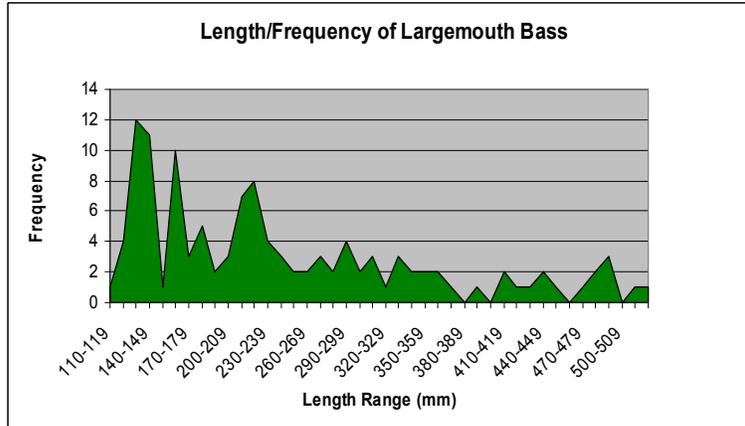


AN OVERVIEW: CLEVELAND METROPARKS FISHERIES PROGRAM 2005-2012

Cleveland Metroparks Technical Report 2012/NR-05



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Executive Summary

Recreational fishing is one of the most popular activities in Cleveland Metroparks, with a recent community survey indicating that fully one-fifth (21%) of residents in the Park District's service area currently enjoy fishing and fishing derbies (Leisure Vision/ETC Institute 2011). Cleveland Metroparks offers 16 major fishing areas, which reflect a variety of experiences ranging from small ponds, to rivers, to Lake Erie. Pond and lake fisheries of the Park District typically offer largemouth bass (*Micropterus salmoides*) and sunfish (predominantly *Lepomis* species) which, in many cases, are seasonally supplemented with stocked rainbow trout (*Oncorhynchus mykiss*) and channel catfish (*Ictalurus punctatus*) to offer quality year-round fishing opportunities. The Rocky and Chagrin rivers offer steelhead trout (*O. mykiss*) from fall through spring, which are a highlight of the Park District fishery. Tasked with managing these varied and diverse fisheries, Cleveland Metroparks maintains an active and extensive fisheries program which includes active fisheries management, program information/education, and organized event components.

Fish population surveys conducted by Natural Resources Division staff using standardized techniques and statistical analysis are the backbone of individual management plans either already completed or scheduled to be written for each of the fisheries that are the management responsibility of Cleveland Metroparks. Given the heavily fished nature of urban fisheries, the Park District also maintains an active fish stocking program, which includes purchase of rainbow trout and channel catfish, as well as acquisition of species like largemouth bass and sunfish from in-house and external sources. Natural Resources Division staff also conduct active habitat management, most notably aquatic weed and algae control, in many of the lakes and ponds.

Disseminating fishing program information is an important component of the Park District's fisheries program and is conducted through a variety of avenues. The Park District offers two printed fishing publications (a tri-fold brochure and a 26 page booklet), and additionally provides printed fishing literature from ODNR. Online offerings, such as the Rocky River Fishing Report blog maintained since fall 2005, have proven to be highly popular tools of communicating fishing information to the public. Rounding out the fisheries program informational offerings are various presentations to sportsmen and community groups upon request, regular communication with local media, fishing informational kiosks at popular fishing locations, and direct communication with anglers.

Cleveland Metroparks also hosts annual fishing events within the community, most notably the Spring Children's Fishing Derby and Outdoor Odyssey, which combined have served an average of 3,700 people annually over the past five years. These events are multi-department collaborations within the park and offer free fishing tackle, bait and guidance, as needed, to encourage new anglers to adopt this healthy pastime. Additionally, between 10-20 smaller fishing events and outings are hosted, by request, throughout the year.

The National Recreation and Park Association notes that "*fishing serves as a gateway to the outdoors, improved health, and heightened awareness of the importance of environmental stewardship.*" All three components of the Park District's mission of Conservation, Recreation, and Education intersect in recreational fishing. Cleveland Metroparks Division of Natural Resources long term work plan includes a strong commitment to the fisheries program.

Historic Overview and Background

Recreational fishing is one of the most popular activities in Cleveland Metroparks. Anglers make an estimated 500,000 trips to fish Park District waters and a recent community survey indicated that one fifth (21%) of all residents in Cleveland Metroparks' service area currently enjoy fishing and fishing derbies (Leisure Vision/ETC Institute 2011). Furthermore, between 2006-2010 Cleveland Metroparks organized fishing events and programs have served 41,503 people total (Bixler 2010). The fishery resources of the Park District attract attention from a wider audience than just Cuyahoga county, as well. In the June 2007 issue of popular national magazine *Field and Stream*, the Rocky River was named among the 150 Best Fishing Spots in America. Cleveland Metroparks contains 30.5 miles of the most productive water for angling in this watershed, giving the Park District the distinction of being the largest single public stream landowner in the state of Ohio.

Cleveland Metroparks contains 16 major fishing areas, as well as a number of ancillary fishing venues (Table 1). The major areas include (in alphabetical order): Beyer's Pond, Bunn's Lake, Chagrin River, Cuyahoga River, Hinckley Lake, Judge's Lake, Lake Erie (access at Huntington Reservation and through the Emerald Necklace Marina), Ledge Lake, Ohio & Erie Canal, Oxbow Lagoon (Rocky River), Ranger Lake, Rocky River (Main and East branches), Shadow Lake, Strawberry Pond, and Wallace Lake. Second tier fishing opportunities are offered at, but not necessarily limited to, ponds/old oxbows at Bonnie Park (Rocky River Reservation) and North and South Chagrin reservations; as well as Big, Chippewa, Euclid, and Porter creeks. Depending on the specific venue, the fisheries of these areas are managed by Cleveland Metroparks

Natural Resources Division, ODNR Division of Wildlife District 3, or joint management between these two agencies, as will be described in more detail shortly (Table 1).

Diverse fishing experiences are available at these various venues (Table 1). In general, pond and lake fisheries offer panfish species such as bluegill (*Lepomis machrochirus*), white crappie (*Pomoxis annularis*), and pumpkinseed sunfish (*L. gibbosus*), as well as largemouth bass (*Micropterus salmoides*), channel catfish (*Ictalurus punctatus*) stocked in select areas, bullhead catfishes (*Ameriurus* spp.), rainbow trout (*Onchorynchus myskiss*) at select areas primarily during the winter and spring seasons, and secondary species such as common carp (*Cyprinus carpio*) and white sucker (*Catostomus commersoni*). Overall, most of the Park District's lake fisheries could be characterized as largemouth bass and bluegill fisheries, which are noted as among the most potentially self-sustaining fish assemblages in smaller waters (Austin et al. 1996, Carlander 1977). Rivers and streams of the Park District offer an equally diverse fisheries, with the main species sought including smallmouth bass (*M. dolomieu*), steelhead trout (*O. mykiss*) from fall through spring, catchable rainbow trout in the East Branch Rocky River in spring, panfish including rock bass (*Ambloplites rupestris*) and bluegill, bullhead catfishes, channel catfish, white sucker, common carp, and various smaller secondary species caught incidentally by anglers.

As a highlight, one of the most popular fisheries in Cleveland Metroparks, and the state of Ohio in general, is the seasonal steelhead trout run in the Rocky and Chagrin rivers from roughly September to May. A fair number of stray steelhead are also caught in the unstocked Cuyahoga River, as well smaller streams like Porter Creek. The quality of this particular fishery has garnered national attention, and the Ohio, Pennsylvania, and

New York shores of Lake Erie have been dubbed “Steelhead Alley” by anglers and the outdoors media. A study of the Ohio portion of this fishery by Ohio Sea Grant in 2004 attempted to quantify the economic component of this popular fishery (Kelch et al. 2006). Among key findings were that although each steelhead costs the state of Ohio \$1.44 to raise, the average angler expenditure per fish is between \$27-38. On average, anglers spend \$26/trip and \$500-600/year targeting steelhead in Ohio streams (Kelch et al. 2006). It is reasonable to believe, given the growing popularity of this particular fishery, that these expenditures have increased since this study was published. A conservative estimate of the contribution of the Ohio steelhead stream fishery to the local economy by an ODNR fisheries supervisor is about \$3 million/year (Kevin Kayle, Ohio Division of Wildlife Fairport Fisheries Station, personal communication), and could be as high as \$12-14 million, although the cost of the stocking program is only \$600,000 annually (Kelch et al. 2006). Clearly, this is a significant contribution to the local economy.

Cleveland Metroparks role in the highly popular steelhead fishery is to serve as an information resource associated with this fishery, as well as to provide many miles of public access to the fishery. Anglers regularly look to the Park District for information regarding this fishery, with routine requests coming from as far away as out of state (Michigan, in particular) during the peak of the steelhead run from late fall through late spring. The varied outlets in which Cleveland Metroparks fulfills this role will be outlined in detail in this document. Public access to this river fishery is the most important single issue identified by the Ohio Division of Wildlife and Ohio Central Basin Steelheaders, a non-profit sportsman’s group. Cleveland Metroparks provides unprecedented access to anglers, with 30.5 public miles of the Rocky River accessible for

fishing. This makes Cleveland Metroparks the largest single stream landowner in the state of Ohio.

The major lake and pond fisheries of Cleveland Metroparks have or will have specific Natural Resources Management Plans devised for them based on the unique goals and challenges presented by the waterbody. The foundation of these plans is fish community data collected by Natural Resources Division staff using standard population assessment techniques, as further outlined in this overview report and in great depth in the individual Management Plans. Management Plans for Hinckley and Wallace lakes were completed in winter 2010 and for Oxbow Lagoon and Shadow Lake in winter 2011, which are available on Cleveland Metroparks website at

<http://www.clemetparks.com/Naturalresources/publications.asp>. Remaining venues which will also have dedicated plans written within the next 3 years include Beyer's Pond, Bunns Lake, Judge's Lake, Ledge Lake, Ohio & Erie Canal fishing area, Strawberry Pond, and Ranger Lake. New fish population data will be collected every five years and plans will be updated with this new data as needed (Table 2).

Joint management agreements between Cleveland Metroparks and ODNR Division of Wildlife exist at three non-riverine locations; Hinckley Lake, Ohio & Erie Canal fishing area, and Shadow Lake (Table 2). Because ODNR also assists with some of the fish (rainbow trout) stocking at these locations, Cleveland Metroparks, in turn, defaults to state regulations on all fish size and bags limits for these bodies of water¹.

¹ This means that anglers may keep, on a daily basis, 5 rainbow trout per angler (no size limit) at all of these locations, and may keep 2 largemouth bass (min. size 12") at Hinckley and Shadow lakes and 5 largemouth bass (min. size 15") at Ohio & Erie Canal. No other species-specific limits are in place at these locations.

The fisheries of the flowing surface waters of the Park District fall under the management jurisdiction of ODNR Division of Wildlife, and active fish management by Cleveland Metroparks in these waterways is limited to the annual spring trout stockings in the East Branch Rocky River (Table 2). For this reason, Cleveland Metroparks specific management plans will not be written for these waterways. The main focus on these mainstream streams for Cleveland Metroparks is to offer fishing access, as well as high quality educational and informational resources not offered by ODNR. Fish size and bag limit regulations on Lake Erie tributaries of Cleveland Metroparks are set by the state of Ohio².

Although Cleveland Metroparks offers angler/boating access and information about the Lake Erie fishery based on land holdings at Emerald Necklace Marina and Huntington Reservation, the Park District does not conduct active fish management on Lake Erie, as this is under the jurisdiction of ODNR DOW (Table 2). Anglers need to consult the current year Ohio Fishing Regulations pamphlet or the ODNR website for specific information regarding size and bag limits for fish species in the Ohio waters of Lake Erie.

In all other waters of Cleveland Metroparks the following species-specific size and bag limits apply: anglers may keep on a daily basis; 3 trout (no size limit) and 2 largemouth/smallmouth bass (minimum size 12”).

A valid Ohio fishing license is required for all anglers over the age of 16 fishing on Cleveland Metroparks property. Seniors age 66 and over can acquire the license for a

² On these streams, anglers may keep, on a daily basis, 2 trout or salmon per angler between Sept. 1 and May 15, and 5 trout or salmon per angler from May 16-Aug. 31. Trout and salmon in these waterways must be at least 12” to be legal for harvest. Anglers may also keep up to 5 largemouth or smallmouth bass daily on these streams in Cleveland Metroparks (no size limit).

reduced rate. A valid fishing license is also required for netting baitfish or crayfish on Park District waters, as outlined in the Ohio Fishing Regulations. Possessing any reptiles and amphibians is prohibited on all Cleveland Metroparks land. Additionally, starting on 1 January, 2012, all fishing guides operating for hire on Cleveland Metroparks land will be required to acquire a Fishing Guide Permit, which will require completion of an application form (Appendix A), proof of liability insurance, and a valid first aid/CPR training certificate, as well as a fee (\$50 for Cuyahoga county and Hinckley Township residents, \$100 for all others). The details of this program and application form are available on the Cleveland Metroparks website (www.clemetparks.com/Naturalresources/fishing.asp) or by contacting Cleveland Metroparks Natural Resources Division.

The overarching management goal for the lakes, ponds, mainstem streams, larger oxbows, and Ohio & Erie canal in Cleveland Metroparks is to maintain, and improve where possible, the chemical, physical, and biological integrity of the waters, as reflected in the national water quality objective contained in the Federal Clean Water Act (CWA). The CWA objective is often referred to as the “fishable/swimmable goal”, and the primary goal for these water bodies is to continue their use as fishing, and in certain cases, swimming, areas. This will be accomplished through active management outlined in this report, as well as in the specific lake and pond for these areas (Table 1).

The rest of this report is organized into three sections: *Active Fisheries Management*, *Fisheries Program Information and Education*, and *Fishing Events*.

Active Fisheries Management

Fish Population Surveys

Cleveland Metroparks Division of Natural Resources staff will conduct fish population assessments approximately every five years at all major lake, pond, oxbow, and Ohio & Erie Canal fishing areas (Table 2). Data may also be collected at select second tier fishing areas when it is determined that more information is necessary to make management decisions. Surveys are conducted to characterize current population dynamics and the health of these recreational fisheries which, in turn, is the basis for making recommendations in the water-body specific management plans. Electrofishing is a well established method utilized by fisheries managers to accurately assess fish population dynamics, abundance, and structure (Neilsen and Johnson 1983, Reynolds 1993). Timed electrofishing runs average between 30-60 minutes, although sometimes longer or shorter as needed, from a customized 14 foot Alweld boat is the primary method of data collection, with the focus on sampling along the structure-rich shorelines. Since predatory largemouth bass are more active in the evening, the surveys are conducted in late afternoon whenever possible (Loeb 1958, Witt and Campbell 1959, Kirkland 1962, Smith-Root 2007). Given the relatively small size of Cleveland Metroparks lakes and ponds (all <100 acres), excluding Lake Erie, the majority, if not entire, shoreline can be effectively sampled in 1-2 sample runs. A Smith-Root 5.0 GPP pulsator and Honda generator is used, as in ODNR fisheries surveys (Burt et al. 2008). Fish are identified to species, counted, weighed, measured, and recorded on field forms (Appendix B). Standardized fisheries statistics are calculated using predominant predator and prey species data (Novinger and Legler 1978, Wege and Anderson 1978, Anderson

1980, Anderson and Gutreuter 1983, Gabelhouse 1984, Hall 1986, Ney 1993). This information is then used to determine characteristics of key sportfish species, including age structure, average health (condition factor), predator/prey proportional stock densities, and predator/prey balance (total quality plot). Site specific methods and equipment used is outlined in individual management plans.

Fish Stocking

Fishing is a very popular pastime in Cleveland Metroparks, as outlined in the background section, and fishing pressure on Park District waters is very high, accordingly. Given the popularity of this urban fishery, it would be impossible to meet the needs of the public through management of the native fisheries of lakes and ponds alone, as is often possible in systems with light or controlled levels of fishing pressure. In such cases, stocking fish is a very common and effective fisheries management practice (DesJardine 1983, Gordon 1983, Heidinger 1993, Manfredo et al. 1983, Norville 1961, Weithman 1993). With that said, Cleveland Metroparks conducts supplemental stocking to offer the public a quality fishing experience. This is accomplished in four ways: 1) purchase of fish from vendors, 2) acquisition of fish from ODNR Division of Wildlife, 3) acquisition of fish from in-house non-fishing areas, and 4) acquisition of fish from external sources as donations to the Park District (Tables 3, 4 & 5).

Cleveland Metroparks annually purchases catchable-size rainbow trout and farm-raised channel catfish from private vendors for stocking in Park District waters. Although the number of trout stocked has been variable over the past three decades (Halko 1983), for the past seven years the quantities have been between 8,400-10,000

pounds (Table 3). In a typical year approximately 3,600 pounds of these fish are stocked between five lakes for ice fishing (Wallace, Shadow, Ledge, Judges, and Ranger lakes, in descending order of quantity of fish received). 1,500 pounds are stocked in Wallace Lake, Ohio & Erie Canal fishing area, and Ledge Lake for the Spring Children's Fishing Derbies and Ken Mantkowski Handicapped fishing outing in May. The remainder are stocked in the East Branch Rocky River in Mill Stream Run Reservation throughout spring to offer a catchable-size trout fishery. In 2012, approximately 2,000 pounds of trout will be reallocated to replace the same quantity of trout the ODNR will no longer be providing for the Outdoor Odyssey youth event in October.

Over the past seven years between 1,000-2,000 pounds of farm-raised channel catfish have been purchased annually to supplement the warmwater fisheries of Wallace Lake and the Ohio & Erie Canal fishing area, as well as to enhance the Spring Children's Fishing Derbies in May and Outdoor Odyssey youth event in October (Table 3). In the future, it is recommended that more channel catfish be distributed to other Park District lakes and ponds to supplement their warm-water native fisheries, as well.

Although not needed in recent years (at least the past 7 years), Cleveland Metroparks can also purchase and stock other warm-water, native fish species (i.e. largemouth bass and bluegill sunfish) to meet management needs.

The Ohio Department of Natural Resources, Division of Wildlife, also stocks rainbow trout (as both catchable-size and juvenile steelhead smolts) in the waters of Cleveland Metroparks on scheduled basis. Every spring, typically in late April or early May, ODNR's Castalia State Fish Hatcher in Sandusky, Ohio, provides juvenile rainbow trout in the 6-9" size called smolts to be released into the Rocky and Chagrin rivers.

Ideally, these juvenile fish go to the lake, feed heavily, and return to the river in which they were stocked in 1 to 4 years as much larger rainbow trout called steelhead and provide a very popular fishery. Between 2006-2010 ODNR consistently stocked between approximately 90,000-110,000 of these fish in each the Rocky and Chagrin rivers. In 2011, that number was reduced by approximately 50% across the state, primarily due to restricted state funds available for ODNR programs. Details on this program in general, including specific stocking quantities by year, can be found on the ODNR website (<http://www.dnr.state.oh.us>).

The Ohio Division of Wildlife also provides catchable-size trout averaging 12” to provide spring fisheries in Hinckley (2,500 trout) and Shadow (500 trout) lakes. These trout are stocked between early and mid April. In the past ODNR also provided 2,500 catchable trout in October for the Outdoor Odyssey youth event, but made the decision in 2011 to transition the program from fall stocking to exclusively spring stocking in the future. In October 2011, Cleveland Metroparks was among the only recipient of fall trout in the state of Ohio, and ODNR will not be providing any fall trout to anyone in 2012. With this said, it will be up to Cleveland Metroparks to provide trout for this event in the future.

Cleveland Metroparks has a number of non-fishing waterbodies that serve secondary uses as native, warm-water fish production sites (Table 4). These include Waterfowl Lake at the Zoo, Sunset Pond at North Chagrin Nature Center, two ponds at Shawnee Hills golf course, one pond at Big Met golf course, Lake Isaac in Big Creek Reservation, and one pond at the Mill Stream Run Management Center. Smaller ponds at other sites around the park may be utilized as ancillary sites for this purpose in the future,

as well. These sites primarily provide sources of catchable-size largemouth bass, bluegill, pumpkinseed sunfish, white crappie, and yellow bullhead catfish. Fish are collected via boat electrofishing, transported in an aerated fiberglass tank in the bed of a pick-up truck, and released in public fishing areas in need of supplemental fish throughout the Park District. Since productivity of these sites is variable, fish harvest from them is not on a set cycle, but is ad-hoc and based on best professional judgment of Division of Natural Resources staff and typically occurs at 1 to 5 year increments (Tables 4 & 5).

Warm-water native fish are also obtained as donations to the Park District from external (non-Cleveland Metroparks) sources. These have been opportunistic and impromptu, as well as (more recently) organized and cyclic in nature and involve Cleveland Metroparks Division of Natural Resources staff conducting the collection and transfer of the fish. In May 2008 approximately 5,000 largemouth bass, bluegill, and white amur (grass carp) were obtained from a private lake owned by the Huff family. In spring 2009 approximately 4,500 largemouth bass, sunfish, and white crappie were obtained from Virginia Kendall Lake in the Cuyahoga Valley National Park. In both cases, the lakes were being drained due to needing repair to their earthen dams and other issues, and in the case of the private residence the landowner was provided information so he could write off the donation in his taxes. In September 2010, a total of 547 largemouth bass and bluegill were obtained from Lake Kilroy at University Schools during an educational fish sampling activity, as well (Table 5).

In fall 2011, Cleveland Metroparks worked out an arrangement to acquire fish via electrofishing from lakes and ponds at three Granite Golf Properties locations (Medina

Country Club, Shale Creek Country Club and Quarry Golf Course) to be released in Park District fishing waters. Division of Natural Resources staff met course managers in October 2011 and agreed that the Park District would collect and transfer the fish in return for detailed documentation of the donated fish so that the landowner could use the information for tax write-off purposes. There are approximately a dozen ponds and lakes on the properties of potential value as fish production sites. A goal of the project is to only remove a portion of the fish populations at each lake during each sampling, with focus on the “catchable” medium to large sized fish, so that fish can be produced in a sustainable manner and obtained on a regular cycle. The frequency of collection, which will typically be conducted in fall due to landowner preference, will be dependant upon the productivity of a given lake or pond. The cycle will likely be 3-5 years per pond. Initial sampling of three ponds at Medina Country Club on two dates in November 2011 yielded 1,418 valuable largemouth bass, bluegill, and white crappie (Table 3).

In summary, between 2008-2011, Cleveland Metroparks has capitalized on various opportunities to collect fish from in-house and other sources to transfer to Park District public fishing areas. In total, 13,177 native fish valued at \$51,956 were acquired over this time period (Table 3). Cleveland Metroparks plans to explore similar opportunities in-house and arrangements at other properties in the region to build on this cost-effective form of recreational fishery enhancement.

Fish Habitat and Fishing Access Improvements

Cleveland Metroparks Division of Natural Resources staff conduct nuisance submerged and emergent plant and algae herbicide/algaecide treatments on a regular

basis to facilitate fishing access and fish habitat at a number of locations. Sites that receive routine/annual treatments in late spring/early summer include Wallace Lake (submerged vegetation and algae), Ledge Lake (submerged vegetation around fishing access locations), Moose Lake at Camp Cheerful (a tiny pond treated for submerged vegetation and algae), Oxbow Lagoon (submerged vegetation around the fishing platform), Judges Lake (submerged vegetation), and Bunns Lake (submerged vegetation around the docks), and Ranger Lake (emergent vegetation along the face of the earthen dike). In addition to facilitating angler access, these chemical treatments also serve to reduce excess plant and algae growth during the growing season so that decaying organic matter is minimized in winter. This decreases the chance of low dissolved oxygen levels under the ice which can cause winter fish kills. These treatments also help maintain a 20% macrophyte coverage ratio recommended for healthy lake and pond fisheries (Austin et al. 1996). Chemical management of nuisance aquatic vegetation will be needed for the foreseeable future.

Wallace and Hinckley lakes, as well as several other smaller venues like Oxbow Lagoon, already have abundant woody debris along their margins that serve as natural fish structure. With a few exceptions, there are no plans to construct wooden fish attractor structures for Cleveland Metroparks lakes and ponds in the future³. Since the need for more fish structures is not a pressing issue, this will be done on an opportunistic,

³ In past decades, Park District staff constructed wooden fish attractor structures that were sunk near fishing docks at Wallace and Hinckley lakes, and possibly others (there are not good records for the fisheries program pre-2000). While good in theory, the main limitation of these structures was due to the materials they were made of (old shipping pallets and Christmas trees), which caused them to degraded over time, as well as being easy for anglers to snag hooks and line upon (the PVC units are much more snag-resistant).

rather than scheduled, basis and appropriate locations for deployment will be identified by Division of Natural Resources staff⁴.

Fishing access in Cleveland Metroparks has been further facilitated through the construction of platforms (docks and piers) at Hinckley, Wallace, Shadow, Ledge, Judges, and Bunns lakes, Oxbow Lagoon, Ohio & Erie Canal fishing area, and Huntington Beach. These structures, constructed and maintained by Park Operations staff are either made of treated lumber, concrete/rock, and/or metal, and several are wheelchair accessible. Additional fishing platforms do not appear to be needed on Park District lakes or ponds even though the currently available structures are popular and heavily used.

Fisheries Program Information and Education

Given the popularity of fishing in Cleveland Metroparks, the Park District makes information about the fishery available through various media, including printed literature, social media, talks, presentations and other events, television and print media, informational kiosks, and direct communication.

⁴ For example, in spring and summer 2011, Natural Resources Division Staff coordinated with Eagle Scout candidate Erik Jorgensen to construct four snag-resistant underwater brush-mimicking structures with “branches” made of gray PVC with a concrete base, which were deployed at Ledge Lake, Hinckley Reservation, on 19 August 2011 (Figure 1). The structures, which were made at Erik’s expense, were similar to commercially available units that retail for between \$50-135 each and were sunken off the end of the fishing dock (2 units) and near the lake overflow structure (2 units), which are both popular fishing locations at the lake. Another Eagle Scout candidate, John Hartman, is working with Natural Resources Division staff to construct similar structures for his community project, to be sunk at Beyer’s Pond in spring 2012.

Printed Literature

There are two main printed fishing publications offered: the first is a less expensive *Fishing Areas in Cleveland Metroparks* tri-fold for people with a need for basic information. It covers general rules and regulations, has some basic fishing and conservation information, and lists the major fishing areas of the Park District by reservation. This publication was printed in two-color ink in January 2006 (10,000 copies) and in four-color ink in September 2011 (5,000 copies). The stock from the 2006 printing lasted until summer 2011, indicating demand for this publication is just about 2,000 annually. Funds to reprint 10,000 additional copies of this booklet were requested in the 2012 budget (which has not been approved as of this writing), which, if approved and considering the copies printed in 2011, would likely be a sufficient quantity to last until approximately summer of 2019, based on historic demand.

The second publication is a 26 page booklet (6"x9") titled *Fishing Areas & Fishing Programs* and provides more detailed information regarding Cleveland Metroparks fishing venues. It covers the same basic rules and regulations and basic fishing and conservation information as the tri-fold, but additionally has 1-2 pages devoted to each of the major fishing areas of Cleveland Metroparks, including basic maps of each location. This booklet was last reprinted in March 2006 (5,000 copies) and remaining stock grew very low in summer 2011, indicating average demand is approximately 1,000 booklets annually under controlled distribution. 5,000 additional copies of this booklet will be printed in four-color ink in 2012.

The primary distributor for these documents are the five Cleveland Metroparks Nature/Visitor centers, with the tri-fold brochure typically available in open racks, and

booklet reserved behind the desk for visitors who inquire for more detailed fishing information. The publications are also distributed at fishing related events, as well as being available by request from any other Cleveland Metroparks facility that interfaces with the public or through phone/email requests to Natural Resources Division staff. Links to electronic copies of both of these documents can be found on the Cleveland Metroparks website at the following address, as well (<http://www.clemetparks.com/recreation/fishing>).

In addition to these two publications, Cleveland Metroparks also routinely distributes the *Sport Fish of Ohio Identification* booklet produced by the ODNR, Division of Wildlife. In its latest reprint, this 47 page full color booklet covers sport fish identification and general fishing information. This publication complements Cleveland Metroparks specific publications well, offering a more general fish and fishing information theme. It is commonly given out to beginner level anglers who contact the Natural Resources Division office for more information, as well as at targeted kids' fishing activities. Cleveland Metroparks acquires and disseminates approximately 1,000 of these booklets annually.

Cleveland Metroparks also provides a number of specific topic focused tri-fold publications by request, including the in-house *Hey Kids, Let's Go Fishing!* brochure (10,000 printed in October 2000) and ODNR's *Fish Bait, Fishing Fundamentals*, and *Trout Fishing in Lake Erie* brochures. Furthermore, Cleveland Metroparks *Naturescape* general outdoors recreation publication has a full page devoted to fishing information (last reprint was 60,000 in May 2010). A segment of the fishing community will always

prefer their information in printed form, and Cleveland Metroparks plans to continue to make these offerings available to suit this need.

Online Fishing Report and other Electronic Information

In October 2005 Cleveland Metroparks Division of Natural Resources staff initiated an online fishing report blog in response to the high demand for up-to-date fishing reports and stocking information pertaining to Park District waters. The report focuses on the highly popular Rocky River fishery, but covers all fishing opportunities and information related to the Park District. The report, in blog format, is updated weekly from September-May and monthly from June-August. The weekly updates from fall-spring correspond with high demand for information during this heavy period of trout stocking, organized fishing events, and the extremely popular seasonal steelhead trout fishery. The report is typically updated on Thursdays, in an effort to offer anglers timely information to plan their weekend fishing trips. When fishing conditions change notably between major updates, short interim updates (often a sentence or two) are frequently added at the beginning of the report. When the fishing report is updated, there are often reminders posted through Cleveland Metroparks Facebook and Twitter accounts, as well as popular local fishing websites such as www.ohiogamefishing.com and www.steelheads.com. People may also subscribe to an RSS feed to receive notification when the report is updated. Furthermore, there is a link to the report on the steelhead information page on the ODNR Ohio Division of Wildlife website, as well as a number of other fishing related websites.

The report includes a link to the real-time data from the USGS flow gage for the Rocky River, which was a project that Cleveland Metroparks spearheaded (Appendix C). The report typically includes between 10-25 photos, which follow the text of the report, most of which are sent in by local anglers. This has proven to be a popular and highly interactive part of this online offering. In addition to timely fishing and fish stocking information, most reports also feature a “highlight” section that features a topic ranging from “painlessly educating” about conservation items, to focusing on upcoming fishing events, to outlining things like an effective fly pattern submitted by a local angler. Contact information for Division of Natural Resources staff (phone and email for the Aquatic Biologist) is also included, which has proven to be an effective way of receiving reports of potential compromises to water quality and other information of potential interest regarding the fisheries program. The report takes approximately an hour a week to maintain, yet receives an average of 15,000-20,000 hits per month from fall through spring (Cleveland Metroparks, Marketing Division), making it an exceptionally cost effective form of disseminating fishing information⁵. The offering can be found on the Cleveland Metroparks website at the following link: <http://blogs.clemetparks.com/rocky-river-fishing-report/> Cleveland Metroparks staff plan to continue to offer the highly popular and cost effective Rocky River Fishing Report blog in the future.

Cleveland Metroparks also offers basic fishing information on the Park District website (<http://www.clemetparks.com/recreation/fishing/index.asp>), including a summary

⁵ In 2010 Cleveland Metroparks Rocky River Fishing Report Blog was awarded 2nd place by the Ohio Parks & Recreation Association in the *Marketing: Electronic Media* category.

of information by fishing location. Other electronic information offerings are offered on a more opportunistic basis⁶.

Talks, Presentations and Educational Events

Annually, Cleveland Metroparks Natural Resources Division staff accommodate numerous requests to give presentation to sportsmen's groups about various fishing related topics. Since May 2005, nearly a dozen of these groups have been served⁷. In many cases, multiple presentations have been given to these groups over those years. In addition, fishing related presentations are regularly given to local school groups, assisted living community groups, community clubs (such as Optimists and Rotary clubs), and Boy Scout/Cub Scout organizations. Visitor attendance at these talks are submitted to Cleveland Metroparks Research/Program Evaluation Division to be incorporated into annual park district visitation reports (most recently Bixler 2010). In many cases, groups follow up these talks with a donation to Cleveland Metroparks Fishing Fund. Since May 2005, such donations have totaled nearly \$15,000.

In addition to talks given to smaller groups (<100 people), Cleveland Metroparks staff also routinely host fishing/fisheries related educational offerings at in-house and

⁶ For example, the ODNR DOW and Cleveland Metroparks team-up, on occasion, to offer online fishing information resources. One recent example would be a *Wild Ohio* vodcast focusing on basic steelhead fishing gear filmed on the Rocky River near the Rocky River Nature Center in November 2011. The video, featuring Cleveland Metroparks Natural Resources Division and Ranger staff, is available on the ODNR website at the following link: www.dnr.state.oh.us/Default.aspx?tabid=23691. Another example would be the steelhead information section of ODNR's *Go Fish!* informational resource, with Cleveland Metroparks Natural Resources Division staff enlisted to write a significant portion of the *Advanced Steelhead* offering, which can be found at the following link: <http://www.dnr.state.oh.us/Default.aspx?tabid=21880#float>.

⁷ These have included Cleveland Fishing Association, Emerald Necklace Chapter of Trout Unlimited, Firelands Fly Fishers, North Coast Fly Fishers, Ohio Central Basin Steelheaders, Western Cleveland Walleye Association, Westlake Sportsmen's Association, Women in the Outdoors, Woods and Waters Club, and Wooster Chapter of Trout Unlimited.

external events⁸. Cleveland Metroparks Institute of the Great Outdoors annually offers various related instructional activities, notably family fishing, fly fishing, and boating offerings, as outlined in the monthly Emerald Necklace Newsletter.

A highlight fishing informational offering that Cleveland Metroparks jointly hosts with Ohio Central Basin Steelheaders is the annual Steelhead Expo at the Rocky River Nature Center⁹. Over the past three years, the event has drawn between 750-1,000 attendees. Typically held on the first Saturday in October, the Expo has a day full of speakers, demonstrations, vendors, and conservations groups focused on offering information pertaining to the steelhead fishery.

Cleveland Metroparks Division of Natural Resources staff plan to continue to serve the fishing community by accommodating as many requests for fishing related presentations as reasonably possible, as well as continuation of the annual events already outlined, since the current level of effort appears to adequately fulfilling the demand.

Media

It has been noted by various fisheries professionals that proper communication with the public and the media is a powerful, and often underutilized, fisheries management tool (Decker and Krueger 1993, Patterson 1983, Cohen et al. 2008). Cleveland Metroparks has maintained, and plans to continue, a mutually beneficial relationship with the local media. The Plain Dealer and Sun News regional newspapers routinely cover fishing related events and other information regarding Park District

⁸ Notably are presentation and/or informational booths at the Cleveland Sport, Travel, Outdoor Show, Lake Erie Nature and Science Center, Northcoast Nature Fest, Northcoast Fly Fishing Expo, Nature at Night, Steelheader's Workbench (Ohio Central Basin Steelheaders offering), and Zoo father's day events.

⁹ This event, in its 18th year and formerly held at Lake County Metroparks Penitentiary Glenn facility, was transitioned to Cleveland Metroparks Rocky River Nature Center in 2009.

fisheries. Most notably, Outdoor columnist D'Arcy Egan contacts Division of Natural Resources staff on a regular basis to acquire timely fishing information to include in his articles, such as fishing conditions in the Rocky River, fish stocking details, and upcoming event information. Within the past six years, these papers have run feature articles about the Wallace Lake and Rocky River fisheries, Spring Children's Fishing Derbies and Youth Outdoor Odyssey (the events to be covered in details in upcoming sections), steelhead fishing resources offered by the Park District, ice fishing in Cleveland Metroparks, and a fish transfer project from a private pond to public fisheries of Cleveland Metroparks.

In addition to local newspapers, several national fishing magazines have published articles featuring the Rocky River fishery of Cleveland Metroparks (Hicks 2007, Kelly 2009). Other magazines have called upon Cleveland Metroparks resources for other fisheries information. The Cleveland Fishing Guide, 2nd Edition (Barbo 2007), also called upon Cleveland Metroparks resources for photos and other information pertaining to a dozen popular Park District fishing locations featured throughout the book.

Cleveland Metroparks also accommodates requests for fishing information from the television media. The first show of the 2007 season of *Outdoors Ohio* on the Sports Time Ohio channel featured *Tackling Trophy Steelhead Trout on Cleveland's Rocky River*, with Division of Natural Resources staff fishing with the host of the show in Cleveland Metroparks. Other television news segments have featured staff discussing upcoming fishing events and the Wallace Lake fishery, as arranged through Cleveland Metroparks Marketing Division.

Cleveland Metroparks staff also make use of radio media to disseminate fishing information, most notably the Inside the Great Outdoors Radio Show on Sunday mornings on WHKW 1440. Division of Natural Resources staff have been guests on this show approximately a half dozen times in the past five years at the request of the host to discuss topics pertaining to Cleveland Metroparks fishing opportunities.

The relationship between Cleveland Metroparks and the media (print, television, and radio) has been a cost effective, way to promote the fisheries program and Park District staff plan to continue to maintain this mutually beneficial relationship in the future.

Kiosks

In late summer 2007, a series of five fishing information kiosks were installed at popular fishing locations distributed throughout the Rocky River Watershed. The two 31”x 60” vinyl panels were designed by Division of Natural Resources and Visual Communications staff, with one panel focusing on the “when” and “where” of fishing in the watershed and the other focusing more on the “what” and “how” (Figure 2). The kiosks, each featuring both panels, were located (from north to south) at Scenic Park and Morley Ford (about a mile north of the Lorain Road bridge) on the Main Branch Rocky River in Rocky River Reservation, and at Lagoon Dam, Wallace Lake, and Hinckley Lake on the East Branch Rocky River in Mill Stream Run and Hinckley reservations, respectively. Information included was not only structured to be of practical interest to anglers, but also to appeal to non-anglers wishing to learn more about life under the

surface of the water. An image of a completed installation at Hinckley Lake is included on the cover page of this report.

There are currently no plans to install more kiosks in the Rocky River watershed, but future projects could involve adapting the current panel design for the Chagrin River watershed for sites in North and South Chagrin reservations, as well at sites along the Cuyahoga River in Big Creek, West Creek, Ohio & Erie Canal, Bedford, and Brecksville reservations.

Direct Communication

Although the diverse information resources already outlined serve the vast majority of the fishing community well, there will always be a segment of the community, or simply inquiries that demand, dealing directly with a Cleveland Metroparks staff member. With this in mind, Division of Natural Resources staff are readily available via phone, email, or face-to-face to assist anglers with questions. Some of the information resources, like the online Rocky River Fishing Blog and printed fishing literature, include the phone number and email of the Aquatic Biologist for this purpose. Additionally, some anglers choose to stop by the facility in person or call Cleveland Metroparks general office numbers, and be directed to a person to assist them. Furthermore, Natural Resources Division staff regularly welcome inquiries from anglers drawn to activities like fish stocking, organized events, or just while out and about working in the park. During the main fishing seasons it is routine for the Aquatic Biologist to receive several dozen fishing related inquiries per week. Open communication with the public has been mutually beneficial to the Park District, as well,

since anglers who observe things like potential compromises to water quality or other issues routinely call the Aquatic Biologist directly to report them. The public regularly provides feedback that they appreciate having a dependable line of communication with the park that they know they can talk to about fishing information and other related items, and staff will always be available with this need in mind.

Fishing Events and Outings

Spring Children's Fishing Derby

Fishing derbies are noted as an exceptionally effective way to offer fishing to the urban public (Schedler and Haynes 1983, Lang et al. 2008). Cleveland Metroparks Spring Children's Fishing Derby has been an institution in the community for over a generation. The weekend event, split between Wallace Lake and Ohio & Erie Canal fishing area, is held in May each year and is a collaborative event between Natural Resources, Outdoor Education Youth Outdoors, Park Operations, Marketing, and the Rangers departments/divisions. Rainbow trout and catfish are stocked prior to the event. Each day of the two day event has two sessions, with younger anglers ages 4-8 fishing from 9:00am until noon and older anglers ages 9-15 from 1:00-4:00pm. At the end of each session, prizes are awarded for largest 3 trout, largest 3 fish of other species, smallest fish, and best 3 casts (in an organized casting activity). Prizes, as well as funds for prizes, are donated by local vendors and sportmen's groups. In recent years, donors have included The Rodmakers Shop, Ohio Central Basin Steelheaders, Cleveland Fishing Association, Firelands Fly Fishers, Optimists Club of West Suburban Cleveland, Stink's Bait and Tackle, Pulse Jigs, and Dick's Sporting Goods. Fishing bait (worms, maggots,

and corn) and fishing gear are provided without charge for sign-out for children who need these items. Fishing bait is also partially funded through these donations. Roving volunteers also provide assistance to anglers in need at the event. Attendance at the event the past five years has been at an all time high, averaging 2,021 total attendees, over half of which are youth. The breakdown of statistics from the 2011 event are provided (Appendix D). Further indicating the popularity of this event, the most recent community survey of the Park District service area revealed 2% of all citizens polled currently attend Cleveland Metroparks fishing derbies (Leisure Vision/ETC Institute 2011).

Outdoor Odyssey

Outdoor Odyssey is an event promoting outdoor recreation to urban youth with a strong emphasis on fishing. The annual event is a half day in length held in October. As with the Spring Children's Derby, fish are stocked specifically for this event and bait, tackle, and instruction are provided as needed. Almost all children in attendance fish at some point during the event. Attendance at the event the past five years has averaged 1,706 total attendees, almost two thirds of which are youth (Appendix D). The breakdown of statistics from the 2011 event are provided, as well (Appendix D).

Ken Mantkowski Memorial Fishing Outing

The Ken Mantkowski Memorial Fishing Outing at Ledge Lake is another annual fishing event, although this event is aimed at mentally and/or physically handicapped attendees. This event is carried out as the legacy of the late Ken Mantkowski, a local angler who adopted two handicapped children and initiated the event. The outing, held in

late May, is a collaboration between Cleveland Metroparks, Cuyahoga County Board of Developmental Disabilities, and Ohio Central Basin Steelheaders. Trout are stocked specifically for this event and bait and tackle are provided as needed. The event draws approximately 100 total attendees each year. The outing is structured loosely so attendees can fish as they wish and also enjoy a cookout picnic lunch hosted by the event collaborators.

Other Outings

In addition to scheduled annual fishing outings, Cleveland Metroparks staff also accommodate numerous requests each year for fishing related outings for smaller groups. Since 2005, over 30 different groups averaging between 10-50 participants have requested such outings, with over half of those being repeat (2 to 4 times) visitors. Regular among these groups have been elementary, middle, and high schools, community groups, assisted living facilities, and event related groups¹⁰. Typically, Cleveland Metroparks staff provide fishing information and equipment, as well as on-site assistance in many cases, and the requestor is expected to provide bait. Cleveland Metroparks will continue to accommodate as many of these outings as reasonably possible as they fit into staff schedules.

In addition to fishing outings, Cleveland Metroparks Natural Resources Division staff also accommodate numerous requests to conduct fish sampling outings using

¹⁰ Among those that regularly request such outings are Cleveland City Schools, Hebrew Academy, Highland Schools, Lakewood High School, Lincoln Elementary School, Northcoast Behavioral, Rocky River High School, Westlake High School, Boy Scouts, Cub Scouts, Girl Scouts, Seven Hills Recreation Center, Strongsville Recreation Center, Village of Oakwood, Franklin Plaza Assisted Living, Hillside Plaza Assisted Living, Pleasant Lake Villa Assisted Living, Sunrise Assisted Living, Leimkuehler Orthotics, Outdoor Education Division, Summer Beach Party, Rocky River Watershed Festival, Winteriffic, and Women in the Outdoors.

electrofishing gear so that the fish species present in Park District waters can be viewed up close and appreciated. Most commonly, these requests come from local college biology or ecology instructors, and in recent years have included Baldwin-Wallace College, Case Western Reserve University, Cleveland State University, and Cuyahoga Community College. Additionally, several high school and in-house groups (CMEA and Outdoor Education) have also requested such outings in recent years. The typical structure of these outings is for the participants to get involved with the sampling, then the live fish are transferred to viewing containers so that their biology and ecology can be discussed, after which they are released. Cleveland Metroparks will continue to accommodate these types of requests as possible.

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Table 1. Major Fisheries of Cleveland Metroparks

Site	Reservation(s)	Quantity in Land Holdings*	Fishery Management Responsibility	Predominant Species Available to Anglers**
<i>Beyer's Pond</i>	<i>Big Creek</i>	<i>2.04 acres</i>	<i>Cleveland Metroparks</i>	<i>Bluegill, white crappie, largemouth bass</i>
<i>Bunns Lake</i>	<i>Bradley Woods</i>	<i>4.63 acres</i>	<i>Cleveland Metroparks</i>	<i>Stunted sunfish and yellow bullhead catfish</i>
<i>Chagrin River</i>	<i>North Chagrin and South Chagrin</i>	<i>4.0 miles NCR and 5.5 miles in SCR</i>	<i>ODNR Division of Wildlife (DOW)</i>	<i>Steelhead trout, smallmouth bass, channel catfish, common carp, various sucker and sunfish species</i>
<i>Cuyahoga River</i>	<i>Bedford, Brecksville, Ohio & Erie Canal</i>	<i>5.3 miles total</i>	<i>ODNR DOW</i>	<i>Steelhead trout, smallmouth bass, channel catfish, common carp, various sucker and sunfish species</i>
<i>Hinckley Lake</i>	<i>Hinckley</i>	<i>87 acres</i>	<i>Cleveland Metroparks and ODNR DOW</i>	<i>Largemouth bass, rainbow trout, bluegill, white crappie, and common carp</i>
<i>Judge's Lake</i>	<i>Hinckley</i>	<i>2.07 acres</i>	<i>Cleveland Metroparks</i>	<i>Rainbow trout and sunfish</i>
<i>Lake Erie</i>	<i>Huntington and access via Rocky River</i>	<i>0.45 miles of lake frontage</i>	<i>ODNR DOW</i>	<i>Walleye, yellow perch, channel catfish, steelhead trout, white bass, and freshwater drum</i>
<i>Ledge Lake</i>	<i>Hinckley</i>	<i>4.37 acres</i>	<i>Cleveland Metroparks</i>	<i>Bluegill, largemouth bass, and rainbow trout</i>
<i>Ohio & Erie Canal Fishing Area</i>	<i>Ohio & Erie Canal</i>	<i>8.24 acres (approx. 1 mile of canal)</i>	<i>Cleveland Metroparks and ODNR DOW</i>	<i>Rainbow trout, channel catfish, sunfish species, and common carp</i>
<i>Oxbow Lagoon</i>	<i>Rocky River</i>	<i>8.12 acres</i>	<i>Cleveland Metroparks</i>	<i>Pumpkinseed sunfish, common carp, and white crappie (few predator fish)</i>
<i>Ranger Lake</i>	<i>Mill Stream Run</i>	<i>1.76 acres</i>	<i>Cleveland Metroparks</i>	<i>Rainbow trout and various sunfish species</i>
<i>Rocky River, East Branch</i>	<i>Hinckley, Mill Stream Run, and Rocky River</i>	<i>4.2 miles in RR, 10.8 miles in MSR, & 4.4 miles in HK.</i>	<i>ODNR DOW</i>	<i>Steelhead trout, smallmouth bass, rainbow trout, channel catfish, common carp, various sucker and sunfish species</i>
<i>Rocky River, Main Branch</i>	<i>Rocky River</i>	<i>11.5 miles</i>	<i>ODNR DOW</i>	<i>Steelhead trout, smallmouth bass, channel catfish, common carp, various sucker and sunfish species</i>
<i>Shadow Lake</i>	<i>South Chagrin</i>	<i>3.74 acres</i>	<i>Cleveland Metroparks and ODNR DOW</i>	<i>Rainbow trout, bluegill, pumpkinseed sunfish, common carp, and white crappie</i>
<i>Strawberry Pond</i>	<i>North Chagrin</i>	<i>2.08 acres</i>	<i>Cleveland Metroparks</i>	<i>Stunted sunfish and common carp (few predator fish)</i>
<i>Wallace Lake</i>	<i>Mill Stream Run</i>	<i>17.6 acres</i>	<i>Cleveland Metroparks</i>	<i>Largemouth bass, channel catfish, rainbow trout, bluegill, redear sunfish, white crappie, and common carp</i>

* Per Cleveland Metroparks GIS database, although these values may vary slightly from older estimates posted elsewhere.

** Steelhead and rainbow trout offer seasonal coldwater fisheries from fall-spring.

Table 2. Lake and Pond Sampling Schedule

Site*	Baseline Data Collected (or Proposed to be Collected)	Management Plan Completed or Proposed	Sampling Cycle (years)	Follow-up Sampling Projected
<i>Wallace Lake</i>	<i>23 June 2010</i>	<i>Completed 29 December 2010</i>	<i>5</i>	<i>2015</i>
<i>Hinckley Lake</i>	<i>22 July 2010</i>	<i>Completed 8 March 2011</i>	<i>5</i>	<i>2015</i>
<i>Oxbow Lagoon (Rocky River Res.)</i>	<i>10 August and 25 October, 2011</i>	<i>Completed 8 March 2012</i>	<i>5</i>	<i>2016</i>
<i>Shadow Lake</i>	<i>17 August 2011</i>	<i>Completed 2 December 2012</i>	<i>5</i>	<i>2016</i>
<i>Beyer's Pond</i>	<i>Proposed 2012</i>	<i>Scheduled for Winter 2012-13</i>	<i>5</i>	<i>2017</i>
<i>Bunns Lake</i>	<i>Proposed 2012</i>	<i>Scheduled for Winter 2012-13</i>	<i>TBD**</i>	<i>TBD**</i>
<i>Ranger Lake</i>	<i>Proposed 2012</i>	<i>Scheduled for Winter 2012-13</i>	<i>TBD**</i>	<i>TBD**</i>
<i>Judges Lake</i>	<i>Proposed 2013</i>	<i>Scheduled for Winter 2013-14</i>	<i>TBD**</i>	<i>TBD**</i>
<i>Ledge Lake</i>	<i>Proposed 2013</i>	<i>Scheduled for Winter 2013-14</i>	<i>5</i>	<i>2018</i>
<i>Ohio & Erie Canal Fishing Area</i>	<i>Proposed 2014</i>	<i>Scheduled for Winter 2014-15</i>	<i>5</i>	<i>2019</i>
<i>Strawberry Pond</i>	<i>Proposed 2014</i>	<i>Scheduled for Winter 2014-15</i>	<i>TBD**</i>	<i>TBD**</i>
<p>* Organized in chronological order based on sampling schedule ** In waters known to have limited fish communities, frequency of sampling will be dependant upon findings in the scheduled management plans.</p>				

Table 3. Rainbow Trout and Channel Catfish purchased 2005-2011

Year	Rainbow Trout (pounds)	Channel Catfish (pounds)
<i>2005</i>	<i>10,000</i>	<i>1,000</i>
<i>2006</i>	<i>8,400</i>	<i>1,600</i>
<i>2007</i>	<i>8,400</i>	<i>1,600</i>
<i>2008</i>	<i>8,400</i>	<i>1,600</i>
<i>2009</i>	<i>8,400</i>	<i>1,600</i>
<i>2011</i>	<i>10,000</i>	<i>2,000</i>
<i>2012 scheduled</i>	<i>10,000</i>	<i>2,000</i>

Table 4. Cleveland Metroparks In-house Fish Production Resources

Location	Resource(s)	Date Last Sampled	Approximate Date for Follow-up	Notes
<i>Big Creek</i>	<i>Lake Isaac</i>	<i>11 October 2011</i>	<i>Spring/Summer 2012</i>	<i>Production of bluegill and yellow bullhead catfish</i>
<i>Big Met Golf Course</i>	<i>Irrigation lake</i>	<i>November 2005</i>	<i>TBD –likely Spring/Summer 2012 or 2013</i>	<i>Production of bluegill, largemouth bass, and white crappie</i>
<i>Mill Stream Run Management Center</i>	<i>Wintergreen Lake</i>	<i>N/A</i>	<i>TBD –likely Spring/Summer 2012 or 2013</i>	<i>Production of bluegill, largemouth bass, and white crappie</i>
<i>North Chagrin Nature Center</i>	<i>Sunset Pond</i>	<i>20 August 2009</i>	<i>TBD –fish population in recovery</i>	<i>Production of bluegill, pumpkinseed sunfish, and largemouth bass</i>
<i>Shawnee Hills Golf Course</i>	<i>Irrigation lakes (x2)</i>	<i>8 September 2010</i>	<i>TBD – likely Spring/Summer 2015 or 2016</i>	<i>Production of bluegill, largemouth bass, and white crappie</i>
<i>Zoo</i>	<i>Waterfowl Lake</i>	<i>17 October 2011</i>	<i>Spring/Summer 2012</i>	<i>Production of bluegill, pumpkinseed sunfish, and largemouth bass</i>

Table 5. Fish Transfers to Cleveland Metroparks Public Fishing Waters 2008-2011

Date(s)	Location	Number of Fish	Calculated Value*	Notes
<i>6, 7, and 12 May 2008</i>	<i>Huff's Lake fish transfers to CM public fishing waters</i>	<i>5,021</i>	<i>\$21,047.00</i>	<i>Largemouth bass (LMB), bluegill sunfish (BG), and triploid white amur (grass)</i>
<i>15 April, 13 May, & 19 May 2009</i>	<i>Virginia Kendall Lake (CVNP) fish transfers to CM public fishing waters</i>	<i>4,475</i>	<i>\$15,531.25</i>	<i>LMB, BG, and white crappie (WCR)</i>
<i>23 May, 30 June, and 20 August 2009</i>	<i>Sunset Pond, North Chagrin, fish transfers to CM public fishing waters</i>	<i>886</i>	<i>\$3,075.00</i>	<i>LMB, sunfish (BG, WCR, and pumpkinseed), and a few channel catfish (CC)</i>
<i>8 Sept. 2010</i>	<i>Shawnee Hills GC lake fish transfer to CM public fishing waters</i>	<i>380</i>	<i>\$2,437.50</i>	<i>LMB, BG, and WCR. Several bass of trophy size</i>
<i>21 Sept. 2010</i>	<i>University Schools Lake Kilroy fish transfer to CM public fishing waters</i>	<i>547</i>	<i>\$2,343.50</i>	<i>LMB and BG</i>
<i>11 Oct 2011</i>	<i>Lake Isaac fish transfer to CM public fishing waters</i>	<i>200</i>	<i>\$750.00</i>	<i>BG and bullhead catfish. Good size sunfish.</i>
<i>17 and 21 October 2011</i>	<i>Waterfowl Lake fish transfer to CM public fishing waters</i>	<i>250</i>	<i>\$1,600.00</i>	<i>LMB, BG, and pumpkinseed sunfish. Most fish of quality size.</i>
<i>4 November 2011</i>	<i>Medina Country Club irrigation lake to CM public fishing waters</i>	<i>531</i>	<i>\$2,612.14</i>	<i>LMB (many one pound and less) and quality BG</i>
<i>7 November 2011</i>	<i>Medina Country Club ponds (16 and 5 Red) to CM public fishing waters</i>	<i>887</i>	<i>\$2,559.65</i>	<i>LMB, BG and a few quality size WCR</i>
	Total:	13,177	\$51,956	
* Per Jones Fish & Lake Management (Newtown, OH) catalog current in year of sampling.				



Figure 1. Photos of Ledge Lake Fish Attractor Structures (19 August 2011)

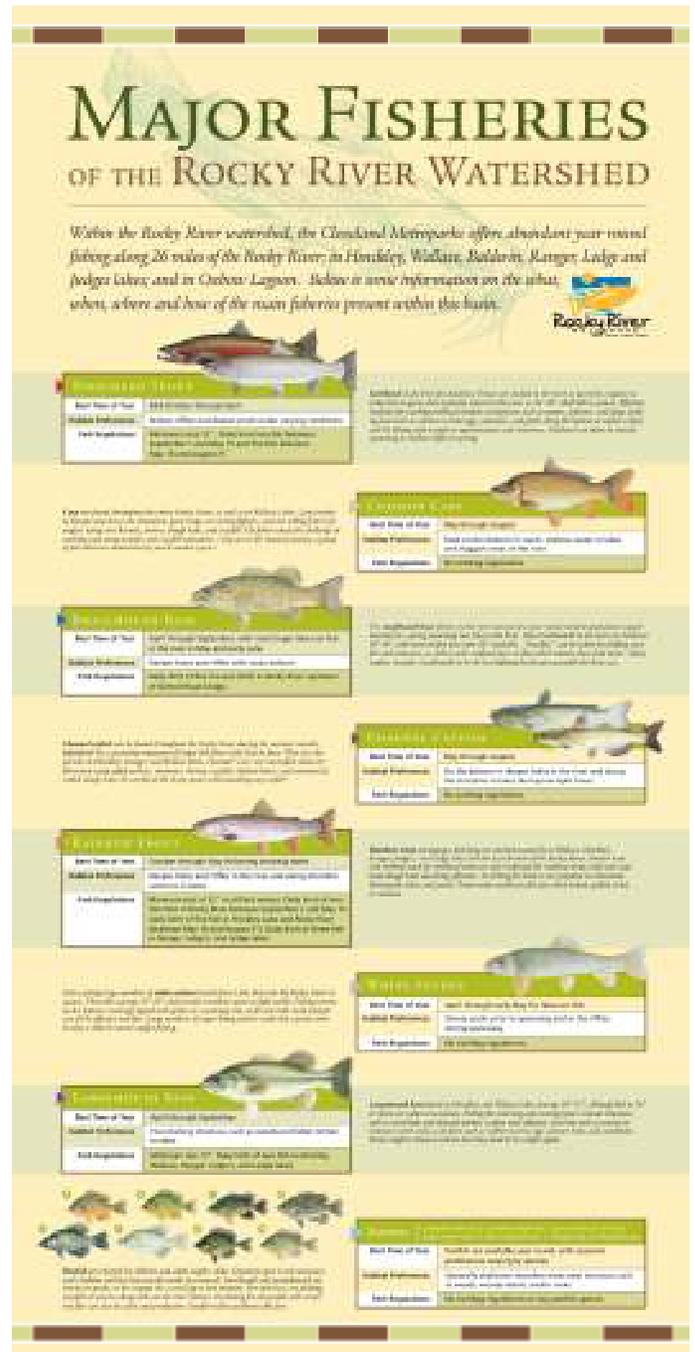
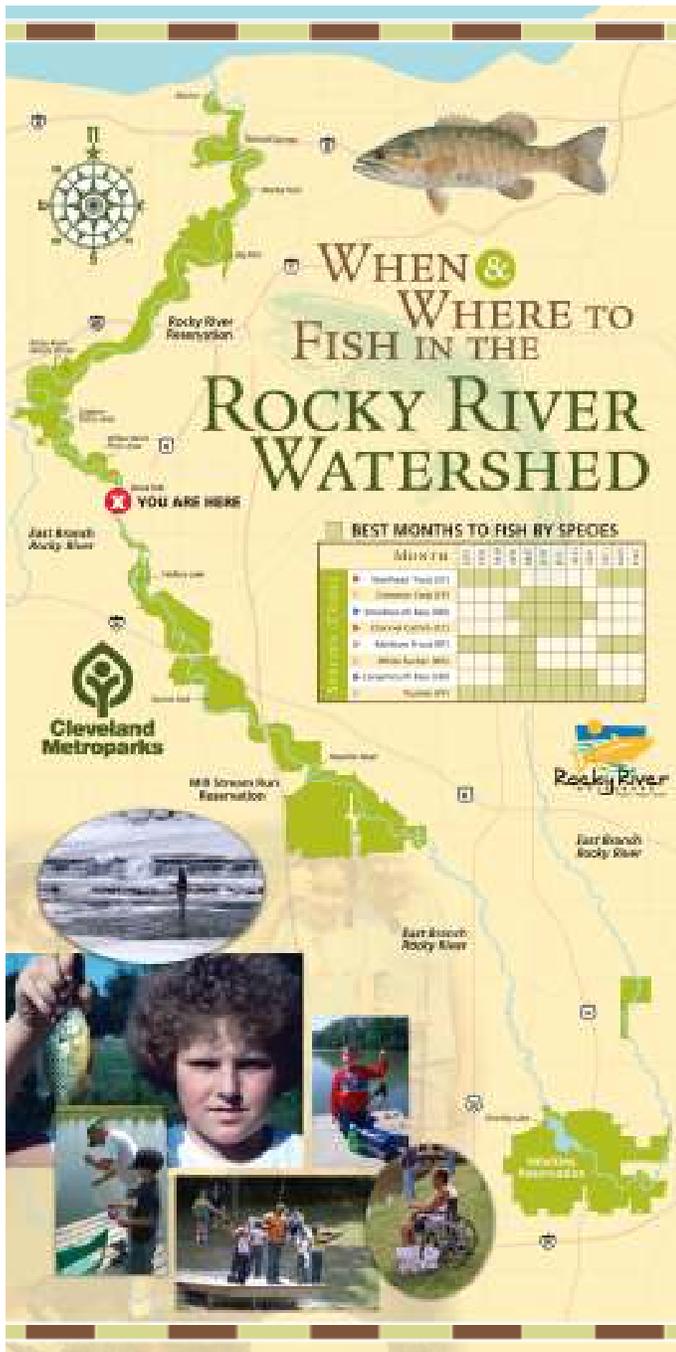


Figure 2. Fisheries of the Rocky River Watershed information kiosk panels

**APPENDIX A:
Cleveland Metroparks Fishing Guide Permit
application form**



Fishing Guide Permit Application

All fishing guides must register and obtain permit from the Park District prior to conducting business or operating on Cleveland Metroparks property. This is an annual permit valid from 1 January through 31 December of the current calendar year.

Name of Applicant (please print)

Organization (if applicable)

Address

Phone Fax Email

In order to qualify for a Fishing Guide Permit, applicant shall submit the following with this application:

- One copy of current certificate in basic cardiopulmonary resuscitation (CPR) and First Aid.
- One copy of a certificate of insurance evidencing (i) commercial general liability insurance and (ii) commercial automobile liability insurance, with each policy having a combined single limit of not less than \$1,000,000 per occurrence. Such insurance shall name the Board of Park Commissioners of the Cleveland Metropolitan Park District as an additional insured. The certificate shall be made out to:

Board of Park Commissioners of the Cleveland Metropolitan Park District
4101 Fulton Parkway
Cleveland, OH 44144

- A check made payable to Cleveland Metroparks, with Fishing Guide Permit Fee in the notes line, as follows:
Cuyahoga County and Hinckley Township Residents - \$50.00
Non-residents of Cuyahoga County or Hinckley Township - \$100.00

Please submit all required materials attention to Michael Durkalec at:

- Fax: (440) 331-8279
- Email: md@clevelandmetroparks.com
- US Mail: 4550 Valley Parkway
Fairview Park, OH 44126

By signing this application, the applicant agrees to hold harmless and release Cleveland Metroparks Board of Park Commissioners, their individual members and all their officers, agents, assigns, and employed from any and all loss, damage, liability, and costs or expenses as may arise, or may be caused in any way by the use and occupancy of Cleveland Metroparks owned or managed property under this agreement. Applicant expressly assumes all responsibility for any loss, damage, or liability arising from the use of the facility, equipment, or areas used by applicant, its agents, representatives, employees, contractors or subcontractors.

I have read and understand the above conditions and Cleveland Metroparks Rules and Regulations established for the safe use of the recreation/park area, facility, or equipment, and by my signature, I agree to abide by them. ***I UNDERSTAND THAT MY FAILURE TO COMPLY WITH ANY TERMS OF THIS PERMIT OR WITH CLEVELAND METROPARKS RULES AND REGULATIONS WILL RESULT IN AN IMMEDIATE TERMINATION OF ANY FISHING GUIDE PERMIT I MAY BE GRANTED BY CLEVELAND METROPARKS.***

Signature of Applicant Date

APPENDIX B:
Cleveland Metroparks Fish Population
Assessment Data Sheet



Fish Population Assessment Data Sheet

Date:

Location:

Species:

Time Sampled:

	Length (mm)	Weight (g)		Length (mm)	Weight (g)		Length (mm)	Weight (g)
1			41			81		
2			42			82		
3			43			83		
4			44			84		
5			45			85		
6			46			86		
7			47			87		
8			48			88		
9			49			89		
10			50			90		
11			51			91		
12			52			92		
13			53			93		
14			54			94		
15			55			95		
16			56			96		
17			57			97		
18			58			98		
19			59			99		
20			60			100		
21			61			101		
22			62			102		
23			63			103		
24			64			104		
25			65			105		
26			66			106		
27			67			107		
28			68			108		
29			69			109		
30			70			110		
31			71			111		
32			72			112		
33			73			113		
34			74			114		
35			75			115		
36			76			116		
37			77			117		
38			78			118		
39			79			119		
40			80			120		

**APPENDIX C:
Rocky River Flow Gage Upgrade article, from
Emerald Necklace Newsletter, August 2006**

The Rocky River Flow Gage Upgrade Project: *A Watershed Stewardship Success Story*

When I received yet another call inquiring “what needs to be done in order to make flow data for the Rocky River available on the internet and how can we help?”, I knew that it was time to do something. This particular call was from the president of the local chapter of Trout Unlimited and represented the wishes of many of this group’s members, a sentiment which I had heard numerous times within the past year from several other groups and local anglers, boaters, and conservation professionals.

A quick call to USGS, the federal agency which maintains river gages, confirmed that interest was indeed present as their regional representative had received numerous recent inquiries regarding this matter. The main problem was that his agency can’t directly accept non-governmental funding and most past inquiries had originated from private groups. The fact that Cleveland Metroparks is a major watershed stakeholder, was interested in such a project, and is able to work directly with such groups made us an ideal regional government “sponsor” of this project.

After an encouraging start to our conversation, we proceeded to discuss what would have to occur to make this possible. He informed me that the Rocky River flow gage wasn’t outfitted with the updated equipment necessary for satellite data transmission which is required for real-time web availability. Addition of a temperature probe, a first on an area stream, was another exciting possibility. I was informed

that USGS would procure the equipment and conduct installation and maintenance, but funding for the equipment would need to come from elsewhere. It was time to make some calls.

As it turned out, a number of groups almost jumped at the opportunity to assist in funding this project. Project partners comprised a diverse cross section of non-profit sportsman’s groups and several levels of government, including: Emerald Necklace Chapter of Trout Unlimited, Firelands Fly Fishers, Ohio

Central Basin Steelheaders, Northeast Ohio Regional Sewer District, USGS, and Cleveland Metroparks. The Metroparks portion was from an ECO Green Project fund, which is generated from proceeds from our recycling program, which reflects responsible economic and conservation practice.

It was at this point that a neat “bigger picture” benefit of this project became clear: successful watershed stewardship. This simply means that several groups with a stake in the health of the river were working together towards attaining a common goal in the interest of the watershed. This was every bit as important as the more immediate benefits of this project.

As of the date of writing this, project funds have been acquired and an agreement is being signed by Park officials. The data should be available as you read this on the Cleveland Metroparks and USGS websites.

Mike Durkalec,
Natural Resources

photo by Stephanie Wollman



Anglers will benefit from the Rocky River Flow Gage Upgrade project.

APPENDIX D:
**Spring Children's Fishing Derby and Outdoor
Odyssey 2011 and 5 year statistics**



Youth Outdoors, Cleveland Metroparks
 4524 East 49th Street, Cuyahoga Heights, Ohio 44125
 TEL: (216) 206-1010; FAX: (216) 206-1008
 EMAIL: yo@clevelandmetroparks.com

A partnership between



Children's Fishing Derby 2011 Statistics - (Metroparker style)

Derby Date/Session	5/14 AM	5/14 PM	5/15 AM	5/15 PM
Location	Wallace	Wallace	OEC	OEC
Time	9 - noon	1 - 4 PM	9 - noon	1 - 4 PM
Age Range	4 - 8 yrs.	9 - 15 yrs.	4 - 8 yrs.	9 - 15 yrs.
Total Attendance	448	386	259	198
Youth Attendance	269	244	155	129
Average stay at event	2.5 Hours	2.0 Hours	2.5 Hours	2.0 Hours
Total Quality (contact) hours	1,120.0 Hours	772 Hours	647.5 Hours	396 Hours
Total (estimated) Minority Attendance	48	51	28	25
African American	29	22	10	11
Hispanic	12	21	2	2
Asian	4	4	13	10
Native American	-	-	-	-
Other	3	4	3	2
Weather	Overcast, some drizzle, high 60s	Temps dropping, heavy rain throughout	Drizzle, then rain, mid 50s	Rain, wind, low 50s
Other notes				

Total attendance: 5/14 WL am/pm 448 + 386 = 834 people
 5/15 OEC am/pm 259 + 198 = 457 people
 Grand total **1,291 people**

Total quality (contact) hours: 5/14 WL am/pm 1,120.0 + 772.0 = 1,892.0 hours
 5/15 OEC am/pm 647.5 + 396.0 = 1,043.5 hours
 Grand total **2,935.5 hours**

Outdoor Odyssey Statistics 2011**Event Attendance**

Year	2011	Notes
Total attendance	2,019	Up significantly from 2010 and a little below all-time best in 2009
Total youth attendance	1,433	71% of total past years 68 - 80%
Average hours per visitor	3.25 hours per person	Weather was outstanding, sunny, temps in the high 70s Started early and was consistently busy until the end
Total quality (contact) hours	6,561.75 hours	2,019 visitors <u>x 3.25 hours/visitor</u> 6,561.75hours

Notes:

- 20 YO clubs and groups attended (17 city recs + 3 others)
- Exceptional weather, high interest in fishing and the many activity stations led to people staying a long time at the event

Minority Event Attendance

Year	2011	Notes
Estimated % minority	75%	Similar to last year
Total minority attendance	1,514	75% of total attendance
African American	1,347	67% of total attendance
Hispanic	83	4% of total minority attendance
Asian	81	4% of total minority attendance
Other	3	<1% of total minority attendance



Youth Outdoors, Cleveland Metroparks
 4524 East 49th Street, Cuyahoga Heights, Ohio 44125
 TEL: (216) 206-1010; FAX: (216) 206-1008
 EMAIL: yo@clevelandmetroparks.com

A partnership between



Date: December 9, 2011

To: Mike Durkalec, Cleveland Metroparks Aquatic Biologist

From: John Rode, Manager – Youth Outdoors

Re: Outdoor Odyssey and Children’s Fishing Derby Statistics

The tables below provide attendance statistics for the past five years. Included are total attendance (youth and adults) and total youth attendance (children only).

Outdoor Odyssey

Year	2007	2008	2009	2010	2011	Sum of 5 years	Five year average
Total Attendance	1,117	1,739	2,143	1,511	2,019	8,529	1,706
Total Youth Attendance	813	1,183	1,498	1,103	1,433	6,030	1,206

Children’s Fishing Derbies – reported as total combined derby attendance:

- Wallace Lake (2 sessions per day)
- Ohio & Erie Canal (2 sessions per day)

Year	2007	2008	2009	2010	2011	Sum of 5 years	Five year average
Total Attendance	2,179	1,989	2,164	2,483	1,291	10,106	2,021
Total Youth Attendance	1,330	1,177	1,316	1,501	797	6,121	1,224

Other attendance measures available but not included are:

- Total contact hours (OE termed as quality hours) measuring total attendance x average estimated length of stay
- Minority attendance estimates

If these would be helpful, I could generate these numbers, but it would be a bit more time consuming and need to wait until after next week when I’m back from vacation.