

**Florida Fish & Wildlife Conservation Commission (FWC)
Division of Freshwater Fisheries Management (DFFM)
Annual Progress Report to be viewed by our constituency
(Fish Orlando section)
July 1, 2017 – June 30, 2018**

Fish Orlando Overview:

Fish Orlando is a program that was developed in 1998 in order to “Bring Quality Fishing to Families”. Research has shown that families are usually the ones that recruit new fishers. Goals of the program are to provide water bodies in the greater Orlando area that are managed for quality fishing and are “family friendly” i.e. have good bank access, safe locations, etc. Because Orlando is the number one tourist destination in the world (40-70 million people go through the Orlando International Airport per year), Fish Orlando also provides information and fishing opportunities that can be easily accessed by those visiting from out of state. Some of the ways we do this is through our web page (myfwc.com/fishing/fishorlando), app (available in iTunes store), fishing forecasts (myfwc.com/fishing/site/forecasts/fishorlando) and fishing maps which can be requested via fishorlando@myfwc.com or picked up in the kiosk at Bass Pro Shops Orlando located just minutes from Disney, Sea World and Universal Studios. To date well over a quarter million maps have been distributed including to fishers visiting from over 40 different states and 13 countries.

FISH ORLANDO BIG WATER BODIES (BWB)

Overview: These are the larger waters managed in the Fish Orlando program. They became actively involved in our work plans in 2006 and include the Butler Chain, Conway Chain, Johns Lake and the Winter Park Chain. These do not have bank fishing access except for the docks associated with the boat ramps. The Fish Orlando fishing map lists where the various boat ramps are located.

Butler Chain of Lakes (4,720 acres)

Background information:

The Butler Chain (Chain) is primarily a Largemouth Bass fishery that is managed by preserving and protecting the fish’s home or habitat. It also has the rare distinction of being an “Outstanding Florida Waterbody” which gives it extra protection when it comes to preserving its water quality and habitat. Located just minutes from Disney World, Universal Studios and SeaWorld, it has 11 lakes in the chain: **Down** (872 acres), **Wauseon Bay** (138 acres), **Butler** (1,655), **Louisa** (145 acres), **Islesworth** (100 acres), **Tibet** (1,798 acres), **Blanche** (121 acres), **Chase** (135 acres), **Sheen** (565 acres), **Pocket** (125 acres) and **Fish** (30 acres).

The upper part of the Chain (Down – Islesworth) has deep (> 20 feet) clear water that you can often see a quarter in 10-12 feet of water. The lower part (Tibet – Fish) also has 20-foot

holes but is more brownish in color from the tannin pigment caused from natural run off passing through stands of cypress and pine trees. Because the tannin color does not allow for light to grow microscopic plants and animals (phytoplankton and zooplankton i.e. the base of the food chain), the lower end does not have as many fish per acre.

In 2006 -2008 the fisheries on the Butler Chain was studied intensely. Part of this was an angler survey done from Lake Down to Tibet from January – April in 2008. It showed that the chain was used extensively by guides and out of state visitors. The average largemouth bass catch rate was 0.58 bass per person per hour (**state average is around 0.30**). The bass anglers on the chain did not harvest many of the bass they caught (96% of the legal largemouth were released; legal at that time was ≥ 14 inches). The bass fishers were evenly split when asked whether they would prefer to catch big bass or high numbers of bass, and 25% said they were pretournament or tournament fishing. Over 90% of all the anglers (bass, crappie, etc.) said they were “satisfied” or “very satisfied” with their fishing experience.

A largemouth bass electrofishing survey was done on the same lakes as the creel. An electrofishing survey uses a rig to stun fish temporarily with electricity, leaving the fish unharmed. It is primarily only effective in water less than 6 feet and usually does not work well when the water is clear (the fish can see you coming). Because of this, it is not surprising that we found the electrofishing results on the upper end of the Butler Chain to be relatively inaccurate in assessing the chain’s bass fishery.

Some bass were also sacrificed to check on their age and growth. Because Florida has no winter, the only way to check growth is to take out the fish’s otoliths (or hearing stone), located behind the brain. The fish lay a ring down on the otoliths each year, similar to the trunk in a tree. The results showed a significant increase in largemouth growth when compared to data 20 years before. Historically it took 5-6 years to grow a 14 inch bass; in 2007 it took 3-4 years.

The increase in growth rates was most likely because in the past three decades, houses were built around nearly the entire chain. This caused increases in fertilizer run off and production of plankton. Plankton is the base of the food chain, so more plankton means more food and faster fish growth. The relatively more restrictive code requirements for a Florida Outstanding Waterbody allows for leaving cypress trees, aquatic vegetation, and protection of the watershed, but does not eliminate yard runoff after a rain.

Currently our primary goal on the Butler Chain is to make sure there are adequate amounts (30-70%) of submersed **native** aquatic plants, i.e. plants that do not grow above the water level. When these plants are present in healthy portions, the good bass fishing follows. Examples of these types of plants are eelgrass, peppergrass, coontail and carpet grass.

An annual vegetation survey is done (usually in the fall), to see if the native aquatic vegetation is meeting the fishery’s needs. We also comment on the proposed annual plant treatments overseen by the FWC’s invasive plant section (Habitat and Species Division) as well as work with them throughout the year if problems arise. In addition to the aquatic plant evaluation, throughout the year the Fish Orlando staff contacts fishing guides and local anglers, as well as checks tournament results, to keep a current “pulse beat” on the bass fishing.

Current information:

Our annual vegetation survey was done in November 2017. The chain had adequate amounts of submersed native aquatic plants, but the water color was a little less clear than normal. This was due to watershed “run-off” that was associated with hurricane Irma in September 2017. With this said, the area on Lake Butler that was “sparse” in last year’s survey

recovered nicely. Also, most of the areas in Lake Louisa that showed reduced eelgrass in last year's observations had returned to normal. There were a couple spots on Lake Tibet and Lake Islesworth that had reduced vegetation due to recent hydrilla treatments, but overall, these two lakes had enough submersed aquatic plants to produce high quality largemouth bass fishing.

Similar to last year, many guides choose the Butler Chain instead of world famous Lake Tohopekaliga, due to the higher numbers of bass caught, and more consistent fishing. Most of the guides fished Lakes Butler and Tibet. Numbers of trophies reported by the guides were slightly less than last year, but as of Feb 2018, The Butler Chain was still in the top 25 for TrophyCatch submissions (42).



Aдриене Blackwell Sr. and Jr with a memorable double-header on the Butler Chain of Lakes, April 2, 2018.

Conway Chain of Lakes (1,800 acres)

Background information:

Similar to the Butler Chain, the Conway Chain is primarily a largemouth bass fishery that is managed by "Preserving and Protecting" the fish's home or habitat. It is characterized by its deep (> 20 feet), clear water, where during winter months; you can sometimes see a quarter in 15

feet of water! It has an east and west north lobe, a middle lobe and a southern lobe. It's "claim to fame" is the fishing action for schooling bass (particularly in the cooler months) that chase shad on the surface of the water.

An angler survey was conducted in 2011. The average largemouth bass catch rate was 0.88 bass per person per hour and 90% of the bass anglers released fish that were legal to keep (during the survey the statewide regulation was a 14" minimum size). The fishers were evenly split when asked whether they would prefer to catch big bass or high numbers of bass. Although the lake is entirely rimmed with houses, 72% of those fishing the chain did not live on the lake. When asked to rank the chain where 1 was the worst and 5 the best, 77% of all the anglers (bass, crappie, etc.) ranked the chain as a 4 or 5.

Guides did use the chain, but it was limited to when extremely cold weather "balled" up the shad pods on the shallow submersed vegetation and they used cast nets to capture live threadfin shad. Circular live wells kept the shad alive and scoops of shad were used to "chum" bass to an anchored boat where a single shad was nose hooked and allowed to free line into the chum. Catches of over 100 bass in half day fishing were common.

A largemouth bass electrofishing survey was also done in 2011. Like the results on the Butler Chain, the clear water of the Conway Chain did not allow for accurate assessment of the bass population using electrofishing.

In February 2016, our invasive plant section stocked 2,500 grass carp to address complaints of excessive "peppergrass" (i.e. Illinois pondweed) around homeowner's docks in the north lobes. Grass carp are a sterile fish from Asia that will eat hydrilla over other plants. The Conway Chain was the first water in Florida to successfully use grass carp to control hydrilla and still maintain healthy amounts of native plants with a good bass fishery. Successful aquatic plant management using grass carp has been done on the Conway Chain for over 3 decades.

Despite the amazing bass fishing on Conway, one of the complaints for nearly the decade plus, has been the lack of bass 4lbs or greater (this was confirmed in the 2011 creel). Historically back in the 1990's, the schooling action was good but catches of bass 4lbs or greater was more common. Reasons for the decline could be reduced number of nutrients going into the chain. There have been several projects on lakes that flow into the chain, where local government has worked with lakefront homeowner's associations to reduce the amount of nutrients in their lake. It also could be that less people are harvesting bass thus causing crowding and slower growth.

Presently, our goals and yearly activities on the Conway Chain are the same as the Butler Chain. However, this year we also worked with the weekly Wednesday night tournament to encourage harvest of the smaller (<14-inch bass). This is possible, now that the new statewide largemouth bass regulation allows for a daily bag limit of 5 bass < 16 inches.

Current information:

All the lobes in the chain were surveyed for submersed vegetation in November 2017. Like the Butler Chain survey, the water was less clear than normal. However, there was still good submersed aquatic native vegetation out to 15 feet. Some of the areas in the north lobes still had too much "peppergrass" around the shoreline areas despite the 2016 grass carp stocking.

Reports from anglers and guides this fiscal year indicated amazing action for largemouth bass. In fact, two guides, who have been fishing the Conway Chain for over 20 years, said that the winter of 2018 was the best bass fishing action they ever recorded. Also encouraging was the fact that they started to see a few more bass caught greater than 4lbs.

Part of the reason for the improvement in quality may be due to the help from Fish Orlando volunteer Dan Fay and the weekly Wednesday night tournament held on the Conway Chain. On August 10, 2017, Dan reported that the Wednesday night tournament had modified their rules to encourage harvest of bass < 14 inches by changing the self imposed tournament minimum size limit from 14 to 10 inches. Additionally, as part of their long-standing rules, they do not apply for an FWC exemption that allows them to bring in more than 1 bass per person \geq 16 inches. As of June 20, 2018, tournament organizers reported that over 1,000 bass had been harvested and given to local charities.



Fish Orlando volunteer, Dan Fay with a nice 4 lb bass caught during a recent Conway Chain Wednesday night tournament. To date, over 1,000 bass less than 14 inches have been harvested in the tournament and given to local charities. The goal is to remove some of the smaller bass so that the chain has more 4lb+ fish.

Johns Lake (2,424 acres)

Background information:

The lake is primarily a bass fishery; however, unlike the Butler and Conway Chains, at times there are a decent number of fishermen that fish for the lake's black crappie (speck), bluegill and redear sunfish (shellcracker). Most of Johns Lake also has deep holes (15 – 20 feet), but it is not nearly as clear as Butler and Conway. During clear water episodes you may be able to see a quarter as deep as 6 feet. The eastern end of the lake near the Florida Turnpike is much

shallower than the rest of the lake (< 8 feet), and it sometimes has a darker tannin color from the water it receives from Black Lake.

Johns Lake is driven by naturally fluctuating water levels, which during low water periods, expose sections of lake bottom that in turn grow non-aquatic or terrestrial plants. When the lake levels come back up, these terrestrial plants help produce increased numbers of insects and small fish that graze on the algae that covers these plants. In 2001, during an extreme drought, the lake dried up enough to where you could drive a car off the boat ramp and across the lake bottom. In 2003, it refilled, and our region restocked the lake with 250,000 fingerling bass. Although only a small percentage of bass stocked ever survive beyond a year, what does survive is enough to become the brood stock to repopulate the lake.

Year classes were produced following this drought that resulted in peak quality bass fishing from approximately 2007 – 2012. Following 2012, most of the terrestrial vegetation that had grown on the lake bottom during the drought had decomposed.

Because rainfall patterns do not always provide enough water level fluctuations on Johns Lake to provide high quality fishing, in October 2014, we worked with our local invasive plant biologist, duck biologist and Lake County aquatic plant manager, to incorporate a hydrilla management plan. This plan involves leaving the hydrilla grow in sections of the lake that do not have houses along the shoreline. Because hydrilla is a non-native plant and does not have the natural predators to keep it under control, we work with our invasive plant section of our Habitat and Species division to stock low numbers of grass carp and do small, but more frequent herbicide treatments. This allows the hydrilla to provide beneficial habitat for the fish without taking over the lake.

Johns Lake is part of the Long-Term Monitoring Study conducted by our research division (Fish and Wildlife Research Institute). As part of the standardized format associated with the Study, we conduct angler surveys every three to five years. The survey in **2011** showed a world class bass fishery that had approximately 800 trophy bass (i.e. ≥ 24 inches) caught in a four-month period (January – April)!

During the same 2011 survey, 96% of the legal sized bass were released by largemouth bass fishermen (legal sized bass were ≥ 14 inches at the time of the survey). Of those bass fishing, 41% were either tournament or pretournament fishing. Over 60% of the bass fishermen preferred to catch big bass instead of numbers of bass, which is not surprising considering the number of big bass being caught in 2011. What is surprising, however, is that despite world class bass fishing, almost no guides were using Johns Lake in 2011. It could be that it was too far from the Orlando area attractions that house most of the guide's customers. All anglers (bass, crappie, etc.) were asked to rank the lake from 1 – 5, with 5 being the best; 82% ranked it a 4 or 5. Most of the anglers (92%) fishing the lake did not live on it.

The survey in **2016** showed largemouth bass catch rates that were very good and like 2011 (one bass caught per hour fished). However, there was a significant reduction in quality bass (less than 100 trophy bass caught January – April). As mentioned above, this was most likely due to the breakdown and elimination of flooded terrestrial vegetation from the 2001 drought, and the natural deaths of the strong largemouth bass year classes produced the years following the refill and restocking of the lake. The next angler survey is in spring 2019. In addition to angler surveys each year, being part of the Long-Term Monitoring Study requires that we use an electrofishing rig to sample the bait and rough fish (gar, mudfish and pickerel) in the fall, and the largemouth bass in the spring. We started the fall electrofishing in 2013 and the spring electrofishing in 2011.

Current information:

Fall 2017 electrofishing showed no major changes in baitfish or rough fish populations since 2013. There were less numbers overall (938 in 2017 versus 1,281 in 2016) but it was likely due to higher water levels scattering the fish. In regard to overall numbers and bass 14-19 inches, spring 2018 largemouth bass electrofishing numbers remained relatively unchanged when compared to historical data since 2011. While angler reports and Wednesday night tournament results have reported that the quality has improved slightly (including more trophies), for the fifth year in a row, numbers of bass electrofished 20 inches or greater have not returned to the peaks of 2011 – 2013. The long-term monitoring electrofishing protocol is designed to statistically notice a 50% change, so it could be the electrofishing evaluation is not precise enough to detect what is being observed by the fishermen.

As part of the division’s TrophyCatch program, fisheries biologists across the state, insert a \$100 tag in every bass sampled 8lbs or greater (it does not hurt the fish). This allows our TrophyCatch researchers to determine how many trophy bass are caught and released and how many are caught and harvested (called an exploitation study). Two trophy (8lb+) bass were tagged in this year’s survey. One was tagged on February 21st and caught and released by a fisherman the following weekend!



Fish Orlando project leader (Jim Sweatman) and OPS technician (Mike DeSantis) with a 9lb Johns Lake bass.

In April 2017, we toured Johns Lake with FWC Habitat and Species personnel to see if associated marshes around the turnpike could be enhanced to increase their fishery value. On May 2, 2018, sites in the northeast side of the lake were picked for a vegetation shredding project. At the end of May 2018, a FWC habitat biologist out of Eustis (Steve Crawford) contracted a company to open areas that had previously been too dense for fish habitat. The

contractor used “barge-like” boats driven by paddle wheels. Attached to the boats were large metal circular “cookie cutter” blades that chopped the vegetation into fine particles that could be quickly broken down by bacteria. Next fiscal year, we hope to open areas on the south shore of the lake that have been “choked out” with the exotic torpedo grass.

Winter Park Chain (969 acres)

Background information:

The Winter Park Chain is primarily a largemouth bass fishery that is also managed by “Preserving and Protecting” the fish’s home or habitat. There are 6 lakes in the chain: **Virginia** (224 acres), **Mitzell** (60 acres), **Osceola** (136 acres), **Maitland** (451 acres), **Nina** (<10 acres) and **Minnehaha** (98 acres). It is characterized by deep (> 20 feet) holes and abundant submersed native aquatic vegetation. On Virginia and Mitzell the water is very clear, and you can see a quarter in 10 feet of water. The water color from Osceola to Minnehaha ranges from extremely green to slightly green depending on the weather and wind.

An angler survey was conducted in 2012. The average largemouth bass catch rate was 1.7 bass per person per hour which was the highest ever recorded in central Florida! There were more 4 lbers caught in the Winter Park Chain creel than in the Conway Chain creel, but less than the Butler Chain creel and Johns Lake creels. It had the highest voluntary live release of legal size bass (98%), which at the time were bass \geq 14 inches. Similar to Johns Lake, it had no guide presence and very few out of state fishers. The fishers were evenly split when asked whether they would prefer to catch big bass or high numbers of bass. While almost entirely rimmed with houses like Butler and Conway, 95% of those fishing the chain did not live on the lake. When asked to rank the chain where 1 was the worst and 5 the best, 76% of the anglers ranked the chain as a 4 or 5.

A largemouth bass electrofishing survey was done during the same year and time period as the angler survey. Because the water is not as clear as the Butler and Conway chains, the electrofishing did accurately depict the bass population with an average of 117 bass shocked per hour (60 per hour is decent on deep water lakes like the Winter Park Chain).

Our current goals and yearly activities are the same as the Butler and Conway Chains. Additionally, we provide fisheries information for the City of Winter Park lakes managers for use in their lakefront homeowner’s newsletter.

Current information:

The aquatic vegetation was surveyed in November 2017. Like the Butler and Conway Chains, clarity was a bit reduced due to the effects of hurricane Irma. However, vegetation communities looked good in all the lakes and had even improved slightly in Minnehaha, which has been an ongoing problem with associated run off and nutrient control.

For years, the daily boat ramp pass via Dinky Dock on Lake Virginia used to be available via a \$6 pass from an “iron maiden” ticket machine. In May 2018, the “iron maiden” was phased out and, as of May 2018, it is available via an app created by The City of Winter Park. Fish Orlando project personnel collaborated with the City to make sure signage was available, so fishers and boaters would know where to locate the app.

FISH ORLANDO FAB FIVE

Overview:

The FAB FIVE are 5 water bodies managed for a unique and/or quality fishing experience. They were picked in 1999 based on potential and support from city and county partners. In April 2006, Lake Ivanhoe replaced Kirkman Pond as a FAB FIVE. In May 2007, Lake Underhill replaced Shadow Bay Park as a FAB FIVE. Both Kirkman Pond and Shadow Bay Park were dropped due to increases in vandalism and poaching in the Metro West area. While each water body has its own unique management plan, cast nets are not allowed on any of the FAB FIVE in order to protect the vegetation and to make it easier for our FWC wildlife officers to keep people from illegally netting sport fish.

Clear Lake (319 acres)

Background information:

Clear Lake is managed for neighborhood residents as a quality put-grow-take hybrid striped bass fishery from November – March, and a quality channel catfish fishery from April – October. Since its inception as a FAB FIVE, there have been two fishing piers (making a total of 3) and 2 kiosks built. The lake also has 2 fish attractors which have been refurbished twice; the first with oak limbs and the second with concrete block.

The hybrid striped bass is created in our hatcheries. It is a cross between a white bass and a striped bass; it is sterile. In Clear Lake, and many other Florida lakes, the fishery is composed of age 1 and 2 fish. Hybrids 3 years or older require cold water (low 70's) to make it through the summer.

The goal is to maintain hybrid striped bass catch rates in experimental gill nets at or above 0.25 fish/net hour, with average size age 2 fish being 12-14 inches. Based on our angler survey in winter 2004, this gill net catch rate is equivalent to fishing action that is slightly less than one hybrid striped bass caught per angler per hour.

This goal is accomplished by stocking approximately 15,000 phase 1 (less than an inch) hybrid striped bass each March/April and by keeping hydrilla levels as low as possible (< 10%) so plankton (microscopic plants and insects) and threadfin shad are abundant for the hybrids. When we were developing the stocking science necessary to achieve our goals, we would do the hybrid striped bass surveys every winter. Now they are done every four years. A hybrid striped bass survey was conducted in February 2018.

Current information:

The hybrid striped bass survey in February 2018 exceeded all management objectives as shown in the table below.

<i>Clear LK Hybrid Striper Evaluation Technique</i>	<i>Management goal</i>	<i>February 2018 value</i>
Gill Nets	0.25 per net hour	0.50 per net hour
Size of age 2 fish	12-14 inches	13-16 inches
Hook and Line	0.75 caught/angler hour	2 caught/angler hour

Additionally, positive reports of hybrid striped bass action were sent to Fish Orlando personnel by local anglers.

Sixty acres of hydrilla was treated in December 2017 and less than 5% coverage of hydrilla was noticed during the February 2018 hybrid survey. Additionally, a vegetation survey conducted by an Invasive Plant biologist in June 2018 indicated the hydrilla continues to be at target levels with native submersed plants occupying water depths less than 8 feet.



The hybrid striped bass survey in February 2018 indicated all management objectives were achieved!

In addition to stocking 17,313 hybrid stripers in April 2018, approximately 15,982 channel catfish around 8 inches were stocked in September 2017. We requested 15,000 more channel catfish be stocked this fall (2018). As a general rule we try to stock approximately 30,000 channel catfish in a one to three-year window followed by 5 years of no stocking. This allows for quality growth where 3-10lb channel catfish are common. The channel catfish require cavities to spawn, and because there is almost no channel catfish spawning habitat in Clear Lake, the number we stock is what will be out there minus stocking mortality and angler harvest.

Lake Ivanhoe (125 acres)

Background information:

The goal of Lake Ivanhoe is to manage it as a quality largemouth bass fishery for greater Orlando residents. It has three lobes separated by two bridges with an information kiosk at the boat ramp and an aeration system (to keep high oxygen levels) in the most western of the 3 lobes. We like to see electrofishing catch rates of 60 largemouths per hour with at least 30% of the adult bass 14 inches or greater. This is very “doable” when we partner with the City of Orlando and our invasive plant section to maintain submersed native vegetation levels at 30 – 70%. Small stockings of grass carp along with small hydrilla treatments using herbicide has allowed us to be very successful in keeping “lush” submersed aquatic vegetation and strong bass populations. We do a winter/spring largemouth bass electrofishing sample every two years and a vegetation survey every year.

Current information:

The October 2017 a vegetation survey indicated continued good submersed aquatic plant habitat and water color, despite the I-4 expansion project. Angler reports continue to indicate good bass fishing with bass consistently caught over 4lbs.



Quality bass fishing continues to be strong on Lake Ivanhoe.

Starke Lake (225 acres)

Background information:

Starke is managed as a quality largemouth bass fishery for greater Orlando residents. Located right next to Ocoee's city hall, it is the "pride and joy" of the city. Management actions that the Fish Orlando team has accomplished since Starke became a FAB FIVE include: (1) building a fishing pier (2) "enhancing the shoreline on Lakeshore Drive by removing nuisance vegetation, replanting with beneficial native vegetation (Kissimmee grass, etc.) and constructing "fishing lanes" (3) deploying 3 brush fish attractors marked with "Fish Attractor" buoys (4) establishing lake chubsuckers as a baitfish to grow bigger bass and (5) building two informational kiosks located at the boat ramp and pier.

The management goals are (1) to be able to shock 100 bass per hour with 20% of the adult bass 14 inches or bigger and (2) maintain nuisance and exotic vegetation in the enhanced shoreline on Lakeshore Drive below 10% coverage keeping the area around the pier and fishing lanes open. The project does a largemouth bass electrofishing sample every winter/spring as well as works with the City of Ocoee and our invasive plant section to accomplish vegetation goals. Additionally, we provide feed for the volunteer that hand feeds from the pier in the morning and evening each day and do a monthly check of the fish attractor buoys and kiosks.

From the time Starke was made a FAB FIVE until 2012, fisheries management goals were achieved. However, in winter 2012 an experimental herbicide was used in a hydrilla treatment that "wiped out" all the submersed aquatic vegetation. The lake turned greenish brown and even though the submersed vegetation has since recovered, there have been problems with undesirable blue green algae. The city of Ocoee has done two studies to determine the extent of the blue green algae problem and paid a contractor to determine that the problem is coming from the prima vista lobe in the southwest portion of the lake. Currently, they are evaluating action steps to rectify the problem.

Current information:

For the sixth consecutive year, we did not meet our management goal in our winter/spring largemouth bass electrofishing survey. However, water color does appear to be improving slightly, indicating a possible reduction of the algae problem. Also, although we did not reach our target value of 100 bass per hour, there does appear to be an upward trend the last three years. This year (2018) we shocked a respectable 80+ bass per hour, and unlike last year, we were able to achieve our quality goal of having 20% of the adult fish be \geq 14 inches.

The complaints from pier fishermen that there was too much Illinois pondweed i.e. "peppergrass" around the edges of the pier were addressed in fall 2017. Good fishing has been reported from the pier from the volunteer that hand feeds the fish to attract them to the pier.

In addition to the native fish around the pier, the Koi carp are still eating the fish feed. Although cast nets are illegal on all FAB FIVE waters (see FAB FIVE introduction above), we allowed a one-time exception to the law and asked a commercial shiner fisherman to throw a cast net over them. He was able to get three. Fly fishers from the pier have caught five that we know of. Add to that the fish we removed while doing the spring electrofishing, and to date, a total of 43 have been removed that we know of. It is unclear whether these Asian exotics are reproducing, or someone is consistently illegally "dumping" them in the lake. We will continue to remove them via electrofishing (which appears to be the most effective method of removal) until they are either eliminated or very rare!



Commercial shiner fisherman Jay Calle (pictured right), volunteered to use a cast net to help remove some exotic Koi carp from Starke Lake. A one-time exception to the “no cast nets” law was allowed to try this technique.

Lastly, on November 4, 2017 we partnered with the City of Ocoee to hold the 17th Annual FAB FIVE Family Fishing Event as part of the Ocoee Founder's Day activities. This year the Solavita fishing club gave their time and expertise to help families that were being introduced to the great sport of fishing.

Turkey Lake (339 acres)

Background information:

Turkey Lake is located just minutes from the Orlando attractions near International Drive. Public access is possible through the city of Orlando's Bill Frederick Park. It is managed as a quality bass and black crappie (speck) fishery for both Florida residents and visitors from out of state.

When the park was built there was a deed restriction that did not allow for a public boat ramp, therefore, a partnership between the city of Orlando, Bass Pro Shops, and FWC was established to provide a boat loaner program. Four aluminum Jon boats are rented (407-246-4486) through the City of Orlando for four hours, Thursday-Sunday. While bank fishing has unlimited hours, boat fishing hours are restricted to limit effort and maintain a quality fishery. The quality is also maintained by a largemouth bass catch and release regulation, a prohibition of gas motors, and our city of Orlando partner spending thousands of dollars to maintain good fisheries vegetation.

In addition to the above-mentioned work, since Turkey Lake became a FAB FIVE, the Fish Orlando team has built 4 fishing piers (5 total), installed 4 brush fish attractors marked with fish attractor buoys, conducted two habitat enhancement projects that removed nuisance native vegetation and replanted beneficial plants, and installed four informative kiosks.

Considered the "crown jewel" of the Fish Orlando program, the work on Turkey Lake has not gone unnoticed. It has been featured in numerous magazines such as Bassmaster and Florida Sportsman, as well TV shows on TNN and ESPN. Families from over 40 states and 13 countries have taken advantage of the boat loaner program.

The management goals of the lake are to have bass fishers using the boat loaner program average a largemouth catch rate of 0.5 bass per hour and crappie fishers average a black crappie catch rate of 0.5 crappie per hour. We also would like the average crappie caught to be ≥ 10 inches. We are able to check and see if we are meeting our goals by having one patron from each boat fill out a survey form where they record the length of each fish they catch. We also do a monthly check of the vegetation, fish attractors and kiosks to make sure they are "up to par".



Nicola came all the way from Italy to catch this 25-inch monster while using the Turkey Lake boat loaner program.

Current information:

Records were broken this fiscal year for the Turkey Lake boat loaner program as seen in the table below.

<i>Turkey Lake bass stat</i>	<i>Previous Record</i>	<i>This year's value</i>
Total catch rate	1.04 bass per angler hour	1.13 bass per angler/hour
Bass caught \geq 24 inches	16	23

Some of the good fishing can be attributed to the fact that the program was shut down from September 8, 2017 until December 2, 2017, due to the damage caused by hurricane Irma. Information from Southern Illinois University has shown that if fishing is closed for 6 weeks, it's as if the fish have never seen a bait or lure!

With the boats shut down for two months of the black crappie season (October and November), and an extremely cold January, crappie fishing action was slightly reduced this fiscal year. However, objectives were still met (0.52 crappie caught per crappie fishermen per hr fished with 80% \geq 10").



This happy angler visiting from New York caught an 11lb bass while fishing Turkey Lake out of an Orlando Bass Pro Shops Grizzly Tracker. The Orlando store provides four boats with trolling motors and depth finders as part of the boat loaner program at Bill Frederick Park. Turkey Lake was featured on the TrophyCatch Face Book page for a second consecutive year.

Finally, once again in June 2018, the employees at Bill Frederick Park at Turkey Lake, joined hands with the FWC's Youth Conservation Network, to put on an Aquatic Wonders Camp designed to introduce youth to the outdoors and fishing. Fish Orlando staff contributed by conducting an electrofishing and fish dissecting demonstration on one of the days at the camp.

Lake Underhill (147 acres)

Background information:

This circular "bass factory" is divided down the middle by the 408 Toll Road, and bordered to its north, by the Orlando Executive Airport. It is managed as a high quality largemouth bass fishery for greater Orlando residents. Success is achieved two ways: (1) A largemouth bass catch and release regulation, and (2) a hydrilla management program that allows for deep water hydrilla (12-17') and shallow (<8') native submersed plants. The City of Orlando and our invasive plant section use grass carp and small herbicide treatments to achieve the balance. A kiosk at the boat ramp informs anglers of the largemouth bass catch and release regulation as well as other Fish Orlando information.

The management goal is to shock 60 bass per hour with 40% of the adult bass 14 inches or greater. While a goal with this high a quality may seem ambitious, thanks to good team work with our invasive plant section and the city of Orlando; in the winter/spring 2016 survey we achieved our goal. Angler reports continue to be "off the charts" and to put it in perspective, when B.A.S.S. had its headquarters in Celebration Florida, they would take their VIP's to Underhill to show them good Florida bass fishing.

While we do our largemouth bass electrofishing survey every four years, we annually survey the vegetation and work closely with our two partners mentioned above, to plan treatments and grass carp stockings. Additionally, we contact anglers that routinely fish the lake to get the latest feedback from them.

Current information:

Vegetation was surveyed twice (October 2017; May 2018). Grass carp (75) were stocked in December 2017 and combined with a cold January in 2018; hydrilla did not have to be treated this fiscal year. Vegetation during both surveys was optimal for bass production.

Angler reports throughout the year were excellent. Fish Orlando staff fished on their own time after the October 2017 vegetation survey and averaged over two bass per man-hr. The best five fish went over 20lbs.

FISH ORLANDO FANTASTIC FISHING DAYS

Background information:

FANTASTIC FISHING day waters are smaller water bodies where we help our partners manage them, but they are only open to the public on a limited basis to keep the fishing “fantastic”. For waters to be in the program there must be a way to control access via a fence, security, etc. In addition to controlling access, for the units to be successful, the partners buy channel catfish, hire vegetation contractors and purchase fish feed. We give them expertise on stocking and feeding rates and techniques, help stock the fish they purchase, give them expertise on vegetation management, and in some cases, do limited fisheries management actions with our staff (fish removal, wild fish stocking, electrofishing evaluation, etc.). In general, we recommend they establish fish feeding 3 times per week from 3 designated locations around the pond. We also try to attend one of the events when they open the fishery to the public.

Current information:

Canoe Creek Pond (< 1 acre) was restocked with 100 eight-inch channel catfish in May 2018 because they did not feed the 100 fish stocked in May 2017; a hook and line survey in March 2018 indicated most of them died. Also Canoe Creek Christian Church did an event in March 2018, which was well attended, but in which few fish were caught. This makes two events since their first stocking of 100 catfish in October 2012. Their first event in October 2012 was well attended, and because the event occurred within the week after stocking, catch rates were excellent.

Recently Canoe Creek Christian Church improved the access around the pond with a controlled burn and a bush hog, and in addition to the event, opened the pond up to various home school groups. Fortunately, a fish feeding program (50 lb bag a month) was established after the May 2018 stocking, and fish survival and future fishing action should be on the upswing. A follow up meeting is scheduled in summer 2018 to make sure all involved are on the same page.

Cornerstone Pond (2 acres) remains the flag ship for the FANTASTIC FISHING DAYS concept. After four very successful years using the 500 channel catfish stocked in April 2013, they used hook and line to remove 225 catfish in December 2016 because they were getting too big (3-9lbs) for youth events (broken lines, poles pulled in, etc.). The pond was restocked in May 2017 with 500 (10”- 12”) channel catfish. The pond also has a very good big bluegill fishery and a decent number of small bass.

During their May 2018 event, Cornerstone had approximately 400 people (approx. 149 kids) for their Fish-a-thon where they caught over 300 fish. The Fish Orlando staff brought their outreach trailer so those without fishing outfits could participate. The church followed the event with 3 consecutive Saturdays where the parents and their 50+ kids participated at a fishing camp. At the camp they learned everything from knot tying to the different types of fishing equipment and techniques. The Fish Orlando project leader was a guest speaker on one of the Saturdays. The parents and children got to fish the pond each Saturday of the camp and all kids caught a fish! If a child attended all 3 Saturdays, they received a free fishing outfit complements of a Fish Florida grant that the church applied for.

This past fiscal year Cornerstone also opened the pond to the Osceola County High School Fishing Program. Currently they feed the channel catfish a 50 lb bag of feed once/week and pay a contractor to maintain 100% bank access.



Cornerstone Pond is the site of some FANTASTIC FISHING!!

The St. Cloud Barrow Pit Pond was stocked in January 2015 with 500 channel catfish. The city of St. Cloud fed the fish a 50 lb bag of feed per week and hired contractors to mechanically remove nuisance torpedo grass that made landing fish difficult. The event in March 2015 was very successful with well over 150 people attending and at least that many catfish caught. During summer 2015 the kids in summer camp fished the barrow pit each week. Unfortunately, the spring event in April 2016 was preceded by a rare cold front and the event in April 2017 was held at 9 am in the blazing sun. Despite decent attendance (100 people per event), less than 50 catfish were caught on each occasion.

In April 2018, Fish Orlando staff investigated reports that an otter was in the pit, but no otter signs were found, and staff observed a fish feeding to make sure the catfish were still viable. No spring event was held this fiscal year because of a scheduling conflict, but an additional 500 catfish were stocked in May 2018 to make up for natural and hooking mortality. An event is planned for August 2018.

Central Winds Park pond became part of the program in May 2017. The City of Winter Park created good bank access, wired electricity, installed a fountain, and investigated purchasing an aeration system. The pond was stocked with 500 channel catfish in May 2017. An FWC alligator trapper was called in several times to remove alligators that were eating the catfish.

Their first FANTASTIC FISHING DAY event (April 2018) at the park was a resounding success. In addition to City of Winter Park and Fish Orlando staff, the Orlando area Teen Sport Fishing Association helped approximately 30 children, accompanied by their parents, catch over

150 fish during the event. The event was followed by a two-week fishing camp staffed exclusively by City of Winter Park employees. The camp had equally good fishing action!



Parks & Recreation director, Chris Caldwell, with the City of Winter Park helps a young angler at their FANTASTIC FISHING DAYS pond.

FISH ORLANDO OTHER WATER BODIES

Background information:

Fish Orlando OTHER WATER BODIES receive some attention, but to a much lesser extent than the BIG WATERBODIES, FAB FIVE, FANTASTIC FISHING DAYS and URBAN PONDS. Some like Shadow Bay Park stay on the “radar” because they were a former FAB FIVE while others get some priority due to requests from our partners.

Current information:

Lake Baldwin is a 225-acre lake that has a public boat ramp in Baldwin Park. While the location is primarily known for its large dog park, the City of Winter Park has made the lake a “no wake” zone, so it is popular with the Orlando sailing club, kayakers and small boats with a trolling motor.

Over the past decade the City of Winter Park and the developers of the Baldwin Park village have planted bulrush (buggy whips), cypress trees and other beneficial plants as well as built a couple piers. The lake receives grass carp stockings and herbicide treatments to control hydrilla. The result is excellent bass fishing with abundant eelgrass dropping off into deep holes, in water clear enough for good night fishing.

A couple years ago we were asked by the city of Winter Park to make Lake Baldwin into a Fish Management Area. This fiscal year signatures were obtained by the City of Orlando and City of Winter Park lakes managers, so now the document can be presented to our FWC leaders and hopefully approved next fiscal year.

Blanchard Park is located off Dean Road and the Little Econlockhatchee River runs through its property. Part of the river in the park is channelized and the part below the dam is natural. It is known for its excellent redbreast sunfish and spotted sunfish action in the tail waters right below the dam, and in the natural section of the river. Each year during the first Saturday in September, the Fish Orlando project helps with the Orange County Parks family fishing event (“Fish for Fun”). In September 2017 we celebrated the 28th annual event and 180 people (all families) attended what may be the longest running fishing event in Florida.

Bithlo Park is another body of water that is part of our work due to a request from Orange County Parks. Unfortunately, the 5th annual “Fish for Fun” event had to be cancelled in September 2018 due to hurricane Irma. Richloam Hatchery still stocked 1,000 six to eight-inch channel catfish in October 2017.

Shadow Bay Park has 3 fishing ponds in the property, but the focus is Lupine Pond (7 acres). The pond’s channel catfish are protected by a 30inch minimum size one catfish bag limit. The park personnel purchase and feed the catfish 150lbs of feed per week with the goal of growing 500 catfish in the pond to an average of at least 4 lbs. The catch rate goal is one catfish per man-hr of fishing. An aeration system ensures that there is enough oxygen for the fish.

In September 2017, a hook and line survey indicated a catch rate of one channel catfish per man-hr of fishing. However, their average size was 3lbs instead of the target goal of 4lbs. Because it is not as controlled as the FANTASTIC FISHING DAY units, we are constantly dealing with poaching. To overcome this, we stocked 531 channel catfish in October 2017. The pond is also checked at least every other month to make sure the pads are being treated along the parking lot shoreline so that fishermen have good access.

FISH ORLANDO URBAN PONDS

Background information:

The Fish Orlando URBAN PONDS are managed for beginning fishermen and those that wish to eat their catch. The four URBAN PONDS are **Barnett Park** (4.5 acres), **Bear Creek** (7 acres), **MLK Jr. Park**-formerly Lake Island Park (5.5 acres) and **Lake Santiago** (4.5 acres).

They are primarily put and take fisheries that are stocked once or twice per year depending on fish availability and angler harvest. Channel catfish are stocked in the fall and spring. Domesticated largemouth bass raised in raceways are stocked in the fall. Multiple studies have shown that hatchery raised bass have poor long-term survival in the wild due to their inability to avoid predation, however, in the case of the URBAN PONDS, they provide one to two months of very good action before they succumb to birds or the “frying pan”.

Since becoming part of the Fish Orlando program, all four have undergone projects to create good bank access, install aeration systems, create two “Baited Fishing Areas” marked with signs, and construct an informational kiosk summarizing regulations and Fish Orlando information. They are all located in safe parks where the young people have other activities to occupy them if they tire of fishing. They are visited monthly to receive a bait block at each “Baited Fishing Area” sign and make sure the vegetation, aeration systems, kiosks, etc. are all “in good shape”.



Grow out largemouth bass reared in hatchery raceways provide one to two months of very good action before they succumb to birds or the “frying pan”. This bass was caught at MLK Jr Park.

Over the years we have tried electrofishing, baited hoop nets and hook and line sampling to do our pond’s fisheries evaluation. We found that the most accurate and cheapest way to do assessments was hook and line. For our fall stockings, thanks to Orange County Parks and Recreation and City of Winter Parks and Recreation, three of the four URBAN PONDS are the site of a fall Family Fishing Events (Barnett and Bear Creek “Fish for Fun” events; MLK Jr. Park “Test the Waters” event). We staff the events and record the number of fish caught and the total number kids fishing. For our spring stockings, good fishermen fish each pond with chicken liver for at least 2 hrs under ideal conditions. The fall goal is one fish caught per child. The spring goal is 3 channel catfish caught per hour per person.

Current information:

The family fishing events at Barnett Park, Bear Creek Park and MLK Jr. Park all were cancelled due to hurricane Irma. They still received October 2017 stockings of approximately 1,000 channel catfish per acre and 100 bass per acre.

Thanks in part to the generosity of Orange County and the City of Winter Park, three of the four URBAN PONDS received spring 2018 stockings of channel catfish purchased from Georgia Select hatchery. Santiago, which is normally stocked in the spring by our Richloom Hatchery, missed a spring 2018 stocking due to cormorant predation in the hatchery ponds. Subsequently, the 3 URBAN PONDS that were stocked in the spring met the project Catch Per Effort (CPE) goal of 3.0 catfish caught per hour per person (see table below).

<i>Urban Pond</i>	<i>Effort (angler-hrs)</i>	<i>Catch</i>	<i>Exp. Angling CPE</i>
Barnett Park	3	36	12
Bear Creek	3	17	5.7
MLK Jr. Park	2	20	10
Santiago	2	1	0.5

OTHER OUTREACH ACTIVITIES

In addition to outreach activities related to Fish Orlando waters, the Fish Orlando project also helped coordinate and promote the statewide TrophyCatch program at various clubs and events (see TrophyCatch.com for more information). This fiscal year these included the B.A.S.S. Toho Open registration and weigh in, Bass Pro Shops Spring Classics state wide, TrophyCatch special weekend promotions at the Gainesville and Daytona Bass Pro Shops, the Solavita fishing club, and the Bartow Ford Winter Wonderland. We also helped the TrophyCatch program with the display at ICAST (largest tackle trade show in the world put on by the American Sportfishing Association) and helped organize the “Bass to Birdies” golf/fishing tournament put on by Florida Sportsman Magazine at the Rosen Shingle Creek Golf Course. Over 42,000 people were reached in fiscal year 2017 – 2018 during TrophyCatch promotional activities.



B.A.S.S. elite pro, Chris Lane with Fish Orlando OPS tech, Larry Mortland.
"Bass to Birdies" July 2017

Bass Pro Shops Orlando is an integral sponsor and partner of Fish Orlando. They provide Tracker Grizzlies equipped with trolling motors, depth finders, etc. for the Turkey Lake boat loaner program. They also house a Fish Orlando kiosk that plays the Fish Orlando video and holds Fish Orlando Fishing Maps. Additionally, the store sets up an in-store catch and release pond associated with various promotional Bass Pro weekends where the Orlando Teen Sport Fishing Association volunteers helps families catch their first fish.

This fiscal year Fish Orlando helped stock the Orlando Bass Pro Shops Catch and Release Pond for the Spring Classic in Feb/March 2018 and the “Gone Fishing” and Father’s Day weekends in June/July 2018. Fish Orlando also provided panfish, black crappie, mudfish and a pickerel to refurbish their aquarium.