

# Bipole III Transmission Project

Clean Environment Commission Public Hearings

*Environmental Protection Program (EPP)*  
*James Matthewson*



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## Environmental Protection

- Key Outcome of EA
- Corporate Commitment
- Experience in Development
- Long History of Environmental Protection
- Use of Research and Development



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## Overview

- Why a draft Environmental Protection Plan?
- Environmental Protection Program
- Adaptive Management Approach
- Plan Updating and Review
- Auditing
- Monitoring Plans
- Lessons Learned...



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## Why is the EnvPP Draft?

- To engage in discussion with:
  - Manitoba Conservation and Water Stewardship
  - Local communities, First Nations and Metis
  - Clean Environment Commission
- First time a EnvPP this has been submitted with a MH Transmission Project EIS



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## Environmental Protection Program

- Overview
- Components of Program
- Development of Program
- Implementation of Program

## Overview

- Developed from a comprehensive review
- Implementation, management and monitoring of mitigation measures.
- Interaction of components.
- Who, What, where and how aspects of protecting the environment in all phases of the project.

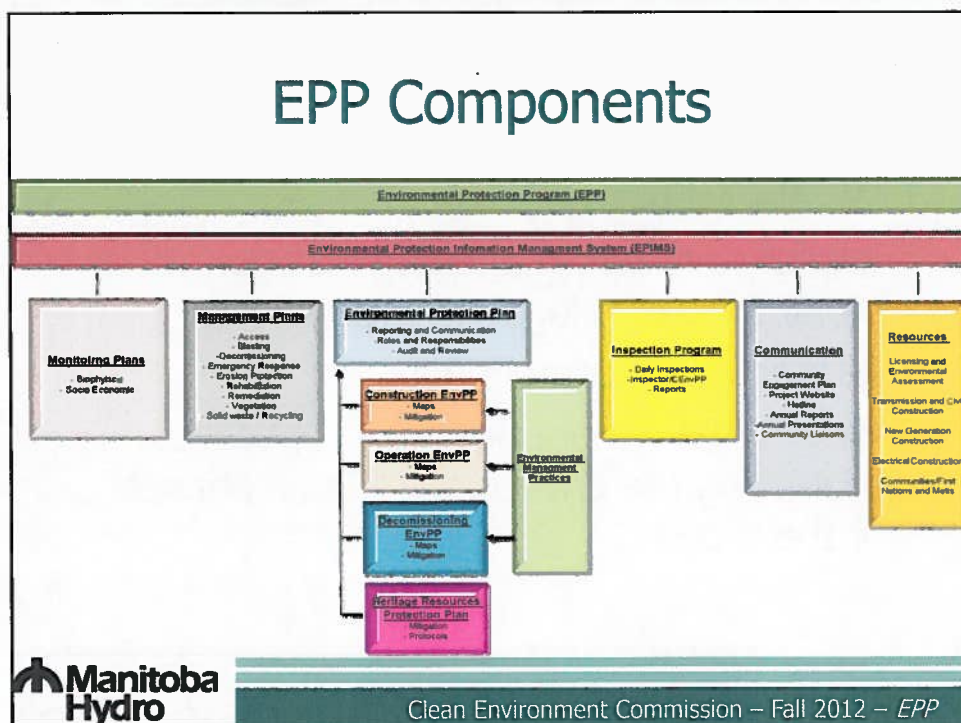
# Environmental Protection Program

- Overview
- **Components of Program**
- Development of Program
- Implementation of Program



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## EPP Components



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## Environmental Protection Information Management System\*

- Modules
  - Inspection
  - Monitoring
  - Reporting
  - Communication
- Tools
  - Document management
  - Workflows
  - Reporting
  - Mapping
  - Communication

\*In development



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## Environmental Protection Information Management System

- Library
- Contact lists
- Schedules
- Inspection Reports
- Information Line
- Licence/Permit
- Monitoring Reports
- Training Tools
- Dashboards
- Project Website



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## Environmental Protection Plans

- Overall Project EnvPP (Draft Submitted with EIS)
- Construction (11 plans in total)
  - 8 - HVdc line – construction planning segments
  - 1 - construction power and ac collectors
  - 2 - Riel and Keewatinoow Converter Stations and ground electrodes
- Operations and Maintenance (4 plans in total)
  - 1 - HVdc line
  - 1 - construction power and ac collectors
  - 2 - Riel and Keewatinoow Converter Stations and ground electrodes
- Decommissioning
  - Created at time of decommissioning of project component.
- Heritage Resources Protection Plan



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## Draft EnvPP Map

Interactive Mapper Demo



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## Draft CEnvPP Map

## Sample CEnvPP Map



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## Management Plans

- Access Management
  - Transmission
  - Keewatinoow Converter Station
- Blasting
- Construction Decommissioning
- Emergency Preparedness and Response
- Erosion Protection and Sediment Control
- Rehabilitation
- Remediation
- Vegetation
- Solid Waste/Recycling



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## Monitoring Plans

- **Biophysical and Socio Economic**
  - Confirm predictions of EIS
  - Effectiveness of mitigation
  - Identify unanticipated effects
  - Information for future projects
  - Community and Traditional Knowledge to be incorporated into both plans.

## Communication (Pre-Construction)

- **Local communities, landowners, First Nations and Metis**
  - Project development
  - Development of plans
- **Building on existing relationships**
- **Development of new relationships**
- **Contractors**



## Communication (Construction)

- Daily
  - Tailboards
  - Inspection reports
  - Monitoring reports
- Weekly
  - Construction meetings
  - Community Liaison reports
  - Inspection report summaries
  - Regulatory Inspections



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## Communication (Construction)

- Monthly
  - Project/dept manager meetings
  - Inspection report summaries
  - Monitoring report summaries
  - Project website
- Annual/Seasonal
  - Post construction community meetings
  - CEnvPP reviews
  - Annual reports and presentations



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## Inspection Program

- Dedicated Environmental Inspectors
- Ensures compliance with Environment Act Licence and conformance with EnvPP's
- Correct implementation of mitigation measures
- Environmental Stop Work Orders



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## Environmental Protection Program

- Overview
- Components of Program
- **Development of Program**
- Implementation of Program



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## Development Process

- Draft EnvPP that incorporates:
  - MH Policies and commitments
  - Regulatory requirements
  - EIS mitigation and monitoring requirements
  - Environmental protection guidelines and best practices
  - Input from stakeholders
  - Iterative mitigation development process with technical specialists



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## Ongoing Development Process

- Reviewed comments from:
  - Regulatory EIS Public and TAC Review
  - CEC Information Requests



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## Ongoing Development Process

- **Community Engagement Process**
  - Identify new ESS and/or refine existing info
  - Community concerns addressed
  - New mitigation measures
  - Working north to south
- **Status**
  - Meetings with Elders/resource users and open houses in communities. Over 70% Communities in N1-N3 have participated.



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## Ongoing Development Process

- **Incorporate Community Engagement Results into Draft Plans**
- **Preliminary Development of:**
  - Construction EnvPP's for tendering purposes
  - Monitoring and Management Plans and Frameworks
- **Review Draft Plans with MB Conservation and through community engagement process.**



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## Ongoing Development Process

- Finalize Plans After Review of
  - Community engagement process results
  - CEC intervener evidence
  - CEC recommendations
  - Environmental Act licence conditions



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## Environmental Protection Program

- Overview
- Components of Program
- Development of Program
- **Implementation of Program**



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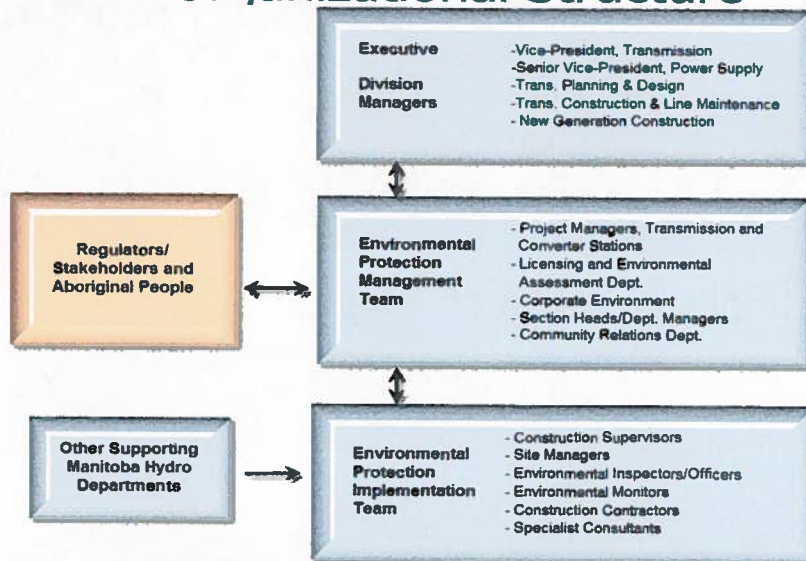
## Implementation

- Program Organizational Structure
- Lines of Reporting
- Roles and Responsibilities
- Community Involvement



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## EPP Organizational Structure



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## Typical Reporting Structure



## Construction Supervisor/ Site Manager

- Role – Works with Contractors to implement EnvPP and ensure compliance
  - 1- MH Staff/CEnvPP
- Key Responsibilities
  - ✓ Reviews
  - ✓ Responds
  - ✓ Ensures
  - ✓ Notifies
  - ✓ Stops Work

## Senior Environmental Assessment Officer

- Role – Develops and Implements Environmental Protection Program
  - 1- MH Staff
- Key Responsibilities
  - ✓ Lead
  - ✓ Develop
  - ✓ Support
  - ✓ Review and audit
  - ✓ Annual Reports and Presentations



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## Senior Environmental Officer

- Role - Manages the Implementation of CEnvPP
  - 2- MH Staff
- Key Responsibilities
  - ✓ Manages
  - ✓ Trains
  - ✓ Assists
  - ✓ Oversees
  - ✓ Liaises
  - ✓ Reviews



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## Environmental Inspector

- Role – Implements CEnvPP Inspection Program
  - 1- MH Staff/CEnvPP
- Key Responsibilities
  - ✓ Inspects/Stops Work
  - ✓ Trains
  - ✓ Assists
  - ✓ Locates
  - ✓ Reports
  - ✓ Directs



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## Construction Contractors

- Role – Works with employees to implement EnvPP and ensure compliance
  - Many for each Component
  - Requirement for Contractor Environmental Officer
- Key Responsibilities
  - ✓ Maintains
  - ✓ Reports
  - ✓ Prepares
  - ✓ Compliance
  - ✓ Stops Work



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## Environmental Monitor

- Role – ESS Implementation Support and Biophysical Monitoring
  - 1- Local community member/ CEnvPP
  - During construction period
  - 1 month during summer to work with specialists
- Key Responsibilities
  - ✓ Monitor
  - ✓ Liaise
  - ✓ Assists
  - ✓ Contributes local knowledge



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## Community Liaison

- Role – Community Relations
  - During construction period 1-2 days/week
  - Selected and employed by community
- Key Responsibilities
  - ✓ Liaises
  - ✓ Contributes local knowledge
  - ✓ Participates
  - ✓ Reports



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## Monitoring Specialists

- Role –Monitoring
  - Wildlife, aquatics, groundwater, soils, vegetation, heritage, reptiles, socio economic, cultural, others as required
- Key Responsibilities
  - ✓ Investigates
  - ✓ Expertise
  - ✓ Guidance
  - ✓ Reports



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## Adaptive Management Approach

- Recognize Uncertainty
  - Use AM as a best practice to minimize risk
- Elements
  - Testing of predictions
  - Inspection and monitoring
  - Feedback and response
  - Dedicated staff
- Continual Improvement
  - Mitigation level
  - Program/Plan level



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## Mitigation Level



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## Construction Plan Updating and Review

- Process
  - Conducted in consultation with construction depts., contractors, regulators and input from communication process
- Transmission Lines
  - Construction Season Review
- Stations
  - Annual Review



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## Auditing

- Annual EnvPP Audits
  - Conducted by an accredited environmental auditor
- Third Party Audits
  - Manitoba Hydro certified under the ISO 14001 Environmental Management System standard



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## Draft Biophysical Monitoring Plan Examples of Methods

- Groundwater
  - Water quality assessment survey
- Aquatics
  - Assessments of ESS
- Soils and Terrain
  - Ground/Aerial survey
- Terrestrial Ecosystems and Vegetation
  - Vegetation surveys
    - Species of conservation concern
    - Native grasslands/prairie areas
    - Plant communities important to Aboriginal peoples
    - Invasive and non-native species



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## Draft Biophysical Monitoring Plan Examples of Methods

- Reptiles
  - Habitat surveys
- Birds
  - Sharp-tailed grouse lek survey
  - Bird-wire collision surveys
  - Colonial and active bird nesting surveys



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## Draft Biophysical Monitoring Plan Examples of Methods

- Mammal
  - Caribou
    - Collar tracking
    - Mortality investigations
    - Caribou recruitment surveys
    - Post collaring surveys
    - Multi-species track surveys
    - Caribou calving complexes
    - Wildlife corridors
    - Naosap/Reed Lake herds – NW Caribou Committee
    - Cape Churchill/Penn Island herds– MB Con and RMB's



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## Draft Biophysical Monitoring Plan Examples of Methods

- Mammal
  - Moose
    - Mortality investigations
    - Multi-species track surveys
    - Line of sight corridors
  - Fur Bearers
    - Trapping program
    - Multi-species track surveys



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## Draft Social Economic Monitoring Plan Examples of Methods

- Employment/Workforce
  - Employee self declaration form
- Business Opportunities
  - Vendor database
  - Key person interviews
- Infrastructure and Services (Gillam)
  - Interviews with RCMP, hospital, councils



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## Draft Social Economic Monitoring Plan Examples of Methods

- Worker and Family Well Being
  - Interviews with workers, camp managers
- Electro Magnetic Fields
  - HVdc EMF model validation
  - Monitor state of science
- Property Values
  - Track market values of properties sold traversed by ROW
  - Seller/buyer interview for sale motivation



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## Draft Social Economic Monitoring Plan Examples of Methods

- Heritage Resources
  - Effectiveness of protection measures
- Culture and Spirituality
  - Engage with Aboriginal peoples to determine appropriate monitoring measures
- Agriculture
  - Interviews with various types and scales of producers



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## Draft Social Economic Monitoring Plan Examples of Methods

- **Transportation/Access**
  - MHTIS data
  - Traffic counters
  - RCMP
  - Gate records
  - Trail cameras
  - Safety program
  - Resource harvesters/outfitters surveys



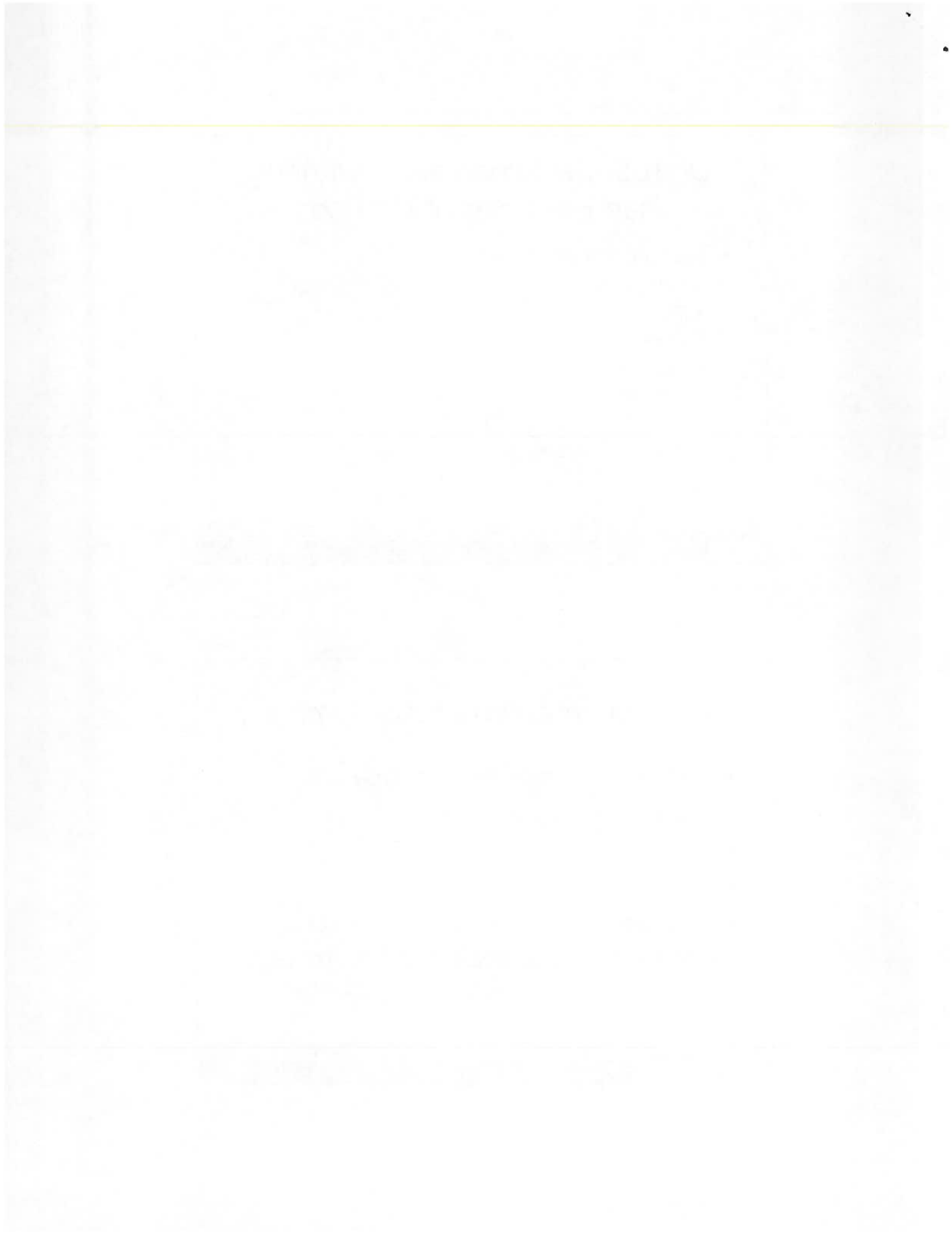
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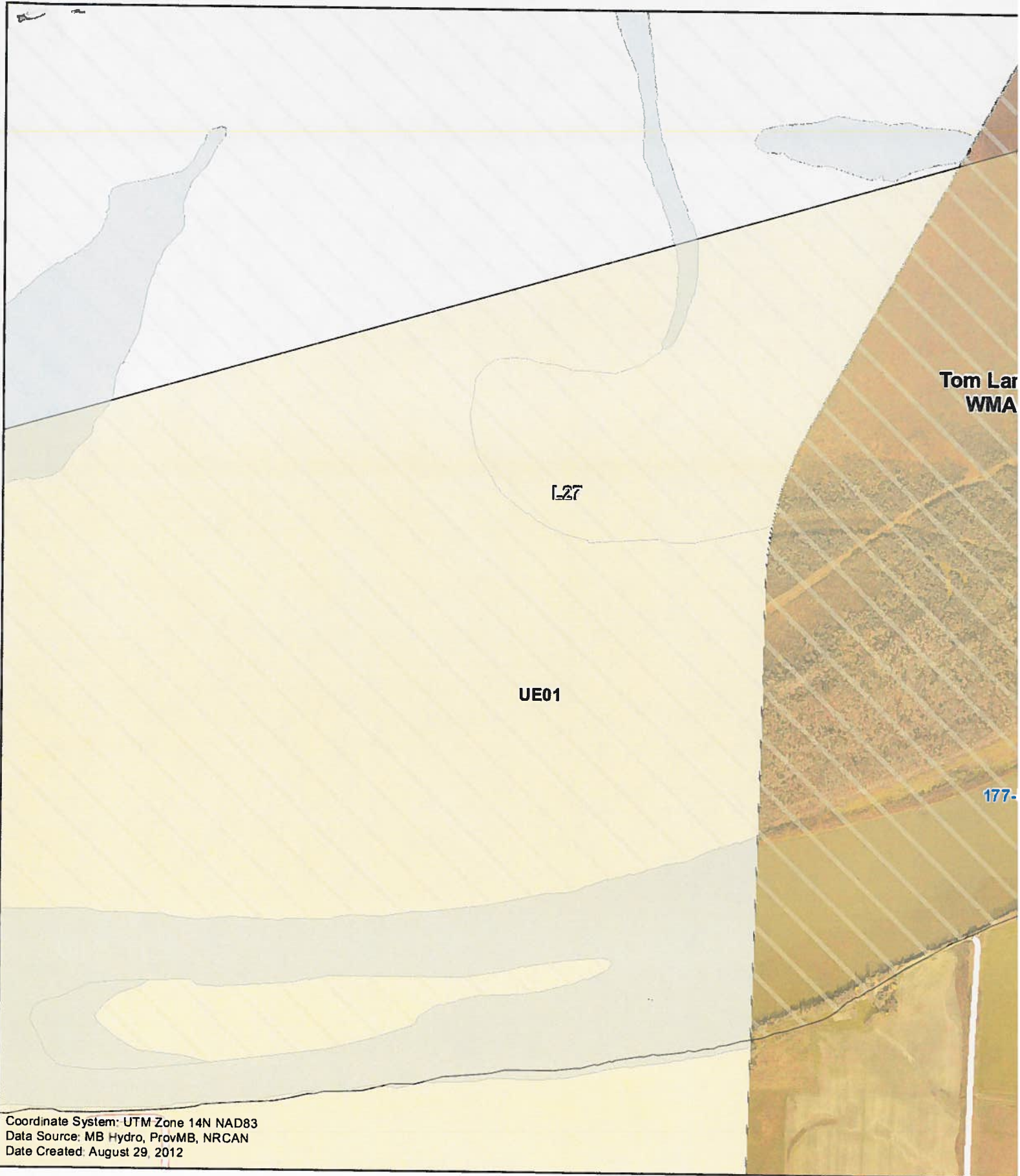
## Environmental Protection Summary

- Committed Comprehensive Program
- Community Engagement
- Adaptive
- Lessons Learned
- Monitoring to Follow-up EIS Predictions
- Meets or Exceeds Applicable Government Guidelines and Industry Best Practices



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Coordinate System: UTM Zone 14N NAD83  
 Data Source: MB Hydro, ProvMB, NRCAN  
 Date Created: August 29, 2012



**Ecosites**

- Wildlife**
- Birds and Habitat
- Water**
- Fish Habitat

**Heritage**

- Archaeological
- Trail

**Land Use**

- Crown Land Encumbrance
- Conservation

**Access**

- Intersection
- Research
- Species of Concern

**Terrain**

- Enduring Features

**Ecosystem**

- Habitat
- Resource Use**
- Forestry
- Mining

**Land Base**

- Roads
- Watercourse
- Waterbodies

# Environmental Protection Program (EPP)

## Environmental Protection Information Management System (EPIMS)

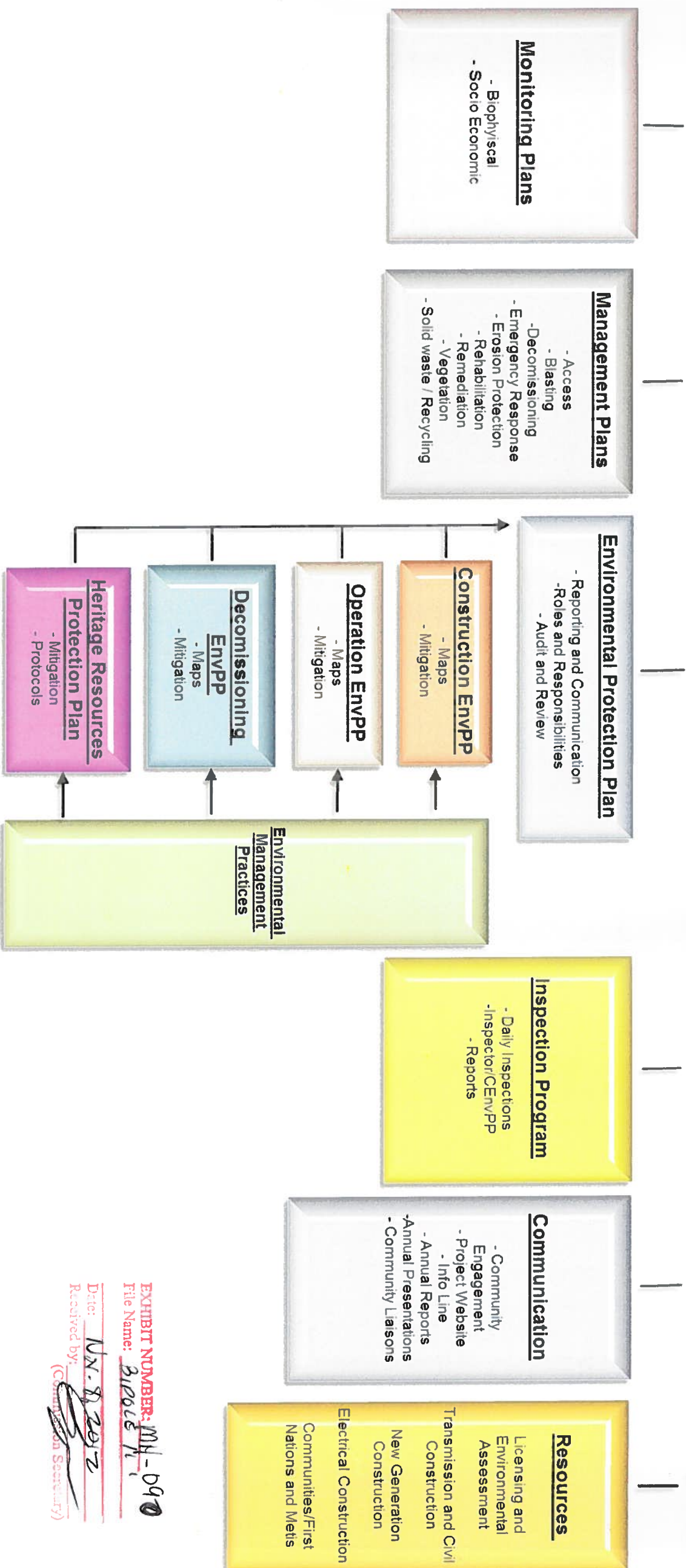


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