Administrative Report No. 39 - Appendix

Public comments to the March, 1994, draft of the

Lake Michigan Integrated Fisheries Management Plan 1995 - 2001

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Wisconsin Department of Natural Resources
Bureau of Fisheries Management
Madison, Wisconsin

work can be accomplished at low cost, taking advantage of the outside funding.

Delete Tactic I.A.1.6: "Inventory northern pike spawning habitat in Green Bay." The work has already been done. No further funds should be expended.

This work has not been completed. With EPA funding we have begun to inventory northern pike spawning habitat and will move ahead with the development of methods for enhancing it. This does not require an allocation of Department funds, although some staff time will be needed to oversee the work. Funding by EPA offers an excellent opportunity to improve northern pike spawning habitat at very low cost to the Department.

Delete Tactic I.A.1.7: "Assess enhancement methods for northern pike spawning and nursery habitat." The work has been done. No further funds should be expended.

This work has not yet been initiated, except in a pilot project. This is the next phase of the EPA-funded northern pike habitat work mentioned above. The preceding response applies here as well.

Delete Tactic I.A.2.1: "Construct and study an artificial lake trout spawning reef, if that can substantially enhance the lake trout restoration program."

This is another potential opportunity to use outside funding to enhance our management efforts. At the present time we are, with EPA funding, developing the design and a cost estimate for an experimental lake trout spawning reef. If funding for the reef and all associated assessment costs is forthcoming from EPA, or any other outside source, it will be an excellent opportunity to conduct important management work at low cost to the Department.

Delete Tactic I.A.2.2: "Continue to search for good natural spawning habitat."

This tactic has been deleted from the final draft.

Delete Tactic I.A.3.1: "Develop a guidance document describing best management practices." This has already been done by others. Instead, the DNR should work with those programs and committees.

We fully agree that the Department should work with other programs and agencies on this issue. That is part of the reason why development of a guidance document of this kind is needed. The draft Plan did not clearly present the intent and rationale for this tactic. This section has been revised in the final draft.

Except as it effects Green Bay, do not pursue Tactic I.A.4.1, "Work with the Aquatic Nuisance Control Program, municipalities, and others involved in aquatic plant control efforts to assure compatibility of control methods with fish habitat needs."

Green Bay will be the primary area of interest for this tactic, but we see no need to confine our interest to that area.

Delete Tactic I.A.6.1: "Determine the value of habitats landward of bulkhead lines and, where appropriate, recommend protective measures."

Valuable fish habitats, including some of the last remaining wetlands on Lake Michigan, lie behind bulkhead lines. This is an important tactic for the protection of habitat.

Delete Tactic I.A.6.2: "Advise the Bureau of Water Regulation and Zoning and local zoning agencies about fishery impacts of lakeshore development."

Fisheries Management must be involved in informing other agencies, businesses, and individuals about the effects of their actions on fisheries.

Delete Tactic I.A.7.1: "Assess damage to yellow perch eggs attributable to water level fluctuations."

We agree; this has been deleted.

Do not manage the lake for a pre-settlement native fish community. Any movement away from the salmon/trout fishery is a movement in the wrong direction. The lake should be managed for what the anglers want and what is most beneficial for the economy in terms of fish, not for the EPA.

It is not the intention of this Plan to return the lake to its pre-settlement conditions. In fact, the Plan clearly states the intention of managing for a sport fishery largely made up of non-indigenous species.

Why study the impact of alewives on native species?

We need to understand the risks of a resurgent alewife population. It is widely accepted that at very high levels of alewife abundance, yellow perch populations suffer. Other species, including chubs, emerald shiners, and lake trout may also be adversely affected by alewives. Because we believe that the salmon fishery has suffered because of declining numbers of alewives, we have adopted strong measures to restrict the harvest of alewives by commercial fishers. This leaves us in the difficult position of wanting to protect alewives while at the same time realizing that increases in alewife abundance could threaten other species. In order to make the best decisions about alewife management, we need better information about the impact of alewives on native species.

Delete Tactic I.B.5.1: "Encourage and support a bioenergetics analysis of the impact of cormorants on native species in Green Bay."

Cormorants have proliferated in the Green Bay area, and elsewhere. Bioenergetics analysis is one important tool for understanding the impact of cormorants on native species, including yellow perch. This is work that is probably beyond our resources to conduct, but by highlighting its importance we can encourage others to do it.

Do not describe alewives as an undesirable exotic.

Alewives serve an important function as the preferred forage for salmon and trout in Lake Michigan, so in the revised Plan we have attempted to avoid characterizing them as undesirable. Nevertheless, we cannot ignore the fact that they can have adverse effects on yellow perch, chubs, and other native species. Prior to the establishment of the salmon program, spring die-offs of alewives posed a major esthetic problem for shoreline communities.

Do not take the attitude that the elimination of undesirable exotics is not possible.

Elimination of undesirable exotics has never been achieved in the Great Lakes. Control is possible for some species, notably alewives and sea lamprey, but not all.

Delete Tactic I.C.1.1: "Encourage the development of methods to strictly regulate ballast water exchanges that affect the Great Lakes." This is already being done at the federal level.

Important steps have been taken to restrict the importation of exotic species in ballast water, but if the present controls can be improved that should be encouraged. Also, because current controls in importation offer no protection against dispersal of exotic species within the Great Lakes basin, we encourage the development of methods to limit such intra-basin transport.

Delete Tactic I.C.1.3: "Promote public understanding of the exotic species problem."

Enhanced public understanding of the exotic species problem can help limit the inadvertent spread of exotics. This applies to the transport of zebra mussels, Eurasian milfoil, and ruffe. Public understanding of this problem is also needed to support and further regulatory or control measures.

Delete Tactic I.C.1.4: "Develop strategies for controlling inadvertent transport of exotic species by bait dealers, the aquarium industry, and recreational boaters." This is taken care of by the new regulation banning the harvest of bait minnows from Lake Superior.

Yes, we have new regulations for Lake Superior, but other issues are involved here. The regulations on Lake Superior limit the transport of bait out of that lake. Moreover, they do not deal with problems associated with the aquarium industry and recreational boating.

Whenever there may be a conflict between the salmon and trout fishery and the native species, preference must be given to the salmon and trout species.

We believe that the protection of native species is implicit in the policy guidance that we receive from the Natural Resources Board: "The goal of fish management is to provide opportunities for the optimum use and enjoyment of Wisconsin's aquatic resources, both sport and commercial. A healthy and diverse environment is essential to meet this goal and shall be promoted through management programs."

But it would be a mistake to describe the salmon and trout program as the enemy of native species. The chinook salmon may be the best friend of native species in Lake Michigan. Before the inception of the salmon program alewives had taken a heavy toll on several native species, including yellow perch and chubs. Alewives were brought under control largely through the stocking of millions of salmon and trout.

Any investment in continuing education and training of fisheries management personnel should be directed towards the salmon and trout fishery, not native species.

For reasons stated above, it would be a mistake to present the salmon and trout program as an enemy of native species. In any event, the protection of native species cannot be subordinated to the promotion of the salmon and trout fishery.

Adjust forage survey methods as technology improves.

We are presently involved in a collaborative effort involving the National Biological Survey and the other states bordering Lake Michigan to develop the best possible methods for assessing the forage community. This Interagency Fish Stock Assessment Research Project is coordinated by the National Biological Survey and utilizes the most advanced accoustic and trawling technologies. Wisconsin's share of funding is provided from our Federal Aid in Sport Fish Restoration funds.

Give preference to salmon and non-lake trout in allocating and determining the quantity of fish stocked in relation to available forage.

Wisconsin does not stock lake trout in Lake Michigan. Lake trout occupy deep water and are capable of utilizing the presently abundant chub population to a greater extent than are Pacific salmon, steelhead, or brown trout. We do not presently plan to limit stocking of other species in order to protect forage for use by lake trout. We expect our stocking program to go forward for the next several years without major changes.

Forage species should be managed to provide for the optimum production of yelow perch, trout, and salmon.

> We must keep in mind that the goals of optimum production of yellow perch and salmon may not be compatible because of the roles of alewives as forage for salmon and predators on and competitors with yellow perch. This issue is addressed under Goal 1, Obective C, Problem 3, "We do not know what level of salmon and trout stocking, if any, will hold alewives at levels compatible with rehabilitation of native species while not depleting alewives to the point where they cannot support salmon and trout fisheries desired by anglers."

Create a separate category of "forage" fish for management purposes.

> This is not biologically realistic; management must be based on the biological characteristics of the fish and their potential uses in sport and commercial fisheries. The forage community includes alewives, rainbow smelt, and chubs, species that have very different life histories and that have different uses and are harvested by very different methods.

Review the stocking rationale model on an annual basis and adjust it as conditions change.

> The Plan now includes the tactic of running the stocking rationale model every two years using current information about sport harvests and available facilities. Because the factors influencing the recommendations of the model, distribution of facilities (ramps, moorings, piers, etc) and catch records, do not vary markedly from year to year, the biennial review should be sufficient.

Closely monitor whether or not stocking complies with the stocking rationale model.

> This can easily be done. We produce annual stocking summaries that can be compared with the stocking rationale model.

The creel survey system produces inaccurate reports and should be modified. This may require additional staffing or some modification of a survey system.

> We agree about the importance of accurate creel surveys. We believe that the Lake Michigan creel survey is sound, but can be improved. We are currently working through the Lake Michigan Technical Committee to review all creel surveys on Lake Michigan and to standardize methods used around the lake.

Delete Tactic II.A.2.1: "Develop a cooperative project with Law Enforcement to improve [charter] reporting compliance."

> Accurate reporting is essential and we believe that Law Enforcement is an important ally in improving compliance.

Delete Tactic II.A.2.2: "Improve [charter] industry cooperation to enhance the quality of reporting."

> It is important to work with the charter industry in this area.

The Department should re-direct its focus to finding a solution to the BKD problem instead of taking more samples. Perhaps outside disease control agencies should be consulted. The "studies" have been going on for a number of years now. It is time to find a solution.

> The text of the Plan summarizes Department activities to reduce the loss of fish to BKD. Department staff work closely with fish health experts from all the Great Lakes states and from states outside the region, and consult with researchers from Universities. An aggressive program to limit BKD is in place, and we believe that progress is being made, but we do not know all the answers.

Delete Tactic II.A.5.1: "Stock both yearling and fingerling cohos and assess the success of each." Available funds should be used for stocking yearlings.

> We have initiated a controlled study to compare stocking of fingerling and yearling coho salmon. In that study 100,000 fingerlings and 400,000 yearlings will be stocked annually for two years, with matched plants of 50,000 of each in each of two rivers, the Root and the Kewaunee. This sort of controlled study is needed to compare the two rearing methods.

The Department, along with Michigan and the other states, should take action on the "Platte River Order."

> The "Platte River Order" is a Michigan court order limiting the number of coho salmon that may be allowed passage beyond the lower weir on the Platte River. It is based on concerns about the environmental effects of large runs of coho salmon.

Lake trout should be studied to determine whether they may be part of the cause and/or a carrier of the disease involved in drop-out syndrome.

> Fish health experts from the Great Lakes states have met under auspices of the Fish Health Committee of the Great Lakes Fishery Commission to discuss the drop-out syndrome. The Committee did not identify lake trout as a likely cause or carrier of the condition. In fact, the consensus of opinion of the Fish Health Committee is that drop-out syndrome is not a disease. Guided by information presented to the Committee Wisconsin is exploring the hypothesis that drop-out syndrome reflects a thiamin deficiency in eggs taken from feral salmon and trout. This year most eggs taken for rearing from chinook salmon, coho salmon,

and rainbow trout collected at our Lake Michigan weirs will be treated with thiamin by immersion. Untreated controls will be used to assess the efficacy of the treatment.

Delete tactics that describe things that have already been done or have been rejected by Conservation Congress hearings.

This plan was developed over a two year period. Some tactics developed early in the process have already been completed, or proposed. Tactics that have been enacted will be noted in the Plan.

The tactic to provide informational materials to improve public understanding of the limited carrying capacity of the lake appears to be a push for an new reduced bag limit and an attempt by the Department to get people to be satisfied with fewer fish. We should not have to get used to fewer fish.

The lake cannot support unlimited numbers of fish. We need to inform the public about the biological limitations of Lake Michigan.

Delete Tactic II.A.8.2: "Periodically survey angler species preferences." The average angler does not have the knowledge to form a viable answer agreeable with the biological characteristics of the lake.

The opinions of the average angler are important. We must try to assess and respond to the views of all anglers.

Do not open any current lake trout refuge areas.

We have received some public support for opening the Clay Banks Refuge and for allowing fishing for species other than lake trout in the Midlake Refuge. These proposals are strongly supported by some members of the public. We will continue to consider those options.

Manage lake trout as a put and take fishery, unless that would jeopardize federal funding.

Because we do not stock lake trout, we do not have the option of managing them for a put and take fishery. In all likelihood, withdrawal of our support for the lake trout restoration program would jeopardize federal support for stocking lake trout in Wisconsin waters. Moreover, it would undermine federal support for the sea lamprey control program.

Delete Tactic II.B.2.1: "Identify and quantify other [i.e., other than exploitation] mortality factors [affecting lake trout]." Instead, use the money to execute solutions to presently known mortality factors.

We agree that where mortality factors are well understood we can tackle them directly, but we also need to know more about the factors affecting lake trout survival.

Delete Problem II.B.3: "The Midlake Refuge meets the objectives of limiting lake trout mortality, but unnecessarily restricts angling for other species."

Many anglers urged us to open the Midlake Refuge to fishing for steelhead. We will continue to discuss this option.

Delete Problem II.C.2: "Lack of fish-propagation research facility and staff limit research." Do not develop a fish propagation research facility; the money should be spent on maintaining hatcheries instead of research.

We agree with this recommendation; the proposal has been deleted from the Plan.

Work with the other states to develop a response to the yellow perch situation in Lake Michigan.

Agreed. This is being done and has been explicitly added to the Plan. A meeting of sport and commercial fishers and fisheries managers from Michigan, Indiana, Illinois, and Wisconsin will take place on December 10. Following that, the four states will propose specific regulations as part of a basin-wide yellow perch protection and restoration program.

Delete Problem II.D.3. "Access to nearshore fishing opportunities is limited." This is something local municipalities should take care of.

Improvement of fishing opportunities is an important part of our work. We will work with municipalities and others in this area, but we will remain involved. An excellent example of progress in this area is recent action by the Department to establish the Manitowoc-Branch River Fishery Area. It is expected that establishment of that Fishery Area will alow the Department's to acquire over 5,000 acres along the Manitowoc and Branch Rivers.

Delete Tactic II.D.4.1: "Survey and describe existing warm-water habitat . . . and describe what it could support." The Department should not spend any further money on such surveys, but rather on hatcheries.

We want to support a diverse fishery, including naturally reproducing warm-water species, to the extent possible, in addition to salmon and trout. In order to do this we need more information about what existing habitat will suport.

Delete Tactic II.E.1.1: "Support a survey to find out why Salmon Stamp sales are declining."

Agreed; this tactic has been deleted.

Delete Tactic II.E.1.3: "Develop a periodic Lake Michigan newsletter." Delete Tactic II.E.2.1: "Develop programs educating the public on contaminant advisories, fisheries management objectives, and ongoing programs." Instead the

Department should develop programs to promote the positives of Lake Michigan.

> These two tactics fall under Goal II, Objective E, which has been reworded to read "Increase public awareness of the sport fishery resources of Lake Michigan." This Objective now contains only two tactics, one dealing with working with others to support a positive marketing program about sport fishing in Lake Michigan. Under this tactic in 1995 Fisheries Management will produce a glossy brochure describing fishing opportunities in Lake Michigan. The second remaining tactic will be to produce a periodic newsletter. The newsletter can be a low-cost way of keeping interested people informed about what is going on in Lake Michigan.

Delete Problem II.F.1: "Snagging and foul-hooking are at unacceptable levels."

> This problem needs to be addressed until it is resolved.

Yellow perch should be split between sport and commercial 50/50 by weight, not numbers.

> The current goal of a 50/50 split by numbers is a guideline. The actual division varies greatly from year to year.

Delete Tactic III.A.6.1. "Work with commercial fishers to develop commercial uses for carp other than human consumption."

> The hope here is that a commercially viable use for carp will found that a) is economically beneficial and b) can help control the abundance of carp. This would benefit the sport fishery.

Funding by sport fishermen of management of the commercial fishery must stop. An excise tax on commercial sales should be used to fund commercial fish management.

> The Plan notes that commercial fees are inadequate to support commercial fishing management. The Plan includes a tactic to "Identify and seek other sources of funding to pay for the [commercial fishing] program." An excise tax on commercial sales could be considered, among other options.

Something should be done to reduce the amount of time being spent responding to various requests by commercial fishermen.

> We agree. This is the point of Problem III.C.3, "Existing regulations, although based on sound data, are constantly challenged."

Delete Problem III.D.1: "The catch report system can be easily circumvented, resulting in under reporting of the catch." Commercial fishermen should pay for all of their own law enforcement monitoring. There are presently enough laws on the books regarding commercial catch reporting. Now its just a matter of enforcing what is already there.

> Whoever pays for it, this is a major problem that must be addressed. It is not a question of how many laws are on the books, but one of how effective they are. This problem should be addressed, working in cooperation with Law Enforcement and commercial fishers.

Delete Tactic III.E.1.1: "Provide information that illustrates management goals and accomplishments and explains the need for intensive regulations."

> This addresses the general problem referred to above: we are not communicating our program to the public.

Reinstate the Lake Michigan Commercial Fishing Advisory Board.

> We agree. This has been added as a new tactic.

Delete Problem III.F.1: "Commercial fishers argue that the requirement for separate license fees for all boats is burdensome." There should be one license per boat.

> This is a problem that we should address <u>if</u> it can be done without undermining funding <u>or</u> if other benefits such as reduced incidental catch of sport species can be realized.

Delete Problem III.F.2: "Individual transferable quotas can be reallocated by the LMCFB, thereby jeopardizing investments."

> This is a legitimate concern of commercial fishers.

The Plan gives the fishermen no hope for better things in the future.

> The sport fishery of Lake Michigan is an outstanding recreational resource, and we are committed to sustaining it. This Plan does not raise false hopes, but does focus our attention on specific problems and realistic remedies.

<u>Great Lakes Study Committee</u>

The Committee agreed with the review by the Wisconsin Federation of Great Lakes Sport Fisherman.

<u>Lake Michigan Federation</u>

The Plan needs to be more proactive in addressing causes of habitat destruction and chemical contamination.

> We believe we are as proactive as we can be. Habitat issues are addressed in Goal I, Objective A, "Protect, maintain, and enhance habitat for game and non-game species." We would appreciate knowing the specific actions the Federation recommends.

Aquatic herbicide use should not be allowed in Lake Michigan.

Again, we believe that we go as far as we can. This is addressed in Goal I, Objective A, Problem 4, "Aquatic plant control may affect fish populations."

The greatest emphasis of stocking programs should be on restoring native species. . . . We question the validity of investing in stocking programs as opposed to restoring a viable fishery with native species.

The Plan reflects a commitment to restoration of several native species. We are also committed to sustaining our salmon and trout stocking programs. The Federation should be aware that the lakewide salmon and trout stocking program was probably the single most important factor in reducing alewife abundance and allowing several native species, including yellow perch and chubs to return to abundance.

Sturgeon should be included in the list of native species of special interest.

Agreed. A reference to sturgeon restoration has been added.

Can sea lamprey build a resistance to the chemicals being used to control them?

This question was addressed by Ronald J. Scholefield and James G. Seelye in a 1990 report to the Great Lakes Fishery Commission. Those authors found no evidence of the development of resistance to TFM, the primary lampricide now in use. Under a program called "Integrated Management of Sea Lamprey," the Great Lakes Fishery Commission is exploring alternative methods for controlling sea lamprey. These include the use of physical barriers and the release of sterile males. At the present time, however, sea lamprey populations cannot be controlled without widespread use of chemical lampricides.

The Federation supports the objective of providing better nearshore fish opportunities, but would add that access to Lake resources should always be available to all.

We agree.

The Department should not only inform the public about sport fishing opportunities, but should also provide the public information about the risks associated with consuming fish.

The Department issues fish consumption advisories, but that is not a function of the Fisheries Management program.

The objective of improving compliance with commercial catch reporting requirements should be changed to read that no over-harvests will be allowed.

Compliance with catch reporting requirements is necessary to keep harvests within quotas.

A fourth goal, restoring and maintaining populations of as many native species as possible, should be added.

This would be redundant. The Plan already includes the objective of protecting and restoring native species.

In order to address Problem I.A.2, "Lake trout natural reproduction may be hindered by degraded habitat," it is necessary to assess the role of toxics in depressing the reproductive ability of lake trout.

The question of whether or not toxics inhibit lake trout reproduction is probably best addressed by others. Most expert opinion holds that contaminants are not currently limiting natural reproduction by lake trout.

Tactic I.A.3.1, "Develop a guidance document describing best [land use] management practices from a fisheries perspective," should include a reference to how the document will be used.

Agreed. A discussion of this has been included in the revised Plan.

There needs to be a discussion of the impacts of herbicides on the fish themselves or the ecological balance of the lake. The tactics should include biological options, and limit or eliminate chemical usage because of water quality impacts.

We agree about the need to mention the possibility of direct effects of herbicides on fish. Fisheries Management does not handle permits for aquatic plant control, so our role is to advise our Aquatic Plant Management Program of the implications for fish of various control options.

Tactic I.A.5.1, "Continue to advise the Federal Energy Regulatory Commission during relicensing of dams," is not really a tactic. It might be more appropriate to evaluate and then advise based on the impacts on fish, and remove dams whenever possible or necessary.

We see no substantive disagreement here. During FERC relicensing, Fisheries Management is very much involved in evaluating the impacts of dams on fish. However, because licensees are required to perform evaluations at the time of relicensing, much of the evaluation work is performed by the utility companies or by their consultants. Fisheries management reviews the study designs and evaluates the resulting data. That is the advisory role referred to in the tactic.

Regarding bulkhead lines, add two tactics that read something like "Push for legislation which would remove all bulkhead lines not already filled in," and "Advise riparian owners and real estate agents . . ."

We think that the existing tactics are appropriate for the Fisheries Management Program.

Objective I.B, "Protect and restore native species," should include determining the impacts of chlorinated compounds and determining what other factors might be limiting reproductive success.

> The research capabilities of Fisheries Management are limited, but we can cooperate with outside investigators addressing these issues. That is the intent of the third tactic listed under Problem I.B.1, "Cooperate with investigators conducting early life history studies addressing factors limiting natural reproduction."

Problem I.B.2, "Natural walleye recruitment does not sustain acceptable fisheries in some areas of Green Bay," should be a fairly low priority. It seems the question is are we trying to produce balanced, self-sustaining populations and overall ecosystems, or just keep anglers satisfied? Given that, the tactics should include factors that are limiting reproduction.

> The goal of sustaining walleye populations that provide one component of a diverse sport fish community in Green Bay is compatible with a healthy ecosystem and self-sustaining populations. Yes, we want to keep anglers happy. That is implicit in the policy guidance we receive from the Natural Resources Board: "The goal of fish management is to provide opportunities for the optimum use and enjoyment of Wisconsin's aquatic resources, both sport and commercial... ."

Tactic I.B.3.3, "Investigate factors limiting native fishes (e.g., interaction between lake whitefish and herring)," should include references to other factors (physical, biological, and chemical).

> Consideration of physical and chemical factors is not precluded by this tactic as written. It should be remembered, however, that our resources for conducting investigation are extremely limited.

Problem I.B.5, "Cormorants may affect fish populations," is a low priority, in the opinion of the Federation."

> We acknowledge that, but for some anglers and commercial fishers predation by cormorants is a major concern which we feel obligated to address.

Regarding Problem I.C.1, "Exotic species keep coming and existing populations continue to expand," would fines be an effective penalty? If not, other means should be considered.

> The issue of limiting importation of exotic species is complex. It is being addressed nationally through the Aquatic Nuissance Preventiona and Control Act and is being reviewed by the Department. We believe that the tactics listed are the appropriate ways for Fisheries Management to be involved in the problem. The use of fines would probably not be effective because it is almost never possible to fix the responsibility on an individual.

Regarding Problem I.C.2, "The impacts of exotic species are not well understood," the tactics are fine, but if the exotics cannot be controlled, what's the justification for bothering?

> We have added some clarifying language here. As the Lake Michigan ecosystem changes because of exotic species, fisheries management must adapt its actions and expectations. That requires knowledge about the abundance, distribution, and effects of the exotic species.

Tactic I.D.1.1 should read, "Increase <u>effective</u> continuing education . . ."

> Agreed. The tactic has been changed accordingly.

An awareness building strategy should be be built into Problem II.A.1, "The available forage in Lake Michigan can only support a limited predator stocking level, one which may not meet angler expectations.

> This is addressed in Problem II.A.8., "Public expectations of stocking and harvest sometimes exceed the carrying capacity of the lake."

Under Problem II.A.2, "Accurate sport harvest estimates are difficult to obtain," a fourth tactic should be added, "Educate as to why reporting is important and necessary."

> This would be an aspect of the third tactic, "Improve industry cooperation to enhance the quality of reporting."

Amend Tactic II.A.5.1, "Stock both yearling and fingerling coho salmon and assess the success of each," by adding, "and reasons for that success."

> We are not sure what is meant here. We will conduct a experiment in which one independent variable, rearing method, is controlled and two dependent variables are measured. The dependent variables are 1) probability of capture by the fishery, 2) probability of return to the weir. A later decision about which rearing method to adopt will also take into consideration the considerable difference in cost of rearing yearlings and fingerlings.

Amend Tactic II.A.8.1, "Provide informational materials to improve public understanding of this problem [i.e., limited ability of the Lake Michigan ecosystem to support stocked fish]," by adding a reference to the concept of balanced ecosystems.

> We will seek to understand the relevant ecological principles and to convey those to the fishing public. Our immediate concern is to have our customers understand that there are limits to what the lake can produce.

Problem II.D.1, "Yellow perch recruitment is highly variable," should include an assurance that effects don't have adverse effects on existing native and other fisheries.

We are not sure what this means.

The tactics listed under Problem II.E.1, "The Lake Michigan sport fishery is losing clients," should include working with fishing clubs.

You are correct, but meeting with sport fish clubs is already an integral and necessary part of the work of fisheries managers.

The tactics listed under Problem II.F.1, "Snagging and foul-hooking are at unacceptable levels," should include working with fishing clubs who can possibly perform self regulation.

Self-regulation by fishing clubs is not the answer; they are not the guilty parties. The fishing clubs are as concerned as we are about snagging and foul-hooking.

Problem III.A.6, "Contaminants prevent commercial utilization of carp," should include a tactic addressing ending contamination.

Ending contamination is outside the scope of what the Fisheries Management Program can do. As noted in other parts of this Plan, we can do many things to highlight and cope with the problem, and to provide support to programs and agencies that can have the ability to take direct steps.

Regarding Problem III.E.1, "The public is not well informed about the Lake Michigan commercial fishery," there should be work done to include interested community groups to develop and disseminate information.

Agreed.

Christopher Heili

Regarding Tactic I.C.1.1, "Encourage the development of methods to strictly regulate ballast water exchanges that affect the Great Lakes." The word "encourage" is very soft and should be changed to something much stronger, like "actively pursue."

Substantial progress has been made in controlling the movement of non-indigenous organisms via ballast water. Further progress can be made, but it probably is beyond the resources of fisheries management to become actively involved beyond supporting efforts made through the Aquatic Nuisance Task Force and the Great Lakes Fishery Commission.

Douglas Leppanen

The Department should emphasize more of the "natural" resources of the state and not be so concerned with the economic development of the state that they would actively endorse a plan that depends on the stocking of fish that rely totally on hatcheries.

The stocking of salmon and trout is needed in order to sustain the present sport fishery. We believe that the hatchery-dependent salmon and trout program can be sustained with minimal impact on self-sustaining trout populations. Moreover, because the salmon and trout program controls alewife abundance, it benefits several native species living in Lake Michigan.

Remove Problem I.A.7, "Water level fluctuations can destroy emergent shoreline vegetation and allow yellow perch eggs to be washed ashore."

Agreed. This has been deleted from the Plan.

Regarding Problem I.B.2, "Natural walleye recruitment does not sustain acceptable fisheries in some areas of Green Bay," the Plan fails to list catch restrictions as a tactic, but does list additional stocking. This is the wrong way to approach the problem.

We believe that catch restrictions are currently strong enough, although we are open to further discussion of that issue.

Regarding Objective II.C, "Identify and correct facility problems within the propagation system," the commentary makes reference to the interest in the propagation of wild trout for inland stocking. The Department should give priority to this type of fishery.

We are moving in that direction in the inland trout program. For the Great Lakes trout and salmon we cannot rely on natural reproduction, but we can and do take steps to assure genetic diversity. These include artificially mating many individual males with many individual females and taking parent fish from all parts of the spawning run.

Regarding Objective II.E, "Provide information opportunities that increase public awareness of the sport fishery resource and techniques," why should the Department be involved in a public information campaign to promote an artificial fishery for economic development?

This objective has been somewhat revised for the final draft, but retains a commitment to working with the charter industry to support a positive marketing program to inform the public about sport fishing opportunities in Lake Michigan. We will do this in two ways: 1) attempting to make fishing better and 2) providing informational materials that can be used in promotional a work.

Chuck Rentmeester

There is enough evidence that the protection or curtailment of eradication of alewives is critical.

Alewives are both an asset and a liability in the Lake Michigan sport fishery. They support salmon but can also, when very abundant, adversely affect yellow perch, chubs, and other native species. We are trying

to find the middle ground where alewives are sufficiently abundant to support salmon and trout, but not so abundant that they threaten native species.

The goal of a 50/50 allocation of yellow perch to sport and commercial fishers should be changed. The sport fishery is more important economically.

We recognize the importance of the sport fishery for yellow perch and control the commercial harvest with that in mind. At the same time we are obligated to provide opportunities for commercial fishing. We believe that the 50/50 allocation goal reflects the appropriate balance.

Regarding Problem I.A.7, "Water level fluctuations can destroy emergent shoreline vegetation and allow yellow perch eggs to be washed ashore," the emphasis in protecting shoreline vegetation should be on carp control. Walleyes also need weeds to spawn successfully.

In Tactic III.A.6 the control of carp is addressed. We agree completely about the importance of maintaining emergent shoreline vegetation. Problem 1.A. 7 has been deleted.

Regarding Tactic II.C.1.5, "Develop and fully utilize the potential of cooperative rearing of fish destined for Lake Michigan," the Department should continue to work with the private sector for newer means of fish rearing.

We agree. We will continue to utilize the best and most economical means of meeting our fish production goals.

Add a new tactic, "Determine the actual number of commercial fishermen using their license and working this way for a living." They deserve the credit.

This information is known. All commercial license holders must demonstrate that they meet minimum investment and fishing activity criteria.

Regarding Problem III.C.3, "Existing regulations, although based on sound data, are constantly challenged," when the Department hands out information that contradicts its own reasoning for regulation changes it should welcome the challenge by sports groups to clean up their act.

This problem addresses commercial, not sport regulations, but you are correct in saying that we should welcome constructive criticism of our program.

Greg Erickson

Regarding Problem II.A.2, "The charter reporting system needs improvement," charter boats should be monitored just like the commercial boats. They should have their book filled in every trip whether they have paid charters or not. Late reporting should not be tolerated. Commercial fishers have a deadline for reporting and charter captains should have one.

These concerns could be addressed through one of the tactics in the Plan, "Develop a cooperative project with Law Enforcement to improve charter reporting compliance."

Regarding Tactic II.B.1.1, "Monitor sport harvest and adjust open seasons, refuges, and bag limits in order to help meet the lakewide goal of 40% annual mortality," a lakewide accounting system is needed with current harvest data used to adjust rules to regulate mortality. What data are available to warrant the extended lake trout season?

Agreed. Creel survey data showing harvests within acceptable limits are the basis for liberalizing the season. We have established separate sport and commercial mortality targets with the goal of 40% annual mortality in mind.

Rick Buser

The most blatant inconsistency in the Management Plan is the incredible amount of energy invested in the stocking of exotic species. Looking at long term benefits it seems funding should go into education of the public of the benefits of a truly healthy ecosystem. Another example of this is the regulation of commercial alewife harvest to sustain the chinook sport fishery when it is clearly understood that alewife negatively affect native species. In this way the Plan fails to couple ecosystem science to management.

We devote energy and money to supporting a salmon and trout fishery because it has both recreational and ecological benefits. Lake Michigan was not a healthy ecosystem at the inception of the salmon and trout program. Since then alewives have been reduced dramatically, largely because of predation by chinook salmon. That has resulted in resurgent populations of native species including yellow perch and chubs.

The cost of managing the commercial fishery is greater than the returns in revenue.

We agree that the cost of managing the commercial fishery exceeds commercial fishing license revenues. This is discussed under Goal III, Objective B, "Seek to adequately fund management of the commercial fishery through a variety of sources."

The Plan ignores other disciplines of management. For example the only direct reference to a wildlife species is the cormorant. What about waterfowl, mink, terns, etc.?

In our assessment of the problems facing us, other wildlife species simply did not come up. We would appreciate knowing more about the problems you see involving waterfowl, mink, etc. Those could be addressed in future planning efforts.

Paul Linke

The Department should stock more walleyes, muskies, yellow perch, and northerns.

Walleye stocking will be undertaken as necessary to sustain walleyes as a component of a diverse Green Bay fishery. Although some experimental stocking may occur in Lake Michigan, we will not undertake large scale stocking there. The Plan calls for development of the Great Lakes spotted musky. Yellow perch stocking is not economically feasible.

The lake trout rehabilitation program is not paying off.

We agree that, so far, natural reproduction by stocked lake trout has been negligible. However, we are committed to a cooperative effort involving the U.S. Fish and Wildlife Service, the other states bordering Lake Michigan, and the Chippewa-Ottawa Treaty Fishing Management Authority to restore lake trout to Lake Michigan. In that program all lake trout are stocked by the Federal Government, so the cost to Wisconsin is low. Although that is not a put-and-take stocking program, it does provide some recreational fishing benefits.

The Department should work to provide handicap accessible fishing spots.

Shoreline access is addressed in Problem II.D.3, "Access to nearshore fishing opportunities is limited." Accessibility to disabled and elderly people, as well as children, will be a consideration in addressing this problem.

Could we get different, shore hugging fish?

This is addressed in the Plan in Problem II.D.2., "Current salmon and trout populations provide limited pier and nearshore opportunities." There we state the following tactic: Seek near-shore salmon and trout strains.

Could fish be stocked in tributaries and in the dark to minimize predation by gulls?

Past evaluations show minimal losses to seagulls, but this issue is still being evaluated.

There is a need for closer monitoring of walleye, yellow perch, and northern harvests, with appropriate changes in sport and commercial regulations.

We monitor with creel surveys, commercial catch reports, and onboard monitoring of commercial boats. Improvement is needed in all of those areas.

At one point in the discussion it states that the commercial fishery serves the purpose of harvesting surplus fish. Who determines what fish are surplus?

We attempt to regulate commercial harvests so that stocks are stable. Surplus means fish above the number needed to sustain the population. We employ a conservative management philosophy under which we attempt to limit the commercial harvest (i.e., to err on the side of the fish population) if our data do not clearly show that a surplus population exists.

Sport and commercial fishers supposedly split the yellow perch harvest 50/50, by numbers, but yellow perch fishing has declined while the commercial harvest has stayed high.

That is correct. We have addressed that situation; commercial cuts have now been instituted in Green Bay and are contemplated for Lake Michigan.

Walleye, yellow perch, and northern pike spawning grounds need better protection.

Agreed. This is addressed in the Plan under Goal I, Objective A, "Protect, maintain, and enhance habitat for game and non-game fish species."

Would it be feasible to stock walleyes in Lake Michigan.

We do not believe so, although some experimental stocking may occur in the Milwaukee area.

Fines for violations, especially snagging, should be stiffer.

We fully agree about that snagging continues to be a significant problem. The Plan addresses unethical practices in Objective II.F, "Develop angling regulations that discourage unethical practices."

<u>Ron Anton</u>

I applaud the position of the WF/GLSFC and can support it.

I had hoped, after all the corresponence, that the Plan would have included something about the LMD and SED work units, or the possibility of a combined unit directed from Madison.

You are correct, this Plan does not address the issue of a combined work unit. However, Secretary George Meyer has initiated a review of the organizational structure of the entire Department of Natural Resources. This issue can be raised in that context.

The hatchery problems are something else. It's hard to rationalize. It is unconscionable that there was no replacement or extensive maintenance program.

The Plan addresses this issue extensively under Goal II, Objective C, "Identify and correct facility problems within the propagation system."

The commercial fishers should start a check off system like that of the pork, dairy, and beef industries. This money should be used to fund management studies, etc.

Funding of commercial management is addressed in Objective III.B, "Seek to adequately fund management of the commercial fishery through a variety of sources."

Pete Le Clair

Commercial trawlers should be used to assess local populations of forage species.

> We are open to considering special studies. This past summer, for example, trawlers conducted a special study of smelt trawling. Any specific proposal for future forage assessments using trawlers will be considered using the criteria we have applied to past proposals. Presently we rely on trawling and acoustic surveys conducted by the National Biological Survey for data on lakewide trends in the abundance of alewives, rainbow smelt, and chubs.

Regarding Problem I.A.4., "Alewives, at high population levels, may affect native species," our observations indicate that the alewives are coming back very strong.

> So far, lakewide National Biological Survey forage surveys have not shown a strong recovery of alewives. Some anecdotal reports by charter captains are consistent with your observations, however. We will continue to support lakewide forage surveys.

The money spent by the Federal Government for lamprey control benefits only the lake trout charter boats. Some of the money should be spent to study forage fish populations.

> We support the lamprey control program. If left uncontrolled, lampreys would decimate not just lake trout, but also lake whitefish, Pacific salmon, brown trout, and steelhead.

Sport fishers should help pay for lakewide forage surveys conducted by the National Biological Survey.

> The lakewide forage surveys are funded by sport fishers and recreational boaters through the Federal Aid in Sport Fish Restoration Program.

Regarding Problem III.A.3., "Yellow perch are shared [by commercial fishers] with sport fishers, requiring allocation," if yellow perch are split 50/50 between sport and commercial fishers, alewives should be allocated 1% to incidental catch by trawlers and 99% to forage for salmon and trout.

> The current policy of Fisheries Management is to minimize the incidental commercial harvest of alewives, while still allowing a viable commercial trawl fishery for rainbow smelt. In this way we reserve alewives for use as food for salmon and trout.

Regarding Problem III.A.5, "The current trigger level for the northern chub racehorse fishery is too high and no trigger level exists for smelt," smelt do not need a trigger level because our nets come home with us every day and there are only three companies fishing smelt.

> Although the situation is somewhat different for trawlers than for gill netters, some type of mechanism is needed in any racehorse fishery to terminate harvest before the total allowable commercial harvest is exceeded. The 85% trigger level for smelt was adopted by the Natural Resources Board in September, 1994.

Regarding Problem III.B.1, "Commercial fees are inadequate to support commercial management," Lake Michigan trawlers pay over $17,000 in license fees and are only allowed to fish approximately 147 days a year. We are paying more than our share, yet the fish data received from our trawlers surely benefits the sport fishery in determining the bioasses.

> Revenues from commercial license fees do not cover the costs of managing the commercial fishery. A subtantial part of the cost of managing the commercial fishery is payed from sport fishing license revenues. In return for the $17,000 in license fees (of which over $11,000 is payed by one non-resident license holder) trawlers have access to a total allowable commercial harvest of over 2.3 million poundsof this highly valued species, and typically harvest over 1.5 million pounds

Regarding Objective III.C., "Minimize or eliminate incidental catch mortality of non-target species," trawlers do not kill non-target species, because diverters are required, yet are the most regulated fishery of all. We cannot be a viable fishery under the strict rules. We request coooperation and support from the Department for studies so that changes can be made. This is top priority.

> All commercial fisheries are strictly regulated for the protection of non-target species. The Department will continue to cooperate with the trawlers in special studies. During the summer of 1994, for example, a special study was conducted by the trawlers and the University of Wisconsin - Stevens Point to see if summer daytime trawling in Lake Michigan could be conducted without catching large numbers of alewives.

Regarding Objective III.E., "Increase public awareness of the positive aspects and benefits of the Lake Michigan commercial fishing industry," the Department should advise people of the freshwater fish that are available at different times of the year.

> The marketing of products of the fishery must be the responsibility of the commercial industry. The tactics listed under Objective III.E. include the provision of information to the public describing the fishery and management practices.

Regarding Objective III.F., "Enhance the viability and stability of the commercial fishing industry," in order for the trawlers to be a viable and stable commercial fishery we must be allowed to trawl for chubs with nets adapted to harvest large chubs and while allowing smaller fish to escape.

> Trawling is an efficient but indescriminant method of harvest, so any proposal to expand and diversify trawling must be carefully studied. Several issues need to be addressed regarding this proposal,

including the effects of such trawling on undersized chubs and on other non-target species. Under current rules trawlers already have a substantial impact on the chub population. For example, Department biologists estimate that during the 1992-93 commercial fishing year over one million pounds of small chubs were harvested during trawling for smelt.

Wisconsin Commercial Fisheries

Wisconsin Commercial Fishermen believe that some type of "property right" exists in our allocated quota shares and would like it to be formally recognized and ensured. It is not our intention to challenge the state's legal title to wild animals, including fish, or the Department's management through proven scientific techniques. What we need is a mechanism to make our percentage of the quota belong to us and eliminate the possibility of reallocation.

This concern is addressed in Problem III.F.2., "Individual transferable quotas can be reallocated by the Lake Michigan Commercial Fishing Board, thereby jeopardizing investments." At this time we do not have a solution that will allay this concern, but we are willing to look further into the problem.

All licensees now designate a beneficiary for their licenses, permits, and quota shares. If a beneficiary is not eligible to receive a license for some reason, the named beneficiary (or named heir) must be provided a mechanism to arrange a transfer to a qualified person.

We understand the desire to assure that the economic value of a license can be passed on to a beneficiary when a license holder dies. This issue is under review by Department attorneys and representatives of Wisconsin Commercial Fisheries.

Sheboygan Area Great Lakes Sport Fishermen

The Plan does not address some basic questions of interest to Sheboygan Area Great Lakes Sport Fishermen. 1) What kind of fish are we looking at planting? 2) How many of each species? 3) Where will they be planted?

We expect to continue planting the same species that we have in the past, and in approximately the same numbers. Annual stocking plans specifying, by species, the numbers of fish sheduled for stocking at each location are available from the Lake Michigan Fishery Supervisor for the Southeast District. Except under special circumstances, the distribution of fish among the lakeshore counties is determined by the Stocking Rationale Model discussed under Objective II.A.. The distribution of fish among stocking locations within a county is at the discretion of the Lake Michigan Fishery Supervisor for each district.

What specific ideas does the Department have for the weirs on the Kewaunee and Root Rivers? What can be done to improve them? How much money are you going to spend on them?

Under Problem II.A.7., "Brood river weir operation and stocking procedures have not been well defined," we discuss these facilities and call for the development of operation plans. Those plans are already available in draft form.

We hear that some hatcheries have to go, but on the other hand there is a shortage of hatchery space. This must be addressed.

We do not know at this time whether hatcheries will be closed in the near future, although funding constraints have required the Department to look into that possibility. Whether or not facilities are closed, we will have difficulty producing the numbers of fish desired for stocking. Under Objective II.C., "Identify and correct facility problems within the propagation system," we propose a number of tactics to help address our hatchery productions needs.

Why does Department leadership wait until it is too late to handle a crisis? Lots of problems could be handled easily if study was started earlier.

We hope that this Plan will be a guide to timely consideration of potential problems.

The Sheboygan River is not mentioned in the Plan. Sheboygan River ponds have been used successfully in the past to imprint salmon. Will they be used in the future?

As you know, stocking in the Sheboygan River was temporarily suspended in 1986 because stocked fish were accumulating high levels PCBs before they left the river. Preliminary results of subsequent studies suggest that, by the time salmon return to the river to spawn, PCB levels are no higher in the Sheboygan River than elsewhere. Stocking of coho salmon, chinook salmon, steelhead, and brown trout has been resumed on an experimental basis. For details on stocking numbers and future use of the ponds, you should contact the Lake Michigan Fishery Supervisor for the Southeast District. One tactic listed in the Plan is to, "Develop and fully utilize the potential of cooperative rearing of fish destined for Lake Michigan.

The resource is going downhill, and the Department should provide leadership in protecting it. Hopefully it is not too late. Cut quotas. Cut seasons. Create new grid areas or no-fishing areas. Lets get back to being conservationists, and save our resource. All the sportsmen hear is that we have to raise license fees, and the next statement is that we have to cut now because the resource is drying up. Thank you for the opportunity to respond to the Plan, on which you did an excellent job. We are looking forward to working with you.

Port of Racine Charter Captains

The document is virtually devoid of measurable goals and objectives. The closest thing to a goal we could find were the harvest targets shown in Table 1, under Goal II. Even there the Plan propose no goal to improve any single species, even the chinook which certainly should be a prime goal of the program.

Instead it accepts the harvest of chinook during the period where significant die-offs were occurring and targets no greater abundance for the future. The chinook harvest goal should be set somewhere between the 1982-87 actual and 1988-1993 actual. We would suggest that you review the Plan from a measurability and quantitative evaluation aspect, then review how each goal could be measured.

> We attempted to be as specific as possible with sport and commercial harvest targets, while keeping a realistic appreciation of the fact that harvests will be determined largely by factors that are outside our control. The lake has changed dramatically since the early 1980's. The forage community has changed from one dominated by alewives, which select water temperatures compatible with salmon, to one dominated by chubs, which live in deep cold water not preferred by salmon. We simply do not know yet whether the changed lake can support salmon production like that seen ten years ago. As stated in the Plan, restoration of the alewife population, even if possible, poses risks to native species, including yellow perch.
>
> We are aware of the importance of evaluating management Plans. The first step we took in developing this plan was to prepare a written evaluation of progress under the previous Plan. Based on that experience, we believe that presentation of goals, objectives, problems, and tactics in the format we have used will allow a good evaluation of progress after this Plan expires in 2001.

For lake trout a goal to have 30 percent of the government provided lake trout planted in shore as they were before the failure of the current refuge to hold spawning fish.

> All lake trout stocked in Lake Michigan are provided by the Federal Government through the U.S. Fish and Wildlife Service. 1994 was a good year for near-shore stocking, with 196,000 yearlings stocked in the Clay Banks Refuge off Door County and 223,000 fall fingerlings stocked near Milwaukee. 500,000 yearlings were stocked in the Midlake Refuge. Distribution of fish stocked by the U.S. Fish and Wildlife Service is determined by the Service and the states within the terms of a lakewide lake trout management plan. We hope to sustain significant near-shore stocking.

We see no reference to efforts to reduce the numbers of fish raised and planted by investigating strains that will return current or greater numbers to the harvest with less stocking. Such a goal could also reduce hatchery space needs, addressing that problem. The raising of Seeforellen brown trout could be an example of such an avenue to accomplish such an objective.

> We will continue look into alternate strains of salmon and trout. Our ability to obtain different strains will be severely limited by the fact, because of concern about importing diseases, we can not longer import fish from outside of the Great Lakes basin. You mention our Seeforellen brown trout program, which shows great promise. The use of new strains of rainbow trout has helped us build an exceptional steelhead fishery both in the open lake and in tributary streams. This Plan calls for seeking strains of salmon and trout that will be accessible to pier and near-shore anglers.