February 15, 2023

GreenLight Wisconsin, LLC
Soo Line 40 Exploration Program
Bend Project, Westboro Township, Taylor County
Revised Notice of Intent to Drill

Introduction

GreenLight Wisconsin, LLC. (GLW) is submitting to the Wisconsin Department of Natural Resources (WDNR or Department) a revised Notice of Intent to Drill document (NOI) for planned exploration work on a 40-acre parcel covering a portion of the Bend Cu-Au project located in Westboro Township, Taylor County, Wisconsin. Exploration work proposed to be completed during this program will consists of the drilling of up to 8 drillholes (totaling up to 7,190') from 6 drill sites during the spring/summer of 2023 and/or winter of 2023/24.

The exploration work proposed by GLW is a continuation of previous exploration efforts focused on delineating the mineral resources of the Bend Volcanogenic Massive Sulfide (VMS) deposit. Initial exploration work conducted in the area was completed by the Jump River Joint Venture (JRJV) from the mid-1980's to the mid-1990's. Additional exploration work was conducted by Aquila Resources Inc. from 2011-2012. To date, a total of 7 drillholes have been drilled within the Soo Line Mineral parcel on which the GLW's proposed exploration work is planned to take place**.**

The submittal of this NOI, along with all accompanying attachments should be considered GLW's full submittal of its notice to the Department and should supersede all previous documents provided in previous iterations of GLW's NOI. Additional information requested of GLW by the Department pertaining to this NOI, as well as additional permits and/or permissions which are either pending at the time of this submittal or are found to be required upon the departments review of this submittal, as well as a final bond to cover reclamation work for this program, will be provided and made part of this NOI as such information and/or approvals become available.

Location and Property Information

The proposed exploration work is planned to take place on a 40-acre parcel (herein identified as the "Soo Line Mineral Parcel") described as:

> NW ¼ of the SW ¼, Section 35, T33N, R2W, Westboro Township, Taylor County, Wisconsin.

Access to the property is located directly off of the Yellow River Road approximately 7 miles north of the town of Perkinstown (**Fig. 1**).

The minerals for the Soo Line Mineral Parcel are owned by the Soo Line Railroad d/b/a Canadian Pacific Railway (Soo Line). The surface estate for this parcel is federally owned and is managed by the U.S. Forest Service (USFS).

GLW currently holds a 20-year mineral lease (effective as of 2019) with Soo Line which grants GLW the right to access and explore the 40-acre parcel.

GLW has submitted an Operations Plan for conducting this program on Federal lands to the United States Department of Agriculture (USDA). This plan was approved by the USDA on September 22, 2022. The work outlined in this plan was slated to be conducted during the winter of 2023. Due to the change in timing of the program, GLW will submit a revised Operations Plan to the USDA which will include provisions for conducting exploration work during this revised time period. GLW will not conduct any exploration work on the property until all necessary approvals and permissions have been received from both state and federal regulatory authorities.

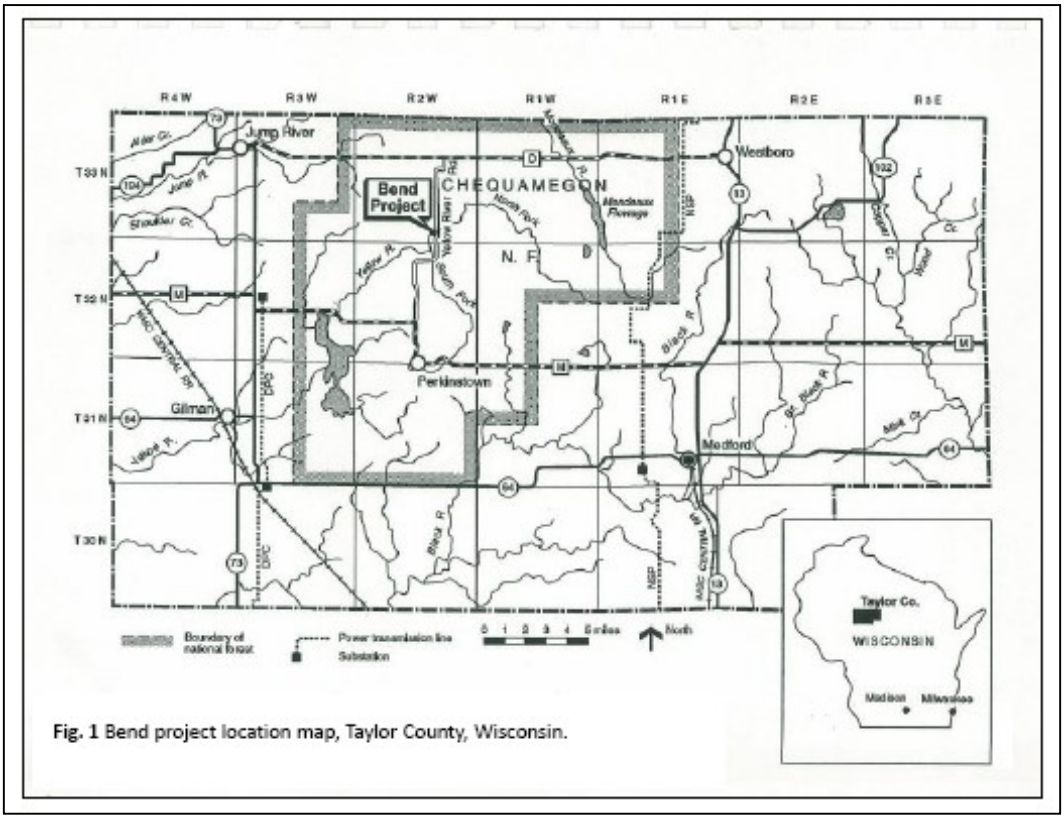

Fig. 1 Bend project location map, Taylor County, Wisconsin.

Project Timeline

Proposed work is planned to commence upon receiving all required permissions and permits from the Department. GLW will keep the Department informed on their plans for conducting site work and will provide a minimum 48-hour notice prior to

commencing drilling activities. The duration of the drilling program, including mobilization, site preparation, temporary and/or permanent abandonment of drillholes, partial site reclamation and site stabilization is estimated to take approximately 10 weeks total, but may be conducted in either 1 or 2 phases in either/or both the spring/summer 2023 and the fall/winter of 2023/24. Final reclamation of drill sites and access roads will be conducted upon completion of each phase of drilling as ground condition permit. Some reclamation activities for work completed during the fall/winter months of 2023/24 (such as final sump abandonment and re-vegetating disturbed areas) will be completed during the following spring/summer (2024) when ground conditions are suitable for completing such tasks.

GLW is not aware of any seasonal restriction placed on conducting exploratory drilling in Wisconsin, however, certain factors related to conducting construction related activities during spring break-up (taking place approximately between mid-march through the end of April) or during periods of significant precipitation can pose logistical difficulties to such projects (i.e., the placement of seasonal weight restrictions on public roads, soft/wet ground conditions, etc.). GLW will monitor the conditions at site, prior to initiating work, and during the drilling operations, to ensure that the project can be completed in compliance with all permissions/guidelines.

The presence of conditions at site which are not conducive to conducting the drilling program in an effective and environmentally sound manner may cause delays to the start of the program and/or may require that the program is temporarily suspended and later resumed. GLW will keep the department informed of any delays to the program and will provide proper notifications to the department of resuming drilling activities in the event that the program is suspended for any reason.

In the event that the program is suspended, GLW will inspect all active Best Management Practices (BMPs) and will install additional BMPs as necessary to ensure that sediment from any disturbed areas does not migrate toward downslope wetlands and waterways until the program resumes and/or until final reclamation can be completed. Equipment will be either demobilized from site and/or secured on site (with permission from the surface owner). A perimeter fence will be installed at any open sumps, with the liner folded over the top of the contained cuttings, and/or backfilled if it is possible to properly dispose of cuttings. Any partially completed holes will be temporarily abandoned with the casing capped (threaded or welded).

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GLW requests that all listed contacts be copied on all notices and orders delivered to GLW.

1.0 Program Details

1.1 Project Location

GLW is proposing to construct up to 8 drillholes (totaling up to 7,190' of drilling) from up to 6 drill sites on the Soo Line Mineral Parcel (NW ¼ of the SW ¼, Section 35, T33N, R2W) in Taylor County. Proposed drillhole locations are shown in the attached plan maps (**Attachement 000a and 000b)** and UTM locations and drillhole construction details are tabulated below in **Table 1**. Note that inclinations, azimuths, and lengths are approximate and may vary depending on the geology encountered during the program, however, total depth of all drillholes will not exceed 7,190'. No additional drillholes are planned at this time. In the event that additional holes are planned or the location of holes are changed from those presented within this NOI, such drillholes will not be constructed without prior written approval from the Department.

Hole	Drill Site #	Inclination	Azimuth	Length_Ft	Easting	Northing	Casing	Drill Rod
DDH-1	Site 1	90		260	688454	5018722	PQ or HQ	HQ or NQ
DDH-2	Site 2	45	345	530	688497.8	5018674	PQ or HQ	HQ or NQ
DDH-3	Site 2	60	345	680	688497.8	5018674	PQ or HQ	HQ or NQ
DDH-4	Site 3	50	345	930	688516.7	5018604	PQ or HQ	HQ or NQ
DDH-6	Site 4	55	345	1,080	688488	5018560	PQ or HQ	HQ or NQ
DDH-7	Site 3	58	345	1,080	688516.7	5018604	PQ or HQ	HQ or NQ
DDH-9	Site 5	60	345	1,280	688528.9	5018557	PQ or HQ	HQ or NQ
DDH-10	Site 6	55	345	1,350	688576.7	5018569	PQ or HQ	HQ or NQ
			Total	**7,190**				

Table 1 Proposed drillhole UTM (NAD 83, Zone 15) locations and construction details on the Soo Line 40 mineral estate

Access to the project area will be directly off (east) of the Yellow River Road. Access to the drill sites off of Yellow River Road will utilize existing forest trails to the extent practical. Off of the existing forest trails, temporary access will be constructed by means of clearing a path (~10' in width) to the drill sites and will include the removal of small trees and underbrush and minor leveling in areas of uneven terrain sufficient to accommodate 4x4 access to the drill sites. In the fall of 2022, GLW conducted a site visit with the USFS and the WDNR. During this visit, drill site locations and access routes were reviewed. Approximate locations of access routes are depicted in the attached plan maps (**Attachments 000a and 000b)**. Final access locations will be chosen to minimize disturbance and to avoid the removal of larger trees and may vary slightly from those identified on the provided maps.

In September of 2022, GLW contracted with Merjent to conduct a wetland determination within the extents of the proposed work area (**see attachment 001 – Merjent Wetland Determination Report**). All drill sites have been planned to be located outside of the delineated wetlands. Access to all drill sites, except those discussed below, have also been planned to avoid all delineated wetlands.

For access to Drill Site 1, two alternative temporary access routes, dependent on the season, have been proposed:

1. Access length = 50'. Access during frozen ground conditions across a narrow wetland located within the ditch along Yellow River Road. Access would be obtained by constructing a 'snow bridge' across the ditch by pushing and compacting snow into the ditch to allow mobilization of the drill rig and support equipment across the ditch. No fill materials will be placed within the wetland. Compacted snow would be removed upon completion of the drilling. Alternatively, a timber mat may be placed across the entire extent of the ditch. The mat would be removed upon completion of the drilling.

2. Access length = 160'. An alternative access route would be created from Drill Site #2 which avoids all wetlands and which may be used during during the summer and/or winter months.

For access to Drill Site 2, two alternative access routes are considered:

1. An existing trail directly off of the Yellow River Road is shown crossing the southern extent of the wetland ditch. GLW will only cross the wetland ditch during frozen ground conditions and will implement the use of a 'snow bridge' as discussed above. The compacted snow will be removed upon completion of the drilling.

2. During non-frozen ground conditions, GLW will access drill site#2 by means of an existing forest road located 125' south of route 1 and will clear a temporary access route from this road 105' to the north to drill site #2.

For the purposes of calculating the total potential disturbances of the project, all potential access routes have been included in the plan maps and disturbance estimates for the project (**Attachments 000a and 000b**).

During drilling operations, GLW will source water for use as a drilling fluid from the N. Fork of the Yellow River located at the bridge crossing along the Yellow River Road located just north of the project area as depicted on the attached plan maps (**Attachments 000a and 000b**).

1.2 Means and methods to be used for exploration

1) Drilling methods

Before diamond coring operations begin, hollow 5- or 10-foot-long steel casing (either PQ – 4.83" diameter or HQ – 3.78" diameter) is either rotary-drilled or diamond drilled through the unconsolidated glacial overburden down to solid bedrock. The casing is driven 5-10 feet into fresh bedrock. This assures groundwater aquifers are sealed off from the bore hole to prevent cross contamination between aquifers and introduction of contaminants to groundwater. Further ground water protection is provided by using bentonite as a drilling mud during overburden drilling. The bentonite mud adds stability to the hole and prevents loss of water during the drilling operation by forming a sleeve that holds in the fluid.

The bedrock coring operation employs a diamond-impregnated bit attached to the end of a string of hollow steel rods. Each drill rod is 10 feet long and added to the rod string as the drill advances through the casing and into subsurface bedrock formations. The lead rod in the string which has at its end the diamond bit contains an inner tube (core barrel). Cylindrical rock core is fed into the barrel as the drill operates and continues to advance through the bedrock rock formations. The core barrel is retrieved through the hollow drill

rod string as well as the casing by a wire line mechanism and emptied at a maximum of every 10-feet during the drilling operation.

Borehole orientations may vary from vertical to inclined and will be either NQ (2.98") or HQ (3.78") in diameter and will be drilled to depths ranging from 260 feet to 1350 feet. In certain cases, a single drill site may accommodate more than one drillhole (**see Table 1)**. In such cases, a single sump will be constructed to accommodate both holes. In the event that the second hole is constructed after the original sump has been abandoned, a new, sump will be constructed at the drill site.

The accumulated core is placed in labeled boxes that hold approximately 10 feet. The boxes are latter shipped back to a facility where a geologist examines (logs) and samples the core. Mineralized core samples are sawed in half at various intervals, bagged and sent out to a lab for assay analysis.

2) Equipment

Experienced contractors will conduct diamond core drilling operations. Standard skid or tract-mounted diamond-bit core drill will be used for drilling. These types of drill rigs are 8 to 10 feet wide during transport to the site. Support equipment will include a skid-mounted rod tray, a D-4 or comparable dozer and/or excavator, and a two-or three-axle flatbed truck for transporting water, pipe, and other equipment. Four-wheel-drive pickups and/or tracked bobcat will be used to transport personnel and service the drill rig. Vehicles and drills will be equipped with the required fire-fighting equipment. Drilling operations will consist of two 2-man crews working 12-hour shifts, 24-hours/day, seven days a week.

3) Water source

Water will be sourced as a drilling fluid from the N. Fork of the Yellow River located directly north of the Soo Line Mineral Parcel. Water will be pumped at the location of the bridge where the N. Fork of the Yellow River crosses the Yellow River Road as depicted on the attached plan maps (**Attachments 000a and 000b)**.

Water from the river will be pumped periodically, on an as-needed-basis, by a portable pump unit into a water truck or water tanks (up to 1,000-gallon capacity) mounted on a two-or three-axle flatbed truck. A portable pump with a ~2" rubber hose containing a suction screen at the intake will be lowered below the water surface and pumped into the water tank(s) at a maximum rate of 12,000 gallons/day (maximum rate, typically much less). Water quantities will be recorded by the drilling contractor and will be included in their daily shift reports.

The water truck will remain within or along the shoulder of the Yellow River Road during pumping operations. Absorbent matting will be placed under the portable pump and the water truck will be equipped with a 'spill kit' to ensure that no hydrocarbons are

released to the environment. If circumstances arise where it may be possible for sedimentation from the pumping site to enter the river, a silt sock will be installed between the pumping site and the river. There are no planned discharges into the N. Fork of the Yellow River.

Based on Wisconsin statute 86.17(1)(1), the general public has the right to use and take water from streams running across public roads. Based on the scope and methods GLW is proposing for water collection, this activity is also exempt from requiring additional permits as it conforms with the conditions provided within the "Intake or Outfall Structure Exemption checklist #11 (R 06/19)" (**Attachment 002**). GLW also understands that intake structures cannot be installed during fish spawning seasons (April, 1 – June, 1) without written permission from the department. GLW will not collect water during this period unless approved, in writing, by the department.

4) Drilling Fluids and Additives

Surface water collected from the N. Fork of the Yellow River will serve as the primary drilling fluid used during the proposed program. During drilling operations, the surface water will be treated with household chlorine bleach as prescribed in Wis. Adm. Code s. NR 812.11 and mixed to a concentration of 100 mg/L using the proportions presented in **Table 2** below.

TABLE D **Disinfection of Wells**			
Desired Chlorine Concentration (mg/L)	Quarts of Liquid Sodium Hypochlorite Household Bleach per 100 Gallons of Water (approximately 5% available chlorine 'regular strength')	Quarts of Liquid Sodium Hypochlorite Household Bleach per 100 Gallons of Water (approximately 8% available chlorine 'extra strength')	Pounds of Dry Calcium Hypochlorite Tablets per 100 Gallons of Water (Approximately 70% available chlorine)
100	0.7	0.4	0.14 (about 3 oz.)
200	1.4	1.0	0.30 (about 5 oz.)
300	2.2	1.5	0.40 (about 7 oz.)
400	2.9	2.0	0.50 (about 8 oz.)
500	3.6	2.4	0.60 (about 10 oz.)

Table 2 – Table D from Wis. Adm. Code s. NR 812.12 "General drilled type well Construction Requirements Outlining Mixing Quantities For Disinfecting Wells".

Surface water (treated with chlorine) will be used as the primary drilling fluid and is occasionally mixed with other drilling products based on encountered drilling conditions. Typical drilling products used during other programs in similar geologic terrains have included the use of bentonite products and/or the use of E-Z Mud drilling polymer to aid in flushing drill cuttings out of the hole. Note that E-Z Mud is used in conjunction with bentonite and not as a replacement for bentonite. In addition, porous rocks such as limestone or dolomite formations are not present within the geology of the project area where the use of this product is not recommended.

While rare, additional drilling products may be required under certain drilling conditions. GLW will only use additives approved by the department and will follow the prescribed "Uses" and "Special Conditions" for such products as set out in "*Wisconsin Department*

of Natural Resource Approved Drilling and Filling Sealing Products List including Heat Exchange Drillhole Products" (**Attachment 003**). GLW will notify the Department prior to using any other approved drilling other than a bentonite product or EZ-Mud.

Chlorine additions, as well as quantities of additional products used during the drilling operations will be recorded by the drilling contractor in their daily shift reports.

1.3 Drill Site Access and Site Preparation

Site and road preparation may begin upon issuance of all necessary permits for conducting the drill program or at an appropriate time prior to mobilizing the drill rig to site. GLW will provide notice to the department when such activities begin.

Site preparation will initially consist of removing brush and small trees at each drill site, along established drill roads, and along new temporary road extensions. The locations of the drill sites and temporary road extensions will be selected to minimize disturbance to the soil and to avoid the removal of mature trees. In cases where mature trees (>3" at breast height) cannot be avoided, such trees will be removed in accordance with USFS requirements and guidelines.

An area of approximately 50'x62.5' will be cleared at each drill site to accommodate the drill rig, ancillary equipment, support vehicles and the sump. New temporary road extensions will be cleared to a width of approximately 10'.

After clearing is completed, a D4 dozer or similar type of equipment will be used to clear large debris such as downed trees/limbs and to remove problematic stumps/boulders to allow access by 4x4 vehicles. Temporary access routes will be constructed and maintained by GLW and/or its contractors in compliance with Forest Service engineering and design specifications. Only minimal leveling of drill sites and temporary access roads is anticipated in hummocky or uneven terrain to provide access by 4x4 vehicles. No fill or installation of culverts are proposed for access roads or drill sites. During winter operations, snow may be removed and/or compacted along the access roads and at the drill sites prior to mobilizing drilling equipment to the drill site to allow frost to penetrate the ground as an added measure to minimize soil disturbance.

Prior to mobilizing drilling equipment along the access routes and to the drill sites, GLW will perform a visual assessment of the ground conditions to ensure they are suitable for mobilizing drilling equipment to the drill sites. In areas where disturbed soil has the potential to migrate towards downslope wetlands or waterways (i.e., areas of planned disturbances such as excavated sumps and stockpiled soil or where soil was disturbed during clearing activities), silt fencing and/or silt socks will be installed to prevent migration of sediment.

After the drill site and access routes are inspected and the necessary BMPs are installed the drilling equipment will be mobilized to the drill site and a sump will be dug along the

side of the drill rig using a backhoe and a hand-dug trench, typically 1-2’ deep, will be dug from the location of the drillhole collar to the sump to direct drilling fluids and cuttings to the sump. Upon placement of the drill and construction of the sump, water will be brought to site and drilling operations will commence.

Sump Construction Details

Refer to **Attachment 006 -** Schematic Section of Sump Showing Dewatering, Cementing, and Backfilling Process

A sump measuring 20' x 20' by 10' - deep pit (maximum size; generally smaller) will be constructed at each site to contain returned drill water and drill cuttings. The size of the sump will be sufficient enough to accommodate return water and cuttings for all planned drilling on the site. In cases where more than one drill hole is planned at a site, and where the original sump has been abandoned prior to drilling a second hole, a new sump will be dug at the drill site. Additionally, for the purposes of disposing of the residual drill water at the end of the project, a smaller sump (~5’x5’x5’) may be dug within the extents of the drill site at 1 or more drill sites (see discussion below in section 1.6).

All sumps will be constructed using a backhoe. Sumps for collecting return water and drill cuttings during drilling will be constructed along one side of the drill rig. The small sump for disposing of residual water will be located in a suitable location within the drill site foot print as the drill rig and most ancillary equipment will not be located at the drill site during disposal of water. Excavated soils (sub-soil and top-soil) would be segregated and stockpiled separately near the pit for use during sump backfilling and reclamation, respectively. The walls and base of the sump will be lined with a plastic liner (20-mill or greater polyvinyl chloride or polyethylene geomembrane) as outlined in Wis. Adm. Code s. NR130.110 (1) (b). A sufficient amount of liner will be used to provide enough material to be folded over the top of the cemented cutting prior to backfilling of the sump during final cuttings disposal as per Wis. Adm. Code s. NR130.110 (2) (a) (2) instructions. Stockpiled subsoil will be applied to the bottom of the lined sump to a thickness of approximately 12”. The layer of subsoil, along with subsoil generated during casing of the drillhole through unconsolidated glacial material will provide a buffer between the liner and the cuttings to prevent damage to the liner when drill cuttings are amended with cement during final disposal of the cuttings. When core drilling in bedrock, approximately 3 (NQ-size) to 4.5 (HQ-size) cubic feet of cuttings are generated per 100 feet of drilling (see **Attachment 004** for drill hole specs).

Sumps will not be constructed at or below the typical groundwater level. During the construction of the sump and prior to using the sump for drilling purposes, the sump will be inspected to determine if the sump has penetrated the normal groundwater level. If such indications exist the sump will be immediately backfilled. If a drillhole is located in an area where the groundwater level prohibits the use of sumps, a recirculation tank will be used and the cuttings for such a drillhole will be disposed of within a viable sump located at an adjacent drill site.

Refer to Section 1.6 for a discussion on sump closure.

1.4 Disturbances, Stormwater/Water Management

Disturbed areas and stormwater management

GLW has estimated the total potential disturbance for the drill program to be 0.643 acres as shown in the attached plan maps and disturbance estimates (**Attachment 000a and 000b**) which includes the construction of 6 drill sites (0.43 acres), 615' of new temporary access roads (0.13 acres), and potential disturbances at laydown/staging areas located along existing forest roads (0.07 acres). The total estimated disturbance is below the 1-acre threshold for requiring a Stormwater Prevention permit.

Anticipated disturbances where soil may be exposed along these features include the construction of the sump (along with the stockpiles of excavated sump material) and intermittent disturbances associated with clearing, site preparation and moving vehicles/equipment along the temporary access routes and at the drill sites (i.e., rutting). Upon completion of clearing the access roads and building the sumps, erosion control measures (BMPs) will be installed along the access routes and adjacent to the stockpiled sump material in areas where exposed sediment has the potential to migrate toward downslope waterways and wetlands. All areas where drilling related activities occur, including along all access routes, drill sites, laydown/staging areas, and at the water source, will be monitored throughout the program. Additional BMPs will be installed as needed and the integrity of such BMPs will be monitored to ensure they are kept in place and under stable conditions throughout the program and until final reclamation can take place.

BMPs will include the installation of silt fencing and/or silt socks placed between potential sediment source and downslope waterways and wetlands. Certified weed-free straw may also be used over areas of exposed soil to minimize the potential transport of the soil. Tarps may be placed over stockpiled materials, especially topsoil, to minimize erosion and to ensure that such materials are available for backfilling the sump and final sump closure/reclamation.

In the event that there is a pause in the program (i.e., a gap between drilling operations and final reclamation or a pause in drilling activities due to unfavorable ground conditions), the integrity of established BMPs will be evaluated and additional BMPs will be installed as needed. During the pause in activity at the site, the integrity of such BMPs will be monitored periodically (on a monthly basis or following significant precipitation events) to ensure they are kept in place and under stable conditions until the program resumes or until final reclamation can be completed.

Rutting

As per USFS guidelines, rutting along existing forest roads and temporary access routes are not to exceed 12" in depth (by visible inspection). If rutting exceeds 12" in depth, access along such routes will be suspended until ruts can be repaired (back-bladed with a dozer or similar equipment) and ground conditions improve. BMPs will be installed in such instances where exposed soils have the potential to migrate towards downslope waterways and wetlands.

Drilling Water Use, Management and Disposal

Water used for drilling will be sourced from the N. Fork of the Yellow River and will be stored at the drill site within a water truck or within water tanks and will be chlorinated as per **Table 2** above. Water is pumped from the water truck/tanks into mud mixing tanks on the drill rig and may be mixed with drilling products as described in the above section. The water is then pumped down the drill rods to the bottom of the hole to lubricate and cool the drill bit and to flush drill cutting out of the hole. The water and cuttings return to the surface (return water) up through the drillhole and through the drill casing. The returned water is then diverted from the drill collar by means of the hand dug channel to the sump. The return water is then pumped back from the sump to the drill rig and reused in the drilling process. Make-up water is added as need from the water truck/tanks.

In the event that a sump is not used at a given drillhole, return water is collected in a small sump (~3' diameter and 1.5' deep) located at the base of the drill collar and pumped into a recirculation tank that collects the cuttings and drilling fluid. The water is then reused in the drilling process while the cuttings are collected in the recirculation tank. Make-up water is added as needed from the water truck/tanks.

Upon completion of the drillhole, drill cuttings and sediment within the sump or recirculation tank will be allowed time to settle out and the decanted water will be pumped into the water truck or water tanks for use during the remaining drill program. Residual water remaining at the end of the program will be disposed of within a sump and allowed to drain into the subsoils as described in section 1.6 below. GLW is currently in the process of applying for a general dewatering permit for dewatering the sumps. GLW will not commence with drilling operations until all necessary approvals pertaining to disposal of drilling water are received from the Department.

Flowing well conditions

Flowing well conditions have not been encountered on this site during past drilling programs. If flowing well conditions are encountered during this program, water will be collected within the sump and/or within the water tanks at the drill site and GLW will contact the Department for approval on how to proceed. Depending on the quantity of water being generated it may be necessary to add casing extensions above grade of the drill collar, or to permanently abandon the drill hole immediately.

Activities adjacent to or within wetlands, waterways, floodplains

In September, 2022 GLW contracted with Merjent to survey the proposed work area and make a wetland determination. (**Attachment 001 – Merjent Wetland Determination Report**). The identified wetlands as well as the location of the floodplain with respect to the exploration work are shown in the attached plan maps (**Attachments 000a and 000b**).

All drill sites are located outside of the water features identified in the Merjent 2022 wetland determination report (**Attachment 001**). With the exception of Drill Site #1, all drill sites are located more than 100 from the identified water features and pose little to no threat of creating a sediment source that could migrate towards such features.

GLW will construct drill site #1 in a manner as to minimize possible sedimentation into the adjacent wetland (i.e., minimize disturbance along the western margin of the drill site and stockpiling sump materials such that possible sedimentation to the adjacent wetland is avoided or minimized) and will install BMPs (silt fence and/or silt socks) between any sediment sources that have the potential of entering the adjacent wetland. GLW will regularly monitor areas where access routes are located proximal to known water features (i.e., access to drill sites #'s 1 & 2) and will install BMPs where sedimentation to the adjacent wetlands may occur.

GLW has proposed access routes to drill sites #1 and #2 which crosses a narrow wetland along the ditch of the Yellow River Road. This access route would only be implemented during the winter months during frozen ground conditions and would be constructed by creating a 'snow bridge' across the ditch over the entirety of the wetland as described in section 1.1 above.. Upon completion of the drillhole, the compacted snow or timber matting would be removed from the ditch. No fill material would be introduced to the wetland. Alternative access for accessing both drill sites #1 and #2 have also been proposed which avoid direct impacts to all wetlands, and which may be utilized during the summer and/or winter months.

The water source is located within the floodplain along the N. Fork of the Yellow River. No disturbances are anticipated during pumping operations and the water truck will remain within the roadway or along the shoulder of the Yellow River Road at all times. The portable pump used for collecting water will be stored on the water truck and will not be left unattended within the floodplain.

1.5 Management of drill cuttings, mud, and other pollutants

GLW anticipates that >50' of "metallic sulfide-bearing rock" will be encountered in some/all of the proposed drillholes and will consist of approximately 2% to >90%, fine to coarse-grained pyrite + chalcopyrite which are expected in the drill cuttings. The only sulfide-bearing waste generated during the operation would be contained in the drill cuttings and will be collected in the lined sump or recirculation tanks and disposed of on-site pursuant to the final closure of the sumps as discussed in section 1.6.

Residual drilling water not reused for drilling and remaining at the end of the program will be disposed of along the outside of the liner, within a sump, or within a small newly excavated sump as described in section 1.6 below. (see **Attachment 006**).

To contain materials that could be released due to equipment failure, spill containment materials and absorbent mats will be readily available at all areas containing equipment such as pumps, hoses, fuel barrows and the drill rig.

GLW shall, where applicable and appropriate, conduct its field activities in a manner that comports with "Wisconsin Forestry Best Management Practices for Water Quality Field Manual", PUB FR-093 2010, Chapter 9. For example, GLW will maintain a spill containment and clean-up kit appropriate for the materials being used at the drill site. GLW will report all hazardous substance spills (i.e. fuel or other hydrocarbons) immediately per applicable State and Federal laws.

There will be no fuel storage within wetlands or floodplains. Fuel storage containers will be kept on an upland site.

If need arises to abandon the drilling site because of a potential flood threat, the rod casing will be sealed with a watertight, threaded or welded cap and the Department will be notified.

GLW will not burn any garbage or waste at the drill site. Containers will be on the work site for trash disposal. All solid waste including trash, drill rods, empty drums, wood, plastic, etc. will be removed from the National Forest and disposed of in accordance with State solid waste management rules and National Forest regulations for removal of trash.

1.6 Drillhole and Sump Abandonment

1) Permanent drillhole abandonment

Permanent abandonment of drillholes will be in accordance with Wis. Adm. Code s. NR130.111 (1) (b) and requires filling the entire hole from bottom to top with concrete or neat cement. GLW will likely use neat (Portland) cement that is mixed on the drill rig (typically within a 55-gallon drum in batches that allow for the cementing of approximately 100' of drillhole) and used immediately to avoid freezing. The abandonment procedure includes the neat cement being pumped down each hole through a conductor pipe (drill rods). Rods will be removed concurrently with the filling of the drillholes with the bottom of the rods kept below the surface of the cement throughout the operation. When cement is pumped under water by a conductor pipe, the bottom end of the conductor pipe shall be submerged in the cement at all times.

Cement is mixed at the rate of one 94 lb. bag of cement to 6 gallons of water. **Attachment 004** contains the specs for drillholes, including the open volumes of a

drillhole, at varying drillhole diameters. An appropriate amount of cement (at a rate of one 94 pound bag to 1.28 cubic foot of open hole) will be used to abandon the drillholes. The drilling contractor will record amounts of cement and water used in their daily reports. Drill hole specifications including diameter and length of materials used during drilling and cement mixing ratios and quantities will be provided in the final abandonment forms for each drillhole.

2) *Temporary drillhole abandonment*

Drilling results will dictate which holes are permanently closed immediately and which are temporarily abandoned until downhole geophysics can be completed. Once the down hole geophysics is completed, the holes will be permanently closed per Wis. Adm. Code s. NR130.111 (1) (b) 1. All temporarily abandoned drillholes will follow Wis. Adm. Code s. NR130.111 (1) (a). These holes will have their surface casing capped (water tight threaded or welded cap) and maintained in a safe and secure manner until the hole is permanently abandoned. Each temporarily abandoned hole will be marked by a five-foot casing extension that is plainly visible.

3) *Sump abandonment (see **Attachment*** **006_Schematic Section of Sump Showing Dewatering, Cementing, and Backfilling Process**)*)*

Prior to final abandonment of the sumps, the cuttings and bentonite will be allowed to settle to the bottom of the pit for a minimum of 12 hours. Decanted water will be removed from the sump and will either be pumped into water tanks for re-use in the drilling process or pumped into the sump, along the outside of the liner, and allowed to drain into the unconsolidated sub soil. If there is insufficient room available to accommodate the water on the outside of the liner, and the water will not be reused in the drilling process, a small sump (approximately 5'x5'x5') will be excavated with a backhoe to contain the residual water. The additional sump will be constructed within the extents of the drill site and sub-soil and top-soil will be segregated and stockpiled separately for backfilling and reclamation purposes, respectively. The water will be allowed to drain sufficiently into the unconsolidated subsoil to prevent overflow prior to being backfilled.

GLW is in the process of applying for a General Dewatering Permit for disposal of residual, decanted drilling water in the sumps. GLW will provide the application, approval, and related documents to the Department once such documents are available.

Once the water is removed, cement will be added to the cuttings contained within the liner as prescribed in WDNR rule NR130.110 (2) (a) 2. Cement will be added at a rate of 1–94-pound bag of cement to every 3 cubic feet of cuttings generated (or as otherwise directed by the Department). Cement additions will be mixed with the cuttings using the bucket of a backhoe. The previously discussed layer of subsoil added to the bottom of the liner, as well as the subsoil generated during the casing of the drillhole will provide a buffer between the cuttings and the liner to prevent damage to the liner while mixing occurs.

Once the cuttings/cement mixture is prepared, the sump liner will be folded over top of the cuttings and will be disposed of "in-place" during backfilling with stockpiled subsoil/topsoil as described in Wis. Adm. Code s. NR130.110 (2) a 2.

If temperatures are too cold during winter drilling and the water freezes before the cutting and bentonite settle out, final abandonment will be postponed to the following spring (2024). Completed lined sump pits will be fenced for safety and the liner will be folded over the contained cutting and secured as to not allow water to inundate the contained cuttings until final disposal and backfilling can be completed.

1.7 Topsoil Management

The most significant soil disturbance will be at the sump sites where topsoil and subsoils will be excavated, segregated, and stockpiled separately adjacent to the sump pit. Upon backfilling the sump, stockpiled topsoil is spread across the top of the reclaimed sump and will be reseeded during the spring/summer. If the reclaimed sump is located upon terrain where erosion of the topsoil may take place, certified weed free straw will be placed over the topsoil to prevent transport until reseeding can be completed. If a sump constructed during the winter is not immediately backfilled and such activities are planned to occur during the following spring, erosion and sedimentation controls will be implemented as discussed previously to prevent sediment from leaving the drill area and a tarp will be secured over the topsoil stockpile to ensure its availability for use in final reclamation.

Additional disturbance to topsoil may be encountered due to site clearing and rutting caused by vehicular traffic and the movement of equipment within the extents of the drill sites and along access routes. In such cases, disturbed areas will be back-bladed by a dozer and/or raked with hand tools to ensure even distribution of topsoil prior to reseeding. If such disturbances are located upon terrain where erosion of the topsoil may take place, certified weed free straw will be placed over the topsoil to prevent transport until reseeding can be completed.

1.8 Invasive species management

GLM confirms that any equipment and vehicles brought to the site will be delivered in a clean state and free of mud/weeds/debris from previous sites. All mulch and seed mixtures used for reclamation purposes will be certified seed and weed free. GLW will use DOT seed mix NO.20 for revegetating the site unless other mixes are recommended by either by the DNR or USFS.

1.9 Pollution prevention

Because of the remoteness of the project area, there are no known potential pollution sources that GLM is aware of within the project area. Since all of the drill sites are in uplands (high ground), fuel storage tanks will be kept within the drill site disturbance

area at each site during the operation. They will be moved from site to site as the drilling proceeds or placed in an upland staging/laydown area as previously discussed. Spill kits will be available at all drill sites and at locations where fuel or other hydrocarbons are being stored.

The drilling sites and access routes are not located within floodplains (see **Attachment 000a and 000b**). Floodplains within the vicinity of the project area are located primarily within wetland areas below the1320-foot elevation. All drill sites are located >350' south of the flood plain on a broad topographical feature above this elevation. The water source for collecting drilling water is located within a floodplain along the N. Fork of the Yellow River. The water truck will be located within or along the shoulder of the Yellow River Road while collecting water and the portable pump will not be left within the floodplain while not in use. A spill kit will be available within the water truck during pumping. There will be no fuel storage within wetlands or floodplains.

1.10 Reclamation

General cleanup, permanent/temporary drillhole abandonment, initial back-blading of drill sites and access roads, stabilization of disturbed areas, as well as possible sump closure will be completed immediately upon completion of each phase of the drill program. Upon completion of drilling during the summer months, final reclamation including sump abandonment, seeding, mulching, etc. will be completed within approximately 6 weeks of completing the drilling operations. In some cases, reclamation activities can be completed concurrently with the drilling program as drill sites and access routes are no longer required for use. Upon completion of drilling during the late fall and winter months, when final reclamation activities cannot be completed immediately after drilling, final reclamation activities will be completed by the end of June, 2024 or as ground conditions permit. During drilling operations, as drill sites and access routes are no longer being used, drill sites and access routes will be stabilized and soil erosion control measures will be kept in place and under stabile conditions until final reclamation can be completed.

GLW will notify the department as reclamation activities are completed, and will inform the department of any changes to the proposed reclamation schedule as these details become available.

Reclamation activities will include the following:

1) All solid and liquid waste (trash, drill rods, empty drums, wood, plastic, etc.) will be removed from the project area by the drilling contractor and disposed of in accordance with State waste management rules.

2) Reclamation of the sumps will be completed per procedures outlined in Wis. Adm. Code s. NR130.110 (2) (a) 2 as discussed in section 1.6. Upon completion of backfilling and leveling the sump area to pre-existing conditions, stockpiled

topsoil will be spread across the backfilled sump and the site will be reseeded and mulched using certified weed free straw.

Disturbed areas within the drill site and along access roads will be reclaimed as follows:

a) Disturbed and rutted areas will be back-bladed and graded to pre-existing conditions.
b) Where necessary, areas will be raked by hand and topsoil will be evenly distributed over disturbed areas
c) Cement will be removed from drill collars of permanently abandoned drillholes
d) Threaded, water-tight caps will be placed on temporarily abandoned drillholes
e) brush and small timber will be scattered
f) pruning seal will be applied to scrapes on effected trees
g) all equipement will be removed from staging area, drill sites, access roads etc.
h) seed and mulch will be applied to all disturbed areas; GLW ensures that weed-free straw and seed will be used in all applications.
i) the main access roads will be blocked with large boulders to prevent unauthorized vehicular access

3) Areas of soil disturbance will be revegetated by seeding and mulching to prevent the transport of sediment by air/water and will include stabilization of access routes and drill sites via DNR/USFS—approved, non-invasive seed mixtures and placement of weed and seed free straw over the disturbed areas.

    i. Seed mixes will include DOT Mix NO.20 (details in table below) as well as certified weed free annual oats as a cover crop unless alternative mixes are specified by the DNR/USFS

SPECIES	PURITY minimum %	GERMINATION minimum %	MIXTURE PROPORTIONS (in percent)				
			NO.10	NO.20	NO.30	NO.40	NO.60
Kentucky Bluegrass	98	85	40	6	10	35	
Red Fescue	97	85	25	15	30	30	
Hard Fescue	97	85		24	25	20	
Tall Fescue	98	85		40			
Salt Grass	98	85			15		
Redtop	92	85	5				
Timothy	98	90					12
Canada Wild Rye		PLS					10
Perennial Ryegrass	97	90	20	15			
Improved Fine Perennial Ryegrass	96	85			20	15	
Annual Ryegrass	97	90					30
Alsike Clover	97	90					4
Red Clover	98	90					4
White Clover	95	90	10				
Japanese Millet	97	85					20
Annual Oats[1]	98	90					20

ii. Once disturbed areas are successfully stabilized, active BMPs (silt socks and/or silt fencing) will be removed and disposed of off-site.

4) Reclamation Cost Estimate

Reclamation Cost Estimate				
Item	**Unit Cost $**	**Units**	**Quantity**	**Total**
Drillhole/Sump Abandonment				
Mob/Demob Drill/Grouting Unit	$ 4,000		1	$ 4,000
Portland Cement - Drill holes*	$ 20	94# Bag	479	$ 9,580
Labor (avg 8 hours per hole)	$ 300	per hour	64	$ 19,200
Portland Cement - Sumps**	$ 20	94# Bag	90	$ 1,800
Labor (avg 4 hours per sump)	$ 150	per hour	24	$ 3,600
Backhoe Operator	$ 250	per hour	20	$ 5,000
Manual Site Reclamation/Seeding/Mulching				
Labor - 4 hours per site + access	$ 150	per hour	24	$ 3,600
Seed - 75 lbs/acre	$ 42	per lb	37.5	$ 1,575
Mulch - 5 bales of straw per site + access	$ 12	per bale	30	$ 360
			Total Estimate	**$ 48,715.00**
*assumes 1.28 cubic feet per 1-94# bag in maximum sized drillholes averaging 131' PQ diameter in Overburden and Remainder at HQ diameter				
** using 1-94# bag of neat cement per 3 cubic feet of bedrock cutting generated				

1.11 Cultural Resources

A limited assessment of the potential for cultural resources in the general area of the proposed exploration work has been completed by the USFS. However, any discovery by GLW of human remains, buildings, and structures and any associated objects and their soil contexts will be left intact. GLW will immediately notify the USFS, DNR (Metallic Mining Coordinator) and local law enforcement (in the event that human remains are identified) of such discoveries, and work in the immediate area will cease until the area has been assessed and a plan for continuation of work is agreed upon.

1.12 Threatened and Endangered Species

GLW understands that the Forest Service has completed consultation with the United States Department of Interior-Fish and Wildlife Service (USDI-F&WS) and received a verification letter of compliance with the Endangered Species Act (ESA section 7(a) (2)) for northern long-eared bat (Myotis septentrionalis). Other ESA protected species that may also occur in the Work Plan area are Gray Wolf (Canis lupus). GLW acknowledges that if its operation disturbs bald or golden eagles, additional coordination with the USDI-F&WS under the Bald and Golden Eagle Protection may be required.

GLW has requested that an Endangered Resources Review (ERR) be conducted within the proposed project area by the Department. The results of this review (received January 26, 2023 and included as **Attachment 005**) indicated that 1 THR species may be present within the project area. GLW has discussed the results of the ERR with the ER Utility Liaison and will implement all required actions and will make considerations to comply with all recommended actions as presented in the report.

GLW acknowledges that if any federally threatened, endangered, or candidate species are encountered in the exploration plan area after approval, a USFS representative will review the site-specific operations and identify specific measures needed for protection. State threatened, endangered or candidate species will be considered in the assessments and in case any species are encountered, the DNR will be notified.

April 14, 2023

Ms. Molly Gardner
Metallic Mining Coordinator
Wisconsin Department of Natural Resources

Subject: February 15, 2023 Notice of Intent to Drill Bend Deposit, Soo Line Mineral Parcel, Taylor County, WI ("NOI")

Dear Ms. Gardner,

This letter is in response to the Department of Natural Resources' (DNR or Department) letter to Green Light Wisconsin (GLW), dated March 7, 2023, commenting on and requesting information with respect to GLW's NOI.

WPDES – Wastewater

GLW submitted to the Department an application for a general dewatering permit (Dewatering Operations – WI-0049344-5; Form 3400-232 (8/18) on April 7, 2023. Exploration field work outlined in GLW's NOI will not commence until approval of this permit is granted.

Waterways and Wetlands

GLW confirms that no fill material will be discharged into the wetlands if a snow bridge is created for access to Drill Sites #1 and #2 and that no permit is required in this situation. It is also understood that it is not necessary to remove compacted ice and snow from wetland W01 once work on the above-mentioned drill sites is completed.

GLW has proposed that water for use as a drilling fluid will be collected from the North Branch of the Yellow River at the bridge located on the Yellow River Road north of the project area. Water will be pumped from the river directly from the bridge. The intake structure, consisting of a 2-3" hose and a double screen, will be lowered into the river from the bridge deck and placed within the water column, above the river bed, in the center portion of the river, away from the river banks.. GLW confirms that the intake structure will remain suspended within the water column and will not be placed on the bed of the river to ensure that there is no removal of bed material.

GLW will use a 2"-3" trash pump for pumping water from the North Branch of the Yellow River with a maximum flow rate of approximately 150 gallons/minute. The intake will include a double screen. An initial standard screen will be utilized to prevent debris floating within the water column from being pumped from the river. An additional screen, approximately 12" in diameter and 12" in length containing a maximum of 3/8" mesh, will be placed around the initial screen to minimize the suction pressure at the intake point. Additionally, the flow rate of the pump may be reduced to ensure that there is no disturbance to the river bed or damage to aquatic wildlife.

Stormwater – Erosion Control –

GLW confirms that disturbance associated with access clearing, drill site preparation, sump excavation, and soil stockpiling will be kept under one acre.

GLW confirms that BMPs will be installed prior to field work in areas where disturbed and/or stockpiled soil/sediment has the potential to eroded and migrate towards water features. Once installed, all BMPs will be inspected on a regular basis, but no less than once per week and after rain events of 1/2" or more, to ensure proper function. Inspections will continue until final stabilization of each disturb area, pursuant to the guidelines and activities set forth in the NOI.

Endangered Resources –

GLW has discussed the results of the Endangered Resources Review (ERR) with the Department and confirms that all required actions will be followed as set out in the ERR report. GLW has also discussed recommended actions with the department and will implement such actions to the extent practical for the duration of the project.

Exploration Surety –

GLW will increase the amount of the existing $5,000.00 surety bond to $50,000. GLW confirms that the $50,000.00 surety bond will satisfy (1) the requirements for its Wisconsin exploration license, and (2) the reclamation costs for the proposed exploration work set forth in the NOI. Field work in the NOI will not take place until the department confirms receipt of the $50,000.00 surety bond, which GLW anticipates providing to your office a minimum of two weeks prior to commencing with site work.

Drilling Fluid –

GLW confirms that only department approved drilling muds and additives will be used during the program and that if products other than EZ-Mud and bentonite are planned to be used during the drilling project, GLW will notify the department prior to using such additives.

Drillhole and Sump Abandonment, Reclamation, and Site Restoration -

GLW confirms that the quantity of cuttings generated will be tracked throughout the duration of the project on a 'hole by hole' basis. In instances where a sump is not constructed at a drill site, and where the cuttings are contained within a cuttings tank, GLW will document both the quantities of cuttings generated as well as the sump location where the cuttings are disposed of.

During abandonment of the sump, GLW will calculate the appropriate cement to cuttings ratio based on the total quantity of cuttings contained within the sump. For the purposes of calculating an appropriate mix ratio of cement to cuttings, GLW will calculate the total bedrock cuttings generated, on a solid rock basis (hole volume minus core volume), and will add a minimum of 2 94 lb. bags of Portland cement per 3 cubic feet of cuttings (to achieve an approximate mix of 3 parts cuttings to 1 part cement). During the abandonment of the sumps, GLW will monitor the cement/cuttings mixture to ensure proper solidification prior to backfilling.

GLW also confirms that the quantities of cuttings and cement, along with the locations of all sumps (by means of a handheld GPS along with sump dimensions) will be recorded and made available to the department.

If you have any further questions, or need additional information, please do not hesitate to contact me directly.

Sincerely,

Eric Quigley
Director of Exploration
GreenLight Metals
220 W. Washington Street
Marquette, MI 49855
Email: equigley@glexploration.com

cc: Ted Dematties, tadematties@gmail.com
Dan Colton, dancolton@greenlightmetals.com
Ben Callan, benjamin.callan@wisconsin.gov
Larry Lynch, Lawrence.lynch@wisconsin.gov

Drilling Specification - Tooling Diameter, Hole Volumes, and Cuttings Generation

	Core Diameter	Bit /Hole Outside Diamter	Hole Volume		Cuttings Generated
	Inches	Inches	Gallons/100'	Cubic Feet/100'	Cubic Feet
NQ	1.875	2.98	36.3	4.85	2.93
NQT	1.995	2.98	36.3	4.85	2.67
HQ	2.5	3.782	58.3	7.79	4.39
PQ	3.345	4.827	95.1	12.71	6.61

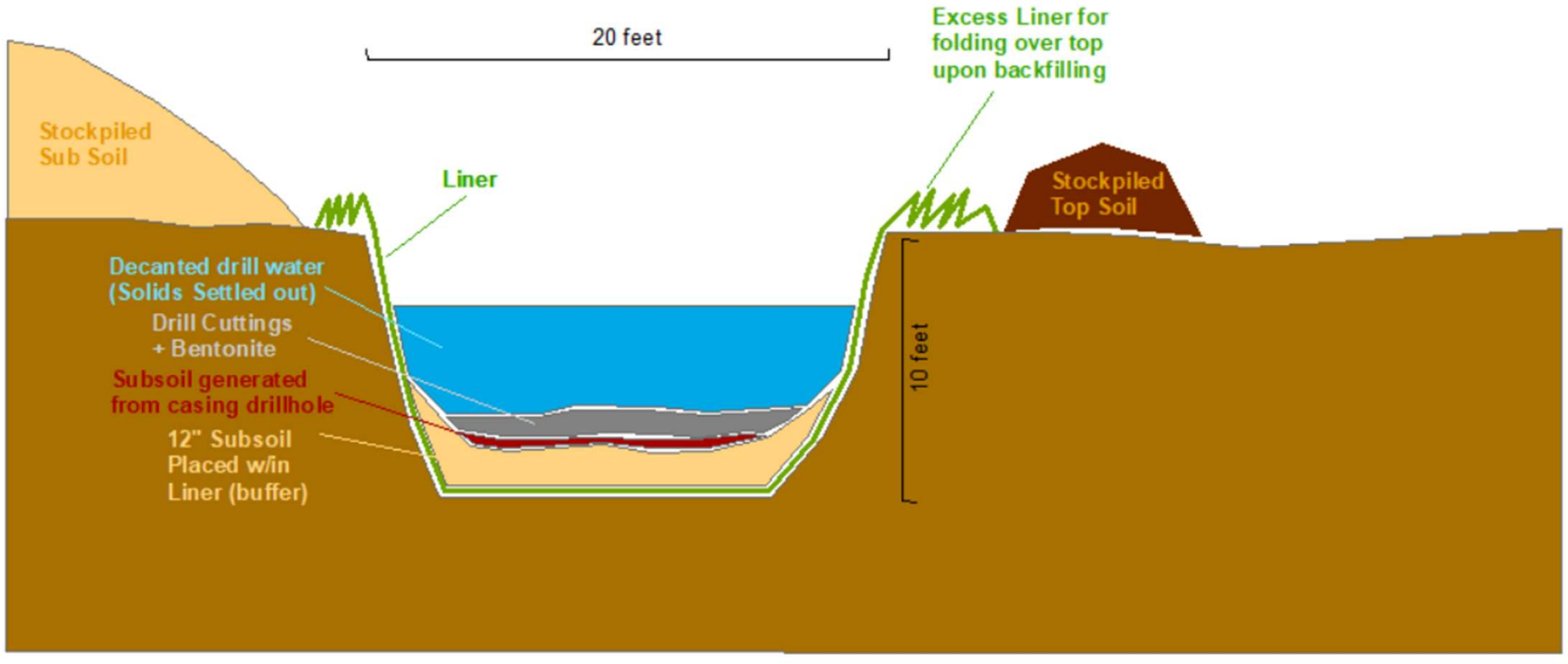
2023 Drill Program - Estimated Volumes

Total Drilling	7190	feet
Casing (unconsolidated Material)*	1050	feet
Coring (Bedrock)	6140	feet
Casing Open Hole Volume (PQ)	133	Cubic Feet
Casing Open Hole Volum (HQ)	82	Cubic Feet
Coring Open Hole Volume (HQ)	479	Cubic Feet
Coring Open Hole Volume (NQ)	298	Cubic Feet
Unconsolidated material generated during casing (PQ)	133	Cubic Feet
Unconsolidated material generated during casing (HQ)	82	Cubic Feet
Cutting generated during coring (HQ)	270	Cubic Feet
Cutting generated during coring (NQ)	180	Cubic Feet

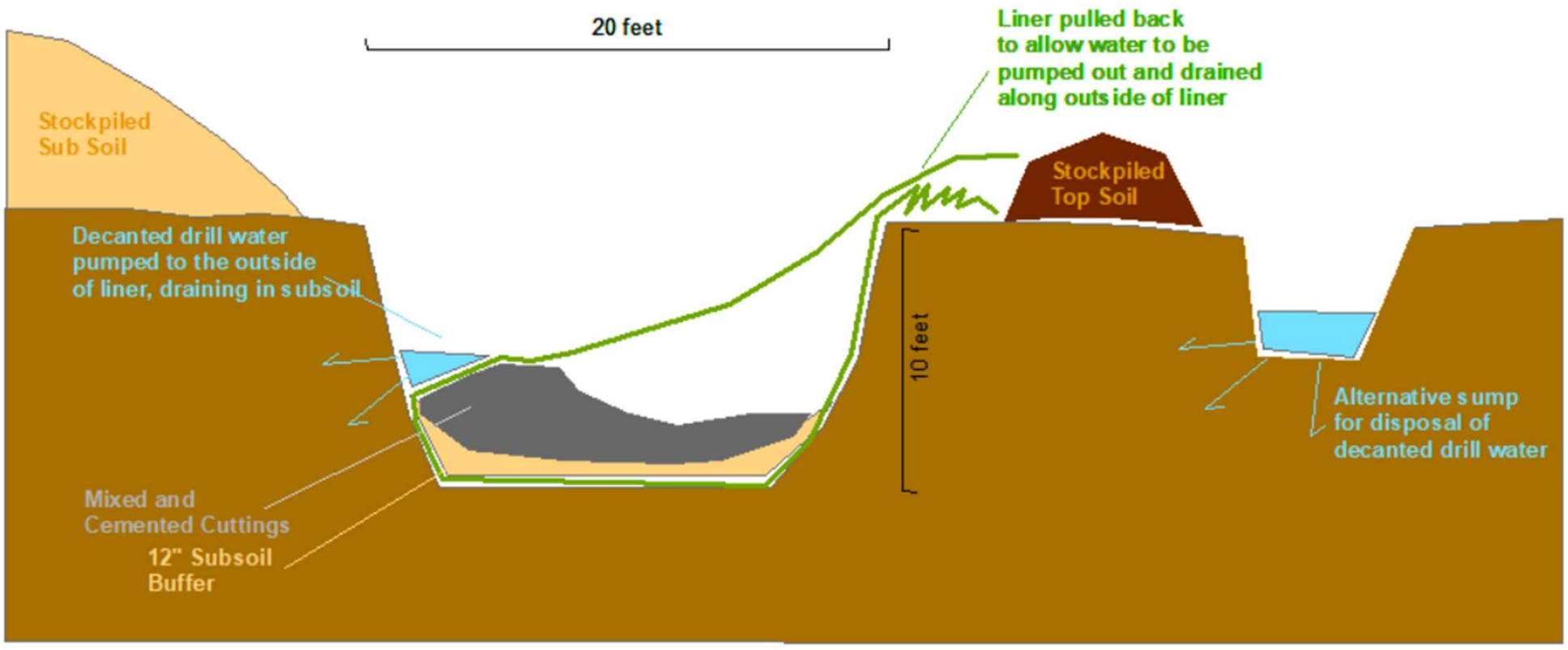
* assumes an avg. of 131' of casing/hole

Used for reclamation cost calculation

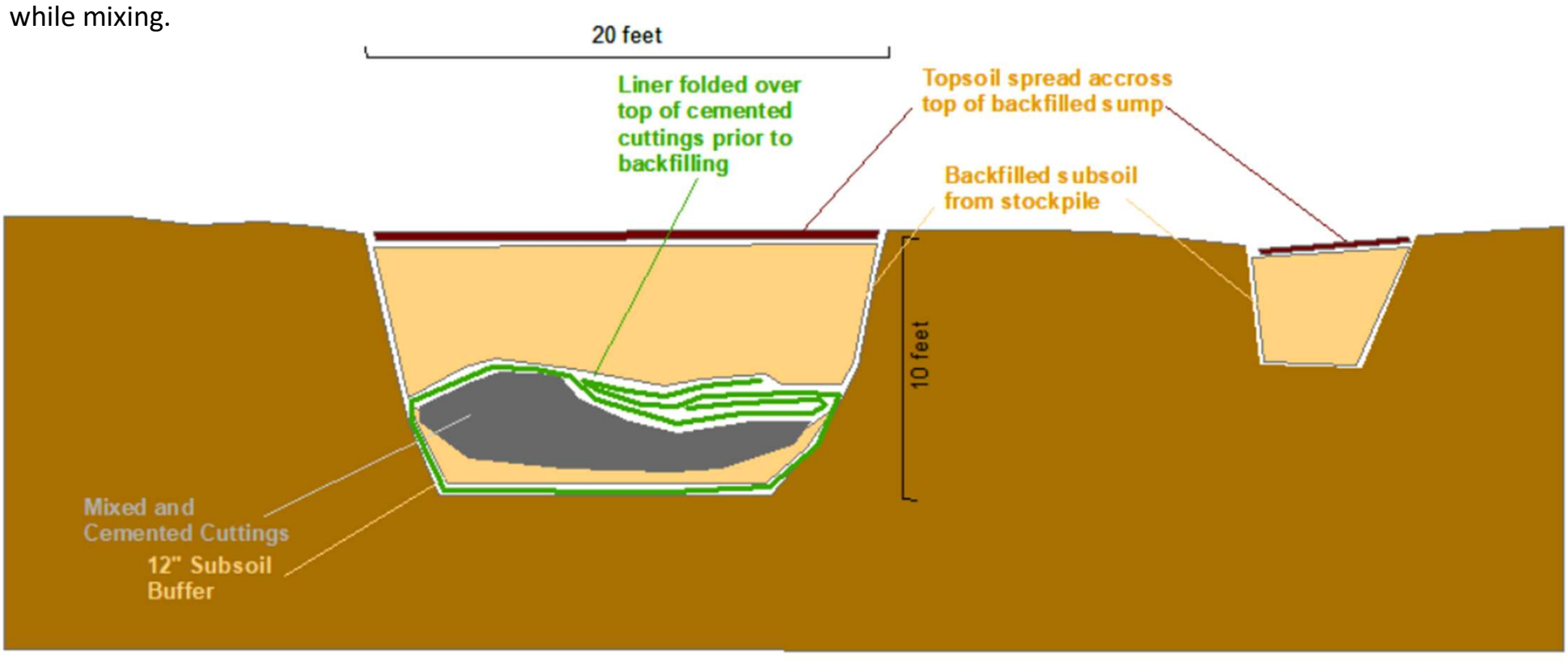
Schematic Section Through Drill Sump Showing Dewatering, Cementing and Backfilling Process



1. Sump is dug with backhoe (max. size 20'x20'x10'). Subsoil and topsoil stockpiled adjacent to sump. Liner, with excess for final disposal, is laid across bottom and sides of sump. 12" of stockpiled subsoil placed over liner along bottom of sump. Unconsolidated subsoil from casing the drillhole is deposited followed by drill cuttings. Residual drill water at completion of sump is allowed to decant and is pumped off sump for use as drilling water for additional drillholes.



2. All residual, decanted drill water not re-used in the drilling process will be discharged to the ground. The liner will be pulled away from the walls of the sump and water will pumped along the outside of the liner and allowed to drain in the subsoil. If conditions are not suitable to accomplish this, a small (~5'x5'x5') sump will be dug adjacent to the main sump for use in disposal of the decanted drill water. Once water is pumped out of liner, cement will be added to the drill cuttings and mixed with the bucket of a backhoe. The bottom layer of subsoil placed within the liner will serve as a buffer to prevent damage to the liner while mixing.



3. Once mixing of the cutting/cement is complete, the liner will be folded over the top of the contained cuttings/cement. Water remaining in the main sump as well as the alternative sump (if constructed) will be allowed to drain to a sufficient level to prevent overflow while backfilling. The sumps will then be backfilled with stockpiled subsoil and the top will be spread with topsoil and revegetated.

GreenLight Wisconsin
Bend Project - Soo Line Mineral Parcel Drill Program - Plan Map w/ Disturbance Estimates

Legend

- Laydown_Staging_Along_Existing_Trails
- 2023_Winter_Access_Routes
- Proposed Temporary Access
- Taylor_County_Floodplain_BendProject
- Drill Sites
- Existing Forest Roads
- Soo Line Mineral Parcel
- Merjent_Diliniated_Weltands_20220920

N

0 25 50 100 150 200 Feet

0 12.5 25 50 75 100 Meters

North Fork Yellow River

Water Source

Yellow River Road

Drill Site #1

Alternat Access to Drill Site #1

Drill Site #2

Alternat Access to Drill Site #2

Drill Site #3

Drill Site #6

Drill Site #4

Drill Site #5

Location	Temp. Access Length (Ft)	Area (Sq. Ft.)	Area (acres)
Drill Site 1 (DDH 1)		3,125	0.072
Drill Site 2 (DDH's 2 &3)		3,125	0.072
Drill Site 3 (DDH's 4 &7)		3,125	0.072
Drill Site 4 (DDH 6)		3,125	0.072
Drill Site 5 (DDH 9)		3,125	0.072
Drill Site 6 (DDH 10)		3,125	0.072
Winter access to site 1 (snow bridge/timber mat over ditch)	50	500	0.011
Alternate access to Site 1 (temp. access from site 2)	160	1,600	0.037
Winter access to site 2	50	500	0.011
Alternate access to Site 2 (temp. access from southern road)	105	1,050	0.024
Temp. Access to Site 3 (located on existing road)	0	-	0.000
Temp. Access to Site 4	125	1,250	0.029
Temp. Access to Site 5	15	150	0.003
Temp. Access to Site 6	110	1,100	0.025
Laydown/Staging located along existing roads (will require an area equivelent in size to a drill site)		3,125	0.072
TOTALS	**615**	**28,025**	**0.643**

*Drill Sites are estimated to be 50'x62.5'

*Temp. Access width = 10'

GreenLight Wisconsin
Bend Project - Soo Line Mineral Parcel
Drill Program - Plan Map w/ Disturbance Estimates

Legend

- Laydown_Staging_Along_Existing_Trails
- 2023_Winter_Access_Routes
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- Merjent_Diliniated_Weltands_20220920

0 25 50 100 150 200 Feet

0 12.5 25 50 75 100 Meters

N

North Fork Yellow River

Water Source

Yellow River Road

Drill Site #1

Alternat Access to Drill Site #1

Drill Site #2

Alternat Access to Drill Site #2

Drill Site #3

Drill Site #6

Drill Site #4

Drill Site #5

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Drill Site 3 (DDH's 4 &7)		3,125	0.072
Drill Site 4 (DDH 6)		3,125	0.072
Drill Site 5 (DDH 9)		3,125	0.072
Drill Site 6 (DDH 10)		3,125	0.072
Winter access to site 1 (snow bridge/timber mat over ditch)	50	500	0.011
Alternate access to Site 1 (temp. access from site 2)	160	1,600	0.037
Winter access to site 2	50	500	0.011
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Laydown/Staging located along existing roads (will require an area equivelent in size to a drill site)		3,125	0.072
TOTALS	**615**	**28,025**	**0.643**

*Drill Sites are estimated to be 50'x62.5'

*Temp. Access width = 10'

MEMO

Date:
September 20, 2022

To:
Dan Colton, Green Light Wisconsin, LLC

From:
Chris Firkus, Merjent, Inc.

Subject:
Bend Exploration – Wetland Determination

1.0 Objectives and Qualifications

Merjent, Inc. (Merjent) has been contracted by Green Light Wisconsin LLC (GLW) to identify potential wetlands and waterways within the survey area for the Bend Exploration project (Project). The Project is located in Taylor County, Wisconsin. The survey area is of the SW ¼ of the NW ¼ of the SW ¼ of T33N, R02W, S35 east of Yellow River Road; an area of approximately 26 acres.

The purpose of the Project is to perform exploratory drilling to determine the economic feasibility for metal mining of subsurface minerals.

This Project does not occur on tribal lands; it is located within Ceded Territory. The project is a not PSC regulated project. The purpose of this memorandum is to provide the methodology and results of Merjent's review to the WDNR for the Notice of Intent application for Exploratory Drilling.

This review was completed by the following staff:

- **Chris Firkus – Senior Environmental Analyst; Surveyor, Report Author, GIS**
  Mr. Christopher Firkus is a senior environmental analyst specializing in environmental field surveys, permitting, and project management in the Upper Midwest. Mr. Firkus has over ten years of experience serving Oil & Gas, Transmission, Transportation, and Development sectors. On behalf of his clients, Mr. Firkus works with environmental permitting agencies to streamline the permitting process and ensure an appropriate timeline is maintained. Mr. Firkus coordinates and conducts field surveys and desktop reviews of threatened and endangered species surveys, habitat assessments, wetland delineations, cultural resources, and contaminated land investigations.

2.0 Methodology

Desktop Review

Merjent conducted a desktop review of available datasets for the survey area. Land cover within the survey area includes wooded cover and existing gravel road.

Resources reviewed are listed below:

- Wisconsin Wetlands Inventory (WWI)
- Natural Resources Conservation Service (NRCS) Soil Survey Geographic Database (SSURGO) Soils Maps
- Wisconsin Department of Natural Resources (WDNR) Wetland Indicators from the Surface Water Data Viewer
- Google Earth® Aerial Imagery (multiple years)

Waterways and waterbodies were investigated within the desktop review area by reviewing available desktop data resources. Resources reviewed are listed below:

- WDNR 24k Hydro Layer
- WDNR Surface Water Data Viewer

Field Review

A conservative wetland field determination of the survey area was conducted on September 16, 2022. The purpose of the field review was to refine the desktop review determinations. This method documents visual evidence of wetland hydrology (e.g. surface water, surface saturation, landscape position) and the dominance of hydrophytic vegetation (i.e. FAC, FACW, or OBL species) when determining a wetland boundary. Soils were not investigated using this method. Site photographs were taken at this time to document determined wetlands, adjacent uplands, and representative views of the entire survey area. These photographs are provided as Photo Log attachment to this memorandum and their locations are depicted on the Wetland Determination map (Figures).

Wetland Community Types

Vegetative community boundaries were identified using the *Wetland Plants and Plant Communities of Minnesota and Wisconsin* (Eggers and Reed, 2014). These boundaries were determined by aerial signatures and further refined during the field review.

3.0 Results

Two WWI point features are marked within the survey area. SSURGO hydric soils units are absent; however, WDNR Wetland Soils & Indicators (WSI) are prevalent across nearly the entire site.

The site is predominantly northern mesic forest a pitched slope draining north toward the North Branch of the Yellow River, found shortly outside the survey area to the north. The canopy is dominated by sugar maple (*Acer saccharum*), red maple (*A. rubrum*), eastern hemlock (*Tsuga canadensis*), yellow birch (*Betula allegheniensis*), burr oak (*Quercus macrocarpa*), and basswood (*Tilia americana*). The understory is fairly open, becoming shrubby toward the northern limit of the survey area. Representative species in the shrub layer include beaked hazelnut (*Corylus cornuta*), Tatarian honeysuckle (*Lonicera tatarica*), blue beech (*Carpinus carolinianus*), young ironwood (*Ostrya virginiana*), and green ash (*Fraxinus pennsylvanica*) seedlings. The herbaceous layer generally continuous and includes Jack-in-the-pulpit (*Arisaema triphyllum*), bristly greenbrier (*Smilax tamnoides*), bottlebrush grass (*Elymus hystrix*), long-awned wood grass (*Brachyelectrum erectum*), Pennsylvania sedge (*Carex pensylvanica*), drooping wood sedge (*C. arctata*), round-loped hepatica (*Anemone americana*), dwarf raspberry (*Rubus pubescens*), Virginia waterleaf (*Hydrophyllum virginianum*), ostrich fern (*Matteuccia struthiopteris*), sarsaparilla (*Aralia nudicaulus*), rough-leaved rice grass (*oryzopsis asperifolia*), woodbine (*Parthenocissus inserta*), meadow rue (*Thalictrum dasycarpum*), yellow avens (*Geum aleppicum*), starflower (*Trientalis borealis*), and Canada mayflower (*Maianthemum canadensis*).

Two wetlands were observed on-site. The first is a roadside ditch that drains north to the North Branch of the Yellow River. Approximately 7,320 square feet of the feature is intersected by the survey ara. The feature is dominated by fringed sedge (*Carex crinita*), lady fern (*Athyrium filix-femina*), common rush (*Juncus effusus*), reed canary grass (*Phalaris arundinacea*), tearthumb (*Persicaria sagittata*), northern bugleweed (*Lycopus*

uniflorus), grass-leaved goldenrod (*Euthamia graminifolia*), lance-leaf aster (*Symphyotrichum lanceolatum*), and sensitive fern (*Onoclea sensibilis*).

A second, small, depressional wetland was identified in the southcentral portion of the survey area and is approximately 2,063 square feet in size. There is a distinct transition of vegetation at the toe slope of this feature. It is dominated by reed canary grass, stinging nettle (*Urtica dioica*), greater water dock (*Rumex orbiculatus*), fringed sedge, lady fern, rough bedstraw (*Galium asprellum*), lance-leaf aster, Virginia waterleaf, tearthumb, and ostrich fern. The feature is a seasonally flooded, small depression over a perched water table.

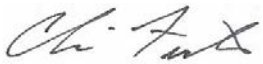
No wetlands were identified with the marked WWI points. There is no topographical depression or change in vegetation at or near these two points.

4.0 Discussion

In our professional opinion, two wetlands and no waterways are present within the survey area. Despite a majority of the survey area containing WSI, the site is distinctly sloped north. The vegetation is typical of northern mesic forest, in distinct contrast with the small wetlands found on-site. The two WWI points on-site do not correspond to actual wetland features; however one pocket wetland was found elsewhere. Much of the bordering road ditch is wetland, and continues north, draining into the North Branch of the Yellow River.

The results of this wetland assessment will be used to coordinate Project activities. Should there be any questions related to the findings discussed in this technical memorandum, please feel free to call or email me at my contact information below.

Respectfully submitted,

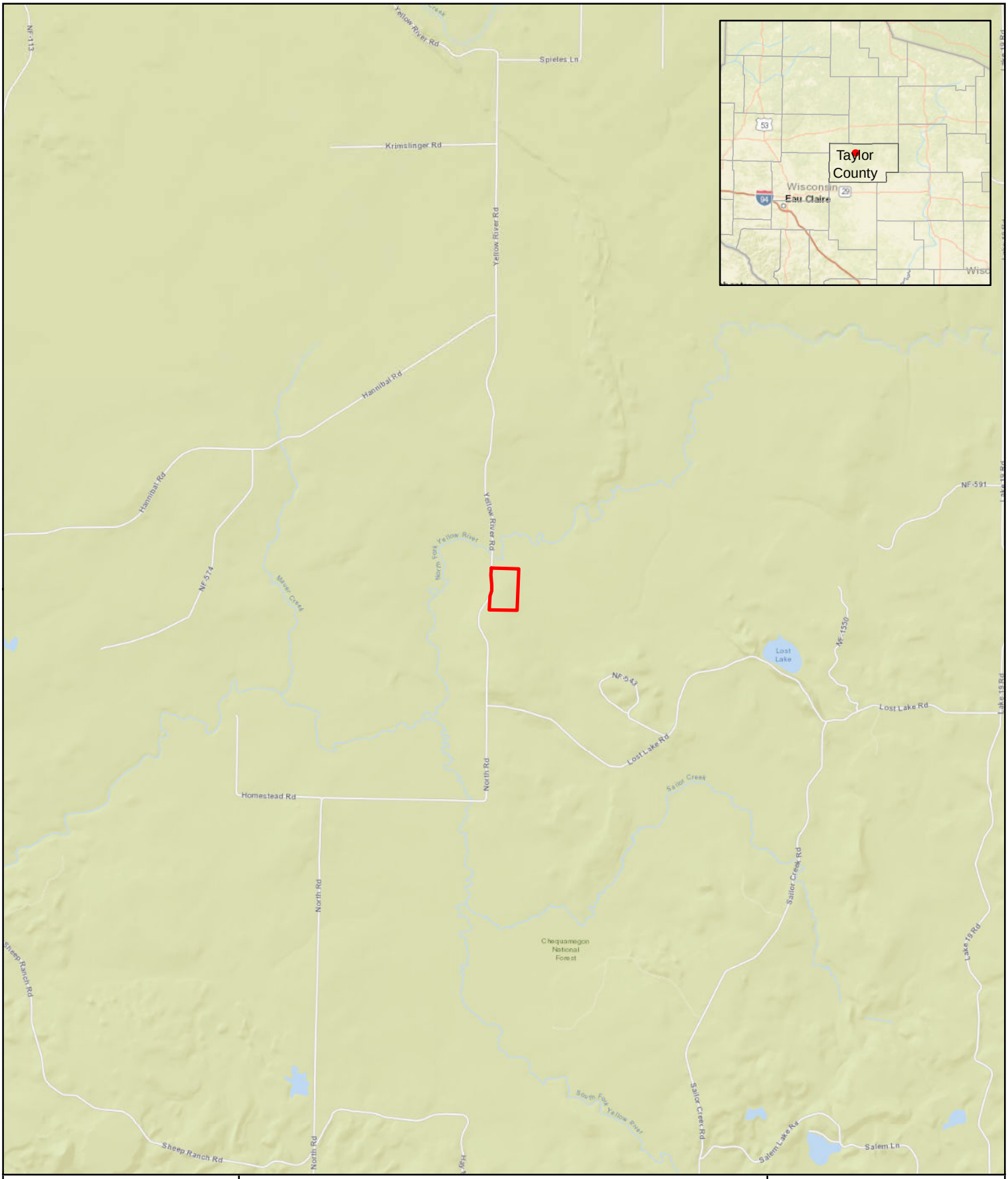


Chris Firkus
Senior Environmental Analyst
chris.firkus@merjent.com
(920) 460-8206

Attached:

- Figures – Wetland Maps
- Photo Log

Figures - Wetland Maps



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For Environmental Review Purposes Only

Project Location

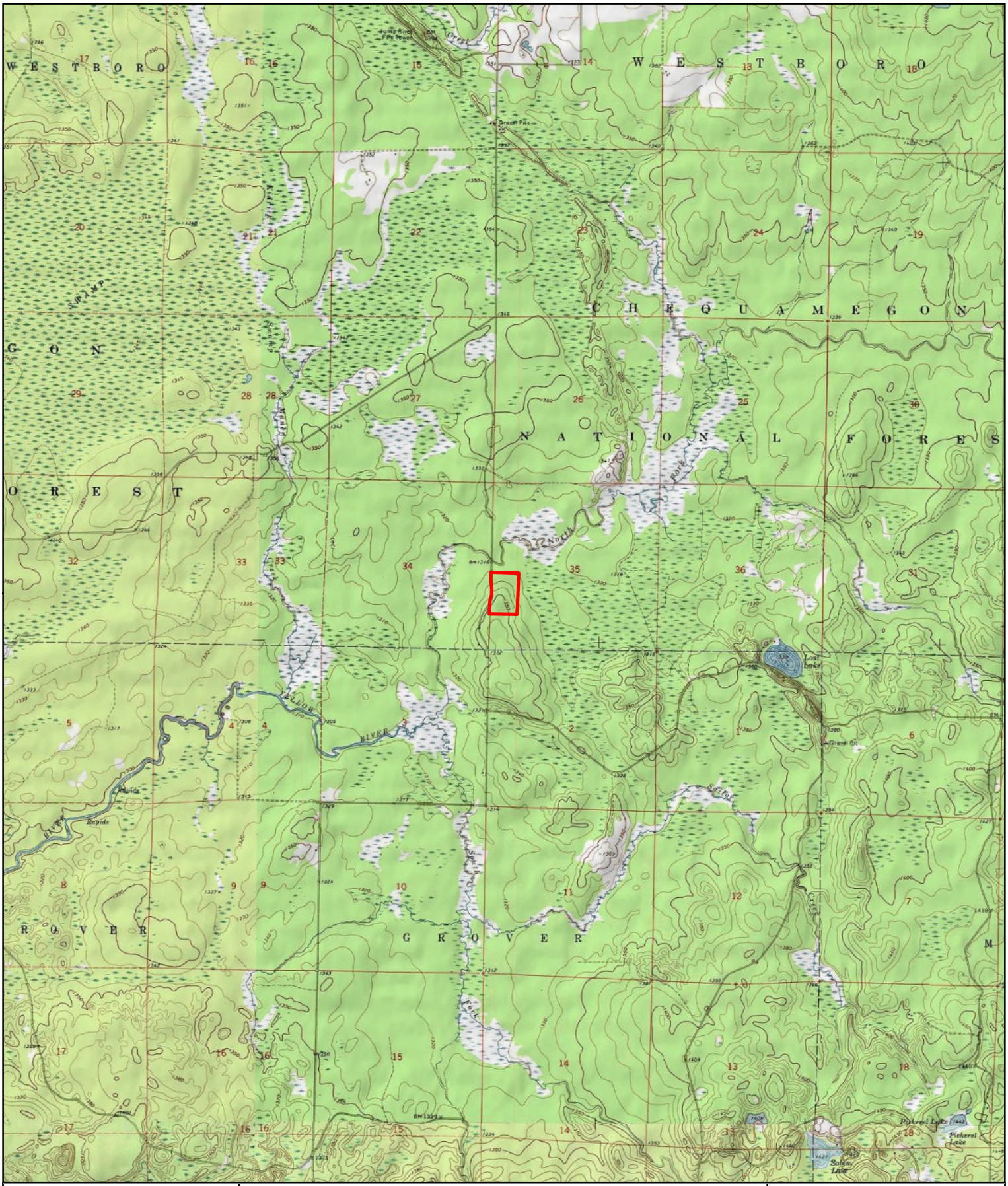
Bend Exploration

Taylor County, Wisconsin

Survey Area

Source: C:\Users\chris.firkus\OneDrive - Merjent, Inc\Documents\GIS\Projects\Development\GreenLight\Bend\ArcGIS\Location.mxd

Date: (9/19/2022)



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For Environmental Review Purposes Only

Topography

Bend Exploration

Taylor County, Wisconsin

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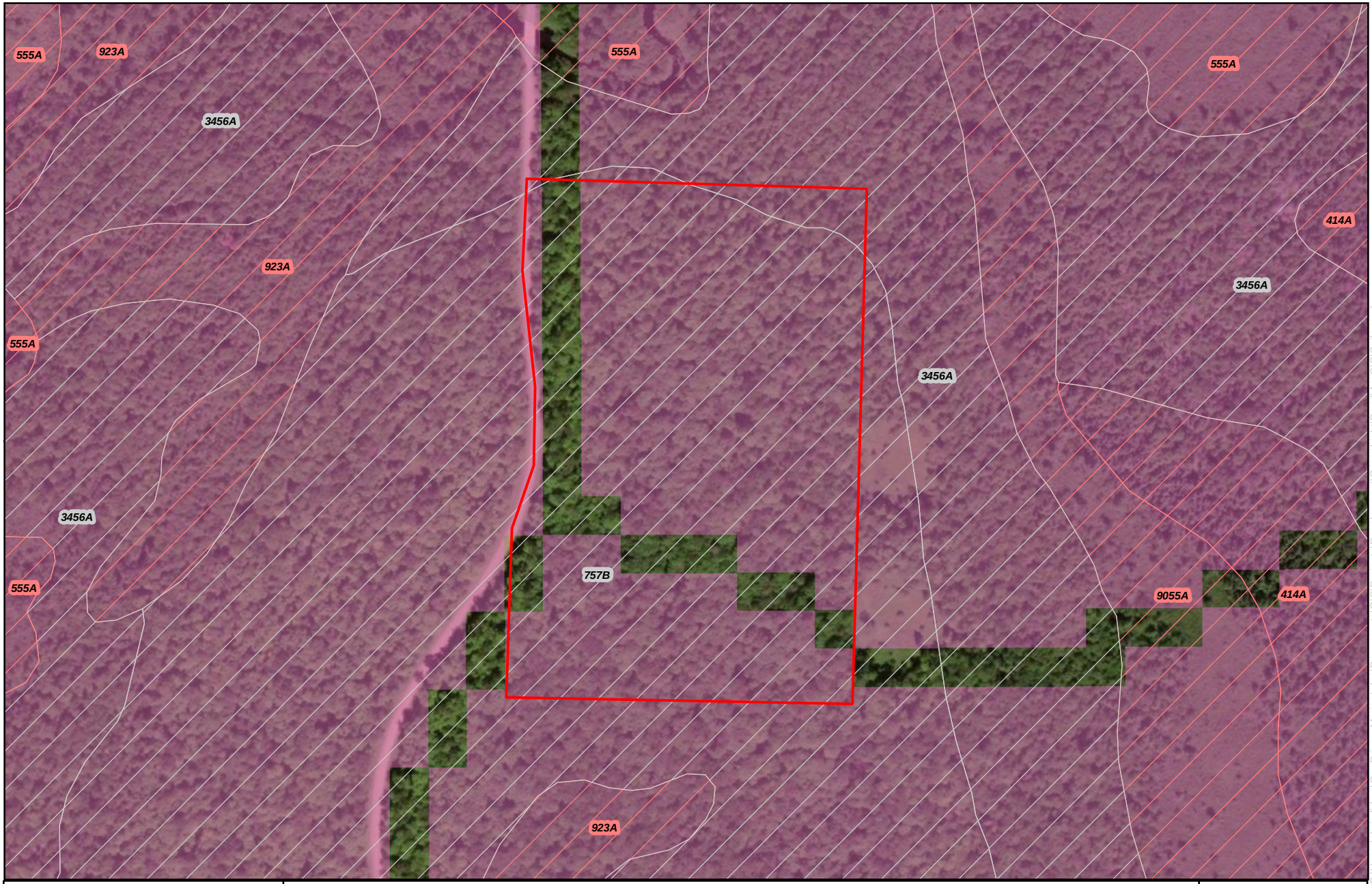
Date: (9/19/2022)



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Soils
Bend Exploration
Taylor County, Wisconsin

Wetland Indicators and Soils
Non-hydric Soil
Hydric Soil
Survey

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Date: (9/19/2022)

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Hydrology
Bend Exploration
Taylor County, Wisconsin

- WDNR Stream
- WWI Point
- WWI Polygon
- Survey Area

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Wetland Determination
Bend Exploration
Taylor County, Wisconsin

Photo Point
Mapped Wetland - Wet Meadow
Survey

Source: C:\Users\chris.firkus\OneDrive - Merjent, Inc\Documents\GIS\Projects\Development\GreenLight\Bend\ArcGIS\Determination.mxd
Date: (9/19/2022)

Photo Log

Photograph pp01 view South

Photograph pp01 view West

Photograph pp02 view East

Photograph pp02 view South

Photograph pp02 view West

Photograph pp03 view East

Photograph pp03 view South

Photograph pp04 view North

Photograph pp04 view South

Photograph pp05 view North

Photograph pp05 view South

Photograph pp06 view East

Photograph pp06 view North

Photograph pp06 view South

Photograph pp06 view West

Photograph pp07 view East

Photograph pp07 view North

Photograph pp07 view South

Photograph pp07 view West

Photograph pp08 view North

Photograph pp08 view South

Photograph pp08 view West

Photograph pp09 view Northwest

Photograph pp09 view Southwest

Photograph pp10 view East

Photograph pp10 view Northwest

Photograph pp10 view Southwest

Photograph pp11 view Northwest

Photograph pp11 view Southwest

Photograph pp12 view Northwest

Photograph pp12 view Southwest

Photograph pp13 view North

Photograph pp14 view South

Photograph pp15 view North

Photograph pp16 view East

Photograph pp16 view North

Photograph pp17 view East

Photograph pp17 view North

Photograph pp17 view West

Photograph pp18 view North

Photograph pp18 view West

Photograph pp19 view North

Photograph pp19 view South

Photograph pp19 view West