A Review of Michigan Trout Streams Nominated For Gear Restrictive Regulations

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Fisheries Division

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Evaluating Trout Streams for Gear Restrictions

Gear restrictions have been used as a fisheries management tool in Michigan for more than 50 years. During the last few decades, angler interest in gear restrictions has increased. Today, more anglers fish primarily for recreation and release most or all of the fish they catch even when harvest is legal. More anglers also appear to have increased their emphasis on catching larger fish and consider challenge and excitement important components of the angling experience. However, gear restrictions continue to be controversial among trout anglers. Organized angling groups and many anglers generally favor the concept of adding new waters into the Gear Restricted Streams category. For others, further restricting fishing opportunities based on tackle type is considered unfair and not necessary to protect any fisheries.

Recreational fishing gear and methods generally are restricted for one of three reasons:

- To enforce principles of fair chase by assuring that fish are captured individually and with sufficient difficulty;
- To prevent the spread of bait species into waters where they may be undesirable;
- To reduce mortality of fish that may not be legally harvested.

During the most recent and previous reviews of inland trout and salmon regulations, Fisheries Division has made it clear to anglers that existing trout and salmon regulations on inland streams protect trout populations from overexploitation. However, unique and diverse fishing opportunities may be enhanced by placing more gear restrictive regulations on limited stream reaches throughout the state.

Prior to 2002, fisheries managers were restricted by statute to 100 miles of trout streams on which gear restrictions could be applied. This limitation, contained in 1994 PA 451, had been in place since the early 1970s. This changed in 2002 when PA 434 went into effect. Among other provisions, PA 434 increased the number of stream miles where gear restrictions could be applied from 100 to 212.

Biological and Social Considerations

The responses of trout populations to special regulations are governed primarily by biological factors. Biological considerations must be carefully weighed and evaluated in the review process because if trout populations in a nominated stream reach do not meet these biological criteria gear restricted regulations will not generate the increases in abundance of larger trout that the public wants and expects. Only a small portion of Michigan's streams have the biological conditions favorable for substantial improvement in trout size and abundance. Many are as good as they can be, or nearly so, under the protection of Michigan's existing trout fishing rules. The main biological factors that need to evaluated when considering gear restrictions include the fish community composition, rates of reproduction and recruitment, mortality (both natural and fishing), and growth rates.

The intent and design of gear restrictions in Michigan is to produce more large resident trout, particularly brown trout and brook trout. They are intended to reduce hooking mortality of resident trout that might be caught multiple times in heavily fished waters before they live long enough (3 or more years) to grow to "trophy" size. Gear restrictions generally are not applied on streams where the majority of angling is for potamodromous (lake-run) salmon and trout. All Chinook, coho, and pink salmon die after spawning, and high percentages of steelhead also die after spawning. These species have grown up in the Great Lakes or large inland lakes and are

completing their spawning runs near the end of their life. Thus, requiring the use of artificial lures or flies to reduce hooking mortality for potamodromous fish would not result in increased abundance of these species. Instead, gear restrictions would prohibit the use of productive baits such as spawn or wigglers that are preferred by many anglers. Gear restrictions also typically are not applied to streams where bait anglers frequently target other species such as walleye or suckers.

In most streams, annual fluctuations in the abundance of trout are due primarily to variations in natural production of young-of-year fish. In other words, the production of young-of-year fish largely determines how many adult fish will be available for anglers in subsequent years. In turn, the production of young-of-year trout is strongly dependent on stream flow conditions during the egg incubation and fry emergence stages. In general, streams with relatively stable flow patterns tend to have higher levels of natural reproduction of trout than streams that experience higher spring flood flows.

Annual mortality for Michigan trout populations commonly exceeds 50%, but varies considerably between river systems. Before proposing gear restrictions, it is necessary to consider the relative importance of natural and fishing mortality. If fishing mortality is only a small component of total annual mortality (as in most Michigan streams), gear restrictions instituted to reduce fishing mortality will not noticeably affect trout populations. However, gear restrictions may be appropriate for streams with low natural mortality of trout and intense fishing pressure.

One of the goals of gear restrictions is to increase the number of large trout, so growth rates are a critical factor to evaluate when considering gear restrictions. For example, a brown trout would reach 12 inches at age 3 under average or above average growth conditions and at age 4 under below average growth conditions. Given a 50% annual mortality rate, only half as many fish would ever reach 12 inches in the slower growth scenario. Thus, regulations intended to increase abundance of brown trout larger than 12 inches have a greater chance of being successful in streams where trout grow rapidly.

Social and geographical factors also are important considerations. Stream segments that are surrounded by public land and readily accessible to anglers are better candidates for gear restrictions than stream segments where angler access is subject to cooperation from private landowners. Current fishing practices are another major consideration. If a large percentage of anglers on a stream segment currently use live bait (as is the case in many streams with steelhead and salmon fisheries), there is likely to be substantial public opposition to gear restrictions.

Current Gear Restricted Waters Review Process

During January-February, 2010, Fisheries Division received more than 500 nominations for gear restricted waters totaling over 1,300 stream miles. Fisheries management unit staff evaluated the nominated stream reaches using the criteria discussed above and outlined in Fisheries Order 213.10 (http://www.michigan.gov/documents/dnr/FO_213.10_317505_7.pdf). Management unit recommendations and the rationale for those recommendations are summarized below.

Unit: WLSMU
County: Marquette
Waterbody: **Carp River**
Segment(s): From Morgan Falls downstream to the confluence with Lake Superior (3.5 miles)
Entry No: 101 & 103
Requested by: Public

Recommendation: We recommend that this stream segment remain classified as Type 3.

Rationale: Insufficient or lack of biological data to support nomination for gear restriction; Significant fishery for potamodromous species (salmon and steelhead).

This is a high-gradient area of the lower Carp River and it receives a spring and fall run of salmonids. The primary angling fishery is for fall-run brown trout, Chinook salmon and spring-run steelhead. The resident brown trout fishery during the summer is very marginal. We have no data on growth and mortality rates for resident trout. Local knowledge and management experience with the stream and angling community indicate there is little social demand for gear restrictive regulations here. The fall migratory brown trout and Chinook fishery is popular and the current Type 3 regulations provide year-round angling opportunities. With little biological data on resident trout populations, and realizing that this reach primarily supports a potamodromous fishery, this river should remain classified as Type 3.

Unit: WLSMU
County: Marquette
Waterbody: **Dead River**
Segment(s): Forestville Power Plant and downstream (3.9 miles)
Entry No: 102
Requested by: Public

Recommendation: We recommend that this stream segment remain classified as Type 1.

Rationale: High natural mortality rate combined with low fishing mortality; Poor accessibility.

This is a wide, slow-moving portion of the Dead River situated between a powerhouse hydro discharge and an impoundment below. Brown trout were stocked here for many years to create a seasonal fishery in the coldwater discharge tailrace below the powerhouse; however evaluations of this stocking program showed that survival of stocked fish and fishing effort were both very low. Therefore, it is certain that natural mortality is high and fishing mortality is low. It is very difficult to gain walking access to the reach due to steep banks in the area. Brown trout are no longer stocked in this stream reach. This reach does not fulfill many of the criteria in FO-213 for trout streams that are good candidates for gear restrictive regulations.

Unit: WLSMU
County: Gogebic
Waterbody: **M. Br. Ontonagon**
Segment(s): From Hwy. US2 in Gogebic County downstream to Mex-i-min-e Falls (Burned Camp) (20.5 miles)
Entry No: 104
Requested by: Internal review (Type 2) plus public

Recommendation: We recommend that this stream segment remain classified as Type 2.

Rationale: Below average growth rates for resident trout; Lack of biological data on natural and fishing mortality rates.

Brook trout are the species sought by anglers here. The mean length of age-2 brook trout is over an inch less than the average for Michigan trout streams. However, total mortality rates are relatively low and as a consequence brook trout larger than 12 inches are relatively abundant and catches of large brook trout are common here. Modest numbers of brook trout survive to age 4, which is extremely rare for a MI trout stream. We have no data on natural mortality or fishing mortality rates, but fishing mortality has not prevented recruitment of larger and older individuals to the population under the current regulations. Estimated harvest of wild brook trout was about 550 per year during creel censuses conducted annually from 1988 through 1992 when the minimum size limit was 7 inches and the creel limit was 10. This area has historically sustained a very good quality fishery. It has been written about in outdoor sports articles. There is assured public access. This section of the Middle Branch Ontonagon River fulfills some of the criteria in FO-213 for trout streams that are good candidates for gear restrictive regulations. However, due to the lack of data for several key biological criteria, we recommend that it remain classified as Type 2.

Unit: WLSMU
County: Houghton
Waterbody: **E. Br. Ontonagon**
Segment(s): From Upper Dam Lake to the confluence with the Main Branch of the Ontonagon (48.3 miles)
Entry No: 105
Requested by: Public

Recommendation: We recommend that the reach upstream of M-28 remain classified as Type 1 and that Type 3 regulations be retained from Highway M-28 downstream to the confluence with the Middle Branch Ontonagon River.

Rationale: Fishery dominated by potamodromous species (salmon and steelhead); Low fishing mortality on resident trout.

Anglers fish the East Branch Ontonagon River for potamodromous species such as steelhead and coho salmon as well as for resident brook trout and brown trout. Approximately 35,000 steelhead are stocked here each year. Gear restrictions generally are not applied on streams where the majority of angling is for potamodromous salmon and trout. Modest populations of brook trout are found here along with some brown trout and steelhead. Limited survey data suggests that the mean length of age-2 brown trout and brook trout are average to below average. These data also suggest that total mortality rates for resident trout species are high because numbers of older trout captured were low. However, anglers do occasionally catch large brook trout and brown trout. We believe that angling mortality is low because angling effort in the Type 1 water is very low and in the Type 3 water the 15-inch minimum size limit protects virtually all resident trout from harvest. There is assured public access. The river segment is wooded and much of it flows through land owned by the U.S. Forest Service. Some interior portions are accessible only to hikers. This stream reach does not fulfill many of the criteria in FO-213 for streams that are good candidates for gear restrictive regulations, and we recommend that current regulations be maintained.

Unit: WLSMU
County: Ontonagon
Waterbody: **M. Br. Ontonagon**
Segment(s): From Agate Falls downstream to confluence with Trout Creek (4 miles)
Entry No: 106 & 118
Requested by: Public

Recommendation: We recommend retaining the current Type-3 regulations that apply from Agate Falls downstream to Lake Superior.

Rationale: Fishery dominated by potamodromous species (salmon and steelhead); Insufficient or lack of key biological data to support nomination for gear restrictions.

Anglers fish the Middle Branch Ontonagon River for potamodromous species such as steelhead as well as for resident brook trout and brown trout. Gear restrictions generally are not applied on streams where the majority of angling is for potamodromous salmon and trout. This reach has the capability to produce some large brook and brown trout. We have no current survey data on growth rates or total mortality and no creel surveys have been conducted here to measure angler harvest. However, access is limited to a walk-in trail from Highway M-28 down past Agate Falls, so we believe that angling effort and harvest are low. Moreover, the current 15-inch minimum size limit for this reach would protect essentially all resident trout from angler harvest. Based on several factors, including poor public access and the predominant potamodromous fishery, this stream segment is not a good candidate for gear restrictive regulations.

Unit: WLSMU
County: Gogebic
Waterbody: **M. Br. Ontonagon River**
Segment(s): From Hwy 45 to U.S. Forest Service Campground (Burned Dam -10.1 miles)
Entry No: 107
Requested by: Internal review (Type 2) plus public

Recommendation: We recommend that this stream segment remain classified as Type 2.

Rationale: Insufficient or lack of key biological data to support nomination for gear restrictions; below average growth rates for resident trout.

Brook trout are the primary species sought by anglers in this segment. Age-2 brook trout here grow slower than average for Michigan trout streams. We have no data on natural or fishing mortality rates. This area has historically sustained a quality fishery. It has been written about in outdoor sports articles and was nominated by the public for gear restrictions. The river is wide here and contains good pool habitat. Canoeists who travel through this area report catches of large size trout, which are occasionally the result of escapement from the Watersmeet Fish Hatchery located in the middle section of this nominated reach of river. There is assured public access. This section of the Middle Branch Ontonagon River fulfills some of the criteria in FO-213 for trout streams that are good candidates for gear restrictive regulations. However, we do not currently possess sufficient biological data to determine whether this stream meets the biological criteria for gear restrictions. We recommend that it remain classified as Type 2.

Unit: WLSMU
County: Ontonagon
Waterbody: **M. Br. Ontonagon River**
Segment(s): From Bond Falls to Agate Falls (8.7 miles)
Entry No: 108 & 117
Requested by: Internal review (Type 2) plus public

Recommendation: We recommend that this stream segment remain classified as Type 2.

Rationale: Existing habitat conditions do not support high quality trout fishery.

Summer water temperatures in this river segment have been higher than optimal in recent years due to the upstream Bond Falls seasonal reservoir storage dam. In addition to the stress of warm water temperatures trout have also been adversely affected by predatory fish species such as walleye and large northern pike that have been passed downstream from the impoundment. The dam is currently being rebuilt so we expect water temperatures discharged from the hypolimnion in the future will be more conducive to trout survival. At the present time this reach does not fulfill most of the criteria in FO-

213 for trout streams that are good candidates for gear restrictive regulations. Therefore we recommend that the segment remain classified as Type 2.

Unit: WLSMU
County: Marquette
Waterbody: **Yellow Dog River**
Segment(s): From headwaters in Baraga Co. (T50N, R30W, Sec. 26) to the confluence with Lake Superior (31.7miles)
Entry No: 109
Requested by: Public

Recommendation: We recommend that this stream segment remain classified as Type 1.

Rationale: High natural mortality rates on resident trout; Poor trout survival.

The fishery in the Yellow Dog River is dominated by brook trout, rainbow trout, and brown trout. The fisheries for these species are heavily subsidized by stocking. Brook trout growth rates are below average for Michigan, but little data on growth rates of the other trout species are available. Natural mortality rates are high because summer water temperatures are too warm to support good survival rates. Levels of natural reproduction are also very low due to warm summer water temperatures. In addition, virtually no rainbow trout and few brown trout survive to maturity so that they can spawn. We have no creel census data to assess fishing mortality, but we are confident that fishing mortality is low compared to natural mortality. Few trout of any species survive long enough to grow to larger sizes. Local knowledge and management experience with the stream and angling community indicate there is some public support for gear restrictions, and there is assured public access. However, the Yellow Dog River does not meet many of the biological criteria in FO-213 for trout streams that are good candidates for gear restrictive regulations. Therefore, we recommend that this stream segment remain classified as Type 1.

Unit: WLSMU
County: Marquette
Waterbody: **Big Garlic River**
Segment(s): From the headwaters in Marquette Co. (T49N, R27W, Sec. 5) to the confluence with Lake Superior (13.1 miles)
Entry No: 110
Requested by: Public

Recommendation: We recommend that this stream segment remain classified as Type-1 from the headwaters to the Forks (T49N, R27W, Sec.12) and Type-4 from the Forks to Lake Superior.

Rationale: Poor growth and survival of resident trout; Presence of a potamodromous fishery.

This is a shallow swift flowing gravel-pool type of river with an average width of about 15 feet. Small resident brook trout up to 8 inches are relatively abundant. Anglers also target spawning steelhead in the Type 4 water during the spring of the year. Growth rates for brook trout are below average for MI trout streams. Although we have no data to directly estimate mortality rates, the size structure of the brook trout population indicates that total mortality rates are high. The river is within a 15 minute drive from Marquette, so it gets a fair amount of fishing pressure. Local knowledge and management experience with the stream and angling community indicate there is little public demand for gear restrictive regulations on the Big Garlic River. This stream does not fulfill many of the criteria in FO-213 for trout streams that are good candidates for gear restrictive regulations. Therefore we recommend retaining the current regulations.

Unit: WLSMU
County: Marquette
Waterbody: **Little Garlic River**
Segment(s): From the headwaters in Marquette Co. (T49N, R27W, Sec. 14) to the confluence with Lake Superior (10.4 miles)
Entry No: 111
Requested by: Public

Recommendation: We recommend that this stream segment remain classified as Type 1.

Rationale: Insufficient or lack of key biological data to support nomination for gear restrictions; Presence of a potamodromous fishery.

This is a shallow, swift-flowing, gravel-pool type of river with an average width of about 15 feet. Anglers who seek resident trout target the relatively low-density population of small brook trout. The stream is also popular for its spring steelhead run. No survey data are available to assess growth or survival rates. However, the size structure of the brook trout population indicates that total mortality is high. Water temperatures warm beyond optimal levels for trout during mid-summer when they commonly rise above 70 ^{0}F. A waterfall about five miles upstream of the mouth is an effective barrier to upstream migration, so the steelhead fishery is confined to the lower part of the stream. Because the stream is relatively small, the brook trout seek out pool habitat as they grow larger and are readily caught at 7" and larger. The river is within a 15 minute drive from Marquette, so it gets a fair amount of fishing pressure. Local knowledge and management experience with the stream and angling community indicate there is little public demand for gear restrictive regulations on this stream. The Little Garlic River does not fulfill many of the criteria in FO-213 for trout streams that are good candidates for gear restrictive regulations. Therefore, we recommend retaining the current Type 1 regulations.

Unit: WLSMU

County: Marquette
Waterbody: **Dead River**
Segment(s): From County Road 550 to the confluence with Lake Superior (1.3 miles)
Entry No: 112
Requested by: Public

Recommendation: We recommend that this stream segment remain categorized as unclassified.

Rationale: Fishery dominated by potamodromous species (salmon and steelhead).

Most anglers in this reach pursue spring and fall runs of steelhead and salmon and most of the anglers use spawn bags and spinners. The nomination here was for the exclusion of treble hooks in this reach of river. Migrating salmon stack up below the Tourist Park Impoundment and are prone to harvest by snagging. Law Division routinely patrols this area, but occasionally there are citizens who are tempted to snag fish.

This stream reach does not meet many of the criteria for trout streams that are good candidates for conventional gear restrictive regulations, which are targeted at reducing hooking mortality of heavily fished resident trout species.

Unit: WLSMU
County: Ontonagon
Waterbody: **Big Carp River**
Segment(s): Lake of the Clouds downstream to the confluence with Lake Superior (9.7 miles)
Entry No: 113
Requested by: Public

Recommendation: We recommend that this stream segment be classified as Type-1 from the headwaters downstream to a point 100 yards downstream of Bathtub Falls (T50N, R45W, Sec. 1) and Type-3 from 100 yards below Bathtub Falls to Lake Superior.

Rationale: Assumed high natural mortality coupled with low fishing mortality.

Anglers primarily seek brook trout in this beautiful rock/pool stream. The stream supports a naturally reproducing population of small brook trout. We have no survey data to directly assess growth or mortality rates. However, because anglers must walk a considerable distance to reach the stream, fishing pressure is light. We are confident that fishing mortality is low compared to natural mortality. Local knowledge and management experience with the stream and angling community indicate there is little public demand for gear restrictions here. This stream segment does not fulfill many of the criteria in FO-213 for streams that are good candidates for gear restrictive regulations. We recommend that the current regulations be maintained.

Unit: WLSMU

County: Gogebic
Waterbody: **Little Carp River**
Segment(s): From the headwaters downstream to Lake Superior (11.8 miles)
Entry No: 114
Requested by: Public

Recommendation: We recommend that this stream segment be classified as Type-1 from the headwaters downstream to Traders Fall (T.50N. R.45W. Sec.2), and Type-3 from Traders Fall downstream to Lake Superior.

Rationale: Insufficient or lack of key biological data to support nomination for gear restrictions.

Anglers primarily seek brook trout in this stream, which supports a naturally reproducing population of small brook trout. We have no survey data to directly assess growth or mortality rates. However, because anglers must walk a considerable distance to reach the stream, fishing pressure is light. We are confident that fishing mortality is low compared to natural mortality. Local knowledge and management experience with the stream and angling community indicate there is little public demand for gear restrictions here. Currently, we do not possess sufficient biological data to determine whether this stream meets the biological criteria for gear restrictions, and based on the information that is available, this stream segment does not fulfill many criteria in FO-213 for streams that are good candidates for gear restrictive regulations. We recommend that the current regulations be maintained.

Unit: WLSMU
County: Houghton
Waterbody: **Otter River**
Segment(s): West Branch headwaters to confluence with North Branch (22.3 miles)
North Branch headwaters to confluence with West Branch (17.8 miles)
Main branch (confluence of West and North Branches) downstream to Otter Lake (10.4 miles)
Entry No: 115
Requested by: Public

Recommendation: We recommend that this stream segment remain classified as Type 1 from the headwaters of the North Branch and the headwaters of the West Branch to their confluence; and Type 3 from this confluence downstream to the Sturgeon River.

Rationale: Insufficient or lack of key biological data to support nomination for gear restrictions; Below average growth rates for resident trout; Presence of a potamodromous fishery.

Anglers who fish for resident trout species target brook trout and brown trout. Other anglers seek potamodromous species such as steelhead using a variety of tackle. Growth rates for brook trout are generally below average for Michigan trout streams. There is

little data available to assess mortality rates. Brook trout populations in both the North Branch and West Branch are supplemented by stocking. This is a top quality coldwater trout stream that is targeted by anglers of the western UP and the municipality of Houghton, Hancock, Baraga, and other communities. Fishing pressure is fairly high throughout the summer. The river flows through State and Corporate Forest lands, providing public access to much of the river system. Local knowledge and management experience with the stream and angling community indicate there is little public demand for gear restricted regulations here. Currently, we do not possess sufficient biological data to determine whether this stream meets the biological criteria for gear restrictions, but based on what information is available, these river segments do not meet many criteria in FO-213 for trout streams that are good candidates for gear restrictive regulations. We recommend that current regulations be retained.

Unit: WLSMU
County: Ontonagon
Waterbody: **Ontonagon watershed**
Segment(s): Undetermined stretch
Entry No: 116
Requested by: Public plus a portion that is Type 2 (Middle Branch)

Recommendation: We recommend that current regulations be maintained in this watershed. Some stream segments are currently Type 1 and others are Type 2.

Specific reaches within the Ontonagon watershed have been discussed elsewhere in this document.

Unit: WLSMU
County: Houghton
Waterbody: **Jumbo River**
Segment(s): From the forks of the East and West Branches downstream to Highway M-28 (4 miles)
Entry No: 119
Requested by: Public

Recommendation: We recommend that this stream segment remain classified as Type 1.

Rationale: Below average growth of resident trout; Presence of a potamodromous fishery.

A popular spring steelhead fishery occurs here as well as further downstream (north) of Highway M-28, and anglers use a variety of tackle to catch them. Anglers also fish here for resident trout species, primarily brook trout. Brook trout growth rates are slower than average for Michigan trout streams. We believe that total mortality rates for brook trout are high because large individuals are rarely found here. We believe that natural mortality is high compared to fishing mortality, in part because resident trout need to compete with dense populations of juvenile steelhead. Access is good along trails and

roads to the river system. Local knowledge and management experience with the stream and angling community indicate there is little public demand for gear restrictions. The Jumbo River does not fulfill many of the criteria in FO-213 for trout streams that are good candidates for gear restrictive regulations.

Unit: WLSMU
County: Houghton
Waterbody: **Pilgrim River**
Segment(s): From Superior Road downstream to Paradise Road (3 miles)
Entry No: 120
Requested by: Public

Recommendation: We recommend that this stream segment remain classified as Type 1 from the headwaters downstream to Highway US-41 and Type 3 from Highway US-41 to Lake Superior.

Rationale: Below average growth of resident trout; Presence of a potamodromous fishery; existing habitat does not support a high quality trout fishery.

Anglers fish the Pilgrim River using a variety of tackle for potamodromous species such as steelhead as well as for brook trout. We believe that brook trout growth rates are slower than average for MI trout streams because of the character of the river and because they must compete with juvenile steelhead. The small average size of brook trout indicates that total mortality rates are high. The river lacks in good holding cover for resident fishes. Long, flat riffle areas completely lacking in underwater cover and flat, shallow, bedrock-bottom pools provide little suitable habitat for legal-sized trout. Access is good along trails and roads to the river system. Local knowledge and management experience with the stream and angling community indicate there is little public demand for gear restrictions here. The Pilgrim River does not fulfill many criteria in FO-213 for trout streams that are good candidates for gear restrictive regulations. We recommend that current regulations be maintained.

Unit: WLSMU
County: Keweenaw
Waterbody: **Montreal River**
Segment(s): From Medora Creek to the Lower Mandan Bridge (8 miles)
Entry No: 121
Requested by: Public

Recommendation: We recommend this stream segment remain classified as Type 1.

Rationale: Low quality trout habitat.

The Montreal River provides poor angling opportunities for brook trout. Brook trout population densities are very low and most individuals are small. We believe that growth rates are probably lower than average and that total mortality rates and natural mortality rates are high because of habitat deficiencies. Summer water temperatures in much of the river are too high to sustain good trout production. Suitable spawning habitat also

appears to be limited, in part due to beaver dams. Access is good along trails and roads to the river system. The Montreal River does not fulfill most criteria in FO-213 for trout streams that are good candidates for gear restrictive regulations. We recommend that current Type 1 regulations be maintained.

Unit: WLSMU
County: Marquette
Waterbody: **Salmon Trout River**
Segment(s): Entire watershed (31.7 miles).
Entry No: 122
Requested by: Public

Recommendation: We recommend that this stream segment remain classified as Type 1 from the headwaters downstream to Lower Falls (T51N, R28W, Section 13) and as a Research Area from Lower Falls downstream to Lake Superior.

Rationale: Existing habitat does not support high quality trout fishery; Inadequate public access.

Little angling by the public occurs anywhere on the Salmon Trout River. The Salmon Trout River is currently a watershed with Type-1 sport fishing regulations in all reaches except from the Lower Falls down to Lake Superior. The watershed is comprised of numerous shallow, narrow feeder streams that have strong inputs of groundwater. These feeder streams come together to form a mainstem channel. Most of this mainstem lies within the Huron Mountain Club. The Huron Mountain Club does not allow pubic trespass of their lands or in the portion of the Salmon Trout River that flows through their property.

Most of the Salmon Trout River is inhabited by a low density population of small wild brook trout. Below the Lower Falls the river is inhabited by "resident" brook trout mixed with juvenile brook trout that are progeny of brook trout that grew to maturity in Lake Superior before returning to spawn in the river (coaster brook trout). During the late summer and fall adult coaster brook trout are also present in the river below the falls, but the river is closed to angling at that time. The portion of the river that is freely accessible to lake-run brook trout lies entirely within the Huron Mountain Club property and is off-limits to public angling. The headwater portions of the Salmon Trout River, upstream of the Huron Mountain Club property, contain low numbers of brook trout that are generally small (5-inch average total length). These headwater streams are narrow and shallow. They also transport a high sand bedload so good quality reproductive habitat is sparse. The abundance of legal size brook trout is quite low within the publicly accessible portions of the Salmon Trout River. The lower river, which does contain some large brook trout, is inaccessible to the general public but is fished by members of the Huron Mountain Club. The Salmon Trout River is closed to fishing downstream of the Lower Falls from August 15 through the Friday before the last Saturday in April of the following year. Thus, virtually all lake-run brook trout spawners (coaster brook trout adults) are protected from angler harvest.

The Salmon Trout River does not fulfill criteria in FO-213 for trout streams that are good candidates for gear restricted regulations. We recommend that current regulations be maintained.

Unit: WLSMU
County: Baraga
Waterbody: **Perch River**
Segment(s): Entire watershed. (25.6 miles)
Entry No: 123
Requested by: Public

Recommendation: We recommend this stream segment remain classified as Type 1.

Rationale: Existing habitat does not support high quality trout fishery.

Brook trout is the targeted species in the Perch River. We have no data on growth or mortality rates. Brook trout numbers in the river are believed to be limited by a lack of suitable spawning habitat and an overall lack of instream woody cover. During a 2004 electrofishing survey only 18 brook trout were collected during three electrofishing runs and only one of these fish was 7 inches long (legal sized). The Keweenaw Bay Indian Community stocked yearling brook trout in the Perch River from 2005 through 2008 in hopes of improving the fishery. The paucity of larger and older wild fish suggests that total mortality rates are high. We have no information on fishing mortality. Local knowledge and management experience with the stream and angling community indicate there is little public demand for gear restrictive regulations on the Perch River. This stream does not fulfill many criteria in FO-213 for trout streams that are good candidates for gear restrictive regulations. Therefore, we recommend that the existing Type 1 regulations be retained because they are most appropriate for this stream.

Unit: WLSMU
County: Baraga County
Waterbody: **Sturgeon River**
Segment(s): Partial watershed. (16.7 miles)
Entry No: 124
Requested by: Public

Recommendation: We recommend that the current Type 2 regulations be retained.

Rationale: High natural mortality coupled with low fishing mortality; Below average growth rates for resident brook trout.

Anglers fish for both brook and brown trout in the Sturgeon River. Brook trout growth rates are below average for Michigan trout streams. No data are available on growth rates for brown trout. The fishery is sustained by annual stockings of yearling brown trout. Good quality spawning habitat is lacking in most of the river. We believe that total mortality rates are high because most stocked fish do not survive beyond the year

they are stocked. Overall, angling pressure is very light throughout the watershed so we are confident that fishing mortality is low compared to natural mortality. Most riparian lands are owned by the US Forest Service and Wisconsin Electric Power Company. This land is undeveloped and in a natural forested state. Access to this river is limited primarily to hike-in through forested land or through the Federal Sturgeon River Gorge Wilderness area preserve. Local knowledge and management experience with the stream and angling community indicate there is little public demand for gear restrictive regulations. The Sturgeon River does not fulfill many criteria in FO-213 for trout streams that are good candidates for gear restrictive regulations.

Unit: WLSMU
County: Gogebic County
Waterbody: **Presque Isle River**
Segment(s): Partial watershed (42.9 miles)
Entry No: 125
Requested by: Internal Review (Type 2) and Public

Recommendation: We recommend that the current classification of this stream be changed from Type 2 to Type 1.

Rationale: Low growth rates of resident trout; High natural mortality; Water temperatures too high to support high quality trout fishery.

The present Type 2-regulated water of the Presque Isle River supports a low quality fishery for brook trout. Years ago, trout were more abundant and some anglers reported catching quality-size brook trout and rainbow trout in the upper (southerly) nominated reaches of this river. In the late 1980s, northern muskellunge were accidently released from headwater rearing ponds located in the State of Wisconsin. Brook trout growth rates are lower than average for Michigan trout streams, although there are rare catches of large individuals (a common occurrence in warm streams where forage fish such as minnows are abundant). Trout total mortality rates are believed to be high and may be attributed to high summer water temperatures as well as predation by northern muskellunge. We are confident that fishing mortality is low compared to natural mortality. The Presque Isle River does not fulfill most criteria in FO-213 for trout streams that are good candidates for gear restrictive regulations. We recommend that the current classification of this stream be changed from Type 2 to Type 1.

Unit: WLSMU
County: Gogebic
Waterbody: **Black River**
Segment(s): Partial watershed.

Entry No: 126
Requested by: Internal Review (Type 2) and Public

Recommendation: We recommend that Type 2 regulations be retained.

Rationale: Below average growth rates for resident trout; Water temperatures too high to support high quality trout fishery.

Anglers fish primarily for brook trout and brown trout in the nominated reach. Trout growth rates are below average for Michigan trout streams. Total mortality rates are high, primarily due to high summer water temperatures.

A thorough review and analysis of this river in 2006 conclusively showed that river water temperatures have been problematic throughout the watershed due to the lack of groundwater inputs (Michigan Department of Natural Resources Status of the Fishery Resource Report #2007-37, B. Gunderman). Temperature monitoring in 2005 documented in-stream temperatures exceeding 70 degrees Fahrenheit on a regular basis and exceeding 80 degrees at the monitoring site closest to Highway US-2. Correspondingly, brook trout and brown trout catches have been low throughout this watershed including the nominated water reach. Coldwater tributaries in the lower reaches do provide thermal refugia, and the natural production of brook trout from these waters contributes wild fish to the nominated reach of the Black River. Annual stocking of DNRE yearling brook trout and brown trout provides fish that also supplement this fishery. Angling pressure is moderate through most of the year and heavier during the spring after the trout season opener. We believe that fishing mortality is low compared to natural mortality.

Access to this river is quite good from numerous points along a paved County road that parallels the west side of this river, and also from numerous woods roads that access the east side of this river.

In May 2007, a public meeting was held in Ironwood, Michigan to discuss the sport fishing regulations that would be appropriate for the Black River. There was very strong public support for retaining the Type-2 regulations for the lower Black River between US-2 and Rainbow Falls, despite poor catches as shown in the 2006 survey effort. The Black River does not fulfill many of the biological criteria in FO-213 for trout streams that are good candidates for gear restrictions. We recommend that the current Type 2 regulations be retained.

Unit: WLSMU
County: Gogebic
Waterbody: **Duck Creek**

Segment(s): From RR Bridge (T44N, R39W, S16 SE ¼ SE ¼) to confluence with Middle Branch Ontonagon River (6.5 miles)
Entry No: 127
Requested by: Internal Review (Currently gear restricted)

Recommendation: Gear restrictions for Duck Creek are required by current legislation. We recommend that the current artificial lures only gear restrictions be simplified by setting all minimum size limits for trout species at 10 inches; open season all year; possession season: for brook trout, brown trout and Atlantic salmon; the last Saturday in April - September 30; for all other species open all year. Creel limit 2 trout per day.

Gear restrictive regulations were implemented on Duck Creek in the early 1970s as mandated by legislative action. The fishery in Duck Creek is dominated by brook trout. We have no data on growth rates of brook trout here but expect that they are average or slower than the average for Michigan trout streams because water temperatures are quite cold. We believe that natural mortality rates are moderate to high because few brook trout larger than 10 inches are presently found in the population. Most brook trout would need to survive to age 3 before growing to 10 inches. Fishing mortality is believed to be low, due in part to the current gear restrictions. Anecdotal reports suggest that fishing mortality was higher before gear restrictions were implemented because the stream was more heavily fished and the minimum size limit was 7 inches. Anecdotal information suggests that the gear restrictive regulations and reduced fishing pressure did result in larger numbers of 7 to 9 inch brook trout but trout 10 inches or larger are still relatively sparse. If the legislative mandate for gear restrictions was removed, we would recommend changing regulations to Type 1.

Unit: ELSMU
County: Luce
Waterbody: **Tahquamenon River**
Segment(s): From County Road 421 Bridge downstream to County Road 442 Bridge (8 miles)
Entry No: 201
Requested by: Public

Recommendation: We recommend that this stream remain classified as Type 1.

Rationale: Insufficient or lack of key biological data to support nomination for gear restrictions.

This stretch of river supports a naturally reproducing brook trout population and is not stocked. Age-2 brook trout growth rates are average for Michigan trout streams. Total mortality rates are high. No data are available on natural or fishing mortality rates. Since extensive stream habitat enhancement efforts in the late 1990s, this reach has become arguably the most heavily fished river in the ELSMU. There is assured public access to this river segment. Currently, we do not possess sufficient biological data to determine whether this stream meets the biological criteria for gear restrictions. However, local

knowledge and management experience with the stream and angling community indicate that the present Type 1 regulations are popular with anglers and that there is little social demand for gear restrictions here.

Unit: ELSMU
County: Luce
Waterbody: **Two Hearted River**
Segment(s): From County Road 407 Bridge downstream to the confluence with Lake Superior (15 miles)
Entry No: 202
Requested by: Public

Recommendation: We recommend that Type 4 regulations be applied to this entire stream section.

Rationale: Significant fishery for potamodromous species (salmon and steelhead). Anglers fish for a variety of trout and salmon species in the Two Hearted River. The mouth of the Two Hearted River is annually stocked with 9,000 yearling steelhead. It is currently managed under Type 4 regulations from the mouth upstream 7 miles to the Co Rd 410 (Reed & Green) Bridge. Little is known about BKT angling effort or catch in the stretch between Co Rd 410 and Co Rd 407, but this reach would provide a good seasonal fishery for steelhead, coho salmon, and pink salmon. The fishery for spawning runs of steelhead and salmon is very popular, and gear restrictions generally are not applied on streams where the majority of angling is for potamodromous salmon and trout. Extending the Type 4 regulations further upstream may help disperse angling effort and provide new fishing opportunities. Local knowledge and management experience with the stream and angling community indicate there is little social demand for gear restrictions here.

Unit: ELSMU
County: Marquette
Waterbody: **Chocolay**
Segment(s): The entire watershed downstream to the confluence with Lake Superior
Entry No: 203
Requested by: Public

Recommendation: We recommend continuation of the current Type 3 regulations from the confluence of Big Creek downstream to Lake Superior, and Type 1 in the upstream portions of the watershed.

Rationale: Below average growth rates and high natural mortality of resident trout; Significant fishery for potamodromous species (salmon and steelhead).

Anglers fish for a variety of trout and salmon species in the Chocolay River including steelhead, coho salmon, brown trout, and brook trout. While the public recommendation for gear restrictions appeared to be targeted at brook trout, gear restrictions generally are

not applied on streams where the majority of angling is for potamodromous salmon and trout. Age-2 brook trout in the Chocolay River are smaller than the average for Michigan trout streams because water temperatures are very cold. Total mortality rates of brook trout in the Chocolay River are high. We have no data on natural mortality or fishing mortality rates. However, we believe that fishing mortality rates are relatively low because angling effort is relatively low. Private ownership of stream frontage limits access to much of the stream to road crossings. The tributaries are presently designated Type 1 and support reasonably good fisheries. Local knowledge and management experience with the stream and angling community indicate there is little social support for such regulations here. The Chocolay River does not fulfill many of the criteria for selection of trout streams that are good candidates for gear restrictions that are described in FO-213.

Unit: ELSMU
County: Alger
Waterbody: **Mosquito River**
Segment(s): The entire watershed downstream to the confluence with Lake Superior (7 miles)
Entry No: 204
Requested by: Public

Recommendation: We recommend that the present research regulations be maintained until ongoing research on coaster brook trout has been completed.

Rationale: Ongoing research.

Anglers fish the Mosquito River for steelhead and salmon in addition to fishing for resident brook trout. Data on brook trout growth and survival rates are presently being collected as part of research being conducted at Northern Michigan University. Fishing mortality is negligible because the current research regulations applied for the past 10 years are functionally equivalent to no-kill regulations. Current regulations mandate an 18 inch minimum size limit for brook trout from April-July 31 and no brook trout may be killed from August 1- through the last Friday in April of the following year. The present research regulations are very unpopular among local anglers who are advocating a change to Type 1 regulations.

Unit: ELSMU
County: Alger
Waterbody: **Seven Mile Creek**
Segment(s): From Seven Mile Lake downstream to the confluence with Lake Superior (6 miles)
Entry No: 205

Requested by: Public

Recommendation: We recommend that the present research regulations be maintained until ongoing research on coaster brook trout has been completed.

Rationale: Ongoing research.

Anglers fish Seven Mile Creek for steelhead and salmon in addition to fishing for resident brook trout. Data on brook trout growth and survival rates are presently being collected as part of research being conducted at Northern Michigan University. Fishing mortality is negligible because the current research regulations applied for the past 10 years are functionally equivalent to no-kill regulations. Current regulations mandate an 18 inch minimum size limit for brook trout from April-July 31 and no brook trout may be killed from August 1- through the last Friday in April of the following year. The present research regulations are very unpopular among local anglers who are advocating a change to Type 1 regulations.

Seven Mile Creek has assured public access.

Unit: ELSMU
County: Chippewa
Waterbody: **East Branch Tahquamenon River**
Segment(s): Headwaters to North Hulbert Road (19 miles)
Entry No: 206
Requested by: Internal review (Type 2)

Recommendation: We recommend that the classification of this stream be changed from Type 2 to Type 1.

Rationale: Existing habitat conditions would not support a high quality trout population.

The East Branch Tahquamenon River is one of the larger tributaries of the Tahquamenon River. The fishery is exclusively for brook trout. Contemporary growth rates of age-2 brook trout are about average for Michigan trout streams although they historically grew much faster before the watershed was degraded by beaver dams. There are no recent estimates of total mortality rates. However, no brook trout older than age 2 have been captured in recent surveys, so it is certain that total mortality is high. We have no estimates of fishing mortality but believe it is low because road access is limited and multiple beaver dams further hinder access. The number of dams has more than doubled in the last fifteen years (USFS Status Report, Chuck Bassett, 2005). The status report described a significant decline in the brook trout population, likely due to blocked spawning migrations into critical habitat. Downstream from Eckerman, the river is largely inaccessible, flowing through an extensive marsh with clay substrate. This stream was not nominated as a candidate for gear restrictions.

The East Branch Tahquamenon River does not fulfill most of the criteria for selection of trout streams that are good candidates for gear restrictions. Few brook trout presently

survive long enough to grow to the current 10 inch minimum size limit due to habitat changes caused by beaver so angler harvest is severely limited. For these reasons, the ELSMU recommends that the current Type 2 regulations be changed to Type 1.

Unit: NLMMU
County: Iron
Waterbody: **Cooks Run**
Segment(s): From the headwaters to the confluence with the South Branch of Paint River (13.5 miles) & from Federal Forest Highway 16 downstream to the confluence with the South Branch of Paint River (4.5 miles)
Entry No: 301 & 302
Requested by: Internal review (Type 2) and public

Recommendation: We recommend that the current Type 2 water regulations for the 5-mile reach from Federal Forest Highway 16 downstream to the confluence with the South Branch of the Paint River be changed to the following gear restricted regulations.

- **Artificial lures only**
- **Open and possession season: The last Saturday in April-September 30 for BKT, BNT, and ATS: other species all year**
- **Minimum size limits:**
  - **Brook trout 8 inches**
  - **Brown trout 12 inches**
  - **Rainbow trout 10 inches**
- **Creel limit 5 with no more than 3 fish 15 inches or larger**

Rationale: Data indicate that habitat can support survival of more brown trout to older ages and larger sizes; Fishing mortality may be high based on observed heavy fishing pressure; Good public access.

Cooks Run is located in northwest Iron County and is a popular destination for both in-state and out-of-state anglers. Cooks Run has a self-sustaining fishery composed of both brook trout and brown trout. Our proposed gear restrictive regulations are targeted at improving the abundance and catch rates for large brown trout. There are no data available on brown trout growth rates or mortality rates but fish up to nearly 20 inches long are sometimes found here. Total mortality rates of brook trout are high because very few live long enough to grow to 10 inches long. We believe that hooking mortality of brook trout may be quite high because this stream reach is heavily fished. The aesthetic appeal of Cooks Run has made it a favorite of many anglers and the waters lend themselves to both wading and navigation by canoes or kayaks. There is assured public access to the stream.

Local knowledge and management experience with the stream and angling community indicate there is substantial public support for gear restrictive regulations on Cooks Run, although such regulations are also strongly opposed by others. Cooks Run fulfills many

of the biological, physical and social criteria for selection of trout streams that are good candidates for gear restriction regulations.

Unit: NLMMU
County: Iron
Waterbody: **Fence River & East Branch of Fence River**
Segment(s): From the confluence of the East and West Branches (T.45N.-R.32W. Sec 12) downstream to Fence River Road (T.45N.-R.31W. Sec 23) (10.2 miles); and from Fence Lake (Baraga County) downstream to the confluence of the West Branch (T.45N.-R.32W. Sec 12) (6.1 miles)
Entry No: 307 & 309
Requested by: Public

Recommendation: We recommend that the current Type 1 regulations be retained.

Rationale: Insufficient or lack of key biological data to support nomination for gear restrictions; Suspected high natural mortality due to warm summer water temperatures; Access is limited by the remote location so fishing mortality is believed to be low.

The Fence River and East Branch of the Fence River are located in the northeast portion of Iron County in a very remote setting. Brook trout are the primary species sought by anglers. We do not have data to directly assess growth rates, but we believe that growth rates are above average because both streams produce some quality-sized fish. No data are available on natural or fishing mortality rates. Fishing effort is believed to be quite low overall because of the remote setting. It is likely that natural mortality rates are quite high because both streams are substantially warmer than optimum during summer, which forces trout to seek out cool water refuges. There is assured public access to both streams but access to most of the proposed reaches is difficult and limited.

Local knowledge and management experience with the stream and angling community indicate there is little public demand for gear restrictions on these streams. Use of minnows as bait is a popular fishing technique on these two waters. Currently, we do not possess sufficient biological data to determine whether this stream meets the biological criteria for gear restrictions.
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Unit: NLMMU
County: Dickenson
Waterbody: **Ford River**
Segment(s): From the confluence with Two Mile Creek (T43N, R29W, Sec 18) downstream to County Road 581 (T43N, R28W, Sec 22) (17.2 miles)
Entry No: 308
Requested by: Public

Recommendation: We recommend that the current Type 1 regulations be retained.

Rationale: Warm summer water temperatures are a primary factor limiting survival of trout.

The Ford River is located in central Dickinson County and dissects the county from west to east. Brook trout are the primary species sought by anglers in the Ford River. Growth rates for brook trout are believed to be above average, as is often the case in marginally warm streams with low density populations. The size structure of the population indicates that total mortality rates are high. We believe that natural mortality rates are high because high summer water temperatures limit habitat quality. Extensive long-distance movements by trout to escape lethally high water temperatures have been documented in this system. There is assured public access but angling effort is believed to be relatively low. Local knowledge and management experience with the stream and angling community indicate there is little public demand for gear restrictions on the Ford River. Currently, we do not possess sufficient biological data to determine whether this stream meets the biological criteria for gear restrictions, but based on management experience, we believe this stream would not be a good candidate for gear restrictions.

Unit: NLMMU
County: Iron
Waterbody: **Iron River**
Segment(s): From Wild River Road (T43N, R35W, Sec 18) downstream to the confluence with the Brule River (20.0 miles)
Entry No: 305
Requested by: Public

Recommendation: We recommend that the current Type 1 regulations be retained.

Rationale: Poor survival of trout beyond age 2.

The Iron River is located in close proximity to two population centers making it a popular river for local anglers. Brook trout are the primary species sought by anglers. Mean length of age-2 brook trout is about average for Michigan trout streams. Total mortality is relatively high. Very few brook trout survived to age 3 even under the Type 2 regulations that were in effect from 2000 to 2008. We have no data on natural or fishing mortality rates. Angling pressure is believed to be modest, with the majority of angling occurring during the first month of the season. There is assured public access but there are also extensive reaches where the riparian zone is privately owned. Local knowledge and experience with the stream and angling community indicate there is little public demand for gear restrictions on the Iron River. Bait angling and angling with artificial lures and flies are all popular on the Iron River.

While we have limited biological data, the Iron River does not appear to fulfill many of the criteria in FO-213 for streams that are good candidates for gear restrictive regulations.

Unit: NLMMU
County: Gogebic & Iron
Waterbody: **South Branch of the Paint River**
Segment(s): From US Highway 2 (T44N, R38W, Sec 24) downstream to Gibbs City (T44N, R35W, Sec 8) (29.1 miles); From the confluence with Cooks Run (T44N, R36 W, Sec 28) downstream to the confluence with the N.B. of the Paint River (T44N, R35W, Sec 8) (11.0 miles); and from the Headwaters (T44N, R37W, Sec 34) downstream to the confluence with the N.B. of the Paint River (T44N, R35W, Sec 8) (33 miles).
Entry No: 303, 304 & 306
Requested by: Internal review (Type 2) and public

Recommendation: We recommend that the current Type 2 regulations for the 10 mile stream segment from the mouth of Cooks Run downstream to the confluence with the North Branch of the Paint River be changed to the following gear restricted regulations.

- **Artificial lures only**
- **Open and possession season: The last Saturday in April-September 30 for BKT, BNT, and ATS: other species all year**
- **Minimum size limits:**
  - **Brook trout 8 inches**
  - **Brown trout 12 inches**
  - **Rainbow trout 10 inches**
- **Creel limit 5 with no more than 3 fish 15 inches or larger**

Rationale: Brown trout mortality and growth rates are believed to be conducive to improvements in abundance of larger fish; Excellent growth rates for resident trout; High level of fishing effort.

The South Branch Paint River has a self-sustaining fishery composed of both brook trout and brown trout. Both brown trout and brook trout are sought by anglers of the South Branch Paint River. Our proposed gear restrictive regulations are targeted at improving the abundance and catch rates for large brown trout. The mean lengths of age-2 brown trout are about 2 inches larger than the state average while age-2 brook trout are about an inch larger than average. Total mortality is relatively low for brown trout but is very high for brook trout. We have no data on natural and fishing mortality rates for either species. However, we believe that fishing mortality rates of brook trout are high because the river is intensively fished by both local and out-of-state anglers. Creel studies indicate that fishing with live bait is very popular, so it is likely that hooking mortality on brook trout is high. Very few brook trout live long enough to grow to 10 inches. However, fast growth rates for brown trout allows this stream to produce as many or more brown trout larger than 12 inches than many sections of the Au Sable River that are currently managed under gear restrictions and higher size limits. We believe that gear restrictive regulations coupled with the above average growth rates for brown trout offer excellent potential for significant increases in trophy-sized brown trout.

There is substantial public support for gear restrictive regulations on the South Branch Paint River, although such regulations are also strongly opposed by others. The South Branch Paint River fulfills many of the biological, physical and social criteria for selection of trout streams that are good candidates for gear restriction regulations.

Unit: NLMMU
County: Schoolcraft & Luce
Waterbody: **East Branch of the Fox River**
Segment(s): From M-77 (T46N, R13W, Sec 4) downstream to M-28 (T46N, R12W, Sec 33) (11.9 miles); and from the headwaters (T47N, R13W, Sec 6) downstream to the confluence with the Fox River (T45N, R13W, Sec 25) (33.9 miles)
Entry No: 321, 322, 323, 324, 325
Requested by: Public

Recommendation: We recommend that the current Type 1 regulations be retained.

Rationale: Below average growth rates and poor survival of resident trout.

The Fox River system has the best groundwater resources of any stream in the central and eastern UP by far. Brook trout are the primary species sought by anglers. The mean length of age-2 brook trout in the East Branch Fox River near M-77 is smaller than average for Michigan trout streams, whereas in the Fox River growth rates are about average. Total mortality rates in the East Branch Fox River are relatively high and very few individuals survive to age 3. No data on mortality rates are available for the Fox River, but brook trout population structure indicates that total mortality is high. A few individuals in both stream segments live long enough to grow to trophy size, but the vast majority of individuals caught in fisheries surveys are young and small. We have no data on natural mortality rates or fishing mortality rates for either segment. Angler reports and staff observations suggest that fishing mortality rates may be moderate. However, the Type 2 regulations applied upstream of M-28 on the East Branch from 2000 through 2007 did not result in increased abundance of larger brook trout, which suggests that natural mortality had more influence than fishing mortality on population size structure. There is assured public access to the streams and some sections are readily navigable by boat.

Both the Fox River and East Branch Fox rivers fulfill some of the criteria for streams that are good candidates for gear restrictive regulations. However, given that growth rates are not above average and that previous Type 2 regulations did not improve trout population size structure in the East Branch Fox River, we expect that gear restrictions would not provide measureable increases in abundance of larger brook trout.

Unit: NLMMU
County: Schoolcraft
Waterbody: **Fox River**

Segment(s): From the headwaters (T48N, R14W, Sec 21) downstream to the confluence with the Manistique River (T45N, R13W, Sec 25) (35.5 miles)
Entry No: 318, 319, 320
Requested by: Public

Recommendation: We recommend that the current Type 1 regulations be retained.

Rationale: Insufficient or lack of key biological data to support nomination for gear restrictions.

The Fox River system has the best groundwater resources of any stream in the central and eastern UP by far. Wading is possible and anglers can canoe the river from the Fox River Campground (~4 miles above M-28) downstream.

Previous surveys indicate that brook trout growth rates are average. Both natural and fishing mortality rates are unknown. Natural reproduction is excellent and has increased dramatically in response to bank stabilization efforts conducted from 1988 to 1992.

Angler access is excellent as there are large holdings of public land and rustic camping facilities nearby. Some anglers seek out the Fox River for the "Hemingway experience." While this stream is supported by natural reproduction and is heavily fished, currently we do not possess sufficient biological data to determine whether this stream meets the biological criteria for gear restrictions.

Unit: NLMMU
County: Schoolcraft
Waterbody: **Driggs River**
Segment(s): Unknown length
Entry No: 327
Requested by: Public

Recommendation: We recommend that the current Type 1 regulations be retained.

Rationale: Insufficient or lack of key biological data to support nomination for gear restrictions; Poor survival of trout; Low fishing pressure.

Stream flow is relatively stable and summer water temperatures are suitable for brook trout. Brook trout are the primary species sought by anglers. No data are available on growth rates for brook trout. We believe total mortality rates for brook trout are high because available survey data indicate that the vast majority of the fish are young and relatively small. Natural and fishing mortality rates are unknown. However, it is known that natural mortality rates for brook trout are typically quite high in streams throughout Michigan where natural mortality data have been collected. Fishing pressure on the Driggs River is much lower than on the better known East Branch of the Fox River and the Main Branch Fox River located further east. There is assured public access to the river both upstream and downstream of M-28 due to state forest ownership and the Seney

National Wildlife refuge. Local knowledge and management experience with the stream and angling community indicate there is little public demand for gear restrictions. . Currently, we do not possess sufficient biological data to determine whether this stream meets the biological criteria for gear restrictions, but management experience with the Driggs River suggests that it does not fulfill many of the criteria in FO-213 for selection of trout streams that are good candidates for gear restrictive regulations.

Unit: NLMMU
County: Schoolcraft
Waterbody: **Manistique River**
Segment(s): From the paper mill dam (T41N, R16W, Sec 12) downstream to the confluence with Lake Michigan (T41N, R16W, Sec 13) (0.77 miles)
Entry No: 326
Requested by: Public

Recommendation: We recommend that the current Type 4 regulations be retained.

Rationale: Fishery dominated by potamodromous species (salmon and steelhead).

The section of the river that can be waded supports Great Lakes runs of steelhead, brown trout and Chinook salmon. Anglers currently use a mixture of artificial flies, artificial lures, and spawn bags. There was a public nomination to add gear restricted regulations from the Manistique Papers dam down to Lake Michigan. The Unit recommends maintaining the current Type 4 regulation in this stretch of the Manistique River.

Unit: NLMMU
County: Alger & Schoolcraft
Waterbody: **Indian River**
Segment(s): From Wide Waters (T44N, R19W, Sec 13) downstream to the confluence with Indian Lake (T42N, R16W, Sec 30) (36.4 miles); and from USFS Forest Road 2213 (T44N, R17W, Sec 29) downstream to County Road 449 (T43N, R17W, Sec 27) (14.5 miles)
Entry No: 310 & 311
Requested by: US Forest Service

Recommendation: We recommend that the current Type 2 regulations from "Wide Waters" downstream to Indian Lake be changed to Type 1.

Rationale: Low fishing mortality for target species: Fishing mortality for brown trout is low compared to natural mortality.

Anglers seek both brown trout and brook trout in the Indian River. Trout growth rates are well above state averages in most of the river. Brown trout are the species targeted by the proposed gear restrictive regulations. A 1995 creel census indicated substantial harvest of brook trout (10.3" average) but little harvest of brown trout (13.75" average). Therefore, fishing mortality for brown trout is low compared to natural mortality. The

present Type 2 regulations that have been in effect since 2000 have not resulted in increased abundance of brown trout larger than 12 inches or brook trout larger than 10 inches. Local knowledge and management experience with the stream and angling community indicate there is little public demand for gear restrictive regulations on the Indian River.

The Indian River does not fulfill many criteria in FO-213 for trout streams that are good candidates for gear restrictive regulations.

Unit: NLMMU
County: Marquette
Waterbody: **Escanaba River**
Segment(s): From the confluence of the Middle and East Branches of the Escanaba River (T45N, R25W, Sec 28) downstream to the mouth of Sawmill Creek (T43N, R25W, Sec 11) (14.3 miles)
Entry No: 315, 316 & 317
Requested by: Public

Recommendation: We recommend that Type 1 regulations be retained on this river section.

Rationale: Insufficient or lack of key biological data to support nomination for gear restrictions; Low fishing mortality.

This reach is just over 14 miles long and ranges from 40-60 feet in width. This reach of the river offers good access for wading anglers and is also popular with float anglers as well. Brown trout are the primary trout species sought by anglers and are the species targeted by the public proposals for gear restrictions. Anglers have reported "good" fishing in the past with some brown trout attaining lengths of 20+ inches. Generally, managers have relied on reports from the public to gauge the status of the fishery and few fisheries surveys in this reach have been conducted. A creel census conducted on this reach in 2004 found that few brown trout and brook trout were harvested by anglers during the survey, which indicates that fishing mortality is low. Data regarding growth rates of trout are unavailable. There is assured public access and some public demand for gear restrictions.

Unit: NLMMU
County: Delta
Waterbody: **Escanaba River**
Segment(s): Boney Falls Dam (T41N, R21W, Sec 2) downstream to County Road 519 (T41N, R23W, Sec 2) (7.0 miles); Boney Falls Dam (T41N, R21W, Sec 2) downstream to Burnt Camp PAS (T40N, R23W, Sec 6) (8.2 miles); Boney Falls Dam (T41N, R21W, Sec 2) downstream to Silver Creek (T40N, R23W, Sec 11) (14.2 miles).

Entry No: 312, 313, and 314
Requested by: Internal review (currently gear restricted) and public

Recommendation: We recommend that the 14.2 mile stream segment be considered for gear restricted regulations.

- **Artificial lures only**
- **Open season: all year**
- **Open and possession season: The last Saturday in April-September 30 for BKT, BNT, and ATS: other species all year**
- **Minimum size limits:**
  - **Brook trout 10 inches**
  - **Brown trout 12 inches**
  - **All other trout and salmon species 10 inches**
- **Creel limit 2 fish**

Brown trout are the primary species sought by anglers in this reach of river. Age-2 brown trout tend to be several inches larger than average for Michigan trout streams but this is primarily because yearling brown trout stocked by DNRE are substantially larger than wild fish so they maintain this size advantage a year later. In addition to the DNRE stocking effort, a local angling club has annually stocked large, privately-reared hatchery brown trout (N=1,000-4,000) for more than 15 years. These fish ranged from 5-18" with the vast majority falling in the 11-14" range. A creel census survey in 2004 indicated that this fishery is primarily catch and release. Therefore, fishing mortality is low.

The Escanaba River Association submitted comments supporting the continuation of the Type 6 regulation, arguing that the regulation is protective of the resource and allows some harvest of trout. Given the current popularity of the fishery and present regulations, we support the continuation of gear restrictions on this 14.2-mile stream section.

Unit: NLMMU
County: Iron
Waterbody: **Brule River**
Segment(s): From the headwaters (T42N, R36W, Sec 18) downstream to the confluence with the Paint River (T41N, R32W, Sec 12 (48.4 miles)
Entry No: 328
Requested by: Public

Recommendation: We recommend that the current Michigan-Wisconsin Boundary Water Regulations be retained.

Rationale: Insufficient or lack of key biological data to support nomination for gear restrictions.

The Brule River is boundary water with Wisconsin and as such, regulation changes are subject to review by both States. The origin of the Brule River is at Brule Lake in western Iron County. It flows in an easterly direction until its confluence with the Paint River in eastern Iron County. Wading is possible and good canoe access exists for float fishing. The Chequamegon-Nicolet Forest is found on the Wisconsin side of the Brule River and the upper Brule runs through the Ottawa National Forest on the Michigan side.

The Brule River supports good brook trout and brown trout fisheries in its upper reaches, with natural reproduction supporting both of theses species. The Brule River trout regulations are similar to Type 2 regulations with the exception of season and the brook trout minimum size limit is 8 inches. Informal angler surveys by Fisheries personnel and Conservation Officers indicates that the current border regulations are supported by anglers and complied with at a higher rate than our current Type 2 Regulations with respect to brook trout. There are no data on growth rates for brown or brook trout. Natural and fishing mortality rates are also unknown. However, we suspect that total trout mortality is fairly high, particularly in downstream reaches that are much warmer than optimal for trout during the summer. Trout in this area must migrate to coldwater refuge areas to avoid lethal water temperatures. Local knowledge and management experience with the stream and angling community indicate there is little public demand for gear restrictive regulations on the Brule River.

Unit: CLMMU
County: Lake
Waterbody: **Pere Marquette River**
Segment(s): From the M-37 Bridge to Gleason's Landing (8.5 Miles)
Entry No: 401
Requested by: Internal review (currently gear restricted) and public

Recommendation: We recommend that current gear restrictions be retained on this stream segment.

- **Artificial flies only**
- **Open season: All year**
- **Catch and release only**

Anglers fish this reach for steelhead, salmon species, and brown trout. The mean length of age-2 brown trout is about 2 inches larger than average for Michigan trout streams. Fishing mortality is negligible under current no-kill regulations. This segment of river has very good populations of trout and salmon because it contains high quality habitat. There is assured public access to the river reach and strong public support for continuation of the flies-only and no kill regulations currently in effect here.

Special restrictions were implemented in the M-37 to Gleason's Landing segment of the mainstem in 1970 when no restrictions were in force from April 25 to May 30, flies only from June 1 through October 15, with a creel limit of 5 and standard size limits. In 2000, the Type 7 regulation was implemented which included year-round fishing with artificial flies and catch and release only.

Fish population estimates were available for 23 years between 1973 and 2009 for the Type 7 section of the Pere Marquette River. These data provide no evidence that gear and harvest limits have improved brown trout population abundance or size structure. However, because of the long history and popularity of gear restrictions on the M-37 to Gleason's Landing section of river we recommend that these regulations continue.

Unit: CLMMU
County: Lake & Mason
Waterbody: **Pere Marquette River**
Segment(s): Entire mainstream (67 Miles)
Entry No: 413
Requested by: Public

Recommendation: We recommend that existing regulations for specific sections of the Pere Marquette River be retained.

Rationale: Various, see below:

Census data and our personal observations of the Pere Marquette River fishery show that far more angling effort is directed at potamodromous salmon and steelhead as compared to brown trout. Michigan's gear restriction regulations are intended to target resident trout species such as brown trout. Our observations also indicate that many contemporary brown trout anglers on the Pere Marquette River practice voluntary release of legal sized trout. This means that angling mortality for brown trout in the river is likely low compared to natural mortality. Although there is much public support for more gear restrictive regulations in the watershed, there is similar strong public opposition to additional gear restrictions on the river. Local knowledge and management experience with the stream and angling community suggests that a majority of anglers of the Pere Marquette fishing river sections outside the no-kill water prefer to have the option of angling with a variety of gear types that might include bait such as spawn or wigglers as well as with artificial flies or lures. Our recommendation to preserve the current diversity of fishing opportunities on the Pere Marquette is based on both biological and social criteria.

Presently there are 5 sections within the Pere Marquette River watershed that are not classified Type 1 (standard seasons and gears). These include:

- The Little South Branch of the Pere Marquette River from 16 mile Road to Foreman Road (5.7 miles – Type 2): **We recommend that this section be designated as Type 1.**
- The Pere Marquette River from M-37 to Gleason's Landing (8.5 miles – Type 7): **We recommend that artificial flies and no kill regulations be retained here.**
- The Pere Marquette River from Gleason's Landing to Reek Road (31.3 miles – Type 4): **We recommend that Type 4 regulations be retained.**
- The Pere Marquette River from Reek Road to old US-31 (20 miles – Type 3): **We recommend that Type 3 regulations be retained.**
- The entire mainstem of the Big South Branch of the Pere Marquette River is Type 4. **We recommend that Type 4 regulations be retained.**
- The Type 2, 3, 4, and 7 sections encompass the majority of the mainstem of the Pere Marquette River watershed.

Unit: CLMMU
County: Newaygo
Waterbody: **Little South Branch Pere Marquette River**
Segment(s): Carlson Bridge (16 Mile Road) downstream to Oxbow Bridge (Forman Road)
Entry No: 407
Requested by: Internal review (Type 2)

Recommendation: We recommend that current Type 2 regulations be changed to Type 1.

Rationale: Marginal trout habitat; Insufficient biological data to support nomination for gear restrictions.

Anglers in the Little South Branch of the Pere Marquette primarily target brown trout. Age-2 brown trout grow faster than average for Michigan trout streams, but total mortality rates are high and there are no data on fishing mortality. The Little South Branch has warmwater fish habitat upstream of McDuffee Creek and then becomes a coldwater stream. Brown trout populations are about average for Michigan streams. The stream provides good production of juvenile steelhead along with some coho and Chinook salmon. Local knowledge and management experience with the stream and angling community indicate little public demand for gear restrictive regulations Currently, while we do not possess sufficient biological data to determine whether this stream meets the biological criteria for gear restrictions, we do not believe this stream segment fulfills many of the criteria in FO-213 for trout streams that are good candidates for gear restrictive regulations.

Unit: CLMMU
County: Muskegon & Newaygo
Waterbody: **Muskegon River**
Segment(s): From Croton Dam downstream to the City of Newaygo New Bridge (T12N, R13W, Sec 24) (14.6 miles)
Entry No: 410
Requested by: Public

Recommendation: We recommend that the current Type 4 regulations be retained.

Rationale: Summer water temperatures too high to support a high quality trout fishery; Significant fishery for potamodromous species (salmon and steelhead).

The Muskegon River, downstream of Croton Dam, is a coolwater stream that is stocked with Chinook salmon, steelhead, and non-migratory rainbow trout and brown trout. Summer water temperatures in this stream segment are too high to sustain successful natural reproduction of trout and steelhead. Mortality rates of stocked trout are also very high in this system due to the high water temperatures. A bubble system designed to up-well colder bottom water at Croton Dam has recently been installed by Consumers Energy. This system has the potential to cool water temperatures below the dam and is

currently being evaluated. Several years of testing will be needed to determine if this system will increase survival of trout. Any consideration of special regulations for trout and salmon in this river section is premature due to the high water temperatures and high mortality rates of trout.

Unit: CLMMU
County: Newaygo
Waterbody: **White River**
Segment(s): From Six Mile Road to Baseline Road (8.7 miles)
Entry No: 408
Requested by: Internal review (Type 2) and public

Recommendation: We recommend that regulations be changed from Type 2 to Type 1.

Rationale: Insufficient or lack of key biological data to support nomination for gear restrictions; Trout population did not significantly improve under Type 2 regulations.

Brown trout are the primary species sought by anglers and some brook trout are present in the upper reaches. There are no data available on growth rates or mortality rates for this reach. However, no improvements in trout population size structure or abundance have been reported for this section in the 9 years that it has been managed under Type 2 regulations. There is assured public access. Local knowledge and management experience with the stream and angling community indicate there is little public demand for gear restriction regulations for this river reach. The stream is quite small and not well suited to angling with artificial gear. We do not possess sufficient biological data to determine whether this stream meets the biological criteria for gear restrictions, but based on our knowledge of the stream it does not appear to fulfill many of the criteria in FO-213 for trout streams that are good candidates for gear restrictive regulations.

Unit: CLMMU
County: Muskegon
Waterbody: **White River**
Segment(s): Hesperia Dam to USFS Pines Point access (9.4 miles)
Entry No: 411
Requested by: Public

Recommendation: The current Type 4 regulations for this reach should be retained.

Rationale: Fishery dominated by potamodromous species (salmon and steelhead); Water temperatures not suitable for resident trout.

The primary species sought by anglers on this stream reach are potamodromous salmon and steelhead. The stream is too warm during the summer to support significant survival

of resident trout species. Therefore, this stream segment is not a good candidate for gear restrictive regulations.

Unit: CLMMU
County: Muskegon & Oceana
Waterbody: **North Branch White River**
Segment(s): Arthur Road downstream to the confluence with the White River (7.3 miles)
Entry No: 412
Requested by: Public

Recommendation: We recommend that the current Type 4 regulations be retained.

Rationale: Significant fishery for potamodromous species (salmon and steelhead); Insufficient or lack of key biological data to support nomination for gear restrictions.

The North Branch of the White River drains from McLaren Lake but grades into a coolwater-coldwater stream near M-20 in Oceana County. This stream is not stocked and has moderate self-sustaining populations of brown trout and steelhead. This stream receives a spawning run of steelhead. Brook trout are present in the tributaries and are found occasionally in the mainstem. No data on growth or survival rates of resident trout species are available. Local knowledge and management experience with the stream and angling community suggests that there is little public demand for gear restrictions for this stream. The current Type 4 regulations allow for steelhead fishing opportunities and provide ample protection for the moderate population of resident trout. Currently, we do not possess sufficient biological data to determine whether this stream meets the biological criteria for gear restrictions, but based on our knowledge of this stream segment, we do not believe it is a good candidate for gear restrictive regulations.

Unit: CLMMU
County: Lake
Waterbody: **Little Manistee River**
Segment(s): Spencers Bridge (T19N, R13W, Sec 5) downstream to Johnson's Bridge (T20N, R14W, Sec 24) (7.5 miles)
Entry No: 402
Requested by: Internal review (currently gear restricted) and public

Recommendation: We recommend that this stream segment be considered for gear restricted regulations.

- **Flies only**
- **Open season: All year**
- **Possession season: Last Saturday in April-September 30 for BKT, BNT, and ATS, other species open all year**
- **Minimum size limits**
    - **Brook trout 7 inches**

    - **Rainbow trout 10 inches**
    - **Brown trout 15 inches**
- **Daily harvest limit 2 fish**

The Little Manistee River has an existing 7.5 mile reach of flies-only water, running from Spencer's Bridge to Johnson's Bridge. It was first designated as flies-only in 1966. Since 2000, it has been regulated as a Type 5 stream. Upstream of the flies-only reach, the Little Manistee River is a Type-1 trout stream. Downstream of the flies-only reach, it is a Type-4 trout stream. The Little Manistee also is closed to fishing (on the entire river) from January 1st through March 31st. This additional regulation is to provide protection for steelhead to ensure that enough spawners will reach upstream areas to spawn in the spring and to supply eggs for Michigan's steelhead stocking program. The Little Manistee River is the sole source of broodstock for the Michigan Winter Run strain of steelhead. The Little Manistee River is not stocked, thus its steelhead population is entirely supported by natural reproduction. The Little Manistee River has robust populations of resident brown trout, annual runs of steelhead that average in the thousands, and a unique summer run of Chinook salmon. The mean lengths of age-2 brown trout in the Johnson's Bridge area are about average for Michigan trout streams. Natural mortality rates are estimated to be quite low. Creel census data have shown that summer fishing pressure for trout is very light, and that the annual brown trout harvest is very low. The vast majority of the fishing effort on the Little Manistee River is targeted at either steelhead or Chinook salmon.

Our recommendation for the Little Manistee River is that the flies-only regulations remain in effect from Spencer's Bridge to Johnson's Bridge, although we do propose reductions in the minimum size limits for brook trout and rainbow trout to make them consistent with recommendations made for other gear restricted stream reaches in the state. The changes in minimum size limits for these two species will have no effect on their populations in this section of Little Manistee River because there are very few brook trout here, and adult steelhead are much larger than 10 inches while almost all steelhead smolts are smaller than 10 inches.

The 2010 gear restriction nominations for the Little Manistee encompassed the entire river from Johnson's Bridge downstream to the mouth. Despite the fact that the Little Manistee River has a robust population of resident brown trout downstream at least as far as Six Mile Bridge, the Little Manistee River should not be a candidate for more gear-restricted waters. This is because it already has a significant stretch of gear restricted waters, and the fact that targeted effort and harvest are very low for resident trout.

Unit: CLMMU
County: Manistee, Mason & Lake
Waterbody: **Little Manistee River**
Segment(s): Little Manistee Weir to the confluence with Manistee Lake (7.0 miles); 10 Mile (Poggensee Bridge) downstream to the Little Manistee Weir (7.0 miles); Johnsons Bridge downstream to 10 Mile (Poggensee Bridge) (17.0 miles)
Entry No: 431, 432, and 433
Requested by: Public

Recommendation: We recommend that current regulations for these stream reaches be retained.

Rationale: The 2010 gear restriction nominations for the Little Manistee encompassed the entire river from Johnson's Bridge downstream to the mouth. Despite the fact that the Little Manistee River has a robust population of resident brown trout downstream at least as far as Six Mile Bridge, the Little Manistee River should not be a candidate for more gear-restricted waters. This is because it already has a significant stretch of gear restricted waters, and the fact that targeted effort and harvest are very low for resident trout.

Unit: CLMMU
County: Antrim, Otsego & Crawford
Waterbody: **Manistee River**
Segment(s): Headwaters to Cameron Bridge (unknown length), Mancelona Road.-Cameron Bridge (6 miles)
Entry No: 404, 425
Requested by: Internal review (Type 2) and public

Recommendation: We recommend that the current Type 2 regulations be retained.

Rationale: Natural mortality is high compared to fishing mortality.

From the headwaters to Cameron Bridge, the Manistee River has been managed as a Type-2 stream since 2000. This reach encompasses the Deward Management area, and has very robust populations of resident brown and brook trout. The mean length of age-2 brook trout is over a half inch lower than the average for Michigan trout streams. Natural mortality rates are very high for brook trout, with few living long enough to grow to the legal minimum size of 10 inches. Natural mortality rates for brook trout from age 1 to age 2 (when they are still smaller than 10 inches) at Cameron Bridge averaged 90% from 2000 to 2009. Fishing mortality rates for brook trout are negligible because almost all die from natural mortality before they grow to the 10 inch minimum size limit. Therefore, brook trout in this section of the Manistee River do not fulfill most of the biological criteria in FO-213 for streams that are good candidates for gear restrictive regulations.

Brown trout are the target species of most public proponents of gear restrictions for this reach. The mean sizes of age-2 through age-4 brown trout in this reach are about average

for Michigan trout streams. The long-term brown trout population data (1988-2009) collected at Cameron Bridge suggests that natural mortality rates of brown trout are about average for a Michigan inland trout stream where the dominant species is brown trout. Fishing mortality is very low. Natural mortality of brown trout is high relative to angling mortality, which makes this reach a poor candidate for gear restrictive regulations. A creel census conducted in 1998 revealed that anglers released 86% of the legal-sized brown trout caught. During a peak angling period, June 13 to July 5, 1998, estimated angler harvest of brown trout was only about 10 brown trout per mile in the Upper Manistee River between Deward and Sharon Bridge. Recall that statewide angling regulations were in effect in 1998 on most of this river reach, i.e. minimum size limit of 8 inches, no gear restrictions, and a creel limit of 10 trout. This stream reach received many nominations for gear restrictions in 2010. On the other hand, since this reach was designated as Type 2 in 2000, we have received very few comments (positive or negative) regarding the regulations in this stretch. This leads us to believe that the public is relatively content with the current Type-2 regulations. Moreover, our extensive biological data on growth and mortality rates of brown trout show that gear restrictive regulations would not produce discernable increases in large brown trout abundance.

Unit: CLMMU
County: Crawford
Waterbody: **Manistee River**
Segment(s): Cameron Bridge to M-72 (11.7 miles)
Entry No: 422
Requested by: Internal review (Type 2) and public

Recommendation: We recommend that the current Type 2 regulations be retained.

Rationale: Moderate to high natural mortality coupled with low fishing mortality.

The reach of the Manistee River from Cameron Bridge to M-72 has also been regulated as a Type-2 stream since 2000. Prior to the 2010 nomination exercise we received little comment from anglers either way about the Type-2 regulation, leading us to believe that anglers are relatively content with Type-2. This reach of the Manistee River supports a good brown trout population. The density of small young brook trout is also high but because of high natural mortality rates very few reach the 10-inch minimum size limit.

Brown trout are the target species of most public proponents of gear restrictions for this reach. The mean length of age-2 brown trout in this reach is about average for Michigan trout streams. Average total annual mortality of age-2 brown trout since 2000 at both Cameron Bridge and M-72 was about 60%, which is about average for Michigan trout streams. Most of this mortality is natural mortality because the average brown trout in this river section does not grow to 12 inches until the fall when they are 3 years old. We believe that fishing mortality here is low. During a 1998 creel census conducted during a peak angling period (June 13 to July 5) estimated angler harvest in this reach was only 11 brown trout per mile. At that time the minimum size limit was 8 inches and the creel limit was 10 trout. Anglers voluntarily released 87% of the legal-sized brown trout they caught in this section. We believe that voluntary release rates probably have increased

over the last decade, and the legal minimum size limits are 4 inches higher. Therefore, angling mortality is certainly lower now than it was in 1998. There is assured public access to this river section.

Local knowledge and management experience with the stream and angling community indicate significant support for gear restrictions. However, since this reach was designated as Type 2 in 2000, we have received very few comments (positive or negative) regarding the present regulations. This leads us to believe that the public is relatively content with the current Type-2 regulations. This stream reach does fulfill some of the social criteria for streams that are good candidates for gear restrictions, such as public support and assured access. However, growth rates are not as high as they are between M-72 and CCC Bridge, and angling mortality is believed to be very low so, we believe that gear restrictions will not produce discernable changes in abundance of larger brown trout. Therefore, we recommend that the reach continue to be managed under Type 2 regulations.

Unit: CLMMU
County: Kalkaska
Waterbody: **Manistee River**
Segment(s): M-72 to CCC Bridge (16.7 miles)
Entry No: 403
Requested by: Internal review (currently gear restricted) and public

Recommendation: We recommend that this stream segment be considered for gear restricted regulations.

- **Flies only**
- **Open season: All year**
- **Possession season: Last Saturday in April-September 30 for BKT, BNT, and ATS, other species open all year**
- **Minimum size limits**
  - **Brook trout 7 inches**
  - **Rainbow trout 10 inches**
  - **Brown trout 15 inches**
- **Daily harvest limit 2 fish**

Prior to 2000, the reach from Yellowtrees to CCC Bridge was flies-only. It was first designated as flies-only in 1970. In 2000, the additional reach from M-72 to Yellowtrees was added to the flies-only section. That action resulted in a significant negative reaction from the public. The reach from M-72 to CCC Bridge encompasses some of the best trout fishing water on the Manistee River. Brown trout growth rates here are much faster than further upstream. Age-2 brown trout are 2-2.5 inches larger than the average for MI trout streams. Age-2 brook trout are of average size for Michigan trout streams. There are no data on natural mortality rates for either brown trout or brook trout but the age structure of the populations indicate that it is fairly high. Brown trout rarely survive beyond age 4 and brook trout rarely survive beyond age 2. Angling mortality for both species is very low because almost all trout are smaller than the current minimum size

limits. Brook trout average about 9.1 inches long by the fall they are 2 years old, while the average 3-year-old brown trout is 14.9 inches long by fall. Moreover, we believe that most legal-sized trout caught are voluntarily released. During a 1998 creel survey conducted during a peak angling period (June 13 to July 5), 85% of legal-sized brown trout caught in the M-72 to Yellowtrees reach were released (minimum size limit for brown trout was 8 inches) and all legal-sized brown trout caught in the Yellowtrees to CCC Bridge reach (minimum size limit of 12 inches) were released. Although there was a strong negative reaction from the public when the reach from M-72 to Yellowtrees was designated as flies-only in 2000, we have not received many comments from the public regarding this reach in recent years. Our recommendation is to continue to manage this reach under flies-only regulations but to make changes to the minimum size limits for brook trout and rainbow trout to make them more consistent with regulations proposed for other Michigan streams managed under flies-only regulations. These changes will not harm the brook trout populations and the number of rainbow trout in the system is insignificant.

Unit: CLMMU
County: Kalkaska
Waterbody: **Manistee River**
Segment(s): CCC Bridge to West Sharon Road (9.0 miles)
Entry No: 423
Requested by: Internal review (Type 2) and public

Recommendation: We recommend that regulations on this stream section be changed from Type 2 to Type 4.

Rationale: Natural mortality is believed to be high compared to fishing mortality: Type 4 regulations will provide new year-round fishing opportunities while protecting trout from harvest during the spawning season.

Since 2000, from CCC-Bridge to Sharon (and actually all the way to US-131), the Manistee River has been managed under Type-2 regulations. Prior to this nomination exercise we received little comment from anglers either way about the Type-2 regulation, leading us to believe that anglers are relatively content with Type-2. Fisheries survey data to directly measure growth and survival are not available from sites downstream of CCC Bridge. However, given the physical and thermal characteristics of the river here we expect that growth rates of brown trout are above average as they are further upstream. We do know that mortality rates for brook trout are very high here because brook trout larger than 10 inches were rarely caught by volunteer anglers who reported on their fishing activity for this reach annually from 1989 through 2003. Fishing mortality for brook trout is certainly low because the average brook trout needs to live to be 3 years old before growing to 10 inches. We also believe that fishing mortality is low for reasons given for other sections of the Manistee.

We recommend that regulations for this reach be changed to Type 4. This will provide for year-round fishing, with no harvest of brown trout and brook trout from Sept. 30th

through the last Saturday in the following April. This change would provide increased angling opportunity and cause no biological harm.

Unit: CLMMU
County: Wexford & Kalkaska
Waterbody: **Manistee River**
Segment(s): Sharon Bridge to US-131 (unknown length)
Entry No: 405
Requested by: Internal review (Type 2) and public

Recommendation: We recommend that regulations for this segment be changed from Type 2 to Type 4.

Rationale: Current habitat conditions do not support a high quality trout fishery; Natural mortality is believed to be high compared to fishing mortality.

Since 2000, from Sharon to US-131, the Manistee River has been regulated as a Type-2 stream. Downstream of Sharon, the Manistee River becomes warmer and the fish community becomes mixed, with walleye, smallmouth bass, and northern pike present in addition to brown trout. Brook trout are rare. Fishing pressure in this reach is relatively low and consequently we are confident that fishing mortality is low compared to natural mortality. We propose that regulations for this segment be changed to Type 4. Type 4 regulations allow for year-round fishing, with no harvest on brown and brook trout from Sept. 30th through the last Saturday of the following April. This would provide increased angling opportunity and cause no biological harm.

Unit: CLMMU
County: Manistee, Kalkaska, Missaukee & Wexford
Waterbody: **Manistee River**
Segment(s): Hodenpyl Dam to Red Bridge (Coates Highway) (12.9 miles) & M-66 to Rainbow Jim's (unknown length)
Entry No: 426 & 427
Requested by: Public

Recommendation: We recommend that the existing Type-4 regulations be retained.

Rationale: High natural mortality; Summer water temperatures too high to support a high quality trout fishery; Stream reach also supports fisheries for warmwater species

Since 2000, the reach of the Manistee River from Hodenpyl Dam to Red Bridge has been Type 4. Since this reach was designated Type 4 in 2000, we have received very few comments (positive or negative) regarding the regulations in this stretch, leading us to believe that the public is relatively content with Type 4 for this reach. This reach has warmer water and a mixed fish community, with walleye, smallmouth bass, and northern pike present in addition to brown trout and rainbow trout, which are heavily stocked. We believe that natural mortality rates here are quite high due to the warm water discharged

through the dam. This reach is stocked with trout because the river is too warm to sustain good natural reproduction and survival of wild fish, yet stocked fish do grow well here. A creel census survey conducted in the summer of 2003 showed that this reach receives modest fishing pressure, and that relatively few trout were harvested (although many were released). As in other reaches of the Manistee River, many anglers practice voluntary catch and release of legal-sized trout. Some anglers also fish this reach for walleye, smallmouth bass, and northern pike.

This stream reach does not fulfill many of the biological criteria in FO-213 for trout streams that are good candidates for gear restrictive regulations. Type 4 regulations should be retained on this portion of the Manistee River.

Unit: CLMMU
County: Manistee
Waterbody: **Manistee River**
Segment(s): Tippy Dam to High Bridge (5.7 miles)
Entry No: 424
Requested by: Public

Recommendation: We recommend that the current Type 3 regulations be retained.

Rationale: Fishery dominated by potamodromous species (salmon and steelhead).

The reach of the Manistee River from Tippy Dam to High Bridge is one of the most heavily fished stream reaches in Michigan. Since 2000, it has been designated as Type 3. The angling fishery in this reach is dominated by Chinook salmon and steelhead. Brown trout are heavily stocked, and cool summers can produce good fishing for holdover brown trout the following year. Although the majority of angling effort in this reach is directed at steelhead and salmon, the brown trout fishery is very popular. Due to the 15 inch minimum size limit under the Type 3 regulations, the brown trout fishery is for the most part a catch and release fishery. Since this reach was designated Type 3 in 2000, we have received very few comments (positive or negative) regarding the regulations in this stretch, leading us to believe that the public is relatively content with Type 3 for this reach. A regulation change in this reach from Type 3 to anything else is likely to be met with vigorous opposition from anglers. Local knowledge and management experience with the stream and angling community indicate there is little public support for gear restrictions on this river reach. This river reach does not meet critical biological criteria in FO-213 for trout streams that are good candidates for gear restrictive regulations, so we recommend retaining the existing Type 3 regulations.

Unit: CLMMU
County: Manistee
Waterbody: **Bear Creek**
Segment(s): Milkes Road to Coates Highway (unknown length)
Entry No: 430
Requested by: Public

Recommendation: We recommend that the current Type 3 regulations be retained.

Rationale: Fishery dominated by potamodromous species (salmon and steelhead); High natural mortality coupled with low fishing mortality for brown trout.

The nominated reach of Bear Creek supports very low populations of brown trout and the vast majority of angling effort is for Chinook salmon and steelhead. Very few anglers target brown trout so we are confident that fishing mortality is low. Moreover, the minimum size limit for brown trout in this Type 3 stream is 15 inches so the few resident brown trout present are already well protected by a high size limit. The low populations of brown trout in Bear Creek suggest that total mortality and natural mortality of brown trout is high.

Prior to the 2009-2010 nominations effort, we received no comments from anglers regarding regulations on Bear Creek, leading us to believe that anglers are happy with the existing regulations on Bear Creek. This stream reach does not fulfill many of the criteria in FO-213 for trout streams that are good candidates for gear restrictive regulations. We recommend retention of the current Type 3 regulations on this stream reach.

Unit: CLMMU
County: Manistee, Wexford & Lake
Waterbody: **Pine River**
Segment(s): Elm Flats to Tippy Pond (Unknown length); M-37 (Peterson Bridge) downstream to Tippy Pond (8.0 miles)& Elm Flats downstream to M-37 (8.0 miles).
Entry No: 406, 428 and 429
Requested by: Internal review (Type 2 segments 1 and 2) and public

Recommendation: We recommend that current Type 2 regulations be retained.

Rationale: Natural mortality is high compared to fishing mortality.

Upstream of Elm Flats, the Pine River is designated as a Type-1 trout stream. Since 2001, the Pine River from Elm Flats to Tippy Pond has been designated as a Type-2 trout stream. The Pine River supports populations of resident brown and rainbow trout, along with the occasional brook trout. The mean length of age-2 brown trout in the Pine River is about 1.5 inches larger than average for Michigan trout streams. Total mortality is fairly low, and we believe that most of this mortality is natural mortality because fishing pressure on the Pine River is very light. There is assured public access and there is some public support for gear restricted regulations. However, we have heard from a number of

anglers is that no stretch of the Pine should become gear-restricted. We have received no comments (negative or positive) about the existing Type 2 regulations, leading us to believe that the public is happy with the Type-2 reach on the Pine River.

The Pine River fulfills some of the criteria in FO-213 for streams that are good candidates for gear restrictions. However, fishing mortality is low, so gear restrictions are not expected to affect trout abundance or size structure. Therefore, we recommend retaining the existing Type 2 regulations.

Unit: CLMMU
County: Benzie, Benzie & Manistee
Waterbody: **Betsie River**
Segment(s): Fred's landing to US-31 (3.7 miles); Lindy Road to Kurick Road (3.7 miles); & Kurick Road to Fred's landing (16.2 miles)
Entry No: 434, 435, 436
Requested by: Public

Recommendation: We recommend that present regulations be retained.

Rationale: Low survival of resident trout; Fishery dominated by potamodromous species (salmon and steelhead).

Upstream of Kurick Road, the Betsie River is designated as a Type-1 trout stream. Downstream of Kurick Road, the Betsie River is designated as a Type 4 trout stream. Below Grass Lake Dam, the Betsie River is a coolwater stream, with very few resident trout present. The angling fishery on the Betsie River is predominantly for Chinook salmon and steelhead with little pressure directed at resident trout. Brown trout are stocked in the river to supplement the angling fishery, but due to high summer water temperatures natural mortality rates for both wild and stocked brown trout are high. Fishing mortality is low relative to natural mortality. The Betsie River does not fulfill many criteria in FO-213 for trout streams that are good candidates for gear restrictive regulations.

Unit: CLMMU
County: Benzie
Waterbody: **Platte River**
Segment(s): Headwaters to Pioneer Road (15.3 miles)
Entry No: 419
Requested by: Public

Recommendation: We recommend that the present regulations be retained.

Rationale: High natural mortality of resident trout coupled with low fishing mortality; Slow growth rates for brown trout; Fishery dominated by potamodromous species (salmon and steelhead).

Upstream of US-31 at Veteran's Park, the Platte River is designated as a Type-1 trout stream. Downstream of US-31, it is designated as a Type-4 stream. The angling fishery in the Platte River is dominated by adult coho salmon and steelhead, with light pressure aimed at resident trout. The Platte River supports populations of resident brown trout, juvenile steelhead, juvenile coho salmon, and juvenile Chinook salmon. The mean length of age-2 brown trout in the Platte River is nearly 1 inch smaller than average for MI trout streams, possibly because they must compete with so many juvenile salmon and steelhead. Total mortality rates for brown trout are also high and we believe that most of this mortality is natural mortality. Because angling effort directed at brown trout is very low we believe that fishing mortality for resident brown trout is also very low. There is assured public access. Local knowledge and management experience with the stream and angling community indicate there is little public support for gear restricted regulations on the Platte River. The Platte River does not fulfill many of the criteria for trout streams that are good candidates for gear restrictions. Therefore, we recommend that Type 1 regulations be maintained in the headwaters and that Type 4 regulations be retained downstream of US-31.

Unit: CLMMU
County: Antrim & Charlevoix
Waterbody: **Jordan River**
Segment(s): Headwaters to Graves Crossing (15.3 miles) & Graves Crossing to the confluence with Lake Charlevoix (17.2 miles)
Entry No: 417 & 418
Requested by: Public

Recommendation: We recommend that existing regulations be maintained.

Rationale: Fishery dominated by potamodromous species (salmon and steelhead); Poor survival of resident trout past age 2.

Upstream of Graves Crossing, the Jordan River is designated as a Type-1 trout stream. From Graves Crossing downstream to Lake Charlevoix, the Jordan River is designated as a Type-4 stream. Local knowledge and management experience with the stream and angling community indicate that the majority of Jordan River anglers fish for salmon and steelhead. The Jordan River has relatively low populations of resident brown and brook trout, along with populations of juvenile Chinook and coho salmon. The mean length of age-2 brown trout is about average for Michigan trout streams, while mean length of age-2 brook trout is below average. Total mortality rates for both brook trout and brown trout are high, and very few of either species survive to age 3. We believe that most of this mortality is natural mortality because fishing pressure on the Jordan River is very light, with most effort directed at salmon and steelhead. There is assured public access and there is some public support for gear restrictive regulations. However, the Jordan River does not fulfill many of the biological criteria in FO-213 for trout streams that are good candidates for gear restrictive regulations. We recommend that the present Type 1 and Type 4 regulations be retained.

Unit: CLMMU
County: Charlevoix
Waterbody: **Boyne River**
Segment(s): USA Dam to Dam Road (0.5 miles) & Dam Road to the confluence with Lake Charlevoix (4.0 miles)
Entry No: 420 & 421
Requested by: Public

Recommendation: We recommend that the current Type 4 regulations be retained.

Rationale: Fishery dominated by potamodromous species (salmon and steelhead); Below average growth rates for stocked trout.

From the USA dam downstream to Lake Charlevoix, the Boyne River is designated as a Type 4 stream. The angling fishery below the dam is dominated by Chinook salmon, coho salmon, and steelhead, although there are some resident brown trout present. Brown trout are annually stocked into this reach by Fisheries Division to provide summer fishing opportunities because natural reproduction and survival of wild brown trout here are very low. There are no data available on the average size of age-2 brown trout but stocked trout appear to grow relatively slowly during the summer after they are stocked. There is assured public access.

The nominated section of the Boyne River does not fulfill many of the criteria in FO-213 for trout streams that are good candidates for gear restrictive regulations. We recommend that the current Type 4 regulations be retained.

Unit: CLMMU
County: Kalkaska & Grand Traverse
Waterbody: **Boardman River**
Segment(s): Headwater to Forks (28.0 miles)
Entry No: 414
Requested by: Public

Recommendation: We recommend that Type 1 regulations be retained.

Rationale: High natural mortality of resident trout coupled with low fishing mortality.

From the headwaters of both the North and South Branches of the Boardman River downstream to where they join, both branches of the Boardman River have been managed as Type 1 streams since 2000. The mean lengths of both brown trout and brook trout at age-2 are slightly below average for Michigan trout streams. Natural mortality rates are very high for brook trout, with few reaching the current legal minimum size of eight inches. Natural mortality rates for brown trout are also high with very few brown trout living beyond age 3. A 2005 creel census study showed that fishing pressure on this reach is relatively low. Angler harvest was extremely low in this reach, and most anglers practiced voluntary catch and release. There is assured public access and fairly strong

public support for gear restrictions on at least some portion of the Boardman River. However, the Boardman River does not fulfill biological criteria in FO-213 for trout streams that are good candidates for gear restricted regulations. We recommend that Type 1 regulations be retained on both the North and South Branches of the Boardman River at this time. The Boardman River regulatory framework will be further assessed through the public review process for the draft Boardman River Assessment to address potential regulatory changes that may be prudent with the pending removal of Sabin, Boardman, and Brown Bridge dams.

Unit: CLMMU
County: Grand Traverse
Waterbody: **Boardman River**
Segment(s): Forks to Brown Bridge Dam (7.4 miles)
Entry No: 415
Requested by: Public

Recommendation: We recommend that Type 1 regulations be retained.

Rationale: High natural mortality and below average growth of resident trout species.

The reach of the Boardman River from the confluence of the North and South Branches downstream to Brown Bridge Pond has been designated as a Type 1 stream since 2000. Natural mortality rates for both brook trout and brown trout are believed to be high. Very few brook trout survive beyond age-1 or reach the 8 inch minimum size limit, and very few brown trout ever survive beyond age 3. Estimated harvest of brown trout from the Boardman River in a 2005 angler census survey was only 81 brown trout over the entire season. Therefore, we believe that fishing mortality here is very low. The mean length of age-2 brown trout is slightly lower than average for Michigan trout streams. In the 1950s and 1960s, a study was conducted within a portion of this reach where flies-only regulations were implemented. The results failed to show any increase in the abundance of larger trout, and the gear restrictive regulations were removed. There is assured public access and some public support for gear restrictions in this reach. However, this section of river does not fulfill many of the biological criteria in FO-213 for trout streams that are good candidates for gear restrictive regulations. We recommend that Type 1 regulations be retained at this time. The Boardman River regulatory framework will be further assessed through the public review process for the draft Boardman River Assessment to address potential regulatory changes that may be prudent with the pending removal of Sabin, Boardman, and Brown Bridge dams.

Unit: CLMMU
County: Grand Traverse
Waterbody: **Boardman River**
Segment(s): Brown Bridge Dam to Boardman Dam (14.2 miles)
Entry No: 416
Requested by: Public

Recommendation: We recommend that Type 1 regulations be retained.

Rationale: High natural mortality coupled with low fishing mortality; Poor survival of trout beyond age 2.

The reach between Brown Bridge Dam and Boardman Pond has been designated as a Type 1 stream since 2000. Water temperatures in this reach are increased by Brown Bridge Pond, and although this reach supports a good population of young brown trout, brook trout are scarce until the river reaches the Beitner Road area. The brown trout in this reach suffer from high natural mortality, with very few surviving beyond age-3 or growing larger than fifteen inches. The brook trout also suffer from high mortality, with very few surviving beyond age-1 or reaching 8 inches in length. A creel census study conducted in 2005 showed that both fishing effort and angler harvest of trout were low in this reach, and that most anglers here practiced voluntary catch and release. There is assured public access and some public support for gear restrictions in this reach. However, this section of river does not fulfill many of the biological criteria in FO-213 for trout streams that are good candidates for gear restrictive regulations. We recommend that Type 1 regulations be retained at this time. The Boardman River regulatory framework will be further assessed through the public review process for the draft Boardman River Assessment to address potential regulatory changes that may be prudent with the pending removal of Sabin, Boardman, and Brown Bridge dams.

Unit: CLMMU
County: Missaukee
Waterbody: **Clam River**
Segment(s): LaChance Road to Blue Road (3.5 miles)
Entry No: 409
Requested by: Internal review (Type 2) and public

Recommendation: We recommend that the current Type 2 regulations be changed to Type 1.

Rationale: Insufficient or lack of biological data to support nomination for gear restriction.

The Clam River is a small tributary of the Muskegon River that drains from Lake Cadillac. This stream begins as a warmwater stream before being cooled sufficiently by groundwater to become a coldwater stream for a short distance (4-5 miles) near the M-55 crossing. The coldwater section of Clam River near M-55 contains primarily brook trout

and is presently managed with Type 2 regulations. Age-2 brook trout are of average size for a Michigan trout stream. Total mortality rates are quite high, as is typical for brook trout in Michigan streams. We have no data on natural or fishing mortality rates. Local knowledge and management experience with the stream and angling community indicate there is little public support for gear restrictions on this reach. Based on the biological data we have available, the Clam River does not fulfill most criteria in FO-213 for trout streams that are good candidates for gear restrictive regulations. We recommend that the regulations for this reach be changed to Type 1.

Unit: SLMMU
County: Cass
Waterbody: **Dowagiac Creek**
Segment(s): From Bunker Lake downstream to the confluence with Lake LaGrange (T6S, R15W, S11) (11.2 miles)
Entry No: 501
Requested by: Internal review (Type 2) and public

Recommendation: We recommend that the stream segment between McKenzie Road and Lake LaGrange remain classified as Type 2. We recommend that the stream segment between Bunker Lake and McKenzie Road remain classified as Type 1.

Rationale: High natural mortality coupled with low fishing mortality; Limited public access; recent local experience indicates strong opposition to gear restrictions.

The angling fishery is primarily targeted at brown trout. Age 2 brown trout are larger than average for Michigan trout streams. Natural mortality rates are high and fishing mortality is low. A creel survey conducted in 2006 indicated that 1,294 angler hours were expended on this stream during trout season, with nearly 2/3 of the effort occurring between the season opener and May 31. The brown trout catch estimate was 766 fish, but only 16 fish were harvested. Dowagiac Creek is not considered a navigable stream, and most of it is surrounded by private property. Assured public access is limited to a small portion of the stream. When we considered this stream for gear restrictions a few years ago, about 70% of the anglers who commented were opposed to gear restrictions.

Dowagiac Creek does not fulfill most of the criteria in FO-213 for selection of trout streams that are good candidates for gear restrictive regulations.

Unit: SLMMU
County: Berrien
Waterbody: **Dowagiac River**
Segment(s): From Pucker Street Dam downstream to the confluence with the St. Joseph River (3.1 miles)
Entry No: 502
Requested by: Public

Recommendation: We recommend that this stream segment remain classified as Type 3.

Rationale: Fishery dominated by potamodromous species (salmon and steelhead).

Anglers who fish this reach of the Dowagiac River are primarily targeting potamodromous species. Although there are some resident brown trout in this stream reach, potamodromous rainbow trout, Chinook salmon, and coho salmon, made up 78% of the total harvest during 1992-2004. Gear restrictions generally are not applied on streams where the majority of angling is for potamodromous salmon and trout. The average annual brown trout harvest was less than 70 fish during this period, and we believe that some unknown percentage of these brown trout were potamodromous. Many anglers currently use bait (e.g., spawn or wigglers) in this stream reach.

This section of the Dowagiac River does not fulfill most of the criteria for selection of trout streams that are good candidates for gear restriction regulations.

Unit: SLMMU
County: Berrien
Waterbody: **St. Joseph River**
Segment(s): From Niles Dam downstream to the Berrien Springs Dam (19.2 miles)
Entry No: 503
Requested by: Public

Recommendation: We do not recommend that this stream segment be considered for gear restricted regulations. We do recommend that this stream segment remain classified as Type 3.

Rationale: Stream reach not managed for resident trout; Fishery dominated by potamodromous species (salmon and steelhead) along with warmwater species.

The fishery of the St. Joseph River is not dominated by trout. The St. Joseph River is a warmwater stream that supports popular angling fisheries for both warmwater species and potamodromous salmonids. Smallmouth bass, walleye, channel catfish, bluegill, and rock bass are important components of the fishery in this portion of the St. Joseph River. This river reach also receives seasonal runs of steelhead (Skamania and winter run), Chinook salmon, coho salmon, and brown trout. Gear restrictions generally are not applied on streams where the majority of angling is for potamodromous salmon and trout.

Fish need to ascend at least one fish ladder to move into this portion of the stream from Lake Michigan. During 1992-2004, salmonids composed 36.1% of the total harvest between the Buchanan and Berrien Springs dams. During this same period, salmonids made up 20.2% of the total harvest between the Niles and Buchanan dams.

Angling with live bait is the preferred fishing technique of many anglers fishing for warmwater species and spawn is one of the most productive baits used to catch potamodromous salmonids. Local knowledge and management experience with the stream and angling community indicate there is little public support for gear restrictions on this river reach. The St. Joseph River is not a trout stream and hence does not fulfill any of the criteria for gear restrictive regulations for trout streams.

Unit: SLMMU
County: Berrien
Waterbody: **Paw Paw River**
Segment(s): From the Watervliet Dam (3S, 17W, S23) downstream to the confluence with the St. Joseph River (23.8 miles)
Entry No: 504
Requested by: Public

Recommendation: We recommend that this stream segment remain unclassified.

Rationale: Fishery dominated by warmwater and potamodromous species (salmon and steelhead).

The fishery of the Paw Paw River is not dominated by trout. This is a cool to warmwater stream that receives seasonal runs of potamodromous trout and salmon. Gear restrictions generally are not applied on streams where the majority of angling is for potamodromous salmon and trout. The Paw Paw River also provides fishing opportunities for a variety of warmwater species (e.g., smallmouth bass, walleye, northern pike, and channel catfish).

Angling with live bait is the preferred fishing technique of many anglers fishing for warmwater species and spawn is one of the most productive baits used to catch potamodromous salmonids. Local knowledge and management experience with the stream and angling community indicate there is little public support for gear restrictions on this river reach. The Paw Paw River is not a trout stream and hence does not fulfill any of the criteria for gear restrictive regulations for trout streams.

Unit: SLMMU
County: Berrien
Waterbody: **Brandywine Creek**
Segment(s): From US-12 (T8S, R16W, Sec 7) downstream to the confluence with the St. Joseph River (3.3 miles)
Entry No: 505
Requested by: Internal review (Type 2)

Recommendation: We recommend that regulations on this stream section be changed from Type 2 to Type 1.

Rationale: High natural mortality coupled with low fishing mortality; Type 2 regulations did not result in an improved size structure of resident brown trout.

Brown trout are the primary species sought by anglers on this stream. The mean size of age 2 brown trout is higher than the state average. Total mortality rates for brown trout are high. We believe that natural mortality is high and that angling mortality is low because the Type 2 regulations in effect since 2000 did not result in increased abundance of older and larger brown trout. The abundance of large brown trout actually declined after Type 2 regulations were applied to this reach. Brandywine Creek is not considered a navigable stream, and most of it is surrounded by private property. Assured public access is limited to a small portion of this stream. Local knowledge and management experience with the stream and angling community indicate there is little or no social demand for gear restriction regulations here.

This section of Brandywine Creek does not fulfill most of the criteria for selection of trout streams that are good candidates for gear restriction regulations.

Unit: SLMMU
County: Cass
Waterbody: **Peavine Creek**
Segment(s): From M-51 (T6S, R16W, Sec 22) downstream to the confluence with the Dowagiac River (2.2 miles)
Entry No: 506
Requested by: Internal review (Type 2)

Recommendation: We recommend that regulations on this stream section be changed from Type 2 to Type 1.

Rationale: Inadequate public access; Physical characteristics of stream are not conducive to gear restriction regulations.

Brown trout are the primary species sought by anglers here. The mean size of age-2 brown trout is higher than average. We have no data on natural or fishing mortality rates. Peavine Creek has an average width of around 9 ft, so it is challenging to fish with artificial lures or flies. There is no assured public access. Public access to this stream is

dependent on the cooperation of riparian landowners. Local knowledge and management experience with the stream and angling community indicate there is little to no social demand for gear restriction regulations here.

This section of Peavine Creek does not fulfill many of the criteria for selection of trout streams that are good candidates for gear restriction regulations.

Unit: SLMMU
County: Cass
Waterbody: **Pokagon Creek**
Segment(s): From Anderson Road (T7S, R16W, Sec 2) downstream to the confluence with the Dowagiac River (8.1 miles)
Entry No: 507
Requested by: Internal review (Type 2)

Recommendation: We recommend that regulations on this stream section be changed from Type 2 to Type 1.

Rationale: High natural mortality coupled with low fishing mortality; Poor survival of trout beyond age 2; Inadequate public access.

Brown trout are the primary species sought by anglers here. The mean size of age 2 brown trout is about average for Michigan trout streams. Survival from age 1 to age 2 is relatively high (about 50%), but survival from age 2 to age 3 is low (10-25%). We believe that overall natural mortality rates are high and that fishing mortality is low. There is no assured public access. Public access to this stream is dependent on cooperation of riparian landowners. Local knowledge and management experience with the stream and angling community indicate there is little to no social demand for gear restriction regulations here.

This section of Pokagon Creek does not fulfill most of the criteria for selection of trout streams that are good candidates for gear restriction regulations.

Unit: SLMMU
County: St. Joseph & Cass
Waterbody: **Curtis Creek & tributaries**
Segment(s): From Corey Lake Road downstream to the confluence with Mill Creek (7.3 miles)
Entry No: 508
Requested by: Internal review (Type 2)

Recommendation: We recommend that this stream remain classified as Type 2.

Rationale: Good survival of brown trout beyond age 2; Fishing mortality rates unknown; Physical characteristics of stream are not conducive to gear restriction regulations.

Brown trout are the primary species sought by anglers. The mean size of age 2 brown trout is above average for Michigan trout streams. The most recent survey was completed in 1993. At that time, the stream was producing big brown trout, with fish up to age 5 present. Although mortality data are lacking, the age structure of the 1993 catch suggested that total mortality was relatively low. There is some assured public access. The lower portion of Curtis Creek flows through the Three Rivers State Game Area (SGA). The only public access is in the SGA. With a mean width of about 15 ft, this stream is challenging to fish with artificial lures or flies. Local knowledge and management experience with the stream and angling community indicate there is little or no social demand for gear restriction regulations here.

Unit: SLMMU
County: Kalamazoo & Van Buren
Waterbody: **Campbell Creek**
Segment(s): From headwaters to the confluence with the N. B. Paw Paw River (5.8 miles)
Entry No: 509
Requested by: Internal review (Type 2)

Recommendation: We recommend that regulations on this stream be changed from Type 2 to Type 1.

Rationale: Insufficient or lack of key biological data to support nomination for gear restrictions; relatively low amount of public access.

This stream supports a naturally reproducing brown trout population and brown trout are the primary species sought by anglers. Mean length of age 2 brown trout is larger than average for Michigan trout streams. We have no data on natural mortality or fishing mortality, but it is likely that fishing mortality is low because there is little public access. The public can access Campbell Creek on Almena Township land south of 28th Avenue. The remainder of the stream is surrounded by private land. Local knowledge and

management experience with the stream and angling community indicate there is little or no social demand for gear restriction regulations here.

Currently, we do not possess sufficient biological data to determine whether this stream meets the biological criteria for gear restrictions. However, based on our best available information this section of Campbell Creek does not fulfill most criteria for selection of trout streams that are good candidates for gear restriction regulations.

Unit: SLMMU
County: Van Buren
Waterbody: **E. Br. Paw Paw River & all tributaries**
Segment(s): All waters downstream to M-40 (T3S, R14W, Sec 13) (20.5 miles)
Entry No: 510
Requested by: Internal review (Type 2)

Recommendation: We recommend that regulations on this stream be changed from Type 2 to Type 1.

Rationale: Insufficient or lack of key biological data to support nomination for gear restrictions; Inadequate public access.

There is some natural reproduction of brown trout in this stream, but the fishery is largely supported by stocking. Brown trout are the primary species sought by anglers. The mean length of age-2 brown trout is above average for Michigan trout streams. No data are available on natural or fishing mortality rates. There is no assured public access. Public access to this stream is dependent on the cooperation of riparian landowners. Local knowledge and management experience with the stream and angling community indicate there is little or no social demand for gear restrictive regulations..

Currently, we do not possess sufficient biological data to determine whether this stream meets the biological criteria for gear restrictions. However, based on our best available information the East Branch Paw Paw River and its tributaries do not fulfill most criteria for selection of trout streams that are good candidates for gear restriction regulations.

Unit: SLMMU
County: Allegan
Waterbody: **Swan Creek**
Segment(s): From 118th Ave. (T2N, R14W, Sec 17) downstream to the confluence with Kalamazoo River (T2N, R14W, Sec 9) (9.5 miles)
Entry No: 511
Requested by: Public

Recommendation: We recommend that this stream segment remain classified as Type 4.

Rationale: Fishery dominated by potamodromous species (salmon and steelhead).

This stream section is primarily used by steelhead and salmon anglers. Gear restrictions generally are not applied on streams where the majority of angling is for potamodromous salmon and trout. There is a snagging problem in this section, so there already is a gear restriction on hook size. Brown trout exist in this section but suitable habitat is very limited. Angling with spawn is one of the more productive baits used to catch potamodromous salmonids in Swan Creek. Local knowledge and management experience with the stream and angling community indicate there is little public support for gear restrictions here. Therefore, Swan Creek does not fulfill most of the criteria for selection of trout streams that are good candidates for gear restriction regulations.

Unit: SLMMU
County: Allegan
Waterbody: **Silver Creek**
Segment(s): From M-89 bridge (T1N, R11W, Sec 26) downstream to the confluence with Kalamazoo River (4.2 miles)
Entry No: 512
Requested by: Internal review (Type 2)

Recommendation: We recommend that this stream segment remain classified as Type 2.

Rationale: Lack of assured public access; Lack of data on fishing mortality.

Silver Creek has an excellent level of natural reproduction of brown trout, which is the primary species sought by anglers. The mean length of age 2 brown trout is about average for Michigan trout streams. Natural mortality and fishing mortality appear to be low with the current 12 inch minimum size limit. There is assured public access although the stream is mainly surrounded by private land. Local knowledge and management experience with the stream and angling community indicate there is little or no social demand for gear restriction regulations here.

Currently, we do not possess sufficient data to determine whether this stream meets the mortality criteria for gear restrictions. However, based on our experience with this stream and existing regulations, Silver Creek does not appear to fulfill many of the criteria for selection of trout streams that are good candidates for gear restriction regulations.

Unit: SLMMU
County: Kalamazoo
Waterbody: **Spring Brook**
Segment(s): From DE Ave (T1S, R10W, Sec 19) downstream to the confluence with the Kalamazoo River (T1S, R11W, Sec 27) (3.1 miles)
Entry No: 513
Requested by: Internal review (Type 2)

Recommendation: We recommend that regulations on this stream be changed from Type 2 to Type 1.

Rationale: Type 2 regulations did not result in an improved size structure of resident brown trout.

Spring Brook has an excellent level of natural reproduction by brown trout, which is the primary species sought by anglers. The mean length of age-2 brown trout is about average for Michigan trout streams. Natural mortality and fishing mortality appear to be low. There is assured public access although the stream is mainly surrounded by private land. Local knowledge and management experience with the stream and angling community indicate there is little to no social demand for gear restriction regulations here.

Based on our management experience with Spring Brook, it does not fulfill many of the criteria for selection of trout streams that are good candidates for gear restriction regulations.

Unit: SLMMU
County: Kent
Waterbody: **Rogue River**
Segment(s): From Algoma Avenue (T09N R11W Sec 27) downstream to 12 Mile Road (T09N R11W Sec 24) (4.1 miles)
Entry No: 514 & 515
Requested by: Public

Recommendation: We recommend that this stream segment remain classified as Type 4.

Rationale: High natural mortality coupled with low fishing mortality; Previous experience with gear restrictions did not result in significant increases in the abundance of larger trout.

The Rogue River is currently managed as a Type 4 stream and is stocked annually with rainbow trout (Eagle Lake strain) and brown trout (Gilchrist Creek strain). Growth rates for both brown trout and rainbow trout are about average for Michigan trout streams. Although there is some natural reproduction of brown trout, the fishery is supported by stocking. A creel survey was conducted in 2003 in the nominated reach. The catch

estimate for rainbow trout was 1,016 fish with 419 harvested. The estimated brown trout catch estimate was 255 with no harvest. These data indicate that fishing mortality is high for rainbow trout but very low for brown trout.

Previous trout management in the nominated reach included special regulations (16 inch minimum size limit, 2 fish creel limit, artificial lures only) which failed to produce the desired trophy fishery. The fact that the previous regulations did not result in significant increases in the abundance of larger trout is clear evidence that natural mortality has more influence than fishing mortality in shaping the population size structure. Thus, this stream reach does not fulfill criteria in FO-213 for trout streams that are good candidates for gear restrictive regulations.

Unit: SLMMU
County: Kent
Waterbody: **Rogue River**
Segment(s): From Pine Island Drive (T09N R11W Sec 32) downstream to 12 Mile Road (T09N R11W Sec 24) (8.9 miles)
Entry No: 516 & 517
Requested by: Public

Recommendation: We recommend that this stream segment remain classified as Type 4.

Rationale: High natural mortality coupled with low fishing mortality; Previous experience with gear restrictions did not result in significant increases in the abundance of larger trout.

The Rogue River is currently managed as a Type 4 stream and is stocked annually with rainbow trout (Eagle Lake strain) and brown trout (Gilchrist Creek strain). Growth rates for both brown trout and rainbow trout are about average for Michigan trout streams. Although there is some natural reproduction of brown trout, the fishery is supported by stocking. A creel survey was conducted in 2003 in the nominated reach. The catch estimate for rainbow trout was 1016 fish with 419 harvested. The estimated brown trout catch estimate was 255 with no harvest. These data indicate that fishing mortality is high for rainbow trout but very low for brown trout.

Previous trout management in the nominated reach included special regulations (16 inch minimum size limit, 2 fish creel limit, artificial lures only) which failed to produce the desired trophy fishery. The fact that the previous regulations did not result in significant increases in the abundance of larger trout is clear evidence that natural mortality has more influence than fishing mortality in shaping the population size structure. Thus, this stream reach does not fulfill criteria in FO-213 for trout streams that are good candidates for gear restrictive regulations.

Unit: SLMMU
County: Barry
Waterbody: **Coldwater River**
Segment(s): From M43 Bridge (T04N R08W Sec 16) downstream to the Freeport Bridge (T04N R08W Sec 06) (5.2 miles)
Entry No: 518 & 519
Requested by: Internal review (Type 2)

Recommendation: We recommend that this stream segment remain classified as Type 2.

Rationale: High natural mortality relative to fishing mortality; Recent local experience indicates strong opposition to gear restrictions.

Brown trout and rainbow trout are the primary species sought by anglers in this stream reach. The mean size of age-2 brown trout here is about average for Michigan trout streams, while rainbow trout here are larger than average at age 2 because they are stocked as large yearlings. There is some natural reproduction of brown trout in this stream, but the fishery is primarily supported by stocking. The main public access to this stream is located in the town of Freeport at a property owned by Trout Unlimited. Other access is dependent on the cooperation of riparian landowners. Fishing mortality for brown trout is low. Estimated harvest of brown trout from this section in 2002 was 334 fish compared with 4,957 released brown trout. Fishing mortality for rainbow trout is believed to be low because most stocked fish do not grow to the current minimum size limit of 12 inches until late in the year they are stocked or during the following year. Natural mortality of rainbow trout is high because few live long enough to grow larger than 12 inches. Local knowledge and management experience with the stream and angling community indicate there is little social support for gear restrictions. A high percentage of anglers opposed gear restrictions in the past when the Coldwater River was previously recommended for such regulations. This is a popular catch and keep trout fishery. Therefore, the Coldwater River does not fulfill most of the criteria for selection of trout streams that are good candidates for gear restrictions.

Unit: SLMMU
County: Barry
Waterbody: **Cedar Creek**
Segment(s): From the M37 Bridge (T02N R08W Sec 09) downstream to the confluence with the Thornapple River (T03N R08W Sec 26) (5.2 miles)
Entry No: 520
Requested by: Internal review (Type 2)

Recommendation: We recommend that regulations on this stream be changed from Type 2 to Type 1.

Rationale: Insufficient or lack of key biological data to support nomination for gear restrictions; Inadequate public access.

Brown trout are the primary species sought by anglers in this stream. The mean length of age-2 brown trout is about average for Michigan trout streams. We have no data on natural or fishing mortality rates. There is some natural reproduction of brown trout in this stream, but the fishery is largely supported by stocking. There is no assured public access. Public access to this stream is dependent on cooperation of riparian landowners. Local knowledge and management experience with the stream and angling community indicate there is little social support for gear restriction regulations. Cedar Creek does not fulfill many criteria for selection of trout streams that are good candidates for gear restrictive regulations.

Unit: NLHMU
County: Montmorency
Waterbody: **Hunt & Gilchrist Creek**
Segment(s): From Hunt Creek Research Station Section Z Bulkhead (T29N, R2E, Sec 25) downstream to the confluence with Thunder Bay River (T30N, R3E, Sec 34) (Length 8.5); and from Greasy Creek Road (T29N, R3E, Sec 27) downstream to the confluence with Thunder Bay River (T30N, R3E, Sec 34) (Length 9 miles)
Entry No: 627 & 628
Requested by: Public

Recommendation: We recommend these streams remain classified as Type 1.

Rationale: Below average growth rates on resident trout; High natural mortality coupled with low fishing mortality.

The fishery in both Hunt and Gilchrist creeks is dominated by brown trout, although small numbers of brook trout are also present. The average size of age-2 brown trout in both streams is below average for Michigan trout streams. Growth rates are particularly slow in portions of Gilchrist Creek where trout densities are high. Total mortality rates are relatively high in both streams, although some fish do survive to old ages and occasionally individual brown trout longer than 20 inches long are found in both streams. Public access to both streams is limited primarily to a small number of road crossings and most of the stream frontage is privately owned. Angling pressure is light. Low angling pressure and the fact that modest numbers of brown trout survive to age 5 or older indicates that angling mortality is very low. Local knowledge and management experience with the stream and angling community indicate there is little social support for gear restriction regulations.

Neither Hunt nor Gilchrist creeks meet the biological criteria for streams that are good candidates for gear restrictions.

Unit: NLHMU
County: Otsego
Waterbody: **Sturgeon River**
Segment(s): From Sturgeon Valley Road downstream to the Cheboygan County Line (Length unknown)
Entry No: 633 & 634
Requested by: Public

Recommendation: We recommend that the stream remain classified as Type 1.

Rationale: Below average growth rates for resident trout; High natural mortality coupled with low fishing mortality.

Fishing effort in this reach of the Sturgeon River is predominantly for brown trout, although a small population of small brook trout is also found here. Brown trout growth rates are below average in this cold river section. The average size of age 2 brown trout at the DNRE long-term monitoring station is about an inch below average for Michigan trout streams. Total annual mortality of age 2 brown trout in the Sturgeon River is about 60%. We believe that most of this mortality is natural mortality because there is little easy public access to this section of stream and hence fishing pressure is quite low. Accordingly we believe that fishing mortality is also low.

The Green Timbers section of the reach receives spawning runs of large brown trout from Burt Lake. These large brown trout are produced from small brown trout that emigrate to Burt Lake as juveniles, grow to a large size in the lake, and then return as adults to spawn in the river. Gear restrictions are expected to have little effect on abundance of these fish compared to variability in growth and survival rates in Burt Lake.

Thus, the Sturgeon River does not meet most of the biological criteria for streams that are good candidates for gear restrictions. Further, fisheries managers do not believe stream conditions such as accessibility or social considerations justify gear restrictions on the Sturgeon River.

Unit: NLHMU
County: Crawford
Waterbody: **West Branch and East Branch of Big Creek**
Segment(s): From Townline Road to the confluence with the N. B. of the Au Sable River (7 miles); and from Walsh Road downstream to the confluence with the West Branch of Big Creek (4 miles)
Entry No: 625 & 626
Requested by: Public

Recommendation: We recommend that both the West Branch and East Branch of Big Creek remain designated as Type 1.

Rationale: Insufficient or lack of key biological data to support nomination for gear restrictions

The trout population in these streams consists primarily of brown trout. No data on brown trout growth rates are available at these sites. The East Branch of Big Creek is quite small and cold summer water temperatures documented in 2006 and 2007 suggest that trout growth rates are likely to be below the Michigan state average. No data are available on either trout growth rates or water temperatures in the section of the West Branch nominated for gear restrictions. Although large brown trout are occasionally found here we believe that some may be immigrants from the North Branch of the Au Sable River where growth rates are high. There is little public access to these sections of stream, fishing pressure is quite low and accordingly we believe that angling mortality is low. There are no data available on total mortality rates. Local knowledge and management experience with the stream and angling community indicate that there is little interest in gear restriction regulations on these streams.

Fisheries managers do not believe stream conditions such as accessibility or social considerations justify gear restrictions for these stream sections.

Unit: NLHMU
County: Oscoda
Waterbody: **Big Creek**
Segment(s): From Randall Road downstream to the confluence with the Au Sable River (3 miles)
Entry No: 624
Requested by: Public

Recommendation: We recommend that this stream reach remain as Type 1.

Rationale: Below average growth rate of resident trout; Natural mortality is high relative to fishing mortality; Inadequate public access.

The trout population in these streams is predominantly brown trout. The average size of age-2 brown trout just upstream from this reach is about 1.5 inches below average for Michigan trout streams. Total annual mortality of age 2 brown trout at the same site is about 60%. We believe that fishing pressure is relatively low, and there is no guaranteed public access. This stream does occasionally produce some large brown trout, and some may ascend from the mainstem Au Sable River where growth rates are much higher. Local knowledge and management experience with the stream and angling community indicate there is little social support for gear restriction regulations. This section of Big Creek does not meet many of the biological, physical, and social criteria described in Fisheries Order 213 for streams that are good candidates for gear restrictions. Local knowledge and management experience with the stream and angling community indicate that there is little support for gear restriction regulations on this stream.

Unit: NLHMU
County: Otsego
Waterbody: **Pigeon River**
Segment(s): Elk Hill access (T32N, R1W, Sec 10) to Webb Road (T33N, R1W, Sec 5) (9.1 miles); entire stream (length unknown)
Entry No: 630, 631
Requested by: Public

Recommendation: We recommend that the present Type 2 regulations in effect from the Golden Lotus Inc. Dam downstream to M-68 be changed to Type 4 regulations.

Rationale: Streamflow fluctuations caused by dam; Summer water temperatures that are higher than optimal for trout limit survival in downstream portions of this reach; Increased fishing opportunities via an extended season.

The Pigeon River supports populations of brown trout, brook trout, and rainbow trout. Brook trout rarely survive to age 3 and hence few grow larger than 10 inches. During the regular trout season rainbow trout found in the river are primarily juvenile steelhead that emigrate to Burt Lake before growing to legal size for harvest. Brown trout grow well in the Pigeon River and are more than an inch larger than the Michigan state average at age 2. Total annual mortality of age-2 and older brown trout is relatively low at about 50% per year. We believe that angling pressure is relatively light and that fishing mortality is relatively low.

The Pigeon River can produce large brown trout and also receives spawning runs of large brown trout from Mullet Lake. Campgrounds within the proposed reach offer a popular catch-and-keep opportunity that is especially popular with families with young children.

The Pigeon River does fulfill several of the criteria for streams that are good candidates for gear restrictions. There is a large amount of publicly owned frontage for public access and substantial support from some angling groups for gear restrictions. However, fisheries managers do not believe gear restrictions would provide perceptible improvements in abundance of larger brown trout. Available data strongly suggest that unnatural streamflow fluctuations and water warming caused by the dam limit brown trout reproductive success and subsequent production of larger brown trout. After evaluating this stream using the criteria in Fisheries Order 213, managers do not believe stream conditions and social considerations justify gear restrictions on the Pigeon River. Application of Type 4 regulations to this section of the Pigeon River would provide anglers with an opportunity to fish for steelhead throughout the reach while protecting resident brown trout and brook trout via a closed possession season from October through the last Saturday in April.

Unit: NLHMU
County: Otsego
Waterbody: **Pigeon River**
Segment(s): Golden Lotus Dam (T32N, R1W, Sec 19) downstream to the M-68 Bridge (24.5 miles)
Entry No: 638
Requested by: Internal review (Type 2) and Public

Recommendation: We recommend that the present Type 2 regulations in effect from the Golden Lotus Inc. Dam downstream to M-68 be changed to the current Type 4 regulations.

Rationale: See discussion above.

Unit: NLHMU
County: Crawford
Waterbody: **South Branch Au Sable River**
Segment(s): Chase Bridge to Lower High Banks (4.3 miles)
Entry No: 646
Requested by: Internal review (currently gear restricted) and public

Recommendation: We recommend that current gear restrictions be retained on this stream segment.

- **Artificial flies only**
- **Open season: All year**
- **Catch and release only**

Brown trout are the dominant species in the Chase Bridge to Lower High Banks reach, and are the species targeted by this proposed regulation. Age-2 brown trout in the South Branch Au Sable River are more than an inch larger than the average for Michigan trout streams. Annual natural mortality of age-2 brown trout at Chase Bridge has averaged about 40% and mortality of age-3 brown trout has averaged 70% under no-kill regulations (since 1983). Angling effort is high but angling mortality is negligible under current regulations. This stream reach has excellent public access and the present flies only, no-kill regulations have broad public support.

Thus, the present gear restricted regulations are supported by the biological and social criteria required to make gear restrictions effective.

Unit: NLHMU
County: Crawford
Waterbody: **South Branch Au Sable River**
Segment(s): Lower Highbanks to confluence with the mainstem Au Sable River (11.5 miles)
Entry No: 622, 623, & 647
Requested by: Internal review (currently gear restricted) and public

Recommendation: We recommend that this stream segment be considered for gear restricted regulations. NLHMU recommends the following gear restricted regulations for this segment.

- **Flies only**
- **Open season: All year**
- **Possession season: The last Saturday in April-September 30 for BKT, BNT, and ATS: other species all year**
- **Minimum size limits:**
    a. **Brook trout 7 inches**
    b. **Rainbow trout 10 inches**
    c. **Brown trout 18 inches**
- **Creel limit 2 trout, but no more than 1 trout over 18 inches**

Brown trout are the dominant species in this reach of the South Branch. Brown trout grow relatively rapidly in this reach of the South Branch; both 2- and 3-year-old brown trout are about an inch larger than average for Michigan trout streams. Natural mortality rates for age-2 brown trout under Type 5 regulations have been low at 43% per year, but high for age-3 brown trout, averaging 82% per year since 2000. Brown trout in the South Branch Au Sable rarely grow to 18 inches until they are 5 years old. An 18 inch minimum size limit (MSL) is equivalent to a no kill regulation since very few brown trout survive to age 5 in any Michigan stream. Angling mortality here is negligible both because of high voluntary release rates and because the average 4-year-old brown trout does not grow to 15 inches until September and thus is protected from harvest for most of its lifetime. The physical, biological, and social factors are compelling to keep this reach under gear restricted regulations. While fisheries managers believe an 18 inch MSL will not result in a discernable increase in the number of large brown trout in this reach, there is substantial public support for this higher limit.

Unit: NLHMU
County: Crawford
Waterbody: **North Branch Au Sable River**
Segment(s): Sheep Ranch to Confluence with the mainstem of the Au Sable River (20.7 miles)
Entry No: 619, 620, 621, and 648
Requested by: Internal review (currently gear restricted) and public

Recommendation: We recommend that this stream segment be considered for gear restricted regulations. NLHMU recommends the following gear restricted regulations for this segment.

- **Flies only**
- **Open season: All year**
- **Possession season: The last Saturday in April-September 30 for BKT, BNT, and ATS: other species all year**
- **Minimum size limits:**
    a. **Brook trout 7 inches**
    b. **Rainbow trout 10 inches**
    c. **Brown trout 18 inches**
- **Creel limit 2 trout, but no more than 1 trout over 18 inches**

Brown trout are the target species for the proposed regulation in this reach, and the primary species of concern. Abundance of brook trout larger than 8 inches long did not change after the minimum size limit (MSL) was increased from 8 inches to 10 inches in 2000. The NLHMU believes a reduction of the brook trout MSL is warranted and will not harm brook trout populations. Growth rates for brown trout are good in the North Branch averaging about an inch larger than the Michigan state average for age 2 and 3 brown trout. Natural mortality rates are very high in the North Branch Au Sable. Under Type 5 regulations less than 10% of age-2 brown trout survive to age-4 when they grow to about 15 inches by fall. Brown trout in the North Branch Au Sable rarely grow to 18 inches until they are 5 years old. An 18 inch MSL is equivalent to a no kill regulation since very few brown trout survive to age 5 in any Michigan stream. Angling mortality here is negligible both because of high voluntary release rates and because the average 4-year-old brown trout does not grow to 15 inches until September.

The North Branch Au Sable River has a long history of flies-only regulations. The first flies-only fishing regulation enacted in Michigan was applied to the North Branch Au Sable in 1907. There is broad public support for flies-only gear restrictions on the North Branch Au Sable River, and there is assured public access.

The North Branch Au Sable River meets many of the biological, physical, and social criteria described in Fisheries Order 213 for streams that are good candidates for gear restrictions. Our proposed regulations would provide consistency in minimum size limits, seasons, and creel limits for a large portion of the Upper Au Sable River watershed.

Unit: NLHMU
County: Crawford
Waterbody: **Au Sable River**
Segment(s): Wakeley Bridge to McMasters Bridge (8.0 miles)
Entry No: 615, 616, & 641
Requested by: Internal review (Type 2) and public

Recommendation: We recommend that this stream segment be considered for gear restricted regulations.

- **Artificial lures only**
- **Open season: All year**
- **Possession season: The last Saturday in April-September 30 for BKT, BNT, and ATS: other species all year**
- **Minimum size limits:**
    a. **Brook trout 7 inches**
    b. **Rainbow trout 10 inches**
    c. **Brown trout 18 inches**
- **Creel limit 2 trout, but no more than 1 trout over 18 inches**

Currently this reach of river is managed under Type 2 regulations. Brown trout are the dominant species in this reach, and the species targeted by our proposed regulations. Brown trout growth rates here are high with age-2 brown trout averaging more than 1.5 inches larger than the Michigan average. Brown trout here grow to 18 inches when they are 4 years old. There are no data available for this reach on either natural or fishing mortality rates. Total angling pressure here is substantially lower than in more easily waded river sections upstream, but effort by boating anglers is high during peak summer hatches. There is assured public access and the reach is easily navigated by boat.

Physical, biological, and social considerations indicate this reach is a viable candidate for gear restrictions. Because voluntary catch and release is practiced by the vast majority of anglers on the Au Sable River, it is doubtful this proposed regulation will have a discernable impact on the brown trout size structure.

Unit: NLHMU
County: Crawford & Oscoda
Waterbody: **Au Sable River**
Segment(s): McMasters Bridge to Rainbow Bend power line (Mio Pond) (18 miles)
Entry No: 601, 610, 612, 613, 617, & 642
Requested by: Internal review (Type 2) and public

Recommendation: We recommend that the current Type 2 regulations applied to this reach be changed to Type 4.

Rationale: Insufficient or lack of key biological data to support nomination for gear restrictions; Broad public support for year round fishing opportunities.

Brown trout are the predominant species sought by anglers in this reach of the Au Sable River. There are no data available on growth or mortality rates of brown trout in this reach. We believe that angling mortality is low here because this reach is generally deeper and has lower fishing pressure than upstream sections. There is substantial public support to change regulations for this reach to allow angling throughout the year, while protecting brook and brown trout from harvest during the spawning season. Type 4 regulations fulfill these objectives.

Unit: NLHMU
County: Oscoda
Waterbody: **Au Sable River**
Segment(s): Mio Dam to Power lines (T26N, R3E, S7) (0.3 miles)
Entry No: 605 & 643
Requested by: Internal review (Type 2) and public

Recommendation: We recommend that the current Type 2 regulations on this short reach be changed to Type 4.

Rationale: High natural mortality coupled with low fishing mortality.

This short (0.3 mile) reach of river is currently in type 2 regulations. This is located in the town of Mio and receives a lot of fishing pressure. Brown and rainbow trout stocked in this reach grow faster than average. Natural mortality rates for both species are high and fishing mortality rates are very low. Although this reach fulfils some of the criteria for waters that are good candidates for gear restrictions, there is broad public support to continue managing the section with more liberal regulations to preserve the popular fishery that has existed here for many years.

Unit: NLHMU
County: Oscoda
Waterbody: **Au Sable River**
Segment(s): Power lines below Mio (T26N, R3E, Sec 7) to McKinley Bridge (T26N, R4E, Sec 15) (15.0 miles)
Entry No: 602, 603, 606, 607, 614, 649 & 650
Requested by: Internal review (current research waters) and public

Recommendation: We recommend that this stream segment be considered for gear restricted regulations. We recommend the following regulations for this reach:

- **Artificial lures only**
- **Open season: All year**
- **Possession season: The last Saturday in April-September 30 for BKT, BNT, and ATS: other species all year**
- **Minimum size limits:**
    a. **Brook trout 7 inches**
    b. **Rainbow trout 10 inches**
    c. **Brown trout 18 inches**
- **Creel limit 2 trout, but no more than 1 trout over 18 inches**

This reach has been managed under research regulations for many years: Artificial lures only, 15 inch minimum size limit for brown trout, 12 inches for other trout, a possession limit of two trout and a closed season from September 30 to the last Saturday in April. This section, as with the Mio Dam to power lines section mentioned above, is stocked annually with brown trout and rainbow trout. Trout growth in this reach is well above state average, and this section of river is valued for its ability to produce large brown trout. High summer temperatures during some years can cause high mortality of trout, but large brown trout have persisted in this reach. Fishing mortality in this reach is negligible. A creel survey conducted throughout the 2009 trout season revealed that catch and release predominates. The estimated harvest of brown trout was only 9 fish during the entire 2009 season, while over 21,000 brown trout were caught and released. Anglers spent over 37,000 hours angling in this reach during 2009.

Stocked rainbow trout provide popular fishing throughout the year, but only a few of these fish survive through the following winter. Both the general public and organized angling groups have recommended, and the NLHMU concurs, that the rainbow trout size limit should be lowered to 10 inches to allow for some harvest of these popular fish. Allowing for the potential harvest of one trophy-sized brown trout over 18 inches long will have no impact on the trout population.

Our proposed regulations are extremely protective of the valued brown trout fishery, allow for utilization of the popular rainbow trout fishery, and open the season to year-round fishing.

Unit: NLHMU
County: Oscoda & Alcona
Waterbody: **Au Sable River**
Segment(s): McKinley Bridge to 4001 Bridge (8 miles)
Entry No: 608, 611 & 644
Requested by: Internal review (Type 2) and public

Recommendation: We recommend that this segment remain classified as Type 2.

Rationale: Good growth rates for resident trout; High natural mortality coupled with low fishing mortality.

This reach is currently managed under Type 2 regulations. These regulations are more than adequate to protect trout in this section. Brown trout and rainbow trout growth rates are higher than the Michigan average in this reach. Natural mortality rates for both brown trout and rainbow trout are believed to be high because of warm summer water temperatures. Very few rainbow trout survive overwinter. Fishing mortality is low both because of the voluntary catch-and-release practices of most Au Sable River anglers and because angling pressure in this reach is fairly low. During the most recent creel census conducted here in 2000, we estimated that only 10 brown trout and 10 rainbow trout were harvested per mile. Over 90% of trout caught in 2000 were released. This section meets only the growth criterion for selection of trout streams that are good candidates for gear restrictions.

Unit: NLHMU
County: Alcona & Iosco
Waterbody: **Au Sable River**
Segment(s): Alcona Dam to confluence with the South Branch River (10.3 miles)
Entry No: 609
Requested by: Public

Recommendation: We recommend that the current Type 4 regulations on this reach be retained.

Rationale: Multispecies fishery; Poor survival of trout species.

A creel census conducted here in 1999 showed that anglers fishing this section of the Au Sable River seek a variety of game fish species including walleye, smallmouth bass, and panfish species in addition to trout. Natural mortality rates for trout are high due to warm summer water temperatures and thus few survive to older ages or larger sizes. Creel census data in 1999 showed that even under a minimum size limit (MSL) of 8.0 inches, the number of brown trout harvested was low compared to numbers stocked (0.3% of stocked fish harvested). Angling mortality of rainbow trout in 1999 under the 8 inch MSL was high because rainbow trout were already big enough for legal harvest by the opening day of trout season. Our proposal to maintain current Type 4 regulations allows rainbow trout to grow to 10 inches during the spring and early summer when conditions

for growth are good, and then still be utilized by anglers before most succumb to warm water temperatures later in the season.

Thus, this river segment does not fulfill many of the criteria for trout streams that are good candidates for gear restriction regulations.

Unit: NLHMU
County: Crawford
Waterbody: **Au Sable River**
Segment(s): From Business 27 near Grayling Dam site downstream to Burton's Landing (about 8 miles)
Entry No: 640
Requested by: Internal review (Type 2) and Public

Recommendation: We recommend that current Type 2 regulations be retained on this segment.

Rationale: Average growth rates of resident trout; Low fishing mortality.

Currently this reach of river is in Type 2 regulations. Brown trout are the dominant species in this reach, and the primary species of concern. No recent brown trout growth data have been collected here but it is very likely that they grow at about the Michigan state average, similar to sites located further downstream. Creel census data collected here in the past showed that angler effort and exploitation were very low in this reach. With average growth and low exploitation, most angling groups are content with keeping Type 2 regulations in place on this stream reach. The waters that are more conducive to gear restrictive regulations are further downstream in this system.

Unit: NLHMU
County: Crawford
Waterbody: **Au Sable River**
Segment(s): From Burton's Landing to Wakeley Bridge (9.0 miles)
Entry No: 604, 645
Requested by: Internal review (currently gear restricted) and Public

Recommendation: We recommend that this stream segment be considered for gear restricted regulations. (Open year round, no kill, artificial flies only).

This section of the Au Sable has been under artificial flies only no-kill regulations since 1989. Brown trout here grow at an average rate for Michigan trout streams. Natural mortality rates are relatively high. Fishing mortality is negligible under the present no-kill regulations. These regulations are very popular with large segments of the angling public and fishing pressure here is very high. Although growth in this reach is average, and potential to grow larger fish is higher in downstream reaches, the popularity of current regulations in this section calls for them to remain in place. A retreat from gear

restricted regulations in this reach would not be well received by those who currently fish it.

Unit: NLHMU
County: Emmet and Cheboygan
Waterbody: **Maple River**
Segment(s): Lake Kathleen Dam (T36N, R4W, Sec 10) to Burt Lake (6.8 miles); entire stream (length unknown)
Entry No: 635, 636, 637 & 632
Requested by: Public

Recommendation: We recommend that present Type 2 regulations on the Maple River segment from Lake Kathleen Dam to Burt Lake be changed to Type 4. We further recommend that waters upstream of Lake Kathleen remain as Type 1.

Rationale: Insufficient or lack of key biological data to support nomination for gear restrictions.

Brown trout are the primary trout species sought by anglers downstream of the dam. At age 2, brown trout are about 1 inch larger than the average for Michigan trout streams and are of average size at age 3. The Maple River also receives spawning runs of large brown trout from Burt Lake and it does hold some large brown trout. No data on total mortality or natural mortality are available. However, there is limited assured public access and fishing pressure and fishing mortality are believed to be relatively low.

While the Maple River does fulfill some criteria for gear restrictions consideration, we do not have mortality or creel survey information to help make these determinations, but plan to obtain some of this information in the coming years.

The NLHMU does not believe gear restrictions are critical for maintaining good trout fishing on this reach of the Maple River, especially the recommendations for artificial flies only. After reviewing the proposals using the criteria in Fisheries Order 213, fisheries managers do not believe stream conditions and social considerations justify gear restrictions on this large segment of the Maple River at this time.

Our proposed change to Type 4 regulations will provide for increased steelhead fishing opportunity while adequately protecting brown trout.

Unit: NLHMU
County: Otsego & Montmorency
Waterbody: **Black River**
Segment(s): Tin Shanty Road Bridge (T32N, R1W, Sec 35) to Town Corner Lake stairs (T32N, R1E, Sec 31) (4.1 miles); Town Corner Lake stairs (T32N, R1E, Sec 31) downstream to Tower Dam (Length unknown)
Entry No: 629, 651 & 639
Requested by: Internal review (current research waters) and public

Recommendation: We recommend continuation of the artificial lures only gear restriction for the stream segment from Tin Shanty Road Bridge to Town Corner Lake stairs. Our recommended regulation is:

- **Artificial lures only**
- **Open season: All year**
- **Possession season: The last Saturday in April-September 30**
- **Minimum size limits:**
    a. **Brook trout 10 inches**
    b. **Brown trout 8 inches and rainbow trout 10 inches**
- **Creel limit 2 trout**

We recommend that the Type 2 regulations presently in effect for the reach from Town Corner Lake stairs to Tower Dam be changed to Type 1.

Brook trout are the primary trout species sought by anglers in the Black River and are the trout species targeted by our proposed regulation. In fact, the Black River has been managed historically to prevent colonization of the stream by brown trout so that they do not diminish the quality of the brook trout fishery. Brook trout grow rapidly throughout the Black River averaging over an inch larger than the Michigan state average at age 2. Natural mortality rates for brook trout here are high. Fishing mortality rates in the Tin Shanty Road Bridge to Town Corner Lake stairs section are believed to be low because this section has been managed with an artificial lures only and 10 inch minimum size limit (MSL) since 2008. There is ample assured public access in this reach and substantial public support for continuation of gear restricted regulations in this reach. To encourage harvest, the size limit for brown trout should be reduced to 8 inches because brown trout colonization of the stream is not compatible with management objectives. The suggested rainbow trout size limit of 10 inches was selected to be compatible with the MSL's for rainbow trout in other stream types, but is irrelevant because there are no rainbow trout in the Black River.

Although this reach of the Black River does not meet the criterion of low natural mortality rates, the opportunity for quality catch-and-release angling for brook trout after September 30th is popular among many anglers even though the artificial lures only restriction has not resulted in increased abundance of larger brook trout. This 4 mile section could be placed in gear restrictions strictly for social reasons and to allow for fishing all year.

Unit: NLHMU
County: Otsego & Montmorency
Waterbody: **Black River -** CONTINUED FROM PREVIOUS PAGE

Segment: Town Corner Stairs to Tower Dam:

As noted above, brook trout grow well throughout the Black River from the headwaters to Tower Dam. The Type 2 regulations in effect on most of the Black River upstream of Tower Dam since 2000 have been extensively evaluated. Type 2 regulations have not resulted in higher abundance of larger brook trout (larger than 8 inches or 10 inches) in the Black River as compared to abundance when statewide regulations were in effect prior to 2000.

Of the brook trout streams located in the NLHMU, the Black River offered the most potential for gear restrictions because growth rates were high and levels of natural reproduction were high. The NLHMU and Hunt Creek Research Station have been investigating the effects of both Type 2 and gear restrictive regulations using population data collected at many sites on the Black River system over the past 25 years. Data collected to date indicate that neither the increase in the minimum size limit for brook trout to 10 inches in 2000 (Type 2), or the addition of an artificial lures only restriction applied to the Tin Shanty Bridge Road to Town Corner Lake stairs reach in 2008, have resulted in increased abundance of larger brook trout.

Therefore, our recommendation for the Black River is to change regulations for the present Type 2 waters to Type 1, while retaining gear restrictions on the 4 mile section from Tin Shanty Road Bridge to Town Corner Lake stairs.

Unit: SLHMU
County: Ogemaw
Waterbody: **Rifle River**
Segment(s): From State Road (T22N, R3E, Sec. 9) downstream to Ladd's Landing (T21N, R3E, Sec. 28) (16.7 miles)
Entry No: 701
Requested by: Public

Recommendation: We recommend that this stream segment remain classified as Type 3.

Rationale: Marginal trout habitat; Multispecies fishery; Significant fishery for potamodromous species (salmon and steelhead).

Brown trout are not the dominant species in the Rifle River fishery. Downstream from Sage Lake Road (T23N, R3E, Sec. 22) trout habitat becomes increasingly marginal. The brown trout population is maintained by annual stocking (15,000 yearlings distributed among 5 sites along the mainstem). Brown trout growth is slightly above state average, which is often characteristic of marginal streams with abundant minnow populations.

Spawning runs of white sucker from Saginaw Bay attract more anglers to the Rifle River than brown trout and steelhead combined, and angling with live bait is their preferred fishing technique. Large steelhead plants (50,000 annually) are made to sustain a potamodromous fishery in winter and early spring when the most productive bait is spawn. Spawning walleye also ascend the river during the spring. Because of the absence of dams, all of these species can ascend the mainstem all the way to the headwaters in the Rifle River State Recreation Area. Recreational canoeing is extremely popular, with at least seven liveries operating on the mainstem. Many canoeists also fish, using a variety of live and artificial baits. At least one livery opens for business April 1st each year to cater to anglers making float trips for steelheads and brown trout.

The Rifle River should continue to be managed as a multi-species fishery with general regulations appropriate to the diversity of fishes available.

Unit:	SLHMU
County:	Clare
Waterbody:	**N. Branch Tobacco River**
Segment(s):	Entire mainstream (23 miles)
Entry No:	702
Requested by:	Public

Recommendation: We recommend that this stream remain classified as Type 1.

Rationale: Insufficient or lack of key biological data to support nomination for gear restrictions; Inadequate public access.

Brown trout are the dominant species in the upper North Branch Tobacco although the stream also supports a low density population of small brook trout. Age-2 brown trout are about an inch larger than average while age-2 brook trout grow slower than average. We have no data on natural mortality rates. Fishing mortality rates are believed to be low because angling effort is low to moderate. There is little assured public access except from road stream crossings and via a few agreements with landowners. Brown trout populations have varied from 21 fish per acre in 2009 to 265 fish per acre in 2008. The population is most likely limited by variable reproductive success attributable to flood events that impair survival of young fish. Local knowledge and management experience with the stream and angling community indicate there is little social support for gear restrictions, and the stream is fished primarily by anglers using all gear types including bait.

This stream fulfils few of the biological criteria outlined in FO-213 for trout streams where gear restrictions are likely to produce perceptible improvements in population size structure, and there is little assured public access or social demand for such restrictions.

Unit: LEMU
County: Wayne
Waterbody: **Johnson Creek**
Segment(s): From Napier Road to the confluence with the Rouge River (6.0 miles)
Entry No: 801
Requested by: Internal review (currently gear restricted)

Recommendation: We recommend that current gear restricted regulations be retained. We recommend the following regulations:

- **Artificial lures only**
- **Open season: All year**
- **Possession season: The last Saturday in April-September 30**
- **Minimum size limit: 12 inches for brown trout (other trout species are not found here)**
- **Creel limit 2 trout**

In 2002, legislation required that gear restrictions be applied to Johnson Creek. This is a marginal trout stream, but due to the statutory mandate it was placed in the Type 6 category. At this time, we recommend that the present gear restricted regulations be retained.

Unit: LEMU
County: Oakland
Waterbody: **Paint Creek**
Segment(s): From Silver Bell Road to Tienken Road (3.7 miles)
Entry No: 802
Requested by: Public

Recommendation: We recommend that this stream segment be considered for gear restricted regulations. We recommend the following:

- **Artificial lures only**
- **Open season and possession season; last Saturday in April - September 30.**
- **10 inch MSL for all trout species**
- **Creel limit of 2 trout**

Paint Creek is the best trout fishery in LEMU. The primary species sought by anglers is brown trout, and they are the species targeted by the proposed regulations. Naturally reproduced brown trout in Paint Creek grow well with 2-year-old fish averaging more than an inch larger than the Michigan average for trout streams. In some years stocked yearling trout are quite small and subsequently are smaller than the state average size at age 2. No data are available on natural mortality rates or fishing mortality rates. Although Paint Creek flows through an urban area, there is abundant assured public access. The area from Silverbell to Tienken roads has high quality habitat and is long enough (3.5 miles) for the regulations to be effective, yet limits the area of "gear restricted" fishing.

This stream reach meets some of the criteria for selection of trout stream that are good candidates for gear restrictions such as good growth rates, assured public access, and strong social support for gear restricted regulations.

Unit: LEMU
County: Washtenaw
Waterbody: **Mill Creek**
Segment(s): From Steinback Road to the confluence with the Huron River (5.7 miles)
Entry No: 803
Requested by: Public

Recommendation: We do not recommend that this stream segment be considered for gear restricted regulations.

Rationale: Habitat does not support a trout fishery.

Mill Creek is a coolwater stream that supports predominantly rock bass and suckers; there are no trout. Because this creek does not contain trout, it does not meet any of the criteria for selection of trout streams with gear restrictions described in FO-213.

Unit: LEMU
County: Washtenaw
Waterbody: **Huron River**
Segment(s): From Flook Dam to Tubbs Road (12.5 miles)
Entry No: 804
Requested by: Public

Recommendation: We do not recommend that this stream segment be considered for gear restricted regulations.

Rationale: Habitat does not support a trout fishery.

The Huron River is a coolwater stream that supports a good smallmouth bass fishery. Because the angler fishery is not dominated by trout this stream segment does not meet the first criterion for selection of trout streams with gear restrictions.