

Match-E-Be-Nash-She-Wish Band of Pottawatomi Indians Nonpoint Source Management Program Plan

Prepared for:

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List of Acronyms

Acronym	Definition
NPS	Nonpoint Source
MBPI	Match-E-Be-Nash-She-Wish Band of Pottawatomi Indians
EPA	United States Environmental Protection Agency
K&A	Kieser & Associates, LLC
CSA	Critical Source Areas
BMP	Best Management Practice
WMP	Watershed Management Plan
CWA	Clean Water Act
MDNR	Michigan Department of Natural Resources
FWS	United States Fish and Wildlife Service
GLC	Gun Lake Casino
LCCC	Luella Collins Community Center
IPM	Integrated Pest Management
ACCD	Allegan County Conservation District
SESC	Soil Erosion and Sediment Control
MDOT	Michigan Department of Transportation
LID	Low Impact Development
MAEAP	Michigan Agricultural Environmental Assurance Program
ACRC	Allegan County Road Commissioner
MDARD	Michigan Department of Agriculture and Rural Development
KRWC	Kalamazoo River Watershed Council

Section 1. Overview

This Nonpoint Source (NPS) Management Program Plan has been created, following the NPS Assessment Report, for the Match-E-Be-Nash-She-Wish Band of Pottawatomi Indians of Michigan (MBPI/Tribe), also known as the Gun Lake Tribe, to fulfill the United States Environmental Protection Agency (EPA)'s requirements for a Clean Water Act Section 319 program. Kieser & Associates, LLC (K&A), an environmental science and engineering firm based in Kalamazoo, Michigan, was retained to conduct, in partnership with the Tribe, the Assessment Report and this Management Program Plan. The report and the program plan are each designed as stand-alone documents which follow specific EPA guidelines and comply with the requirements of the act as identified in the *Handbook for Developing and Managing Tribal Nonpoint Source Pollution Programs Under Section 319 of the Clean Water Act* (USEPA 2010). The NPS Assessment Report identifies critical source areas (CSAs) of NPS pollution and summarizes the current conditions of Tribal water resources and NPS impacts. Based on these findings, the NPS Management Program Plan provides a detailed framework to identify and guide appropriate, sustainable future management actions including the implementation of best management practices (BMPs).

The Match-E-Be-Nash-She-Wish Band of Pottawatomi Indians is a federally recognized sovereign nation located in Southwest Michigan. The Tribe historically inhabited the Kalamazoo River Valley with their primary village located at the head of the Kalamazoo River. In 2000, the Gun Lake Tribe adopted their present-day constitution. The Tribal Council has authority over all Tribal affairs and consists of seven popularly elected members. The Tribe works to “maintain our elders’ vision, integrity, spirituality, culture, and economic self-sufficiency by protecting our sovereignty, treaty rights, traditions, land and natural resources for our future generations” (Gun Lake Tribe, *Our Heritage* 2017).

The Gun Lake Tribe and its members value water as a critical resource and cultural element. The Tribe strives to identify and protect MBPI lands and waters supporting animals of cultural significance, such as sturgeon, sandhill cranes, herons, ducks, otters and turtles. The Tribe also considers mnomen (wild rice – *Zizania aquatica* and *Zizania palustris*) an important cultural and ecological resource. The Tribe leads and cooperates on several projects to restore such important ecological resources, such as lake sturgeon habitat and mnomen beds, throughout the region.

As of January 1, 2019, MBPI lands include approximately 605 acres of Trust land and 558 acres of Fee land in Southwest Michigan. Table 1 provides a summary atlas of the Tribe’s water resources. The Tribe’s Government Campus is located south of Wayland in Allegan County, Michigan. The Gun Lake Tribe’s lands span multiple, non-contiguous land parcels throughout Allegan County totaling approximately 1,163 acres of both Fee and Trust Land. The Tribe’s service area includes Allegan, Barry, Kalamazoo, Kent and Ottawa Counties.

Figure 1 illustrates the location of Gun Lake Tribe’s lands and waterbodies in relation to their watersheds and subwatersheds. Waters of the Gun Lake Tribe’s lands are a part of the Rabbit River and Gun River watersheds, both part of the Kalamazoo River watershed. The majority of the Gun Lake Tribe’s subwatersheds drain to the Rabbit River, which is located primarily in Allegan County but also extends into Barry, Ottawa and Kent Counties and encompasses

approximately 187,200 acres. The Gun River watershed encompasses 73,272 acres in Allegan and Barry Counties, Michigan.

Table 1: Summary atlas of MBPI water resources

Resource Description	Trust Lands	Fee Lands	All Gun Lake Tribe Lands
Land Surface Area (ac)	604.4	558.5	1162.9
Rivers/Streams (km)	1.6	2.8	4.3
Lakes/Reservoirs/Ponds (#)	3.0	5.0	8.0
Lakes/Reservoirs/Ponds (ac)	20.3	56.4	76.7
Wetlands (ac)	62.5	43.4	105.9

Figure 1: Watersheds and subwatersheds map of Gun Lake Tribe’s waterbodies

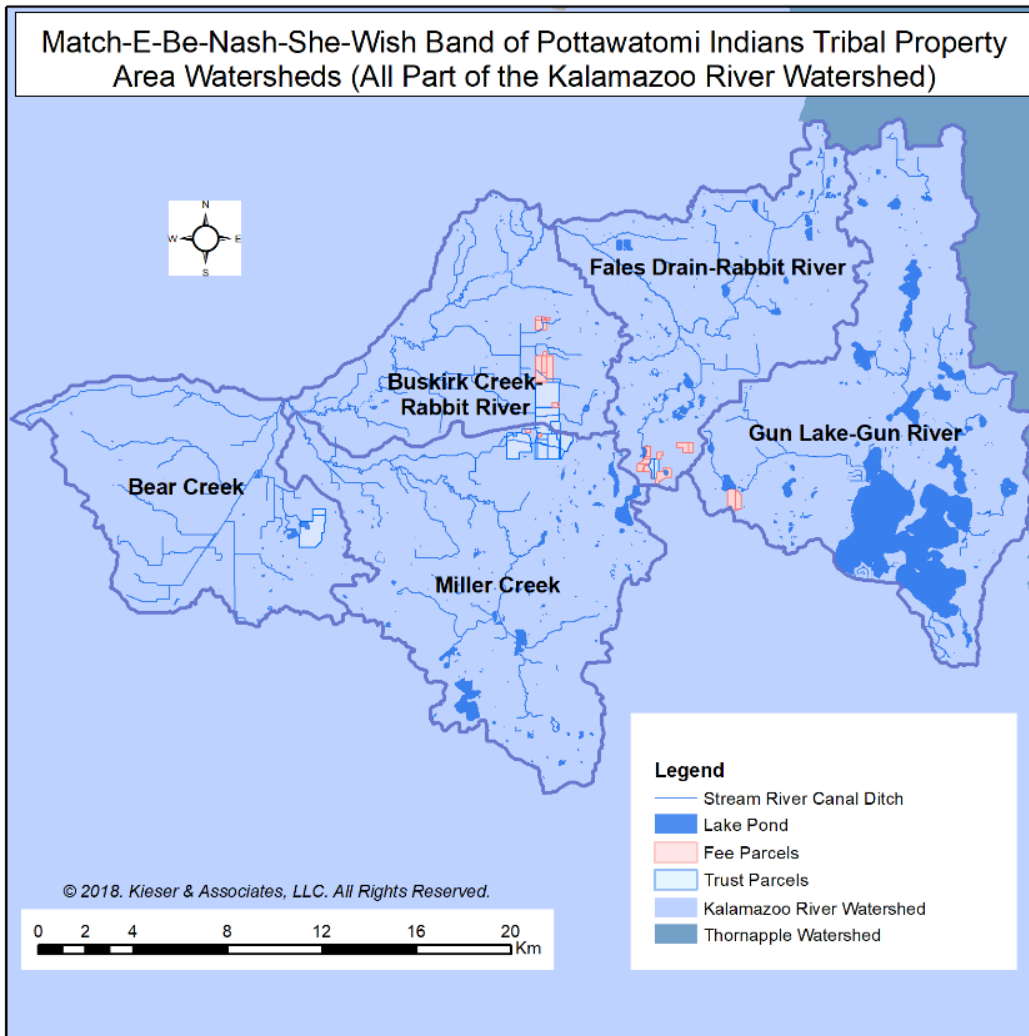


Table 2 outlines the scale of watersheds and subwatersheds for each contributing waterbody passing through Tribal lands. The Kalamazoo River watershed drains approximately 1,292,800 acres, spanning a variety of land uses in southwest Michigan. Known and suspected impairments to State of Michigan Designated Uses for the Kalamazoo River Watershed include: 1)

indigenous aquatic life and wildlife, impaired by nutrients, sediment, habitat degradation or fragmentation and unstable flows; 2) warmwater fisheries, impaired by oil, grease and petroleum hydrocarbons; 3) cold-water fisheries, impaired by temperature; and 4) total and partial body contact recreation, impaired by pathogens and bacteria (KRW 2011).

Table 2: Watersheds and contributing waterbodies crossing through MBPI lands

Hydrologic Unit Code (HUC)	Watershed/Subwatershed	Contributing MBPI Waterbodies	Scale
04050003	Kalamazoo River	All	<i>Big</i>
0405000308	Rabbit River	Buskirk Creek, Selkirk Creek, Bear Creek, Miller Creek, Fales Drain	↓
0405000307	Gun River	Gun Lake-Gun River (via Boot Lake)	
040500030805	Buskirk Creek-Rabbit River	Buskirk Creek, Selkirk Creek	
040500030804	Bear Creek	Ingerson Lake, Herlan Lake, Unnamed Creek (<i>Jijak Camp</i>)	
040500030803	Miller Creek	Pierce County Drain Extension, Unnamed Creek (<i>Gun Lake Casino</i>)	
040500030802	Fales Drain-Rabbit River	Indian Lake, Moore Lake	
040500030701	Gun Lake-Gun River	Boot Lake	

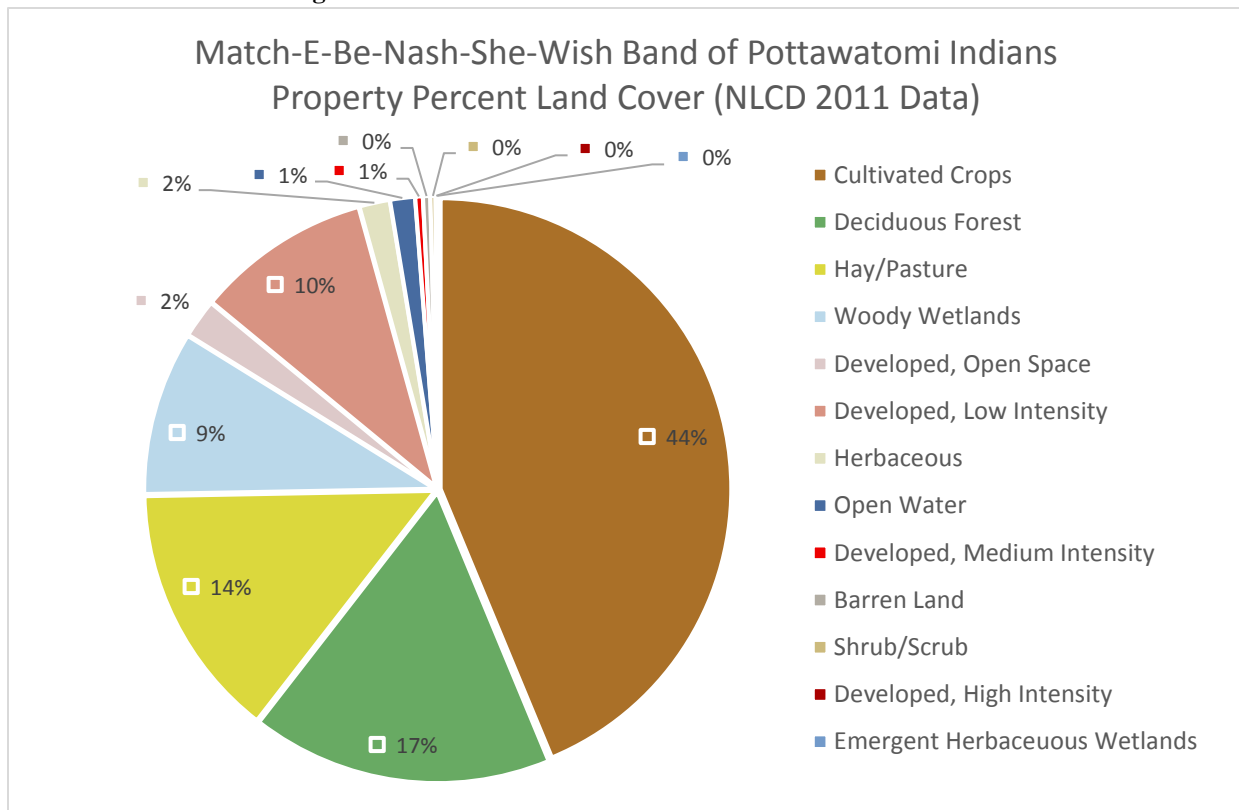
The Rabbit River watershed, encompassing approximately 187,200 acres, experiences flashy flows and NPS impairments of sediments, nutrients, pathogens, and pesticides from agriculture and nutrients and pathogens from residential areas. The Rabbit River empties into a stretch of the Kalamazoo River included in the Wild and Scenic River priority protection area. Land types in this watershed are primarily agricultural, forested, and urban, though the majority of the watershed is rural (FTCH 2009). The Gun River watershed encompasses 73,272 acres in Allegan and Barry Counties. This watershed experiences NPS impairments including sediment and nutrient loading from agriculture, nutrients, pathogens, hydrocarbons, exotic species, hydrology and habitat fragmentation from residential areas, and *E. coli* and nutrients from recreational areas (FTCH 2004). EPA-approved watershed management plans (WMPs) were established for the Rabbit River watershed in 2009 (FTCH 2009) and for the Gun River watershed in 2004 (FTCH 2004).

The Gun Lake Tribe’s Environmental Department has implemented an EPA-approved formal QAPP for water quality monitoring since 2010, which was expanded and updated in 2015. The Tribe currently collects water quality data on Buskirk Creek and the Pierce County Drain Extension, as well as water quality and aquatic vegetation data on Boot Lake, Indian Lake and Ingerson Lake. Monitoring has also occurred on Selkirk Lake, Long Lake and Mill Pond, outside of MBPI lands (MBPI 2010, 2015).

Due to newly acquired land, the Tribe will apply to expand their QAPP in 2019. The expanded monitoring regime will include new water quality monitoring stations on Moore Lake and two unnamed streams, one originating at Jijak Camp and the other originating at the Gun Lake Casino. Additional downstream monitoring sites will be added on Buskirk Creek and the Pierce County Drain Extension. A continuous monitoring station will also be installed at Indian Lake. The proposed expanded monitoring program is further detailed in Section 3.4 of this NPS Management Program Plan.

NPS pollution is the leading source of water quality degradation in the United States (USEPA 2010). NPS pollution occurs when anthropogenic developments disturb the land or water, causing adverse changes to the ecology and hydrology of waterbodies through pollutant transport and deposition into aquatic systems, including groundwater. Certain land use types tend to contribute greater amounts of NPS pollution, particularly when these lands not properly managed to prevent NPS pollutant transport to waterbodies through runoff or aerial deposition. Land uses of the Gun Lake Tribe’s properties include approximately 44% Cultivated Crops (506 acres), 17% Deciduous Forest (194 acres), 14% Hay/Pasture (164 acres), 10% Low Intensity Development (113 acres), and the remaining 15% is made up of Open Space Development, Woody Wetlands, Herbaceous, Open Water, Medium Intensity Development, Barren Land, Shrub/Scrub, High Intensity Development and Emergent Herbaceous Wetlands. Figure 2 illustrates the approximate percent land cover of the Gun Lake Tribe’s lands.

Figure 2: Percent land cover of the Gun Lake Tribe’s lands



The Nonpoint Source Assessment Report shows that Tribal waterbodies are most affected by the following NPS pollutant categories both on Tribal lands and in upstream and downstream areas:

- Agriculture
- Transportation: Roads, highways and bridges
- Urbanized (developed) areas
- Hydromodification including wetland and riparian habitat alterations

The Nonpoint Source Assessment Report further suggests that, within these categories, the most consistent nonpoint source pollution problems facing these waterbodies include:

- Impairments mainly due to unstable and flashy flows,
- Increased levels of sediments, nutrients, pathogens and pesticides contributed by agricultural and developed areas which lack adequate stormwater controls,
- Riparian habitat and wetlands fragmentation, and
- Hydrologic alterations.

To address these issues, this NPS Management Program Plan includes: 1) a summary of water quality impairments; 2) identification of NPS management projects and BMPs, associated programs and funding sources that can assist in BMP implementation; and 3) a schedule for priority projects and BMP implementation.

This report fulfills the legal requirement for the NPS Management Program Plan under Section 319 of the Clean Water Act (CWA) for these MBPI Tribal waters. Approval of the NPS Management Program Plan will allow the Gun Lake Tribe to pursue federal grant funding to assist with the implementation of structural and non-structural BMPs toward reducing NPS pollutant impacts.

Section 2. Introduction

The MBPI NPS Management Program Plan provides a management framework to guide the implementation of BMPs toward addressing the NPS pollution issues identified in the MBPI NPS Assessment Report. The program plan includes a schedule with measurable milestones associated with specific management tasks to cover a five-year period of planned efforts. The goal of this NPS Management Plan is to strategically identify and prioritize feasible and appropriate BMPs toward fulfilling the specific objectives of the Tribe's Environmental Department.

Specific objectives of the Gun Lake Tribe's Environmental Department, as outlined in the Tribe's Environmental Department FY 2017-2021 Strategic Plan, include (Gun Lake Tribe 2017):

1. Conserve and restore environmental resources, developing the foundations for safeguarding these resources for the next seven generations.
2. Protect woodlot habitat and resources by reducing the risk of invasive species invasions while safeguarding these resources for the next seven generations.
3. Rehabilitate the Kalamazoo River Lake Sturgeon, developing the foundations for the protection of this species for the next seven generations.
4. Provide Environmental Services to Tribal citizens and government.
5. Protect environmental resources for the next seven generations.
6. All Environmental Department staff will be culturally aware and respectful.
7. Gain support and consensus from Tribal Council and the other two southern MI Potawatomi Tribes on a path to move forward with asserting Treaty Rights.
8. Develop and offer youth and family programming: Strengthen the recovery and preservation of traditional environmental knowledge and lifeways by developing these foundations for safeguarding these resources for the next seven generations.

9. Aim for at least one outside partner to be involved and/or invested in each stewardship project.

Prioritization of management projects is expressed in this plan as “High,” “Medium” and “Low” priority based on a suite of prioritization indicators. The plan prioritizes projects including BMPs that will address NPS pollution issues within the Buskirk Creek-Rabbit River, Bear Creek, Miller Creek, Fales Drain-Rabbit River and Gun Lake-Gun River subwatersheds of the Rabbit River and Gun River watersheds, both tributaries to the Kalamazoo River. Priority is given foremostly to BMPs that can be implemented on MBPI properties. Prioritized BMPs on non-Tribal lands are those that directly impact Tribal waters and can be undertaken with willing partnerships as identified in this plan.

Each prioritization indicator was also translated into a numerical score of 0 (low priority, impact, feasibility, etc.) to 3 (high priority, impact, feasibility, etc.) and the total scores were compared to help develop the final project prioritization tables. Additional prioritization indicators used for developing the prioritization tables found in Appendix A include:

- Impaired or threatened designated and desired use status and potential future source threats to the receiving waterbody,
- Project feasibility and constraints,
- Potential volume capture and pollutant load reduction,
- Potential cost-effectiveness,
- Hydrological, ecological, and community benefits,
- Proximity to receiving waters,
- EMC modeling results of volume, sediment and nutrient losses from contributing parcels,
- Relevance to other existing or potential implementations,
- Estimated implementation timeline including potential design and build times,
- Maintenance requirements and
- Relevance to the Environmental Department’s monitoring program.

To fulfill the Tribe’s goals and objectives the NPS Management Plan includes tables of prioritized BMPs, a detailed schedule of management activities including milestones and identification of opportunities to coordinate with other Tribes and appropriate non-tribal programs and partners. These efforts set the stage for future BMP implementations designed to effectively reduce NPS pollutant impacts from critical source areas both within and outside of Tribal lands in order to address water quality impairments and threats to Tribal waterbodies.

Section 3. Tribal NPS Management Program Summary

The MBPI Environmental Department will be the main driver of the NPS Management Program Plan. Success of the program, however, will rely on interdepartmental coordination within the Tribe to ensure that NPS management strategies and specific project plans are fully integrated into future land use planning and developments. Recommendations for each proposed project and BMP therefore carefully consider the relevant future land use development potential as part of the management strategy specific to each site.

Section 3 describes the codes, plans, and ordinances relevant to implementation of the Gun Lake Tribe's NPS management program. It also outlines the Tribe's governance and staffing structure related to implementing the program as well as relevant non-Tribal partners who may aid in implementing projects and BMPs. Finally, this section outlines the MBPI Environmental Department's planned monitoring efforts, including measures to determine the effectiveness of BMPs, and coordinated reporting strategies to fulfill the requirements of this program plan.

Section 3.1. Relevant Ordinances, Codes and Plans

The NPS Management Program Plan will guide the course of action toward NPS pollution management implementations. The MBPI Environmental Council and the Tribal Council will provide oversight on decisions regarding implementation of the program. The following MBPI ordinances, codes and plans will be accounted for during each stage of NPS management planning and implementation on Tribal lands:

- MBPI Environmental Department monitoring program Quality Assurance Protection Plan (QAPP) (2015, currently being updated for 2019): To guide the Tribe's CWA 106 water quality monitoring activities.
- Gun Lake Tribe's Environmental Department FY2017 – 2021 Strategic Plan (Gun Lake Tribe 2017): To guide integration of NPS management activities in all future land developments.
- Source Water Protection Plan (ITCM 2013): Currently developing to inform and guide implementation of NPS management activities related to groundwater.
- Hazardous Materials Ordinance: To protect the Gun Lake Tribe from extraordinary expenses resulting from incidences involving hazardous materials.
- Civil Infraction Ordinance, Chapter III, Section 4: To prevent littering.

Relevant ordinances, codes, and plans for any future NPS management activities within the subwatersheds of the MBPI lands to be undertaken on non-Tribal lands include:

- EPA-approved WMP for the Kalamazoo River watershed, published in 2011 (KRWC 2011).
- EPA-approved WMPs for the Rabbit River watershed in 2009 (FTCH 2009) and for the Gun River watershed in 2004 (FTCH 2004). Both WMPs are due for technical updates based on the typical 10-year update cycle, however, neither have been updated.
- Allegan County Soil Erosion and Sedimentation Control Ordinance (ordinance #1013.1): Requires soil erosion permits for all projects involving earth moving activities that occur within 500 feet of lakes, streams, drains and water impoundments and disturb more than 225 square feet or disturb one or more acres.
- Hopkins Township Code of Ordinances, Title XV, Chapter 151: Earth-Changing Activities: Regulates activities such as mining, moving, removing, transporting, dumping, spreading, stockpiling, digging, bulldozing or otherwise manipulating soil.
- Wayland Township Ordinances, Chapter 3, General Provisions:
 - Section 3.13: To prevent "unwholesome substances" such as "sewage, waste water or water containing foreign substances" from being deposited or drained to any unapproved land or surface waterbody.
 - Section 3.24: Requires water supply and sewage disposal facilities to safely and sanitarily supply or dispose of all water or water-carried wastes.

- Section 3.32: Outlines development rules for lots having water frontage.
- Section 3.37: To protect groundwater, prohibits contamination of surface and subsurface waters by land use, storage or placement of materials that might seep, percolate or wash into these waters.
- Section 3.40: To preserve open space projects, the township must adopt zoning regulations to permit “open space preservation,” providing requirements for residential developments to preserve 50% of open space.
- Wayland Township Ordinances, Chapter 16, Rabbit River Protection Overlay Zone: To help protect water quality and habitat in waterways of Wayland Township by encouraging vegetative buffers.

These Tribal and non-Tribal ordinances help lay the foundation for developing the MBPI NPS Management Program Plan. Ongoing coordination with relevant local and regional authorities will be an important aspect for implementation of the NPS management program. As the program evolves, the Tribe will consider developing additional policies modeled after relevant ordinances or codes to support future conservation or improvement projects on MBPI lands.

Section 3.2. Tribal NPS Program Partners

The MBPI Environmental Department is the main driver of the NPS Assessment Report and NPS Management Program Plan. Applicable governing bodies within the Gun Lake Tribe, including the Environmental Committee and the Tribal Government Council, will review the NPS Assessment Report and NPS Management Program Plan prior to submittal to the EPA. The document reviews will also include inputs from the Tribe’s legal counsel. The Tribe’s land use authority rests within the Tribal Council of the sovereign MBPI government, with oversight from the Tribal Government Committees. An organizational chart outlining the governance structure of the Gun Lake Tribe is included as Figure 3.

Interdepartmental coordination will be an important part of the NPS Management Program implementation. The Tribal Administrators will assist in this type of coordination so that the Environmental Department can efficiently implement the Management Program Plan. Close coordination with the Director of Land Use, Planning, and Development will be necessary to incorporate NPS management strategies into all future land use concepts and implementations. Coordination with the Grants, Planning and Management Director will occur when applying for and managing grants. The Communications Coordinator will help to ensure coordinated reporting and inclusion of NPS management implementations in Tribal communiques. The Educational Director may also play an important role where NPS management projects contain a community demonstration or educational aspect. Other departmental directors, such as the Public Works and Public Safety Directors could also be engaged in the development and implementation of projects which overlap with their departmental duties.

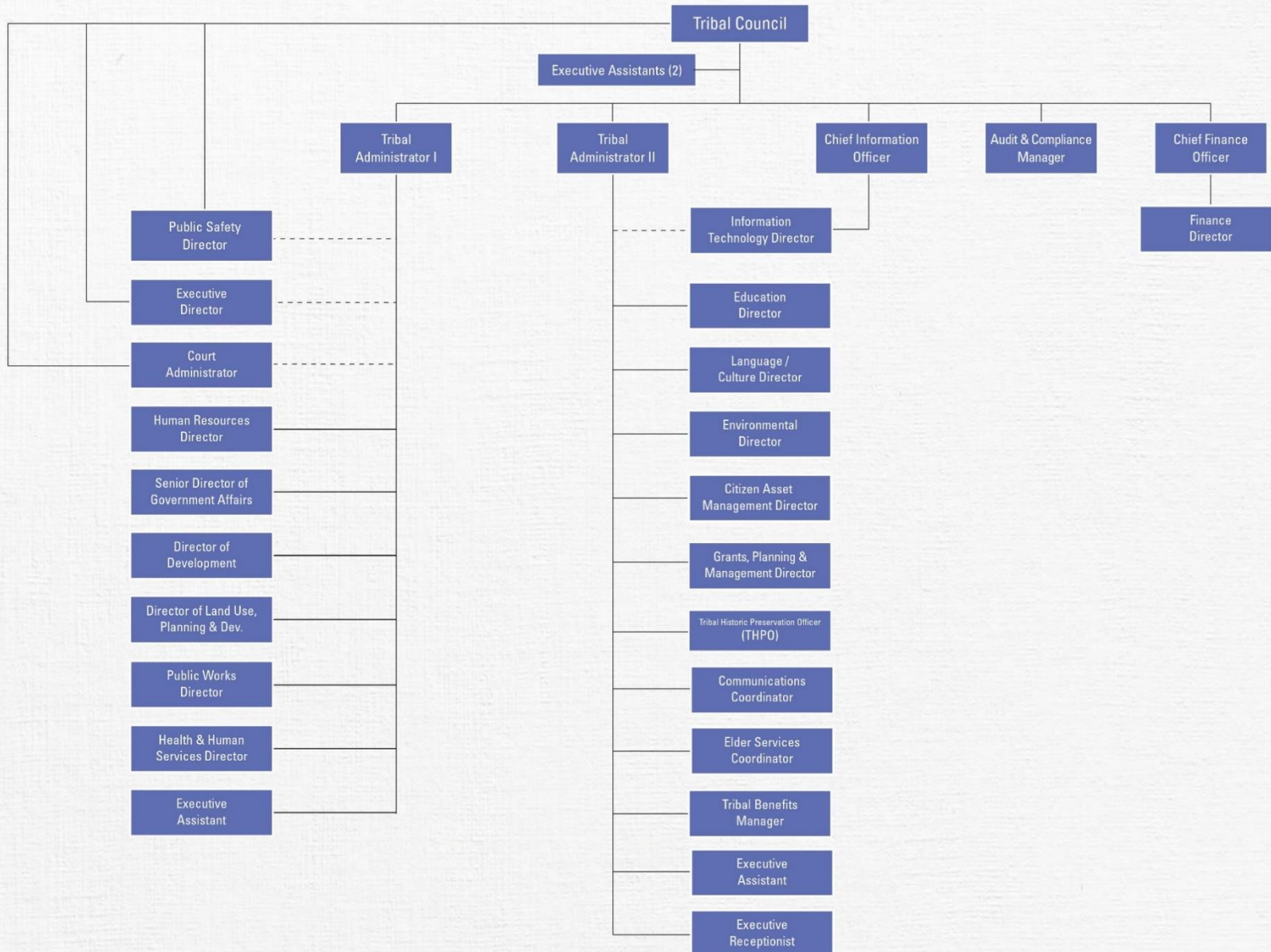
Section 3.4 provides details of the MBPI Environmental Department’s role in implementing the NPS Management Program. The Gun Lake Tribe’s Environmental Department will oversee the implementation of new BMPs and direct the maintenance of existing BMPs on Tribal lands. The Tribe will continue to address NPS on its properties through collaboration with community stakeholders and Tribal members, as appropriate.

Figure 3: Organizational chart for the Gun Lake Tribe.



ORGANIZATIONAL CHART FOR GUN LAKE TRIBE

REVISION 2
12/13/2018



Section 3.3. Non-Tribal NPS Program Partners

BMP implementation on Tribal lands will be achieved using a variety of existing NPS programs, funding sources and education and outreach programs. The MBPI Environmental Department works closely with Tribal and non-Tribal partners on conservation projects throughout the region. For example, the Tribe currently works with the the Michigan Department of Natural Resources (MDNR), the United States Fish and Wildlife Service (FWS), Grand Valley State University and the Kalamazoo Chapter of Sturgeon for Tomorrow for rehabilitation efforts to protect and increase populations of lake sturgeon (*Acipenser fulvescens*) (Gun Lake Tribe, Environmental Projects 2017). Continued collaboration with other agencies/stakeholders particularly within the Kalamazoo River watershed, Rabbit River subwatershed and Gun River subwatershed, is encouraged throughout the process, specifically for BMPs not on Tribal Lands.

The Tribe may work with a number of agencies and organizations to implement BMPS on Tribal lands. As laid out in the Assessment Report, these agencies and organizations may include but are not limited to:

- Bureau of Indian Affairs
- US Environmental Protection Agency (EPA)
- US Fish and Wildlife Service (FWS)
- Natural Resource Conservation Service
- Allegan County Conservation District
- Barry County Conservation District
- Kent County Conservation District
- Ottawa County Conservation District
- Michigan Department of Environmental Quality (MDEQ)
- Michigan Department of Natural Resources (MDNR)
- Kalamazoo River Watershed Council
- Grand Valley State University
- Michigan State University Extension
- Pierce Cedar Creek Institute
- West Michigan Conservation Network
- BCK CISMA
- Outdoor Discovery Center
- Federal Emergency Management Agency (FEMA)

Appendix B describes in greater detail each partnerships role in implementing a CWA-319 program. This includes specific detail for each organization outlining their programmatic capacities as a potential partner organization for the CWA-319 program. Through the course of implementation, the Gun Lake Tribe will also review sources of Federal financial assistance and Federal development projects of potential relation to their CWA-319 program. Individual assistance applications or development projects from such sources will be reviewed to determine their potential consistency with or effect on water quality improvement goals. These sources will include the Bureau of Indian Affairs, US Fish and Wildlife Service, US Department of Housing and Urban Development and other programs.

Section 4 includes tables that outline, in part, which primary partnerships will likely be utilized for each proposed management project. The MBPI Environmental Department will work closely with the Gun Lake Tribe Governmental bodies as appropriate, to ensure BMPs are being effectively employed on Tribal lands to address current NPS as well as those that could be potentially caused by any new development.

Section 3.4. Monitoring and Assessment

The mission of the MBPI Environmental Department is to “promote environmental and human health through conservation and management, improving sustainability of our natural and environmental resources for the next seven generations.” The Department is overseen by the Environmental Director, with oversight from the Environmental Committee. The Environmental Department developed an EPA-approved QAPP in 2010 which was subsequently updated in 2015 with another update pending in 2019. The purpose of the Tribe’s water quality monitoring program is to gather information and assess current conditions in order to develop MBPI water policies and land development guidance. The in-depth water quality sampling conducted by the Department provides critical information used to assess the impacts of critical source areas of pollution, as shown in the MBPI NPS Assessment Report.

Table 3 outlines the proposed monitoring regime which includes several new monitoring sites and several expanded sites. The proposed 2019 sampling regime will include water quality sampling on: Buskirk Creek (3 sites), Pierce County Drain Extension (5 sites), the unnamed stream originating at Jijak Camp, Boot Lake, Indian Lake, Ingerson Lake, and Moore Lake. Monitoring will also take place on non-MBPI lakes including Selkirk Lake and Long Lake.

Parameters measured in-field by Environmental Department staff include: dissolved oxygen, temperature, pH, specific conductance, turbidity, velocity/discharge rates, waterbody depth/width and Secchi depth. Water samples for all other parameters are analyzed by a local analytical laboratory. These parameters are typically sampled on an annual or quarterly basis, depending on the site, and include: total suspended solids (TSS), total phosphorus (TP), total nitrogen (TN), nitrate-N, nitrite-N, ammonia-N, total Kjeldahl nitrogen, calcium, magnesium, sulfate, *E. coli*, chloride, chlorophyll *a* and phenophytin *a*. The Department also surveys MBPI lakes annually for aquatic vegetation and produces a detailed report.

Monitoring will play an important role in implementing future CWA 319 projects. Historic data will help provide the rationale for future implementations, while future monitoring will help quantify the impact of NPS improvement projects. Additional monitoring suggestions for potential future projects are included in the prioritization tables in Appendix A.

Table 3. MBPI proposed time table of water quality sampling

Time Table of Sampling Physical, Biological and Chemical Parameters of Sites**																
Site Name	Water Body	Latitude	Longitude	Status of Sampling	Jan ⁺	Feb ⁺	Mar ⁺	Apr	May	Jun	July	Aug	Sept	Oct	Nov ⁺	Dec ⁺
BC01	Buskirk Creek	-85.652939	42.635696	Ongoing	o	o/x	o	o	o/x	o	o/x	o	o	o/x	o	o
BC02	Buskirk Creek	-85.653558	42.63567	Ongoing	o	o/x	o	o	o/x	o	o/x	o	o	o/x	o	o
PD01	Pierce Drain	-85.649499	42.625418	Proposed	o	o/x	o	o	o/x	o	o/x	o	o	o/x	o	o
BC03	Buskirk Creek	-85.661637	42.63528	Ongoing	o	o	o	o	o	o	o/x	o	o	o	o	o
JJ	Unnamed Stream	-85.741949	42.609355	Proposed	o	o	o	o	o	o	o/x	o	o	o	o	o
PD02	Pierce Drain	-85.659175	42.627463	Proposed	o	o	o	o	o	o	o/x	o	o	o	o	o
PD03	Pierce Drain	-85.67244	42.628379	Proposed	o	o	o	o	o	o	o/x	o	o	o	o	o
PD04	Pierce Drain	-85.661493	42.631967	Proposed	o	o	o	o	o	o	o/x	o	o	o	o	o
PD05	Pierce Drain	-85.672503	42.629379	Proposed	o	o	o	o	o	o	o/x	o	o	o	o	o
BOOT	Boot Lake ^{**}	-85.588936	42.616719	Ongoing	o	o	o	o	o	o	o/x	o	o	o	o	o
IND	Indian Lake ^{**}	-85.620261	42.625660	Ongoing	o	o	o	o	o	o	o/x	o	o	o	o	o
ING	Ingerson Lake ^{**}	-85.748858	42.605447	Ongoing	o	o	o	o	o	o	o/x	o	o	o	o	o
LONG	Long Lake ^{**}	-85.508438	42.622329	Proposed	o	o	o	o	o	o	o/x	o	o	o	o	o
MOOR	Moore Lake ^{**}	-85.611857	42.619311	Proposed	o	o	o	o	o	o	o/x	o	o	o	o	o
SELL	Selkirk Lake ^{**}	-85.622772	42.614522	Ongoing	o	o	o	o	o	o	o/x	o	o	o	o	o

*Lab = x. Lab analysis will consist of TP, NO2/NO3, TKN, Chloride and *E. coli*. Blanks and duplicates will also be taken.

**Sonde = o. Sonde measurements will consist of DO, pH, and Conductivity

+Sampled if weather permits

**Sampled if budget permits

Section 3.5. Coordinated Reporting

Measurable milestones for each proposed priority project help provide a roadmap for gaging the efficacy of the NPS Management Program. Coordinated reporting within the Tribe's governance and management structure as well as between the Tribe and any project partners will facilitate knowledge sharing to ensure these milestones are being met and allow for improvements if project outcomes fall short of proposed goals and objectives. The MBPI Environmental Department staff, with direct oversight from the Environmental Director, will be highly involved in monitoring and reporting of NPS Management Program project achievements. The Environmental Director will coordinate closely with the Environmental Committee and the Tribal Administrators to provide these reporting outcomes to the Tribal Council and any other relevant Tribal governmental parties involved.

A flexible system for coordinated reporting will be developed prior to implementations to ensure the Environmental Department fulfills all reporting requirements of CWA 319 project implementations. The Tribe will work with project partners to ensure timely and accurate project reporting. This process will include a review step to ensure that specific project goals are being met and that project goals remain in line with the overall goals and objectives of the NPS Management Program. Additionally, this process may include updating and sharing reports with relevant local watershed groups or other relevant organizations beyond the program partners when applicable.

The coordinated reporting process will lead to both technical reports and publicly-accessible project summations. This process will include close coordination with the Tribe's Grants, Planning and Management Director and the Communications Coordinator. This will ensure that Tribal citizens and the regional watershed communities remain informed about the status and accomplishments of ongoing or completed projects. Project summations will also intend to increase community awareness of NPS pollutant issues and of how the Tribe is working to resolve these issues.

Prior to submittal of final reporting products, multiple reviews will have taken place. Reviewers will include the Gun Lake Tribe Environmental Department along with all applicable governing bodies within the Tribe, the Environmental Committee and the Tribal Council. Review of technical reports and project summations may also include inputs from the Tribe's legal counsel. In this way, the Tribe will ensure transparency and support continued collaboration to address NPS pollutant issues toward the benefit of Tribal citizens and the watershed communities.

Section 4. NPS Management Program Description

This section of the MBPI NPS Management Program Plan details the scope, structure, and function of the management program. This includes a review of NPS pollutants of concern and critical source areas of NPS pollution for MBPI waterbodies and references the MBPI Environmental Department's water quality monitoring strategies. Table 4 summarizes the NPS pollutants of concern and NPS pollutant categories causing slight, moderate, or severe threats or impairment to designated and desired uses of Tribal waters.

As outlined in the MBPI NPS Assessment Report, severity levels were characterized as slight, moderate, or severe using a number of quantifiable and subjective indicators relative to the assessed waterbodies. Severity indicators included measurements and observations taken by K&A staff during field surveys, data collected by the Gun Lake Tribe's Environmental Department and visual identification of contributing source areas through aerial photographs. Additional indicators included the pollutant contribution results of the HAWQS and EMC analyses. Each indicator was considered along with impaired or threatened designated and desired uses of the Tribe's waterbodies and identified potential future source threats.

Characterization as "Severe" indicates known NPS pollutant impairments and threats to designated and desired uses of Tribal waters which will worsen without management action. Characterization as "Moderate" severity indicates the presence of NPS pollutant threats to those designated and desired uses which may worsen without management action. Characterization as "Slight" severity indicates minor NPS pollutant issues which may pose a current threat to desired uses or a future threat to designated uses of Tribal waters.

Sections 4.1-4.4 discuss the impacts of each relevant category of NPS pollution upon the Gun Lake Tribe's waters, including agriculture, transportation, developed areas and hydromodification. Within Sections 4.1-4.4, Tables 5, 7, 9 and 11, respectively, summarize for each category of NPS pollution the critical source areas, severity of pollutant impacts and the potential management approaches which could be utilized to address each NPS pollutant source issue. Each discussion of potential management approaches in Tables 5, 7, 9 and 11 reflects the analyses of the MBPI NPS Assessment Report and the collective discourse of the Tribe's Environmental Department and K&A during the management program planning process.

Appendix A contains prioritization tables in which the suite of priority indicators listed in Section 2 are applied to each potential management project or BMP, given a numerical score and prioritized according to that score. Note that the prioritization scoring is an adaptive process involving both quantitative and qualitative judgements guided by the outlined goals and objectives of the NPS management program. For each priority management project or BMP, Sections 4.1-4.4 contain, in Tables 6, 8, 10, and 12, respectively, an outline of programs, partners, funding sources and a 5-year implementation schedule for each priority BMP.

Implementation of the NPS management program will follow an adaptive management approach with measurable milestones to help guide successful project implementations and future updates to the program plan. The full prioritization tables are included as Appendix A. The prioritized projects found in the Appendix A tables are summarized for each relevant category of NPS pollution in the narrative of Sections 4.1-4.4.

Table 4: Summary of NPS pollutant categories and pollutants of concern for Tribal waterbodies

NPS Category	Severity	Last 4 Digits of HUC	Agriculture	Severity	Last 4 Digits of HUC	Transportation: Roads, Highways, and Bridges	Severity	Last 4 Digits of HUC	Urbanized Areas (Development)	Severity	Last 4 Digits of HUC	Hydro-modification (incl. riparian and aquatic habitat degradation)
NPS Pollutants of Concern			Sediments, Nutrients, Pathogens, Toxicants			Sediments, Nutrients, Toxicants, Trash,			Sediments, Nutrients, Toxicants, Pathogens, Thermal Stress, Trash			Sediments, Nutrients, Thermal Stress
MBPI Waterbodies Impacted by NPS Pollutants												
MBPI Lands	Slight	0805	Buskirk Creek	Slight	0805	Buskirk Creek Selkirk Creek Extension Reno Drive Ponds	Slight	0805	Gun Lake Casino (GLC) Retention Pond Selkirk Creek Extension Reno Drive Ponds	Slight	0805	Selkirk Creek Extension Reno Drive Ponds
								0804	Unnamed Stream (Jijak)			
								0803	Pierce County Drain Extension GLC Detention Pond 2 Unnamed Stream (GLC)			
								0701	Boot Lake			
	Mod.	0803	Pierce County Drain Extension	Mod.	0803	Pierce County Drain Extension	Mod.	0805	Buskirk Creek GLC Detention Pond 1	Severe	0805	Buskirk Creek GLC Detention Pond 1
								0804	Unnamed Stream (Jijak)			
Upstream of MBPI Lands	Slight	0802	Moore Lake	Slight	0805	Buskirk Creek				Slight	0802	Indian Lake
Down-stream of MBPI Lands	Slight	0803	Unnamed Stream (GLC)	Slight	0803	Unnamed Stream (GLC)				Slight	0803	Pierce County Drain Extension Unnamed Stream (GLC)
		0701	Boot Lake Drain		0804	Ingerson Lake Drain Herlan Lake Drain Unnamed Stream (Jijak)						
	Mod.	0804	Ingerson Lake Drain Herlan Lake Drain Unnamed Stream (Jijak)	Mod.	0805	Buskirk Creek Selkirk Creek Extension						
		0805	Buskirk Creek Selkirk Creek Extension		0803	Pierce County Drain Extension						
	Severe	0805	Buskirk Creek Selkirk Creek Extension	Mod.	0805	Buskirk Creek Selkirk Creek Extension						
		0803	Pierce County Drain Extension		0803	Pierce County Drain Extension						
										Mod.	0805	Buskirk Creek Selkirk Creek Extension

Section 4.1. Agriculture

Agriculture is the predominant land use throughout the watersheds and subwatersheds of the Gun Lake Tribe's lands and waters and remains a predominant land use on MBPI parcels. Agriculture accounts for an estimated 47% of land use in the Kalamazoo River Watershed. A majority of these agricultural lands are operated for the row-cropping production of corn and soy.

Agricultural land use is the principal contributor of NPS pollution to both the Gun River and Rabbit River Watersheds. (KRWC 2011, FTCH 2004 and FTCH 2009).

NPS pollution from agricultural land uses is also the main issue impacting the waterbodies crossing through or originating on Gun Lake Tribe lands, particularly in downstream areas. Agricultural NPS pollution currently poses very little threat to MBPI lakes but is particularly threatening to MBPI streams and creeks. The MBPI NPS Assessment Report shows how five of the forty-one MBPI parcels analyzed produced 59% of the total phosphorus load and, of these five parcels, three are agricultural fields. Management priority will be given to those MBPI agricultural parcels contributing NPS pollutants directly to surface waterbodies. Several of the proposed management strategies, however, could easily be adapted for and applied to all MBPI agricultural parcels.



Figure 4. Rill erosion and tractor compaction on the Nowak parcel

NPS pollution contributions from agricultural lands includes sediment, nutrient, pathogen and toxicant loading through stormwater surface runoff and tile drainage. Agricultural land is expected to have higher nutrient loading due to fertilizer inputs. Groundwater quality, too, is susceptible to NPS pollution from nitrates found in agricultural fertilizers. Agricultural fields which drain groundwater through tile drains also contribute nutrients directly to receiving waterbodies at tile drain outlets. Streambank erosion in MBPI waterbodies is also exacerbated by stormwater inputs from lands used for agriculture. Many of the former wetlands in the region of the Gun Lake Tribe's lands were drained for agricultural use and the features of these drains are still predominant throughout the region. NPS pollutants are especially prominent on agricultural lands that lack nutrient management planning, adequate stormwater controls and riparian buffers.

Active agricultural lands on MBPI parcels are typically leased for one year. Lease modification will be an important management strategy to reduce NPS pollution-causing activities and conditions on agricultural lands currently leased by the Gun Lake Tribe. Several developments on MBPI parcels have converted lands out of row-crop agriculture, including the Tribal Government Campus, the Gun Lake Casino (GLC), the Luella Collins Community Center (LCCC) and the Settlement. The NPS pollution management program therefore emphasizes the importance of preparing NPS management strategies and BMP opportunities to be incorporated into future land use planning and development.

Table 5 summarizes agricultural NPS pollutant source areas and their severity of impact on Tribal waters and discusses potential BMPs and management recommendations for each area.

Table 5: Summary of agricultural NPS pollutant source areas and discussion of potential BMPs and management recommendations

NPS Category: Agriculture	Severity	Last 4 Digits of HUC	Waterbody	MBPI Parcel ID(s)	Summary of NPS Pollutant(s) and Pollutant Source Area(s)	Discussion of Potential BMPs and Management Recommendations*
					Sediments, Nutrients, Pathogens, Toxicants	Lease agreement modifications, Nutrient management planning, Filter strips, Riparian buffers, Cover crops, Wind breaks, No till
MBPI Lands	Slight	0805	Buskirk Creek	Gun Lake Casino (North parcels)	NPS pollutants contributed to Buskirk Creek via edge of field surface water runoff, mainly on east and west sides of the approximately 33-acre agricultural field, currently leased by the Gun Lake Tribe, part of Allegan County Parcel 24-019-026-30.	NPS pollutant management for Tribal Ag lands will focus on modification of Ag land lease agreements. Ag lands in the Tribe’s planned economic corridor will likely transition into urbanized development in the next 5-15 years. Current leases will be modified in the next lease cycle to include conservation plans and increased buffer zones of approximately 35 meters. New leases will require leasers meet MAEAP certification requirements including nutrient management planning, riparian buffers, filter strips, and other soil conservation practices such as cover crops and no till, as appropriate. Tile drain surveys will be used to assess the extent and impact of tile drainage from Ag lands.
	Mod.	0803	Pierce County Drain Extension	Zanbergen, Nowak	Two parcels currently leased for agricultural use, the 75.4-acre Zanbergen and 130.8-acre Nowak parcels, contribute NPS pollutants via surface runoff and, likely, tile drainage, to the Pierce County Drain Extension. Four locations on the Zanbergen field are particularly susceptible: the railroad bridge crossing; an agricultural equipment bridge crossing; and two locations where surface water runoff enters the creek during wet weather. The central and west side of the Nowak field are similarly susceptible to NPS pollutant loading through surface runoff. Riparian buffers are inadequate on both fields. The number of tile drains on either field is currently unknown.	
Upstream of MBPI Lands	Slight	0802	Moore Lake	Upland parcels to south	Non-tribal agricultural field in the south upland area of Moore Lake may contribute some sediment and nutrients to the riparian area of Moore Lake through surface water runoff.	NPS pollutant management for non-Tribal Ag lands contributing to upland and downstream areas of Tribal waterbodies will be prioritized secondarily after improvements to Tribal Ag lands. The focus of the management strategy will involve coordination with the appropriate county conservation district and private landowners. This strategy could include identifying and strategically targeting critical source areas of Ag land to prioritize the most potentially impactful improvements. The Tribe could work with the conservation districts, MAEAP representatives and private landowners to incentivize implementation of agricultural BMPs to reduce NPS pollutant contributions to receiving waters.
Down-stream of MBPI Lands	Slight	0803	Unnamed Stream (GLC)	North of 1217 129 th St	Non-tribal agricultural parcel north of Allegan County Parcel 10-024-002-00 with inadequate riparian buffers.	
		0701	Boot Lake Drain	Downstream of LCCC	Non-tribal agricultural lands downstream of Boot Lake contribute NPS pollutants through surface water runoff.	
	Mod.	0804	Ingerson Lake Drain, Herlan Lake Drain, Unnamed Stream	Downstream of Jijak	Non-tribal agricultural lands border the three drains which originate on or near the Jijak property and ultimately discharge to Bear Creek. NPS pollutants are contributed through inadequate riparian buffers, surface water runoff and tile drain discharges, all of which may cause accelerated erosion.	
	Severe	0805	Buskirk Creek, Selkirk Creek Extension	Downstream of GLC Downstream of Reno Dr.	Non-tribal agricultural lands border Buskirk Creek and the Selkirk Creek Extension contribute NPS pollutants through inadequate riparian buffers, surface water runoff and tile drain discharges, all of which may cause accelerated erosion.	
		0803	Pierce County Drain Extension	Downstream of Nowak	Non-tribal agricultural lands border the Pierce County Drain Extension contribute NPS pollutants through inadequate riparian buffers, surface water runoff and tile drain discharges, all of which may cause accelerated erosion.	

*Appendix A provides greater detail, including project tasks and prioritization indicators, for each potential BMP and management recommendation.

The full prioritization tables for all MBPI lands are included as Attachment A. Based on the prioritization indicators used for each project category, the following agricultural BMPs and management strategies will be prioritized for the Gun Lake Tribe lands and waters:

High Priority:

1. Agricultural land lease modifications to include conservation management and BMP requirements on all MBPI lands leased for agriculture, including:

Subwatershed	MBPI ID	Allegan Co. Parcel	Approx. Acres
040500030803 Miller Creek	Nowak	10-024-004-00	131
	Zanbergen	24-019-029-10	75
040500030805 Buskirk Creek- Rabbit River	1159 132 nd Ave	24-007-007-00	3
	1144 132 nd Ave	24-018-008-00	41
	1186 132 nd Ave	24-018-009-00	48
	1168 132 nd Ave	24-018-009-10	20
	North 130 th	24-018-011-00	10
	North 130 th	24-018-010-00	140
	Gun Lake Casino (N. Ag field)	24-019-026-30	30

- a. Incorporate, at minimum, Michigan Agriculture Environmental Assurance Program (MAEAP) certification requirements into MBPI agricultural land leases, to include more intensive site-specific requirements as appropriate. The Tribe’s Jijak Camp and LCCC properties are currently MAEAP verified.
 - b. Include detailed plans for periodic inspections to ensure compliance with modified lease requirements, in line with the MI Department of Agriculture (MDARD) requirements for inspection and compliance.
 - c. Complete updated lease agreements incorporating appropriate and feasible conservation practice requirements and apply this language to all MBPI Ag land leases upon next lease renewal cycle.
 - d. Following current draft language for future Ag land leases, assist leasers in complying with lease agreements by offering resources for completing nutrient management plans, integrated pest management (IPM) plans and other updated lease requirements with assistance from conservation district partners as needed.
2. For MBPI agricultural lands, mandatory >30m riparian buffer zones will be drafted into agricultural lease modifications, to include riparian habitat improvements and filter strips where feasible, and prioritizing on the following critical riparian Ag lands:

Subwatershed	Riparian to	MBPI ID	Allegan Co. Parcel No.	Existing Riparian Buffer	Approx. Acres
040500030803 Miller Creek	Pierce County Drain Extension	Nowak	10-024-004-00	~8m	131
		Zanbergen	24-019-029-10	~10m	75
040500030805 Buskirk Creek- Rabbit River	Buskirk Creek	Gun Lake Casino (N. Ag field)	24-019-026-30	~10m	30

Low Priority:

1. Conduct tile drain surveys to assess the extent and impact of tile drainage from Ag lands, prioritizing Tribal properties. This could be undertaken with road crossing inventories.
2. Coordinate with the Allegan County Conservation District (ACCD) and private land owners to implement BMPs and conservation practices on riparian agricultural lands in downstream stretches of all relevant MBPI waterbodies, including, in order of priority:

Subwatershed ID	Relevant MBPI Waterbodies
040500030803 Miller Creek	Pierce County Drain Extension
040500030805 Buskirk Creek-Rabbit River	Buskirk Creek, Selkirk Creek Extension
040500030804 Bear Creek	Ingerson Lake Drain, Herlan Lake Drain, Unnamed Stream
040500030802 Fales Drain-Rabbit River	Fales Drain
040500030701 Gun Lake-Gun River	Boot Lake Drain

- a. Identify and prioritize critical source areas in the priority subwatersheds and those bordering MBPI lands, such as the agricultural field north of the MBPI 1217 126th Street parcel.
- b. Work with the ACCD to engage agricultural landowners in the identified priority areas that may be willing to participate in NPS management implementations and identify incentivization strategies to encourage participation.

For each priority management project or BMP, Sections 4.1-4.4 contain, in Tables 6, 8, 10 and 12, an outline of programs, partners and a 5-year implementation schedule for each priority BMP. Table 6 contains this information for MBPI lands in agriculture.

Table 6. Priority projects/BMPs for agricultural lands

Priority	Subwatersheds/ Waterbodies/ Sites for BMP Application	Project/BMP	Primary Partners	Year 1	Year 2	Year 3	Year 4	Year 5+	Milestones
High	All leased MBPI lands used for agriculture	Draft and implement Ag land lease updates to include mandatory BMPs and management standards.	ACCD, MDEQ, NRCS, KRWC, PCCI, ODC, MAEAP, MBPI Legal	X	X	X	X	X	1. Lease updates drafted. 2. Lease agreements completed. 3. % of MBPI lands in Ag complying with details of lease agreements.
	Buskirk Creek (Gun Lake Casino N Ag field), Pierce County Drain (Nowak, Zanbergen)	Implement mandatory riparian buffers including riparian enhancement and filter strips.		X	X				1. Language incorporated into lease agreements. 2. % of ID'd parcels complying with lease agreement.
Low	All riparian Ag lands in subwatersheds, downstream of MBPI lands	Coordinate with ACCD and Ag landowners to implement conservation management practices on riparian ag fields.					X	X	1. Communications established with ACCD. 2. Critical source areas identified. 3. % of prioritized downstream Ag lands implementing BMPs.

Section 4.2. Transportation: Roads, Highways and Bridges

The majority of MBPI waterbodies are impacted by the presence of roads, highways and bridges. Several of the Tribe's parcels border or are in near proximity to the US-131 highway. Buskirk Creek, the Selkirk Creek Extension and the Pierce County Drain Extension each pass beneath US-131, flowing from or between Tribal lands. These, and other Tribal waterbodies also cross beneath a number of roads, culverts and bridges, including railroad and agricultural equipment bridges, in the course of their flow.

Roads, highways and bridges contribute NPS pollutants to waterways via runoff from rain and snowmelt as well as dry-weather transport through wind. Construction and maintenance activities can increase the contribution of sediments to surface waters, particularly through increased erosion, from these land use developments. Impervious surfaces preventing rain and snowmelt infiltration also increase pollutant transport and surface water volume in stormwater. Further, impervious surfaces can elevate the temperature of stormwater runoff as it flows toward surface waterbodies via roadside ditches or storm sewers, negatively impacting water quality and aquatic life.

Improperly-sized culverts at stream crossings exacerbate erosive conditions, especially in creeks with flashy flows, and can create barriers to fish and wildlife. The Great Lakes Road Stream Crossing Inventory Instructions, developed and tested by federal, state, and nonprofit groups, takes a detailed approach to assessing road-stream crossings, including data sheets and safety protocols. Information collected during the inventory process can be used to inform road crossing management improvements to address relevant NPS pollutant issues. This information includes, generally: Crossing type, structure shape, inlet and outlet type, structure material and size, perch location, embeddedness, water velocity and stream flow, scour pool and upstream ponding, riffle information, road information, and erosion information (US Forest Service 2011). The assessment process is key for effective planning and implementation of NPS pollutant reduction strategies related to road-stream crossings.



Figure 5. US-131 between 12th St and the Gun Lake Casino

Pesticides and herbicides commonly used in roadway and railroad maintenance can enter waterbodies through stormwater runoff and atmospheric deposition. Aquatic biota and public health are threatened by road salt and deicing products as well as oil, grease, antifreeze and other contaminants from vehicles, including litter and trash such as plastic, metal and tires (USEPA 2016). Groundwater quality is also susceptible to NPS pollutants, most notably road salting for ice and snow control, as it seeps into groundwater aquifers.

Table 7 summarizes transportation corridor-related NPS pollutant source areas and their severity of impact on Tribal waters and discusses potential BMPs and management recommendations for each area.

Table 7: Summary of transportation NPS pollutant source areas and discussion of potential BMPs and management recommendations

NPS Category: Roads, Highways and Bridges	Severity	Last 4 Digits of HUC	Waterbody	MBPI Parcel ID(s)	Summary of NPS Pollutant(s) and Pollutant Source Area(s)	Discussion of Potential BMPs and Management Recommendations*
					Sediments, Nutrients, Toxicants, Trash	Road-stream inventories, Riparian buffers, Soil erosion and sediment control (SESC), Streambank stabilization, Culvert replacements, Trash clean-ups
MBPI Lands	Slight	0805	Buskirk Creek, Selkirk Creek Extension, Reno Drive Ponds	Gun Lake Casino, Reno Drive Area	These waterbodies are in close proximity to US-131 and receive NPS pollutant inputs, including stormwater runoff, from this high-traffic thoroughfare. Both Buskirk Creek and the Selkirk Creek extension are channeled through tight bends near their crossing with US-131. Significant erosion was noted in Buskirk Creek at the railroad bridge crossing, east side of the casino property.	Road-creek crossing inventories following the Great Lakes Road Stream Crossing Inventory protocols could provide a basis for pursuing specific future improvements to road and bridge culverts currently contributing or threatening NPS pollutants or other issues such as impeded fish passage. This inventory could then be provided to the Gun Lake Tribes' Public Works director, responsible for communications and coordination with the Michigan Department of Transportation (MDOT) and Allegan County Road Commissioner. Implementation opportunities improving fish and wildlife passage through transportation corridors could be prioritized. Strategically reducing direct stormwater inputs to Tribal waterbodies from the US-131 corridor could be another long-term goal of coordinated work with MDOT. A long-term management strategy for addressing any issues noted in the road-creek crossing inventory could be developed and provided to the Tribe's Land Use Planning and Development Council with recommendations for BMPs before, during, or after planned developments take place. This could include SESC practices for construction and opportunities for improving fish and wildlife passage and reconnecting habitat corridors. Transportation corridor implementations should be closely coordinated with improvements targeting hydromodification issues. Management of transportation corridor NPS pollutant issues will be prioritized, wherever possible, on Tribal lands and upstream areas before downstream areas.
		0803	Unnamed Stream (GLC)	Gun Lake Casino, 1217 129 th St	This waterbody is in close proximity to US-131 and receives NPS pollutant inputs from this high-traffic thoroughfare. One steep erosion area was noted in 2018 immediately upstream of the 12 th Street creek crossing.	
	Mod.	0803	Pierce County Drain Extension	Former RTC/Nowak	This waterbody is in close proximity to US-131 and receive NPS pollutant inputs, including direct stormwater runoff, from this high-traffic thoroughfare. A railroad bridge crossing on the west side of the Government Campus is also susceptible to erosion.	
		0804	Unnamed Stream (Jijak)	Jijak Camp	The headwaters of this small unnamed stream lie within 10-30 m of 20 th St and receives NPS pollutant inputs from this rural road. Minor erosive conditions were also noted in 2018 at the 126 th Ave creek crossing.	
Upstream of MBPI Lands	Slight	0805	Buskirk Creek	Upstream of Gun Lake Casino	Buskirk Creek crosses under three bridges/culverts prior to entering Tribal property. A full road-creek crossing inventory is needed to determine the extent of NPS impacts from these road-creek crossings in the upstream portion of Buskirk Creek.	
Downstream of MBPI Lands	Slight	0804	Ingerson Lake Drain, Herlan Lake Drain, Unnamed Stream	Jijak Camp	NPS impacts from road-creek crossings including culverts and bridges are suspected for these downstream sections of Tribal waters. A full road-creek crossing inventory is needed to determine the extent of NPS impacts in the upstream and downstream portions of these waterbodies.	
	Mod.	0805	Buskirk Creek, Selkirk Creek Extension	Gun Lake Casino, Reno Dr Area		
		0803	Pierce County Drain Extension	Former RTC/Nowak		

*Appendix A provides greater detail, including project tasks and prioritization indicators, for each potential BMP and management recommendation.

The full prioritization tables for all MBPI lands are included as Attachment A. Based on the prioritization indicators used for each project category, the following transportation corridor-related BMPs and management strategies will be prioritized for the Gun Lake Tribe lands and waters:

High Priority:

1. Conduct road-stream crossing and fish passage inventories, following the Great Lakes Road Stream Crossing Inventory protocols, in order of priority, on:

Subwatershed ID	Relevant MBPI Waterbodies
040500030805 Buskirk Creek-Rabbit River	Buskirk Creek
040500030803 Miller Creek	Pierce County Drain Extension
040500030805 Buskirk Creek-Rabbit River	Selkirk Creek Extension
040500030804 Bear Creek	Ingerson Lake Drain, Herlan Lake Drain, Unnamed Stream
040500030802 Fales Drain-Rabbit River	Fales Drain
040500030701 Gun Lake-Gun River	Boot Lake Drain

- a. Prioritize MBPI lands and upstream areas prior to downstream areas.
 - b. Utilize the results of these inventories to coordinate with MDOT, the County Road Commissioner or other responsible parties to identify potential improvements to problematic road-stream crossings on non-Tribal lands.
 - c. Incorporate improvements to road crossings with a focus on improving hydromodification issues, fish passage, aquatic habitat and connecting wildlife habitat corridors into future land use development planning on MBPI lands.
2. Assess extent of erosion at railroad crossings and work with MDOT or responsible party to address critical erosion areas and stabilize streambanks in:
 - a. Buskirk Creek (E side of Gun Lake Casino),
 - b. Pierce County Drain Extension (W side of Government Campus).

Medium Priority:

1. Coordinate with MDOT or Allegan County Road Commissioner (ACRC) to fix erosion area occurring at 12th Street crossing with unnamed stream (originating at Gun Lake Casino).

For each priority management project or BMP, Sections 4.1-4.4 contain, in Tables 6, 8, 10 and 12, an outline of programs, partners and a 5-year implementation schedule for each priority BMP. Table 8 contains this information for transportation-corridor related projects.

Table 8. Priority projects/BMPs for roads, highways and bridges

Priority	Subwatersheds/ Waterbodies/ Sites for BMP Application	Project/BMP	Primary Partners	Year 1	Year 2	Year 3	Year 4	Year 5+	Milestones
High	Prioritized waterbodies in all MBPI subwatersheds	Road-stream crossing and fish passage inventories, toward coordinated improvements including development planning on Tribal lands.		X	X			X	<ol style="list-style-type: none"> 1. MBPI Env. Dept. staff trained on road-stream crossing and fish passage inventory procedures. 2. # of inventories conducted. 3. Critical areas reported to responsible party. 4. # of improvements made to critical areas on non-Tribal lands. 5. # of improvements incorporated into MBPI future land use plans.
	Buskirk Creek (Gun Lake Casino), Pierce County Drain Extension (Government Campus)	Assess erosion at railroad crossings and work with responsible party to implement streambank stabilization.			X	X	X		<ol style="list-style-type: none"> 1. Railroad crossing erosion sites assessed. 2. Erosion issues reported to responsible party. 3. Extent of streambank stabilized in identified critical areas.
Medium	Crossing of 12th St and Unnamed Stream (Gun Lake Casino).	Collaborate with responsible party to fix erosion area.	MDOT or ACRC	X	X				<ol style="list-style-type: none"> 1. Responsible party informed of issue. 2. Erosion issue addressed.

Section 4.3. Urbanized (Developed) Areas

Developed urban areas make up a small portion, approximately 8%, of land uses in the Kalamazoo River Watershed (KRW 2011). The Gun River and Rabbit River Watersheds are similarly dominated by rural land uses, with smaller areas of urban-industrial development mainly in close proximity to transportation corridors. In regard to MBPI lands, the discussion of developed urban areas will include lands developed for a variety of community and commercial uses. These developed areas range in development density and purpose but each one has been developed out of a former land use for some level of anthropogenic use.

Pavement, parking lots, rooftops and other impervious surfaces represent the main source of NPS pollutants from developed urban areas. These land use developments prevent water from naturally infiltrating into the soil causing increased velocity, volume and temperature of stormwater runoff. Concentrated flows of stormwater can lead to streambank erosion and flooding. Soils exposed during construction activities can further increase runoff volumes and sediment deposition into waterways. Contaminants from motor vehicles and parking lots can be easily washed into waterways where they can harm aquatic life (USEPA 2016).

Many opportunities exist in the landscape of developed urban areas to reduce NPS pollutant impacts. Often, however, developers have neglected to incorporate stormwater BMPs and management strategies in their design. These conditions substantially increase the chances of NPS pollutant impacts through stormwater runoff and accelerated erosion. New developments will continue to lead to increased pollutant loading unless sound policies and management planning exist to mitigate NPS impacts using BMPs and pollutant controls.

Since gaining federal recognition in 1999, some development toward more urbanized land uses have taken place on MBPI properties. For example, parts of the Jijak property, which hosts a summer camp and large-scale cultural events, were formerly farmed fields or mowed lawns. The Gun Lake Casino property, a large development, was constructed on a former agricultural and industrial property. The Tribal Government Campus, The Settlement and Luella Collins Community Center (LCCC) were also constructed on former agricultural lands. Most of these developments have included low-impact development (LID) practices or stormwater BMPs in their design. Improvements to existing structures and practices, and incorporation of BMPs where none exist, is the focus of the NPS management program for developed urban areas.

Table 9 summarizes developed urban area NPS pollutant source areas and their severity of impact on Tribal waters and discusses potential BMPs and management recommendations for each area.



Figure 6. Impervious parking lot at the Gun Lake Casino



Figure 7. Vegetated parking lot swale at the Gun Lake Tribal Governance Campus

Table 9: Summary of urbanized (developed) area NPS pollutant source areas and discussion of potential BMPs and management recommendations

NPS Category: Urbanized (Developed) Areas	Severity Last 4 Digits of HUC	Waterbody	MBPI Parcel ID(s)	Summary of NPS Pollutant(s) and Pollutant Source Area(s)	Discussion of Potential BMPs and Management Recommendations*	
				Sediments, Nutrients, Toxicants, Pathogens, Thermal Stress, Trash	Major stormwater BMPs (retention/detention ponds), Wetlands, Vegetated swales, Streambank stabilization, Vegetated buffers, Infiltration practices, Curb cuts, Low-impact development (LID), Pervious pavers/pavement, Pavement cleaning	
MBPI Lands	Slight	0805	GLC Retention Pond, Selkirk Creek Extension, Reno Drive Ponds	Gun Lake Casino Reno Drive Area	These waterbodies in developed areas are susceptible to NPS pollutants in stormwater runoff from construction, impervious surfaces, and nearby industrial developments.	Incorporate stormwater management BMPs and O&M practices into future land use planning for these areas.
		0804	Unnamed Stream (Jijak)	Jijak Camp	A legacy trash midden exists in the headwaters area of this unnamed stream. The SE corner of the headwaters area is mowed within <20 m of surface waters.	Removal of legacy trash midden. Approximately 25-m expansion of no-mow zone at southeast corner of headwaters area, including reseeded.
		0803	Pierce County Drain Extension, Unnamed Stream, GLC Detention Pond 2	Government Campus, Gun Lake Casino	EMC analyses show that these properties may produce significant NPS pollutants from stormwater runoff if existing stormwater controls are not adequate.	Develop BMP maintenance and visual monitoring plan for stormwater retention basins, which could include water level monitoring at the Detention Pond 2 outfall, to ensure adequacy of existing stormwater controls.
		0701	Boot Lake	LCCC	EMC analyses show that this property may produce significant NPS pollutants from stormwater runoff if existing stormwater controls are not adequate.	Develop BMP maintenance plan and simple visual monitoring plan for stormwater retention basins, to ensure adequacy of existing stormwater controls.
	Mod.	0805	Buskirk Creek GLC Detention Pond 1	Gun Lake Casino	The Gun Lake Casino Detention Pond 1 receives significant volumes of stormwater carrying NPS pollutants from the casino parking lot and current construction areas. Field observations suggest that these volumes may currently supersede the designed capacity of the pond. The Detention Pond 1 outfall to Buskirk Creek is causing moderate erosive conditions, accelerating sedimentation on the steep streambanks.	Develop BMP maintenance and monitoring plan and provide recommendations to improve on-site issues: Short-term monitoring of volume and NPS pollutants at the Detention Pond 1 outfall. Conceptual design to meet volumetric demand of stormwater inputs and site plan review strategies for future developments. This would tie in engineering design standards, stormwater “foot-printing,” a potential stormwater offset program and stormwater capacity improvements.
		0804	Ingerson Lake	Jijak Camp	Two significant NPS pollutant issues are noted at the Jijak Camp site in the upland areas of Ingerson Lake. The Sacred Fire Pavilion upland areas contribute stormwater to a single outfall which has caused significant erosion in the wooded uplands of the lake. The ditch conveyance of this outfall is experiencing erosion throughout. To the immediate north of this outfall area, the Jijak beach uplands, a steep mowed-grass hillside is experiencing minor erosion from overland stormwater runoff, minor erosion along a stormwater conveyance pipe, and significant nutrient and bacteria loading from goose droppings.	This community area provides opportunities for high feasibility, high benefit improvements to reduce NPS pollutant inputs and benefit human health. The close location of the two NPS pollutant issues allows for these improvements to be lumped into a single project: Establishment of no-mow buffer zones and “stormwater-sensitive” landscape management; establishment of native plants in buffer areas for ecological improvement and geese deterrence; stormwater conveyance improvements; integration of infiltration practices such as rain gardens and bioswales in upland contributing areas; demonstration opportunities to make stormwater more “visible”; and restoration of existing erosion areas.

*Appendix A provides greater detail, including project tasks and prioritization indicators, for each potential BMP and management recommendation.

The full prioritization tables for all MBPI lands are included as Attachment A. Based on the prioritization indicators used for each project category, the following developed area-related BMPs and management strategies will be prioritized for the Gun Lake Tribe lands and waters:

High Priority:

1. Jijak Camp stormwater infrastructure, upland infiltration and landscape management improvements, including assessment of drainage areas, design, coordination with maintenance staff and implementation of improvements for:
 - a. Sacred Fire Pavilion upland area stormwater improvements via interconnected infiltration systems and native plantings.
 - b. Beach-side and upland stormwater improvements to overland and piped conveyance with no-mow buffer zones, native plantings and goose-prevention.
 - c. Stormwater discharge to Ingerson Lake area, ditch restoration at outfall and two ditches convergence and protection to reduce erosion.
2. Develop Management Plans and design NPS management improvements for incorporation into future land use management planning in economic corridor for all future developments to include management strategies to address all categories of NPS pollution, focusing on:
 - a. Buskirk Creek corridor (including Gun Lake Casino),
 - b. Pierce County Drain Extension corridor,
 - c. Selkirk Creek extension corridor (including Reno Drive ponds).
3. Fix erosion at Casino Detention Pond 1 outfall.
 - a. Assess degree of failure and detail improvement need and petition contractor to implement improvements.

Medium Priority:

1. Develop Management Plans for existing BMPs and assessments of potential retention area enhancements and retrofits as needed. This will include collaboration and hands-on training with management staff for proper vegetative maintenance of BMPs, including seasonal timelines, and visual monitoring of BMP effectiveness at:
 - a. Gun Lake Casino Detention Ponds 1 and 2
 - b. Luella Collins Community Center
 - c. Gun Lake Tribal Government Campus
2. Develop a handbook of LID techniques and retrofits for implementation at the Gun Lake Casino and other future development sites, including:
 - a. Coordination with the Gun Lake Casino management staff and the development council to encourage future implementations of structural and non-structural BMPs and LID options, providing a suite of potential options for managing NPS pollutants on developed land.
3. Expand no-mow zone near headwaters of unnamed stream at northeast corner of the Jijak property and remove legacy trash midden at headwaters.

For each priority management project or BMP, Sections 4.1-4.4 contain, in Tables 6, 8, 10 and 12, an outline of programs, partners and a 5-year implementation schedule for each priority BMP. Table 10 contains this information for urban developed area projects.

Table 10. Priority projects/BMPs for developed areas

Priority	Subwatersheds/ Waterbodies/ Sites for BMP Application	Project/BMP	Primary Partners	Year 1	Year 2	Year 3	Year 4	Year 5+	Milestones
High	Buskirk Creek corridor (incl. Gun Lake Casino), Pierce County Drain Extension corridor, Selkirk Creek extension corridor (incl. Reno Drive)	NPS management incorporation into future land use planning in economic corridor for all future developments to include management strategies to address NPS pollution.		X	X	X	X	X	1. Management Plans with recommendations for future developments identified and authored. 2. # of ID'd BMPs incorporated into next generation land use plan. 3. % of BMPs undertaken.
	Ingerson Lake Uplands (Sacred Fire Pavilion Area) and beach hillside (Camp Jijak)	Upland area stormwater improvements via interconnected infiltration systems and native plantings.		X	X	X			1. Improvements coordinated with maintenance staff. 2. # of BMPs undertaken. 3. % of BMPs maintained.
		Beach hillside overland and conveyed SW improvements with no-mow buffer zones, native plantings, and goose-prevention.		X	X	X			1. Improvements coordinated with maintenance staff. 2. % goose population reduced. 3. % of BMPs maintained.
		Stormwater discharge ditch restoration at outfall and along ditches, protection to reduce erosion.			X	X			1. Meters of ditch banks restored/stabilized.
	Gun Lake Casino	Assess and implement improvement to failing streambank at outfall.		X	X				1. Issue assessed. 2. Improvements undertaken.
Medium	Gun Lake Casino	Parking lot runoff management and LID planning.				X		X	1. Handbook written or adopted. 2. # of practices adopted.
	Camp Jijak	Expansion of headwaters buffer zone and removal of trash in headwaters.		X	X				1. Trash removed. 2. Headwaters buffer maintained.
	Gun Lake Casino	Assess possibility of Detention Pond 1 expansion into retention pond area.					X	X	1. Volumetric assessment undertaken and recommendations recorded.
	Gun Lake Casino Detention Ponds, LCCC, Government Campus	Maintenance of existing BMPs, visual monitoring and assessment of potential retention area enhancements.		X		X		X	1. BMP management plans/visual monitoring protocols written. 2. % of BMPs monitored. 3. % of BMPs maintained.

Section 4.4. Hydromodification

Throughout the subwatersheds of the Gun Lake Tribe's lands and waters, many former wetlands were historically drained for agricultural use. These drains tended to feature long, straight stretches with sharply-angled bends designed to transport surface water quickly away from its source area. The features of these drains are still prominent throughout these subwatershed regions. Channelization has often been coupled with riparian vegetation removal, causing degraded habitats and increased sediment deposition. Sedimentation of these waterways has often buried gravel substrates, harming biodiversity and favoring silt-tolerant fish species (USEPA 2007).

Channel modification, channelization and streambank and shoreline erosion are examples of hydromodification activities that can impact streams. All streams bordering or flowing through MBPI properties are affected by hydromodification which, in most cases, has led to undercutting and streambank erosion. Channelization increases the velocity and temperatures while decreasing the residence time of flowing water, leading to streambank erosion, habitat alterations and increased nutrient and sediment transport downstream. Erosive conditions are exacerbated by stormwater inputs from developed lands, transportation corridors and lands used for agriculture. Flashy flows, caused by increased stormwater runoff volumes due to lack of upland infiltration, also increase the risks of streambank erosion in hydro-modified channels.



Figure 8. Channelized stretch of the Pierce County Drain Extension on MBPI lands

Two-stage ditches and self-forming streams are restoration practices that naturalize ditches, increase residence time of flowing water and thus decrease nutrient transport downstream. The two-stage ditch approach incorporates a riparian zone into the bench of the ditch channel (Powell et al. 2007), which in turn decreases water velocity. The self-forming stream approach also decreases water velocity, but through increased surface area by excavating the channel bed to an over-wide width. This approach encourages natural deposition of sediment which stimulates vegetation growth over time (Jayakaran and Ward 2007).

Wetlands provide a variety of ecosystem services such as nutrient, sediment and contaminant removal, species habitat and flood abatement. Wetland restoration helps alleviate NPS issues, like nutrient and sediment runoff from agricultural production and urban development. Determining the wetland area needed to intercept enough water to improve water quality is site specific, however, research suggests that even small areas, as little as four meters, adjacent to streams can reduce nutrient and sediment transport downstream (Zedler & Kercher, 2005).

Table 11 summarizes hydromodification-related NPS pollutant source areas and their severity of impact on Tribal waters and discusses potential BMPs and management recommendations for each area.

Table 11: Summary of hydromodification area NPS pollutant source areas and discussion of potential BMPs and management recommendations

NPS Category: Hydro-modification (incl. riparian and aquatic habitat degradation)	Severity	Last 4 Digits of HUC	Waterbody	MBPI Parcel ID(s)	Summary of NPS Pollutant(s) and Pollutant Source Area(s)	Discussion of Potential BMPs and Management Recommendations*
					Sediments, Nutrients, Thermal Stress	Streambank stabilization, Wetlands, Micro-pools, Riparian vegetation, Riparian buffers, Aquatic vegetation management
MBPI Lands	Slight	0805	Selkirk Creek Extension Reno Drive Ponds	Reno Drive Area	These hydro-modified waterbodies are susceptible to NPS pollutant loading due to the channelized nature of the streams and the land use developments of their contributing areas. Pollutant inputs from other NPS pollutant categories tend to exacerbate the susceptibility of these waterbodies to erosion due to their modified condition.	Prepare in-stream improvement designs to address existing NPS pollution issues, such as streambank stabilization, meanders, micro-pools, and riparian improvements, to be included as part of planned developments in the Tribe's future economic development corridor. Provide naturalized design to the Planning and Development Department to integrate into future development. Coordinate with USACE and USEPA for improvements to waterbodies on Trust lands.
		0803	Pierce County Drain Extension GLC Detention Pond 2 Unnamed Stream (GLC)	Zanbergen, Former RTC, Nowak Gun Lake Casino, 1217 129 th St.		
	Severe	0805	Buskirk Creek GLC Detention Pond 1	Gun Lake Casino	Buskirk creek is a highly channelized waterbody with several significant areas of streambank erosion and undercutting occurring, including erosion occurring at the outfall of the Casino Detention Pond 1.	Prepare in-stream improvement designs to address existing NPS pollution issues, such as streambank stabilization, meanders, micro-pools, and riparian improvements, to be included as part of planned developments in the Tribe's future economic development corridor. Provide naturalized design to the Planning and Development Department to integrate into future development. Require the Casino site developers to restore the streambank at the Casino Detention Pond 1 outfall, as this aspect of the detention pond design is currently failing.
Downstream of MBPI Lands	Slight	0805	Buskirk Creek Selkirk Creek Extension	Downstream of Gun Lake Casino	These creeks follow highly-channelized agricultural ditches which are susceptible to NPS pollutants from agricultural land uses and accelerated erosion.	Identify critical and feasible downstream areas for in-stream and riparian improvements. Coordinate with MDEQ and the Allegan County Drain Commissioner to engage private landowners who support improvements.
	Mod.	0803	Pierce County Drain Extension Unnamed Stream (GLC)	Downstream of Nowak		
Upstream of MBPI Lands	Slight	0802	Indian Lake	Selkirk Lake Drain	Potential pollutant transport via newly-built county drain from Selkirk Lake into Indian Lake.	Continue monitoring effects of the County drain project on water quality and aquatic habitat in Indian Lake.

*Appendix A provides greater detail, including project tasks and prioritization indicators, for each potential BMP and management recommendation.

The full prioritization tables for all MBPI lands are included as Attachment A. Based on the prioritization indicators used for each project category, the following hydromodification-related BMPs and management strategies will be prioritized for the Gun Lake Tribe lands and waters:

High Priority:

1. Targeted streambank restoration at critical erosion areas on Tribal properties, targeting the following waterbodies:

Subwatershed ID	Relevant MBPI Waterbodies
040500030805 Buskirk Creek-Rabbit River	Buskirk Creek
040500030803 Miller Creek	Pierce County Drain Extension
040500030805 Buskirk Creek-Rabbit River	Selkirk Creek Extension

2. Design whole-stretch stream restorations to be incorporated into planned and potential future land use developments, with a focus on the planned economic corridor, including wetland/riparian habitat restorations on the following waterbodies, to include:

Subwatershed ID	Relevant MBPI Waterbodies
040500030805 Buskirk Creek-Rabbit River	Buskirk Creek
040500030803 Miller Creek	Pierce County Drain Extension
040500030805 Buskirk Creek-Rabbit River	Selkirk Creek Extension

- a. Hydrologic study of contributing area and stormwater inputs,
- b. Incorporation of road-stream crossing and fish passage inventory results,
- c. ID all erosion areas including height/width/soil type/lateral recession rate,
- d. Engineering design to include in-stream restoration, meanders, micropools, riffles, fish passage and upstream/downstream bank stabilization and riparian habitat and wetland improvements, including improvements to existing BMPs,
- e. Implementation of design integrated into future land use development.

For each priority management project or BMP, Sections 4.1-4.4 contain, in Tables 6, 8, 10 and 12, an outline of programs, partners and a 5-year implementation schedule for each priority BMP. Table 12 contains this information for urban developed area projects.

Table 12. Priority projects/BMPs for hydromodification

Priority	Subwatersheds/ Waterbodies/ Sites for BMP Application	Project/BMP	Primary Partners	Year 1	Year 2	Year 3	Year 4	Year 5+	Milestones
High	MBPI Stretches of Buskirk Creek	Erosion mitigation and whole-stretch stream restoration.		X	X			X	For each waterbody: 1. Critical erosion areas ID'd. 2. Meters of critical streambank stabilized. 3. # of project tasks completed. 4. # of whole-stretch improvements incorporated into future land use plans. 5. % of improvements undertaken.
	MBPI Stretches of Pierce County Drain Extension	Erosion mitigation and whole-stretch stream restoration.		X	X			X	
	MBPI Stretches of Selkirk Creek Extension	Erosion mitigation and whole-stretch stream restoration.		X	X			X	

Section 4.5. Tribal Authority for Implementing the NPS Program

The Gun Lake Tribe's legal authority for implementing this NPS management program is outlined in their Section 319 Treatment-as-a-State application. The TAS application includes the Tribe's Federal Acknowledgment, constitution and by-laws, and establishes the Match-E-Be-Nash-She-Wish Band of Pottawatomi Indians as a sovereign nation and describes the powers of the Tribal Council to manage economic affairs, promulgate and enforce ordinances, charter subordinate organizations and adopt resolutions regulating internal matters.

Section 5. Public Notice and Comment

The Gun Lake Tribe's Environmental Department recognizes the importance of coordination with Tribal governance, Tribal citizens, and non-Tribal communities, governments, and organizations in successfully implementing the NPS Management Program. For many years the Tribe has established excellent working relationships, in a wide variety of capacities, with community members and organizations at the local, regional, state, and federal levels. As they continue to work and grow in their historic land base, the Gun Lake Tribe seeks to foster meaningful opportunities to cooperate with their neighbors to mutually benefit the region's lands and waters. MBPI Environmental Department staff are already working closely with nonprofit organizations, watershed groups, conservation districts and government agencies to improve the effectiveness of their program.

The Public Notice period for comments on the MBPI 319 Program Documents began (July 9, 2019) and continue until August 8, 2019. A draft version of the MBPI NPS Assessment Report and Management Program Plan have been uploaded as a link on the Gun Lake Tribe's website here: [_____](#). Printed copies are also available at the following upon request from the Gun Lake Tribe's Environmental Department located at 2872 Mission Drive, Shelbyville, MI 49344.

Notification letters for the Public Notice period will be sent via email to all partners and municipalities identified in the Assessment Plan. Notice will also be posted via the Tribe's outreach avenues including but not limited to the Tribe's Facebook and the monthly Tribal newsletter. Comments received during the Public Notice period will be addressed within the documents as possible and included as Appendix C of this Management Program Plan.

Partners and municipalities identified in the Management Program Plan will receive letters of intent including links to the documents posted online location. These comments will additionally be included in Appendix C of this document.

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