusia sp.		1
2561	I-35	Ziz-2	15-Oct-20	13	Gambusia sp.		1
2561	I-35	Ziz-2	15-Oct-20	14	No fish collected		
2561	I-35	Ziz-2	15-Oct-20	15	No fish collected		
2562	City Park	Ziz-1	16-Oct-20	1	No fish collected		
2562	City Park	Ziz-1	16-Oct-20	2	No fish collected		
2562	City Park	Ziz-1	16-Oct-20	3	Gambusia sp.	12	1
2562	City Park	Ziz-1	16-Oct-20	4	No fish collected		
2562	City Park	Ziz-1	16-Oct-20	5	No fish collected		
2562	City Park	Ziz-1	16-Oct-20	6	Gambusia sp.	17	1

2562	City Park	Ziz-1	16-Oct-20	7	No fish collected		
2562	City Park	Ziz-1	16-Oct-20	8	Gambusia sp.	25	1
2562	City Park	Ziz-1	16-Oct-20	9	No fish collected		
2562	City Park	Ziz-1	16-Oct-20	10	No fish collected		
2562	City Park	Ziz-1	16-Oct-20	11	No fish collected		
2562	City Park	Ziz-1	16-Oct-20	12	Gambusia sp.	13	1
2562	City Park	Ziz-1	16-Oct-20	13	No fish collected		
2562	City Park	Ziz-1	16-Oct-20	14	No fish collected		
2562	City Park	Ziz-1	16-Oct-20	15	No fish collected		
2563	City Park	Hygr-1	16-Oct-20	2	Gambusia sp.		1
2563	City Park	Hygr-1	16-Oct-20	2	Gambusia sp.		1
2563	City Park	Hygr-1	16-Oct-20	2	Gambusia sp.		1
2563	City Park	Hygr-1	16-Oct-20	2	Gambusia sp.		1
2563	City Park	Hygr-1	16-Oct-20	2	Gambusia sp.		1
2563	City Park	Hygr-1	16-Oct-20	2	Gambusia sp.		1
2563	City Park	Hygr-1	16-Oct-20	2	Gambusia sp.		1
2563	City Park	Hygr-1	16-Oct-20	2	Gambusia sp.		1
2563	City Park	Hygr-1	16-Oct-20	3	Gambusia sp.		1
2563	City Park	Hygr-1	16-Oct-20	3	Gambusia sp.		1
2563	City Park	Hygr-1	16-Oct-20	3	Gambusia sp.		1
2563	City Park	Hygr-1	16-Oct-20	3	Gambusia sp.		1
2563	City Park	Hygr-1	16-Oct-20	3	Gambusia sp.		1
2563	City Park	Hygr-1	16-Oct-20	4	Lepomis miniatus	64	1
2563	City Park	Hygr-1	16-Oct-20	4	Etheostoma fonticola	21	1
2563	City Park	Hygr-1	16-Oct-20	4	Procambarus sp.		1
2563	City Park	Hygr-1	16-Oct-20	4	Gambusia sp.		1
2563	City Park	Hygr-1	16-Oct-20	4	Gambusia sp.		1
2563	City Park	Hygr-1	16-Oct-20	5	Gambusia sp.		1
2563	City Park	Hygr-1	16-Oct-20	5	Gambusia sp.		1
2563	City Park	Hygr-1	16-Oct-20	5	Gambusia sp.		1
2563	City Park	Hygr-1	16-Oct-20	6	Gambusia sp.		1
2563	City Park	Hygr-1	16-Oct-20	6	Gambusia sp.		1
2563	City Park	Hygr-1	16-Oct-20	7	No fish collected		
2563	City Park	Hygr-1	16-Oct-20	8	Gambusia sp.		1
2563	City Park	Hygr-1	16-Oct-20	9	No fish collected		
2563	City Park	Hygr-1	16-Oct-20	10	Gambusia sp.		1
2563	City Park	Hygr-1	16-Oct-20	10	Gambusia sp.		1
2563	City Park	Hygr-1	16-Oct-20	10	Gambusia sp.		1
2563	City Park	Hygr-1	16-Oct-20	11	Procambarus sp.		1
2563	City Park	Hygr-1	16-Oct-20	11	Gambusia sp.		1
2563	City Park	Hygr-1	16-Oct-20	12	No fish collected		

[illegible]

2563	City Park	Hygr-1	16-Oct-20	1	Gambusia sp.		1
2563	City Park	Hygr-1	16-Oct-20	1	Gambusia sp.		1
2563	City Park	Hygr-1	16-Oct-20	1	Gambusia sp.		1
2563	City Park	Hygr-1	16-Oct-20	1	Gambusia sp.		1
2563	City Park	Hygr-1	16-Oct-20	1	Gambusia sp.		1
2563	City Park	Hygr-1	16-Oct-20	1	Gambusia sp.		1
2563	City Park	Hygr-1	16-Oct-20	1	Lepomis miniatus	52	1
2563	City Park	Hygr-1	16-Oct-20	2	Etheostoma fonticola	27	1
2563	City Park	Hygr-1	16-Oct-20	2	Etheostoma fonticola	18	1
2563	City Park	Hygr-1	16-Oct-20	2	Gambusia sp.		1
2563	City Park	Hygr-1	16-Oct-20	2	Gambusia sp.		1
2564	City Park	Hygr-2	16-Oct-20	1	Lepomis miniatus	48	1
2564	City Park	Hygr-2	16-Oct-20	1	Procambarus sp.		5
2564	City Park	Hygr-2	16-Oct-20	1	Etheostoma fonticola	29	1
2564	City Park	Hygr-2	16-Oct-20	1	Etheostoma fonticola	16	1
2564	City Park	Hygr-2	16-Oct-20	1	Palaemonetes sp.		3
2564	City Park	Hygr-2	16-Oct-20	1	Gambusia sp.	10	1
2564	City Park	Hygr-2	16-Oct-20	1	Gambusia sp.	10	1
2564	City Park	Hygr-2	16-Oct-20	1	Gambusia sp.	10	1
2564	City Park	Hygr-2	16-Oct-20	1	Gambusia sp.	10	1
2564	City Park	Hygr-2	16-Oct-20	1	Gambusia sp.	10	1
2564	City Park	Hygr-2	16-Oct-20	1	Gambusia sp.	10	1
2564	City Park	Hygr-2	16-Oct-20	1	Gambusia sp.	10	1
2564	City Park	Hygr-2	16-Oct-20	1	Gambusia sp.	10	1
2564	City Park	Hygr-2	16-Oct-20	1	Gambusia sp.	10	1
2564	City Park	Hygr-2	16-Oct-20	1	Gambusia sp.	10	1
2564	City Park	Hygr-2	16-Oct-20	1	Gambusia sp.	10	1
2564	City Park	Hygr-2	16-Oct-20	1	Gambusia sp.	9	1
2564	City Park	Hygr-2	16-Oct-20	1	Gambusia sp.	9	1
2564	City Park	Hygr-2	16-Oct-20	1	Gambusia sp.	10	1
2564	City Park	Hygr-2	16-Oct-20	1	Gambusia sp.	14	1
2564	City Park	Hygr-2	16-Oct-20	1	Gambusia sp.	12	1
2564	City Park	Hygr-2	16-Oct-20	1	Gambusia sp.	10	1
2564	City Park	Hygr-2	16-Oct-20	1	Gambusia sp.	10	1
2564	City Park	Hygr-2	16-Oct-20	1	Gambusia sp.	12	1
2564	City Park	Hygr-2	16-Oct-20	2	Procambarus sp.		4
2564	City Park	Hygr-2	16-Oct-20	2	Etheostoma fonticola		1
2564	City Park	Hygr-2	16-Oct-20	2	Etheostoma fonticola	20	1
2564	City Park	Hygr-2	16-Oct-20	2	Etheostoma fonticola	32	1
2564	City Park	Hygr-2	16-Oct-20	2	Etheostoma fonticola	17	1
2564	City Park	Hygr-2	16-Oct-20	2	Etheostoma fonticola	21	1
2564	City Park	Hygr-2	16-Oct-20	2	Etheostoma fonticola	18	1

2564	City Park	Hygr-2	16-Oct-20	2	Etheostoma fonticola	10	1
2564	City Park	Hygr-2	16-Oct-20	2	Etheostoma fonticola	13	1
2564	City Park	Hygr-2	16-Oct-20	2	Gambusia sp.	16	1
2564	City Park	Hygr-2	16-Oct-20	2	Gambusia sp.	9	1
2564	City Park	Hygr-2	16-Oct-20	2	Palaemonetes sp.		1
2564	City Park	Hygr-2	16-Oct-20	3	Procambarus sp.		1
2564	City Park	Hygr-2	16-Oct-20	3	No fish collected		
2564	City Park	Hygr-2	16-Oct-20	4	Etheostoma fonticola	20	1
2564	City Park	Hygr-2	16-Oct-20	4	Etheostoma fonticola	23	1
2564	City Park	Hygr-2	16-Oct-20	4	Etheostoma fonticola	23	1
2564	City Park	Hygr-2	16-Oct-20	4	Etheostoma fonticola	36	1
2564	City Park	Hygr-2	16-Oct-20	4	Procambarus sp.		1
2564	City Park	Hygr-2	16-Oct-20	4	Gambusia sp.		1
2564	City Park	Hygr-2	16-Oct-20	4	Gambusia sp.		1
2564	City Park	Hygr-2	16-Oct-20	4	Gambusia sp.		1
2564	City Park	Hygr-2	16-Oct-20	4	Gambusia sp.		1
2564	City Park	Hygr-2	16-Oct-20	4	Gambusia sp.		1
2564	City Park	Hygr-2	16-Oct-20	5	Etheostoma fonticola	28	1
2564	City Park	Hygr-2	16-Oct-20	5	Gambusia sp.		1
2564	City Park	Hygr-2	16-Oct-20	5	Gambusia sp.		1
2564	City Park	Hygr-2	16-Oct-20	5	Gambusia sp.		1
2564	City Park	Hygr-2	16-Oct-20	5	Procambarus sp.		1
2564	City Park	Hygr-2	16-Oct-20	6	Etheostoma fonticola	30	1
2564	City Park	Hygr-2	16-Oct-20	6	Etheostoma fonticola	25	1
2564	City Park	Hygr-2	16-Oct-20	6	Etheostoma fonticola	21	1
2564	City Park	Hygr-2	16-Oct-20	6	Etheostoma fonticola	20	1
2564	City Park	Hygr-2	16-Oct-20	6	Gambusia sp.		1
2564	City Park	Hygr-2	16-Oct-20	6	Gambusia sp.		1
2564	City Park	Hygr-2	16-Oct-20	6	Gambusia sp.		1
2564	City Park	Hygr-2	16-Oct-20	6	Gambusia sp.		1
2564	City Park	Hygr-2	16-Oct-20	6	Gambusia sp.		1
2564	City Park	Hygr-2	16-Oct-20	6	Gambusia sp.		1
2564	City Park	Hygr-2	16-Oct-20	6	Gambusia sp.		1
2564	City Park	Hygr-2	16-Oct-20	6	Gambusia sp.		1
2564	City Park	Hygr-2	16-Oct-20	6	Gambusia sp.		1
2564	City Park	Hygr-2	16-Oct-20	6	Gambusia sp.		1
2564	City Park	Hygr-2	16-Oct-20	6	Gambusia sp.		1
2564	City Park	Hygr-2	16-Oct-20	6	Gambusia sp.		1
2564	City Park	Hygr-2	16-Oct-20	7	Etheostoma fonticola	21	1
2564	City Park	Hygr-2	16-Oct-20	7	Etheostoma fonticola	28	1
2564	City Park	Hygr-2	16-Oct-20	7	Gambusia sp.		1
2564	City Park	Hygr-2	16-Oct-20	7	Gambusia sp.		1

2564	City Park	Hygr-2	16-Oct-20	7	Gambusia sp.		1
2564	City Park	Hygr-2	16-Oct-20	7	Gambusia sp.		1
2564	City Park	Hygr-2	16-Oct-20	7	Gambusia sp.		1
2564	City Park	Hygr-2	16-Oct-20	7	Gambusia sp.		1
2564	City Park	Hygr-2	16-Oct-20	7	Gambusia sp.		1
2564	City Park	Hygr-2	16-Oct-20	7	Gambusia sp.		1
2564	City Park	Hygr-2	16-Oct-20	7	Gambusia sp.		1
2564	City Park	Hygr-2	16-Oct-20	7	Gambusia sp.		1
2564	City Park	Hygr-2	16-Oct-20	7	Gambusia sp.		1
2564	City Park	Hygr-2	16-Oct-20	7	Gambusia sp.		1
2564	City Park	Hygr-2	16-Oct-20	8	Etheostoma fonticola	31	1
2564	City Park	Hygr-2	16-Oct-20	8	Gambusia sp.		1
2564	City Park	Hygr-2	16-Oct-20	9	Etheostoma fonticola	20	1
2564	City Park	Hygr-2	16-Oct-20	9	Etheostoma fonticola	29	1
2564	City Park	Hygr-2	16-Oct-20	9	Gambusia sp.		1
2564	City Park	Hygr-2	16-Oct-20	9	Procambarus sp.		1
2564	City Park	Hygr-2	16-Oct-20	10	Etheostoma fonticola	26	1
2564	City Park	Hygr-2	16-Oct-20	10	Etheostoma fonticola	28	1
2564	City Park	Hygr-2	16-Oct-20	10	Etheostoma fonticola	27	1
2564	City Park	Hygr-2	16-Oct-20	10	Etheostoma fonticola	25	1
2564	City Park	Hygr-2	16-Oct-20	10	Procambarus sp.		2
2564	City Park	Hygr-2	16-Oct-20	10	Gambusia sp.		1
2564	City Park	Hygr-2	16-Oct-20	10	Gambusia sp.		1
2564	City Park	Hygr-2	16-Oct-20	10	Gambusia sp.		1
2564	City Park	Hygr-2	16-Oct-20	11	Etheostoma fonticola	18	1
2564	City Park	Hygr-2	16-Oct-20	11	Gambusia sp.		1
2564	City Park	Hygr-2	16-Oct-20	12	Etheostoma fonticola	23	1
2564	City Park	Hygr-2	16-Oct-20	13	Etheostoma fonticola	31	1
2564	City Park	Hygr-2	16-Oct-20	14	Procambarus sp.		1
2564	City Park	Hygr-2	16-Oct-20	14	Etheostoma fonticola	24	1
2564	City Park	Hygr-2	16-Oct-20	14	Gambusia sp.		1
2564	City Park	Hygr-2	16-Oct-20	15	Procambarus sp.		1
2564	City Park	Hygr-2	16-Oct-20	15	No fish collected		
2565	City Park	Open-1	16-Oct-20	1	Gambusia sp.	21	1
2565	City Park	Open-1	16-Oct-20	1	Gambusia sp.	12	1
2565	City Park	Open-1	16-Oct-20	1	Gambusia sp.	8	1
2565	City Park	Open-1	16-Oct-20	2	No fish collected		
2565	City Park	Open-1	16-Oct-20	3	Gambusia sp.	10	1
2565	City Park	Open-1	16-Oct-20	3	Gambusia sp.	10	1
2565	City Park	Open-1	16-Oct-20	3	Gambusia sp.	15	1
2565	City Park	Open-1	16-Oct-20	4	Gambusia sp.	15	1

2565	City Park	Open-1	16-Oct-20	4	Gambusia sp.	20	1
2565	City Park	Open-1	16-Oct-20	4	Gambusia sp.	10	1
2565	City Park	Open-1	16-Oct-20	4	Gambusia sp.	9	1
2565	City Park	Open-1	16-Oct-20	5	Procambarus sp.		1
2565	City Park	Open-1	16-Oct-20	5	Gambusia sp.	10	1
2565	City Park	Open-1	16-Oct-20	5	Gambusia sp.	10	1
2565	City Park	Open-1	16-Oct-20	5	Gambusia sp.	12	1
2565	City Park	Open-1	16-Oct-20	5	Gambusia sp.	12	1
2565	City Park	Open-1	16-Oct-20	5	Gambusia sp.	13	1
2565	City Park	Open-1	16-Oct-20	6	Gambusia sp.	12	1
2565	City Park	Open-1	16-Oct-20	6	Gambusia sp.	15	1
2565	City Park	Open-1	16-Oct-20	6	Gambusia sp.	10	1
2565	City Park	Open-1	16-Oct-20	6	Gambusia sp.	10	1
2565	City Park	Open-1	16-Oct-20	6	Gambusia sp.	12	1
2565	City Park	Open-1	16-Oct-20	6	Gambusia sp.	15	1
2565	City Park	Open-1	16-Oct-20	6	Gambusia sp.	10	1
2565	City Park	Open-1	16-Oct-20	6	Gambusia sp.	15	1
2565	City Park	Open-1	16-Oct-20	7	Gambusia sp.	14	1
2565	City Park	Open-1	16-Oct-20	7	Gambusia sp.	13	1
2565	City Park	Open-1	16-Oct-20	7	Gambusia sp.	12	1
2565	City Park	Open-1	16-Oct-20	7	Gambusia sp.	12	1
2565	City Park	Open-1	16-Oct-20	7	Gambusia sp.	16	1
2565	City Park	Open-1	16-Oct-20	7	Gambusia sp.	10	1
2565	City Park	Open-1	16-Oct-20	7	Gambusia sp.	16	1
2565	City Park	Open-1	16-Oct-20	7	Gambusia sp.		1
2565	City Park	Open-1	16-Oct-20	7	Gambusia sp.		1
2565	City Park	Open-1	16-Oct-20	8	Gambusia sp.		1
2565	City Park	Open-1	16-Oct-20	8	Gambusia sp.		1
2565	City Park	Open-1	16-Oct-20	9	Gambusia sp.		1
2565	City Park	Open-1	16-Oct-20	9	Gambusia sp.		1
2565	City Park	Open-1	16-Oct-20	9	Gambusia sp.		1
2565	City Park	Open-1	16-Oct-20	10	Gambusia sp.		1
2565	City Park	Open-1	16-Oct-20	10	Gambusia sp.		1
2565	City Park	Open-1	16-Oct-20	10	Gambusia sp.		1
2565	City Park	Open-1	16-Oct-20	11	No fish collected		
2565	City Park	Open-1	16-Oct-20	12	Gambusia sp.		1
2565	City Park	Open-1	16-Oct-20	12	Gambusia sp.		1
2565	City Park	Open-1	16-Oct-20	13	Gambusia sp.		1
2565	City Park	Open-1	16-Oct-20	13	Gambusia sp.		1
2565	City Park	Open-1	16-Oct-20	14	No fish collected		
2565	City Park	Open-1	16-Oct-20	15	No fish collected		

2566	City Park	Open-2	16-Oct-20	1	No fish collected		
2566	City Park	Open-2	16-Oct-20	2	No fish collected		
2566	City Park	Open-2	16-Oct-20	3	No fish collected		
2566	City Park	Open-2	16-Oct-20	4	No fish collected		
2566	City Park	Open-2	16-Oct-20	5	No fish collected		
2566	City Park	Open-2	16-Oct-20	6	No fish collected		
2566	City Park	Open-2	16-Oct-20	7	Gambusia sp.	20	1
2566	City Park	Open-2	16-Oct-20	8	No fish collected		
2566	City Park	Open-2	16-Oct-20	9	No fish collected		
2566	City Park	Open-2	16-Oct-20	10	No fish collected		
2566	City Park	Open-2	16-Oct-20	11	No fish collected		
2566	City Park	Open-2	16-Oct-20	12	No fish collected		
2566	City Park	Open-2	16-Oct-20	13	No fish collected		
2566	City Park	Open-2	16-Oct-20	14	No fish collected		
2566	City Park	Open-2	16-Oct-20	15	No fish collected		
2567	City Park	Pota-1	16-Oct-20	1	Gambusia sp.	36	1
2567	City Park	Pota-1	16-Oct-20	1	Gambusia sp.	32	1
2567	City Park	Pota-1	16-Oct-20	1	Gambusia sp.	10	1
2567	City Park	Pota-1	16-Oct-20	1	Gambusia sp.	21	1
2567	City Park	Pota-1	16-Oct-20	1	Gambusia sp.	12	1
2567	City Park	Pota-1	16-Oct-20	1	Gambusia sp.	34	1
2567	City Park	Pota-1	16-Oct-20	1	Gambusia sp.	25	1
2567	City Park	Pota-1	16-Oct-20	1	Gambusia sp.	20	1
2567	City Park	Pota-1	16-Oct-20	1	Gambusia sp.	20	1
2567	City Park	Pota-1	16-Oct-20	1	Gambusia sp.	26	1
2567	City Park	Pota-1	16-Oct-20	1	Gambusia sp.	26	1
2567	City Park	Pota-1	16-Oct-20	1	Gambusia sp.	26	1
2567	City Park	Pota-1	16-Oct-20	1	Gambusia sp.	30	1
2567	City Park	Pota-1	16-Oct-20	1	Gambusia sp.	12	1
2567	City Park	Pota-1	16-Oct-20	1	Gambusia sp.	11	1
2567	City Park	Pota-1	16-Oct-20	1	Gambusia sp.	31	1
2567	City Park	Pota-1	16-Oct-20	1	Gambusia sp.	14	1
2567	City Park	Pota-1	16-Oct-20	1	Gambusia sp.	8	1
2567	City Park	Pota-1	16-Oct-20	1	Gambusia sp.	8	1
2567	City Park	Pota-1	16-Oct-20	1	Gambusia sp.	8	1
2567	City Park	Pota-1	16-Oct-20	1	Gambusia sp.	10	1
2567	City Park	Pota-1	16-Oct-20	1	Gambusia sp.	10	1
2567	City Park	Pota-1	16-Oct-20	1	Gambusia sp.	10	1
2567	City Park	Pota-1	16-Oct-20	1	Gambusia sp.	10	1
2567	City Park	Pota-1	16-Oct-20	1	Gambusia sp.	16	1

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2568	City Park	Pota-2	16-Oct-20	1	Ambloplites rupestris	165	1
2568	City Park	Pota-2	16-Oct-20	1	Gambusia sp.	28	1
2568	City Park	Pota-2	16-Oct-20	1	Gambusia sp.	24	1
2568	City Park	Pota-2	16-Oct-20	1	Gambusia sp.	25	1
2568	City Park	Pota-2	16-Oct-20	1	Gambusia sp.	15	1
2568	City Park	Pota-2	16-Oct-20	1	Gambusia sp.	22	1
2568	City Park	Pota-2	16-Oct-20	2	Astyanax mexicanus	55	1
2568	City Park	Pota-2	16-Oct-20	2	Gambusia sp.	38	1
2568	City Park	Pota-2	16-Oct-20	2	Gambusia sp.	20	1
2568	City Park	Pota-2	16-Oct-20	2	Gambusia sp.	35	1
2568	City Park	Pota-2	16-Oct-20	2	Gambusia sp.	28	1
2568	City Park	Pota-2	16-Oct-20	2	Gambusia sp.	22	1
2568	City Park	Pota-2	16-Oct-20	2	Gambusia sp.	20	1
2568	City Park	Pota-2	16-Oct-20	2	Gambusia sp.	26	1
2568	City Park	Pota-2	16-Oct-20	3	Gambusia sp.	25	1
2568	City Park	Pota-2	16-Oct-20	3	Gambusia sp.	25	1
2568	City Park	Pota-2	16-Oct-20	3	Gambusia sp.	35	1
2568	City Park	Pota-2	16-Oct-20	3	Gambusia sp.	26	1
2568	City Park	Pota-2	16-Oct-20	3	Gambusia sp.	25	1
2568	City Park	Pota-2	16-Oct-20	3	Gambusia sp.	23	1
2568	City Park	Pota-2	16-Oct-20	3	Gambusia sp.	26	1
2568	City Park	Pota-2	16-Oct-20	3	Gambusia sp.	20	1
2568	City Park	Pota-2	16-Oct-20	3	Gambusia sp.	24	1
2568	City Park	Pota-2	16-Oct-20	4	Gambusia sp.	30	1
2568	City Park	Pota-2	16-Oct-20	5	Lepomis miniatus	90	1
2568	City Park	Pota-2	16-Oct-20	5	Gambusia sp.	26	1
2568	City Park	Pota-2	16-Oct-20	6	Gambusia sp.	38	1
2568	City Park	Pota-2	16-Oct-20	6	Gambusia sp.	30	1
2568	City Park	Pota-2	16-Oct-20	6	Gambusia sp.	25	1
2568	City Park	Pota-2	16-Oct-20	7	No fish collected		
2568	City Park	Pota-2	16-Oct-20	8	Gambusia sp.		1
2568	City Park	Pota-2	16-Oct-20	9	No fish collected		
2568	City Park	Pota-2	16-Oct-20	10	No fish collected		
2568	City Park	Pota-2	16-Oct-20	11	Gambusia sp.		1
2568	City Park	Pota-2	16-Oct-20	12	Lepomis miniatus	121	1
2568	City Park	Pota-2	16-Oct-20	13	No fish collected		
2568	City Park	Pota-2	16-Oct-20	14	No fish collected		
2568	City Park	Pota-2	16-Oct-20	15	No fish collected		
2569	City Park	Ziz-2	16-Oct-20	1	Palaemonetes sp.		1
2569	City Park	Ziz-2	16-Oct-20	1	No fish collected		
2569	City Park	Ziz-2	16-Oct-20	2	Procambarus sp.		1

2569	City Park	Ziz-2	16-Oct-20	2	Gambusia sp.	14	1
2569	City Park	Ziz-2	16-Oct-20	2	Gambusia sp.	15	1
2569	City Park	Ziz-2	16-Oct-20	2	Gambusia sp.	12	1
2569	City Park	Ziz-2	16-Oct-20	2	Gambusia sp.	14	1
2569	City Park	Ziz-2	16-Oct-20	2	Gambusia sp.	15	1
2569	City Park	Ziz-2	16-Oct-20	2	Gambusia sp.	10	1
2569	City Park	Ziz-2	16-Oct-20	2	Gambusia sp.	9	1
2569	City Park	Ziz-2	16-Oct-20	2	Gambusia sp.	22	1
2569	City Park	Ziz-2	16-Oct-20	3	Gambusia sp.	20	1
2569	City Park	Ziz-2	16-Oct-20	4	Gambusia sp.	16	1
2569	City Park	Ziz-2	16-Oct-20	4	Gambusia sp.	18	1
2569	City Park	Ziz-2	16-Oct-20	4	Gambusia sp.	15	1
2569	City Park	Ziz-2	16-Oct-20	4	Gambusia sp.	18	1
2569	City Park	Ziz-2	16-Oct-20	4	Gambusia sp.	15	1
2569	City Park	Ziz-2	16-Oct-20	4	Gambusia sp.	11	1
2569	City Park	Ziz-2	16-Oct-20	5	Gambusia sp.	28	1
2569	City Park	Ziz-2	16-Oct-20	5	Gambusia sp.	14	1
2569	City Park	Ziz-2	16-Oct-20	5	Gambusia sp.	10	1
2569	City Park	Ziz-2	16-Oct-20	6	Gambusia sp.	14	1
2569	City Park	Ziz-2	16-Oct-20	6	Gambusia sp.	8	1
2569	City Park	Ziz-2	16-Oct-20	6	Gambusia sp.	17	1
2569	City Park	Ziz-2	16-Oct-20	6	Gambusia sp.	18	1
2569	City Park	Ziz-2	16-Oct-20	6	Gambusia sp.	15	1
2569	City Park	Ziz-2	16-Oct-20	6	Gambusia sp.	12	1
2569	City Park	Ziz-2	16-Oct-20	6	Gambusia sp.	10	1
2569	City Park	Ziz-2	16-Oct-20	6	Gambusia sp.		1
2569	City Park	Ziz-2	16-Oct-20	6	Gambusia sp.		1
2569	City Park	Ziz-2	16-Oct-20	6	Procambarus sp.		1
2569	City Park	Ziz-2	16-Oct-20	7	Gambusia sp.		1
2569	City Park	Ziz-2	16-Oct-20	8	Gambusia sp.		1
2569	City Park	Ziz-2	16-Oct-20	9	Gambusia sp.		1
2569	City Park	Ziz-2	16-Oct-20	10	Gambusia sp.		1
2569	City Park	Ziz-2	16-Oct-20	10	Gambusia sp.		1
2569	City Park	Ziz-2	16-Oct-20	10	Gambusia sp.		1
2569	City Park	Ziz-2	16-Oct-20	10	Gambusia sp.		1
2569	City Park	Ziz-2	16-Oct-20	10	Gambusia sp.		1
2569	City Park	Ziz-2	16-Oct-20	11	Etheostoma fonticola	17	1
2569	City Park	Ziz-2	16-Oct-20	11	Etheostoma fonticola	20	1
2569	City Park	Ziz-2	16-Oct-20	12	No fish collected		
2569	City Park	Ziz-2	16-Oct-20	13	No fish collected		
2569	City Park	Ziz-2	16-Oct-20	14	No fish collected		

2569	City Park	Ziz-2	16-Oct-20	15	No fish collected		
2570	Spring Lake Dam	Open-1	14-Oct-20	1	No fish collected		
2570	Spring Lake Dam	Open-1	14-Oct-20	2	No fish collected		
2570	Spring Lake Dam	Open-1	14-Oct-20	3	No fish collected		
2570	Spring Lake Dam	Open-1	14-Oct-20	4	No fish collected		
2570	Spring Lake Dam	Open-1	14-Oct-20	5	No fish collected		
2570	Spring Lake Dam	Open-1	14-Oct-20	6	No fish collected		
2570	Spring Lake Dam	Open-1	14-Oct-20	7	No fish collected		
2570	Spring Lake Dam	Open-1	14-Oct-20	8	No fish collected		
2570	Spring Lake Dam	Open-1	14-Oct-20	9	No fish collected		
2570	Spring Lake Dam	Open-1	14-Oct-20	10	No fish collected		
2571	Spring Lake Dam	Ziz-1	14-Oct-20	1	No fish collected		
2571	Spring Lake Dam	Ziz-1	14-Oct-20	2	No fish collected		
2571	Spring Lake Dam	Ziz-1	14-Oct-20	3	No fish collected		
2571	Spring Lake Dam	Ziz-1	14-Oct-20	4	No fish collected		
2571	Spring Lake Dam	Ziz-1	14-Oct-20	5	No fish collected		
2571	Spring Lake Dam	Ziz-1	14-Oct-20	6	No fish collected		
2571	Spring Lake Dam	Ziz-1	14-Oct-20	7	No fish collected		
2571	Spring Lake Dam	Ziz-1	14-Oct-20	8	No fish collected		
2571	Spring Lake Dam	Ziz-1	14-Oct-20	9	No fish collected		
2571	Spring Lake Dam	Ziz-1	14-Oct-20	10	No fish collected		
2572	Spring Lake Dam	Pota-1	14-Oct-20	1	No fish collected		
2572	Spring Lake Dam	Pota-1	14-Oct-20	2	Lepomis miniatus	51	1
2572	Spring Lake Dam	Pota-1	14-Oct-20	3	Gambusia sp.	35	1
2572	Spring Lake Dam	Pota-1	14-Oct-20	4	No fish collected		
2572	Spring Lake Dam	Pota-1	14-Oct-20	5	No fish collected		
2572	Spring Lake Dam	Pota-1	14-Oct-20	6	No fish collected		
2572	Spring Lake Dam	Pota-1	14-Oct-20	7	No fish collected		
2572	Spring Lake Dam	Pota-1	14-Oct-20	8	No fish collected		
2572	Spring Lake Dam	Pota-1	14-Oct-20	9	No fish collected		
2572	Spring Lake Dam	Pota-1	14-Oct-20	10	No fish collected		
2572	Spring Lake Dam	Pota-1	14-Oct-20	11	No fish collected		
2572	Spring Lake Dam	Pota-1	14-Oct-20	12	No fish collected		
2572	Spring Lake Dam	Pota-1	14-Oct-20	13	No fish collected		
2572	Spring Lake Dam	Pota-1	14-Oct-20	14	No fish collected		
2572	Spring Lake Dam	Pota-1	14-Oct-20	15	No fish collected		
2573	Spring Lake Dam	Pota-2	14-Oct-20	1	Lepomis miniatus	95	1
2573	Spring Lake Dam	Pota-2	14-Oct-20	1	Dionda nigrotaeniata	38	1
2573	Spring Lake Dam	Pota-2	14-Oct-20	1	Etheostoma fonticola	32	1
2573	Spring Lake Dam	Pota-2	14-Oct-20	2	No fish collected		
2573	Spring Lake Dam	Pota-2	14-Oct-20	3	Lepomis miniatus	39	1

2573	Spring Lake Dam	Pota-2	14-Oct-20	3	Procambarus sp.		1
2573	Spring Lake Dam	Pota-2	14-Oct-20	4	No fish collected		
2573	Spring Lake Dam	Pota-2	14-Oct-20	5	No fish collected		
2573	Spring Lake Dam	Pota-2	14-Oct-20	6	Dionda nigrotaeniata	43	1
2573	Spring Lake Dam	Pota-2	14-Oct-20	7	No fish collected		
2573	Spring Lake Dam	Pota-2	14-Oct-20	8	Lepomis miniatus	95	1
2573	Spring Lake Dam	Pota-2	14-Oct-20	8	Lepomis miniatus	46	1
2573	Spring Lake Dam	Pota-2	14-Oct-20	9	No fish collected		
2573	Spring Lake Dam	Pota-2	14-Oct-20	10	No fish collected		
2573	Spring Lake Dam	Pota-2	14-Oct-20	11	No fish collected		
2573	Spring Lake Dam	Pota-2	14-Oct-20	12	No fish collected		
2573	Spring Lake Dam	Pota-2	14-Oct-20	13	Etheostoma fonticola	31	1
2573	Spring Lake Dam	Pota-2	14-Oct-20	13	Lepomis miniatus	43	1
2573	Spring Lake Dam	Pota-2	14-Oct-20	14	No fish collected		
2573	Spring Lake Dam	Pota-2	14-Oct-20	15	No fish collected		
2574	Spring Lake Dam	Sagi-1	14-Oct-20	1	Gambusia sp.	30	1
2574	Spring Lake Dam	Sagi-1	14-Oct-20	1	Gambusia sp.	21	1
2574	Spring Lake Dam	Sagi-1	14-Oct-20	1	Gambusia sp.	28	1
2574	Spring Lake Dam	Sagi-1	14-Oct-20	1	Gambusia sp.	25	1
2574	Spring Lake Dam	Sagi-1	14-Oct-20	1	Gambusia sp.	28	1
2574	Spring Lake Dam	Sagi-1	14-Oct-20	1	Gambusia sp.	21	1
2574	Spring Lake Dam	Sagi-1	14-Oct-20	1	Gambusia sp.	18	1
2574	Spring Lake Dam	Sagi-1	14-Oct-20	1	Gambusia sp.	17	1
2574	Spring Lake Dam	Sagi-1	14-Oct-20	1	Palaemonetes sp.		4
2574	Spring Lake Dam	Sagi-1	14-Oct-20	2	Etheostoma fonticola	32	1
2574	Spring Lake Dam	Sagi-1	14-Oct-20	2	Etheostoma fonticola	30	1
2574	Spring Lake Dam	Sagi-1	14-Oct-20	2	Etheostoma fonticola	31	1
2574	Spring Lake Dam	Sagi-1	14-Oct-20	2	Etheostoma fonticola	26	1
2574	Spring Lake Dam	Sagi-1	14-Oct-20	2	Gambusia sp.	30	1
2574	Spring Lake Dam	Sagi-1	14-Oct-20	2	Gambusia sp.	25	1
2574	Spring Lake Dam	Sagi-1	14-Oct-20	2	Gambusia sp.	28	1
2574	Spring Lake Dam	Sagi-1	14-Oct-20	2	Gambusia sp.	25	1
2574	Spring Lake Dam	Sagi-1	14-Oct-20	2	Gambusia sp.	22	1
2574	Spring Lake Dam	Sagi-1	14-Oct-20	2	Gambusia sp.	15	1
2574	Spring Lake Dam	Sagi-1	14-Oct-20	2	Palaemonetes sp.		2
2574	Spring Lake Dam	Sagi-1	14-Oct-20	3	Procambarus sp.		3
2574	Spring Lake Dam	Sagi-1	14-Oct-20	3	Gambusia sp.	30	1
2574	Spring Lake Dam	Sagi-1	14-Oct-20	3	Gambusia sp.	16	1
2574	Spring Lake Dam	Sagi-1	14-Oct-20	3	Gambusia sp.	15	1
2574	Spring Lake Dam	Sagi-1	14-Oct-20	3	Etheostoma fonticola	42	1
2574	Spring Lake Dam	Sagi-1	14-Oct-20	3	Etheostoma fonticola	44	1

2574	Spring Lake Dam	Sagi-1	14-Oct-20	3	Etheostoma fonticola	15	1
2574	Spring Lake Dam	Sagi-1	14-Oct-20	3	Palaemonetes sp.		1
2574	Spring Lake Dam	Sagi-1	14-Oct-20	4	Palaemonetes sp.		2
2574	Spring Lake Dam	Sagi-1	14-Oct-20	4	Gambusia sp.	33	1
2574	Spring Lake Dam	Sagi-1	14-Oct-20	4	Gambusia sp.	25	1
2574	Spring Lake Dam	Sagi-1	14-Oct-20	4	Gambusia sp.	30	1
2574	Spring Lake Dam	Sagi-1	14-Oct-20	4	Gambusia sp.	22	1
2574	Spring Lake Dam	Sagi-1	14-Oct-20	4	Gambusia sp.	35	1
2574	Spring Lake Dam	Sagi-1	14-Oct-20	4	Gambusia sp.	15	1
2574	Spring Lake Dam	Sagi-1	14-Oct-20	4	Gambusia sp.	13	1
2574	Spring Lake Dam	Sagi-1	14-Oct-20	5	Gambusia sp.	32	1
2574	Spring Lake Dam	Sagi-1	14-Oct-20	5	Gambusia sp.	25	1
2574	Spring Lake Dam	Sagi-1	14-Oct-20	5	Etheostoma fonticola	25	1
2574	Spring Lake Dam	Sagi-1	14-Oct-20	6	Etheostoma fonticola	31	1
2574	Spring Lake Dam	Sagi-1	14-Oct-20	6	Dionda nigrotaeniata	46	1
2574	Spring Lake Dam	Sagi-1	14-Oct-20	7	Gambusia sp.		1
2574	Spring Lake Dam	Sagi-1	14-Oct-20	8	No fish collected		
2574	Spring Lake Dam	Sagi-1	14-Oct-20	9	Gambusia sp.		1
2574	Spring Lake Dam	Sagi-1	14-Oct-20	10	Etheostoma fonticola	34	1
2574	Spring Lake Dam	Sagi-1	14-Oct-20	10	Gambusia sp.		1
2574	Spring Lake Dam	Sagi-1	14-Oct-20	11	No fish collected		
2574	Spring Lake Dam	Sagi-1	14-Oct-20	12	No fish collected		
2574	Spring Lake Dam	Sagi-1	14-Oct-20	13	No fish collected		
2574	Spring Lake Dam	Sagi-1	14-Oct-20	14	No fish collected		
2574	Spring Lake Dam	Sagi-1	14-Oct-20	15	No fish collected		
2575	Spring Lake Dam	Sagi-2	14-Oct-20	1	Lepomis miniatus	40	1
2575	Spring Lake Dam	Sagi-2	14-Oct-20	1	Lepomis miniatus	60	1
2575	Spring Lake Dam	Sagi-2	14-Oct-20	1	Lepomis miniatus	66	1
2575	Spring Lake Dam	Sagi-2	14-Oct-20	1	Lepomis miniatus	45	1
2575	Spring Lake Dam	Sagi-2	14-Oct-20	1	Lepomis miniatus	60	1
2575	Spring Lake Dam	Sagi-2	14-Oct-20	1	Lepomis miniatus	30	1
2575	Spring Lake Dam	Sagi-2	14-Oct-20	1	Lepomis miniatus	30	1
2575	Spring Lake Dam	Sagi-2	14-Oct-20	1	Lepomis miniatus	38	1
2575	Spring Lake Dam	Sagi-2	14-Oct-20	1	Lepomis miniatus	28	1
2575	Spring Lake Dam	Sagi-2	14-Oct-20	1	Lepomis gulosus	80	1
2575	Spring Lake Dam	Sagi-2	14-Oct-20	1	Procambarus sp.		4
2575	Spring Lake Dam	Sagi-2	14-Oct-20	1	Gambusia sp.	18	1
2575	Spring Lake Dam	Sagi-2	14-Oct-20	1	Gambusia sp.	15	1
2575	Spring Lake Dam	Sagi-2	14-Oct-20	1	Gambusia sp.	10	1
2575	Spring Lake Dam	Sagi-2	14-Oct-20	1	Gambusia sp.	10	1
2575	Spring Lake Dam	Sagi-2	14-Oct-20	1	Gambusia sp.	20	1

2575	Spring Lake Dam	Sagi-2	14-Oct-20	2	Procambarus sp.		1
2575	Spring Lake Dam	Sagi-2	14-Oct-20	2	Lepomis miniatus	75	1
2575	Spring Lake Dam	Sagi-2	14-Oct-20	2	Lepomis miniatus	43	1
2575	Spring Lake Dam	Sagi-2	14-Oct-20	2	Gambusia sp.	22	1
2575	Spring Lake Dam	Sagi-2	14-Oct-20	2	Gambusia sp.	35	1
2575	Spring Lake Dam	Sagi-2	14-Oct-20	2	Gambusia sp.	10	1
2575	Spring Lake Dam	Sagi-2	14-Oct-20	2	Gambusia sp.	23	1
2575	Spring Lake Dam	Sagi-2	14-Oct-20	2	Gambusia sp.	10	1
2575	Spring Lake Dam	Sagi-2	14-Oct-20	2	Gambusia sp.	20	1
2575	Spring Lake Dam	Sagi-2	14-Oct-20	3	Gambusia sp.	15	1
2575	Spring Lake Dam	Sagi-2	14-Oct-20	3	Gambusia sp.	20	1
2575	Spring Lake Dam	Sagi-2	14-Oct-20	4	Lepomis miniatus	48	1
2575	Spring Lake Dam	Sagi-2	14-Oct-20	4	Lepomis miniatus	53	1
2575	Spring Lake Dam	Sagi-2	14-Oct-20	4	Gambusia sp.	10	1
2575	Spring Lake Dam	Sagi-2	14-Oct-20	4	Gambusia sp.	10	1
2575	Spring Lake Dam	Sagi-2	14-Oct-20	5	Procambarus sp.		2
2575	Spring Lake Dam	Sagi-2	14-Oct-20	5	Gambusia sp.	32	1
2575	Spring Lake Dam	Sagi-2	14-Oct-20	6	No fish collected		
2575	Spring Lake Dam	Sagi-2	14-Oct-20	7	Lepomis miniatus	72	1
2575	Spring Lake Dam	Sagi-2	14-Oct-20	7	Lepomis miniatus	75	1
2575	Spring Lake Dam	Sagi-2	14-Oct-20	7	Gambusia sp.	14	1
2575	Spring Lake Dam	Sagi-2	14-Oct-20	8	Lepomis gulosus	77	1
2575	Spring Lake Dam	Sagi-2	14-Oct-20	8	Lepomis miniatus	85	1
2575	Spring Lake Dam	Sagi-2	14-Oct-20	9	No fish collected		
2575	Spring Lake Dam	Sagi-2	14-Oct-20	10	Herichthys cyanoguttatus	32	1
2575	Spring Lake Dam	Sagi-2	14-Oct-20	11	Lepomis miniatus	32	1
2575	Spring Lake Dam	Sagi-2	14-Oct-20	12	Lepomis miniatus	25	1
2575	Spring Lake Dam	Sagi-2	14-Oct-20	12	Lepomis miniatus	52	1
2575	Spring Lake Dam	Sagi-2	14-Oct-20	12	Gambusia sp.	30	1
2575	Spring Lake Dam	Sagi-2	14-Oct-20	13	No fish collected		
2575	Spring Lake Dam	Sagi-2	14-Oct-20	14	Gambusia sp.	22	1
2575	Spring Lake Dam	Sagi-2	14-Oct-20	14	Gambusia sp.	13	1
2575	Spring Lake Dam	Sagi-2	14-Oct-20	15	No fish collected		
2575	Spring Lake Dam	Sagi-2	14-Oct-20	1	Lepomis miniatus	45	1
2576	Spring Lake Dam	Ziz-2	14-Oct-20	1	Gambusia sp.	26	1
2576	Spring Lake Dam	Ziz-2	14-Oct-20	1	Gambusia sp.	10	1
2576	Spring Lake Dam	Ziz-2	14-Oct-20	1	Gambusia sp.	22	1
2576	Spring Lake Dam	Ziz-2	14-Oct-20	1	Gambusia sp.	10	1
2576	Spring Lake Dam	Ziz-2	14-Oct-20	1	Gambusia sp.	20	1
2576	Spring Lake Dam	Ziz-2	14-Oct-20	1	Gambusia sp.	18	1
2576	Spring Lake Dam	Ziz-2	14-Oct-20	1	Gambusia sp.	20	1

2576	Spring Lake Dam	Ziz-2	14-Oct-20	1	Gambusia sp.	18	1
2576	Spring Lake Dam	Ziz-2	14-Oct-20	1	Gambusia sp.	15	1
2576	Spring Lake Dam	Ziz-2	14-Oct-20	1	Gambusia sp.	22	1
2576	Spring Lake Dam	Ziz-2	14-Oct-20	1	Astyanax mexicanus	35	1
2576	Spring Lake Dam	Ziz-2	14-Oct-20	1	Astyanax mexicanus	66	1
2576	Spring Lake Dam	Ziz-2	14-Oct-20	2	Gambusia sp.	10	1
2576	Spring Lake Dam	Ziz-2	14-Oct-20	2	Gambusia sp.	15	1
2576	Spring Lake Dam	Ziz-2	14-Oct-20	2	Gambusia sp.	15	1
2576	Spring Lake Dam	Ziz-2	14-Oct-20	2	Gambusia sp.	15	1
2576	Spring Lake Dam	Ziz-2	14-Oct-20	3	Gambusia sp.	15	1
2576	Spring Lake Dam	Ziz-2	14-Oct-20	3	Gambusia sp.	15	1
2576	Spring Lake Dam	Ziz-2	14-Oct-20	3	Gambusia sp.	15	1
2576	Spring Lake Dam	Ziz-2	14-Oct-20	3	Gambusia sp.	11	1
2576	Spring Lake Dam	Ziz-2	14-Oct-20	3	Micropterus salmoides	71	1
2576	Spring Lake Dam	Ziz-2	14-Oct-20	4	Gambusia sp.	22	1
2576	Spring Lake Dam	Ziz-2	14-Oct-20	5	Micropterus salmoides	70	1
2576	Spring Lake Dam	Ziz-2	14-Oct-20	5	Gambusia sp.	10	1
2576	Spring Lake Dam	Ziz-2	14-Oct-20	6	No fish collected		
2576	Spring Lake Dam	Ziz-2	14-Oct-20	7	Gambusia sp.	30	1
2576	Spring Lake Dam	Ziz-2	14-Oct-20	8	Gambusia sp.	30	1
2576	Spring Lake Dam	Ziz-2	14-Oct-20	9	No fish collected		
2576	Spring Lake Dam	Ziz-2	14-Oct-20	10	No fish collected		
2576	Spring Lake Dam	Ziz-2	14-Oct-20	11	Gambusia sp.	13	1
2576	Spring Lake Dam	Ziz-2	14-Oct-20	12	Gambusia sp.	22	1
2576	Spring Lake Dam	Ziz-2	14-Oct-20	13	Etheostoma fonticola	30	1
2576	Spring Lake Dam	Ziz-2	14-Oct-20	13	Gambusia sp.	15	1
2576	Spring Lake Dam	Ziz-2	14-Oct-20	13	Gambusia sp.	12	1
2576	Spring Lake Dam	Ziz-2	14-Oct-20	14	No fish collected		
2576	Spring Lake Dam	Ziz-2	14-Oct-20	15	Gambusia sp.	30	1
2577	Spring Lake Dam	Hydr-1	14-Oct-20	1	Etheostoma fonticola	28	1
2577	Spring Lake Dam	Hydr-1	14-Oct-20	1	Etheostoma fonticola	26	1
2577	Spring Lake Dam	Hydr-1	14-Oct-20	2	Procambarus sp.		1
2577	Spring Lake Dam	Hydr-1	14-Oct-20	2	Etheostoma fonticola	29	1
2577	Spring Lake Dam	Hydr-1	14-Oct-20	2	Etheostoma fonticola	24	1
2577	Spring Lake Dam	Hydr-1	14-Oct-20	2	Gambusia sp.	26	1
2577	Spring Lake Dam	Hydr-1	14-Oct-20	2	Palaemonetes sp.		1
2577	Spring Lake Dam	Hydr-1	14-Oct-20	3	No fish collected		
2577	Spring Lake Dam	Hydr-1	14-Oct-20	4	Etheostoma fonticola	23	1
2577	Spring Lake Dam	Hydr-1	14-Oct-20	5	Procambarus sp.		1

2577	Spring Lake Dam	Hydr-1	14-Oct-20	5	No fish collected		
2577	Spring Lake Dam	Hydr-1	14-Oct-20	6	No fish collected		
2577	Spring Lake Dam	Hydr-1	14-Oct-20	7	Ameiurus natalis	61	1
2577	Spring Lake Dam	Hydr-1	14-Oct-20	8	No fish collected		
2577	Spring Lake Dam	Hydr-1	14-Oct-20	9	No fish collected		
2577	Spring Lake Dam	Hydr-1	14-Oct-20	10	No fish collected		
2577	Spring Lake Dam	Hydr-1	14-Oct-20	11	No fish collected		
2577	Spring Lake Dam	Hydr-1	14-Oct-20	12	No fish collected		
2577	Spring Lake Dam	Hydr-1	14-Oct-20	13	Micropterus salmoides	85	1
2577	Spring Lake Dam	Hydr-1	14-Oct-20	14	No fish collected		
2577	Spring Lake Dam	Hydr-1	14-Oct-20	15	No fish collected		
2578	Spring Lake Dam	Hydr-2	14-Oct-20	1	Etheostoma fonticola	24	1
2578	Spring Lake Dam	Hydr-2	14-Oct-20	1	Etheostoma fonticola	32	1
2578	Spring Lake Dam	Hydr-2	14-Oct-20	1	Etheostoma fonticola	24	1
2578	Spring Lake Dam	Hydr-2	14-Oct-20	1	Gambusia sp.	22	1
2578	Spring Lake Dam	Hydr-2	14-Oct-20	2	Etheostoma fonticola	25	1
2578	Spring Lake Dam	Hydr-2	14-Oct-20	2	Etheostoma fonticola	18	1
2578	Spring Lake Dam	Hydr-2	14-Oct-20	2	Etheostoma fonticola	25	1
2578	Spring Lake Dam	Hydr-2	14-Oct-20	2	Etheostoma fonticola	25	1
2578	Spring Lake Dam	Hydr-2	14-Oct-20	2	Etheostoma fonticola	27	1
2578	Spring Lake Dam	Hydr-2	14-Oct-20	2	Etheostoma fonticola	32	1
2578	Spring Lake Dam	Hydr-2	14-Oct-20	2	Gambusia sp.	20	1
2578	Spring Lake Dam	Hydr-2	14-Oct-20	3	No fish collected		
2578	Spring Lake Dam	Hydr-2	14-Oct-20	4	Procambarus sp.		2
2578	Spring Lake Dam	Hydr-2	14-Oct-20	4	Etheostoma fonticola	29	1
2578	Spring Lake Dam	Hydr-2	14-Oct-20	4	Etheostoma fonticola	34	1
2578	Spring Lake Dam	Hydr-2	14-Oct-20	4	Etheostoma fonticola	35	1
2578	Spring Lake Dam	Hydr-2	14-Oct-20	5	Procambarus sp.		1
2578	Spring Lake Dam	Hydr-2	14-Oct-20	5	Etheostoma fonticola	26	1
2578	Spring Lake Dam	Hydr-2	14-Oct-20	6	Etheostoma fonticola	32	1
2578	Spring Lake Dam	Hydr-2	14-Oct-20	6	Etheostoma fonticola	30	1
2578	Spring Lake Dam	Hydr-2	14-Oct-20	6	Etheostoma fonticola	27	1
2578	Spring Lake Dam	Hydr-2	14-Oct-20	6	Procambarus sp.		1
2578	Spring Lake Dam	Hydr-2	14-Oct-20	7	No fish collected		
2578	Spring Lake Dam	Hydr-2	14-Oct-20	8	No fish collected		
2578	Spring Lake Dam	Hydr-2	14-Oct-20	9	Etheostoma fonticola	27	1
2578	Spring Lake Dam	Hydr-2	14-Oct-20	10	No fish collected		
2578	Spring Lake Dam	Hydr-2	14-Oct-20	11	No fish collected		
2578	Spring Lake Dam	Hydr-2	14-Oct-20	12	No fish collected		
2578	Spring Lake Dam	Hydr-2	14-Oct-20	13	No fish collected		
2578	Spring Lake Dam	Hydr-2	14-Oct-20	14	No fish collected		

2578	Spring Lake Dam	Hydr-2	14-Oct-20	15	No fish collected		
2578	Spring Lake Dam	Hydr-2	14-Oct-20	6	Etheostoma fonticola	33	1
2579	Spring Lake Dam	Open-2	14-Oct-20	1	No fish collected		
2579	Spring Lake Dam	Open-2	14-Oct-20	2	No fish collected		
2579	Spring Lake Dam	Open-2	14-Oct-20	3	No fish collected		
2579	Spring Lake Dam	Open-2	14-Oct-20	4	No fish collected		
2579	Spring Lake Dam	Open-2	14-Oct-20	5	No fish collected		
2579	Spring Lake Dam	Open-2	14-Oct-20	6	No fish collected		
2579	Spring Lake Dam	Open-2	14-Oct-20	7	No fish collected		
2579	Spring Lake Dam	Open-2	14-Oct-20	8	No fish collected		
2579	Spring Lake Dam	Open-2	14-Oct-20	9	No fish collected		
2579	Spring Lake Dam	Open-2	14-Oct-20	10	No fish collected		
2499	City Park	TWR-1	22-Apr-20	1	Etheostoma fonticola	35	1
2499	City Park	TWR-1	22-Apr-20	1	Procambarus sp.		1
2499	City Park	TWR-1	22-Apr-20	2	Etheostoma fonticola	25	1
2499	City Park	TWR-1	22-Apr-20	2	Etheostoma fonticola	19	1
2499	City Park	TWR-1	22-Apr-20	2	Etheostoma fonticola	23	1
2499	City Park	TWR-1	22-Apr-20	3	Gambusia sp.	22	1
2499	City Park	TWR-1	22-Apr-20	3	Gambusia sp.	32	1
2499	City Park	TWR-1	22-Apr-20	4	No fish collected		
2499	City Park	TWR-1	22-Apr-20	5	No fish collected		
2499	City Park	TWR-1	22-Apr-20	6	Procambarus sp.		1
2499	City Park	TWR-1	22-Apr-20	6	No fish collected		
2499	City Park	TWR-1	22-Apr-20	7	No fish collected		
2499	City Park	TWR-1	22-Apr-20	8	Procambarus sp.		1
2499	City Park	TWR-1	22-Apr-20	8	No fish collected		
2499	City Park	TWR-1	22-Apr-20	9	No fish collected		
2499	City Park	TWR-1	22-Apr-20	10	No fish collected		
2499	City Park	TWR-1	22-Apr-20	11	No fish collected		
2499	City Park	TWR-1	22-Apr-20	12	No fish collected		
2499	City Park	TWR-1	22-Apr-20	13	No fish collected		
2499	City Park	TWR-1	22-Apr-20	14	Etheostoma fonticola	29	1
2499	City Park	TWR-1	22-Apr-20	15	Etheostoma fonticola	15	1
2499	City Park	TWR-1	22-Apr-20	16	No fish collected		
2500	City Park	Pota-2	22-Apr-20	1	Gambusia sp.	10	1
2500	City Park	Pota-2	22-Apr-20	1	Gambusia sp.	24	1
2500	City Park	Pota-2	22-Apr-20	1	Gambusia sp.	15	1
2500	City Park	Pota-2	22-Apr-20	1	Gambusia sp.	18	1
2500	City Park	Pota-2	22-Apr-20	1	Gambusia sp.	25	1
2500	City Park	Pota-2	22-Apr-20	1	Gambusia sp.	17	1
2500	City Park	Pota-2	22-Apr-20	1	Gambusia sp.	18	1

2500	City Park	Pota-2	22-Apr-20	1	Gambusia sp.	31	1
2500	City Park	Pota-2	22-Apr-20	1	Gambusia sp.	22	1
2500	City Park	Pota-2	22-Apr-20	1	Gambusia sp.	30	1
2500	City Park	Pota-2	22-Apr-20	1	Gambusia sp.	10	1
2500	City Park	Pota-2	22-Apr-20	2	Gambusia sp.	18	1
2500	City Park	Pota-2	22-Apr-20	3	Gambusia sp.	34	1
2500	City Park	Pota-2	22-Apr-20	4	Gambusia sp.	12	1
2500	City Park	Pota-2	22-Apr-20	4	Gambusia sp.	12	1
2500	City Park	Pota-2	22-Apr-20	5	Etheostoma fonticola	18	1
2500	City Park	Pota-2	22-Apr-20	6	Gambusia sp.	15	1
2500	City Park	Pota-2	22-Apr-20	7	No fish collected		
2500	City Park	Pota-2	22-Apr-20	8	No fish collected		
2500	City Park	Pota-2	22-Apr-20	9	No fish collected		
2500	City Park	Pota-2	22-Apr-20	10	No fish collected		
2500	City Park	Pota-2	22-Apr-20	11	No fish collected		
2500	City Park	Pota-2	22-Apr-20	12	No fish collected		
2500	City Park	Pota-2	22-Apr-20	13	Etheostoma fonticola	21	1
2500	City Park	Pota-2	22-Apr-20	14	Gambusia sp.	10	1
2500	City Park	Pota-2	22-Apr-20	15	No fish collected		
2501	City Park	TWR-2	22-Apr-20	1	No fish collected		
2501	City Park	TWR-2	22-Apr-20	2	No fish collected		
2501	City Park	TWR-2	22-Apr-20	3	No fish collected		
2501	City Park	TWR-2	22-Apr-20	4	No fish collected		
2501	City Park	TWR-2	22-Apr-20	5	No fish collected		
2501	City Park	TWR-2	22-Apr-20	6	No fish collected		
2501	City Park	TWR-2	22-Apr-20	7	No fish collected		
2501	City Park	TWR-2	22-Apr-20	8	No fish collected		
2501	City Park	TWR-2	22-Apr-20	9	No fish collected		
2501	City Park	TWR-2	22-Apr-20	10	No fish collected		
2502	I-35	Open-1	23-Apr-20	1	No fish collected		
2502	I-35	Open-1	23-Apr-20	2	No fish collected		
2502	I-35	Open-1	23-Apr-20	3	No fish collected		
2502	I-35	Open-1	23-Apr-20	4	No fish collected		
2502	I-35	Open-1	23-Apr-20	5	No fish collected		
2502	I-35	Open-1	23-Apr-20	6	No fish collected		
2502	I-35	Open-1	23-Apr-20	7	No fish collected		
2502	I-35	Open-1	23-Apr-20	8	No fish collected		
2502	I-35	Open-1	23-Apr-20	9	No fish collected		
2502	I-35	Open-1	23-Apr-20	10	No fish collected		