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MICHIGAN'S PROPOSAL FOR A RECREATIONAL METRO FISHING PROGRAM

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SUMMARY

Persons living in the metropolitan area of the state have become increasingly aware of the Michigan Great Lakes fisheries program and now want the state to increase its emphasis on fishing programs for their immediate area.

The Detroit metropolitan area is unique in that it has the potential for almost an unlimited variety of fisheries developments. It has a vast amount of Great Lakes shoreline (Lake Erie and Lake St. Clair and the Detroit and St. Clair Rivers), as well as many miles of inland streams and numerous lakes. In addition, there also are many small endemic waters, e.g., pools, ponds, borrow pits, etc., that offer potential fishing development.

In 1972, the Department of Natural Resources designed a plan of action to develop a Metropolitan Fishing Program. Major goals and objectives were outlined, planning work groups established, and "Planning and Review" and "Citizen Advisory" groups formed. From this organization, metro fishing proposals were developed providing information on feasibility, scope, benefits and costs, budget outlines, and operational plans. Priorities as suggested by the review and citizens committees have been incorporated into the program.

Major programs proposed included pier and shoreline fishing, recreational fish-out ponds, fish stocking, interpretive services, and private services.

Pier and shoreline fishing development incorporate access, shorefishing facilities, offshore fishing facilities, and the use of thermal effluents for fishery benefits. Priority importance was given to shorefishing facilities on Belle Isle, then to the Detroit waterfront shoreline. Consideration is given in this respect to the potential cooperation by private agencies for the development of a waterfront fishing corridor. Priorities continue with development of a pilot fishing pier.

Priority also has been given to fish-out facilities on Belle Isle, followed by expansion to Palmer Park, Farwell Field and Maybury Park. By 1990, hopefully 20 to 40 new ponds will be managed for fish-out programs. Expansion of fishing derbies, now being conducted in several public swimming pools after swimming season, could result in better than 50 such programs being in operation by 1990. Seasonal costs for such programs will approximate \$1,500 to \$2,500 per acre for stocking fish in fish-out ponds and about \$1,000 to \$1,500 per fishing derby held in municipal pools.

Emphasis is being placed on fish stocking in the metro area with the commencement of trout and salmon stocking in the Detroit, St. Clair, Huron and Raisin Rivers. Projected Great Lakes annual plants for the metro area are for approximately 500,000 - 600,000 trout and salmon. The seven-county area contains a vast amount of water and fishing potential. In addition to Great Lakes plants, inland rehabilitation programs, such as the Huron River Project, are being given major consideration. Over the next five years such programs will require approximately 1.7 million fish. Expansion of stocking programs will require an additional several million fish annually.

Education and interpretive services are covered in four sub-programs: interpretive efforts at fishing and wildlife sites; outdoor education; fisheries and wildlife information; and nature centers for fishing and wildlife. The estimated cost of such a program for a five-year period will be based on the personnel and facilities needed to handle the desired program.

The program is viewed primarily as long-range; however, certain immediate goals also can be met. Objectives basically center around providing opportunities for thousands of metro residents to develop an appreciation for, and to be able to participate in, the area's sport fishery.

The fifth and last area of consideration is private services. Such services are supportive in nature, and limited in scope, but add to the quality of the program they support. Services identified as being important to metro fishing are shoreline facilities, such as bait, tackle, fuel, transportation, party boats, private fishing piers, private fish-out facilities, charter boats, and boat rental.

The development of such services will depend a great deal on the success of the program. This development could be encouraged by information dissemination through advertisement, i.e., brochure or pamphlet. It is expected the demand by fishermen will triple the requirements or need for various tackle and equipment types. In addition, the need for fishing platforms, private fish-out ponds, charter boats and boat rentals also will develop.

INTRODUCTION

Michigan's very successful Great Lakes fisheries program has stimulated an increasing awareness in fishing by the state's metropolitan population. A large portion of the state's population is located in the seven counties of St. Clair, Macomb, Oakland, Washtenaw, Wayne, Monroe, and Livingston in southeast Michigan (Figure 1). This factor dictates that fisheries resources of the area be developed on a more intensive basis to meet the needs of the concentrated urban population. This metropolitan area is unique in that it has an abundance of water with the potential for an almost unlimited variety of fisheries developments.

Lake St. Clair and Lake Erie have large and diversified fish populations (Table 1). Lake St. Clair's muskellunge fishery must be considered as the largest single fishery (Plate 1) of its type in the world. Both lakes provide excellent angling for walleye, bass, panfish, and catfish, and have the capacity for greatly expanded recreational uses.

TABLE 1. FISHES COMMON TO THE SPORT CATCH FROM THE METRO AREA

Lake sturgeon	White crappie	Longnose gar
Sucker	Goldfish	Yellow perch
Bowfin	Carp	Rainbow smelt
Quillback	Northern pike	Walleye
Largemouth bass	Muskellunge	White bass
Smallmouth bass	Burbot	White perch
Rock bass	Mooneye	Rainbow trout
Bluegill	Black bullhead	Coho salmon
Pumpkinseed	Channel catfish	Chinook salmon
Black crappie	Brown bullhead	Brown trout

In addition, the metro area borders on two of the state's large rivers connecting these lakes, which have been appropriately labeled the world's largest trout streams. (Figure 2). Similar to the lakes, they also have the potential to accommodate a multifold increase in fishing pressure.

The inland sectors of the metro area have numerous streams and lakes -- one county (Oakland County) having the fifth largest number of lakes of any county in the state. Although presently most of the inland lakes are heavily used, well-planned management can provide for additional recreational hours. With pollution abatement and wise stream management, streams can provide for a large amount of recreational use, most of which are now used relatively little.

FIGURE 1. DETROIT METRO AREA



PLATE 1.

GREAT LAKES MUSKELLUNGE FROM LAKE ST. CLAIR



Finally, there are many small endemic water types, borrow pits, ponds, and pools scattered throughout the area that can provide many hours of recreational use if developed properly.

A plan of action was designed by the Department of Natural Resources in September 1972, to develop a Metropolitan ("Metro") Fishing Program. Major goals and objectives were outlined, planning work groups established, and planning and review and citizens advisory committees formed. Program goals were outlined that would provide metro residents of all ages a chance to understand and appreciate the fisheries resource and to allow each citizen to actively participate in the area's sport fishery. The opportunity to fish would then relate to all citizens regardless of financial status, race, age or sex. Fishing as a clean, wholesome, invigorating, outdoor sport should, under such a plan, be as much a part of urban life as rural life.

FIGURE 2. DETROIT AND ST. CLAIR RIVERS



FIGURE 3, METRO FISHING PROGRAM METHODOLOGY

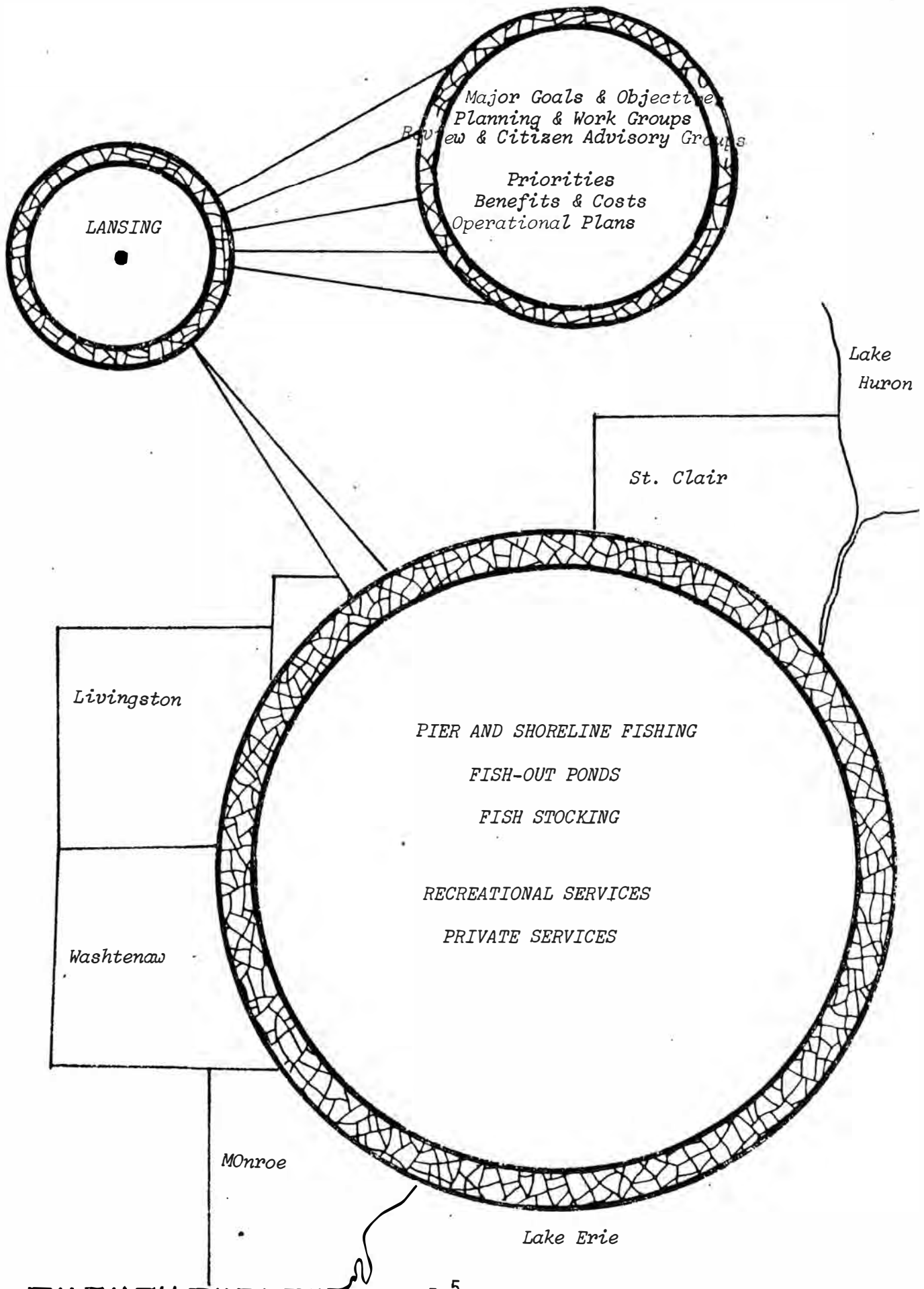
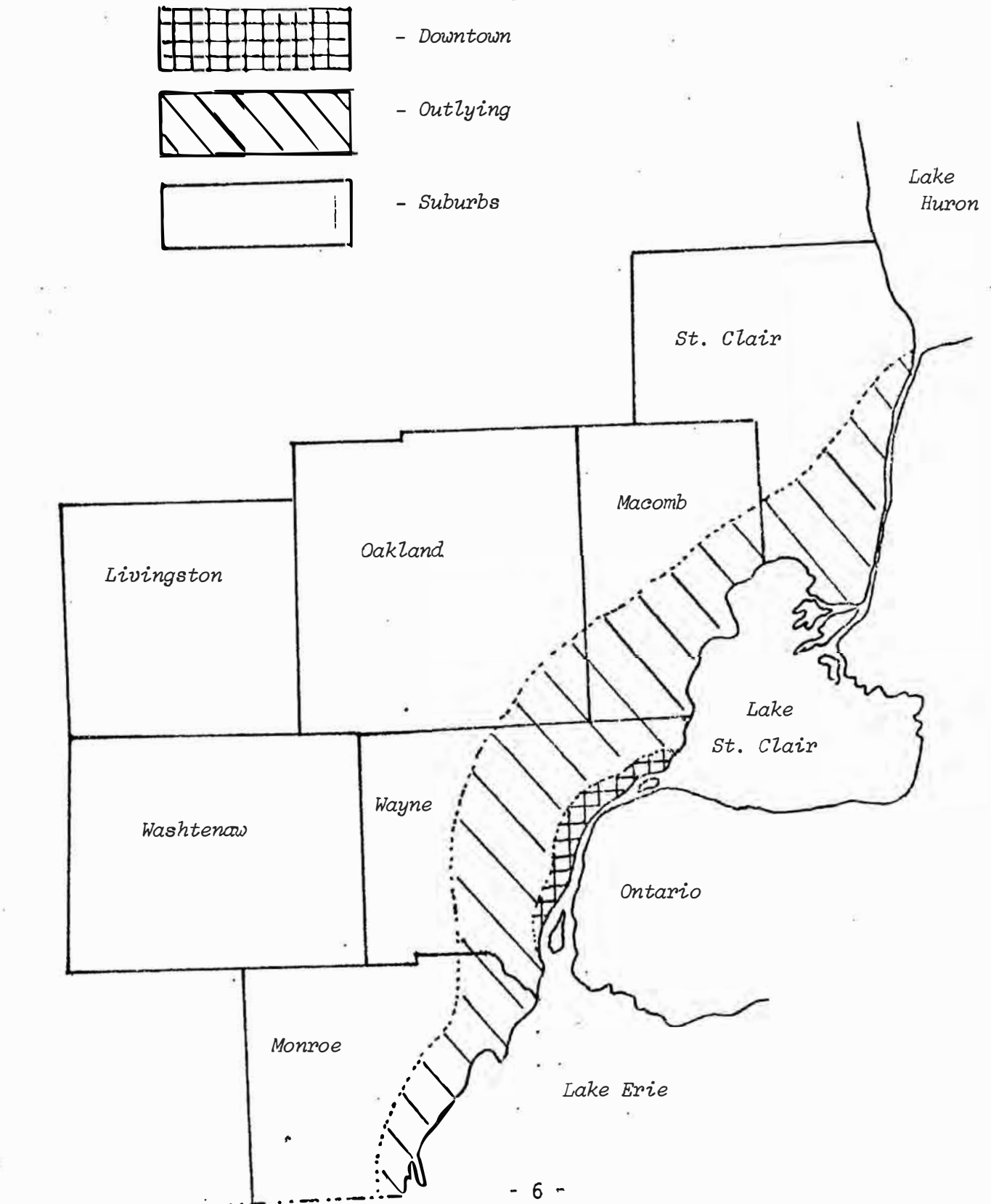


FIGURE 4. RANKING OF ACTION PROGRAM PROPOSALS - METRO FISHING



METHODOLOGY

Initial development of the Metro Fishing Plan involved the establishment of work groups to explore management proposals in five designated areas of responsibility: shoreline and pier fishing, fish stocking, recreational fish-out ponds, fisheries interpretive services, and stimulation of private services.

Each work group developed tentative plans for their respective program area. They included, when necessary, inventory information, outlines of needs, proposal programs, suggested priorities, and in some instances, costs and benefits (Figure 3). The five plans were then reviewed jointly by the Citizen's Advisory and the Planning and Review committees, who analyzed them for program feasibility, needs, and then assigned priorities. Their joint suggestions and priority determinations were then returned to the respective work groups for inclusion into advanced planning for direct action programs.

ACTION PROGRAM PROPOSALS

Proposals were developed to provide information on feasibility, scope, benefits and costs, where applicable, budget outlines, and operational plans. Priorities, as suggested by the Review and Citizens committees, were then incorporated. Although many of the proposals were interrelated, they were presented as individual units or subsections of a comprehensive program. In concert with advisory committee recommendations, project proposals were considered in rank: (1) downtown, (2) suburbs, and (3) outlying. Subsequent adjustments in priorities more recently established the downriver area, including the city of Detroit, as the area of greatest recreational fisheries need (Figure 4). Project types were separated into three groups and given priorities on the basis of time, benefit and cost: (1) direct and short-term participation projects, i.e., stocked fish-out ponds, salmon planting, (2) extensive development and capital investment required, i.e., piers, party boats, land acquisition, (3) educational and interpretive, i.e., outdoor centers, training programs and fishing demonstrations.

PIER AND SHORELINE FISHING

Identification of pier and shoreline fishing areas was accomplished by (1) an aerial survey, (2) ownership map, and (3) governmental and recreational agencies. Existing recreational lands, parks and fishing areas were identified. In addition, inadequacies (lack of facilities, etc.), inaccessible areas and areas of potential development were also noted.

Four general areas are considered important to providing increased fishing opportunity, access, shorefishing facilities, offshore fishing facilities and use of thermal discharges.

The development of shorefishing facilities continues of priority importance. Existing public frontage on the Detroit River provides an excellent opportunity for pilot projects such as the development of bulkheads, piers of varying length, and shore-connected platforms. This would seem to offer the greatest number of user days, and on the waterfront locations could perhaps be coordinated with the public transportation system.

A special fishing facility program was outlined for the Belle Isle shoreline.¹ Belle Isle, with its 6.7 miles of perimeter shoreline and 9.9 miles of internal lake and stream shoreline is located at the head of the Detroit River (Figure 5) and is in position to be the focal point of the Detroit River fisheries. In a comprehensive fishing program developed by the Michigan Department of Natural Resources four types of fisheries developments were proposed for Belle Isle (Figure 6): (I) the development of the perimeter shoreline, (II) the development of the island's internal lake and stream fisheries, (III) the utilization of the model yacht basin as a children's fish-out pond¹, and (IV) the development of an anadromous fisheries program. This proposed program was submitted to the city for their use.

At the present time major emphasis is being given to the perimeter fisheries. Four areas of Belle Isle hold promise for pier sites (Figure 7). The city, through its own funding, has already constructed a large fishing pier on the north side of the Isle (Site D, Figure 7). Through recreational bonding funds available to the city, another pier has been constructed on the south side of the island in 1977 (Site B, Figure 7). Other aspects of fisheries development on the Island will be phased into the program by the city as feasibility develops.

City-owned land, (Figure 8) upstream from Cobo Hall to Lake St. Clair, offers a tremendous development potential for bulkheads and piers fully equipped with safety rails, ladders and lights. The city presently owns, exclusive of Belle Isle, 12 frontage sites upstream from Cobo Hall (approximately 1,286 acres) and is anticipating the acquisition of additional waterfront in the same area.

However, because of the high capital cost of fishing bulkhead (present estimated cost of \$500 to \$600 per lineal foot) this phase of development must be considered as long range. Downstream from Cobo Hall, access becomes a major consideration because very little frontage is in public ownership. Fee title or easements are needed to provide fishing access. Either alternative involves high capital costs and along with bulkhead development must be considered as a long range program.

¹ In August of 1973, the city initiated a children's fish-out program in the model yacht basin of Belle Isle (Plate 2). Twelve hundred pounds each of channel catfish, bullheads, and carp were stocked. The fishery was limited to children under age 12 and a recreational attendant was scheduled daily to help the young fishermen bait hooks, remove fish, etc. Discontinued in 1974, 75 and 76 the program was reinitiated in 1977 and expanded to a small lake in the cities Palmer Park.

FIGURE 5. LOCATION OF BELLE ISLE IN RELATION TO CITY OF DETROIT.

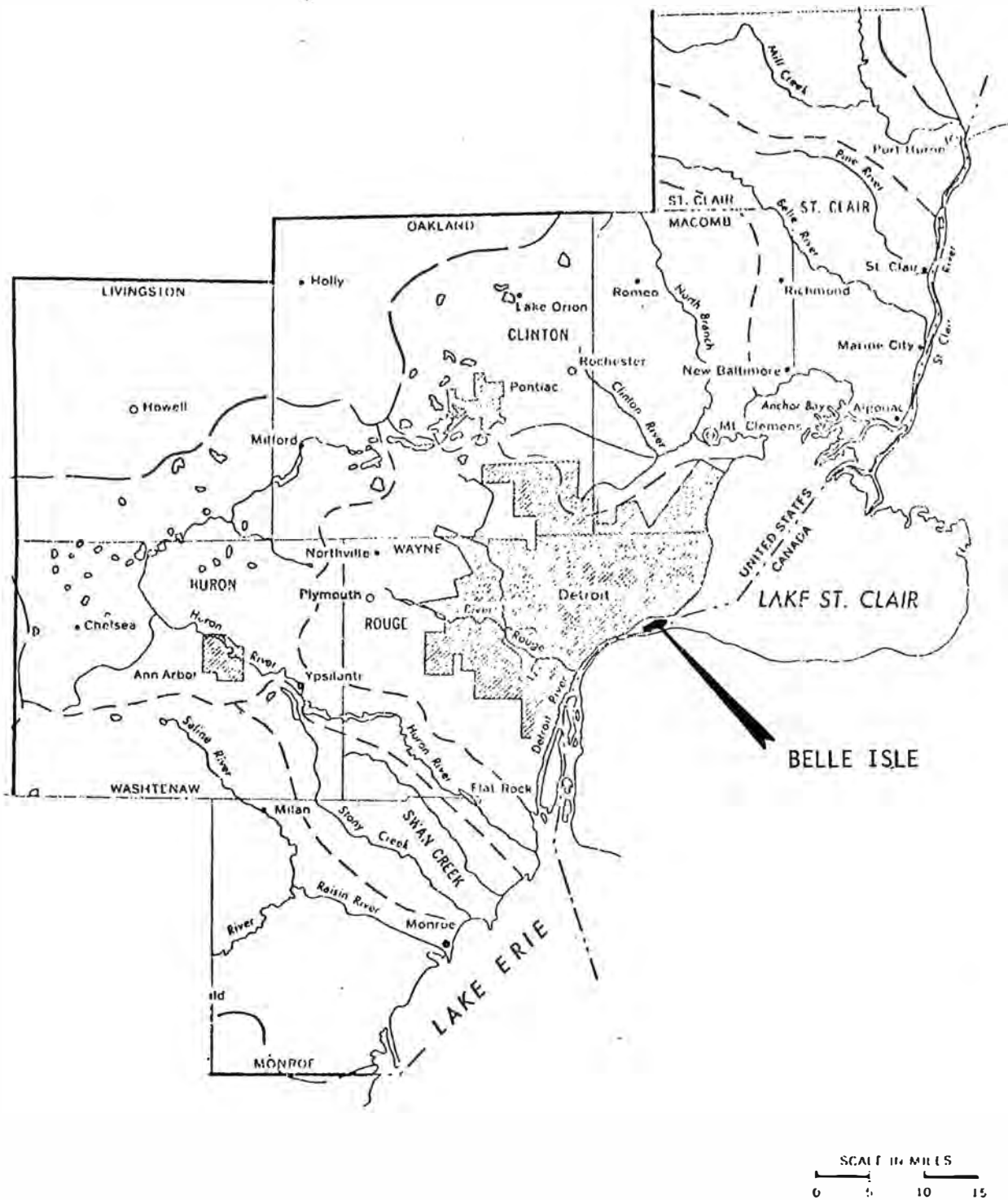


FIGURE 6. FOUR TYPES OF FISHERIES DEVELOPMENTS
PROPOSED FOR BELLE ISLE.

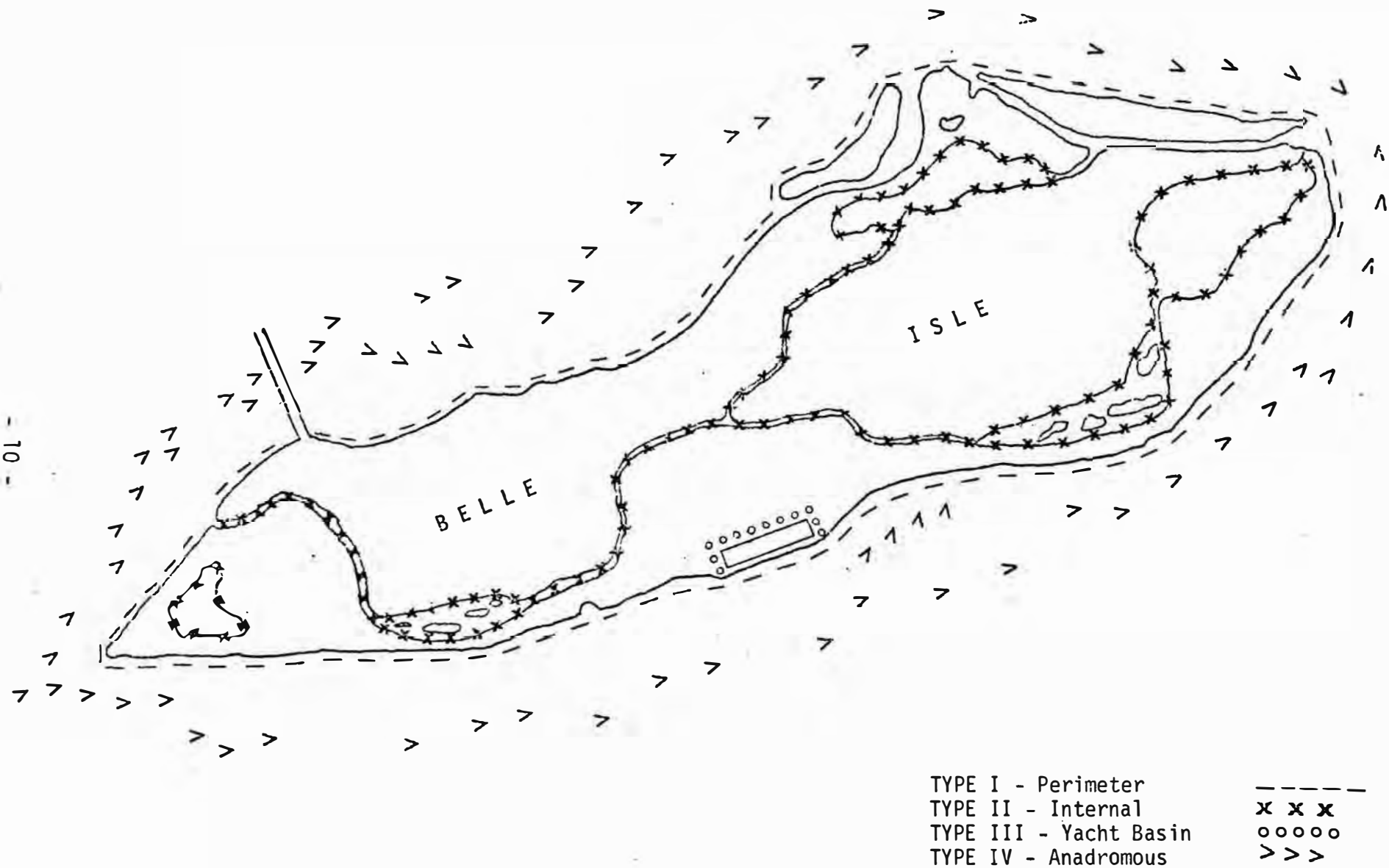


PLATE 2.

BELLE ISLE FISH-OUT PROGRAM AT THE ISLAND'S MODEL YACHT BASIN



A fishing pier, Chesterfield Township, Macomb County, recently constructed, will serve to demonstrate the utility of piers as fishing instruments with special features for attracting fish, lights for safety and night fishing, and adequate parking (Plate 3).

PLATE 3.

CHESTERFIELD FISHING PIER, LAKE ST. CLAIR



FIGURE 7. POSSIBLE PIER SITES ON BELLE ISLE.

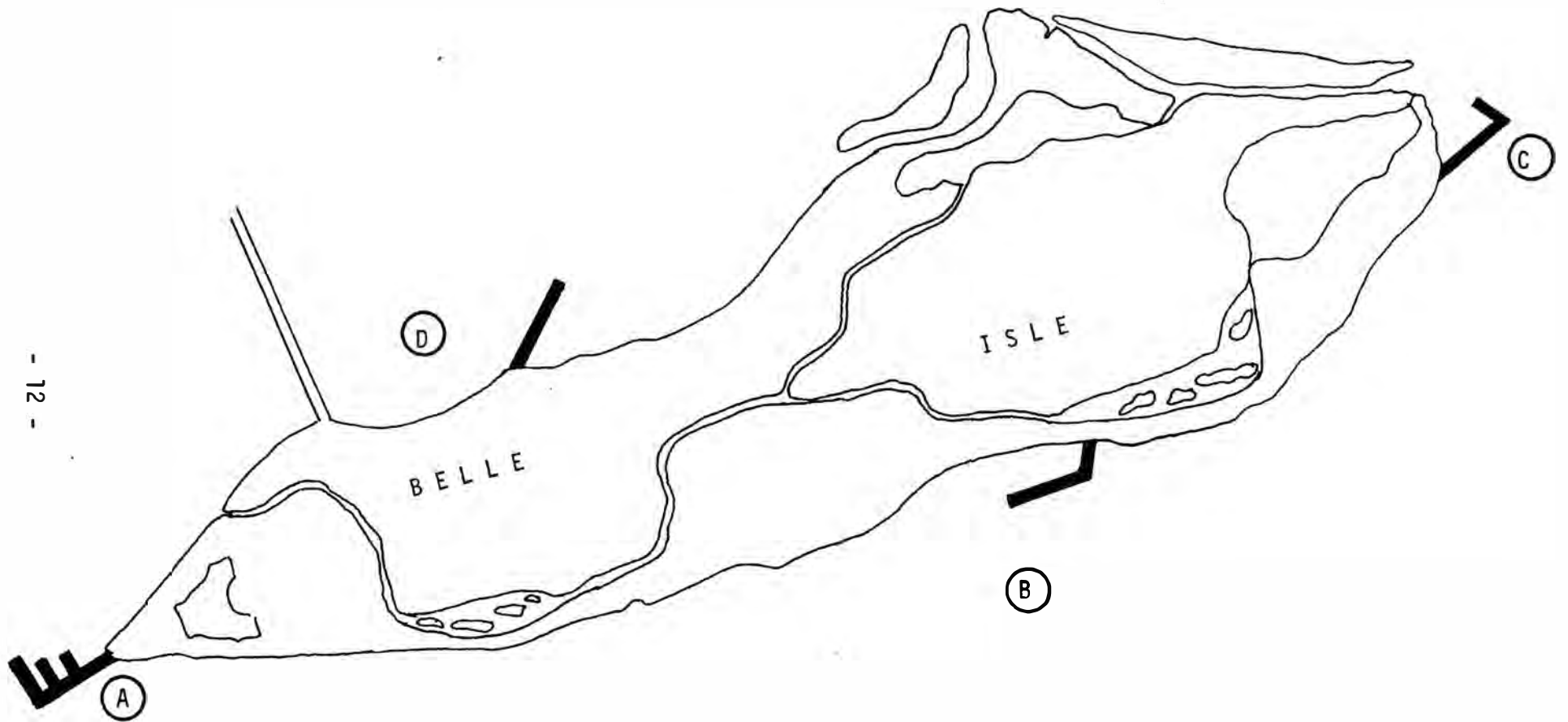
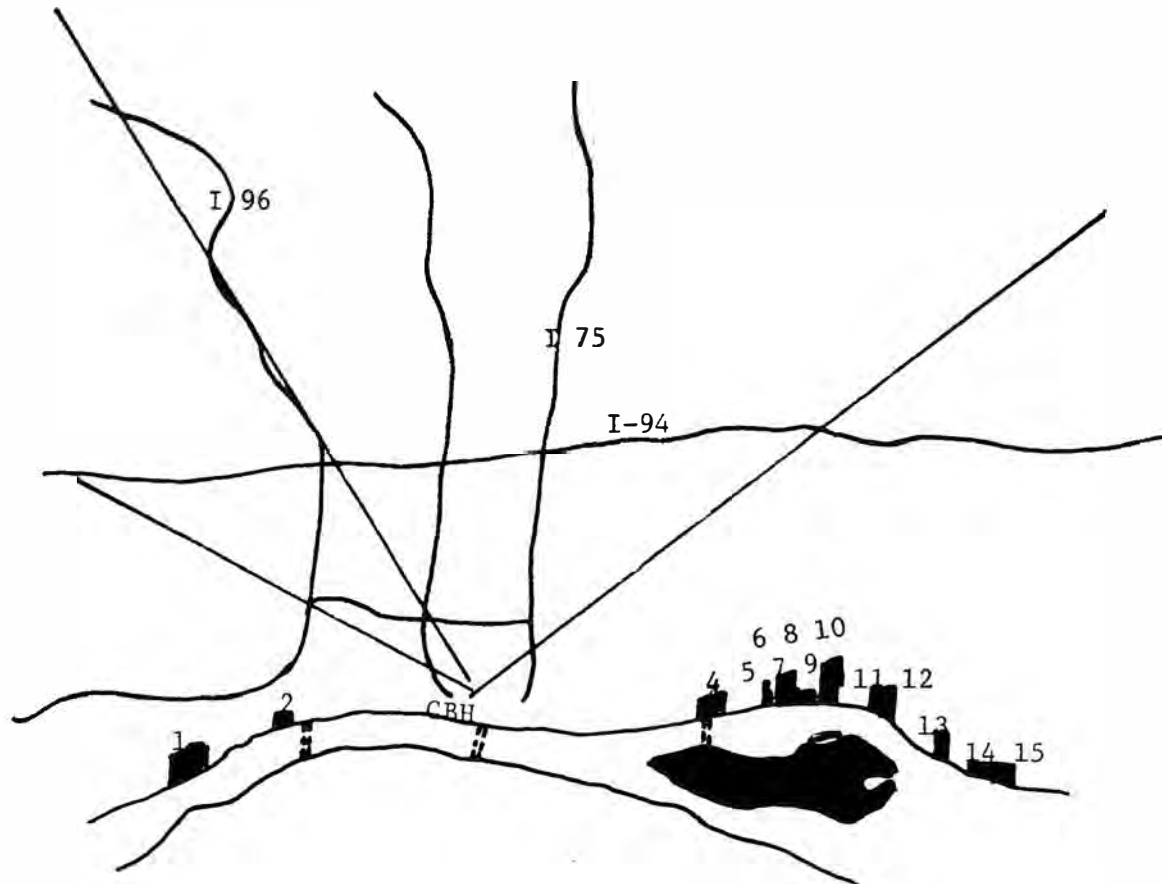


FIGURE 8. DETROIT CITY PARK PROPERTY ALONG THE WATERFRONT



Downriver Parks:

1. Fort Wayne
2. Riverside

Upriver Parks:

- | | |
|-----------------------|------------------------------|
| 3. Belle Isle | 10. Waterworks |
| 4. Gabriel-Richard | 11. Engel |
| 5. Owen | 12. Vaughn Reid |
| 6. Memorial | 13. Maheras |
| 7. Memorial Extension | 14. Alfred Brush Ford |
| 8. Dwight Avenue | 15. Riverfront-Lakewood East |
| 9. Stockton Memorial | |

Public utilities and industry could be most helpful in allowing their frontage to be used by fishermen, and even provide free parking areas. A waterfront and recreational corridor must be emphasized as a long-range objective.

Offshore devices, cribs, artificial reefs and containment cells vary greatly in cost dependent upon the facility. Priorities will be determined by the cost. All spoil deposition from navigation channel dredging should be viewed with the idea that it can be useful in developing both onshore and offshore facilities.

Lastly, the use of heated discharges from energy center cooling systems should be continuously explored for fishery benefits. Although this area of development is perhaps limited, potential use of cooling lagoons as fish rearing facilities and development of special fishing locations in warmwater flumes has possibilities.

Priorities, relating to the five areas of development, are assigned as follows:

1. Existing shoreline features conducive to fishing should be expanded. Top consideration is given to Belle Isle and then the city of Detroit shoreline and the downriver communities followed by the St. Clair River and Lake Erie.
2. Development or construction of a pilot project on Great Lakes to serve as demonstration (such a project -- a fishing pier -- has been constructed in Lake St. Clair).
3. Acquisition of frontage, down river from the center of Detroit; Detroit Edison and industry should be contacted on the possibility of providing access, or easements, to the waterfront for fishing.
4. Development of necessary transportation.
5. Development of fish-attracting devices.
6. Development of offshore facilities.

RECREATIONAL FISH-OUT PONDS

Fish-out ponds may be defined as relatively small units of water stocked periodically with fish to provide instantaneous recreational fisheries. They may be small ponds in municipal or state parks, publicly operated swimming pools, mobile pools, Veterans Administration Hospital or golf course ponds, highway borrow pits, or even small sectors of streams.

Fish-out ponds are stocked with catchable fish at a rate to provide high and continuous return to the creel. The purpose of this service is to bring fishing recreation to a particular area or neighborhood or to provide fishing opportunity to a particular group of people such as children, mentally retarded, or the handicapped (Plates 4, 5 and 6).

PLATE 4.

FISH-OUT PONDS ARE IDEAL FOR TEACHING CHILDREN TO FISH



Five pond types are identified as being important in the development of the Metro fish-out program. Each, along with type and quality of ponds, type of operation considered, fish species, fish sources, and management considerations, is presented. The first four types are pond or pool types, while the last incorporates streams for temporary or permanent impoundments.

<u>Type Pond</u>	<u>Type Operation</u>	<u>Suggested Fisheries</u>
A. Small ponds (public) <ol style="list-style-type: none"> 1. City parks 2. County parks 3. State parks 4. V. A. ponds 5. Golf courses 6. Rouge parkway 7. DNR trout ponds 8. Other (special situations) 	Free fish-out operation established for children or other select groups or for the public at large.	Bullhead/carp combination recommended. In some instances, however, channel catfish and other specific species such as perch or sunfishes may be considered.
B. Swimming pools (municipal)	Fishing contests, clinics and recreational fishing, are recommended as prime General plan of operation would be to use prior or subsequent to normal swimming season, i.e., April-May and September-October.	Channel catfish or trout species. However, other species may be considered.
C. Borrow Ponds	Free or fee fish-out, depending on location & circumstances.	A primary fishery of bullheads and carp, with an occasional plant of other bonus fish such as pike, bluegills, catfish and bass.
D. New ponds <ol style="list-style-type: none"> 1. Public 2. Private 	Free or fee fish-out fishing, depending on location and circumstances.	Bullhead/carp combinations or channel catfish are considered as prime species for warm ponds; trout for cold water ponds.
E. Controlled stream environment	Free recreational fish-out.	In this type of situation, it is recommended that an assortment of fish be utilized. Suggested species are bullheads, channel catfish, carp, pike, bass and sunfishes.

Fish-out facilities should be administered by respective ownership units, i.e., local, state, or federal governments, or private services. Most public fishing should be free, but some ponds might be readily adaptable to fee fishing for investment return, maintenance or operational reimbursement; if a private venture, for profit.

PLATE 5

FISHING PROVIDES AN EXCEPTIONAL THRILL TO THE MENTALLY RETARDED AND HANDICAPPED. THIS PORTABLE FISHING FACILITY WAS SET UP ON THE CENTRAL MICHIGAN UNIVERSITY CAMPUS AT THE 1975 SPECIAL OLYMPICS.



In the Detroit metro area, the priority fish-out locations are Belle Isle, Palmer Park, Farwell Field, and in the future, Maybury Park. By 1990, it is expected that 20 to 40 new ponds could be developed for recreational fishing. Hopefully, highway or roadway borrow pits will be similarly developed. It might be anticipated that as many as four to five borrow pits could be developed annually.

PLATE 6
FISHING IS A VERY SUITABLE FORM OF RECREATION
FOR HANDICAPPED PERSONS



Utilization of several swimming pools, as model projects for fishing contests or for short-term recreation, should be promoted (Plates 7 and 8). As the result of a large number of successful operations now underway, it is expected that the use of swimming pools for recreational fishing during the off-swimming season could be expanded rapidly. There are presently about 50 publicly owned pools in the metro area. It is expected that a large percent (perhaps 30 to 40) of these could be utilized for fishing. As the result of the above programs, it is hoped other types of fish-out facilities, i.e., fee fishing types, both public and private, golf course ponds, etc., can be developed.

PLATES 7 & 8.

SWIMMING POOL UTILIZATION AND FISH-OUT PONDS



Costs of stocking fish-out ponds presently run from \$1,500 to \$2,500 per acre for an annual fishing period of five months, depending on the species or combination of species used. The cost of each stocking of a swimming pool with channel catfish or trout for contest purposes presently approximates \$1,000 to \$1,500 per contest. The annual cost of fish stocking within the next five years at the expected rate of development might range between \$30,000 and \$40,000. By 1990, the program may grow to reach an annual cost of from \$200,000 to \$300,000.

Stocking rates are designed to provide an average catch of 1.1 to 1.7 fish per hour; with low cost fisheries being based on a carp-bullhead fishery, and the high cost fisheries entirely on trout. It is estimated that fish-out ponds will provide 13,000 to 14,000 man days of fishing per acre. This type of fishery, when fully developed, should provide an estimated 160,000 to 175,000 man days of fishing annually; by 1990, the expanded fishery should be providing nearly a million man days of fishing annually.

FISH STOCKING

The seven-county metropolitan area contains a vast amount of water that presently provides more than three million man days of fishing. Under intensive management, the fishing recreational use can be expanded and still maintain the traditional quality.

Water sources of the metro area are impressive:

1. Two of the world's largest "trout" streams (St. Clair and Detroit Rivers).
2. A lake with the world's largest muskellunge population (Lake St. Clair).
3. A county with the fifth highest number of lakes (Oakland County - 447 lakes) in the state.
4. A highly developed regional, state and local system of recreational lands.
5. Thousands of acres of inland lakes and hundreds of miles of streams (assured public access is available to over 15,000 acres of inland lakes. In addition, vast acreage of streams are also accessible to the public).
6. Lake Erie, one of the Great Lakes that is nearly devoid of angling pressure.
7. The largest marsh spawning areas in the state (located in Lake St. Clair and Lake Erie).

Management proposals for fish stocking fall in two general categories; stocking hatchery fish, and better utilization of existing fish species. Habitat alteration is important in each area to either rehabilitate waters or to make certain waters more productive and fishable. Resource types, Great Lakes and connecting rivers, inland lakes, and inland streams, are accounted for in the proposals.

PLATE 9.

PLANTING SALMON AND TROUT IN THE DETROIT METRO AREA



Initial thrust into an expansion of the Great Lakes and river systems program is presently underway. Annual salmon and trout plants have been made in the Detroit River since 1973 to provide for anadromous runs in that area (Plates 9 and 10). In addition, steelhead and brown trout have been stocked in the Belle and St. Clair Rivers (and salmon in the Huron and Raisin Rivers) to provide fisheries for these areas (Figure 2). Projected Great Lakes plants in the metro area are for approximately 500-600,000 trout and salmon to be planted annually. These fish should provide an estimated additional 150,000 to 200,000 recreational days of fishing to the immediate metro area annually. Projected projects include the development of a fish ladder and viewing platform on Belle Isle's Muskoday Lake, where returning salmon may be viewed by the public as well as being caught by fishermen.

PLATE 10

THESE SMALL CHINOOK SALMON WILL MATURE IN 3 YEARS
AND PROVIDE EXCELLENT SALMON FISHING



PLATE 11

CHEMICALS APPLIED TO THE WATER ERADICATE UNMANAGEABLE FISH POPULATIONS



Inland river reclamation projects have been done on the Huron River (Plates 11 and 12), as well as on other rivers, to change under-utilized and undesirable fish populations to quality game-fish populations. This program, as presently projected, will require approximately 1.7 million warmwater fish through 1978. Management programs and periodic stocking of catchable fish in the ponds on Belle Isle are in the planning stage. These ponds, along with new fish programs beyond the present programs, will require several million additional warmwater fish.

PLATE 12

WITHIN A SHORT TIME AFTER ERADICATION, THESE WATERS
WILL BE RESTOCKED WITH A VARIETY OF GAME FISHES



Expansion and development of state warmwater hatchery facilities will greatly enhance the opportunities of program development, through stocking programs, of high value predator species and introductory fish for reclaimed waters (Plate 13). Stocking hatchery fish in public waters is a state responsibility, but limited supplies preclude furnishing all that could be utilized. Private funds could augment agency stocking, particularly in furnishing fish for fish-out ponds, and provide for many angler days.

Better, or greater, utilization of existing fish stocks is expected as a result of training and informing the public of the recreational and food value of the so-called "low value species". A carp by any other name might be a reasonably popular sport fish. Building the image of the undesirable species would soon release recreational opportunities that are now available, but under-utilized.

PLATE 13

SMALL NORTHERN PIKE STOCKED IN LAKES AND PONDS
GROW QUICKLY INTO FIGHTING SIZE SPORT FISH



Costs are minimal when mass planting is done by the state agency, in terms of cost/benefit for recreational return. Supporting programs and undertaking educational projects for utilization of existing species by local and private groups are considered essential for a successful program in this area. Overall costs are minimal, with no capital investment cost involved.

INTERPRETIVE SERVICES

Educational and interpretive services are covered in four sub-programs. Implementation of these services will provide for a significant thrust into the development of fisheries and wildlife efforts in the major metro areas of southern Michigan. The objectives are in concert with the Metro Fishing Plan, and will provide opportunities for thousands of metro residents of all ages, regardless of financial status, race, age or sex, to understand and appreciate the fisheries resource and to actively participate in the area's sport fishery.

PLATE 14

CLASSROOM INSTRUCTION INITIATES MANY CHILDREN
TO OUTDOOR RECREATION SUCH AS FISHING



An interpretive services program is viewed as a long-range program with rather indirect benefits. There are immediate goals, however, that must also be met to aid in the development of other programs. Instructional programs must be developed, especially for children, to get maximum use of fish-out ponds and the developing river fisheries (Plates 14 and 15).

Initially, various interpretive efforts may be combined. However, as funding becomes available, certain programs may be emphasized and developed singly. Sub-programs under interpretive services are listed by priority and include personnel needs.

PLATE 15.

THERE IS NO GREATER THRILL THAN CATCHING ONE'S FIRST FISH



Interpretive efforts at fishing and wildlife sites involve the taking of interpretive efforts to sites where a trained resource manager can demonstrate opportunities to study and enjoy fisheries and wildlife (Plate 16). Sites in the Detroit area having a potential for this are Belle Isle, Point Mouillee, Sterling State Park, State Fair Grounds, and local nature centers. Additional sites in other metro areas also must be considered.

PLATE 16

ADULTS ALSO NEED INTERPRETIVE INSTRUCTION TO TEACH THEM ABOUT FISHING



Department of Natural Resources employees trained in fisheries and wildlife management would be assigned to various sites on a weekly travel rotation basis. Activity at each site would obviously vary, but the major thrust would be to provide further opportunities to study, observe, and enjoy the fisheries or wildlife resource. Cost estimates must include salary, travel, displays, equipment, and office costs for a single employee working at five different sites. In the first year, a single employee would be utilized. Reasonable expansion would be one person each year up to the total needed.

Outdoor Education involves "extension-type" work. It is a service in which an employee trained in fisheries and wildlife work coordinates a wide variety of activities in the seven-county area, moving throughout the region as needed. His efforts would be directed toward school-related activities and events such as fairs, derbies and exhibitions.

The function as defined could be provided by the County Extension Service or the Department of Natural Resources Information and Education Division. The scope and nature of this program, however, are of a magnitude that warrants special funding.

Cost estimates would include salary, travel, displays, equipment, and office costs for a single employee. This would be expanded over a five-year period to a total of three or more employees.

Fisheries and Wildlife Information is a service that would provide primarily for a Detroit-based information coordinator to gather timely fishing and wildlife information and disseminate it through available mass media.

The present system, due to lack of available manpower, is not able to provide timely information and has directed its attention primarily to the expert fishermen.

The proposal would place a new Department of Natural Resources employee on the Detroit Office Information and Education staff with sole responsibility for getting timely news and events to TV and radio sportscasters, and assuring that information flowed freely from Department of Natural Resources field staff to the communication outlet. An estimated annual budget would have to provide for the salary and office expenses of one employee.

Nature Centers for Fisheries and Wildlife would be located throughout the various metro regions. They would vary considerably in size, scope and nature depending on location, operating agency, and the extent to which the subject matter is integrated with other interpretive efforts such as history and natural sciences.

Top quality displays, which combine educational and entertaining themes, are considered highest priority. Mounted specimens are considered more feasible and appropriate than live specimens for such displays (Plate 17).

Nature center programs can be very expensive. An interpretive facility has now been constructed on Belle Isle at a cost of approximately \$750,000. This facility has been augmented by the construction of two new fishing piers and will be further augmented by the construction of a fish ladder for returning salmon and a viewing station for the public.¹ These projects will provide greatly for inner-city

¹ It is programmed to develop an anadromous run of salmon to Lake Muskoday on Belle Isle. A fish ladder, constructed from the Detroit River to the lake, with a people viewing platform will permit the public to observe returning salmon and watch them jump the fish ladder.

interests. Later appropriations, if obtainable, for three years would provide grants to local governments for nature center facilities which emphasize major fisheries and wildlife programs.

PLATE 17

WELL MOUNTED SPECIMENS SUCH AS THIS SMALLMOUTH BASS
ARE WORTH A THOUSAND WORDS



PRIVATE SERVICES

Everyday living is supported to a greater or lesser degree by various public services. These services, however, are generally limited in scope, and must be supported by numerous supplementary private services which add to the quality of the total service. Recreational fishing is no exception. Public development includes access, boat launching, parking and boat mooring. However, items like fuel, equipment, tackle and bait, and charter facilities are generally made available through some form of private service.

The development of a comprehensive Metro Fishing Program package depends a lot on the degree of stimulation of certain private services. This encouragement will depend to a large extent on the level of development of a fisheries program, and on the amount and types of financial backing.

Services considered important to the development of an over-all Metro Fishing Program are as follows:

<u>Type</u>	<u>Priority</u>	<u>Description</u>
Shoreline Service Facilities Bait, tackle Boating equipment Food and beverages	High	Such services are very necessary to fishing. Although available in some areas, generally, such services are at a premium or located away from areas of immediate need.
Transportation	High	This is considered very important to the downtown area of Detroit. Many persons have no way of getting to fishing areas. Relatively inexpensive transportation (not necessarily private) is needed.
Party Boats	Medium	This service offers large accommodations with reasonable fees.
Fishing Platforms	Medium	This service has the potential of providing greatly to the maximum use of water area at a low cost to fishermen, but has a high initial capital cost.
Private Fish-Out Facilities	Medium	This service will provide a beneficial addition to public fish-out facilities at a low cost to fishermen. However, most likely, it will not be stimulated until public fish-out facilities pave the way.
Charter Boats	Low	Although this service has a definite place in the spectrum, it generally is too high-priced for the average fisherman. Its status will be determined by the demand.
Boat Rental	Low	This is an expensive service for large waters because of boat requirements. However, development of inland fisheries may create a demand for smaller boats which are relatively inexpensive. If such a demand develops, then this priority could be upgraded.

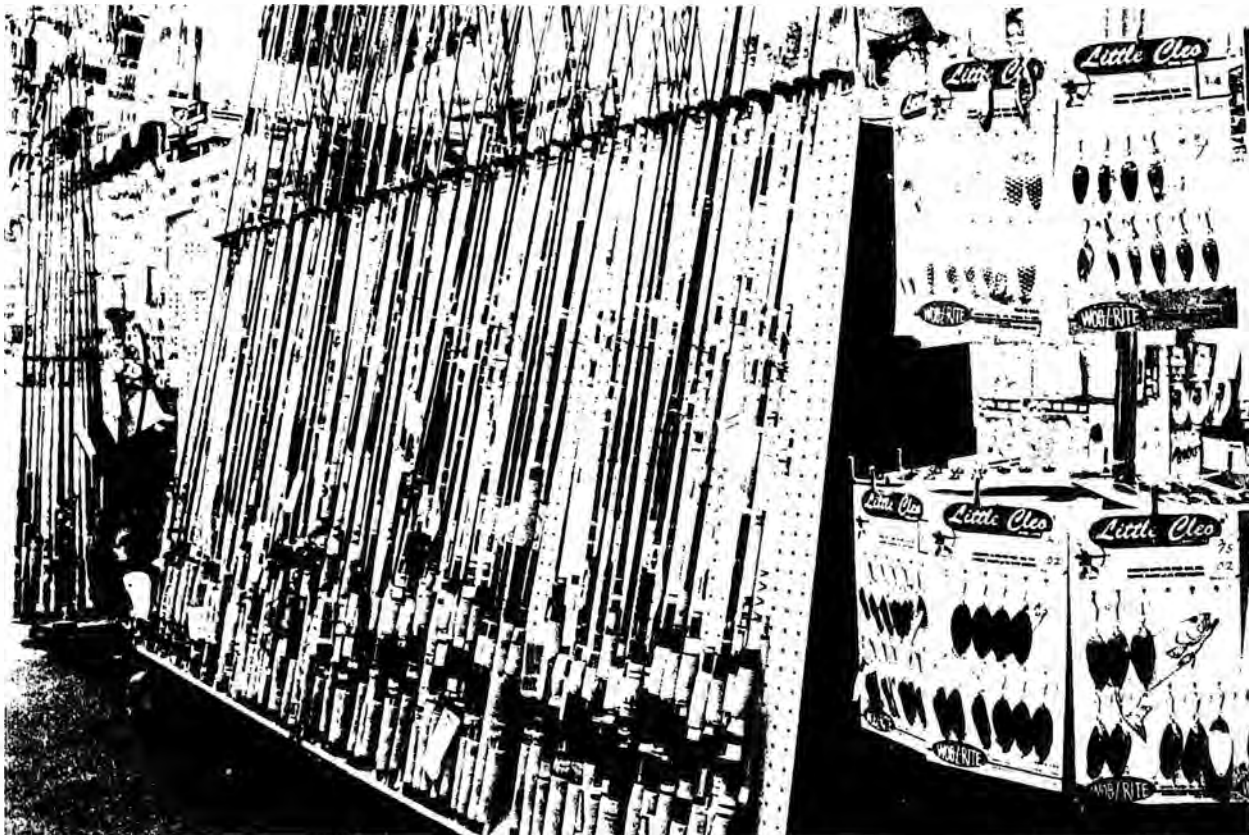
Development of private services will depend a great deal on the trend of the fisheries, i.e., fish stocking, fishing access and facilities, and public interest. These services, therefore, must be given a relatively low priority at this time.

It is believed that information relative to available fishing supportive services, including bait and tackle dealers, boat rentals, boat fuel and oil, is badly needed. This need could be easily fulfilled through some type of publication, or advertisement brochure. It should initially be supported or published by some unit of government like Huron-Clinton Metropolitan Authority or local chamber of commerce. Later costs might be recovered by sale or advertising fees.

Shoreline Service Facilities will be increasingly under demand as the fisheries develop. Different types of bait and tackle will be needed to catch introduced species of fish such as salmon. The development of a salmon and trout fishery could create a need for perhaps as many as 50,000 heavy-duty rods and reels annually (Plate 18). Development of access and provision of transportation will result in tripling the demand for bait, poles, reels, lines and bobbers. Other tackle, likewise, will increase at a proportional rate. Bait and tackle revenues can be expected to jump several million dollars during the next five years as a result of the increased fishery.

PLATE 18

ANGLERS ARE BENEFITTED BY A WELL-SUPPLIED TACKLE SHOP



Transportation is a major item of importance to a developing metropolitan fishing program. It is possible to bring the fishery to people only to a certain degree -- then a means must be available for the people to get to the fishery. Several million people reside in downtown Detroit. Survey data indicates that 23 percent of these residents are fishermen, and another 10 to 15 percent would fish if transportation were available. Residents residing immediately by the Detroit River can reach it by walking; however, the majority, or between 200,000 and 300,000 people, must have transportation to get to the water.

Belle Isle is considered a major fishing area and will be developed on a number-one priority. This area must be considered as being out of reach to most Detroit residents as far as walking is concerned. If we are to provide a fishery to the downtown people, then we must provide a very cheap mode of transportation.

Continual development of recreational fishing areas in the outlying portions of the seven-county metropolitan area will result in drawing more persons. Recreational fishing can be expected to triple within the next decade as leisure time increases. Rising gasoline and oil costs, along with the need to curb automobile emissions, bring out the need for a rapid transit system that can service multiple recreational points.

Party Boats are presently considered as medium priority, but can contribute significantly to the Metro Fishing Program in the future. Besides offering a diversity of fishing to the fishermen, they are mobile and can go where the fish are for better catches. Because of their large capacity, they can offer much more reasonable rates than the normal, smaller charter boats. They would provide a service to that group of persons who have sufficient income to obtain certain recreational luxuries.

Salt-water party boats are generally over 50 feet in length and have a capacity of 40 to 60 persons. Fee rates presently would range from \$5 to \$10, respectively, for half- and full-day trips, inclusive of bait and tackle. It is suggested that five of this type boat be put into service in the Detroit River within the next five years.

Boats of this nature should be able to provide for at least 120 trips (4,800 to 7,200 angler days) each, annually. Operated at full capacity, potential total gross incomes for such an operation could be a large involvement for financial backing for prospective businesses.

Fishing Platforms, although considered important in the future, do not have an immediate priority. Capital outlay costs would be relatively high and fishing pressure must be significant enough to warrant such a venture. Such units are feasible both on Great Lakes and inland waters. Well designed units should be popular, similar to other parts of the country, because (1) ice shanty or glass bottom boat types would allow participants to view underwater fish

activities while fishing; (2) enclosed units would provide comfortable conditions; (3) they could be self-contained, i.e., provide bait, tackle, licenses, food, beverages, and rest room facilities; (4) they could provide access to waters not normally available to shore fishermen; and (5) they generally provide better fishing than adjacent shore areas because of location and fish attraction features.

Daily fees for platform use in other areas of the country presently are quite reasonable -- usually a dollar or less. The low rates are feasible because of the large capacity of platforms which may run up to several hundred people, and because of low maintenance costs. Pilot projects should be initiated for both inland and Great Lakes waters. Successful operations could result in a dozen or so platforms within the next decade, and provide an additional 300,000 angler days of fishing to the metro area.

Private Fish-out Pond development may be stimulated in the wake of a successful public fish-out program. Present population densities within the seven-county metro area should successfully support the operation of three or four additional facilities above the four now in operation. Based on an annual 13,000 to 14,000 man days per acre use, at a fee of \$3.00 or more per person, a private facility could expect to gross enough annually to induce successful ventures of this nature.

Charter Boats and Boat Rentals are considered of low priority. Such services are now available, but are generally economically out of reach of most inner city metro residents. These services will develop along with a fisheries program and could generally be expected to supply the needs of the area.

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