Manitoba-Minnesota Transmission Project

Blasting Management Plan

April 2019

Prepared by:

Licensing and Environmental Assessment Department

Manitoba Hydro

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PREFACE

Manitoba Hydro would like to acknowledge that this Project will be located in Treaty One Territory, the traditional territories of the Anishinabe, Cree, and Dakota people and the homeland of the Metis Nation.

This document presents the Blasting Management Plan (the Plan) for the construction of the Manitoba-Minnesota Transmission Project (the Project). It is intended to provide information and instruction to Contractors and Manitoba Hydro employees as well as information to regulators, Indigenous communities and organizations, and members of the public.

The Plan provides general considerations and guidance pertinent to the use of implode sleeves for conductor and overhead skywire splicing during the development of the Project. More importantly it presents a Project-specific implementation plan and actions required to proactively address the use of implode sleeves as a result of construction of the Project.

Manitoba Hydro employees and contractors are encouraged to contact the onsite Manitoba Hydro Environmental Inspector/Officer if they require information, clarification or support. Regulators, Indigenous communities and organizations, and the Public are to direct any inquiries about this Plan to:

Manitoba Hydro
Licensing and Environmental Assessment Department
360 Portage Avenue
Winnipeg, MB
Canada R3C 0G8
1-877-343-1631

mmtp@hydro.mb.ca

Document Owner
Licensing and Environmental Assessment Department
Transmission Planning and Design Division
Transmission Business Unit
Manitoba Hydro

Version – Final 1.0

List of Revisions

Number	Nature of revision	Section(s)	Revised by	Date
Draft	Added acknowledgement to Preface	Page ii	Manitoba Hydro	20190211
Draft	Reference to Secondary licensed magazines – added	Section 3.1.1	Manitoba Hydro	20190211
Draft	Engagement activities - added	Section 1.1	Manitoba Hydro	20190211
Draft	Summary of Consultation	Appendix A	Manitoba Hydro	20190211

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1.0 Introduction

Consistent with its corporate Environmental Management Policy, Manitoba Hydro has committed within the Manitoba - Minnesota Transmission Project (the Project) Environmental Impact Statement (EIS) to developing a Blasting Management Plan as part of a larger suite of mitigation measures to minimize potential negative environmental and socio-economic effects. This document outlines the procedures to be employed by Contractors to proactively address the issue of using implode sleeves for conductor splicing.

Conductor splicing along the transmission line is typically required at angle structure locations and at splicing locations approximately every 6 kilometers, which is the typical length of a spool of electrical conductor. For conductor connections within an electrical station implosive sleeves are also used. Please see the video at this link (https://www.youtube.com/watch?v=KuMkQxdn7OA) for an example of conductor splicing using implosive sleeves.

Blasting will not be used on this project for quarrying or foundation installation.

This document is intended to provide measures to manage the use of implode sleeves during the construction of the Project. The storage, use, disposal and communication of implode sleeve activities will be discussed.

Note that the methods presented here are not exhaustive and alternative methods may be proposed by the Contractor but would require approval from a Manitoba Hydro Environmental Officer prior to implementation.

1.1 Commitment to environmental protection and Indigenous engagement

Manitoba Hydro integrates environmentally responsible practices in all aspects of our business. Environmental protection can only be achieved with the involvement of Manitoba Hydro employees, consultants, contractors, Indigenous communities and organizations and the public at all stages of the Project from planning and design through construction and operational phases.

The use of a Blasting Management Plan is a practical and direct implementation of Manitoba Hydro's environmental policy and its commitment to responsible environmental and social stewardship. It is a proactive approach to manage potential effects of the use of implode technologies related to the construction of a new transmission line.

Manitoba Hydro is committed to seeking input on this draft plan from Indigenous communities and organizations through the MMTP Monitoring Committee and the project First Nations and Metis Engagement Process.

Below is a summary and evidence of Manitoba Hydro's consultation with potentially affected persons, organizations, Indigenous communities, and federal and provincial authorities regarding the Blasting Management Plan. Any feedback or concerns that were raised, steps that Manitoba Hydro has taken or will take to address those concerns can be found in Appendix A.

Draft environmental protection and management plans, including Blasting Management Plan, were uploaded to the Project website and a web page was created in November 2018, including a fillable comment form to provide feedback (Appendix A).

Indigenous communities and organizations, landowners, interested parties and the public were notified, in October 2018, that Manitoba Hydro was seeking feedback on these plans. This was done through the Project website, MMTP Monitoring Committee website, e-campaign, and emails (Appendix A).

The construction environmental protection plan and associated management plans, including the Blasting Management Plan have been discussed at MMTP Monitoring Committee meeting and posted to the MMTP Monitoring Committee website. Paper copies of all draft plans were provided to community members at meeting. The management plan website was shared with communities via email and the plan was also posted on the MMTP Monitoring Committee website (Appendix A).

Manitoba Hydro is committed to implementing this Plan and requiring Contractors to follow the terms of this and other applicable plans within the Environmental Protection Program.

1.2 Purpose and objectives

This Plan is intended to be used as a reference document in the field; during construction activities to address implode sleeve use while ensuring compliance with Manitoba Hydro's Construction Environmental Protection Plan requirements, industry best practices, and Provincial/Federal regulations and legislation.

Should a contractor wish to deviate from the techniques or implementation described in this document they must first obtain approval from a Manitoba Hydro Environmental Officer.

The objectives of this Plan are as follows:

- To provide guidance on the management of implode sleeve use at the work site.
- To provide guidance on the public communication methods to be employed when implode sleeves are utilized.

1.3 Roles and responsibilities

This section outlines the major roles and responsibilities of those involved in the implementation of the Plan. The Plan forms a component of the Environmental Protection Program (EPP), which provides the framework for the delivery, management and monitoring of environmental and socio-economic protection measures for the Project. The EPP describes how Manitoba Hydro is organized and functions to deliver timely, effective, and comprehensive solutions and mitigation measures to address potential environmental effects from Project activities. A visual reference for how the Plan fits into the overall EPP organization structure is provided in Figure 1.

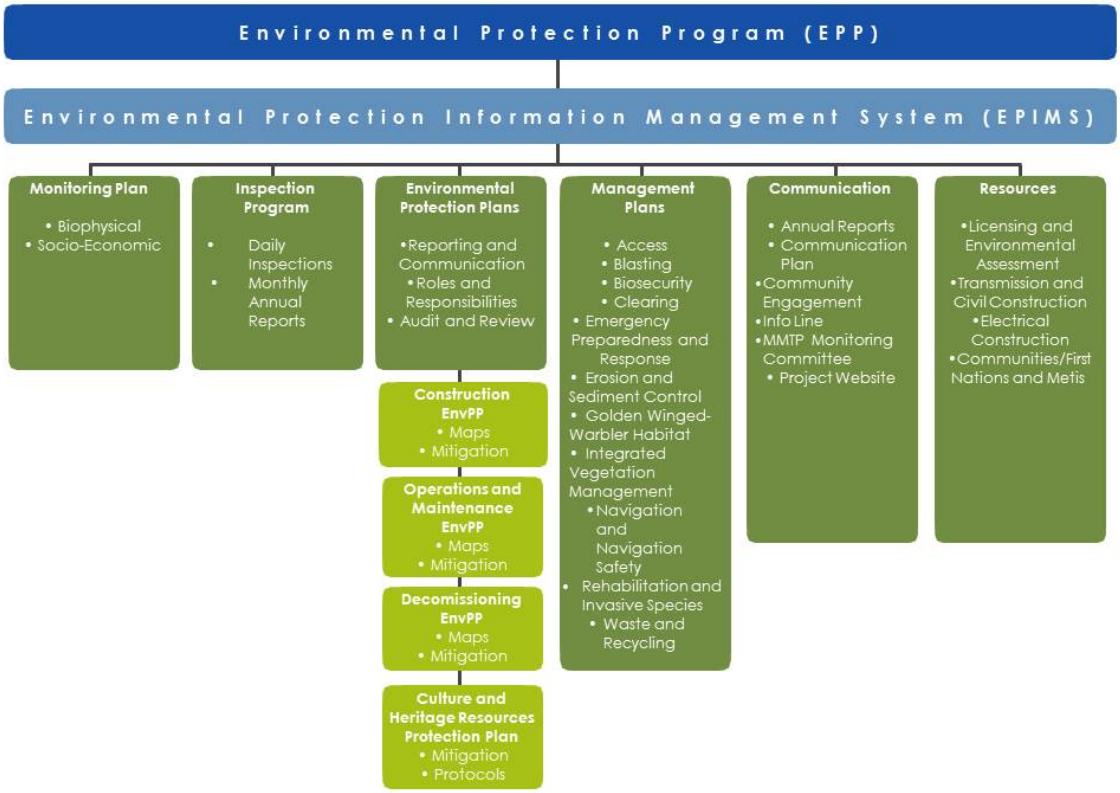

Figure 1: Transmission Environmental Protection Program

A summary of roles and key responsibilities is found in Table 1. Communication and reporting on environmental issues, monitoring and compliance will be as outlined in Figure 2.

Table 1: Roles and responsibilities

Role	Key Responsibilities
Manitoba Hydro	• Develops and amends this Plan. • Aquires all necessary implode sleeves and stores them in a licenced Magazine at Riel Storage Yard. • Appoints an Environmental/Safety Inspector/Officer to confirm that regulatory criteria are being met. • Maintains inventory of all explosives at MH licenced Magazine • Communicates to all parties of blasting activities as per section

	4.0
Construction Contractor(s)	• Ensure that all activities comply with the requirements of the Plan. • Ensure that all activities comply with applicable regulatory requirements. • Obtains additional Magazine licence as required for temporary storage at Project work site(s) • Responsible for the transportation and storage at the project work site. • Responsible for acquiring any applicable regulatory permits related to the use of implode sleeves and submitting copies to MH. • Ensure all contractor project staff are adequately trained/informed of pertinent requirements and of the Project related to their position. • Ensure that only Province of Manitoba certified blasters are permitted to conduct implode sleeve splicing. • Report any discoveries of non-compliance, accidents or incidents to MH. • Respond and act promptly to resolve if any activities are identified as not in compliance with the Plan or any regulatory requirements. • Ensure that adequate equipment and materials are on hand to safely store, segregate and manage implode sleeves. • Ensure that Blaster Log documentation is maintained and copies submitted to MH on request.

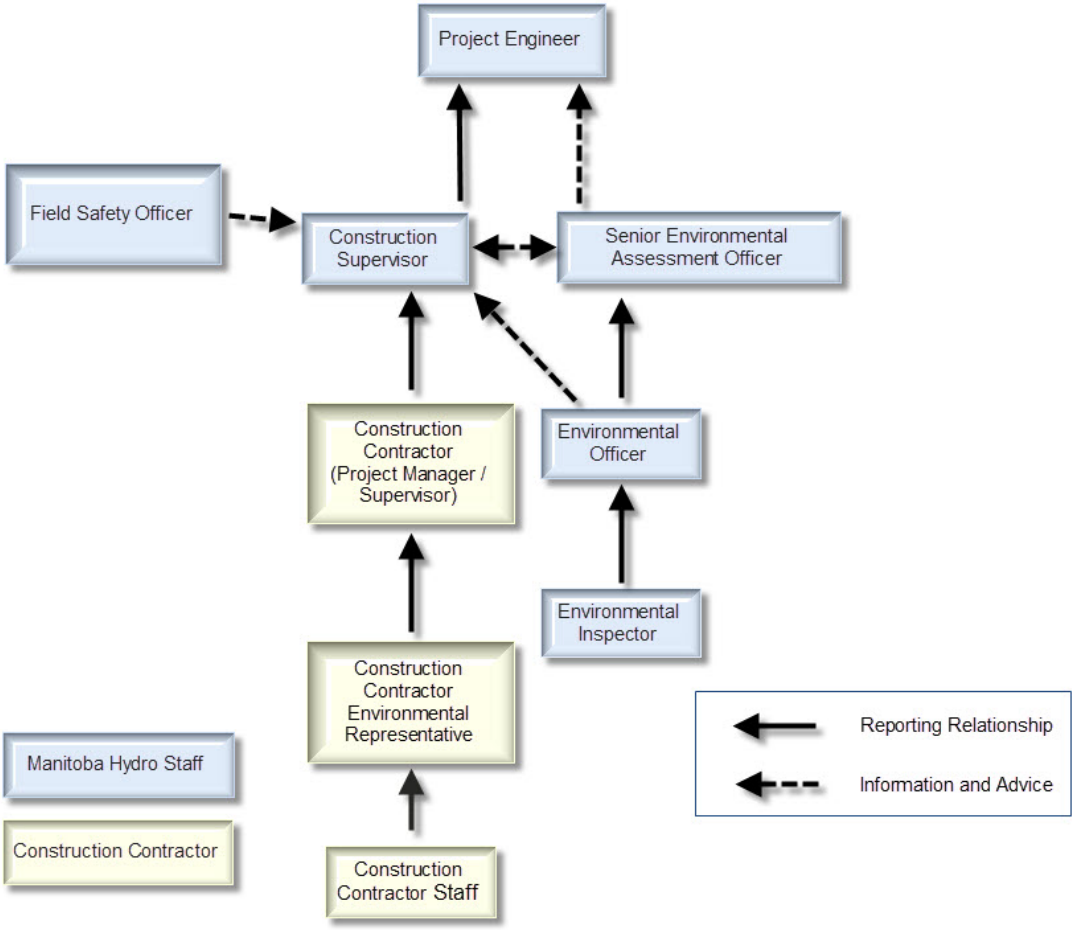

Figure 2: Environmental communication reporting structure

2.0 Regulatory context

In general, the laws and regulations mandating the use of implode sleeves cover:

- Manufacture of explosives
- Sale of explosives
- Storage of explosives
- Import and export of explosives
- Disposal of explosives
- Transportation of explosives
- Safe worksite practices

Below is a list of the applicable legislation regarding implode sleeve use:

Provincial

- Occupational Health and Safety Regulations

Federal

- Transportation of Dangerous Goods Act
- The Explosives Act

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3.0 Implementation

3.1 Explosive Storage

3.1.1 Magazine

Manitoba Hydro holds a User's Explosives License (U075827/E) for its magazines located in a storage yard at Gate 6 - 59029 Provincial Road 207, Rural Municipality of Springfield, Manitoba, Canada. This magazine will be the primary storage location for implode sleeves for the project. Additional magazines may be licensed by the contractor for secondary storage closer to the work sites.

3.1.2 Project work sites

When implosive sleeves are transported to the work site for use they must be stored properly and kept separate from flammable materials, potential initiators such as matches, fuse lighters, detonators, exposed batteries, and from exposed steel and iron until the last practicable moment before they are brought together for the blast.

All implosive sleeves delivered to a work site must be kept in their original boxes and placed in a safe and stable location. At the work site, implosive sleeves must be attended by a competent person or kept in a locked, secured container. To protect from contamination, damage, or accidental detonation, implosive sleeves should be kept in a suitable day box even when attended.

If implosive sleeves are kept on a vehicle at the work site, they must be kept in locked containers and attended by a competent person. After working hours, all implosive sleeves, detonators and shock tube will either be returned to a licensed magazine or guarded in person overnight.

A day box is a lockable receptacle of substantial construction that is used to transport implosive sleeves to a work site and store them temporarily while work is in progress.

This box must be fully enclosed, locked and secure. Most boxes are constructed of wood-lined metal, with a door or lid secured with a heavy-duty padlock. The interior must have no exposed steel or other hard, gritty, material or anything capable of sparking.

On the work site, detonators must be kept separately in a crush resistant portable container capable of protecting the detonators from damage. The container is usually made

of plywood with a hinged or sliding lid. Since it is attended by a blaster or an assistant, a lock is not required.

3.2 Certified Blaster

The installation of implosive sleeves in the province of Manitoba must be supervised by a certified blaster. Only the blaster can install and initiate the detonator. The blaster controls the work area and is responsible for all explosive aspects of the work. The blasters' authority covers all assistants, workers and equipment in the area in and around the installation area. If there is more than one certified blaster on site, one of them must be designated the "Blaster of Record". This person will have full authority over the work site and responsibility for the detonation.

The blaster conducting or directing an operation must have a valid blaster's certificate issued by the Province of Manitoba. This specifies the type of blasting the blaster is qualified to conduct. The employer is required to record and verify details of the blaster's certification, including: name and address, certificate number, certification codes, all conditions/restrictions, and expiry date. Whenever the blaster conducts or directs a blasting operation, the blaster must have the certificate readily available at the job site to be produced if requested by Manitoba Hydro.

The blaster is responsible for, and must exercise continuous visual supervision over, all assistants. All assistants must be competent and have demonstrated knowledge of safe work procedures. Before work begins, the blaster will carry out a tailgate meeting on the job site where all workers are present. The blaster will describe the day's work, assign tasks and responsibilities, and go over the safety procedures for the job site. Whenever the blaster leaves the blasting area, work must cease, assistants must guard the explosive materials and wait until the blaster returns before the operation may be continued.

3.3 Designated areas

3.3.1 Blasting area

The work area around the installation site for implosive sleeves is referred to as the blasting area. No work should be done within the blasting area without the approval of the blaster. A blasting area extends at least 50m (165') in all directions from any place in which implosive sleeves are being prepared or placed, or where an unexploded charge is known or believed to exist.

If an activity or condition outside the blasting area endangers any person engaged in the operation, the blaster must take corrective action and all persons must follow the blaster's directions. The safety of every person within the blasting area is one of a blaster's major responsibilities. The blaster must be sure to give a safety briefing to all workers on the site and maintain effective control over the site throughout the entire blasting operation.

3.3.2 Danger area

The danger area is an area centered around the detonation in which a person could suffer injury from the effects of the blast, including air blast (concussion), fire, fly material or projectiles, landslide or avalanche caused by the explosion. In the case of implosive sleeves, the principle dangers are projectile hazard and air blast. There is no ground vibration caused by the detonation of implosive sleeves.

Unlike the blasting area, the danger area has no prescribed minimum size. The blaster is responsible for establishing the limits of the danger area and communicating this information to all persons who may be potentially affected, and for taking measures to mitigate potential impacts from the blast, such as protecting nearby vehicles, equipment, windows, etc.

3.4 Security

One of the tasks of the blaster is to assign guards and posting stations at the installation site to prevent unauthorized entry to the installation site.

Implosive sleeves must be guarded at all times by a competent person who is properly instructed in their handling. The guard's responsibilities are to protect the charges from tampering and theft and to prevent unauthorized entry by persons not working on the job site. Warning signs and barricades can be used as well but do not substitute for a guard. The most critical period in the installation of implosive sleeves is when the detonator is attached to the sleeve. To prevent accidental detonation, the area surrounding a blast must be under the control of the certified blaster who is responsible for the safety of all persons who could be affected. Only the blaster may detonate the charges.

The guard must be posted in a safe location, typically outside the danger area. In a small installation site where visibility is clear, it may be possible for just one person to guard the danger area. Guards should be provided with appropriate equipment. For example, if the guard is to control traffic, they will require a flagman's vest and a "STOP" paddle.

The blaster is responsible for instructing guards in their duties and responsibilities, including the following.

- location of their post.
- warning devices and signals.
- guard's responsibility to prevent persons from entering the danger area, for any reason.
- importance of watching for fly material.
- not allowed to re-enter or permit re-entry to the danger area until the all-clear signal is given or the guard is personally relieved by the blaster.

3.5 Detonation

3.5.1 Timing

The detonation of implosive sleeves is generally timed to occur on all of the conductors that need splicing at a splicing location at the same time to minimize the frequency and amount of noise generated. Implode sleeves are typically detonated one to two times per day at a single location during normal business hours 08:00 thru 17:00.

3.5.2 Clearing the area

During detonation of implosive sleeves, only the blaster and the blaster's assistant(s) should remain in the area. No other person is allowed entry unless the blaster gives permission and maintains control over that person's activities.

Before detonating a charge, the blaster must clear the danger area of all persons. Where visibility is obstructed, the blaster must make sure that no one is present in the danger area or is about to enter it. No person is allowed to remain in the danger area during a blast unless it is essential for that person to remain there and the blaster ensures that the person is positioned in a safe place before initiating the blast.

Before sounding the warning signals and firing the blast, the danger area must be cleared by the blaster or their assistant. Sounding the warning signal does not relieve the blaster of responsibility to clear the area and to keep it clear during the blast.

3.5.3 Pre-blast precautions

Before firing a charge, the blaster must:

- visually confirm that the explosive circuit is complete, so that all connections are secure and the detonation will fire properly.
- confirm that any surplus implosive sleeves have been removed to a safe distance from the blast.
- determine that adequate protective measures have been taken for the safety of persons and protection of property.
- verify that the danger area is clear and that all guards are at their posts.

3.5.4 Warning signals

Before an implosive sleeve is detonated, the blaster will sound a warning signal. Every person in the danger area must be aware of the warning signals. The blaster must also post the signal code at conspicuous locations in the danger area if there is a possibility that other persons may approach the danger area.

Devices sounding warning signals should be distinct from other signal devices in the area and must be audible throughout the danger area. A compressed air horn is a common device used for this purpose. A truck horn is not distinct or loud enough and therefore not a good signaling device, but can be used if nothing else is available. The blaster establishes the blast warning signal and the all clear signal that will be used and makes sure that all persons working on the job site are aware of the signaling protocol. After the warning signal, the detonation is fired. After the detonation, and after the area has been inspected by the blaster and deemed to be clear of explosive hazards, the all-clear signal is sounded. A very common signaling pattern is 3 short warning blasts, followed by yelling “fire”, then the shot and then after the shot, a single long air horn blast gives the all clear signal.

During the time between the warning signals and the all-clear signal, only the blaster and persons authorized by the blaster may enter the blast area. After a detonation, it may be necessary for the blaster and an assistant to clear dangers before the all-clear signal is sounded.

3.5.5 Misfires

A misfire refers to a situation where any part of an explosive charge which, after initiation, has failed to detonate. Misfires with implosive sleeves are rare, but regardless of precautions taken to prevent them, they can still occur. A misfire is a potentially dangerous situation and must be handled with great care. A blaster is expected to recognize a misfire condition and follow safe procedures for handling them.

3.6 Post-blast inspection and clean up

Following a detonation, the blaster must be satisfied that there are no undetonated explosive materials or other dangers in the blast area. After the successful detonation of an implosive sleeve, there will be no residual explosive material remaining. The blaster will confirm if all sleeves have been detonated, and when it is safe to return to the work area.

Installed implosive sleeves do not need to be cleaned. However, there will be a film of plastic residue on the sleeve left over from the protective covering around the sleeve. This can be removed with a rag. The quality of the installed implosive sleeve will be immediately apparent. A visual examination of the sleeve should be carried out to make sure the sleeve was installed properly. This means checking that the marks on the conductor have not moved and that the compression is uniform and smooth. Tell-tale signs of incorrect compression include dislocated conductor mark and uneven compression.

After installation, the spent shock tube left over from the initiation system should be picked up so that it does not become a trip hazard. This material and any leftover debris from the detonator can be placed into bags and taken to landfill.

Empty wooden boxes and detonator cartons do not contain explosive residue. If this is confirmed by visual inspection, they may be recycled or taken to landfill.

It is very important that all orange stickers and labels identifying the contents of packaging as explosive materials must be removed from packaging if the packaging is to be removed from the site.

If there are only a handful of detonators left over, it is sometimes more expedient to destroy them at the job site. The blaster will make this decision. The blaster must not leave the blasting site or allow others to enter the site until satisfied that the site is safe.

3.7 Effects and mitigation measures

Transient noise is the primary effect of the use of implosive sleeves, as the detonation of implosive sleeves can be startling to nearby animals or people who are not aware of the activity, Through a proactive communication program with farmers, resources users and nearby residences in the affected area, Manitoba Hydro will endevour to alleviate their concerns, and minimize disruption to the public.

General mitigation measures that are particular to the use of implosive sleeves are found in the Construction Environmental Protection Plan, General mitigation tables:

- PA-1 Blasting and Imploding

3.8 Documentation

The blaster is required to maintain a blasting log before installing any implosive sleeve. The blasting log is a record of details of the blast and the post-blast site examination. After detonating the sleeve, the blaster must record the results of the post-blast inspection. Any format for documenting this information is acceptable, provided the required information is recorded in an organized manner. The blasting log must record details of the implosive sleeves installation and the results of the post blast inspection. The blasting log must be readily available at the blast site and must be produced for inspection upon request of Manitoba Hydro. It must be retained by the contractor for at least 5 years following completion of blasting operations at a job site. The blasting log is also intended to document basic information such as the date and time of the installations, the quantities of sleeves installed, safety precautions taken, and placement of guards.

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4.0 Communication

Manitoba Hydro will notify the MMTP Monitoring Committee (including 25 different Indigenous communities), area residents, Interested Parties (including area Conservation officers, police, fire, Rural Municipalities, air traffic control, 911), Public, and identified resource users.

Notification will take various forms including letters, email, e-campaign, project website, social media and in person by Manitoba Hydro staff prior to implode sleeve use. See appendix B for an example of the minimum content in a blasting notification, and appendix C for a more detailed list of those who will be notified and how.

5.0 References

2017, Implosive Splicing Training Manual, Implosive Sleeves Corporation

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Appendix A

Summary of Consultation

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Appendix A: Summary of consultation

Introduction

Below is a summary and evidence of Manitoba Hydro's consultation with potentially affected persons, organizations, Indigenous communities, and federal and provincial authorities regarding the Blasting Management Plan (the Plan) construction environmental protection plan, including any concerns that were raised, steps that Manitoba Hydro has taken or will take to address those concerns.

Consultation

Draft environmental protection and management plans, were uploaded to the Project website and a web page was created in October 2018, this plan was added in February 2019, including a fillable comment form to provide feedback.

As Manitoba Hydro completed draft plans, Indigenous communities and organizations, landowners, interested parties and the public were notified. Input was sought between May of 2018 until present. Manitoba Hydro sought feedback on this Plans in February of 2019. This was done through the Project website, MMTP Monitoring Committee website, e-campaign, emails, and letters to landowners.

As noted above, the Project website was shared with communities via email and the Plan was also posted on the MMTP Monitoring Committee website.

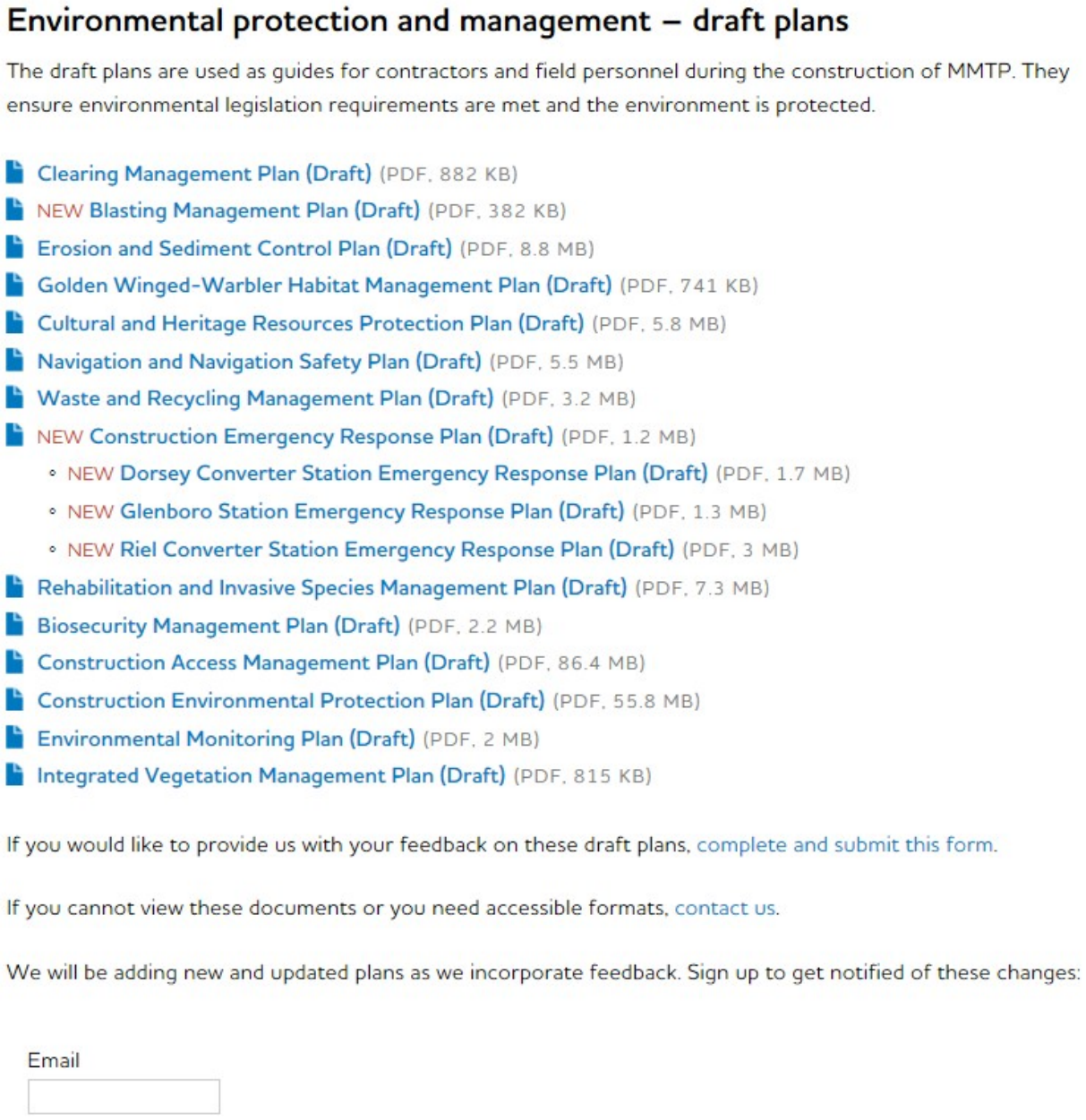
Concerns raised and steps taken to address concerns

Manitoba Hydro received feedback on this Plan from a MMTP Monitoring Committee Representative Dakota Tipi First Nation (Table 1). Manitoba Hydro reviewed the feedback, updated the plan where appropriate including the list of revisions table and provided Dakota Tipi First Nation with a table including their comments and Manitoba Hydro's responses. As a result of this no further feedback has been received from these communities/organizations with regard to this Plan.

Table 1 Comments from a MMTP Monitoring Committee Representative from Dakota Tipi First Nation

Section	Comments from Dakota Tipi First Nation	Manitoba Hydro response, steps taken and rationale
Overall	I reviewed the cultural and heritage resources protection plan, I'm very satisfied with hydro respect and transparent aspect to the plan, as well with the other 10 plans, Dakota Tipi first nation and myself look forward to a respectful positive outcome for all living spirits that will be involved in the construction of the MMTP project	Manitoba Hydro also looks forward to continuing to work with Dakota Tipi First Nation and thanks the Committee Representative for their review of the plans

Draft environmental protection and management plans, were uploaded to the Project website and a web page was created in October 2018 and updated in February 2019 with this Plan. A recent screen shot of the Manitoba Hydro Project Website is below (Figure A).



Environmental protection and management – draft plans

The draft plans are used as guides for contractors and field personnel during the construction of MMTP. They ensure environmental legislation requirements are met and the environment is protected.

- Clearing Management Plan (Draft) (PDF, 882 KB)
- NEW Blasting Management Plan (Draft) (PDF, 382 KB)
- Erosion and Sediment Control Plan (Draft) (PDF, 8.8 MB)
- Golden Winged-Warbler Habitat Management Plan (Draft) (PDF, 741 KB)
- Cultural and Heritage Resources Protection Plan (Draft) (PDF, 5.8 MB)
- Navigation and Navigation Safety Plan (Draft) (PDF, 5.5 MB)
- Waste and Recycling Management Plan (Draft) (PDF, 3.2 MB)
- NEW Construction Emergency Response Plan (Draft) (PDF, 1.2 MB)
  - NEW Dorsey Converter Station Emergency Response Plan (Draft) (PDF, 1.7 MB)
  - NEW Glenboro Station Emergency Response Plan (Draft) (PDF, 1.3 MB)
  - NEW Riel Converter Station Emergency Response Plan (Draft) (PDF, 3 MB)
- Rehabilitation and Invasive Species Management Plan (Draft) (PDF, 7.3 MB)
- Biosecurity Management Plan (Draft) (PDF, 2.2 MB)
- Construction Access Management Plan (Draft) (PDF, 86.4 MB)
- Construction Environmental Protection Plan (Draft) (PDF, 55.8 MB)
- Environmental Monitoring Plan (Draft) (PDF, 2 MB)
- Integrated Vegetation Management Plan (Draft) (PDF, 815 KB)

If you would like to provide us with your feedback on these draft plans, complete and submit this form.

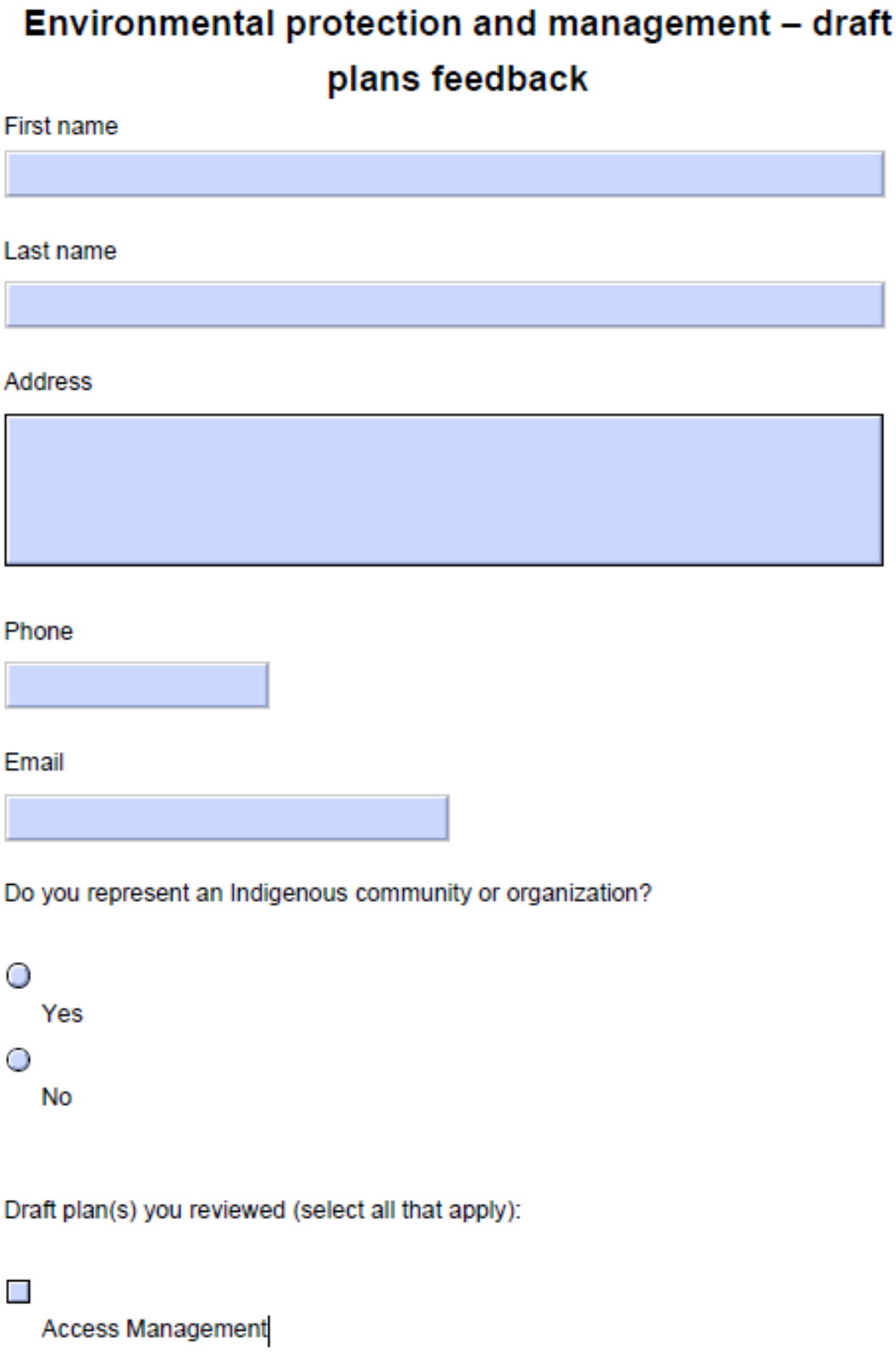
If you cannot view these documents or you need accessible formats, contact us.

We will be adding new and updated plans as we incorporate feedback. Sign up to get notified of these changes:

Email

Figure A screen shot of Manitoba Hydro project page website

A fillable comment form to provide feedback was created in October 2018. A screen shot of the fillable comment sheet can be found below (Figure B).



Environmental protection and management – draft plans feedback

First name

Last name

Address

Phone

Email

Do you represent an Indigenous community or organization?

- Yes
- No

Draft plan(s) you reviewed (select all that apply):

- Access Management

Figure B Fillable comment form to provide feedback

Draft environmental protection and management plans were uploaded to the MMTP Monitoring Committee website in October 2018, this Plan was added in February 2019. A screen shot of the MMTP Monitoring Committee website is below (Figure C).

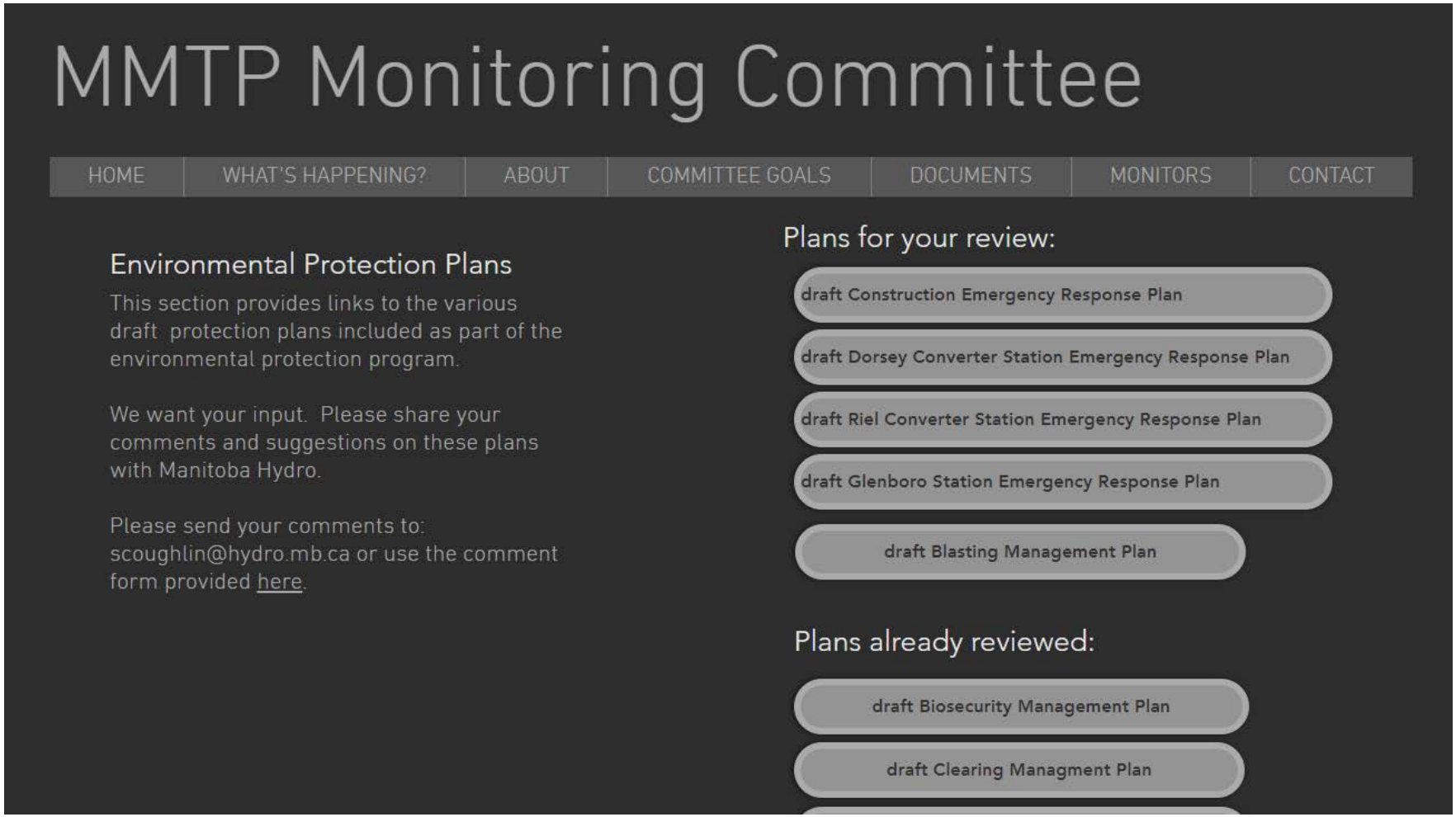


Figure C MMTP Monitoring Committee website screenshot

Below is a screen shot of the e-campaign that was sent to 825 recipients (Figure D.

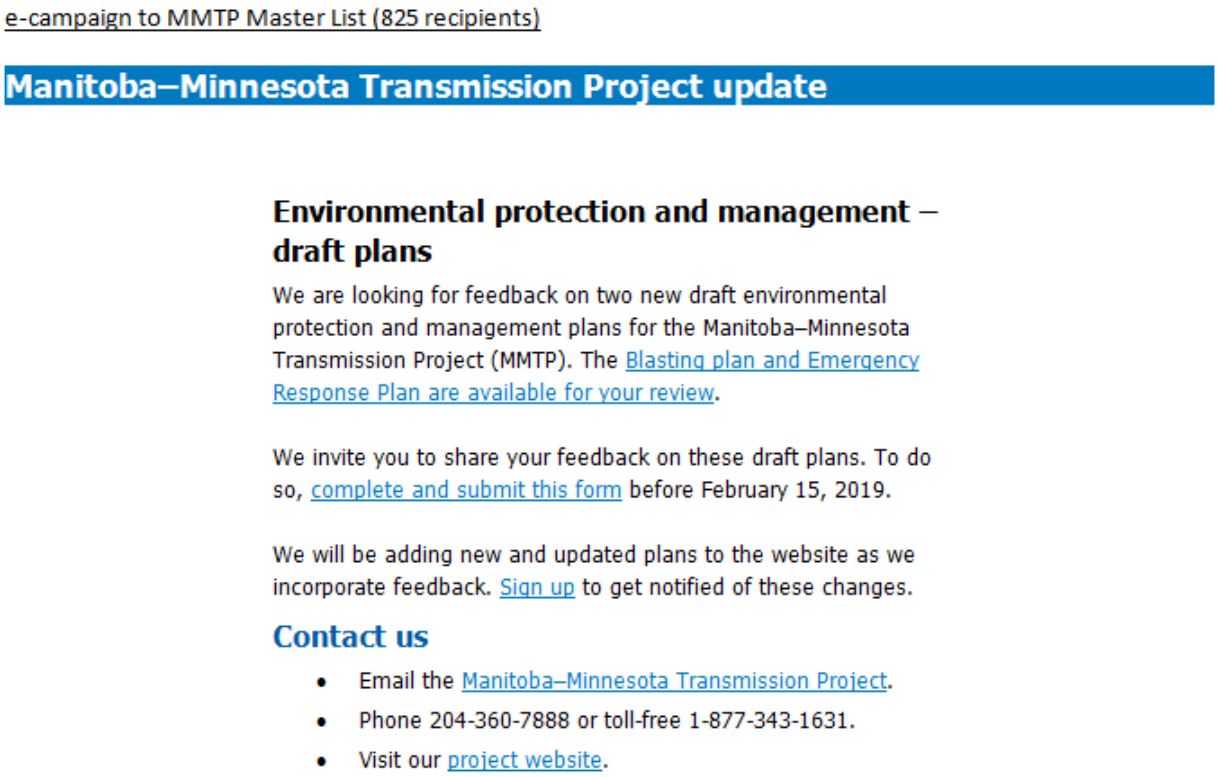


Figure D e-campaign screenshot

Below is the content from the letter sent to landowners (Figure E).

Manitoba Hydro

2019 04 04

[redacted]

Dear Landowner:

MANITOBA-MINNESOTA TRANSMISSION PROJECT: ENVIRONMENT ACT LICENCE RECEIVED

Manitoba Sustainable Development has granted a licence for the Manitoba-Minnesota Transmission Project. The licence outlines conditions that Manitoba Hydro must follow for the project and can be found on the Manitoba Sustainable Development Public Registry (https://www.gov.mb.ca/sd/eal/registries/5750mbhydrombminnesota/index.html).

While the Project has received provincial regulatory approval, federal decisions are pending and Manitoba Hydro will not begin construction until it has received all necessary approvals.

The draft environmental protection and management plans for the Project are available on our website and we invite you to provide feedback. The following is a link to the document library that contains these plans https://www.hydro.mb.ca/projects/mb_mn_transmission/document_library.shtml. I encourage you to visit the Project website (www.hydro.mb.ca/mmtp) for more information or to sign up for project updates.

At this time we are also seeking to understand whether you have interest in participating in a Landowner Advisory Committee. Please contact me for further information should you be interested.

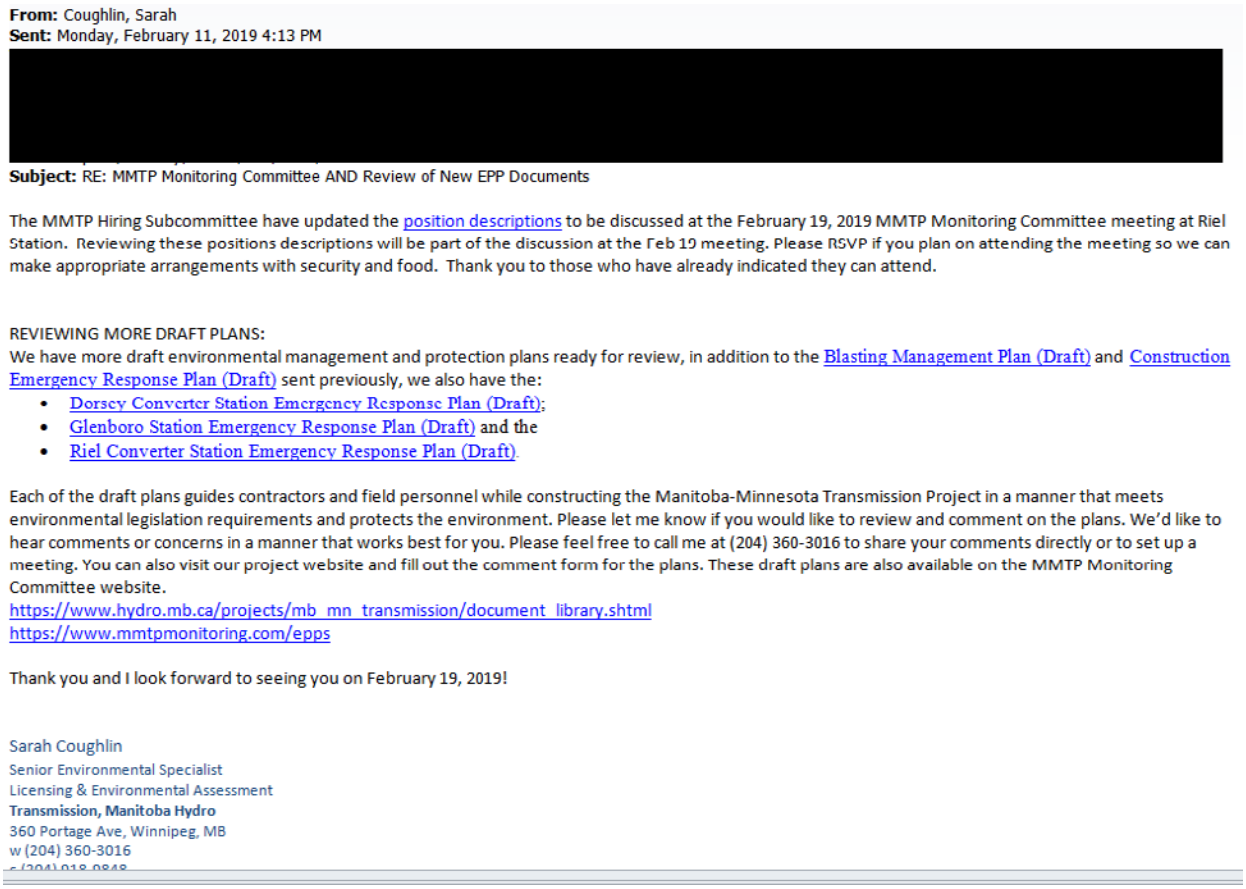
As your Manitoba Hydro liaison, I welcome discussions with you at any time. I can be reached directly at «Liaison_phone_number». Please let me know if you would prefer correspondence by email.

Yours truly,

«Liaison»

Figure E Content from the letter sent to landowners

Below is a screen shot of an email sent to the MMTP Monitoring Committee (Figure F).



From: Coughlin, Sarah
Sent: Monday, February 11, 2019 4:13 PM
[redacted]
Subject: RE: MMTP Monitoring Committee AND Review of New EPP Documents

The MMTP Hiring Subcommittee have updated the position descriptions to be discussed at the February 19, 2019 MMTP Monitoring Committee meeting at Riel Station. Reviewing these positions descriptions will be part of the discussion at the Feb 19 meeting. Please RSVP if you plan on attending the meeting so we can make appropriate arrangements with security and food. Thank you to those who have already indicated they can attend.

REVIEWING MORE DRAFT PLANS:
We have more draft environmental management and protection plans ready for review, in addition to the Blasting Management Plan (Draft) and Construction Emergency Response Plan (Draft) sent previously, we also have the:

- Dorsey Converter Station Emergency Response Plan (Draft);
- Glenboro Station Emergency Response Plan (Draft) and the
- Riel Converter Station Emergency Response Plan (Draft).

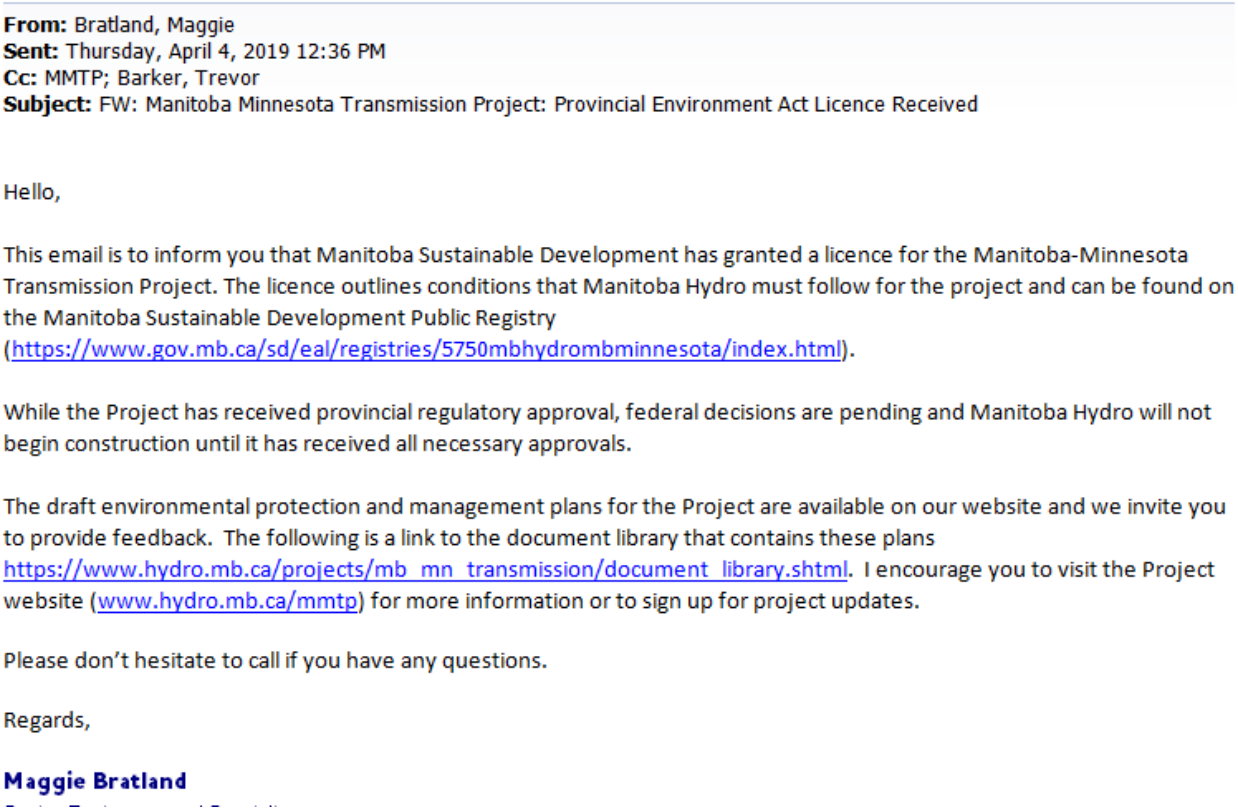
Each of the draft plans guides contractors and field personnel while constructing the Manitoba-Minnesota Transmission Project in a manner that meets environmental legislation requirements and protects the environment. Please let me know if you would like to review and comment on the plans. We'd like to hear comments or concerns in a manner that works best for you. Please feel free to call me at (204) 360-3016 to share your comments directly or to set up a meeting. You can also visit our project website and fill out the comment form for the plans. These draft plans are also available on the MMTP Monitoring Committee website.
https://www.hydro.mb.ca/projects/mb_mn_transmission/document_library.shtml
https://www.mmtpmonitoring.com/epps

Thank you and I look forward to seeing you on February 19, 2019!

Sarah Coughlin
Senior Environmental Specialist
Licensing & Environmental Assessment
Transmission, Manitoba Hydro
360 Portage Ave, Winnipeg, MB
w (204) 360-3016
c (204) 918-0848

Figure F Screen shot of an email sent to the MMTP Monitoring Committee

Below is a screen shot of an email sent to interested parties (Figure H) and a list of the interested parties (Table 2)



From: Bratland, Maggie
Sent: Thursday, April 4, 2019 12:36 PM
Cc: MMTP; Barker, Trevor
Subject: FW: Manitoba Minnesota Transmission Project: Provincial Environment Act Licence Received

Hello,

This email is to inform you that Manitoba Sustainable Development has granted a licence for the Manitoba-Minnesota Transmission Project. The licence outlines conditions that Manitoba Hydro must follow for the project and can be found on the Manitoba Sustainable Development Public Registry (https://www.gov.mb.ca/sd/eal/registries/5750mbhydrombminnesota/index.html).

While the Project has received provincial regulatory approval, federal decisions are pending and Manitoba Hydro will not begin construction until it has received all necessary approvals.

The draft environmental protection and management plans for the Project are available on our website and we invite you to provide feedback. The following is a link to the document library that contains these plans https://www.hydro.mb.ca/projects/mb_mn_transmission/document_library.shtml. I encourage you to visit the Project website (www.hydro.mb.ca/mmtp) for more information or to sign up for project updates.

Please don't hesitate to call if you have any questions.

Regards,

Maggie Bratland

Figure G Sample email sent to interested parties

Table 2 Manitoba Hydro's list of interested parties for the Project includes the following organizations

Interested parties list
Beausejour Community Planning Services
Beef Producers of Manitoba
Bird Atlas
Canadian Parks and Wilderness Society (CPAWS)
City of Steinbach
City of Winnipeg
Consumers Association of Canada
Cooks Creek Conservation District
Dairy Farmers of Manitoba
DOA Outfitters
Ducks Unlimited
Forest Industry Association of Manitoba

Interested parties list
Green Action Centre
HyLife, Land Manager
Integrated Resource Management Team (Eastern Region)
Keystone Agricultural Producers
La Salle Redboine Conservation District
Local Urban District of Richer, Committee Member-Chairperson
Macdonald-Ritchot Planning District
Manitoba Indigenous and Northern Relations
Manitoba Aerial Applicators
Manitoba Agriculture (Land Use)
Manitoba Agriculture (Agri-Resource Branch)
Manitoba Association of Cottage Owners
Manitoba Bass Anglers (MBA)
Manitoba Canoe & Kayak Centre - Winnipeg
Manitoba Chamber of Commerce
Manitoba Chicken Producers
Manitoba Climate Change and Air Quality
Manitoba Crown Lands
Manitoba Fly Fishing Association (MFFA)
Manitoba Forestry Association
Manitoba Groundwater Management
Manitoba Habitat Heritage Corporation
Manitoba Historic Resources Branch
Manitoba Infrastructure
Manitoba Infrastructure Highway Engineering
Manitoba Infrastructure Highway Regional Operations
Office of Fire Commissioner
Manitoba Lodges and Outfitters Association
Manitoba Paddling Association
Manitoba Parks and Regional Services - Parks and Protected Spaces
Manitoba Petroleum Branch
Manitoba Pork Council (Industry Services Co-ordinator
Manitoba Protected Areas Initiative
Manitoba Public Health
Manitoba Resource Development Division Growth, Enterprise and Trade
Manitoba Sustainable Development
Manitoba Sustainable Development (Aboriginal Relations)
Manitoba Sustainable Development (Office of Drinking Water)
Manitoba Sustainable Development (Water Control Works and Drainage Licensing)

Interested parties list
Manitoba Sustainable Development (Water Quality Management)
Manitoba Trails Association
Manitoba Trappers Association
Manitoba Sustainable Development (Fish and Wildlife)
Manitoba Water Use Licensing
Manitoba Woodlot Association
Maple Leaf Agri-Farms
Nature Conservancy of Canada
Organic Producers Association of Manitoba Co-Operatives Inc.
Paddle Manitoba
Portage la Prairie Community Planning Services
REDBOINE BOATING CLUB
Rural Municipality of Glenboro South - Cypress
Rural Municipality of Headingley
Rural Municipality of La Broquerie
Rural Municipality of McDonald
Rural Municipality of Piney
Rural Municipality of Ritchot
Rural Municipality of Rosser
Rural Municipality of Springfield
Rural Municipality of Ste. Anne
Rural Municipality of Stuartburn
Rural Municipality of Tache
Ruth Marr Consulting
Save the Seine
Seine-Rat River Conservation District
Sharp-Tails Plus Foundation
Sno-Man Inc
South East Snoriders
Southwood Golf & Country Club
St. Norbert Ward - Winnipeg
St. Vital Ward - Winnipeg
Steinbach Community Planning Services
Steinbach Game & Fish Gun Range Inc
Town of St. Pierre Jolys
Town of Ste. Anne
Trails Manitoba
TransCanada Pipelines Limited
Travel Manitoba
Village of Glenboro

Interested parties list
Wa Ni Ska Tan
Walleye Anglers Association of Manitoba (WAAM)
Wilderness Society
Winnipeg Rowing Club

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Appendix B

Sample notification

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Appendix B: Sample notification

Sample Notification Postcard text:

Manitoba Hydro will be using implosive sleeves to splice conductors together for the Manitoba-Minnesota Transmission Project. Implosive sleeves consist of a small energy charge that is pre-wrapped around a specifically designed metallic sleeve. The charge creates an implosive compression, creating a permanent high quality connection between two pieces of electrical conductor. **Please note the split-second detonation creates a loud noise and flash similar to a firework.**

Implosive sleeves will be used INSERT LOCATION. The detonation of these devises will periodically take place between INSERT DATES AND TIMES.

Any further questions or concerns, please contact;

INSERT NAME – Construction Supervisor @ INSERT PHONE NUMBER

INSERT NAME – Project Safety Officer @ INSERT PHONE NUMBER

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Appendix C

Notification list

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Appendix C: Notification list

Milestone / activities	Audience	Methods of communication
Implode conductor splicing	MMTP monitoring committee[1]	Emails
	Landowners / residents	Letters. There will be postcard sent to residents and identified resource - users in close proximity (typically within two kilometers) of a implode ahead of the activity to provide accurate timing information.
	Interested parties[2]	E-campaign, website, social media
	Public	E-campaign, website, social media
	Resource users	There will be postcard sent to identified resource - users in close proximity (typically within two kilometers) of a implode ahead of the activity to provide accurate timing information.

[1] Over the course of project planning Manitoba Hydro communicated with Indigenous communities through the First Nation and Metis Engagement Process, then later formed a Monitoring Committee in response to concerns shared. Both groups invite participation from the same 25 different Indigenous communities and organizations. Manitoba Hydro representatives communicate project information to all 25 groups and, if preferred, bilaterally with individual communities or organizations.

[2] Interested parties include groups or people who may have potential feedback to share, be affected by the decisions made regarding the Project, have specific interests or mandates in the area, have potential data to share, have an ability to disseminate information to membership / constituency or possess an interest in the Project's area that has been shared with Manitoba Hydro. Interested parties include: agricultural organizations, conservation districts, environmental non-governmental organizations, government representatives, infrastructure and services, recreational organizations and waterway users