Drinking Water Revolving Fund Project Plan Preparation Guidance

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DRINKING WATER REVOLVING FUND
PROJECT PLAN PREPARATION GUIDANCE

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INTRODUCTION

The intent of this guidance is to assist water suppliers in fulfilling the project planning requirements of the Drinking Water Revolving Fund (DWRF) program. This guidance is not regulatory. It is intended to more fully explain the requirements included in the following statutes, laws and rules:

- The federal Safe Drinking Water Act (SDWA), Amendments of 1996, 42. United States Code (U.S.C.) §300f *et seq*.

- Part 54, Safe Drinking Water Assistance, of Michigan's Natural Resources and Environmental Protection Act, 1994 PA 451, as amended (NREPA), MCL §§324.5401-324.5418

- The Michigan Safe Drinking Water Act, 1976 PA 399, (Act 399), MCL §§325.1001-325.1023

- The Act 399 Administrative Rules, Michigan Administrative Code R325.10101-R325.12820

The project planning requirements are addressed during the State Environmental Review Process (SERP). The SERP is essential to ensuring that a given project achieves drinking water quality and health protection objectives, is cost effective, and is environmentally sound.

It should be noted that **this guidance addresses a wide variety of potential projects.** Not every issue detailed is relevant to every project. However, when issues are applicable, they must be addressed at a level of detail consistent with their complexity and the scope of the total proposed project. In some instances short responses are appropriate, while more complex issues require more detail.

It is strongly advised that interested water suppliers contact the Revolving Loan and Operation Certification Section early in the planning process. A project manager will then be assigned to assist the supplier in identifying applicable planning issues and to answer questions regarding project plan development. This may save water suppliers both time and money in completing the plan requirements.

Please note that your project plan should examine and prioritize <u>all</u> drinking water needs in the study area for the next 20 years, whether or not funding is being sought for every capital improvement. For needs that will be addressed using DWRF loan assistance, a cost-effectiveness analysis based on a 20-year planning horizon must be performed and each component to be funded must be part of the 20-year facility that will cost-effectively address drinking water problems.

Suppliers are encouraged to submit their draft project plan for review at least 90 days prior to its completion. This period of time will allow staff to identify problems and potential obstacles. The supplier will then have the opportunity to incorporate necessary changes before the required public hearing on the final project plan.

A complete final project plan will be the basis for project prioritization for DWRF loan assistance. Two copies of the final project plan must be submitted to the address on the front cover of this guidance by May 1 of any given year for prioritization on a Project Priority List (PPL) for the following fiscal year (October 1 to September 30). Please note that a completed *DWRF Project Plan Submittal Form* (Attachment A) must accompany the final project plan submittal. A current

reliability study/master plan should also be submitted with the final project plan to justify the specific system needs. Before beginning a project plan, please read the *Applicant Action Related to DWRF Project Planning* (Attachment B) for guidance on which federal and state agencies to contact during the planning process.

I. Project Background

The project plan must discuss the project background in sufficient detail to assess needs and evaluate alternatives.

A. Summary of Project Need

The project plan must describe the existing waterworks problems and needs, including the severity and extent of water supply/public health problems. The description of need should be sufficiently detailed to form the basis for project ranking on the PPL. The ranking criteria are identified in Section 5406 of Part 54, of the NREPA. The summary of need should include the following:

1. Compliance with the drinking water standards defined in the Administrative Rules for Act 399.

    a. Any acute violations of a Maximum Contaminant Level or surface water treatment technique.

    b. Any non-acute violations of a Maximum Contaminant Level or surface water treatment technique.

    c. An evaluation of the existing treatment facility as conducted and/or reviewed by the Michigan Department of Environmental Quality (MDEQ) or other appropriate regulatory agency. The evaluation should compare the existing treatment facility to the requirements of Act 399.

    d. A description of any waterborne disease outbreaks, their magnitude, and their apparent causes.

    e. A reliability study/master plan which substantiates water supply needs and outlines deficiencies that warrant correction.

2. Orders or Enforcement Actions

    Please provide a copy of any court or enforcement order against the water supplier, including written enforcement actions, such as a Notice of Violation, Consent Agreement, or Department Order to correct deficiencies and achieve compliance with Act 399.

3. Drinking Water Quality Problems

    a. Drinking water quality problems being experienced by the water supplier should be identified. The aesthetic quality of the drinking water supply should also be discussed.

b. Where the community is proposing to provide new service to areas currently served by individual wells, the project plan must document the nature, number and location of wells that are malfunctioning based on the MDEQ, and/or local health department records, and/or sanitary surveys. The site characteristics (e.g., groundwater levels, soil permeability, geology) contributing to the problems must be documented. The system failures and limiting site characteristics must be plotted on a map along with existing habitation.

c. Where surface water or groundwater contamination is of concern, point and nonpoint sources of pollution should be examined. For groundwater contamination, aquifer condition and type should be identified. Where surface water contamination is of concern, describe and evaluate the impact of these problems on the quality of drinking water.

B. Study Area Characteristics

1. Delineation of Study Area

A study area should be delineated in a manner that recognizes the drinking water problems in the area that can, reasonably and logically, be addressed by one or more feasible projects. The assessment of problems within the study area may result in prioritizing more than one project from the plan.

The study area should also include potential waterworks systems outside of the service area, including facilities located in neighboring areas. The potential capability of a regional waterworks system to meet existing and future drinking water needs must be examined.

The characteristics and uses of the surface and groundwaters in the study area should also be described. Points should be identified where water is withdrawn for drinking, agricultural, and industrial uses.

To depict the above information, please provide a map of the study area that identifies the following where applicable:

a. Lakes, rivers, ponds, and wetlands.

b. A general layout of the existing waterworks system(s).

c. Wells, intakes, and other water supply sources.

d. Population distribution (homes, businesses, and industries).

e. Other significant natural or man-made features that could affect or be affected by the project.

2. Land Use in Study Area

Describe the existing land uses in the study area, including residential, commercial, industrial, agricultural, and recreational areas. A discussion of the master plan, zoning, and other land use regulations or policies should be included. Predicted land use in the study area over the 20-year planning period should also be described. Development trends should be addressed, emphasizing aspects that would be detrimental to the air and water quality, and would impact agricultural lands and development of sensitive areas.

C. Population Data

Residential population data are critical to assessing need, priority, and sizing of proposed facilities. Data must be provided for both the study area and the service area (defined as the area to be served by the proposed project). Seasonal population (e.g., population attributed to summer or winter resort areas) should be also be identified.

Projections must correlate with those prepared by the state or the appropriate regional planning agency. If you need assistance determining the appropriate regional planning agency for your project, please contact this office.

Please identify the baseline year, complete the population table below, and include it in your project plan submittal.

	Existing Population	+ 5 years	+10 years	+20 years
Study Area				
Service Area Year-round				
Service Area Seasonal				

Source of population projections: _____

In addition to residential population, community water suppliers should identify demand from industrial, commercial, and institutional users, particularly where such users represent a significant portion of the total drinking water needs. Such needs should be supported by documentation, either in terms of letters of intent, or demand estimates, and included with the project plan.

Non-community water suppliers must identify the existing and projected non-transient and/or transient populations to be served by the proposed project. They may prepare a table similar to the one above.

D. Existing Facilities

The project plan must provide an overview of the existing waterworks system including:

1. The condition of source facilities (e.g., wells, intakes, cribs, etc.).

2. The method of water treatment, as well as the location and physical condition of facilities, including years in service of major components.

3. An evaluation of storage tank and pump station capacities, including the adequacy and reliability of pump stations in maintaining system integrity.

4. The condition of service lines.

5. The type of conveyance system and the condition of any existing transmission and distribution mains.

6. The method of residuals handling and disposal, if applicable.

7. The design capacity of the waterworks system and existing uses of available capacity.

8. A discussion of operation and maintenance including any problems, as well as an evaluation of opportunities to maximize operation and maintenance to improve drinking water quality.

II. Analysis of Alternatives

It is essential to conduct a systematic evaluation of alternatives rather than rely on preferences or instincts. The alternatives evaluation process must examine the objectives of the project, including the needs, technical constraints, and applicable drinking water standards, or requirements to be met. The widest variety of potential alternatives for both the entire system and the various functional subsystems must be identified, evaluated and screened. All of the alternatives evaluated must serve the same service area population with demonstrated drinking water needs. The rationale for rejecting any of these alternatives must be provided in the plan. In-depth analyses need only be performed for the principal alternatives. Such analyses must be based on a cost-effectiveness analysis, and on potential environmental impacts, implementability, and technical issues.

A. Identification of Potential Alternatives

The following types of alternatives must be evaluated **in addition to** conventional waterworks technologies or processes.

1. No-Action

This alternative is primarily relevant where waterworks facilities are in compliance and/or where no public waterworks facilities currently exist. A no-action alternative must be considered when the purpose of the project is to enlarge the capacity of facilities for future needs and/or to serve currently unserved areas. In these situations, the environmental benefit of the proposed action may not be clear, and the expense and potential for adverse environmental impacts may far outweigh the potential benefit of a project.

2. Optimum Performance of Existing Facilities

Investigation may reveal that the existing waterworks facilities can function more efficiently with the addition of new equipment, operational changes, or the addition and training of operating personnel. On the other hand, it may establish that the facilities are operating at their optimum efficiency. Whatever the results of the investigation, optimum operation of existing facilities will determine what additions, expansions, or replacements must be made, including improved design and operation of existing individual well systems. The investigation will also determine the extent to which existing waterworks facilities can be used in the new system.

Criteria for this investigation include:

a. The optimum performance level possible with the existing process design.

b. The age and reliability of existing equipment and its remaining useful life.

c. Any additional operating controls and laboratory facilities needed to monitor and improve operations.

d. Possible process modifications.

3. Regional Alternatives

Although a regional alternative can occasionally provide economies of scale, the complete cost of this alternative and its comparability with other alternatives must be evaluated carefully. For instance, a regional alternative may allow for future service to areas with no water supply/storage problems, along with areas that have existing needs, while other alternatives serve only those areas with existing water supply/storage problems (e.g., connection to a regional waterworks system compared to modification and/or expansion of an existing waterworks system in a small town).

For regional alternatives, the capacity and adequacy of any existing regional waterworks facilities must be examined. Where capacity and adequacy are deficient, the costs of upgrade and expansion to supply safe and sufficient quantities of water, including the basis for these costs, must be added to the analysis. These costs are in addition to the watermain/pump station costs.

In analyzing connection to regional waterworks systems, various watermain routings must be evaluated, with consideration given not only to cost, but also to the magnitude of facilitated or induced growth. Also, the socio-economic and environmental impacts of the growth resulting from the alternative routings must be examined **(see Section IV, Environmental Impacts)**.

A critical issue is the basis for population projections in the areas that will be served by regional waterworks systems, particularly where currently undeveloped areas will be traversed by the watermains and transmission lines. Where the construction of a regional watermain will facilitate and accelerate development of a currently less developed area, the impacts of this development must be addressed **(see Section IV, Environmental Impacts).** Also, the population to be ultimately accommodated by the system must be presented in the plan and must correspond to acceptable assumptions and projection methodologies. Water suppliers should note that Part 54, of the NREPA, does not allow the DWRF to fund projects constructed primarily for the anticipation of future growth.

Another consideration in evaluating regional alternatives is the need to negotiate and execute intermunicipal service agreements/contracts between the various participating communities and/or water suppliers.

B. Analysis of Principal Alternatives

The evaluation of principal alternatives must be completed using the criteria described below. It should be noted that the monetary analysis is not necessarily the most important factor in selecting the proposed project. Comparison of potential impacts resulting from each alternative must also be given due consideration.

1. Cost-Effectiveness Analysis

The monetary evaluation must include a present-worth analysis. This analysis does not identify the source of funds, but compares costs uniformly for each alternative over the 20-year planning period. For example, private costs such as tap-in fees, well abandonment, and service line installation costs on private property are to be included in the analysis. However, sunk costs (investments or financial commitments made before or during project planning) are not to be included in the cost-effectiveness analysis since they have already been committed regardless of the alternative selected. Sunk costs typically include the cost of existing facilities and associated land, outstanding bond indebtedness, and the cost of preparing the project plan. The fundamentals of a monetary evaluation are presented in Attachment C.

The following cost factors are associated with the cost-effectiveness analysis:

a. Present Worth

Present worth is the sum which, if invested now at a given interest (discount) rate, would provide exactly the funds required to pay all present and future costs. Total present worth, used to compare alternatives, is the sum of the initial capital cost, plus the present worth of Operation, Maintenance and Replacement (OM&R) costs,

minus the present worth of the salvage value at the end of the 20-year planning period.

b. Discount Rate

The discount rate to be used in computing present worth cost is established by the Environmental Protection Agency (EPA) consistent with Public Law 93-251 and Title 18 of the Code of Federal Regulations (CFR) §704.39, and is published for each fiscal year in the Federal Register. The rate may also be obtained by contacting your MDEQ project manager.

c. Salvage Value

The planning period in a cost-effectiveness analysis is 20 years. At the end of this period, portions of the project's structures or equipment may have a salvage value, which is determined by using straight line depreciation. The present worth of the salvage value is then computed using the discount rate. The useful life reflected in a cost-effective analysis should fall within the following ranges:

- Land: Permanent.
- Water supply conveyance structures (e.g., distribution and transmission mains, intakes and wells): 50 years.
- Other structures (e.g., waterworks buildings, water storage tanks, pump station structures): 30 to 50 years.
- Process equipment (e.g., chemical feed systems, mixers, scrapers): 15 to 20 years.
- Pumps and motors: 15 to 20 years
- Auxiliary equipment (e.g., alternate power supplies): 15 to 20 years.

When the water supplier assigns a useful life of less than the 20-year planning period to any component, the cost-effectiveness analysis must show the present worth of the replacement cost at the end of the useful life, as well as the present worth of the salvage value of the replacement at the end of the 20-year planning period.

d. Escalation

Only energy costs and land value may be escalated in the cost-effectiveness analysis. The costs of labor, equipment, and materials are not escalated, since it is assumed that any increase will apply equally to all alternatives. Different alternatives, on the other hand, may use different fuel supplies, or one alternative may

involve the purchase of land and another may not. Escalation of energy costs is to be based on data periodically published by the EPA, or on historical data for the area, if justified. Land prices should be escalated at a uniform rate of 3 percent per year.

e. Interest during Construction

If interest charged during construction is significant and could influence the comparison of alternatives, it may be included in the cost-effectiveness analysis using one of two methods. If expenditures are uniform and the construction period is less than four years, interest is one half of the product of the construction period (in years), the total capital expenditures (in dollars), and the discount rate. Otherwise, interest should be calculated on a yearly basis.

f. Staging Construction

A 20-year planning period is generally used in the cost-effectiveness analysis. However, in some circumstances the design life may be shorter. If the proposed design life is less than the 20-year planning period, the project must be carefully scrutinized, since the actual design life (assuming that a portion of time elapses between project planning and the initiation of operation) may be considerably shorter. This situation could result in the need for expansion soon after project completion. Nonetheless, staging construction may be cost-effective, or may address financial capability issues.

Other conditions that strongly suggest staging construction include:

- Environmental considerations, particularly where rapid induced growth cannot be accommodated without major adverse socioeconomic or environmental consequences.
- Uncertainties surrounding future population projections and economic conditions.
- Future treatment requirements which are more stringent than current standards.
- Interim use of existing facilities which are later phased out.

As a guideline, the staging period should be based on:

- An approved *Reliability Study*[1] to meet the *Finished Water Supply Requirements*[2].
- An approved engineering study.

OR

- A separate determination made by the MDEQ.

2. Environmental Evaluation

A project plan must include a synopsis of the environmental setting of the project and an analysis of the potential environmental and public health impacts of the various alternatives. Please see Attachment B for further information on federal and state project planning requirements.

Briefly evaluate the following aspects of the environmental setting and **provide a narrative discussion and maps of all applicable items:**

a. Cultural Resources

Historical and archaeological sites known to exist must be listed with documentation provided through the National or State Historical Register, the State Historical Preservation Officer (SHPO), local historical societies, or local and regional planning agencies.

b. The Natural Environment

- Climate, including precipitation, temperature, and any adverse weather conditions that may affect construction of the project (e.g., depth of frost, length of construction season).
- Air quality.
- Wetlands.
- Coastal zones.

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[1] A study conducted by the supplier or its consultant to determine the quantity of water supply needed for the waterworks system. The study shall propose a method of compliance to provide sufficient capacity in the waterworks system to meet the approved *Finished Water Supply Requirements* (defined in footnote 2). The study shall be based on 10-year projections of the following: Present and projected average day demand, maximum day demand, maximum hourly demand, fireflow demand, and peak instantaneous demand for systems using hydropneumatic storage, along with the basis of these demand projections.

[2] The capacity is equal to one or any combination of the following: Rated capacity from an approved surface water supply or complete treatment system; firm capacity from an approved groundwater supply, where the firm capacity equals the flow with the largest producing well out of service; the available capacity obtained under contract and capable of delivery from another public water supply; or finished water storage capacity in excess of the established normal waterworks system requirements.

- Floodplains [Note: Construction in a Department of Housing and Urban Development (HUD) designated flood area requires participation in the HUD Flood Insurance Program.].

- Natural or Wild and Scenic Rivers.

- Major surface waters - the major lakes, rivers and streams in the study area and their designated uses (e.g., warm water fish) must be identified.

- Topography.

- Geology.

- Soils.

- Agricultural resources - identification of prime, unique, and otherwise highly productive farmlands must be included.

- Existing plant/animal communities and environmentally sensitive habitats, particularly those on the threatened or endangered species list, must be identified. Animals of economic or sport value should also be identified.

- Unique features.

The major environmental impacts expected to result from each alternative must be compared in the project plan. Where impacts are similar, the discussion need not be repetitive. Instead, similar impacts must be compared in scope and intensity. Where vastly different types of impacts are expected, the whole range of impacts must be addressed. Any significant environmental benefits precluded by rejection of an alternative must be included.

The comparison of impacts resulting from each alternative should address the relevant environmental, social, or other factors identified in the description of the environmental setting. It may be possible to summarize the comparison of impacts in a matrix or other tabular format. However, the complex and major impacts should be fully described to clarify the differences in scope and intensity of impacts expected to result from the various alternatives.

Anticipated mitigation requirements and costs associated with the alternatives must also be included in the analysis of alternatives **(see Section V. Mitigation)**. The costs of mitigation undertaken by the water supplier or any other party, either on-site or off-site, must be considered in the cost-effectiveness analysis. Depending on the short-term or long-term nature of mitigation, appropriate cost factors should be applied to generate a present worth value. Where impacts or types of mitigation (such as non-structural) are not easily reduced to a monetary basis, they must still be

considered in the alternatives analysis, along with other non-monetary issues such as implementability.

3. Implementability and Public Participation

Throughout the evaluation of alternatives, the public must be provided the opportunity to comment **(see Section VI. Public Participation)**. With public input, it may become apparent that certain alternatives or sites are not acceptable to the public or to neighboring communities that may be affected by the project. These issues must be resolved in the choice of alternatives.

Some other implementability issues to be resolved by the water supplier and described in the plan include the financial burden on the community, the need for intermunicipal agreements or formation of an operating authority, the availability or competing uses of the proposed site, and the ability of the community to meet capacity development requirements.

4. Technical and Other Considerations

a. System Reliability

Principal alternatives evaluated under this section must demonstrate sound engineering principles and comply with the reliability requirements of Act 399. In addition, the basis of design must follow established guidelines identified in the "Recommended Standards for Waterworks" as published by the Great Lakes and Upper Mississippi Board of State Sanitary Engineers. Any deviation from these established guidelines must be acceptable to the Water Bureau of the MDEQ.

System reliability must demonstrate:

- Sufficient pumping capacity to meet design flows for all pumping stations.
- Stand-by power or an acceptable alternative.
- A minimum of two wells for new waterworks systems.
- A minimum of two units for each required treatment process.
- Adequate storage volume.

Each alternative should be evaluated based on its reliability to meet and consistently maintain compliance with applicable water quality standards.

b. Residuals

When waterworks treatment facilities involve generation of residuals, the effect of different alternatives on the quantity and quality of residuals, including any constituents limiting the safety of residuals for disposal must be considered.

Where the quantity and quality of residuals will be affected by various transportation or treatment alternatives, alternative methods of residuals handling and disposal must be evaluated.

c. Industrial/Commercial/Institutional Usage

Identify any significant volume users of water that may affect design flows and pressures of the potential alternatives being evaluated.

d. Growth Capacity

The project plan must consider the capacity provided for growth during the planning period. A balance must be struck between sizing facilities for the entire planning period versus that which will require expansion sooner than the end of the planning period. **(See Section II. B. 1. f. above regarding staging construction.)**

e. Contamination at the Project Site

The cleanup of contamination at a project site must be factored into the assessment of project alternatives, both in the environmental evaluation of the alternatives and, especially, with regard to cost-effectiveness. Typically, four types of contamination may be encountered during project construction: soils contaminated by petroleum or other chemicals; discarded materials such as chemical drums or insulation; groundwater or surface waters contaminated by chemical leachate or runoff; and materials to be removed or disturbed in the existing facility which contain asbestos, lead, mercury, PCBs, or similar contaminants.

In order to complete the environmental evaluation of alternatives, consideration should be given to following actions:

i. An identification of past activities, which might have caused site contamination, such as leaking underground storage, tanks along proposed sewer routings.

ii. A visual survey of projects sites to identify and abandoned containers and their contents.

iii. Soil and groundwater sampling of project sites to evaluate potential contamination problems.

iv. An examination of the state's list of contaminated sites, found at http://www.deq.state.mi.us/part201ss/.

v. Where the proposed project involves the reconstruction or rehabilitation of existing facilities, a record search or visual survey to ascertain the presence of contaminated building materials in the areas of proposed construction.

The activities necessary for construction to proceed in areas of contamination (i.e., the excavation, testing, removal, handling, transportation, and disposal of contaminated materials) must be identified and factored into the environmental evaluation. The costs associated with these activities must be included, as mitigation costs, in the monetary evaluation of alternatives.

III. Selected Alternative

The description of the selected alternative should be detailed, comprehensive, and consistent with information provided during the comparison of principal alternatives. Creative use of charts, overlays, drawings, and other graphics can provide descriptive details and inform citizens who will ultimately benefit from the project.

A. Description

1. Relevant Design Parameters

Summarize the basis of design, including the following:

a. Major process features.

b. Unit processes and sizes as related to service area needs.

c. Schematic flow diagram.

d. Design criteria (e.g., process loading, existing and projected design flows, and other aspects of the preliminary basis of design).

e. Residuals management such as haul routes, times, and frequencies.

f. Wells and intakes.

g. Water distribution system (e.g., pipe lengths and sizes).

h. Pump station types and sizes, including provisions for standby power, telemetry, etc.

i. Storage facilities.

j. Schedule for design and construction.

2. Controlling Factors

Briefly discuss the factors that shape the design. The intent is to emphasize the logical linkages between the selected alternative and the following controlling factors:

a. Service area population, including any special users (e.g., industrial or commercial customers).

b. Characteristics of the water supply, including source and quality.

c. Permit requirements necessary for construction, design, and operation of the selected alternative.

d. Stipulations in court orders or MDEQ findings.

e. Drinking water quality standards.

f. Local health department findings and directives.

g. Mitigation of environmental impacts resulting from project construction and continued long-term operation.

h. Other pertinent factors.

With regard to transmission lines and watermains, briefly discuss the factors that dictate sizing of the pipes, such as minimum state guidelines, service area flows and pressures (existing and proposed), and other determinants.

3. Maps

Provide legible maps with distance scales and other appropriate graphics that are associated with the selected alternative, including:

a. Location of water sources and waterworks treatment systems.

b. Routes, lengths, and sizes of transmission and distribution watermains.

c. Locations and sizes of pump stations.

d. Locations and sizes of water storage tanks.

Precise dimensions and locations may not yet be known, but basic project characteristics should be available.

4. Sensitive Ecosystems

Clearly map any environmentally sensitive areas such as wetlands, streams, prime or unique agricultural lands, archaeological sites, or

threatened or endangered species habitats that are affected by the project or are in the zone of project influence. While this information will be addressed in detail in the environmental impact section, well executed maps will enhance the description of the selected alternative. The goal is to present a comprehensive and unified description that emphasizes how the selected alternative fits into, and is shaped by, features and conditions of the project area.

5. Mitigation of Environmental Impacts

Structural and nonstructural mitigative measures and associated costs are integral features of any construction project **(see Section V. Mitigation)**. This portion of the project plan must contain a brief description of any efforts necessary to mitigate environmental impacts of proposed construction and operation of the waterworks facilities.

6. Schedule for Design and Construction

List and briefly explain major activities and project milestones. A Program Evaluation Review Technique (PERT) chart or other standard project scheduling technique should be used to illustrate the relationships between major elements of the project. Time required for design, financing, bidding, processing of permits, seasonal restrictions on construction, and mitigation of environmental impacts of construction and operation, should be identified to provide a clear understanding of the timing of the project. The schedule should be consistent with annual DWRF funding timelines.

B. Transmission System Documentation

1. Capacity

For watermain replacement or extension projects, the project plan must document that sufficient waterworks system supply and transmission capacity exists, or will exist, as part of the project over the 20-year planning period.

2. Land Development/Land Use

Since specific details of development cannot be predicted accurately, estimate future waterworks service areas necessary to accommodate growth and display this information in map form. The type and magnitude of development must be analyzed to justify new transmission lines to serve partially or sparsely developed areas.

Identify the proposed and potential development with respect to the new transmission system and provide information regarding service area populations and density of development.

C. New Well Construction

1. Preliminary Site Analysis for Test Well Approval

An accurate site plan of the selected well site(s) must be included in the final project plan submitted on May 1. When a water supplier has prior knowledge of the area, suitable well sites may be identified based on the proximity of the site to the water distribution system, the availability/cost of the property, the supplier's desire to provide service in that area, and so on. When a supplier has no prior knowledge of the area, a well drilling contractor may be hired to provide a preliminary evaluation of potential well sites. The driller may collect some soil borings, but drilling for wells of any kind (including small-diameter exploratory) cannot be performed without the approval of the MDEQ Water Bureau district engineer. In addition to the site plan, a description of the well site must also be included in the project plan that identifies the site's natural setting, distance from the water distribution system and surrounding homes, proximity to known contamination sites, estimated land purchase costs, and a discussion of the willingness of the land owner to cooperate. In addition, the impacts associated with new well construction must be identified and analyzed within the project plan. This is the minimum level of information required to be submitted in the final project plan. Ideally, the project plan will also contain documentation of environmental contacts and responses from the U.S. Fish & Wildlife Service, the Michigan Natural Features Inventory, the SHPO, and the MDEQ Land and Water Management Division. Verification must be obtained prior to the drilling of the test wells that the resources regulated by these agencies will not be adversely impacted by the drilling activities.

The next step is for the water supplier to contact the Water Bureau district engineer to schedule an on-site inspection of proposed well sites. This may be done either before or after project plan submittal, but is required prior to test well site approval. The Water Bureau district engineer will do a walk-about review to determine if adequate isolation distances from property lines exist, or if any known, potential or possible sources of contamination could affect the potential suitability of the site. Based upon a satisfactory review of the site data from the on-site inspection and project plan, the Water Bureau district engineer will issue an approval for the drilling of a test well. The test well approval letter can be issued and submitted with the final project plan on May 1, but is not required at this time. There is one important note to make should the landowner not be willing to agree to options or easements for testing. The actual purchase of the well site or site easement cannot occur until after the applicant's resolution to adopt the project plan has been passed; otherwise the land costs will be ineligible for DWRF reimbursement.

2. Costs

A complete listing and analysis of the estimated costs for new well construction must be included in the final project plan at submittal (by May 1). These costs include, but are not limited to, well house structure, drilling of test-production well, aquifer and site studies, appraisal and land purchase costs, associated professional services, laboratory costs, pumps, controls, water main connections, and other appurtenances.

3. Test Wells

Once the water supplier has received the MDEQ approval letter authorizing the well drilling and the environmental clearances have been received, the supplier's well drilling contractor may proceed. It should be noted that for purposes of bidding and contract award, we treat the test well drilling services as we do planning/design services. The test well drilling does not have to be competitively bid; however, if over $50,000, an executed contract will be required.

At this point, there are two alternatives that may be selected for further evaluating a potential well site. If the water supplier is confident about the outcome, it may elect to install a large-diameter test well that will eventually serve as the final production well, as long as the yet-to-be-performed pump test and aquifer analysis demonstrate that this well will produce the quantity and quality of water necessary to satisfy the supplier's needs. This well is still referred to as a test well (or test production well) until the data has been reviewed and approved and a construction permit issued. The driller will also be installing at least two monitoring/observation wells, usually 5-inch in diameter. This approach is used when a supplier is willing to accept a higher degree of risk, while spending less time and money on the exploration and evaluation phase.

The second alternative is to install a small-diameter test well to obtain geological data and water quality at the site to determine if a suitable water bearing formation may be present. The contractor may install such test wells at several sites simultaneously to determine the best available site, or they may do it one site at a time until they find one that is acceptable. Again, this preliminary test well drilling and evaluation step may be accomplished only if the Water Bureau district engineer has conducted the necessary well site inspection(s) and granted approval for test well drilling. Once a suitable site has been identified for a final production well, a larger diameter test well will be installed to be used for the pump test and aquifer analysis. The initial test well that was installed at this site is often used as one of the two required observation wells.

4. Hydrogeological Analysis for Production Well Approval

The hydrogeological analysis is conducted using the large-diameter test well and at least two monitoring/observation wells. This is commonly referred to as a pump test and aquifer analysis. In general, a hydrogeological analysis is performed to properly gauge the aquifer's ability to produce sufficient amounts of clean water. This analysis defines the safe yield of the aquifer; determines the pumping capacity, draw down, and static level of the well; and the quality of pumped water under operating conditions. Chemistry and bacteriological monitoring must also be collected from the test well to document compliance with state drinking water standards. Subsequent to the collection of this quantity/quality data, it is reviewed by the Water Bureau, Groundwater Section. The review of this data typically requires eight weeks.

Exceptions to the Procedures

A large-diameter test well ***may*** not always be required when an existing production well (in the same formation) is nearby. A hydrogeological analysis (pump test and aquifer analysis) ***may*** be conducted by using the existing production well. This is a determination that must be made by the MDEQ Water Bureau, Ground Water Section.

A hydrogeological analysis (pump test and aquifer analysis) ***may*** also be waived by the Groundwater Section staff on a proposed well because of its location in an existing well field. In these situations, the aquifer characteristics were already determined from a previous evaluation of the existing well(s). However, one should not assume that the hydro-geological analysis will always be waived under these circumstances. There may be situations where the information available from the existing well(s) is not adequate to assess the aquifer characteristics and determine the appropriate design (depth, diameter, screen size, spacing) for a proposed well. Therefore, another pump test and aquifer analysis would need to be performed using existing wells or a test well. Again, this is a determination that must be made by the Groundwater Section staff.

In either of these cases, it is important to remember that a water supplier who proceeds directly to installing an initial production well must still obtain all of the necessary environmental clearances referenced under Paragraph C.1 above prior to beginning drilling activities.

5. Finalization of Well Design

The finalization of a well design and issuance of an Act 399 permit is contingent upon a hydrogeological analysis and a final well log. The hydrogeological analysis provides the information used determine safe yield and water quality. The well log provides other vital information such as depth, diameter, grout material, and screen sizing. It is important to remember that a construction permit is typically not issued until after the production well has been installed. The permit, in essence, equips the production well with final pump/motor sizings and allows the well to go into service.

This production well can be the large-diameter test well that was drilled previously for the hydrogeological analysis and that will be converted to a final production well upon issuance of the Act 399 permit. It can also be a new well that has been constructed based on a waiver of the hydrogeological analysis requirement or on a hydrogeological analysis that was done on an existing operational well. The waiver allows the water supplier to go directly to the drilling of an initial production well (i.e., no test well exists to be converted).

In the cases where the hydrogeological analysis requirement has been waived, it is important to keep in mind that while the hydrogeological information is available, a well log is not, since no previously-drilled large-

diameter test well exists. Consequently, sufficient time must be built into the project's milestone schedules to provide for both the drilling of the initial production well and the subsequent issuance of the Act 399 permit. With that said, there may be instances where the MDEQ Water Bureau district engineer is comfortable with issuing a permit before the initial production well is constructed, with the understanding that any significant changes based on the final well log may result in a construction permit modification. However, this is not the standard operating practice and is subject to agreement by the district engineer.

D. Monetary Cost Estimate

A summary of all costs for planning, design, construction, operation and maintenance must be presented for the selected alternative. Because of inherent problems with long-range estimates, include a brief discussion of the confidence level ascribed to the cost estimating methods that were used.

E. User Costs

Total estimated project costs should be translated into an estimated annual user cost over the useful life of the project.

Calculation of the annual user cost for the selected alternative should be based on best available data at the time the project plan is drafted. It is important that this information be consistent with the data presented in the cost-effectiveness analysis. To ensure the water supplier meets the requirements of the law, the project plan must include:

- Estimated capital construction costs.
- Estimated operation and maintenance costs, including replacement of equipment which may be necessary to ensure the waterworks functions properly throughout its useful life.
- Other costs to be incurred by the system users.
- An analysis of the impacts of the annual user costs for water supply on the system users.
- A demonstration of the water supplier's ability to repay the incurred debt, including discussion on how the project costs will be financed.

The law allows maximum flexibility for water suppliers in determining the method of assessing rates. In many instances, water suppliers may choose to assess rates based on delivered billable flow. In the absence of individual meters, residential equivalent units (REUs) may be employed to assess user costs. Hook-up charges, tap-in fees, special assessments, and other non-flow related charges are also used to spread the cost of capital financing through debt retirement.

Staff reviewing the project plan will seek to determine that there are sufficient funds available to operate and maintain the waterworks system, as well as retire system debt. The methodology used in distributing costs to users is the responsibility of the water supplier.

Please note that estimated costs must be generated without factoring in new users projected to appear after project completion, even though such users could serve to lower long-term costs. The goal is to present project cost impacts on the current customers, including a comparison of existing charges to the proposed charges after project completion, so users can view costs from a before and after project perspective. It is suggested that this information be presented in tabular format whenever possible.

F. Disadvantaged Community

Part 54, of the NREPA, provides for several benefits to municipalities who meet the state's criteria for disadvantaged community status. These benefits include additional priority points, extended loan terms, and the possibility of loan forgiveness for qualified planning costs. A Disadvantaged Community Status Determination Worksheet (Attachment A) should be completed and returned with the final project plan submittal.

G. Ability to Implement the Selected Alternative

The legal, financial, and managerial aspects of the applicant's organization need to be briefly discussed in order to document that the applicant has the legal authority, capability, and willingness to plan, finance, build, operate, and maintain the water system. Information must be provided to identify the entity that will own, operate, and finance the facilities to be built as part of the proposed project. Where responsibility for implementation rests with more than one municipality, each entity's jurisdiction and responsibility must be delineated. The institutional arrangements for financing the project, including capital cost contributions from other entities, must be described.

In the case of a project serving more than one municipality, the intermunicipal service agreement will be an indication of the institutional and financial obligations of each participating municipality. The project plan must identify service agreements, either new or modified, that will be needed in order to finance and construct the project. If revisions to existing agreements are needed to implement the project (i.e. reallocating contract capacities), the project plan must also identify the necessary amendments.

Where the applicant's authority to finance and construct the proposed project requires contractual arrangements with other local units of government, resolutions must be obtained from all of the participating entities adopting the project plan and agreeing to implement the selected alternative. These resolutions will suffice as an initial demonstration of project implementation capability. However, executed intermunicipal agreements will ultimately be needed to solidify the arrangement that will finance the project.

Please note that all service agreements and necessary ordinances must be submitted for MDEQ review as part of the Revenue System/Water Use Ordinance submittal during the DWRF loan application process.

IV. Evaluation of Environmental Impacts

The discussion of environmental impacts must provide a comprehensive overview and evaluation of any potential impacts that may result from the selected alternative. To document the impacts of the proposed action, this evaluation should generally be more detailed than the comparison of impacts for the various alternatives.

Some projects may qualify for a **categorical exclusion** from environmental assessments. The MDEQ may issue a categorical exclusion for projects that do not individually, cumulatively over time, or in conjunction with other federal, state, local, or private actions have a significant adverse effect on the quality of the environment or public health.

A supplier whose project qualifies for a categorical exclusion should find that the preparation and submission of substantive environmental documents is not necessary, as the MDEQ will not prepare environmental assessments for these projects. However, the **project plan must contain sufficient environmental information and analysis for the MDEQ to determine whether a categorical exclusion can be issued** for the proposed project. Water suppliers who believe their project may qualify should approach the discussion of environmental impacts and mitigation accordingly. Staff of the MDEQ can assist in determining the appropriate level of detail that should be included in these two sections of the project plan.

A. General

The potential beneficial and detrimental environmental effects of the project should be evaluated in the project plan. The analysis of project impacts should be organized to systematically consider the impacts on the existing environment described earlier in the project plan **(see Section II. B. 2. above)**. A comparison should be made of the situation with and without the proposed project.

The analysis of impacts should be divided into Direct, Indirect, and Cumulative Impacts as defined in Figure 1.

Figure 1. Environmental Impacts

IMPACT	DEFINITION	EXAMPLES
Direct	Impacts directly attributed to the construction and operation of the project	• Destruction of a historical building • Construction through a wetland • Consumption of land and materials • Odors, noise, construction traffic, and haul routes
Indirect	Impacts caused by the project but removed in time and/or distance; often secondary in nature	• Changes in the rate and density of development • Changes in land use • Changes to sensitive ecosystems • Loss of prime farmland to development
Cumulative	Impacts that increase in magnitude over time, or that result from individually minor but collectively significant actions	• Development induced by concurrent construction of a new drinking water system and other infrastructure projects, such as a new highway system • Impacts resulting from the construction of both the drinking water project and a sewer or other public works project

A discussion of the full range of potential impacts - direct, indirect and cumulative - must identify the nature of the impact in terms of the following:

1. Beneficial or Adverse Impacts

   Describe all positive and negative impacts resulting from the proposed project (take special note of cultural or environmentally sensitive resources).

2. Short- and Long-Term Impacts

   This discussion should include an evaluation of any irreversible commitments or use of irretrievable resources, such as the commitment of construction materials, energy, and land to the proposed project. The evaluation should include trade-offs between short-term uses and the maintenance and enhancement of long-term productivity, and vice versa. For example, evaluate the possibility of the proposed action foreclosing future options, particularly future uses of land and water resources.

B. Analyses of Impacts

1. Direct Impacts

Direct impacts are environmental impacts directly attributed to the construction and operation of the project. Although some types of projects may result in minimal impacts, the water supplier must carefully consider impacts resulting from construction in areas that have not been previously disturbed. The effects of the proposed project on each of the following environmental factors and any other resources should be analyzed:

a. Historical, archaeological, geological, cultural, or recreational areas.

b. Existing and future quality of the surface water and groundwater, and the project's contributions to drinking water quality objectives and other water management goals.

c. Natural settings and sensitive ecosystems (e.g., floodplains, wetlands, endangered species, wild and scenic rivers, sensitive coastal zones, and prime and unique agricultural land).

d. Consumption of materials, land, and energy in construction and operation.

e. Human, social, and economic impacts (e.g., dislocation, employment changes, and user charges).

f. Construction and operational impacts.

g. Other impacts.

2. Indirect Impacts

Generally, indirect impacts are those caused by the proposed project but removed in time and/or distance. Indirect impacts are often secondary in nature and are generally caused by residential and/or commercial development made possible by the project.

Growth is induced by a combination of forces related to economics, perceived desirability, and land availability. However, the provision of infrastructure in an area frequently initiates the most growth, particularly where publicly financed infrastructure gives one location a competitive advantage in building costs over other locations in the same market area. Where a watermain or transmission system is expected to traverse undeveloped areas, the potential for induced development in these areas must be considered. The provision of drinking water facilities is likely to induce development, particularly where lack of adequate facilities currently prevents development (i.e., is the "limiting factor"). For this reason, the extension of transmission mains to undeveloped areas is not eligible for DWRF assistance.

The impacts of undirected growth include additional traffic, overcrowded schools, overextended police, and fire protection. This contributes to a heavy financial burden on existing and future residents, not only for the cost of new waterworks facilities, but for the costs of other capital improvements as well.

Undirected growth not only affects local residents and their quality of life, but can also have serious adverse impacts on natural environments, historical resources, and sensitive habitats. It is more effective to address such threats through comprehensive planning than to attempt to address adverse impacts afterwards.

Examples of indirect impacts which should be evaluated include:

a. Changes in the rate, density, or type of development, including residential, commercial, industrial, and the associated transportation changes.

b. Changes in land use (e.g., open space, floodplains, prime agricultural land, and coastal zones).

c. Changes in air or water quality stemming from primary and secondary development.

d. Changes to the natural setting or sensitive ecosystems, or jeopardy to endangered species resulting from secondary growth.

e. Impacts on cultural, human, social, and economic resources.

f. Resource consumption over the useful life of the facility and the generation of wastes.

g. Aesthetic and other impacts.

3. Cumulative Impacts

Cumulative impacts are those impacts that increase in magnitude over time, or that results from individually minor but collectively significant actions taking place over time. Cumulative impacts may also take the form of multiple impacts affecting one particular element of the environment. Rather than an analysis of each impact separately, a comprehensive overview of these impacts should be presented. The overview should blend together impacts from actions directly related to the project and/or impacts resulting from actions attributable to other agencies or persons. See Figure 1 for some examples of cumulative impacts.

V. Mitigation

The project plan must identify structural and nonstructural measures that avoid, eliminate, or mitigate adverse impacts on the environment. The costs of mitigation must be considered in the cost-effectiveness analysis, if applicable **(see Section II. Analysis of Alternatives)**.

Structural:	Measures involving the specific design and construction of the facility
Non-structural:	Measures involving regulatory, institutional, governmental or private plans, policies or regulations

The mitigation of short-term, long-term, and indirect impacts must be discussed (see Figure 2).

Where impacts cannot be avoided, mitigation of adverse impacts must be considered and described in the project plan, whether or not required by a particular permit or agency clearance. The magnitude and potential for environmental impacts, and any "extraordinary measures" necessary to mitigate them, form the basis for determining if an Environmental Impact Statement (EIS) will be required.

Figure 2. Mitigation of Environmental Impacts

IMPACT	EXAMPLE	MITIGATION TECHNIQUES
Short-term	General construction-related impacts	• Traffic and safety hazard control • Dust control • Noise control • Soil and sedimentation control • Restoration of roads and vegetation
Long-term	Construction in sensitive environments; operational impacts resulting from the project	• Prohibiting spoils disposal in wetlands and floodplains • Properly disposing of excavated, contaminated soil • Specifying use of construction mats or wide track vehicles in wetlands, or limiting construction to dry seasons • Specifying certain backfill in stream crossings • Alternative routing or siting of the facilities • Buffer zones
Indirect	Secondary development	• Planning and zoning to recognize and protect cultural and natural features • Formulating and enforcing plans and ordinances for control of nonpoint source pollution created by growth • Staging facilities to direct development in accordance with master plan

A. Mitigation of Short-Term Impacts

Many mitigation techniques used to minimize construction impacts are standard procedures and are expected to be included in construction contracts. See the examples in Figure 2.

B. Mitigation of Long-Term Impacts

Every effort must be made to avoid potential long-term or irreversible adverse impacts. Where it is demonstrated that there are no feasible and prudent alternatives that totally avoid impacts, mitigation must be considered to ensure that sensitive environments do not suffer permanent damage.

1. General Construction

If construction will occur in or near sensitive environments, mitigation measures are usually specified in permits issued under the various acts that protect sensitive environments. See Figure 2 for examples of typical mitigation measures.

Early contact should be made with permitting authorities to determine the existence, extent, and value of the various sensitive features, and this information should be incorporated into the project plan. However, these agencies cannot, in most cases, provide any clearance on the proposed action without detailed plans or drawings for evaluation. Because the supplier is responsible for adherence to the various environmental laws and regulations, it must be cooperative and timely in providing sufficient information for evaluation.

2. Siting and Routing Decisions

The project plan **must** evaluate and document alternate routings for transmission systems and alternative sites for major facilities that **avoid** affecting sensitive environmental features. The location of waterworks facilities or major appurtenances is generally permanent and irreversible, and can therefore, damage or destroy sensitive environmental features. When there is absolutely no other feasible alternative, replacement of damaged environments, such as wetlands, may be an option. Approvability shall be determined by the agency with permitting or review authority over the resource, in conjunction with project review staff and other interested and affected agencies.

Alternate sites and routings must be portrayed on maps and described in terms of comparative physical characteristics (e.g., soils, vegetation, existing farmland, sensitive environmental features, surrounding uses, available buffer zones, etc.). The ownership and availability of the sites must also be described.

Siting and routing decisions should consider the relative costs of replacing or restoring the more expensive or valuable existing features such as roads and mature vegetation.

3. Operational Impacts

Impacts occurring as a result of facility operation include noise and operational accidents. These potential impacts can generally be mitigated by use of buffer zones and structural or mechanical features of the facility. Accidents may be mitigated through redundancy, secondary containment, emergency response, and contingency plans. Potential operational impacts and mitigation methods must be discussed in the plan where applicable.

C. Mitigation of Indirect Impacts

Mitigation of indirect (or secondary) adverse impacts is frequently best accomplished by using nonstructural means (e.g., laws).

The most effective means of addressing induced development and its potentially adverse impacts is through well conceived land use planning, capital improvements planning, and equitable enforcement of zoning and other ordinances. Communities must recognize the impacts of development and must also recognize their duty to protect the health, safety and welfare of their current and future residents. Communities must, therefore, take an active role in directing development to appropriate locations, and at appropriate densities, through master planning, zoning, and building permit application reviews.

Where new development is expected to occur, whether induced, facilitated or accommodated by the project, the project plan must show that the impacts can be mitigated so as not to be detrimental to the community, and its agricultural, natural, and cultural resources. The first step in addressing this issue is demonstrating that the design capacity and service area accommodated by the proposed project are consistent with the master plan and/or zoning in the community.

In addition, the project plan should consider the following tools for mitigating the adverse impacts of growth:

1. Use the master plan and/or zoning to recognize and protect the cultural, historical, and natural attributes existing in the study area. Planning and zoning should specifically recognize development pressures on:

   - Historical features or neighborhoods to guide development so that these areas are not directly destroyed by new building or indirectly by other infrastructure.

   - Prime agricultural land so as to control direct development of this critical resource, and to prevent displacement of farmers by increased taxes and other assessments (e.g., front footage assessments).

   - Wetlands, floodplains, stream banks, ponds, lakeshores and other sensitive habitats to direct growth away from these features and to prevent deterioration of these areas by dumping, nonpoint source

pollution, and other degradation (e.g., destroying vegetation, draining, ditching, using pesticides and herbicides).

These and other issues are frequently addressed in specific ordinances that protect the various resources (e.g., wetlands protection ordinances).

2. Formulate and enforce plans and ordinances that control increased storm water and nonpoint source pollution from impervious surfaces, fertilized and chemically treated residential lawns, and disturbed areas where new construction is occurring. Structural solutions (e.g., settling or retention basins and a storm water control network) may be necessary to address the magnitude of storm water, potential flooding, and nonpoint source pollution problems that are created by growth.

3. Utilize building requirements, performance standards, specific ordinances, or limitations on certain uses to address the increased noise, odors, and air pollution from dust, general combustion sources (e.g., open burning, wood stoves), and internal combustion sources (vehicle and equipment emissions) caused by increased growth.

4. Stage construction of facilities such as transmission line extensions and, where feasible, stage treatment plant facilities (particularly in metropolitan areas). This method, especially in cases where capacity increases and system extensions are dramatic, can assist in limiting the debt retirement burden for existing residents. It can also allow for other capital improvements (e.g., roads) to keep pace with the provision of drinking water facilities. The routing and timing of the project can help direct development appropriately and in accordance with the community's master plan (**see Section II. B. 1. f. above regarding staging construction**).

The negative effects of growth are felt not only at the local level, but also at state and federal levels where growth impacts occur in violation of state and federal law. It is unacceptable for a project's direct impacts to violate state and federal law, and likewise unacceptable for a project to provide for or induce growth in locations that are protected from development under state and federal law. Project plans must demonstrate that planning, zoning or other land use controls acknowledge the location and status of protected land and resources, as evidence that these lands and resources will be safeguarded from damage or destruction.

VI. Public Participation

The project plan must document opportunities for public participation. Public participation is generally informal in the early planning phase and becomes more formal prior to completing the project plan. Methods of involving the public include newspaper articles, fliers in utility bills, mass mailings to citizens and establishment of citizen's advisory groups for input on more complex or controversial projects. The purpose is to address controversial aspects of the project plan and/or to generate a better understanding of the project. A list of significant issues raised by the public and any changes to the project resulting from public input must be included in the project plan.

A. Public Meeting on Proposed Alternatives (Recommended)

A public meeting to discuss the various alternatives is recommended before a final alternative is selected. Such a meeting may help promote public support for the project. If held, the meeting should be at a time and place to best maximize public input. While a brief summary of the proceedings of the meeting should be included in the project plan, a formal presentation and record of proceedings is not required. A public meeting is preferred, but a council meeting held in accordance with all of the above guidelines is also an option.

B. The Formal Public Hearing (Required)

The municipality applying for a DWRF loan must hold a formal public hearing prior to the adoption and submittal of a final project plan. The date, place, and time of this hearing must be conducive to maximizing public input. For complex or controversial projects, or projects which will serve more than one municipality, hearings at several locations could be held.

1. Public Hearing Advertisement

A notice of the public hearing must be advertised at least 30 days prior to the hearing in a newspaper of general circulation in the communities affected by the proposed project. A copy of the advertisement and an affidavit confirming its publication must be included in the final project plan. Instructions on where to find copies of the project plan and how to submit written comments about the project must be included in the advertisement. A model public hearing notice is provided in Attachment D.

2. Public Hearing Transcript or Recording

The final project plan must be accompanied by one of the following:

a. A verbatim transcript of the public hearing, recorded by a court reporter or transcribed by a stenographer from a recording of the proceedings (most preferred).

b. A cassette tape recording of the public hearing.

c. A VHS videotape recording of the public hearing (least preferred).

3. Public Hearing Contents

The following items must be discussed during the public hearing:

a. A description of the drinking water quality needs and problems to be addressed by the proposed project and the principal alternatives that were considered.

b. A description of the recommended alternative, including its capital costs and a cost breakdown by project components (e.g., supply, treatment, distribution, storage).

c. A discussion of project financing and costs to users, including the proposed method of project financing and estimated monthly debt retirement; the proposed annual, quarterly, or monthly charge to the typical residential customer; and any special fees that will be assessed.

d. A description of the anticipated social and environmental impacts associated with the recommended alternative and the measures that will be taken to mitigate adverse impacts.

In the event no one from the public attends the hearing (a reporter would be considered a member of the public, as would members of the applicant's governing body), the public hearing may be opened and closed without a formal presentation of the project plan. However, a transcript or recording must still be submitted with the final project plan documenting this action.

4. Comments Received and Answered

The final project plan must include the following items:

a. A typed list with the names and addresses of the people who attended the public hearing.

b. A copy of any written comments which were received during the public comment period for the proposed project.

c. The applicant's responses to the comments received.

d. A description of any changes which were made to the project as a result of the public participation process.

C. Adoption of the Project Plan (Required)

The official period for receiving public comments on the proposed project may either end at the close of the formal public hearing or extend for a several days after the hearing. After the close of the public comment period, an alternative must be selected for implementation by the municipalities participating in the project. The final project plan submitted by the May 1 deadline must include resolutions from all of the participating local units of government to formally adopt the project plan and implement the selected alternative. A sample resolution can be found in Attachment A.

ATTACHMENT A

Drinking Water Revolving Fund Project Plan Submittal Form
(Including sample Joint Resolution and
Disadvantaged Community Worksheet)

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Michigan Department of Environmental Quality
Jennifer M. Granholm, Governor
Steven E. Chester, Director

http://www.michigan.gov

Drinking Water Revolving Fund Project Plan Submittal

Name of the Project	**Applicant's Federal Employer Identification Number (EIN)**	
Legal Name of Applicant (The legal name of the applicant may be different than the name of the project. For example, a county may be the applicant for bonding purposes, while the project may be named for the particular village or township it serves.)	**Areas Served by this Project** Counties _____ _____	
Address of Applicant (Street, PO Box, City, State & Zip)	Congressional Districts _____ State Senate Districts _____ State House Districts _____	
Population Served by the Water Supplier _____ If you are interested in an interim planning loan for the immediate reimbursement of project planning costs, check here ☐ (An interim planning loan is available only to a municipality serving a population of less than 10,000.)		
Brief Description of the Project		
Estimated Total Cost of the Project	**Construction Start Target Date**	
Name and Title of Applicant's Authorized Representative	**Telephone**	**FAX**
Address of Authorized Representative if same as address above, check here ☐		
Signature of Authorized Representative		**Date**
Joint Resolution of Project Plan Adoption/Authorized Representative Designation is attached check here ☐		

A final project plan, prepared and adopted in accordance with the Department's *Drinking Water Revolving Fund Program Project Plan Preparation Guidance*, must be submitted by May 1st in order for a proposed project to be considered for placement on Michigan's Project Priority List for the next fiscal year. Please send your final project plan with this form to:

REVOLVING LOAN AND OPERATOR CERTIFICATION SECTION
ENVIRONMENTAL SCIENCE AND SERVICES DIVISION
MICHIGAN DEPARTMENT OF ENVIRONMENTAL QUALITY
PO BOX 30457
LANSING MI 48909-7957

October 2005

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SAMPLE RESOLUTION

A RESOLUTION ADOPTING A FINAL PROJECT PLAN FOR WATER SYSTEM IMPROVEMENTS AND DESIGNATING AN AUTHORIZED PROJECT REPRESENTATIVE

WHEREAS, the _____ *(legal name of applicant)* recognizes the need to make improvements to its existing water treatment and distribution system; and

WHEREAS, the _____ *(legal name of applicant)* authorized _____ *(name of consulting engineering firm)* to prepare a Project Plan, which recommends the construction of _____

_____; and

WHEREAS, said Project Plan was presented at a Public Hearing held on _____ and all public comments have been considered and addressed;

NOW THEREFORE BE IT RESOLVED, that the _____ *(legal name of applicant)* formally adopts said Project Plan and agrees to implement the selected alternative (Alternative _____).

BE IT FURTHER RESOLVED, that the _____ *(title of the designee's position)*, a position currently held by _____ *(name of the designee)*, is designated as the authorized representative for all activities associated with the project referenced above, including the submittal of said Project Plan as the first step in applying to the State of Michigan for a Drinking Water Revolving Fund Loan to assist in the implementation of the selected alternative.

Yeas:

Nays:

I certify that the above Resolution was adopted by _____ *(the governing body of the applicant)* on _____.

BY: _____

Name and Title *(please print or type)*

_____

Signature Date

October 2005

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Disadvantaged Community Status Determination Worksheet

The following data is required from each municipality in order to assess the disadvantaged community status. Please provide the necessary information and return to:

Mr. Robert Schneider
Revolving Loan and Operator Certification Section
Environmental Science and Services Division
P.O. Box 30457
Lansing, MI 48909-7957

Or fax at 517-335-0743.

If you have any questions please contact Robert Schneider at 517-373-4761

1. Total amount of anticipated debt, including the DWRF loan on the water system for proposed project.

   _____

2. Annual payments on the existing debt for the water system.

   _____

3. Total operation, maintenance and replacement expenses for the water system on an annual basis once the proposed work in completed.

   _____

4. Number of "residential equivalent users" in the system.

   _____

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ATTACHMENT B

Application Actions Related to DWRF Project Planning

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Applicant Actions Related to Revolving Funds (SRF/SWQIF/DWRF) Project Planning

In all cases where contact letters are specified below, the applicant must provide (at a minimum) the following information in its contact letters:

1. A detailed map showing the area(s) affected by the proposed construction.

2. The location of each construction site using the Congressional Land Survey System Township, Range, and Section.

3. A description of the proposed construction that contains sufficient detail to allow the reviewing agency to adequately assess possible impacts of the proposed action.

4. A reasonable date when comments should be returned to the applicant.

All correspondence related to agency contacts (i.e., the initial and any subsequent contact letters as well as all agency responses) must be included in the final project plan.

Please note there are four agencies that must be contacted in every case: the State Historic Preservation Office (see Item 2), the Tribal Historic Preservation Officers (see Item 3), the MDNR Wildlife Division (see Item 10), and MDEQ Compliance Assistance for Land and Water Management Division issues (see Item 15). The U.S. Fish & Wildlife Service (see Item 10) has initiated a new streamlined review process whereby their written concurrence may not be required for some projects.

Surveys may be required to better define historical-archaeological resources, biological resources, and wetlands. Please note that if any surveys are required, we cannot issue an environmental assessment until the surveys are completed.

1. Air Quality

The **Clean Air Act** (42 U.S.C. §7616) requires an analysis of whether air pollutant emissions will result from the construction or operation of a federally-assisted project.

Applicant Action

The applicant must analyze whether direct or indirect air pollutant emissions will result from the construction or operation of the proposed project. If pollutant emissions can result from the proposed project, the applicant must analyze the impacts of those emissions, including impacts that could result from population growth facilitated by the project. A description of the project-related direct and indirect emissions, along with an analysis of their impacts, must be included in the final project plan.

2. Archeological and Historic Resources

In order to comply with the **Archeological and Historic Preservation Act of 1974** (16 U.S.C. §469 through §469c-1), the State Historic Preservation Office (SHPO) must be notified during the planning of a federally-assisted project so that a determination can be made of whether the proposed project could cause irreparable loss or destruction of significant scientific, prehistorical, historical, or archeological data in the vicinity of the project.

The **National Historic Preservation Act**, as amended (16 U.S.C. §470, et seq.) mandates the protection of historic sites, buildings, structures, districts, and objects of national, state, regional, or local significance listed in the National Register of Historic Places and requires that the effect of a federally-assisted project upon properties included in or eligible for inclusion in the National Register must be taken into account during project planning.

Applicant Action

During project planning, the applicant must request comments on the proposed project from the SHPO. To prepare this request, the applicant needs to follow SHPO's memorandum "Information Needed for a Project Review" (Attachment F in the SRF/SWQIF Guidance and Attachment E in the DWRF Guidance). Of key importance, "streetscape" photographs or a VHS videotape showing the areas affected by the project need to be provided at this time.

The applicant may be required by the SHPO to conduct a survey to ascertain the existence of scientific, prehistorical, historical, or archeological data in the vicinity of the proposed project.

If the SHPO determines that significant scientific, prehistorical, historic, or archeological data will be destroyed by the proposed project, the applicant must either undertake a plan to recover and preserve the data as part of the project or alter the project in order to avoid the destruction.

If the SHPO determines that the proposed project could adversely affect a property that is included in or eligible for inclusion in the National Register of Historic Places, the applicant must either select an alternative project site or integrate into the project design the mitigative measures that have been recommended by the SHPO.

3. Tribal Historic Preservation Officers (THPO)

Tribal Historic Preservation Officers are one of the mandatory consulting parties under Section 106 of the National Historic Preservation Act. While the SHPO may have information concerning religious or culturally significant tribal lands which is made known during their reviews, it is recognized that their database is not comprehensive.

Applicant Action

In all cases during project planning, whether the project occurs on tribal lands or not, applicants are required to make a reasonable good faith effort to identify any Indian tribes or Native Hawaiian organizations that might attach religious and cultural significance to historic properties in the area of potential effects and invite them to be consulting parties. The list of THPOs is arranged by County and can be accessed at http://www.deq.state.mi.us/documents/deq-ess-mfs-dwww-THPOguidance.pdf. This list is also included as Attachment H in the DWRF Guidance and Attachment I in the SRF/SWQIF Guidance. Because of the movement of tribes and the potential for multiple tribes to use the same territory, there will be more than one contact per county. For example, projects in Lapeer County would require that 14 different THPOs be contacted.

If the THPO determines that historic properties with religious and/or cultural significance will be impacted by the proposed project, the applicant must either select an alternative project site or integrate into the project design the mitigative measures that have been recommended by the THPO.

4. Facility Discharge Permits

The **Federal Water Pollution Control Act Amendments of 1972** (P.L. 92-500) require permits for discharges into the waters of the United States. The Michigan Department of Environmental Quality (MDEQ) regulates discharges to both surface waters and groundwater under Michigan's **Natural Resources and Environmental Protection Act, 1994 PA 451, as amended (NREPA)**.

Applicant Action

In order to modify or apply for a discharge permit, the applicant should contact the appropriate MDEQ Water Bureau District Office responsible for the geographic area of the proposed project. District office addresses can be found at http://www.michigan.gov/deq/0,1607,7-135-3306_3329-12306--,00.html. The need for a new or modified discharge permit should be noted in the project plan, along with an estimated date for its issuance. The new or modified permit must be issued prior to our publication of the environmental assessment for the project.

5. Farmland and Open Space Preservation

In order to comply with the **Farmland Protection Policy Act** (7 U.S.C. §4201, et seq.), alternative actions that could lessen adverse effects must be considered if a federally-assisted project may result in the conversion of significant farmland to nonagricultural uses. Significant farmland under this Act is defined as prime, unique, statewide or local important farmland.

Applicant Action

The applicant must provide a map in the final project plan showing the location of significant agricultural lands in the vicinity of the proposed project. The project plan must also include information on the impacts of project construction or operation upon agricultural lands. Examples of impacts include the acquisition of farmland as the site for a new wastewater treatment plant or pumping station, the use of agricultural lands for the treatment or disposal of effluent or sludge, and the conversion of farmland into nonagricultural uses due to growth fostered by the expansion of a wastewater collection and treatment system.

If significant farmlands may be converted to nonagricultural uses as a result of the proposed project, the applicant may be required to select an alternative project site. If your project may convert farmland either directly or indirectly, contact the USDA Natural Resources Conservation Service (NRCS) below. The State Conservationist performs a review under the National Environmental Policy Act (NEPA). If there may be a negative impact on prime and unique farmland, the USDA-NRCS will provide Form AD-1006 for completion in accordance with the Farmland Protection Policy Act (FPPA).

John A. Bricker, State Conservationist
Farmland Preservation Program
USDA Natural Resources Conservation Service
3001 Coolidge Road, Suite 250
East Lansing, Mi 48823

The Farmland and Open Space Preservation Act (Part 361 of the **NREPA**), more commonly known as PA 116, enables a farm owner to maintain land in an agricultural use and insures the land is not developed in a non-agricultural use. If your project may affect farmland protected via this state-level program, contact the Michigan Department of Agriculture below.

Michigan Department of Agriculture
Farmland & Open Space Preservation Program
Farmland Preservation Office
Environmental Stewardship Division
P.O. Box 30499
Lansing, MI 48909

6. Health Department Permits

Local health departments have primary regulatory authority over on-site septic systems under Sections 2433, 2435, and 2441 of the **Michigan Public Health Code** (1978 PA 368).

Applicant Action

If the proposed project involves the construction, alteration, extension, or replacement of on-site septic systems, the applicant should contact the local health department during project planning to seek input regarding the acceptability of the proposed action. Local health department addresses can be found at http://michiganstartpages.com/michigan/health/healthdept2.htm. The applicant must then provide a copy of the draft project plan to the local health department for its review and concurrence.

7. Lagoon Berm Permits

Under Michigan's **NREPA**, a dam safety permit may be needed for a lagoon where the berm encloses more than five acres.

Applicant Action

If the proposed project impacts a lagoon where the berm encloses more than five acres, the applicant should contact the MDEQ Land and Water Management Division staff responsible for the geographic area of the proposed project. Dam safety contacts can be found at http://www.michigan.gov/documents/deq/lwm-dams-staffmap_202689_7.pdf. The need for a new or modified dam safety permit should be noted in the project plan, along with an estimated date for its issuance.

8. National Natural Landmarks

The **Historic Sites Act** (16 U.S.C. §461, et seq.) mandates the protection of national natural landmarks.

Applicant Action

The applicant should review the list of national natural landmarks (Attachment G in the SRF/SWQIF Guidance and Attachment F in the DWRF Guidance) and note in the final project plan whether or not there is any listed landmark that could be impacted by project construction or operation. If the proposed project could adversely affect a national natural landmark, the applicant must either select an alternative project site or integrate into the project design the mitigative measures that have been recommended by your MDEQ project manager.

9. Project Site Contamination

Several MDEQ divisions oversee activities related to project site contamination and cleanup. The Air Quality Division (AQD) regulates activities related to the removal of building materials containing asbestos under the National Emission Standards for Hazardous Air Pollutants (NESHAP) regulations (40 CFR Part 61, Subpart M). The Remediation and Redevelopment Division (RRD) regulates contaminated sites under Part 201 (Environmental Remediation) and Part 213 (Leaking Underground Storage Tanks) of Michigan's **NREPA**. The Waste and Hazardous Materials Division (WHMD) regulates the disposal of a variety of waste materials under Part 111 (Hazardous Waste Management) and Part 115 (Solid Waste Management) of Michigan's **NREPA**.

Applicant Action

The applicant must indicate in the project plan whether construction of the proposed project will involve any site contamination or cleanup issues. Existing or proposed work plans and practices that will be followed in the excavation, testing, removal, handling, transportation, and disposal of contaminated materials need to be identified. Specific work practices that will be followed to minimize the release of asbestos fibers during construction and ensure the proper disposal of removed materials containing asbestos must also be detailed.

If the proposed project involves the renovation or demolition of structures containing asbestos, the applicant may wish to contact the AQD's NESHAP Asbestos Coordinator at (517)-373-7064 to learn about the work practices associated with safe asbestos removal and disposal. More information about asbestos NESHAP regulations and notification requirements can be found at http://www.michigan.gov/deq/0,1607,7-135-3310_4106-11856--,00.html.

If the proposed project involves construction activities in areas of known soil or groundwater contamination, the applicant may wish to contact the appropriate RRD District Office to learn about the standards that govern the removal and disposal of contaminated soils or groundwater. District office addresses can be found at http://www.michigan.gov/deq/0,1607,7-135-3306_3329-12306--,00.html.

If the proposed project involves the removal and disposal of building materials which contain lead, mercury, PCBs, or similar contaminants, the applicant may wish to contact the appropriate WHMD District Office to learn about proper waste disposal practices. District office addresses can be found at http://www.michigan.gov/deq/0,1607,7-135-3306_3329-12306--,00.html.

10. Protected Plants and Animals

The **Endangered Species Act of 1973**, as amended (16 U.S.C. §1531, et seq.) prohibits federal assistance to a project which is likely to jeopardize (1) any species of fauna or flora listed or proposed to be listed as endangered or threatened by the U.S. Fish & Wildlife Service (USFWS) or (2) the critical habitat on which such species depend.

Michigan's endangered and threatened species are protected under Part 365 of the **NREPA**. The Michigan Department of Natural Resources (MDNR) is the state agency responsible for protecting state listed endangered species in Michigan.

Applicant Action

During project planning, the applicant must contact the MDNR, Wildlife Division, to ascertain whether any species of fauna or flora listed or proposed to be listed in the Michigan Natural Features Inventory as endangered or threatened or special concern, or the critical habitat of such species, is found in the vicinity of the proposed project (see the address below).

The USFWS ensures that federally funded projects do not jeopardize any federally listed species through the implementation of Section 7 of the federal Endangered Species Act. The USFWS has initiated a new streamlined review process whereby their written concurrence may not be required for some SRF/DWRF projects. The USFWS does not need to be consulted if your project is in an urban area where no suitable wildlife habitat is present, or if construction work is limited to existing structures, or if the loan applicant consults with a qualified biologist who can document that no such habitat exists and there is no potential for endangered or threatened species to be present, or that there would be no effect on any listed species.

However, you must contact the USFWS at the address below if there is uncertainty regarding the possible presence of, or effects on, listed species or their habitat. In these cases, the USFWS must provide a list of species in the project area, and, depending on potential effects of the project as determined by the action agency or consultant, may also provide written concurrence as per the previous standard practice for SRF/SWQIF/DWRF projects.

More information is on the Section 7 Consultation webpage at www.fws.gov/midwest/endangered/section7/index.html. Step-by-step instructions are available through the Technical Assistance link on this page. The USFWS requests action agencies and representatives to conclude consultation without USFWS concurrence when a “no effect” determination is appropriate as described in Step 2.

If the USFWS or the MDNR determines that the proposed project is likely to jeopardize an endangered or threatened or special concern species or its critical habitat, the applicant must select an alternative project site.

Addresses:

U.S. Fish and Wildlife Service
East Lansing Field Office
2651 Coolidge Road
East Lansing, MI 48823

Endangered Species Specialist
MDNR Wildlife Division
Natural Heritage Program
P.O. Box 30180
Lansing, Mi 48909

11. Regional Planning

Fourteen regional planning agencies in Michigan play a part in local environmental planning initiatives to support orderly development, efficient use of public resources, and compliance with environmental protection standards within their region.

Applicant Action

The applicant should contact the appropriate regional planning agency during project planning to seek input regarding the impacts of the proposed project upon local development plans, areawide waste treatment management plans, and/or regional water quality management plans. A request for confirmation of the population figures and projections to be used in the project plan should also be made. Planning agency addresses are listed in Attachment H of the SRF/SWQIF Guidance and Attachment G in the DWRF Guidance. If the applicant municipality is in Livingston, Macomb,

Monroe, Oakland, St. Clair, Washtenaw, or Wayne County, the applicant must send a copy of the entire project plan to SEMCOG for review and approval.

12. Storm Water Discharge Permits

The **Water Quality Act of 1987** (P.L. 100-4) requires permits for discharges from municipal separate storm water systems. The MDEQ regulates municipal storm water discharges under Michigan's **NREPA** and Michigan Executive Orders 1991-31, 1995-4, and 1995-18.

Applicant Action

The applicant must contact the appropriate MDEQ Water Bureau staff in the following situations to determine if the proposed project will require permits for storm water discharges:

(1) If the municipality in which the project is located operates a separate municipal storm sewer system and the proposed project involves additional storm water discharges;

(2) If the municipality in which the project is located operates a combined sewer system that, as a result of the proposed project, will become a separated system; or

(3) If the construction activity resulting from the proposed project will disturb one acre or greater (or less than one acre if the construction activity is part of a larger common plan of development).

More information on who to contact can be found at http://www.michigan.gov/deq/0,1607,7-135-3313_3682_3716-24454--,00.html.

In all cases, the final project plan must identify all storm water discharges that will result from the construction or operation of the proposed project, along with an analysis of their impacts. Elements of existing or proposed storm water management plans and specific storm water controls for construction activities also need to be identified.

13. Wild and Scenic Rivers

The **Wild and Scenic Rivers Act** as amended by the **Michigan Scenic Rivers Act of 1991** (16 U.S.C. §1271, et seq.) prohibits federal assistance to a project which will have a direct and adverse effect on the values for which a river segment listed in the National Wild and Scenic Rivers System or designated for study on the National Rivers Inventory was established.

Applicant Action

If a designated wild, scenic, or natural river or tributary may be impacted by the proposed project, the applicant should contact the Natural Rivers Program of the MDNR Fisheries Division during project planning. More information on river segments designated for protection can be found as follows:

Michigan river miles designated as part of the National Wild and Scenic Rivers System, administered by the National Park Service, are listed at: www.rivers.gov/wildriverslist.html#mi

Michigan rivers federally designated for Congressional study are listed at: www.rivers.gov/study.html

Michigan river segments in the Nationwide Rivers Inventory are listed at http://www.nps.gov/ncrc/programs/rtca/nri/states/mi.html.

Michigan Natural Rivers and their tributaries can be found on the MDNR website at http://www.michigandnr.com/PUBLICATIONS/PDFS/fishing/NaturalRivers/DesignatedRivers.pdf.

If the proposed project could adversely impact a designated river segment, the applicant must either select an alternative project site or integrate into the project design the mitigative measures that have been recommended by the MDNR Fisheries Division. If your project may affect a federal or state designated river shown on these maps or listed on the websites, you will need to contact the MDNR Natural River Administrator below. While the River Administrator only has authority over the state-designated rivers, the office can assist in answering questions about federally-designated rivers or will refer/redirect to the appropriate federal office for further review.

Address: Natural River Administrator
MDNR Fisheries Division
PO Box 30446
Lansing, MI 48909-7946

14. Airspace and Airports

Federal Aviation Administration (FAA) regulations (14 CFR 77.13) and the Michigan Tall Structure Act (1959 PA 259) have notification and permitting requirements for any construction that may obstruct the use of airspace by aircraft. Tall structures that exceed specific height and runway proximity criteria will require a permit prior to construction.

FAA Advisory Circular 150/5200-33, the federal inter-agency agreement on aircraft/wildlife strikes and the Michigan Aeronautics Code (1945 PA 327), require that new or expanded potential wildlife attractants must be approved prior to construction. Examples of potential wildlife attractants include wastewater treatment facilities utilizing lagoons for treatment and effluent discharge outfalls.

Applicant Action

If the proposed project involves the construction of an elevated storage tank or a new or expanded wildlife attractant in the vicinity of an airport ('vicinity' defined as within 5 miles of any licensed airport) and/or inside the boundaries of an airport, the applicant must contact the Michigan Department of Transportation (MDOT), Bureau of Aeronautics at Lansing's Capital City Airport. To find out whether a project falls within 5 miles of a licensed airport, a directory of licensed airports, grouped by city, is located at http://www.michigan.gov/aero/0,1607,7-145-6777_7036---,00.html. If a project falls within the 5 mile radius, the applicant should forward the facility name, location (including map), and a project description to:

Molly Lamrouex
Aeronautics Environmental Specialist, MDOT
2700 E. Airport Service Drive
Lansing, MI 48906
lamrouexm@michigan.gov
517-335-9866

15. Land-Water Interfaces

The remaining environmental review actions relate to those activities that are regulated by the MDEQ Land and Water Management Division (LWMD) or the Army Corps of Engineers (ACoE). We have provided a LWMD review coordinator housed in the Environmental Science and Services Division who will screen all projects for potential impacts to land-water interfaces. This screening will also include the need for the ACoE review for approval of projects involving waters under federal jurisdiction. A single inquiry containing the minimum information (along with the specific information identified for floodplains) can be sent to:

John Skubinna
MDEQ – ESSD
Pollution Prevention Section
Compliance Assistance Unit
P.O. Box 30457
Lansing, Mi 48909-7957

A. Inland Lakes and Streams

The **Fish and Wildlife Coordination Act** (16 U.S.C. §661, et seq.) requires that fish and wildlife resources be protected whenever a federally-assisted project will result in the control or structural modification of any natural stream or other body of water.

Part 301 of Michigan's **NREPA** requires the evaluation and mitigation of any adverse construction impacts upon inland lakes and streams (e.g., bridge and culvert work, dredging, filling, open cuts and stream re-routings).

Applicant Action

The applicant must indicate in the project plan whether the construction of the proposed project will result in the control or structural modification of any natural stream or other body of water. If the proposed project will have such an impact on a water body, the applicant must note this fact in the contact letter that must be sent to the USFWS (see Item 10).

If the proposed project will result in the modification of a stream or other water body that could adversely affect fish and wildlife resources, the applicant must integrate into the project design the mitigative measures that have been recommended by the USFWS.

The applicant must also indicate in the project plan whether any project construction will occur in the land area of an inland lake or stream that lies below the ordinary high-water mark or on Great Lakes bottom lands. If so, the applicant will need to apply for a permit from the MDEQ LWMD. More information about this permit about can be found at http://www.michigan.gov/deq/0,1607,7-135-3313_24403---,00.html.

If the project may adversely impact an inland lake or stream, the applicant must either select an alternative project site or integrate into the project design the mitigative measures that have been recommended by the MDEQ Land and Water Management Division.

B. Floodplains

Federal **Executive Order 11988**, "Floodplain Management" (42 FR 26951) mandates the evaluation of the potential effects of a federally-assisted project upon floodplains in order to avoid adverse effects associated with direct and indirect development of the floodplains. The executive order further forbids federally-assisted project construction in a 100-year floodplain unless no practicable alternative exists.

Part 31 of Michigan's **NREPA** requires the evaluation and mitigation of any alteration or occupation of the 100-year floodplain of a river, stream, or drain (e.g., constructing buildings, filling, grading).

Applicant Action

The applicant must indicate in the project plan whether any project construction will occur within the 100-year floodplain. The initial contact letter should include a Federal Emergency Management Agency (FEMA) floodplain map, obtained from the local community, with the areas affected by the proposed construction clearly marked. If a floodplain map is not available, the description of the proposed construction must include the elevation of the ground surface at the construction site and its distance from the water course.

If floodplains may be impacted by the proposed project, the final project plan must include all of the following:

(1) A map showing the 100-year floodplains in the vicinity of the proposed project.

(2) A discussion of the direct and indirect effects of the proposed project upon the floodplains.

(3) A description of the alternative sites or actions that were considered to avoid those effects.

(4) The reasons why the project must be located in or affect the floodplains.

(5) A description of the mitigative measures that will be used to minimize adverse impacts.

(6) A statement of whether or not the project conforms to applicable state or local floodplain protection standards.

All of these items must be discussed at the formal public hearing held prior to the adoption of the final project plan and public notices of scheduled meetings and hearings must mention that floodplains will be affected by the proposed project.

If floodplains will be adversely impacted by the proposed project, the applicant must either select an alternative project site or integrate into the project design the mitigative measures that have been recommended by the MDEQ Land and Water Management Division.

C. Wetlands

Federal **Executive Order 11990**, "Protection of Wetlands" (42 FR 26961) mandates the evaluation of the potential effects of a federally-assisted project upon wetlands in order to avoid adverse effects associated with the destruction or loss of wetlands and to avoid new construction in wetlands if a practicable alternative exists.

Part 303 of Michigan's **NREPA** requires the evaluation and mitigation of any adverse construction impacts to regualated wetlands (e.g., depositing fill material, dredging soil, draining water).

Applicant Action

If wetlands may be impacted by the proposed project, the final project plan must include all of the following:

(1) A map showing all wetlands in the vicinity of the proposed project.

(2) A discussion of the direct and indirect effects of the proposed project upon wetlands.

(3) A description of the alternative sites or actions that were considered to avoid those effects.

(4) The reasons why the project must be located in or affect the wetlands.

(5) A description of the mitigative measures that will be used to minimize adverse impacts.

(6) A statement of whether or not the project conforms to applicable state or local wetlands protection standards.

All of these items must be discussed at the formal public hearing held prior to the adoption of the final project plan and public notices of scheduled meetings and hearings must mention that wetlands will be affected by the proposed project.

If wetlands will be adversely impacted by the proposed project, the applicant must either select an alternative project site or integrate into the project design the mitigative measures that have been recommended by the MDEQ LWMD.

If a wetland survey is required, we encourage applicants to engage a private wetlands consultant, as it does expedite both our state environmental review for environmental assessment publication as well as the permit review process. Alternately, applicants may choose to utilize the Wetland Identification Program administered by the LWMD (formerly called the Wetland Assessment Program). The program information can be accessed at http://www.michigan.gov/deq/0,1607,7-135-3313_3687-10193--,00.html.

D. Great Lakes Shorelands Protection

The **Coastal Barrier Resources Act** as amended by the **Great Lakes Coastal Barrier Act of 1988** (16 U.S.C. §3501 et seq.) prohibits federal assistance to a project which will impact undeveloped coastal barrier areas along the shores of the Great Lakes that have been included in the U.S. Department of the Interior's Coastal Barrier Resources System. The **Coastal Zone Management Act of 1972**, as amended (16 U.S.C. §1451, et seq.) requires that a federally-assisted project be consistent with the approved state coastal zone management program.

The coastal zone management program is administered through several coastal related sections of **NREPA** including Part 323 (Shorelands Protection and Management), Part 325 (Great Lakes Submerged Lands), and Part 353 (Sand Dunes Management).

Applicant Action

If the proposed project will be located near one of the Great Lakes, the applicant must provide a map in the final project plan showing the proximity of the proposed construction to the lakeshore. If the project will affect shoreland that is included in the Coastal Barrier Resources System or if the project is determined not to be consistent with the approved coastal zone management plan, the applicant must either select an alternative project site or integrate into the project design the mitigative measures that have been recommended by the MDEQ LWMD.

E. Army Corps of Engineers (ACoE) Regulated Activities

The ACoE regulates land/water interface activities under the following federal laws:

Section 10 of the **Rivers and Harbors Act of 1899**
Section 404 of the **Clean Water Act of 1977**

These laws require ACoE permits authorizing activities in or affecting navigable waters of the United States, including the discharge of dredged or fill materials into waterways and adjacent wetlands.

Applicant Action

The applicant must contact the appropriate ACoE office to determine if the proposed project will impact a water under federal jurisdiction.

F. Joint Permit Applications

A joint permit application (JPA), which the MDEQ and the ACoE share, is available to ensure efficient permit processing in areas where both agencies have jurisdiction. If a project requires permits/reviews for any of the following activities, only one application is required to meet state and federal requirements:

(1) Wetlands

(2) Inland Lakes and Streams

(3) Floodplains

(4) Great Lakes Bottom Lands

(5) Marinas

(6) Critical Dunes

(7) Dams

(8) High Risk Erosion Areas

This application is available at http://www.Michigan.gov/jointpermit. The site also provides the tools needed to prepare the application, fee schedule, rules pertaining to the project, an application instruction manual, staff contacts, resource location maps (including floodplain and wetlands mapping), and resource protection documents. There are also links to guidance information about each of the specific regulatory areas.

ATTACHMENT C

Fundamentals of the Monetary Evaluation

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Fundamentals of the Monetary Evaluation

WHAT: A comparison of the monetary costs of two or more alternatives being considered to address a common need and produce the same desired end.

WHY: To account for the fact that money changes value over time and to allow for an understandable comparison of more complex cash flows that take place over time.

HOW: A total present worth analysis.

COMPONENTS:

1. Planning Period = 20 years.

2. Capital Costs = All costs (immediate and future) to construct the proposed project, excluding sunk costs. Land costs can be escalated.

3. Capitalized Interest = Any interest costs incurred to "carry" the borrowing during construction (although capitalized interest will not normally be included in a revolving fund loan).

4. Operation, Maintenance, and Replacement (OM&R) Costs = All costs projected to be incurred to operate and maintain the treatment works facilities, both fixed and variable. Energy costs can be escalated.

5. Revenue Generated = Income from the treatment works operation (e.g., any crops produced, biosolids sold as fertilizer, power generated, etc.).

6. Salvage Value = The value of treatment works facilities at the end of the planning period. Facilities with a useful life that exceeds the planning period (except land) should be straight-line depreciated.

7. Discount Rate = The discount rate set by the U.S. EPA for the year in which project planning began.

KEYS:

1. All costs (except sunk costs) must be included, both eligible and ineligible.

2. Evaluation should not be done on a per-user basis but on the total project costs.

3. Each alternative must address the need that is identified in the project plan.

4. Alternatives must be equivalent. Each alternative must serve the same immediate customers and provide the same end-of-planning-period capacity.

PROCESS:

1. Determine the present worth of construction and OM&R components:

   a. One-Time Expenditures = Capital Costs

$$PW = F \times 1/(1 + i)^n$$

F = the future value = the estimated project cost
n = the number of years
i = the EPA discount rate

(= single payment present worth factor)

   b. Recurring Equal Expenditures = OM&R Costs

$$PW = A \times [(1 + i)^n - 1/i(1 + i)^n]$$

A = the annual expenditure
n = the number of years
i = the EPA discount rate

(= uniform series present worth factor)

   c. Recurring Escalating Expenditures = Energy Costs (if applicable)

$$PW = G \times [(1 + i)^{n+1} - (1 + ni + i)/I^2(1 + i)^n]$$

G = the uniform increasing amount
n = the number of years
i = the EPA discount rate

(= gradient series present worth factor)

2. Combine the present worth of the construction and OM&R components.

3. Determine the salvage value and the present worth of the salvage value.

4. Determine the present value of capitalized interest and revenue generated, if appropriate.

5. Total Present Worth will be the present worth of the salvage value combined with the present worth of revenue generated subtracted from the present worth of capital costs, OM&R components, and capitalized interest.

ATTACHMENT D

Notice of Project Plan Public Hearing (Model)

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NOTICE OF PUBLIC HEARING

The _____ will hold a public hearing on the proposed _____ project for the purpose of receiving comments from interested persons.

The hearing will be held at _____ p.m. on _____ at the following location: _____

The purpose of the proposed project is _____
_____
_____

Project construction will involve _____
_____
_____

Impacts of the proposed project include _____
_____
_____

The estimated cost to users for the proposed project will be _____
_____

Copies of the plan detailing the proposed project are available for inspection at the following location(s):
_____
_____
_____

Written comments received before the hearing record is closed on _____ will receive responses in the final project plan. Written comments should be sent to:
_____
_____
_____

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ATTACHMENT E

Information Needed for a State Historic Preservation Office Project Review

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Instructions for Application for Section 106 Review

Section I: General Information

a. Please provide the name of your project.

b. Provide the street address of your project if applicable. If no street address exists please leave this blank.

c. Municipal unit is not always the mailing address of the project location. For example, if a mailing address lists Lansing as the city, yet the project is outside the city limits, then the township is the municipal unit.

d. Every project has a federal funding, licensing, or permitting agency. Include the name, address, and telephone number of the contact person at the federal agency. A federal agency or federally delegated authority contact is mandatory. Projects not receiving federal assistance, nor requiring a federal permit or license, are not subject to Section 106 review except in certain circumstances when mandated by state or local policy. If you do not know your federal agency please contact the party requiring you to apply for Section 106 review for this information.

e. Include the name, address, and telephone number of the contact person at the state agency. If this is a grant program note the name of the program (i.e. CDBG, HOME, TEA-21, etc.)

f. Please provide the name, address, telephone number, and email address of the contact person to who questions may be directed.

Section II: Ground Disturbing Activity

a. Provide a USGS 7.5 minute quadrangle map with the location clearly marked. An entire quad map does not have to be submitted; an 8.5x11 inch portion of the map may be submitted. Map scale must be 1:24000. Photocopies are acceptable as long as the map and location are clear. Street maps and platt maps are <u>not</u> acceptable substitutes. Provide the name of the quadrangle map.

b. Township, Range, and Section refer to the coordinates of the project location. These are numbers such as T21N, R2W, Section 12. Do not put names of townships in this location. Alternative coordinates, such as UTM, may be submitted <u>in addition</u> to the Township, Range, and Section.

c. Describe the proposed dimensions of ground disturbing activity. Plans and specifications should not be substituted here. Example: 4 feet wide, 20 feet long, 2 feet deep.

d. Describe the previous use of the land. Was it farmland, an industrial site, a homestead, etc.? Was there a utility corridor placed on the property, were sewer and waterlines placed there 10 years ago, etc.?

e. Describe the current use and condition of the property.

f. Ask the landowner(s) if they are aware of any artifacts being discovered on the property at any point in time. Include their description of items that have been found, if any.

Section III: Project Work Description and Area of Potential Effects (APE)

a. This is a detailed description of the work that will be undertaken. Include any information about building removals, rehabilitation, and landscape alteration such as sidewalk or tree removals. The SHPO is mandated to assess the effects that a project will have on the historic built environment. Economic benefits, impacts to the natural and social environment are not relevant unless these bear some connection to the integrity of the historic built environment.

b. Localized map highlighting the location of the project (i.e. a copy of a portion plat or a city street map). Maps must provide the precise location of the project. If the project will occur in several locations (i.e. curb and gutter replacement at several places along a roadway), all such locations must be noted. Please ensure that street/road names are included and legible.

c. Draw/Outline/Highlight the APE for your project.

d. *The terms "not applicable" or "unknown" are not acceptable responses.* Describe the steps taken to identify the area of potential effects and justify the boundaries chosen. The **area of potential effects** is defined as the geographic area or areas within which an undertaking may directly, or indirectly, cause changes in the character or use of historic properties. *In most instances, the area of potential effects is not simply the project's physical boundaries, or right-of-way.* The area of potential effects is influenced by the scale and nature of an undertaking and may be different for different kinds of effects caused by an undertaking. In defining the APE, you must consider not only physical effects but also visual, auditory, and socio-cultural (i.e. land use, traffic patterns, public access) effects.

Section IV: Identification of Historic Properties

a. List and provide construction dates for all properties 50 years of age or older located in the APE. The terms *"not applicable"* or *"unknown"* are not acceptable responses. If research has been done and no approximate date is found, the term "not found" is acceptable. If your project is located in a National Register eligible, listed or local historic district it is not necessary to list every structure. Identify the district and describe its general characteristics and range of construction dates.

b. A historic property is defined as any prehistoric or historic district, site, building, structure, or object that is 50 years of age or older and is listed in, or eligible for listing in, the National Register of Historic Places. It is your responsibility to make a reasonable and good faith effort to carry out appropriate identification efforts, which *may* include background research, consultation, oral history interviews, sample field investigation, and field survey. Michigan Sites-On-Line is a directory of properties listed in the National Register (www.michigan.gov/shpo). This directory, however, does not include properties eligible for listing in the National Register, and simply searching this directory does not fulfill your responsibility to identify historic properties. *The SHPO does not conduct research.*

c. Please choose one.

d. Please describe the condition, previous disturbance to and history of any historic property located in the APE and identified on section IV of this form.

e. Key identified historic properties onto a localized map. This can be the same map that was created in Section III.b, c.

Section V: Photographs

Faxed or photocopied photographs are not acceptable. Photographs may be color or black and white. Printed digital photographs are acceptable provided they have a high dpi and clear resolution. Photographs must provide clear views (i.e. subject of the photograph should not be obscured by shadows, trees, cars, or any other type of obstruction) of any historic properties in the project's area of potential effects. If submitting a project which is, or may be in, a historic district (especially in commercial or residential neighborhoods fifty years of age or older) please submit representative streetscape views of the built environment in the project's area of potential effects to provide the SHPO with an idea of the architectural context. Remember to key all photographs to your localized map.

a. Please photograph the location where the project will be taking place. If the project covers a large area, please provide several views.

b. Please provide photographs of properties identified in Section IV. a. If the project is located in a National Register eligible, listed or local historic district it is not necessary to photograph every structure. Streetscape photographs that clearly illustrate the district are sufficient.

Section VI: Determination of Effect

Following a reasonable and good faith effort to identify historic properties within the project's area of potential effects provide the SHPO with your finding of the project's effect upon historic properties within the project's area of potential effects.

a. For a determination of: (1) *no historic properties affected* [36 CFR § 800.4(d)(1)] in which there are either no historic properties present or no historic properties affected, include the basis for this determination.

b. For a determination of: *no adverse effect* [36 CFR § 800.5(b)]; explain why the criteria of adverse effect [36 CFR § 800.5(a)(1)] were not found applicable and include any conditions to avoid, minimize, or mitigate adverse effects. Adverse effects must be resolved in consultation with the SHPO pursuant to 36 CFR § 800.6. Please indicate the efforts undertaken to seek views provided by consulting parties and the public pursuant to 36 CFR § 800.6(a)(4), and provide copies or summaries of this information to the SHPO.

c. For a determination of: *adverse effect* [36 CFR § 800.5(d)(2)]; explain why the criteria of adverse effect [36 CFR § 800.5(a)(1)] were found applicable and include any conditions to avoid, minimize, or mitigate adverse effects. Adverse effects must be resolved in consultation with the SHPO pursuant to 36 CFR § 800.6. Please indicate the efforts undertaken to seek views provided by consulting parties and the public pursuant to 36 CFR § 800.6(a)(4), and provide copies or summaries of this information to the SHPO.

Questions: Please contact the Environmental Review Staff

Diane Tuinstra
Environmental Review Assistant
U.S. Department of Housing and Urban Development (HUD) projects including Michigan Economic Development Corporation (MEDC) and Michigan State Housing Development Authority (MSHDA) projects only.
(517) 335-2723
tuinstrad@michigan.gov

Brian Grennell
Environmental Review Specialist
(517) 335-2721
grennellb@michigan.gov

STATE HISTORIC PRESERVATION OFFICE
Application for Section 106 Review

SHPO Use Only					
☐ IN	Received Date	____ / ____ / ____	Log In Date	____ / ____ / ____
☐ OUT	Response Date	____ / ____ / ____	Log Out Date	____ / ____ / ____
	Sent Date	____ / ____ / ____		

Submit one copy for each project for which review is requested. This application is required. Please type. Applications must be complete for review to begin. Incomplete applications will be sent back to the applicant without comment. Send only the information and attachments requested on this application. Materials submitted for review cannot be returned. Due to limited resources we are unable to accept this application electronically.

I. GENERAL INFORMATION

☐ THIS IS A NEW SUBMITTAL ☐ THIS IS MORE INFORMATION RELATING TO ER#

- ☐ Funding Notice
- ☐ Survey
- ☐ MOA or PA
- ☐ Other:

a. Project Name:
b. Project Address (if available):
c. Municipal Unit: County:
d. Federal Agency and Contact (*If you do not know the federal agency involved in your project please contact the party requiring you to apply for Section 106 review, not the SHPO, for this information*.):
e. State Agency and Contact (if applicable):
f. Consultant or Applicant Contact Information (if applicable):

II. GROUND DISTURBING ACTIVITY (INCLUDING EXCAVATION, GRADING, TREE REMOVALS, UTILITY INSTALLATION, ETC.)

DOES THIS PROJECT INVOLVE GROUND-DISTURBING ACTIVITY? ☐ YES ☐ NO (If no, proceed to section III.)

Exact project location must be submitted on a USGS Quad map (portions, photocopies of portions, and electronic USGS maps are acceptable as long as the location is clearly marked).

a. USGS Quad Map Name:
b. Township: Range: Section:
c. Description of width, length and depth of proposed ground disturbing activity:
d. Previous land use and disturbances:
e. Current land use and conditions:
f. Does the landowner know of any archaeological resources found on the property? YES
   Please describe:

III. PROJECT WORK DESCRIPTION AND AREA OF POTENTIAL EFFECTS (APE)

Note: Every project has an APE.

a. Provide a detailed written description of the project (plans, specifications, Environmental Impact Statements (EIS), Environmental Assessments (EA), etc. **cannot** be substituted for the written description):
b. Provide a localized map indicating the location of the project; road names must be included and legible.
c. On the above-mentioned map, identify the APE.
d. Provide a written description of the APE (physical, visual, auditory, and socio-cultural), the steps taken to identify the APE, and the justification for the boundaries chosen.

IV. IDENTIFICATION OF HISTORIC PROPERTIES

a. List and date **all** properties 50 years of age or older located in the APE. If the property is located within a National Register eligible, listed or local district it is only necessary to identify the district:

b. Describe the steps taken to identify whether or not any **historic** properties exist in the APE and include the level of effort made to carry out such steps:

c. Based on the information contained in "b", please choose one:
   - ☐ Historic Properties Present in the APE
   - ☐ No Historic Properties Present in the APE

d. Describe the condition, previous disturbance to, and history of any historic properties located in the APE:

V. PHOTOGRAPHS

Note: All photographs must be keyed to a localized map, and should be included as an attachment to this application.

a. Provide photographs of the site itself.
b. Provide photographs of all properties 50 years of age or older located in the APE (faxed or photocopied photographs are not acceptable).

VI. DETERMINATION OF EFFECT

☐ No historic properties affected based on [36 CFR § 800.4(d)(1)], please provide the basis for this determination.

☐ No Adverse Effect [36 CFR § 800.5(b)] on historic properties, explain why the criteria of adverse effect, 36 CFR Part 800.5(a)(1), were found not applicable.

☐ Adverse Effect [36 CFR § 800.5(d)(2)] on historic properties, explain why the criteria of adverse effect, [36 CFR Part 800.5(a)(1)], were found applicable.

Please print and mail completed form and required information to:

State Historic Preservation Office, Environmental Review Office, Michigan Historical Center, 702 W. Kalamazoo Street, P.O. Box 30740, Lansing, MI 48909-8240

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ATTACHMENT F

National Natural Landmarks in Michigan

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National Natural Landmarks in Michigan

Designated Landmarks in Upper Peninsula Counties

1. Dukes Research Natural Area (Marquette County): 231 acres in the U.S. Forest Service Upper Peninsula Experimental Station, 22 miles southeast of Marquette near Maple Grove.

2. Porcupine Mountains (Gogebic and Ontonagon Counties): 47,761 acres on the southern shore of Lake Superior, 14 miles north of Wakefield.

3. Strangmoor Bog (Schoolcraft County): 9,700 acres within the Seney National Wildlife Refuge, 14 miles southwest of Seney.

Designated Landmarks in Lower Peninsula Counties

1. Black Spruce Bog Natural Area (Jackson County): 120 acres within the Waterloo State Recreation Area, 5 miles south of Stockbridge.

2. Dead Stream Swamp (Missaukee and Roscommon Counties): 11,680 acres on the western shore of Houghton Lake, 4 miles northwest of Houghton Lake Heights.

3. Grand Mere Lakes (Berrien County): 1,200 acres on the shore of Lake Michigan, 1 mile southwest of Stevensville.

4. Haven Hill State Natural Area (Oakland County): 546 acres within the Highland State Recreation Area, 3 miles northeast of Milford.

5. Newton Woods (Cass County): 40 acres in the vicinity of the Goff Lakes, 1½ miles southwest of Marcellus.

6. Roscommon Virgin Pine Stand (Roscommon County): 16 acres in the Au Sable State Forest, 8 miles north of St. Helen near Keno.

7. Tobico Marsh (Bay County): 956 acres on the western shore of Saginaw Bay, 7 miles north of Bay City.

8. Toumey Woodlot (Ingham County): 24 acres within the boundaries of the Michigan State University campus, 2½ miles south of Okemos.

9. Warren Woods Natural Area (Berrien County): 312 acres by the Galien River, 2½ miles northwest of Three Oaks.

Maps of specific locations are available upon request.

October 2005

ATTACHMENT G

Regional Planning Agency Addresses

Regional Planning Agency Addresses

Region 1: **Livingston, Macomb, Monroe, Oakland, St. Clair, Washtenaw, and Wayne Counties**

Southeast Michigan Council of Governments (SEMCOG)
535 Griswold Street, Suite 300
Detroit, MI 48226-3602

Region 2: **Hillsdale, Jackson, and Lenawee Counties**

Region 2 Planning Commission
120 West Michigan Avenue
Jackson, MI 49201

Region 3: **Barry, Branch, Calhoun, Kalamazoo, and St. Joseph Counties**

Southcentral Michigan Planning Council
PO Box 2137
Portage, MI 49081

Region 4: **Berrien, Cass, and Van Buren Counties**

Southwestern Michigan Commission
185 East Main Street, Suite 701
Benton Harbor, MI 49022

Region 5: **Genesee, Lapeer, and Shiawassee Counties**

Genesee County Metropolitan Planning Commission
1101 Beach Street, Room 223
Flint, MI 48502

Region 6: **Clinton, Eaton, and Ingham Counties**

Tri-County Regional Planning Commission
913 West Holmes Road, Suite 201
Lansing, MI 48910

Region 7: **Arenac, Bay, Clare, Gladwin, Gratiot, Huron, Iosco, Isabella, Midland, Ogemaw, Roscommon, Saginaw, Sanilac, and Tuscola Counties**

East Central Michigan Planning & Development Regional Commission
3144 Davenport Avenue, Suite 200
Saginaw, MI 48602-3494

March 2004

Region 8: **Allegan, Ionia, Kent, Mecosta, Montcalm, Osceola, and Ottawa Counties**

West Michigan Regional Planning Commission
820 Monroe Avenue, NW, Suite 214
Grand Rapids, MI 49503

Region 9: **Alcona, Alpena, Cheboygan, Crawford, Montmorency, Oscoda, Otsego, and Presque Isle Counties**

Northeast Michigan Council of Governments
PO Box 457
Gaylord, MI 49735

Region 10: **Antrim, Benzie, Charlevoix, Emmet, Grand Traverse, Kalkaska, Leelanau, Manistee, Missaukee, and Wexford Counties**

Northwest Michigan Council of Governments
PO Box 506
Traverse City, MI 49685

Region 11: **Chippewa, Luce, and Mackinac Counties**

Eastern Upper Peninsula Regional Planning & Development Commission
PO Box 520
Sault Ste Marie, MI 49783

Region 12: **Alger, Delta, Dickinson, Marquette, Menominee, and Schoolcraft Counties**

Central Upper Peninsula Planning & Development Regional Commission
2415 14th Avenue, South
Escanaba, MI 49829

Region 13: **Baraga, Gogebic, Houghton, Iron, Keweenaw, and Ontonagon Counties**

Western Upper Peninsula Planning & Development Regional Commission
PO Box 365
Houghton, MI 49931

Region 14: **Lake, Mason, Muskegon, Newaygo, and Oceana Counties**

West Michigan Shoreline Regional Development Commission
PO Box 387
Muskegon, MI 49443-0387

ATTACHMENT H

Tribal Historic Preservation Officers

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The following Tribes should be contacted when you have information requests in the following counties in the state of Michigan.

Genesee, Lapeer, Lenawee, Livingston, Macomb, Monroe, Oakland, Shiawassee, St. Clair, Washtenaw, and Wayne counties.
Please contact the following tribes:

1. Bay Mills Indian Community
   Wanda Perron
   12214 W. Lakeshore Drive
   Brimley, MI 49715-9320
   1-906-248-3354 ext. 4212
   history@baymills.org
2. Burt Lake Band of Ottawa & Chippewa Indians
   Curtis Chambers
   6461 Brutus Road
   P.O. Box 206
   Brutus, MI 49716
   1-231-529-6113
   blbtc@burtlakeband.org
3. Grand River Band of Ottawa Indians
   Ron Yob
   1251 Plainfield NE Ste B
   PO Box 2937
   Grand Rapids, MI 49501
   1-616-458-8759
   Fax 1-616-458-9039
   ron_yob@yahoo.com
4. Grand Traverse Band of Ottawa and Chippewa Indians
   Robert Kewaygoshkum
   2605 NW Bayshore Drive
   Peshawbetown, MI 49682
   1-231-271-3538
   gtb@gtb.nsn.us
5. Hannahville Potawatomi Indian Community
   Earl Meshigaud
   14911 Hannahville B-1 Road
   Wilson, MI 49896
   1-906-466-2932 ext. 124
   earlmeshigaud@hannahville.org
6. Keweenaw Bay Indian Community
   Summer Sky Cohen
   16429 Beartown Road
   Baraga, MI 49908
   1-906-353-6272 ext. 6272
   schoen@kbic-nsn.gov
7. Lac Vieux Desert Band of Lake Superior Chippewa Indians
   Giiwegiizhigookway Martin
   P.O. Box 249
   Watersmeet, MI 49969
   1-906-358-0137
   gmartin@lvdtribal.com
8. Little River Band of Ottawa Indians
   Jay Sam
   375 River Street
   Manistee, MI 49660
   1-231-398-2220
   jsam@lrboi.com
9. Little Traverse Bay Band of Odawa
   Winnay Wemigwase
   7500 Odawa Circle
   Harbor Springs, MI 49740
   1-231-242-1455
   wwemigwase@tbbodawa-nsn.gov
10. Match-e-be-nash-shee-wish Band of Potawatomi Indians
    Ed Pigeon
    P.O. Box 218
    Dorr, MI 49323
    1-616-681-9510 ext. 342
    espigeon@mbpi.org
11. Nottawaseppi Band of Huron Potawatomi
    RoAnn Beebe
    2221 1 ½ Mile Road
    Fulton, MI 49052
    1-269-729-5151
12. Pokagon Band of Potawatomi
    Mark Parrish
    P.O. Box 180
    Dowagiac, MI 49047
    1-269-782-9602
13. Saginaw Chippewa Indian Tribe of MI
    William Johnson
    6650 E. Broadway
    Mt. Pleasant, MI 48858
    1-989-775-4730
    wjohnson@sagchip.org
14. Sault Ste. Marie Tribe of Chippewa
    Cecil E. Pavlat Sr.
    523 Ashmun
    Sault Ste. Marie, MI 49783
    1-906-635-6050 ext. 26151

The following Tribes should be contacted when you have information requests in the following counties in the state of Michigan:

Allegan, Barry, Berrien, Branch, Calhoun, Cass, Hillsdale, Ionia, Jackson, Kalamazoo, Kent, Ottawa, St. Joseph, and Van Buren counties.
Please contact the following tribes:

1. Grand River Band of Ottawa Indians
   Ron Yob
   1251 Plainfield NE Ste B
   PO Box 2937
   Grand Rapids, MI 49501
   1-616-458-8759
   Fax 1-616-458-9039
   ron-yob@yahoo.com
2. Hannahville Potawatomi Indian Community
   Earl Meshigaud
   14911 Hannahville B-1 Road
   Wilson, MI 49896
   1-906-466-2932 ext. 124
   earlmeshigaud@hannahville.org
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   jsam@lrboi.com
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   P.O. Box 218
   Dorr, MI 49323
   1-616-681-9510 ext. 342
   espigeon@mbpi.org
5. Nottawaseppi Band of Huron Potawatomi
   RoAnn Beebe
   2221 1 ½ Mile Road
   Fulton, MI 49053
   1-269-729-5151
6. Pokagon Band of Potawatomi
   Mark Parrish
   P.O. Box 180
   Dowagiac, MI 49047
   1-269-782-9602

The following tribes should be contacted when you have information requests in the following counties in the state of Michigan.

Alpena, Antrim, Benzie, Charlevoix, Cheboygan, Crawford, Emmet, Grand Traverse, Kalkaska, Lake, Leelanau, Manistee, Mason, Mecosta, Missaukee, Montcalm, Montmorency, Muskegon, Newaygo, Oceana, Osceola, Otsego, Presque Isle, Roscommon, and Wexford counties.
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1. Burt Lake Band of Ottawa & Chippewa Indians
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   jsam@lrboi.com
5. Little Traverse Bay Band of Odawa
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   7500 Odawa Circle
   Harbor Springs, MI 49740
   1-231-242-1455
   wwemigwase@tbbodawa-nsn.gov

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   wjohnson@sagchip.org

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   Brimley, MI 49715-9320
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   wwemigwase@tbbodawa-nsn.gov
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   523 Ashmun
   Sault Ste. Marie, MI 49783
   1-906-635-6050 ext. 26151
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   Watersmeet, MI 49969
   1-906-358-0137
   gmartin@lvdtribal.com

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