

Michigan Department of Natural Resources

Fisheries Division

Tactical Plan

October 24, 2013

In March 2012, employees in Fisheries Division began a process to update the Division's strategic plan. Developing and writing the new strategic plan took nearly twelve months using a team of employees in the Division, with support from constituents and broad public participation. More than 10,000 individuals provided feedback through online surveys or phone interviews, and additional public input was provided on the draft version of the plan when it was available on the Department's website during January and February 2013.

The result of these efforts is a new Strategic Plan for the Division that begins in 2013 and runs through 2017. ***Charting the Course: Fisheries Division's Framework for Managing Aquatic Resources*** provides a vision for managing Michigan's fisheries, aquatic habitats, and public access to the Great Lakes, inland lakes, and streams. In addition, the Strategic Plan (1) ensures ample opportunity for stakeholders to voice their opinions and desires about the management of Michigan's fisheries; (2) reflects the values, passions, and hard work of numerous stakeholders, organizations, and employees in the Division; and (3) directly aligns with the Department of Natural Resources' mission and goals.

Upon completion of the Strategic Plan, the Division developed detailed tactics to guide the implementation of the Strategic Plan. The tactics include specific and measurable tasks within the framework of the five goals identified in the Strategic Plan. Many of the tactics reflect ongoing responsibilities, which are currently fulfilled by existing programs and staff in the Division. Other tactics include new tasks or objectives that are highly desired, yet not attainable without additional financial or human resources. Each of the 100 tactics has been assigned to appropriate employees in the Division with a realistic timeline for completion. Collectively, the tactics represent the highest priority resource issues on which the Division will focus its money and manpower from 2013 through 2017.

The Tactical Plan provides a long-range course of action for how the Division will implement its Strategic Plan. As stated in the Strategic Plan, organizations perform best when they choose an explicit course of action and concentrate their effort on pursuing that course. Likewise, the evaluation of progress is equally important to both the organization and the constituents who support it. Consequently, performance metrics are stated for each tactic so the Division can easily measure and report on its performance in meeting the vision, goals, and objectives of the Strategic Plan.

TABLE OF CONTENTS

Goal 1: Healthy Aquatic Ecosystems and Sustainable Fish Populations	1
Objective 1: Enhance control efforts for Aquatic Invasive Species (AIS)	1
Strategy 1: Prevent introductions of new AIS.	1
Strategy 2: Control the spread of existing AIS.	3
Strategy 3: Monitor existing AIS populations.	4
Strategy 4: Develop and disseminate education and outreach materials on AIS.	4
Objective 2: Conserve and manage aquatic species and their habitats.	6
Strategy 1: Protect and enhance natural reproduction of native and desirable naturalized aquatic species.	6
Strategy 2: Stock fish as appropriate for balanced aquatic communities.	7
Strategy 3: Develop and adhere to guidance documents for the management of aquatic species and habitat.	8
Strategy 4: Protect and enhance nongame and rare species.	9
Strategy 5: Manage aquatic resources for use by current and future generations.	10
Strategy 6: Participate in and influence decisions on habitat use through collaboration and permit reviews.	11
Goal 2: Diverse Fishing Opportunities	12
Objective 1: Increase public awareness of Michigan’s diverse fishing opportunities.	12
Strategy 1: Promote diverse fishing opportunities statewide by providing targeted information and updates to specific regions, demographics, interest groups, and the media.	12
Strategy 2: Work with local tourism and economic development organizations to demonstrate and market the connections between Michigan’s diverse fishing opportunities and quality of life, both economic and non-economic.	13
Strategy 3: Instill awareness and appreciation of Michigan’s fish, fishing heritage, and fishing opportunities into the culture, education, and consciousness of all Michigan citizens.	13
Strategy 4: Work with the commercial fish industry to optimize its efficiency and value in ways that provide maximum sustainable benefits to Michigan’s citizens.	14
Objective 2: Create or enhance fishing opportunities.	14
Strategy 1: Identify and catalog areas where fishing access is needed, prioritize locations, and work with partners to address these needs.	14

Strategy 2: Use fish stocking as a tool to create new, or enhance existing, fishing opportunities.	15
Strategy 3: Implement fishing regulations expressly designed to create special or unique fishing opportunities.	16
Objective 3: Increase participation and interest in fishing among all demographic groups.....	18
Strategy 1: Identify what impedes people from fishing or from buying fishing licenses.....	18
Strategy 2: Investigate ways to increase fishing license sales through implementation of alternative license sale structures and incentive purchase programs that instill sustained loyalty and interest.	18
Strategy 3: Increase education and outreach through programs and partners, both existing and new.	19
Goal 3: Strategic Resource Partnerships.....	20
Objective 1: Achieve fisheries management goals through partnerships.	20
Strategy 1: Increase the proportion of Michigan’s annual fish production that is reared through cooperative arrangements and methods (e.g., net pens, walleye ponds, and streamside sturgeon facilities).	20
Strategy 2: Assume leadership roles and fully participate in fisheries management and regulatory processes involving interjurisdictional resources (e.g., Great Lakes, interstate, US/Canadian, Tribal).....	20
Strategy 3: Work toward a program whereby most habitat enhancement projects are achieved through partnership collaborations.	21
Strategy 4: Provide constituents with guidance on resource issues and contribute to the development of decision support tools when requested.	21
Strategy 5: Develop and maintain a list of partners along with their specialized skills and equipment.	22
Objective 2: Promote aquatic resource stewardship and watershed management.....	23
Strategy 1: Support, enhance, and foster the growth of existing programs (e.g., Salmon in the Classroom) to assist in teaching Michigan’s youth about stewardship principles and aquatic resources.	23
Strategy 2: Increase the number of people visiting interpretive centers at State fish hatcheries.....	24
Strategy 3: Partner with local chambers of commerce or other economic development groups to promote aquatic resource stewardship and to develop region-specific quality-of-life messages disseminated through multimedia outlets.	25

Strategy 4: Develop web-based tools and information to help individuals or groups practice good shoreline and streamside resource stewardship.	25
Strategy 5: Facilitate watershed management by developing collaborative partnerships with organized watershed groups.	27
Objective 3: Increase angler recruitment and retention.	28
Strategy 1: Partner with angler groups and sport retailers to increase angler recruitment and retention.	28
Goal 4: Strategically Focused Assessment and Decision Support Tools.....	29
Objective 1: Conduct comprehensive assessments of fish and other aquatic life, habitat, and aquatic resource users.	29
Strategy 1: Refine a fisheries assessment strategy that continues to develop the Status and Trends Program and accounts for specific management needs for such things as large-lake surveys, walleye population estimates, and a statewide fish pathogen assessment.	29
Strategy 2: Develop a standardized program to annually assess Great Lakes nearshore and offshore fish communities.	30
Strategy 3: Develop a strategy to assess habitat in inland and Great Lakes (nearshore and offshore) waters using remote sensing methods where practical.	31
Strategy 4: Develop and implement surveys to track the public’s opinions, attitudes, and participation related to angling and aquatic resources.	33
Objective 2: Develop new and improve existing decision-support tools to optimize Michigan’s fisheries and aquatic resources.	35
Strategy 1: Develop GIS-based tools to enhance landscape and waterscape-level management decisions with regard to such things as habitat protection and rehabilitation, river assessments, fish passage barriers, and climate change.	35
Strategy 2: Develop, refine, and implement stock assessment models and tools for intensively-managed species.	36
Strategy 3: Assist other state and federal agencies to refine water withdrawal assessment and tools.....	36
Objective 3: Evaluate fisheries management actions.	37
Strategy 1: Annually conduct evaluations of key actions taken by the Division.	37
Strategy 2: Determine levels of natural reproduction by salmonids in the Great Lakes.	37
Strategy 3: Conduct peer reviews of the fish stocking program to evaluate cost effectiveness of each stocking location and species and to determine associated effects on local and state economies.	39

Strategy 4: Conduct peer reviews of habitat improvement projects to evaluate cost effectiveness of each program component.	39
Goal 5: Efficient Division Operations	41
Objective 1: Encourage professional development for all employees.	41
Strategy 1: Provide training opportunities that are reflected in performance evaluations.....	41
Strategy 2: Encourage involvement in professional organizations that are reflected in performance evaluations.	42
Strategy 3: Facilitate access to relevant information via trade and professional publications, technical assistance documents, and other outlets.	42
Objective 2: Align employees with resources to meet the goals of the Division.	43
Strategy 1: Develop a new three- to five-year staffing plan for the Division. ...	43
Strategy 2: Align and coordinate employees with resources to maximize effectiveness across Basin, Unit, and Section lines.	43
Strategy 3: Seek and incorporate new and emerging technologies and techniques.....	44
Strategy 4: Enhance and maintain equipment and facility plans.	45
Strategy 5: Review work plan activities on an annual basis to document accomplishments and identify areas in need of improvement.....	45
Objective 3: Streamline the Division’s programs and decision-making process.	46
Strategy 1: Conduct periodic reviews of all the Division’s programs.	46
Strategy 2: Continue to support decision-making authority at the lowest appropriate level.....	47
Objective 4: Recruit and retain talented employees.	47
Strategy 1: Boost and monitor employee morale.....	47
Strategy 2: Create and maintain desirable work environments.	49
Strategy 3: Continue with a recognition program for employees.	50
Appendix A: List of Acronyms.....	52

Goal 1: Healthy Aquatic Ecosystems and Sustainable Fish Populations

Objective 1: Enhance control efforts for Aquatic Invasive Species (AIS)

Goal 1:

Healthy Aquatic Ecosystems and Sustainable Fish Populations

Objective 1: Enhance control efforts for Aquatic Invasive Species (AIS).

Strategy 1: Prevent introductions of new AIS.

Tactic 1: Prevent and manage AIS through legislation and regulation.

What: Implement Section 324.41313 of the Natural Resources Environmental Protection Act (NREPA), and implement current laws and regulations by training employees to identify AIS and know and understand the statute's requirements.

Who: **Aquatic Species and Regulatory Affairs (ASRA) Unit;** Employees.

How: Collaborate with the AIS Core Team; post accurate information regarding prohibited and restricted species on the State of Michigan's website, and submit annual reports required under NREPA to the Governor and Legislature; provide training for employees.

Metric: Establishment of an accurate, up-to-date website; number of reports submitted on time; number of employees trained.

Timeline: Initiation 2014, completion 2015, every 3 years thereafter.

Tactic 2: Prevent and manage AIS through the development of new tools and information.

What: Conduct, support, or promote research on new testing methods to detect AIS. Promote water management that serves to benefit AIS prevention or minimize dispersal. Continue to support the investigations of new strategies to increase trapping of sea lampreys on the Saint Marys River.

Who: **Research Section;** ASRA Unit; Basin Coordinators; Partnership for Ecosystem Research and Management (PERM) researchers.

How: Research Section will implement this tactic by tracking and evaluating ongoing AIS research, promoting and supporting new research where appropriate, participating in work groups, lake committees, and lake technical committees, and working to enhance relationships regarding AIS with outside agencies.

Metric: 1) The Division's involvement in initiatives related to AIS management (at least four ongoing initiatives); 2) the Division's involvement in development of new tools or methods for the prevention and management of AIS (at least two during the Strategic Plan implementation period, 2013-2017).

Timeline: Initiate 2013, annually thereafter.

Goal 1: Healthy Aquatic Ecosystems and Sustainable Fish Populations

Objective 1: Enhance control efforts for Aquatic Invasive Species (AIS)

Tactic 3: Prevent introductions and limit the dispersal of AIS through policies, procedures, and permits.

What: Evaluate, coordinate, and improve AIS prevention policies, procedures, and training of employees who conduct field activities (e.g., prevention strategies, species identification, hydropower licensing). Evaluate current AIS prevention language and Best Management Practices for cleaning equipment, proper disposal of specimens, and include reporting of new AIS infestations in permits, grants, and contracts for research.

Who: **ASRA Unit;** AIS Core Team.

How: Work with AIS Core Team to develop and enhance policies, procedures, and training sessions.

Metric: Number of documented policies and procedures updated and evaluated; number of training sessions held.

Timeline: Initiation 2013, completion 2014, annual review thereafter.

Tactic 4: Prevent the introduction of AIS through canals and waterways, specifically Asian carps, through the Chicago Area Waterway System.

What: Ensure continued operation of existing short-term preventative measures at the Chicago Area Waterways System; provide support to maintain and enhance existing measures; promote hydrological separation between the Great Lakes and the Mississippi River basins; promote and support research and implementation of measures to prevent introduction of Asian carps and other AIS at entry points other than the Chicago Area Waterways System.

Who: **ASRA Unit;** Representative to Asian Carp Regional Coordinating Committee.

How: Participate in work groups, including the Asian Carp Regional Coordinating Committee; continue existing efforts to expedite federal action on the hydrologic separation of the Great Lakes and Mississippi River basins.

Metric: Number of workdays devoted to participation in work groups.

Timeline: Initiation 2013, completion 2014, annually thereafter.

Tactic 5: Evaluate man-made connections between waterbodies in Michigan.

What: Develop a briefing paper that contains identifying connections and recommendations for future actions.

Who: **ASRA Unit;** AIS Core Team.

How: Work with local governments.

Metric: Completion of briefing paper.

Timeline: Initiation 2014, completion 2017.

Tactic 6: Prevent the introduction of AIS through organisms in trade (i.e., sale and transmission of aquatic species).

What: Identify and develop a list of organisms-in-trade species threatening Michigan. Implement current laws and regulations; provide employees with training on identification of AIS and statute

Fisheries Division - Tactical Plan

Goal 1: Healthy Aquatic Ecosystems and Sustainable Fish Populations

Objective 1: Enhance control efforts for Aquatic Invasive Species (AIS)

requirements; maintain list of contacts for businesses involved in trade of aquatic organisms; evaluate existing laws and regulations; utilize risk assessments to identify new AIS threats; make changes to the prohibited/restricted species list as appropriate; evaluate discrepancies with other agency AIS lists and modify Michigan's list as appropriate; ensure license language includes proper disposal of unwanted organisms and reporting of potential AIS; encourage voluntary testing when appropriate; and support and promote voluntary Hazard Analysis and Critical Control Points (HACCP) training related to AIS for licensed dealers and harvesters.

Who: **ASRA Unit;** Michigan Department of Natural Resources (MDNR)-Law Enforcement Division; AIS Core Team.

How: Collaborate with AIS Core Team. Seek out and provide training opportunities, conduct inspections, maintain contact lists, create a report containing recommendations on use of risk assessments, create briefing that describes discrepancies among AIS lists, improve license language to include protective provisions, and implement plans.

Metric: Numbers of individuals trained and inspections completed; completion of written documents; number of recommendations implemented.

Timeline: Initiation 2013, completion 2017.

Tactic 7: Prevent introductions and limit the dispersal of AIS via aquaculture practices conducted within the State of Michigan and by private facilities through laws, regulations, permits, policies, and procedures.

What: Implement current laws and regulations regarding prohibited species and fish health certification. Conduct AIS-HACCP training at the Division's hatcheries, and encourage the use of AIS-HACCP at private hatcheries, as a method to identify and eliminate potential AIS risks. Identify and encourage the use of AIS preventative procedures through communication with other agencies, including federal, Tribal, and private.

Who: **ASRA Unit;** Fish Production Section; Management Units.

How: Evaluate existing laws and regulations and update if needed. Review fish rearing (including the use of minnows as a food source), transportation, stocking, equipment, disinfection, and hatchery practices. Modify policies and procedures if needed.

Metric: Number of state, federal, Tribal, and private hatcheries using AIS-HACCP plans.

Timeline: Initiation 2014, completion 2015, review every 5 years thereafter.

Strategy 2: Control the spread of existing AIS.

Tactic 1: Implement AIS control strategies through existing and new programs.

What: Continue to support the Great Lakes Sea Lamprey control program.

Fisheries Division - Tactical Plan

Goal 1: Healthy Aquatic Ecosystems and Sustainable Fish Populations

Objective 1: Enhance control efforts for Aquatic Invasive Species (AIS)

Who: ASRA Unit; Employees.

How: Coordinate with the U.S. Fish and Wildlife Service by consulting on projects that may increase access into rivers for sea lamprey, review annual lampricide treatment proposals and communicate concerns; issue necessary permits or certifications.

Metric: Number of pertinent projects receiving input from the Division.

Timeline: Initiation 2013, completion 2014, annually thereafter.

Strategy 3: Monitor existing AIS populations.

Tactic 1: Continue conducting early detection efforts for Asian Carp.

What: Work to ensure continued operation of existing short-term preventative and rapid response measures at Chicago Area Waterways System.

Who: ASRA Unit; Representative to Asian Carp Regional Coordinating Committee; Management Units; Research Section.

How: Support active and collaborative monitoring of Asian carps in Michigan's waters using environmental DNA. Participate in committees or collection efforts as needed.

Metric: Number of continuous days of operation of short-term preventative and rapid response measures; number of environmental DNA samples collected, days spent on committee work, and survey collections.

Timeline: Initiation 2013, completion 2014, annually thereafter.

Tactic 2: Develop/implement a process for early detection and reporting of AIS.

What: Develop a list of high-risk AIS not currently found in Michigan. Establish a cohesive, statewide monitoring and reporting program using field employees and partners. Monitor status and trends and discretionary surveys for AIS.

Who: ASRA Unit; Representative to Asian Carp Regional Coordinating Committee; Management Units.

How: Work with other agencies to develop a list. Inventory existing efforts; identify need for additional efforts; develop long-term statistically valid monitoring program, and develop coordination plan.

Metric: High-risk AIS list and monitoring and reporting plan developed. Reporting mechanism identified.

Timeline: Initiation 2013, completion 2015.

Strategy 4: Develop and disseminate education and outreach materials on AIS.

Tactic 1: Work with AIS Core Team to develop a cohesive and effective information/education outreach document.

What: Develop an outreach document that outlines consistent messaging, priority pathways and audiences, available resources, and effective media outlets.

Fisheries Division - Tactical Plan

Goal 1: Healthy Aquatic Ecosystems and Sustainable Fish Populations

Objective 1: Enhance control efforts for Aquatic Invasive Species (AIS)

Who: **ASRA Unit;** Division representatives to AIS Core Team; Outreach and Education Unit.

How: Inventory and evaluate existing resources, including those from other states, regions, and provinces. Create a Michigan-specific planning document and implement recommendations.

Metric: Document completed. Number of recommendations implemented and reported on annually.

Timeline: Initiation 2014, completion 2015, review every 5 years thereafter.

Tactic 2: Improve and increase information about aquatic invasive species.

What: Provide relevant AIS information on the Division's website and have materials available for distribution.

Who: **Outreach and Education Unit;** AIS Core Team; ASRA Unit.

How: Identify and evaluate existing materials on AIS. Organize and post relevant materials on the website. Link website to other pre-existing AIS-related sites. Identify areas where new materials are needed and develop those materials. Materials should include AIS populations; implications; control mechanisms; the Division's role, involvement and accomplishments; and prevention. Identify and execute a distribution and marketing plan. Distribution emphasis to include recreational water-related groups (boaters, anglers, scuba divers, etc.).

Metric: New document development: complete existing document review to determine new materials necessary and produce written report to obtain approval from AIS Core Team for new material development. Currently have two AIS documents (Asian Carp and Viral Hemorrhagic Septicemia brochures). Website: number of hits on the AIS materials increases 5% by 2015.

Timeline: Initiate 2014, completion 2015, annually thereafter.

Tactic 3: Provide information and education materials to the trade industry and consumers to help prevent future introductions and limit the spread of AIS.

What: Implement and support industry awareness campaigns promoting responsible acquisition, distribution, and disposal of aquatic organisms in trade. Implement and support consumer awareness campaigns promoting proper disposal of aquatic organisms in trade and regulated AIS.

Who: **ASRA Unit;** Communications Specialist; Michigan Department of Agriculture and Rural Development.

How: Identify target audiences, distribute information, write articles for target audiences.

Metric: Number of outreach activities.

Timeline: Initiation 2015, completion 2016, annual reporting thereafter.

Objective 2: Conserve and manage aquatic species and their habitats.

Strategy 1: Protect and enhance natural reproduction of native and desirable naturalized aquatic species.

Tactic 1: Identify waters with self-supporting populations of important native and naturalized aquatic species and those where enhancement is needed.

What: Determine which waters in each Management Unit contain naturally-reproducing populations of key species. Identify key species that need to be included for each area or region. Identify waters with current or historical natural reproduction of these species.

Who: **Institute for Fisheries Research;** Basin Coordinators; Database Administrator; partner agencies with surveys and/or databases of historical information (e.g., educational research institutions, watershed councils, conservancies, Michigan United Conservation Clubs (MUCC)); fishing organizations (e.g., Trout Unlimited); local MDNR-Law Enforcement Division personnel.

How: Request and conduct reviews of files and databases for listed species and accumulate input from members of smaller organizations. Develop and distribute request to Management Units, internal and external research staff, and large organizations. Use local contact lists to request information from local groups. Conduct additional surveys as indicated by gaps in data. Recommend and implement enhancement activities as needed.

Metric: 1) Region-specific lists of key species developed; 2) Region- and species-specific list of waters/habitat supporting self-sustaining populations developed; 3) long-term plan for updating lists developed; 4) needed enhancement activities identified with plans; 5) adequate involvement of all entities.

Timeline: Initiate 2014, completion 2017, update at regular intervals thereafter.

Tactic 2: Protect waters and habitats critical to reproductive success of important aquatic species.

What: Use list of critical waters and habitats for key species to focus protection strategies; make permitting agencies aware of special waters/habitats needing extra protection; provide lists of species and waters to local agencies and groups to help focus their conservation efforts; conduct research into habitat needs where information is inadequate.

Who: **Management Unit Biologists.**

How: Incorporate protection of listed resources in standard operating procedures and future planning efforts; allow for protecting critical habitats in permitting reviews; include sampling to monitor status of listed species during normal surveys; consider local projects to

Fisheries Division - Tactical Plan

Goal 1: Healthy Aquatic Ecosystems and Sustainable Fish Populations

Objective 2: Conserve and manage aquatic species and their habitats

- protect critical habitat for species of concern; educate riparians on the importance of maintaining diverse, natural habitats.
- Metric:** Develop a final list of critical waters and habitats for key species; for waters/habitats receiving focus in any given year, attain increasing and/or >50% conformance with awareness by relevant entities and riparian organizations of key species and critical habitats in their areas; and incorporation of conditions that provide recommended protections into the permit review process for local projects administered by the Michigan Department of Environmental Quality (MDEQ).
- Timeline:** List development/distribution: Initiation 2013, completion 2014.
Awareness/conformance/incorporation: Initiation 2013, completion 2014, annually thereafter.

Tactic 3: Improve/restore waters/habitats critical for reproduction/recruitment of important aquatic species.

- What:** Work with state, local, and permitting agencies and groups to plan and implement habitat projects for key species; develop lists of needed research; and continue to work with local riparian and lake organizations to adopt practices favorable to aquatic habitat restoration and do habitat improvement work.
- Who:** **Management Unit Biologists;** Research Section; PERM; Outreach and Education Unit; engaged local watershed/volunteer groups.
- How:** Develop and evaluate effectiveness of projects targeting key species through involvement of employees with project planning, implementation, and research projects to develop and assess effectiveness of techniques used; develop educational materials for public distribution.
- Metric:** Number of projects (improvement/restoration/research/monitoring) of waters/habitats for key species and observations of resultant improvements. Educational items developed.
- Timeline:** Initiation 2013, completion 2015, annually thereafter.

Strategy 2: Stock fish as appropriate for balanced aquatic communities.

Tactic 1: Assess the effectiveness of current stocking plans through angler and constituent reports (creel surveys, discussions with lake associations and other groups) and biological surveys.

- What:** Use available resources, both biological and social, to determine the success of current stocking efforts. Fish stocking is an important management activity implemented by the Division, and stocking plans are currently peer reviewed through the Fish Prescription System. Improved, holistic evaluation of the fish stocking program will lead to more consistent peer reviews of individual stocking plans, a more efficient and effective program, and ultimately improved fisheries for Michigan anglers.

Fisheries Division - Tactical Plan

Goal 1: Healthy Aquatic Ecosystems and Sustainable Fish Populations

Objective 2: Conserve and manage aquatic species and their habitats

Who: **Statewide Angler Survey Program (SASP);** Fish Production Section, Basin Coordinators; ASRA Unit; lake associations and other user groups.

How: Compile available data from Fish Production, ASRA, angler/constituent reports, and biological surveys. Create an assessment tool that uses all available data for specific fisheries where stocking plans are involved. Use the assessment tool to rank success of stockings. Implement the ranking system in the Fish Prescription System. Adjust stocking plans to complement results of assessments.

Metric: 1) Development and implementation of a functional assessment tool; 2) ongoing use of the assessment tool to adjust stocking plans in accordance with changing fisheries; 3) improved effectiveness and efficiency of the Division's fish stocking program.

Timeline: Initiate 2014, completion 2017, annually thereafter.

Tactic 2: Develop coolwater production capacity to meet Management Unit's stocking requirements.

What: Develop needed support plans and construct coolwater production facilities to meet future coolwater fish stocking needs as identified by Management Units.

Who: **Fish Production Section;** Basin Coordinators and Management Unit Supervisors; MDNR-Real Estate Division's liaison; Michigan Department of Technology, Management, and Budget (MDTMB)-Engineering Section; MDNR and MDTMB Land and Building Services; contractors.

How: Completion of this tactic will require 1) development of a conceptual design plan for coolwater rearing facilities that includes rearing targets by species, best locations, and appropriate water sources; 2) development of initial engineering design to include cost estimates and conceptual design drawings that will be used to solicit funding; 3) obtaining funding from the legislature for final design and construction; and 4) constructing, testing and operation of new coolwater rearing facilities.

Metric: Complete conceptual design plan by 2014; complete initial engineering design work by 2015, assuming funding for preliminary engineering designs are available; obtain funding by 2016; complete final design work by 2017; construct facilities by 2018.

Timeline: Initiate 2014, complete by 2019.

Strategy 3: Develop and adhere to guidance documents for the management of aquatic species and habitat.

Tactic 1: Develop management plans for important, native, naturalized, or rare fish species and habitats.

What: Develop management plans for important fish species such as inland trout, and species potentially at risk such as cisco, river redhorse,

Fisheries Division - Tactical Plan

Goal 1: Healthy Aquatic Ecosystems and Sustainable Fish Populations

Objective 2: Conserve and manage aquatic species and their habitats

and spotted gar to meet the intent of Part 365 of NREPA and the Michigan Wildlife Action Plan; identify waters for targeted surveys and use this information to ascertain waters where harvest could be allowed; implement approved management plans through modified Fisheries Orders.

Who: **Management Unit Biologists;** Research Section; Fish Production Section.

How: Basin Teams and Management Units set priorities for writing these plans; Management Unit Supervisors make assignments; targeted surveys to develop knowledge of populations.

Metric: Number of management plans completed.

Timeline: Initiation 2013, completion 2014, annually thereafter.

Tactic 2: Write Status of the Fishery reports and document management activities for managed waterbodies on a regular basis.

What: When writing Status of the Fishery Reports, include the historical fisheries management of that waterbody, most recent survey findings, and a Management Direction section that specifically lays out management objectives for that particular waterbody; write up survey results at the end of each field season; develop management actions within reports; compile historical fisheries management actions.

Who: **Management Unit Biologists;** Research Section; Fish Production Section.

How: Management Unit Supervisors make assignments.

Metric: Number of Status of the Fishery Reports completed annually; number of reports distributed (e.g., to lake associations and constituents); number of positive comments received from public pertaining to the reports.

Timeline: Initiation 2013, completion 2014, annually thereafter.

Strategy 4: Protect and enhance nongame and rare species.

Tactic 1: Protect aquatic species and habitats through review of environmental permits and other planned management actions.

What: Provide detailed and timely reviews of environmental permits (e.g., National Pollutant Discharge Elimination System, Part 301/303 of NREPA, Aquatic Nuisance Species Control Permits, etc.) and participate on Natural Rivers Zoning Review Boards to assess potential harm to aquatic species, including endangered, threatened, or species of special concern, caused by habitat loss and degradation.

Who: **Management Unit biologists;** Habitat Management Unit (HMU).

How: Utilize site specific knowledge (i.e., data contained in the Division's databases, such as the Fish Collection System, Scientific Collectors Permits, the Division's spatial mapper, or from external sources such

Fisheries Division - Tactical Plan

Goal 1: Healthy Aquatic Ecosystems and Sustainable Fish Populations

Objective 2: Conserve and manage aquatic species and their habitats

as the Michigan Natural Features Inventory, University of Michigan Museum collections, etc.) to make informed recommendations to reduce/eliminate risk.

Metric: Track the number of environmental permits/management actions that are reviewed.

Timeline: Initiation 2013, completion 2014, annually thereafter.

Tactic 2: Include adequate sampling effort for nongame species in survey planning.

What: Incorporate goals of the Michigan Wildlife Action Plan into annual work plan development; review list of Species of Greatest Conservation Need as identified in the Michigan Wildlife Action Plan to determine the potential for these species to be present in waters to be surveyed; increase sampling efforts in appropriate habitats to assess occurrence these species.

Who: **Management Unit Biologists and Technicians;** ASRA; Research Section; PERM.

How: Use the Division's standard survey protocols to implement assessments for species of greatest conservation need. Provide review and training at the Biologists' conference.

Metric: Count of surveys performed that incorporate sampling to assess species of greatest conservation need; count of surveys that document the status of species of greatest conservation need.

Timeline: Initiation 2013, completion 2016, annually thereafter.

Strategy 5: Manage aquatic resources for use by current and future generations.

Tactic 1: Work with land management agencies (local, state and federal) to ensure protection and/or enhancement of aquatic resources through land management reviews, compartment reviews, parcel reviews (e.g., mineral), use permits, etc.

What: Provide comments and input to other divisions and constituents in order to protect aquatic resources on lands that are proposed for different types of usage. Conduct field site visits as necessary. Use appropriate policies, procedures, and other relevant guidance documents of the Division.

Who: **Management Unit Biologists.**

How: Provide comments on plans through forest compartment reviews, forest treatment proposals, the parcel review system for mineral leases, use permit review, etc., integrating site visits, the Division's policies and procedures, and other relevant documents as appropriate; participate on committees and provide input for documents, such as watershed plans and river assessments.

Metric: Number of plans reviewed; number of site visits made; number of employees on associated committees.

Timeline: Initiation 2013, completion 2014, annually thereafter.

Fisheries Division - Tactical Plan

Goal 1: Healthy Aquatic Ecosystems and Sustainable Fish Populations

Objective 2: Conserve and manage aquatic species and their habitats

Strategy 6: Participate in and influence decisions on habitat use through collaboration and permit reviews.

Tactic 1: Actively engage in work requests to protect, maintain or enhance aquatic environments for fisheries.

What: Attend meetings with various partners and agencies to discuss proposed projects that impact aquatic habitats. Provide comments as requested to regulatory agencies for pending applications that will impact aquatic habitat.

Who: **Management Unit Supervisors** and biologist; research biologist, HMU.

How: Proposals and applications for construction or rehabilitation projects are regulated and permitted by other state and federal agencies. Early participation in project design discussions, or review of applications with recommended adjustments, can lessen the need for mitigation requirements and provide protection of aquatic resources.

Metric: Number of permits commented on; number of meetings attended.

Timeline: Initiate 2013, completion 2014, annually thereafter.

Goal 2:
Diverse Fishing Opportunities

Objective 1: Increase public awareness of Michigan's diverse fishing opportunities.

Strategy 1: Promote diverse fishing opportunities statewide by providing targeted information and updates to specific regions, demographics, interest groups, and the media.

Tactic 1: Use creel clerks to receive/distribute information to anglers.

What: Use creel clerks to receive information from and distribute information to the angling community. Improve collection of angler demographic data through the SASP to better define and serve the angling community. Creel clerks are the primary contact point between the Division and anglers and the general public; as such, they are ideally suited to serve as a conduit of information among these groups.

Who: **SASP**; Basin Coordinators; Management Unit Technician Supervisors; Outreach and Education Unit.

How: Expand and reconfigure the SASP to provide better creel coverage of inland fisheries resources. Regularly meet with Basin Coordinators and Outreach and Education staff to determine needs for information collection and dissemination. Regularly provide creel clerks with information to distribute and up-to-date instructions for collection of demographic information. Work with SASP staff to expand/optimize gathering and dissemination of data/information. Improve frequency and quality of communications between clerks and supervisors.

Metric: 1) Increased distribution of information to anglers via creel clerks; 2) expansion of demographic data collection through SASP; 3) monthly communication and feedback between supervisors and creel clerks; 4) end-of-season creel clerk summaries compiled and distributed to managers.

Timeline: Initiate 2013, completion 2015, annually thereafter.

Tactic 2: Enhance website to distribute information to public.

What: Continue to improve and enhance the Division's website to specifically distribute information to target audiences.

Who: **Outreach and Education Unit**; Employees; users.

How: Review current web content and organization, and determine what additional content is needed. Improve visibility of current links and add additional links to other user groups/organizations. Increase traffic on website through various means of marketing, which may include such activities such as video contests (YouTube) and various other competitions.

Fisheries Division - Tactical Plan

Goal 2: Diverse Fishing Opportunities

Objective 1: Increase public awareness of Michigan's diverse fishing opportunities

Metric: Increase website hits by 1-2% annually. Assess customer satisfaction via a survey instrument such as survey monkey.

Timeline: Initiate 2013, completion 2017, annually thereafter.

Tactic 3: Develop Information/Outreach Materials Specific for Trout Angling.

What: Develop "Trout Trails" materials, both written and electronic, to highlight Michigan's world class trout fishing opportunities.

Who: **Outreach and Education Unit;** Research Section; Management units.

How: Develop written and electronic materials that highlight Michigan's trout fisheries, including all things trout such as: where to go, regulations, guide service, gear, etc. Utilize electronic media such as video and mobile access. Emphasis will be on tourism factor to encourage and assist out of state anglers.

Metric: Number of hits on electronic media.

Timeline: Initiate 2014, completion 2015.

Strategy 2: Work with local tourism and economic development organizations to demonstrate and market the connections between Michigan's diverse fishing opportunities and quality of life, both economic and non-economic.

Tactic 1: Partner with "Explore the Shores" type of initiatives at local level.

What: Partner with existing and emerging programs such as the "Explore the Shores" initiative to promote place-based initiatives that link natural resource and quality of life.

Who: **Management Unit Supervisors;** Management Unit Biologists.

How: Work with local economic groups to develop and provide input to steering committees/focus groups; continue to sponsor grant programs that support these initiatives.

Metric: Annually weigh number of projects/initiatives with involvement by the Division.

Timeline: Initiate 2014, completion 2017.

Strategy 3: Instill awareness and appreciation of Michigan's fish, fishing heritage, and fishing opportunities into the culture, education, and consciousness of all Michigan citizens.

Tactic 1: Develop online video competitions for anglers.

What: Develop online competitions for anglers to submit videos showcasing Michigan fishing opportunities.

Who: **Outreach and Education Unit.**

How: Develop framework and criteria for competition. Promote competition and solicit entries utilizing various forms of social media (Facebook, Twitter, blogging, etc.). Offer incentives/prizes for submissions (e.g., donated fishing trip, gear, etc.).

Metric: Number of submissions, number of views and number of viewer votes.

Fisheries Division - Tactical Plan

Goal 2: Diverse Fishing Opportunities

Objective 1: Increase public awareness of Michigan's diverse fishing opportunities

Timeline: Initiate 2015, completion 2017.

Strategy 4: Work with the commercial fish industry to optimize its efficiency and value in ways that provide maximum sustainable benefits to Michigan's citizens.

Tactic 1: Optimize efficiency of commercial fish and bait industry.

What: Regulate the harvest of and adequately protect bait fish populations; increase the efficiency of commercial fishery administration; regulate wholesale fish transactions to enable tracing of fish origins and verify commercial fish catch reports; regulate the charter fishing industry; eliminate or convert existing research permits to licenses; pursue funding to assist Tribes converting from gill nets to impoundment gear; recruit appropriate agencies to encourage Tribes to adopt optimal fishing and processing practices; compile a prioritized list of research needs affecting commercial fisheries development; develop and implement data reporting by inland pilots/guides.

Who: **ASRA Unit;** Research Section; Management Units.

How: Annually work with conservation officers on commercial bait fish identification and enforcement issues; continue efforts to educate anglers about spread of AIS via bait use and disposal. Seek legislative approval of commercial fisheries statute rewrite; gain acceptance of electronic catch reporting by commercial fishers and wholesalers. Attain increasing level of compliance on reporting from the charter boat industry. Eliminate remaining research permits and convert them to licenses as appropriate. Continue working towards furthering goals of the 2000 Consent Decree and prepare for the 2020 Consent Decree. Continue work to implement data reporting by inland pilots/guides.

Metric: Number of licenses (commercial, bait fish, charter boat, and inland fisheries as well as wholesalers) issued, monitored, and assessed annually.

Timeline: Initiation 2014, completion 2017.

Objective 2: Create or enhance fishing opportunities.

Strategy 1: Identify and catalog areas where fishing access is needed, prioritize locations, and work with partners to address these needs.

Tactic 1: Identify waterbodies where public access is lacking and work to acquire or secure public access to those waters.

What: Identify waterbodies lacking or with sparse public access, prioritize areas for access acquisition across Management Units; identify appropriate partners (lake associations, MDNR-Parks and Recreation Division (MDNR-PRD), watershed councils, additional

Fisheries Division - Tactical Plan

Goal 2: Diverse Fishing Opportunities

Objective 2: Create or enhance fishing opportunities

constituents) to help secure locations for public access development; create fishing ponds on state-owned land; investigate opportunities for shore fishing access on Hunter Access Program lands with ponds or water frontage; work with counties and other local units of government to develop access sites on their properties.

Who: **Management Unit supervisors;** MDNR-Marketing and Outreach Division (MDNR-MOD); Basin Teams; Management Team.

How: Conduct online public surveys to help define areas where access is limiting fishing participation; use public survey information, local knowledge, and consultation with other partners to identify and prioritize areas within each Management Unit for acquiring new access sites; complete statewide prioritization.

Metric: Prepare lists of areas created and prioritized by Management Unit, and develop statewide prioritization of areas.

Timeline: Initiate 2014, completion 2017.

Tactic 2: Improve existing public access sites.

What: Identify current MDNR fishing access sites and facilities on lakes and rivers and those that could be improved through a variety of methods such as dredging, expansion, or pier construction.

Who: **Management Unit Supervisors;** various partners, including other MDNR divisions, municipalities, and non-governmental organizations.

How: Conduct online public surveys to define areas where access is limiting fishing participation; install fishing piers to create handicapped-accessible and family-friendly fishing opportunities; expand or repair existing State access sites, including unofficial access sites (e.g., carry-in boat launches on State land); work with partners to obtain funding (e.g., Michigan Natural Resources Trust Fund) for the improvements listed in the previous steps; and work with MDNR-PRD, county road commissions, and other partners to plow select sites for increased ice fishing access.

Metric: Track the number of boat launches improved, numbers of fishing piers installed and shore fishing access sites improved, and number of ice fishing access sites plowed each year.

Timeline: Initiate 2014, completion 2017, annually thereafter.

Strategy 2: Use fish stocking as a tool to create new, or enhance existing, fishing opportunities.

Tactic 1: Implement stocking programs to create new fisheries, expand existing fisheries, or to rehabilitate historic fisheries for native species, and adjust stocking as necessary based on survey data.

What: Modify existing stocking programs or redistribute stocked fish as necessary to increase fishing opportunities; review data from fish community or population assessments, creel surveys, and other sources to evaluate fishing opportunities (e.g., by rehabilitating

Fisheries Division - Tactical Plan

Goal 2: Diverse Fishing Opportunities

Objective 2: Create or enhance fishing opportunities

depressed fish populations, creating put-grow-and-take fisheries, or augmenting existing fisheries) created by each stocking program; identify and prioritize opportunities to rehabilitate historic fisheries for native species; stock fish (e.g., lake sturgeon or Great Lakes muskellunge) to rehabilitate fisheries that have declined due to historic overfishing or habitat degradation; create new stocking programs for species or strains of fish that currently are not reared in the Division's hatcheries, rearing ponds, or streamside rearing facilities; transfer wild fish from one waterbody to another or obtain fish through trade with other states.

Who: **Management Unit supervisors**; Fish Production Section; ASRA.

How: The Division will continue to identify opportunities for native species rehabilitation using survey data from Management Units, Research Section, and partner agencies; stock Great Lakes strain muskellunge in waters within their historic range; stock lake sturgeon in various streams according to the guidelines listed in the Division's Lake Sturgeon Rehabilitation Strategy; utilize novel rearing or stocking strategies (e.g., streamside rearing facilities) to maximize survival and imprinting of stocked fish when feasible; stock other native species (e.g., walleye, northern pike, or cisco) as necessary to rehabilitate depressed populations; fish stocking requests will continue to be created or modified by Management Unit personnel using the Division's prescription process, and once prescriptions are approved, Fish Production and ASRA personnel will determine allocations and fish stocking logistics.

Metric: Number of fish stocking prescriptions prepared and approved.

Timeline: Initiated 2013, annually thereafter through December 2017.

Strategy 3: Implement fishing regulations expressly designed to create special or unique fishing opportunities.

Tactic 1: Investigate options for creating catch-and-immediate-release opportunities during closed seasons.

What: Identify opportunities for creating catch-and-immediate release opportunities for select game fish species and evaluate the potential biological and sociological consequences of expanding catch-and-immediate release opportunities for particular species.

Who: **Bass Regulations Evaluation Committee**; Trout, Walleye, and Esocid Committees; MDNR-MOD; Basin Teams; Biologists; Coldwater and Warmwater Resources Steering committees.

How: An online public survey will be conducted to gauge angler interest in catch-and-immediate release seasons for various fish species; The work group will conduct the biological review using information from the Division's surveys, scientific literature, and consultations with biologists in other states; Any changes to existing regulations will go

Fisheries Division - Tactical Plan

Goal 2: Diverse Fishing Opportunities

Objective 2: Create or enhance fishing opportunities

through the established processes for changing statutes or Fisheries Orders.

Metric: Number of species for which reviews were completed and recommendations were provided to management team.

Timeline: Initiate changes 2013, completion 2017.

Tactic 2: Review existing and evaluate potential new waters for special regulations.

What: Review waters currently listed as Type D trout lakes, quality non-trout fishing lakes, or gear restricted streams. Remove waters that do not meet the criteria for inclusion in these categories. Identify and evaluate other waters (e.g., waters where public access is acquired) that appear to be suitable candidates for special regulations.

Who: **Management Unit Biologists;** Research Section; ASRA.

How: Non-trout lakes will be evaluated according to the criteria outlined in Fisheries Order 244; existing and potential gear restricted streams will be evaluated using the criteria outlined in Fisheries Order 213; existing and potential Type D trout lakes will be evaluated to determine if trout growth and survival are conducive to production of large (>15 inches) fish; any changes to existing regulations will have to go through the established processes for changing statutes or Fisheries Orders.

Metric: All existing Type D lakes, non-trout quality fishing lakes, and gear restricted streams reviewed; all waters with newly acquired public access sites evaluated for special regulations.

Timeline: Initiate 2014, completion 2017.

Tactic 3: Develop unique fishing opportunities for young anglers.

What: Develop a regulatory framework for kids fishing ponds and identify waters for implementing these regulations.

Who: **Kids' Fishing Pond Task Group;** Management Units; Outreach and Education Unit; Legislative liaison.

How: The work group will coordinate with the legislative liaison to work with the legislature to introduce legislation that will grant the MDNR authority to designate kids fishing ponds and the Natural Resources Commission authority to regulate them. Management Units will consult with appropriate stakeholders (i.e., MDNR-PRD, municipalities, and other partners) to identify appropriate waterbodies for implementation of kids fishing regulations.

Metric: Development of at least one new kids fishing pond per year.

Timeline: Initiate 2013, completion 2014, annually thereafter.

Fisheries Division - Tactical Plan

Goal 2: Diverse Fishing Opportunities

Objective 3: Increase participation and interest in fishing among all demographic groups

Objective 3: Increase participation and interest in fishing among all demographic groups.

Strategy 1: Identify what impedes people from fishing or from buying fishing licenses.

Tactic 1: Survey targeted audiences regarding barriers to fishing participation and license purchases, specifically recreation passport users and youth.

What: Develop and distribute a survey to Michigan's Recreation Passport users and identified youth, to identify barriers to fishing participation and license purchases. This will provide us with feedback from groups we don't usually communicate with.

Who: **Outreach and Education Unit;** MDNR-PRD; Michigan State University (MSU) survey staff; Michigan Historical Center; Education Services Section of the MDNR-MOD; the Natural Resources Commission's Youth Advisory Council; Fish Production Section and Visitors Centers.

How: Identify Recreation Passport users through MDNR-PRD. Identify specific youth populations to survey. Develop surveys with assistance from MSU survey staff and distribute to targeted users. Analyze survey results.

Metric: Number of survey responses.

Timeline: Initiate 2015, completion 2017.

Strategy 2: Investigate ways to increase fishing license sales through implementation of alternative license sale structures and incentive purchase programs that instill sustained loyalty and interest.

Tactic 1: Enhance functionality of the Retail Sales System.

What: Expand the mobile and e-license purchasing functionality in the Retail Sales System, and expand on-site license purchasing capabilities at shows and state parks.

Who: **Financial/Data Support Unit;** Retail Sales Section; ASRA Unit.

How: Initiate a work group to develop and implement these expansions.

Metric: Increase the number of license types available through mobile purchasing option by two; Increase the number of e-licenses sales in 2016 by 5%; and increase the number of state parks that sell fishing licenses by 10%.

Timeline: Initiate 2014, completion 2017.

Fisheries Division - Tactical Plan

Goal 2: Diverse Fishing Opportunities

Objective 3: Increase participation and interest in fishing among all demographic groups

Strategy 3: Increase education and outreach through programs and partners, both existing and new.

Tactic 1: Educate youth about stewardship of aquatic resources including fishing instruction.

What: Develop a formal program that educates youth about aquatic resources and includes fishing instruction.

Who: **Outreach and Education Unit;** MDNR-MOD Education Services Section.

How: Development of a formal MDNR Aquatic Education Program that includes a fishing component. Work closely with MDNR-MOD staff on curriculum and assist in marketing the program. Engage school systems and others in offering the program.

Metric: Completion of program development with formal curriculum.

Timeline: Initiate 2014, completion 2016.

Tactic 2: Identification of existing and potential partners who are involved in education and outreach activities.

What: Compile list of ongoing education and outreach efforts facilitated by our partners.

Who: **Outreach and Education Unit;** Management Units.

How: Compile statewide list of partners. Identify what education and outreach activities the partners participate in. Make list available to employees. Update list on regular basis. Work with partners to increase number of outreach activities.

Metric: Completion of partner list with identified education and outreach activities.

Timeline: Initiate 2014, completion 2014.

Tactic 3: Encourage employees to get involved with local education and efforts.

What: Increase interactions between employees and the public through events, site visits, presentations, etc.

Who: **Management Team;** Employees.

How: Starting with the 4/1/14-3/31/15 performance evaluation period, each Division employee's performance evaluation should include an objective to "Perform at least two educational and outreach initiatives related to fisheries".

Metric: All performance evaluations contain the required objective.

Timeline: Initiate 2014, completion 2015, annually thereafter.

Goal 3 Strategic Resource Partnerships

Objective 1: Achieve fisheries management goals through partnerships

Goal 3:
Strategic Resource Partnerships

Objective 1: Achieve fisheries management goals through partnerships.

Strategy 1: Increase the proportion of Michigan's annual fish production that is reared through cooperative arrangements and methods (e.g., net pens, walleye ponds, and streamside sturgeon facilities).

Tactic 1: Maintain and expand cooperative agreements.

What: Expand fish rearing opportunities in Great Lakes watersheds to provide the public with an additional venue to participate in ownership of the fishery resources of the State. Maintain and expand existing cooperative agreements.

Who: **Management Unit Supervisors;** Fish Production Section Managers; Research Section Managers.

How: Maintain and expand cooperative agreements with stakeholders such as university, angler groups, Tribal governments, federal government, and local governments.

Metric: Increase the number of cooperative agreements in each Great Lakes basin by 10% by 2018.

Timeline: Initiate 2013, completion 2018.

Strategy 2: Assume leadership roles and fully participate in fisheries management and regulatory processes involving interjurisdictional resources (e.g., Great Lakes, interstate, US/Canadian, Tribal).

Tactic 1: Leadership roles in activities of the Great Lakes Fishery Commission (GLFC).

What: Maintain and expand the role of employees in leadership positions on lake and technical committees sponsored by the GLFC, and other working committees (e.g., lake sturgeon task groups, modeling subcommittees). Michigan is bordered by four states and the province of Ontario and shares fisheries management responsibilities for Great Lakes and border waters with these states, Ontario, and several Native American Tribes in Michigan. Michigan's share of these border waters and Great Lakes exceeds that of any other jurisdiction and the Division should be a leader in interjurisdictional fisheries management of shared waters.

Who: **Basin Coordinators;** Division Chief; Management Unit Supervisors.

How: Create list of interjurisdictional committees and work groups and a list of current Employees on these groups.

Metric: Annually compare involvement of employees on interjurisdictional committees and work groups with prior years to ensure no net loss of membership. Identify areas where membership on committees by

Fisheries Division - Tactical Plan

Goal 3 Strategic Resource Partnerships

Objective 1: Achieve fisheries management goals through partnerships

employees is lacking and appoint employees to committees/work groups where needed.

Timeline: Initiate 2014, annually thereafter.

Tactic 2: Leadership training.

What: Expand financial and administrative support for employees to attend leadership and other training opportunities (e.g., Great Lakes Leadership Academy). This will continue to develop strong leaders for the future.

Who: **Management Team.**

How: Ensure adequate funding for training in the Division's annual budgeting process and encourage leadership training for employees.

Metric: Annually compare the Division's budget commitment for training to prior years to ensure no net loss of budget support. This would begin with the FY2015 budget that will be developed during calendar year 2014.

Timeline: Initiate 2014, completion 2015, annually thereafter.

Strategy 3: Work toward a program whereby most habitat enhancement projects are achieved through partnership collaborations.

Tactic 1: Implementation of Competitive Aquatic Habitat Protection and Rehabilitation Grant Program.

What: Develop and implement an Aquatic Habitat Protection and Rehabilitation Grant Program.

Who: **HMU;** Management Unit Supervisors; Basin Coordinators; MDNR-Grants Management Section; MDEQ.

How: Develop and implement a competitive Aquatic Habitat Protection and Rehabilitation Grant Program that provides funding for projects that protect intact and rehabilitate degraded aquatic habitat.

Metric: Complete development of supporting materials including application, application process, and project scoring by January 2014; secure funding from legislature; review supporting materials by August and issue requests for proposals by September each year; review projects that have been funded to ensure the projects meet proposed habitat goals; measure effects of funded projects on aquatic habitat.

Timeline: Initiate October 2013, annually thereafter.

Strategy 4: Provide constituents with guidance on resource issues and contribute to the development of decision support tools when requested.

Tactic 1: Expand access to survey information.

What: Expanded or shift current fisheries survey inventory efforts in each Management Unit to cover nearshore or onshore access sites on the Great Lakes each year. This would include surveys of Great Lakes bay areas and river mouths and can include historic creel survey observations. The information would be accessible to the public.

Fisheries Division - Tactical Plan

Goal 3 Strategic Resource Partnerships

Objective 1: Achieve fisheries management goals through partnerships

Reference data can be drawn up quickly and used by tourists and new anglers for quickly-planned fishing trips.

Fisheries survey inventory information should be obtained and published to cover as many public access sites on the Great Lakes as possible. Information should include, but not be limited to, species residence or possible catch at location, best time of the year to catch a given species, and if possible angling method used. This database could be continually updated to keep anglers informed on new fishing methods and species present.

Who: **Research Section;** Management Units; Outreach and Education Unit.

How: Data are collected according to the Division's survey methods; fishing reports; partner with local city officials to report fishing activity and promote fishing activity; and angler catch information. Establish an interactive tool on the Internet that links the fish stocking information with the survey reports.

Metric: Number of hits on the Internet, log of public comments, and participation at public access sites along the Great Lakes through the creel survey program.

Timeline: Initiate 2014.

Tactic 2: Interactive map.

What: Expand the current map system so that additional information can be obtained on each site by clicking on the lake name or river section. Additional information would include species stocked, gear restrictions, size limit, season, etc. This would simplify responding to inquiries regarding regulations. The interactive map will make outings easier to plan for people, while getting more people out fishing.

Who: **Research Section.**

How: This could be done with existing information on file and provided in a more user-friendly format. Anglers can also post pictures of catches on the site. The site should be accessible by home computer, mobile laptop, and iPhones.

Metric: Number of hits on the Internet, log of public comments, and participation through the creel survey program.

Timeline: Initiate 2015.

Strategy 5: Develop and maintain a list of partners along with their specialized skills and equipment.

Tactic 1: Volunteer coordination.

What: Develop and maintain a list of potential volunteers for use by employees. The Division provides support for a volunteer coordinator position at MUCC. This position is responsible for facilitating volunteer activities between MDNR-Wildlife and Fisheries

Fisheries Division - Tactical Plan

Goal 3 Strategic Resource Partnerships

Objective 1: Achieve fisheries management goals through partnerships

divisions and the sport clubs that are represented by MUCC. The Division maintains a list of non-MDNR sports clubs and committees. This list needs to be updated to identify potential volunteer contacts and their specialized skills and equipment that could be available for volunteer projects.

Who: **Personnel Support Unit Volunteer Coordinator.**

How: The Division's Volunteer Coordinator will facilitate contact with MUCC's Volunteer Coordinator. Develop a list of MUCC-related volunteer contacts and identify their specialized skills and equipment. Review the Division's current sports club/committee list and identify any volunteer contacts and their specialized skills and equipment that may be available. This information should be available on the Division's intranet site.

Metric: Complete volunteer list with associated details and post on the intranet.

Timeline: Initiate 2014, completion 2014, review annually thereafter.

Objective 2: Promote aquatic resource stewardship and watershed management.

Strategy 1: Support, enhance, and foster the growth of existing programs (e.g., Salmon in the Classroom) to assist in teaching Michigan's youth about stewardship principles and aquatic resources.

Tactic 1: Enhance and expand Little Manistee and Boardman weirs and interpretive amenities.

What: Enhance and expand Little Manistee and Boardman weirs and interpretive programming and amenities through collaboration with internal stakeholders (e.g., MDNR-MOD staff) and external stakeholders (e.g., Manistee County Alliance for Economic Success staff).

Who: **Central Lake Michigan Management Unit Supervisor;** Central Lake Michigan Management Unit employees; MDNR-MOD, Fish Production Section.

How: Coordinate with interested groups to develop interpretive and presentation opportunities (e.g., enhanced interpretive activities during weir operations) at weirs on the Boardman and Little Manistee rivers.

Metric: Annual increase in visitors to the weir.

Timeline: Initiate 2013, completion 2018, annually thereafter.

Strategy 2: Increase the number of people visiting interpretive centers at State fish hatcheries.

Tactic 1: Improve fisheries programming at interpretive centers.

What: Develop and implement programs to increase dissemination of fisheries information at interpretative centers by coordinating and assisting in large-scale community events at each interpretive center (e.g., Fish Fest).

Who: **Fish Production Section;** MDNR-MOD; MDNR Interpreters; Management Units; Oden State Fish Hatchery; Wolf Lake State Fish Hatchery; public partners.

How: Develop and implement a strategy to increase fisheries programming at interpretative centers. The strategy should include components for: working with external partners to organize labor and financial resources for improved interpretation of fisheries and aquatic habitat; develop external funding sources such as the Great Lakes Stewardship Initiative and the Great Lakes Fishery Trust; add new and update current interpretation of fisheries and aquatic habitat at MDNR facilities, including interpretative centers at the State's parks and hatcheries.

Metric: By 2017, increase 1) the number of visits to interpretative facilities by 5%; 2) the number of visitors with good knowledge of Michigan's fisheries and aquatic habitat by 10% as measured by entrance and exit surveys; 3) returning visitors to interpretative facilities by 10%; 4) increase vendor participation at interpretative facilities by 5%.

Timeline: Initiate 2014, completion 2015, and implement annually.

Tactic 2: Enhance marketing and outreach efforts to promote interpretive centers.

What: Enhance marketing and outreach efforts for promoting interpretive centers that include fishing components.

Who: **Outreach and Education Unit;** MDNR-MOD.

How: Identify and inventory existing marketing and outreach efforts at the State's fish hatcheries and interpretative centers that have fishing components. Enhance collaborative efforts with other MDNR divisions to cross promote programming and facilities. Utilize various marketing tools to promote and attract participation. Develop outreach to under- or non-utilized markets (e.g., convention and visitor bureaus).

Metric: Increase number of visitors by 5% per location annually.

Timeline: Initiate 2016, completion 2017, annually thereafter.

Goal 3 Strategic Resource Partnerships

Objective 2: Promote aquatic resource stewardship and watershed management

Strategy 3: Partner with local chambers of commerce or other economic development groups to promote aquatic resource stewardship and to develop region-specific quality-of-life messages disseminated through multimedia outlets.

Tactic 1: Enhance the Division's partnership with Pure Michigan.

What: Capitalize on the MDNR's relationship with Pure Michigan and ensure growth in our collaborations. Pure Michigan is a large-scale marketing campaign that has crossover with the messaging that the MDNR would like to promote.

Who: **Outreach and Education Unit;** MDNR-MOD.

How: Further develop the already existing working relationship between the Division's and Pure Michigan's staff for common themes in promotion and marketing. Utilize the Michigan Travel Commission's Michigan Tourism Strategic Plan 2012-2017 as a guiding document to structure further growth and development. Utilize relationships and avenues of information dissemination to partners and interest groups, such as local chambers of commerce and convention and visitors bureaus, between Pure Michigan and MDNR.

Metric: Increase contacts made with local chambers of commerce and convention and visitors bureaus by 5% annually.

Timeline: Initiate 2013, completion 2017, annually thereafter.

Tactic 2: Enhance participation with business-oriented groups such as the Michigan Economic Development Corporation and chamber of commerce.

What: Share written materials (e.g., rack cards) with chambers of commerce and tourism groups for distribution. Actively participate in Michigan Economic Development Corporation's regional planning and policy collaborative such as the Collaborative Development Council.

Who: **Management Unit Supervisors;** Management Unit Biologists; Outreach and Education Unit.

How: Partner with local chamber of commerce and tourism groups to distribute educational materials highlighting aquatic resource stewardship and region-specific quality of life. Attend local and regional planning and policy development meetings.

Metric: Actively participate in at least one local or regional planning or policy development initiative in each management unit per year.

Timeline: Initial 2013, completion 2014, annually thereafter.

Strategy 4: Develop web-based tools and information to help individuals or groups practice good shoreline and streamside resource stewardship.

Tactic 1: Develop a stewardship Best Management Practices outreach tool kit.

What: Make resources readily available to facilitate constituent requests for assistance with habitat projects. Landowners and constituents often

Fisheries Division - Tactical Plan

Goal 3 Strategic Resource Partnerships

Objective 2: Promote aquatic resource stewardship and watershed management

look to the Division for information and guidance when implementing projects where they desire to practice aquatic resource stewardship. These resources could be centralized and made readily available to the public.

Who: Outreach and Education Unit; HMU Biologists; Management Units.

How: Identify existing resources that employees could recommend for habitat project assistance. Organize these materials in a meaningful way and post on the Internet. Publish a list of easy-to-follow steps and procedures (i.e., how to or “cookbook” list) for individuals and groups who are interested in habitat protection, rehabilitation, and enhancement.

Metric: Complete existing resource review and organization, and post on website.

Timeline: Initiate 2014, completion 2014, annually thereafter.

Tactic 2: Enhance educational material development and distribution on the importance of aquatic habitats.

What: Increase the awareness of constituents regarding the importance of intact aquatic habitats. Constituents often ask employees for information or materials to promote understanding of habitat complexities in their water of interest. The Division does not currently have a localized area for information regarding aquatic habitats and aquatic habitat stewardship that is easily accessible by constituents.

Who: Outreach and Education Unit; HMU Biologists; Management Units.

How: Research and gather appropriate materials and publish to the Division’s website. Utilize and link to relevant publications from other resource agencies. Provide a “reading list” of relevant information and case studies that explain the importance of intact aquatic habitats to constituents.

Metric: Compile materials and post on website.

Timeline: Initiate 2016, completion 2017, annually thereafter.

Tactic 3: Enhance transfer of the Division’s information to the public.

What: Increase awareness of the current nearshore lake habitat status with constituents. The Division has collected an extensive database of lake and stream habitat variables through the Status and Trends Program. This information can be disseminated to the public in an efficient manner to increase their understanding of current aquatic habitat conditions in Michigan.

Who: Outreach and Education Unit; Resource Inventory Team (RIT).

How: Develop a dedicated website to post relevant information. Develop an informational document on the status of shoreline habitat on lakes that has been inventoried using status and trends protocols. Incorporate related materials and web information from partners.

Metric: Completion of the dedicated page on the website. Track/count website hits.

Timeline: Initiate 2014, completion 2014, annually thereafter.

Strategy 5: Facilitate watershed management by developing collaborative partnerships with organized watershed groups.

Tactic 1: Provide watershed-level management support to stakeholders.

What: Develop and implement mechanisms for the Division to provide technical expertise and data to watershed partners.

Who: **HMU**; Management Units, Research Section; Outreach and Education Unit.

How: Actively develop and enhance active partnerships with all watershed councils and other watershed groups by forging strategic alliances with these entities. Employees will develop and provide or organize training on key issues, processes, or rehabilitation techniques. Upon a watershed entity's request, the Division will assist in the development, planning, construction, and review of aquatic habitat projects by providing technical expertise and data. Additionally, aquatic habitat project guidance, key datasets, and best management practices documents will be developed and provided electronically for key issues, processes, habitat protection, and rehabilitation options.

Metric: Increase the number of active and engaged watershed entities by five per year; increase the number of active and new watershed improvement projects by watershed entities by 5% per year; increase HMU website views by 10% annually as measured by website analytics.

Timeline: Initiate 2013, continue annually.

Tactic 2: Facilitate partnerships among external stakeholder groups concerned with aquatic habitat.

What: Improve coordination between watershed and statewide groups to protect and rehabilitate aquatic habitat.

Who: **HMU**; Management Units; Research Section.

How: Annually coordinate or assist with coordination of a workshop to engage statewide and watershed-specific groups on watershed issues. Determine common interests between groups and engage groups with similar interests on specific watersheds, assist in coordinating their actions, and assist in bringing external resources for the planning and implementation of projects that protect intact and rehabilitate degraded aquatic habitat. Where resource competition is noted, serve in a mediator role in project collaboration between groups and assist with problem resolution. Develop and provide electronically datasets, aquatic habitat project guidance, and best management practices documents for key issues, processes, and options for habitat protection and rehabilitation.

Metric: Annually conduct a workshop with statewide and watershed conservation groups; increase participation in the workshop by

Fisheries Division - Tactical Plan

Goal 3 Strategic Resource Partnerships

Objective 2: Promote aquatic resource stewardship and watershed management

statewide and watershed conservation groups by 5% annually;
increase number of collaborative projects by 5% annually.

Timeline: Initiate 2015, continue annually.

Objective 3: Increase angler recruitment and retention.

Strategy 1: Partner with angler groups and sport retailers to increase angler recruitment and retention.

Tactic 1: Enhance fishing recruitment and retention programs.

What: Enhance the programmatic framework for recruitment and retention efforts based on identified benefits of increasing the number of anglers in Michigan. Identify angler groups, educational organizations, and major retailers (e.g., Cabela's, Gander Mountain, Meijer's, Jay's, Dunham's, etc.) to partner with, and develop a joint marketing plan to engage these partners in promoting recruitment and retention of anglers.

Who: **Outreach and Education Unit;** MDNR-MOD; MDNR-PRD; Management Units.

How: Solicit participation from employees in developing a framework and identifying groups as potential partners. Establish formal partnerships and a joint planning committee. Involve staff in MDNR-PRD on the planning committee to encourage use of state parks as focal points and hosts for more recruitment and retention programs. Identify current programs that are working to recruit anglers (e.g., Becoming an Outdoor Woman, kids fishing programs, or "Family-Friendly Fishing" waters) and expand these programs. Facilitate existing programs with incentives (e.g., coupons, gear, discounted fishing licenses, etc.) or develop programs that groups or retailers could use to recruit new anglers. Enhance MDNR-PRD's online reservation system for parks with nearby fishing opportunities by adding fishing reminders (e.g., "Don't forget to bring fishing tackle"), on-site information (written, video, etc.) about fishing opportunities at the State's parks, how-to materials for beginning anglers (educational materials, "How to" guides, etc.).

Metric: Increase number of participants in recruitment and retention programs by 5% annually.

Timeline: Initiate 2013, completion 2015, annually thereafter.

Fisheries Division - Tactical Plan

Goal 4 Strategically Focused Assessment and Decision Support Tools

Objective 1: Conduct comprehensive assessments of fish and other aquatic life, habitat and aquatic resource users

Goal 4:

Strategically Focused Assessment and Decision Support Tools

Objective 1: Conduct comprehensive assessments of fish and other aquatic life, habitat, and aquatic resource users.

Strategy 1: Refine a fisheries assessment strategy that continues to develop the Status and Trends Program and accounts for specific management needs for such things as large-lake surveys, walleye population estimates, and a statewide fish pathogen assessment.

Tactic 1: Fully implement the Resource Inventory Plan (RIP), including implementation of species management plans.

What: In 2011, the RIT was formed to develop and refine protocols for status and trends surveys, management evaluations, and discretionary surveys. Over the next five years, the RIT will continue to refine existing programs and concentrate on developing standardized protocols for evaluating walleye, northern pike, muskellunge, and fish pathogens.

Who: **Institute for Fisheries Research;** RIT; Basin Coordinators; university partners.

How: To fully implement the RIP, Management Units must allocate an appropriate amount of effort by survey type in work plans. The RIT will review existing protocols and develop any new standard protocols for assessing walleye, northern pike, and muskellunge populations, including standardized management evaluations for walleye recruitment and stocking contribution. Additionally, full implementation calls for development of goals and protocols for assessing fish pathogens utilizing specimens collected during existing surveys. The various protocols defining the RIP should be incorporated into the Division's Manual of Fisheries Survey Methods on the intranet.

Metric: 1) Appropriate percentage of survey effort by survey type to ensure proper implementation and accountability of RIP; 2) Applicable protocols developed and incorporated into the Manual of Fisheries Survey Methods; 3) status and trends interactive summary spreadsheets completed (every two years); 4) RIP evaluation report completed (every six years per federal requirement); 5) large lake reports completed (annually, when conducted).

Timeline: Initiate 2013, completion 2017, annually thereafter (depending on metric).

Fisheries Division - Tactical Plan

Goal 4 Strategically Focused Assessment and Decision Support Tools

Objective 1: Conduct comprehensive assessments of fish and other aquatic life, habitat and aquatic resource users

Strategy 2: Develop a standardized program to annually assess Great Lakes nearshore and offshore fish communities.

Tactic 1: Identify and catalog existing Great Lakes assessment programs conducted by the Division and other agencies.

What: Create a central inventory of Great Lakes nearshore and offshore assessment programs in which employees participate, collaborate, or use data to manage aquatic resources. A comprehensive understanding of existing long-term monitoring and assessment programs is essential to ensure that they are managed effectively and maintain their utility.

Who: **Research Section;** Great Lakes Research Stations; Database Specialist; partner agencies.

How: Create a central inventory to archive survey type, time period, standard effort, gear, purpose, and other pertinent summary information. Solicit information from employees, members of lake technical committees sponsored by the GLFC, and other agencies. Disseminate completed inventory to employees and incorporate feedback. Regularly (five year interval) update assessment inventory.

Metric: 1) Assessment inventory database completed and distributed; 2) feedback from employees received and incorporated into revised database; 3) plan developed for regular updates to inventory.

Timeline: Initiate 2014, completion 2017, five year intervals thereafter.

Tactic 2: Maintain and develop Great Lakes long-term stock assessment and research vessel programs that support the Division's management plans and decision tools.

What: Evaluate Great Lakes long-term stock assessment data to maximize efficiency and effectiveness. Document case histories of information collected in Great Lakes surveys and how this information has been applied to management. Long-term surveys conducted by the Division's research vessel fleet have been a backbone in the management of Michigan's aquatic resources in the Great Lakes since the mid-20th century.

Who: **Charlevoix Fisheries Research Station;** Great Lakes Research Stations; Basin Coordinators; partner agencies; university partners; PERM.

How: Maintain research vessels to conduct long-term aquatic surveys. Evaluate stock assessment programs, quantitative models, and long-term datasets according to the Federal Aid in Sport Fish Restoration template and with respect to ability of the survey to address management needs. Compare annual stock assessment results with basin-level management plan goals and objectives to evaluate progress. Implement short-term research studies to support stock

Fisheries Division - Tactical Plan

Goal 4 Strategically Focused Assessment and Decision Support Tools

Objective 1: Conduct comprehensive assessments of fish and other aquatic life, habitat and aquatic resource users

assessments. Publish reports and data as scheduled to disseminate assessment results and document survey value.

Metric: 1) All assessment programs, models, and datasets evaluated as scheduled; 2) research studies aimed at improving stock assessment programs implemented; 3) information disseminated to employees, and to MDNR, partner agencies, and the public (including stock assessment reports and harvest quotas, GLFC state of lake reports, statewide databases, and other appropriate outlets).

Timeline: Initiate 2013, completion 2017, annually thereafter.

Tactic 3: Collaborate with other agencies to assess Great Lakes nearshore and offshore fish and communities.

What: Utilize existing agency infrastructure in the Great Lakes to coordinate assessment activities among agencies. To effectively manage the aquatic environment of the Great Lakes, it is essential to have consistent, comprehensive, long-term information that is collected in standardized assessments. Because of the scope of the environment in the Great Lakes, it is essential to collaborate with other agencies to collect this information.

Who: **Charlevoix Fisheries Research Station;** Great Lakes Research Stations; Basin Coordinators; partner agencies; university partners.

How: Employees will participate on interagency committees and work groups to represent the needs of the Division. Employees will collaborate with other agencies on joint surveys, lakewide assessment plans, workshops, and research proposals.

Metric: 1) Membership and participation on lake committees and lake technical committees sponsored by the GLFC, and other appropriate interagency assessment groups; 2) improvement, expansion, or addition of new joint surveys, workshops, or research proposals addressing assessment of the fish community in the Great Lakes; 3) information disseminated to employees, and to MDNR, partner agencies, and public (including stock assessment reports and harvest quotas, GLFC state of lake reports, statewide databases, and other appropriate outlets).

Timeline: Initiate 2013, annually thereafter.

Strategy 3: Develop a strategy to assess habitat in inland and Great Lakes (nearshore and offshore) waters using remote sensing methods where practical.

Tactic 1: Identify existing habitat datasets; inventory aquatic habitat protection and rehabilitation projects; develop a priority decision-support system for habitat projects; determine information gaps.

What: Create a centralized inventory database of existing habitat datasets, projects, and assessment programs. Link and incorporate information from other entities assessing habitat such as other

Fisheries Division - Tactical Plan

Goal 4 Strategically Focused Assessment and Decision Support Tools

Objective 1: Conduct comprehensive assessments of fish and other aquatic life, habitat and aquatic resource users

MDNR divisions, MDEQ, US Environmental Protection Agency, US Forest Service, US Fish and Wildlife Service, Trout Unlimited, and National Fish Habitat Partnerships. Develop a decision support tool using available data systems and information to prioritize aquatic habitat projects for funding.

Who: **HMU**; Management Units; Database Coordinator; Research Section.

How: Establish inland and Great Lakes aquatic habitat coordinators under the direction of HMU to oversee this tactic. Coordinators would develop a centralized, geo-referenced data system with the assistance of the Database Coordinator and Research Section staff to capture the information needed to implement this tactic. Annually conduct an inventory of habitat datasets, projects, and assessment programs with the assistance of Management Unit and Research Section staff. Similarly, coordinators would annually survey other entities to determine current projects, available datasets, and assessment programs in Michigan and add these data to the inventory. Using all available information, a decision-support tool can be developed to assist in prioritizing habitat projects in consultation with Management Unit and Research Section staff.

Metric: Establish aquatic habitat coordinators (existing employees) by early 2014; develop aquatic habitat data system by 2014; annually inventory and update aquatic habitat data system starting in January of each year and complete by April with updated habitat data available by June; develop decision-support tool for prioritizing habitat projects by 2015.

Timeline: Initiate 2014, continue annually.

Tactic 2: Execute inland habitat assessment efforts through the RIP.

What: Continue implementation of the RIP. Ensure that employees collect habitat data as directed in the RIP and its subprograms. Make available the proper habitat assessment protocols for the survey types described in the RIP.

Who: **Institute for Fisheries Research**; RIT; Basin Coordinators; university partners.

How: To fully implement the RIP, Management Units must allocate an appropriate amount of effort by survey type in work plans. Research Section staff and the RIT will maintain a central inventory of all inland habitat data through the Fish Collection System, and work with employees and Geographic Information System (GIS) staff in partner agencies and universities to maintain and develop spatial data layers relevant to inland habitat management. Habitat assessment protocols developed by the Stream Habitat Improvement and Management work group should be incorporated into the Manual of Fisheries Survey Methods on the intranet.

Metric: 1) Appropriate percentage of survey effort to ensure proper implementation and accountability of RIP; 2) number of completed

Fisheries Division - Tactical Plan

Goal 4 Strategically Focused Assessment and Decision Support Tools

Objective 1: Conduct comprehensive assessments of fish and other aquatic life, habitat and aquatic resource users

habitat surveys is in compliance with RIP; 3) all completed habitat surveys entered into Fish Collection System; 4) production of regular updates to Manual of Fisheries Survey Methods; 5) RIP evaluation report completed (every six years per federal requirement).

Timeline: Initiate 2013, completion 2017, annually thereafter.

Tactic 3: Develop a habitat assessment program for the Great Lakes.

What: Develop a comprehensive plan for habitat assessment in Michigan's waters of the Great Lakes. There is no structured program for collecting habitat data from Michigan's waters. Current inventory and assessment activities are piecemeal and are not directly tied to fisheries management objectives.

Who: **Charlevoix Fisheries Research Station;** Great Lakes Research Stations; Basin Coordinators; partner agencies; university partners.

How: Identify ongoing habitat assessment efforts in other States around the Great Lakes. Coordinate with partner agencies and universities to identify habitat assessment needs and existing protocols. Develop employees' knowledge of remote sensing techniques (including hydroacoustics, lidar, and side-scan sonar) and other habitat assessment protocols. Integrate proposed habitat assessments with needs identified in the Division's management plans in coordination with plans of the MDNR and other Great Lakes agencies (e.g., GLFC Joint Strategic Plan, Areas of Concern, Lakewide Management Plans).

Metric: 1) Inventory of ongoing habitat assessment efforts complete; 2) employees trained in habitat assessment techniques and protocols; 3) production of a Great Lakes habitat assessment plan for Michigan.

Timeline: Initiate 2014, completion 2017, ongoing thereafter.

Strategy 4: Develop and implement surveys to track the public's opinions, attitudes, and participation related to angling and aquatic resources.

Tactic 1: Fully maintain and refine the SASP on Great Lakes, inland lakes, and rivers.

What: Evaluate and implement appropriate changes to the SASP to ensure adequate ongoing creel survey coverage on Michigan's waters of the Great Lakes, inland lakes, and rivers. The SASP is a long-term monitoring program, which has surveyed anglers about their catch, harvest, effort, preferences, behaviors, and demography for the Great Lakes (Huron, Michigan, Erie, and Superior) and for inland lakes and rivers statewide. Due to recent budget constraints, the program has had to scale back creel coverage statewide.

Who: **SASP;** Basin Coordinators; Management Unit Technician Supervisors; other employees as needed.

Fisheries Division - Tactical Plan

Goal 4 Strategically Focused Assessment and Decision Support Tools

Objective 1: Conduct comprehensive assessments of fish and other aquatic life, habitat and aquatic resource users

How: Determine and allocate appropriate tiers of SASP coverage for different budget levels. Perform SASP surveys. Analyze data, generate estimates, report results. Continue to refine methodology as new technologies and needs arise.

Metric: Measure SASP relevancy and success using the number of internal and external data requests and studies tied to SASP and the amount of one-on-one public interactions performed by creel clerks. Review SASP program for efficiency every five years.

Timeline: Initiate 2014, completion 2015.

Tactic 2: Develop a survey program to collect feedback on aquatic resources and angling issues.

What: Develop a long-term, standardized, and comprehensive survey program to collect public feedback on aquatic resources, angler behavior, demography, attitudes, preferences and opinions. Nearly 30 years have passed since systematic statewide surveys of Michigan's recreational anglers have occurred, with only occasional surveys conducted to support individual projects or to react to management issues. This approach has left the Division with uncoordinated and non-standardized public feedback collection efforts for various projects over time. Beginning in 2008, the Division has supported the monthly, MSU-led statewide recreational angler survey. Employees have increasingly utilized angler data from this ongoing survey.

Who: SASP; Research Section; PERM; Management Units; Social Scientist.

How: Develop and implement a focused and responsive, cost-effective, long-term survey strategy for the Division. Surveys should quantify relative demand, resource use, services, benefits, and economic impacts of aquatic resource management decisions and activities. Analyze data, report results, prepare peer-reviewed publications, and regularly present public input to managers. Collaborate with Outreach and Marketing Unit staff to improve communication strategies and to better engage resource users.

Metric: 1) Hire a social scientist; 2) survey strategy developed and implemented; 3) regular increase in the utilization of survey information to support management decisions and to communicate with policy makers, stakeholders, and the general public; 4) increased success in recruiting and retaining anglers; 5) improved public opinion of the Division's efforts as measured through regular surveys.

Timeline: Initiate 2014, completion 2017, annually thereafter.

Fisheries Division - Tactical Plan

Goal 4 Strategically Focused Assessment and Decision Support Tools

Objective 1: Conduct comprehensive assessments of fish and other aquatic life, habitat and aquatic resource users

Tactic 3: Continue to solicit and collect various forms of public feedback and ensure feedback is communicated to appropriate staff in the Division.

What: The Division already collects public feedback from many existing channels such as social media (Facebook, Twitter, You Tube), the MDNR website, public meetings, and during the course of a normal work day (interactions on the phone, in the office, in the field, at sports shows, etc.). The Division needs to continue to solicit and collect various forms of public feedback to be communicated to appropriate staff in the Division.

Who: **Outreach and Education Unit;** Employees.

How: Continue to maintain social media accounts, website, hold public meetings and attend sport shows. Continue to monitor public responses through these channels. Communicate public responses to the appropriate personnel. Document and summarize, where possible, important or notable public feedback or feedback used to manage aquatic resources.

Metric: Communicate a report annually that identifies major areas of public feedback and the Division's response.

Timeline: Initiate 2013, completion 2014, annually thereafter.

Objective 2: Develop new and improve existing decision-support tools to optimize Michigan's fisheries and aquatic resources.

Strategy 1: Develop GIS-based tools to enhance landscape and waterscape-level management decisions with regard to such things as habitat protection and rehabilitation, river assessments, fish passage barriers, and climate change.

Tactic 1: Continue development of spatial databases and web-based tools to support fisheries management.

What: Continue development of spatial databases for fisheries management using GIS technology, and create web-based tools (utilizing expanded spatial databases) to better support fisheries management. The Division uses several GIS-based tools to input, store, retrieve, display, and analyze data. Continued development of GIS-based tools will be important to fulfill the mission and goals of the Division.

Who: **Institute for Fisheries Research;** Database Coordinator; Research Section; Basin Coordinators.

How: Maintain and expand GIS data set on the Division's intranet. Maintain and expand the recently developed Aquatic Habitat Viewer. Work with employees to create new spatial data layers and other GIS tools in support of fisheries management initiatives identified by Basin Teams and interagency management groups.

Fisheries Division - Tactical Plan

Goal 4 **Strategically Focused Assessment and Decision Support Tools**
Objective 2: **Develop new and improve existing decision-support tools to optimize Michigan's fisheries and aquatic resources**

Metric: 1) Inventory of existing spatial databases and GIS tools complete and up-to-date; 2) regular increase in availability of new databases and tools for management implementation; 3) employees are aware of and well-trained in the use of spatial databases and GIS tools.

Timeline: Initiate 2014, annually thereafter.

Strategy 2: Develop, refine, and implement stock assessment models and tools for intensively-managed species.

Tactic 1: Maintain and update existing stock assessment and decision-support tools for intensively managed species.

What: Maintain and update existing stock assessment and decision-support tools for intensively managed species, and develop new models and tools where needed. Effective management of fishery resources in the Great Lakes and some inland populations of fish require the use of stock assessment models and decision-support tools, including structured decision making, decision analysis, management strategy evaluations, and adaptive management procedures. State-of-the-art quantitative methods are necessary to facilitate management decision making and ensure sustainability of the State's aquatic resources.

Who: **Marquette Fisheries Research Station;** Research Section; Tribal Coordination Unit; Basin Coordinators; partner agencies; university partners.

How: Create an inventory of existing stock assessment and decision-support tools. Update existing models and create new decision-support tools where needed. Create an inventory of data sources and data needs to ensure that models remain updated and intact.

Metric: 1) Inventory of existing models and tools complete; 2) data inventory complete; 3) regular updates and new model development completed.

Timeline: Initiate 2014, completion 2016, annually thereafter.

Strategy 3: Assist other state and federal agencies to refine water withdrawal assessment and tools.

Tactic 1: Provide support for the Water Withdrawal Tool and the Water Withdrawal Implementation Team.

What: Provide data and analytical support to MDEQ and other agencies to address needed improvements to the Water Withdrawal Tool. Participate in related meetings (such as the multi-agency Water Withdrawal Implementation Team) to ensure the Division's perspective on water withdrawal issues is considered. MDEQ currently maintains the Water Withdrawal Tool. The Division maintains the spatial data layers and models that support this tool.

Fisheries Division - Tactical Plan

Goal 4 **Strategically Focused Assessment and Decision Support Tools**
Objective 2: **Develop new and improve existing decision-support tools to optimize Michigan's fisheries and aquatic resources**

Who: **Marquette Fisheries Research Station and Institute for Fisheries Research;** Research Section; HMU; Basin Coordinators.
How: Maintain and update spatial data layers. Share stream fish community data collected through the RIP. Update models linking water withdrawal to stream flow and fish communities.
Metric: 1) Spatial data layers updated and distributed; 2) stream fish community data collected and distributed; 3) models updated (as needed).
Timeline: Initiate 2013, annually thereafter.

Objective 3: Evaluate fisheries management actions.

Strategy 1: Annually conduct evaluations of key actions taken by the Division.

Tactic 1: Apply adaptive management to major decision-making processes.

What: Evaluate the process used to make key decisions and direct actions, the success and impacts of those decisions and actions, and the time commitment dedicated to those decisions and actions.

Who: **Management Team;** Division committees.

How: The Management Team should determine which decisions or actions from the previous year were regarded as most important and rank them for evaluation. The Management Team should then create a team to evaluate the decision-making processes, record what worked and what did not, and identify the success and effects of those key decisions or actions.

Metric: Conduct a strategic evaluation of at least one initiative per year.

Timeline: Initial 2015, completion 2016, annually thereafter.

Strategy 2: Determine levels of natural reproduction by salmonids in the Great Lakes.

Tactic 1: Determine levels of natural reproduction of salmonids in the Great Lakes.

What: Stocked fish will be marked so that wild fish can be identified. Estimates of natural reproduction for each stocked species will be produced annually. Increasing natural reproduction, if undetected, could lead to overstocking. Excessive stocking of fish is a costly misuse of fish production resources and can overtax supplies of prey fish. Managers must have estimates of levels of natural reproduction to establish realistic and sustainable stocking rates.

Who: **Charlevoix Fisheries Research Station;** Research Section; Fish Production Section Biologists; partner agencies.

How: Organize work in manageable annual increments, focusing on species-specific evaluations in turn. Phase I includes marking and assessment of the incidence of hatchery-reared Chinook salmon and

lake trout stocked by all jurisdictions. Phase II would involve evaluation of coho salmon, brown trout, steelhead, and other salmonids. Review and analysis of data, presentation of reports, and development of management recommendations would occur during Phase III. Coordinate this initiative with other jurisdictions through the lake and technical committees sponsored by the GLFC. Reproduction will be measured as the percent of wild fish in assessment catches and in the harvest by anglers utilizing data from the SASP. Where stock assessment models exist, reproduction may be estimated at the population level. The ability to distinguish hatchery from wild fish is essential to implement this tactic. Use the existing mass marking plan, in collaboration with the US Fish and Wildlife Service, other states, and Ontario, to mark Chinook salmon and lake trout. Expand this program to include other species in future years. Use oxytetracycline or fin clips if the coded-wire tagging program proves cost prohibitive.

Metric: 1) Lake trout and Chinook salmon will be marked and assessed by 2013; 2) steelhead and other species will be marked by 2015; 3) review and analysis of data, presentation of reports, and development of management recommendations is occurring as scheduled.

Timeline: Initiate 2013, annually thereafter.

Tactic 2: Determine the success of stocking salmonids in the Great Lakes.

What: Estimate post-stocking survival for Great Lakes stocking, beginning with the largest and most costly programs and those for which data are already available. Food web changes, rising avian and piscine predation, and declining supplies of prey fish have raised concern that the success of stocking salmonids is declining. Low survival rates represent a costly use of fish production resources. Managers must have estimates of survival rates to establish sustainable, economically-sound stocking plans.

Who: **Alpena Fisheries Research Station;** Research Section; Fish Production Section Biologists; partner agencies; university partners.

How: Organize work in manageable annual increments. Phase I tasks include organizing a study team, coordinating with other jurisdictions, ranking sites and stocking programs, and identifying data gaps. During Phase II, the proportion of harvest by anglers that is composed of stocked fish by location and program will be estimated. Chinook salmon are currently marked and, therefore, would be first priority. Survival will be indexed as “return to creel”, commercial harvest, or survival to assessment gear relative to benchmarks. Where models exist, survival may be estimated at the population level. University partners would be consulted for statistical assistance and economic valuation of stocking. Phase III would involve work on filling data gaps, reviewing results to date, and

Fisheries Division - Tactical Plan

Goal 4 Strategically Focused Assessment and Decision Support Tools

Objective 3: Evaluate fisheries management actions

preparing reports and recommendations for the next five year segment.

Metric: 1) Stocked fish are being marked and data gaps addressed; 2) measures of return of stocked fish to creel and assessment gear are being collected; 3) timely summaries of stocking success are completed for high-cost programs.

Timeline: Initiate 2014, annually thereafter.

Strategy 3: Conduct peer reviews of the fish stocking program to evaluate cost effectiveness of each stocking location and species and to determine associated effects on local and state economies.

Tactic 1: A valuation of stocking costs and benefits.

What: Evaluate stocking costs and identify value of benefits in terms of economic activity by category (e.g., stocking sites, species). The cost of rearing fish has been rising, and survival of stocked fish at some sites on the Great Lakes has been declining as natural reproduction rises and prey fish decline. Therefore, the need is great to evaluate the costs and benefits of stocking for the purpose of directing stocking to the most cost-effective locations and species.

Who: **Alpena Fisheries Research Station;** Research Section; Fish Production Section Biologists; partner agencies; university partners.

How: During Phase I, Fish Production Section staff will summarize costs of stocking by species and expense category (e.g., utility costs, personnel, transport, feed). Priorities for analysis will be established by site and species; develop cost and benefit metrics, identify data gaps, and schedule analyses based on the most urgent management needs. During Phase II, Phase I evaluations will continue as needed. Concurrently, work with resource economic specialists will occur to define and develop reports on site- and program-specific costs and benefits of stocking.

Metric: 1) Fish production costs and stocking benefit data have been estimated; 2) number of evaluations initiated; 3) number of evaluations completed.

Timeline: Initiate 2014, completion 2017, annually thereafter.

Strategy 4: Conduct peer reviews of habitat improvement projects to evaluate cost effectiveness of each program component.

Tactic 1: Develop and implement a continuous review and evaluation strategy for aquatic habitat protection and rehabilitation projects.

What: Develop and implement a continuous review and evaluation strategy for all types of aquatic habitat projects that incorporates appropriate levels of peer review and evaluation. Provide periodic summary reviews of each type and class of aquatic habitat project conducted that includes a summary of assessment and evaluation information,

Fisheries Division - Tactical Plan

Goal 4 Strategically Focused Assessment and Decision Support Tools

Objective 3: Evaluate fisheries management actions

changes in habitat and aquatic communities, data gaps, and recommendations for improvements.

Who: **HMU;** RIT; Research Section.

How: A continuous review and evaluation strategy for all types of aquatic habitat projects will be developed by the HMU in partnership with others by 2016. The strategy will use relevant information from the Fisheries Prescription Program, Habitat Project Inventory Database, the Division's policy statements, scientific literature, and the Management Team's priorities to determine the levels of and methods for peer review and evaluation needed for each class of aquatic habitat project. The strategy will be implemented starting in 2017 with assignments based on the Management Team's annual priorities. Evaluation reports will be developed annually that include prioritized habitat projects and a summary of one class of aquatic habitat project. Habitat project evaluation protocols will be integrated into the RIP by 2017.

Metric: Evaluation rate > 75%, where Evaluation rate = (Number of habitat projects evaluated)/(Number of habitat projects prioritized for evaluation); improvements identified by the reviews that increase effectiveness and the cost/ benefit ratio; annual increase of 10% in the cost/benefit analysis as a result of review recommendations.

Timeline: Initiate 2016, continue annually.

Goal 5:
Efficient Division Operations

Objective 1: Encourage professional development for all employees.

Strategy 1: Provide training opportunities that are reflected in performance evaluations.

Tactic 1: Incorporate professional development training into performance plans for employees.

What: At least one training opportunity will be included as an objective each year in annual performance plans for every employee. Where possible, priority should be given to completing training that is identified as part of the core training requirements for specific job classifications. In order to have productive and valuable employees, it is imperative that employees are well trained. Areas of training can vary from very specific and technical (e.g., electrofishing training, fish health training, welding, etc.) to more general (e.g., Career Track or Skill Path training on organizing your work area).

Who: **Personnel Support Unit;** Managers; Supervisors.

How: All Managers and Supervisors will add an objective for training in their direct reports' performance plans each year. Individual training opportunities will be suggested as deemed appropriate for each specific person and position, and Managers and Supervisors will encourage employees to identify training that they want to participate in. Employees will self-report their training online.

Metric: Number of individual training opportunities that employees participate in.

Timeline: Initiate 2014, completion 2015, annually thereafter.

Tactic 2: Intra-divisional training program.

What: Pursue intra-divisional training opportunities for employees where personnel are knowledgeable or have had previous training that can be shared with additional employees.

Who: **Personnel Support Unit;** Employees.

How: Compile listing of internal training opportunities, including meetings, available for employees to participate in. Post this list on the intranet. Encourage all employees to take advantage of these opportunities as their work load allows.

Metric: Increase number of employees participating in internal meetings and trainings by 5%.

Timeline: Initiate 2013, completion 2014, annually thereafter.

Fisheries Division - Tactical Plan

Goal 5 Efficient Division Operations

Objective 1: Encourage professional development for all employees

Tactic 3: Extra-divisional training program.

- What:** Pursue training from staff outside the Division (e.g., PERM staff, other university staff, and staff in other agencies) that can provide additional expertise within their discipline. People outside the Division can share training, knowledge, skills, and expertise in various areas, thereby multiplying the benefits.
- Who:** **Research Section;** Basin Coordinators; university partners; other MDNR staff; partner agencies.
- How:** Provide funding to MDNR partners that provide training opportunities for the Division's employees, thus ensuring that the training will occur within the State and limiting travel costs and restrictions.
- Metric:** 1) At least one training opportunity offered within each Section (Fish Production, Field Operations, Program Support, and Research) annually; 2) increasing participation by employees in training opportunities over time; 3) positive evaluation of training opportunities based on surveys of employees.
- Timeline:** Initiate 2013, annually thereafter.

Strategy 2: Encourage involvement in professional organizations that are reflected in performance evaluations.

Tactic 1: Promote membership in professional organizations.

- What:** Encourage employees to join or attend a meeting of a professional organization. Being involved in professional organizations increases knowledge, training opportunities, and keeps one up-to-date on cutting edge ideas and techniques as well as creating networking opportunities. Participation by employees in professional organizations also increases the Division's influence in the scientific community.
- Who:** **Personnel Support Unit.**
- How:** Identify what professional organizations are pertinent and suitable for participation by employees. Identify meeting schedules for opportunities to attend. Post this information on the intranet for easy access by employees. Encourage employees to attend a meeting or training with a particular organization each year.
- Metric:** Increase number of employees attending professional organizational meetings and trainings by 5%.
- Timeline:** Initiate 2014, completion 2014, annually thereafter.

Strategy 3: Facilitate access to relevant information via trade and professional publications, technical assistance documents, and other outlets.

Tactic 1: Track the Division's journal and publication subscriptions.

- What:** Establish and maintain a list of current subscriptions received at the Division's offices. The Division historically purchased subscriptions to professional publications to ensure that employees were up-to-

Fisheries Division - Tactical Plan

Goal 5 Efficient Division Operations

Objective 1: Encourage professional development for all employees

date with current science. In 2007, a directive was issued by the MDNR that prohibited the purchase of professional publications. This directive has since been rescinded, but it is still appropriate to track subscriptions within the Division to ensure the greatest access for the Division's employees and most efficient use of the Division's funds.

- Who:** **Research Section;** Basin Coordinators; Managers; Supervisors; Website Coordinator.
- How:** Section Managers and Basin Coordinators will annually poll Unit Managers for a list of subscriptions and provide the list to the Website Coordinator for Intranet posting. The list should include both hard copy subscriptions and digital subscriptions and newsletters. Research Section and the Website Coordinator will collaborate to document that information needs of employees are being met.
- Metric:** 1) Publication list is accessible and updated regularly; 2) employees have timely access to scientific information.
- Timeline:** Initiate 2013, annually thereafter.
-

Objective 2: Align employees with resources to meet the goals of the Division.

Strategy 1: Develop a new three- to five-year staffing plan for the Division.

Tactic 1: Update the 2002 staffing plan.

- What:** Update the 2002 Staffing Plan.
- Who:** **Management Team;** 14 level Managers; employees.
- How:** Develop an updated staffing plan for the Division based on the framework created for the 2012 interim staffing plan; align and coordinate employees with resources to maximize effectiveness across Basin, Unit, and Section lines with direct links to staffing needed to accomplish the Division's strategic plan.
- Metric:** Completion of a staffing plan document and updated vacancy priorities that are adaptable to changes based on evolving needs and circumstances.
- Timeline:** Initiation 2013, completion 2014, monthly thereafter.

Strategy 2: Align and coordinate employees with resources to maximize effectiveness across Basin, Unit, and Section lines.

Tactic 1: Division-level and regional work plan coordination.

- What:** Institute a regional work plan review at each Basin Team meeting and institute a work plan meeting at the Division level that includes one representative from each Basin. The goal of these reviews is to discuss, prioritize, and coordinate work plan needs; eliminate duplication; distribute workloads across units if possible; identify

Fisheries Division - Tactical Plan

Goal 5 Efficient Division Operations

Objective 2: Align employees with resources to meet the goals of the Division

appropriate employees for tasks; and consider the location of employees and equipment to reduce travel.

Who: **Financial/Data Support Unit.**

How: Program Support Section will update the work plan instructions to include the required Basin Team meeting review and coordinate an annual meeting.

Metric: Regional work plan review is completed at each Basin Team meeting and the Division-level meeting is held.

Timeline: Initiate 2014, completion 2015, annually thereafter.

Strategy 3: Seek and incorporate new and emerging technologies and techniques.

Tactic 1: Increase efficiency of data management within the Division.

What: Assess key programmatic issues related to the management, storage, and retrieval of the Divisions' data resources and recommend potential solutions to meet the needs while considering the cost and benefit of each.

Who: **Financial/Data Support Unit;** Database Committee.

How: The Database Committee will provide a report to the Management Team by summer of 2015 to address issues identified. The report should include recommended future actions and timelines.

Metric: Report is provided to the Management Team.

Timeline: Initiate 2014, completion 2015.

Tactic 2: Maximize efficiency of employees through technology.

What: Assess inefficiencies in data collection and entry methodologies and recommend potential solutions to improve employees' productivity across the Division.

Who: **Financial/Data Support Unit;** Division Database Committee.

How: The Database Committee will provide a report to the Management Team by summer of 2017 to address inefficiencies. The report should include recommended future actions and timelines.

Metric: Report is provided to the Management Team.

Timeline: Initiate 2015, completion 2017.

Tactic 3: Improve information transfer and communications for employees through technology.

What: Continue to support and utilize software tools such as Go-To-Meeting and video conferencing to maximize meeting efficiencies, and identify newer generation products to improve communication while reducing travel.

Who: **Outreach and Education Unit;** Employees.

How: Continue the use of Go-To-Meeting software and video conferencing. Ensure that current licensing and infrastructure is meeting the needs of the Division. Survey staff for needs assessment.

Fisheries Division - Tactical Plan

Goal 5 Efficient Division Operations

Objective 2: Align employees with resources to meet the goals of the Division

Metric: Complete survey of employees and develop a report identifying future needs and satisfaction with existing tools.

Timeline: Initiate 2014, completion 2014, annually thereafter.

Strategy 4: Enhance and maintain equipment and facility plans.

Tactic 1: Facility, vessel, and major equipment maintenance plan.

What: Develop a standardized maintenance plan for the Division that includes a template and guidelines for managing maintenance of all the Division's facilities, vessels and major equipment. A maintenance plan already exists for research vessels and hatcheries, and it would be beneficial to have all of the Division's offices using similar maintenance plan.

Who: **Financial/Data Support Unit.**

How: Establish a Maintenance Committee to develop a standardized maintenance plan for monitoring the Division's facilities, vessels, and major equipment. This plan will address condition, life expectancy, and maintenance schedules for the Division's assets.

Metric: Standardized maintenance plan is approved by the Management Team.

Timeline: Initiate 2015, completion 2016.

Tactic 2: Major maintenance and equipment funding allocation.

What: The Management team will use major maintenance and equipment needs when determining the annual major maintenance and equipment funds allocation, and will require a maintenance plan for facilities, vessels, and major equipment be in place to receive a portion of those funds.

Who: **Financial/Data Support Unit.**

How: Once the standardized maintenance plan is approved by the Management Team, the Division's major maintenance and equipment lists will include a field that identifies if a plan is required and whether it has been completed. If a plan is required but not completed, then the item will not be approved for funding.

Metric: The Division's major maintenance and equipment lists contain a field that identifies if a plan is needed and whether the plan has been completed.

Timeline: Initiate 2016, completion 2017, annually thereafter.

Strategy 5: Review work plan activities on an annual basis to document accomplishments and identify areas in need of improvement.

Tactic 1: Enhance the Division's work plan process.

What: Integrate goals and objectives from the Division's strategic plan into the work planning process. During the work planning process, it is necessary to be cognizant of activities and how they relate to the Division's strategic plan to ensure that units are working towards

Fisheries Division - Tactical Plan

Goal 5 Efficient Division Operations

Objective 2: Align employees with resources to meet the goals of the Division

meeting the goals and objectives. Tactics addressed in this Tactical Plan should be specifically added to the work planning process.

Who: **Financial/Data Support Unit.**

How: Work plan template and instructions should be updated to emphasize the goals and objectives in the Division's strategic plan and to add tactics addressed in this Tactical Plan.

Metric: Work plan template and instructions are updated.

Timeline: Initiate 2014, completion 2015, annually thereafter.

Tactic 2: Enhance the Division's accomplishment report.

What: Enhance the annual accomplishment report of the Division to clearly identify to the public the accomplishments and outcomes completed that relate to the goals and objectives in the Division's strategic plan.

Who: **Financial/Data Support Unit;** Management Team.

How: The format of the annual accomplishment report of the Division is being updated by a subcommittee of the Management Team.

Metric: Updated format for the annual accomplishment report for the Division is approved by the Management Team.

Timeline: Initiate 2013, completion 2013.

Objective 3: Streamline the Division's programs and decision-making process.

Strategy 1: Conduct periodic reviews of all the Division's programs.

Tactic 1: Develop program cost/benefit analysis to examine fiscal effectiveness of the Division's programs.

What: Develop a standardized approach to assess the benefits and costs of the Division's programs and systematically review each program. Currently, the Division does not have a standardized approach for a systematic review of the fiscal effectiveness of its programs. Such an approach must fully account for all costs, both to the Division and the public trust resource, of each major program, and all benefits of the Division's programs, some of which may not be fully valued economically at this time. This analysis is important to the appropriate prioritization of the Division's actions and to better communicate to the public how those actions meet the Division's public trust responsibilities.

Who: **Management Team;** Management Unit Supervisors; Employees; external individuals.

How: Completion of this tactic will require development of a standardized cost/benefit assessment process, which can then be implemented across all of the Division's programs; development of a schedule for program assessment; constitution of assessment team(s) of both internal and external expertise to appropriately review the fiscal

Fisheries Division - Tactical Plan

Goal 5 Efficient Division Operations

Objective 3: Streamline the Division's programs and decision-making process

effectiveness of each program; and completion of the cost/benefit analysis of each program.

Metric: Complete cost/benefit analysis process and program schedule by 2014; complete first program cost/benefit analysis by 2015 with new programs done annually thereafter; implement recommendations and findings within 1 year of report issuance.

Timeline: Initiate 2014, continue annually.

Strategy 2: Continue to support decision-making authority at the lowest appropriate level.

Tactic 1: Define decision-making lines of authority.

What: Conduct an assessment comparing the Division's current decision-making processes with actual responsibilities as detailed in position descriptions and the Division's policies and procedures. As a result of recent fiscal constraints, reduced staffing, and changes in how the Division conducts its business, such an assessment is needed to ensure efficient operation of the Division. It is believed by the Division's employees that there are work misalignments within the Division that are wasting resources, thus impairing the ability of the Division to meet its public trust responsibilities. Realigning responsibilities with the decision-making process will increase efficiency and increase available resources.

Who: **Employees.**

How: Completion of this tactic will require: 1) a catalog of work tasks and responsibilities of the Division's employees using information from current position descriptions and requirements detailed in the Division's policies and procedures, 2) a catalog of routinely needed decisions, 3) an analysis comparing the two catalogs that identifies current alignments and misalignments, and 4) development of recommendations to correct identified issues.

Metric: Complete analysis of and report on the Division's decision-making process by 2015; implement recommendations and findings from this report by 2017.

Timeline: Initiate 2014, complete by 2017.

Objective 4: Recruit and retain talented employees.

Strategy 1: Boost and monitor employee morale.

Tactic 1: Create the Division's Bureaucracy Busters website.

What: Develop a Division-specific Bureaucracy Busters-like website to capture employee feedback.

Who: **Program Support Section;** MDTMB staff; Internet Liaison.

Fisheries Division - Tactical Plan

Goal 5 Efficient Division Operations

Objective 4: Recruit and retain talented employees

How: Submit a Computer Project Request (under 80 hours) to have MDTMB staff set up a website for the Division that is identical to the MDNR's Bureaucracy Busters website; announce to employees that the site is active; employees submit ideas and vote; the Internet Liaison summarizes website submissions and reports them to the Management Team; the Management Team selects which content to address; any actions taken as a result of the Bureaucracy Busters website will be communicated to employees via email.

Metric: Website success will be based on use of the tool by employees, and the Divisions' response to content that is collected. At least 50% of the issues identified should be addressed through this initiative.

Timeline: Initiate 2014, annually thereafter.

Tactic 2: Assess the morale of employees and their satisfaction with the job.

What: Develop an anonymous, annual, comprehensive survey of employees to determine their level of morale and satisfaction with their job.

Who: **Program Support Section;** PERM.

How: Create a Survey Committee; Committee members meet and develop survey; survey is implemented; Committee members summarize the results and distribute the results to the Management Team; the Management Team decides on survey response actions; the Committee summarizes any follow-up management actions and the report is made available on intranet.

Metric: Survey success will be measured by 1) an increase in survey indices that measure job satisfaction, morale, and retention of employees and 2) using feedback from employees about their satisfaction with the survey.

Timeline: Initiate 2015, annually thereafter.

Tactic 3: Implement effective 360° review process.

What: Develop a standardized and online 360° review process for Supervisors.

Who: **Management Team;** Personnel Support Unit; Social Scientist; Employees.

How: Personnel Support Unit with help from Supervisors develops and implements a survey; individuals review their own results and coordinate with their Supervisors to determine how best to address feedback from their employees.

Metric: Survey success will be measured by satisfaction of employees with their Supervisor through time and by feedback from employees about their satisfaction with the survey instrument.

Timeline: Initiation 2015, completion 2015, annually thereafter.

Strategy 2: Create and maintain desirable work environments.

Tactic 1: Increase awareness of employees regarding benefits provided by the State of Michigan.

What: There are benefits that employees may be eligible for that they may not be aware of. A concerted effort should be made to share this information on a regular basis, including web site links that would provide more detail. Annually send an email to employees identifying these additional benefits. Send announcements when special offers occur or when new items are added.

Who: **Personnel Support Unit;** MDNR-MOD.

How: Annually send an email to employees that identifies the links to available discounts.

Metric: Verify e-mail is sent annually.

Timeline: Initiate 2013, completion 2013, annually thereafter.

Tactic 2: Define characteristics of healthy and positive work environments, and regularly survey employees regarding satisfaction with their work environment.

a) **What:** Research and report on characteristics of healthy and positive work environments in successful organizations. Develop an anonymous, annual, comprehensive survey of employees to determine their level of morale and satisfaction with their work environment. Compare the State of Michigan, MDNR, and the Division with standards and establish recommendations for improvement.

Employee morale and job satisfaction are tied to healthy and positive work environments. The Division has the ability to develop online surveys that can be distributed easily to all employees. There has never been a comprehensive review of the Division's work environments and culture in the context of other agencies within the State of Michigan, other organizations or governments nationally. There is currently no division-wide, standardized effort that solicits feedback from employees on morale and satisfaction with their work environment.

Who: **Research Section;** Management Team, Personnel Support Unit; PERM; Social Scientist; Employees.

How: Review literature related to healthy and positive work environments. Compile State of Michigan indices and policies on healthy and positive work environments, and document how the State is addressing satisfaction of employees with their work place. Develop and regularly implement a survey of employees; analyze results. Rank and report on where MDNR and the Division fall out according to research. Address areas where the Division can improve on creating and maintaining healthy and positive work environments.

Metric: 1) Survey developed and implemented annually or at other regular intervals to be determined by the Survey Committee; 2) actions identified by survey results are implemented to improve the work

Fisheries Division - Tactical Plan

Goal 5 Efficient Division Operations

Objective 4: Recruit and retain talented employees

environment for employees; 3) regular improvement in survey indices that measure job satisfaction, morale, and retention of employees after changes are implemented.

Timeline: Initiate 2014, annually or at regular intervals thereafter.

Strategy 3: Continue with a recognition program for employees.

Tactic 1: Continue with a recognition program for employees.

What: Continue to recognize exceptional employees via the biannual awards ceremony.

Who: **Personnel Support Unit;** Employees.

How: Personnel Support staff will solicit nominations from employees for special recognition awards. Nominations will be submitted to the Management Team for review and final selection. Awards will be presented at the biannual awards ceremony by the Chief and recognized on the intranet site.

Metric: The awards and the ceremony itself will serve as the metric. As a way to continually improve this tactic, a short, post-ceremony survey will be distributed to employees asking for feedback on the ceremony and the selection process.

Timeline: Initiate 2013, biannually thereafter through 2017.

Tactic 2: Institute recognition of employees by Managers.

What: Managers are encouraged to learn strategies for providing regular feedback to employees who perform at a high level, and they should strive to ensure that recognition is provided.

Who: **Personnel Support Unit;** Managers; Supervisors.

How: The Division will provide Managers with training in employee relations and performance recognition. Specific actions will be determined by Managers, but can include: submitting information to the Chief for his monthly memo, a write-up of exceptional employees in newsletters, or recognizing excellence at a Section or Basin Team meeting.

Metric: Feedback from employees using the job satisfaction surveys and via the 360° reviews.

Timeline: Initiate in 2014, ongoing through 2017.

Tactic 3: Promote knowledge of projects and efforts of co-worker.

What: Provide communication of publications produced by, or external awards received by, employees. Efforts of many employees are highlighted by the press, published internally within the Division or externally in scientific journals, and included in newsletters or other more formal media.

Who: **Outreach and Education Unit;** Employees.

How: Develop an intranet page with categories (press articles, internal publications, external publications, external awards, Section and Station newsletters, etc.). Employees will be responsible for

Fisheries Division - Tactical Plan

Goal 5 **Efficient Division Operations**

Objective 4: Recruit and retain talented employees

uploading their information (citation, link to press, award information, newsletter, etc.) to the correct category. A monthly communication will be sent division-wide highlighting these items.

Metric: Monthly communications will be sent to employees.

Timeline: Initiate 2014, completion 2014, annually and monthly thereafter.

Appendix A:
List of Acronyms

Acronym	Description
AIS	Aquatic Invasive Species
ASRA	Aquatic Species and Regulatory Affairs
GIS	Geographic Information System
GLFC	Great Lakes Fishery Commission
HACCP	Hazard Analysis and Critical Control Points
HMU	Habitat Management Unit
MDEQ	Michigan Department of Environmental Quality
MDNR	Michigan Department of Natural Resources
MDTMB	Michigan Department of Technology, Management, and Budget
MOD	MDNR-Marketing and Outreach Division
MSU	Michigan State University
MUCC	Michigan United Conservation Clubs
NREPA	Natural Resources Environmental Protection Act
PERM	Partnership for Ecosystem Research and Management
PRD	MDNR-Parks and Recreation Division
RIP	Resource Inventory Plan
RIT	Resource Inventory Team
SASP	Statewide Angler Survey Program