Approval Pending

Enbridge Line 6B MP 608
Marshall, MI Pipeline Release

Addendum to the Response Plan for Downstream Impacted Areas, August 2, 2010 (Revised August 17, 2010 per U.S. EPA August 17, 2010 letter), Supplement to Source Area Response Plan and Supplement to Response Plan for Downstream Impacted Areas, Referred to as Operations and Maintenance Work Plan

Commonly referred to as
"Consolidated Work Plan for Activities through 2012"

Prepared for United States Environmental Protection Agency

Enbridge Energy, Limited Partnership

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FIGURES

ATTACHMENTS

LIST OF ACRONYMS

ADCP	Acoustic Doppler Current Profiler
ADV	Acoustic Doppler Velocimeter
CL	Cold Lake Blend
Enbridge	Enbridge Energy, Limited Partnership
DRO	Diesel Range Organics
GIS	geographic information system
GPS	Global Positioning System
Line 6B	The pipeline owned by Enbridge Energy, Limited Partnership that runs just south of Marshall, Michigan
LSR	2011 Late Summer Reassessment
MDEQ	Michigan Department of Environmental Quality
MDEQ Order	Administrative Consent Order And Partial Settlement Agreement entered *In the Matter of Enbridge Energy Partners, L.P., and Enbridge Energy, Limited Partnership*, proceedings under the Michigan Natural Resources and Environmental Protection Act, 1994 PA 451, as amended, MCL 324.101 et seq. signed November 1, 2010
mg/kg	Milligrams per kilogram (parts per million)
MP	Mile Post
O&M	Operations and Maintenance
ORO	Oil Range Organics
OSCAR	Outstanding Site Characterization and Reconciliation
P_{Oil}	Density – oil
P_{Sed}	Dry density – sediment
Part 201	Part 201 of Michigan’s Act 451 of 1994 as amended
RI	Remedial Investigation
SCAT	Shoreline Cleanup Assessment Technique
SOP	Standard Operating Procedure
SORT	Shoreline and Overbank Reassessment Technique
Supplemental Order	Supplement to Order for Compliance Under Section 311(c) of the Clean Water Act, issued by USEPA Region 5 on September 23, 2010 to Enbridge Energy Partners, L.P. *et al*., Respondents, Docket No: CWA 1321-5-10-001
TPH	Total Petroleum Hydrocarbons
USGS	United States Geological Survey
U.S. EPA	United States Environmental Protection Agency
U.S. EPA Order	U.S. EPA Removal Administrative Order Under Section 311(c) of the Clean Water Act, issued on July 27, 2010 to Enbridge Energy Partners, L.P., Docket Number: CWA 1321-5-10-001
U.S. EPA START contractor	United States Environmental Protection Agency Superfund Technical Assessment & Response Team contractor.
UV	ultraviolet
WCS	Western Canadian Select

1.0 INTRODUCTION

This *Addendum to the Response Plan for Downstream Impacted Areas, August 2, 2010 (Revised August 17, 2010 per United States Environmental Protection Agency (U.S. EPA) August 17, 2010 letter), Supplement to Source Area Response Plan and Supplement to Response Plan for Downstream Impacted Areas, Referred to as Operations and Maintenance Work Plan* is in response to the requirements of the U.S. EPA Notice of Modifications to Work Plans for Oil Recovery Activities to be Conducted from Fall 2011 through Fall 2012 to Enbridge Energy, Limited Partnership (Enbridge) dated October 6, 2011. The notice directs Enbridge to perform oil recovery activities pursuant to the Administrative Order issued by the U.S. EPA on July 27, 2010 and a Supplement to Order for Compliance under Section 311(c) of the Clean Water Act ("Supplement") issued by the U.S. EPA on September 23, 2010. Paragraph 6 (Item 18.i and 18.j) of the Supplement requires that Enbridge complete oil recovery of all submerged oil, oil sheen, oil-containing soils, and oil-containing sediments.

This addendum involves work related to the oil-impacted overbank areas (the areas along the banks and floodplains of the Kalamazoo River) and submerged oil located within the Kalamazoo River (including the Morrow Lake Delta and Morrow Lake). This addendum will meet the directives as detailed in the Notice.

1.1 Environmental Protection

Future oil recovery actions will be based on the results of the studies outlined in this work plan, and a decision tree process that provides a balanced assessment of the environmental consequence of implementing specific oil recovery actions. This approach includes evaluations of potential consequences by a team of independent experts. The evaluation will include considerations of the impacts to the environment of specific remedial actions, such as:

- River bank erosion from boat usage,
- Loss of habitat for aquatic life from large woody debris removal,
- Potential for increased erosion during flood conditions,
- Migration of sediment at an abnormally high rate due to agitation techniques,
- Damage to the benthic community from agitation of the river sediments,
- Injury and death of wildlife due to equipment and boats on the river,
- Loss of wooded wetland habitat due to excavations, and
- Air emissions due to burning gasoline/diesel fuel.

The independent group that we propose be formed would be charged with taking into account these and like considerations in the course of making its evaluations.

2.0 OVERBANK OIL

2.1 Fall 2011/Winter 2011/2012 OSCAR Strategy

Outstanding Site Characterization and Reconciliation (OSCAR) was established to compile a single list of unresolved overbank sites along the Talmadge Creek, Kalamazoo River, and Morrow Lake. The unresolved overbank sites included Operations and Maintenance (O&M) sites identified through the Shoreline Cleanup Assessment Technique (SCAT) process completed in the Summer/Fall 2010, and tar patty sites and strike sites identified during the Shoreline and Overbank Reassessment Technique (SORT) process completed in the Spring/Summer 2011. The OSCAR group is comprised of Enbridge, U.S. EPA, and Michigan Department of Environmental Quality (MDEQ) acting as a task force to review current and historic data, quality control and the site closure process to ensure that all pending issues are addressed. The overall goal for the OSCAR group is to demonstrate that each site has been addressed in a manner consistent with requirements of the U.S. EPA Order.

To reach this goal, visual assessments are conducted by an Enbridge and U.S. EPA representative at each OSCAR site to determine whether or not the site is consistent with the U.S. EPA Order and ready for future management under Part 201 of Michigan Act 451 of 1994 as amended (Part 201). A vegetative assessment at each OSCAR site is also conducted concurrently with the visual assessment to determine if the location meets MDEQ wetland areas of potential high value criteria.

Once these assessments are complete, the Enbridge and U.S. EPA representatives evaluate the current and historical data and present the information to the OSCAR group at the OSCAR/Oil Recovery Effectiveness Meeting. If the Enbridge and U.S. EPA representatives are in consensus that the site is consistent with the U.S. EPA Order, the site is then recommended for MDEQ Part 201 program consideration. If the site is not consistent with the U.S. EPA Order, the task force makes a recommendation to continue toward completion of any work necessary at the site. These recommendations may include, but are not limited to, one of the following:

- Additional visual assessment activities,
- Additional recovery operations using approved toolbox methods,

- Transfer to submerged oil recovery operations or identify as a 2011 Late Summer Reassessment (LSR) polygon (i.e.: Strike Sites),
- Initiating an expedited priority Remedial Investigation (RI), or
- Permitted removal operations. If a removal operation is required, a site specific work plan will be submitted that outlines the specific actions that will be taken to make the site consistent with requirements of the U.S. EPA Order.

Once these operations are complete, the data is presented to the OSCAR group during the OSCAR/Oil Recovery Effectiveness Meeting. This process will continue until all sites on the OSCAR list are considered to be consistent with requirements of the U.S. EPA Order.

2.2 New Sites Recovery

If new sites exhibiting the presence of oil are identified for any reason, they will be evaluated and addressed using the OSCAR process described above.

2.3 Spring 2012 Reassessment

The shorelines and floodplains along the Kalamazoo River downstream impacted areas will be reassessed in Spring 2012. The objective of the Spring 2012 reassessment is to determine the presence of oil and/or oil sheen, if any, along select overbank areas along the affected river system from Mile Post (MP) 2.25 of the Kalamazoo River through the Morrow Lake Dam. The reassessment will encompass the following areas:

- Former remedial excavation areas.
- The following areas identified during the 2011 SORT assessment:
    - Locations that were inundated during assessment activities.
    - Locations that were identified as having “Film” or “Pooled Oil”.

Spring 2012 reassessment areas are presented in *Attachment A*. The Spring 2012 reassessment metrics and procedures are presented below.

2.3.1 Reassessment Metrics

Metrics of successful cleanup for a contaminated point or polygon vary depending on bank or habitat type and degree of oiling. They are defined as follows:

- Riparian Zones and Stream Banks
    - Shorelines no longer release sheens that affect navigable waterways,
    - Oil no longer removes readily on contact, and
    - Oil removal to the point where recovery/re-colonization can occur, provided that the removal will not cause more environmental harm than leaving the oil in place.
- Soil, Sand and Gravel
    - Oil is no longer visible on surface.
- Man-Made Structures
    - Structure no longer generates oil or sheen, and
    - Oil no longer removes readily on contact.

These metrics will be assessed by visual field screening for the presence of materials capable of producing a release of oil or oil sheen to the Kalamazoo River. Visual screening does not include additional screening tests, such as organic headspace (using a photo-ionization detector [PID]) or detecting a petroleum odor. Residual impacts will be addressed as part of a long-term investigation and/or remediation effort (conducted pursuant to the State of Michigan Consent Order) for the site.

2.3.2 Reassessment Procedures

Surveys will be conducted via boat and/or by foot and will target the areas described above. Shorelines will be identified in the assessment as Left Descending Bank (LDB), or Right Descending Bank (RDB). The following procedures will be followed:

- Identify and estimate the areas (labeled numerically to not conflict with reassessment (SORT) efforts in 2011) of specific oiling and substrate conditions found at each point or area.
- Characterize oiling conditions and substrate types using a standardized terminology (Shoreline Oil Terminology / Codes for Oil Spills of Black Oil).
- Characterize shoreline and overbank habitat types and the degree and characteristics of any oiling conditions.
- Record percent cover of a specific oiling condition within a point/zone on data collection forms.
- Collect a waypoint and/or polygon, using a Global Positioning System (GPS) unit with sub-meter accuracy, for each of the oiled points/zones identified as having visible oil and/or sheen that is affecting or threatening navigable waterways.

Cleanup recommendations will not be provided during reassessment activities as this is strictly a reassessment. If the presence of oil is detected using the reassessment methods, the OSCAR process will be implemented as outlined in *Section 2.1*.

Observations will be documented on field forms or in digital tablets (Trimble YUMA). The field sign-off sheet will contain a signatory area for the Enbridge and U.S. EPA representatives to verify the accuracy of data on the sheet. These signatures are only to verify the information gathered during the reassessment (whether an area or point contains oil or not). Reassessment data will be provided as a deliverable document which includes the following:

- Aerial maps with GPS points, lines and polygons collected by the assessment teams,
- A YUMA output table describing the degree and type of oiling, if any,
- Photo log, and
- Field sign-off sheets.

3.0 SUBMERGED OIL

3.1 Submerged Oil Task Force

A submerged oil task force team will be established to review submerged oil data acquired during implementation of this work plan. The submerged oil task force team will comprise of Enbridge, U.S. EPA, United States Geological Survey (USGS) and MDEQ representatives. The overall goal for the task force is to ensure data collection quality, continuity between recovery teams, and to direct recovery actions, if necessary, and placement of sediment traps.

To reach this goal, the task force will take the following into account:

- Environmental protection as described in *Section 1.1*,
- Hydrodynamic Model results,
- Temperature effect study,
- Quantification of oil results,
- 2012 Reassessment results,
- Containment placement, monitoring and removal, and
- Placement, monitoring and maintenance of sediment traps.

3.2 Hydrodynamic Assessment

Data will be collected to evaluate the fate and transport of submerged oil in the affected river system. Data will be collected in cooperation with USGS. The primary objectives of the hydrodynamic assessment are:

- To develop an understanding of the riverine system (i.e., Talmadge Creek, Kalamazoo River, Morrow Lake Delta and Morrow Lake) physical chemistry associated with the migration, mobilization and recovery of submerged oil, including, but not limited to, the effects of temperature, barometric pressure and river velocity on the migration of submerged oil.
- To identify physical patterns and migration rates of submerged oil along channel bars, impoundments, and delta/fan environments caused by the following river conditions: high flow, low flow, seasonal/diurnal variation, and oil recovery/assessment activities.
- To provide support for quantification of submerged oil in riverine deposits.

3.2.1 Poling in Morrow Lake Downstream of Fan

Qualitative assessments using poling techniques will be performed at locations and frequencies similar to 2010 pre-recovery and Spring 2011 reassessment activities. Enbridge will perform poling as specified below:

- Poling frequency upstream of Morrow Lake Dam:
    - To occur daily during submerged oil recovery operations,
    - Post-recovery at least 24 hours after completion of submerged oil recovery operations at a site,
    - At least once each season when water temperature is greater than 45°F or the temperature break point determined in the temperature study described in *Section 3.3* (Fall 2011, Spring 2012, Summer 2012, and Fall 2012), and/or
    - After large flood events (two year or higher) in 2012. Poling after multiple floods within a three month period, will occur more than once if the recurrence interval between floods is five years or higher.

- Focus area poling locations downstream of Morrow Lake Dam (e.g., next likely depositional areas):
    - Immediately downstream of the Morrow Lake Dam, in a backwater area near MP 39.9,
    - Margin of a bend on the left descending bank near MP 40.25,

  - Downstream side of a mid-channel island near MP 40.85,
  - North side channel margin near MP 41.00 and upstream of River St. Bridge, and
  - Upstream end of an oxbow near MP 41.25 (downstream of River St. and upstream of King Hwy).

Focus area poling locations downstream of Morrow Lake Dam are shown in *Attachment B*. A minimum of five poling locations will be collected at each focus area. The poling locations will be selected in the field to be representative of the focus area based on sediment thickness, water depth, and water velocity.

- Poling frequency downstream of Morrow Lake Dam:
  - At least once each season when water temperature is greater than 45°F or the temperature break point determined in the temperature study described in *Section 3.3* (Fall 2011, Spring 2012, Summer 2012, and Fall 2012), and/or
  - After large flood events (two year or higher) in 2012. Poling after multiple floods within a three month period, will occur when the difference in recurrence interval between flood events is five years or greater.

If submerged oil is found downstream of the Morrow Lake Dam, the poling locations will be re-evaluated with U.S. EPA and USGS personnel.

3.2.2 Cohesion and Erodibility Test

The purpose of these tests is to provide information on specific sediment characteristics and their effect on submerged oil migration and transport under typical Kalamazoo River temperature and velocity conditions. The tests to determine the effect of temperature on the submerged oil release and mobility are provided in *Section 3.4*. The cohesion and erodibility of sediment will be evaluated through one of the following methods: literature search of other oil spills with similar sediment characteristics, geotechnical properties, in-situ jet tester, sedflume, or other devices that will provide data for the model. The site specific data provided by these methods includes cohesion, critical shear stress, and erodibility. The field based methods will begin in Fall 2011.

3.2.3 Water Velocity Profiling

Existing hydrodynamic data consists of estimated velocity ranges and current-meter point measurements at discrete poling locations throughout the river system during a single flow condition. Multi-dimensional understanding of velocity distributions and profiles for adequately describing bed shear stresses under different flow conditions is needed.

An Acoustic Doppler Velocimeter (ADV) or Acoustic Doppler Current Profiler (ADCP) will be used to collect velocities in the x, y, and z directions. Both velocity meters collect 3-dimensional data but the ADCP collects data continuously while the ADV is a point collector. This type and density of data is needed for the hydrodynamic model to more accurately estimate shear stress on the bed and banks of the river. The preference will be to use the ADCP in the Morrow Lake Delta and Sediment Fan if the water depths are sufficient for its use. Shallow water depths on the Kalamazoo River may require the use of a hand held or pole mounted ADV.

Data will be used to determine migration/transport rates and for calibration/verification of the hydrodynamic model. Velocity data will be collected at the following locations and times:

- Horizontal and vertical velocities at cross-sections (at varying river stages) in specific geomorphic areas including:
    - Morrow Lake Fan (at least three latitudinal profiles and four longitudinal profiles),
    - Each side of existing containment location E4.5 (if present),
    - Delta channels,
    - 35th Street bridge,
    - Neck of delta and downstream of the neck on the sediment fan to determine velocity changes longitudinally, and
    - Kalamazoo River: Representative River reaches to evaluate the flow patterns associated with depositional areas, the thalweg, dam impoundments, meanders, oxbows, cutoff channels, and changes in channel width.

- Horizontal and vertical velocities to evaluate changes in velocity at longitudinal locations including:
    - 35th Street to the Morrow Lake sediment fan,
    - MP 13.0 to the Dickman Road culverts (North and South Mill Ponds),
    - MP 3.0 to Ceresco dam, and
    - Other reaches of concern in depositional areas where the number of velocity readings does not adequately explain the river flow pattern.

- At least once each season (Fall 2011, Spring 2012, Summer 2012, and Fall 2012), and/or
- During mean flow conditions,
- During low flow conditions, and

- During high flow conditions (e.g., various flows above median values, minimum of two high flow readings; 3rd quartile and 4th quartile levels if flow events occur within the task schedule). During high flow events, the ADCP may be used from bridges for safety reasons.

The USGS will provide ADCP velocity profiles and cross sections from discharge measurements made at the existing gauging stations at bridge locations, if available. Final velocity profile locations will be determined in consultation with U.S. EPA and USGS.

3.2.4 Surficial Streambed Sediment Characteristics

Existing data consist of pre- and post-recovery cores linked with poling data from various river locations and the Morrow Lake Delta/fan area. Additional samples will be collected to aid in the determination of submerged oil transport rates and depositional patterns. Additional sediment samples will be collected and evaluated as follows:

- Hand push or driven check valve sampler (given the shallow depths).
- Cores advanced to target depth or refusal. If target depth is achieved and the recovery is less than 80%, a discrete interval sampler will be used to obtain recovery greater than 80%. If refusal occurs prior to reaching the target depth and recovery is less than 80%, a second core attempt may be made at the discretion of the sampler, START/U.S. EPA or USGS oversight.
- For in-situ bulk density cores, a second check valve core will be advanced to the target depth. This core will remain intact and shipped for bulk density and particle size analysis.
- Penetration depth and recovery ratios will be recorded.
- High water-content sediment and water interface that may contain submerged oil will be recovered.
- Stratigraphic logging using the Sediment Logging Standard Operating Procedure (SOP) which includes the Unified Soil Classification System (USCS) and United States Department of Agriculture (USDA) classification system.
- Color assessment using Munsell Color Charts.
- Identification of pre-dam (e.g., before the Morrow Lake Dam was constructed) surface mapping in the Morrow Lake sediment fan to calculate sedimentation rates.
- In the Morrow Lake Delta, the cores will penetrate into pre-dam floodplain/channel deposits or to refusal.

Sediment cores will be collected from the following locations:

- Sample locations will be co-located with poling and velocity transects/longitudinal profiles wherever possible. Sample locations that are not co-located with these data points will be noted in the sample log.
- Morrow Lake Fan: along a contour from north/south and east/west and in the former channel (at least three latitudinal profiles and four longitudinal profiles).
- 35th Street Bridge to Morrow Lake sediment fan and within the Morrow Lake Delta channels.
- Other locations in key reaches to be determined in consultation with U.S. EPA and USGS such as Mill Ponds/Ceresco Dam.

Sediment core sample locations are shown in *Attachment B*.

Sediment cores will be collected at the following times:

- Fall 2011 (post-recovery and pre-ice formation) – including analysis,
- Spring 2012 (post-flood; pre-recovery) – including analysis for post-spring flood,
- Summer 2012 – visual only,
- Fall 2012 (post recovery if recovery occurs) – including analysis, and/or
- After large flood events (two year or higher) in 2012. Coring after multiple floods within a three month period, will occur when the difference in recurrence interval between flood events is five years or greater.

During the Fall 2011, Spring 2012, and Fall 2012 coring events, chemistry data will be obtained from the samples secured from the sediment cores. Samples will be analyzed for the following parameters:

- Total Petroleum Hydrocarbons (TPH) consisting of Diesel Range Organics (DRO) and Oil Range Organics (ORO),
- Bulk density,
- Particle size, and
- Organic matter content (loss on ignition method).

Coring results will be evaluated after each sampling event and the number of samples and locations will be modified as appropriate. Modifications will be presented to U.S. EPA and USGS for approval.

3.2.5 Sediment Transport

To determine how submerged oil may be transported in various geomorphic settings, additional information will be collected and evaluated. Existing data consist of turbidity measurements, sediment bed types, and velocity measurement collected over the course of the project to date. Anecdotal evidence suggests that submerged oil migrates in association with fine-grained bedload and/or suspended sediment. This evidence also suggests that the migration is dependent on flow conditions, temperature, possibly atmospheric pressure, and agitation from oil recovery operations. Increased sediment transport also takes place during runoff events (e.g., rain events) and low-flow conditions. To evaluate how submerged oil is transported in various geomorphic settings and the mass of submerged oil transported in suspended and/or bed-load components, Enbridge will conduct the following data to allow for a better understanding of the issues:

- Time-integrated suspended sediment sampling, which will occur downstream of agitation/recovery areas and silt curtains. Enbridge will use Walling suspended sediment traps (Phillips et al., 2000) at the following locations and in accordance with the following parameters:

    - Two traps placed upstream of the confluence of Talmadge Creek and the Kalamazoo River to obtain background suspended sediment samples.
    - Morrow Lake: downstream and in the vicinity of E4.5 control point. Three traps will be placed in 2011 depositional areas.
    - Seven traps will be located on an approximate north-south transect across the sediment fan in 2011 depositional areas. The traps will be placed and co-located at poling locations.
    - The Kalamazoo River gage at Battle Creek: two locations, one upstream and one downstream of the gage. The upstream location will be immediately downstream of Discman Road and the downstream location will be the Angell Street Bridge. Locations will be field checked to verify that it is an appropriate location for sampling suspended sediment. If it is not appropriate / representative, another location will be selected in conjunction with U.S. EPA and USGS personnel.
    - Ceresco impoundment: Transects will be located immediately upstream of the dam, in the thalweg and adjacent to the thalweg on each side, and downstream of the former rail road tressel (two to three locations, equally spaced along a transverse transect).

- Traps will be placed with minimum 8-feet long “T” or “U” shaped channel posts driven into the sediment bed or a cradle system along with buoy markers along the transect. Traps set in deeper water (>2.5 feet) will be installed with two Walling samplers to obtain a near sediment bed sample and a near water surface sample.
- During oil recovery, Enbridge will check and sample the traps monthly, after storm events, immediately following oil recovery operations, and at other times as directed by the U.S. EPA.
- After oil recovery operations are complete for the field season, Enbridge will check and sample the traps once a month and at other times as directed by the U.S. EPA. The Walling samplers will be removed before freeze up or remain in place over the winter, if conditions allow. This decision will be made in consultation with U.S. EPA and USGS.
- In Spring 2012, the Walling samplers will be installed as soon as safe work conditions allow. For 2012, the Walling samplers will be installed, monitored and sampled in the same manner as 2011.

Chemistry data will be obtained from samples secured from the Walling suspended sediment traps and will be analyzed for following parameters:

- TPH (DRO and ORO),
- Particle size, and
- Organic matter content (loss on ignition method).

The proposed suspended sediment sample locations are shown in *Attachment B*.

3.2.6 Data Results

Enbridge will provide results of all data in spreadsheets and/or word processing formats. This includes data for the following parameters/items: water temperature, turbidity, sediment temperature, water velocity, surface water elevation, depth to soft sediment, soft sediment thickness, depth to hardpan, core logging information, all other surface water field parameter data collected to date, analytical data, river discharge rates, river stage, and sediment curtain configurations from project inception (Geographical Information System format). Enbridge will also provide location information (e.g., global positioning system data, latitude/longitude). The evaluation and presentation of the data will be provided to U.S. EPA within 30 days after field work is complete.

3.2.7 Adaptive Management

The scope of work detailed above will be re-evaluated prior to each quarterly event. The intent is to develop a scope that is appropriate for current site conditions and a determination as to whether the activity is still relevant. Each evaluation will consider the previous quarter's model and data results before the scope is changed. Enbridge will ensure this plan's objectives are being met, as appropriate with river conditions and operations which may have occurred, while evaluating each of the upcoming quarterly events.

3.3 Hydrodynamic Modeling

Hydrodynamic modeling will be used to simulate and evaluate a range of flow conditions using various existing data sets and additional field data. The model will be completed for the affected river system from the Talmadge Creek and Kalamazoo River confluence to the Morrow Lake Dam. The model domain will include the river, delta, and lake regions and adjacent flood plain areas subject to inundation during high flow events.

Data needed for the model include velocity profiles, suspended sediment data, mapped geomorphic surfaces, and sediment bed physical properties necessary to configure the model are described in *Sections 3.2*. The model will use the data inputs to simulate and evaluate the mobilization, transport and re-deposition of sediment and oil. The configured model will be used to simulate and evaluate a range of flow conditions including low flows and various recurrence interval high flows. Various containment strategies including in-river silt curtains, hard and soft booms, and silt fence will be simulated to evaluate oil containment strategies. The schedule for the first run of the hydrodynamic model will be three months after a complete data set is available. If deemed necessary, following adaptive management practices, the 2012 data collection in the Spring, Summer, and Fall may result in a model run following the completion of each data set. Each model run will be completed two months after the receipt of the seasonal data set. Output from interim model runs will be evaluated, discussed, and utilized for Enbridge and agency decision making prior to completion of the model run for each data set.

3.4 Temperature Effects on Submerged Oil

A plan has been developed to evaluate the effect of temperature on the relative appearance of oil and sheen on the water surface upon agitation of sediment at various temperature ranges. This plan is intended to enhance the understanding of the effects that temperature has on submerged oil liberation and the subsequent effectiveness of recovery methods. The sections below present a brief overview and the plan objective.

3.4.1 Overview

The fraction of oil that is recoverable by toolbox techniques is released from the sediment underlying the water column by agitation, which causes submerged oil to rise to the water surface where the oil is collected and appropriately disposed. The oil properties (e.g., density and viscosity) that facilitate its movement to the water surface are sensitive to temperature (Kong, 2004, Fingas et al., 2006). As water and sediment temperatures decrease, oil density and viscosity are both expected to increase.

3.4.2 Study Procedures

Sediment and water samples will be collected from the Kalamazoo River and transported to the field laboratory where the tests will be conducted. The study design and data collection parameters are presented in *Attachment C*. The laboratory will be housed in a field trailer or a house garage that is ventilated and contains adequate space for the study. Appropriate health and safety procedures will be followed in accordance with the *Site Health and Safety Plan* (HASP) (Enbridge, 2010a) and any other approved applicable guidance. It is understood that either U.S. EPA and/or MDEQ oversight will be required for the entire testing process.

3.4.2.1 Sediment Collection

River sediment will be obtained from a depositional area that is likely to contain heavy oil based upon screening using poling and selected in collaboration with the U.S. EPA. A petite Ponar® sampler or similar device will be used to collect and place the grab sample of sediment (approximately 6 liters) into each of five 7½-liter plastic containers. The petite Ponar® or alternative sampling method will be deployed to sample shallow sediments where oil is known to be present, not greater than 5-inches in depth. Sediment samples in all five containers will be observed and photographed under natural and ultraviolet (UV) light and the appearance of the sediment, texture, color, debris, and other notable features, will be described. The general presence of sheen on the sediment will be noted under visible light and confirmed using a portable UV light viewed under a light blocking hood. The presence, size, and percent abundance of globules under both visible and UV light will be recorded.

Two of the five sample containers will be covered with river water in the field by tilting the container at an angle and very gently pouring river water into it before slowly returning it upright being careful not to disturb the sediment. These samples will be agitated in the field to confirm that the sediment releases sheen upon agitation under current river water-sediment temperature conditions to ensure that the location selected for sampling contains sheen-generating oil. If the samples do not produce sheen, an alternative area of submerged oil will be sampled. The three sample containers that are not agitated in the field will be covered with a lid for transport to the field laboratory for the study and the two agitated samples will be disposed following proper waste disposal procedures. Samples of sediment and river water retained for the bench study will be chilled to between 32 degrees Fahrenheit (°F) and 40°F, but not frozen, and retained cold until the sample is used in the bench study. Sample disturbance and movement will be minimized, and every sample will be handled in the same way. In addition to the sediment grab samples, approximately 23 liters of river water will be collected for the study. Sediment in the three containers brought in from the field will be sampled and analyzed for particle size distribution.

Sampling Location

The sediment samples for testing will be collected at a depositional location where sheening and globules released by poling has indicated the presence of “heavy” submerged oil. The initial location and representative depositional setting will be selected in collaboration with the U.S. EPA to be representative of an agreed upon depositional setting (e.g., backchannel, oxbow, cutoff, dam, island, or delta) and sediment type.

Sampling Methods

Sediment samples will be collected following the applicable sediment sampling SOP presented in the approved *Sampling and Analysis Plan* (SAP) as amended (Enbridge, 2011b) particularly *Section 6.3.2* (entitled “Ponar® or Ekman dredge Sampling”) found in *SOP EN-202*.

3.4.2.2 Controlled Temperature

The sample design includes testing 3 replicate samples at 5 different target temperatures for a total of 15 trial tests as summarized in *Attachment C*. Each replicate sample will consist of equal volume aliquots from each of the three remaining undisturbed grab sample containers, for a total replicate sample volume of 400 milliliters (ml). For example, replicate sample #1 at temperature #1 will consist of approximately 133 ml of sediment taken from each of the 3 grab samples for a total sediment sample volume of approximately 400 ml. The aliquots will be placed into a 2-liter beaker (7.5-inches tall and 6.25-inches in diameter). A split sample will then be collected using the same sampling methods for laboratory analysis of a single composite sample. The split sample will be homogenized, and the sample will be analyzed for TPH measured as DRO and ORO, and for oil and grease and organic content. The sediment remaining in the replicate sample beakers will then be covered by river water, filling the beaker to 1½ liters. Three beakers will be placed into a temperature controlled, bench top circulating water bath that is set at the desired target temperature.

Target water bath temperatures are 35 ºF, 45 ºF, 55 ºF, 65 ºF and 75 ºF. Samples will initially be in storage at temperatures between 32 ºF and 40 ºF and will be placed into the water bath and allowed to equilibrate for one hour, then water and sediment sample temperatures will be monitored using a digital thermometer (e.g., Omega HH11B) and recorded at 15 minute intervals until both water and sediment temperatures are stable and within 5 °F of the target temperature. The water and sediment may equilibrate at different temperatures and at different times given the different heat capacities of the two matrices. Equilibration and monitoring times may be adjusted in response to the time required to achieve stabilization, if warranted. Other changes to sample design or procedures that result from lessons learned during the study will be documented.

Once the sediment and water temperatures are stabilized within the target temperature range, the appearance and percent coverage of sheen and the number of globules on the water surface will be recorded. The percent of sheen coverage will be estimated by counting the number of grid points that contain sheen on a clear rigid acetate grid that is placed on top of the beaker.

3.4.2.3 Sediment Agitation

Samples will be agitated in the temperature controlled environment and the parameters presented in *Attachment C* will be recorded. Prior to each agitation, sheen on the surface of the water in the sample container will be removed with a sheen net, wipe or other absorbent device. As the sheen is removed, care will be taken to reduce motion so that the sediment in the container is not agitated, and also so that the sheen is not further smeared onto the edges of the sample container. The general appearance of sheen (gray, silver, metallic/transitional) and percent coverage and the presence, size, and abundance of globules on the water surface will be noted prior to the initial agitation. Using a Nalgene® rod (selected to be representative of poling), the sediment will be stirred with one complete circle and a description of the appearance and percent coverage of sheen and globules on the water surface will be recorded. Photographs under visible and UV light will be taken. The sheen will be removed from the surface of the water. The sediment will then be stirred three more times within 15 minutes of the initial agitation. The three stirs will start in the middle of the sample and work outwards with each turn. The appearance and percent coverage of sheen and globules will be noted after completing agitation and photographed under visible and UV light. For consistency, the same person will agitate each replicate sample at nearly the same temperatures within the targeted temperature range, while making every effort to follow the exact, same procedures. Similarly, a single observer will be estimating the percentage surface area coverage for all samples. Photographs of the sheen on the surface of the water will be taken for each agitation as stated above. For at least 25% of the visual observations of the amount of sheen present, the photographs will be quantitatively analyzed to confirm the accuracy of visual estimation of percentage cover by sheen.

3.4.2.4 Final Warm Agitation

All replicate sample sets will be warmed by heating the bath to 75 ^{o}F and the sediment will be agitated again with three stirs of the sediment as described above. The sheen will be removed from the surface of the water prior to heating so that any oil liberated during heating is documented. Agitation at a warm temperature following the bench test will be used to confirm that a lack of or a reduced amount of sheen was due to the effects of the lower temperature and not a lack of oil in a sediment aliquot.

3.4.3 Data Evaluation and Reporting

The presence or absence of sheen and globules will be assessed to enhance the understanding of the effects that temperature has on submerged oil liberation. The report will address how the conclusions are relevant to the evaluation of the effects that temperature has on the effectiveness of recovery methods, and if additional studies are proposed. The report will address the application of the results to different depositional environments and sediment types after completion of the initial study depending on study design effectiveness and the results obtained. Consistency between replicate samples within a temperature range will be assessed to evaluate reliability of the results. This information can be used in the design of any subsequent studies to clarify the results or investigate oil bearing sediment from other depositional environments. Results will be presented in a report of findings that will provide conclusions that may be used as a guide in future oil recovery efforts. As appropriate, the report will provide applicable conclusions based on geomorphic settings and depositional environments that can be classified as similar.

3.5 Submerged Oil Quantification

A scientifically-based model will be used to calculate the volume of submerged oil for the locations identified during the Late Summer 2011 reassessment. The model will be populated with chemical, physical, and geotechnical (i.e. sediment thickness) data obtained from sediment cores collected after submerged oil recovery activities were completed in 2011. This will be a similar process used to the submerged oil quantification calculated based on Pre-Summer 2011 oil recovery activities. Only data collected under U.S. EPA and/or MDEQ approved work plans will be used in the proposed evaluation.

3.5.1 Submerged Oil Volume Quantification

This section describes the numeric model that will be used to estimate the amount of submerged oil remaining in the Kalamazoo River (including the Morrow Lake Delta and Morrow Lake) after the post Summer/Fall 2011 oil recovery activities. This section includes data to be used as input for the numeric calculations, and the following sections present these calculations. This data will be supplemented with additional information on the bulk density, thickness of oil-contaminated sediment, area of submerged oil, and TPH concentrations in the sediment samples. A total of 36 background sediment sample locations (collected upstream of the affected portion of the Kalamazoo River) will be included in the oil calculator to account for historic TPH concentrations and as a comparison to the historic TPH present in the portion of the Kalamazoo River affected by the Enbridge 6B incident.

3.5.2 Source of Data

3.5.2.1 Estimated Concentration of Oil in the Sediment

The concentration of submerged oil in the sediments at the completion of the Summer/Fall 2011 recovery activities will be estimated using up to 100 sediment cores collected following submerged oil recovery operations. The purpose of the sediment cores is to obtain sediment samples to be analyzed to evaluate remaining submerged oil in the Kalamazoo River. Sediment samples from the sediment cores will be analyzed for TPH that includes DRO, and ORO. The total TPH value, taking into account background TPH values, provides a potential measure of residual submerged oil present in the sediments. In the absence of specific TPH data for various elevations at a given location, existing TPH data from that location will be applied to all depth horizons where qualitative evaluation indicated the presence of oil. Information regarding location and methodology for sediment core collection is that outlined in *Section 3.2.4* related to the hydrodynamic assessment.

A comparison between the light, moderate, and heavy poling designations and the corresponding mean, minimum, and maximum TPH concentrations will be presented with standard deviations, subject to being deemed valid, in accordance with the statistical validation described herein.

3.5.2.2 Sediment Bulk Density

Sediment cores previously collected to determine the sediment bulk density in the Kalamazoo River will be used for this version of the quantification of submerged oil.

3.5.2.3 Aerial and Vertical Extent Determination

Poling, chemistry, and core logging data will be used to determine the aerial and vertical boundaries of the sediment volume impacted by submerged oil. The aerial boundary that defines the extent of submerged oil was developed during the LSR 2011 activities with the oversight of U.S. EPA. An area was not previously created for these light locations in accordance with the U.S. EPA approved work plan. Therefore, no polygons currently exist that define the aerial extent of light designations. Geomorphic surface mapping for the in-channel area of the Kalamazoo River will be used to establish the aerial extent of the lights.

The thickness of oil-containing sediment will be determined from actual sediment core logging information and chemistry data. This information will be used in the model to calculate the submerged oil volume from the sediment sample locations. Vertical extent of submerged oil will be determined by visual observation and UV light test.

3.5.3 Volume Quantification Model

A model has been developed to quantify the amount of submerged oil in sediment identified during the Spring 2011 reassessment of Talmadge Creek and the Kalamazoo River (including the Morrow Lake Delta and Morrow Lake). This same model will be used for the Fall 2011 quantification as well. This model will use:

- Measured TPH sediment concentrations,
- Extent of oil impacted areas, based on visual observation of sheen areas from the LSR 2011,
- Density of crude (Cold Lake Blend (CL)/Western Canadian Select (WCS) mixture),
- Vertical extent of impacted sediment layer, and
- Dry density of sediment measured from sediment cores.

The model will utilize a spreadsheet to calculate the volume of impacted sediment derived from the oil impacted area based on visual observation of sheen areas and an assumed depth of the oil layer. Once calculated, the mass of oil impacted sediment will be determined from the impacted volume and bulk density. Subsequently, the mass of oil present will be calculated based on the mean of reported TPH concentration and total impacted sediment mass. Finally, the volume of submerged oil will be calculated from an approximation of the density of the released crude. The algorithm used in the model will be as follows:

Gallons of Oil (gal) =

{[D(inches) * A(acres) * P * 4,046.86 (m^2/acre) * 0.0254 (m/inch)

* P_{Sed}(g/cm^3) * 10^6(cm^3/m^3) * TPH (mg/kg) * 10^{-6}(kg/mg)]

/ P_{Oil}(g/cm^3)} * 10^{-3}(L/cm^3)

* 0.2642 (gal/L)

Where:

A = Total Area of Interest (acres)

P = % of Area of Interest with TPH Concentration (decimal equivalent)

D = Thickness of oil impacted sediment layer (inches)

P_{Sed} = Dry density – sediment (g/cm^3)

P_{Oil} = Density – oil (g/cm^3)

TPH = Mean, median, and maximum submerged oil concentration (mg/kg – from 2011 field data) – and mean of oil and grease concentrations from additional analysis. Coverage provided for light, moderate, and heavy poling designations.

Assumptions were as follows:

P (% of area of interest with TPH concentration) = 1.0 (100%)

D (Depth of oil layer) = Thickness of oil-containing sediments for chemistry data and statistical analysis, or supplemental data collected from field sampling

P_{Sed} (Dry density – sediment) = mean of estimated bulk density measured in sediment containing submerged oil

P_{Oil} (Density – oil) = 0.9285 (g/cm^3) http://www.crudemonitor.ca/ – 5-year average as defined below.

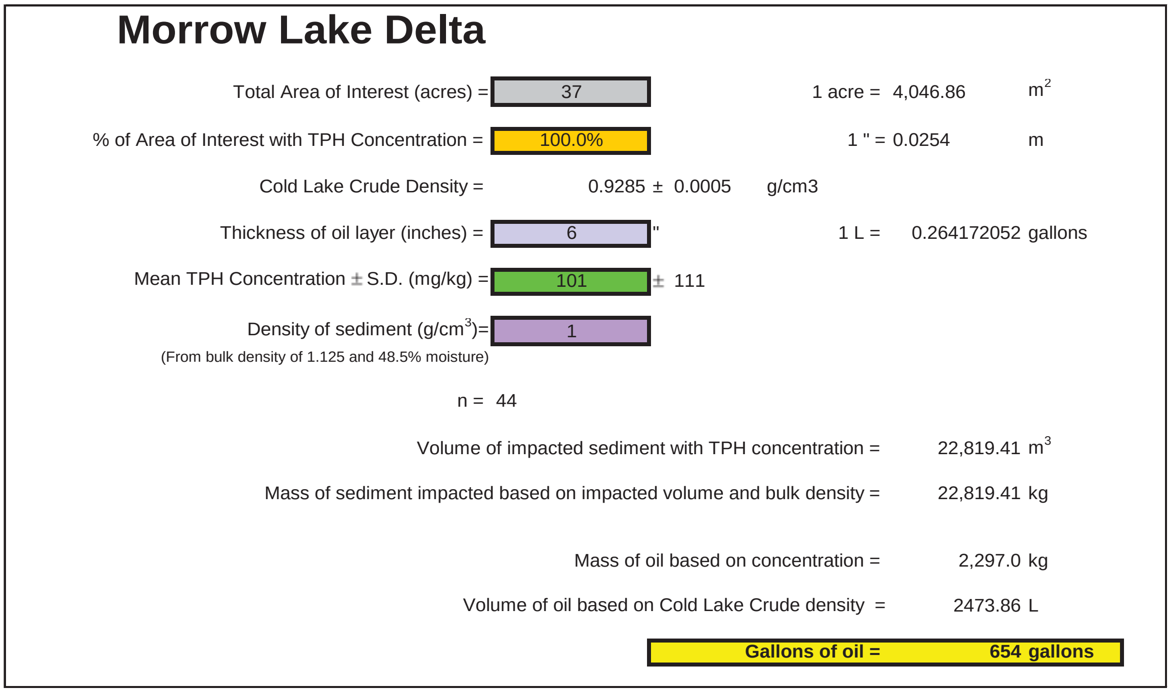
The density of the oil (P_{Oil}) is developed from the density of the crude oil spilled. Based upon a review of Enbridge transportation records and analysis of sampling taken by Enbridge after the pipeline restarted, the release appears to have occurred at or about the time that the latter end of a batch of WCS was passing through Marshall, Michigan and a batch of CL crude had begun. The composition of the oil released was approximately 77.5% CL and 22.5% WCS. Using this composition (77.5 % CL and 22.5 % WCS), and the 5-yr average density for each (0.9283 g/m^3 for CL and 0.9290 g/m^3 for WCB from http://www.crudemonitor.ca/ on August 10, 2011), the estimated combined density for a 77.5 % to 22.5 % mixture would be 0.9285 g/cm^3, which is equivalent to the CL 5-year average. As the nature and cause of the release is still under investigation by National Transportation Safety Board, this determination is based on a number of assumptions regarding the nature and timing of the release. The density of oil has not been adjusted for the potential loss of volatile fractions.

TPH concentrations and variations will be represented by the sediment samples from the sediment cores collected to evaluate the condition of the sediments after the 2011 recovery activities.

Areas of interest acreage to be incorporated in the model will be estimated from the LSR 2011 delineation areas and supplemental areas where light sheen was observed during poling.

The model has an open architecture and is readily adaptable and flexible to approximate the amount of oil present in the sediment within specific river reaches/lake areas or broader reaches/lake areas with minimal data input. It is automated to the greatest extent possible and only requires input of a few (i.e., 5) specific parameters. Output is standardized and lists key parameters/assumptions used in the model along with summary statistics (see below for an example of preliminary output from the model).

Example:



Morrow Lake Delta

Total Area of Interest (acres) = 37 1 acre = 4,046.86 m^2

% of Area of Interest with TPH Concentration = 100.0% 1 " = 0.0254 m

Cold Lake Crude Density = 0.9285 ± 0.0005 g/cm3

Thickness of oil layer (inches) = 6 " 1 L = 0.264172052 gallons

Mean TPH Concentration ± S.D. (mg/kg) = 101 ± 111

Density of sediment (g/cm^3)= 1

(From bulk density of 1.125 and 48.5% moisture)

n = 44

Volume of impacted sediment with TPH concentration = 22,819.41 m^3

Mass of sediment impacted based on impacted volume and bulk density = 22,819.41 kg

Mass of oil based on concentration = 2,297.0 kg

Volume of oil based on Cold Lake Crude density = 2473.86 L

Gallons of oil = 654 gallons

The model will be populated with LSR 2011 reassessment data and can be easily updated with new data as they become available. Descriptive statistics (e.g. mean, median, range, standard deviation, confidence interval) of the data will be provided.

3.5.4 Statistical Evaluation of TPH Data

Sediment TPH data will be evaluated using empirical and statistical methods to assess data distributions and relationships within TPH concentration data to estimate the submerged oil present within the river system. Only data collected under U.S. EPA and/or MDEQ approved work plans will be used for this task. The statistical evaluation will be used to support the calculation of submerged oil in Kalamazoo River sediment and will consist of the following elements:

- Initial evaluation of the dataset to determine if lithology, depth/thickness, and/or other factors result in specific groupings or populations of data requiring segregation and separate statistical evaluation/testing,
- Determining a probability mass function to define the discrete probability distributions of the population(s) identified in the initial evaluation,
- Calculating interquartile ranges, standard deviation and variance of the population(s) identified in the initial evaluation, and
- Developing a statistically based method for approximating the amount of oil present and confidence interval for this estimate within the riverine system.

The evaluation will use Fall 2011 data and actual oil-impacted sediment thicknesses in all oil-containing sediment areas (light, moderate, and/or heavy). Depending on the population(s) distributions (i.e., normal vs. not normal or skewed determined by normality tests such as Shapiro-Wilk, Anderson-Darling, or as most appropriate to the dataset), parametric or non-parametric (e.g. Kruskall Wallace, Mann-Whitney) statistical significance tests may be conducted, as appropriate and warranted. If required based on the outcome of the empirical and/or statistical evaluation, approximation of the amount of oil present and confidence interval for this estimate may vary per river segment, with the total amount of submerged oil being the sum of such individual segments. Descriptive statistics (e.g. mean, median, range, standard deviation, confidence interval) along with quartile plots and other graphical presentations of the data will be provided.

3.6 Spring 2012 Reassessment

Enbridge will perform a submerged oil reassessment between MP 2.25 and Morrow Lake Dam in the Spring of 2012. Similar poling activities were completed during Fall 2010 and the 2011 spring reassessment activities to determine the presence and relative amount of observed submerged oil.

The 2011 reassessment poling was conducted to determine the submerged oil deposition pattern and compare that pattern to the 2010 submerged oil deposition pattern. Poling activities for the Spring 2012 reassessment include the following objectives:

- Determine the 2012 submerged oil deposition pattern,
- Conduct poling activities in geomorphic settings most likely to contain submerged oil (i.e. depositional areas with soft sediment type), and
- Compare the 2010, 2011 and 2012 depositional pattern.

3.6.1 Methods

Fine grained sediments (silts and clays) typically include higher concentrations of organic carbon that adsorb and retain submerged oil. Understanding the thickness and spatial distribution of such sediments will aid in determining the quantity and distribution of submerged oil. The most efficient means of assessing the location and distribution of soft sediment is by poling. Poling is the manual pushing of a pole into the bed sediment until advancement is restricted (e.g. gravel, till, etc.). Poling can also be used to determine the presence and relative amount of submerged oil. The following sections detail the poling locations and procedures to be used during the 2012 field season.

3.6.1.1 Poling Locations

Poling will be conducted in areas along the Kalamazoo River, within Morrow Lake and at additional areas downstream of Morrow Lake Dam. Locations will be selected where moderate or heavy submerged oil was identified during the 2011 field season, and in the 2011 focus areas. Locations will be focused in depositional areas with soft sediment bed types, because submerged oil is most often associated with this geomorphic environment. Poling locations will be minimal in erosional areas with sand/gravel bed types, because submerged oil is not typically associated with this geomorphic setting. For all these areas, crews will visually assess the area and select representative poling locations. The crews may add poling locations to an area to obtain a good representation of the area. Poling focus areas are presented in *Attachment D*.

3.6.1.2 Procedures

GPS coordinates, water depth, advancement depth, soft sediment thickness, bed characteristics, the presence/absence of oil, and relative amount of oil at each location will be documented. The following sections describe the procedure for the GPS survey and poling at each location.

3.6.1.3 GPS Survey

A GPS will be used to document the coordinates for each poling location. All poling locations will be staked and/or surveyed during the project to the extent practicable using a GPS unit with sub-meter accuracy. The horizontal coordinate system will be the Michigan State Plane Coordinate System, South, NAD 83 datum, in international feet.

3.6.1.4 Poling

Water depth (i.e. depth to sediment surface) is the first measurement at each poling location. To measure water depth, a 6-inch diameter disk is attached to the end of a pole graduated with 0.1-foot intervals. The pole is gradually lowered to the top of the sediment bed. Next, the thickness of soft sediment is measured. A pole without a disk (approximately 2 inches in diameter) with maximum graduations of 0.1 feet will be pushed vertically through the sediment until advancement is restricted. The depth to sediment surface (water depth) and maximum poling depth into the soft sediment will determine the soft sediment thickness at a location. The field personnel will provide an approximate description of the sediment type based on the poling such as soft sediment over sand.

To determine the amount of submerged oil at each location, a pole with a 6-inch diameter disk attached at the base will be used to agitate the soft sediment. The degree of oil observed at the water surface after agitation will be described using the same categories as the 2011 field season (heavy, moderate, slight, or none). These categories are outlined in the attached Submerged Oil Classification flow chart (*Figure 1*).

If a “moderate” or “heavy” submerged oil sheen/globules is observed, the area will be delineated with additional poling. The poling teams will work away from the “moderate” or “heavy” location until they have poled a light or no submerged oil. This location is the delineated boundary and a stake with survey flagging is set to designate the boundary.

Data generated as part of the background study for quantification of submerged oil will be used to aid in determining if there is a need to change the poling technique to prevent interference due to existing background contamination not due to the Enbridge leak. If a change is recommended, a description and justification will be provided to the U.S. EPA.

3.6.1.5 Data Collection and Documentation

Electronic field data forms will serve as a daily record of events, observations, and measurements during all field activities for the poling assessment. All information relevant to poling activities will be recorded electronically on these forms. Entries on these forms will include:

- Names of field crew,
- Date and time of site entry and exit,
- Location of poling activity,
- Site Description,
- Field measurements,
- Field observations, and
- Photographs.

Paper copies of the field forms will be printed and filed for hard copy backup of all data collected. In addition, all electronic data will be downloaded to a server at the end of each work day and stored in a Geographic Information System (GIS) database. GIS is used to organize data and to display the data in map form. The poling location information, field observations, sediment characteristics, utility information, and any analytical results are stored in the GIS database and posted to maps to assist in determining the geomorphic factors that influence depositional patterns.

3.6.2 Data Analysis

A series of maps will be developed to display the results of poling data. The poling locations and the associated relative oil concentrations will be plotted on the maps. The maps will allow a comparison of the observed 2011 and 2012 depositional patterns. This comparison may provide an understanding of the relationship between river stage and the transport of submerged oil

3.7 Fall/Winter 2011 and Spring/Summer 2012 Recovery Actions

If based on the assessment process described in *Section 1.1* it is determined that additional recovery actions would be environmentally beneficial, the river will be addressed using a top down approach or working upstream to downstream for future recovery actions based on the depositional areas identified using the fluvial geomorphology of the river. The first section will consist of a portion of the river starting at the confluence of the Talmadge Creek and the Kalamazoo River and ending at the Ceresco Dam. The second section begins at the Ceresco Dam and ends at the Battle Creek impoundment. The final section runs from the Battle Creek impoundment to the Morrow Lake Dam.

3.7.1 Fall 2011 Submerged Oil Recovery Actions

Submerged oil recovery activities will continue in the Fall of 2011 as long as water and sediment conditions remain conducive to efficient submerged oil liberation and recovery. It is anticipated that these activities will cease in approximately mid-October 2011. Recovery actions will follow a strict top to bottom approach beginning at the Kalamazoo River/Talmadge Creek confluence. Activities will be performed using the previously approved toolbox techniques.

3.7.2 Winter 2011 Submerged Oil Recovery Actions

Over the winter months, passive recovery locations for submerged oil activities will be evaluated. These passive locations may be used to collect submerged oil mobilized by natural river flow conditions. The identification of these locations will be supported by the Hydrodynamic Model, Late Summer Reassessment 2011, existing poling data, and other fluvial geomorphic observations. Use of these passive locations for collection uses the dynamic nature of the river to collect submerged oil while minimizing the ecological impact of recovery activities on the river system. Refer to *Section 5.0* for additional information regarding these activities.

3.7.3 Spring/Summer 2012 Submerged Oil Recovery Actions

As stated in *Section 1.1*, future oil recovery actions will be based on the results of the studies outlined in this work plan and a decision tree process that provides a balanced assessment of the environmental consequences of implementing specific oil recovery actions.

Additionally, Enbridge intends to complete a preliminary ecological toxicology evaluation under the MDEQ Order to evaluate potential affects, if any, to the existing benthic community. The results of these various evaluations will be used to determine if there is a recoverable quantity of submerged oil remaining within the river, and if there is justification to incur potential consequence to the river's ecosystem similar to that which occurred during the Summer/Fall 2011 submerged oil recovery activities.

Enbridge values the environment and is concerned about finding the appropriate balance during the future of this cleanup. Enbridge does not support further damage to the river's ecosystem that is based solely on visual aesthetic impacts. The previously described evaluations and studies will determine the potential merit in future active submerged oil recovery activities.

Upon evaluation of available data, passive recovery methods may be acceptable means for oil recovery. Therefore, active recovery may not be recommended. If required, submerged oil recovery activities will resume in Spring/Summer 2012 in concurrence with the Spring 2012 reassessment activities. Submerged oil recovery activities will be conducted in a strict top to bottom sequence. The submerged oil recovery activities will be conducted only while water and sediment temperatures are conducive to submerged oil recovery. Although work may be conducted pursuant to the U.S. EPA Order, it will not obviate the need to comply with pertinent state regulations and laws.

An addendum to this work plan outlining specific 2012 submerged oil recovery activities and procedures will be submitted prior to resumption of submerged oil recovery activities. The work plan addendum will take into account all potential environmental impacts when outlining proposed activities.

4.0 FALL2011/SPRING 2012 CONTAINMENT PLAN

The objectives for the containment plan for late 2011 and early 2012 are:

- Personnel and public safety, inclusive of the Kalamazoo River being open to public use,
- Complete the removal of containment prior to winter freeze up in an efficient manner,
- Manage winter site containment,
- Install appropriate containment for planned operations in the Spring of 2012, and
- Limit impact to downstream receptors.

Containment will be removed on a priority basis and in a controlled systematic manner. Containment deployment in 2012 will be based on weather and site conditions (as determined through the Spring 2012 reassessment and other visual observations).

Upon opening of sections of the river, every consideration will be taken into account for the protection and safety of the public. This plan provides containment in critical sections of the river (areas where boat traffic will not be affected) while ensuring the safety of public river users.

Surface containment that may be installed in a location which may come in contact with the public will be minimized if not eliminated. The presence of shore to shore or “check mark” containment poses a potential risk to inexperienced river users. This type of containment (if required) will only be used in areas of the river where on water traffic can be completely controlled. As a result, the following containment plan identifies the locations of potential deployment sites planned for Spring 2012.

This plan is based on the current strategies that are to be implemented in the 2012 work season. The identified deployment strategy may be modified if any changes in the work plan take place based on weather conditions, spring reassessment findings, river characteristics, presence of surface or subsurface oil residuals or any other factor that could cause a change in the work plan.

4.1 Implementation

The following techniques and strategies will be utilized to implement the Fall 2011/Spring 2012 Containment Plan.

4.1.1 Monitoring

4.1.1.1 Fall 2011

Site monitoring will be completed during Fall 2011 utilizing boats, as well as land based observation. During the monitoring, crews will observe river characteristics such as freezing, movement of flowing ice, debris movement (including vegetation/debris dislodged during fall vegetation die back and accumulated organic matter), visual checking for the presence of surface oil and/or sheen as well as submerged oil migration via poling. The information collected during these activities will become a driver for the implementation of this plan determining the priority sequence and timing of containment removal.

4.1.1.2 Winter 2011/2012

Site monitoring will be completed during the late fall and early winter, utilizing boats, as well as land based observation. During monitoring, sites will be monitored for ice buildup, debris accumulation and containment integrity as well as visual checking for the presence of surface oil and/or sheen. The information gathered during monitoring will become a driver for required boom maintenance and adjustment.

4.1.1.3 Spring 2012

Site monitoring will be completed during the late winter and spring months, utilizing boats as well as land based observation. During monitoring, crews will observe river characteristics such as freezing, movement of flowing ice, debris movement (including vegetation/debris dislodged during spring runoff and accumulated organic matter), visually checking for the presence oil and/or sheen. The information collected during these activities will become a driver for the implementation of this plan determining the priority sequence and timing of containment deployment.

4.1.2 Containment Removal Procedure

Containment removal will be executed in a controlled manner while visually monitoring sediment and sheen levels downstream of the containment. If excessive visual levels of sediment or sheen are noted during the containment removal, operations will be suspended and alternative removal plans will be implemented (the addition of temporary downstream containment may be required). Containment will be removed utilizing the following steps.

- All debris accumulated in the retention area of the boom will be collected and taken for disposal. If the presence of sheen is noted in the contained area a sweep will be completed utilizing sorbent sweep.

- The lines securing the downstream end of the containment will be released starting with the shoreline protection. The retention area line will then be slowly released allowing the containment to settle onto the upstream anchor. If excessive levels of sediment or sheen are noted the line can be secured to allow them to settle out.
- Any sediment curtain or X-Tex attached to the boom will then be cut free and loaded into boats and taken for disposal.
- Boom will be towed to the nearest boat launch where it will be loaded directly from the water into roll-off bins. Boom will be taken for decontamination and repairs. Boom will then be sorted and properly stored for winter to prevent dry rot and UV damage. Any boom that is too damaged will have the metal fittings removed and then be disposed.

4.2 Removal Priority and Scheduling:

Priority sequence for removal is as follows:

- Removal of containment associated with submerged oil sites.
- Removal of control point containment.
- Removal of containment associated with O&M sites.

This sequence is based on several factors as listed below.

- Areas with the potential to have ongoing sheen issues should be removed last to prevent additional impact to downstream receptors. As most submerged oil locations do not release sheen without agitation they will be removed as they are completed and determined to be consistent with requirement of the U.S. EPA Order.
- Control points should be left in place until submerged oil operations are completed.
- At the request of STS Utilities all containment must be removed from Morrow Lake and the Delta (35th Street to Morrow Dam) by November 18, 2011.
- O&M locations should be removed as late as reasonably possible. O&M sites that are in sheltered locations, where ice damage is not anticipated, may be left in place and monitored through the winter.
- Containment will be removed from O&M sites that have received determination as being consistent with the U.S. EPA Order.
- The presence of frazil ice or dislodged sheet ice flowing within the main river channel.

The schedule for the containment removal plan will be based on the above priority sequence. The implementation of the containment removal plan is largely dependent on fluctuating weather and river conditions and may be delayed by a down turn in either of these factors. If, due to fluctuations in the weather, the potential for ice or debris dams increases once containment removal has begun, removal activities will be limited. Additionally, any remaining boom will be monitored for a potential loss of integrity so that corrective actions can be taken.

4.2.1 Submerged Oil Containment Removal Schedule

Submerged oil containment will be removed as sites are determined to be consistent with requirements of the U.S. EPA Order. Any remaining sites will be removed after the completion of 2011 submerged oil operations. Removal of submerged oil containment sites will generally be from the top down approach.

4.2.2 Control Point Containment Removal Schedule

Control point removal will begin after the completion of submerged oil activities, no later than November 10, 2011 (weather dependent). All containment between 35th Street Bridge and Morrow Dam will be removed by November 18, 2011 as per the request of STS Utilities. The confluence containment point will remain in place throughout the winter. The projected order of removal will be:

- E 4.75 (MP 38.25)
- E 4.5 (MP 38.25)
- E 4 (MP 37.75)
- E 5 (MP 39.25)
- E 6 (MP 39.75
- D 3 (MP 19.25)
- Ceresco (MP 5.75)
- MP 6.0
- MP 10.8
- C 6 (MP 15.25)
- MP 15.75

This order is subject to change dependent on site conditions, weather and other operational activities.

4.2.3 O&M Containment Removal Schedule

O&M containment will be removed as it receives sign-off. Any locations that have not received a determination as being consistent with the U.S. EPA Order as of November 1, 2011 will be evaluated for their potential to impact downstream receptors and to become dislodged by moving ice. Any location not sufficiently protected from ice movement will be removed starting November 1, 2011. Removal of the O&M containment sites will generally be from the top down.

4.2.4 Winter Maintenance Procedure

Throughout winter operations all locations requiring boom, if any, will be monitored. Any site that becomes damaged or dislodged during operations or by ice will be removed, replaced or repaired depending on the potential for downstream impacts versus the potential for additional damage. All locations will be monitored on a weekly basis to ensure their integrity.

4.2.5 Spring Deployment Plan

4.2.5.1 Control Point Booming

Control point booming is the use of containment boom, curtain boom, silt fence and/or X-Tex boom to prevent the downstream migration of surface and/or subsurface oil. The control point booming, when properly deployed, will aid in facilitating the recovery of migrating surface and subsurface oil. There are several booming strategies that will be used in control point booming, these are:

- Shore to Shore Booming: In this strategy, a single span of boom is deployed to cover the entire width of the river. The upstream end of the boom is secured to an anchor point on the upstream bank. Hand lines or in stream anchors are used to maneuver the boom at the appropriate angle (dependent on current velocity) down to a recovery area. A small section of boom is then deployed along the downstream shoreline to prevent impact to the river bank (shoreline protection).
- Gate Booming (also referred to as “Open Chevron”): In this strategy, two segments of boom are deployed across the width of the river to allow for vessel traffic up and down the river. The upstream ends of both booms are secured in an overlapping position using in stream anchors. Hand lines or in stream anchors are used to maneuver the boom at the appropriate angle (dependent on current velocity) down to a recovery area. A small section of boom is then deployed along the downstream shoreline to prevent impact to the river bank (shoreline protection).
- Cascade Booming: The cascade system is the deployment of multiple booms across the width of the river to allow for vessel traffic up and down the river or to reduce the strain that current places on individual spans of boom. The upstream boom is secured to the shore at its upstream point. Using hand lines or in stream anchors, the boom is maneuvered at an appropriate angle (dependent on current velocity) to a point in the

river where it is secured with an in stream anchor. Each additional segment is then placed downstream in an overlapping position and secured with in stream anchors. The last span of boom is secured on its downstream end to the shore. A small section of boom is then deployed along the downstream shoreline to prevent impact to the river bank (shoreline protection).

- Chevron Booming: In the chevron system, a single span of boom is deployed to deflect oil around a sensitive area or to recovery points on both banks. The center of the boom is secured in the middle of the channel using an in stream anchor. Hand lines or in stream anchors are used to maneuver both of the downstream booms at appropriate angles (dependent on current velocity) down to recovery areas. Small sections of boom are then deployed along the downstream shoreline to prevent impact to the river bank (shoreline protection).

Oil collected by control point booming will be recovered using either hand skimming or by use of absorbent materials. Control point booming location sites will be selected based on the following criteria:

- River characteristics (current speed, depth, width and bottom material),
- Site access (ease of oil recovery and maintenance),
- Suitable anchor points,
- Distance to upstream control points,
- Distance to upstream sources of impact (identified impacted depositional areas and impacted overbank areas), and
- Access control to prevent impact to the public.

Currently, control points have been identified as likely locations for installation of surface containment. This number is dependent on information gathered during spring monitoring activities, the Spring 2012 reassessment, and river reopening activities. These are located at:

- MP 2.00, B 5 (confluence of Talmadge and Kalamazoo),
- MP 5.75 (Ceresco Dam), and
- MP 15.75, C 6 (Battle Creek Dam).

Due to the increase in water levels associated with spring runoff, all control points will be installed at a greater angle. This will lessen the force applied to them by the increased current velocity and reduce the risk of containment failure.

Subsurface containment may also be installed based on the monitoring and reassessment activities. The locations of these sites would be based on the observations made by the monitoring team as well as the locations of any identified subsurface concerns.

All control points will be monitored for ice buildup. If there is significant ice buildup, the boom will be released to prevent an unsafe condition or uncontrolled containment failure.

4.2.5.2 Sediment Trap Containment

During winter operations, engineered sediment traps may be installed within the Kalamazoo River. Refer to *Section 5.0* below for additional information. During the Spring and Summer 2012 seasons, dependent on site conditions and the presence of surface or subsurface oil, additional containment may be installed immediately downstream of each sediment trap. This containment, if necessary, would potentially consist of surface and subsurface containment and would be dependent on the present access to that section of the river by the public.

4.2.5.3 Protective Containment

Protective containment is the use of surface and subsurface containment to prevent impact to a sensitive area or to prevent impact to the river from a small impacted area. Containment is deployed between a source of impact and the selected area or river to shield the area from impact. This method can also be used to isolate impacted areas until recovery methods have been completed and regulatory sign off has been received. The containment will usually be deployed:

- At the mouth of an inlet,
- Around the entire area, and
- In a chevron (see control point booming) upstream of the area.

The selection of locations for protective containment will be based on the following criteria:

- Areas that have the potential to cause impact to downstream receptors.
- Areas of significant ecological value.

Deployment at these locations is dependent on information gathered during monitoring activities and may vary pending the results of those activities. Additional areas may be added based on inspection results and the identification of unknown areas of impact.

4.2.5.4 Oil Recovery

Oil recovery involves the removal of oil from the surface of the water. All containment locations will be monitored for the accumulation of oil and impacted debris. When identified, this material will be recovered and disposed of according to the accepted waste handling practices. Several recovery methods are listed below but are not limited to:

- Hand Skimming: Hand skimming is the removal of oil by physical labor. Personnel will utilize hand tools such as dip nets, strainers, and pitchforks to lift the oil and debris out of recovery areas and place it into a container for disposal.
- Rotary Skimming: Rotary skimming is the removal of oil by a mechanical rotary skimmer. There are several types of rotary skimmers including drum, mop skimmers and brush skimmers. All rotary skimmers work by rotating a surface with oil adhering qualities. The oil is then mechanically removed from the surface and collected into a container for disposal.
- Vacuum Truck: Utilizing a vacuum unit to remove oil or impacted sediment out of a containment area.

Due to the low volume of oil expected to accumulate during operations, hand skimming will be the preferred method of oil recovery.

4.3 Deployment Priority and Scheduling:

Priority sequence for deployment is as follows:

- Deployment of surface containment from downstream to upstream,
- Deployment of protective containment at areas of high ecological value,
- Deployment of protective containment from upstream to downstream, and
- Deployment of submerged oil containment (not including submerged oil work sites) from downstream to upstream.

The schedule for the containment plan will be based on the above priority sequence. The deployment of containment in spring conditions is largely dependent on fluctuating weather and river conditions and may be delayed by either of these factors. Due to the potential for the formation of ice and or debris dams, booming activities will be triggered by the absence of the potential for migration of ice and or debris to downstream areas. If, due to fluctuations in the weather the potential for ice or debris dams increases once deployment has begun, booming activities may be limited. Additionally, any deployed boom will be monitored for a potential loss of integrity so that corrective actions can be taken.

During all work in the river, special consideration will be given to the following:

- The safety of personnel working in, around and on the water,
    - Boat traffic will be kept to a minimum to reduce the risk to workers.
    - If personnel are working in the water from the shoreline a tag line will be required for any work completed in water greater than waist depth.
    - Boats working in the vicinity of containment will do so under a no wake restriction with the exception of crossing the boom. Boom crossing will be done on step at the top end of the boom in the channel marked by marker buoys. Airboats will cross the boom off step.

- The safety of the public.
    - All sites that are accessible to the public will be clearly marked with signage warning of the dangers associated with site.

An adaptive management approach will be used in conjunction with the Fall 2011/Spring 2012 containment plan. This management strategy will allow for modifications to the approved plan to be made as warranted by field conditions. All changes made to the Fall 2011/Spring 2012 containment plan will be submitted to and be approved by U.S. EPA before they are executed. Verbal notification with verbal acceptance will be completed to address changes to the plan.

5.0 SEDIMENT COLLECTION AREAS

The installations of sediment traps provide a quick and efficient non-invasive method to recover remaining submerged oil. Sediment traps may be installed during the winter months under frozen conditions to minimize any ecological impacts on the river system. Locations of traps will be based on: minimization of ecological impact due to accessing the trap for maintenance, safety of the public and workers, 2011 LSR results, results of the hydrodynamic model, and geomorphic data and evaluation. Structures will be designed, permitted, and installed for longer term maintenance and presence. Other considerations which will be addressed by the structure design include, but are not limited to the following:

- Ability to conduct monitoring in least invasive manner,
- Ability to collect sediment in least invasive manner,
- Ability to monitor sediment in least invasive manner, and
- Ability to 100% clean out structure.

For the above reasons, the locations of sediment traps are not provided at this time. It is known that the Ceresco impoundment, the Battle Creek dam, and the Morrow Lake Delta are the most significant depositional areas within the river system and are therefore anticipated locations for potential sediment traps. Additionally, a design will be provided once a location is determined. After completion of the hydrodynamic model, a work plan addendum will be provided that outlines the location and design of each sediment trap. Development of the work plan addendum will be coordinated with the submerged oil task force team.

6.0 SCHEDULE

A schedule is presented (*Attachment E*) for general scheduling purposes only and will be modified based on numerous factors including river conditions, access, permitting and re-prioritization of areas. Updates to the schedule will be ongoing throughout the project and will be presented to the U.S. EPA and MDEQ as needed to indicate significant change.

7.0 REFERENCES

Enbridge, 2010a. Enbridge Line 6B MP 608 Pipeline Release; Marshall, Michigan; *Health and Safety Plan.* August 2010.

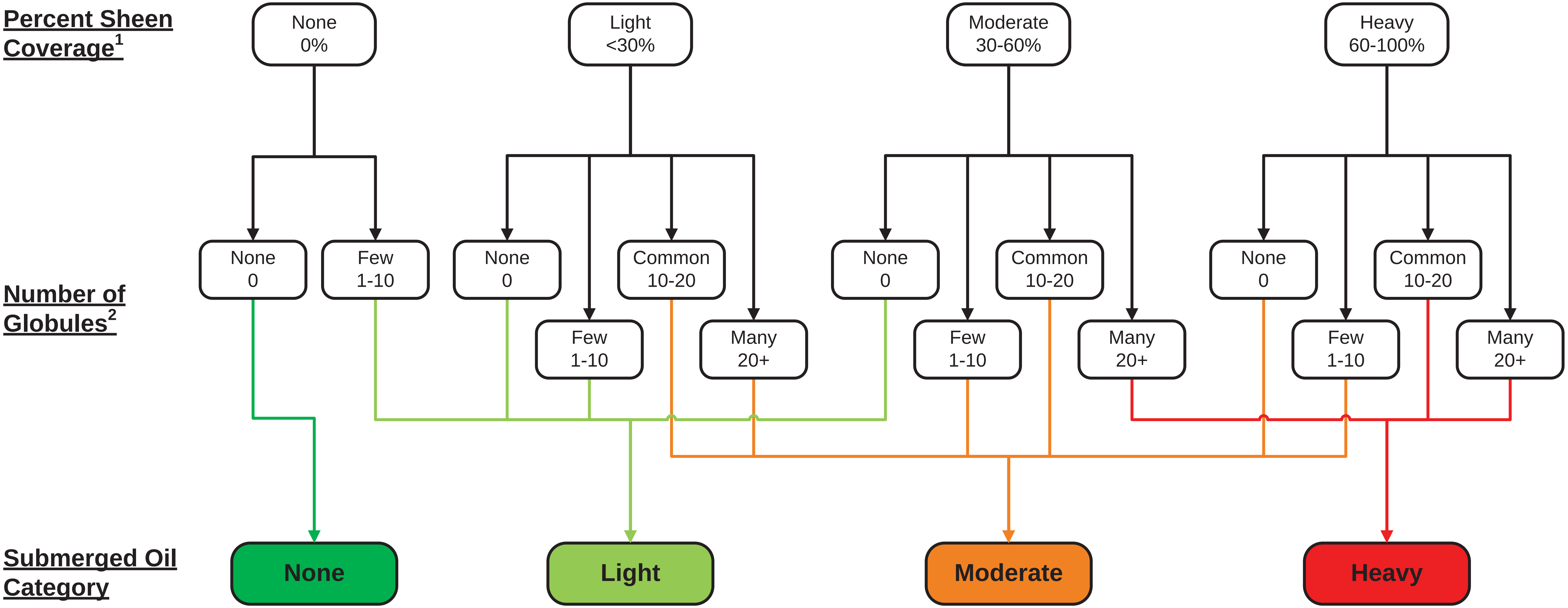
Enbridge, 2011b. Enbridge Line 6B MP 608 Pipeline Release; Marshall, Michigan; *Sampling and Analysis Plan*. August 30, 2011.

Kong, Lingjun, 2004. *Characterization of Mineral Oil, Coal Tar, and Soil Properties and Investigation of Mechanisms That Affect Coal Tar Entrapment In and Removal From Porous Media*. Doctoral Thesis submitted to the School of Civil and Environmental Engineering. Georgia Institute of Technology, Atlanta, Georgia.

Fingas, Merv; Hollebone, Bruce; Fieldhouse, Ben, 2006. *The Density Behavior of Heavy Oils in Freshwater: The Example of the Lake Wabamun Spill.* Technical Report. Emergencies Science & Technology Division, Environment Canada, Ottawa, Ontario.

Figures

Figure1: Submerged Oil Field Observation Flowchart



Notes:
1. Percent coverage per square yard
2. Number of globules per square yard

Attachment A

Overbank Oil: Spring 2012 Reassessment

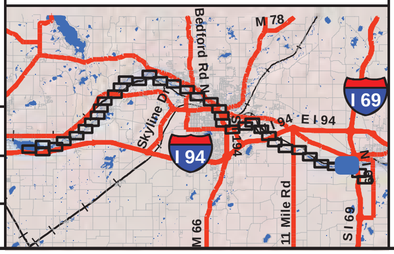
ENBRIDGE

Drawn: DP 10/18/2011

Approved: DB 10/18/2011

Project #: 60162778

Map Location



Legend

Spring 2011 Reassessment Data

- ● Pooled Oil Observation
- ● — ☐ Film (Sheen) Observations
- ● — ▨ Innundated Areas - Reassess
- ☐ Excavated Areas
- — 2011 Inundation Model
- — Quarter Mile Grid Segments

N

0 125 250 500

Scale in Feet

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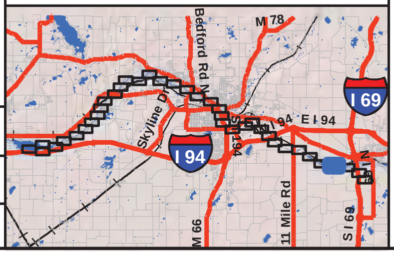

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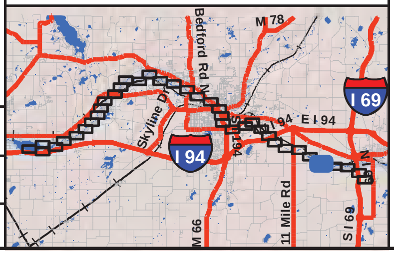

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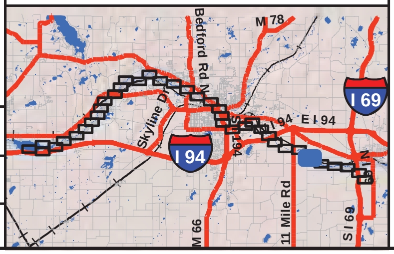

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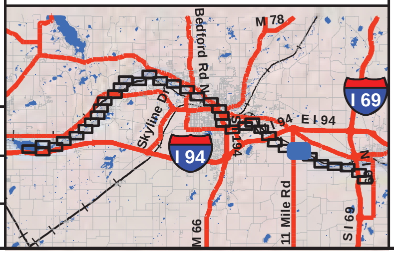

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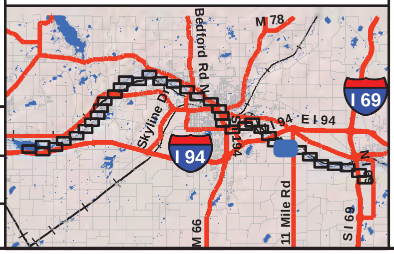

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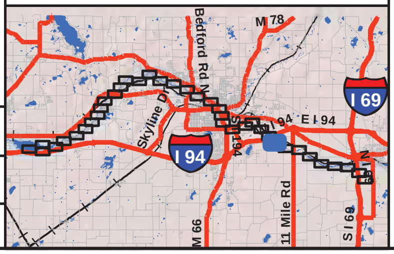

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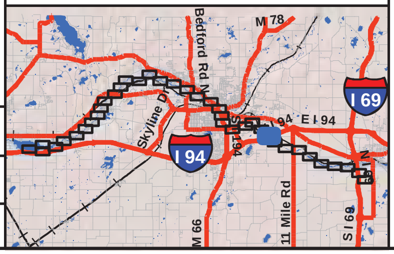

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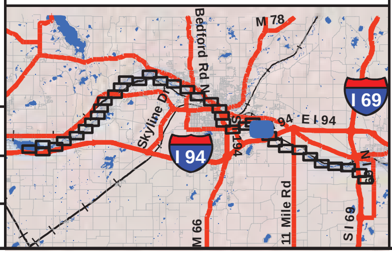

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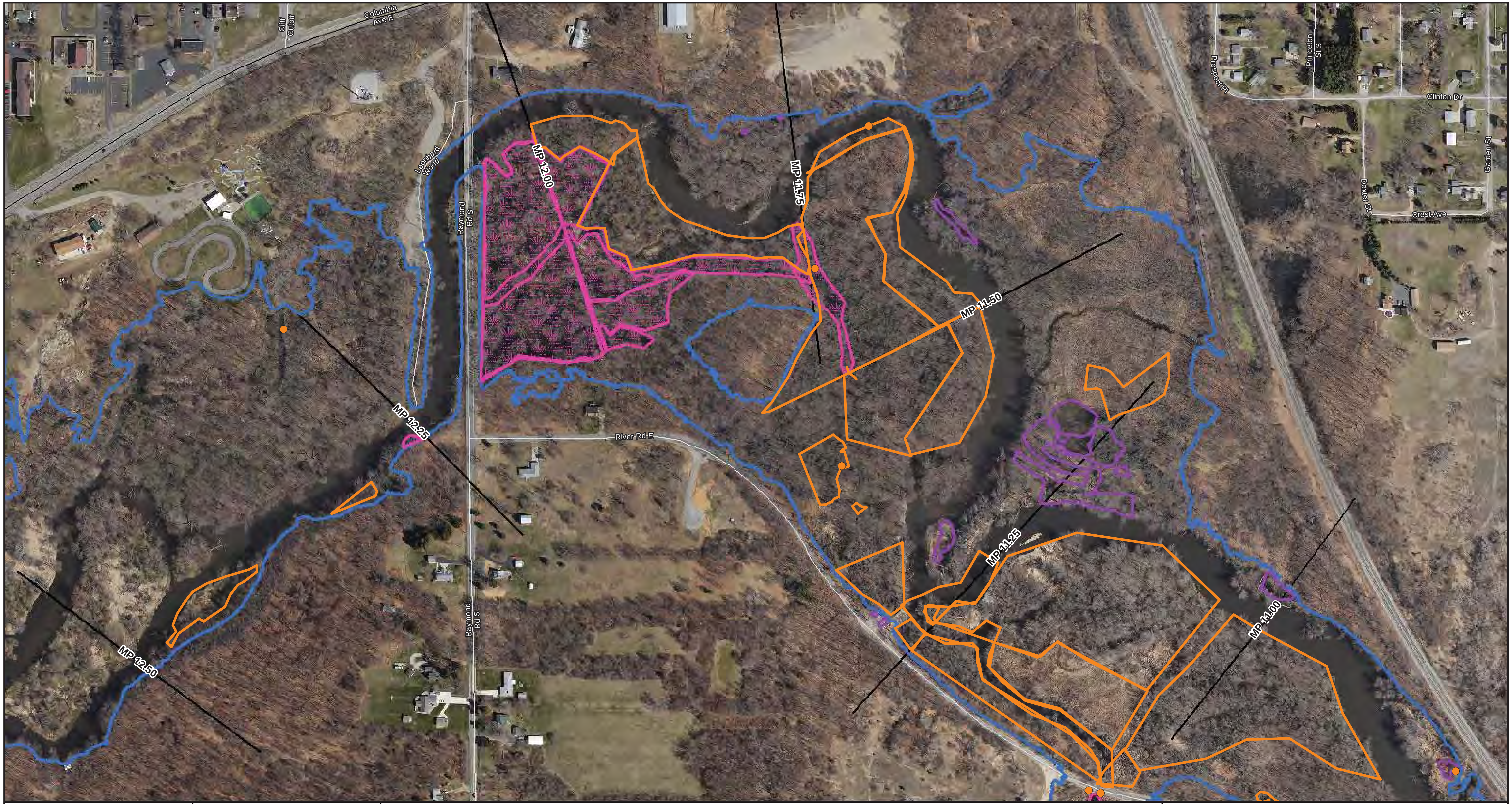

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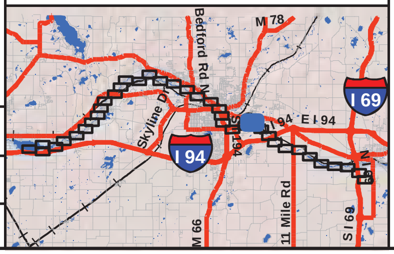

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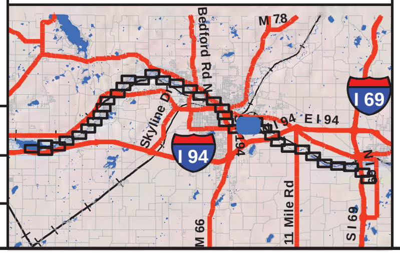

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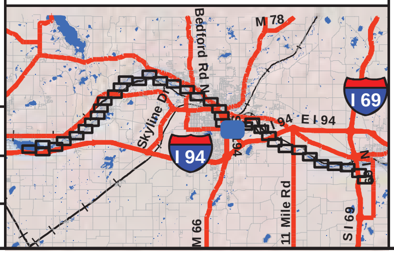

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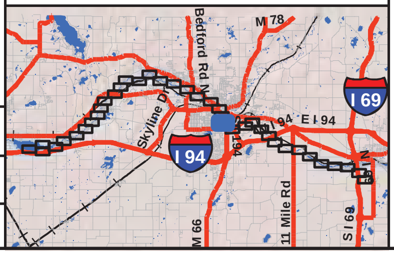

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Sheet 13 of 38

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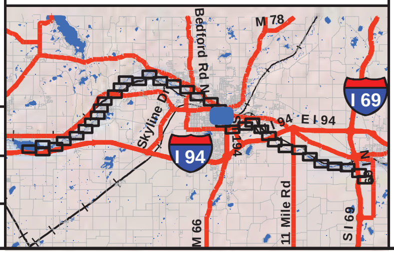
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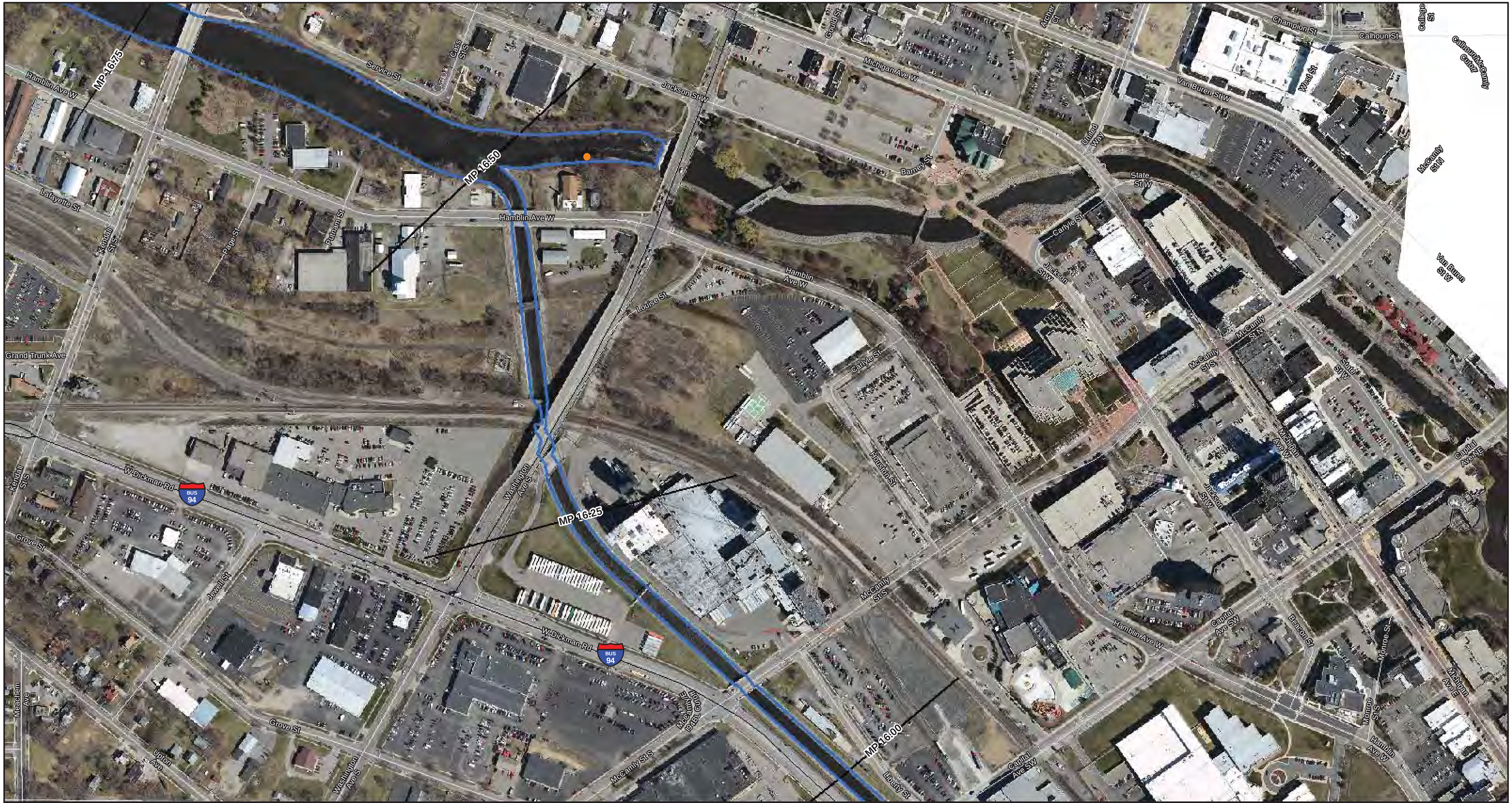

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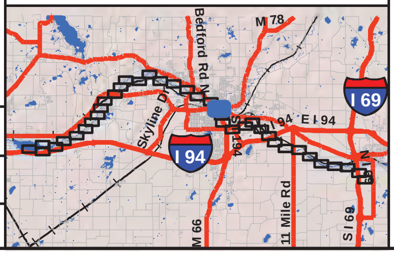

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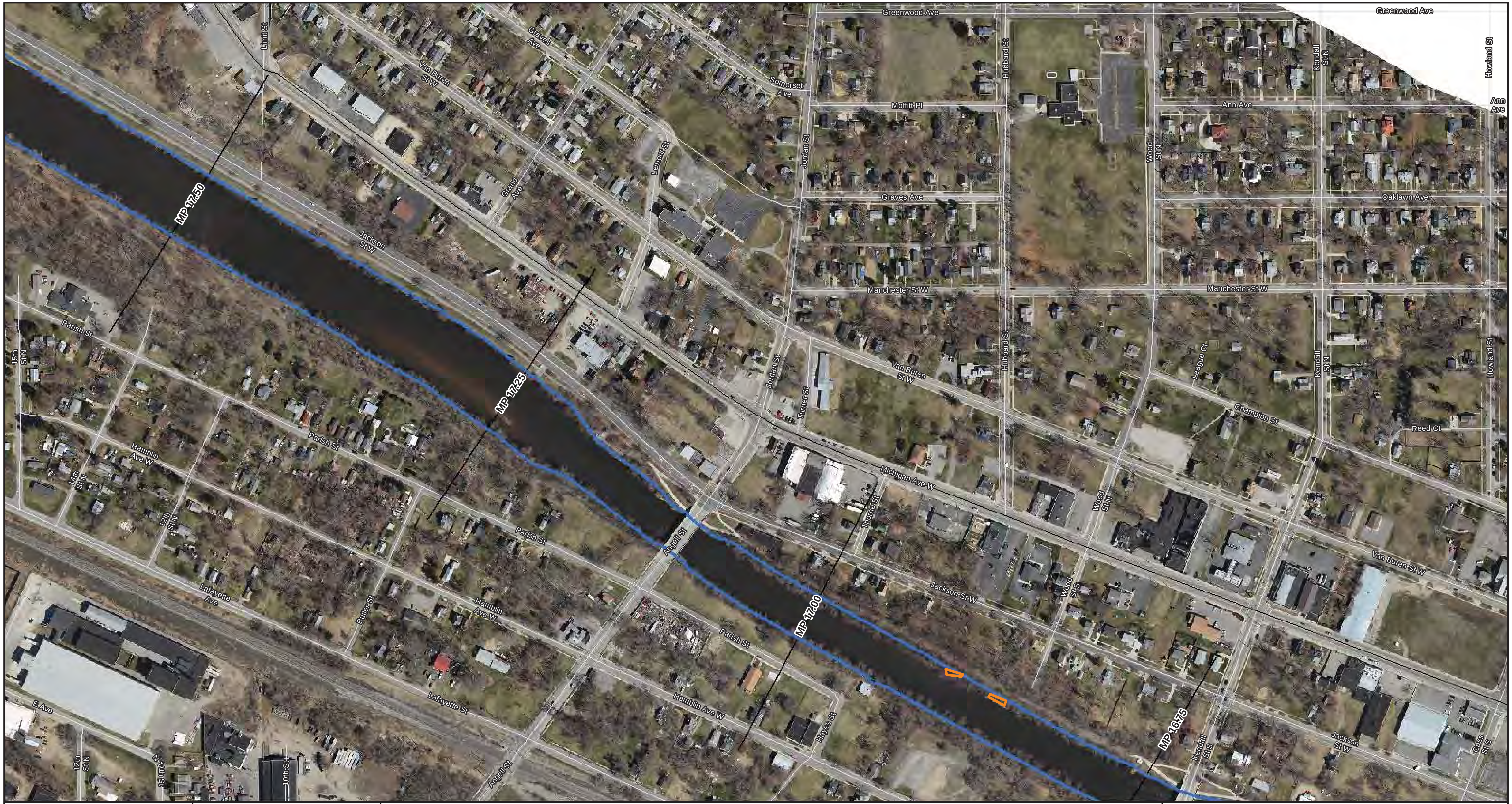
Aerial Photography Date: April 2011



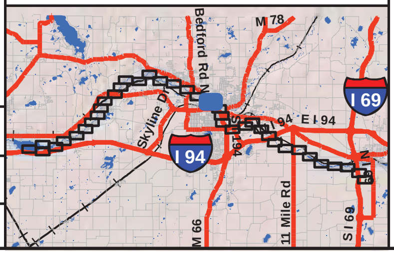
ENBRIDGE

Drawn: DP 10/18/2011

Approved: DB 10/18/2011

Project #: 60162778

Map Location



Legend

Spring 2011 Reassessment Data

● Pooled Oil Observation

● — ▭ Film (Sheen) Observations

● — ▨ Innundated Areas - Reassess

▭ Excavated Areas

— 2011 Inundation Model

— Quarter Mile Grid Segments

N

0 125 250 500

Scale in Feet

PROPOSED SURVEY AREAS
SPRING 2012 REASSESSMENT
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MARSHALL, MI PIPELINE RELEASE
ENBRIDGE ENERGY, LIMITED PARTNERSHIP

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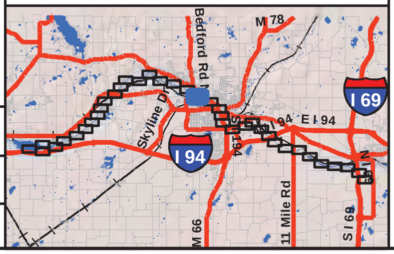
Aerial Photography Date: April 2011

ENBRIDGE

Drawn: DP 10/18/2011
Approved: DB 10/18/2011
Project #: 60162778

Map Location



Legend

Spring 2011 Reassessment Data

● Pooled Oil Observation
● — ☐ Film (Sheen) Observations
● — ▨ Innundated Areas - Reassess
☐ Excavated Areas
— 2011 Inundation Model
— Quarter Mile Grid Segments

N

0 125 250 500
Scale in Feet

PROPOSED SURVEY AREAS
SPRING 2012 REASSESSMENT
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MARSHALL, MI PIPELINE RELEASE
ENBRIDGE ENERGY, LIMITED PARTNERSHIP

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Aerial Photography Date: April 2011

ENBRIDGE

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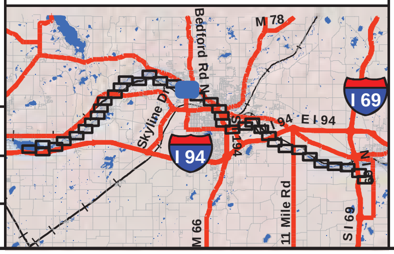
Approved:	DB	10/18/2011
Project #:	60162778	

Map Location



Legend

Spring 2011 Reassessment Data

● Pooled Oil Observation

● — ▭ Film (Sheen) Observations

● — ▨ Inundated Areas - Reassess

▭ Excavated Areas

— 2011 Inundation Model

— Quarter Mile Grid Segments

N

0 125 250 500

Scale in Feet

PROPOSED SURVEY AREAS
SPRING 2012 REASSESSMENT

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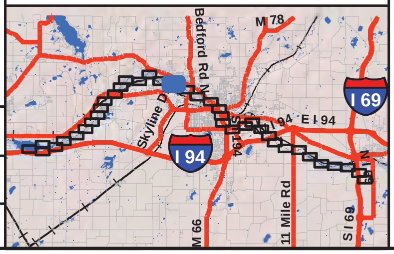
Aerial Photography Date: April 2011

Map Location



ENBRIDGE

Drawn: DP 10/18/2011

Approved: DB 10/18/2011

Project #: 60162778

Legend

Spring 2011 Reassessment Data

- ● Pooled Oil Observation
- ● — ▭ Film (Sheen) Observations
- ● — ▨ Inundated Areas - Reassess
- ▭ Excavated Areas
- — 2011 Inundation Model
- — Quarter Mile Grid Segments

N

0 125 250 500

Scale in Feet

PROPOSED SURVEY AREAS
SPRING 2012 REASSESSMENT
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Aerial Photography Date: April 2011

ENBRIDGE

Drawn: DP 10/18/2011
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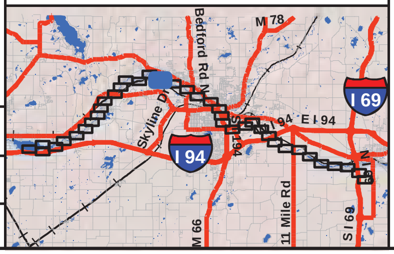
Project #: 60162778

Map Location



Legend

Spring 2011 Reassessment Data

●			Pooled Oil Observation	
●	—	☐	Film (Sheen) Observations	
●	—	▨	Innundated Areas - Reassess	
		☐	Excavated Areas	
	—		2011 Inundation Model	
	—		Quarter Mile Grid Segments	

N

0 125 250 500

Scale in Feet

PROPOSED SURVEY AREAS
SPRING 2012 REASSESSMENT
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ENBRIDGE LINE 6B MP 608
MARSHALL, MI PIPELINE RELEASE
ENBRIDGE ENERGY, LIMITED PARTNERSHIP

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Aerial Photography Date: April 2011

ENBRIDGE

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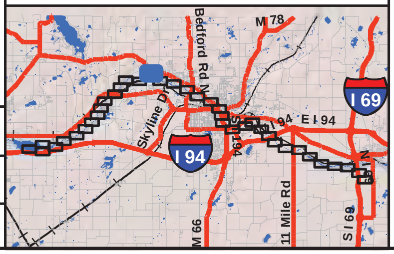
Approved:	DB	10/18/2011
Project #:	60162778	

Map Location



Legend

Spring 2011 Reassessment Data

● Pooled Oil Observation

● — ☐ Film (Sheen) Observations

● — ▨ Innundated Areas - Reassess

☐ Excavated Areas

— 2011 Inundation Model

— Quarter Mile Grid Segments

N

0 125 250 500

Scale in Feet

PROPOSED SURVEY AREAS
SPRING 2012 REASSESSMENT
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ENBRIDGE LINE 6B MP 608
MARSHALL, MI PIPELINE RELEASE
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Aerial Photography Date: April 2011

ENBRIDGE

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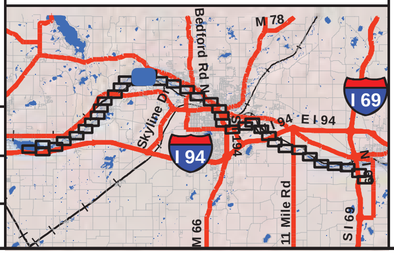
Map Location



Legend

Spring 2011 Reassessment Data

- ● Pooled Oil Observation
- ● — ☐ Film (Sheen) Observations
- ● — ▨ Innundated Areas - Reassess
- ☐ Excavated Areas
- — 2011 Inundation Model
- — Quarter Mile Grid Segments

N

0 125 250 500

Scale in Feet

PROPOSED SURVEY AREAS
SPRING 2012 REASSESSMENT
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ENBRIDGE LINE 6B MP 608
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ENBRIDGE ENERGY, LIMITED PARTNERSHIP

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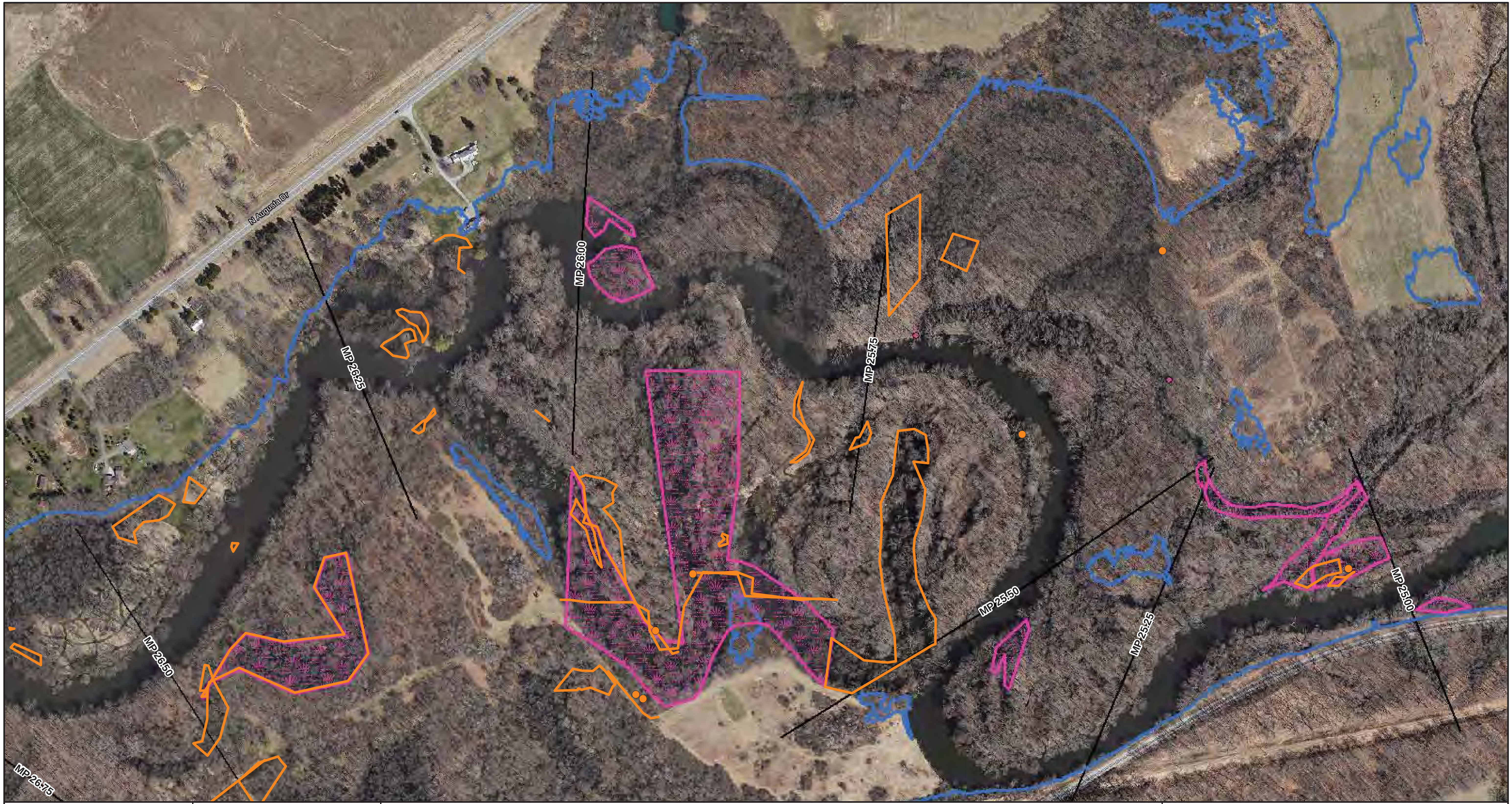
Aerial Photography Date: April 2011



ENBRIDGE

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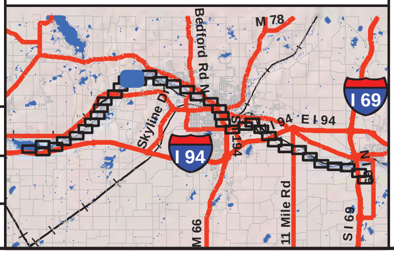

Legend

Spring 2011 Reassessment Data

● Pooled Oil Observation
● — ▢ Film (Sheen) Observations
● — ▨ Innundated Areas - Reassess
▢ Excavated Areas
— 2011 Inundation Model
— Quarter Mile Grid Segments

N

0 125 250 500
Scale in Feet

PROPOSED SURVEY AREAS
SPRING 2012 REASSESSMENT
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ENBRIDGE LINE 6B MP 608
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ENBRIDGE ENERGY, LIMITED PARTNERSHIP

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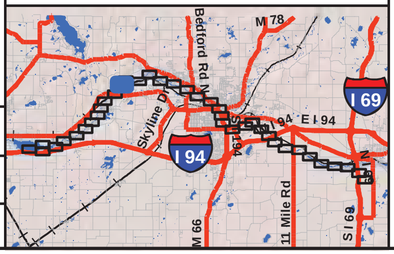
Map Location



Legend

Spring 2011 Reassessment Data

● Pooled Oil Observation

● — ☐ Film (Sheen) Observations

● — ▨ Innundated Areas - Reassess

☐ Excavated Areas

— 2011 Inundation Model

— Quarter Mile Grid Segments

N

0 125 250 500

Scale in Feet

PROPOSED SURVEY AREAS
SPRING 2012 REASSESSMENT
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ENBRIDGE LINE 6B MP 608
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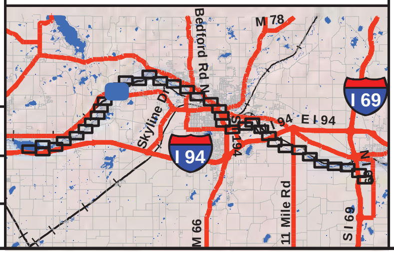
Map Location



Legend

Spring 2011 Reassessment Data

● Pooled Oil Observation

● — ☐ Film (Sheen) Observations

● — ▨ Innundated Areas - Reassess

☐ Excavated Areas

— 2011 Inundation Model

— Quarter Mile Grid Segments

N

0 125 250 500

Scale in Feet

PROPOSED SURVEY AREAS
SPRING 2012 REASSESSMENT
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ENBRIDGE LINE 6B MP 608
MARSHALL, MI PIPELINE RELEASE
ENBRIDGE ENERGY, LIMITED PARTNERSHIP

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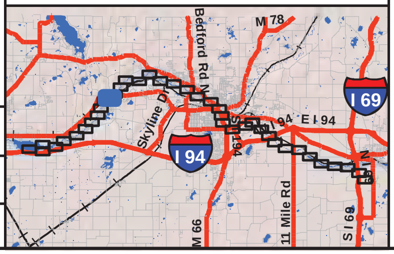
Map Location



Legend

Spring 2011 Reassessment Data

● Pooled Oil Observation	▭ Excavated Areas
● — ▭ Film (Sheen) Observations	— 2011 Inundation Model
● — ▨ Inundated Areas - Reassess	— Quarter Mile Grid Segments

N

0 125 250 500

Scale in Feet

PROPOSED SURVEY AREAS
SPRING 2012 REASSESSMENT
Sheet 26 of 38

ENBRIDGE LINE 6B MP 608
MARSHALL, MI PIPELINE RELEASE
ENBRIDGE ENERGY, LIMITED PARTNERSHIP

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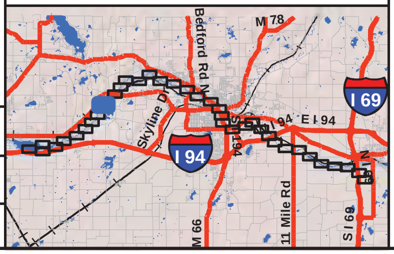
Map Location



Legend

Spring 2011 Reassessment Data

● Pooled Oil Observation

● — ▭ Film (Sheen) Observations

● — ▨ Innundated Areas - Reassess

▭ Excavated Areas

— 2011 Inundation Model

— Quarter Mile Grid Segments

N

0 125 250 500

Scale in Feet

PROPOSED SURVEY AREAS
SPRING 2012 REASSESSMENT
Sheet 27 of 38

ENBRIDGE LINE 6B MP 608
MARSHALL, MI PIPELINE RELEASE
ENBRIDGE ENERGY, LIMITED PARTNERSHIP

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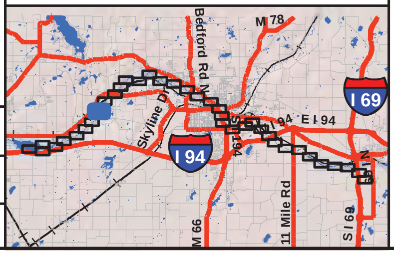
Map Location



Legend

Spring 2011 Reassessment Data

●			Pooled Oil Observation
●	—	☐	Film (Sheen) Observations
●	—	▨	Innundated Areas - Reassess
☐	Excavated Areas		
—	2011 Inundation Model		
—	Quarter Mile Grid Segments		

N

0 125 250 500
Scale in Feet

PROPOSED SURVEY AREAS
SPRING 2012 REASSESSMENT

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ENBRIDGE LINE 6B MP 608
MARSHALL, MI PIPELINE RELEASE
ENBRIDGE ENERGY, LIMITED PARTNERSHIP

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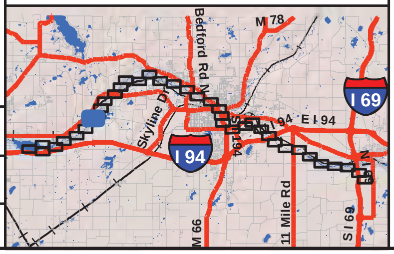
Map Location



Legend

Spring 2011 Reassessment Data

● Pooled Oil Observation

● — ☐ Film (Sheen) Observations

● — ▨ Innundated Areas - Reassess

☐ Excavated Areas

— 2011 Inundation Model

— Quarter Mile Grid Segments

N

0 125 250 500

Scale in Feet

PROPOSED SURVEY AREAS
SPRING 2012 REASSESSMENT
Sheet 29 of 38

ENBRIDGE LINE 6B MP 608
MARSHALL, MI PIPELINE RELEASE
ENBRIDGE ENERGY, LIMITED PARTNERSHIP

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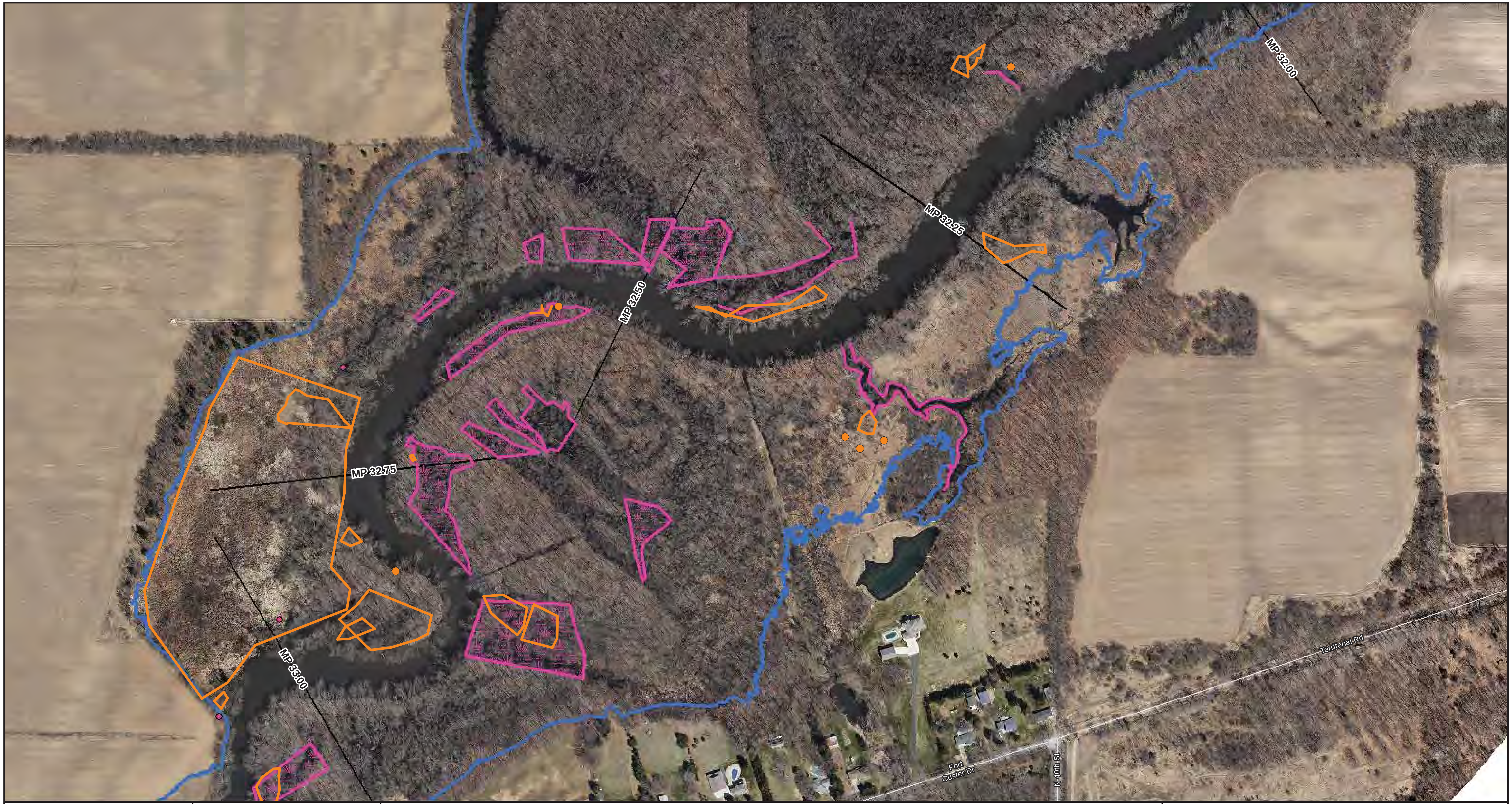

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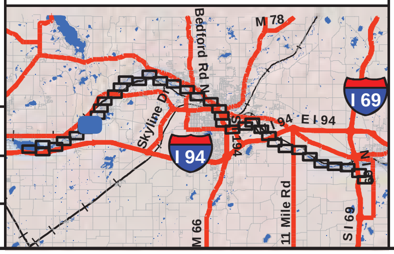
Map Location



Legend

Spring 2011 Reassessment Data

- ● Pooled Oil Observation
- ● — ▭ Film (Sheen) Observations
- ● — ▨ Innundated Areas - Reassess
- ▭ Excavated Areas
- — 2011 Inundation Model
- — Quarter Mile Grid Segments

N

0 125 250 500

Scale in Feet

PROPOSED SURVEY AREAS
SPRING 2012 REASSESSMENT
Sheet 30 of 38

ENBRIDGE LINE 6B MP 608
MARSHALL, MI PIPELINE RELEASE
ENBRIDGE ENERGY, LIMITED PARTNERSHIP

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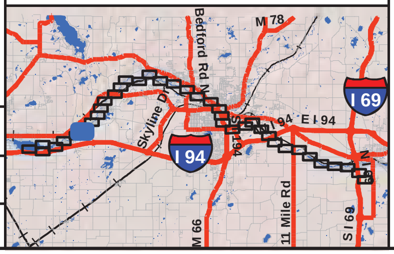
Map Location



Legend

Spring 2011 Reassessment Data

- ● Pooled Oil Observation
- ● — ☐ Film (Sheen) Observations
- ● — ▨ Innundated Areas - Reassess
- ☐ Excavated Areas
- — 2011 Inundation Model
- — Quarter Mile Grid Segments

N

0 125 250 500
Scale in Feet

PROPOSED SURVEY AREAS
SPRING 2012 REASSESSMENT
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ENBRIDGE LINE 6B MP 608
MARSHALL, MI PIPELINE RELEASE
ENBRIDGE ENERGY, LIMITED PARTNERSHIP

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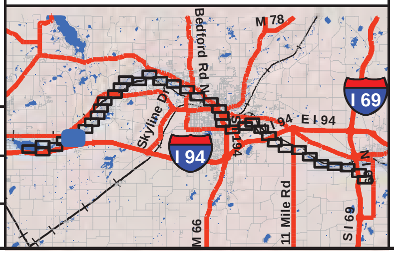
Project #: 60162778

Map Location



Legend

Spring 2011 Reassessment Data

●	Pooled Oil Observation	▭	Excavated Areas
● — ▭	Film (Sheen) Observations	—	2011 Inundation Model
● — ▨	Inundated Areas - Reassess	—	Quarter Mile Grid Segments

N

0 125 250 500

Scale in Feet

PROPOSED SURVEY AREAS
SPRING 2012 REASSESSMENT
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ENBRIDGE LINE 6B MP 608
MARSHALL, MI PIPELINE RELEASE
ENBRIDGE ENERGY, LIMITED PARTNERSHIP

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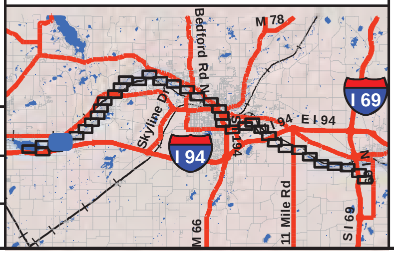
Approved:	DB	10/18/2011
Project #:	60162778	

Map Location



Legend

Spring 2011 Reassessment Data

- 🔴 Pooled Oil Observation
- 🟠 ― ▭ Film (Sheen) Observations
- ● ― ▨ Innundated Areas - Reassess
- ▭ Excavated Areas
- ― 2011 Inundation Model
- ― Quarter Mile Grid Segments

N

0 125 250 500

Scale in Feet

PROPOSED SURVEY AREAS
SPRING 2012 REASSESSMENT
Sheet 33 of 38

ENBRIDGE LINE 6B MP 608
MARSHALL, MI PIPELINE RELEASE
ENBRIDGE ENERGY, LIMITED PARTNERSHIP

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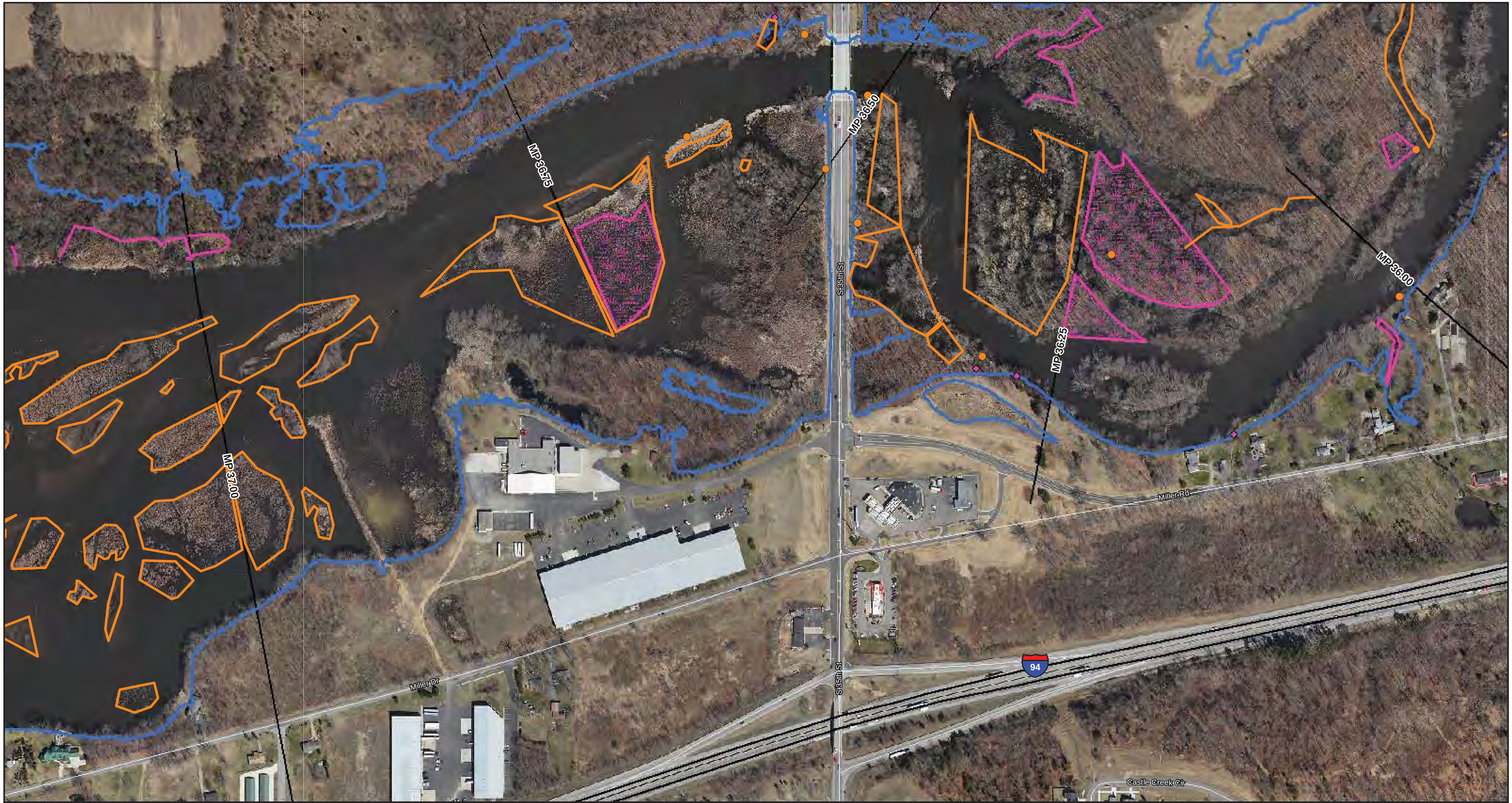

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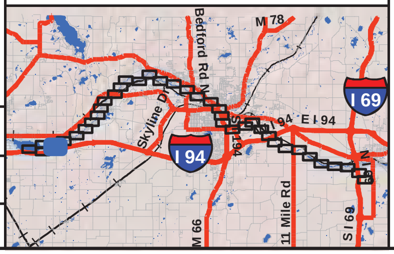
Map Location



Legend

Spring 2011 Reassessment Data

● Pooled Oil Observation

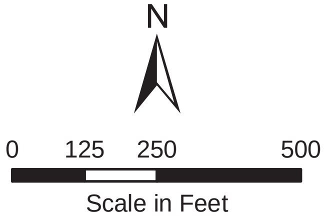
● — ☐ Film (Sheen) Observations

● — ▨ Inundated Areas - Reassess

☐ Excavated Areas

— 2011 Inundation Model

— Quarter Mile Grid Segments



Scale in Feet

PROPOSED SURVEY AREAS
SPRING 2012 REASSESSMENT
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ENBRIDGE LINE 6B MP 608
MARSHALL, MI PIPELINE RELEASE
ENBRIDGE ENERGY, LIMITED PARTNERSHIP

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Aerial Photography Date: April 2011

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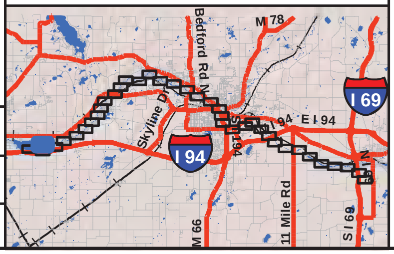
Map Location



Legend

Spring 2011 Reassessment Data

● Pooled Oil Observation

● — ▭ Film (Sheen) Observations

● — ▨ Inundated Areas - Reassess

▭ Excavated Areas

— 2011 Inundation Model

— Quarter Mile Grid Segments

N

0 125 250 500

Scale in Feet

PROPOSED SURVEY AREAS
SPRING 2012 REASSESSMENT
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ENBRIDGE LINE 6B MP 608
MARSHALL, MI PIPELINE RELEASE
ENBRIDGE ENERGY, LIMITED PARTNERSHIP

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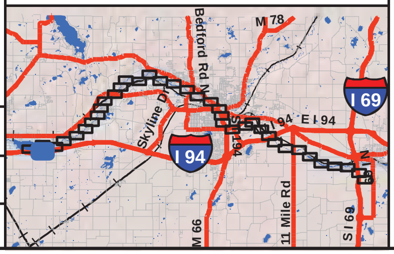
Map Location



Legend

Spring 2011 Reassessment Data

- ● Pooled Oil Observation
- ● — ▭ Film (Sheen) Observations
- ● — ▨ Inundated Areas - Reassess
- ▭ Excavated Areas
- — 2011 Inundation Model
- — Quarter Mile Grid Segments

N

0 125 250 500
Scale in Feet

PROPOSED SURVEY AREAS
SPRING 2012 REASSESSMENT

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ENBRIDGE LINE 6B MP 608
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ENBRIDGE ENERGY, LIMITED PARTNERSHIP

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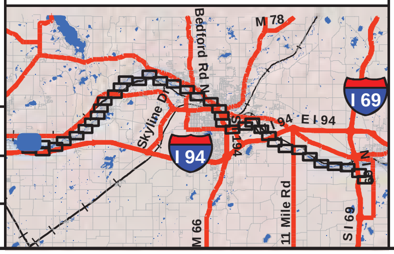
Map Location



Legend

Spring 2011 Reassessment Data

● Pooled Oil Observation
● — ☐ Film (Sheen) Observations
● — ▨ Innundated Areas - Reassess

☐ Excavated Areas
— 2011 Inundation Model
— Quarter Mile Grid Segments

N

0 125 250 500
Scale in Feet

PROPOSED SURVEY AREAS
SPRING 2012 REASSESSMENT
Sheet 37 of 38

ENBRIDGE LINE 6B MP 608
MARSHALL, MI PIPELINE RELEASE
ENBRIDGE ENERGY, LIMITED PARTNERSHIP

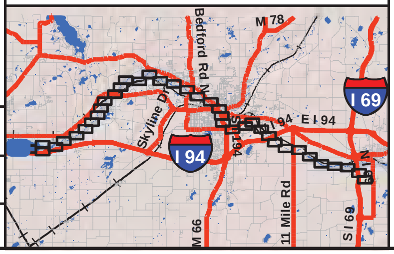
Z:\Work\GIS\2011_Reassessment\Requests\MXDs\Proposed_Survey_Areas_2012_Reassessment.mxd

Aerial Photography Date: April 2011

ENBRIDGE

Drawn: DP 10/18/2011
Approved: DB 10/18/2011
Project #: 60162778

Map Location



Legend

Spring 2011 Reassessment Data

- ● Pooled Oil Observation
- ● — ☐ Film (Sheen) Observations
- ● — ▨ Inundated Areas - Reassess
- ☐ Excavated Areas
- — 2011 Inundation Model
- — Quarter Mile Grid Segments

N

0 125 250 500

Scale in Feet

PROPOSED SURVEY AREAS
SPRING 2012 REASSESSMENT
Sheet 38 of 38

ENBRIDGE LINE 6B MP 608
MARSHALL, MI PIPELINE RELEASE
ENBRIDGE ENERGY, LIMITED PARTNERSHIP

Z:\Work\GIS\2011_Reassessment\Requests\MXDs\Proposed_Survey_Areas_2012_Reassessment.mxd

Aerial Photography Date: April 2011

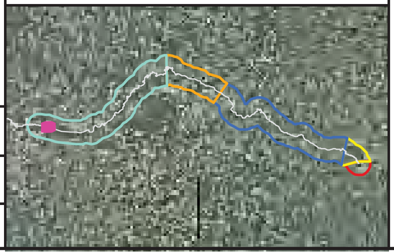
Attachment B

Submerged Oil: Hydrodynamic Assessment

ENBRIDGE

Drawn: BHS 09/24/2011
Approved: DBR 09/24/2011
Project #: 106-4186

Map Location



Legend

- ▨ Proposed Poling Focus Areas
- — Quarter Mile Grid Segment

FIGURE 1
PROPOSED POLING AREAS DOWNSTREAM OF MORROW LAKE DAM

MORROW LAKE DAM TO MP 40.5

ENBRIDGE LINE 6B MP 608
MARSHALL, MI PIPELINE RELEASE
ENBRIDGE ENERGY, LIMITED PARTNERSHIP

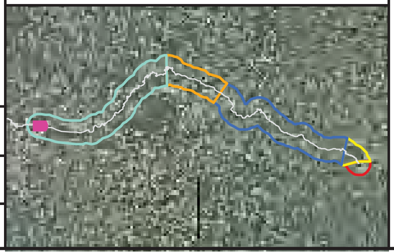
H:\ArcMap Project Files\Recovery\Focus_Areas_Below_MLD_092211

Aerial Photography: 2009 NAIP

ENBRIDGE

Drawn: BHS 09/24/2011
Approved: DBR 09/24/2011
Project #: 106-4186

Map Location



Legend

- Proposed Poling Focus Areas
- Quarter Mile Grid Segment

FIGURE 1
PROPOSED POLING AREAS
DOWNSTREAM OF MORROW LAKE DAM

MP 40.5 TO MP 41.25

ENBRIDGE LINE 6B MP 608
MARSHALL, MI PIPELINE RELEASE
ENBRIDGE ENERGY, LIMITED PARTNERSHIP

H:\ArcMap Project Files\Recovery\Focus_Areas_Below_MLD_092211

Aerial Photography: 2009 NAIP

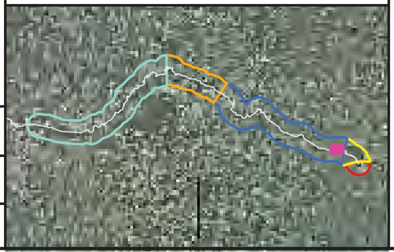
ENBRIDGE

Drawn: BRS 10/6/2011

Approved: DBR 10/6/2011

Project #: 106-4186

Map Location



Legend

◐ Proposed Velocity Profiling Locations

LS Reassessment Delineation Areas

🟥 Heavy

🟧 Moderate

— Quarter Mile Grid Segment

N

0 125 250 500

Scale in Feet

FIGURE 2.
VELOCITY PROFILE LOCATIONS

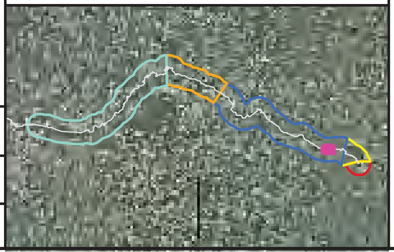
MP 02.60 - MP 03.40

ENBRIDGE LINE 6B MP 608
MARSHALL, MI PIPELINE RELEASE
ENBRIDGE ENERGY, LIMITED PARTNERSHIP

F:\ArcMap Project Files\Recovery\Map Requests\LSR_Mapset_RiverVelocitiy_Profile_Locatins_092211.mxd

Aerial Photography Date: April 2011

Map Location



Legend

◐ Proposed Velocity Profiling Locations

LS Reassessment Delineation Areas

- Heavy
- Moderate

— Quarter Mile Grid Segment

N

0 125 250 500
Scale in Feet

Drawn: BRS 10/6/2011
Approved: DBR 10/6/2011
Project #: 106-4186

FIGURE 2.
VELOCITY PROFILE LOCATIONS

MP 03.40 - MP 04.20

ENBRIDGE LINE 6B MP 608
MARSHALL, MI PIPELINE RELEASE
ENBRIDGE ENERGY, LIMITED PARTNERSHIP

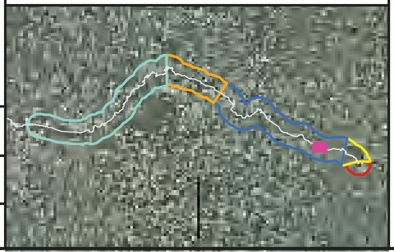
F:\ArcMap Project Files\Recovery\Map Requests\LSR_Mapset_RiverVelocitiy_Profile_Locatins_092211.mxd

Aerial Photography Date: April 2011

ENBRIDGE

Drawn: BRS 10/6/2011
Approved: DBR 10/6/2011
Project #: 106-4186

Map Location



Legend

◐ Proposed Velocity Profiling Locations

LS Reassessment Delineation Areas

🟥 Heavy

🟧 Moderate

— Quarter Mile Grid Segment

N

0 125 250 500

Scale in Feet

FIGURE 2.
VELOCITY PROFILE LOCATIONS

MP 04.15 - MP 05.00

ENBRIDGE LINE 6B MP 608
MARSHALL, MI PIPELINE RELEASE
ENBRIDGE ENERGY, LIMITED PARTNERSHIP

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Aerial Photography Date: April 2011

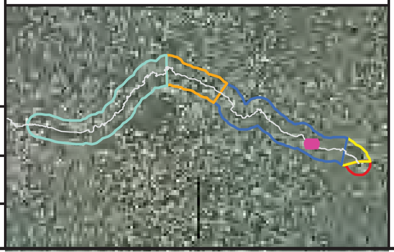
ENBRIDGE

Drawn: BRS 10/6/2011

Approved: DBR 10/6/2011

Project #: 106-4186

Map Location



Legend

◐ Proposed Velocity Profiling Locations

LS Reassessment Delineation Areas

Heavy

Moderate

Quarter Mile Grid Segment

N

0 125 250 500

Scale in Feet

FIGURE 2.
VELOCITY PROFILE LOCATIONS

MP 04.90 - MP 05.65

ENBRIDGE LINE 6B MP 608
MARSHALL, MI PIPELINE RELEASE
ENBRIDGE ENERGY, LIMITED PARTNERSHIP

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Aerial Photography Date: April 2011

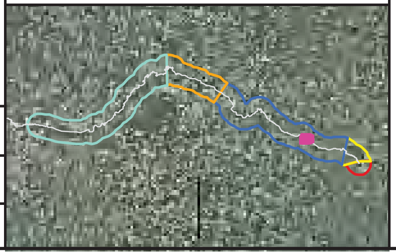
ENBRIDGE

Drawn: BRS 10/6/2011

Approved: DBR 10/6/2011

Project #: 106-4186

Map Location



Legend

◐ Proposed Velocity Profiling Locations

LS Reassessment Delineation Areas

🟥 Heavy

🟧 Moderate

— Quarter Mile Grid Segment

N

0 125 250 500

Scale in Feet

FIGURE 2.
VELOCITY PROFILE LOCATIONS

MP 05.65 - MP 06.30

ENBRIDGE LINE 6B MP 608
MARSHALL, MI PIPELINE RELEASE
ENBRIDGE ENERGY, LIMITED PARTNERSHIP

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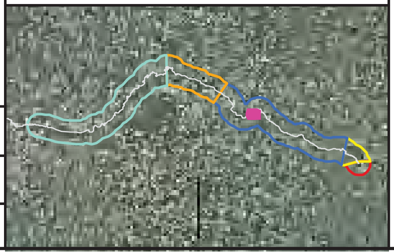
Aerial Photography Date: April 2011

ENBRIDGE

Drawn:	BRS 10/6/2011
Approved:	DBR 10/6/2011
Project #:	106-4186

Map Location



Legend

◐ Proposed Velocity Profiling Locations

LS Reassessment Delineation Areas

Heavy

Moderate

Quarter Mile Grid Segment

N

0 125 250 500
Scale in Feet

FIGURE 2.
VELOCITY PROFILE LOCATIONS

MP 12.30 - MP 13.05

ENBRIDGE LINE 6B MP 608
MARSHALL, MI PIPELINE RELEASE
ENBRIDGE ENERGY, LIMITED PARTNERSHIP

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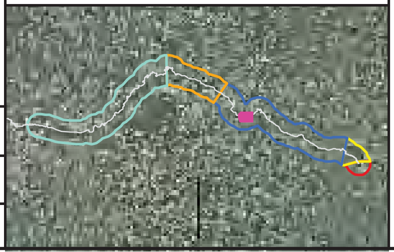
Aerial Photography Date: April 2011

ENBRIDGE

Drawn: BRS 10/6/2011
Approved: DBR 10/6/2011
Project #: 106-4186

Map Location



Legend

◐ Proposed Velocity Profiling Locations

LS Reassessment Delineation Areas
🟥 Heavy
🟧 Moderate

— Quarter Mile Grid Segment

FIGURE 2.
VELOCITY PROFILE LOCATIONS

MP 13.00 - MP 14.10

ENBRIDGE LINE 6B MP 608
MARSHALL, MI PIPELINE RELEASE
ENBRIDGE ENERGY, LIMITED PARTNERSHIP

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Aerial Photography Date: April 2011

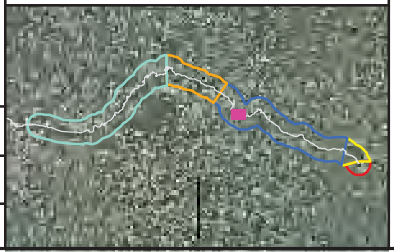
ENBRIDGE

Drawn: BRS 10/6/2011

Approved: DBR 10/6/2011

Project #: 106-4186

Map Location



Legend

◐ Proposed Velocity Profiling Locations

LS Reassessment Delineation Areas

- 🟥 Heavy
- 🟧 Moderate

🟩 Quarter Mile Grid Segment

N

0 125 250 500

Scale in Feet

FIGURE 2.
VELOCITY PROFILE LOCATIONS

MP 14.00 - MP 14.85

ENBRIDGE LINE 6B MP 608
MARSHALL, MI PIPELINE RELEASE
ENBRIDGE ENERGY, LIMITED PARTNERSHIP

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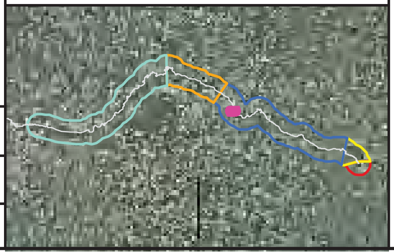
Aerial Photography Date: April 2011

ENBRIDGE

Drawn: BRS 10/6/2011
Approved: DBR 10/6/2011
Project #: 106-4186

Map Location



Legend

◐ Proposed Velocity Profiling Locations

LS Reassessment Delineation Areas
- Heavy
- Moderate

Quarter Mile Grid Segment

N

0	125	250	500

Scale in Feet

FIGURE 2.
VELOCITY PROFILE LOCATIONS

MP 14.65 - MP 15.25

ENBRIDGE LINE 6B MP 608
MARSHALL, MI PIPELINE RELEASE
ENBRIDGE ENERGY, LIMITED PARTNERSHIP

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Aerial Photography Date: April 2011

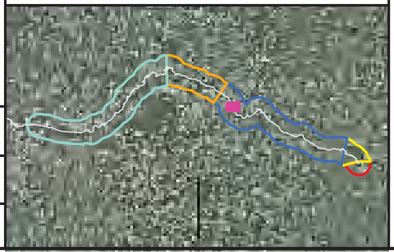
ENBRIDGE

Drawn: BRS 10/6/2011

Approved: DBR 10/6/2011

Project #: 106-4186

Map Location



Legend

◐ Proposed Velocity Profiling Locations

LS Reassessment Delineation Areas

- Heavy
- Moderate

Quarter Mile Grid Segment

N

0 125 250 500

Scale in Feet

FIGURE 2.
VELOCITY PROFILE LOCATIONS

MP 15.25 - MP 15.75

ENBRIDGE LINE 6B MP 608
MARSHALL, MI PIPELINE RELEASE
ENBRIDGE ENERGY, LIMITED PARTNERSHIP

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Aerial Photography Date: April 2011

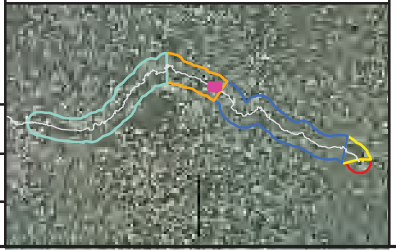
ENBRIDGE

Drawn: BRS 10/6/2011

Approved: DBR 10/6/2011

Project #: 106-4186

Map Location



Legend

◐	Proposed Velocity Profiling Locations

LS Reassessment Delineation Areas

🟥	Heavy
🟧	Moderate

🟩	Quarter Mile Grid Segment

N

0 125 250 500

Scale in Feet

FIGURE 2.
VELOCITY PROFILE LOCATIONS

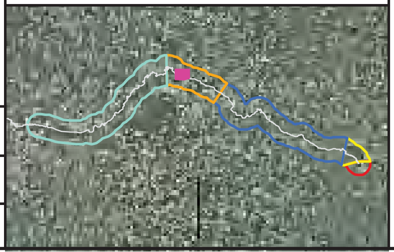
MP 17.60 - MP 18.40

ENBRIDGE LINE 6B MP 608
MARSHALL, MI PIPELINE RELEASE
ENBRIDGE ENERGY, LIMITED PARTNERSHIP

F:\ArcMap Project Files\Recovery\Map Requests\LSR_Mapset_RiverVelocitiy_Profile_Locatins_092211.mxd

Aerial Photography Date: April 2011

Map Location



Drawn: BRS 10/6/2011
Approved: DBR 10/6/2011
Project #: 106-4186

Legend

◐ Proposed Velocity Profiling Locations

LS Reassessment Delineation Areas
🟥 Heavy
🟧 Moderate

— Quarter Mile Grid Segment

N

0 125 250 500
Scale in Feet

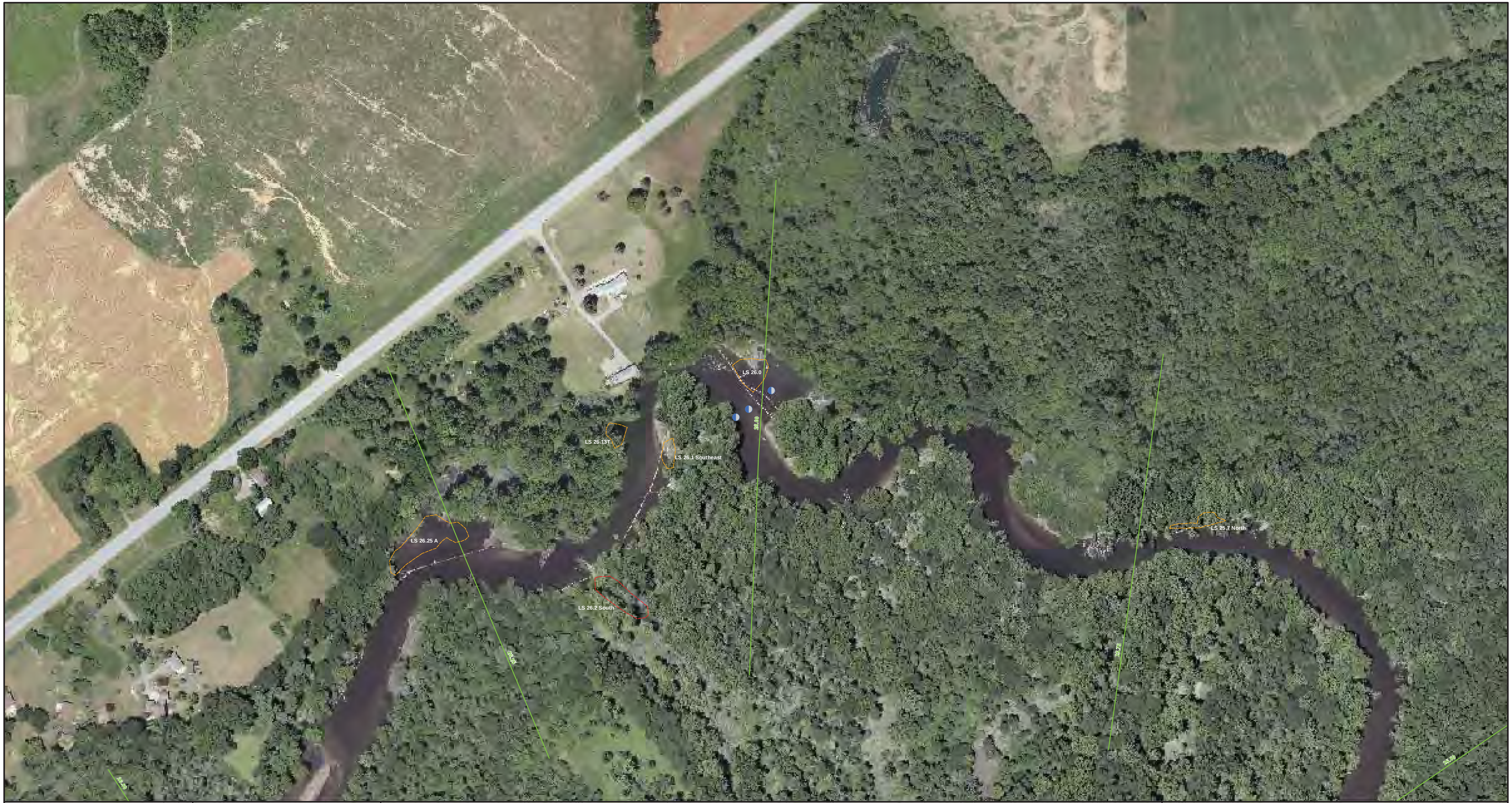
FIGURE 2.
VELOCITY PROFILE LOCATIONS

MP 20.70 - MP 21.50

ENBRIDGE LINE 6B MP 608
MARSHALL, MI PIPELINE RELEASE
ENBRIDGE ENERGY, LIMITED PARTNERSHIP

F:\ArcMap Project Files\Recovery\Map Requests\LSR_Mapset_RiverVelocitiy_Profile_Locatins_092211.mxd

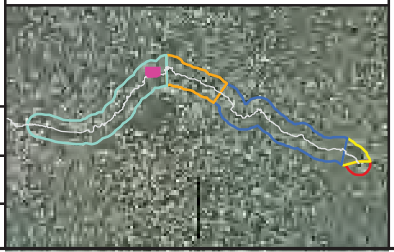
Aerial Photography Date: April 2011



ENBRIDGE

Drawn: BRS 10/6/2011
Approved: DBR 10/6/2011
Project #: 106-4186

Map Location



Legend

◐ Proposed Velocity Profiling Locations

LS Reassessment Delineation Areas
- Heavy
- Moderate

Quarter Mile Grid Segment

N

0 125 250 500
Scale in Feet

FIGURE 2.
VELOCITY PROFILE LOCATIONS

MP 25.55 - MP 26.40

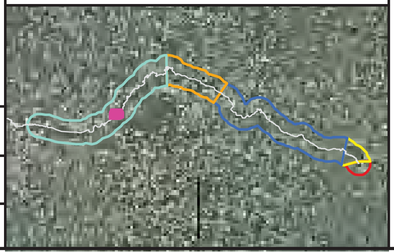
ENBRIDGE LINE 6B MP 608
MARSHALL, MI PIPELINE RELEASE
ENBRIDGE ENERGY, LIMITED PARTNERSHIP

F:\ArcMap Project Files\Recovery\Map Requests\LSR_Mapset_RiverVelocitiy_Profile_Locatins_092211.mxd

Aerial Photography Date: April 2011

Drawn:	BRS 10/6/2011
Approved:	DBR 10/6/2011
Project #:	106-4186

Map Location



Legend

◐ Proposed Velocity Profiling Locations

Spring Delineation Areas
🟥 Heavy
🟧 Moderate

🟩 Quarter Mile Grid Segment

0 125 250 500
Scale in Feet

N

FIGURE 2.
VELOCITY PROFILE LOCATIONS

MP 32.25 - MP 33.10

ENBRIDGE LINE 6B MP 608
MARSHALL, MI PIPELINE RELEASE
ENBRIDGE ENERGY, LIMITED PARTNERSHIP

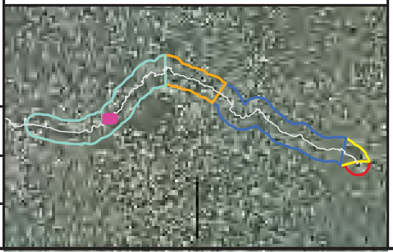
F:\ArcMap Project Files\Recovery\Map Requests\LSR_Mapset_RiverVelocitiy_Profile_Locatins_092211.mxd

Aerial Photography Date: April 2011

ENBRIDGE

Drawn: BRS 10/6/2011
Approved: DBR 10/6/2011
Project #: 106-4186

Map Location



Legend

● Proposed Velocity Profiling Locations

Spring Delineation Areas

- 🟥 Heavy
- 🟧 Moderate

🟩 Quarter Mile Grid Segment

0 125 250 500
Scale in Feet

N

FIGURE 2.
VELOCITY PROFILE LOCATIONS

MP 33.10 - MP 33.70

ENBRIDGE LINE 6B MP 608
MARSHALL, MI PIPELINE RELEASE
ENBRIDGE ENERGY, LIMITED PARTNERSHIP

F:\ArcMap Project Files\Recovery\Map Requests\LSR_Mapset_RiverVelocitiy_Profile_Locatins_092211.mxd

Aerial Photography Date: April 2011

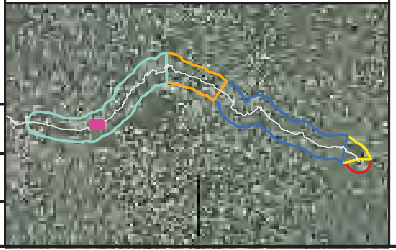
ENBRIDGE

Drawn: BRS 10/6/2011

Approved: DBR 10/6/2011

Project #: 106-4186

Map Location



Legend

◐ Proposed Velocity Profiling Locations

Spring Delineation Areas

🟥 Heavy

🟧 Moderate

Quarter Mile Grid Segment

N

0 125 250 500

Scale in Feet

FIGURE 2.
VELOCITY PROFILE LOCATIONS

MP 34.70 - MP 35.75

ENBRIDGE LINE 6B MP 608
MARSHALL, MI PIPELINE RELEASE
ENBRIDGE ENERGY, LIMITED PARTNERSHIP

F:\ArcMap Project Files\Recovery\Map Requests\LSR_Mapset_RiverVelocitiy_Profile_Locatins_092211.mxd

Aerial Photography Date: April 2011

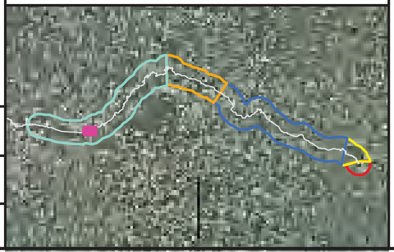
ENBRIDGE

Drawn: BRS 10/6/2011

Approved: DBR 10/6/2011

Project #: 106-4186

Map Location



Legend

◐ Proposed Velocity Profiling Locations

Spring Delineation Areas
- 🟥 Heavy
- 🟧 Moderate

🟩 Quarter Mile Grid Segment

N

0 125 250 500
Scale in Feet

FIGURE 2.
VELOCITY PROFILE LOCATIONS

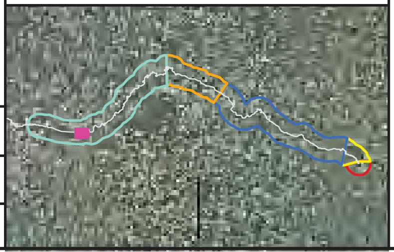
MP 35.75 - MP 36.80

ENBRIDGE LINE 6B MP 608
MARSHALL, MI PIPELINE RELEASE
ENBRIDGE ENERGY, LIMITED PARTNERSHIP

F:\ArcMap Project Files\Recovery\Map Requests\LSR_Mapset_RiverVelocitiy_Profile_Locatins_092211.mxd

Aerial Photography Date: April 2011

Map Location



Drawn: BRS 10/6/2011

Approved: DBR 10/6/2011

Project #: 106-4186

Legend

◐ Proposed Velocity Profiling Locations

Spring Delineation Areas

🟥 Heavy

🟧 Moderate

🟩 Quarter Mile Grid Segment

N

0 125 250 500

Scale in Feet

FIGURE 2.
VELOCITY PROFILE LOCATIONS

MP 36.80 - MP 37.55

ENBRIDGE LINE 6B MP 608
MARSHALL, MI PIPELINE RELEASE
ENBRIDGE ENERGY, LIMITED PARTNERSHIP

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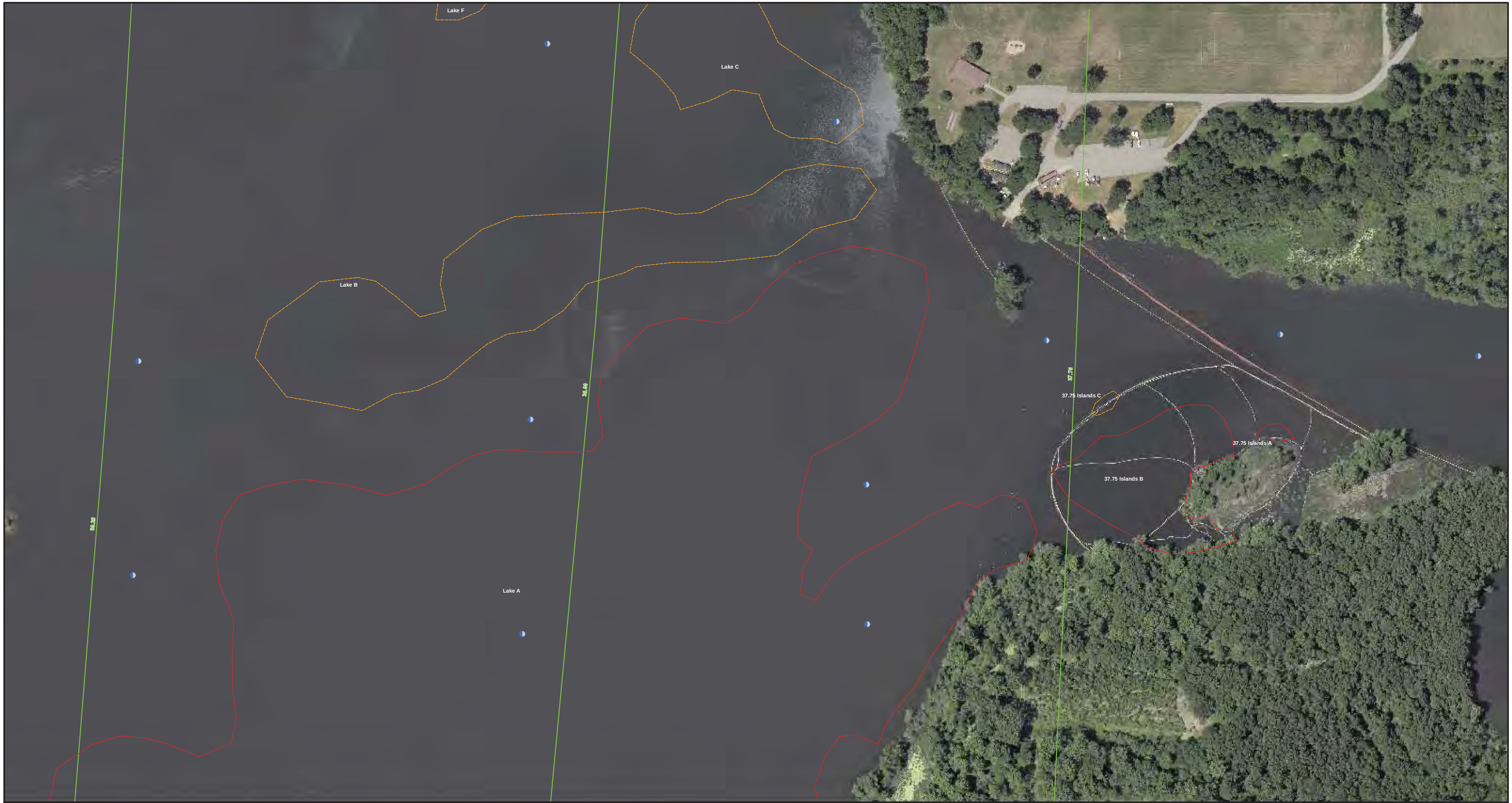
Aerial Photography Date: April 2011



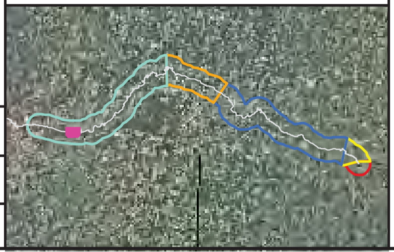
ENBRIDGE

Drawn: DAL 10/13/2011

Approved: DBR 10/13/2011

Project #: 106-4186

Map Location



Legend

◐ Proposed Velocity Profiling Locations

Spring Delineation Areas

🟥 Heavy

🟧 Moderate

🟩 Quarter Mile Grid Segment

N

0 125 250 500

Scale in Feet

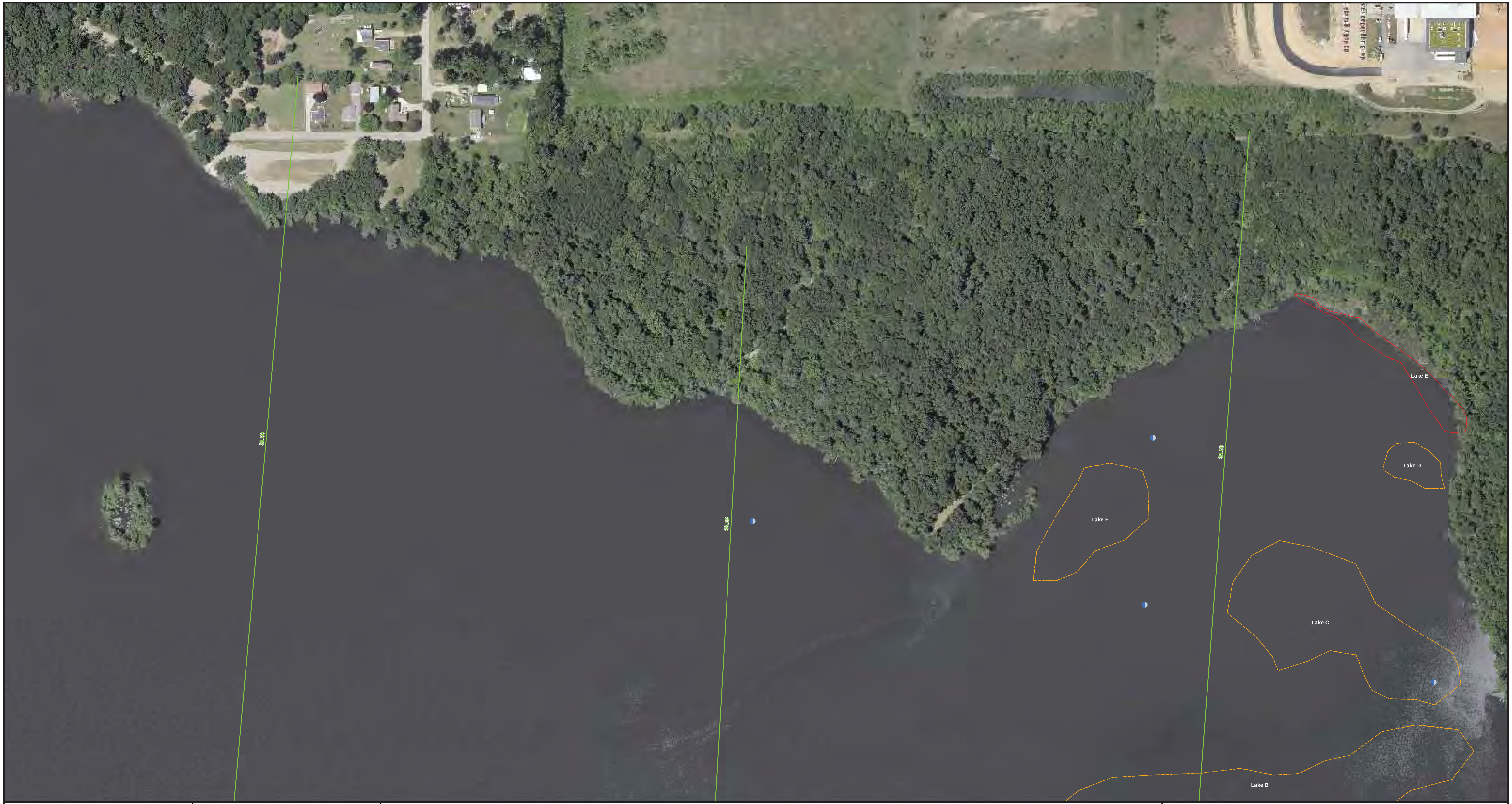
FIGURE 2.
VELOCITY PROFILE LOCATIONS

MP 37.55 - MP 38.30

ENBRIDGE LINE 6B MP 608
MARSHALL, MI PIPELINE RELEASE
ENBRIDGE ENERGY, LIMITED PARTNERSHIP

F:\ArcMap Project Files\Recovery\Map Requests\LSR_Mapset_RiverVelocitiy_Profile_Locatins_092211.mxd

Aerial Photography Date: April 2011



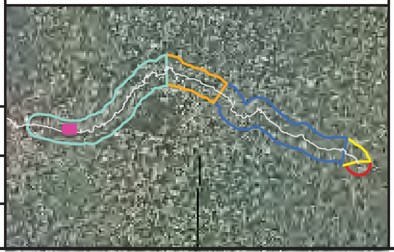
ENBRIDGE

Drawn: DAL 10/13/2011

Approved: DBR 10/13/2011

Project #: 106-4186

Map Location



Legend

◐ Proposed Velocity Profiling Locations

Spring Delineation Areas

🟥 Heavy

🟧 Moderate

— Quarter Mile Grid Segment

N

0 125 250 500

Scale in Feet

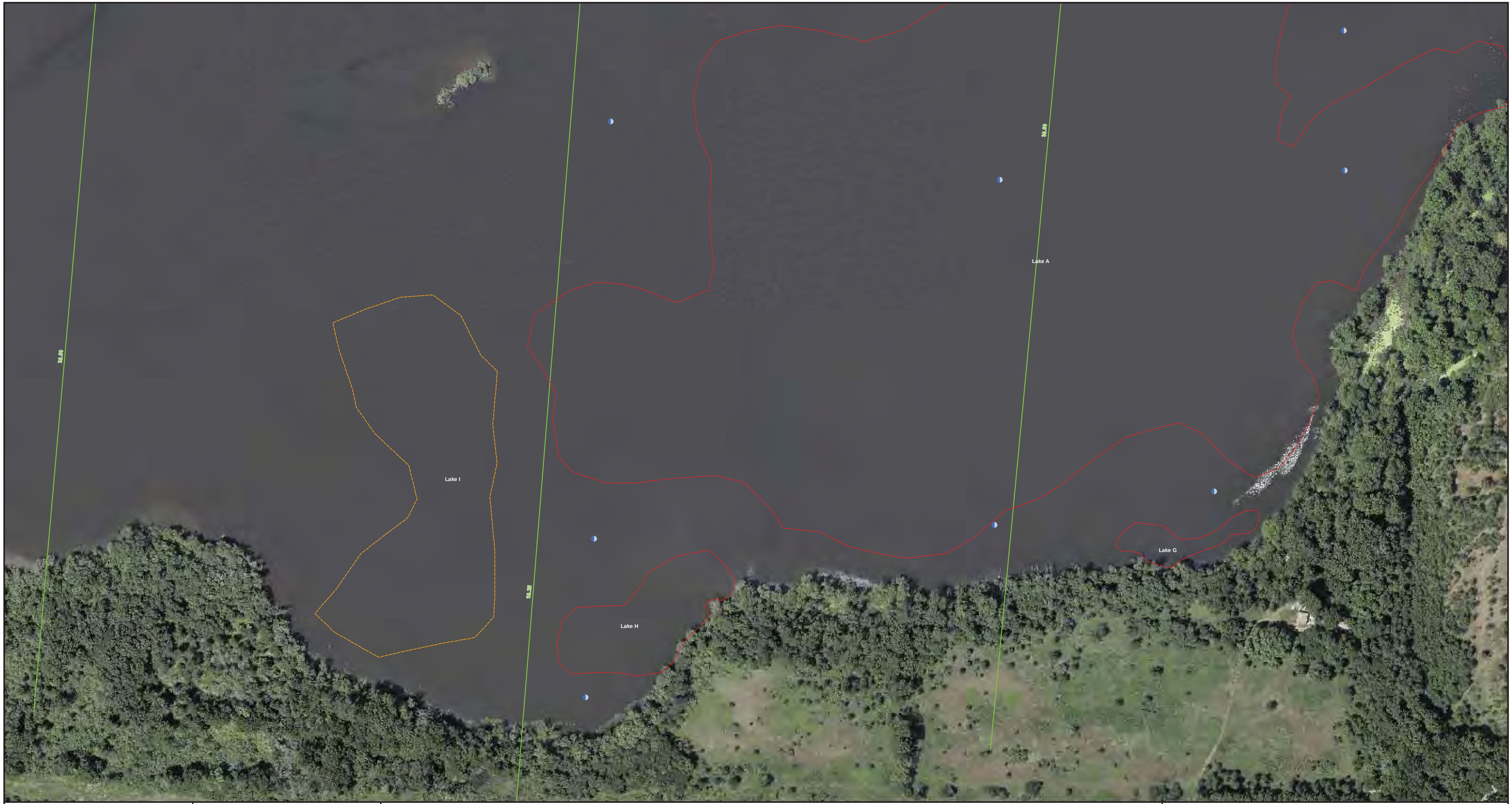
FIGURE 2.
VELOCITY PROFILE LOCATIONS

MP 37.80 - MP 38.60N

ENBRIDGE LINE 6B MP 608
MARSHALL, MI PIPELINE RELEASE
ENBRIDGE ENERGY, LIMITED PARTNERSHIP

F:\ArcMap Project Files\Recovery\Map Requests\LSR_Mapset_RiverVelocitiy_Profile_Locatins_092211.mxd

Aerial Photography Date: April 2011



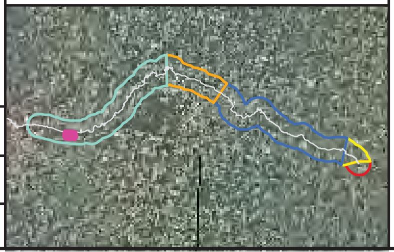
ENBRIDGE

Drawn: DAL 10/13/2011

Approved: DBR 10/13/2011

Project #: 106-4186

Map Location



Legend

◐ Proposed Velocity Profiling Locations

Spring Delineation Areas

🟥 Heavy

🟧 Moderate

🟩 Quarter Mile Grid Segment

N

0 125 250 500

Scale in Feet

FIGURE 2.
VELOCITY PROFILE LOCATIONS

MP 37.80 - MP 38.60S

ENBRIDGE LINE 6B MP 608
MARSHALL, MI PIPELINE RELEASE
ENBRIDGE ENERGY, LIMITED PARTNERSHIP

F:\ArcMap Project Files\Recovery\Map Requests\LSR_Mapset_RiverVelocitiy_Profile_Locatins_092211.mxd

Aerial Photography Date: April 2011

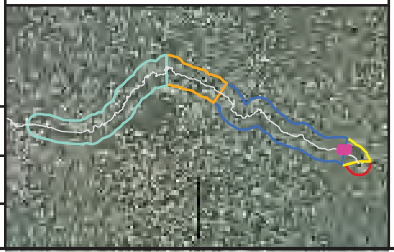
ENBRIDGE

Drawn: DAL 9/24/2011

Approved: DBR 9/24/2011

Project #: 106-4186

Map Location



Legend

Proposed Core Locations

✕ New Core Location

⊗ Previous Core Location

LS Reassessment Delineation Areas

- Heavy
- Moderate

Installed Boom

Quarter Mile Grid Segment

N

0 125 250 500

Scale in Feet

FIGURE 3
PROPOSED CORING LOCATIONS

MP 01.95 - MP 02.75

ENBRIDGE LINE 6B MP 608
MARSHALL, MI PIPELINE RELEASE
ENBRIDGE ENERGY, LIMITED PARTNERSHIP

H:\ArcMap Project Files\Recovery\Figure3_Mapset_092411.mxd

Aerial Photography Date: April 2011

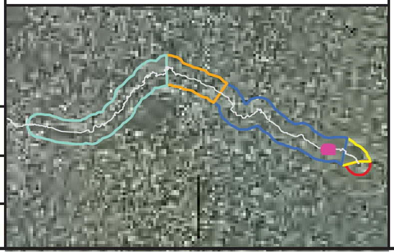
ENBRIDGE

Drawn: DAL 9/24/2011

Approved: DBR 9/24/2011

Project #: 106-4186

Map Location



Legend

Proposed Core Locations

✕ New Core Location

⊗ Previous Core Location

LS Reassessment Delineation Areas

🟥 Heavy

🟧 Moderate

— Quarter Mile Grid Segment

N

0 125 250 500

Scale in Feet

FIGURE 3
PROPOSED CORING LOCATIONS

MP 03.40 - MP 04.20

ENBRIDGE LINE 6B MP 608
MARSHALL, MI PIPELINE RELEASE
ENBRIDGE ENERGY, LIMITED PARTNERSHIP

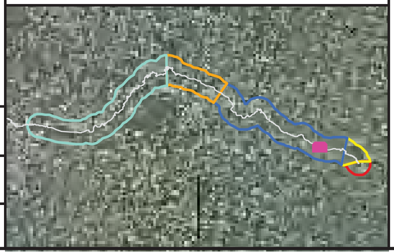
H:\ArcMap Project Files\Recovery\Figure3_Mapset_092411.mxd

Aerial Photography Date: April 2011

ENBRIDGE

Drawn:	DAL 9/24/2011
Approved:	DBR 9/24/2011
Project #:	106-4186

Map Location



Legend

Proposed Core Locations

☒ New Core Location

⊗ Previous Core Location

LS Reassessment Delineation Areas

🟥 Heavy

🟧 Moderate

🟩 Quarter Mile Grid Segment

N

0 125 250 500

Scale in Feet

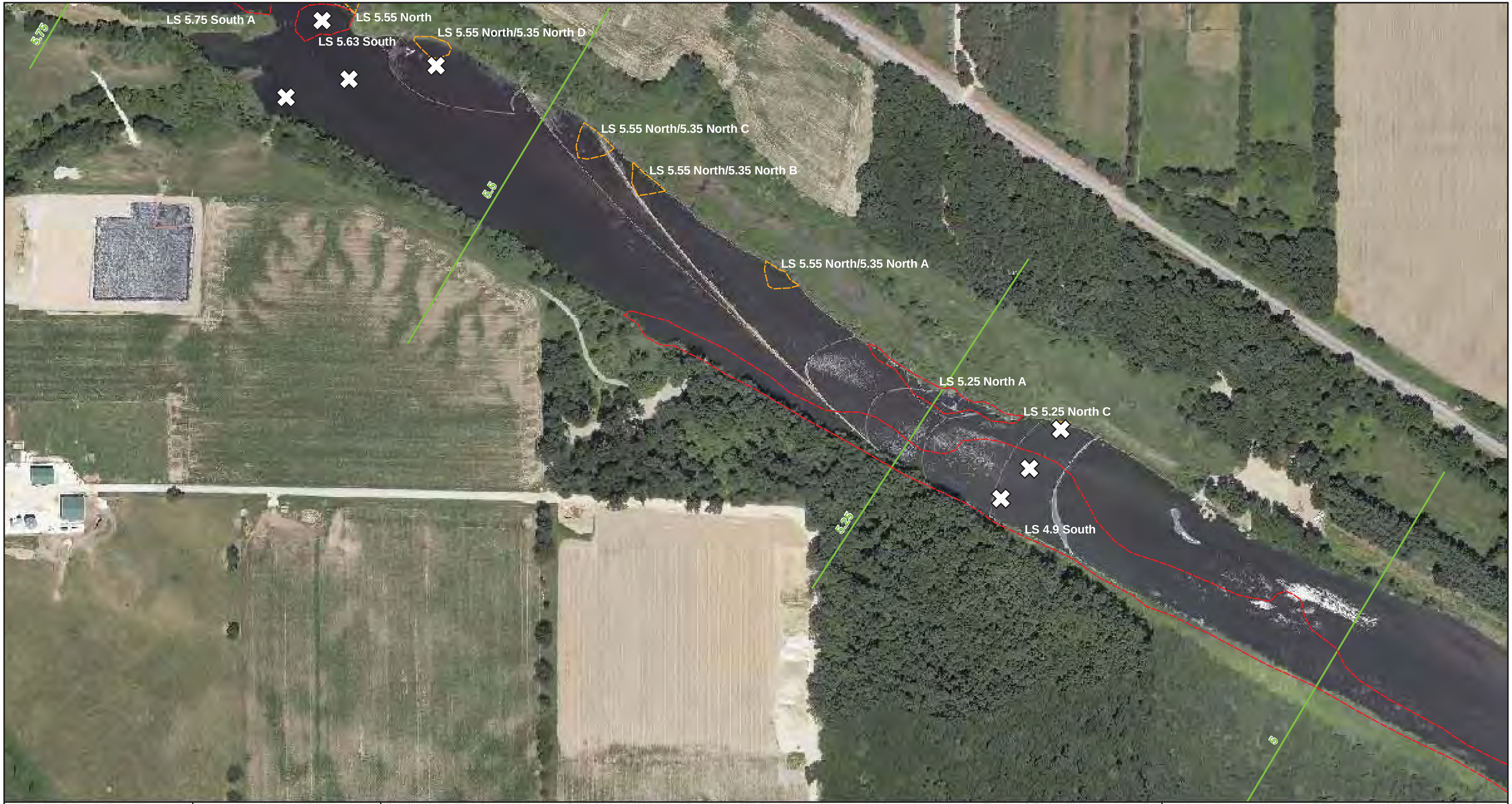
FIGURE 3
PROPOSED CORING LOCATIONS

MP 04.15 - MP 05.00

ENBRIDGE LINE 6B MP 608
MARSHALL, MI PIPELINE RELEASE
ENBRIDGE ENERGY, LIMITED PARTNERSHIP

H:\ArcMap Project Files\Recovery\Figure3_Mapset_092411.mxd

Aerial Photography Date: April 2011



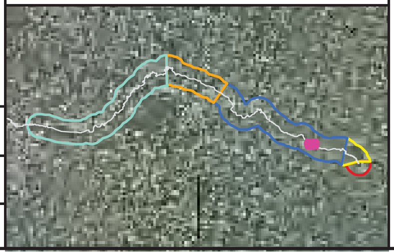
ENBRIDGE

Drawn: DAL 9/24/2011

Approved: DBR 9/24/2011

Project #: 106-4186

Map Location



Legend

Proposed Core Locations

✕ New Core Location

⊗ Previous Core Location

LS Reassessment Delineation Areas

🟥 Heavy

🟧 Moderate

— Quarter Mile Grid Segment

N

0 125 250 500

Scale in Feet

FIGURE 3
PROPOSED CORING LOCATIONS

MP 04.90 - MP 05.65

ENBRIDGE LINE 6B MP 608
MARSHALL, MI PIPELINE RELEASE
ENBRIDGE ENERGY, LIMITED PARTNERSHIP

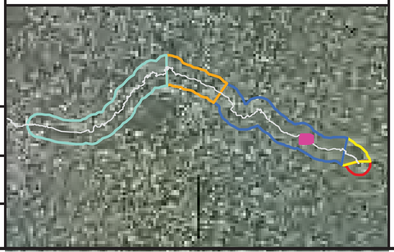
H:\ArcMap Project Files\Recovery\Figure3_Mapset_092411.mxd

Aerial Photography Date: April 2011

ENBRIDGE

Drawn: DAL 9/24/2011
Approved: DBR 9/24/2011
Project #: 106-4186

Map Location



Legend

Proposed Core Locations

☒ New Core Location

⊗ Previous Core Location

LS Reassessment Delineation Areas

🟥 Heavy

🟧 Moderate

— Quarter Mile Grid Segment

N

0 125 250 500

Scale in Feet

FIGURE 3
PROPOSED CORING LOCATIONS

MP 05.65 - MP 06.30

ENBRIDGE LINE 6B MP 608
MARSHALL, MI PIPELINE RELEASE
ENBRIDGE ENERGY, LIMITED PARTNERSHIP

H:\ArcMap Project Files\Recovery\Figure3_Mapset_092411.mxd

Aerial Photography Date: April 2011

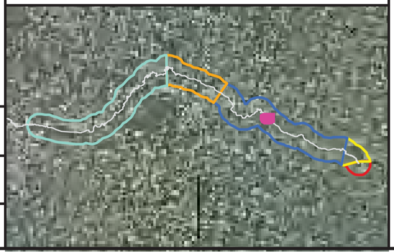
ENBRIDGE

Drawn: DAL 9/24/2011

Approved: DBR 9/24/2011

Project #: 106-4186

Map Location



Legend

Proposed Core Locations

☒ New Core Location

⊗ Previous Core Location

LS Reassessment Delineation Areas

🟥 Heavy

🟧 Moderate

— Quarter Mile Grid Segment

N

0 125 250 500

Scale in Feet

FIGURE 3
PROPOSED CORING LOCATIONS

MP 10.00 - MP 10.65

ENBRIDGE LINE 6B MP 608
MARSHALL, MI PIPELINE RELEASE
ENBRIDGE ENERGY, LIMITED PARTNERSHIP

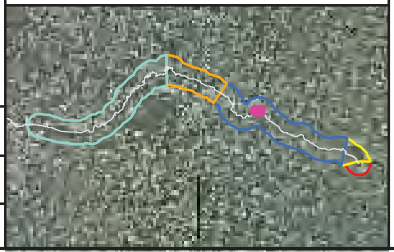
H:\ArcMap Project Files\Recovery\Figure3_Mapset_092411.mxd

Aerial Photography Date: April 2011

ENBRIDGE

Drawn: DAL 9/24/2011
Approved: DBR 9/24/2011
Project #: 106-4186

Map Location



Legend

Proposed Core Locations

☒ New Core Location

⊗ Previous Core Location

LS Reassessment Delineation Areas

Heavy

Moderate

Quarter Mile Grid Segment

N

0 125 250 500
Scale in Feet

FIGURE 3
PROPOSED CORING LOCATIONS

MP 11.10 - MP 12.45

ENBRIDGE LINE 6B MP 608
MARSHALL, MI PIPELINE RELEASE
ENBRIDGE ENERGY, LIMITED PARTNERSHIP

H:\ArcMap Project Files\Recovery\Figure3_Mapset_092411.mxd

Aerial Photography Date: April 2011

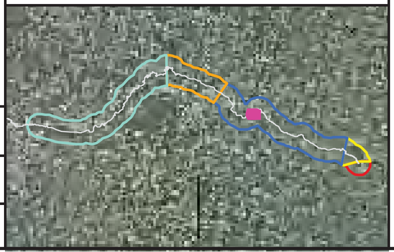
ENBRIDGE

Drawn: DAL 9/24/2011

Approved: DBR 9/24/2011

Project #: 106-4186

Map Location



Legend

Proposed Core Locations

☒ New Core Location

⊗ Previous Core Location

LS Reassessment Delineation Areas

🟥 Heavy

🟧 Moderate

🟩 Quarter Mile Grid Segment

FIGURE 3
PROPOSED CORING LOCATIONS

MP 12.30 - MP 13.05

ENBRIDGE LINE 6B MP 608
MARSHALL, MI PIPELINE RELEASE
ENBRIDGE ENERGY, LIMITED PARTNERSHIP

H:\ArcMap Project Files\Recovery\Figure3_Mapset_092411.mxd

Aerial Photography Date: April 2011

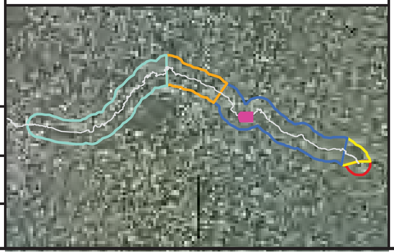
ENBRIDGE

Drawn: DAL 9/24/2011

Approved: DBR 9/24/2011

Project #: 106-4186

Map Location



Legend

Proposed Core Locations

☒ New Core Location

⊗ Previous Core Location

LS Reassessment Delineation Areas

🟥 Heavy

🟧 Moderate

🟩 Quarter Mile Grid Segment

0 125 250 500

Scale in Feet

N

FIGURE 3
PROPOSED CORING LOCATIONS

MP 13.00 - MP 14.10

ENBRIDGE LINE 6B MP 608
MARSHALL, MI PIPELINE RELEASE
ENBRIDGE ENERGY, LIMITED PARTNERSHIP

H:\ArcMap Project Files\Recovery\Figure3_Mapset_092411.mxd

Aerial Photography Date: April 2011

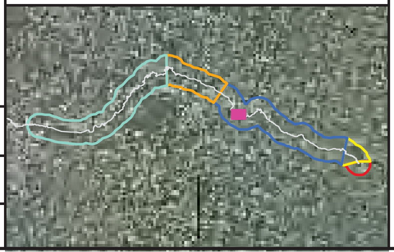
ENBRIDGE

Drawn: DAL 9/24/2011

Approved: DBR 9/24/2011

Project #: 106-4186

Map Location



Legend

Proposed Core Locations

☒ New Core Location

⊗ Previous Core Location

LS Reassessment Delineation Areas

Heavy

Moderate

Quarter Mile Grid Segment

N

FIGURE 3
PROPOSED CORING LOCATIONS

MP 14.00 - MP 14.85

ENBRIDGE LINE 6B MP 608
MARSHALL, MI PIPELINE RELEASE
ENBRIDGE ENERGY, LIMITED PARTNERSHIP

H:\ArcMap Project Files\Recovery\Figure3_Mapset_092411.mxd

Aerial Photography Date: April 2011

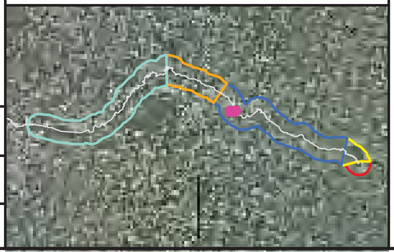
ENBRIDGE

Drawn: DAL 9/24/2011

Approved: DBR 9/24/2011

Project #: 106-4186

Map Location



Legend

Proposed Core Locations

- New Core Location
- Previous Core Location

LS Reassessment Delineation Areas

- Heavy
- Moderate

Quarter Mile Grid Segment

N

0 125 250 500
Scale in Feet

FIGURE 3
PROPOSED CORING LOCATIONS

MP 14.65 - MP 15.25

ENBRIDGE LINE 6B MP 608
MARSHALL, MI PIPELINE RELEASE
ENBRIDGE ENERGY, LIMITED PARTNERSHIP

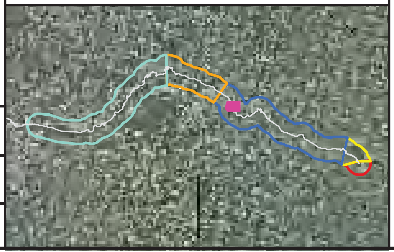
H:\ArcMap Project Files\Recovery\Figure3_Mapset_092411.mxd

Aerial Photography Date: April 2011

ENBRIDGE

Drawn:	DAL 9/24/2011
Approved:	DBR 9/24/2011
Project #:	106-4186

Map Location



Legend

Proposed Core Locations

✕ New Core Location

⊗ Previous Core Location

LS Reassessment Delineation Areas

🟥 Heavy

🟧 Moderate

— Quarter Mile Grid Segment

N

0 125 250 500

Scale in Feet

FIGURE 3
PROPOSED CORING LOCATIONS

MP 15.25 - MP 15.75

ENBRIDGE LINE 6B MP 608
MARSHALL, MI PIPELINE RELEASE
ENBRIDGE ENERGY, LIMITED PARTNERSHIP

H:\ArcMap Project Files\Recovery\Figure3_Mapset_092411.mxd

Aerial Photography Date: April 2011

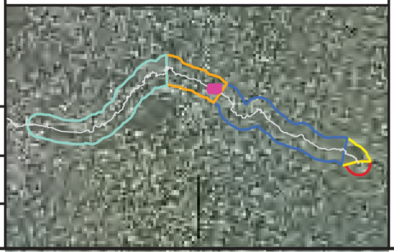
ENBRIDGE

Drawn: DAL 9/24/2011

Approved: DBR 9/24/2011

Project #: 106-4186

Map Location



Legend

Proposed Core Locations

☒ New Core Location

⊗ Previous Core Location

LS Reassessment Delineation Areas

🟥 Heavy

🟧 Moderate

🟩 Quarter Mile Grid Segment

N

0 125 250 500

Scale in Feet

FIGURE 3
PROPOSED CORING LOCATIONS

MP 17.60 - MP 18.40

ENBRIDGE LINE 6B MP 608
MARSHALL, MI PIPELINE RELEASE
ENBRIDGE ENERGY, LIMITED PARTNERSHIP

H:\ArcMap Project Files\Recovery\Figure3_Mapset_092411.mxd

Aerial Photography Date: April 2011

ENBRIDGE

Drawn: DAL 9/24/2011

Approved: DBR 9/24/2011

Project #: 106-4186

Legend

Proposed Core Locations

☒ New Core Location

⊗ Previous Core Location

LS Reassessment Delineation Areas

Heavy

Moderate

Quarter Mile Grid Segment

FIGURE 3
PROPOSED CORING LOCATIONS

MP 19.10 - MP 19.95

ENBRIDGE LINE 6B MP 608
MARSHALL, MI PIPELINE RELEASE
ENBRIDGE ENERGY, LIMITED PARTNERSHIP

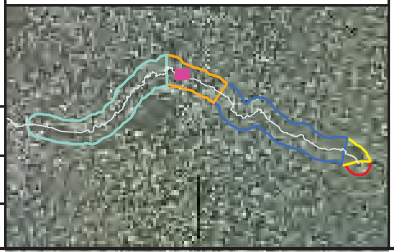
H:\ArcMap Project Files\Recovery\Figure3_Mapset_092411.mxd

Aerial Photography Date: April 2011

ENBRIDGE

Drawn: DAL 9/24/2011
Approved: DBR 9/24/2011
Project #: 106-4186

Map Location



Legend

Proposed Core Locations

☒ New Core Location

⊗ Previous Core Location

LS Reassessment Delineation Areas

🟥 Heavy

🟧 Moderate

🟩 Quarter Mile Grid Segment

N

0 125 250 500
Scale in Feet

FIGURE 3
PROPOSED CORING LOCATIONS

MP 20.70 - MP 21.50

ENBRIDGE LINE 6B MP 608
MARSHALL, MI PIPELINE RELEASE
ENBRIDGE ENERGY, LIMITED PARTNERSHIP

H:\ArcMap Project Files\Recovery\Figure3_Mapset_092411.mxd

Aerial Photography Date: April 2011

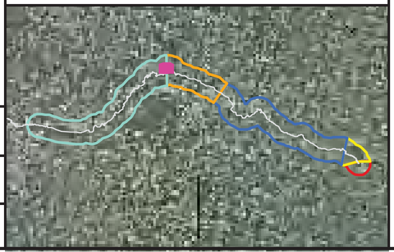
ENBRIDGE

Drawn: DAL 9/24/2011

Approved: DBR 9/24/2011

Project #: 106-4186

Map Location



Legend

Proposed Core Locations

☒ New Core Location

⊗ Previous Core Location

LS Reassessment Delineation Areas

Heavy

Moderate

Quarter Mile Grid Segment

N

0 125 250 500

Scale in Feet

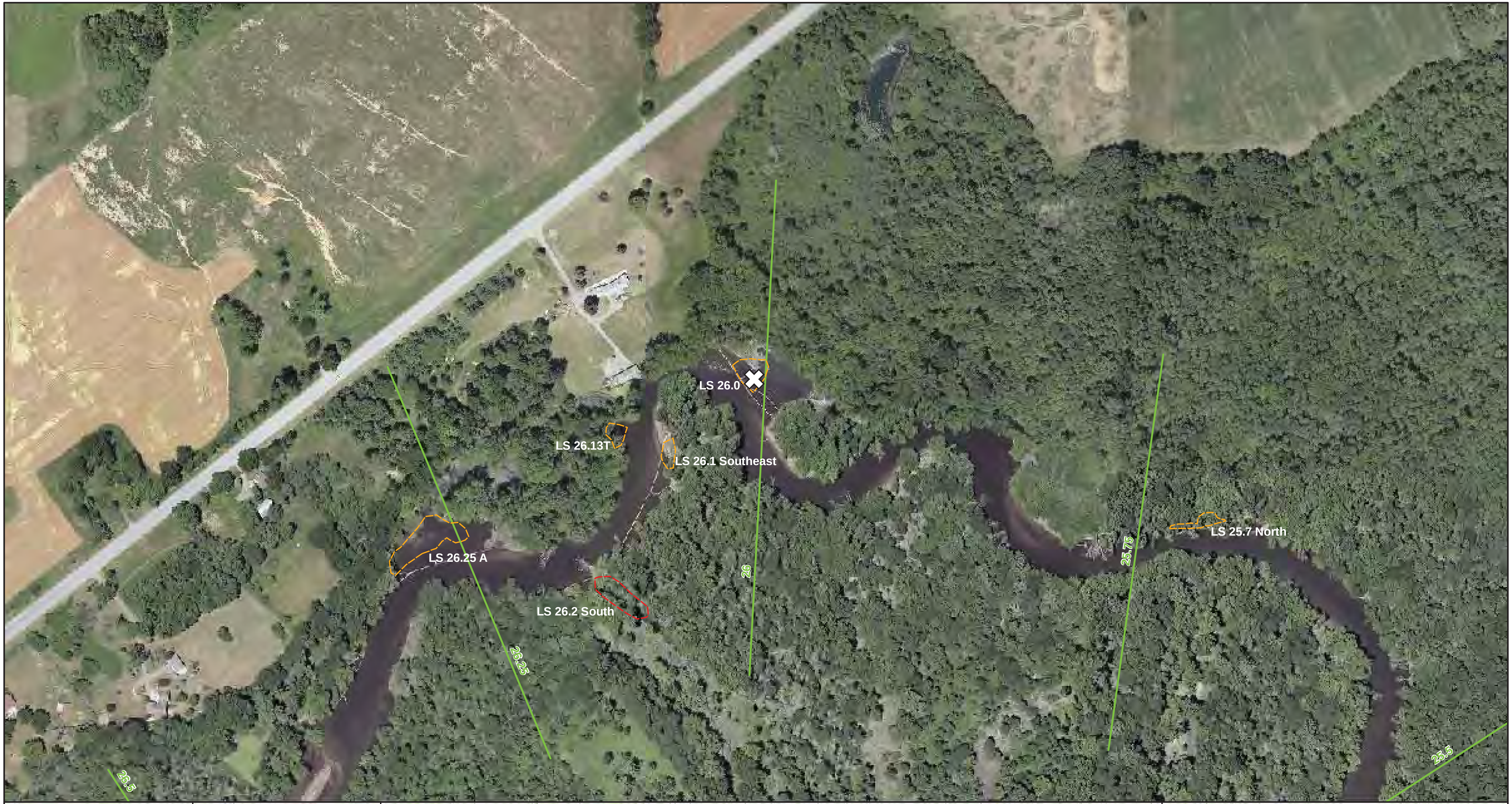
FIGURE 3
PROPOSED CORING LOCATIONS

MP 22.80 - MP 24.10

ENBRIDGE LINE 6B MP 608
MARSHALL, MI PIPELINE RELEASE
ENBRIDGE ENERGY, LIMITED PARTNERSHIP

H:\ArcMap Project Files\Recovery\Figure3_Mapset_092411.mxd

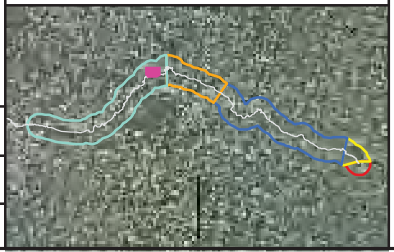
Aerial Photography Date: April 2011



ENBRIDGE

Drawn: DAL 9/24/2011
Approved: DBR 9/24/2011
Project #: 106-4186

Map Location



Legend

Proposed Core Locations

✕ New Core Location

✖ Previous Core Location

LS Reassessment Delineation Areas

Heavy
Moderate

Quarter Mile Grid Segment

N

0 125 250 500
Scale in Feet

FIGURE 3
PROPOSED CORING LOCATIONS

MP 25.55 - MP 26.40

ENBRIDGE LINE 6B MP 608
MARSHALL, MI PIPELINE RELEASE
ENBRIDGE ENERGY, LIMITED PARTNERSHIP

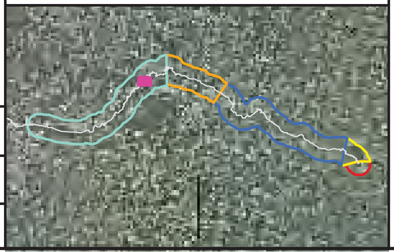
H:\ArcMap Project Files\Recovery\Figure3_Mapset_092411.mxd

Aerial Photography Date: April 2011

ENBRIDGE

Drawn:	DAL 9/24/2011
Approved:	DBR 9/24/2011
Project #:	106-4186

Map Location



Legend

Proposed Core Locations

☒ New Core Location

⊗ Previous Core Location

Spring Delineation Areas

🟥 Heavy

🟧 Moderate

— Quarter Mile Grid Segment

0 125 250 500
Scale in Feet

N

FIGURE 3
PROPOSED CORING LOCATIONS

MP 27.45 - MP 28.10

ENBRIDGE LINE 6B MP 608
MARSHALL, MI PIPELINE RELEASE
ENBRIDGE ENERGY, LIMITED PARTNERSHIP

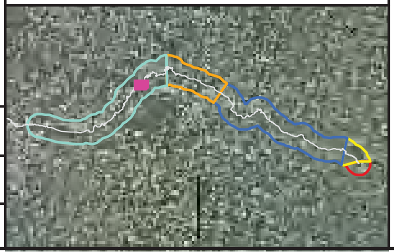
H:\ArcMap Project Files\Recovery\Figure3_Mapset_092411.mxd

Aerial Photography Date: April 2011

ENBRIDGE

Drawn: DAL 9/24/2011
Approved: DBR 9/24/2011
Project #: 106-4186

Map Location



Legend

Proposed Core Locations
✕ New Core Location
⊗ Previous Core Location

Spring Delineation Areas
🟥 Heavy
🟧 Moderate

— Quarter Mile Grid Segment

N

0 125 250 500
Scale in Feet

FIGURE 3
PROPOSED CORING LOCATIONS

MP 28.05 - MP 28.85

ENBRIDGE LINE 6B MP 608
MARSHALL, MI PIPELINE RELEASE
ENBRIDGE ENERGY, LIMITED PARTNERSHIP

H:\ArcMap Project Files\Recovery\Figure3_Mapset_092411.mxd

Aerial Photography Date: April 2011

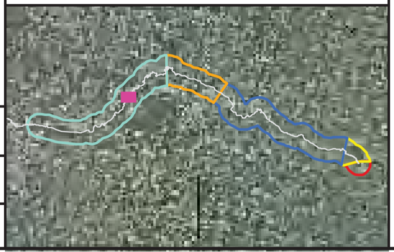
ENBRIDGE

Drawn: DAL 9/24/2011

Approved: DBR 9/24/2011

Project #: 106-4186

Map Location



Legend

Proposed Core Locations

✖ New Core Location

⊗ Previous Core Location

Spring Delineation Areas

🟥 Heavy

🟧 Moderate

— Quarter Mile Grid Segment

0 125 250 500

Scale in Feet

N

FIGURE 3
PROPOSED CORING LOCATIONS

MP 29.95 - MP 30.80

ENBRIDGE LINE 6B MP 608
MARSHALL, MI PIPELINE RELEASE
ENBRIDGE ENERGY, LIMITED PARTNERSHIP

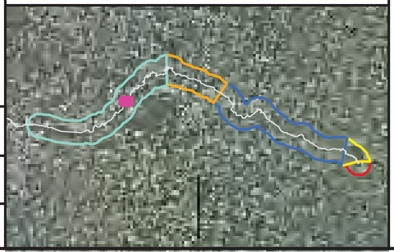
H:\ArcMap Project Files\Recovery\Figure3_Mapset_092411.mxd

Aerial Photography Date: April 2011

ENBRIDGE

Drawn: DAL 9/24/2011
Approved: DBR 9/24/2011
Project #: 106-4186

Map Location



Legend

Proposed Core Locations

✕ New Core Location

⊗ Previous Core Location

Spring Delineation Areas

🟥 Heavy

🟧 Moderate

— Quarter Mile Grid Segment

N

0 125 250 500
Scale in Feet

FIGURE 3
PROPOSED CORING LOCATIONS

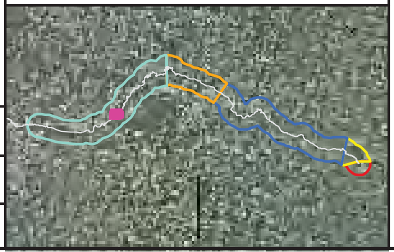
MP 30.75 - MP 31.25

ENBRIDGE LINE 6B MP 608
MARSHALL, MI PIPELINE RELEASE
ENBRIDGE ENERGY, LIMITED PARTNERSHIP

H:\ArcMap Project Files\Recovery\Figure3_Mapset_092411.mxd

Aerial Photography Date: April 2011

Map Location



Legend

Proposed Core Locations

✖ New Core Location

⊗ Previous Core Location

Spring Delineation Areas

Heavy

Moderate

Quarter Mile Grid Segment

N

0 125 250 500
Scale in Feet

Drawn: DAL 9/24/2011
Approved: DBR 9/24/2011
Project #: 106-4186

FIGURE 3
PROPOSED CORING LOCATIONS

MP 32.25 - MP 33.10

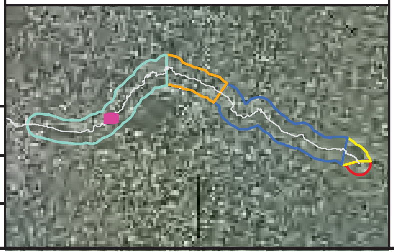
ENBRIDGE LINE 6B MP 608
MARSHALL, MI PIPELINE RELEASE
ENBRIDGE ENERGY, LIMITED PARTNERSHIP

H:\ArcMap Project Files\Recovery\Figure3_Mapset_092411.mxd

Aerial Photography Date: April 2011

Drawn: DAL 9/24/2011
Approved: DBR 9/24/2011
Project #: 106-4186

Map Location



Legend

Proposed Core Locations

New Core Location

Previous Core Location

Spring Delineation Areas

Heavy

Moderate

Quarter Mile Grid Segment

N

0 125 250 500

Scale in Feet

FIGURE 3
PROPOSED CORING LOCATIONS

MP 33.10 - MP 33.70

ENBRIDGE LINE 6B MP 608
MARSHALL, MI PIPELINE RELEASE
ENBRIDGE ENERGY, LIMITED PARTNERSHIP

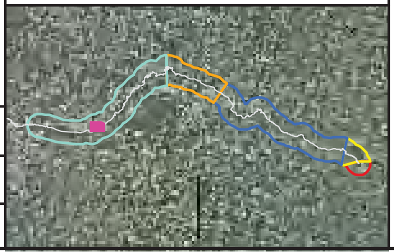
H:\ArcMap Project Files\Recovery\Figure3_Mapset_092411.mxd

Aerial Photography Date: April 2011

ENBRIDGE

Drawn: DAL 9/24/2011
Approved: DBR 9/24/2011
Project #: 106-4186

Map Location



Legend

Proposed Core Locations
☒ New Core Location
⊗ Previous Core Location

Spring Delineation Areas
🟥 Heavy
🟧 Moderate

— Quarter Mile Grid Segment

0 125 250 500
Scale in Feet

N

FIGURE 3
PROPOSED CORING LOCATIONS

MP 34.70 - MP 35.75

ENBRIDGE LINE 6B MP 608
MARSHALL, MI PIPELINE RELEASE
ENBRIDGE ENERGY, LIMITED PARTNERSHIP

H:\ArcMap Project Files\Recovery\Figure3_Mapset_092411.mxd

Aerial Photography Date: April 2011

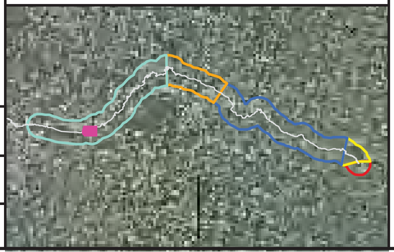
ENBRIDGE

Drawn: DAL 9/24/2011

Approved: DBR 9/24/2011

Project #: 106-4186

Map Location



Legend

Proposed Core Locations

☒ New Core Location

☒ Previous Core Location

Spring Delineation Areas

🟥 Heavy

🟧 Moderate

— Quarter Mile Grid Segment

N

0 125 250 500

Scale in Feet

FIGURE 3
PROPOSED CORING LOCATIONS

MP 35.75 - MP 36.80

ENBRIDGE LINE 6B MP 608
MARSHALL, MI PIPELINE RELEASE
ENBRIDGE ENERGY, LIMITED PARTNERSHIP

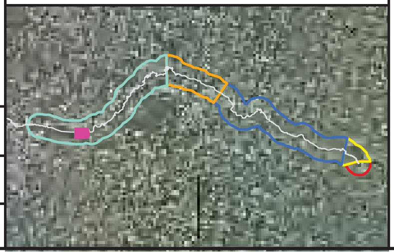
H:\ArcMap Project Files\Recovery\Figure3_Mapset_092411.mxd

Aerial Photography Date: April 2011

ENBRIDGE

Drawn:	DAL 9/24/2011
Approved:	DBR 9/24/2011
Project #:	106-4186

Map Location



Legend

Proposed Core Locations

- ☒ New Core Location
- ⊗ Previous Core Location

Spring Delineation Areas

- 🟥 Heavy
- 🟧 Moderate

🟩 Quarter Mile Grid Segment

N

0 125 250 500

Scale in Feet

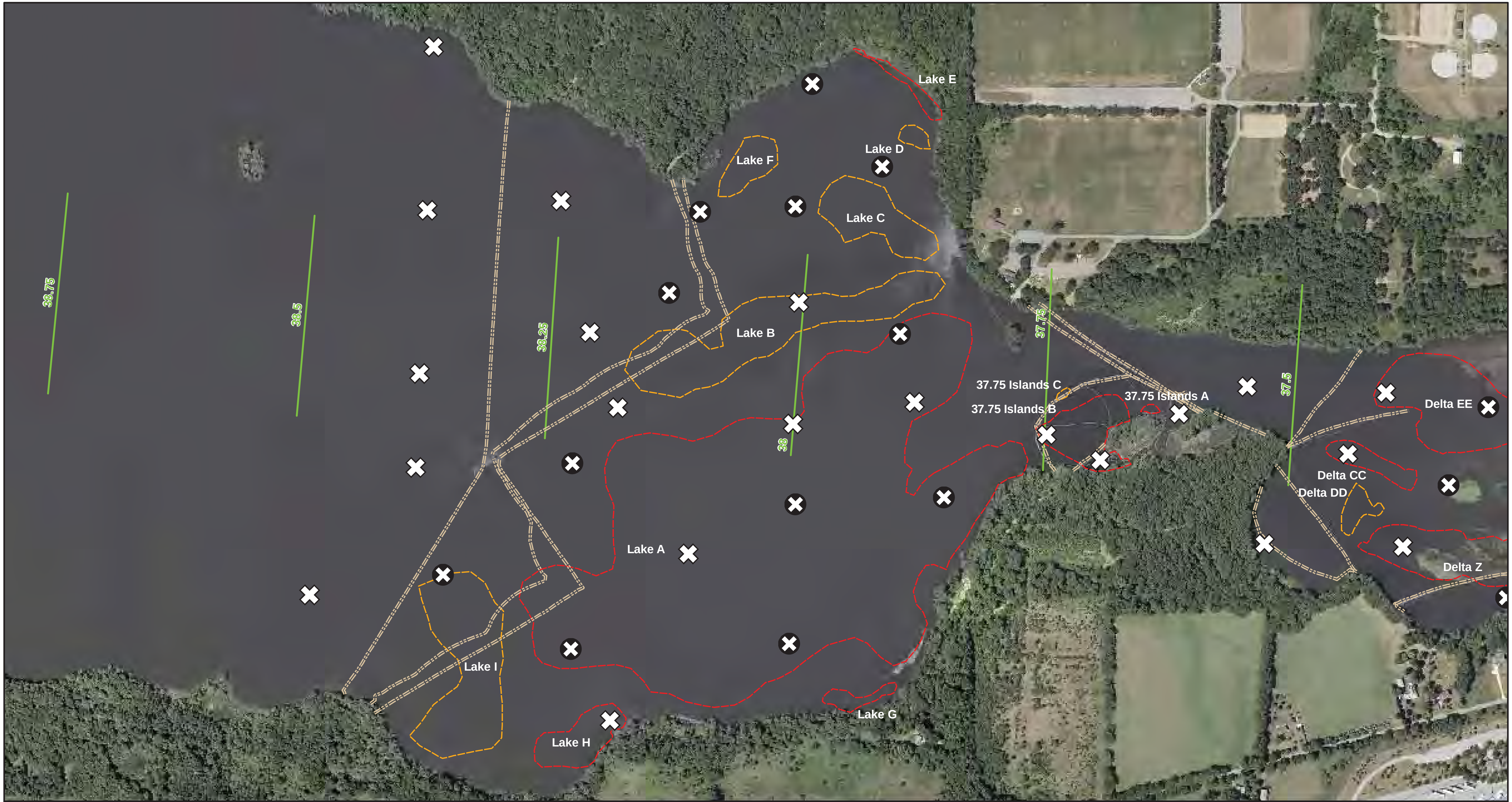
FIGURE 3
PROPOSED CORING LOCATIONS

MP 36.80 - MP 37.55

ENBRIDGE LINE 6B MP 608
MARSHALL, MI PIPELINE RELEASE
ENBRIDGE ENERGY, LIMITED PARTNERSHIP

H:\ArcMap Project Files\Recovery\Figure3_Mapset_092411.mxd

Aerial Photography Date: April 2011



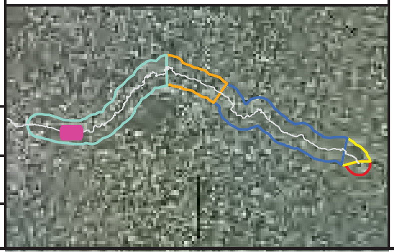
ENBRIDGE

Drawn: DAL 9/24/2011

Approved: DBR 9/24/2011

Project #: 106-4186

Map Location



Legend

Proposed Core Locations

✕ New Core Location

✖ Previous Core Location

Spring Delineation Areas

Heavy

Moderate

Installed Boom

Quarter Mile Grid Segment

N

0 125 250 500

Scale in Feet

FIGURE 3
PROPOSED CORING LOCATIONS

MP 37.55 - MP 38.30

ENBRIDGE LINE 6B MP 608
MARSHALL, MI PIPELINE RELEASE
ENBRIDGE ENERGY, LIMITED PARTNERSHIP

H:\ArcMap Project Files\Recovery\Figure3_Mapset_092411.mxd

Aerial Photography Date: April 2011

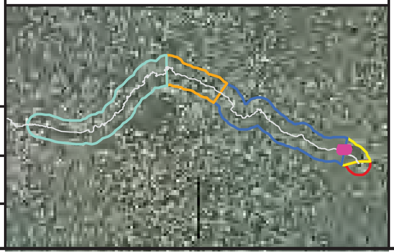
ENBRIDGE

Drawn: BRS 10/6/2011

Approved: DBR 10/6/2011

Project #: 106-4186

Map Location



Legend

◇ Walling Suspended Sediment Location

LS Reassessment Delineation Areas

- Heavy
- Moderate

Installed Boom

Quarter Mile Grid Segment

N

0 125 250 500

Scale in Feet

FIGURE 4
PROPOSED WALLING SUSPENDED SEDIMENT LOCATIONS

MP 01.95 - MP 02.75

ENBRIDGE LINE 6B MP 608
MARSHALL, MI PIPELINE RELEASE
ENBRIDGE ENERGY, LIMITED PARTNERSHIP

H:\ArcMap Project Files\Recovery\Figure4_Mapset_092411.mxd

Aerial Photography Date: April 2011

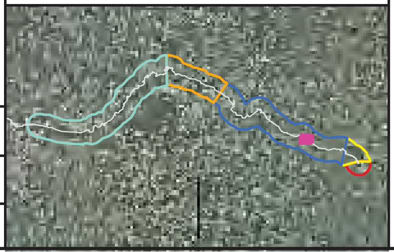
ENBRIDGE

Drawn: BRS 10/6/2011

Approved: DBR 10/6/2011

Project #: 106-4186

Map Location



Legend

◇ Walling Suspended Sediment Location

LS Reassessment Delineation Areas

- Heavy
- Moderate

Installed Boom

Quarter Mile Grid Segment

N

0 125 250 500

Scale in Feet

FIGURE 4
PROPOSED WALLING SUSPENDED SEDIMENT LOCATIONS
MP 05.65 - MP 06.30

ENBRIDGE LINE 6B MP 608

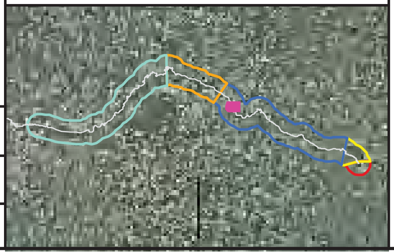
MARSHALL, MI PIPELINE RELEASE

ENBRIDGE ENERGY, LIMITED PARTNERSHIP

H:\ArcMap Project Files\Recovery\Figure4_Mapset_092411.mxd

Aerial Photography Date: April 2011

Map Location



ENBRIDGE

Drawn: BRS 10/6/2011

Approved: DBR 10/6/2011

Project #: 106-4186

Legend

◊ Walling Suspended Sediment Location

LS Reassessment Delineation Areas

- Heavy
- Moderate

Installed Boom

Quarter Mile Grid Segment

N

0 125 250 500

Scale in Feet

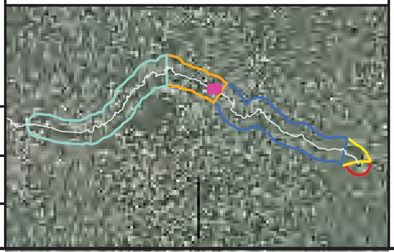
FIGURE 4
PROPOSED WALLING SUSPENDED SEDIMENT LOCATIONS
MP 15.25 - MP 15.75

ENBRIDGE LINE 6B MP 608
MARSHALL, MI PIPELINE RELEASE
ENBRIDGE ENERGY, LIMITED PARTNERSHIP

H:\ArcMap Project Files\Recovery\Figure4_Mapset_092411.mxd

Aerial Photography Date: April 2011

Map Location



Drawn: BRS 10/6/2011

Approved: DBR 10/6/2011

Project #: 106-4186

Legend

◇ Walling Suspended Sediment Location

LS Reassessment Delineation Areas

- Heavy
- Moderate

Installed Boom

Quarter Mile Grid Segment

N

0 125 250 500

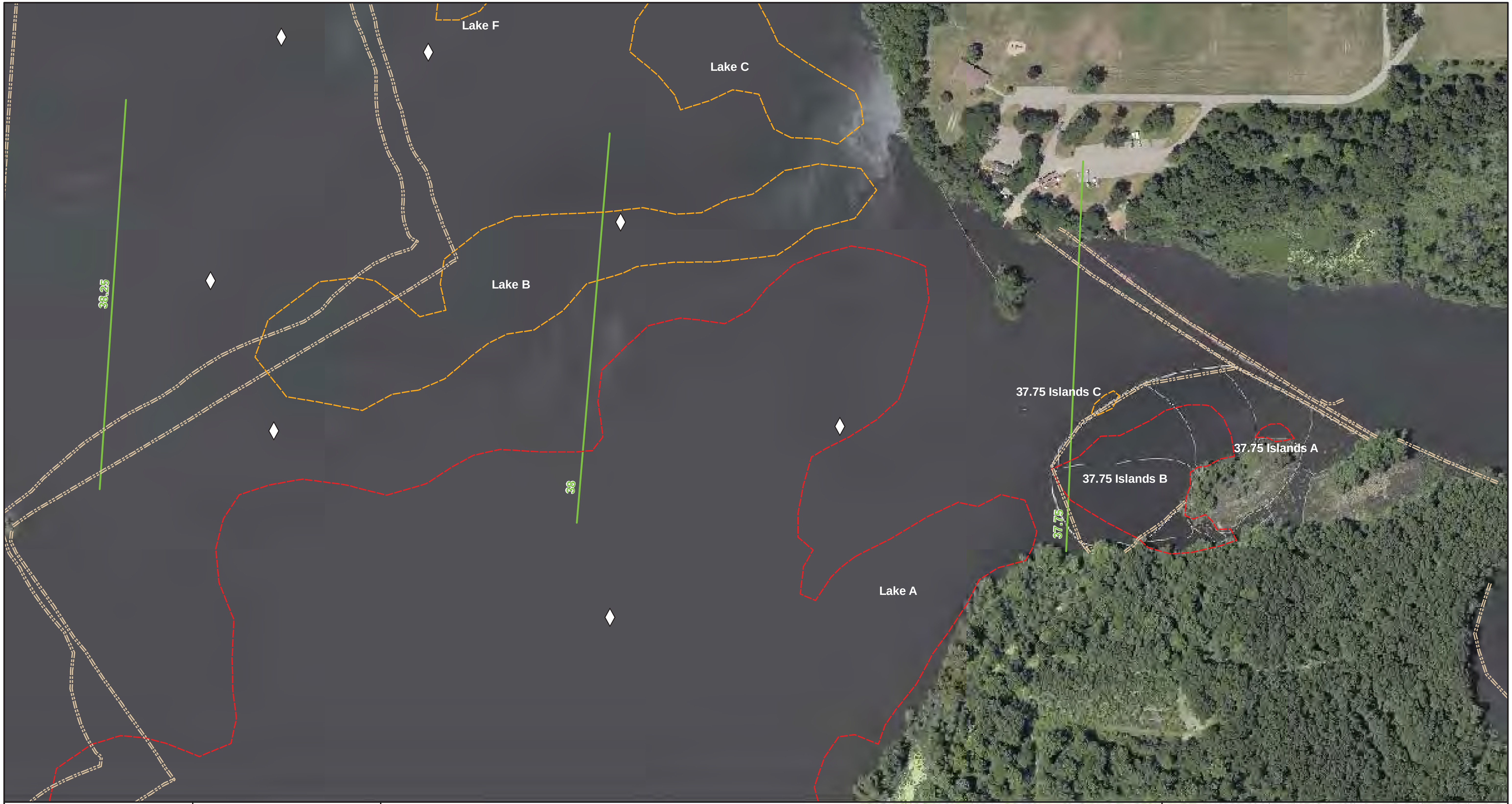
Scale in Feet

FIGURE 4
PROPOSED WALLING SUSPENDED SEDIMENT LOCATIONS
MP 17.60 - MP 18.40

ENBRIDGE LINE 6B MP 608
MARSHALL, MI PIPELINE RELEASE
ENBRIDGE ENERGY, LIMITED PARTNERSHIP

H:\ArcMap Project Files\Recovery\Figure4_Mapset_092411.mxd

Aerial Photography Date: April 2011



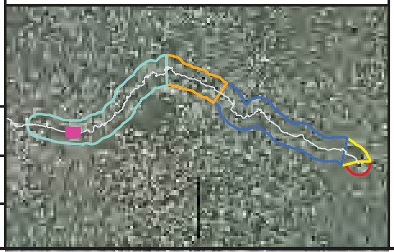
ENBRIDGE

Drawn: BRS 10/6/2011

Approved: DBR 10/6/2011

Project #: 106-4186

Map Location



Legend

◊ Walling Suspended Sediment Location

Spring Delineation Areas

- Heavy
- Moderate

Installed Boom

Quarter Mile Grid Segment

N

0 125 250 500

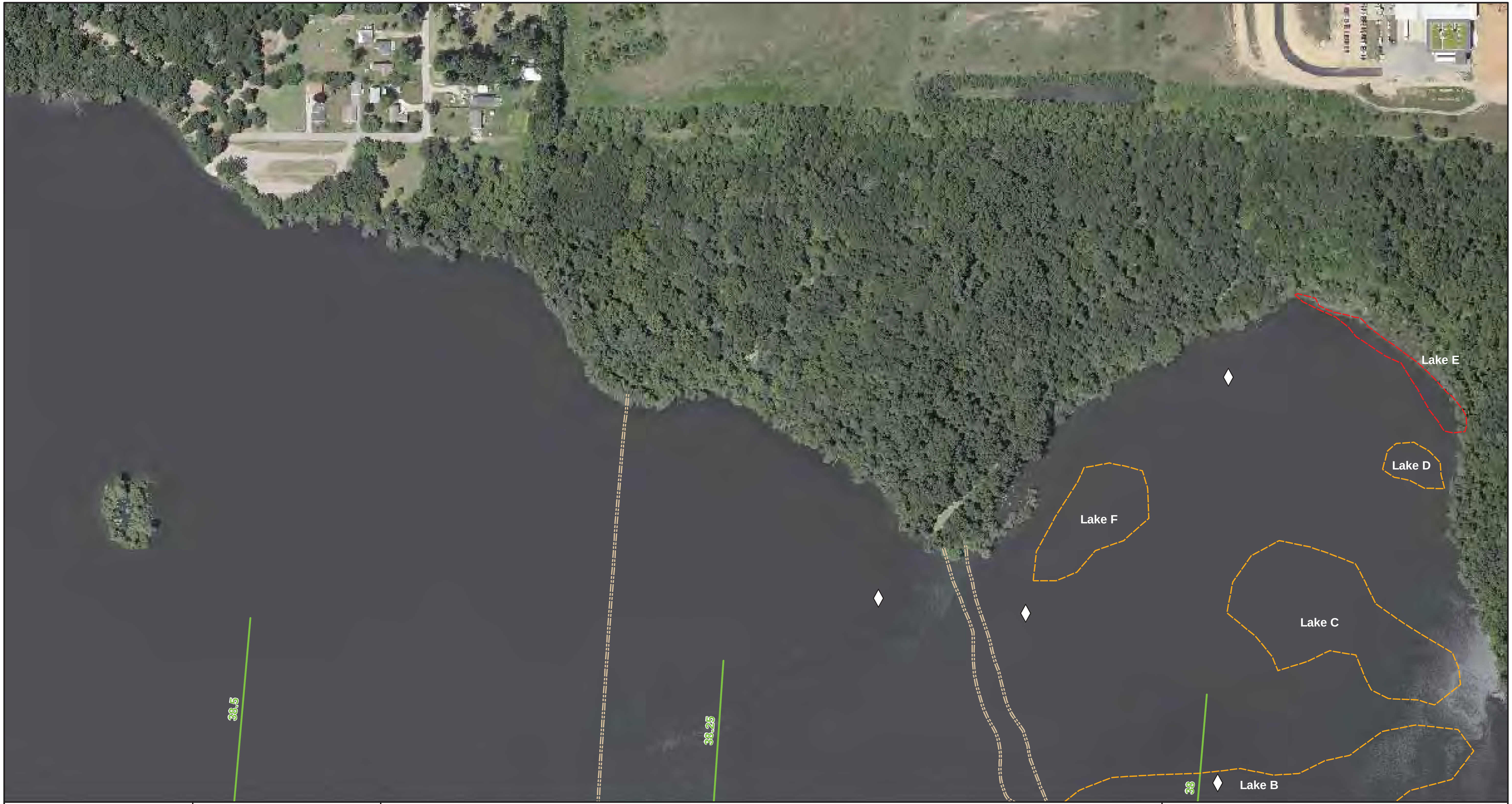
Scale in Feet

FIGURE 4
PROPOSED WALLING SUSPENDED SEDIMENT LOCATIONS
MP 37.55 - MP 38.30

ENBRIDGE LINE 6B MP 608
MARSHALL, MI PIPELINE RELEASE
ENBRIDGE ENERGY, LIMITED PARTNERSHIP

H:\ArcMap Project Files\Recovery\Figure4_Mapset_092411.mxd

Aerial Photography Date: April 2011



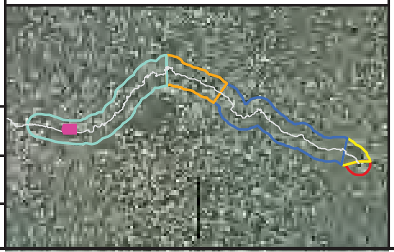
ENBRIDGE

Drawn: BRS 10/6/2011

Approved: DBR 10/6/2011

Project #: 106-4186

Map Location



Legend

◊ Walling Suspended Sediment Location

Spring Delineation Areas

Heavy

Moderate

Installed Boom

Quarter Mile Grid Segment

N

0 125 250 500

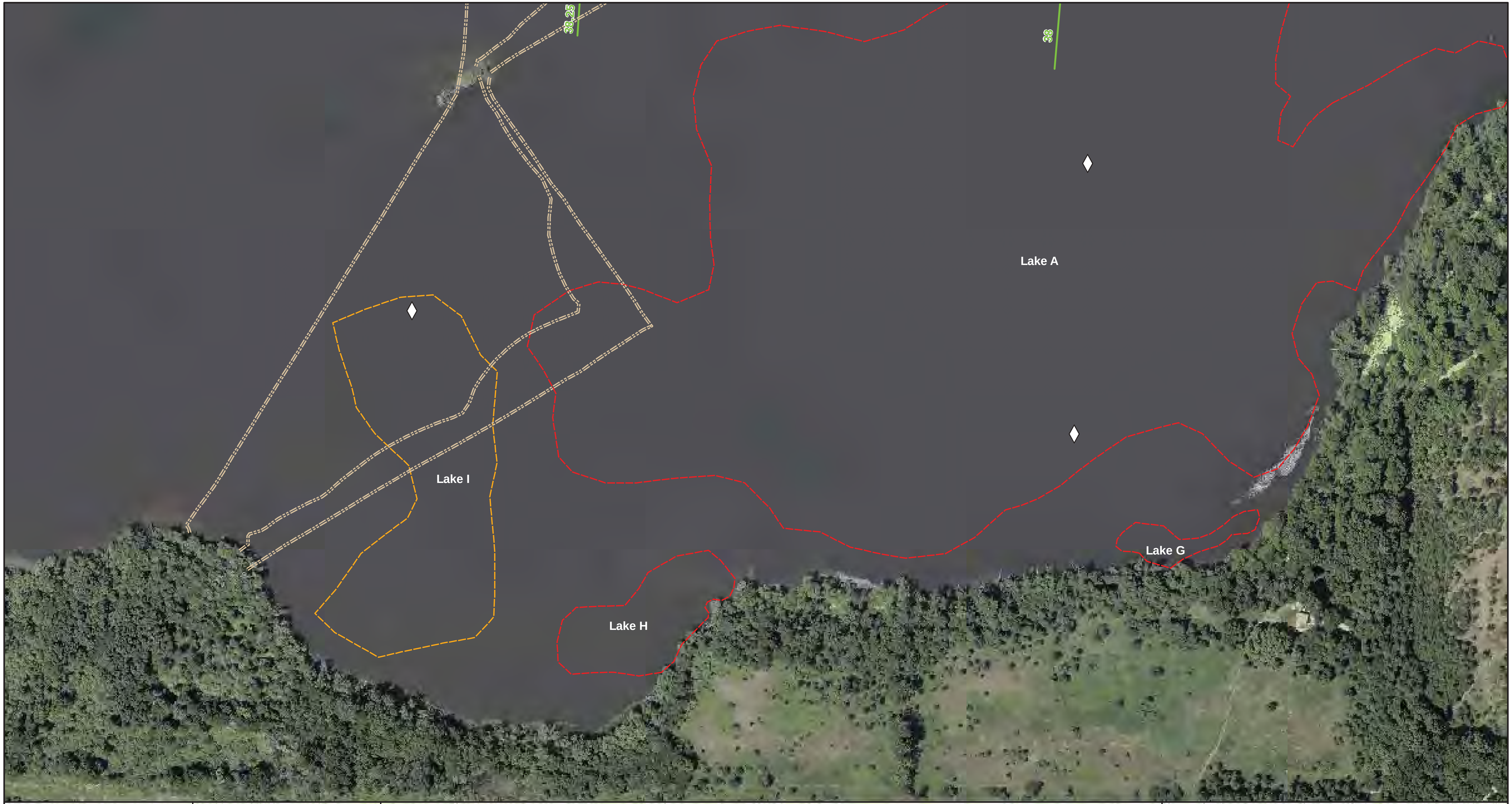
Scale in Feet

FIGURE 4
PROPOSED WALLING SUSPENDED SEDIMENT LOCATIONS
MP 37.80 - MP 38.60N

ENBRIDGE LINE 6B MP 608
MARSHALL, MI PIPELINE RELEASE
ENBRIDGE ENERGY, LIMITED PARTNERSHIP

H:\ArcMap Project Files\Recovery\Figure4_Mapset_092411.mxd

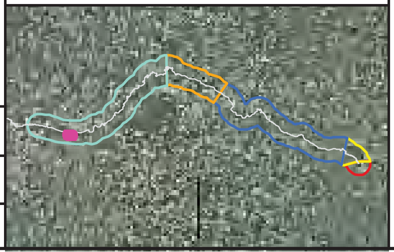
Aerial Photography Date: April 2011



ENBRIDGE

Drawn: BRS 10/6/2011
Approved: DBR 10/6/2011
Project #: 106-4186

Map Location



Legend

◊ Walling Suspended Sediment Location

Spring Delineation Areas

- 🟥 Heavy
- 🟧 Moderate

==== Installed Boom

— Quarter Mile Grid Segment

N

0 125 250 500
Scale in Feet

FIGURE 4
PROPOSED WALLING SUSPENDED SEDIMENT LOCATIONS
MP 37.80 - MP 38.60S

ENBRIDGE LINE 6B MP 608
MARSHALL, MI PIPELINE RELEASE
ENBRIDGE ENERGY, LIMITED PARTNERSHIP

H:\ArcMap Project Files\Recovery\Figure4_Mapset_092411.mxd

Aerial Photography Date: April 2011

Attachment C

Submerged Oil: Temperature Effects on Submerged Oil

Table 1. Study Design Summary
Enbridge Line 6B MP 608 Marshall, MI Pipeline Release
Enbridge Energy, Limited Partnership

Target Water Bath Temperature, °F	Number of Sample Replicates
35	3
45	3
55	3
65	3
75	3
Final 75 °F agitation	All sample aliquots (15)

Table 2. Data Collection Parameters

Enbridge Line 6B MP 608 Marshall, MI Pipeline Release

Enbridge Energy, Limited Partnership

Location	Observation period	Appearance and abundance of sheen and oil and photographs		Temperature		Laboratory Analysis	
		Natural Light	**Ultraviolet Light**	**Sediment**	**Water**	**Analytical Parameters**	**Grain Size**
Field	Prior to agitation	X	X	X	X	NA	X
	After agitation	X	X	NA	NA	NA	NA
Temperature controlled environment	Prior to agitation	X	X	X	X	X[1]	NA
	After 1 turn, each temperature range	X	X	NA	NA	NA	NA
	After 3 turns, each temperature range	X	X	X	X	NA	NA
Final Warm temperature agitation	Prior to agitation	X	X	X	X	NA	NA
	After 1 turn	X	X	NA	NA	NA	NA
	After 3 turns	X	X	X	X	NA	NA

NA = Not applicable.

[1] Split sample composited from the replicate samples. Analysis to include total petroleum hydrocarbons measured as diesel range organics and oil range organics, and for oil and grease and organic content.

Attachment D

Submerged Oil: Spring 2012 Reassessment

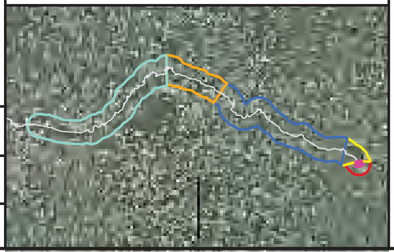
ENBRIDGE

Drawn: BRS 10/18/2011

Approved: DBR 10/18/2011

Project #: 106-4186

Map Location



Legend

- Late Summer 2011 Delineation Area
- Spring 2011 Delineation Area
- *2011 Poling Focus Areas*

Transects

- 2011 transect to be poled in 2012
- 2011 transect not slated for poling in 2012
- ● Additional 2012 transect poling locations

- ★ Park/Launch Access Poling Areas
- ★ Bridge Access Poling Areas
- Quarter Mile Grid Segment

Number of poling locations within each area will be dependent on site conditions. Full transects will have a minimum of 3 locations.

N

0 50 100 200

Scale in Feet

2012 POLING FOCUS AREAS & TRANSECTS
MP00.00-MP00.09

SHEET 1 OF 170

ENBRIDGE LINE 6B MP 608
MARSHALL, MI PIPELINE RELEASE
ENBRIDGE ENERGY, LIMITED PARTNERSHIP

H:\ArcMap Project Files\Report Maps\2012 Plan\2012_Poling_Reassessment_Plan_101811.mxd

Aerial Photography Date: April 2011

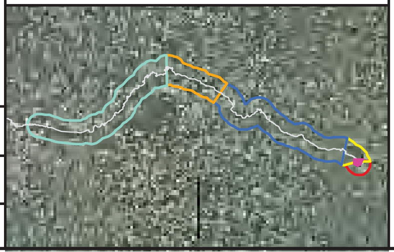
ENBRIDGE

Drawn: BRS 10/18/2011

Approved: DBR 10/18/2011

Project #: 106-4186

Map Location



Legend

Late Summer 2011 Delineation Area

Spring 2011 Delineation Area

2011 Poling Focus Areas

Transects

2011 transect to be poled in 2012

2011 transect not slated for poling in 2012

● Additional 2012 transect poling locations

★ Park/Launch Access Poling Areas

★ Bridge Access Poling Areas

Quarter Mile Grid Segment

Number of poling locations within each area will be dependent on site conditions. Full transects will have a minimum of 3 locations.

N

0 50 100 200

Scale in Feet

2012 POLING FOCUS AREAS & TRANSECTS

MP00.09-MP00.32

SHEET 2 OF 170

ENBRIDGE LINE 6B MP 608
MARSHALL, MI PIPELINE RELEASE
ENBRIDGE ENERGY, LIMITED PARTNERSHIP

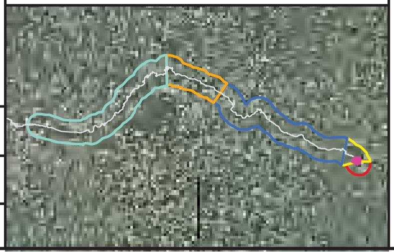
H:\ArcMap Project Files\Report Maps\2012 Plan\2012_Poling_Reassessment_Plan_101811.mxd

Aerial Photography Date: April 2011

ENBRIDGE

Drawn: BRS 10/18/2011
Approved: DBR 10/18/2011
Project #: 106-4186

Map Location



Legend

◌	Late Summer 2011 Delineation Area		Transects	★	Park/Launch Access Poling Areas
◌	Spring 2011 Delineation Area	—	2011 transect to be poled in 2012	★	Bridge Access Poling Areas
◌	*2011 Poling Focus Areas*	- - -	2011 transect not slated for poling in 2012	—	Quarter Mile Grid Segment
		●	Additional 2012 transect poling locations		

Number of poling locations within each area will be dependent on site conditions. Full transects will have a minimum of 3 locations.

N

0 50 100 200
Scale in Feet

2012 POLING FOCUS AREAS & TRANSECTS
MP00.32-MP00.50
SHEET 3 OF 170
ENBRIDGE LINE 6B MP 608
MARSHALL, MI PIPELINE RELEASE
ENBRIDGE ENERGY, LIMITED PARTNERSHIP

H:\ArcMap Project Files\Report Maps\2012 Plan\2012_Poling_Reassessment_Plan_101811.mxd

Aerial Photography Date: April 2011

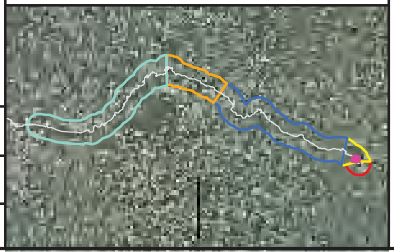
ENBRIDGE

Drawn: BRS 10/18/2011

Approved: DBR 10/18/2011

Project #: 106-4186

Map Location



Legend

- Late Summer 2011 Delineation Area
- Spring 2011 Delineation Area
- *2011 Poling Focus Areas*

Transcents

- 2011 transect to be poled in 2012
- 2011 transect not slated for poling in 2012
- ● Additional 2012 transect poling locations

- ★ Park/Launch Access Poling Areas
- ★ Bridge Access Poling Areas
- Quarter Mile Grid Segment

Number of poling locations within each area will be dependent on site conditions. Full transects will have a minimum of 3 locations.

N

0 50 100 200

Scale in Feet

2012 POLING FOCUS AREAS & TRANSECTS

MP00.50-MP00.71

SHEET 4 OF 170

ENBRIDGE LINE 6B MP 608
MARSHALL, MI PIPELINE RELEASE
ENBRIDGE ENERGY, LIMITED PARTNERSHIP

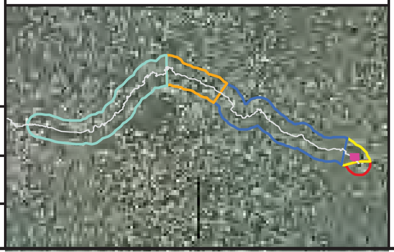
H:\ArcMap Project Files\Report Maps\2012 Plan\2012_Poling_Reassessment_Plan_101811.mxd

Aerial Photography Date: April 2011

ENBRIDGE

Drawn: BRS 10/18/2011
Approved: DBR 10/18/2011
Project #: 106-4186

Map Location



Legend

- Late Summer 2011 Delineation Area
- Spring 2011 Delineation Area
- *2011 Poling Focus Areas*

Transects

- 2011 transect to be poled in 2012
- 2011 transect not slated for poling in 2012
- ● Additional 2012 transect poling locations

- ★ Park/Launch Access Poling Areas
- ★ Bridge Access Poling Areas
- Quarter Mile Grid Segment

N

Number of poling locations within each area will be dependent on site conditions. Full transects will have a minimum of 3 locations.

0 50 100 200
Scale in Feet

2012 POLING FOCUS AREAS & TRANSECTS
MP00.71-MP00.96
SHEET 5 OF 170
ENBRIDGE LINE 6B MP 608
MARSHALL, MI PIPELINE RELEASE
ENBRIDGE ENERGY, LIMITED PARTNERSHIP

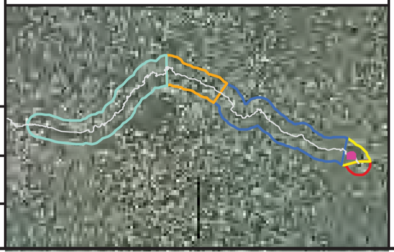
H:\ArcMap Project Files\Report Maps\2012 Plan\2012_Poling_Reassessment_Plan_101811.mxd

Aerial Photography Date: April 2011

ENBRIDGE

Drawn: BRS 10/18/2011
Approved: DBR 10/18/2011
Project #: 106-4186

Map Location



Legend

- 🟣 Late Summer 2011 Delineation Area
- 🟡 Spring 2011 Delineation Area
- *2011 Poling Focus Areas*

Transects

- — 2011 transect to be poled in 2012
- - - - 2011 transect not slated for poling in 2012
- ⊙ Additional 2012 transect poling locations

- ★ Park/Launch Access Poling Areas
- ★ Bridge Access Poling Areas
- — Quarter Mile Grid Segment

N

Number of poling locations within each area will be dependent on site conditions. Full transects will have a minimum of 3 locations.

0 50 100 200
Scale in Feet

2012 POLING FOCUS AREAS & TRANSECTS
MP00.96-MP01.30
SHEET 6 OF 170
ENBRIDGE LINE 6B MP 608
MARSHALL, MI PIPELINE RELEASE
ENBRIDGE ENERGY, LIMITED PARTNERSHIP

H:\ArcMap Project Files\Report Maps\2012 Plan\2012_Poling_Reassessment_Plan_101811.mxd

Aerial Photography Date: April 2011

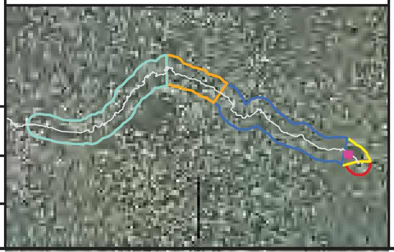
ENBRIDGE

Drawn: BRS 10/18/2011

Approved: DBR 10/18/2011

Project #: 106-4186

Map Location



Legend

Late Summer 2011 Delineation Area

Spring 2011 Delineation Area

2011 Poling Focus Areas

Transects

— 2011 transect to be poled in 2012

- - - 2011 transect not slated for poling in 2012

● Additional 2012 transect poling locations

★ Park/Launch Access Poling Areas

★ Bridge Access Poling Areas

— Quarter Mile Grid Segment

N

0 50 100 200

Scale in Feet

Number of poling locations within each area will be dependent on site conditions. Full transects will have a minimum of 3 locations.

2012 POLING FOCUS AREAS & TRANSECTS

MP01.30-MP01.67

SHEET 7 OF 170

ENBRIDGE LINE 6B MP 608

MARSHALL, MI PIPELINE RELEASE

ENBRIDGE ENERGY, LIMITED PARTNERSHIP

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Aerial Photography Date: April 2011

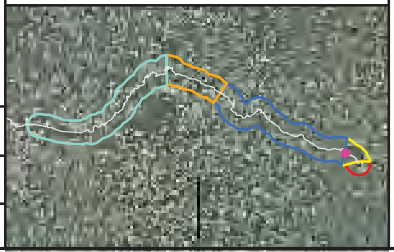
ENBRIDGE

Drawn: BRS 10/18/2011

Approved: DBR 10/18/2011

Project #: 106-4186

Map Location



Legend

- ▨ Late Summer 2011 Delineation Area
- ▨ Spring 2011 Delineation Area
- ▨ *2011 Poling Focus Areas*

Transcripts

- — 2011 transect to be poled in 2012
- - - 2011 transect not slated for poling in 2012
- ● Additional 2012 transect poling locations

- ★ Park/Launch Access Poling Areas
- ★ Bridge Access Poling Areas
- — Quarter Mile Grid Segment

Number of poling locations within each area will be dependent on site conditions. Full transects will have a minimum of 3 locations.

N

0 50 100 200

Scale in Feet

2012 POLING FOCUS AREAS & TRANSECTS
MP01.67-MP01.90

SHEET 8 OF 170

ENBRIDGE LINE 6B MP 608
MARSHALL, MI PIPELINE RELEASE
ENBRIDGE ENERGY, LIMITED PARTNERSHIP

H:\ArcMap Project Files\Report Maps\2012 Plan\2012_Poling_Reassessment_Plan_101811.mxd

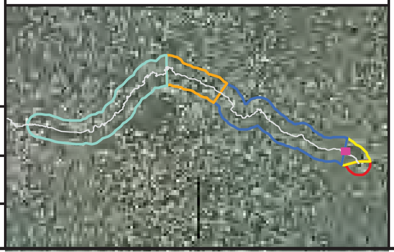
Aerial Photography Date: April 2011

2012 POLING FOCUS AREAS & TRANSECTS
MP01.90-MP02.18
SHEET 9 OF 170

ENBRIDGE LINE 6B MP 608
MARSHALL, MI PIPELINE RELEASE
ENBRIDGE ENERGY, LIMITED PARTNERSHIP

Drawn: BRS 10/18/2011
Approved: DBR 10/18/2011
Project #: 106-4186

Map Location



Legend

- Late Summer 2011 Delineation Area
- Spring 2011 Delineation Area
- *2011 Poling Focus Areas*

Transects
- 2011 transect to be poled in 2012
- 2011 transect not slated for poling in 2012
- ● Additional 2012 transect poling locations

- ★ Park/Launch Access Poling Areas
- ★ Bridge Access Poling Areas
- Quarter Mile Grid Segment

N

0 50 100 200
Scale in Feet

Number of poling locations within each area will be dependent on site conditions. Full transects will have a minimum of 3 locations.

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Aerial Photography Date: April 2011

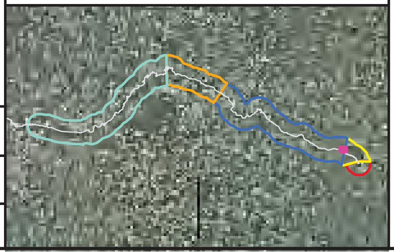
ENBRIDGE

Drawn: BRS 10/18/2011

Approved: DBR 10/18/2011

Project #: 106-4186

Map Location



Legend

- Late Summer 2011 Delineation Area
- Spring 2011 Delineation Area
- *2011 Poling Focus Areas*

Transects

- 2011 transect to be poled in 2012
- 2011 transect not slated for poling in 2012
- ● Additional 2012 transect poling locations

- ★ Park/Launch Access Poling Areas
- ★ Bridge Access Poling Areas
- Quarter Mile Grid Segment

Number of poling locations within each area will be dependent on site conditions. Full transects will have a minimum of 3 locations.

N

0 50 100 200

Scale in Feet

2012 POLING FOCUS AREAS & TRANSECTS

MP02.18-MP02.57

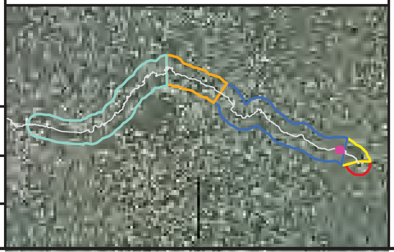
SHEET 10 OF 170

ENBRIDGE LINE 6B MP 608
MARSHALL, MI PIPELINE RELEASE
ENBRIDGE ENERGY, LIMITED PARTNERSHIP

H:\ArcMap Project Files\Report Maps\2012 Plan\2012_Poling_Reassessment_Plan_101811.mxd

Aerial Photography Date: April 2011

Map Location



ENBRIDGE

Drawn:	BRS 10/18/2011
Approved:	DBR 10/18/2011
Project #:	106-4186

Legend

- Late Summer 2011 Delineation Area
- Spring 2011 Delineation Area
- *2011 Poling Focus Areas*

Transcripts

- 2011 transect to be poled in 2012
- 2011 transect not slated for poling in 2012
- ● Additional 2012 transect poling locations

- ★ Park/Launch Access Poling Areas
- ★ Bridge Access Poling Areas
- Quarter Mile Grid Segment

N

Number of poling locations within each area will be dependent on site conditions. Full transects will have a minimum of 3 locations.

0 50 100 200

Scale in Feet

2012 POLING FOCUS AREAS & TRANSECTS
MP02.57-MP02.90
SHEET 11 OF 170
ENBRIDGE LINE 6B MP 608
MARSHALL, MI PIPELINE RELEASE
ENBRIDGE ENERGY, LIMITED PARTNERSHIP

H:\ArcMap Project Files\Report Maps\2012 Plan\2012_Poling_Reassessment_Plan_101811.mxd

Aerial Photography Date: April 2011

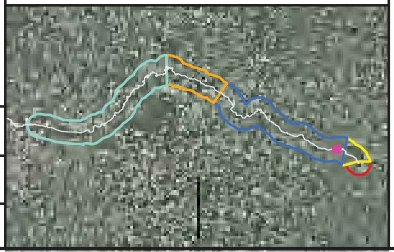
ENBRIDGE

Drawn: BRS 10/18/2011

Approved: DBR 10/18/2011

Project #: 106-4186

Map Location



Legend

▨	Late Summer 2011 Delineation Area
▨	Spring 2011 Delineation Area
▨	*2011 Poling Focus Areas*

Transects

—	2011 transect to be poled in 2012
- - -	2011 transect not slated for poling in 2012
●	Additional 2012 transect poling locations

★	Park/Launch Access Poling Areas
★	Bridge Access Poling Areas
—	Quarter Mile Grid Segment

Number of poling locations within each area will be dependent on site conditions. Full transects will have a minimum of 3 locations.

N

0 50 100 200

Scale in Feet

2012 POLING FOCUS AREAS & TRANSECTS

MP02.90-MP03.17

SHEET 12 OF 170

ENBRIDGE LINE 6B MP 608
MARSHALL, MI PIPELINE RELEASE
ENBRIDGE ENERGY, LIMITED PARTNERSHIP

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Aerial Photography Date: April 2011

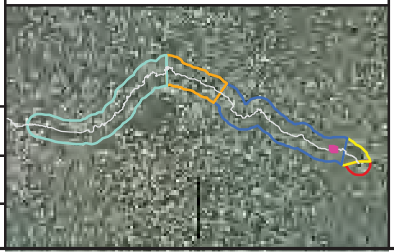
ENBRIDGE

Drawn: BRS 10/18/2011

Approved: DBR 10/18/2011

Project #: 106-4186

Map Location



Legend

- Late Summer 2011 Delineation Area
- Spring 2011 Delineation Area
- *2011 Poling Focus Areas*

Transects

- 2011 transect to be poled in 2012
- 2011 transect not slated for poling in 2012
- ● Additional 2012 transect poling locations

- ★ Park/Launch Access Poling Areas
- ★ Bridge Access Poling Areas
- Quarter Mile Grid Segment

Number of poling locations within each area will be dependent on site conditions. Full transects will have a minimum of 3 locations.

N

0 50 100 200

Scale in Feet

2012 POLING FOCUS AREAS & TRANSECTS
MP03.17-MP03.47

SHEET 13 OF 170

ENBRIDGE LINE 6B MP 608
MARSHALL, MI PIPELINE RELEASE
ENBRIDGE ENERGY, LIMITED PARTNERSHIP

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Aerial Photography Date: April 2011

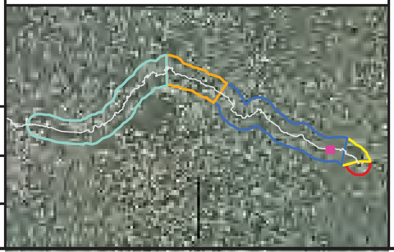
ENBRIDGE

Drawn: BRS 10/18/2011

Approved: DBR 10/18/2011

Project #: 106-4186

Map Location



Legend

- Late Summer 2011 Delineation Area
- Spring 2011 Delineation Area
- *2011 Poling Focus Areas*

Transcects

- 2011 transect to be poled in 2012
- 2011 transect not slated for poling in 2012
- ● Additional 2012 transect poling locations

- ★ Park/Launch Access Poling Areas
- ★ Bridge Access Poling Areas
- Quarter Mile Grid Segment

Number of poling locations within each area will be dependent on site conditions. Full transects will have a minimum of 3 locations.

N

0 50 100 200

Scale in Feet

2012 POLING FOCUS AREAS & TRANSECTS

MP03.47-MP03.75

SHEET 14 OF 170

ENBRIDGE LINE 6B MP 608
MARSHALL, MI PIPELINE RELEASE
ENBRIDGE ENERGY, LIMITED PARTNERSHIP

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Aerial Photography Date: April 2011

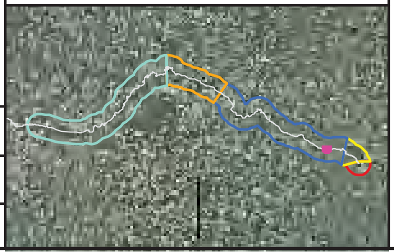
ENBRIDGE

Drawn: BRS 10/18/2011

Approved: DBR 10/18/2011

Project #: 106-4186

Map Location



Legend

- Late Summer 2011 Delineation Area
- Spring 2011 Delineation Area
- *2011 Poling Focus Areas*

Transcripts

- 2011 transect to be poled in 2012
- 2011 transect not slated for poling in 2012
- ● Additional 2012 transect poling locations

- ★ Park/Launch Access Poling Areas
- ★ Bridge Access Poling Areas
- Quarter Mile Grid Segment

Number of poling locations within each area will be dependent on site conditions. Full transects will have a minimum of 3 locations.

N

0 50 100 200

Scale in Feet

2012 POLING FOCUS AREAS & TRANSECTS
MP03.75-MP04.07

SHEET 15 OF 170

ENBRIDGE LINE 6B MP 608
MARSHALL, MI PIPELINE RELEASE
ENBRIDGE ENERGY, LIMITED PARTNERSHIP

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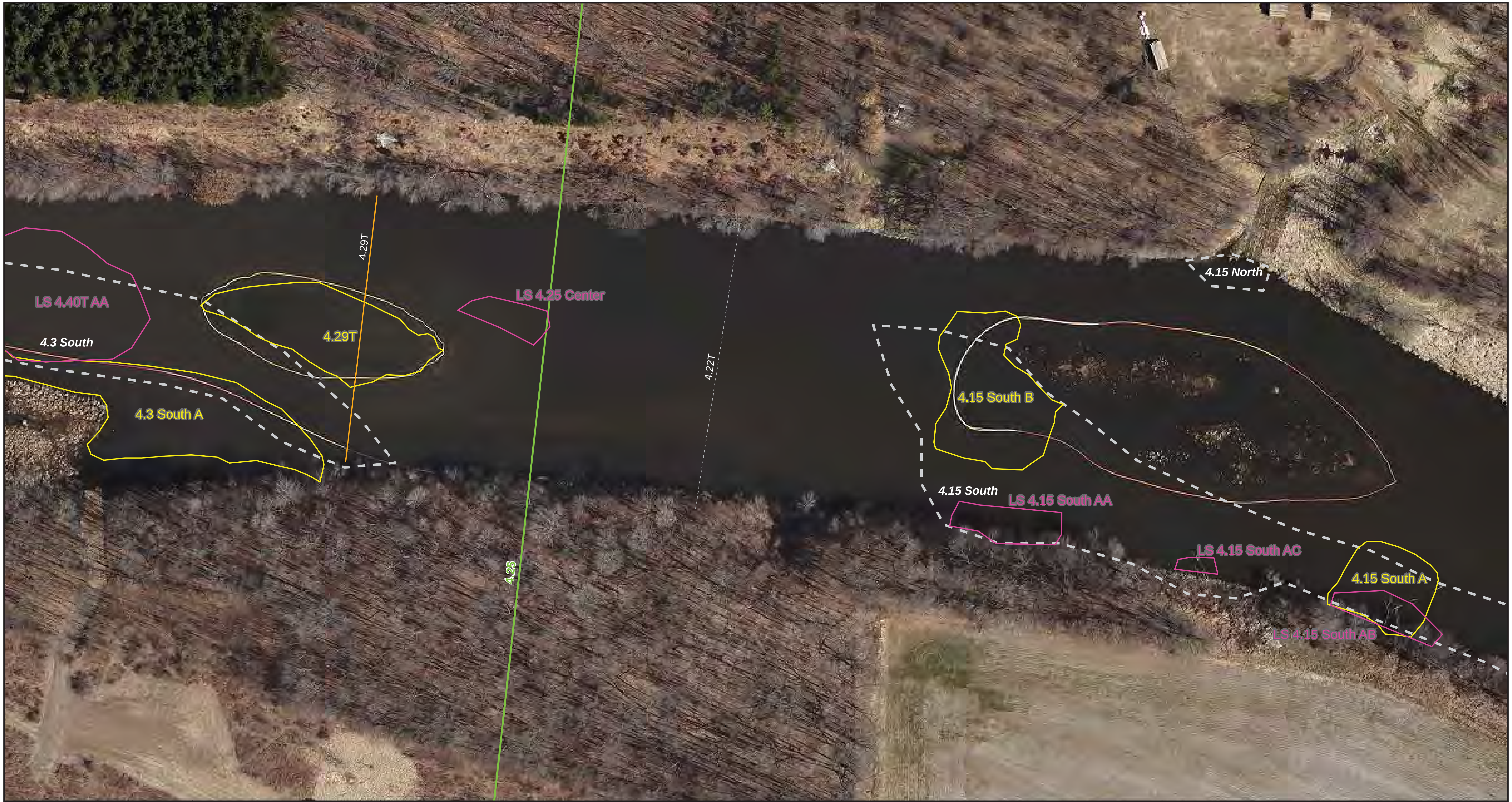
Aerial Photography Date: April 2011



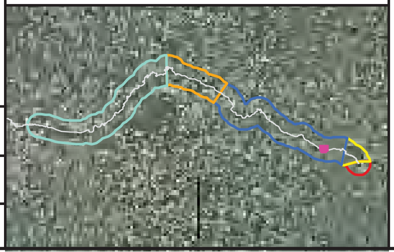
ENBRIDGE

Drawn: BRS 10/18/2011

Approved: DBR 10/18/2011

Project #: 106-4186

Map Location



Legend

- ⬠ Late Summer 2011 Delineation Area
- ⬠ Spring 2011 Delineation Area
- ╌ *2011 Poling Focus Areas*

Transects

- — 2011 transect to be poled in 2012
- ╌ 2011 transect not slated for poling in 2012
- ● Additional 2012 transect poling locations

- ★ Park/Launch Access Poling Areas
- ★ Bridge Access Poling Areas
- — Quarter Mile Grid Segment

N

Number of poling locations within each area will be dependent on site conditions. Full transects will have a minimum of 3 locations.

0 50 100 200

Scale in Feet

2012 POLING FOCUS AREAS & TRANSECTS
MP04.07-MP04.36

SHEET 16 OF 170

ENBRIDGE LINE 6B MP 608
MARSHALL, MI PIPELINE RELEASE
ENBRIDGE ENERGY, LIMITED PARTNERSHIP

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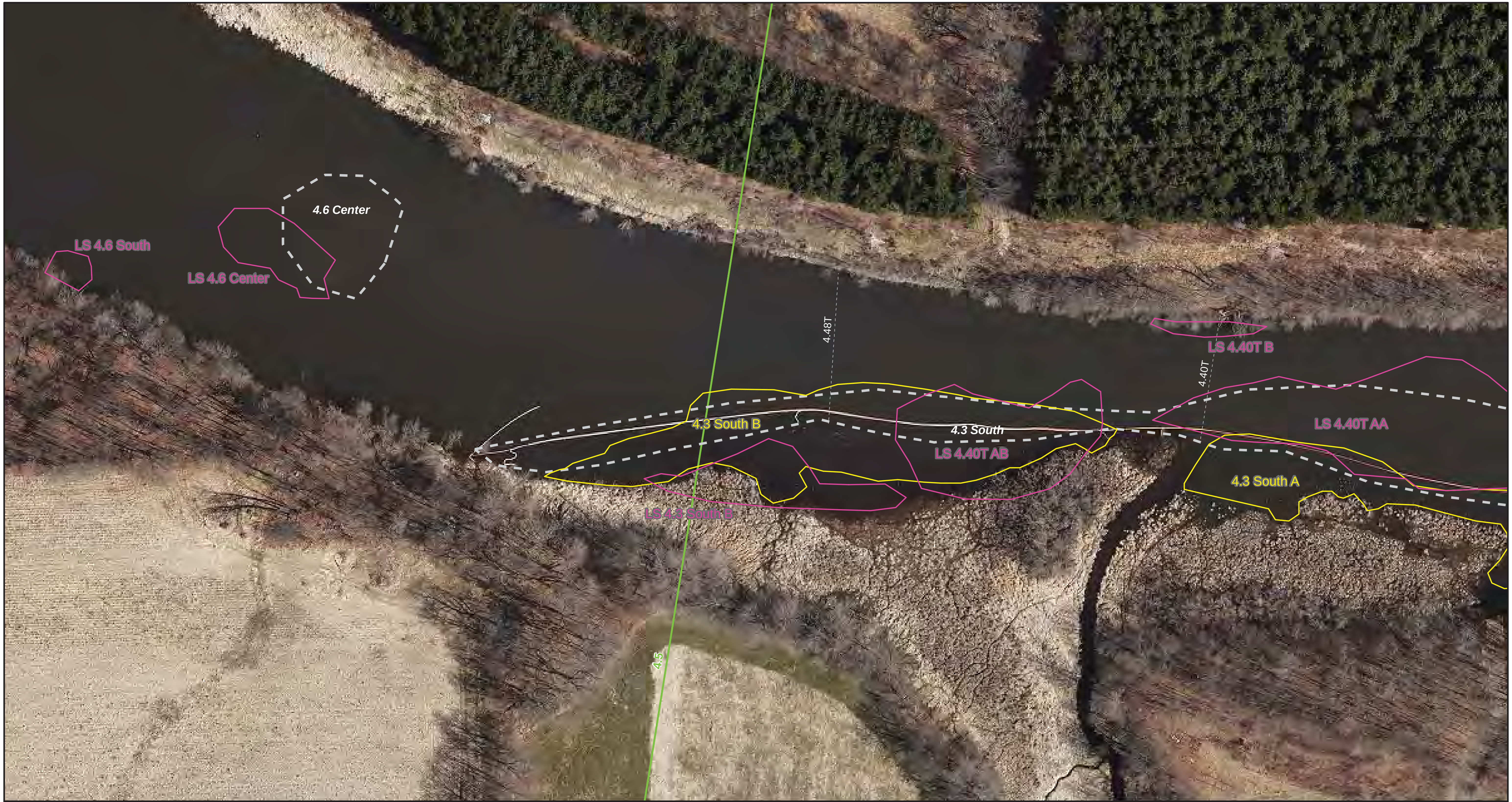
Aerial Photography Date: April 2011



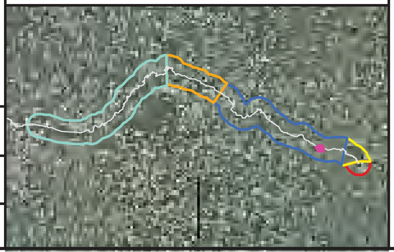
ENBRIDGE

Drawn: BRS 10/18/2011

Approved: DBR 10/18/2011

Project #: 106-4186

Map Location



Legend

- Late Summer 2011 Delineation Area
- Spring 2011 Delineation Area
- *2011 Poling Focus Areas*

Transcripts

- 2011 transect to be poled in 2012
- 2011 transect not slated for poling in 2012
- ● Additional 2012 transect poling locations

- ★ Park/Launch Access Poling Areas
- ★ Bridge Access Poling Areas
- Quarter Mile Grid Segment

Number of poling locations within each area will be dependent on site conditions. Full transects will have a minimum of 3 locations.

N

0 50 100 200
Scale in Feet

2012 POLING FOCUS AREAS & TRANSECTS
MP04.36-MP04.65
SHEET 17 OF 170
ENBRIDGE LINE 6B MP 608
MARSHALL, MI PIPELINE RELEASE
ENBRIDGE ENERGY, LIMITED PARTNERSHIP

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Aerial Photography Date: April 2011

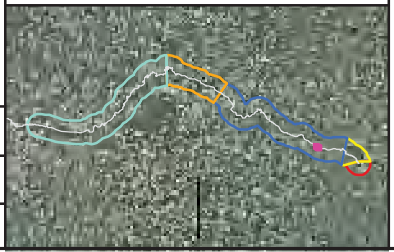
ENBRIDGE

Drawn: BRS 10/18/2011

Approved: DBR 10/18/2011

Project #: 106-4186

Map Location



Legend

- Late Summer 2011 Delineation Area
- Spring 2011 Delineation Area
- *2011 Poling Focus Areas*

Transects

- 2011 transect to be poled in 2012
- 2011 transect not slated for poling in 2012
- ● Additional 2012 transect poling locations

- ★ Park/Launch Access Poling Areas
- ★ Bridge Access Poling Areas
- Quarter Mile Grid Segment

N

Number of poling locations within each area will be dependent on site conditions. Full transects will have a minimum of 3 locations.

0 50 100 200

Scale in Feet

2012 POLING FOCUS AREAS & TRANSECTS
MP04.65-MP04.86

SHEET 18 OF 170

ENBRIDGE LINE 6B MP 608
MARSHALL, MI PIPELINE RELEASE
ENBRIDGE ENERGY, LIMITED PARTNERSHIP

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Aerial Photography Date: April 2011

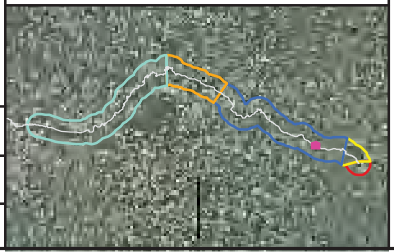
ENBRIDGE

Drawn: BRS 10/18/2011

Approved: DBR 10/18/2011

Project #: 106-4186

Map Location



Legend

- Late Summer 2011 Delineation Area
- Spring 2011 Delineation Area
- *2011 Poling Focus Areas*

Transcripts

- 2011 transect to be poled in 2012
- 2011 transect not slated for poling in 2012
- ● Additional 2012 transect poling locations

- ★ Park/Launch Access Poling Areas
- ★ Bridge Access Poling Areas
- Quarter Mile Grid Segment

Number of poling locations within each area will be dependent on site conditions. Full transects will have a minimum of 3 locations.

N

0 50 100 200

Scale in Feet

2012 POLING FOCUS AREAS & TRANSECTS
MP04.86-MP05.13
SHEET 19 OF 170
ENBRIDGE LINE 6B MP 608
MARSHALL, MI PIPELINE RELEASE
ENBRIDGE ENERGY, LIMITED PARTNERSHIP

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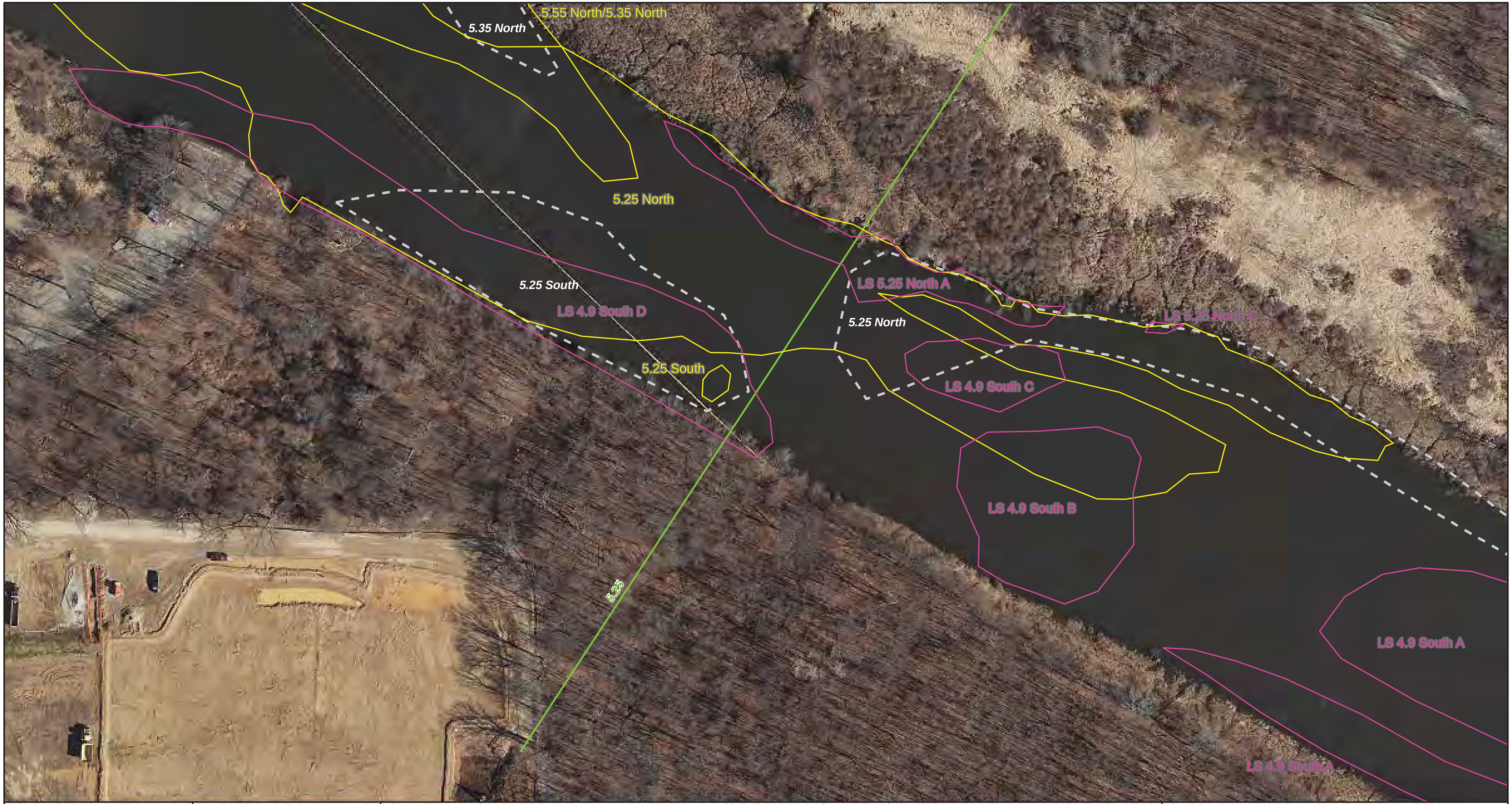
Aerial Photography Date: April 2011



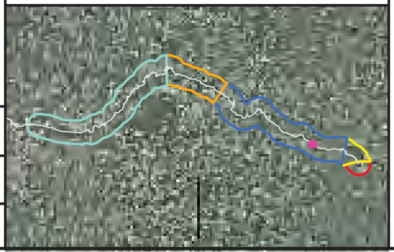
ENBRIDGE

Drawn: BRS 10/18/2011

Approved: DBR 10/18/2011

Project #: 106-4186

Map Location



Legend

Late Summer 2011 Delineation Area

Spring 2011 Delineation Area

2011 Poling Focus Areas

Transects

— 2011 transect to be poled in 2012

- - - 2011 transect not slated for poling in 2012

● Additional 2012 transect poling locations

★ Park/Launch Access Poling Areas

★ Bridge Access Poling Areas

— Quarter Mile Grid Segment

Number of poling locations within each area will be dependent on site conditions. Full transects will have a minimum of 3 locations.

N

0 50 100 200

Scale in Feet

2012 POLING FOCUS AREAS & TRANSECTS

MP05.13-MP05.37

SHEET 20 OF 170

ENBRIDGE LINE 6B MP 608
MARSHALL, MI PIPELINE RELEASE
ENBRIDGE ENERGY, LIMITED PARTNERSHIP

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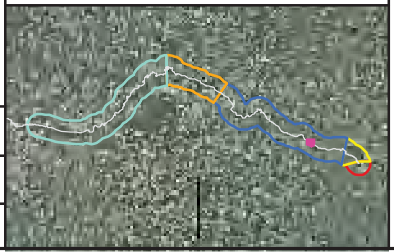
Aerial Photography Date: April 2011

ENBRIDGE

Drawn: BRS 10/18/2011
Approved: DBR 10/18/2011
Project #: 106-4186

Map Location



Legend

- ⬠ Late Summer 2011 Delineation Area
- ⬠ Spring 2011 Delineation Area
- *2011 Poling Focus Areas*

Transects
- 2011 transect to be poled in 2012
- 2011 transect not slated for poling in 2012
- ● Additional 2012 transect poling locations

- ★ Park/Launch Access Poling Areas
- ★ Bridge Access Poling Areas
- Quarter Mile Grid Segment

Number of poling locations within each area will be dependent on site conditions. Full transects will have a minimum of 3 locations.

N

0 50 100 200
Scale in Feet

2012 POLING FOCUS AREAS & TRANSECTS
MP05.37-MP05.64
SHEET 21 OF 170
ENBRIDGE LINE 6B MP 608
MARSHALL, MI PIPELINE RELEASE
ENBRIDGE ENERGY, LIMITED PARTNERSHIP

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Aerial Photography Date: April 2011

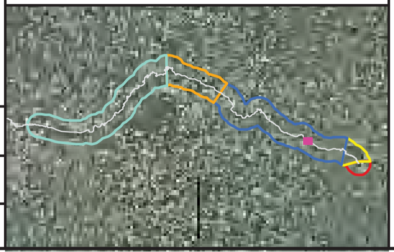
ENBRIDGE

Drawn: BRS 10/18/2011

Approved: DBR 10/18/2011

Project #: 106-4186

Map Location



Legend

- Late Summer 2011 Delineation Area
- Spring 2011 Delineation Area
- *2011 Poling Focus Areas*

Transects

- 2011 transect to be poled in 2012
- 2011 transect not slated for poling in 2012
- ● Additional 2012 transect poling locations

- ★ Park/Launch Access Poling Areas
- ★ Bridge Access Poling Areas
- Quarter Mile Grid Segment

Number of poling locations within each area will be dependent on site conditions. Full transects will have a minimum of 3 locations.

N

0 50 100 200

Scale in Feet

2012 POLING FOCUS AREAS & TRANSECTS
MP05.64-MP05.92
SHEET 22 OF 170
ENBRIDGE LINE 6B MP 608
MARSHALL, MI PIPELINE RELEASE
ENBRIDGE ENERGY, LIMITED PARTNERSHIP

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Aerial Photography Date: April 2011

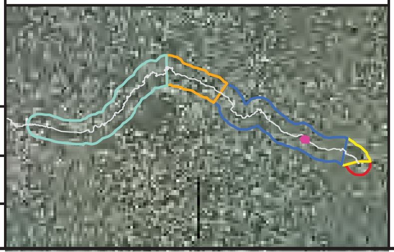
ENBRIDGE

Drawn: BRS 10/18/2011

Approved: DBR 10/18/2011

Project #: 106-4186

Map Location



Legend

Late Summer 2011 Delineation Area

Spring 2011 Delineation Area

2011 Poling Focus Areas

Transects

2011 transect to be poled in 2012

2011 transect not slated for poling in 2012

● Additional 2012 transect poling locations

★ Park/Launch Access Poling Areas

★ Bridge Access Poling Areas

Quarter Mile Grid Segment

Number of poling locations within each area will be dependent on site conditions. Full transects will have a minimum of 3 locations.

N

0 50 100 200

Scale in Feet

2012 POLING FOCUS AREAS & TRANSECTS

MP05.92-MP06.13

SHEET 23 OF 170

ENBRIDGE LINE 6B MP 608
MARSHALL, MI PIPELINE RELEASE
ENBRIDGE ENERGY, LIMITED PARTNERSHIP

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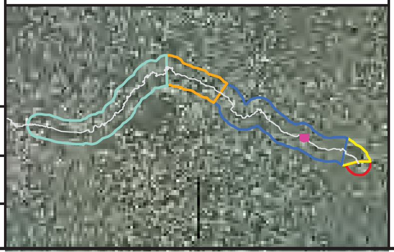
Aerial Photography Date: April 2011

ENBRIDGE

Drawn:	BRS 10/18/2011
Approved:	DBR 10/18/2011
Project #:	106-4186

Map Location



Legend

- Late Summer 2011 Delineation Area
- Spring 2011 Delineation Area
- *2011 Poling Focus Areas*

Transects

- 2011 transect to be poled in 2012
- 2011 transect not slated for poling in 2012
- ● Additional 2012 transect poling locations

- ★ Park/Launch Access Poling Areas
- ★ Bridge Access Poling Areas
- Quarter Mile Grid Segment

Number of poling locations within each area will be dependent on site conditions. Full transects will have a minimum of 3 locations.

N

0 50 100 200
Scale in Feet

2012 POLING FOCUS AREAS & TRANSECTS
MP06.12-MP06.29
SHEET 24 OF 170
ENBRIDGE LINE 6B MP 608
MARSHALL, MI PIPELINE RELEASE
ENBRIDGE ENERGY, LIMITED PARTNERSHIP

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Aerial Photography Date: April 2011

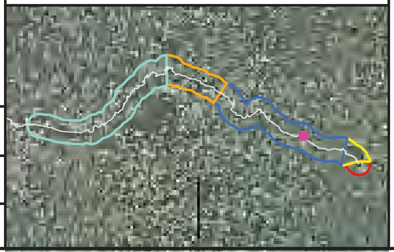
ENBRIDGE

Drawn: BRS 10/18/2011

Approved: DBR 10/18/2011

Project #: 106-4186

Map Location



Legend

- Late Summer 2011 Delineation Area
- Spring 2011 Delineation Area
- *2011 Poling Focus Areas*

Transects

- 2011 transect to be poled in 2012
- 2011 transect not slated for poling in 2012
- ● Additional 2012 transect poling locations

- ★ Park/Launch Access Poling Areas
- ★ Bridge Access Poling Areas
- Quarter Mile Grid Segment

Number of poling locations within each area will be dependent on site conditions. Full transects will have a minimum of 3 locations.

N

0 50 100 200
Scale in Feet

2012 POLING FOCUS AREAS & TRANSECTS
MP06.29-MP06.44
SHEET 25 OF 170
ENBRIDGE LINE 6B MP 608
MARSHALL, MI PIPELINE RELEASE
ENBRIDGE ENERGY, LIMITED PARTNERSHIP

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Aerial Photography Date: April 2011

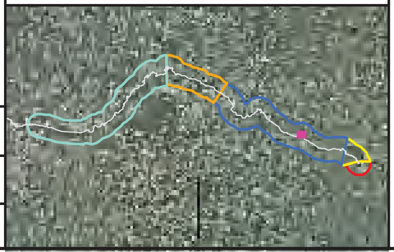
ENBRIDGE

Drawn: BRS 10/18/2011

Approved: DBR 10/18/2011

Project #: 106-4186

Map Location



Legend

- 🟥 Late Summer 2011 Delineation Area
- 🟨 Spring 2011 Delineation Area
- ▨ *2011 Poling Focus Areas*

Transects

- — 2011 transect to be poled in 2012
- - - 2011 transect not slated for poling in 2012
- ● Additional 2012 transect poling locations

- ★ Park/Launch Access Poling Areas
- ★ Bridge Access Poling Areas
- — Quarter Mile Grid Segment

Number of poling locations within each area will be dependent on site conditions. Full transects will have a minimum of 3 locations.

N

0 50 100 200
Scale in Feet

2012 POLING FOCUS AREAS & TRANSECTS
MP06.44-MP06.72
SHEET 26 OF 170
ENBRIDGE LINE 6B MP 608
MARSHALL, MI PIPELINE RELEASE
ENBRIDGE ENERGY, LIMITED PARTNERSHIP

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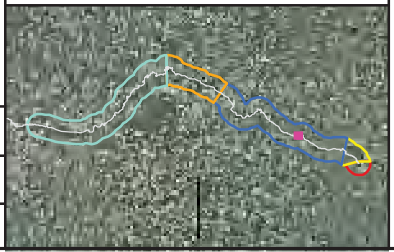
Aerial Photography Date: April 2011

ENBRIDGE

Drawn: BRS 10/18/2011
Approved: DBR 10/18/2011
Project #: 106-4186

Map Location



Legend

- ⬭ Late Summer 2011 Delineation Area
- ⬭ Spring 2011 Delineation Area
- ⬭ *2011 Poling Focus Areas*

Transcets

- — 2011 transect to be poled in 2012
- ---- 2011 transect not slated for poling in 2012
- ● Additional 2012 transect poling locations

- ★ Park/Launch Access Poling Areas
- ★ Bridge Access Poling Areas
- — Quarter Mile Grid Segment

Number of poling locations within each area will be dependent on site conditions. Full transects will have a minimum of 3 locations.

N

0 50 100 200
Scale in Feet

2012 POLING FOCUS AREAS & TRANSECTS
MP06.72-MP07.01
SHEET 27 OF 170
ENBRIDGE LINE 6B MP 608
MARSHALL, MI PIPELINE RELEASE
ENBRIDGE ENERGY, LIMITED PARTNERSHIP

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Aerial Photography Date: April 2011

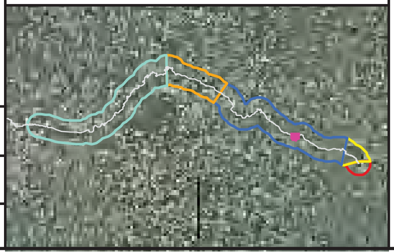
ENBRIDGE

Drawn: BRS 10/18/2011

Approved: DBR 10/18/2011

Project #: 106-4186

Map Location



Legend

- Late Summer 2011 Delineation Area
- Spring 2011 Delineation Area
- *2011 Poling Focus Areas*

Transects

- — 2011 transect to be poled in 2012
- - - 2011 transect not slated for poling in 2012
- ● Additional 2012 transect poling locations

- ★ Park/Launch Access Poling Areas
- ★ Bridge Access Poling Areas
- — Quarter Mile Grid Segment

Number of poling locations within each area will be dependent on site conditions. Full transects will have a minimum of 3 locations.

N

0 50 100 200

Scale in Feet

2012 POLING FOCUS AREAS & TRANSECTS

MP07.01-MP07.34

SHEET 28 OF 170

ENBRIDGE LINE 6B MP 608
MARSHALL, MI PIPELINE RELEASE
ENBRIDGE ENERGY, LIMITED PARTNERSHIP

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Aerial Photography Date: April 2011

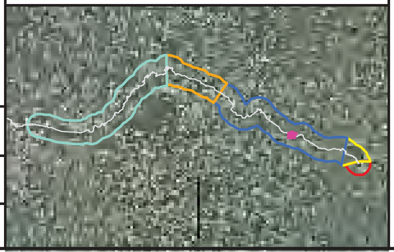
ENBRIDGE

Drawn: BRS 10/18/2011

Approved: DBR 10/18/2011

Project #: 106-4186

Map Location



Legend

- Late Summer 2011 Delineation Area
- Spring 2011 Delineation Area
- *2011 Poling Focus Areas*

Transcripts

- 2011 transect to be poled in 2012
- 2011 transect not slated for poling in 2012
- ● Additional 2012 transect poling locations

- ★ Park/Launch Access Poling Areas
- ★ Bridge Access Poling Areas
- Quarter Mile Grid Segment

Number of poling locations within each area will be dependent on site conditions. Full transects will have a minimum of 3 locations.

N

0 50 100 200

Scale in Feet

2012 POLING FOCUS AREAS & TRANSECTS

MP07.34-MP07.64

SHEET 29 OF 170

ENBRIDGE LINE 6B MP 608
MARSHALL, MI PIPELINE RELEASE
ENBRIDGE ENERGY, LIMITED PARTNERSHIP

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Aerial Photography Date: April 2011

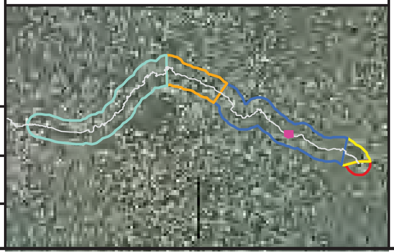
ENBRIDGE

Drawn: BRS 10/18/2011

Approved: DBR 10/18/2011

Project #: 106-4186

Map Location



Legend

Late Summer 2011 Delineation Area	Transects
Spring 2011 Delineation Area	2011 transect to be poled in 2012
2011 Poling Focus Areas	2011 transect not slated for poling in 2012
	● Additional 2012 transect poling locations

★ Park/Launch Access Poling Areas

★ Bridge Access Poling Areas

Quarter Mile Grid Segment

Number of poling locations within each area will be dependent on site conditions. Full transects will have a minimum of 3 locations.

N

0 50 100 200

Scale in Feet

2012 POLING FOCUS AREAS & TRANSECTS

MP07.64-MP07.92

SHEET 30 OF 170

ENBRIDGE LINE 6B MP 608

MARSHALL, MI PIPELINE RELEASE

ENBRIDGE ENERGY, LIMITED PARTNERSHIP

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Aerial Photography Date: April 2011

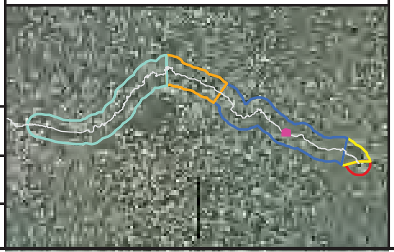
ENBRIDGE

Drawn: BRS 10/18/2011

Approved: DBR 10/18/2011

Project #: 106-4186

Map Location



Legend

- Late Summer 2011 Delineation Area
- Spring 2011 Delineation Area
- *2011 Poling Focus Areas*

Transcripts

- 2011 transect to be poled in 2012
- 2011 transect not slated for poling in 2012
- ● Additional 2012 transect poling locations

- ★ Park/Launch Access Poling Areas
- ★ Bridge Access Poling Areas
- Quarter Mile Grid Segment

Number of poling locations within each area will be dependent on site conditions. Full transects will have a minimum of 3 locations.

N

0 50 100 200
Scale in Feet

2012 POLING FOCUS AREAS & TRANSECTS
MP07.92-MP08.21
SHEET 31 OF 170
ENBRIDGE LINE 6B MP 608
MARSHALL, MI PIPELINE RELEASE
ENBRIDGE ENERGY, LIMITED PARTNERSHIP

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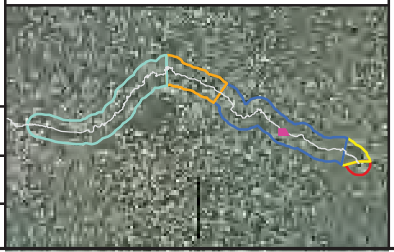
Aerial Photography Date: April 2011

ENBRIDGE

Drawn: BRS 10/18/2011
Approved: DBR 10/18/2011
Project #: 106-4186

Map Location



Legend

Late Summer 2011 Delineation Area	Transects	★	Park/Launch Access Poling Areas
Spring 2011 Delineation Area	— 2011 transect to be poled in 2012	★	Bridge Access Poling Areas
2011 Poling Focus Areas	- - - 2011 transect not slated for poling in 2012	—	Quarter Mile Grid Segment
	⊙ Additional 2012 transect poling locations		

Number of poling locations within each area will be dependent on site conditions. Full transects will have a minimum of 3 locations.

N

0 50 100 200
Scale in Feet

2012 POLING FOCUS AREAS & TRANSECTS
MP08.21-MP08.49
SHEET 32 OF 170
ENBRIDGE LINE 6B MP 608
MARSHALL, MI PIPELINE RELEASE
ENBRIDGE ENERGY, LIMITED PARTNERSHIP

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Aerial Photography Date: April 2011

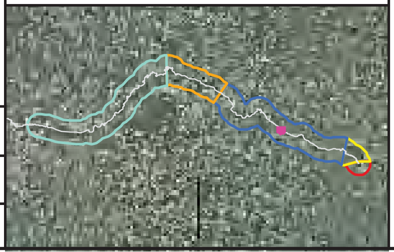
ENBRIDGE

Drawn: BRS 10/18/2011

Approved: DBR 10/18/2011

Project #: 106-4186

Map Location



Legend

- Late Summer 2011 Delineation Area
- Spring 2011 Delineation Area
- *2011 Poling Focus Areas*

Transects

- 2011 transect to be poled in 2012
- 2011 transect not slated for poling in 2012
- ● Additional 2012 transect poling locations

- ★ Park/Launch Access Poling Areas
- ★ Bridge Access Poling Areas
- Quarter Mile Grid Segment

N

Number of poling locations within each area will be dependent on
site conditions. Full transects will have a minimum of 3 locations.

0 50 100 200
Scale in Feet

2012 POLING FOCUS AREAS & TRANSECTS
MP08.49-MP08.67
SHEET 33 OF 170

ENBRIDGE LINE 6B MP 608
MARSHALL, MI PIPELINE RELEASE
ENBRIDGE ENERGY, LIMITED PARTNERSHIP

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Aerial Photography Date: April 2011

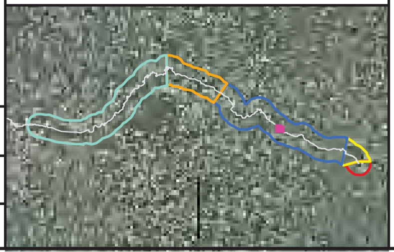
ENBRIDGE

Drawn: BRS 10/18/2011

Approved: DBR 10/18/2011

Project #: 106-4186

Map Location



Legend

- Late Summer 2011 Delineation Area
- Spring 2011 Delineation Area
- *2011 Poling Focus Areas*

Transcripts

- 2011 transect to be poled in 2012
- 2011 transect not slated for poling in 2012
- ● Additional 2012 transect poling locations

- ★ Park/Launch Access Poling Areas
- ★ Bridge Access Poling Areas
- Quarter Mile Grid Segment

Number of poling locations within each area will be dependent on site conditions. Full transects will have a minimum of 3 locations.

N

0 50 100 200
Scale in Feet

2012 POLING FOCUS AREAS & TRANSECTS
MP08.67-MP08.85

SHEET 34 OF 170

ENBRIDGE LINE 6B MP 608
MARSHALL, MI PIPELINE RELEASE
ENBRIDGE ENERGY, LIMITED PARTNERSHIP

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Aerial Photography Date: April 2011

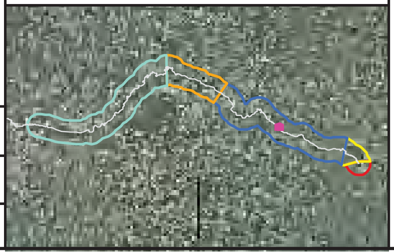
ENBRIDGE

Drawn: BRS 10/18/2011

Approved: DBR 10/18/2011

Project #: 106-4186

Map Location



Legend

- Late Summer 2011 Delineation Area
- Spring 2011 Delineation Area
- *2011 Poling Focus Areas*

Transcripts

- 2011 transect to be poled in 2012
- 2011 transect not slated for poling in 2012
- ● Additional 2012 transect poling locations

- ☆ Park/Launch Access Poling Areas
- ★ Bridge Access Poling Areas
- Quarter Mile Grid Segment

Number of poling locations within each area will be dependent on site conditions. Full transects will have a minimum of 3 locations.

N

0 50 100 200

Scale in Feet

2012 POLING FOCUS AREAS & TRANSECTS

MP08.85-MP09.04

SHEET 35 OF 170

ENBRIDGE LINE 6B MP 608
MARSHALL, MI PIPELINE RELEASE
ENBRIDGE ENERGY, LIMITED PARTNERSHIP

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Aerial Photography Date: April 2011

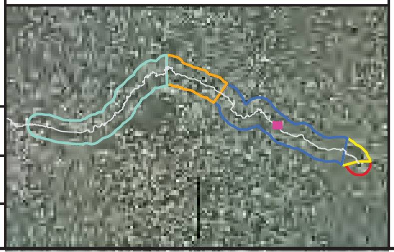
ENBRIDGE

Drawn: BRS 10/18/2011

Approved: DBR 10/18/2011

Project #: 106-4186

Map Location



Legend

- Late Summer 2011 Delineation Area
- Spring 2011 Delineation Area
- *2011 Poling Focus Areas*

Transcripts

- 2011 transect to be poled in 2012
- 2011 transect not slated for poling in 2012
- ● Additional 2012 transect poling locations

- ★ Park/Launch Access Poling Areas
- ★ Bridge Access Poling Areas
- Quarter Mile Grid Segment

Number of poling locations within each area will be dependent on site conditions. Full transects will have a minimum of 3 locations.

N

0 50 100 200

Scale in Feet

2012 POLING FOCUS AREAS & TRANSECTS
MP09.04-MP09.29
SHEET 36 OF 170
ENBRIDGE LINE 6B MP 608
MARSHALL, MI PIPELINE RELEASE
ENBRIDGE ENERGY, LIMITED PARTNERSHIP

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Aerial Photography Date: April 2011

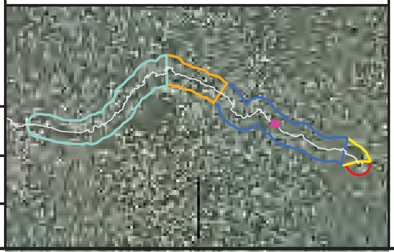
ENBRIDGE

Drawn: BRS 10/18/2011

Approved: DBR 10/18/2011

Project #: 106-4186

Map Location



Legend

▨	Late Summer 2011 Delineation Area
▨	Spring 2011 Delineation Area
▨	*2011 Poling Focus Areas*

Transects

—	2011 transect to be poled in 2012
- - -	2011 transect not slated for poling in 2012
⊙	Additional 2012 transect poling locations

★	Park/Launch Access Poling Areas
★	Bridge Access Poling Areas
—	Quarter Mile Grid Segment

Number of poling locations within each area will be dependent on site conditions. Full transects will have a minimum of 3 locations.

N

0 50 100 200

Scale in Feet

2012 POLING FOCUS AREAS & TRANSECTS

MP09.29-MP09.56

SHEET 37 OF 170

ENBRIDGE LINE 6B MP 608
MARSHALL, MI PIPELINE RELEASE
ENBRIDGE ENERGY, LIMITED PARTNERSHIP

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Aerial Photography Date: April 2011

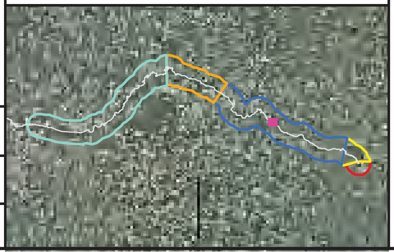
ENBRIDGE

Drawn: BRS 10/18/2011

Approved: DBR 10/18/2011

Project #: 106-4186

Map Location



Legend

🟪	Late Summer 2011 Delineation Area
🟨	Spring 2011 Delineation Area
⬜	*2011 Poling Focus Areas*

Transects

—	2011 transect to be poled in 2012
- - -	2011 transect not slated for poling in 2012
●	Additional 2012 transect poling locations

★	Park/Launch Access Poling Areas
★	Bridge Access Poling Areas
—	Quarter Mile Grid Segment

Number of poling locations within each area will be dependent on site conditions. Full transects will have a minimum of 3 locations.

N

0 50 100 200

Scale in Feet

2012 POLING FOCUS AREAS & TRANSECTS
MP09.56-MP09.80
SHEET 38 OF 170
ENBRIDGE LINE 6B MP 608
MARSHALL, MI PIPELINE RELEASE
ENBRIDGE ENERGY, LIMITED PARTNERSHIP

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Aerial Photography Date: April 2011

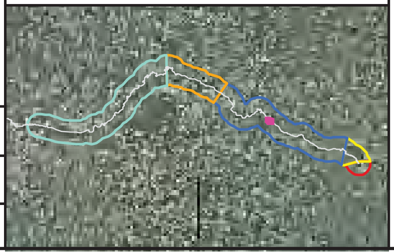
ENBRIDGE

Drawn: BRS 10/18/2011

Approved: DBR 10/18/2011

Project #: 106-4186

Map Location



Legend

- Late Summer 2011 Delineation Area
- Spring 2011 Delineation Area
- *2011 Poling Focus Areas*

Transects

- 2011 transect to be poled in 2012
- 2011 transect not slated for poling in 2012
- ● Additional 2012 transect poling locations

- ★ Park/Launch Access Poling Areas
- ★ Bridge Access Poling Areas
- Quarter Mile Grid Segment

Number of poling locations within each area will be dependent on site conditions. Full transects will have a minimum of 3 locations.

N

0 50 100 200
Scale in Feet

2012 POLING FOCUS AREAS & TRANSECTS
MP09.80-MP10.04
SHEET 39 OF 170
ENBRIDGE LINE 6B MP 608
MARSHALL, MI PIPELINE RELEASE
ENBRIDGE ENERGY, LIMITED PARTNERSHIP

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Aerial Photography Date: April 2011

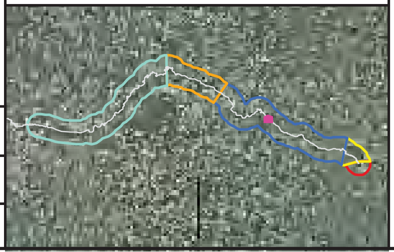
ENBRIDGE

Drawn: BRS 10/18/2011

Approved: DBR 10/18/2011

Project #: 106-4186

Map Location



Legend

- Late Summer 2011 Delineation Area
- Spring 2011 Delineation Area
- *2011 Poling Focus Areas*

Transcripts

- 2011 transect to be poled in 2012
- 2011 transect not slated for poling in 2012
- ● Additional 2012 transect poling locations

- ★ Park/Launch Access Poling Areas
- ★ Bridge Access Poling Areas
- Quarter Mile Grid Segment

Number of poling locations within each area will be dependent on site conditions. Full transects will have a minimum of 3 locations.

N

0 50 100 200
Scale in Feet

2012 POLING FOCUS AREAS & TRANSECTS
MP10.04-MP10.43

SHEET 40 OF 170

ENBRIDGE LINE 6B MP 608
MARSHALL, MI PIPELINE RELEASE
ENBRIDGE ENERGY, LIMITED PARTNERSHIP

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Aerial Photography Date: April 2011

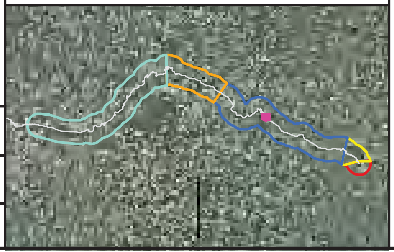
ENBRIDGE

Drawn: BRS 10/18/2011

Approved: DBR 10/18/2011

Project #: 106-4186

Map Location



Legend

- Late Summer 2011 Delineation Area
- Spring 2011 Delineation Area
- *2011 Poling Focus Areas*

Transects

- 2011 transect to be poled in 2012
- 2011 transect not slated for poling in 2012
- ● Additional 2012 transect poling locations

- ★ Park/Launch Access Poling Areas
- ★ Bridge Access Poling Areas
- Quarter Mile Grid Segment

Number of poling locations within each area will be dependent on site conditions. Full transects will have a minimum of 3 locations.

N

0 50 100 200

Scale in Feet

2012 POLING FOCUS AREAS & TRANSECTS

MP10.43-MP10.61

SHEET 41 OF 170

ENBRIDGE LINE 6B MP 608
MARSHALL, MI PIPELINE RELEASE
ENBRIDGE ENERGY, LIMITED PARTNERSHIP

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Aerial Photography Date: April 2011

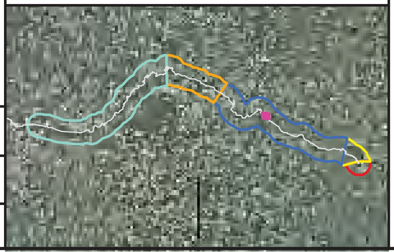
ENBRIDGE

Drawn: BRS 10/18/2011

Approved: DBR 10/18/2011

Project #: 106-4186

Map Location



Legend

Late Summer 2011 Delineation Area
Spring 2011 Delineation Area
2011 Poling Focus Areas

Transects
2011 transect to be poled in 2012
2011 transect not slated for poling in 2012
● Additional 2012 transect poling locations

★ Park/Launch Access Poling Areas
★ Bridge Access Poling Areas
Quarter Mile Grid Segment

Number of poling locations within each area will be dependent on site conditions. Full transects will have a minimum of 3 locations.

N

0 50 100 200
Scale in Feet

2012 POLING FOCUS AREAS & TRANSECTS
MP10.61-MP10.78

SHEET 42 OF 170

ENBRIDGE LINE 6B MP 608
MARSHALL, MI PIPELINE RELEASE
ENBRIDGE ENERGY, LIMITED PARTNERSHIP

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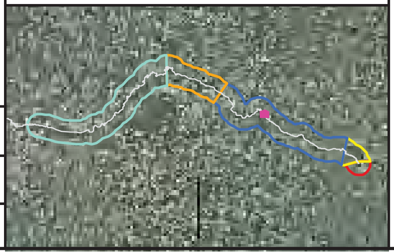
Aerial Photography Date: April 2011

ENBRIDGE

Drawn: BRS 10/18/2011
Approved: DBR 10/18/2011
Project #: 106-4186

Map Location



Legend

🟪	Late Summer 2011 Delineation Area
🟨	Spring 2011 Delineation Area
⬜	*2011 Poling Focus Areas*

Transects

—	2011 transect to be poled in 2012
- - -	2011 transect not slated for poling in 2012
●	Additional 2012 transect poling locations

★	Park/Launch Access Poling Areas
★	Bridge Access Poling Areas
—	Quarter Mile Grid Segment

Number of poling locations within each area will be dependent on site conditions. Full transects will have a minimum of 3 locations.

N

0 50 100 200
Scale in Feet

2012 POLING FOCUS AREAS & TRANSECTS
MP10.78-MP10.99
SHEET 43 OF 170
ENBRIDGE LINE 6B MP 608
MARSHALL, MI PIPELINE RELEASE
ENBRIDGE ENERGY, LIMITED PARTNERSHIP

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Aerial Photography Date: April 2011

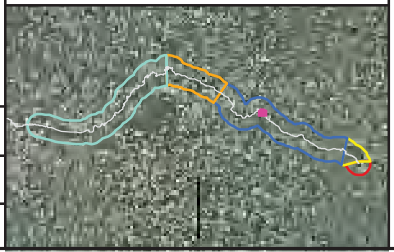
ENBRIDGE

Drawn: BRS 10/18/2011

Approved: DBR 10/18/2011

Project #: 106-4186

Map Location



Legend

Late Summer 2011 Delineation Area
Spring 2011 Delineation Area
2011 Poling Focus Areas

Transects
2011 transect to be poled in 2012
2011 transect not slated for poling in 2012
● Additional 2012 transect poling locations

★ Park/Launch Access Poling Areas
★ Bridge Access Poling Areas
Quarter Mile Grid Segment

N

Number of poling locations within each area will be dependent on site conditions. Full transects will have a minimum of 3 locations.

0 50 100 200
Scale in Feet

2012 POLING FOCUS AREAS & TRANSECTS
MP10.99-MP11.41
SHEET 44 OF 170
ENBRIDGE LINE 6B MP 608
MARSHALL, MI PIPELINE RELEASE
ENBRIDGE ENERGY, LIMITED PARTNERSHIP

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Aerial Photography Date: April 2011

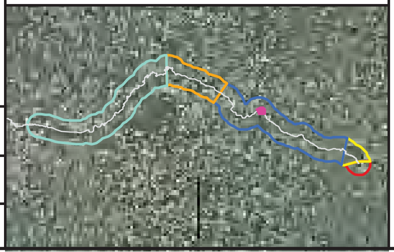
ENBRIDGE

Drawn: BRS 10/18/2011

Approved: DBR 10/18/2011

Project #: 106-4186

Map Location



Legend

- Late Summer 2011 Delineation Area
- Spring 2011 Delineation Area
- *2011 Poling Focus Areas*

Transects

- 2011 transect to be poled in 2012
- 2011 transect not slated for poling in 2012
- ● Additional 2012 transect poling locations

- ★ Park/Launch Access Poling Areas
- ★ Bridge Access Poling Areas
- Quarter Mile Grid Segment

Number of poling locations within each area will be dependent on site conditions. Full transects will have a minimum of 3 locations.

N

0 50 100 200
Scale in Feet

2012 POLING FOCUS AREAS & TRANSECTS
MP11.41-MP11.58
SHEET 45 OF 170
ENBRIDGE LINE 6B MP 608
MARSHALL, MI PIPELINE RELEASE
ENBRIDGE ENERGY, LIMITED PARTNERSHIP

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Aerial Photography Date: April 2011

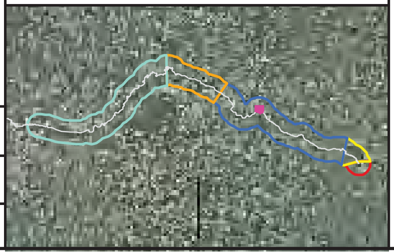
ENBRIDGE

Drawn: BRS 10/18/2011

Approved: DBR 10/18/2011

Project #: 106-4186

Map Location



Legend

- Late Summer 2011 Delineation Area
- Spring 2011 Delineation Area
- *2011 Poling Focus Areas*

Transcripts

- 2011 transect to be poled in 2012
- 2011 transect not slated for poling in 2012
- ● Additional 2012 transect poling locations

- ★ Park/Launch Access Poling Areas
- ★ Bridge Access Poling Areas
- Quarter Mile Grid Segment

Number of poling locations within each area will be dependent on site conditions. Full transects will have a minimum of 3 locations.

N

0 50 100 200

Scale in Feet

2012 POLING FOCUS AREAS & TRANSECTS
MP11.58-MP11.99

SHEET 46 OF 170

ENBRIDGE LINE 6B MP 608
MARSHALL, MI PIPELINE RELEASE
ENBRIDGE ENERGY, LIMITED PARTNERSHIP

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Aerial Photography Date: April 2011

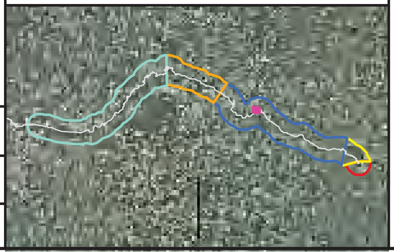
ENBRIDGE

Drawn: BRS 10/18/2011

Approved: DBR 10/18/2011

Project #: 106-4186

Map Location



Legend

Late Summer 2011 Delineation Area

Spring 2011 Delineation Area

2011 Poling Focus Areas

Transects

— 2011 transect to be poled in 2012

- - 2011 transect not slated for poling in 2012

● Additional 2012 transect poling locations

★ Park/Launch Access Poling Areas

★ Bridge Access Poling Areas

— Quarter Mile Grid Segment

Number of poling locations within each area will be dependent on site conditions. Full transects will have a minimum of 3 locations.

N

0 50 100 200

Scale in Feet

2012 POLING FOCUS AREAS & TRANSECTS

MP11.99-MP12.17

SHEET 47 OF 170

ENBRIDGE LINE 6B MP 608

MARSHALL, MI PIPELINE RELEASE

ENBRIDGE ENERGY, LIMITED PARTNERSHIP

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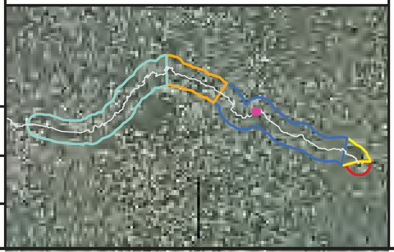
Aerial Photography Date: April 2011

ENBRIDGE

Drawn:	BRS 10/18/2011
Approved:	DBR 10/18/2011
Project #:	106-4186

Map Location



Legend

- Late Summer 2011 Delineation Area
- Spring 2011 Delineation Area
- *2011 Poling Focus Areas*

Transects

- 2011 transect to be poled in 2012
- 2011 transect not slated for poling in 2012
- ● Additional 2012 transect poling locations

- ★ Park/Launch Access Poling Areas
- ★ Bridge Access Poling Areas
- Quarter Mile Grid Segment

N

Number of poling locations within each area will be dependent on site conditions. Full transects will have a minimum of 3 locations.

0 50 100 200
Scale in Feet

2012 POLING FOCUS AREAS & TRANSECTS
MP12.17-MP12.39
SHEET 48 OF 170
ENBRIDGE LINE 6B MP 608
MARSHALL, MI PIPELINE RELEASE
ENBRIDGE ENERGY, LIMITED PARTNERSHIP

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Aerial Photography Date: April 2011

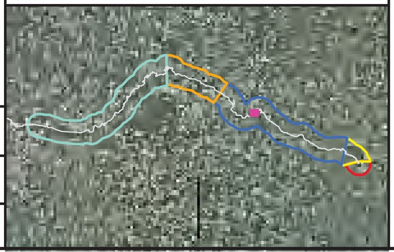
ENBRIDGE

Drawn: BRS 10/18/2011

Approved: DBR 10/18/2011

Project #: 106-4186

Map Location



Legend

- Late Summer 2011 Delineation Area
- Spring 2011 Delineation Area
- *2011 Poling Focus Areas*

Transects

- 2011 transect to be poled in 2012
- 2011 transect not slated for poling in 2012
- ● Additional 2012 transect poling locations

- ★ Park/Launch Access Poling Areas
- ★ Bridge Access Poling Areas
- Quarter Mile Grid Segment

Number of poling locations within each area will be dependent on site conditions. Full transects will have a minimum of 3 locations.

N

0 50 100 200

Scale in Feet

2012 POLING FOCUS AREAS & TRANSECTS

MP12.39-MP12.53

SHEET 49 OF 170

ENBRIDGE LINE 6B MP 608

MARSHALL, MI PIPELINE RELEASE

ENBRIDGE ENERGY, LIMITED PARTNERSHIP

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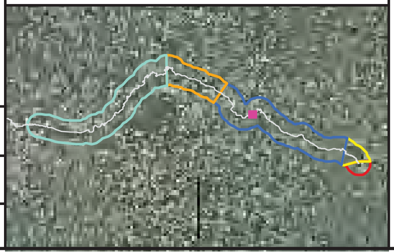
Aerial Photography Date: April 2011

ENBRIDGE

Drawn: BRS 10/18/2011
Approved: DBR 10/18/2011
Project #: 106-4186

Map Location



Legend

- Late Summer 2011 Delineation Area
- Spring 2011 Delineation Area
- *2011 Poling Focus Areas*

Transcripts

- 2011 transect to be poled in 2012
- 2011 transect not slated for poling in 2012
- ● Additional 2012 transect poling locations

- ★ Park/Launch Access Poling Areas
- ★ Bridge Access Poling Areas
- Quarter Mile Grid Segment

Number of poling locations within each area will be dependent on site conditions. Full transects will have a minimum of 3 locations.

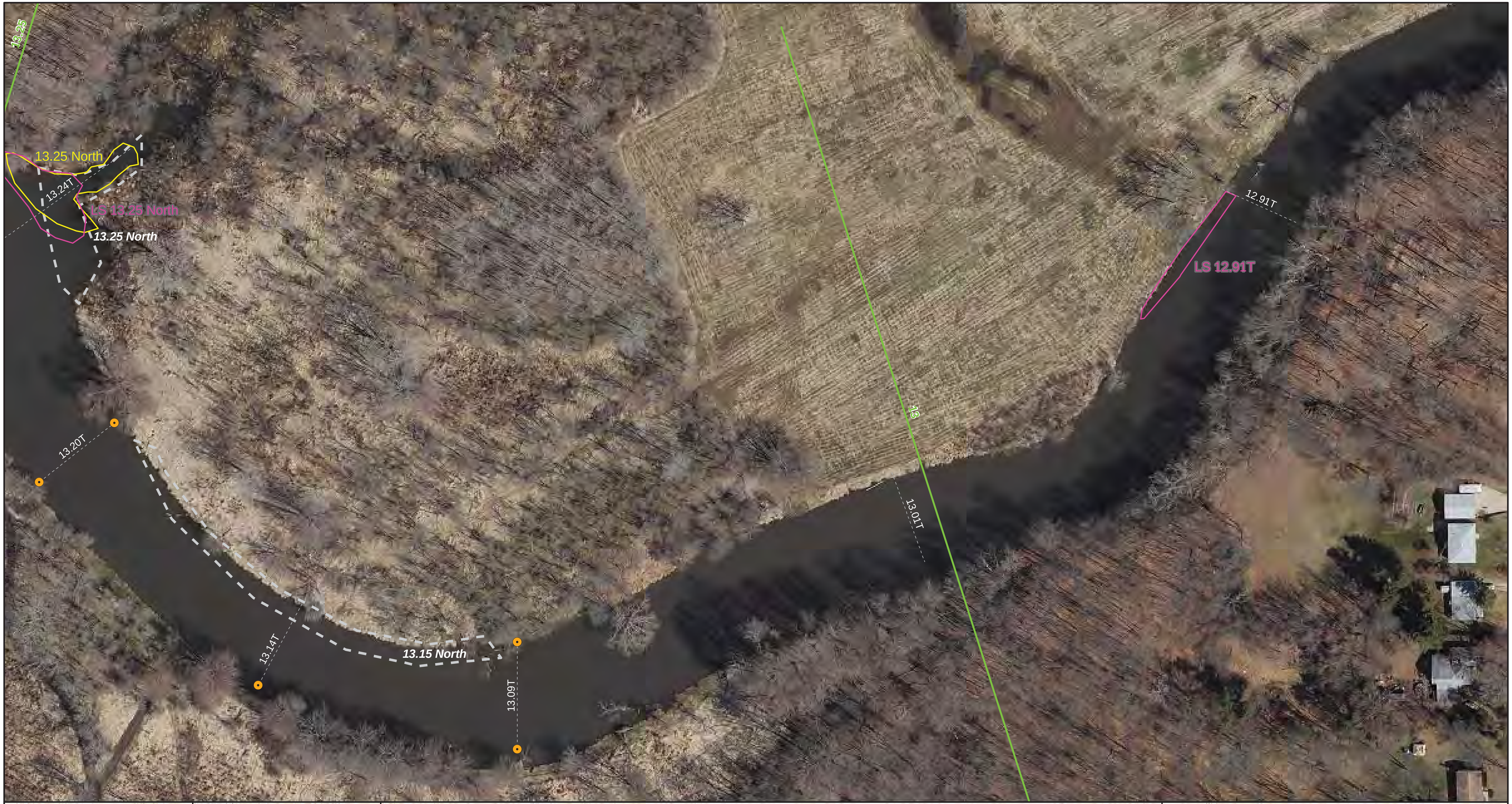
N

0 50 100 200
Scale in Feet

2012 POLING FOCUS AREAS & TRANSECTS
MP12.53-MP12.87
SHEET 50 OF 170
ENBRIDGE LINE 6B MP 608
MARSHALL, MI PIPELINE RELEASE
ENBRIDGE ENERGY, LIMITED PARTNERSHIP

H:\ArcMap Project Files\Report Maps\2012 Plan\2012_Poling_Reassessment_Plan_101811.mxd

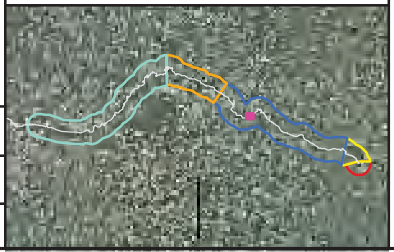
Aerial Photography Date: April 2011



ENBRIDGE

Drawn: BRS 10/18/2011
Approved: DBR 10/18/2011
Project #: 106-4186

Map Location



Legend

- Late Summer 2011 Delineation Area
- Spring 2011 Delineation Area
- *2011 Poling Focus Areas*

Transcripts

- — 2011 transect to be poled in 2012
- - - - 2011 transect not slated for poling in 2012
- ● Additional 2012 transect poling locations

- ★ Park/Launch Access Poling Areas
- ★ Bridge Access Poling Areas
- — Quarter Mile Grid Segment

Number of poling locations within each area will be dependent on site conditions. Full transects will have a minimum of 3 locations.

N

0 50 100 200
Scale in Feet

2012 POLING FOCUS AREAS & TRANSECTS
MP12.87-MP13.21
SHEET 51 OF 170
ENBRIDGE LINE 6B MP 608
MARSHALL, MI PIPELINE RELEASE
ENBRIDGE ENERGY, LIMITED PARTNERSHIP

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Aerial Photography Date: April 2011

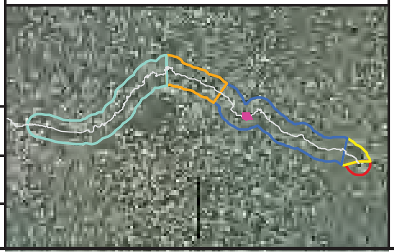
ENBRIDGE

Drawn: BRS 10/18/2011

Approved: DBR 10/18/2011

Project #: 106-4186

Map Location



Legend

- Late Summer 2011 Delineation Area
- Spring 2011 Delineation Area
- *2011 Poling Focus Areas*

Transects

- 2011 transect to be poled in 2012
- 2011 transect not slated for poling in 2012
- ● Additional 2012 transect poling locations

- ★ Park/Launch Access Poling Areas
- ★ Bridge Access Poling Areas
- Quarter Mile Grid Segment

Number of poling locations within each area will be dependent on site conditions. Full transects will have a minimum of 3 locations.

N

0 50 100 200

Scale in Feet

2012 POLING FOCUS AREAS & TRANSECTS
MP13.21-MP13.53
SHEET 52 OF 170
ENBRIDGE LINE 6B MP 608
MARSHALL, MI PIPELINE RELEASE
ENBRIDGE ENERGY, LIMITED PARTNERSHIP

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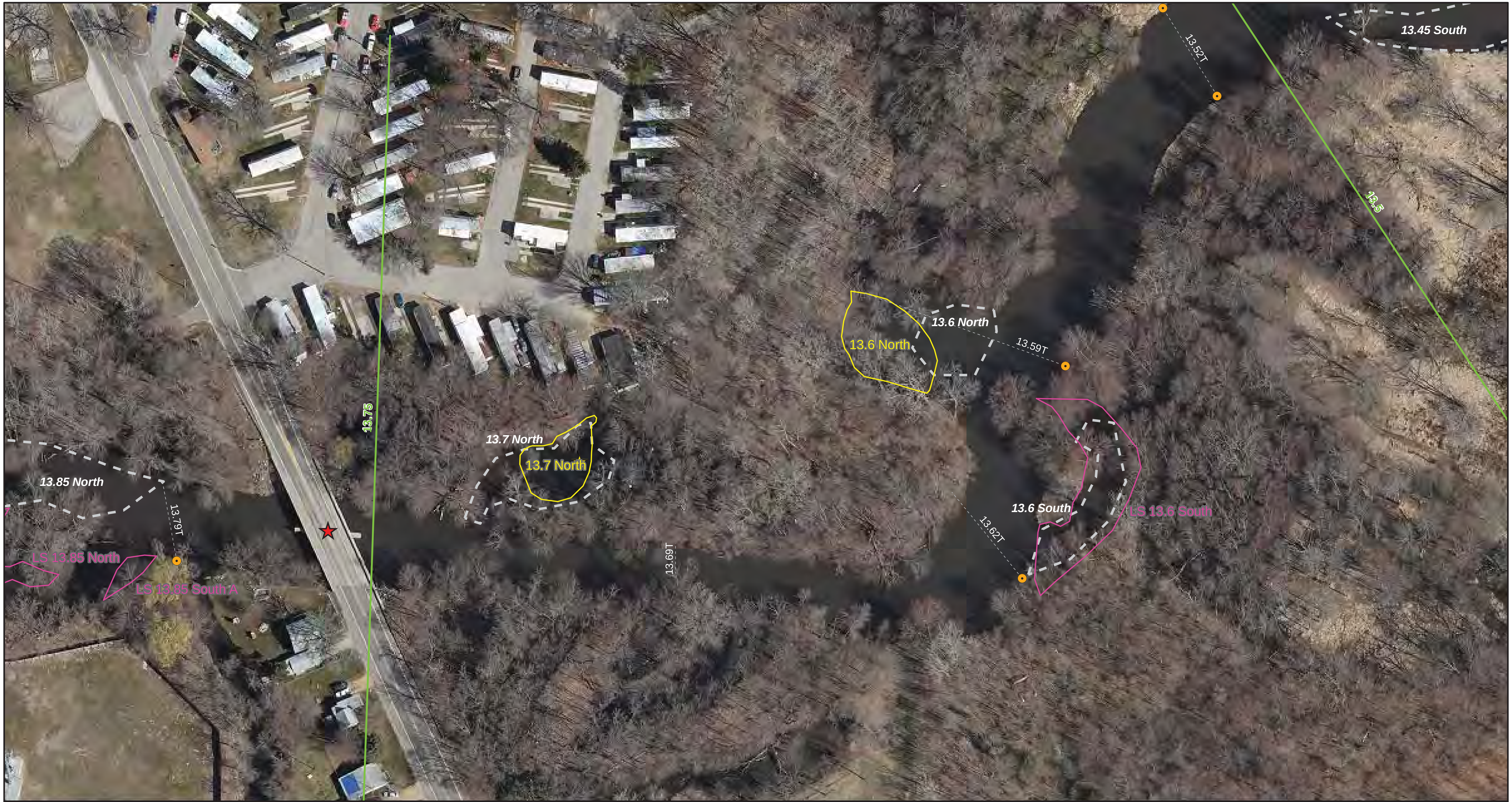
Aerial Photography Date: April 2011



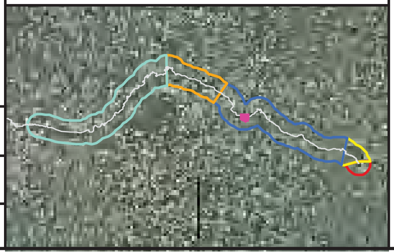
ENBRIDGE

Drawn: BRS 10/18/2011

Approved: DBR 10/18/2011

Project #: 106-4186

Map Location



Legend

- Late Summer 2011 Delineation Area
- Spring 2011 Delineation Area
- *2011 Poling Focus Areas*

Transects

- 2011 transect to be poled in 2012
- 2011 transect not slated for poling in 2012
- ● Additional 2012 transect poling locations

- ★ Park/Launch Access Poling Areas
- ★ Bridge Access Poling Areas
- Quarter Mile Grid Segment

Number of poling locations within each area will be dependent on site conditions. Full transects will have a minimum of 3 locations.

N

0 50 100 200
Scale in Feet

2012 POLING FOCUS AREAS & TRANSECTS
MP13.53-MP13.82

SHEET 53 OF 170

ENBRIDGE LINE 6B MP 608
MARSHALL, MI PIPELINE RELEASE
ENBRIDGE ENERGY, LIMITED PARTNERSHIP

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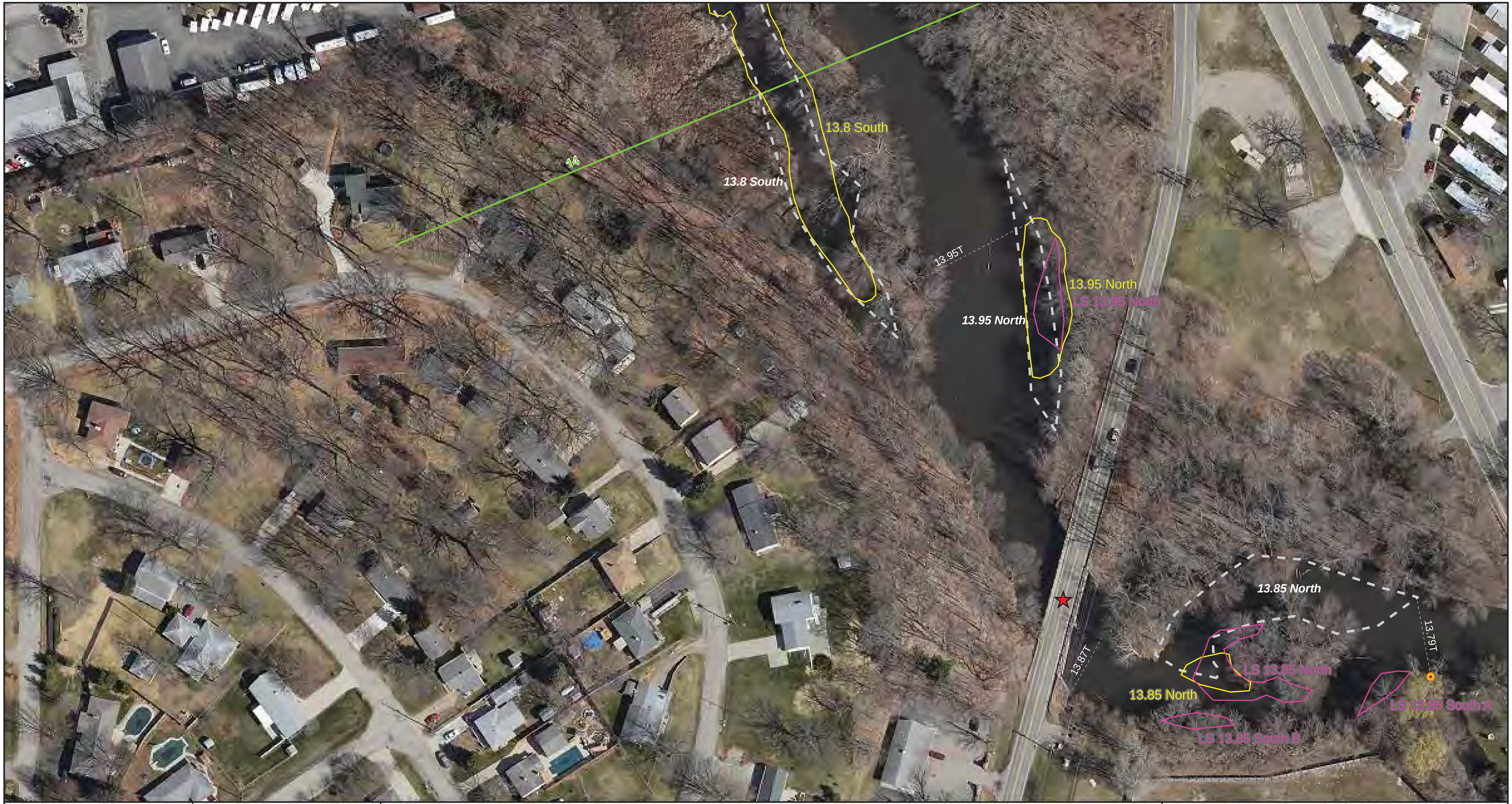
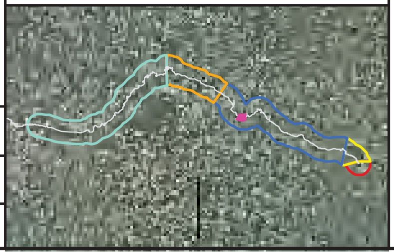
Aerial Photography Date: April 2011



ENBRIDGE

Drawn:	BRS 10/18/2011
Approved:	DBR 10/18/2011
Project #:	106-4186

Map Location



Legend

- Late Summer 2011 Delineation Area
- Spring 2011 Delineation Area
- *2011 Poling Focus Areas*

Transects

- 2011 transect to be poled in 2012
- 2011 transect not slated for poling in 2012
- ● Additional 2012 transect poling locations

- ★ Park/Launch Access Poling Areas
- ★ Bridge Access Poling Areas
- Quarter Mile Grid Segment

Number of poling locations within each area will be dependent on site conditions. Full transects will have a minimum of 3 locations.

N

0 50 100 200
Scale in Feet

2012 POLING FOCUS AREAS & TRANSECTS
MP13.82-MP14.00
SHEET 54 OF 170
ENBRIDGE LINE 6B MP 608
MARSHALL, MI PIPELINE RELEASE
ENBRIDGE ENERGY, LIMITED PARTNERSHIP

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Aerial Photography Date: April 2011

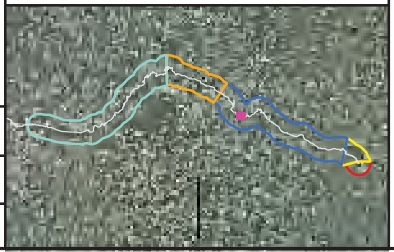
ENBRIDGE

Drawn: BRS 10/18/2011

Approved: DBR 10/18/2011

Project #: 106-4186

Map Location



Legend

Late Summer 2011 Delineation Area

Spring 2011 Delineation Area

2011 Poling Focus Areas

Transects

2011 transect to be poled in 2012

2011 transect not slated for poling in 2012

● Additional 2012 transect poling locations

★ Park/Launch Access Poling Areas

★ Bridge Access Poling Areas

Quarter Mile Grid Segment

Number of poling locations within each area will be dependent on site conditions. Full transects will have a minimum of 3 locations.

N

0 50 100 200

Scale in Feet

2012 POLING FOCUS AREAS & TRANSECTS

MP14.00-MP14.28

SHEET 55 OF 170

ENBRIDGE LINE 6B MP 608

MARSHALL, MI PIPELINE RELEASE

ENBRIDGE ENERGY, LIMITED PARTNERSHIP

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Aerial Photography Date: April 2011

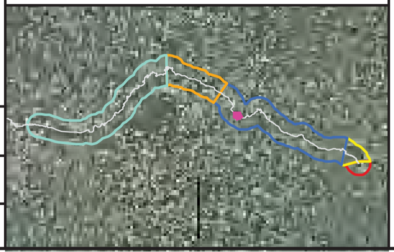
ENBRIDGE

Drawn: BRS 10/18/2011

Approved: DBR 10/18/2011

Project #: 106-4186

Map Location



Legend

- Late Summer 2011 Delineation Area
- Spring 2011 Delineation Area
- *2011 Poling Focus Areas*

Transcripts

- 2011 transect to be poled in 2012
- 2011 transect not slated for poling in 2012
- ● Additional 2012 transect poling locations

- ★ Park/Launch Access Poling Areas
- ★ Bridge Access Poling Areas
- Quarter Mile Grid Segment

Number of poling locations within each area will be dependent on site conditions. Full transects will have a minimum of 3 locations.

N

0 50 100 200

Scale in Feet

2012 POLING FOCUS AREAS & TRANSECTS

MP14.28-MP14.52

SHEET 56 OF 170

ENBRIDGE LINE 6B MP 608

MARSHALL, MI PIPELINE RELEASE

ENBRIDGE ENERGY, LIMITED PARTNERSHIP

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Aerial Photography Date: April 2011

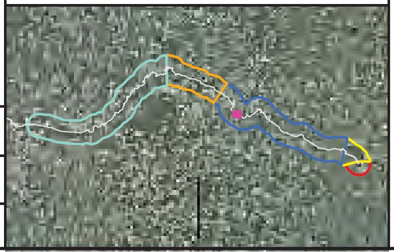
ENBRIDGE

Drawn: BRS 10/18/2011

Approved: DBR 10/18/2011

Project #: 106-4186

Map Location



Legend

- Late Summer 2011 Delineation Area
- Spring 2011 Delineation Area
- *2011 Poling Focus Areas*

Transects

- 2011 transect to be poled in 2012
- 2011 transect not slated for poling in 2012
- ● Additional 2012 transect poling locations

- ★ Park/Launch Access Poling Areas
- ★ Bridge Access Poling Areas
- Quarter Mile Grid Segment

Number of poling locations within each area will be dependent on site conditions. Full transects will have a minimum of 3 locations.

N

0 50 100 200
Scale in Feet

2012 POLING FOCUS AREAS & TRANSECTS
MP14.52-MP14.67
SHEET 57 OF 170
ENBRIDGE LINE 6B MP 608
MARSHALL, MI PIPELINE RELEASE
ENBRIDGE ENERGY, LIMITED PARTNERSHIP

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Aerial Photography Date: April 2011

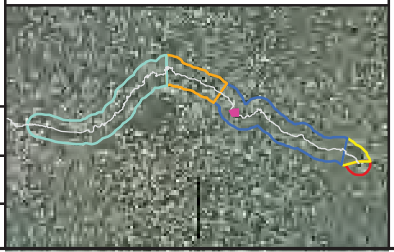
ENBRIDGE

Drawn: BRS 10/18/2011

Approved: DBR 10/18/2011

Project #: 106-4186

Map Location



Legend

Late Summer 2011 Delineation Area

Spring 2011 Delineation Area

2011 Poling Focus Areas

Transects

2011 transect to be poled in 2012

2011 transect not slated for poling in 2012

Additional 2012 transect poling locations

★ Park/Launch Access Poling Areas

★ Bridge Access Poling Areas

Quarter Mile Grid Segment

Number of poling locations within each area will be dependent on site conditions. Full transects will have a minimum of 3 locations.

N

0 50 100 200

Scale in Feet

2012 POLING FOCUS AREAS & TRANSECTS

MP14.67-MP14.95

SHEET 58 OF 170

ENBRIDGE LINE 6B MP 608
MARSHALL, MI PIPELINE RELEASE
ENBRIDGE ENERGY, LIMITED PARTNERSHIP

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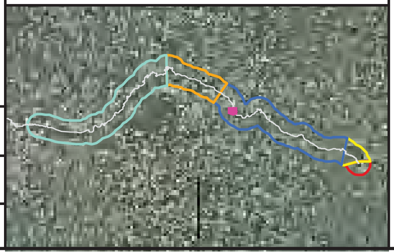
Aerial Photography Date: April 2011

ENBRIDGE

Drawn: BRS 10/18/2011
Approved: DBR 10/18/2011
Project #: 106-4186

Map Location



Legend

- Late Summer 2011 Delineation Area
- Spring 2011 Delineation Area
- *2011 Poling Focus Areas*

Transects
- 2011 transect to be poled in 2012
- 2011 transect not slated for poling in 2012
- ● Additional 2012 transect poling locations

- ★ Park/Launch Access Poling Areas
- ★ Bridge Access Poling Areas
- Quarter Mile Grid Segment

Number of poling locations within each area will be dependent on site conditions. Full transects will have a minimum of 3 locations.

N

0 50 100 200
Scale in Feet

2012 POLING FOCUS AREAS & TRANSECTS
MP14.95-MP15.14
SHEET 59 OF 170
ENBRIDGE LINE 6B MP 608
MARSHALL, MI PIPELINE RELEASE
ENBRIDGE ENERGY, LIMITED PARTNERSHIP

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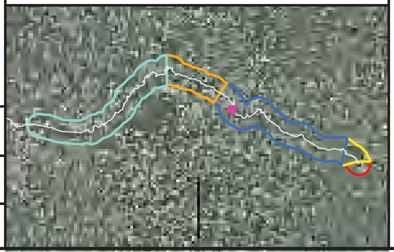
Aerial Photography Date: April 2011

Map Location



Legend

- Late Summer 2011 Delineation Area
- Spring 2011 Delineation Area
- *2011 Poling Focus Areas*

Transects

- 2011 transect to be poled in 2012
- 2011 transect not slated for poling in 2012
- ● Additional 2012 transect poling locations

- ★ Park/Launch Access Poling Areas
- ★ Bridge Access Poling Areas
- Quarter Mile Grid Segment

Number of poling locations within each area will be dependent on site conditions. Full transects will have a minimum of 3 locations.

N

0 50 100 200
Scale in Feet

ENBRIDGE

Drawn: BRS 10/18/2011
Approved: DBR 10/18/2011
Project #: 106-4186

2012 POLING FOCUS AREAS & TRANSECTS
MP15.14-MP15.31
SHEET 60 OF 170
ENBRIDGE LINE 6B MP 608
MARSHALL, MI PIPELINE RELEASE
ENBRIDGE ENERGY, LIMITED PARTNERSHIP

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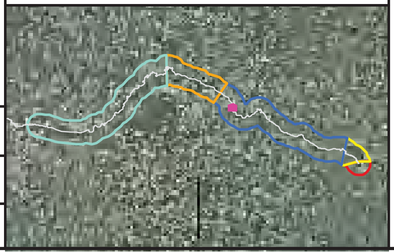
Aerial Photography Date: April 2011

Map Location



Legend

Late Summer 2011 Delineation Area

Spring 2011 Delineation Area

2011 Poling Focus Areas

Transcripts

2011 transect to be poled in 2012

2011 transect not slated for poling in 2012

● Additional 2012 transect poling locations

★ Park/Launch Access Poling Areas

★ Bridge Access Poling Areas

Quarter Mile Grid Segment

Number of poling locations within each area will be dependent on site conditions. Full transects will have a minimum of 3 locations.

N

0 50 100 200

Scale in Feet

ENBRIDGE

Drawn:	BRS 10/18/2011
Approved:	DBR 10/18/2011
Project #:	106-4186

2012 POLING FOCUS AREAS & TRANSECTS
MP15.31-MP15.53
SHEET 61 OF 170
ENBRIDGE LINE 6B MP 608
MARSHALL, MI PIPELINE RELEASE
ENBRIDGE ENERGY, LIMITED PARTNERSHIP

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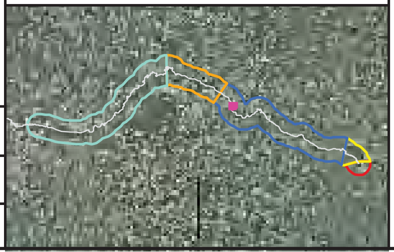
Aerial Photography Date: April 2011

![ENBRIDGE]

Drawn: BRS 10/18/2011
Approved: DBR 10/18/2011
Project #: 106-4186

Map Location



Legend

Late Summer 2011 Delineation Area	Transcripts	★ Park/Launch Access Poling Areas
Spring 2011 Delineation Area	2011 transect to be poled in 2012	★ Bridge Access Poling Areas
2011 Poling Focus Areas	2011 transect not slated for poling in 2012	Quarter Mile Grid Segment
	● Additional 2012 transect poling locations	

Number of poling locations within each area will be dependent on site conditions. Full transects will have a minimum of 3 locations.

N

0 50 100 200
Scale in Feet

2012 POLING FOCUS AREAS & TRANSECTS
MP15.53-MP15.69
SHEET 62 OF 170
ENBRIDGE LINE 6B MP 608
MARSHALL, MI PIPELINE RELEASE
ENBRIDGE ENERGY, LIMITED PARTNERSHIP

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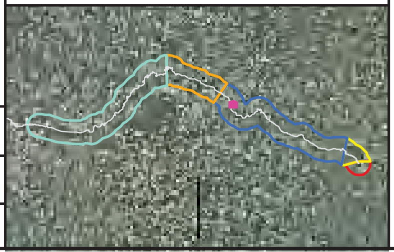
Aerial Photography Date: April 2011

ENBRIDGE

Drawn:	BRS 10/18/2011
Approved:	DBR 10/18/2011
Project #:	106-4186

Map Location



Legend

- Late Summer 2011 Delineation Area
- Spring 2011 Delineation Area
- *2011 Poling Focus Areas*

Transects

- — 2011 transect to be poled in 2012
- - - - 2011 transect not slated for poling in 2012
- ● Additional 2012 transect poling locations

- ★ Park/Launch Access Poling Areas
- ★ Bridge Access Poling Areas
- — Quarter Mile Grid Segment

Number of poling locations within each area will be dependent on site conditions. Full transects will have a minimum of 3 locations.

N

0 50 100 200

Scale in Feet

2012 POLING FOCUS AREAS & TRANSECTS
MP15.68-MP15.86

SHEET 63 OF 170

ENBRIDGE LINE 6B MP 608
MARSHALL, MI PIPELINE RELEASE
ENBRIDGE ENERGY, LIMITED PARTNERSHIP

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Aerial Photography Date: April 2011

2012 POLING FOCUS AREAS & TRANSECTS

MP15.86-MP16.08

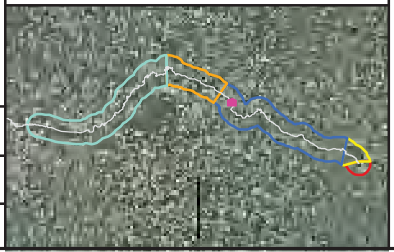
SHEET 64 OF 170

ENBRIDGE LINE 6B MP 608
MARSHALL, MI PIPELINE RELEASE
ENBRIDGE ENERGY, LIMITED PARTNERSHIP

ENBRIDGE

Drawn: BRS 10/18/2011
Approved: DBR 10/18/2011
Project #: 106-4186

Map Location



Legend

- Late Summer 2011 Delineation Area
- Spring 2011 Delineation Area
- *2011 Poling Focus Areas*

Transects

- 2011 transect to be poled in 2012
- 2011 transect not slated for poling in 2012
- ● Additional 2012 transect poling locations

- ★ Park/Launch Access Poling Areas
- ★ Bridge Access Poling Areas
- Quarter Mile Grid Segment

Number of poling locations within each area will be dependent on site conditions. Full transects will have a minimum of 3 locations.

N

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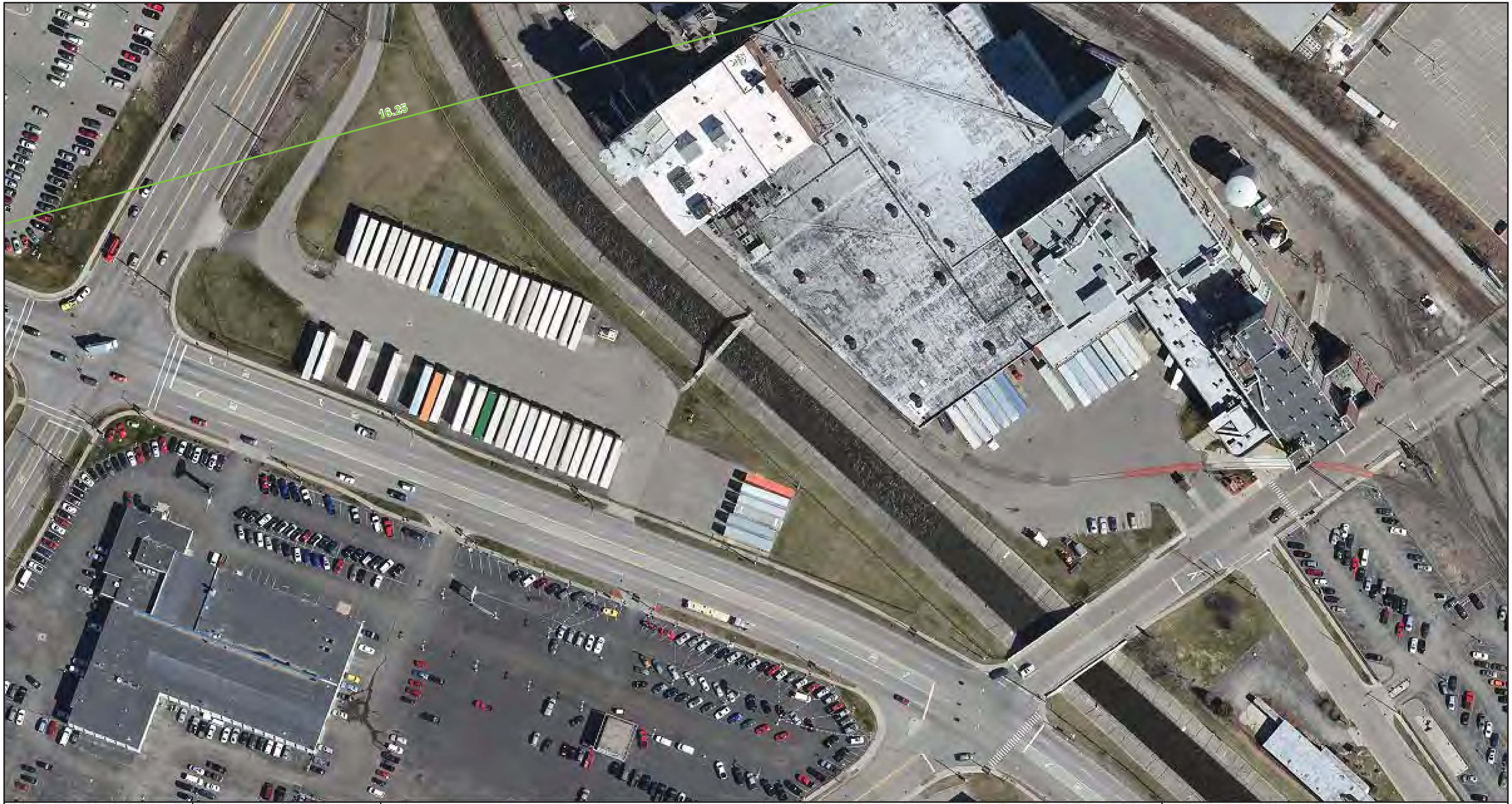
Aerial Photography Date: April 2011



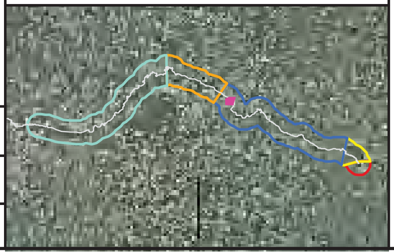
ENBRIDGE

Drawn: BRS 10/18/2011

Approved: DBR 10/18/2011

Project #: 106-4186

Map Location



Legend

- Late Summer 2011 Delineation Area
- Spring 2011 Delineation Area
- *2011 Poling Focus Areas*

Transects

- — 2011 transect to be poled in 2012
- - - 2011 transect not slated for poling in 2012
- ● Additional 2012 transect poling locations

- ★ Park/Launch Access Poling Areas
- ★ Bridge Access Poling Areas
- — Quarter Mile Grid Segment

Number of poling locations within each area will be dependent on site conditions. Full transects will have a minimum of 3 locations.

N

0 50 100 200

Scale in Feet

2012 POLING FOCUS AREAS & TRANSECTS

MP16.08-MP16.27

SHEET 65 OF 170

ENBRIDGE LINE 6B MP 608
MARSHALL, MI PIPELINE RELEASE
ENBRIDGE ENERGY, LIMITED PARTNERSHIP

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Aerial Photography Date: April 2011

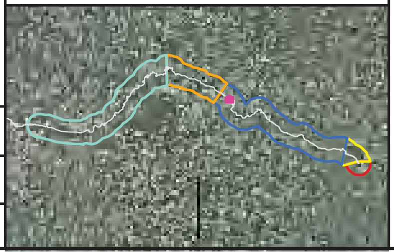
ENBRIDGE

Drawn: BRS 10/18/2011

Approved: DBR 10/18/2011

Project #: 106-4186

Map Location



Legend

▢ Late Summer 2011 Delineation Area

▢ Spring 2011 Delineation Area

▢ *2011 Poling Focus Areas*

Transects

— 2011 transect to be poled in 2012

- - - 2011 transect not slated for poling in 2012

● Additional 2012 transect poling locations

★ Park/Launch Access Poling Areas

★ Bridge Access Poling Areas

— Quarter Mile Grid Segment

Number of poling locations within each area will be dependent on site conditions. Full transects will have a minimum of 3 locations.

N

0 50 100 200

Scale in Feet

2012 POLING FOCUS AREAS & TRANSECTS

MP16.27-MP16.41

SHEET 66 OF 170

ENBRIDGE LINE 6B MP 608
MARSHALL, MI PIPELINE RELEASE
ENBRIDGE ENERGY, LIMITED PARTNERSHIP

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Aerial Photography Date: April 2011

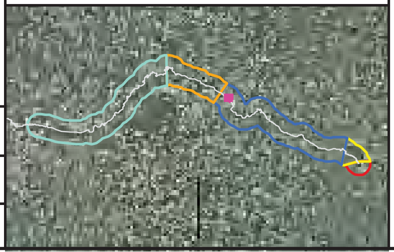
ENBRIDGE

Drawn: BRS 10/18/2011

Approved: DBR 10/18/2011

Project #: 106-4186

Map Location



Legend

- Late Summer 2011 Delineation Area
- Spring 2011 Delineation Area
- *2011 Poling Focus Areas*

Transects
- 2011 transect to be poled in 2012
- 2011 transect not slated for poling in 2012
- ● Additional 2012 transect poling locations

- ★ Park/Launch Access Poling Areas
- ★ Bridge Access Poling Areas
- Quarter Mile Grid Segment

Number of poling locations within each area will be dependent on site conditions. Full transects will have a minimum of 3 locations.

N

0 50 100 200
Scale in Feet

2012 POLING FOCUS AREAS & TRANSECTS
MP16.41-MP16.65
SHEET 67 OF 170

ENBRIDGE LINE 6B MP 608
MARSHALL, MI PIPELINE RELEASE
ENBRIDGE ENERGY, LIMITED PARTNERSHIP

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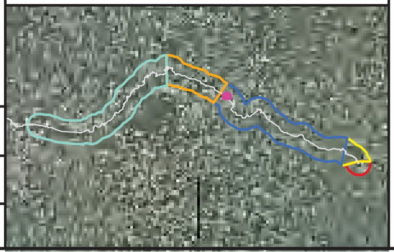
Aerial Photography Date: April 2011

ENBRIDGE

Drawn: BRS 10/18/2011
Approved: DBR 10/18/2011
Project #: 106-4186

Map Location



Legend

- Late Summer 2011 Delineation Area
- Spring 2011 Delineation Area
- *2011 Poling Focus Areas*

Transcripts

- 2011 transect to be poled in 2012
- 2011 transect not slated for poling in 2012
- ● Additional 2012 transect poling locations

- ★ Park/Launch Access Poling Areas
- ★ Bridge Access Poling Areas
- Quarter Mile Grid Segment

Number of poling locations within each area will be dependent on site conditions. Full transects will have a minimum of 3 locations.

N

0 50 100 200
Scale in Feet

2012 POLING FOCUS AREAS & TRANSECTS
MP16.65-MP16.81
SHEET 68 OF 170
ENBRIDGE LINE 6B MP 608
MARSHALL, MI PIPELINE RELEASE
ENBRIDGE ENERGY, LIMITED PARTNERSHIP

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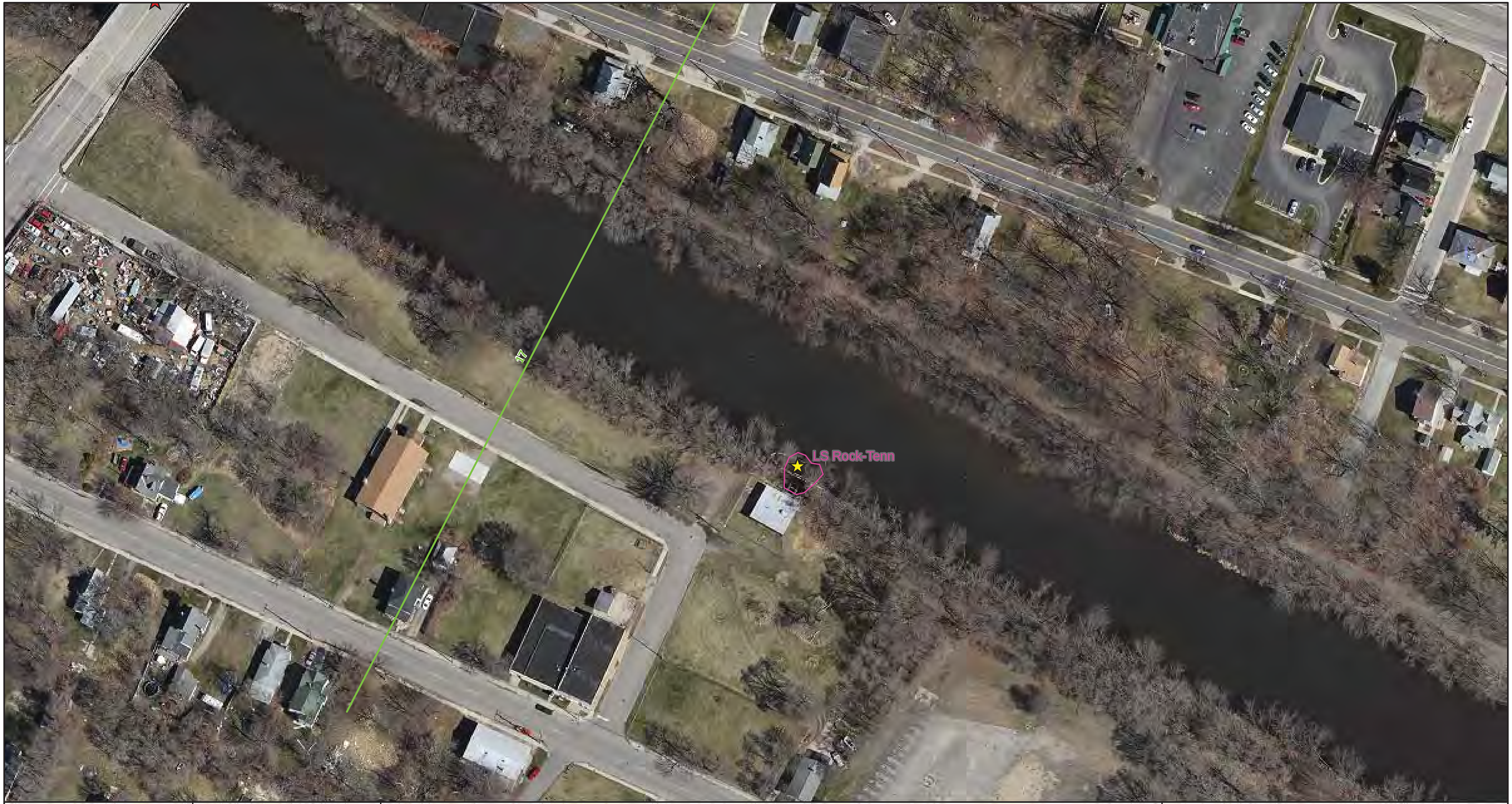
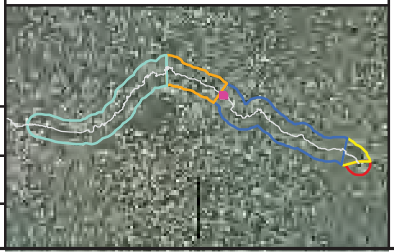
Aerial Photography Date: April 2011



ENBRIDGE

Drawn: BRS 10/18/2011
Approved: DBR 10/18/2011
Project #: 106-4186

Map Location



Legend

Late Summer 2011 Delineation Area
Spring 2011 Delineation Area
2011 Poling Focus Areas

Transects
2011 transect to be poled in 2012
2011 transect not slated for poling in 2012
● Additional 2012 transect poling locations

★ Park/Launch Access Poling Areas
★ Bridge Access Poling Areas
Quarter Mile Grid Segment

Number of poling locations within each area will be dependent on site conditions. Full transects will have a minimum of 3 locations.

N

0 50 100 200
Scale in Feet

2012 POLING FOCUS AREAS & TRANSECTS
MP16.81-MP17.08
SHEET 69 OF 170
ENBRIDGE LINE 6B MP 608
MARSHALL, MI PIPELINE RELEASE
ENBRIDGE ENERGY, LIMITED PARTNERSHIP

H:\ArcMap Project Files\Report Maps\2012 Plan\2012_Poling_Reassessment_Plan_101811.mxd

Aerial Photography Date: April 2011

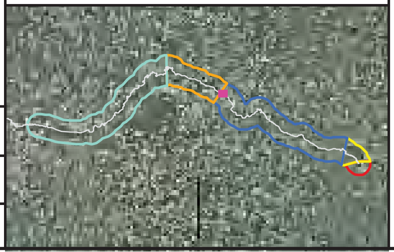
ENBRIDGE

Drawn: BRS 10/18/2011

Approved: DBR 10/18/2011

Project #: 106-4186

Map Location



Legend

- Late Summer 2011 Delineation Area
- Spring 2011 Delineation Area
- *2011 Poling Focus Areas*

Transcets

- 2011 transect to be poled in 2012
- 2011 transect not slated for poling in 2012
- ● Additional 2012 transect poling locations

- ★ Park/Launch Access Poling Areas
- ★ Bridge Access Poling Areas
- Quarter Mile Grid Segment

Number of poling locations within each area will be dependent on site conditions. Full transects will have a minimum of 3 locations.

0 50 100 200
Scale in Feet

N

2012 POLING FOCUS AREAS & TRANSECTS
MP17.08-MP17.22
SHEET 70 OF 170
ENBRIDGE LINE 6B MP 608
MARSHALL, MI PIPELINE RELEASE
ENBRIDGE ENERGY, LIMITED PARTNERSHIP

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Aerial Photography Date: April 2011

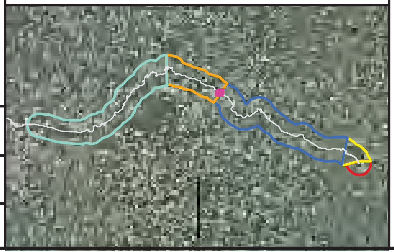
ENBRIDGE

Drawn: BRS 10/18/2011

Approved: DBR 10/18/2011

Project #: 106-4186

Map Location



Legend

- Late Summer 2011 Delineation Area
- Spring 2011 Delineation Area
- *2011 Poling Focus Areas*

Transects

- 2011 transect to be poled in 2012
- 2011 transect not slated for poling in 2012
- ● Additional 2012 transect poling locations

- ★ Park/Launch Access Poling Areas
- ★ Bridge Access Poling Areas
- Quarter Mile Grid Segment

Number of poling locations within each area will be dependent on site conditions. Full transects will have a minimum of 3 locations.

N

0 50 100 200
Scale in Feet

2012 POLING FOCUS AREAS & TRANSECTS
MP17.22-MP17.50

SHEET 71 OF 170

ENBRIDGE LINE 6B MP 608
MARSHALL, MI PIPELINE RELEASE
ENBRIDGE ENERGY, LIMITED PARTNERSHIP

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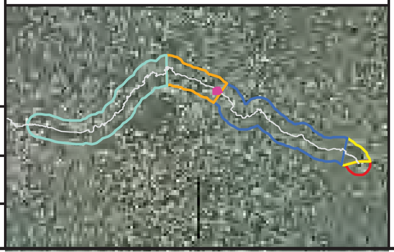
Aerial Photography Date: April 2011

2012 POLING FOCUS AREAS & TRANSECTS
MP17.50-MP17.78
SHEET 72 OF 170
ENBRIDGE LINE 6B MP 608
MARSHALL, MI PIPELINE RELEASE
ENBRIDGE ENERGY, LIMITED PARTNERSHIP

ENBRIDGE

Drawn: BRS 10/18/2011
Approved: DBR 10/18/2011
Project #: 106-4186

Map Location



Legend

Late Summer 2011 Delineation Area
Spring 2011 Delineation Area
2011 Poling Focus Areas

Transects
2011 transect to be poled in 2012
2011 transect not slated for poling in 2012
● Additional 2012 transect poling locations

★ Park/Launch Access Poling Areas
★ Bridge Access Poling Areas
Quarter Mile Grid Segment

Number of poling locations within each area will be dependent on site conditions. Full transects will have a minimum of 3 locations.

N

0 50 100 200
Scale in Feet

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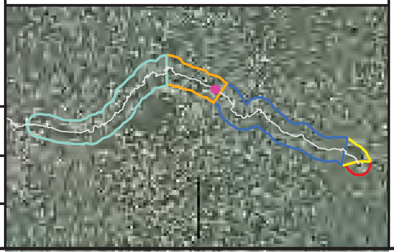
Aerial Photography Date: April 2011

ENBRIDGE

Drawn: BRS 10/18/2011
Approved: DBR 10/18/2011
Project #: 106-4186

Map Location



Legend

Late Summer 2011 Delineation Area
Spring 2011 Delineation Area
2011 Poling Focus Areas

Transects
2011 transect to be poled in 2012
2011 transect not slated for poling in 2012
● Additional 2012 transect poling locations

★ Park/Launch Access Poling Areas
★ Bridge Access Poling Areas
Quarter Mile Grid Segment

Number of poling locations within each area will be dependent on site conditions. Full transects will have a minimum of 3 locations.

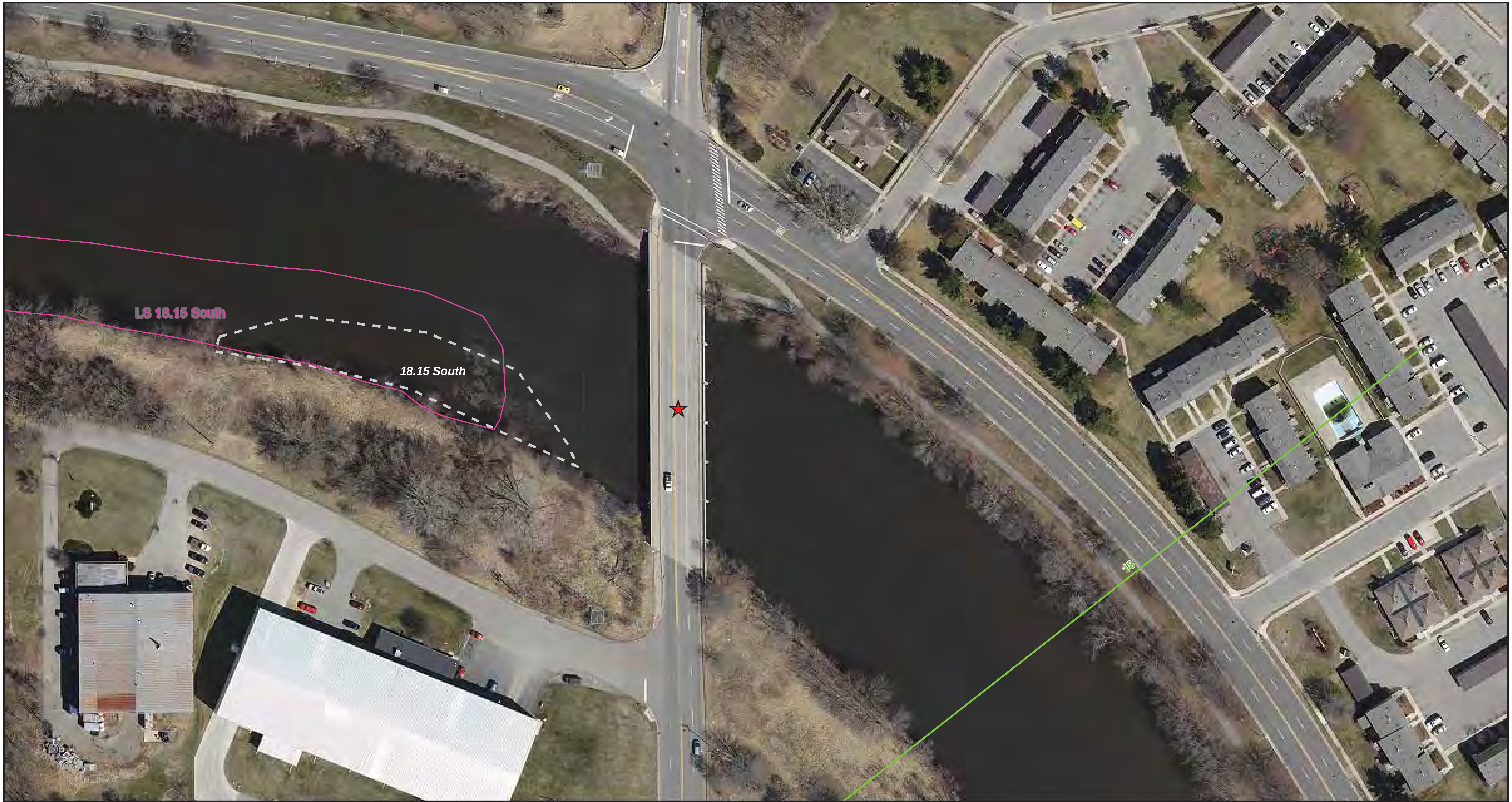
N

0 50 100 200
Scale in Feet

2012 POLING FOCUS AREAS & TRANSECTS
MP17.78-MP17.97
SHEET 73 OF 170
ENBRIDGE LINE 6B MP 608
MARSHALL, MI PIPELINE RELEASE
ENBRIDGE ENERGY, LIMITED PARTNERSHIP

H:\ArcMap Project Files\Report Maps\2012 Plan\2012_Poling_Reassessment_Plan_101811.mxd

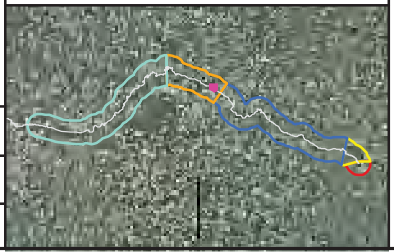
Aerial Photography Date: April 2011



ENBRIDGE

Drawn: BRS 10/18/2011
Approved: DBR 10/18/2011
Project #: 106-4186

Map Location



Legend

- Late Summer 2011 Delineation Area
- Spring 2011 Delineation Area
- *2011 Poling Focus Areas*

Transects
- 2011 transect to be poled in 2012
- 2011 transect not slated for poling in 2012
- ● Additional 2012 transect poling locations

- ★ Park/Launch Access Poling Areas
- ★ Bridge Access Poling Areas
- Quarter Mile Grid Segment

Number of poling locations within each area will be dependent on site conditions. Full transects will have a minimum of 3 locations.

N

0 50 100 200
Scale in Feet

2012 POLING FOCUS AREAS & TRANSECTS
MP17.97-MP18.23
SHEET 74 OF 170
ENBRIDGE LINE 6B MP 608
MARSHALL, MI PIPELINE RELEASE
ENBRIDGE ENERGY, LIMITED PARTNERSHIP

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Aerial Photography Date: April 2011

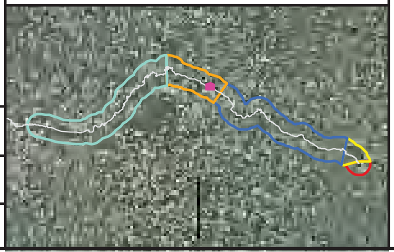
ENBRIDGE

Drawn: BRS 10/18/2011

Approved: DBR 10/18/2011

Project #: 106-4186

Map Location



Legend

- Late Summer 2011 Delineation Area
- Spring 2011 Delineation Area
- *2011 Poling Focus Areas*

Transects

- 2011 transect to be poled in 2012
- 2011 transect not slated for poling in 2012
- ● Additional 2012 transect poling locations

- ★ Park/Launch Access Poling Areas
- ★ Bridge Access Poling Areas
- Quarter Mile Grid Segment

Number of poling locations within each area will be dependent on site conditions. Full transects will have a minimum of 3 locations.

N

0 50 100 200

Scale in Feet

2012 POLING FOCUS AREAS & TRANSECTS
MP18.23-MP18.52

SHEET 75 OF 170

ENBRIDGE LINE 6B MP 608
MARSHALL, MI PIPELINE RELEASE
ENBRIDGE ENERGY, LIMITED PARTNERSHIP

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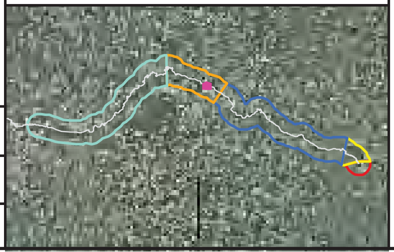
Aerial Photography Date: April 2011

ENBRIDGE

Drawn:	BRS 10/18/2011
Approved:	DBR 10/18/2011
Project #:	106-4186

Map Location



Legend

Late Summer 2011 Delineation Area
Spring 2011 Delineation Area
2011 Poling Focus Areas

Transects
2011 transect to be poled in 2012
2011 transect not slated for poling in 2012
● Additional 2012 transect poling locations

★ Park/Launch Access Poling Areas
★ Bridge Access Poling Areas
Quarter Mile Grid Segment

Number of poling locations within each area will be dependent on site conditions. Full transects will have a minimum of 3 locations.

N

0 50 100 200
Scale in Feet

2012 POLING FOCUS AREAS & TRANSECTS
MP18.52-MP18.83
SHEET 76 OF 170
ENBRIDGE LINE 6B MP 608
MARSHALL, MI PIPELINE RELEASE
ENBRIDGE ENERGY, LIMITED PARTNERSHIP

H:\ArcMap Project Files\Report Maps\2012 Plan\2012_Poling_Reassessment_Plan_101811.mxd

Aerial Photography Date: April 2011

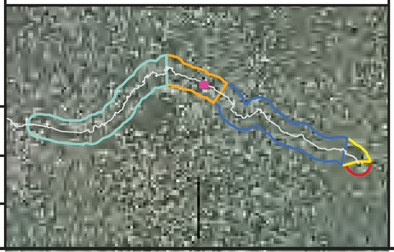
ENBRIDGE

Drawn: BRS 10/18/2011

Approved: DBR 10/18/2011

Project #: 106-4186

Map Location



Legend

Late Summer 2011 Delineation Area

Spring 2011 Delineation Area

2011 Poling Focus Areas

Transcts

2011 transect to be poled in 2012

2011 transect not slated for poling in 2012

● Additional 2012 transect poling locations

★ Park/Launch Access Poling Areas

★ Bridge Access Poling Areas

Quarter Mile Grid Segment

Number of poling locations within each area will be dependent on site conditions. Full transects will have a minimum of 3 locations.

N

0 50 100 200
Scale in Feet

2012 POLING FOCUS AREAS & TRANSECTS
MP18.83-MP19.10

SHEET 77 OF 170

ENBRIDGE LINE 6B MP 608
MARSHALL, MI PIPELINE RELEASE
ENBRIDGE ENERGY, LIMITED PARTNERSHIP

H:\ArcMap Project Files\Report Maps\2012 Plan\2012_Poling_Reassessment_Plan_101811.mxd

Aerial Photography Date: April 2011

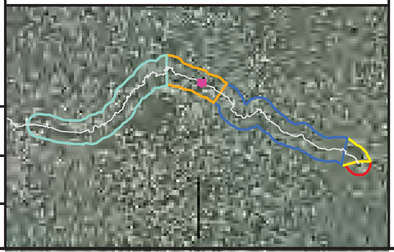
ENBRIDGE

Drawn: BRS 10/18/2011

Approved: DBR 10/18/2011

Project #: 106-4186

Map Location



Legend

🟪	Late Summer 2011 Delineation Area
🟨	Spring 2011 Delineation Area
⬜	*2011 Poling Focus Areas*

Transects

—	2011 transect to be poled in 2012
- - -	2011 transect not slated for poling in 2012
●	Additional 2012 transect poling locations

★	Park/Launch Access Poling Areas
★	Bridge Access Poling Areas
—	Quarter Mile Grid Segment

Number of poling locations within each area will be dependent on site conditions. Full transects will have a minimum of 3 locations.

N

0 50 100 200
Scale in Feet

2012 POLING FOCUS AREAS & TRANSECTS
MP19.10-MP19.31
SHEET 78 OF 170
ENBRIDGE LINE 6B MP 608
MARSHALL, MI PIPELINE RELEASE
ENBRIDGE ENERGY, LIMITED PARTNERSHIP

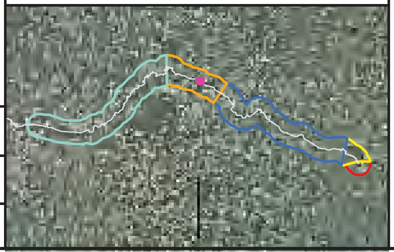
H:\ArcMap Project Files\Report Maps\2012 Plan\2012_Poling_Reassessment_Plan_101811.mxd

Aerial Photography Date: April 2011

ENBRIDGE

Drawn: BRS 10/18/2011
Approved: DBR 10/18/2011
Project #: 106-4186

Map Location



Legend

Late Summer 2011 Delineation Area	Transects	★	Park/Launch Access Poling Areas
Spring 2011 Delineation Area	2011 transect to be poled in 2012	★	Bridge Access Poling Areas
2011 Poling Focus Areas	2011 transect not slated for poling in 2012		Quarter Mile Grid Segment
	● Additional 2012 transect poling locations		

Number of poling locations within each area will be dependent on site conditions. Full transects will have a minimum of 3 locations.

N

0 50 100 200
Scale in Feet

2012 POLING FOCUS AREAS & TRANSECTS
MP19.31-MP19.58
SHEET 79 OF 170
ENBRIDGE LINE 6B MP 608
MARSHALL, MI PIPELINE RELEASE
ENBRIDGE ENERGY, LIMITED PARTNERSHIP

H:\ArcMap Project Files\Report Maps\2012 Plan\2012_Poling_Reassessment_Plan_101811.mxd

Aerial Photography Date: April 2011

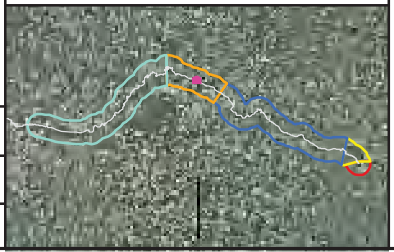
ENBRIDGE

Drawn: BRS 10/18/2011

Approved: DBR 10/18/2011

Project #: 106-4186

Map Location



Legend

- Late Summer 2011 Delineation Area
- Spring 2011 Delineation Area
- *2011 Poling Focus Areas*

Transects

- 2011 transect to be poled in 2012
- 2011 transect not slated for poling in 2012
- ● Additional 2012 transect poling locations

- ★ Park/Launch Access Poling Areas
- ★ Bridge Access Poling Areas
- Quarter Mile Grid Segment

Number of poling locations within each area will be dependent on site conditions. Full transects will have a minimum of 3 locations.

N

0 50 100 200

Scale in Feet

2012 POLING FOCUS AREAS & TRANSECTS
MP19.58-MP19.90
SHEET 80 OF 170

ENBRIDGE LINE 6B MP 608
MARSHALL, MI PIPELINE RELEASE
ENBRIDGE ENERGY, LIMITED PARTNERSHIP

H:\ArcMap Project Files\Report Maps\2012 Plan\2012_Poling_Reassessment_Plan_101811.mxd

Aerial Photography Date: April 2011

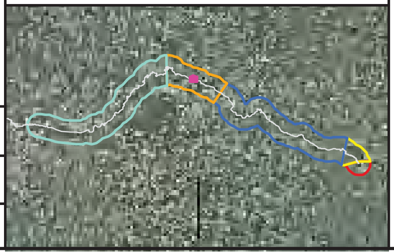
ENBRIDGE

Drawn: BRS 10/18/2011

Approved: DBR 10/18/2011

Project #: 106-4186

Map Location



Legend

- Late Summer 2011 Delineation Area
- Spring 2011 Delineation Area
- *2011 Poling Focus Areas*

Transects

- 2011 transect to be poled in 2012
- 2011 transect not slated for poling in 2012
- ● Additional 2012 transect poling locations

- ★ Park/Launch Access Poling Areas
- ★ Bridge Access Poling Areas
- Quarter Mile Grid Segment

N

Number of poling locations within each area will be dependent on site conditions. Full transects will have a minimum of 3 locations.

0 50 100 200
Scale in Feet

2012 POLING FOCUS AREAS & TRANSECTS
MP19.90-MP20.17
SHEET 81 OF 170
ENBRIDGE LINE 6B MP 608
MARSHALL, MI PIPELINE RELEASE
ENBRIDGE ENERGY, LIMITED PARTNERSHIP

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Aerial Photography Date: April 2011

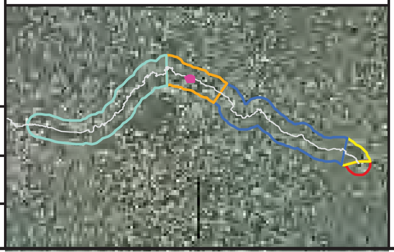
ENBRIDGE

Drawn: BRS 10/18/2011

Approved: DBR 10/18/2011

Project #: 106-4186

Map Location



Legend

- Late Summer 2011 Delineation Area
- Spring 2011 Delineation Area
- *2011 Poling Focus Areas*

Transcripts

- 2011 transect to be poled in 2012
- 2011 transect not slated for poling in 2012
- ● Additional 2012 transect poling locations

- ★ Park/Launch Access Poling Areas
- ★ Bridge Access Poling Areas
- Quarter Mile Grid Segment

Number of poling locations within each area will be dependent on site conditions. Full transects will have a minimum of 3 locations.

N

0 50 100 200

Scale in Feet

2012 POLING FOCUS AREAS & TRANSECTS

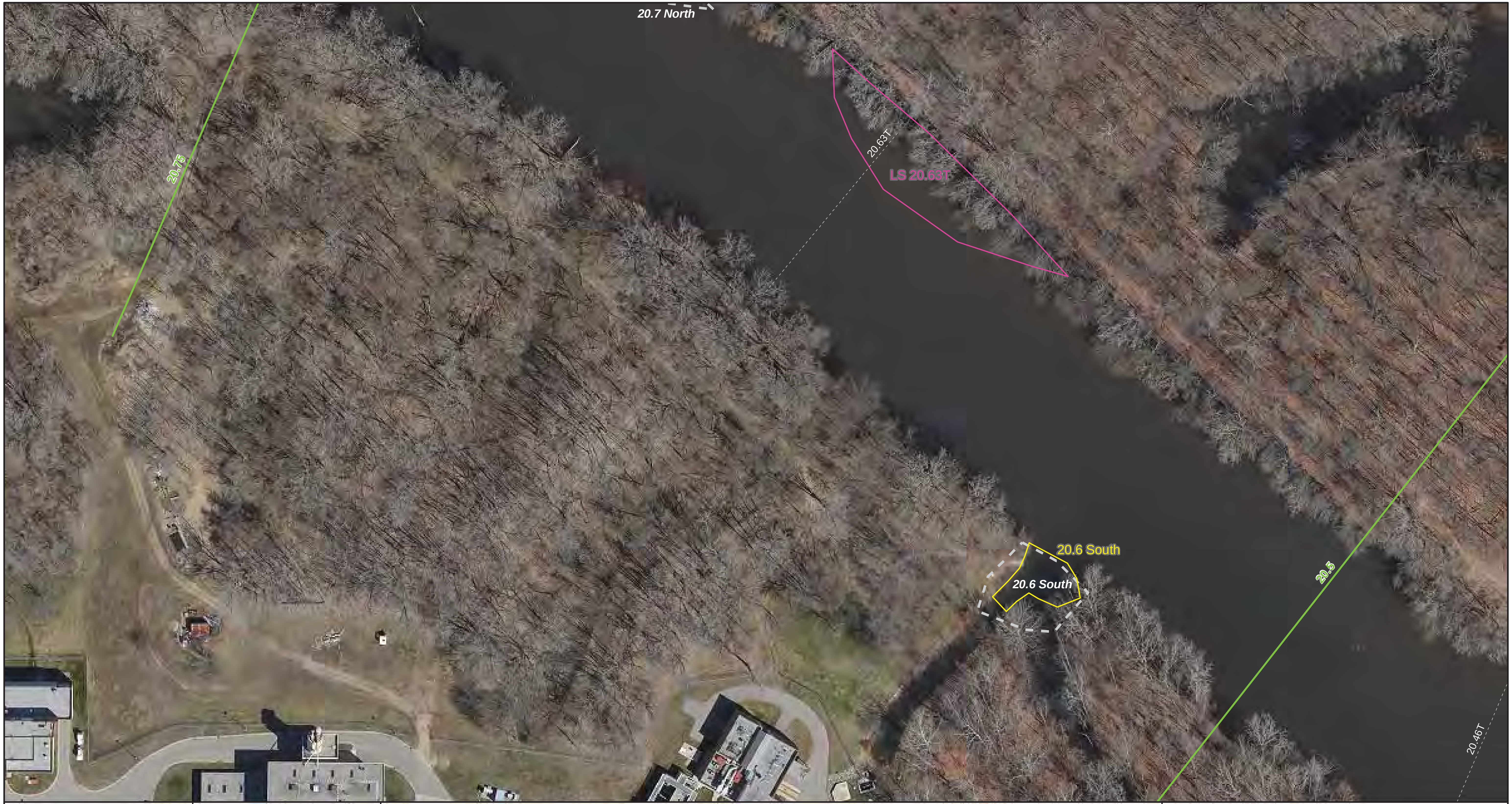
MP20.17-MP20.48

SHEET 82 OF 170

ENBRIDGE LINE 6B MP 608
MARSHALL, MI PIPELINE RELEASE
ENBRIDGE ENERGY, LIMITED PARTNERSHIP

H:\ArcMap Project Files\Report Maps\2012 Plan\2012_Poling_Reassessment_Plan_101811.mxd

Aerial Photography Date: April 2011

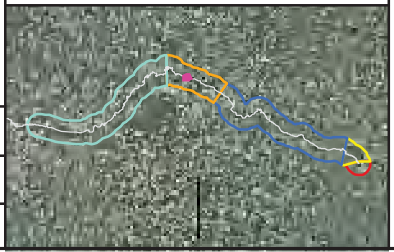


2012 POLING FOCUS AREAS & TRANSECTS
MP20.48-MP20.69
SHEET 83 OF 170
ENBRIDGE LINE 6B MP 608
MARSHALL, MI PIPELINE RELEASE
ENBRIDGE ENERGY, LIMITED PARTNERSHIP

ENBRIDGE

Drawn: BRS 10/18/2011
Approved: DBR 10/18/2011
Project #: 106-4186

Map Location



Legend

- Late Summer 2011 Delineation Area
- Spring 2011 Delineation Area
- *2011 Poling Focus Areas*

Transcripts

- 2011 transect to be poled in 2012
- 2011 transect not slated for poling in 2012
- ● Additional 2012 transect poling locations

- ★ Park/Launch Access Poling Areas
- ★ Bridge Access Poling Areas
- Quarter Mile Grid Segment

Number of poling locations within each area will be dependent on site conditions. Full transects will have a minimum of 3 locations.

N

0 50 100 200
Scale in Feet

H:\ArcMap Project Files\Report Maps\2012 Plan\2012_Poling_Reassessment_Plan_101811.mxd

Aerial Photography Date: April 2011

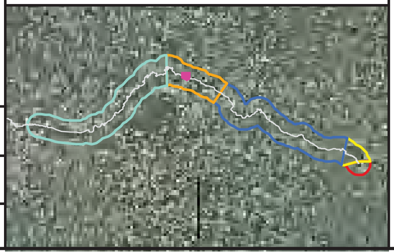
ENBRIDGE

Drawn: BRS 10/18/2011

Approved: DBR 10/18/2011

Project #: 106-4186

Map Location



Legend

- Late Summer 2011 Delineation Area
- Spring 2011 Delineation Area
- *2011 Poling Focus Areas*

Transcripts

- 2011 transect to be poled in 2012
- 2011 transect not slated for poling in 2012
- ● Additional 2012 transect poling locations

- ★ Park/Launch Access Poling Areas
- ★ Bridge Access Poling Areas
- Quarter Mile Grid Segment

Number of poling locations within each area will be dependent on site conditions. Full transects will have a minimum of 3 locations.

N

0 50 100 200
Scale in Feet

2012 POLING FOCUS AREAS & TRANSECTS
MP20.69-MP20.90

SHEET 84 OF 170

ENBRIDGE LINE 6B MP 608
MARSHALL, MI PIPELINE RELEASE
ENBRIDGE ENERGY, LIMITED PARTNERSHIP

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Aerial Photography Date: April 2011

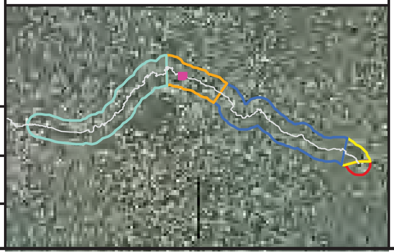
ENBRIDGE

Drawn: BRS 10/18/2011

Approved: DBR 10/18/2011

Project #: 106-4186

Map Location



Legend

- Late Summer 2011 Delineation Area
- Spring 2011 Delineation Area
- *2011 Poling Focus Areas*

Transcripts

- 2011 transect to be poled in 2012
- 2011 transect not slated for poling in 2012
- ● Additional 2012 transect poling locations

- ★ Park/Launch Access Poling Areas
- ★ Bridge Access Poling Areas
- Quarter Mile Grid Segment

Number of poling locations within each area will be dependent on site conditions. Full transects will have a minimum of 3 locations.

N

0 50 100 200

Scale in Feet

2012 POLING FOCUS AREAS & TRANSECTS
MP20.90-MP21.21

SHEET 85 OF 170

ENBRIDGE LINE 6B MP 608
MARSHALL, MI PIPELINE RELEASE
ENBRIDGE ENERGY, LIMITED PARTNERSHIP

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Aerial Photography Date: April 2011

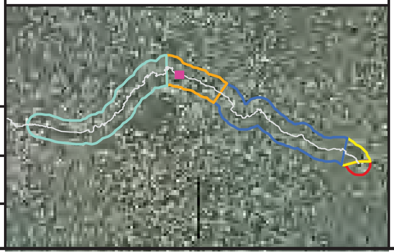
ENBRIDGE

Drawn: BRS 10/18/2011

Approved: DBR 10/18/2011

Project #: 106-4186

Map Location



Legend

- Late Summer 2011 Delineation Area
- Spring 2011 Delineation Area
- *2011 Poling Focus Areas*

Transects

- 2011 transect to be poled in 2012
- 2011 transect not slated for poling in 2012
- ● Additional 2012 transect poling locations

- ★ Park/Launch Access Poling Areas
- ★ Bridge Access Poling Areas
- Quarter Mile Grid Segment

N

Number of poling locations within each area will be dependent on site conditions. Full transects will have a minimum of 3 locations.

0 50 100 200
Scale in Feet

2012 POLING FOCUS AREAS & TRANSECTS
MP21.21-MP21.50

SHEET 86 OF 170

ENBRIDGE LINE 6B MP 608
MARSHALL, MI PIPELINE RELEASE
ENBRIDGE ENERGY, LIMITED PARTNERSHIP

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Aerial Photography Date: April 2011

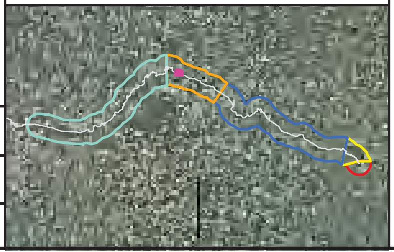
ENBRIDGE

Drawn: BRS 10/18/2011

Approved: DBR 10/18/2011

Project #: 106-4186

Map Location



Legend

Late Summer 2011 Delineation Area

Spring 2011 Delineation Area

2011 Poling Focus Areas

Transects

2011 transect to be poled in 2012

2011 transect not slated for poling in 2012

● Additional 2012 transect poling locations

★ Park/Launch Access Poling Areas

★ Bridge Access Poling Areas

Quarter Mile Grid Segment

Number of poling locations within each area will be dependent on site conditions. Full transects will have a minimum of 3 locations.

N

0 50 100 200

Scale in Feet

2012 POLING FOCUS AREAS & TRANSECTS
MP21.30-MP21.58 (oxbow)
SHEET 87 OF 170
ENBRIDGE LINE 6B MP 608
MARSHALL, MI PIPELINE RELEASE
ENBRIDGE ENERGY, LIMITED PARTNERSHIP

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Aerial Photography Date: April 2011

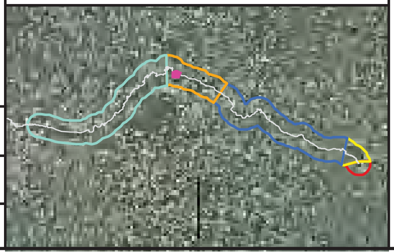
ENBRIDGE

Drawn: BRS 10/18/2011

Approved: DBR 10/18/2011

Project #: 106-4186

Map Location



Legend

- ▨ Late Summer 2011 Delineation Area
- ▨ Spring 2011 Delineation Area
- ▨ *2011 Poling Focus Areas*

Transcripts

- — 2011 transect to be poled in 2012
- - - 2011 transect not slated for poling in 2012
- ● Additional 2012 transect poling locations

- ★ Park/Launch Access Poling Areas
- ★ Bridge Access Poling Areas
- — Quarter Mile Grid Segment

Number of poling locations within each area will be dependent on site conditions. Full transects will have a minimum of 3 locations.

N

0 50 100 200

Scale in Feet

2012 POLING FOCUS AREAS & TRANSECTS

MP21.50-MP21.90

SHEET 88 OF 170

ENBRIDGE LINE 6B MP 608
MARSHALL, MI PIPELINE RELEASE
ENBRIDGE ENERGY, LIMITED PARTNERSHIP

H:\ArcMap Project Files\Report Maps\2012 Plan\2012_Poling_Reassessment_Plan_101811.mxd

Aerial Photography Date: April 2011

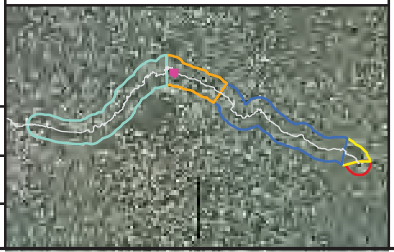
ENBRIDGE

Drawn: BRS 10/18/2011

Approved: DBR 10/18/2011

Project #: 106-4186

Map Location



Legend

- Late Summer 2011 Delineation Area
- Spring 2011 Delineation Area
- *2011 Poling Focus Areas*

Transcripts

- 2011 transect to be poled in 2012
- 2011 transect not slated for poling in 2012
- ● Additional 2012 transect poling locations

- ★ Park/Launch Access Poling Areas
- ★ Bridge Access Poling Areas
- Quarter Mile Grid Segment

Number of poling locations within each area will be dependent on site conditions. Full transects will have a minimum of 3 locations.

N

0 50 100 200

Scale in Feet

2012 POLING FOCUS AREAS & TRANSECTS
MP21.90-MP22.08

SHEET 89 OF 170

ENBRIDGE LINE 6B MP 608
MARSHALL, MI PIPELINE RELEASE
ENBRIDGE ENERGY, LIMITED PARTNERSHIP

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Aerial Photography Date: April 2011

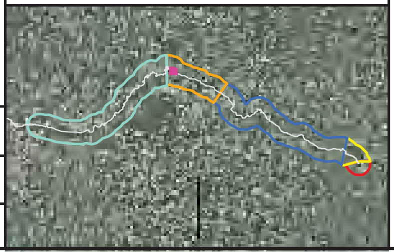
ENBRIDGE

Drawn: BRS 10/18/2011

Approved: DBR 10/18/2011

Project #: 106-4186

Map Location



Legend

- Late Summer 2011 Delineation Area
- Spring 2011 Delineation Area
- *2011 Poling Focus Areas*

Transects

- 2011 transect to be poled in 2012
- 2011 transect not slated for poling in 2012
- ● Additional 2012 transect poling locations

- ★ Park/Launch Access Poling Areas
- ★ Bridge Access Poling Areas
- Quarter Mile Grid Segment

Number of poling locations within each area will be dependent on site conditions. Full transects will have a minimum of 3 locations.

N

0 50 100 200

Scale in Feet

2012 POLING FOCUS AREAS & TRANSECTS

MP22.08-MP22.33

SHEET 90 OF 170

ENBRIDGE LINE 6B MP 608
MARSHALL, MI PIPELINE RELEASE
ENBRIDGE ENERGY, LIMITED PARTNERSHIP

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Aerial Photography Date: April 2011

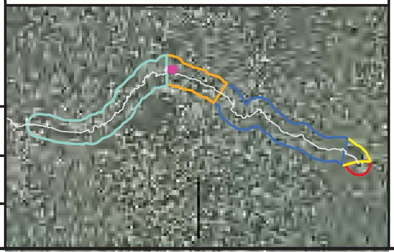
ENBRIDGE

Drawn: BRS 10/18/2011

Approved: DBR 10/18/2011

Project #: 106-4186

Map Location



Legend

◯	Late Summer 2011 Delineation Area
◯	Spring 2011 Delineation Area
⋯	*2011 Poling Focus Areas*

Transects

—	2011 transect to be poled in 2012
- - -	2011 transect not slated for poling in 2012
●	Additional 2012 transect poling locations

★	Park/Launch Access Poling Areas
★	Bridge Access Poling Areas
—	Quarter Mile Grid Segment

Number of poling locations within each area will be dependent on site conditions. Full transects will have a minimum of 3 locations.

N

0 50 100 200

Scale in Feet

2012 POLING FOCUS AREAS & TRANSECTS
MP22.33-MP22.49

SHEET 91 OF 170

ENBRIDGE LINE 6B MP 608
MARSHALL, MI PIPELINE RELEASE
ENBRIDGE ENERGY, LIMITED PARTNERSHIP

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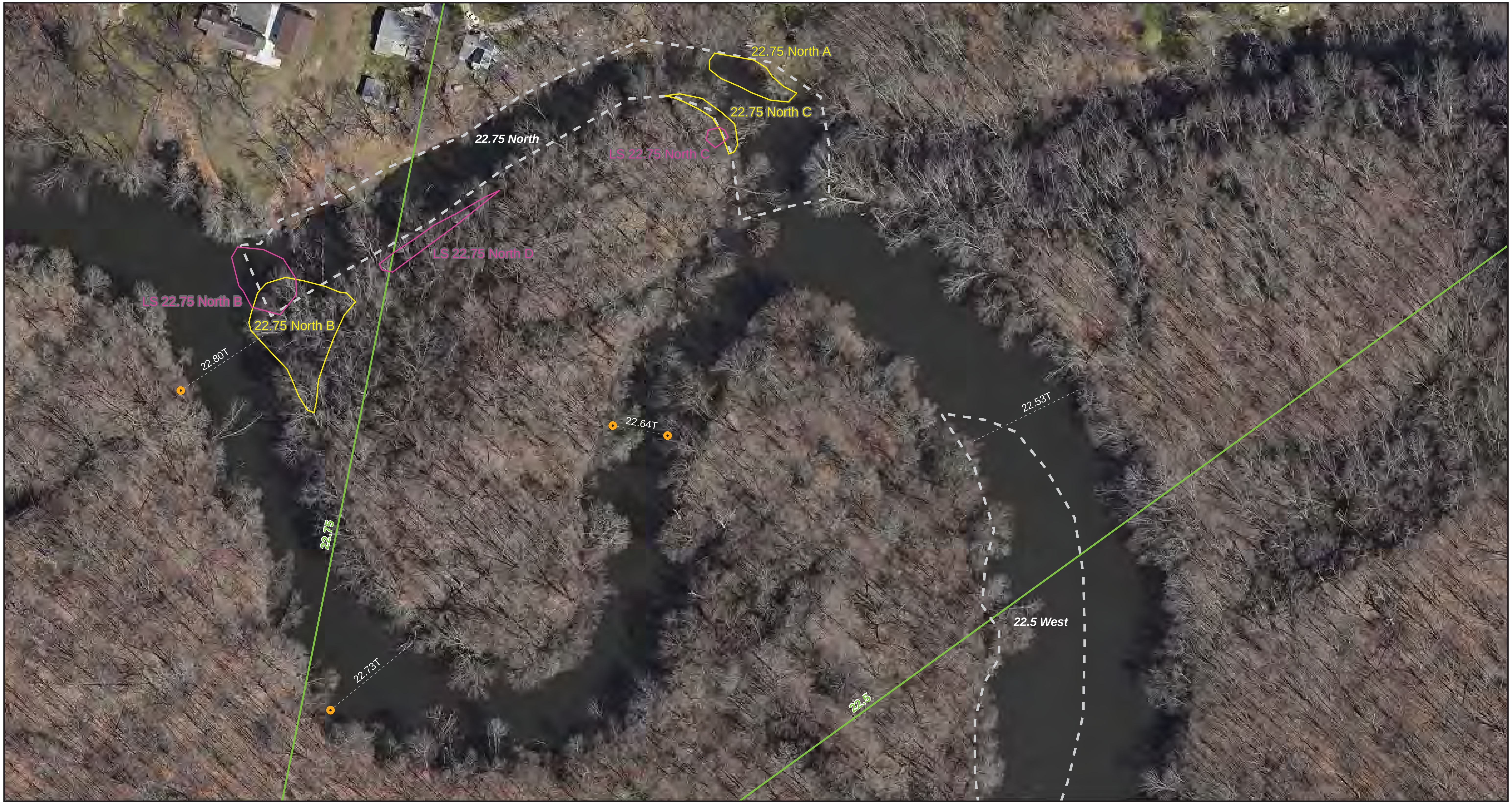
Aerial Photography Date: April 2011



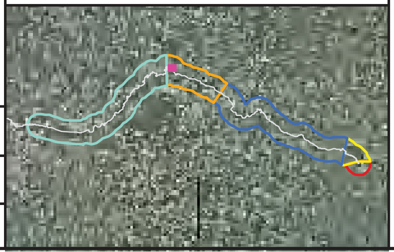
ENBRIDGE

Drawn: BRS 10/18/2011

Approved: DBR 10/18/2011

Project #: 106-4186

Map Location



Legend

- Late Summer 2011 Delineation Area
- Spring 2011 Delineation Area
- *2011 Poling Focus Areas*

Transects

- 2011 transect to be poled in 2012
- 2011 transect not slated for poling in 2012
- ● Additional 2012 transect poling locations

- ★ Park/Launch Access Poling Areas
- ★ Bridge Access Poling Areas
- Quarter Mile Grid Segment

Number of poling locations within each area will be dependent on site conditions. Full transects will have a minimum of 3 locations.

N

0 50 100 200

Scale in Feet

2012 POLING FOCUS AREAS & TRANSECTS
MP22.49-MP22.85
SHEET 92 OF 170
ENBRIDGE LINE 6B MP 608
MARSHALL, MI PIPELINE RELEASE
ENBRIDGE ENERGY, LIMITED PARTNERSHIP

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Aerial Photography Date: April 2011

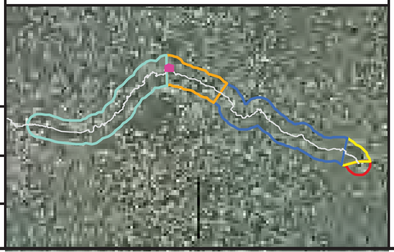
ENBRIDGE

Drawn: BRS 10/18/2011

Approved: DBR 10/18/2011

Project #: 106-4186

Map Location



Legend

▨	Late Summer 2011 Delineation Area
▨	Spring 2011 Delineation Area
┅	*2011 Poling Focus Areas*

Transects

—	2011 transect to be poled in 2012
- - -	2011 transect not slated for poling in 2012
●	Additional 2012 transect poling locations

★	Park/Launch Access Poling Areas
★	Bridge Access Poling Areas
—	Quarter Mile Grid Segment

Number of poling locations within each area will be dependent on site conditions. Full transects will have a minimum of 3 locations.

N

0 50 100 200
Scale in Feet

2012 POLING FOCUS AREAS & TRANSECTS
MP22.85-MP23.10
SHEET 93 OF 170
ENBRIDGE LINE 6B MP 608
MARSHALL, MI PIPELINE RELEASE
ENBRIDGE ENERGY, LIMITED PARTNERSHIP

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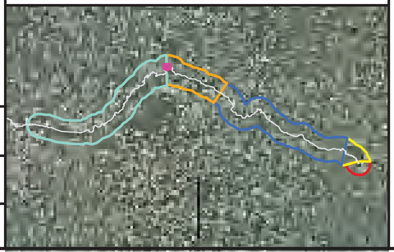
Aerial Photography Date: April 2011

ENBRIDGE

Drawn:	BRS 10/18/2011
Approved:	DBR 10/18/2011
Project #:	106-4186

Map Location



Legend

- Late Summer 2011 Delineation Area
- Spring 2011 Delineation Area
- *2011 Poling Focus Areas*

Transects
- 2011 transect to be poled in 2012
- 2011 transect not slated for poling in 2012
- ● Additional 2012 transect poling locations

- ★ Park/Launch Access Poling Areas
- ★ Bridge Access Poling Areas
- Quarter Mile Grid Segment

Number of poling locations within each area will be dependent on site conditions. Full transects will have a minimum of 3 locations.

N

0 50 100 200
Scale in Feet

2012 POLING FOCUS AREAS & TRANSECTS
MP23.10-MP23.38
SHEET 94 OF 170
ENBRIDGE LINE 6B MP 608
MARSHALL, MI PIPELINE RELEASE
ENBRIDGE ENERGY, LIMITED PARTNERSHIP

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Aerial Photography Date: April 2011

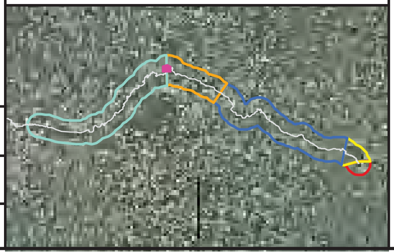
ENBRIDGE

Drawn: BRS 10/18/2011

Approved: DBR 10/18/2011

Project #: 106-4186

Map Location



Legend

- Late Summer 2011 Delineation Area
- Spring 2011 Delineation Area
- *2011 Poling Focus Areas*

Transects

- 2011 transect to be poled in 2012
- 2011 transect not slated for poling in 2012
- ● Additional 2012 transect poling locations

- ★ Park/Launch Access Poling Areas
- ★ Bridge Access Poling Areas
- Quarter Mile Grid Segment

N

0 50 100 200

Scale in Feet

Number of poling locations within each area will be dependent on site conditions. Full transects will have a minimum of 3 locations.

2012 POLING FOCUS AREAS & TRANSECTS
MP23.38-MP23.73
SHEET 95 OF 170

ENBRIDGE LINE 6B MP 608
MARSHALL, MI PIPELINE RELEASE
ENBRIDGE ENERGY, LIMITED PARTNERSHIP

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Aerial Photography Date: April 2011

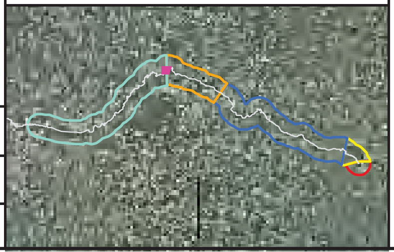
ENBRIDGE

Drawn: BRS 10/18/2011

Approved: DBR 10/18/2011

Project #: 106-4186

Map Location



Legend

- Late Summer 2011 Delineation Area
- Spring 2011 Delineation Area
- *2011 Poling Focus Areas*

Transects

- 2011 transect to be poled in 2012
- 2011 transect not slated for poling in 2012
- ● Additional 2012 transect poling locations

- ★ Park/Launch Access Poling Areas
- ★ Bridge Access Poling Areas
- Quarter Mile Grid Segment

Number of poling locations within each area will be dependent on site conditions. Full transects will have a minimum of 3 locations.

N

0 50 100 200

Scale in Feet

2012 POLING FOCUS AREAS & TRANSECTS

MP23.73-MP24.18

SHEET 96 OF 170

ENBRIDGE LINE 6B MP 608

MARSHALL, MI PIPELINE RELEASE

ENBRIDGE ENERGY, LIMITED PARTNERSHIP

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Aerial Photography Date: April 2011

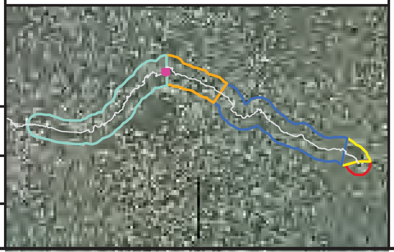
ENBRIDGE

Drawn: BRS 10/18/2011

Approved: DBR 10/18/2011

Project #: 106-4186

Map Location



Legend

Late Summer 2011 Delineation Area

Spring 2011 Delineation Area

2011 Poling Focus Areas

Transects

2011 transect to be poled in 2012

2011 transect not slated for poling in 2012

● Additional 2012 transect poling locations

★ Park/Launch Access Poling Areas

★ Bridge Access Poling Areas

Quarter Mile Grid Segment

Number of poling locations within each area will be dependent on site conditions. Full transects will have a minimum of 3 locations.

N

0 50 100 200

Scale in Feet

2012 POLING FOCUS AREAS & TRANSECTS
MP24.18-MP24.34
SHEET 97 OF 170
ENBRIDGE LINE 6B MP 608
MARSHALL, MI PIPELINE RELEASE
ENBRIDGE ENERGY, LIMITED PARTNERSHIP

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Aerial Photography Date: April 2011

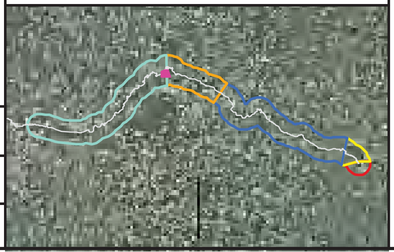
ENBRIDGE

Drawn: BRS 10/18/2011

Approved: DBR 10/18/2011

Project #: 106-4186

Map Location



Legend

- ⬭ Late Summer 2011 Delineation Area
- ⬭ Spring 2011 Delineation Area
- ⬭ *2011 Poling Focus Areas*

Transects

- — 2011 transect to be poled in 2012
- - - 2011 transect not slated for poling in 2012
- ● Additional 2012 transect poling locations

- ★ Park/Launch Access Poling Areas
- ★ Bridge Access Poling Areas
- — Quarter Mile Grid Segment

Number of poling locations within each area will be dependent on site conditions. Full transects will have a minimum of 3 locations.

N

0 50 100 200
Scale in Feet

2012 POLING FOCUS AREAS & TRANSECTS
MP24.34-MP24.62
SHEET 98 OF 170
ENBRIDGE LINE 6B MP 608
MARSHALL, MI PIPELINE RELEASE
ENBRIDGE ENERGY, LIMITED PARTNERSHIP

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Aerial Photography Date: April 2011

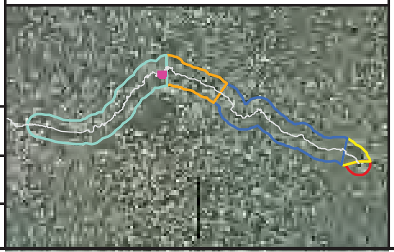
ENBRIDGE

Drawn: BRS 10/18/2011

Approved: DBR 10/18/2011

Project #: 106-4186

Map Location



Legend

- Late Summer 2011 Delineation Area
- Spring 2011 Delineation Area
- *2011 Poling Focus Areas*

Transects

- 2011 transect to be poled in 2012
- 2011 transect not slated for poling in 2012
- ● Additional 2012 transect poling locations

- ☆ Park/Launch Access Poling Areas
- ★ Bridge Access Poling Areas
- Quarter Mile Grid Segment

Number of poling locations within each area will be dependent on site conditions. Full transects will have a minimum of 3 locations.

N

0 50 100 200

Scale in Feet

2012 POLING FOCUS AREAS & TRANSECTS

MP24.62-MP24.89

SHEET 99 OF 170

ENBRIDGE LINE 6B MP 608
MARSHALL, MI PIPELINE RELEASE
ENBRIDGE ENERGY, LIMITED PARTNERSHIP

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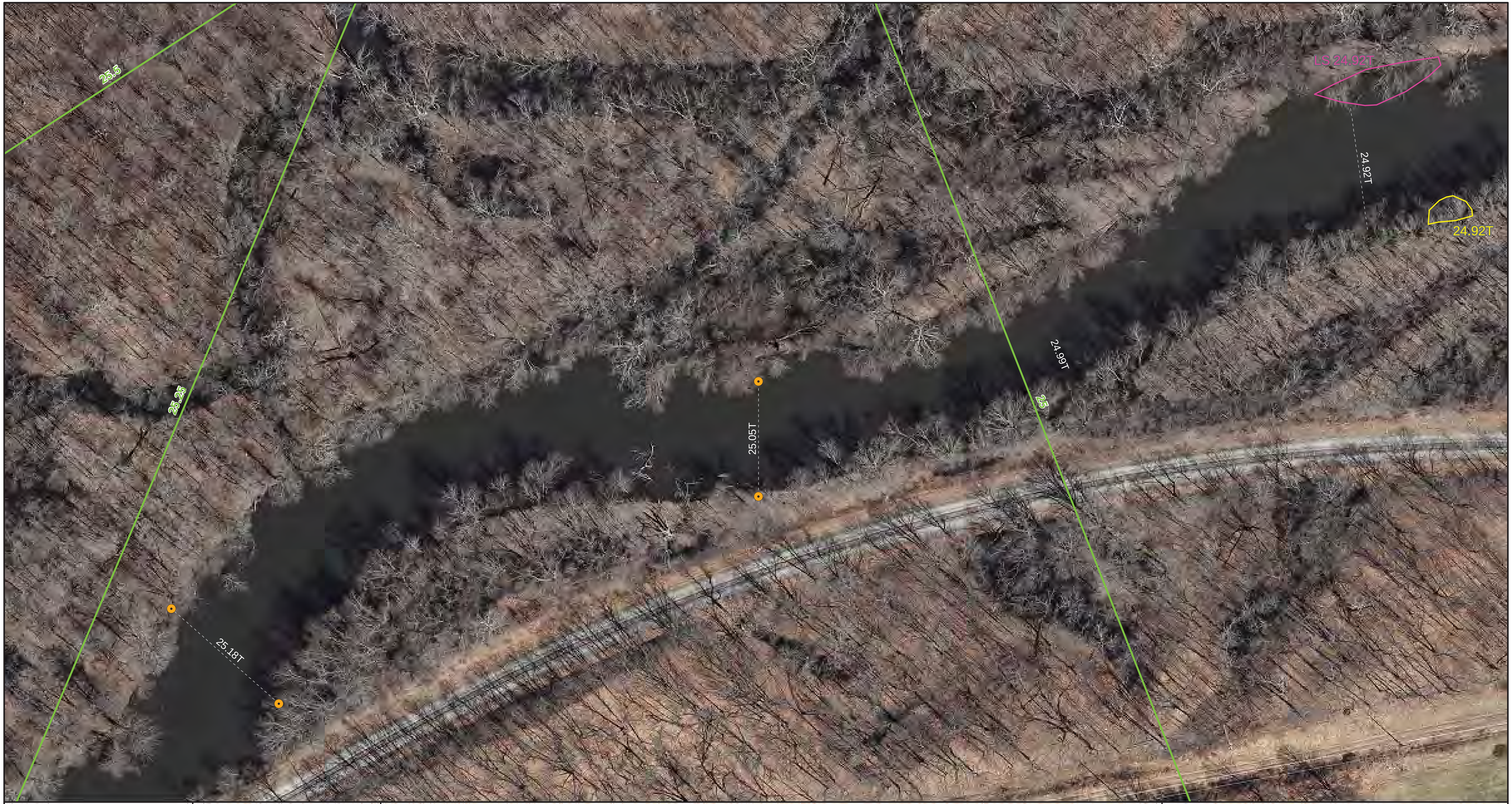
Aerial Photography Date: April 2011



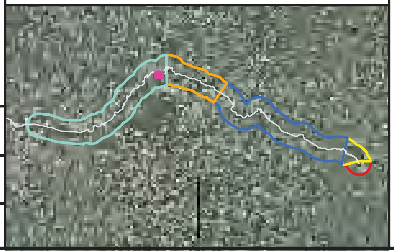
ENBRIDGE

Drawn: BRS 10/18/2011

Approved: DBR 10/18/2011

Project #: 106-4186

Map Location



Legend

⬭	Late Summer 2011 Delineation Area
⬭	Spring 2011 Delineation Area
⬭	*2011 Poling Focus Areas*

Transects

—	2011 transect to be poled in 2012
- - -	2011 transect not slated for poling in 2012
●	Additional 2012 transect poling locations

★	Park/Launch Access Poling Areas
★	Bridge Access Poling Areas
—	Quarter Mile Grid Segment

Number of poling locations within each area will be dependent on site conditions. Full transects will have a minimum of 3 locations.

N

0 50 100 200

Scale in Feet

2012 POLING FOCUS AREAS & TRANSECTS
MP24.89-MP25.21
SHEET 100 OF 170
ENBRIDGE LINE 6B MP 608
MARSHALL, MI PIPELINE RELEASE
ENBRIDGE ENERGY, LIMITED PARTNERSHIP

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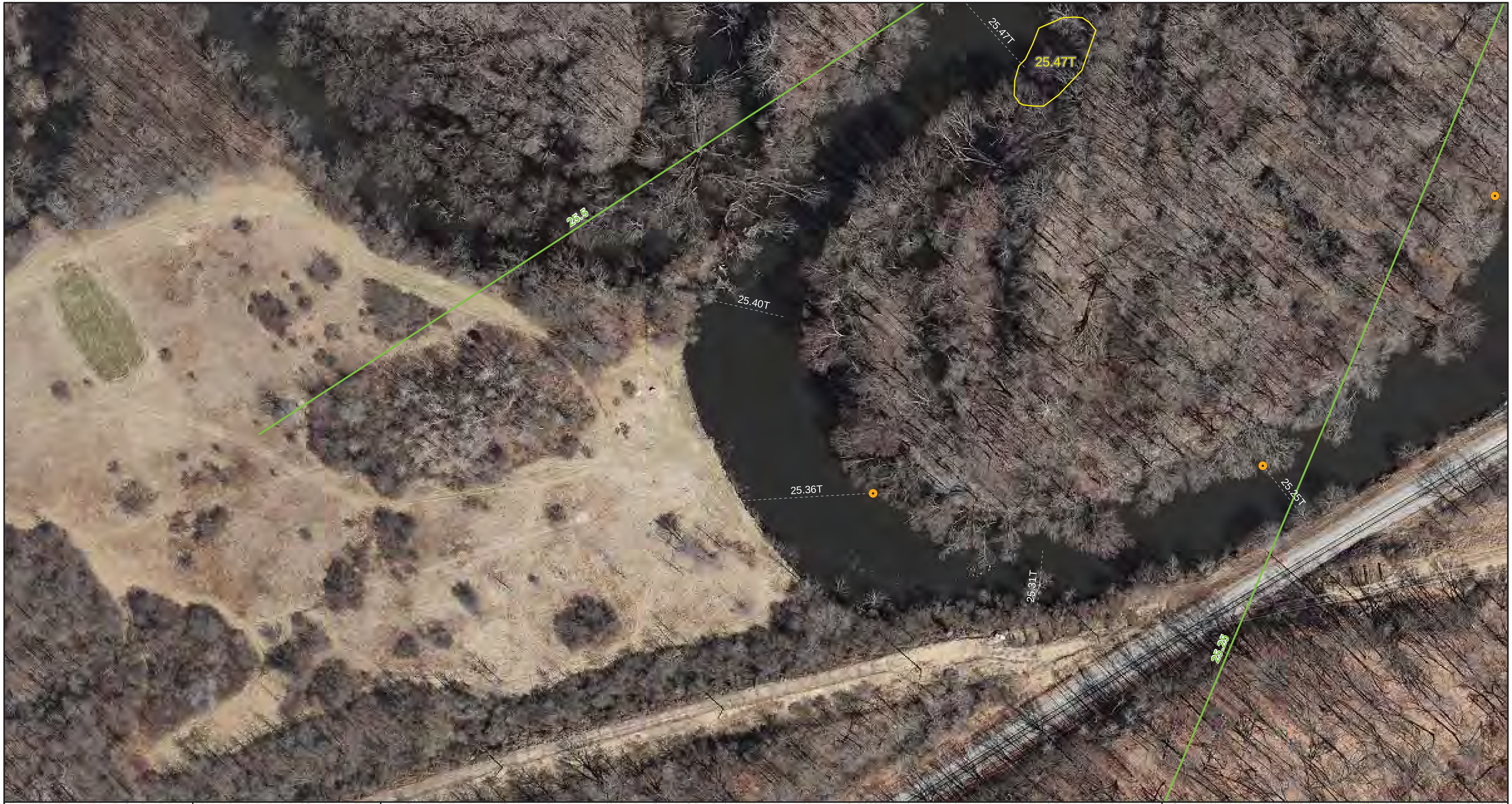
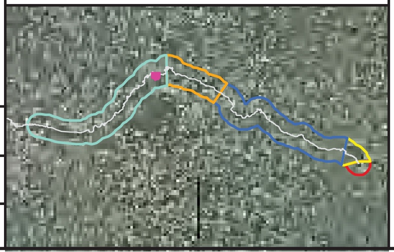
Aerial Photography Date: April 2011



ENBRIDGE

Drawn: BRS 10/18/2011
Approved: DBR 10/18/2011
Project #: 106-4186

Map Location



Legend

Late Summer 2011 Delineation Area
Spring 2011 Delineation Area
2011 Poling Focus Areas

Transects
2011 transect to be poled in 2012
2011 transect not slated for poling in 2012
● Additional 2012 transect poling locations

★ Park/Launch Access Poling Areas
★ Bridge Access Poling Areas
Quarter Mile Grid Segment

Number of poling locations within each area will be dependent on site conditions. Full transects will have a minimum of 3 locations.

N

0 50 100 200
Scale in Feet

2012 POLING FOCUS AREAS & TRANSECTS
MP25.21-MP25.47
SHEET 101 OF 170
ENBRIDGE LINE 6B MP 608
MARSHALL, MI PIPELINE RELEASE
ENBRIDGE ENERGY, LIMITED PARTNERSHIP

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Aerial Photography Date: April 2011

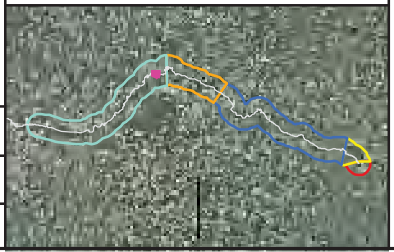
ENBRIDGE

Drawn: BRS 10/18/2011

Approved: DBR 10/18/2011

Project #: 106-4186

Map Location



Legend

Late Summer 2011 Delineation Area

Spring 2011 Delineation Area

2011 Poling Focus Areas

Transects

2011 transect to be poled in 2012

2011 transect not slated for poling in 2012

● Additional 2012 transect poling locations

★ Park/Launch Access Poling Areas

★ Bridge Access Poling Areas

Quarter Mile Grid Segment

Number of poling locations within each area will be dependent on site conditions. Full transects will have a minimum of 3 locations.

N

0 50 100 200
Scale in Feet

2012 POLING FOCUS AREAS & TRANSECTS
MP25.47-MP25.65
SHEET 102 OF 170
ENBRIDGE LINE 6B MP 608
MARSHALL, MI PIPELINE RELEASE
ENBRIDGE ENERGY, LIMITED PARTNERSHIP

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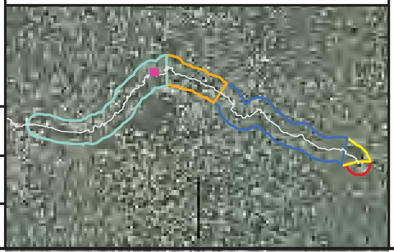
Aerial Photography Date: April 2011

ENBRIDGE

Drawn: BRS 10/18/2011
Approved: DBR 10/18/2011
Project #: 106-4186

Map Location



Legend

Late Summer 2011 Delineation Area
Spring 2011 Delineation Area
2011 Poling Focus Areas

Transects
2011 transect to be poled in 2012
2011 transect not slated for poling in 2012
● Additional 2012 transect poling locations

★ Park/Launch Access Poling Areas
★ Bridge Access Poling Areas
Quarter Mile Grid Segment

Number of poling locations within each area will be dependent on site conditions. Full transects will have a minimum of 3 locations.

N

0 50 100 200
Scale in Feet

2012 POLING FOCUS AREAS & TRANSECTS
MP25.65-MP26.06
SHEET 103 OF 170

ENBRIDGE LINE 6B MP 608
MARSHALL, MI PIPELINE RELEASE
ENBRIDGE ENERGY, LIMITED PARTNERSHIP

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Aerial Photography Date: April 2011

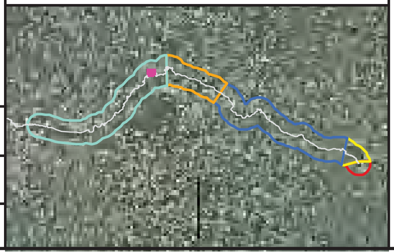
ENBRIDGE

Drawn: BRS 10/18/2011

Approved: DBR 10/18/2011

Project #: 106-4186

Map Location



Legend

- Late Summer 2011 Delineation Area
- Spring 2011 Delineation Area
- *2011 Poling Focus Areas*

Transects
- 2011 transect to be poled in 2012
- 2011 transect not slated for poling in 2012
- ● Additional 2012 transect poling locations

- ★ Park/Launch Access Poling Areas
- ★ Bridge Access Poling Areas
- Quarter Mile Grid Segment

Number of poling locations within each area will be dependent on site conditions. Full transects will have a minimum of 3 locations.

N

0 50 100 200
Scale in Feet

2012 POLING FOCUS AREAS & TRANSECTS
MP26.06-MP26.32
SHEET 104 OF 170
ENBRIDGE LINE 6B MP 608
MARSHALL, MI PIPELINE RELEASE
ENBRIDGE ENERGY, LIMITED PARTNERSHIP

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Aerial Photography Date: April 2011

ENBRIDGE

Drawn: BRS 10/18/2011

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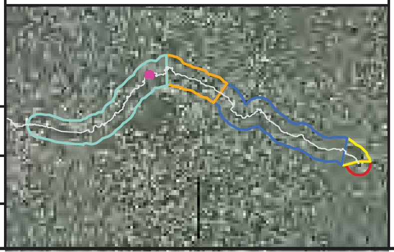
Project #: 106-4186

Map Location



Legend

- Late Summer 2011 Delineation Area
- Spring 2011 Delineation Area
- *2011 Poling Focus Areas*

Transects

- 2011 transect to be poled in 2012
- 2011 transect not slated for poling in 2012
- ● Additional 2012 transect poling locations

- ★ Park/Launch Access Poling Areas
- ★ Bridge Access Poling Areas
- Quarter Mile Grid Segment

Number of poling locations within each area will be dependent on site conditions. Full transects will have a minimum of 3 locations.

N

0 50 100 200
Scale in Feet

2012 POLING FOCUS AREAS & TRANSECTS
MP26.32-MP26.49
SHEET 105 OF 170
ENBRIDGE LINE 6B MP 608
MARSHALL, MI PIPELINE RELEASE
ENBRIDGE ENERGY, LIMITED PARTNERSHIP

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Aerial Photography Date: April 2011

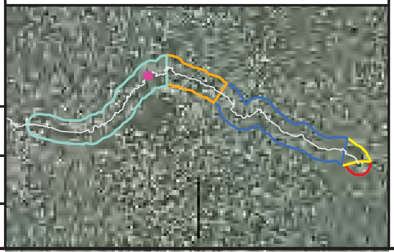
ENBRIDGE

Drawn: BRS 10/18/2011

Approved: DBR 10/18/2011

Project #: 106-4186

Map Location



Legend

- Late Summer 2011 Delineation Area
- Spring 2011 Delineation Area
- *2011 Poling Focus Areas*

Transects

- 2011 transect to be poled in 2012
- 2011 transect not slated for poling in 2012
- ● Additional 2012 transect poling locations

- ★ Park/Launch Access Poling Areas
- ★ Bridge Access Poling Areas
- Quarter Mile Grid Segment

Number of poling locations within each area will be dependent on site conditions. Full transects will have a minimum of 3 locations.

N

0 50 100 200
Scale in Feet

2012 POLING FOCUS AREAS & TRANSECTS
MP26.49-MP26.89
SHEET 106 OF 170
ENBRIDGE LINE 6B MP 608
MARSHALL, MI PIPELINE RELEASE
ENBRIDGE ENERGY, LIMITED PARTNERSHIP

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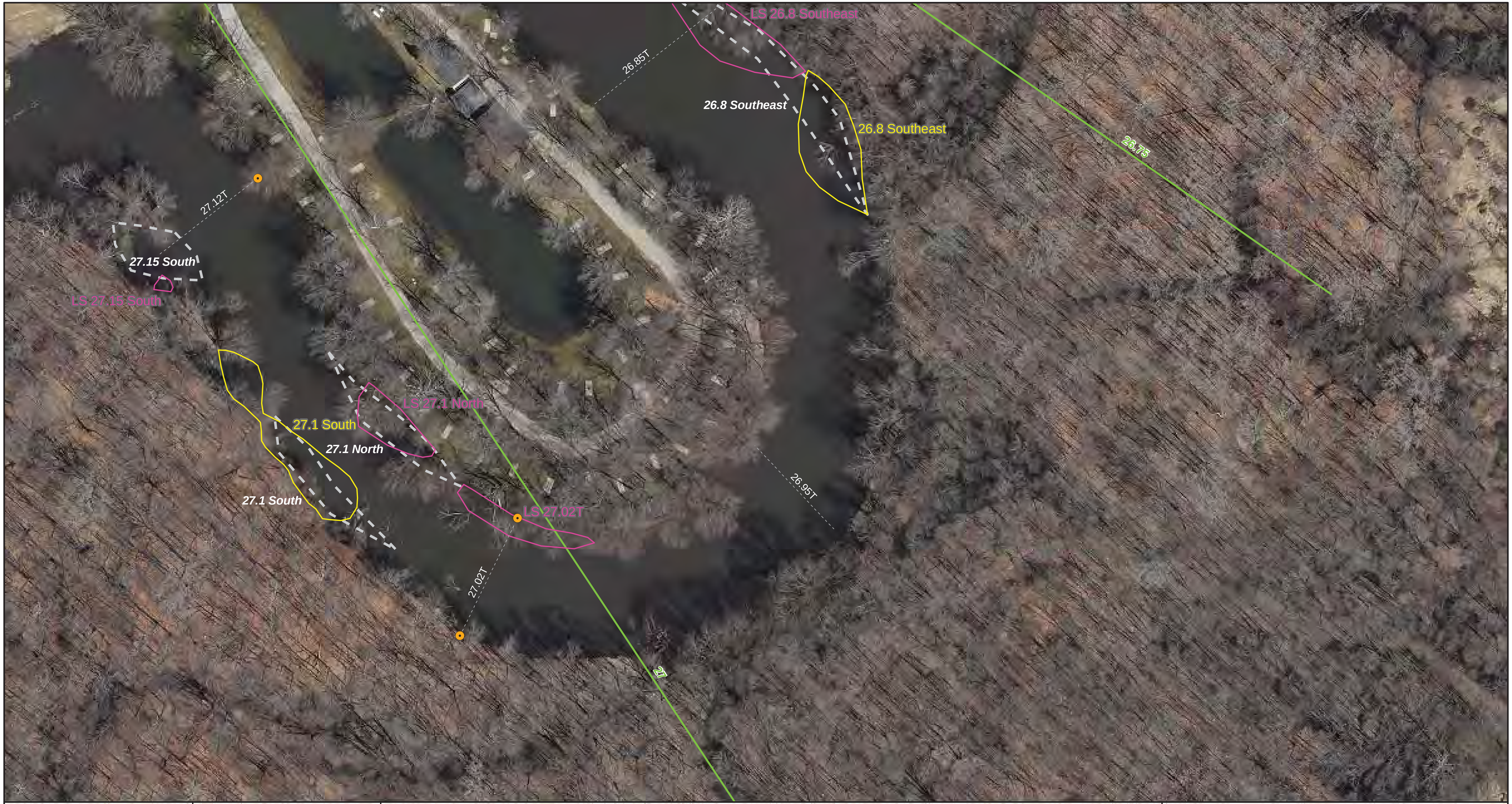
Aerial Photography Date: April 2011



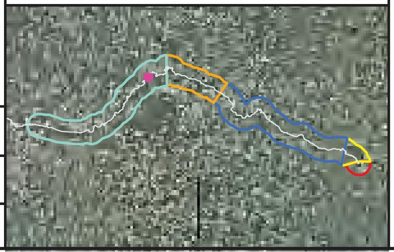
ENBRIDGE

Drawn: BRS 10/18/2011

Approved: DBR 10/18/2011

Project #: 106-4186

Map Location



Legend

- Late Summer 2011 Delineation Area
- Spring 2011 Delineation Area
- *2011 Poling Focus Areas*

Transects

- 2011 transect to be poled in 2012
- 2011 transect not slated for poling in 2012
- ● Additional 2012 transect poling locations

- ★ Park/Launch Access Poling Areas
- ★ Bridge Access Poling Areas
- Quarter Mile Grid Segment

Number of poling locations within each area will be dependent on site conditions. Full transects will have a minimum of 3 locations.

N

0 50 100 200

Scale in Feet

2012 POLING FOCUS AREAS & TRANSECTS
MP26.89-MP27.17
SHEET 107 OF 170
ENBRIDGE LINE 6B MP 608
MARSHALL, MI PIPELINE RELEASE
ENBRIDGE ENERGY, LIMITED PARTNERSHIP

H:\ArcMap Project Files\Report Maps\2012 Plan\2012_Poling_Reassessment_Plan_101811.mxd

Aerial Photography Date: April 2011

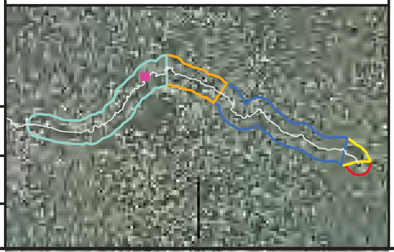
ENBRIDGE

Drawn: BRS 10/18/2011

Approved: DBR 10/18/2011

Project #: 106-4186

Map Location



Legend

- Late Summer 2011 Delineation Area
- Spring 2011 Delineation Area
- *2011 Poling Focus Areas*

Transects

- 2011 transect to be poled in 2012
- 2011 transect not slated for poling in 2012
- ● Additional 2012 transect poling locations

- ★ Park/Launch Access Poling Areas
- ★ Bridge Access Poling Areas
- Quarter Mile Grid Segment

Number of poling locations within each area will be dependent on site conditions. Full transects will have a minimum of 3 locations.

N

0 50 100 200
Scale in Feet

2012 POLING FOCUS AREAS & TRANSECTS
MP27.17-MP27.33

SHEET 108 OF 170

ENBRIDGE LINE 6B MP 608
MARSHALL, MI PIPELINE RELEASE
ENBRIDGE ENERGY, LIMITED PARTNERSHIP

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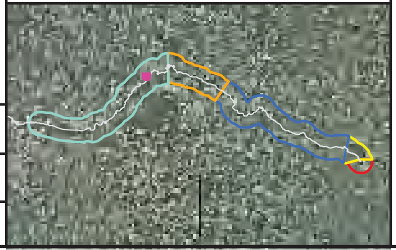
Aerial Photography Date: April 2011

Drawn: BRS 10/18/2011
Approved: DBR 10/18/2011
Project #: 106-4186

Map Location



Legend

- Late Summer 2011 Delineation Area
- Spring 2011 Delineation Area
- *2011 Poling Focus Areas*

Transects

- 2011 transect to be poled in 2012
- 2011 transect not slated for poling in 2012
- Additional 2012 transect poling locations

- ★ Park/Launch Access Poling Areas
- ★ Bridge Access Poling Areas
- Quarter Mile Grid Segment

N

Number of poling locations within each area will be dependent on site conditions. Full transects will have a minimum of 3 locations.

0 50 100 200
Scale in Feet

2012 POLING FOCUS AREAS & TRANSECTS
MP27.33-MP27.49
SHEET 109 OF 170

ENBRIDGE LINE 6B MP 608
MARSHALL, MI PIPELINE RELEASE
ENBRIDGE ENERGY, LIMITED PARTNERSHIP

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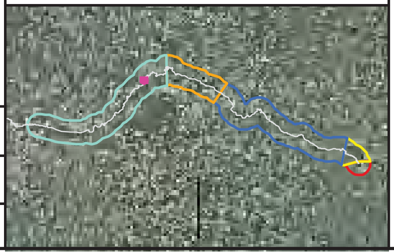
Aerial Photography Date: April 2011

ENBRIDGE

Drawn: BRS 10/18/2011
Approved: DBR 10/18/2011
Project #: 106-4186

Map Location



Legend

- Late Summer 2011 Delineation Area
- Spring 2011 Delineation Area
- *2011 Poling Focus Areas*

Transects

- 2011 transect to be poled in 2012
- 2011 transect not slated for poling in 2012
- ● Additional 2012 transect poling locations

- ★ Park/Launch Access Poling Areas
- ★ Bridge Access Poling Areas
- Quarter Mile Grid Segment

Number of poling locations within each area will be dependent on site conditions. Full transects will have a minimum of 3 locations.

N

0 50 100 200
Scale in Feet

2012 POLING FOCUS AREAS & TRANSECTS
MP27.49-MP27.70
SHEET 110 OF 170

ENBRIDGE LINE 6B MP 608
MARSHALL, MI PIPELINE RELEASE
ENBRIDGE ENERGY, LIMITED PARTNERSHIP

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Aerial Photography Date: April 2011

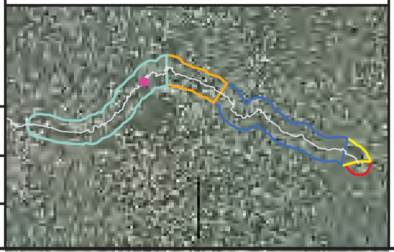
ENBRIDGE

Drawn: BRS 10/18/2011

Approved: DBR 10/18/2011

Project #: 106-4186

Map Location



Legend

Late Summer 2011 Delineation Area

Spring 2011 Delineation Area

2011 Poling Focus Areas

Transects

2011 transect to be poled in 2012

2011 transect not slated for poling in 2012

● Additional 2012 transect poling locations

★ Park/Launch Access Poling Areas

★ Bridge Access Poling Areas

Quarter Mile Grid Segment

Number of poling locations within each area will be dependent on site conditions. Full transects will have a minimum of 3 locations.

N

0 50 100 200

Scale in Feet

2012 POLING FOCUS AREAS & TRANSECTS
MP27.70-MP28.04
SHEET 111 OF 170
ENBRIDGE LINE 6B MP 608
MARSHALL, MI PIPELINE RELEASE
ENBRIDGE ENERGY, LIMITED PARTNERSHIP

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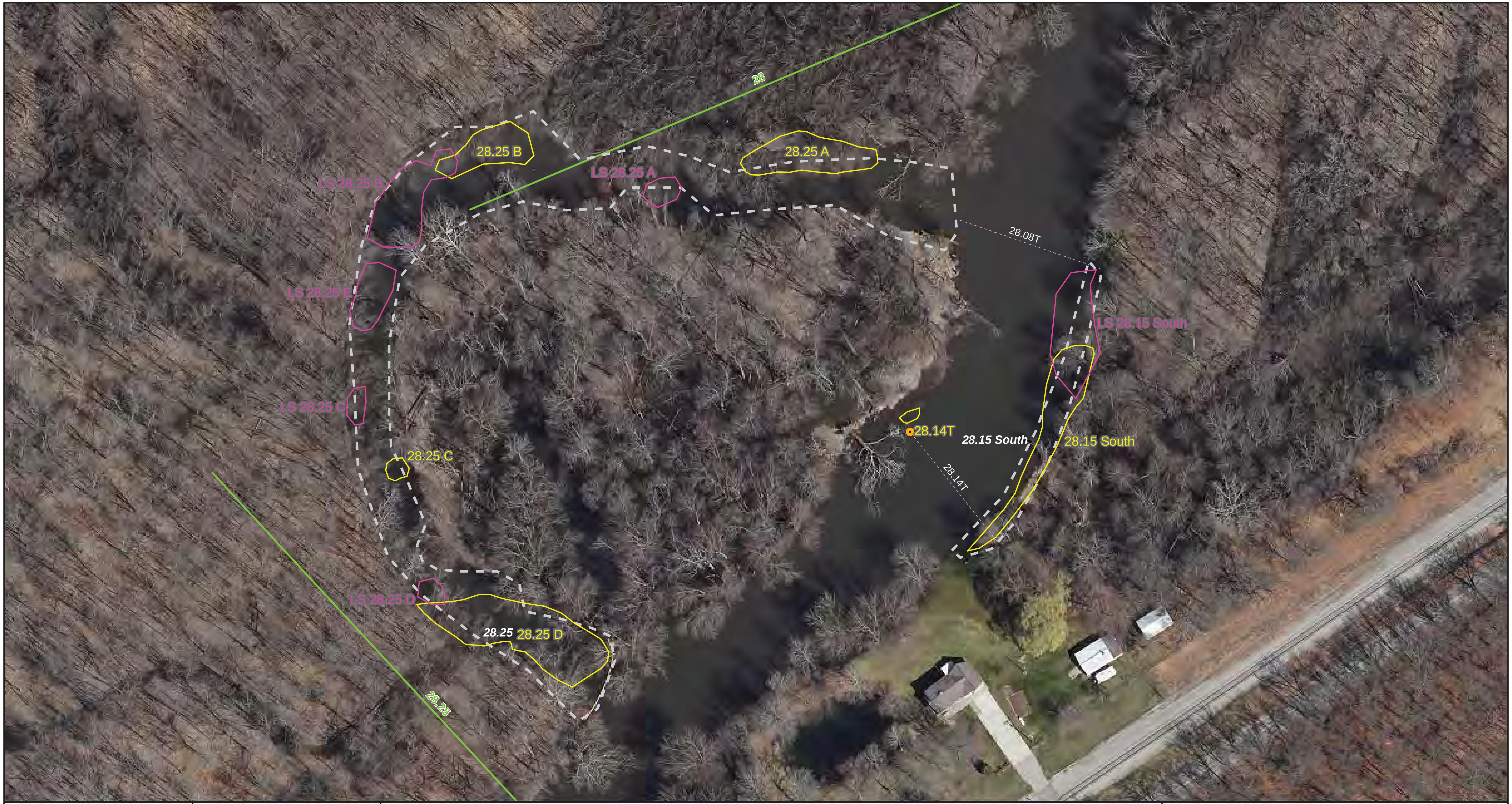
Aerial Photography Date: April 2011



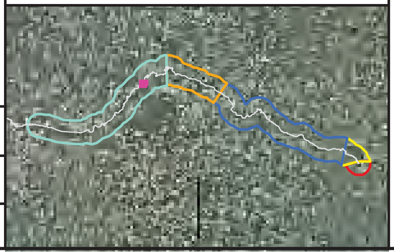
ENBRIDGE

Drawn: BRS 10/18/2011

Approved: DBR 10/18/2011

Project #: 106-4186

Map Location



Legend

- Late Summer 2011 Delineation Area
- Spring 2011 Delineation Area
- *2011 Poling Focus Areas*

Transects

- 2011 transect to be poled in 2012
- 2011 transect not slated for poling in 2012
- ● Additional 2012 transect poling locations

- ★ Park/Launch Access Poling Areas
- ★ Bridge Access Poling Areas
- Quarter Mile Grid Segment

Number of poling locations within each area will be dependent on site conditions. Full transects will have a minimum of 3 locations.

N

0 50 100 200

Scale in Feet

2012 POLING FOCUS AREAS & TRANSECTS
MP28.04-MP28.23

SHEET 112 OF 170

ENBRIDGE LINE 6B MP 608
MARSHALL, MI PIPELINE RELEASE
ENBRIDGE ENERGY, LIMITED PARTNERSHIP

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Aerial Photography Date: April 2011

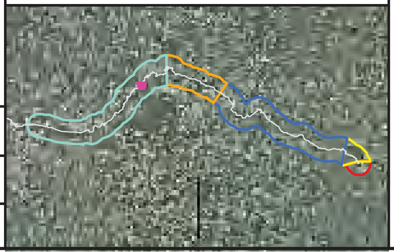
ENBRIDGE

Drawn: BRS 10/18/2011

Approved: DBR 10/18/2011

Project #: 106-4186

Map Location



Legend

- ▢ Late Summer 2011 Delineation Area
- ▢ Spring 2011 Delineation Area
- ▢ *2011 Poling Focus Areas*

Transects

- — 2011 transect to be poled in 2012
- - - 2011 transect not slated for poling in 2012
- ● Additional 2012 transect poling locations

- ★ Park/Launch Access Poling Areas
- ★ Bridge Access Poling Areas
- — Quarter Mile Grid Segment

Number of poling locations within each area will be dependent on site conditions. Full transects will have a minimum of 3 locations.

N

0 50 100 200
Scale in Feet

2012 POLING FOCUS AREAS & TRANSECTS
MP28.23-MP28.54
SHEET 113 OF 170
ENBRIDGE LINE 6B MP 608
MARSHALL, MI PIPELINE RELEASE
ENBRIDGE ENERGY, LIMITED PARTNERSHIP

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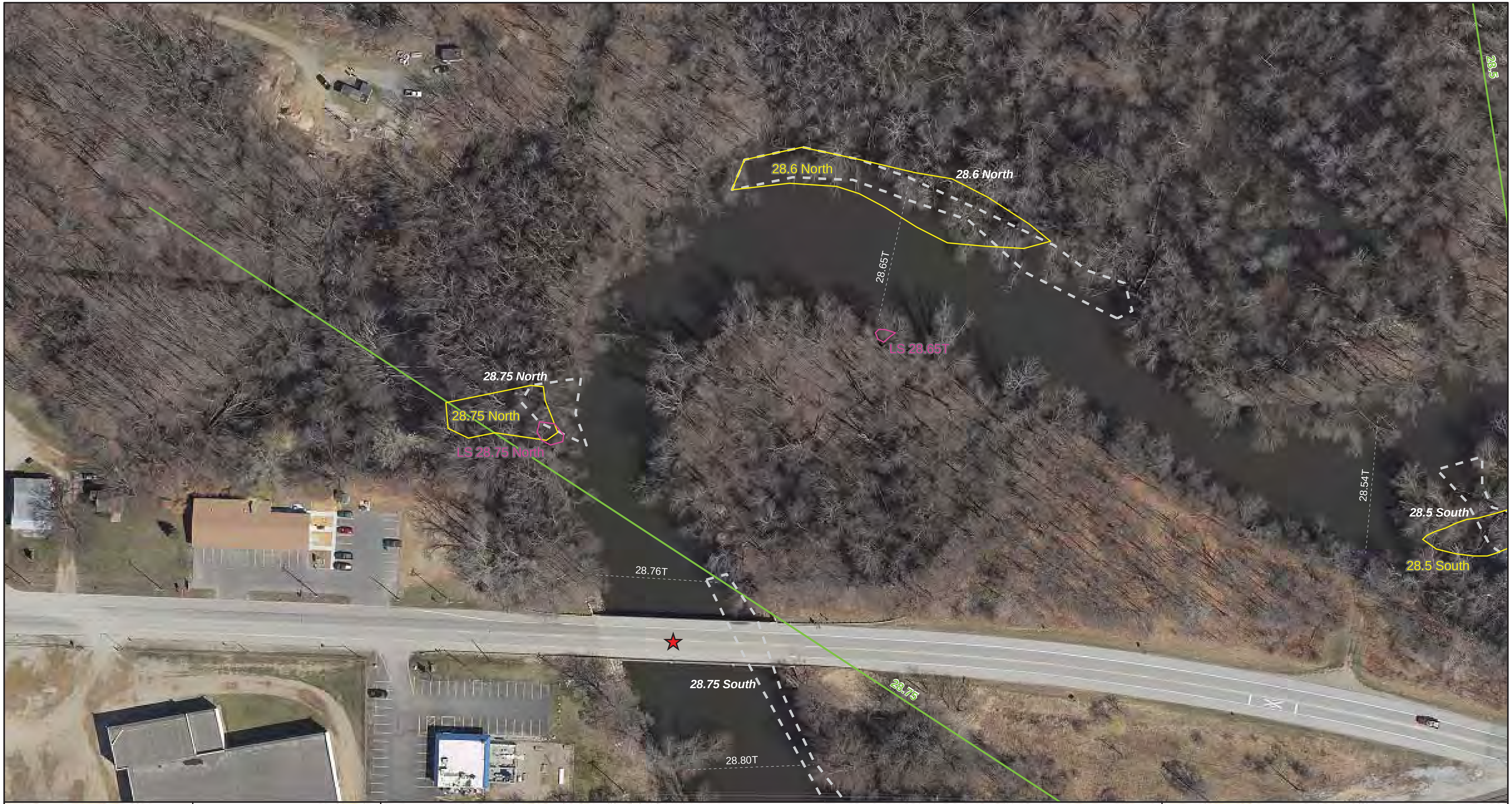
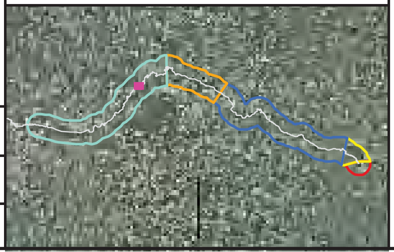
Aerial Photography Date: April 2011



ENBRIDGE

Drawn: BRS 10/18/2011
Approved: DBR 10/18/2011
Project #: 106-4186

Map Location



Legend

- Late Summer 2011 Delineation Area
- Spring 2011 Delineation Area
- *2011 Poling Focus Areas*

Transects
- 2011 transect to be poled in 2012
- 2011 transect not slated for poling in 2012
- ● Additional 2012 transect poling locations

- ★ Park/Launch Access Poling Areas
- ★ Bridge Access Poling Areas
- Quarter Mile Grid Segment

N

Number of poling locations within each area will be dependent on site conditions. Full transects will have a minimum of 3 locations.

0 50 100 200
Scale in Feet

2012 POLING FOCUS AREAS & TRANSECTS
MP28.54-MP28.80
SHEET 114 OF 170

ENBRIDGE LINE 6B MP 608
MARSHALL, MI PIPELINE RELEASE
ENBRIDGE ENERGY, LIMITED PARTNERSHIP

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Aerial Photography Date: April 2011

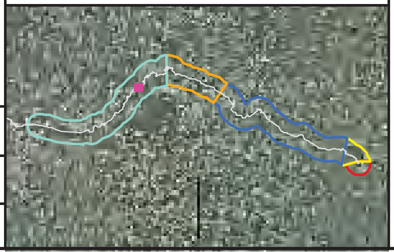
ENBRIDGE

Drawn: BRS 10/18/2011

Approved: DBR 10/18/2011

Project #: 106-4186

Map Location



Legend

- Late Summer 2011 Delineation Area
- Spring 2011 Delineation Area
- *2011 Poling Focus Areas*

Transects

- 2011 transect to be poled in 2012
- 2011 transect not slated for poling in 2012
- ● Additional 2012 transect poling locations

- ★ Park/Launch Access Poling Areas
- ★ Bridge Access Poling Areas
- Quarter Mile Grid Segment

Number of poling locations within each area will be dependent on site conditions. Full transects will have a minimum of 3 locations.

N

0 50 100 200
Scale in Feet

2012 POLING FOCUS AREAS & TRANSECTS
MP28.80-MP29.05
SHEET 115 OF 170
ENBRIDGE LINE 6B MP 608
MARSHALL, MI PIPELINE RELEASE
ENBRIDGE ENERGY, LIMITED PARTNERSHIP

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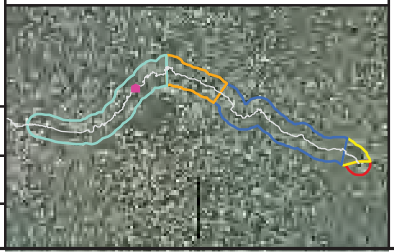
Aerial Photography Date: April 2011

ENBRIDGE

Drawn: BRS 10/18/2011
Approved: DBR 10/18/2011
Project #: 106-4186

Map Location



Legend

- 🟪 Late Summer 2011 Delineation Area
- 🟨 Spring 2011 Delineation Area
- *2011 Poling Focus Areas*

Transects

- — 2011 transect to be poled in 2012
- - - - 2011 transect not slated for poling in 2012
- ⊙ Additional 2012 transect poling locations

- ★ Park/Launch Access Poling Areas
- ★ Bridge Access Poling Areas
- — Quarter Mile Grid Segment

Number of poling locations within each area will be dependent on site conditions. Full transects will have a minimum of 3 locations.

N

0 50 100 200
Scale in Feet

2012 POLING FOCUS AREAS & TRANSECTS
MP29.05-MP29.31
SHEET 116 OF 170
ENBRIDGE LINE 6B MP 608
MARSHALL, MI PIPELINE RELEASE
ENBRIDGE ENERGY, LIMITED PARTNERSHIP

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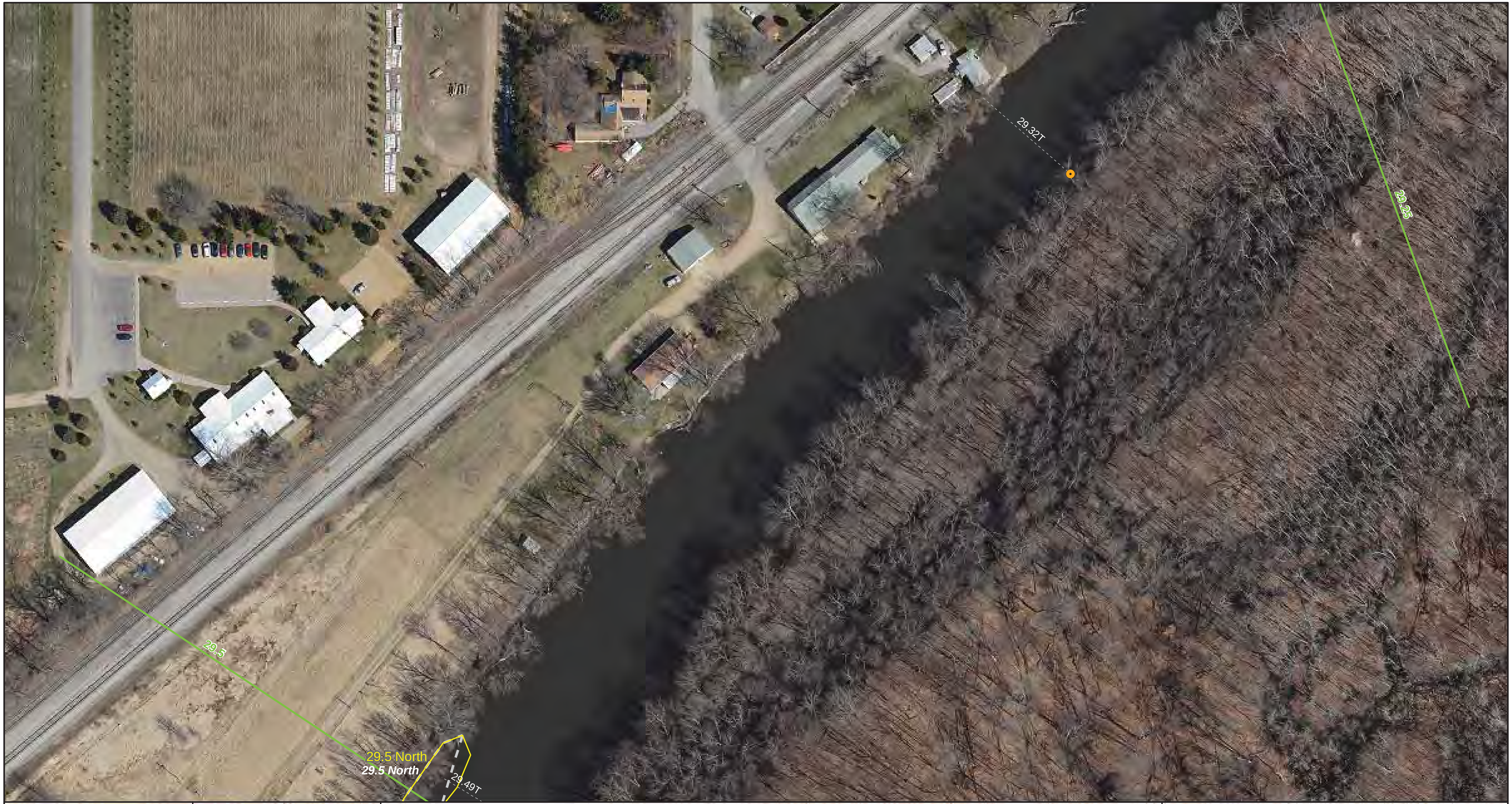
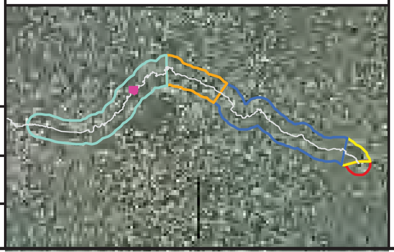
Aerial Photography Date: April 2011



ENBRIDGE

Drawn: BRS 10/18/2011
Approved: DBR 10/18/2011
Project #: 106-4186

Map Location



Legend

- Late Summer 2011 Delineation Area
- Spring 2011 Delineation Area
- *2011 Poling Focus Areas*

Transects

- 2011 transect to be poled in 2012
- 2011 transect not slated for poling in 2012
- ● Additional 2012 transect poling locations

- ★ Park/Launch Access Poling Areas
- ★ Bridge Access Poling Areas
- Quarter Mile Grid Segment

Number of poling locations within each area will be dependent on site conditions. Full transects will have a minimum of 3 locations.

N

0 50 100 200
Scale in Feet

2012 POLING FOCUS AREAS & TRANSECTS
MP29.31-MP29.49
SHEET 117 OF 170
ENBRIDGE LINE 6B MP 608
MARSHALL, MI PIPELINE RELEASE
ENBRIDGE ENERGY, LIMITED PARTNERSHIP

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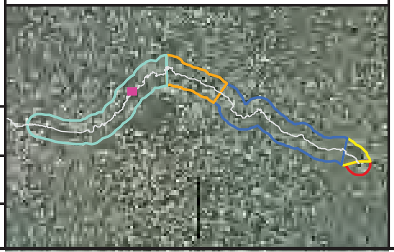
Aerial Photography Date: April 2011

Map Location



ENBRIDGE

Drawn: BRS 10/18/2011

Approved: DBR 10/18/2011

Project #: 106-4186

Legend

- Late Summer 2011 Delineation Area
- Spring 2011 Delineation Area
- *2011 Poling Focus Areas*

Transects

- 2011 transect to be poled in 2012
- 2011 transect not slated for poling in 2012
- ● Additional 2012 transect poling locations

- ★ Park/Launch Access Poling Areas
- ★ Bridge Access Poling Areas
- Quarter Mile Grid Segment

Number of poling locations within each area will be dependent on site conditions. Full transects will have a minimum of 3 locations.

N

0 50 100 200

Scale in Feet

2012 POLING FOCUS AREAS & TRANSECTS
MP29.49-MP29.64
SHEET 118 OF 170
ENBRIDGE LINE 6B MP 608
MARSHALL, MI PIPELINE RELEASE
ENBRIDGE ENERGY, LIMITED PARTNERSHIP

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Aerial Photography Date: April 2011

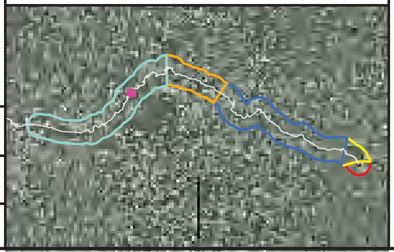
ENBRIDGE

Drawn: BRS 10/18/2011

Approved: DBR 10/18/2011

Project #: 106-4186

Map Location



Legend

- Late Summer 2011 Delineation Area
- Spring 2011 Delineation Area
- *2011 Poling Focus Areas*

Transects

- 2011 transect to be poled in 2012
- 2011 transect not slated for poling in 2012
- ● Additional 2012 transect poling locations

- ★ Park/Launch Access Poling Areas
- ★ Bridge Access Poling Areas
- Quarter Mile Grid Segment

Number of poling locations within each area will be dependent on site conditions. Full transects will have a minimum of 3 locations.

N

0 50 100 200

Scale in Feet

2012 POLING FOCUS AREAS & TRANSECTS

MP29.64-MP29.84

SHEET 119 OF 170

ENBRIDGE LINE 6B MP 608

MARSHALL, MI PIPELINE RELEASE

ENBRIDGE ENERGY, LIMITED PARTNERSHIP

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Aerial Photography Date: April 2011

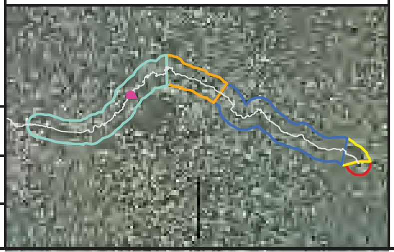
ENBRIDGE

Drawn: BRS 10/18/2011

Approved: DBR 10/18/2011

Project #: 106-4186

Map Location



Legend

- Late Summer 2011 Delineation Area
- Spring 2011 Delineation Area
- *2011 Poling Focus Areas*

Transects

- 2011 transect to be poled in 2012
- 2011 transect not slated for poling in 2012
- ● Additional 2012 transect poling locations

- ★ Park/Launch Access Poling Areas
- ★ Bridge Access Poling Areas
- Quarter Mile Grid Segment

Number of poling locations within each area will be dependent on site conditions. Full transects will have a minimum of 3 locations.

N

0 50 100 200

Scale in Feet

2012 POLING FOCUS AREAS & TRANSECTS
MP29.84-MP30.03

SHEET 120 OF 170

ENBRIDGE LINE 6B MP 608
MARSHALL, MI PIPELINE RELEASE
ENBRIDGE ENERGY, LIMITED PARTNERSHIP

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Aerial Photography Date: April 2011

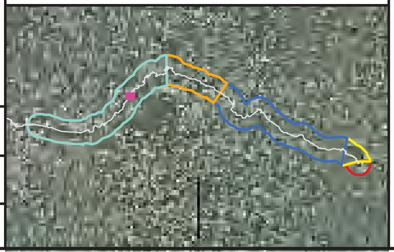
ENBRIDGE

Drawn: BRS 10/18/2011

Approved: DBR 10/18/2011

Project #: 106-4186

Map Location



Legend

Late Summer 2011 Delineation Area

Spring 2011 Delineation Area

2011 Poling Focus Areas

Transcripts

Transects

2011 transect to be poled in 2012

2011 transect not slated for poling in 2012

● Additional 2012 transect poling locations

★ Park/Launch Access Poling Areas

★ Bridge Access Poling Areas

Quarter Mile Grid Segment

Number of poling locations within each area will be dependent on site conditions. Full transects will have a minimum of 3 locations.

N

0 50 100 200

Scale in Feet

2012 POLING FOCUS AREAS & TRANSECTS

MP30.03-MP30.21

SHEET 121 OF 170

ENBRIDGE LINE 6B MP 608

MARSHALL, MI PIPELINE RELEASE

ENBRIDGE ENERGY, LIMITED PARTNERSHIP

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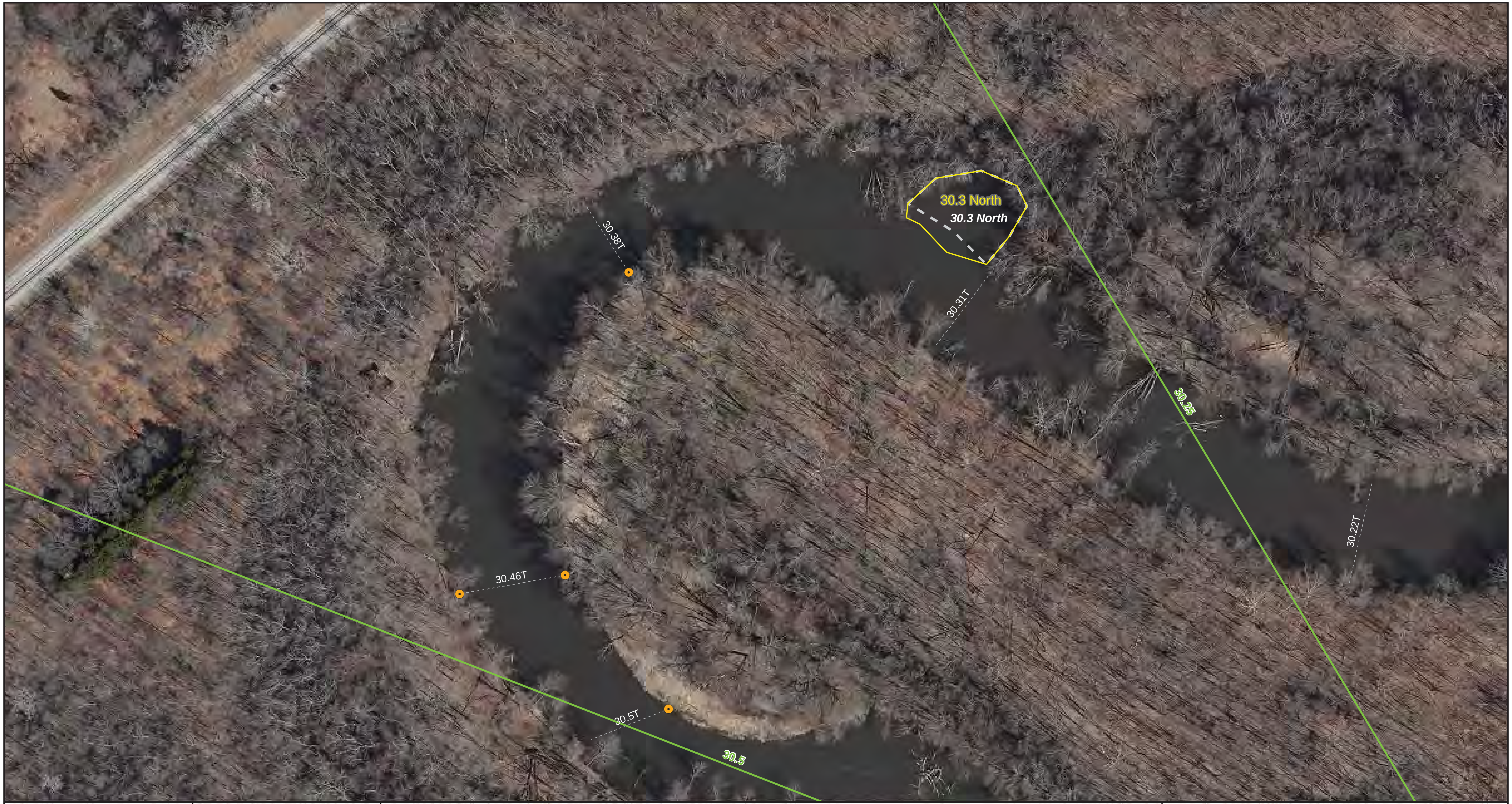
Aerial Photography Date: April 2011



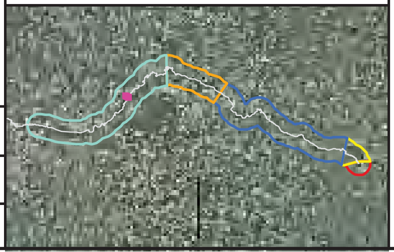
ENBRIDGE

Drawn: BRS 10/18/2011

Approved: DBR 10/18/2011

Project #: 106-4186

Map Location



Legend

- Late Summer 2011 Delineation Area
- Spring 2011 Delineation Area
- *2011 Poling Focus Areas*

Transects

- 2011 transect to be poled in 2012
- 2011 transect not slated for poling in 2012
- ⊙ Additional 2012 transect poling locations

- ★ Park/Launch Access Poling Areas
- ★ Bridge Access Poling Areas
- Quarter Mile Grid Segment

Number of poling locations within each area will be dependent on site conditions. Full transects will have a minimum of 3 locations.

N

0 50 100 200

Scale in Feet

2012 POLING FOCUS AREAS & TRANSECTS

MP30.21-MP30.56

SHEET 122 OF 170

ENBRIDGE LINE 6B MP 608
MARSHALL, MI PIPELINE RELEASE
ENBRIDGE ENERGY, LIMITED PARTNERSHIP

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Aerial Photography Date: April 2011

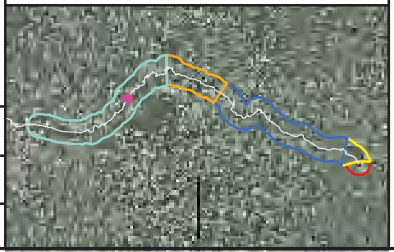
ENBRIDGE

Drawn: BRS 10/18/2011

Approved: DBR 10/18/2011

Project #: 106-4186

Map Location



Legend

○	Late Summer 2011 Delineation Area
○	Spring 2011 Delineation Area
▨	*2011 Poling Focus Areas*

Transcripts

Transects

—	2011 transect to be poled in 2012
- - -	2011 transect not slated for poling in 2012
●	Additional 2012 transect poling locations

★	Park/Launch Access Poling Areas
★	Bridge Access Poling Areas
—	Quarter Mile Grid Segment

Number of poling locations within each area will be dependent on site conditions. Full transects will have a minimum of 3 locations.

N

0 50 100 200

Scale in Feet

2012 POLING FOCUS AREAS & TRANSECTS
MP30.56-MP30.74

SHEET 123 OF 170

ENBRIDGE LINE 6B MP 608
MARSHALL, MI PIPELINE RELEASE
ENBRIDGE ENERGY, LIMITED PARTNERSHIP

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Aerial Photography Date: April 2011

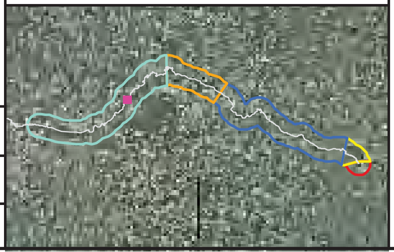
ENBRIDGE

Drawn: BRS 10/18/2011

Approved: DBR 10/18/2011

Project #: 106-4186

Map Location



Legend

Late Summer 2011 Delineation Area

Spring 2011 Delineation Area

2011 Poling Focus Areas

Transects

2011 transect to be poled in 2012

2011 transect not slated for poling in 2012

● Additional 2012 transect poling locations

★ Park/Launch Access Poling Areas

★ Bridge Access Poling Areas

Quarter Mile Grid Segment

Number of poling locations within each area will be dependent on site conditions. Full transects will have a minimum of 3 locations.

N

0 50 100 200

Scale in Feet

2012 POLING FOCUS AREAS & TRANSECTS
MP30.74-MP30.92
SHEET 124 OF 170
ENBRIDGE LINE 6B MP 608
MARSHALL, MI PIPELINE RELEASE
ENBRIDGE ENERGY, LIMITED PARTNERSHIP

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Aerial Photography Date: April 2011

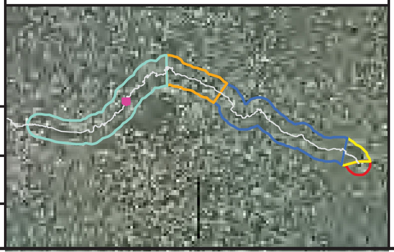
ENBRIDGE

Drawn: BRS 10/18/2011

Approved: DBR 10/18/2011

Project #: 106-4186

Map Location



Legend

- Late Summer 2011 Delineation Area
- Spring 2011 Delineation Area
- *2011 Poling Focus Areas*

Transects

- — 2011 transect to be poled in 2012
- - - 2011 transect not slated for poling in 2012
- ● Additional 2012 transect poling locations

- ★ Park/Launch Access Poling Areas
- ★ Bridge Access Poling Areas
- — Quarter Mile Grid Segment

Number of poling locations within each area will be dependent on site conditions. Full transects will have a minimum of 3 locations.

N

0 50 100 200

Scale in Feet

2012 POLING FOCUS AREAS & TRANSECTS
MP30.92-MP31.10

SHEET 125 OF 170

ENBRIDGE LINE 6B MP 608
MARSHALL, MI PIPELINE RELEASE
ENBRIDGE ENERGY, LIMITED PARTNERSHIP

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Aerial Photography Date: April 2011

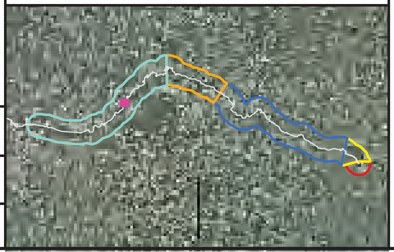
ENBRIDGE

Drawn: BRS 10/18/2011

Approved: DBR 10/18/2011

Project #: 106-4186

Map Location



Legend

⬠	Late Summer 2011 Delineation Area
⬠	Spring 2011 Delineation Area
⬠	*2011 Poling Focus Areas*

Transects

—	2011 transect to be poled in 2012
- - -	2011 transect not slated for poling in 2012
⊙	Additional 2012 transect poling locations

★	Park/Launch Access Poling Areas
★	Bridge Access Poling Areas
—	Quarter Mile Grid Segment

Number of poling locations within each area will be dependent on site conditions. Full transects will have a minimum of 3 locations.

N

0 50 100 200

Scale in Feet

2012 POLING FOCUS AREAS & TRANSECTS

MP31.10-MP31.30

SHEET 126 OF 170

ENBRIDGE LINE 6B MP 608
MARSHALL, MI PIPELINE RELEASE
ENBRIDGE ENERGY, LIMITED PARTNERSHIP

H:\ArcMap Project Files\Report Maps\2012 Plan\2012_Poling_Reassessment_Plan_101811.mxd

Aerial Photography Date: April 2011

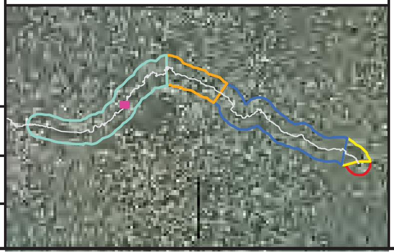
ENBRIDGE

Drawn: BRS 10/18/2011

Approved: DBR 10/18/2011

Project #: 106-4186

Map Location



Legend

- Late Summer 2011 Delineation Area
- Spring 2011 Delineation Area
- *2011 Poling Focus Areas*

Transects
- 2011 transect to be poled in 2012
- 2011 transect not slated for poling in 2012
- ● Additional 2012 transect poling locations

- ★ Park/Launch Access Poling Areas
- ★ Bridge Access Poling Areas
- Quarter Mile Grid Segment

Number of poling locations within each area will be dependent on site conditions. Full transects will have a minimum of 3 locations.

N

0 50 100 200
Scale in Feet

2012 POLING FOCUS AREAS & TRANSECTS
MP31.30-MP31.45
SHEET 127 OF 170
ENBRIDGE LINE 6B MP 608
MARSHALL, MI PIPELINE RELEASE
ENBRIDGE ENERGY, LIMITED PARTNERSHIP

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Aerial Photography Date: April 2011

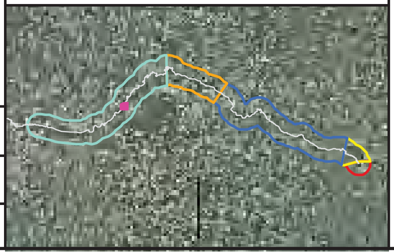
ENBRIDGE

Drawn: BRS 10/18/2011

Approved: DBR 10/18/2011

Project #: 106-4186

Map Location



Legend

- Late Summer 2011 Delineation Area
- Spring 2011 Delineation Area
- *2011 Poling Focus Areas*

Transects

- 2011 transect to be poled in 2012
- 2011 transect not slated for poling in 2012
- ● Additional 2012 transect poling locations

- ★ Park/Launch Access Poling Areas
- ★ Bridge Access Poling Areas
- Quarter Mile Grid Segment

Number of poling locations within each area will be dependent on site conditions. Full transects will have a minimum of 3 locations.

N

0 50 100 200
Scale in Feet

2012 POLING FOCUS AREAS & TRANSECTS
MP31.45-MP31.65
SHEET 128 OF 170
ENBRIDGE LINE 6B MP 608
MARSHALL, MI PIPELINE RELEASE
ENBRIDGE ENERGY, LIMITED PARTNERSHIP

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Aerial Photography Date: April 2011

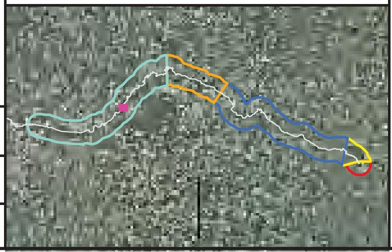
ENBRIDGE

Drawn: BRS 10/18/2011

Approved: DBR 10/18/2011

Project #: 106-4186

Map Location



Legend

- Late Summer 2011 Delineation Area
- Spring 2011 Delineation Area
- *2011 Poling Focus Areas*

Transects

- 2011 transect to be poled in 2012
- 2011 transect not slated for poling in 2012
- ● Additional 2012 transect poling locations

- ★ Park/Launch Access Poling Areas
- ★ Bridge Access Poling Areas
- Quarter Mile Grid Segment

Number of poling locations within each area will be dependent on site conditions. Full transects will have a minimum of 3 locations.

N

0 50 100 200
Scale in Feet

2012 POLING FOCUS AREAS & TRANSECTS
MP31.65-MP31.78
SHEET 129 OF 170
ENBRIDGE LINE 6B MP 608
MARSHALL, MI PIPELINE RELEASE
ENBRIDGE ENERGY, LIMITED PARTNERSHIP

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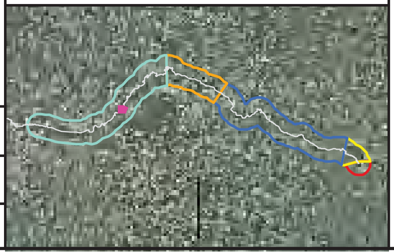
Aerial Photography Date: April 2011

ENBRIDGE

Drawn: BRS 10/18/2011
Approved: DBR 10/18/2011
Project #: 106-4186

Map Location



Legend

Late Summer 2011 Delineation Area
Spring 2011 Delineation Area
2011 Poling Focus Areas

Transects
2011 transect to be poled in 2012
2011 transect not slated for poling in 2012
● Additional 2012 transect poling locations

★ Park/Launch Access Poling Areas
★ Bridge Access Poling Areas
Quarter Mile Grid Segment

Number of poling locations within each area will be dependent on site conditions. Full transects will have a minimum of 3 locations.

N

0 50 100 200
Scale in Feet

2012 POLING FOCUS AREAS & TRANSECTS
MP31.78-MP32.01
SHEET 130 OF 170
ENBRIDGE LINE 6B MP 608
MARSHALL, MI PIPELINE RELEASE
ENBRIDGE ENERGY, LIMITED PARTNERSHIP

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Aerial Photography Date: April 2011

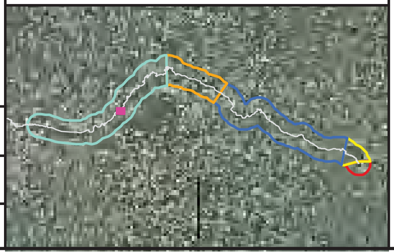
ENBRIDGE

Drawn: BRS 10/18/2011

Approved: DBR 10/18/2011

Project #: 106-4186

Map Location



Legend

- Late Summer 2011 Delineation Area
- Spring 2011 Delineation Area
- *2011 Poling Focus Areas*

Transcripts

- — 2011 transect to be poled in 2012
- --- 2011 transect not slated for poling in 2012
- ● Additional 2012 transect poling locations

- ★ Park/Launch Access Poling Areas
- ★ Bridge Access Poling Areas
- — Quarter Mile Grid Segment

Number of poling locations within each area will be dependent on site conditions. Full transects will have a minimum of 3 locations.

N

0 50 100 200

Scale in Feet

2012 POLING FOCUS AREAS & TRANSECTS
MP32.01-MP32.22
SHEET 131 OF 170
ENBRIDGE LINE 6B MP 608
MARSHALL, MI PIPELINE RELEASE
ENBRIDGE ENERGY, LIMITED PARTNERSHIP

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Aerial Photography Date: April 2011

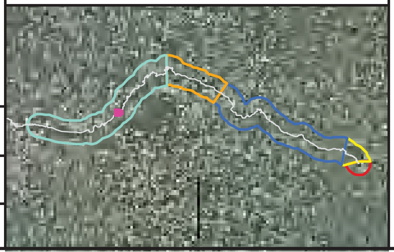
ENBRIDGE

Drawn: BRS 10/18/2011

Approved: DBR 10/18/2011

Project #: 106-4186

Map Location



Legend

- Late Summer 2011 Delineation Area
- Spring 2011 Delineation Area
- *2011 Poling Focus Areas*

Transects

- 2011 transect to be poled in 2012
- 2011 transect not slated for poling in 2012
- ● Additional 2012 transect poling locations

- ★ Park/Launch Access Poling Areas
- ★ Bridge Access Poling Areas
- Quarter Mile Grid Segment

Number of poling locations within each area will be dependent on site conditions. Full transects will have a minimum of 3 locations.

N

0 50 100 200
Scale in Feet

2012 POLING FOCUS AREAS & TRANSECTS
MP32.22-MP32.48
SHEET 132 OF 170
ENBRIDGE LINE 6B MP 608
MARSHALL, MI PIPELINE RELEASE
ENBRIDGE ENERGY, LIMITED PARTNERSHIP

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Aerial Photography Date: April 2011

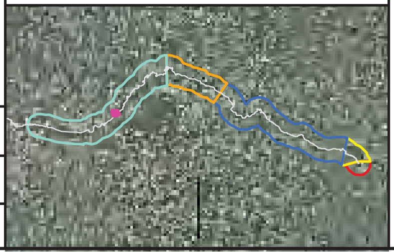
ENBRIDGE

Drawn: BRS 10/18/2011

Approved: DBR 10/18/2011

Project #: 106-4186

Map Location



Legend

- Late Summer 2011 Delineation Area
- Spring 2011 Delineation Area
- *2011 Poling Focus Areas*

Transcripts

- 2011 transect to be poled in 2012
- 2011 transect not slated for poling in 2012
- ● Additional 2012 transect poling locations

- ★ Park/Launch Access Poling Areas
- ★ Bridge Access Poling Areas
- Quarter Mile Grid Segment

Number of poling locations within each area will be dependent on site conditions. Full transects will have a minimum of 3 locations.

N

0 50 100 200

Scale in Feet

2012 POLING FOCUS AREAS & TRANSECTS
MP32.48-MP32.73

SHEET 133 OF 170

ENBRIDGE LINE 6B MP 608
MARSHALL, MI PIPELINE RELEASE
ENBRIDGE ENERGY, LIMITED PARTNERSHIP

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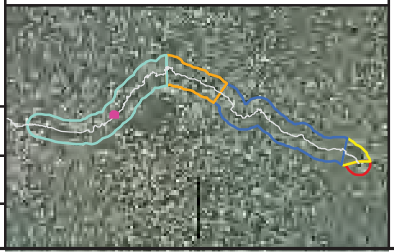
Aerial Photography Date: April 2011

ENBRIDGE

Drawn:	BRS 10/18/2011
Approved:	DBR 10/18/2011
Project #:	106-4186

Map Location



Legend

Late Summer 2011 Delineation Area

Spring 2011 Delineation Area

2011 Poling Focus Areas

Transects

2011 transect to be poled in 2012

2011 transect not slated for poling in 2012

● Additional 2012 transect poling locations

★ Park/Launch Access Poling Areas

★ Bridge Access Poling Areas

Quarter Mile Grid Segment

Number of poling locations within each area will be dependent on site conditions. Full transects will have a minimum of 3 locations.

N

0 50 100 200

Scale in Feet

2012 POLING FOCUS AREAS & TRANSECTS
MP32.73-MP32.91
SHEET 134 OF 170

ENBRIDGE LINE 6B MP 608
MARSHALL, MI PIPELINE RELEASE
ENBRIDGE ENERGY, LIMITED PARTNERSHIP

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Aerial Photography Date: April 2011

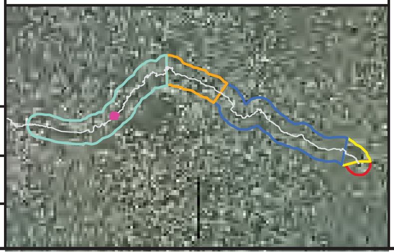
ENBRIDGE

Drawn: BRS 10/18/2011

Approved: DBR 10/18/2011

Project #: 106-4186

Map Location



Legend

- Late Summer 2011 Delineation Area
- Spring 2011 Delineation Area
- *2011 Poling Focus Areas*

Transects

- 2011 transect to be poled in 2012
- 2011 transect not slated for poling in 2012
- ● Additional 2012 transect poling locations

- ★ Park/Launch Access Poling Areas
- ★ Bridge Access Poling Areas
- Quarter Mile Grid Segment

N

Number of poling locations within each area will be dependent on site conditions. Full transects will have a minimum of 3 locations.

0 50 100 200
Scale in Feet

2012 POLING FOCUS AREAS & TRANSECTS
MP32.91-MP33.13
SHEET 135 OF 170
ENBRIDGE LINE 6B MP 608
MARSHALL, MI PIPELINE RELEASE
ENBRIDGE ENERGY, LIMITED PARTNERSHIP

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Aerial Photography Date: April 2011

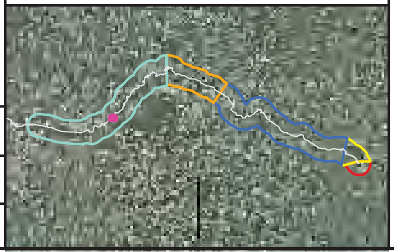
ENBRIDGE

Drawn: BRS 10/18/2011

Approved: DBR 10/18/2011

Project #: 106-4186

Map Location



Legend

- Late Summer 2011 Delineation Area
- Spring 2011 Delineation Area
- *2011 Poling Focus Areas*

Transects

- 2011 transect to be poled in 2012
- 2011 transect not slated for poling in 2012
- ● Additional 2012 transect poling locations

- ★ Park/Launch Access Poling Areas
- ★ Bridge Access Poling Areas
- Quarter Mile Grid Segment

Number of poling locations within each area will be dependent on site conditions. Full transects will have a minimum of 3 locations.

N

0 50 100 200
Scale in Feet

2012 POLING FOCUS AREAS & TRANSECTS
MP33.13-MP33.34
SHEET 136 OF 170
ENBRIDGE LINE 6B MP 608
MARSHALL, MI PIPELINE RELEASE
ENBRIDGE ENERGY, LIMITED PARTNERSHIP

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Aerial Photography Date: April 2011

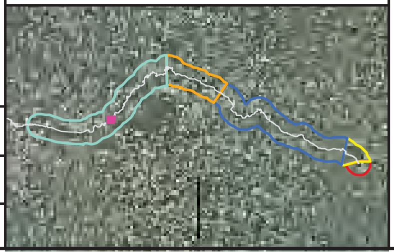
ENBRIDGE

Drawn: BRS 10/18/2011

Approved: DBR 10/18/2011

Project #: 106-4186

Map Location



Legend

- Late Summer 2011 Delineation Area
- Spring 2011 Delineation Area
- *2011 Poling Focus Areas*

Transects
- 2011 transect to be poled in 2012
- 2011 transect not slated for poling in 2012
- ● Additional 2012 transect poling locations

- ★ Park/Launch Access Poling Areas
- ★ Bridge Access Poling Areas
- Quarter Mile Grid Segment

Number of poling locations within each area will be dependent on site conditions. Full transects will have a minimum of 3 locations.

N

0 50 100 200
Scale in Feet

2012 POLING FOCUS AREAS & TRANSECTS
MP33.34-MP33.57
SHEET 137 OF 170
ENBRIDGE LINE 6B MP 608
MARSHALL, MI PIPELINE RELEASE
ENBRIDGE ENERGY, LIMITED PARTNERSHIP

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Aerial Photography Date: April 2011

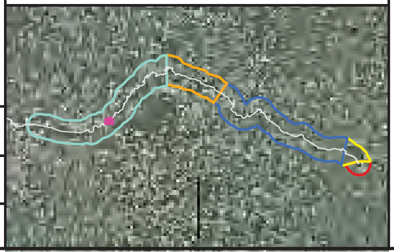
ENBRIDGE

Drawn: BRS 10/18/2011

Approved: DBR 10/18/2011

Project #: 106-4186

Map Location



Legend

- Late Summer 2011 Delineation Area
- Spring 2011 Delineation Area
- *2011 Poling Focus Areas*

Transects
- 2011 transect to be poled in 2012
- 2011 transect not slated for poling in 2012
- ● Additional 2012 transect poling locations

- ★ Park/Launch Access Poling Areas
- ★ Bridge Access Poling Areas
- Quarter Mile Grid Segment

Number of poling locations within each area will be dependent on site conditions. Full transects will have a minimum of 3 locations.

N

0 50 100 200
Scale in Feet

2012 POLING FOCUS AREAS & TRANSECTS
MP33.57-MP33.81
SHEET 138 OF 170
ENBRIDGE LINE 6B MP 608
MARSHALL, MI PIPELINE RELEASE
ENBRIDGE ENERGY, LIMITED PARTNERSHIP

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Aerial Photography Date: April 2011

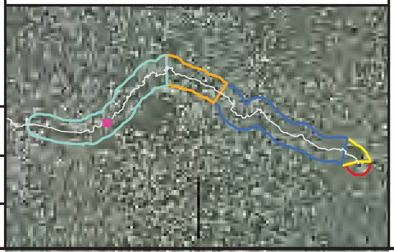
ENBRIDGE

Drawn: BRS 10/18/2011

Approved: DBR 10/18/2011

Project #: 106-4186

Map Location



Legend

- Late Summer 2011 Delineation Area
- Spring 2011 Delineation Area
- *2011 Poling Focus Areas*

Transects

- 2011 transect to be poled in 2012
- 2011 transect not slated for poling in 2012
- ● Additional 2012 transect poling locations

- ★ Park/Launch Access Poling Areas
- ★ Bridge Access Poling Areas
- Quarter Mile Grid Segment

Number of poling locations within each area will be dependent on site conditions. Full transects will have a minimum of 3 locations.

N

0 50 100 200

Scale in Feet

2012 POLING FOCUS AREAS & TRANSECTS
MP33.81-MP34.04

SHEET 139 OF 170

ENBRIDGE LINE 6B MP 608
MARSHALL, MI PIPELINE RELEASE
ENBRIDGE ENERGY, LIMITED PARTNERSHIP

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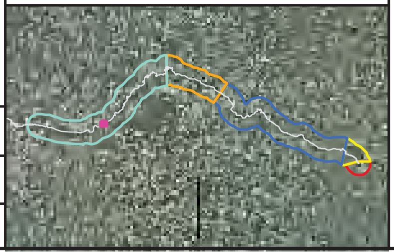
Aerial Photography Date: April 2011

ENBRIDGE

Drawn: BRS 10/18/2011
Approved: DBR 10/18/2011
Project #: 106-4186

Map Location



Legend

◌	Late Summer 2011 Delineation Area
◌	Spring 2011 Delineation Area
┅	*2011 Poling Focus Areas*

Transects

—	2011 transect to be poled in 2012
- - -	2011 transect not slated for poling in 2012
●	Additional 2012 transect poling locations

☆	Park/Launch Access Poling Areas
★	Bridge Access Poling Areas
—	Quarter Mile Grid Segment

Number of poling locations within each area will be dependent on site conditions. Full transects will have a minimum of 3 locations.

2012 POLING FOCUS AREAS & TRANSECTS
MP34.04-MP34.20
SHEET 140 OF 170
ENBRIDGE LINE 6B MP 608
MARSHALL, MI PIPELINE RELEASE
ENBRIDGE ENERGY, LIMITED PARTNERSHIP

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Aerial Photography Date: April 2011

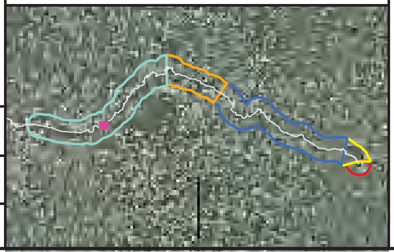
ENBRIDGE

Drawn: BRS 10/18/2011

Approved: DBR 10/18/2011

Project #: 106-4186

Map Location



Legend

- Late Summer 2011 Delineation Area
- Spring 2011 Delineation Area
- *2011 Poling Focus Areas*

Transects

- 2011 transect to be poled in 2012
- 2011 transect not slated for poling in 2012
- ● Additional 2012 transect poling locations

- ★ Park/Launch Access Poling Areas
- ★ Bridge Access Poling Areas
- Quarter Mile Grid Segment

Number of poling locations within each area will be dependent on site conditions. Full transects will have a minimum of 3 locations.

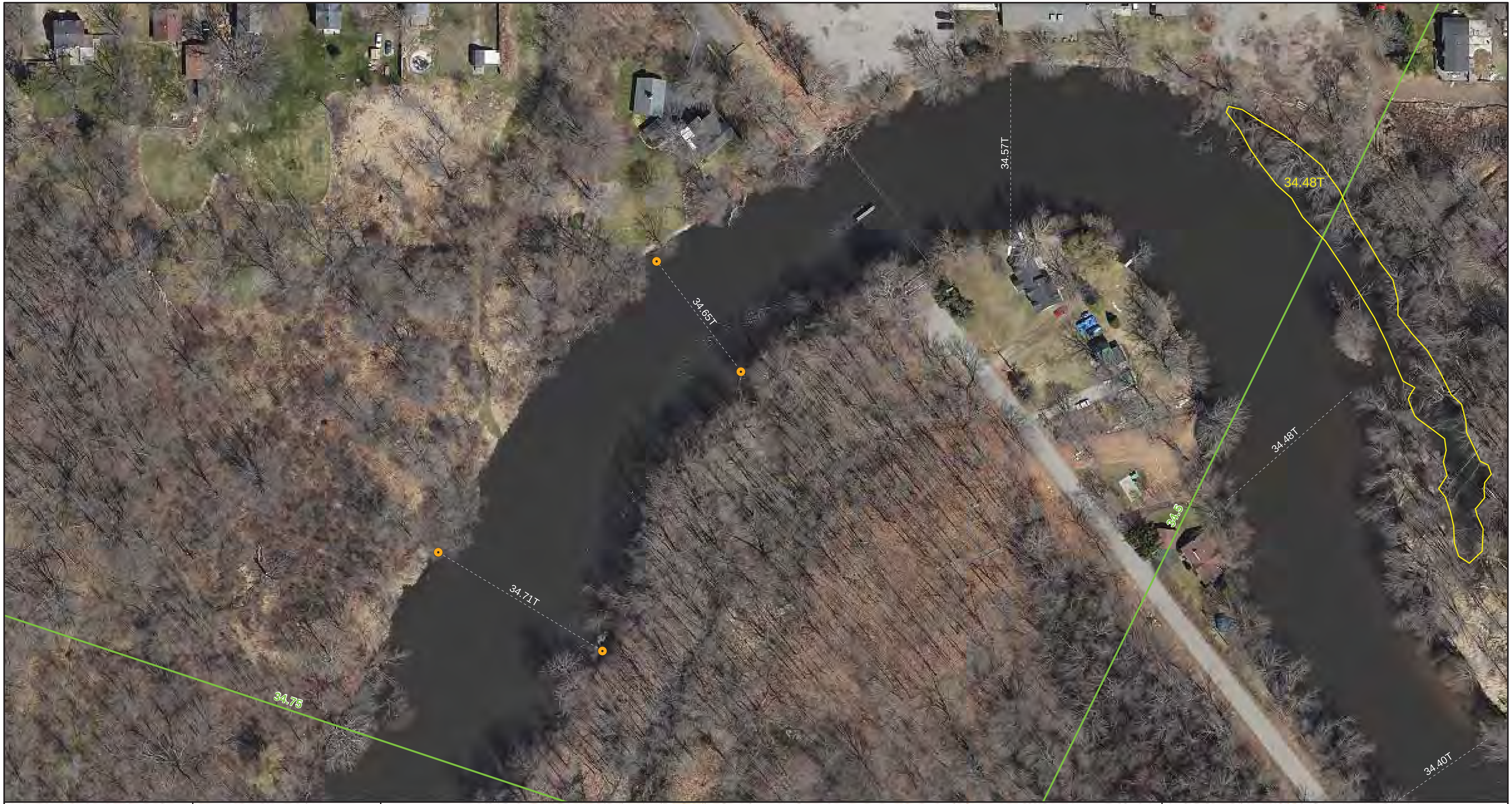
N

0 50 100 200
Scale in Feet

2012 POLING FOCUS AREAS & TRANSECTS
MP34.20-MP34.48
SHEET 141 OF 170
ENBRIDGE LINE 6B MP 608
MARSHALL, MI PIPELINE RELEASE
ENBRIDGE ENERGY, LIMITED PARTNERSHIP

H:\ArcMap Project Files\Report Maps\2012 Plan\2012_Poling_Reassessment_Plan_101811.mxd

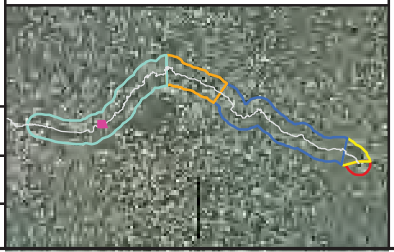
Aerial Photography Date: April 2011



ENBRIDGE

Drawn: BRS 10/18/2011
Approved: DBR 10/18/2011
Project #: 106-4186

Map Location



Legend

- Late Summer 2011 Delineation Area
- Spring 2011 Delineation Area
- *2011 Poling Focus Areas*

Transcripts
- 2011 transect to be poled in 2012
- 2011 transect not slated for poling in 2012
- ● Additional 2012 transect poling locations

- ★ Park/Launch Access Poling Areas
- ★ Bridge Access Poling Areas
- Quarter Mile Grid Segment

Number of poling locations within each area will be dependent on site conditions. Full transects will have a minimum of 3 locations.

N

0 50 100 200
Scale in Feet

2012 POLING FOCUS AREAS & TRANSECTS
MP34.48-MP34.76
SHEET 142 OF 170
ENBRIDGE LINE 6B MP 608
MARSHALL, MI PIPELINE RELEASE
ENBRIDGE ENERGY, LIMITED PARTNERSHIP

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Aerial Photography Date: April 2011

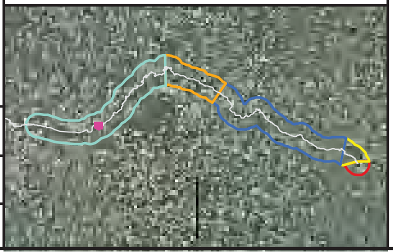
ENBRIDGE

Drawn: BRS 10/18/2011

Approved: DBR 10/18/2011

Project #: 106-4186

Map Location



Legend

- Late Summer 2011 Delineation Area
- Spring 2011 Delineation Area
- *2011 Poling Focus Areas*

Transects

- 2011 transect to be poled in 2012
- 2011 transect not slated for poling in 2012
- ● Additional 2012 transect poling locations

- ★ Park/Launch Access Poling Areas
- ★ Bridge Access Poling Areas
- Quarter Mile Grid Segment

Number of poling locations within each area will be dependent on site conditions. Full transects will have a minimum of 3 locations.

N

0 50 100 200

Scale in Feet

2012 POLING FOCUS AREAS & TRANSECTS

MP34.76-MP34.91

SHEET 143 OF 170

ENBRIDGE LINE 6B MP 608
MARSHALL, MI PIPELINE RELEASE
ENBRIDGE ENERGY, LIMITED PARTNERSHIP

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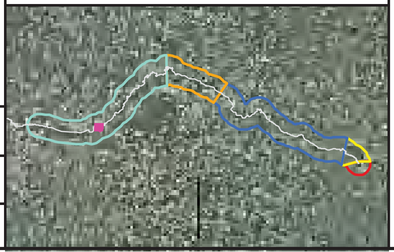
Aerial Photography Date: April 2011

Drawn: BRS 10/18/2011

Approved: DBR 10/18/2011

Project #: 106-4186

Map Location



Legend

Late Summer 2011 Delineation Area	Transects
Spring 2011 Delineation Area	2011 transect to be poled in 2012
2011 Poling Focus Areas	2011 transect not slated for poling in 2012
	● Additional 2012 transect poling locations

★ Park/Launch Access Poling Areas

★ Bridge Access Poling Areas

Quarter Mile Grid Segment

Number of poling locations within each area will be dependent on site conditions. Full transects will have a minimum of 3 locations.

N

0 50 100 200
Scale in Feet

2012 POLING FOCUS AREAS & TRANSECTS
MP34.91-MP35.19
SHEET 144 OF 170

ENBRIDGE LINE 6B MP 608
MARSHALL, MI PIPELINE RELEASE
ENBRIDGE ENERGY, LIMITED PARTNERSHIP

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Aerial Photography Date: April 2011

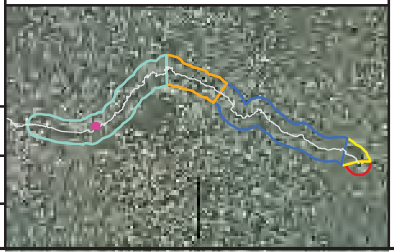
ENBRIDGE

Drawn: BRS 10/18/2011

Approved: DBR 10/18/2011

Project #: 106-4186

Map Location



Legend

- 🟪 Late Summer 2011 Delineation Area
- 🟨 Spring 2011 Delineation Area
- *2011 Poling Focus Areas*

Transects

- 2011 transect to be poled in 2012
- - - - 2011 transect not slated for poling in 2012
- ● Additional 2012 transect poling locations

- ★ Park/Launch Access Poling Areas
- ★ Bridge Access Poling Areas
- Quarter Mile Grid Segment

N

0 50 100 200

Scale in Feet

Number of poling locations within each area will be dependent on site conditions. Full transects will have a minimum of 3 locations.

2012 POLING FOCUS AREAS & TRANSECTS
MP35.19-MP35.56

SHEET 145 OF 170

ENBRIDGE LINE 6B MP 608
MARSHALL, MI PIPELINE RELEASE
ENBRIDGE ENERGY, LIMITED PARTNERSHIP

H:\ArcMap Project Files\Report Maps\2012 Plan\2012_Poling_Reassessment_Plan_101811.mxd

Aerial Photography Date: April 2011

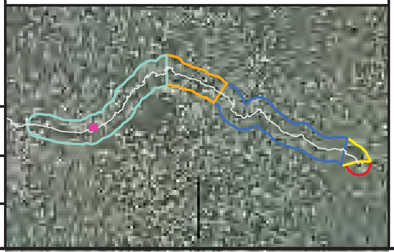
ENBRIDGE

Drawn: BRS 10/18/2011

Approved: DBR 10/18/2011

Project #: 106-4186

Map Location



Legend

- Late Summer 2011 Delineation Area
- Spring 2011 Delineation Area
- *2011 Poling Focus Areas*

Transcripts

- 2011 transect to be poled in 2012
- 2011 transect not slated for poling in 2012
- ● Additional 2012 transect poling locations

- ★ Park/Launch Access Poling Areas
- ★ Bridge Access Poling Areas
- Quarter Mile Grid Segment

Number of poling locations within each area will be dependent on
site conditions. Full transects will have a minimum of 3 locations.

N

0 50 100 200

Scale in Feet

2012 POLING FOCUS AREAS & TRANSECTS

MP35.56-MP35.70

SHEET 146 OF 170

ENBRIDGE LINE 6B MP 608
MARSHALL, MI PIPELINE RELEASE
ENBRIDGE ENERGY, LIMITED PARTNERSHIP

H:\ArcMap Project Files\Report Maps\2012 Plan\2012_Poling_Reassessment_Plan_101811.mxd

Aerial Photography Date: April 2011

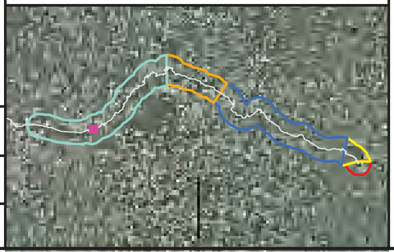
ENBRIDGE

Drawn: BRS 10/18/2011

Approved: DBR 10/18/2011

Project #: 106-4186

Map Location



Legend

Late Summer 2011 Delineation Area

Spring 2011 Delineation Area

2011 Poling Focus Areas

Transcripts

2011 transect to be poled in 2012

2011 transect not slated for poling in 2012

Additional 2012 transect poling locations

★ Park/Launch Access Poling Areas

★ Bridge Access Poling Areas

Quarter Mile Grid Segment

Number of poling locations within each area will be dependent on site conditions. Full transects will have a minimum of 3 locations.

N

0 50 100 200

Scale in Feet

2012 POLING FOCUS AREAS & TRANSECTS
MP35.70-MP35.85
SHEET 147 OF 170

ENBRIDGE LINE 6B MP 608
MARSHALL, MI PIPELINE RELEASE
ENBRIDGE ENERGY, LIMITED PARTNERSHIP

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Aerial Photography Date: April 2011

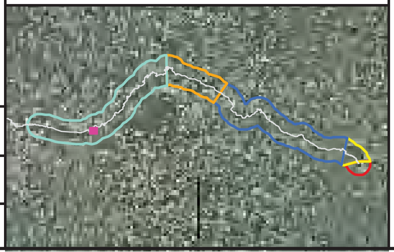
ENBRIDGE

Drawn: BRS 10/18/2011

Approved: DBR 10/18/2011

Project #: 106-4186

Map Location



Legend

- Late Summer 2011 Delineation Area
- Spring 2011 Delineation Area
- *2011 Poling Focus Areas*

Transects

- 2011 transect to be poled in 2012
- 2011 transect not slated for poling in 2012
- ● Additional 2012 transect poling locations

- ★ Park/Launch Access Poling Areas
- ★ Bridge Access Poling Areas
- Quarter Mile Grid Segment

Number of poling locations within each area will be dependent on site conditions. Full transects will have a minimum of 3 locations.

N

0 50 100 200

Scale in Feet

2012 POLING FOCUS AREAS & TRANSECTS
MP35.85-MP36.01

SHEET 148 OF 170

ENBRIDGE LINE 6B MP 608
MARSHALL, MI PIPELINE RELEASE
ENBRIDGE ENERGY, LIMITED PARTNERSHIP

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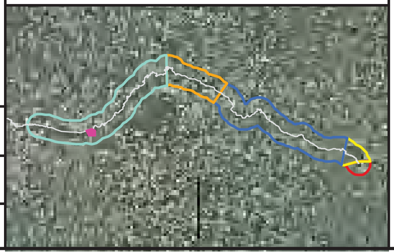
Aerial Photography Date: April 2011

ENBRIDGE

Drawn:	BRS 10/18/2011
Approved:	DBR 10/18/2011
Project #:	106-4186

Map Location



Legend

- Late Summer 2011 Delineation Area
- Spring 2011 Delineation Area
- *2011 Poling Focus Areas*

Transects

- 2011 transect to be poled in 2012
- 2011 transect not slated for poling in 2012
- ● Additional 2012 transect poling locations

- ★ Park/Launch Access Poling Areas
- ★ Bridge Access Poling Areas
- Quarter Mile Grid Segment

Number of poling locations within each area will be dependent on site conditions. Full transects will have a minimum of 3 locations.

N

0 50 100 200
Scale in Feet

2012 POLING FOCUS AREAS & TRANSECTS
MP36.01-MP36.30

SHEET 149 OF 170

ENBRIDGE LINE 6B MP 608
MARSHALL, MI PIPELINE RELEASE
ENBRIDGE ENERGY, LIMITED PARTNERSHIP

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Aerial Photography Date: April 2011

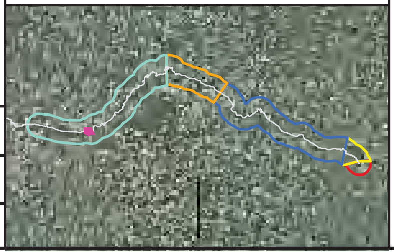
ENBRIDGE

Drawn: BRS 10/18/2011

Approved: DBR 10/18/2011

Project #: 106-4186

Map Location



Legend

- Late Summer 2011 Delineation Area
- Spring 2011 Delineation Area
- *2011 Poling Focus Areas*

Transcripts

- 2011 transect to be poled in 2012
- 2011 transect not slated for poling in 2012
- ● Additional 2012 transect poling locations

- ★ Park/Launch Access Poling Areas
- ★ Bridge Access Poling Areas
- Quarter Mile Grid Segment

Number of poling locations within each area will be dependent on site conditions. Full transects will have a minimum of 3 locations.

N

0 50 100 200

Scale in Feet

2012 POLING FOCUS AREAS & TRANSECTS

MP36.30-MP36.43

SHEET 150 OF 170

ENBRIDGE LINE 6B MP 608

MARSHALL, MI PIPELINE RELEASE

ENBRIDGE ENERGY, LIMITED PARTNERSHIP

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Aerial Photography Date: April 2011

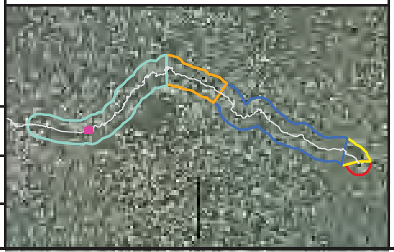
ENBRIDGE

Drawn: BRS 10/18/2011

Approved: DBR 10/18/2011

Project #: 106-4186

Map Location



Legend

- Late Summer 2011 Delineation Area
- Spring 2011 Delineation Area
- *2011 Poling Focus Areas*

Transcripts

- 2011 transect to be poled in 2012
- 2011 transect not slated for poling in 2012
- ● Additional 2012 transect poling locations

- ★ Park/Launch Access Poling Areas
- ★ Bridge Access Poling Areas
- Quarter Mile Grid Segment

Number of poling locations within each area will be dependent on site conditions. Full transects will have a minimum of 3 locations.

N

0 50 100 200
Scale in Feet

2012 POLING FOCUS AREAS & TRANSECTS
MP36.43-MP36.69

SHEET 151 OF 170

ENBRIDGE LINE 6B MP 608
MARSHALL, MI PIPELINE RELEASE
ENBRIDGE ENERGY, LIMITED PARTNERSHIP

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Aerial Photography Date: April 2011

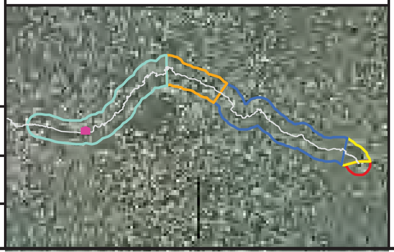
ENBRIDGE

Drawn: BRS 10/18/2011

Approved: DBR 10/18/2011

Project #: 106-4186

Map Location



Legend

- Late Summer 2011 Delineation Area
- Spring 2011 Delineation Area
- *2011 Poling Focus Areas*

Transcripts

- 2011 transect to be poled in 2012
- 2011 transect not slated for poling in 2012
- ● Additional 2012 transect poling locations

- ★ Park/Launch Access Poling Areas
- ★ Bridge Access Poling Areas
- Quarter Mile Grid Segment

Number of poling locations within each area will be dependent on site conditions. Full transects will have a minimum of 3 locations.

N

0 50 100 200
Scale in Feet

2012 POLING FOCUS AREAS & TRANSECTS
Delta-01
SHEET 152 OF 170

ENBRIDGE LINE 6B MP 608
MARSHALL, MI PIPELINE RELEASE
ENBRIDGE ENERGY, LIMITED PARTNERSHIP

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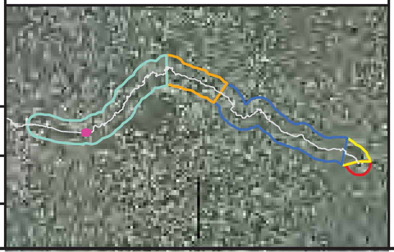
Aerial Photography Date: April 2011

ENBRIDGE

Drawn:	BRS 10/18/2011
Approved:	DBR 10/18/2011
Project #:	106-4186

Map Location



Legend

- Late Summer 2011 Delineation Area
- Spring 2011 Delineation Area
- *2011 Poling Focus Areas*

Transects

- 2011 transect to be poled in 2012
- 2011 transect not slated for poling in 2012
- ● Additional 2012 transect poling locations

- ★ Park/Launch Access Poling Areas
- ★ Bridge Access Poling Areas
- Quarter Mile Grid Segment

N

Number of poling locations within each area will be dependent on site conditions. Full transects will have a minimum of 3 locations.

0 50 100 200
Scale in Feet

2012 POLING FOCUS AREAS & TRANSECTS

Delta-02

SHEET 153 OF 170

ENBRIDGE LINE 6B MP 608
MARSHALL, MI PIPELINE RELEASE
ENBRIDGE ENERGY, LIMITED PARTNERSHIP

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Aerial Photography Date: April 2011

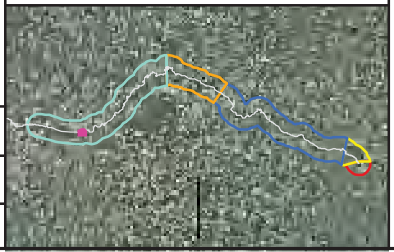
ENBRIDGE

Drawn: BRS 10/18/2011

Approved: DBR 10/18/2011

Project #: 106-4186

Map Location



Legend

Late Summer 2011 Delineation Area

Spring 2011 Delineation Area

2011 Poling Focus Areas

Transects

2011 transect to be poled in 2012

2011 transect not slated for poling in 2012

● Additional 2012 transect poling locations

★ Park/Launch Access Poling Areas

★ Bridge Access Poling Areas

Quarter Mile Grid Segment

Number of poling locations within each area will be dependent on site conditions. Full transects will have a minimum of 3 locations.

N

0 50 100 200

Scale in Feet

2012 POLING FOCUS AREAS & TRANSECTS

Delta-03

SHEET 154 OF 170

ENBRIDGE LINE 6B MP 608
MARSHALL, MI PIPELINE RELEASE
ENBRIDGE ENERGY, LIMITED PARTNERSHIP

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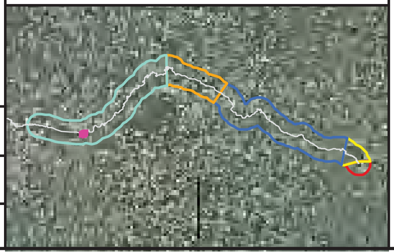
Aerial Photography Date: April 2011

ENBRIDGE

Drawn: BRS 10/18/2011
Approved: DBR 10/18/2011
Project #: 106-4186

Map Location



Legend

Late Summer 2011 Delineation Area
Spring 2011 Delineation Area
2011 Poling Focus Areas

Transects
2011 transect to be poled in 2012
2011 transect not slated for poling in 2012
● Additional 2012 transect poling locations

★ Park/Launch Access Poling Areas
★ Bridge Access Poling Areas
Quarter Mile Grid Segment

Number of poling locations within each area will be dependent on site conditions. Full transects will have a minimum of 3 locations.

N

0 50 100 200
Scale in Feet

2012 POLING FOCUS AREAS & TRANSECTS
Delta-04
SHEET 155 OF 170
ENBRIDGE LINE 6B MP 608
MARSHALL, MI PIPELINE RELEASE
ENBRIDGE ENERGY, LIMITED PARTNERSHIP

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Aerial Photography Date: April 2011

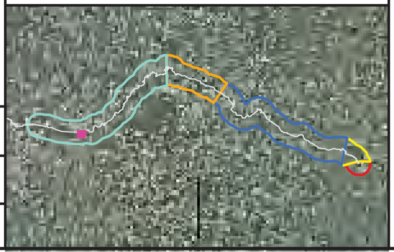
ENBRIDGE

Drawn: BRS 10/18/2011

Approved: DBR 10/18/2011

Project #: 106-4186

Map Location



Legend

Late Summer 2011 Delineation Area

Spring 2011 Delineation Area

2011 Poling Focus Areas

Transects

2011 transect to be poled in 2012

2011 transect not slated for poling in 2012

● Additional 2012 transect poling locations

★ Park/Launch Access Poling Areas

★ Bridge Access Poling Areas

Quarter Mile Grid Segment

Number of poling locations within each area will be dependent on site conditions. Full transects will have a minimum of 3 locations.

N

0 50 100 200
Scale in Feet

2012 POLING FOCUS AREAS & TRANSECTS
Delta-05
SHEET 156 OF 170
ENBRIDGE LINE 6B MP 608
MARSHALL, MI PIPELINE RELEASE
ENBRIDGE ENERGY, LIMITED PARTNERSHIP

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Aerial Photography Date: April 2011

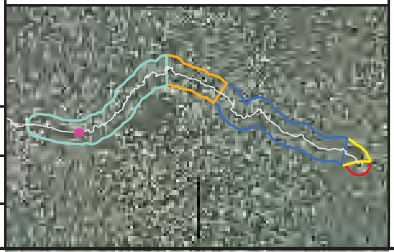
ENBRIDGE

Drawn: BRS 10/18/2011

Approved: DBR 10/18/2011

Project #: 106-4186

Map Location



Legend

- Late Summer 2011 Delineation Area
- Spring 2011 Delineation Area
- *2011 Poling Focus Areas*

Transcripts

- 2011 transect to be poled in 2012
- 2011 transect not slated for poling in 2012
- ● Additional 2012 transect poling locations

- ★ Park/Launch Access Poling Areas
- ★ Bridge Access Poling Areas
- Quarter Mile Grid Segment

Number of poling locations within each area will be dependent on site conditions. Full transects will have a minimum of 3 locations.

N

0 50 100 200

Scale in Feet

2012 POLING FOCUS AREAS & TRANSECTS

Delta-06

SHEET 157 OF 170

ENBRIDGE LINE 6B MP 608
MARSHALL, MI PIPELINE RELEASE
ENBRIDGE ENERGY, LIMITED PARTNERSHIP

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Aerial Photography Date: April 2011

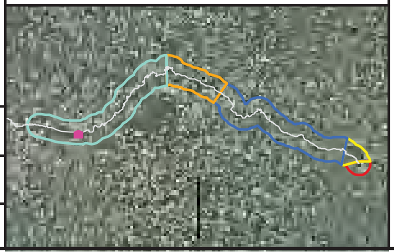
ENBRIDGE

Drawn: BRS 10/18/2011

Approved: DBR 10/18/2011

Project #: 106-4186

Map Location



Legend

- Late Summer 2011 Delineation Area
- Spring 2011 Delineation Area
- *2011 Poling Focus Areas*

Transects

- 2011 transect to be poled in 2012
- 2011 transect not slated for poling in 2012
- ● Additional 2012 transect poling locations

- ★ Park/Launch Access Poling Areas
- ★ Bridge Access Poling Areas
- Quarter Mile Grid Segment

Number of poling locations within each area will be dependent on site conditions. Full transects will have a minimum of 3 locations.

N

0 50 100 200
Scale in Feet

2012 POLING FOCUS AREAS & TRANSECTS

Delta-07

SHEET 158 OF 170

ENBRIDGE LINE 6B MP 608
MARSHALL, MI PIPELINE RELEASE
ENBRIDGE ENERGY, LIMITED PARTNERSHIP

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Aerial Photography Date: April 2011

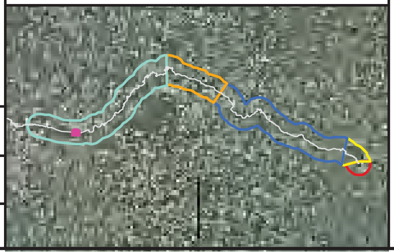
ENBRIDGE

Drawn: BRS 10/18/2011

Approved: DBR 10/18/2011

Project #: 106-4186

Map Location



Legend

Late Summer 2011 Delineation Area	
Spring 2011 Delineation Area	
2011 Poling Focus Areas	

Transects
- 2011 transect to be poled in 2012
- 2011 transect not slated for poling in 2012
- ● Additional 2012 transect poling locations

★ Park/Launch Access Poling Areas

★ Bridge Access Poling Areas

Quarter Mile Grid Segment

N

Number of poling locations within each area will be dependent on site conditions. Full transects will have a minimum of 3 locations.

0 50 100 200
Scale in Feet

2012 POLING FOCUS AREAS & TRANSECTS

Delta-08

SHEET 159 OF 170

ENBRIDGE LINE 6B MP 608
MARSHALL, MI PIPELINE RELEASE
ENBRIDGE ENERGY, LIMITED PARTNERSHIP

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Aerial Photography Date: April 2011

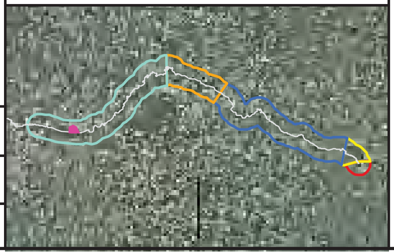
ENBRIDGE

Drawn: BRS 10/18/2011

Approved: DBR 10/18/2011

Project #: 106-4186

Map Location



Legend

- Late Summer 2011 Delineation Area
- Spring 2011 Delineation Area
- *2011 Poling Focus Areas*

Transcets

- 2011 transect to be poled in 2012
- 2011 transect not slated for poling in 2012
- ● Additional 2012 transect poling locations

- ★ Park/Launch Access Poling Areas
- ★ Bridge Access Poling Areas
- Quarter Mile Grid Segment

N

Number of poling locations within each area will be dependent on site conditions. Full transects will have a minimum of 3 locations.

0 50 100 200

Scale in Feet

2012 POLING FOCUS AREAS & TRANSECTS

Lake-01

SHEET 160 OF 170

ENBRIDGE LINE 6B MP 608
MARSHALL, MI PIPELINE RELEASE
ENBRIDGE ENERGY, LIMITED PARTNERSHIP

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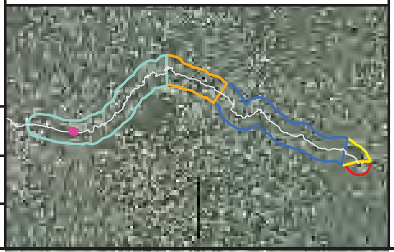
Aerial Photography Date: April 2011

ENBRIDGE

Drawn: BRS 10/18/2011
Approved: DBR 10/18/2011
Project #: 106-4186

Map Location



Legend

- Late Summer 2011 Delineation Area
- Spring 2011 Delineation Area
- *2011 Poling Focus Areas*

Transects
- 2011 transect to be poled in 2012
- 2011 transect not slated for poling in 2012
- ● Additional 2012 transect poling locations

- ★ Park/Launch Access Poling Areas
- ★ Bridge Access Poling Areas
- Quarter Mile Grid Segment

Number of poling locations within each area will be dependent on site conditions. Full transects will have a minimum of 3 locations.

N

0 50 100 200
Scale in Feet

2012 POLING FOCUS AREAS & TRANSECTS
Lake-02
SHEET 161 OF 170
ENBRIDGE LINE 6B MP 608
MARSHALL, MI PIPELINE RELEASE
ENBRIDGE ENERGY, LIMITED PARTNERSHIP

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Aerial Photography Date: April 2011

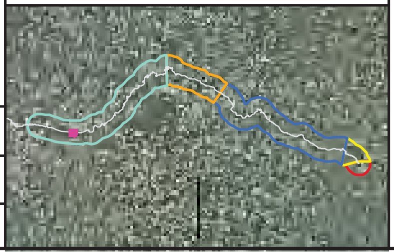
ENBRIDGE

Drawn: BRS 10/18/2011

Approved: DBR 10/18/2011

Project #: 106-4186

Map Location



Legend

- Late Summer 2011 Delineation Area
- Spring 2011 Delineation Area
- *2011 Poling Focus Areas*

Transcripts

- 2011 transect to be poled in 2012
- 2011 transect not slated for poling in 2012
- ● Additional 2012 transect poling locations

- ★ Park/Launch Access Poling Areas
- ★ Bridge Access Poling Areas
- Quarter Mile Grid Segment

Number of poling locations within each area will be dependent on site conditions. Full transects will have a minimum of 3 locations.

N

0 50 100 200
Scale in Feet

2012 POLING FOCUS AREAS & TRANSECTS

Lake-03

SHEET 162 OF 170

ENBRIDGE LINE 6B MP 608
MARSHALL, MI PIPELINE RELEASE
ENBRIDGE ENERGY, LIMITED PARTNERSHIP

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Aerial Photography Date: April 2011

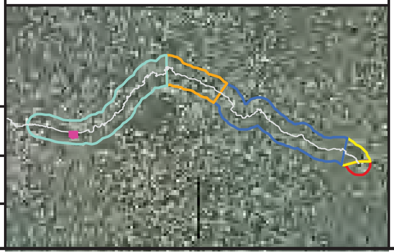
ENBRIDGE

Drawn: BRS 10/18/2011

Approved: DBR 10/18/2011

Project #: 106-4186

Map Location



Legend

- ▭ Late Summer 2011 Delineation Area
- ▭ Spring 2011 Delineation Area
- ▭ *2011 Poling Focus Areas*

Transects

- — 2011 transect to be poled in 2012
- - - - 2011 transect not slated for poling in 2012
- ⊙ Additional 2012 transect poling locations

- ★ Park/Launch Access Poling Areas
- ★ Bridge Access Poling Areas
- — Quarter Mile Grid Segment

Number of poling locations within each area will be dependent on site conditions. Full transects will have a minimum of 3 locations.

N

0 50 100 200

Scale in Feet

2012 POLING FOCUS AREAS & TRANSECTS

Lake-04

SHEET 163 OF 170

ENBRIDGE LINE 6B MP 608
MARSHALL, MI PIPELINE RELEASE
ENBRIDGE ENERGY, LIMITED PARTNERSHIP

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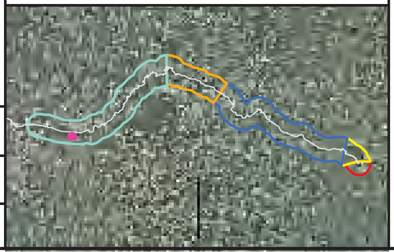
Aerial Photography Date: April 2011

ENBRIDGE

Drawn:	BRS 10/18/2011
Approved:	DBR 10/18/2011
Project #:	106-4186

Map Location



Legend

- Late Summer 2011 Delineation Area
- Spring 2011 Delineation Area
- *2011 Poling Focus Areas*

Transects

- — 2011 transect to be poled in 2012
- - - - 2011 transect not slated for poling in 2012
- ● Additional 2012 transect poling locations

- ★ Park/Launch Access Poling Areas
- ★ Bridge Access Poling Areas
- — Quarter Mile Grid Segment

Number of poling locations within each area will be dependent on site conditions. Full transects will have a minimum of 3 locations.

N

0 50 100 200
Scale in Feet

2012 POLING FOCUS AREAS & TRANSECTS

Lake-05

SHEET 164 OF 170

ENBRIDGE LINE 6B MP 608
MARSHALL, MI PIPELINE RELEASE
ENBRIDGE ENERGY, LIMITED PARTNERSHIP

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Aerial Photography Date: April 2011

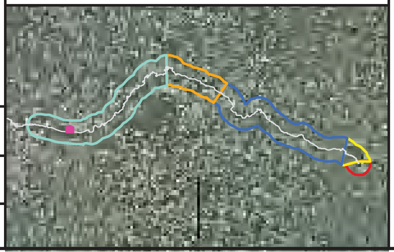
ENBRIDGE

Drawn: BRS 10/18/2011

Approved: DBR 10/18/2011

Project #: 106-4186

Map Location



Legend

- Late Summer 2011 Delineation Area
- Spring 2011 Delineation Area
- *2011 Poling Focus Areas*

Transcripts

- 2011 transect to be poled in 2012
- 2011 transect not slated for poling in 2012
- ● Additional 2012 transect poling locations

- ★ Park/Launch Access Poling Areas
- ★ Bridge Access Poling Areas
- Quarter Mile Grid Segment

Number of poling locations within each area will be dependent on site conditions. Full transects will have a minimum of 3 locations.

N

0 50 100 200

Scale in Feet

2012 POLING FOCUS AREAS & TRANSECTS

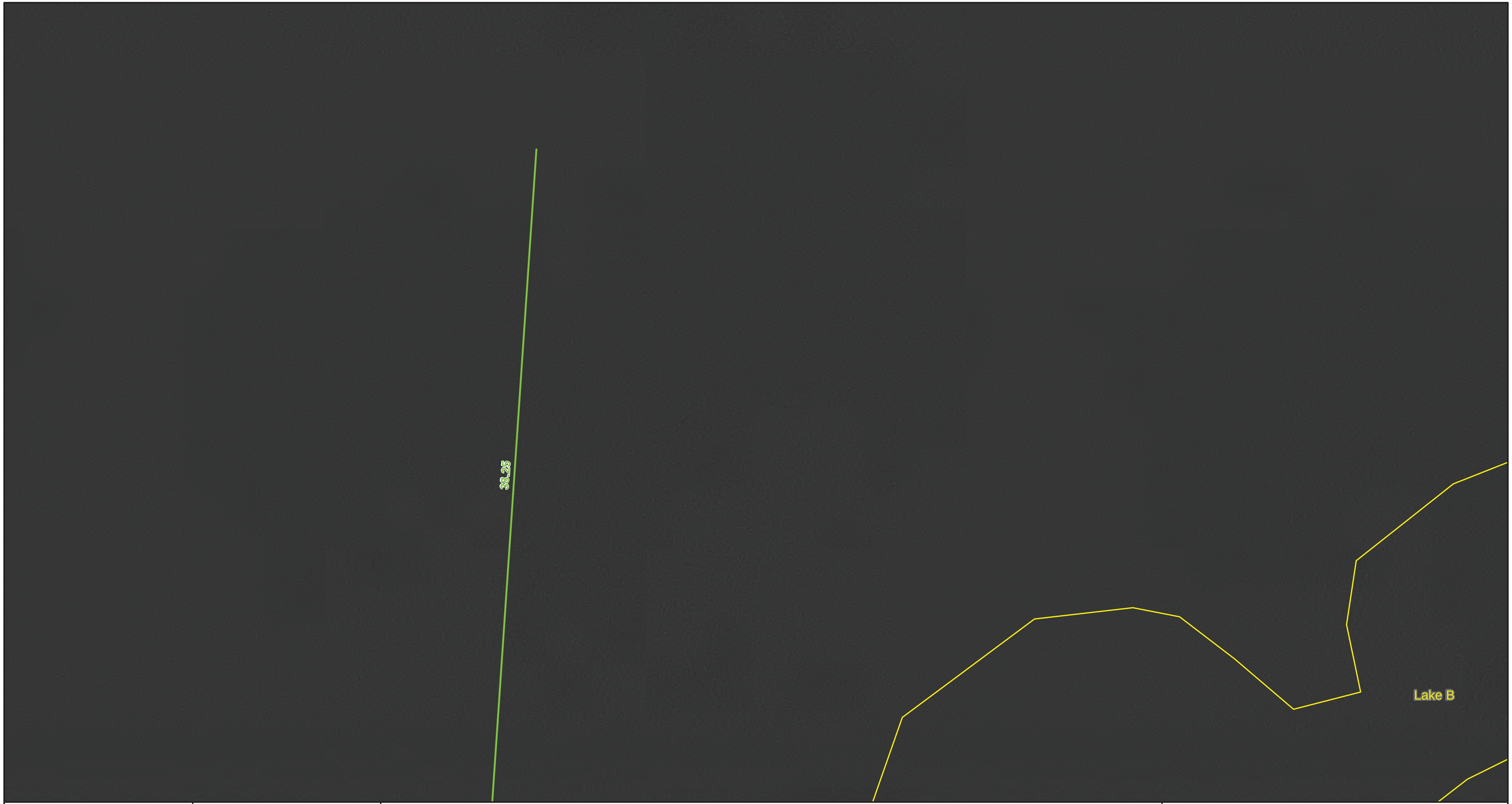
Lake-06

SHEET 165 OF 170

ENBRIDGE LINE 6B MP 608
MARSHALL, MI PIPELINE RELEASE
ENBRIDGE ENERGY, LIMITED PARTNERSHIP

H:\ArcMap Project Files\Report Maps\2012 Plan\2012_Poling_Reassessment_Plan_101811.mxd

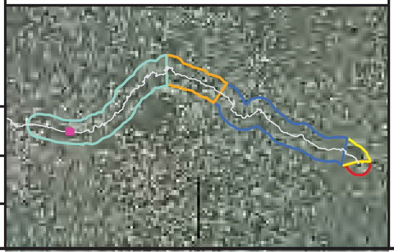
Aerial Photography Date: April 2011



ENBRIDGE

Drawn: BRS 10/18/2011
Approved: DBR 10/18/2011
Project #: 106-4186

Map Location



Legend

◌	Late Summer 2011 Delineation Area
◌	Spring 2011 Delineation Area
◌	*2011 Poling Focus Areas*

Transects

—	2011 transect to be poled in 2012
- - -	2011 transect not slated for poling in 2012
●	Additional 2012 transect poling locations

★	Park/Launch Access Poling Areas
★	Bridge Access Poling Areas
—	Quarter Mile Grid Segment

Number of poling locations within each area will be dependent on site conditions. Full transects will have a minimum of 3 locations.

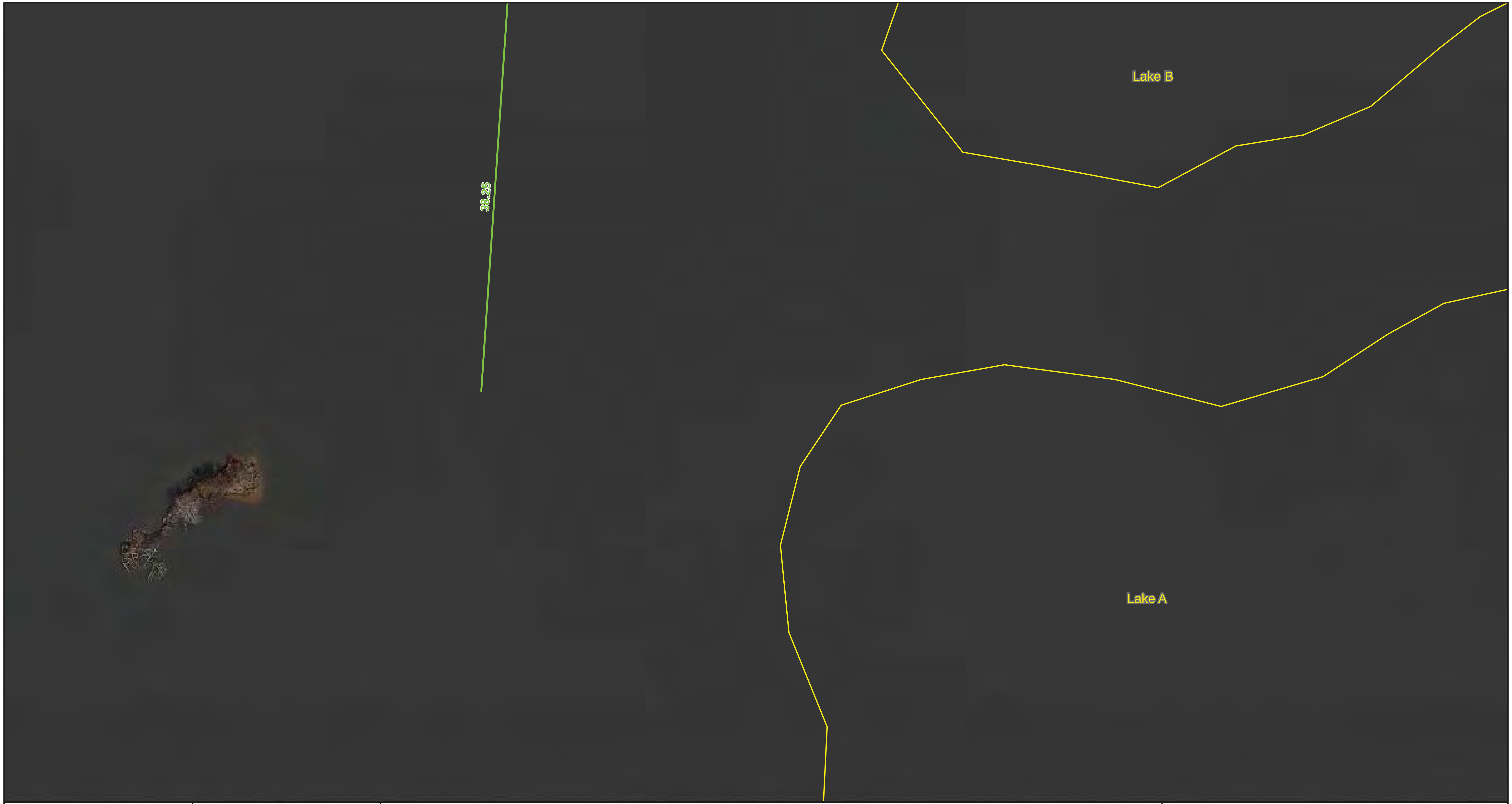
0 50 100 200
Scale in Feet

N

2012 POLING FOCUS AREAS & TRANSECTS
Lake-07
SHEET 166 OF 170
ENBRIDGE LINE 6B MP 608
MARSHALL, MI PIPELINE RELEASE
ENBRIDGE ENERGY, LIMITED PARTNERSHIP

H:\ArcMap Project Files\Report Maps\2012 Plan\2012_Poling_Reassessment_Plan_101811.mxd

Aerial Photography Date: April 2011



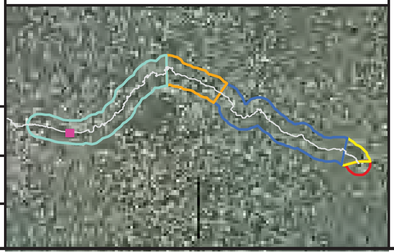
ENBRIDGE

Drawn: BRS 10/18/2011

Approved: DBR 10/18/2011

Project #: 106-4186

Map Location



Legend

- Late Summer 2011 Delineation Area
- Spring 2011 Delineation Area
- *2011 Poling Focus Areas*

Transects

- 2011 transect to be poled in 2012
- 2011 transect not slated for poling in 2012
- Additional 2012 transect poling locations

- Park/Launch Access Poling Areas
- Bridge Access Poling Areas
- Quarter Mile Grid Segment

Number of poling locations within each area will be dependent on site conditions. Full transects will have a minimum of 3 locations.

2012 POLING FOCUS AREAS & TRANSECTS
Lake-08
SHEET 167 OF 170
ENBRIDGE LINE 6B MP 608
MARSHALL, MI PIPELINE RELEASE
ENBRIDGE ENERGY, LIMITED PARTNERSHIP

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Aerial Photography Date: April 2011

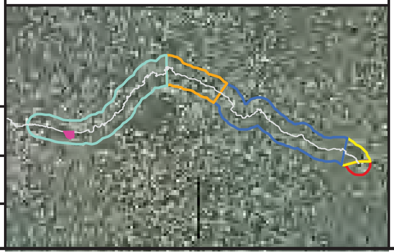
ENBRIDGE

Drawn: BRS 10/18/2011

Approved: DBR 10/18/2011

Project #: 106-4186

Map Location



Legend

Late Summer 2011 Delineation Area

Spring 2011 Delineation Area

2011 Poling Focus Areas

Transects

2011 transect to be poled in 2012

2011 transect not slated for poling in 2012

● Additional 2012 transect poling locations

☆ Park/Launch Access Poling Areas

★ Bridge Access Poling Areas

Quarter Mile Grid Segment

Number of poling locations within each area will be dependent on site conditions. Full transects will have a minimum of 3 locations.

N

0 50 100 200

Scale in Feet

2012 POLING FOCUS AREAS & TRANSECTS

Lake-09

SHEET 168 OF 170

ENBRIDGE LINE 6B MP 608
MARSHALL, MI PIPELINE RELEASE
ENBRIDGE ENERGY, LIMITED PARTNERSHIP

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Aerial Photography Date: April 2011

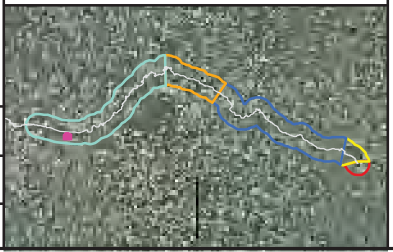
ENBRIDGE

Drawn: BRS 10/18/2011

Approved: DBR 10/18/2011

Project #: 106-4186

Map Location



Legend

- Late Summer 2011 Delineation Area
- Spring 2011 Delineation Area
- *2011 Poling Focus Areas*

Transects

- 2011 transect to be poled in 2012
- 2011 transect not slated for poling in 2012
- ● Additional 2012 transect poling locations

- ★ Park/Launch Access Poling Areas
- ★ Bridge Access Poling Areas
- Quarter Mile Grid Segment

Number of poling locations within each area will be dependent on site conditions. Full transects will have a minimum of 3 locations.

N

0 50 100 200
Scale in Feet

2012 POLING FOCUS AREAS & TRANSECTS
Lake-10
SHEET 169 OF 170

ENBRIDGE LINE 6B MP 608
MARSHALL, MI PIPELINE RELEASE
ENBRIDGE ENERGY, LIMITED PARTNERSHIP

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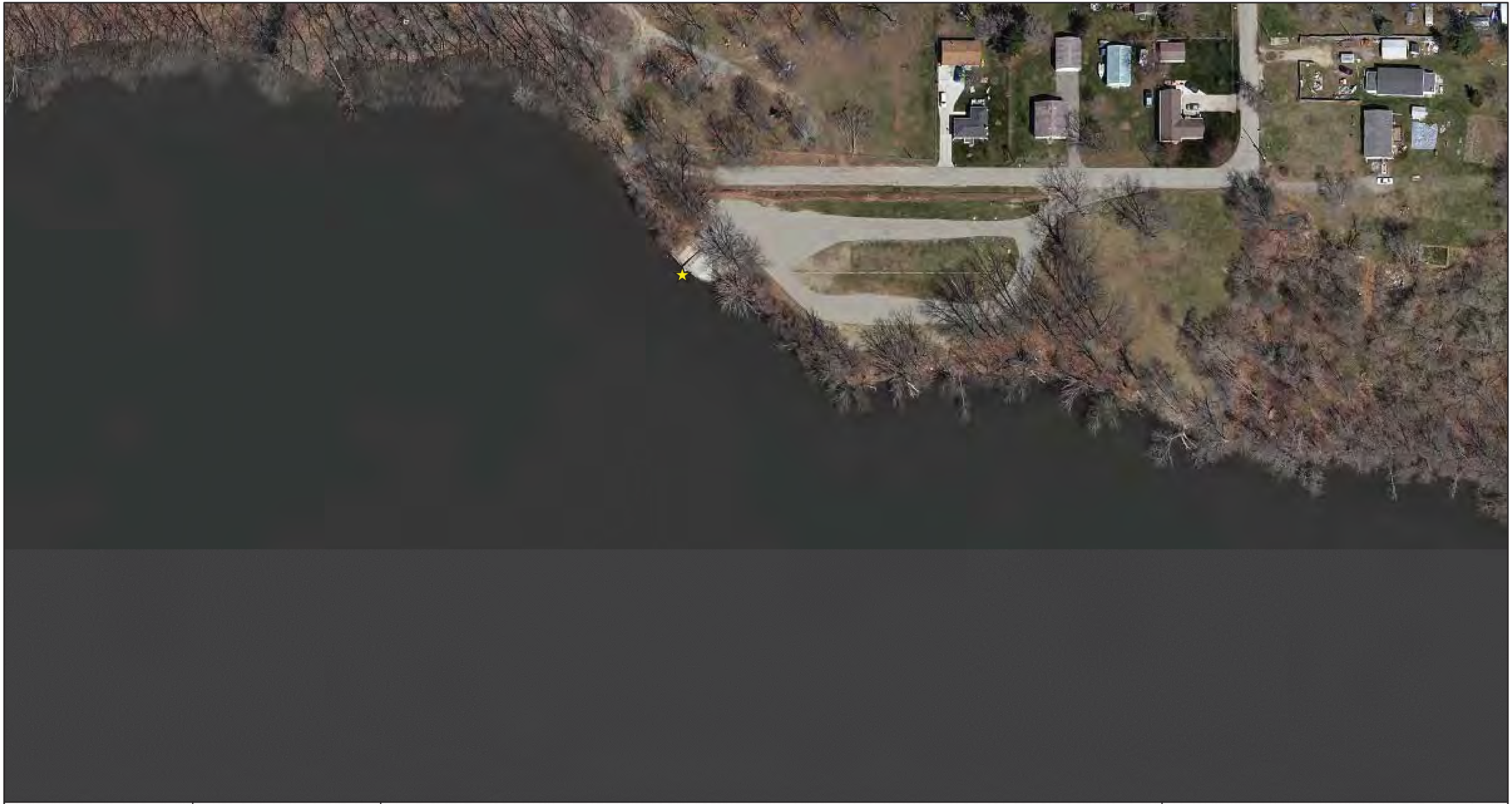
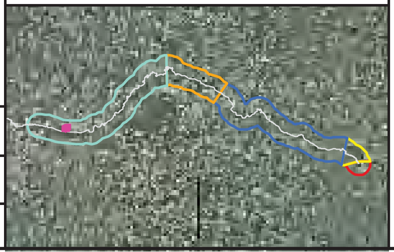
Aerial Photography Date: April 2011



Map Location



Legend

Late Summer 2011 Delineation Area
Spring 2011 Delineation Area
2011 Poling Focus Areas

Transects
— 2011 transect to be poled in 2012
- - - 2011 transect not slated for poling in 2012
● Additional 2012 transect poling locations

★ Park/Launch Access Poling Areas
★ Bridge Access Poling Areas
— Quarter Mile Grid Segment

Number of poling locations within each area will be dependent on site conditions. Full transects will have a minimum of 3 locations.

N

0 50 100 200
Scale in Feet

ENBRIDGE

Drawn: BRS 10/18/2011
Approved: DBR 10/18/2011
Project #: 106-4186

2012 POLING FOCUS AREAS & TRANSECTS
Lake-11
SHEET 170 OF 170
ENBRIDGE LINE 6B MP 608
MARSHALL, MI PIPELINE RELEASE
ENBRIDGE ENERGY, LIMITED PARTNERSHIP

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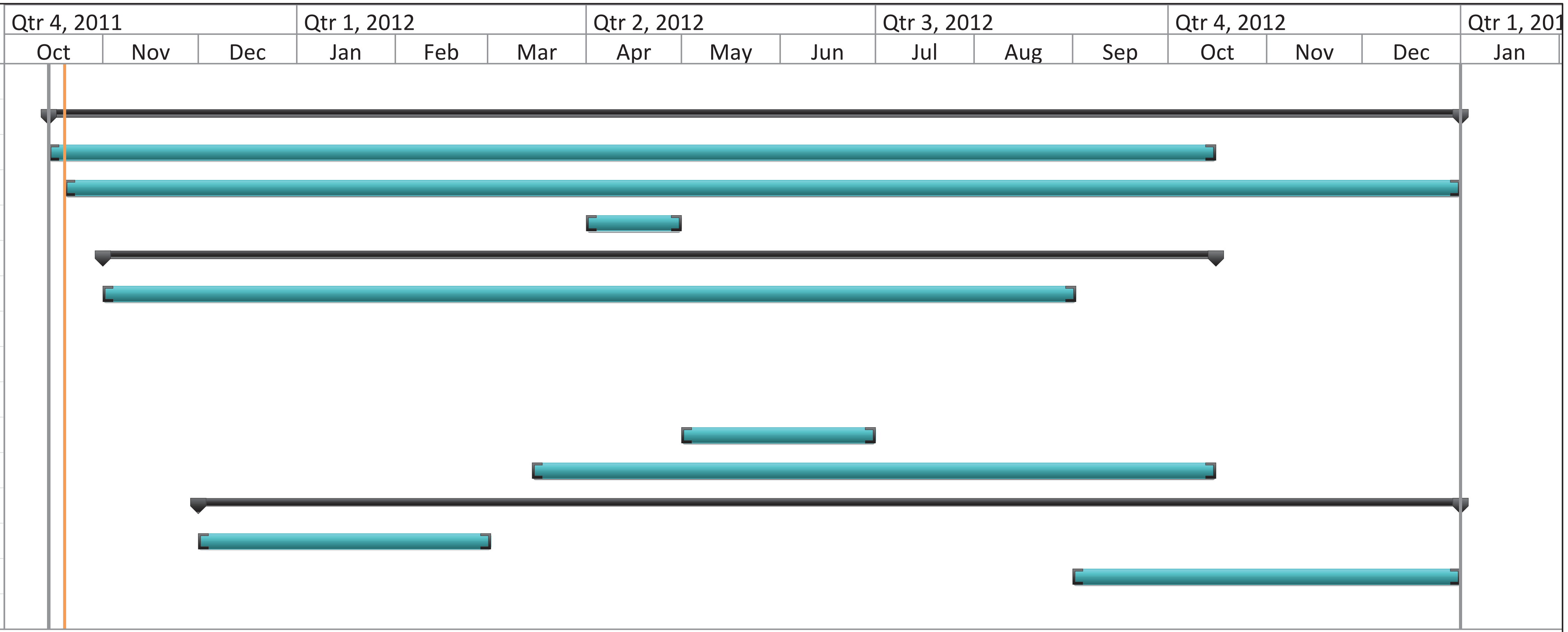
Aerial Photography Date: April 2011

Attachment E

Schedule

ID	Task Name
1	
2	**Overbank Oil**
3	OSCAR Strategy
4	New Sites Recovery
5	Spring 2012 Reassessment
6	**Submerged Oil**
7	Submerged Oil Task Force
8	Hydrodynamic Assessment
9	Hydrodynamic Modeling
10	Temp Effects on Submerged Oil
11	Spring 2012 Reassessment
12	Recovery Activities
13	**Containment**
14	Implementation
15	Removal Priority and Scheduling
16	Sediment Collection Areas



Project: Consolidated Work Plan for Activities through 2012
Date: Thu 10/20/11