



Sawyer County

Agenda

Zoning Committee Meeting

Friday, May 19, 2023 @ 8:30 AM

Assembly Room; Sawyer County Courthouse

Page

1. ZOOM DIRECTIONS

The public is strongly encouraged to access the public hearing remotely due to public health and safety concerns. To view or participate in the **virtual meeting** from a computer, iPad, or Android device please go to <https://zoom.us/j/99413118485>. You can also use the dial in number for listening only at [1-312-626-6799](tel:1-312-626-6799) with the Webinar ID: 994 1311 8485. If additional assistance is needed please contact the Zoning & Conservation Department at 715-634-8288 prior to the meeting.

2. PRELIMINARY MATTERS

- a. Call to Order and Roll Call
- b. Pledge of Allegiance
- c. State of Committee and Hearing Procedure and Statement of Hearing Notice
[Statement of Comm. Hearing & Procedure & Hearing Notice](#)

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- d. Approval of Previous Meeting Minutes
[4-28-2023 ZC Minutes](#)

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- e. Public Comment

Please note comment time is intended for general public comments, not comments relating to a specific application before this Committee. Each Agenda item requiring a public hearing will have its public hearing conducted just prior to the application being considered by this Committee. If you wish to speak on a specific Agenda item, we encourage you to hold your comments until that specific public hearing.

3. REZONE APPLICATIONS

- a. None

4. CONDITIONAL USE APPLICATIONS

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- a. A Public Hearing in the Town of Winter. CUP #23-010, Owner: Richard & Cindy Dischinger Jr. Assessor Plat 1, Lot 5; S22, T38N, R03W; Parcel #032-271-00-0500; Tax ID# 42923; 4.34 total acres; Zoned Residential/Recreational One (RR-1). Permit desired for a 30' x 40' accessory building across Johnson Road, a Town Road as per Section 4.26 (3) as per the Sawyer County Ordinance. Construction of a single accessory building divided by a public roadway.
[CUP #23-010, Richard & Cindy Dischinger pkt.](#)
- b. Discussion/Action in the Town of Winter. CUP #23-010, Owner: Richard & Cindy Dischinger Jr. Assessor Plat 1, Lot 5; S22, T38N, R03W; Parcel #032-271-00-0500; Tax ID# 42923; 4.34 total acres; Zoned Residential/Recreational One (RR-1). Permit desired for a 30' x 40' accessory building across Johnson Road, a Town Road as per Section 4.26 (3) as per the Sawyer County Ordinance. Construction of a single accessory building divided by a public roadway.

19 - 26

- c. A Public Hearing in the Town of Round Lake. CUP #23-011. Owner Michelle & Adam Smith. Part of the SW $\frac{1}{4}$ of the SE $\frac{1}{4}$. Lot 2 CSM 33/71 #7964; S09, T41N, R07W; Parcel #024-741-09-4305; Tax ID #41762; 5.04 total acres; Zoned Residential/Recreational One (RR-1). Permit desired to: operate a general Gunsmith Service including disassembly, diagnosing, reassembly, cleaning, repairs, scope & sighting alignments utilizing bore lasers, removal of stuck cartridges or live rounds, restorations, and FFL transfers on a limited basis. Business hours: Monday thru Friday, 9am to 2pm by appointment only. No sales of firearms. As per section 17.2 (7).
[CUP #23-011, Michelle & Adam Smith pkt](#)
- d. Discussion/Action in the Town of Round Lake. CUP #23-011. Owner Michelle & Adam Smith. Part of the SW $\frac{1}{4}$ of the SE $\frac{1}{4}$. Lot 2 CSM 33/71 #7964; S09, T41N, R07W; Parcel #024-741-09-4305; Tax ID #41762; 5.04 total acres; Zoned Residential/Recreational One (RR-1). Permit desired to: operate a general Gunsmith Service including disassembly, diagnosing, reassembly, cleaning, repairs, scope & sighting alignments utilizing bore lasers, removal of stuck cartridges or live rounds, restorations, and FFL transfers on a limited basis. Business hours: Monday thru Friday, 9am to 2pm by appointment only. No sales of firearms. As per section 17.2 (7).

27 - 34

- e. A Public Hearing in the Town of Edgewater. CUP #23-012. Owner: Scott Carpenter & Clifton Carpenter. Part of Government Lot 1, Lot 4 CSM 6/145 #1192, S34, T38N, R09W; Parcel #008-938-34-5102, Tax ID #9573, .910 total acres, Zoned Residential/Recreational One (RR-1). Permit desired for a 28' x 40' x 18.5' high, accessory building across East Shore Drive, a Town Road as per section 4.26 (2) of the Sawyer County Ordinance. Construction of a single accessory building divided by a public roadway with conditions.

[CUP #23-012, Scott Carpenter & Clifton Carpenter pkt](#)

- f. Discussion/Action in the Town of Edgewater. CUP #23-012. Owner: Scott Carpenter & Clifton Carpenter. Part of Government Lot 1, Lot 4 CSM 6/145 #1192, S34, T38N, R09W; Parcel #008-938-34-5102, Tax ID #9573, .910 total acres, Zoned Residential/Recreational One (RR-1). Permit desired for a 32' x 40' x 18.5' high, accessory building across East Shore Drive, a Town Road as per section 4.26 (2) of the Sawyer County Ordinance. Construction of a single accessory building divided by a public roadway with conditions.
- 35 - 43 g. A Public Hearing on the Town of Ojibwa. CUP #23-013. Owner: Kevin & Monesse Starr. Part of Government Lot 3, Lot 114 CSM 24/284 #6616; S13, T39N, R06W; Parcel #020-639-13-5401; Tax ID #21204; 4.55 total acres; Zoned Residential/Recreational Two (RR-2). Permit desired for a 36' x 40' per section 4.26 (1) of the Sawyer County Zoning Ordinance. Accessory structure on vacant property with a 3-year time-line to build a primary dwelling.
[CUP #23-013, Kevin & Monese Starr pkt.](#)
- h. Discussion/Action in the Town of Ojibwa. CUP #23-013. Owner: Kevin & Monese Starr. Part of Government Lot 3, Lot 114 CSM 24/284 #6616; S13, T39N, R06W; Parcel #020-639-13-5401; Tax ID #21204; 4.55 total acres; Zoned Residential/Recreational Two (RR-2). Permit desired for a 36' x 40' per section 4.26 (1) of the Sawyer County Zoning Ordinance. Accessory structure on vacant property with a 3-year time-line to build a primary dwelling.
- 44 - 55 i. A Public Hearing in the Town of Hayward. CUP #23-014. Owner: Terry & Sarah Walport. Part of the SW ¼ of the NW ¼; S32, T41N, R09W; Parcel #010-941-32-2401; Tax ID #13107; 39.89 total acres; Zoned Agriculture One (A-1). Permit desired for location and operation of non-metallic mineral extraction including rock crusher, actual mine site to be limited to 20 acres within the North half of the 39.89 acre parcel as per the Sawyer County Ordinance section 17.4 (B) (6).

[CUP #23-014, Terry & Sarah Walport, Location & Operation Plan pkt](#)
- j. Discussion/Action in the Town of Hayward. CUP #23-014. Owner: Terry & Sarah Walport. Part of the SW ¼ of the NW ¼; S32, T41N, R09W; Parcel #010-941-32-2401; Tax ID #13107; 39.89 total acres; Zoned Agriculture One (A-1). Permit desired for location and operation of non-metallic mineral extraction including rock crusher, actual mine site to be limited to 20 acres within the North half of the 39.89 acre parcel as per the Sawyer County Ordinance section 17.4 (B) (6).
- 56 - 103 k. A Public Hearing in the Town of Hayward, Reclamation Plan CUP #23-014. Owner: Terry & Sarah Walport. Part of the SW ¼ of the NW ¼; S32, T41N, R09W; Parcel #010-941-32-2401; Tax ID #13107; 39.89 total acres; Zoned Agriculture One (A-1). Permit desired for the Sawyer County NR135 Reclamation Issuance for location/operation of a non-metallic mineral open pit limited to 20 acres actual mine.

[CUP #23-014, Terry & Sarah Walport - Reclamation Plan pkt](#)

- I. Discussion/Action in the Town of Hayward, Reclamation Plan CUP #23-014. Owner: Terry & Sarah Walport. Part of the SW ¼ of the NW ¼; S32, T41N, R09W; Parcel #010-941-32-2401; Tax ID #13107; 39.89 total acres; Zoned Agriculture One (A-1). Permit desired for the Sawyer County NR135 Reclamation Issuance for location/operation of a non-metallic mineral open pit limited to 20 acres actual mine.

5. *CANCELLED* PROPOSED ORDINANCE AMENDMENTS

Proposed ordinance amendments did not receive majority approval of Towns

- a. ~~A Public Hearing for Sawyer County Zoning Ordinance Amendment to Section 2.0 Definitions, Section 17.0 Zone Districts, and Sawyer County Shoreland Wetland Protection Ordinance and Section 5.1 Minimum Lot Size Purpose. The proposed amendments are in reference to Multi-Dwelling Development and definition of a "resort". The proposed ordinance amendment changes can be found on the Sawyer County Zoning & Conservation Website. (Discussion/Possible Action to Send to County Board of Supervisors.)~~

6. NEW BUSINESS

- a. Ordinance Amendment for Multi-Dwelling development and definition of a resort. Discussion/Possible Action
- b. Any other business that may come before the Committee.

7. ADJOURNMENT

8. QUORUM

- a. *A quorum of the County Board of Supervisors or of any of its committees may be present at this meeting to listen and observe. Neither the Board nor any of the committees have established attendance at this meeting as an official function of the Board or committee(s) or otherwise made a determination that attendance at the meeting is necessary to carry out the Board or committee's function. The only purpose for other supervisors attending the meeting is to listen to the information presented. Neither the Board nor any committee (other than the committee providing this notice and agenda) will take any official action with respect to this noticed meeting.*

**SAWYER COUNTY ZONING COMMITTEE
STATEMENT OF COMMITTEE HEARING AND PROCEDURE AND STATEMENT OF HEARING
NOTICE**

This Sawyer County Zoning Committee ("Zoning Committee") meeting is being held this day and will be called to order at approximately 8:30 a.m. in the Sawyer County Courthouse, 10610 Main Street, Hayward, Wisconsin.

This Statement of Committee Hearing and Procedure and Statement of Hearing Notice is for the public's reference and supplements on the statements on the record under Agenda Item No. 1, "Preliminary Matters." This Statement of Committee Hearing and Procedure and Statement of Hearing Notice is incorporated into the record of today's Zoning Committee meeting.

Nothing in this Statement of Committee Hearing and Procedure and Statement of Hearing Notice modifies or otherwise limits the provisions set forth in the Wisconsin Statutes and other applicable law.

Any persons requiring assistance with this may contact the Sawyer County Zoning Administrator or request assistance at the Zoning Committee meeting during public comments.

Statement of Committee Hearing and Procedure

Individual Public Hearing: Generally, each application requiring a public hearing shall have an individual public hearing conducted just prior to the Agenda item in which the Zoning Committee may take action.

Public Hearing Process: Each public hearing conducted at this Zoning Committee meeting will follow this order: (1) presentation of a summary of the petition set forth in the application or request; (2) submission of a file to the Zoning Committee; and (3) the applicant's statements (or the applicant's representative's statements) and presentation of evidence; (4) public testimony by persons desiring to give pertinent testimony (a "Speaker") in support of the application; (5) public testimony by Speakers in objection to the application; and (6) any rebuttal as permitted by the Zoning Committee Chair. Once the Zoning Committee has the pertinent information, the public hearing will be closed and thereafter the Zoning Committee may deliberate, discuss, pose questions to the Sawyer County staff, legal counsel or the applicant, and take action on the application within the Zoning Committee's discretion.

Hearing Appearance Slip: For all hearings to be conducted at today's Zoning Committee meeting, any Speaker desiring to give pertinent testimony will be afforded to opportunity to do so. A Speaker must complete a Hearing Appearance Slip, which is provided at this meeting next to the meeting Agenda. After completion, the Speaker shall deliver the Hearing Appearance Slip to the Zoning Committee Chair prior to the commencement of the Zoning Committee meeting.

Process and Guidelines for Testimony by Speakers: Prior to speaking, the Speaker must be recognized by the Zoning Committee Chair in order to speak. Once recognized by the Zoning Committee Chair, the Speaker must state their full name and address before giving testimony. The Speaker should also state whether the Speaker represents a client, group, or other association, whether the Speaker is in favor or opposes the proposal on which the testimony is being given, and other pertinent information. Speakers should confine their testimony to the facts and matters presented. Speakers should avoid repetitive testimony, and Speakers are encouraged to state that they agree or disagree with other comments to avoid repetitive testimony. A Speaker's testimony will be limited to three (3) minutes, unless additional time is provided for by the Zoning Committee Chair. Orderly procedures require that each Speaker proceeds without interruption by others. All testimony will be addressed to the Zoning Committee and there will be no questions or arguments between individuals. The Zoning Committee is under no obligation to answer questions posed by the Speaker during the public hearing.

Applications for Rezoning: On applications for a change in zoning designation of property, the decision of the Zoning Committee is a recommendation to the Sawyer County Board of Supervisors for final determination and action. This provision does not modify or otherwise limit the provisions set forth in Wis. Stat. § 59.69 or any other applicable law.

Appeal of Certain Decisions: Any person aggrieved by a decision regarding a conditional use or any other decision in which the County Zoning Committee is the decision making body, a person may commence an action with the Sawyer County Board of Appeals to review the Zoning Committee's decision in whole or in part, within 30 days of the date following the committee's decision letter. This provision does not modify or otherwise limit the provisions set forth in Wis. Stat. § 59.694.

Statement of Hearing Notice

Each public hearing conducted at this Zoning Committee meeting has been published as a Class 2 notice in accordance with Wisconsin Statutes Ch. 985 in the Sawyer County Record and the Sawyer County Gazette, and publically posted within the Sawyer County Courthouse.

Questions

Please contact the Sawyer County Zoning Administrator should you have any questions regarding this Statement of Committee Hearing and Procedure and Statement of Hearing.

**MINUTES OF PUBLIC HEARING
Sawyer County Zoning Committee
April 28, 2023, 8:30 AM Sawyer County Courthouse**

Zoning Committee Members

Ronald Buckholtz, Chairman
Stacey Hessel, Vice Chairperson
Tweed Shuman
Michael Maestri
Kay Wilson
John Righeimer, Alternate

Zoning Administration

Jay Kozlowski, Zoning Administrator
Kathy Marks, Deputy Zoning & Conservation Administrator
Pat Brown, Assistant Zoning & Conservation Administrator
Rebecca Roeker, Corporation Council

PRELIMINARY MATTERS

a) Call to Order and Roll Call Buckholtz (acting Vice-Chair) called the Public Hearing before the Sawyer County Zoning Committee to order at 8:30 AM at the Sawyer County Courthouse, 10610 Main St., Hayward, Wisconsin. Roll is called finding present: Buckholtz, Shuman, Hessel, Maestri, Righeimer and Wilson. John Righeimer is present. Attending from the Zoning Office Kozlowski and Brown. Marks is absent. Virtual is Rebecca Roeker, Corporation Council.

b) Election of Officers (Chairperson and Vice-Chairperson). Lynn Fitch, County Clerk starts the process. Nomination of Chairman for Buckholtz by Shuman. 5 to 0 in favor. Nomination for Vice Chairman for Hessel by Shuman. 5 to 0 in favor. Motions carry.

c) Statement of Committee and Hearing Procedure and Statement of Hearing Notice. Buckholtz reads the Statement of Committee and Statement of Hearing Notice.

e) Pledge of Allegiance.

f) Approval of March 17, 2023 minutes. Motion by Hessel to approve the March 17, 2023 minutes. Second by Shuman. All in favor. Motion carries.

e) Public comment. Linda Zillmer Edgewater Property owner and Douglas Kurtzweil give public comment.

REZONE APPLICATIONS

a) A Public Hearing in the Town of Lenroot. RZN #23-001. Owner: Fred Scheer III. Part of the SE ¼ of the NE ¼, Lot 3 CSM 24-92 #6522; S07, T41N, R08W; Tax ID #16329; Zoned Forestry One (F-1); 5.06 total acres. Purpose of request is to rezone from Forestry One (F-1) to Residential/Recreational One (RR-1) to allow portions of lot to be merged into the adjacent lots, cleaning up lot lines and roads. No new additional lots are being created. The surrounding lots are zoned Residential/Recreational One (RR-1). Kozlowski reads application, staff report and town opinion. No opinion letters returned. Motion by Buckholtz to open the public hearing portion of the application by Buckholtz, second by Hessel. All in favor. Wilson recues herself from this case. Michelle Smith, representative for owner Fred Scheer speaks in favor of the

application. No questions. No other comments for case. Motion by Buckholtz to close the public portion of the application, second by Shuman. All in favor. Kozlowski reads the discussion/action portion of the application. Motion by Hessel, second by Shuman to approve the application with Findings of Fact: 1. It would not be damaging to the rights of others or property values.

2. It would not be detrimental to ecology, wild life, wetlands or shorelands. 3. It would not create an air quality, water supply, or pollution problem. 4. It would not create topographical problems such as run off, drainage, erosion, flooding, or vegetative cover removal. 5. It would not create traffic or highway access problems. 6. It would not destroy prime agricultural lands. 7. It would be compatible with the surrounding uses and the area. 8. It would be consistent with the Town and/or County Comprehensive Plan. 9. It would not create an objectionable view. Roll call finds: Hessel – yes, Shuman – yes, Buckholtz – yes, Maestri – yes, Righeimer – yes. All in favor. Motion passes.

CONDITIONAL USE APPLICATIONS

a) A Public Hearing in the Town of Round Lake. CUP #23-005. Owners: Michael Anderson & Laura Bredemus. Agent: Verizon Central LLC. Part of the SW ¼ of the NW ¼; S05, T41N, R06W; Parcel #024-641-05-2301; Tax ID# 24024; 34.89 total acres; Zoned Agricultural One (A-1). Permit desired for construction of a 275 foot wireless communication tower with 5 foot lightning rod. This will allow Verizon to improve customer experience. Kozlowski reads the application, staff report, and Town opinion. No opinion letters. Motion by Shuman to open the public hearing portion of the application, second by Hessel. All in favor. Laura Bredemus, Owner speaks in favor of the application. Discussion with Committee and Kozlowski held. Barbara Herot, Spider Lake Township resident speaks in favor of the application. Vance Haesemeyer, Spider Lake Township resident speaks in favor. Lee Seibert, Town of Round Lake resident speaks in favor of the application, Linda Zillmer, Edgewater property owner speaks in favor. Martin Hanson speaks in opposition of the application. No other comments. Motion to close the public hearing portion of the application by Wilson, second by Hessel. All in favor. Kozlowski reads the discussion/action portion of the application. All in favor. Discussion held with Kozlowski and Committee. Motion to approve the application by Hessel with Findings of Facts: 1. It would not be damaging to the rights of others or property values. 2. It would not be detrimental to ecology, wild life, wetlands or shorelands. 3. It would not create an air quality, water supply, or pollution problem. 4. It would not create topographical problems such as run off, drainage, erosion, flooding, or vegetative cover removal. 5. It would not create traffic or highway access problems. 6. It would not destroy prime agricultural lands. 7. It would be compatible with the surrounding uses and the area. 8. It would be consistent with the Town and/or County Comprehensive Plan. 9. It would not create an objectionable view. Conditions of the staff report: 1. Land Use Permit for telecommunication facility is required. 2. Prior to issuing the LUP the applicant or owner of the telecommunication facility shall provide a bond, irrevocable letter of credit, of their suitable financial guarantee as to insure the removal of facility if it falls into disuse & restoration back to preconstruction state in the amount of \$20,000. 3. All other town, county, state federal laws are followed. Town conditions of: 1. Condition that a buffer of at least 4 foot high evergreens be planted along the perimeter of the area as per Sawyer County telecommunications Ordinance. Second by Wilson. Discussion held. Roll call finds: Wilson – yes, Maestri – yes, Shuman – yes, Hessel – yes, Buckholtz – yes. All in favor. Motion carries.

b) A Public Hearing in the Town of Draper. CUP #23-006. Owners: Lynn Phol & Diane Wasieleski. Agent: Verizon Central LLC. Part of the SE ¼ of the NW ¼; S24, T39N, R03W; Parcel #006-339-24-2401; Tax ID #6012; 39.93 total acres; Zoned Forestry One (F-1). Permit desired for construction of a 275 foot wireless communication tower with 5 foot lightning rod.

This will allow Verizon to improve customer experience. Kozlowski reads the application, staff report, town board did not vote because of resignations. Motion to open the public comment portion of the application by Shuman, second by Hessel. All in favor. Applicant not present. No comments in favor. Doug Kurtzweil, Town of Hunter resident speaks in favor. No opinions of opposition of the application. Motion to close the public hearing portion of the application by Wilson, second by Hessel. All in favor. Kozlowski reads the discussion/action portion of the application. Committee holds discussion. Motion by Shuman to approve the application with conditions of: 1. Land Use Permit for telecommunication facility is required. 2. Prior to issuing the LUP the applicant or owner of the telecommunication facility shall provide a bond, irrevocable letter of credit, of their suitable financial guarantee as to ensure the removal of facility if it falls into disuse & restoration back to preconstruction state in the amount of \$20,000. 3. All other town, county, state federal laws are followed. Findings of Facts: 1. It would not be damaging to the rights of others or property values. 2. It would not be detrimental to ecology, wild life, wetlands or shorelands. 3. It would not create an air quality, water supply, or pollution problem. 4. It would not create topographical problems such as run off, drainage, erosion, flooding, or vegetative cover removal. 5. It would not create traffic or highway access problems. 6. It would not destroy prime agricultural lands. 7. It would be compatible with the surrounding uses and the area. 8. It would be consistent with the Town and/or County Comprehensive Plan. 9. It would not create an objectionable view. Town approval will be needed. Roll Call Finds: Shuman – yes, Hessel – yes, Buckholtz – yes, Maestri – yes, Wilson – yes. All in favor. Motion carries.

c) A Public Hearing in the Town of Lenroot. CUP #23-007. Owners: Jeffery & Cynthia Schmid. Part of the SW ¼ of the SE ¼, Lot 1 CSM 30/92 #7534; S15, T42N, R08W; Tax ID #39913; 5.67 total acres; Zoned Residential/Recreational One (RR-1). Permit desired for the assembly of dairy wash controls. Per Section 17.2 (B) (7) for professional office. No manufacturing will be done on the site, assembly only. Kozlowski reads the application, staff report and Town opinion. Motion to open the public hearing portion of the application by Hessel, second by Wilson. All in favor. Jeffrey & Cynthia Schmid, owner speaks in favor. Discussion held. No other audience comments. Motion to close the public hearing portion of the application by Shuman, second by Hessel. All in favor. Kozlowski reads the discussion/action portion of the application. Discussion held. Motion by Hessel to approve the application with conditions of: 1. CUP #23-007 is limited to the property owner and use as described with the request. 2. No fabrication or manufacturing of product is allowed. Assembly Only. 3. If/when a new building is constructed it will require its own fire number/address sign. 4. Only 1 additional building is allowed for requested use. If additional buildings are needed it will require an additional CUP. 5. A Land Use Permit is required for the construction of the new building and is to meet all setback requirements. 6. A deed restriction or restrictive covenants document is needed to combine the adjacent lot containing the primary/habitable dwelling with lot proposed for the new accessory structure and CUP request. 7. All signage must meet Sawyer County Zoning Ordinance Requirements. 8. All other Town, County, State, Federal Laws are followed. Findings of Facts: 1. It would not be damaging to the rights of others or property values. 2. It would not be detrimental to ecology, wild life, wetlands or shorelands. 3. It would not create an air quality, water supply, or pollution problem. 4. It would not create topographical problems such as run off, drainage, erosion, flooding, or vegetative cover removal. 5. It would not create traffic or highway access problems. 6. It would not destroy prime agricultural lands. 7. It would be compatible with the surrounding uses and the area. 8. It would be consistent with the Town

and/or County Comprehensive Plan. 9. It would not create an objectionable view. Second by Shuman. Rebecca Roeker speaks of the CUP and uses and commends the Committee on a job well done. Roll call Finds: Hessel – yes, Buckholtz – yes, Wilson – yes, Maestri – yes, Shuman – yes. All in favor. Motion carries. 1)

d) A public Hearing in the Town of Hayward. CUP #23-008. Owners: Reginald & Kimberly Pontillo. Part of the NW ¼ of the SE ¼, Lot 1 CSM 36-243 #8461; S15, T41N, R08W; Parcel #010-841-15-4204; Tax ID #43868. 7.39 total acres; Zoned Forestry One (F-1). Permit desired for an accessory building 32' x 40' and 20' in height. Section 4.26 (1) of the Sawyer County Ordinance to build an accessory structure on vacant property w/conditions to build a dwelling within 3 years. Kozlowski reads the application, staff report, Town opinion. No opinion letters returned. Motion to open the public hearing portion of the application by Shuman, second by Wilson. All in favor. No representation for the application present. No audience comments. Discussion with Kozlowski and Committee. Motion by Hessel to close the public hearing portion of the application, second by Buckholtz. All in favor. Kozlowski reads the discussion/action of the application. Discussion held with Kozlowski and Committee. Motion by Shuman to approve the application with Conditions of: 1. Land Use Permit is required and applied for the accessory structure(s) within 1 year from the date of Zoning Committee decision and built within permit timeframes. 2. Land Use Permit is required and applied for principal structure within 3 years from date of Zoning Committee decision and built within permit timeframe. Failure to apply and build will result in citation with potential order for removal of accessory building. 3. Proposed accessory structure must meet all other Sawyer County Zoning & Conservation requirements and compliant with all other State & Federal Laws. 4. Size of proposed structure not to exceed 32' x 40'. Findings of Fact: 1. It would not be significantly damaging to the rights of others or property values. 2. It would not be detrimental to ecology, wild life, wetlands or shorelands. 3. It would not create an air quality, water supply, or pollution problem. 4. It would not create topographical problems such as run off, drainage, erosion, flooding, or vegetative cover removal. 5. It would not create traffic or highway access problems. 6. It would not destroy prime agricultural lands. 7. It would be compatible with the surrounding uses and the area. 8. It would be consistent with the Town and/or County Comprehensive Plan. 9. It would not create an objectionable view. Second by Buckholtz. Roll call Finds: Buckholtz – yes, Wilson – yes, Maestri – yes, Shuman – yes, Hessel – yes. All in favor. Motion carries.

E) A Public Hearing in the Town of Radisson. CUP #23-009, Owner: Brandon & Natalie Heath. Agent: Nick Petit. The NE ¼ of the SW ¼; S12, T38N, R07W; Parcel #022-738-12-3101; Tax ID 22306; 40 total acres; Zoned Forestry One (F-1). Permit desired for location/operation of non-metallic mining site to include rock crusher. Actual mine site to be limited to 5 acres within the NW corner of the 40-acre parcel. Per section 17.8 (B) (8) of the Sawyer County Zoning Ordinance. Kozlowski reads the application, staff report, Town opinion. No opinion letters returned. Motion to open the public hearing portion of the application by Hessel, second by Wilson. All in favor. Brandon Heath, owner is present. Jeremy Petit to speak on behalf of owner in favor of the application. Discussion with Petit, Committee and Kozlowski. Paul Cigen, WDNR speaks of Oak Wilt. Petit and Committee have discussion. Linda Zillmer, Edgewater property owner speaks for informational purposes only. Patrick Delaney Spider Lake property

owner speaks information only. Motion by Shuman to close the public hearing portion of the application. Second by Hessel. All in favor. Kozlowski reads the discussion/action portion of the application. Discussion held. Motion by Hessel to approve the application with conditions of: 1. Obtain approval or conditional approval of reclamation plan. 2. Hours of normal operations: 6AM-7PM, Monday-Friday; 7AM-4PM, Saturday and Sunday (excluding holidays). 3. Crushing hours & asphalt plant operation: 6AM-7PM, Monday-Friday; 7AM-4PM, Saturday-Sunday excluding holidays, not to exceed 21 days per calendar year. 4. A Fire # or Site Address is required for the property. 5. Maintain compliance with Department of Natural Resources Chapter 30. 6. Comply with all other federal, state, and local regulations including approval of the "Reclamation Plan". Findings of Fact: 1. It would not be significantly damaging to the rights of others or property values. 2. It would not be detrimental to ecology, wild life, wetlands or shorelands. 3. It would not create an air quality, water supply, or pollution problem. 4. It would not create topographical problems such as run off, drainage, erosion, flooding, or vegetative cover removal. 5. It would not create traffic or highway access problems. 6. It would not destroy prime agricultural lands. 7. It would be compatible with the surrounding uses and the area. 8. It would be consistent with the Town and/or County Comprehensive Plan. 9. It would not create an objectionable view. Second by Buckholtz. Hessel amends motion to include recommendation from DNR regarding Oak Wilt. Second by Shuman. Roll call finds: Maestri – yes, Wilson – yes, Buckholtz – yes, Hessel – yes, Shuman – yes. All in favor. Motion carries.

5 Minute break 1:25pm

Meeting called back to order at 1:30 pm

f) A Public Hearing in the Town of Radisson. Reclamation Plan for CUP #23-009, Owner: Brandon & Natalie Heath. Agent: Nick Petit. The NE ¼ of the SW ¼; S12, T38N, R07W; Parcel #022-738-12-3101; Tax ID 22306; 40 total acres; Zoned Forestry One (F-1). Permit desired for the Sawyer County NR 135 Reclamation Issuance for location/operation of a non-metallic mineral open pit limited to 5-acre actual mine site. Kozlowski reads the application, staff report and Town opinion. No opinion letters returned. Motion by Wilson, second by Shuman. All in favor. Nick Petit speaks in favor of the application. No other public comments. Motion to close the public hearing portion of the application by Hessel, second by Shuman. All in favor. Kozlowski reads the discussion/action portion of the application. Motion to approve the application by Hessel based on the information given in the CUP. Second by Buckholtz. Roll call finds: Maestri – yes, Wilson – yes, Buckholtz – yes, Righeimer – yes, Hessel – yes, Shuman – yes. All in favor. Motion carries.

NEW BUSINESS

a) Minor corrections to proposed multi-dwelling ordinance amendment needed to send to Towns for review. Kozlowski discusses the information regarding sending to the Town(s). Rebecca Roeker explains that Andy Phillips was the one that was working on this more than her. But she can answer questions even though she was not in on the 3 versions. Motion by Shuman to send option 3 version 4.3 to the Towns. Second by Hessel. Discussion held with Kozlowski & Committee with changes but the language is fine how it is drafted. Roll call finds: Buckholtz – yes, Hessel – yes, Wilson – yes, Shuman – yes, Maestri – yes. All in favor. Motion carries.

Shuman leaves meeting.

b) Kozlowski asks for request to have an Ad-Hoc Committee for Tourist Rooming Housing. Discussion held with Committee, Sawyer County Administrator, Andy Albardo and Kozlowski. Rebecca Roeker, Council speaks of this being a State wide issue, other Counties, and it is a collaborate effort with WCCA. Motion to have Ad-Hoc Committee sent to County Board by Hessel, second by Wilson. 4 to 0 to approve. Motion carries

c) Any other business that may become before the Committee.

ADJOURNMENT

Buckholtz adjourns meeting at 10:40am

Minutes prepared by Pat Brown Assistant Zoning & Conservation Administrator & Kathy Marks, Deputy Zoning & Conservation Administrator

For more information and audio please see our website at sawyercountygov.org



Conditional Use Permit Request STAFF REPORT

Prepared By: Jay Kozlowski, Sawyer County Zoning & Conservation Administrator

File: # CUP 23-010

Applicant:

Richard & Cindy Dischinger
10622 Wills Run
Marshfield, WI 54449

Property Location & Legal Description:

Assessor Plat 1, Lot 5; S22, T38N, R03W; Parcel #032-271-00-0500; Tax ID# 42923; 4.34 total acres; Zoned Residential/Recreational One (RR-1). #3370N Johnson Road

Request: Permit desired for a pole shed (Accessory structure) not to exceed 40' x 30'. The proposed structure on the other side of a Town road (Johnson Road) subject to Sawyer County Ordinance Section 4.26 (3):

The construction of a single accessory structure on an adjacent parcel of land that are divided by a Public Roadway and defined as one contiguous tract of land by deed or survey map will also require Conditional Use Approval.

Project History & Summary of Request

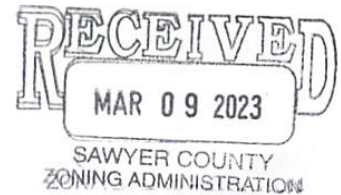
The applicant is requesting to build a 40' x 30' accessory structure on the back side of Johnson Road from where the primary dwelling is located. The current primary dwelling on the lake side of Johnson Road was recently built and now the owner is requesting this CUP for a pole shed on the same piece of property but on the non-lake side portion of the road. The proposed pole shed would not be able to fit on the lake side portion due to setback requirements. The proposed pole shed would be located approximately 350' from the lake and would meet all other setback requirements including impervious surface requirements per the land area, wetland setbacks, and general Town Road Setbacks. See attached maps included in this packet.

Additional information for Conditional Use Permits:

Substantial evidence means facts and information, other than merely personal preferences or speculation, directly pertaining to the requirements and conditions an applicant must meet to obtain a conditional use permit and that reasonable persons would accept in support of a conclusion.



Conditional Use Public Hearing Application



TO: Sawyer County Zoning and Conservation Administration
10610 Main Street Suite 49
Hayward, Wisconsin 54843
Attn: Kathy Marks E-mail: kathy.marks@sawyercountygov.org

Property Owner Name & Ad

Richard Jr &
Cindy J Dischinger
10622 Wills Run
Marshfield WI 54449-8737

3370 N. Johnson Rd. Winter, Wis.
Phone: _____ Email: _____

Property description including Parcel Number:

Lot #5 corners Lake North of Johnson Rd.
3370 N. Johnson Rd. Winter, WI.

Permit desired for:

Prep area for storage shed 30'x40'
in 2024
Remove trees - level ground - possible
add fill if required - maintain 40'
offset from west lot

Richard Dischinger
[Signature]
Owner Print & Sign

Owner Print & Sign

Signature of property owner(s) required. The undersigned person(s) hereby give permission for access to the property for inspection by Municipal Officials, Sawyer County Zoning Staff and Sawyer County Zoning Committee members if needed.

Name, Address, Phone & Email of Agent or Buyer:

E-mail cin2101@hotmail.com
Phone # 715-387-4662

Fee: \$350.00

Date of Public Hearing: May 19, 2023

Rev January 2021

Real Estate Sawyer County Property Listing

Today's Date: 3/13/2023

Property Status: Current

Created On: 10/3/2017 8:30:05 AM

**Description**

Updated: 3/26/2021

Tax ID:	42923
PIN:	57-032-2-38-03-22-5 15-271-000500
Legacy PIN:	032271000500
Map ID:	
Municipality:	(032) TOWN OF WINTER
STR:	S22 T38N R03W
Description:	TOWN OF WINTER ASSESSOR PLAT 1 LOT 5
Recorded Acres:	4.340
Calculated Acres:	0.000
Lottery Claims:	0
First Dollar:	Yes
Waterbody:	Connors Lake
Zoning:	(RR1) Residential/Recreational One
ESN:	428

**Tax Districts**

Updated: 10/3/2017

1	State of Wisconsin
57	Sawyer County
032	Town of Winter
576615	Winter School District
001700	Technical College

**Recorded Documents**

Updated: 10/22/2018

WARRANTY DEED	
Date Recorded: 10/17/2018	414935
PLAT	
Date Recorded: 9/22/2017	408804
EASEMENT DEED	
Date Recorded: 4/27/2017	406406
MAP OF SURVEY	
Date Recorded: 2/16/2015	22383-27
WARRANTY DEED	
Date Recorded: 7/5/1972	140860 508/235
WARRANTY DEED	
Date Recorded: 6/22/1972	140695 237/277

Child History Record Count: 1 -

HISTORY [Expand All History](#)

White=Current Parcels Pink=Retired Parcels

Tax ID: 32895 **Pin:** 57-032-2-38-03-22-5 05-001-000100 **Leg. Pin:** 032338225110 **Map ID:** :1.10[42923](#) This Parcel Parents Children**Ownership**

Updated: 10/22/2018

RICHARD R JR & CINDY J DISCHINGER MARSHFIELD WI**Billing Address:**

RICHARD R JR & CINDY J DISCHINGER
10622 WILLS RUN
MARSHFIELD WI 54449

Mailing Address:

RICHARD R JR & CINDY J DISCHINGER
10622 WILLS RUN
MARSHFIELD WI 54449

**Site Address** * indicates Private Road

3370N JOHNSON RD WINTER 54896

**Property Assessment**

Updated: 6/8/2022

2023 Assessment Detail

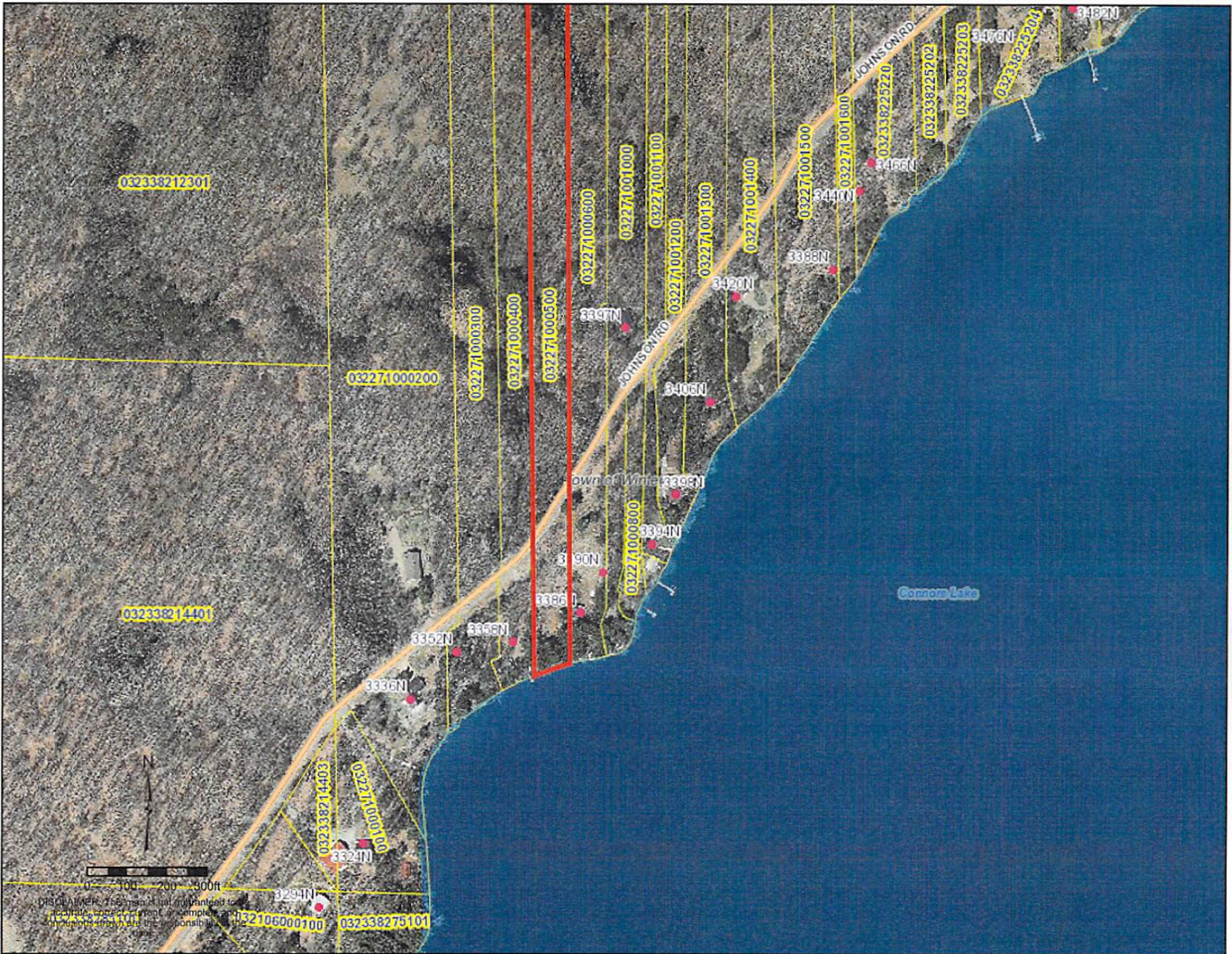
Code	Acres	Land	Imp.
G1-RESIDENTIAL	4.340	106,300	170,300

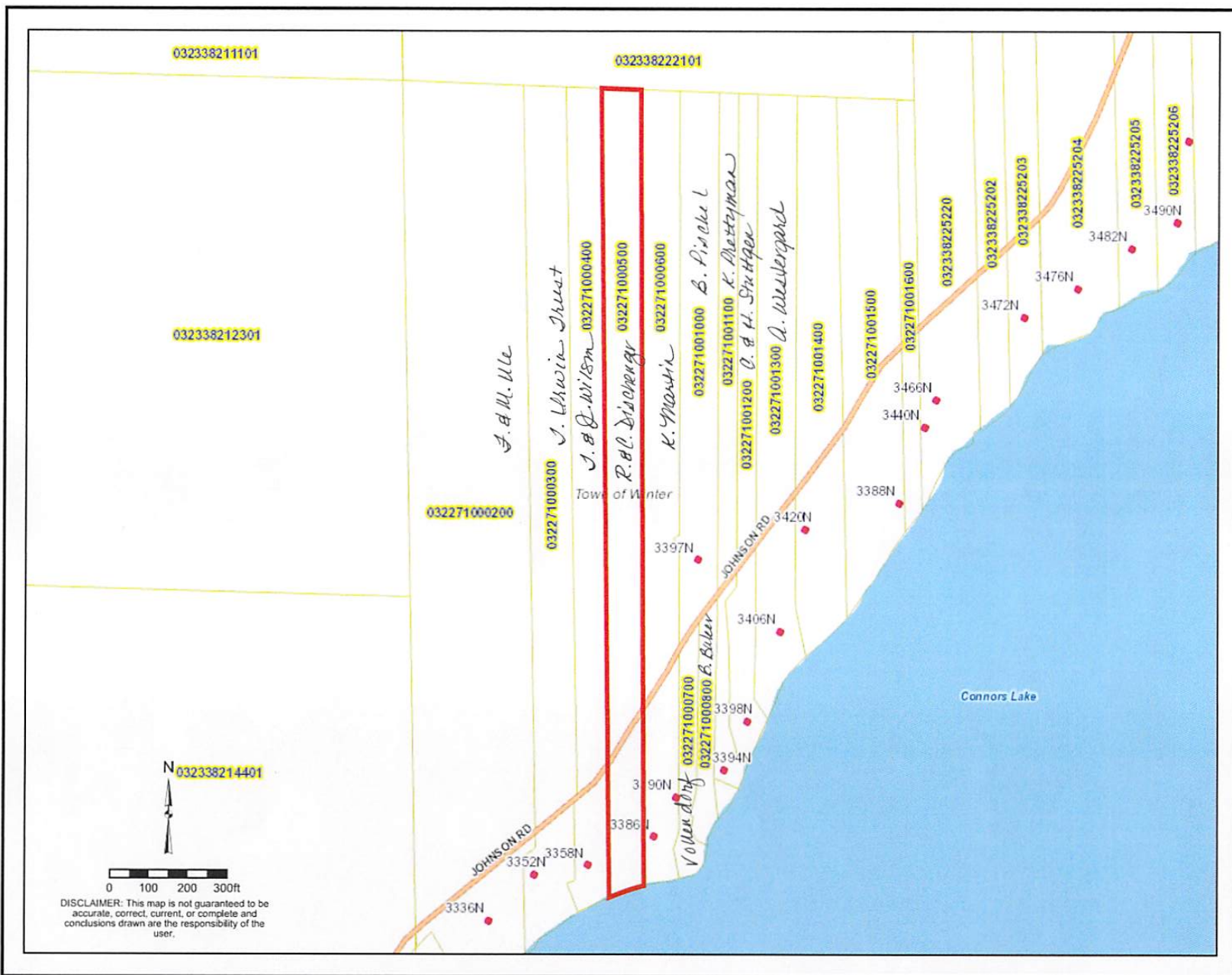
2-Year Comparison	2022	2023	Change
Land:	106,300	106,300	0.0%
Improved:	170,300	170,300	0.0%
Total:	276,600	276,600	0.0%

**Property History**

Parent Properties	Tax ID
57-032-2-38-03-22-5 05-001-000100	32895







Conditional Use Permit Request STAFF REPORT

Prepared By: Jay Kozlowski, Sawyer County Zoning & Conservation Administrator

File: # CUP 23-011

Applicant:

Adam & Michelle Smith
11254N Lower Twin Lake Road
Hayward, WI 54843



Property Location & Legal Description:

Town of Round Lake. Part of the SW ¼ of the SE ¼. Lot 2 CSM 33/71 #7964; S09, T41N, R07W; Parcel #024-741-09-4305; Tax ID #41762; 5.04 total acres; Zoned Residential/Recreational One (RR-1).

Request: Permit requested to operate a general Gunsmith Service as per Sawyer County Zoning Ordinance Section 17.2(7) for a “professional office and studios and Sec 17.2(3) for a “sports shop or other recreational service-oriented use”.

Project History & Summary of Request: Per the applicant’s statement, activities will include disassembly, diagnosing, reassembly, cleaning, repairs, scope & sighting alignments utilizing bore lasers, removal of stuck cartridges or live rounds, restorations, and Federal Firearms License (FFL) to transfers firearms on a limited basis. There will not be direct sales of firearms from this location. However, this request does include the applicant obtaining an FFL which is handled through The Bureau of Alcohol, Tobacco, Firearms and Explosives (ATF). The ATF requires a property to have an established business use on the property before authorizing a FFL. The main intent for the applicant to obtain the FFL would be to serve as a distributor for online purchases. When individuals purchase firearms online it must be sent to a FFL holder who then releases the firearm after proper authorization. This process is strictly regulated by the ATF.

Business hours are specified as Monday thru Friday, 9am to 2pm by appointment only.

The request is just to run the actual business out of the existing house on the property. Future plans may include an additional storage building if setbacks allow but no additional buildings are proposed at this time. The CUP is being requested to operate a professional office and business with a similar use to a sports shop which provides gunsmithing services.

Additional information for Conditional Use Permits:

Substantial evidence means facts and information, other than merely personal preferences or speculation, directly pertaining to the requirements and conditions an applicant must meet to obtain a conditional use permit and that reasonable persons would accept in support of a conclusion. If an applicant agrees to meets all of the requirements and conditions specified in the county ordinance or those imposed by the county zoning board, the county shall grant the conditional use permit. Any condition imposed must be related to the purpose of the ordinance and be based on substantial evidence. The conditions must be reasonable and, to the extent practicable, measurable. The applicant must demonstrate that the application and all requirements and conditions established by the county relating to the conditional use are or shall be satisfied, both of which must be supported by substantial evidence. The county's decision to approve or deny the permit must be supported by substantial evidence.

Possible Conditions for Approval: (choose from list below) (add or delete from list below)

- 1 CUP #23-011 is limited to the property owner.
- 2 Hours of business operation from 9AM-2PM, Monday-Friday
- 3 All signage must meet Sawyer County Zoning Ordinance Requirements.
- 4 All other Town, County, State, Federal Laws are followed

Findings of Fact for Approval: (choose from list below)

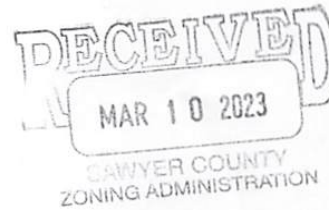
- 1 It would not be significantly damaging to the rights of others or property values
- 2 It would not be detrimental to ecology, wild life, wetlands or shorelands.
- 3 It would not create an air quality, water supply, or pollution problem.
- 4 It would not create topographical problems such as run off, drainage, erosion, flooding, or vegetative cover removal.
- 5 It would not create traffic or highway access problems.
- 6 It would not destroy prime agricultural lands.
- 7 It would be compatible with the surrounding uses and the area.
- 8 It would be consistent with the Town and/or County Comprehensive Plan
- 9 It would not create an objectionable view.

Findings of Fact for Denial: (choose from list below)

- 10 It would be significantly damaging to the rights of others and property values.
- 11 It would be detrimental to ecology, wild life, wetlands or shorelands.
- 12 It would create an air quality, water supply, or pollution problem.
- 13 It would create topographical problems such as run off, drainage, erosion, flooding, or vegetative cover removal.
- 14 It would create traffic or highway access problems.
- 15 It would destroy prime agricultural lands.
- 16 It would not be compatible with the surrounding uses and the area.
- 17 It would not be consistent with the Town and/or County Comprehensive Plan
- 18 It would create an objectionable view.



Conditional Use Public Hearing Application



TO: Sawyer County Zoning and Conservation Administration
10610 Main Street Suite 49
Hayward, Wisconsin 54843

Attn: Kathy Marks E-mail: kathy.marks@sawyercountygov.org

Phone: 715-638-3225

Property Owner Name & Address:

ADAM SMITH
11254 N. LOWER TWIN LAKE RD.
HAYWARD, WI 54843

Phone: 360-471-3919

Email: ADAM_K_SMITH@YAHOO.COM

Property description including Parcel Number:

SEE ATTACHMENT

Permit desired for:

TO OPERATE A GENERAL GUNSMITH SERVICE, PLEASE SEE ATTACHMENT.
NORMAL HOURS OF OPERATION WILL BE FROM 9AM TO 2PM, MONDAY THROUGH FRIDAY BY
APPOINTMENT ONLY.

3-21-23

NO FIREARM SALES.

ADAM K. SMITH

Owner Print & Sign

Owner Print & Sign

Signature of property owner(s) required. The undersigned person(s) hereby give permission for access to the property for inspection by Municipal Officials, Sawyer County Zoning Staff and Sawyer County Zoning Committee members if needed.

Name, Address, Phone & Email of Agent or Buyer:

Fee: \$350.00

Date of Public Hearing:

Gravel Pit renewal \$300.00

Rev January 2023

GUNSMITH SERVICES

Disassembly, diagnosing and reassembly.

Cleaning ranging from field strip and clean to ultrasonic deep cleaning.

Inspection and repairs including but not limited to; barrel, bolt assemblies, trigger assemblies, safety mechanisms, slides and firing pins.

All varieties of scope and sighting alignments utilizing bore lasers.

Removal of stuck cartridges or live rounds.

Restorations.

FFL transfers on a limited case by case basis.

Real Estate Sawyer County Property Listing

Today's Date: 2/28/2023

Property Status: Current

Created On: 3/6/2014 9:03:35 AM

**Description**

Updated: 4/26/2016

Tax ID:	41762
PIN:	57-024-2-41-07-09-4 03-000-000050
Legacy PIN:	024741094305
Map ID:	
Municipality:	(024) TOWN OF ROUND LAKE
STR:	S09 T41N R07W
Description:	PRT SWSE LOT 2 33/71 #7964
Recorded Acres:	5.040
Calculated Acres:	5.035
Lottery Claims:	0 LC Note
First Dollar:	Yes
Zoning:	(RR1) Residential/Recreational One
ESN:	404

**Tax Districts**

Updated: 3/6/2014

1	State of Wisconsin
57	Sawyer County
024	Town of Round Lake
572478	Hayward Community School District
001700	Technical College

**Recorded Documents**

Updated: 8/8/2022

WARRANTY DEED	440427
Date Recorded: 7/28/2022	
CORRECTION INSTRUMENT	439535
Date Recorded: 6/7/2022	
CONVEYANCE RECORDED NOT USED	439282
Date Recorded: 5/23/2022	
WARRANTY DEED	439258
Date Recorded: 5/20/2022	
QUIT CLAIM DEED	389859
Date Recorded: 4/1/2014	
CERTIFIED SURVEY MAP	389558
Date Recorded: 3/4/2014	
WARRANTY DEED	377931
Date Recorded: 3/30/2012	

Child History Record Count: 2 -

HISTORY [Expand All History](#)

White=Current Parcels

Pink=Retired Parcels

Tax ID: 25098 **PIN:** 57-024-2-41-07-09-4 03-000-000020 **Leg. Pin:** 024741094302 **Map ID:** .15.2**Tax ID:** 41275 **PIN:** 57-024-2-41-07-09-4 03-000-000030 **Leg. Pin:** 024741094303 **Map ID:** .15.3[41762](#) This Parcel [Parents](#) [Children](#)**Ownership**

Updated: 8/8/2022

MICHELLE P & ADAM K SMITH HAYWARD WI**Billing Address:****Mailing Address:**

MICHELLE P & ADAM K SMITH 11254N LOWER TWIN LAKE RD
HAYWARD WI 54843

MICHELLE P & ADAM K SMITH 11254N LOWER TWIN LAKE RD
HAYWARD WI 54843

**Site Address** * indicates Private Road

11254N LOWER TWIN LAKE RD HAYWARD 54843

**Property Assessment**

Updated: 7/16/2019

2023 Assessment Detail

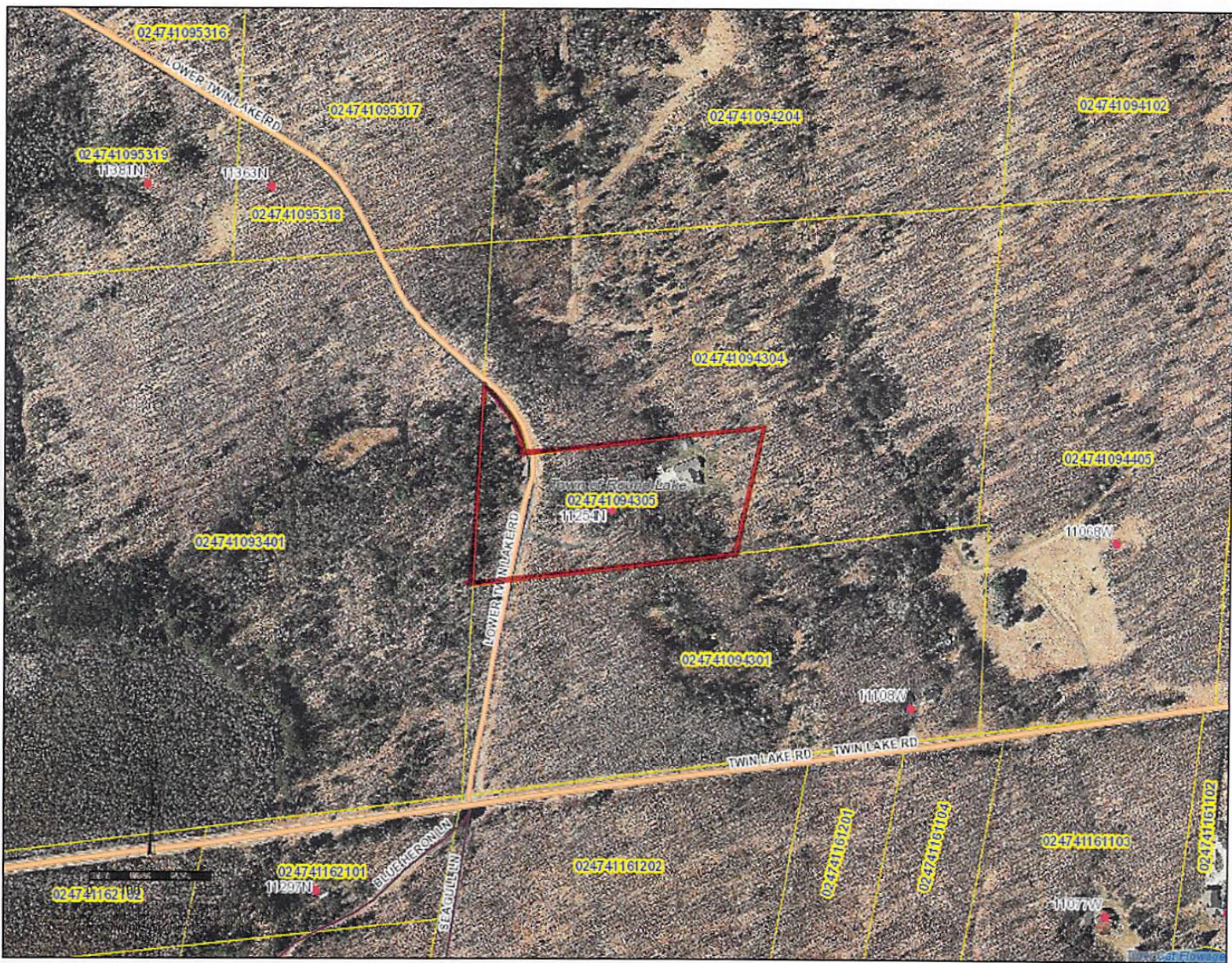
Code	Acres	Land	Imp.
G1-RESIDENTIAL	5.040	23,600	178,400

2-Year Comparison

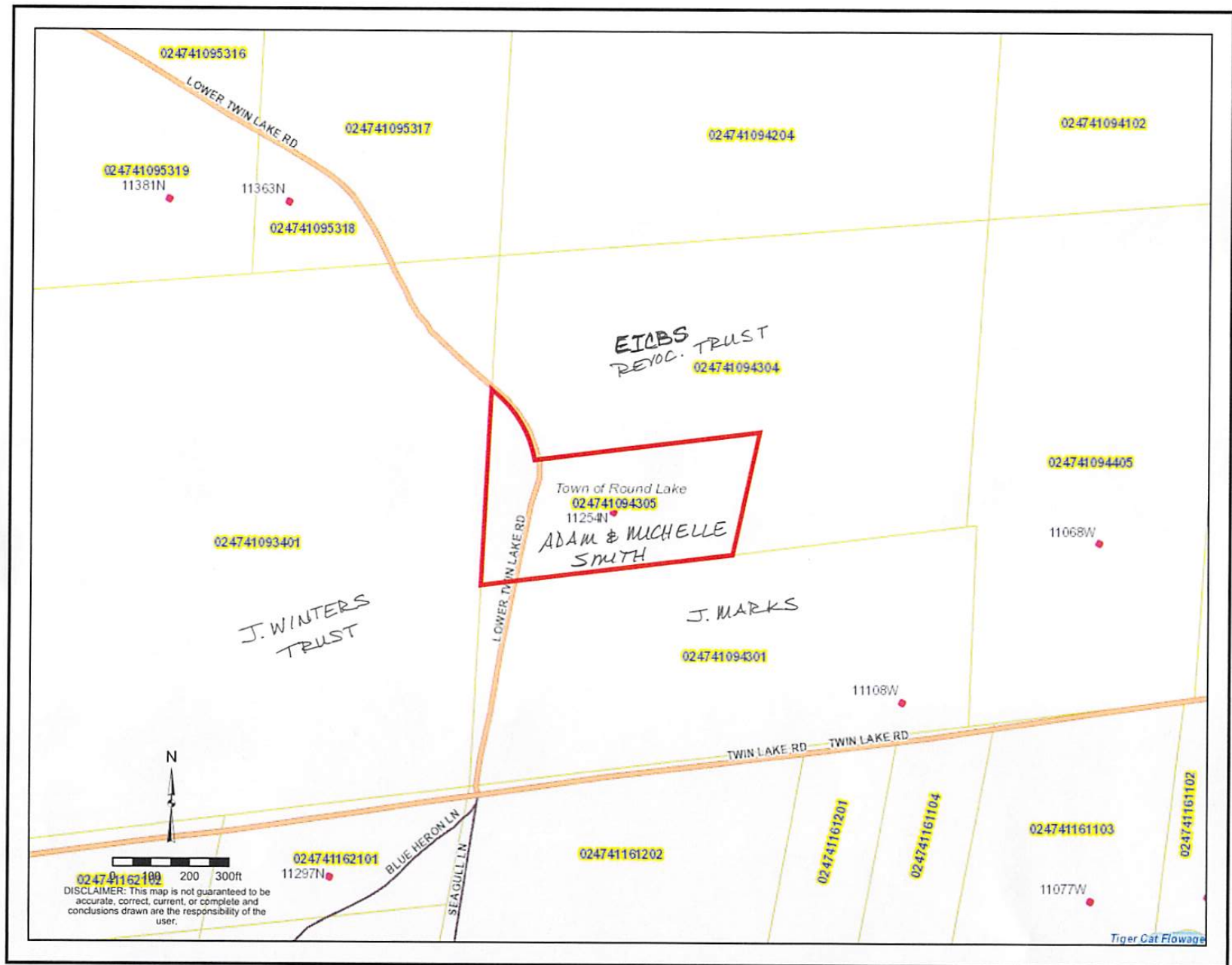
	2022	2023	Change
Land:	23,600	23,600	0.0%
Improved:	178,400	178,400	0.0%
Total:	202,000	202,000	0.0%

**Property History**

Parent Properties	Tax ID
57-024-2-41-07-09-4 03-000-000030	41275









Conditional Use Permit Request STAFF REPORT

Prepared By: Jay Kozlowski, Sawyer County Zoning & Conservation Administrator

File: # CUP 23-012

Applicant:

Scott Carpenter & Clifton Carpenter
1840 Walnut Lane
Eagan, MN 55122

Property Location & Legal Description:

Town of Edgewater. Part of Government Lot 1, Lot 4 CSM 6/145 #1192, S34, T38N, R09W; Parcel #008-938-34-5102, Tax ID #9573, .910 total acres, Zoned Residential/Recreational One (RR-1). Primary Dwelling located at #2877N East Shore Drive.

Request: Permit desired for an accessory structure (garage) not to exceed 40' x 32' and a height of 18.5'. The proposed structure on the other side of a Town road (East Shore Drive) subject to Sawyer County Ordinance Section 4.26 (2):

The construction of a single accessory structure on an adjacent parcel of land divided by a Public Roadway that does not contain the principal structure may be allowed by Conditional Use Permit.

Project History & Summary of Request

The applicant is requesting to build a 40' x 32' accessory structure on the back side of East Shore Drive from where the primary dwelling is located. The current primary dwelling is on a separate lot immediately adjacent across the Town Road. The proposed garage would not be able to fit on the lake side portion due to setback requirements. The proposed pole shed would be located approximately 320' from the lake and would meet all other setback requirements. It would also meet all other provisions and subsection of Section 4.26(2) of the Sawyer County Zoning Ordinance. This property is not located in a platted subdivision.

Additional information for Conditional Use Permits:

Substantial evidence means facts and information, other than merely personal preferences or speculation, directly pertaining to the requirements and conditions an applicant must meet to obtain a conditional use permit and that reasonable persons would accept in support of a conclusion.

If an applicant agrees to meets all of the requirements and conditions specified in the county ordinance or those imposed by the county zoning board, the county shall grant the conditional use permit. Any condition imposed must be related to the purpose of the ordinance and be based on substantial evidence. The conditions must be reasonable and, to the extent practicable, measurable. The applicant must demonstrate that the application and all requirements and conditions established by the county relating to the conditional use are or shall be satisfied, both of which must be supported by substantial evidence. The county's decision to approve or deny the permit must be supported by substantial evidence.

Possible Conditions for Approval: (choose from list below) (add or delete from list below)

- 1 No habitable area is allowed in this structure.
- 2 No commercial use or operation allowed in structure.
- 3 Size of proposed accessory structure not to exceed 40' x 32' x 18.5' high.
- 4 Must follow all other Town, County, State, Federal regulations/laws/conditions including an additional Town Driveway Permit.

Findings of Fact for Approval: (choose from list below)

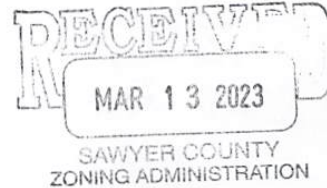
- 1 It would not be damaging to the rights of others or property values
- 2 It would not be detrimental to ecology, wild life, wetlands or shorelands.
- 3 It would not create an air quality, water supply, or pollution problem.
- 4 It would not create topographical problems such as run off, drainage, erosion, flooding, or vegetative cover removal.
- 5 It would not create traffic or highway access problems.
- 6 It would not destroy prime agricultural lands.
- 7 It would be compatible with the surrounding uses and the area.
- 8 It would be consistent with the Town and/or County Comprehensive Plan
- 9 It would not create an objectionable view.

Findings of Fact for Denial: (choose from list below)

- 10 It would be damaging to the rights of others and property values.
- 11 It would be detrimental to ecology, wild life, wetlands or shorelands.
- 12 It would create an air quality, water supply, or pollution problem.
- 13 It would create topographical problems such as run off, drainage, erosion, flooding, or vegetative cover removal.
- 14 It would create traffic or highway access problems.
- 15 It would destroy prime agricultural lands.
- 16 It would not be compatible with the surrounding uses and the area.
- 17 It would not be consistent with the Town and/or County Comprehensive Plan
- 18 It would create an objectionable view.



Conditional Use Public Hearing Application



TO: Sawyer County Zoning and Conservation Administration
10610 Main Street Suite 49
Hayward, Wisconsin 54843
Attn: Kathy Marks E-mail: kathy.marks@sawyercountygov.org

Property Owner Name & Address: Scott Carpenter

1840. Walnut Ln
Eggan MN 55122

Phone: 651-271-1609

Email: Carpinski @ Comcast.net

Property description including Parcel Number: Lot #4 of certified Survey Map #1192

Government lot #1 of Section 34 Township 38 North, Range 9
West, town of Edgewater, Sawyer County. PARCEL #008-938-34-5102
TALID#9573

Directly Across East Shore from #2877

Permit desired for: is for and subject to Section 4-26(2) Sawyer County
Zoning ordinance for the construction of an accessory structure
across a town road. it will be approximately 32' x 40' and
be about 16' high at its peak. See attached page
for location

Scott Carpenter

[Signature]

Owner Print & Sign

Clifton Carpenter

[Signature]

Owner Print & Sign

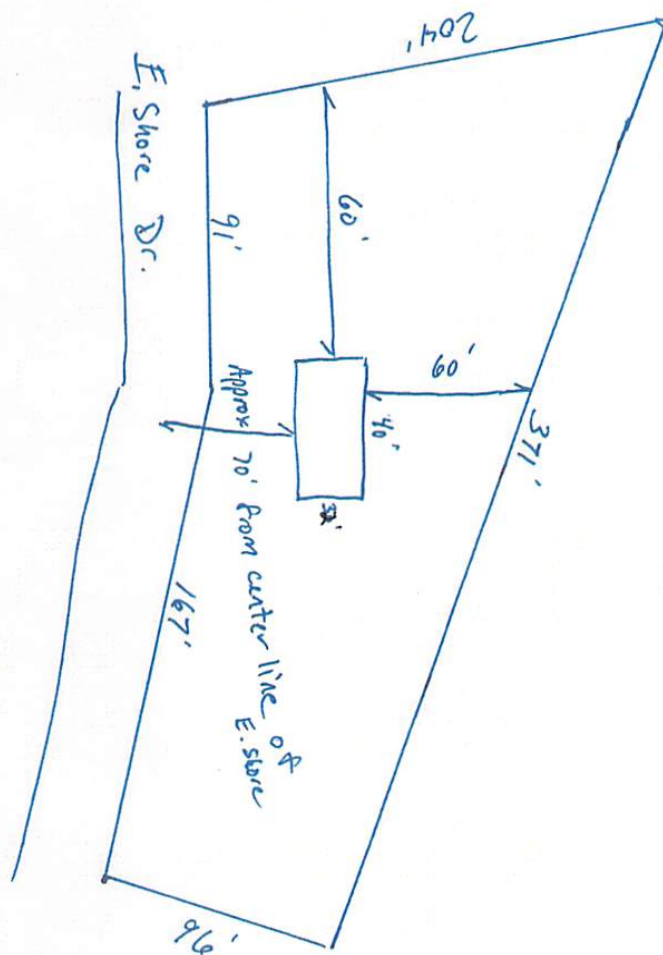
Signature of property owner(s) required. The undersigned person(s) hereby give permission for access to the property for inspection by Municipal Officials, Sawyer County Zoning Staff and Sawyer County Zoning Committee members if needed.

Name, Address, Phone & Email of Agent or Buyer:

Fee: \$350.00

Date of Public Hearing: May 19, 2023

Rev January 2021



Real Estate Sawyer County Property Listing

Today's Date: 3/13/2023

Property Status: Current
Created On: 2/6/2007 7:55:17 AM

**Description**

Updated: 1/23/2020

Tax ID:	9573
PIN:	57-008-2-38-09-34-5 05-001-000020
Legacy PIN:	008938345102
Map ID:	:1.2
Municipality:	(008) TOWN OF EDGEWATER
STR:	S34 T38N R09W
Description:	PRT GOVT LOT 1 LOT 4 CSM 6/145 #1192
Recorded Acres:	0.910
Calculated Acres:	0.908
Lottery Claims:	0
First Dollar:	No
Zoning:	(RR1) Residential/Recreational One
ESN:	

**Tax Districts**

Updated: 2/6/2007

1	State of Wisconsin
57	Sawyer County
008	Town of Edgewater
650441	Birchwood School District
001700	Technical College

**Recorded Documents**

Updated: 3/6/2023

TRANSFER ON DEATH DEED	
Date Recorded: 2/27/2023	443452
QUIT CLAIM DEED	
Date Recorded: 2/27/2023	443451
WARRANTY DEED	
Date Recorded: 6/24/2022	439844
WARRANTY DEED	
Date Recorded: 5/28/2021	432238
TERMINATION OF DECEDENTS INTEREST	
Date Recorded: 5/28/2021	432237
WARRANTY DEED	
Date Recorded: 10/27/1994	244904
CERTIFIED SURVEY MAP	
Date Recorded: 12/7/1978	167908

**Ownership**

Updated: 6/28/2022

SCOTT A CARPENTER	EAGAN MN
CLIFTON A CARPENTER	WEST HARRISON IN

Billing Address:

SCOTT A CARPENTER
1840 WALNUT LN
EAGAN MN 55122

Mailing Address:

SCOTT A CARPENTER
1840 WALNUT LN
EAGAN MN 55122

**Site Address** * indicates Private Road

N/A

**Property Assessment**

Updated: 2/6/2007

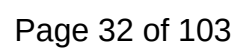
2023 Assessment Detail

Code	Acres	Land	Imp.
G1-RESIDENTIAL	0.910	4,600	0

2-Year Comparison	2022	2023	Change
Land:	4,600	4,600	0.0%
Improved:	0	0	0.0%
Total:	4,600	4,600	0.0%

**Property History**

N/A







Conditional Use Permit Request STAFF REPORT

Prepared By: Jay Kozlowski, Sawyer County Zoning & Conservation Administrator

File: # CUP 23-013

Applicant:

Kevin & Monese Starr
3415 197th Ave
Anoka, MN 55303

Property Location & Legal Description:

Town of Ojibwa. Part of Government Lot 3, Lot 114 CSM 24/284 #6616; S13, T39N, R06W; Parcel #020-639-13-5401; Tax ID #21204; 4.55 total acres; Zoned Residential/Recreational Two (RR-2). Site address of #6393N Knapp Road

Request: Permit desired for a 36' x 40' accessory structure on vacant property per section 4.26 (1) of the Sawyer County Zoning Ordinance. This accessory structure is to meet all setbacks. As per section 4.26 (1) of the Sawyer County Zoning Ordinance.

4.26(1)....The construction of accessory buildings on vacant property may only be allowed by Conditional Use with Town and Zoning Committee Approval. Granting of a Conditional Use will require within 3 years for a principal dwelling Land Use Permit to be applied for and the principal dwelling to be built within the permit time frame on the same parcel. Failure to build principal dwelling will result in citation and order for removal of accessory structure.

Project History & Summary of Request

As per conversations with the applicants the Conditional Use Permit is being requested to first build an outbuilding prior to constructing a cabin. Proposed accessory structure is to meet all other County Zoning setback and use requirements. The size of the garage not to exceed 36' x 40'.

Additional information for Conditional Use Permits:

Substantial evidence means facts and information, other than merely personal preferences or speculation, directly pertaining to the requirements and conditions an applicant must meet to obtain a conditional use permit and that reasonable persons would accept in support of a conclusion.

If an applicant agrees to meets all of the requirements and conditions specified in the county ordinance or those imposed by the county zoning board, the county shall grant the

conditional use permit. Any condition imposed must be related to the purpose of the ordinance and be based on substantial evidence. The conditions must be reasonable and, to the extent practicable, measurable. The applicant must demonstrate that the application and all requirements and conditions established by the county relating to the conditional use are or shall be satisfied, both of which must be supported by substantial evidence. The county's decision to approve or deny the permit must be supported by substantial evidence.

Possible Conditions for Approval: (choose from list below) (add or delete from list below)

- 1 Land Use Permit is required and applied for the **accessory structure(s)** within 1 year from the date of Zoning Committee decision and built within permit timeframes.
- 2 Land Use Permit is required and applied for **principal structure** within 3 years from date of Zoning Committee decision and built within permit timeframe. Failure to apply and build will result in citation with potential order for removal of accessory building.
- 3 Proposed accessory structure must meet all other Sawyer County Zoning & Conservation requirements and compliant with all other State & Federal Laws
- 4 Size of proposed structure not to exceed 36' x 40'.

Findings of Fact for Approval: (choose from list below)

- 1 It would not be significantly damaging to the rights of others or property values
- 2 It would not be detrimental to ecology, wild life, wetlands or shorelands.
- 3 It would not create an air quality, water supply, or pollution problem.
- 4 It would not create topographical problems such as run off, drainage, erosion, flooding, or vegetative cover removal.
- 5 It would not create traffic or highway access problems.
- 6 It would not destroy prime agricultural lands.
- 7 It would be compatible with the surrounding uses and the area.
- 8 It would be consistent with the Town and/or County Comprehensive Plan
- 9 It would not create an objectionable view.

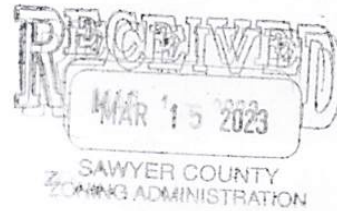
Findings of Fact for Denial: (choose from list below)

- 10 It would be significantly damaging to the rights of others and property values.
- 11 It would be detrimental to ecology, wild life, wetlands or shorelands.
- 12 It would create an air quality, water supply, or pollution problem.
- 13 It would create topographical problems such as run off, drainage, erosion, flooding, or vegetative cover removal.
- 14 It would create traffic or highway access problems.
- 15 It would destroy prime agricultural lands.
- 16 It would not be compatible with the surrounding uses and the area.
- 17 It would be consistent with the Town and/or County Comprehensive Plan
- 18 It would create an objectionable view.



Conditional Use Public Hearing Application

TO: Sawyer County Zoning and Conservation Administration
10610 Main Street Suite 49
Hayward, Wisconsin 54843
Attn: Kathy Marks E-mail: kathy.marks@sawyercountygov.org



Property Owner Name & Address: Kevin STARR 6393 N Kava pp Rd
Ojibwa 54862

Phone: 763 486 5975 Email: 1KSTARR61@gmail.com

Property description including Parcel Number:
4.55 Acres 21204
57-020-2-39-06-13-5-004-000010

Permit desired for: Conditional use - garage 36' x 40'
per Section 4.26(1) sawyer county zoning ordinance. Accessory
structure on vacant land with 3 year timeline to build
primary dwelling.

Kevin STARR
K. Starr
Owner Print & Sign

Monese Starr
Monese K Starr
Owner Print & Sign

Signature of property owner(s) required. The undersigned person(s) hereby give permission for access to the property for inspection by Municipal Officials, Sawyer County Zoning Staff and Sawyer County Zoning Committee members if needed.

Name, Address, Phone & Email of Agent or Buyer:

Kevin STARR
3415 197 Ave
ANOKA MN 55303

Fee: \$350.00
Rev January 2021

Date of Public Hearing: May 19, 2023

Real Estate Sawyer County Property Listing

Today's Date: 3/27/2023

Property Status: Current

Created On: 2/6/2007 7:55:36 AM

**Description**

Updated: 8/6/2019

Tax ID:	21204
PIN:	57-020-2-39-06-13-5 05-004-000010
Legacy PIN:	020639135401
Map ID:	:4.1
Municipality:	(020) TOWN OF OJIBWA
STR:	S13 T39N R06W
Description:	PRT GOVT LOTS 3 & 4 LOT 114 CSM 24/284 #6616
Recorded Acres:	4.550
Calculated Acres:	4.495
Lottery Claims:	0
First Dollar:	No
Waterbody:	Chippewa River
Zoning:	(RR2) Residential/Recreational Two
ESN:	

**Tax Districts**

Updated: 2/6/2007

1	State of Wisconsin
57	Sawyer County
020	Town of Ojibwa
576615	Winter School District
001700	Technical College

**Recorded Documents**

Updated: 4/16/2021

WARRANTY DEED	
Date Recorded: 3/25/2021	430766
DESIGNATION OF TOD BENEFICIARY	
Date Recorded: 7/16/2019	418794
QUIT CLAIM DEED	
Date Recorded: 3/13/2017	405755
WARRANTY DEED	
Date Recorded: 3/9/2004	319855
CERTIFIED SURVEY MAP	
Date Recorded: 7/9/2003	312987
COVENANTS	
Date Recorded: 3/29/1993	234146

**Ownership**

Updated: 4/16/2021

KEVIN & MONESE STARR ANOKA MN**Billing Address:**

KEVIN & MONESE STARR
 3415 197TH AVE
 ANOKA MN 55303

Mailing Address:

KEVIN & MONESE STARR
 3415 197TH AVE
 ANOKA MN 55303

**Site Address** * indicates Private Road

6393N KNAPP RD WINTER 54896

**Property Assessment**

Updated: 8/20/2013

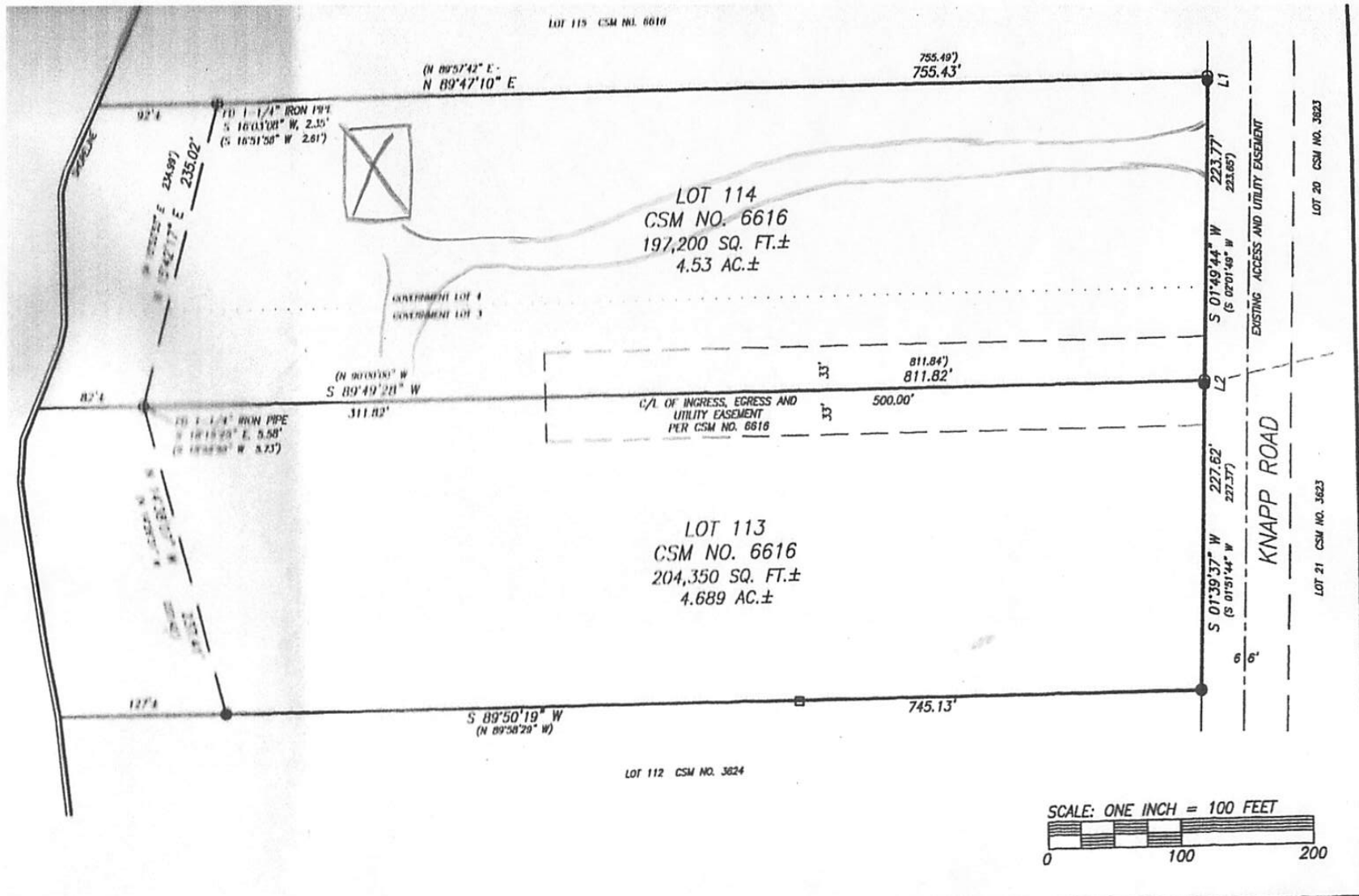
2023 Assessment Detail

Code	Acres	Land	Imp.
G1-RESIDENTIAL	4.550	37,800	0

2-Year Comparison	2022	2023	Change
Land:	37,800	37,800	0.0%
Improved:	0	0	0.0%
Total:	37,800	37,800	0.0%

**Property History**

N/A

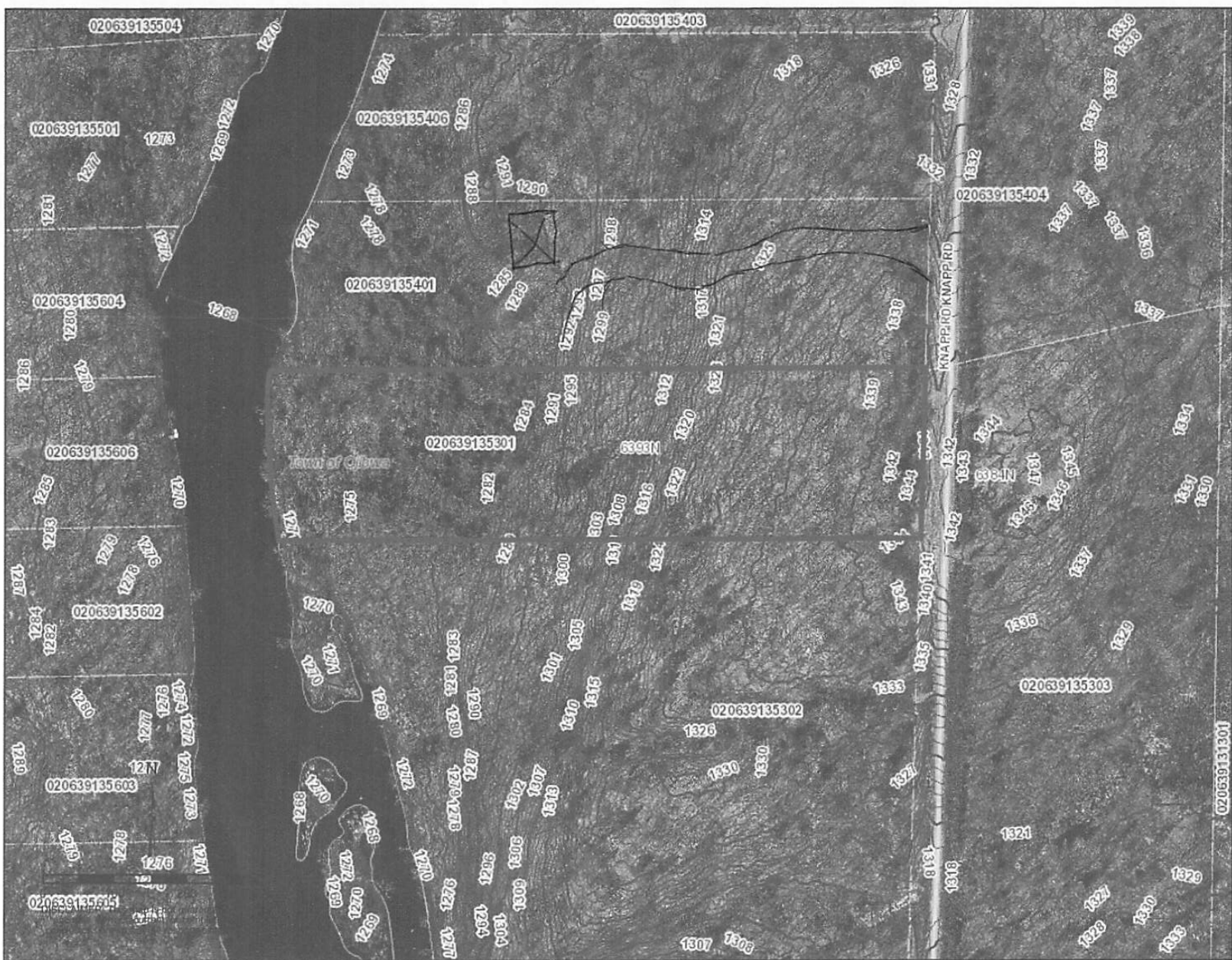


KEVIN STARR
1/21/2021
1" = 100 FEET
DATE COMPLETED: 04/22/2021

FILE: M/T39NR6W/SEC13
ACAD: H21_STARR
COORD: STARR
NB. B-427 PG. 89

**HEART OF THE NORTH
SURVEYING OF HAYWARD, INC.**

10339N DUFFY ROAD
HAYWARD, WI. 54843
PH: 715/634-2442
FAX: 715/634-6444
WWW.HONSURVEYING.COM





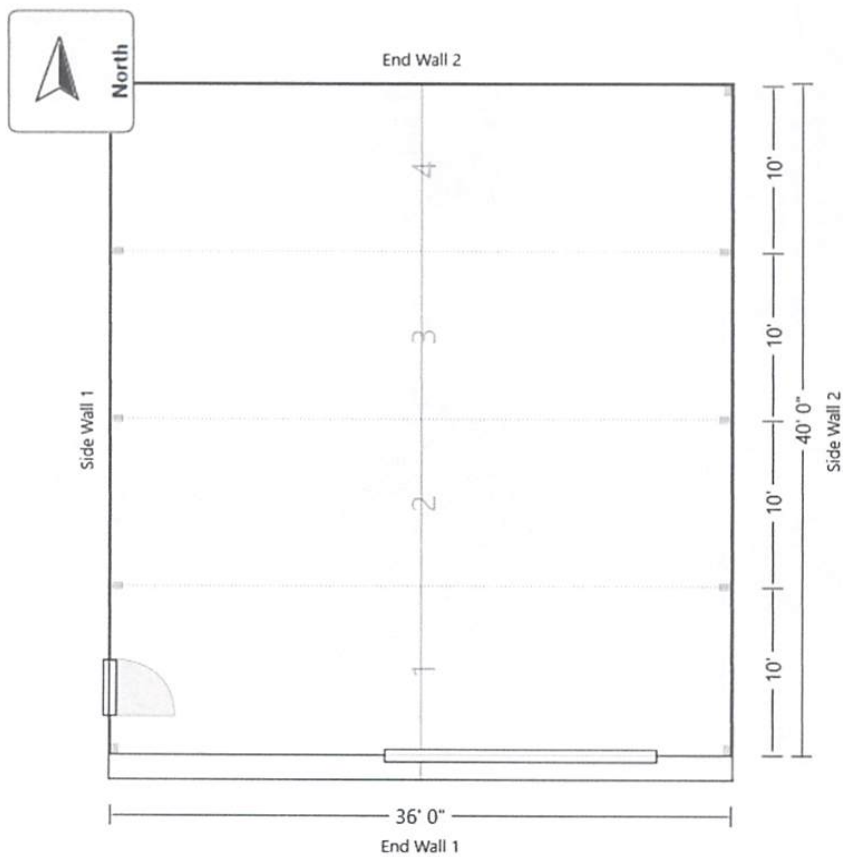


P.O. Box 930220
Verona, WI 53593-0220
Phone: (608) 845-9700
Fax: (608) 845-7070

3/13/2023
STARR, KEVIN
Doc ID: 5145220230313110045

Cleary/Owner Project Contract - Erected

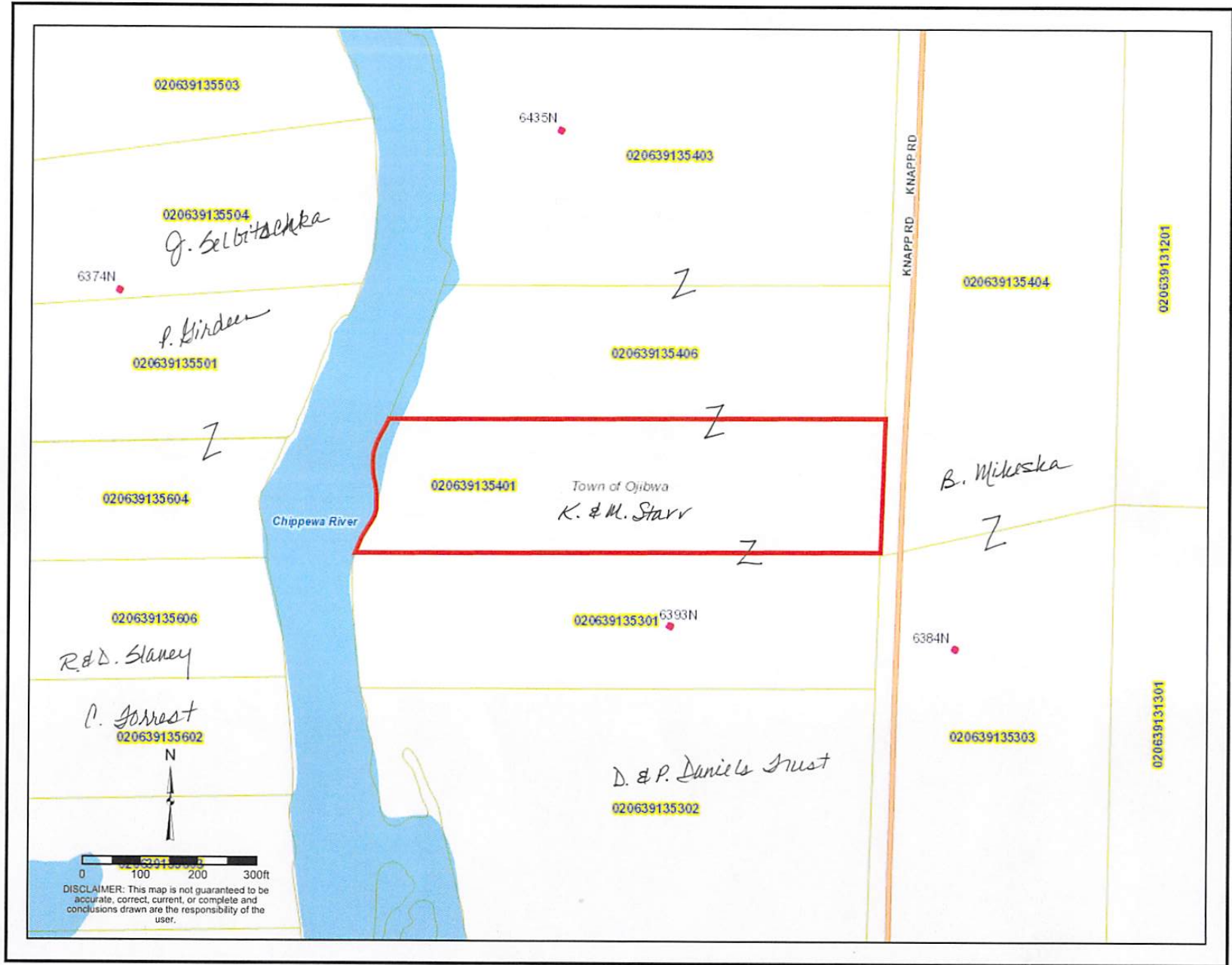
Floor Plan



C-500
v12/10

built with pride before the  is applied[®]

10 of 19





Conditional Use Permit Request - STAFF REPORT

Prepared By: Jay Kozlowski, Sawyer County Zoning & Conservation Administrator

File: # CUP 23-014 Location and Operation Plan

Owner/Operator:

Terry & Sarah Walport
15282W Fun Valley Road
Hayward, WI 54843

Property Location & Legal Description:

Part of the SW $\frac{1}{4}$ of the NW $\frac{1}{4}$; S32, T41N, R09W; Parcel #010-941-32-2401; Tax ID #13107;
39.89 total acres; Zoned Agriculture One (A-1).

Request: Permit desired for location and operation of non-metallic mineral extraction including rock crusher, actual mine site to be limited to 20 acres within the North half of the 39.89 acre parcel as per the Sawyer County Ordinance section 17.4 (B) (6). This would be for a potential 5-year approval.

Project History & Summary of Request

This request of CUP 23-014 is for the new location of a non-metallic mineral extraction operation including a rock crusher. The property is 40.0 total acres with an actual mine site identified as 20 acres in the North half of the property.

The surrounding area is an additional gravel pit to the North, industrial pellet plant to the West, and mixed residential to the East. The nearest residence is approximately 675' away with all crushing operations to be a minimum of 1000' away.

As per conditions of an approved reclamation plan financial assurance would be required in the amount of \$1,500 per acre. The applicant has broken down phases of excavation so total financial assurance hasn't been determined yet but is planned at \$6,000 for phase 1. Each additional phase of excavation will require additional financial assurance.

The specified hours of operation are to be from 6 AM to 7 PM, Monday – Saturday. Crushing hours operations are to occur during specified hours of operation and not to exceed 6 weeks per calendar year.

Other plans of operation are included within this packet.

Additional information for Conditional Use Permits:

Substantial evidence means facts and information, other than merely personal preferences or speculation, directly pertaining to the requirements and conditions an applicant must meet to obtain a conditional use permit and that reasonable persons would accept in support of a conclusion.

If an applicant agrees to meet all of the requirements and conditions specified in the county ordinance or those imposed by the county zoning board, the county shall grant the conditional use permit. Any condition imposed must be related to the purpose of the ordinance and be based on substantial evidence. The conditions must be reasonable and, to the extent practicable, measurable. The applicant must demonstrate that the application and all requirements and conditions established by the county relating to the conditional use are or shall be satisfied, both of which must be supported by substantial evidence. The county's decision to approve or deny the permit must be supported by substantial evidence.

Possible Conditions for Approval: (choose from list below) (add or delete from list below)

- 1 Obtain approval or conditional approval of reclamation plan
- 2 Hours of normal operations: 6AM-7PM, Monday-Saturday
- 3 Crushing hours: 6AM-7PM, Monday- Saturday not to exceed 6 weeks per calendar year.
- 4 A Fire # or Site Address is required for the property.
- 5 Maintain compliance with Department of Natural Resources Chapter 30
- 6 Existing southern 20 acres of pine plantation is anticipated to remain. If a timber harvest operation is to occur that area is to be replanted or allowed to self-regenerate.
- 7 Potential 50' buffer on East property line for residential zoned land. (discussion to occur at Zoning Committee)
- 8 Comply with all other federal, state, and local regulations including approval of the "Reclamation Plan".

Findings of Fact for Approval: (choose from list below)

- 1 It would not be significantly damaging to the rights of others or property values
- 2 It would not be detrimental to ecology, wild life, wetlands or shorelands.
- 3 It would not create an air quality, water supply, or pollution problem.
- 4 It would not create topographical problems such as run off, drainage, erosion, flooding, or vegetative cover removal.
- 5 It would not create traffic or highway access problems.
- 6 It would not destroy prime agricultural lands.
- 7 It would be compatible with the surrounding uses and the area.
- 8 It would be consistent with the Town and/or County Comprehensive Plan
- 9 It would not create an objectionable view.

Findings of Fact for Denial: (choose from list below)

- 10 It would be significantly damaging to the rights of others and property values.
- 11 It would be detrimental to ecology, wild life, wetlands or shorelands.

- 12 It would create an air quality, water supply, or pollution problem.
- 13 It would create topographical problems such as run off, drainage, erosion, flooding, or vegetative cover removal.
- 14 It would create traffic or highway access problems.
- 15 It would destroy prime agricultural lands.
- 16 It would not be compatible with the surrounding uses and the area.
- 17 It would not be consistent with the Town and/or County Comprehensive Plan
- 18 It would create an objectionable view.



Conditional Use Public Hearing Application

TO: Sawyer County Zoning and Conservation Administration
10610 Main Street Suite 49
Hayward, Wisconsin 54843

Attn: Kathy Marks E-mail: kathy.marks@sawyercountygov.org

Phone: 715-638-3225

Property Owner Name & Address:

Terry N. & Sarah E. Walport
15828W Fun Valley Road
Hayward, WI 54843

Phone: 715-699-2258

Email: thewalports@gmail.com

Property description including Parcel Number:

T41N, R9W, Sec. 32, SE 1/4, NW 1/4, TR4 I.D. #13107, PARCEL# 010-941-32-2401,
39.89 TOTAL ACRES, ZONE A-1

Permit desired for:

Operation of sand/gravel pit and rock crusher

17.4 (B) (b) OF THE S.C. ZONING ORDINANCE

Terry N. Walport
Owner Print & Sign

Sarah E. Walport
Owner Print & Sign

Signature of property owner(s) required. The undersigned person(s) hereby give permission for access to the property for inspection by Municipal Officials, Sawyer County Zoning Staff and Sawyer County Zoning Committee members if needed.

Name, Address, Phone & Email of Agent or Buyer:

Fee: \$350.00

Gravel Pit renewal \$300.00

Date of Public Hearing: May 19, 2023

Rev January 2023

Real Estate Sawyer County Property Listing

Today's Date: 3/15/2023

Property Status: Current

Created On: 2/6/2007 7:55:23 AM



Description

Updated: 5/28/2020

Tax ID:	13107
PIN:	57-010-2-41-09-32-2 04-000-000010
Legacy PIN:	010941322401
Map ID:	.8.1
Municipality:	(010) TOWN OF HAYWARD
STR:	S32 T41N R09W
Description:	PRT SENW
Recorded Acres:	39.890
Calculated Acres:	39.927
Lottery Claims:	0
First Dollar:	No
Zoning:	(A-1) Agricultural One
ESN:	444



Tax Districts

Updated: 2/6/2007

1	State of Wisconsin
57	Sawyer County
010	Town of Hayward
572478	Hayward Community School District
001700	Technical College



Recorded Documents

Updated: 1/31/2022

WARRANTY DEED	
Date Recorded: 1/3/2022	436882
JUDGMENT-FINAL	
Date Recorded: 6/6/2003	311867 208/444 T456/197 JDG854/500
JUDGMENT-FINAL	
Date Recorded: 10/8/1990	220682
QUIT CLAIM DEED	
Date Recorded: 12/20/1966	124933



Ownership

Updated: 1/31/2022

TERRY N & SARAH E WALPORT	HAYWARD WI
--------------------------------------	------------

Billing Address:

TERRY N & SARAH E WALPORT
15828W FUN VALLEY RD
HAYWARD WI 54843

Mailing Address:

TERRY N & SARAH E WALPORT
15828W FUN VALLEY RD
HAYWARD WI 54843



Site Address * indicates Private Road

N/A



Property Assessment

Updated: 11/9/2015

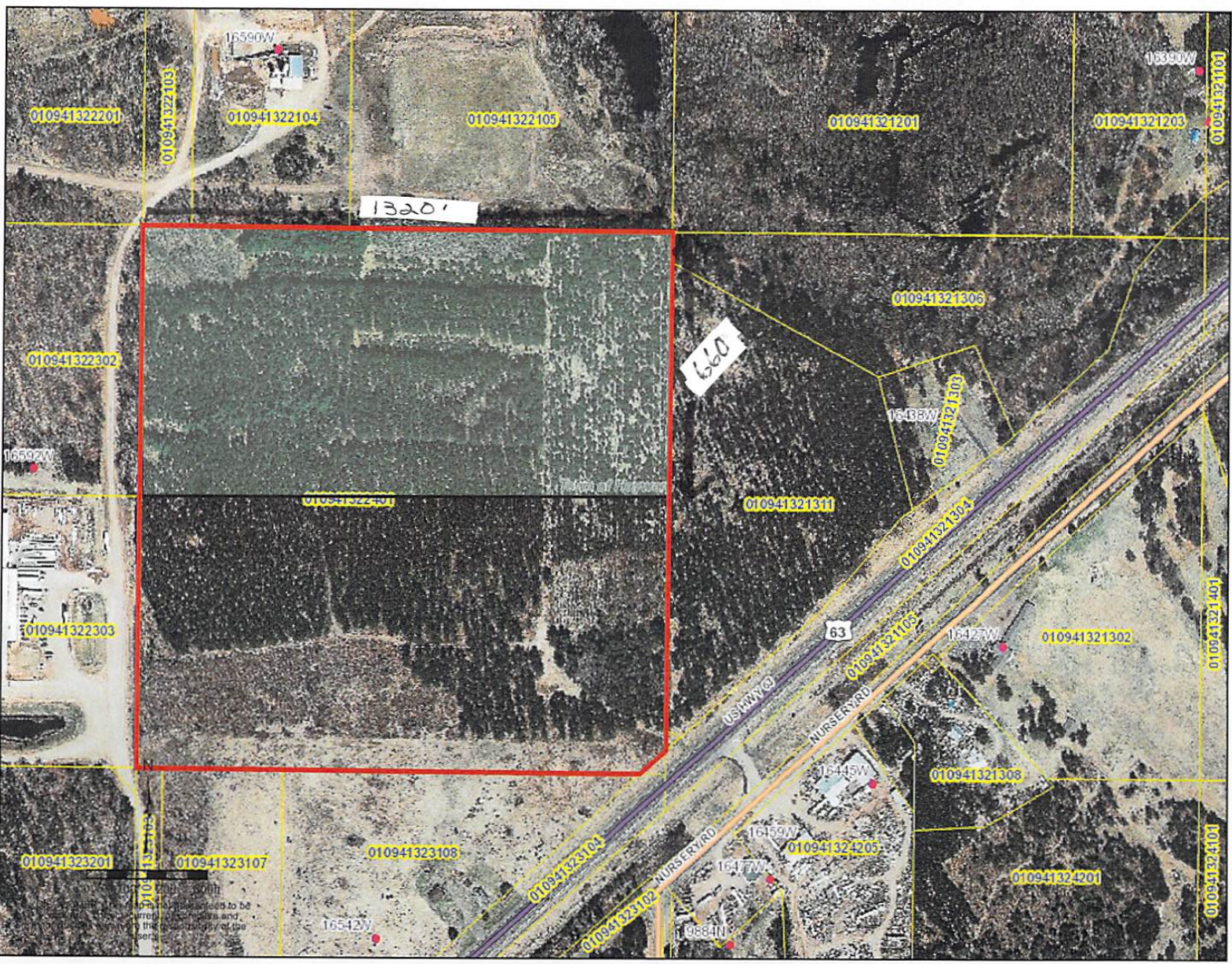
2023 Assessment Detail			
Code	Acres	Land	Imp.
G6-PRODUCTIVE FOREST	39.890	65,400	0

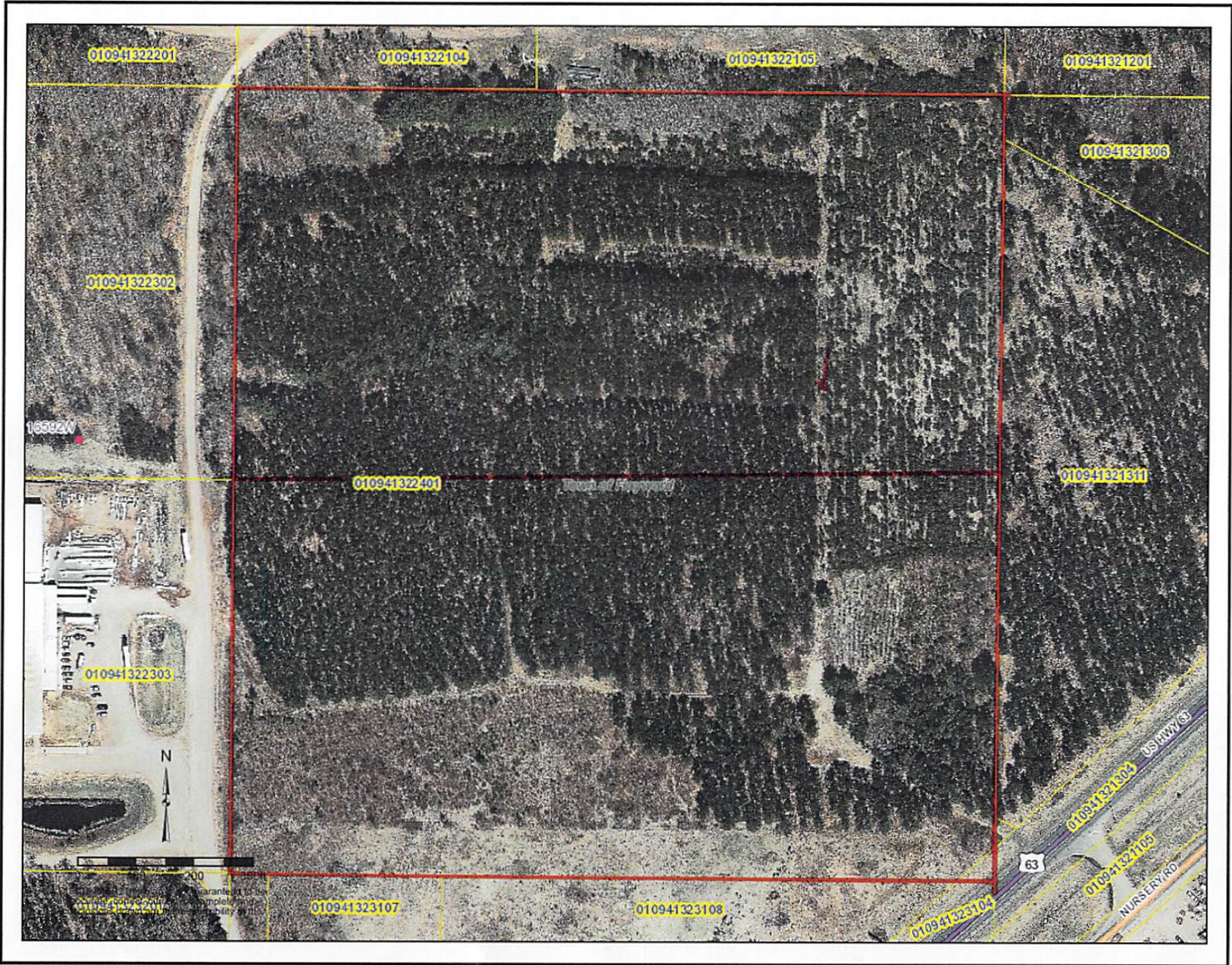
2-Year Comparison			
	2022	2023	Change
Land:	65,400	65,400	0.0%
Improved:	0	0	0.0%
Total:	65,400	65,400	0.0%



Property History

N/A





PLAN OF OPERATION

PROPOSED ACTIVITIES

- Sand and gravel extraction, stockpiling, loading, and hauling – Continuous
- Crushing –Brief periods
- Screening- Simi continuous

HOURS OF OPERATION

- Normal hours will be 6:00am to 7:00pm, Monday through Saturday
- Crushing Operation will be conducted 3-6 weeks per year. These operations are conducted by contracted sources and use portable equipment.

ACCESS ROUTE

- Access to the pit is obtained from Hwy 63 on to private property that the operation is being applied for.

OPERATION EQUIPMENT

Sand and gravel equipment will include a portable crusher and screening plant, loaders, dozers, portable conveyors, dump trucks and excavators. Other miscellaneous excavation and aggregate producing equipment may be present.

EROSION CONTROL

Runoff from site disturbance and future extraction will be controlled within the project site with berms and natural barriers and topography. During extraction operations, the perimeter slopes will not be steeper than 3:1 when the depth exceeds 15feet. During the operation of the pit, erosion control will be maintained to insure that all soil will not leave the pit area on the Walport property.

Rock crushers will be brought in occasionally to crush aggregate. They will conform to state and federal pollution standards.

ENVIRONMENTAL CONSIDERATION

The existing pine plantation will be left in place to screen the operation from the highway. If the woods are ever part of an active timber sale the operation would be visible however overtime that are would revegetate and self-screen again.

All operations will be performed in a manner that will minimize, as practicable, the production of noise, vibration, or dust that would be hazardous or be sustainability annoying to persons located off the premises.

The site contains no surface ground water.



Conditional Use Permit Request-Reclamation Plan STAFF REPORT

Prepared By: Jay Kozlowski, Sawyer County Zoning & Conservation Administrator

File: # CUP 23-014 Reclamation Plan

Owner/Operator:

Terry & Sarah Walport
15282W Fun Valley Road
Hayward, WI 54843

Property Location & Legal Description:

Part of the SW $\frac{1}{4}$ of the NW $\frac{1}{4}$; S32, T41N, R09W; Parcel #010-941-32-2401; Tax ID #13107;
39.89 total acres; Zoned Agriculture One (A-1).

Request: Permit issuance of the Reclamation Plan

Project History & Summary of Request

The applicant is requesting to open a new non-metallic mineral extraction on the property described above. Previously the public hearing for CUP 23-014 was for potential approval of the "Location & Operation" Per the reclamation plan provided the area is showing 20.0 acres of disturbance for mining. If expansion was to occur a new updated reclamation plan would be need which required additional approval. Per the plan, the pit depth is not to exceed 25 feet and approximately 2,000-5,000 cubic yards of material are to be extracted from the site annually. Per the NR 135 requirements before approval can be granted for the conditional use operation process the regulatory authority being the County needs to approve the applicant's reclamation plan (attached).

The Sawyer County Zoning & Conservation Department has reviewed the "reclamation summary" and concludes that the plan is consistent with the standards specified in NR 135.

The Sawyer County Zoning Committee, being the regulatory authority may approve, conditionally approve, or deny the reclamation plan.

If the regulatory authority approves the reclamation plan subject to general compliance requirements of NR 135, the approval may not include conditions that are not related to the reclamation plan. Other conditions may be added during the public hearing process for the

“location and plan of operation”. One required condition of an approved reclamation plan shall be that the new mine obtain financial assurance pursuant to NR 135.40.

If the regulatory authority denies the reclamation plan it needs to have the findings of one the following:

- 1) The applicant has, after being given an opportunity to make corrections, failed to provide an adequate permit application, reclamation plan, financial assurance or any other submittal required by NR 135 or the applicable reclamation ordinance.
- 2) The proposed nonmetallic mining site cannot be reclaimed in compliance with the reclamation standards contained in the applicable reclamation ordinance, NR 135 or subch. I of ch. 295, Stats.
- 3) The applicant, or its agent, principal or predecessor has, during the course of nonmetallic mining in Wisconsin within 10 years of the permit application or modification request being considered shown a pattern of serious violations of this chapter or of federal, state or local environmental laws related to nonmetallic mining reclamation.

A denial shall be in writing and shall contain documentation of reasons for denial. The regulatory authority's decision to deny an application to issue a reclamation permit may be reviewed NR 135.30.

Terry Walport Excavation Non-Metallic Mine Reclamation Summary

March 2023

Applicant Name: Terry Walport

Pit Name: Walport 63

Address: 15828W Fun Valley Rd
Hayward, WI 54843

Sites Legal Description:
T41N, R9W, Sec. 32, SE ¼, NW ¼

Phone: (715) 699-2258

Total Area of Mine: 20 acres

Purpose and planned excavation of mine: The purpose of the mine is for the production of gravel and fill sand. The total extent of the mine is shown on the Site Plan Map. Excavation will be done in phases to limit the amount of exposed soil to reduce the possibility of erosion and pollution of surface or groundwater. Active excavation at the site should not exceed five acres at any given time. The total depth of excavation will be between 20' to 25' and will not exceed 25' in any location.

Reclamation Costs: The estimated cost of reclamation in 2022 is \$1500 per acre of disturbed area. Financial assurance will be based on the cost of reclamation. The cost of reclamation is listed for each phase.

Phase 1: Excavation to a depth of approximately 20 to 25 feet deep will begin on centerline of the north ½ of the 40 acre parcel of the mine to make room for future stockpiles and crushing operations. Topsoil will be removed and stockpiled out of the way as excavation progresses west towards property line. Between crushing's banks will be sloped to minimize erosion. Banks that have been sloped and won't be reopened will be covered with a layer of topsoil and seeded.
Total size: 4 acres Financial Assurance: \$ 6000.00

Phase 2: Topsoil will be removed and stockpiled out of the way as excavation to a depth of approximately 20 to 25 feet deep continues toward the south. Between crushing's active banks will be sloped to minimize erosion. Inactive banks will be sloped and covered with a layer of topsoil, seeded and mulched. Crushed material will be stockpiled in the area of Phase 1. Once excavation of Phase 2 has been completed the area will be reclaimed in accordance with this plan.
Total size: 4 acres Financial Assurance: \$ 6000.00

Phase 3: Topsoil will be removed and stockpiled out of the way as excavation to a depth of approximately 20 to 25 feet deep progresses toward the east. Between crushing's active banks will be sloped to minimize erosion. Inactive banks will be sloped and covered with a layer of topsoil, seeded and mulched. Crushed material will be stockpiled in the area of Phase 1. Once excavation of Phase 3 has been completed the area of Phase 1 will be reclaimed in accordance with this plan.
Total size: 4 acres Financial Assurance: \$ TBD

Phase 4: Topsoil will be removed and stockpiled out of the way as excavation to a depth of approximately 20 to 255 feet deep progresses toward the south. Between crushing's active banks will be sloped to minimize erosion. Inactive banks will be sloped and covered with a layer of topsoil, seeded and mulched. Crushed material will be stockpiled in the area of Phase 3. Once excavation of Phase 4 has been completed the area of Phase 3 will be reclaimed in accordance with this plan.
Total size: 4 acres Financial Assurance: \$ TBD

Phase 5: Topsoil will be removed and stockpiled out of the way as excavation to a depth of approximately 20 to 25 feet deep progresses toward the west. Between crushing's active banks will be sloped to minimize erosion. Inactive banks will be sloped and covered with a layer of topsoil, seeded and mulched. Crushed material will be stockpiled in the area of Phase 4. Once excavation of Phase 5 has been completed and the stockpiles removed the entire mine site will be reclaimed in accordance with this plan.

Total size: 4 acres **Financial Assurance:** \$ TBD

SAWYER COUNTY NR135 RECLAMATION PLAN

General Location: Walport Pit non-metallic mine is located in SE¼, NW¼, Section 32, Township 41N Range 8 W, in the Town of Hayward, Sawyer County, Wisconsin. The mine is approximately 15 miles North of US Hwy 63 and West of the City of Hayward.

Soil Type: The soil type at the site is a Keweenaw-Sayner-Vilas Complex and a Mahtomedi loamy sand. This is best described as unconsolidated glacial material that forms a stony sandy loam, with a 2.3 percent slope over the existing land.

Distribution, thickness and type of topsoil: Thickness of topsoil is less than 8 inches with an abrupt wavy boundary.

Approximate elevation of groundwater: The approximate ground level elevation of the water table in this site is 35- 40' below the land surface as detailed in the well report for the neighboring property. The groundwater level will be 10' below the floor of the final pit level.

Location of surface waters and existing drainage patterns: The existing drainage pattern of the site is internally draining. There are no perennial water bodies close to the mine site. The closest water is a small ephemeral pond about 1/10 mile to the north and the Namakagon River is located ½ mile south. The existing drainage patterns can be seen on the attached map.

Current biological resources, plant communities, and wildlife use at and adjacent to mine site: Biological and wildlife data was mainly determined by visual observations. The proposed mine site is a young northern hardwood forest consisting of mostly maple with a mix of oak, birch, and aspen trees.

Biological and wildlife data was mainly determined by visual observations. The proposed mine site is a mature red pine plantation with a dense over story and fairly thin understory.

Wildlife usage is low to moderate. Main species present include whitetail deer, cottontail rabbits, and various songbirds and smaller mammals common to the area. No threatened or endangered species were observed or known to the site.

Proposed post-mining land use: The proposed post-mining land use for the non-metallic mine site is a grassy meadow with some trees. The proposed land use would be appropriate to the current local zoning of Agricultural 1. Upon complete reclamation natural succession would convert the grassy meadow back to forested habitat.

BMP's to be employed before and during non-metallic mine operation: All run-off is planned to be contained within the pit. An earthen berm, constructed with some of the overburden, will be left around the perimeter of the mine to contain all run-off within the mine site. Total area of exposed soil will be limited to only an area large enough to allow for needed excavation. If the possibility for erosion outside the mine occurs, silt fencing or a sediment basin may be needed. Exposed soils should be seeded with a cover crop and seed mixture to quickly revegetate the site and stabilize the soils protecting from run-off and wind erosion. All operations will be done in a way that will minimize the production of noise, vibration, and/or dust. Best management practices will be used to minimize erosion and pollution of surface and ground water. Water should be applied to non-vegetated areas of the site to control dust during dry or windy conditions.

Topsoil removal, storage, stabilization, and conservation: Topsoil shall be removed prior to excavation of subsoil for each phase. Topsoil removal will be accomplished using bulldozers, front end loaders, and other necessary equipment with the goal of recovering as much of the existing topsoil as possible. Topsoil will be removed in a manner that minimizes the surface area exposed to erosion at any one time.

Topsoil that has been stripped from the site will be stockpiled on level ground and away from any slopes. Stockpiles should be located in an area where they will be easy to access and out of the way to keep double handling to a minimum. To help prevent erosion and weed growth stockpiled topsoil should be seeded. A cover crop of oats, barley, winter wheat, or winter rye should be used if the stockpile will be disturbed in less than six months. If a stockpile will not be disturbed for more than six months at a time a perennial seed mixture should be used (See Critical Area Seeding Attachment). If erosion is occurring to the stockpile, straw bale silt fencing should be placed around topsoil stockpile until it has been seeded and stabilized. See Straw Bale Silt Fencing attachment for proper installation and maintenance.

Purpose and planned excavation of mine: The purpose of the mine is for the production of sand fill and possibly some gravel. The total extent of the mine is shown on the Site Plan Map. Excavation will be done in phases to limit the amount of exposed soil to reduce the possibility of erosion and pollution of surface or groundwater, as well as limit the amount of fees. Each phase will be approximately 4 acres.

Reclamation Costs: The estimated cost of reclamation in 2022 is \$1500 per acre of disturbed area. Financial assurance will be based on the cost of reclamation. The cost of reclamation is listed for each phase.

Phase 1: Excavation to a depth of approximately 20 to 25 feet deep will begin on centerline of the north ½ of the 40 acre parcel of the mine to make room for future stockpiles and crushing operations. Topsoil will be removed and stockpiled out of the way as excavation progresses west towards property line. Between crushing's banks will be sloped to minimize erosion. Banks that have been sloped and won't be reopened will be covered with a layer of topsoil and seeded.

Total size: 4 acres Financial Assurance: \$ 6000.00

Phase 2: Topsoil will be removed and stockpiled out of the way as excavation to a depth of approximately 20 to 25 feet deep continues toward the south. Between crushing's active banks will be sloped to minimize erosion. Inactive banks will be sloped and covered with a layer of topsoil, seeded and mulched. Crushed material will be stockpiled in the area of Phase 1. Once excavation of Phase 2 has been completed the area will be reclaimed in accordance with this plan.

Total size: 4 acres Financial Assurance: \$ 6000.00

Phase 3: Topsoil will be removed and stockpiled out of the way as excavation to a depth of approximately 20 to 25 feet deep progresses toward the east. Between crushing's active banks will be sloped to minimize erosion. Inactive banks will be sloped and

covered with a layer of topsoil, seeded and mulched. Crushed material will be stockpiled in the area of Phase 1. Once excavation of Phase 3 has been completed the area of Phase 1 will be reclaimed in accordance with this plan.

Total size: 4 acres Financial Assurance: \$ TBD

Phase 4: Topsoil will be removed and stockpiled out of the way as excavation to a depth of approximately 20 to 25 feet deep progresses toward the south. Between crushing's active banks will be sloped to minimize erosion. Inactive banks will be sloped and covered with a layer of topsoil, seeded and mulched. Crushed material will be stockpiled in the area of Phase 3. Once excavation of Phase 4 has been completed the area of Phase 3 will be reclaimed in accordance with this plan.

Total size: 4 acres Financial Assurance: \$ TBD

Phase 5: Topsoil will be removed and stockpiled out of the way as excavation to a depth of approximately 20 to 25 feet deep progresses toward the west. Between crushing's active banks will be sloped to minimize erosion. Inactive banks will be sloped and covered with a layer of topsoil, seeded and mulched. Crushed material will be stockpiled in the area of Phase 4. Once excavation of Phase 5 has been completed and the stockpiles removed the entire mine site will be reclaimed in accordance with this plan.

Total size: 4 acres Financial Assurance: \$ TBD

Interim Reclamation sufficient to qualify for the waiver of fees:

Sequential interim reclamation will be done so as to minimize the area impacted and to reduce the fees. Once a phase is completed and the area is stabilized the non-metallic mine operator will request of the Sawyer County Regulatory authority that the area be considered temporarily reclaimed for the purposes of reduction of fees. If an extended period of time is to pass between planned excavations interim reclamation will be done to reduce the amount of exposed area. Methods for interim reclamation are to be the same as for final reclamation.

Final Reclamation

Sloping and Grading: All slopes will be graded to a final slope of 3:1 horizontal to vertical or flatter. The floor of the mine will be graded to prevent ponding of water on the reclaimed surface. Resulting surfaces will be scarified prior to topsoil redistribution. Stockpiled topsoil will be evenly distributed over the entire site.

Revegetation: The areas will be seeded following the final grading and completion of each phase and all site preparation activities. A soil test should be taken before planting to determine the proper amount, if any of fertilizer and/or lime to be applied.

Seed will be applied to properly prepared soils at any time during the growing season when soil conditions are suitable. Seeding should not be carried out immediately following rain, when ground is too wet, too dry, or during windy conditions.

The seed mixture should be chosen from the Critical Area Seeding attachment that is suitable for the site conditions or D.O.T. #20 from the 1996 WI D.O.T. Standard Specification for Highway Construction manual which consist of 6% Kentucky Bluegrass, 24% Hard Fescue, 40% Tall Fescue, and 30% Perennial Ryegrass. D.O.T. mix #20 should be planted at 12 pounds per acre.

A cover crop of annual rye or oats should also be planted during the spring and summer. Winter wheat or winter rye should be planted as a cover crop after September 1. Seeding can be done using a broadcast seeder or grain drill. Cover crops should be planted at a rate of:

Annual rye – 5 pounds per acre
Oats – 48 pounds per acre
Winter Wheat – 90 pounds per acre
Winter Rye – 84000 pounds per acre

Mulching and Erosion Control: All slopes should be seeded and covered with mulch. To control erosion during reclamation of side slopes, topsoil should not be distributed over an area larger than what can be seeded and covered with mulch in a day. Mulch reduces run-off and erosion as well as conserves moisture and control weeds. See attached Mulching Standard for mulching options and proper application.

Quantifiable standards for revegetation adequate to show that a sustainable stand of revegetation has been established which will support the approved post-mining land use: One year after an area has been reclaimed the non-metallic mine operator will notify the Sawyer County Land and Water Conservation Department to request final reclamation approval. A representative of Sawyer County LWCD will determine adequate revegetation using percent vegetative cover. Since a primary objective of this work is to stabilize the site it is important to provide a high degree of vegetative cover as quickly as possible. This will result in greater protection of the soil from the effects of raindrop impact, which will be absorbed by the vegetative "canopy". This protection translates into reduced erosion and sedimentation.

Any unacceptable areas are to be fixed by the operator and a return visit by a LWCD representative will determine if the site is acceptable and financial assurance can be released.

Note: All stockpiles must be removed and site vegetated before reclamation will be considered final.

The operator shall provide a signed certification that reclamation will be carried out in accordance with the reclamation plan. The operator shall also certify that the Best Management Practices are installed and maintained. The landowner and lessee, if different from the operator, shall also provide signed certification that they concur with the reclamation plan and will allow its implementation.

In the following situations, the landowner and lessee, if different from the mine operator, are not required to submit a written certification. The operator shall provide written evidence that the landowner and lessee, if different from the operator, have been provided with a written copy of the reclamation plan, and that:

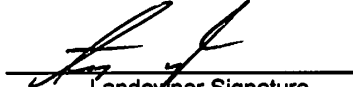
- a. The mine operator has submitted a reclamation plan for an existing non-metallic mine in accordance with Sawyer County Non-Metallic Mining Reclamation Ordinance Section 12.20, or
- b. The operator has submitted a reclamation plan for a new or reopened mine in accordance with Sawyer County Non-Metallic Mining Reclamation Ordinance Section 12.30 which is located on land for which a lease agreement or memorandum of lease between the landowner and applicant was recorded prior to August 1, 2001 (NMMRO Section 13(6)).

I, Terry Walcott, (operator) certify that reclamation will be carried out in accordance with the reclamation plan and the required Best Management Practices are installed and maintained.

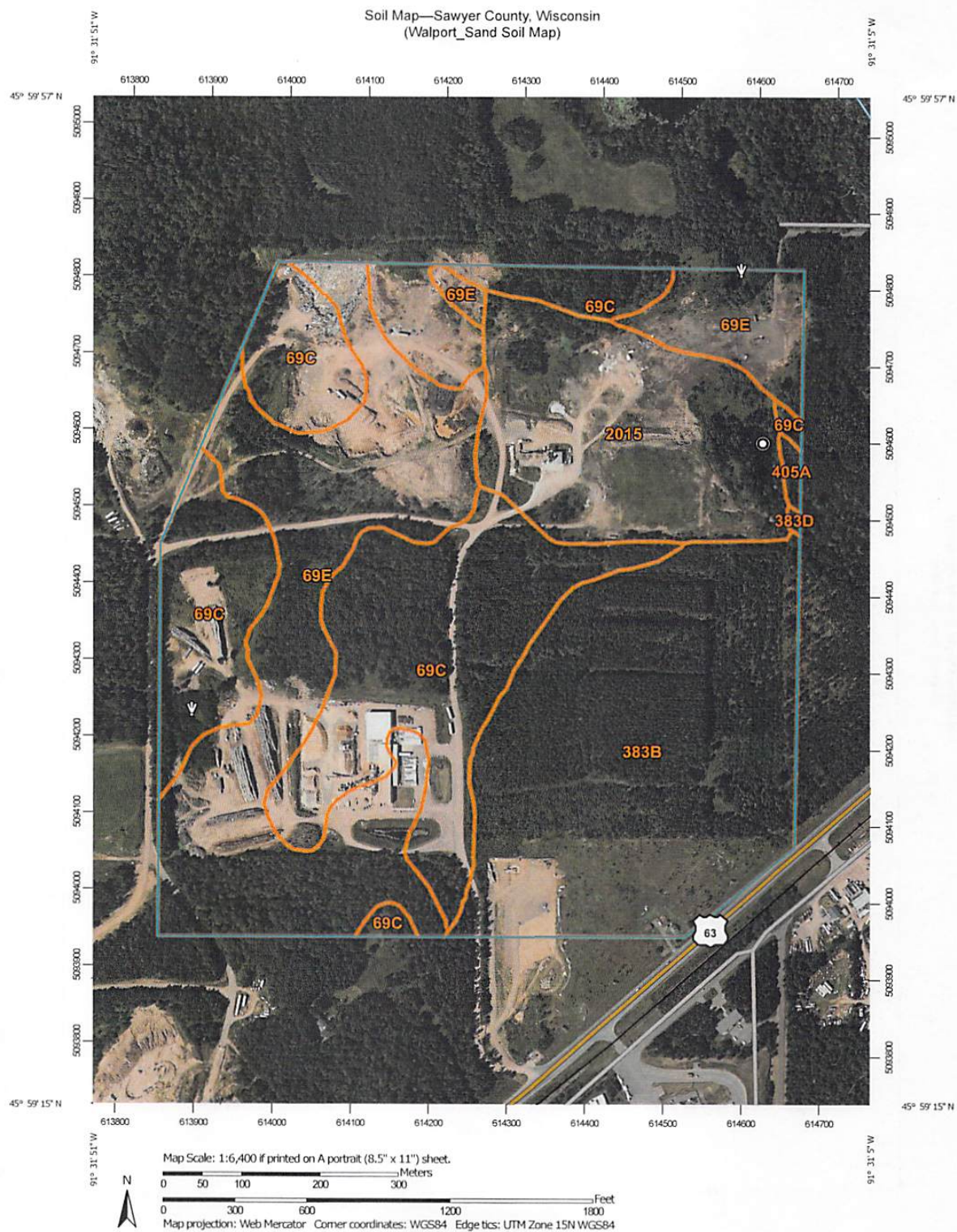
Terry Walcott
Operator Signature

3-15-23
Date

I, Teery Waibet, (landowner) certify that I have received a copy of the reclamation plan, read it and understand it. I further certify that I concur with the reclamation plan and will allow its implementation.


Landowner Signature

3-15-23
Date



**Natural Resources
Conservation Service**

Web Soil Survey
National Cooperative Soil Survey

3/14/2023
Page 1 of 3

Soil Map—Sawyer County, Wisconsin
(Walport_Sand Soil Map)

MAP LEGEND

Area of Interest (AOI)		Spoil Area	
Area of Interest (AOI)		Stony Spot	
Soils		Very Stony Spot	
Soil Map Unit Polygons		Wet Spot	
Soil Map Unit Lines		Other	
Soil Map Unit Points		Special Line Features	
Special Point Features		Water Features	
Blowout		Streams and Canals	
Borrow Pit		Transportation	
Clay Spot		Rails	
Closed Depression		Interstate Highways	
Gravel Pit		US Routes	
Gravelly Spot		Major Roads	
Landfill		Local Roads	
Lava Flow		Background	
Marsh or swamp		Aerial Photography	
Mine or Quarry			
Miscellaneous Water			
Perennial Water			
Rock Outcrop			
Saline Spot			
Sandy Spot			
Severely Eroded Spot			
Sinkhole			
Slide or Slip			
Sodic Spot			

MAP INFORMATION

The soil surveys that comprise your AOI were mapped at 1:12,000.

Please rely on the bar scale on each map sheet for map measurements.

Source of Map: Natural Resources Conservation Service
Web Soil Survey URL:
Coordinate System: Web Mercator (EPSG:3857)

Maps from the Web Soil Survey are based on the Web Mercator projection, which preserves direction and shape but distorts distance and area. A projection that preserves area, such as the Albers equal-area conic projection, should be used if more accurate calculations of distance or area are required.

This product is generated from the USDA-NRCS certified data as of the version date(s) listed below.

Soil Survey Area: Sawyer County, Wisconsin
Survey Area Data: Version 20, Sep 12, 2022

Soil map units are labeled (as space allows) for map scales 1:50,000 or larger.

Date(s) aerial images were photographed: Apr 1, 2021—Oct 1, 2021

The orthophoto or other base map on which the soil lines were compiled and digitized probably differs from the background imagery displayed on these maps. As a result, some minor shifting of map unit boundaries may be evident.

Map Unit Legend

Map Unit Symbol	Map Unit Name	Acres In AOI	Percent of AOI
69C	Keweenaw-Sayner-Vilas complex, 1 to 15 percent slopes, stony	51.1	30.3%
69E	Keweenaw-Sayner-Vilas complex, 5 to 35 percent slopes, stony	46.8	27.7%
383B	Mahtomedi loamy sand, 0 to 6 percent slopes	45.2	26.8%
383D	Mahtomedi loamy sand, 12 to 30 percent slopes	0.1	0.1%
405A	Lupton, Cathro, and Tawas soils, 0 to 1 percent slopes	0.5	0.3%
2015	Pits	25.0	14.8%
Totals for Area of Interest		168.7	100.0%



Sawyer County, Wisconsin

383B—Mahtomedi loamy sand, 0 to 6 percent slopes

Map Unit Setting

National map unit symbol: nzrv
Elevation: 670 to 1,600 feet
Mean annual precipitation: 28 to 36 inches
Mean annual air temperature: 39 to 46 degrees F
Frost-free period: 100 to 150 days
Farmland classification: Not prime farmland

Map Unit Composition

Mahtomedi and similar soils: 75 percent
Minor components: 25 percent
Estimates are based on observations, descriptions, and transects of the mapunit.

Description of Mahtomedi

Setting

Landform: Stream terraces, outwash plains
Landform position (three-dimensional): Riser, rise
Down-slope shape: Convex
Across-slope shape: Convex
Parent material: Sandy outwash

Typical profile

A - 0 to 5 inches: loamy sand
E - 5 to 8 inches: sand
Bw1 - 8 to 15 inches: gravelly coarse sand
Bw2 - 15 to 30 inches: gravelly sand
C - 30 to 60 inches: gravelly sand

Properties and qualities

Slope: 0 to 6 percent
Depth to restrictive feature: More than 80 inches
Drainage class: Excessively drained
Runoff class: Very low
Capacity of the most limiting layer to transmit water (Ksat): High to very high (6.00 to 20.00 in/hr)
Depth to water table: More than 80 inches
Frequency of flooding: None
Frequency of ponding: None
Available water supply, 0 to 60 inches: Very low (about 2.7 inches)

Interpretive groups

Land capability classification (irrigated): None specified
Land capability classification (nonirrigated): 4s
Hydrologic Soil Group: A
Ecological site: F090AY019WI - Dry Sandy Uplands

Forage suitability group: Low AWC, adequately drained
(G090AY002WI)
Other vegetative classification: Low AWC, adequately drained
(G090AY002WI)
Hydric soil rating: No

Minor Components

Graycalm

Percent of map unit: 10 percent
Landform: Outwash plains
Landform position (three-dimensional): Rise
Down-slope shape: Convex
Across-slope shape: Convex
Ecological site: F091XY011WI - Sandy Upland
Other vegetative classification: Low AWC, adequately drained
(G090AY002WI)
Hydric soil rating: No

Menahga

Percent of map unit: 10 percent
Landform: Outwash plains
Landform position (three-dimensional): Rise
Down-slope shape: Convex
Across-slope shape: Convex
Ecological site: F090AY019WI - Dry Sandy Uplands
Other vegetative classification: Low AWC, adequately drained
(G090AY002WI)
Hydric soil rating: No

Cress

Percent of map unit: 3 percent
Landform: Stream terraces, outwash plains
Landform position (three-dimensional): Riser, rise
Down-slope shape: Convex
Across-slope shape: Convex
Ecological site: F091XY004WI - Terrace
Other vegetative classification: Low AWC, adequately drained
(G090AY002WI)
Hydric soil rating: No

Lenroot

Percent of map unit: 2 percent
Landform: Stream terraces, outwash plains
Landform position (three-dimensional): Riser, rise
Down-slope shape: Linear
Across-slope shape: Concave
Ecological site: F091XY011WI - Sandy Upland
Other vegetative classification: Low AWC, adequately drained
(G090AY002WI)

Hydric soil rating: No

Data Source Information

Soil Survey Area: Sawyer County, Wisconsin
Survey Area Data: Version 20, Sep 12, 2022

Sawyer County, Wisconsin

69C—Keweenaw-Sayner-Vilas complex, 1 to 15 percent slopes, stony

Map Unit Setting

National map unit symbol: 2xjss
Elevation: 970 to 1,840 feet
Mean annual precipitation: 30 to 34 inches
Mean annual air temperature: 39 to 43 degrees F
Frost-free period: 100 to 140 days
Farmland classification: Not prime farmland

Map Unit Composition

Keweenaw, stony, and similar soils: 35 percent
Sayner, stony, and similar soils: 20 percent
Vilas, stony, and similar soils: 20 percent
Minor components: 25 percent
Estimates are based on observations, descriptions, and transects of the mapunit.

Description of Keweenaw, Stony

Setting

Landform: Moraines
Landform position (two-dimensional): Shoulder, backslope
Landform position (three-dimensional): Side slope
Down-slope shape: Convex
Across-slope shape: Convex
Parent material: Sandy and loamy till

Typical profile

A - 0 to 2 inches: loamy sand
E - 2 to 4 inches: loamy sand
Bs1 - 4 to 9 inches: loamy sand
Bs2 - 9 to 23 inches: gravelly loamy sand
E/B - 23 to 35 inches: gravelly loamy sand
B/E - 35 to 55 inches: gravelly loamy sand
C - 55 to 79 inches: gravelly loamy sand

Properties and qualities

Slope: 2 to 15 percent
Surface area covered with cobbles, stones or boulders: 0.1 percent
Depth to restrictive feature: More than 80 inches
Drainage class: Well drained
Capacity of the most limiting layer to transmit water (Ksat): High
(2.00 to 6.00 in/hr)
Depth to water table: More than 80 inches
Frequency of flooding: None
Frequency of ponding: None
Maximum salinity: Nonsaline to very slightly saline (0.0 to 2.0 mmhos/cm)

Available water supply, 0 to 60 inches: Low (about 4.5 inches)

Interpretive groups

Land capability classification (irrigated): None specified

Land capability classification (nonirrigated): 3s

Hydrologic Soil Group: A

Ecological site: F090AY013WI - Sandy Upland

Forage suitability group: Mod AWC, adequately drained
(G090AY005WI)

Other vegetative classification: Mod AWC, adequately drained
(G090AY005WI), Pinus/Maianthemum-Vaccinium (PMV), Acer
saccharum-Tsuga/Maianthemum (ATM)

Hydric soil rating: No

Description of Vilas, Stony

Setting

Landform: Moraines

Landform position (two-dimensional): Backslope

Landform position (three-dimensional): Side slope

Down-slope shape: Convex

Across-slope shape: Convex

Parent material: Sandy outwash

Typical profile

Oe - 0 to 1 inches: moderately decomposed plant material

A - 1 to 3 inches: loamy sand

E - 3 to 5 inches: loamy sand

Bs1 - 5 to 11 inches: loamy sand

Bs2 - 11 to 18 inches: sand

Bs3 - 18 to 23 inches: sand

BC - 23 to 30 inches: sand

C - 30 to 79 inches: sand

Properties and qualities

Slope: 1 to 15 percent

Surface area covered with cobbles, stones or boulders: 0.1 percent

Depth to restrictive feature: More than 80 inches

Drainage class: Excessively drained

Capacity of the most limiting layer to transmit water

(Ksat): Moderately high to high (0.60 to 6.00 in/hr)

Depth to water table: More than 80 inches

Frequency of flooding: None

Frequency of ponding: None

Maximum salinity: Nonsaline to very slightly saline (0.0 to 2.0
mmhos/cm)

Available water supply, 0 to 60 inches: Low (about 4.3 inches)

Interpretive groups

Land capability classification (irrigated): None specified

Land capability classification (nonirrigated): 4s

Hydrologic Soil Group: A

Ecological site: F090AY019WI - Dry Sandy Uplands

Forage suitability group: Low AWC, adequately drained
(G090AY002WI)
Other vegetative classification: Low AWC, adequately drained
(G090AY002WI), Pinus/Maianthemum-Vaccinium (PMV), Acer
saccharum/Vaccinium-Viburnum (AVVb)
Hydric soil rating: No

Description of Sayner, Stony

Setting

Landform: Moraines
Landform position (two-dimensional): Backslope
Landform position (three-dimensional): Side slope
Down-slope shape: Convex
Across-slope shape: Convex
Parent material: Stratified sandy and gravelly outwash

Typical profile

A - 0 to 2 inches: loamy sand
E - 2 to 4 inches: loamy sand
Bs1 - 4 to 7 inches: loamy sand
Bs2 - 7 to 14 inches: sand
BC - 14 to 22 inches: gravelly sand
C1 - 22 to 38 inches: gravelly coarse sand
C2 - 38 to 79 inches: gravelly coarse sand

Properties and qualities

Slope: 1 to 15 percent
Surface area covered with cobbles, stones or boulders: 0.1 percent
Depth to restrictive feature: More than 80 inches
Drainage class: Excessively drained
Capacity of the most limiting layer to transmit water (Ksat): High to
very high (6.00 to 20.00 in/hr)
Depth to water table: More than 80 inches
Frequency of flooding: None
Frequency of ponding: None
Maximum salinity: Nonsaline to very slightly saline (0.0 to 2.0
mmhos/cm)
Available water supply, 0 to 60 inches: Very low (about 2.2 inches)

Interpretive groups

Land capability classification (irrigated): None specified
Land capability classification (nonirrigated): 6s
Hydrologic Soil Group: A
Ecological site: F090AY019WI - Dry Sandy Uplands
Forage suitability group: Low AWC, adequately drained
(G090AY002WI)
Other vegetative classification: Low AWC, adequately drained
(G090AY002WI), Pinus/Maianthemum-Vaccinium (PMV), Acer
rubrum-Quercus/Vaccinium (ArQV)
Hydric soil rating: No

Minor Components

Vilas, till substratum, stony

Percent of map unit: 10 percent
Landform: Moraines
Landform position (two-dimensional): Backslope
Landform position (three-dimensional): Side slope
Down-slope shape: Convex
Across-slope shape: Convex
Ecological site: F090AY019WI - Dry Sandy Uplands
Hydric soil rating: No

Pence, stony

Percent of map unit: 10 percent
Landform: Moraines
Landform position (two-dimensional): Backslope
Landform position (three-dimensional): Side slope
Down-slope shape: Convex
Across-slope shape: Convex
Ecological site: F090AY013WI - Sandy Upland
Other vegetative classification: Low AWC, adequately drained
(G090AY002WI), *Acer saccharum*-*Tsuga*/*Maianthemum* (ATM)
Hydric soil rating: No

Croswell, stony

Percent of map unit: 3 percent
Landform: Moraines
Landform position (two-dimensional): Footslope
Landform position (three-dimensional): Base slope
Down-slope shape: Linear
Across-slope shape: Linear
Ecological site: F090AY013WI - Sandy Upland
Other vegetative classification: Low AWC, adequately drained
(G090AY002WI), *Acer rubrum*-*Quercus*/*Vaccinium* (ArQV)
Hydric soil rating: No

Springstead, stony

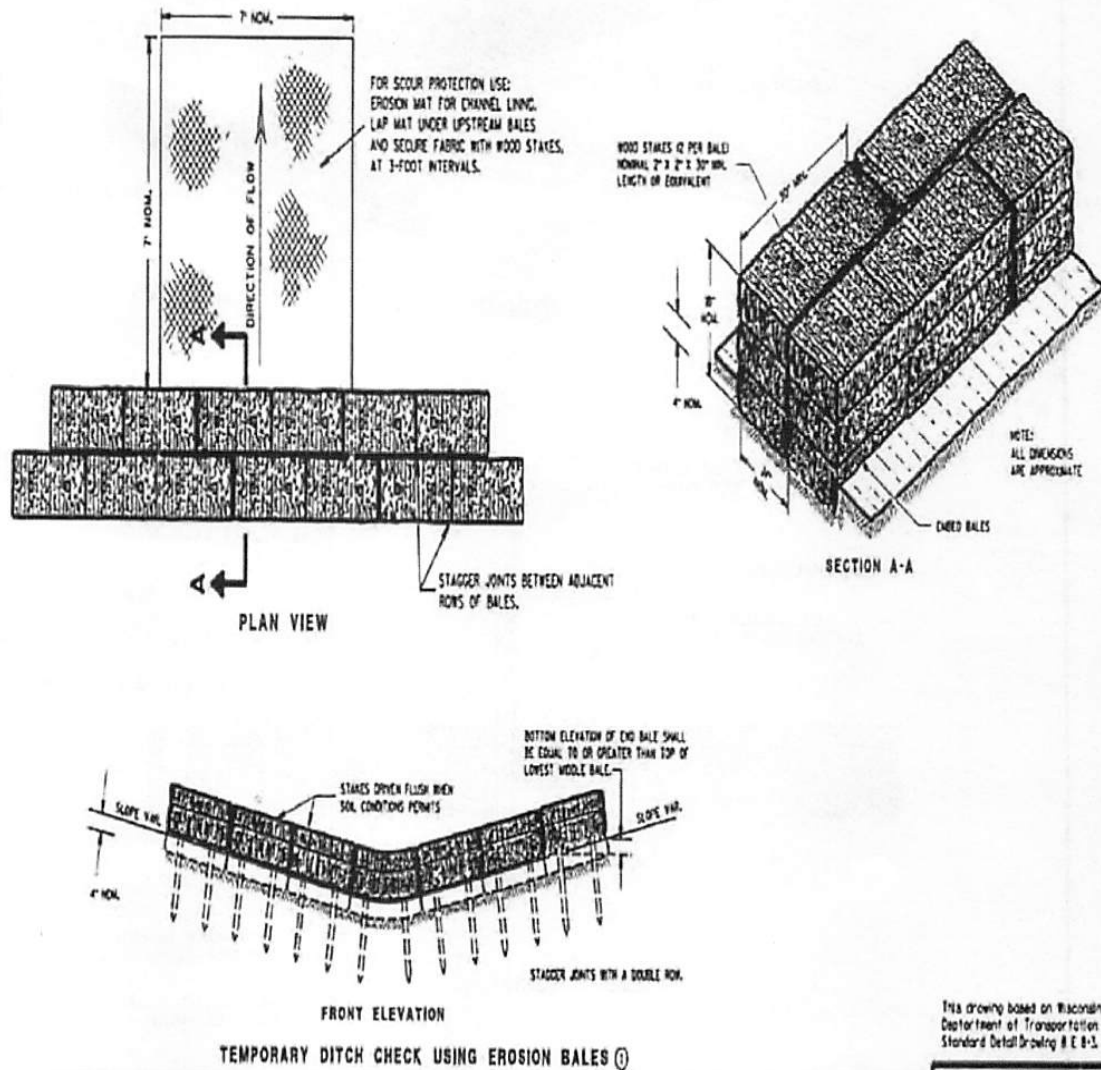
Percent of map unit: 2 percent
Landform: Moraines
Landform position (two-dimensional): Summit
Landform position (three-dimensional): Interfluvium
Down-slope shape: Convex
Across-slope shape: Convex
Ecological site: F090AY013WI - Sandy Upland
Other vegetative classification: Low AWC, adequately drained
(G090AY002WI)

Hydric soil rating: No

Data Source Information

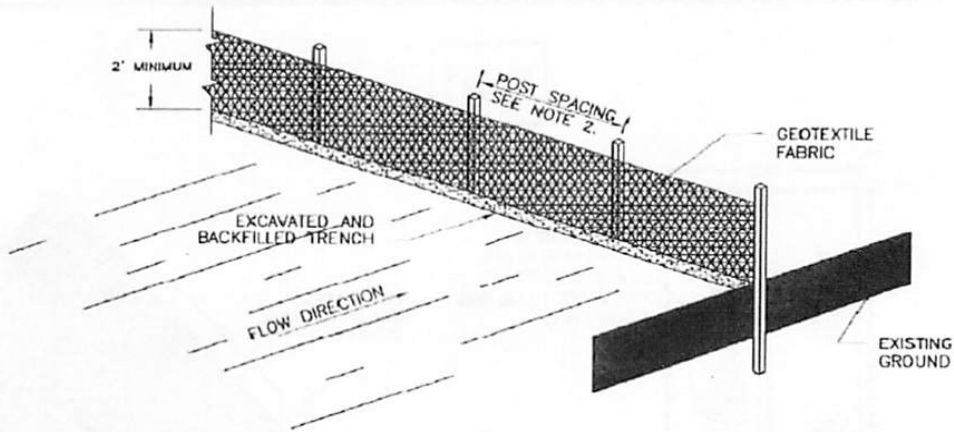
Soil Survey Area: Sawyer County, Wisconsin
Survey Area Data: Version 20, Sep 12, 2022

Figure 1

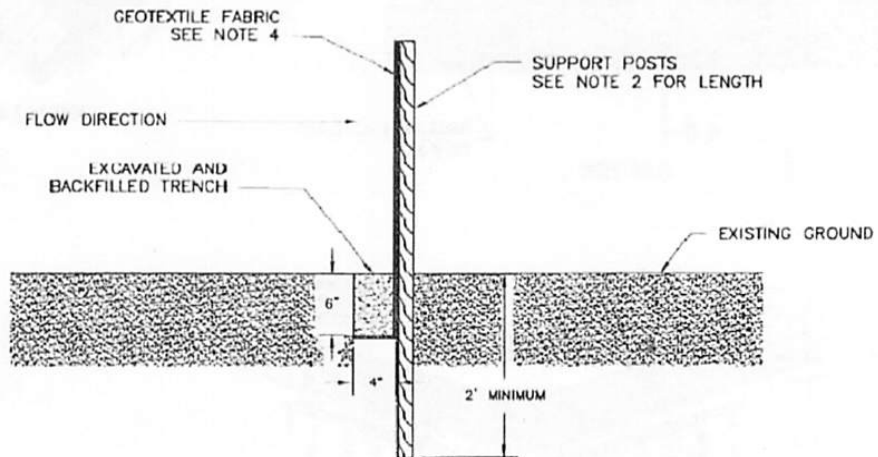


This drawing based on Wisconsin
Department of Transportation
Standard Detail Drawing # E 8-3.

TYPICAL INSTALLATIONS OF
EROSION BALES / TEMPORARY
DITCH CHECKS



ISOMETRIC VIEW



TYPICAL SECTION

ESTIMATED LENGTH
OF SILT FENCE _____

SEE SHEET _____ OF _____
FOR LOCATION

SAWYER COUNTY ZONING AND CONSERVATION	SILT FENCE	CLIENT: _____ COUNTY: _____	Date _____	Drawing Name _____
			Designed _____	Date _____
			Drawn _____	12/11
			Checked _____	Sheet _____ of _____
			Approved _____	

NOTES:

1. THE GEOTEXTILE FABRIC SHALL BE PLACED IN THE EXCAVATED TRENCH, BACKFILLED, AND COMPACTED TO THE EXISTING GROUND SURFACE.
2. WOODEN SUPPORT POSTS SHALL BE A MINIMUM DIMENSION OF 1-1/8" x 1-1/8" AIR OR KILN DRIED OF HICKORY OR OAK AND 4 FEET LONG. STEEL POSTS SHALL BE STUDDED "TEE" OR "U" TYPE WITH A MINIMUM WEIGHT OF 1.3 POUNDS PER LINEAL FOOT AND 5 FEET LONG. POST SPACING SHALL BE A MAXIMUM OF 8 FEET FOR WOVEN FABRIC AND 3 FEET FOR NON-WOVEN FABRIC.
3. THE GEOTEXTILE FABRIC SHALL BE ATTACHED DIRECTLY TO THE UPSLOPE SIDE OF WOODEN POSTS WITH 0.5 INCH STAPLES IN AT LEAST 3 PLACES, OR WITH WOODEN LATH AND NAILS. ATTACHMENT TO STEEL POSTS WILL BE BY WIRE FASTENERS OR 50 POUND PLASTIC TIE STRAPS ON THE UPSLOPE SIDE.
4. THE GEOTEXTILE FABRIC SHALL CONSIST OF EITHER WOVEN OR NON-WOVEN POLYESTER, POLYPROPYLENE, STABILIZED NYLON, POLYETHYLENE, OR POLYVINYLIDENE CHLORIDE. NON-WOVEN FABRIC MAY BE NEEDLE PUNCHED, HEAT BONDED, RESIN BONDED, OR COMBINATIONS THEREOF. ALL FABRIC SHALL MEET THE FOLLOWING REQUIREMENTS:

<u>TEST REQUIREMENT</u>	<u>METHOD</u>	<u>VALUE *</u>
MINIMUM GRAB TENSILE STRENGTH IN THE MACHINE DIRECTION	ASTM D 4632	120 LBS.
MINIMUM GRAB TENSILE STRENGTH IN THE CROSS MACHINE DIRECTION	ASTM D 4632	100 LBS.
MAXIMUM APPARENT OPENING SIZE EQUIVALENT STANDARD SIEVE	ASTM D 4751	NO. 30
MINIMUM PERMITTIVITY	ASTM D 4491	0.05 SEC ⁻¹
MAXIMUM PERMITTIVITY	ASTM D 4491	0.135 SEC ⁻¹ OR 10 gpm/sq ft at 50 mm constant head.
MINIMUM ULTRAVIOLET STABILITY PERCENTAGE OF STRENGTH RETAINED AFTER 500 HOURS OF EXPOSURE	ASTM D 4355	70%

* ALL NUMERICAL VALUES REPRESENT MINIMUM/MAXIMUM AVERAGE ROLL VALUES. (FOR EXAMPLE, THE AVERAGE OF MINIMUM TEST RESULTS ON ANY ROLL IN A LOT SHOULD MEET OR EXCEED THE MINIMUM SPECIFIED VALUES.)

BILL OF MATERIALS

ITEM	QUANTITY
SUPPORT POSTS	_____
GEOTEXTILE	_____ FT.
FASTENERS	AS REQUIRED

CRITICAL AREA PLANTING

(Acre)
Code 342

Natural Resources Conservation Service
Conservation Practice Standard

I. Definition

Establishing permanent vegetation on sites that have or are expected to have high erosion rates, and on sites that have physical, chemical, or biological conditions that prevent the establishment of vegetation with normal practices.

II. Purposes

This practice may be applied as part of a conservation management system to support one or more of the following purposes.

- Stabilize and restore riparian areas.
- Stabilize stream and channel banks and shorelines.
- Stabilize areas with existing or expected high rates of soil erosion by water or wind.
- Rehabilitate and revegetate degraded sites that cannot be stabilized using normal establishment techniques.

III. Conditions Where Practice Applies

This practice applies to highly disturbed areas such as:

- active or abandoned surface mine sites,
- urban conservation sites,
- road construction areas,
- conservation practice construction sites,
- areas needing stabilization before or after natural disasters such as floods, tornados, and wild fires,
- eroded banks of natural channels, banks of newly constructed channels, and lake shorelines, and
- areas degraded by human activities.

IV. Federal, Tribal, State and Local Laws

Critical area planting practices shall comply with all federal, tribal, state and local laws, rules or regulations. The landowner and/or operator is responsible for securing required permits. This

standard does not contain the text of the federal, tribal, state or local laws.

V. Criteria

A. General Criteria Applicable To All Purposes.

1. Site Assessment

A site investigation shall be conducted to identify any physical, chemical, or biological conditions that could affect the successful establishment of vegetation. The site investigation shall include evaluation of soil characteristics, soil fertility, slope, aspect, moisture regime, climatic patterns, proximity to natural plant community, and site history.

Areas to be planted will be cleared of unwanted materials and smoothed or shaped, if needed, to meet planting and landscaping purposes.

Compacted layers will be ripped and the soil re-firmed prior to seedbed preparation.

On tilled or disturbed sites, prepare a firm seedbed. The seedbed shall contain enough fine particles for uniform shallow coverage of seed and contact with moisture and nutrients. For details on seedbed preparation, refer to Wisconsin Agronomy Technical Notes 5, Establishing and Maintaining Native Grasses, Legumes, and Forbs; and 6, Establishing and Maintaining Introduced Grasses and Legumes.

2. Species Selection and Seed Quality

Species selected for planting shall be suited to current site conditions, intended use, and be resistant to diseases and insects common to the site location.

Conservation Practice Standards are reviewed periodically and updated if needed. To obtain the current version of this standard, download it from the electronic Field Office Technical Guide, or contact the NRCS State Office or the Wisconsin Land and Water Conservation Association office at (608) 461-2677.

NRCS, WI
1/13

Words in the standard that are shown in italics are described in X. Definitions. The words are italicized the first time they are used in the text.

Selected species will have the capacity to achieve adequate density and vigor to stabilize the site within an appropriate period.

Native herbaceous or woody vegetation selected for planting shall be suitable for the site.

Species identified as restricted or prohibited by law shall not be planted.

Certified Seed shall be used, and seeding rates will be based on *Pure Live Seed* (PLS). Seed tag information such as purity and germination and any computations to adjust seeding rates must be submitted to document actual seeding rates. *Actual adjusted seeding rates* will be based on the equivalent of 100 percent PLS, determined by multiplying the percent purity by total percent germination.

Untested introduced and native grass and forb seed are not approved for planting.

When certified seed is unavailable or difficult to locate, *non-certified* seed can be used, after testing for varietal purity, germination, and other mechanical qualities, such as inert matter and other crop or weed seeds.

If more than 20 percent of legume seed is hard seed, increase the seeding rate for legumes by the percentage of hard seed.

Introduced and native legume seed shall be inoculated immediately prior to planting. Rhizobia inoculant shall be specific to the legume seeded. When more than one legume species is used, each species will be inoculated separately.

3. Seeding Periods

The specific date that provides the best chance for success will vary from south to north and from year to year with prevailing moisture and temperature conditions. Late summer seeding is generally riskier than spring seeding. Planting at either end of the allowable range is riskier than the middle of the range. Refer to Figure 1 for planting zones and Tables 1 and 2 for seeding dates.

Seeding outside of the recommended dates must be approved by the Area Resource Conservationist or State Agronomist.

Frost seeding is not an authorized seeding method when using this standard.

Dormant seeding can be used when planting introduced species. When using dormant seedings in concentrated flow areas, the site must be mulched according to the engineering design (if applicable) and Wisconsin NRCS Field Office Technical Guide, Section IV, (WI FOTG) Conservation Practice Standard 484, Mulching.

4. Nutrient and Soil Amendment Requirements

When seeding *introduced species*, soil fertility and pH level will be amended to satisfy the needs of the plant species to be established. Fertilizer and lime recommendations will be determined by a soil test, and all nutrients will be applied following WI FOTG Standard 590, Nutrient Management. If no soil test is available, apply a minimum of 150 pounds of 20-10-10 fertilizer and 2 tons of 80-89 lime or equivalent per acre. Soil amendments may be waived at the discretion of a certified conservation planner. The basis for waiving the use of soil amendments shall be documented in the client's case file.

For establishment of *native species*, use of soil amendments are not required.

5. Seedbed Preparation

Prior to planting into cropland fields, verify that herbicides previously applied to the site will not "carry over" and damage the new seeding.

Site preparation shall be adequate to assure weed suppression and to promote germination and growth of the species planted.

Planting equipment type, use, and timing shall be appropriate for the site conditions, soil characteristics, and type of seeds (size, etc.) selected to assure uniform placement and germination.

Refer to Wisconsin Agronomy Technical Notes 5 and 6 for detailed guidance for specific situations.

6. Mulching, Temporary Cover, and Companion Crop

Mulching, temporary cover, and companion crops are vital practices utilized to support the establishment of a critical area planting. Temporary cover and companion crops suppress weed growth and limit soil erosion during the establishment period. Use depends on the site conditions, method of planting, and seed mixture.

For further details on mulching, temporary cover and companion crop recommendations, refer to Wisconsin Agronomy Technical Notes 5 and 6.

B. Criteria for Seed Mixture Development

Seeding rates are based on seeds per square foot of Pure Live Seeds. Refer to Tables 3 and 4 for common species and seeding rates.

Additional approved species for critical area planting can be found in Wisconsin Agronomy Technical Notes 5 and 6. Species not listed in the technical notes must be approved in advance by the State Agronomist.

a. Introduced Grass and Legume Plantings on Critical Sites

Custom and standard mixtures will comprise of at least 50 percent grass seed, consisting of at least 25 percent sod forming grass seed per square foot.

A minimum of 160 seeds per square foot is required for either a solid stand of grasses or a combination of grasses and legumes. Increase seeding rate by 15 percent when dormant seeding occurs.

Standard mixes listed in Table 5 will meet the minimum seed mixture criteria.

b. Native Herbaceous Plantings on Critical Sites

Native species are generally not recommended for critical area plantings due to their slow establishment and because they are clump grasses, not the preferred sod-

forming grasses. Native plantings are not permitted in concentrated flow channels.

1) A minimum of 60 seeds per square foot for solid native grass plantings is required.

2) For native grass and forb/legume mixtures, a minimum of 40 seeds per square foot of grass and a minimum of 20 seeds per square foot for the forb/legume component is required. The minimum of 20 forb/legume seeds per square foot is not required when the solid stand native grass mixture comprise of 60 grass seeds per square foot is utilized.

Canada/Virginia wildrye and sidecoats grama shall not exceed a maximum of 20 percent of the required grass seeds per square foot in custom seed mixtures.

C. Additional Criteria to Stabilize Stream Channel Banks and Shorelines

Wisconsin FOTG Standard 580, Streambank and Shoreline Protection, shall be used to stabilize the toe and/or bank hydrologic zones before vegetation establishment.

1. Bank and Channel Slopes

Identify, mark, and protect desirable existing vegetation during practice installation.

On sites with a disturbed soil profile, topsoil will be stockpiled and spread over areas to be planted as needed to meet planting and land shaping needs.

Channel side slopes shall be shaped to a stable slope to facilitate establishment and maintenance of desired vegetation.

Slopes steeper than 2H:1V shall not be stabilized using vegetation alone. A combination of vegetative and structural measures will be used on these slopes to ensure adequate stability.

Grazing shall be permanently excluded on high hazard sites, such as cut banks, areas of seepage or other potentially unstable areas.

2. Species Selection

Plant material used for this purpose shall:

- be adapted to the hydrologic zone into which they will be planted.
- be adapted and proven in the regions in which they will be used.
- when mature, produce plant communities that are compatible with those already existing in the area.
- protect the channel banks but not restrict channel capacity.

D. Additional Criteria to Stabilize Areas of Erosion By Wind and Water

1. The amount of plant biomass and cover needed to reduce wind and water erosion to the planned soil loss objective shall be determined using the current approved wind and/or water erosion prediction technology.
2. Do not use tillage where desirable vegetation is already present or where soil disturbance will increase the potential for erosion or cause sedimentation to environmentally sensitive areas.
3. Use a companion crop as added protection.

E. Additional Criteria to Rehabilitate and Revegetate Degraded Sites That Cannot Be Stabilized Using Normal Establishment Techniques

Slope Stabilization

1. On sites that are too steep for regular seeding equipment to operate, the use of hydroseeding and mechanically blown

mulch is recommended. For more information regarding hydroseeding, refer to Wisconsin Agronomy Technical Note 6.

2. Grade to a stable slope when shaping and eliminate all overfalls. For slopes steeper than 2H:1V, enhanced stabilization activities such as soil bioengineering may be required. These practice concepts shall follow approved design procedures located in the NRCS Engineering Field Handbook, Chapter 18.
3. The toe of the slope, or the outlet of the concentrated flow channel, shall be stable before attempting seeding on the slope.
4. Concentrated flow may need to be diverted from the critical area during the establishment period.
5. All gullies and deep rills will be filled and leveled during seedbed preparation.
6. A minimum of 4 inches of friable soil material or topsoil shall be added and mixed to exposed rocky, sandy, gravelly, shaley material, or extremely fine textured subsoil.
7. Sod placement shall be limited to areas that can naturally supply needed moisture or sites that can be irrigated during the establishment period.
8. Sod will be placed and anchored using techniques to ensure that it remains in place until established.

Zone	Spring Seeding
Northern	Thaw - 7/15
Central	Thaw - 6/30
Southern	Thaw - 6/30

Planting Zone	Spring	Late Summer	Dormant
North	5/1 - 6/15	7/15 - 8/10	11/1 - Freeze up
Central	4/15 - 6/1	8/1 - 8/21	11/1 - Freeze up
South	4/1 - 5/15	8/7 - 8/29	11/1 - Freeze up

VI. Considerations

Additional recommendations relating to design that may enhance the use of, or avoid problems with, this practice but are not required to ensure its basic conservation functions are as follows.

- A. Minimize activities which disturb wildlife during the primary nesting season May 15 through August 1.
- B. Consider seeding at a lower rate and making 2 passes to ensure uniform coverage. Check seed boxes regularly to ensure even distribution.
- C. Heavy traffic and/or compacted soil areas may need special site preparation prior to seeding.
- D. Sprigs, root stocks, crowns, cones, culms, and sod may be considered where appropriate to accelerate the establishment of cover.
- E. Woody shrubs or trees may be used only after initial stabilization. Plant in accordance with the purpose of the planting. See WI FOTG Standards 612, Tree/Shrub Planting; and 580, Streambank and Shoreland Protection. Also see NRCS Engineering Field Handbook, Chapter 16, Streambank and Shoreline Protection and Chapter 18, Soil Bioengineering for Upland Slope Protection.
- F. Consider using carriers such as vermiculite, sawdust, and soybean meal to increase volume and weight for uniform seed distribution.
- G. Consider limited or no use of herbicides one year prior to seeding. If herbicides must be used, ensure there is no potential for carryover and follow label recommendations. Follow WI FOTG Standard 595, Integrated Pest Management, for pesticide use and safety.
- H. Consider sodding to establish vegetation on steep slopes. For further details on this special erosion control measure, refer to Wisconsin Agronomy Technical Note 6.
- I. Consider establishing a buffer of trees and/or grasses next to intermittent or perennial streams.
- J. Consider planting native vegetation and/or local *genotypes* when restoring riparian corridors to its pre-settlement conditions.
- K. High seed counts per square foot much above the recommended minimums may lead to excessive

competition and poor establishment of some species. Seeds per square foot should not exceed 25 percent of the minimum requirement, with the exception of mixtures designed for wet mesic and wet sites.

- L. Consider the use of *soil bioengineering* techniques to arrest and prevent slope failures and erosion. For approved design procedures, refer to Chapter 18 of the NRCS Engineering Field Handbook (EFH).
- M. Consider alternatives to reduce or eliminate the delivery of sediment and associated pollutants into the riparian zone by implementing upland treatment practices.

VII. Plans and Specifications

Prepare plans and specifications for each field or management unit according to the Criteria and Operation and Maintenance sections of this standard. Specifications shall describe the requirements for applying this practice to meet the intended purpose using the appropriate specification and/or job sheets. The following elements shall be addressed in the plan, as applicable, to meet the intended purpose.

- Site preparation.
- Fertilizer application.
- Methods of seeding/planting.
- Selection of species.
- Analysis of seed quality.
- Seeding rate (adjusted based on pure live seed calculations).
- Target number of plants per square foot after emergence.
- Mulching (if applicable).
- Temporary cover (if applicable).
- Companion crop (if applicable).
- Weed control activities during the establishment period.

Specifications shall be recorded using Wisconsin Job Sheets 134, How to Establish and Maintain Introduced Grasses and Legumes; and 135, How to Establish and Maintain Native Grasses, Forbs, and Legumes.

VIII. Operation and Maintenance

- A. Noxious weeds and other undesirable species must be controlled at all sites. During the first year, mow plantings at 14 to 21-day intervals or when weeds are 12-14 inches high and before the development of mature seed. Mowing height

should be 4 inches for introduced and 7 inches for native plants. Small grain companion crops should be mowed at boot stage and prior to heading. Spot spraying or hand pulling may be needed for some invasive species such as thistles and purple loosestrife.

- B. Sites may require on-going periodic maintenance consisting of mowing, burning, or herbicide treatment.
- C. Sites should be inspected periodically to ensure site stabilization objectives are being met.

IX. References

- Curtis, J. T. 1959. The Vegetation of Wisconsin: an ordination of plant communities. University of Wisconsin Press, Madison, Wisconsin.
- Henderson, R. A. 1995. Plant Species Composition of Wisconsin Prairies: An Aid to Selecting Species for Plantings and Restorations Based Upon University of Wisconsin-Madison Plant Ecology Laboratory Data. Wisconsin Department of Natural Resources Technical Bulletin No. 188.
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- Nichols, S. and Entine, L. 1976. Prairie Primer. University of Wisconsin - Extension, publication G2736.
- Packard, S. and Mutel, C. 1997. The Tallgrass Restoration Handbook for Prairies, Savannas and Woodlands. Society for Ecological Restoration
- Rock, H. W. 1971. Prairie Propagation Handbook. Boerner Botanical Gardens.
- USDA, NRCS, National Engineering Handbook, Part 650, Engineering Field Handbook.
- USDA, NRCS, Wisconsin Field Office Technical Guide (FOTG), Section IV, Practice Standards and Specifications.
- USDA, NRCS, Wisconsin Agronomy Technical Note 5, Establishing and Maintaining Native Grasses, Forbs, and Legumes.
- USDA, NRCS, Wisconsin Agronomy Technical Note 6, Establishing and Maintaining Introduced Grasses and Legumes.
- USDA, NRCS, Wisconsin Job Sheet 134, How to Establish and Maintain Introduced Grasses and Legumes.

USDA, NRCS, Wisconsin Job Sheet 135, How to Establish and Maintain Native Grasses, Forbs, and Legumes.

X. Definitions

Actual Adjusted Seeding Rates (V.A.2) - an increase in seeds per square foot or pounds per acre, when the PLS is less than 100 percent.

Aspect (V.A.1) - The exposure of the site to direct sunlight, prevailing winds, and other factors that influence plant growing conditions. For example, a north slope tends to be cooler and moister while a south-facing slope tends to be drier and warmer.

Soil Bioengineering (VI.L) - Practice of combining mechanical, biological, and ecological concepts to arrest and prevent shallow slope failures and erosion.

Certified Seed (V.A.2) - Seed that meets the standards established by the designated official seed certifying agency for the purpose of ensuring species/variety, species/varietal purity and mechanical quality. The Wisconsin Crop Improvement Association is the official seed certifying agency for Wisconsin.

Genotype (V.L.J) - A group of individual plants which share a specified genetic makeup. For example, all big bluestem plants that are genetically adapted to grow and mature in the climatic conditions found in the driftless region could be considered a genotype.

Introduced Species (V.A.4) - Plant species that historically were not native to North America and were brought here from other parts of the world, for example, smooth brome grass and alfalfa.

Native Species (V.A.4) - Plants species that historically would have been found growing in North America such as big bluestem or green needle-grass.

Non-Certified Seed (V.A.2) - Seed that is grown, processed, tested and labeled for species/variety and mechanical quality factors, but is not certified by an official seed certifying agency.

Pure Live Seed (PLS) (V.A.2) - PLS is a means of expressing seed quality, based on the percentage of seed in a seed lot that is both pure and viable. PLS is calculated by multiplying the percentage of total viable seed (germination + hard seed + dormant seed) by the percentage of pure seed divided by 100.

Untested Seed (V.A.2) - Seed that has no assurances of testing for species/variety and mechanical quality, i.e., species/variety purity, inert matter, other crop or weed seeds and germination potential. Untested seed legally cannot be labeled.

Table 3
Common Species and Seeding Rates for Critical Area Plantings

Common Name	Scientific Name	Moisture Regime	Single Species Seeding Rate (PLS) Lbs./Ac.	Seeds/Lb.	Seeds/Square Ft./Lb./Ac.
Native Grasses					
Big Bluestem ¹	<i>Andropogon gerardii</i> ¹	D, DM, M, WM	11	165,000	3.8
Canada Wild Rye	<i>Elymus canadensis</i>	DM, M, WM	12	83,200	1.9
Indian Grass ¹	<i>Sorghastrum nutans</i> ¹	D, DM, M, WM, W	10	192,000	4.4
Little Bluestem	<i>Schizachyrium scoparium</i>	D, DM, M	8	240,000	5.5
Prairie June Grass	<i>Koeleria macrantha</i> ^{1,2}	D, DM, M	0.5	2,308,672	53
Sideoats Grama	<i>Bouteloua curtipendula</i>	D, DM, M	8	127,000	2.9
Switch Grass ¹	<i>Panicum virgatum</i> ¹	D, DM, M, WM, W	7	389,000	8.9
Virginia Wild Rye	<i>Elymus virginicus</i>	M, WM, W	17	67,200	1.5
Introduced Grasses					
Chewings Red Fescue ²	<i>Festuca rubra</i> L. sp. <i>fallax</i> ²	D, DM, M	5	350,000	8
Creeping Red Fescue ^{1,2}	<i>Festuca rubra</i> ^{1,2}	DM, M, WM	5	350,000	8
Festulolium	<i>Festuca x Lolium</i>	DM, M, WM	10	227,000	5.2
Italian or Annual Ryegrass	<i>Lolium perenne</i> L. sp. <i>multiflorum</i>	DM, M, WM	20	227,000	5.2
Kentucky Bluegrass ^{1,2}	<i>Poa pratensis</i> ^{1,2}	D, DM, M, WM, W	8	2,177,000	50
Orchard Grass	<i>Dactylis glomerata</i> L.	D, DM, M, WM	10	653,000	15
Perennial Ryegrass	<i>Lolium perenne</i>	DM, M, WM	20	227,000	5.2
Redtop ^{1,2}	<i>Agrostis gigantea</i> ²	M, WM, W	4	4,990,000	114.5
Smooth Bromegrass ^{1,2}	<i>Bromus inermis</i> ^{1,2}	D, DM, M, WM	20	136,000	3.1
Tall Fescue	<i>Schedonorus arundinaceus</i>	D, DM, M, WM	12	227,000	5.2
Timothy	<i>Phleum pratense</i>	DM, M, WM, W	8	1,230,000	28.2
Legumes					
Alfalfa	<i>Medicago sativa</i>	D, DM, M	12	219,000	5.0
Alsike Clover	<i>Trifolium hybridum</i>	M, WM, W	3	680,000	15.6
Birdsfoot trefoil	<i>Lotus corniculatus</i>	DM, M, WM, W	7	375,000	8.6
Red Clover	<i>Trifolium pratense</i>	DM, M, WM	10	275,000	6.3
White Ladino Clover	<i>Trifolium repens</i>	DM, M, WM	3	871,630	20

¹ Species approved for seeding individually at the recommended Pure Stand Rates based on Pure Live Seeds (PLS) depending on the erosiveness of the site.

It is required that at least 50% of the seeds per square foot of mixtures planted to introduced and native species on critical areas are composed of grasses, and 25% of the seeds per square foot are sod-forming grasses for introduced species.

If more than 20% of the legume seed is hard seed, increase the seeding rate for legumes by the percent of hard seed

Seeds per square foot for a particular species can be calculated by multiplying the number of seeds per pound of the species by the rate of the species in pound(s) per acre divided by 43,560 square feet.

² Sod-forming grass plants.

Table 4
Seeding Chart for Native Grass Species

Common Name	Scientific Name	Percent of Mixture	Pure Stand Seeding Rate	Seeds per Square Foot
Big Bluestem	<i>Andropogon gerardii</i>	0-100	11 lbs/ac	42
Canada Wildrye	<i>Elymus canadensis</i>	0-20	12 lbs/ac	23
Indian grass	<i>Sorghastrum nutans</i>	0-100	10 lbs/ac	44
Little Bluestem	<i>Schizachyrium scoparium</i>	0-20	8 lbs./ac	44
Sideoats Grama	<i>Bouteloua curtipendula</i>	0-20	8 lbs/ac	23
Switchgrass	<i>Panicum virgatum</i>	0-100	7 lbs/ac	63
Virginia Wild Rye	<i>Elymus virginicus</i>	0-20	17 lbs/ac	26
Prairie June Grass	<i>Koeleria macrantha</i>	0-20	0.5 lbs/ac	26
Hairy Grama	<i>Bouteloua hirsuta</i>	0-25	1 lb/ac	26

Canada Wild Rye, Virginia Wild Rye and Sideoats Grama when combined will not comprise of more than 20% of the total grass seeds per square foot. Pure stand seeding rates for Big Bluestem and Indiangrass must be increased by 5 lbs/acre to meet the minimum seeds per square foot as required by this standard. Refer to Table 3 for suggested moisture regimes per specie.

342-10

Table 5
Seeding Mixtures Suitable for Critical Area Plantings

Seed Calculator Code*	Moisture Regimes	Common Name	Scientific Name	Seeding Rate in lb/ae PLS	Seeding Rate in Seeds/Ft ² PLS	Capacity Retardance	Type of Site**
342-1	Dry-Mesic and Mesic Sites	Smooth Bromegrass	Bromus inermis	10	31	B	EB, WW, CSB
		Creeping Red Fescue	Festuca rubra	3	24		
		Alfalfa	Medicago sativa	3	15		
		Red Clover	Trifolium pratense	3	19		
		Kentucky bluegrass	Poa pratensis	1.5	75		
342-2	Dry-Mesic and Mesic Sites***	Smooth Bromegrass	Bromus inermis	15	47	B	EB, WW
		Alfalfa	Medicago sativa	7	35		
		Timothy	Phleum pratense	3	85		
342-3	Dry-Mesic and Mesic Sites	Kentucky bluegrass	Poa pratensis	1	50	B	CSB, EB, WW
		Smooth Bromegrass	Bromus inermis	10	31		
		Timothy	Phleum pratense	2	56		
		Tall Fescue	Schedonorus undinacea	2	10		
		Perennial Ryegrass	Lolium perenne	5	26		
342-4	Dry-Mesic and Mesic Sites	Smooth Bromegrass	Bromus inermis	20	62	B	EB, WW, CSB
		Creeping Red Fescue	Festuca rubra	5	40		
		Alfalfa	Medicago sativa	8	40		
		Red Clover	Trifolium pratense	4	25		
342-5	Dry-Mesic and Mesic Sites	Smooth Bromegrass	Bromus inermis	30	93	B	EB, WW, CSB
		Alfalfa	Medicago sativa	14	70		
342-6	Dry-Mesic, Mesic, and Wet Mesic Sites	Smooth Bromegrass	Bromus inermis	7	22	B	CSB, EB, WW
		Timothy	Phleum pratense	2	56		
		Creeping Red Fescue	Festuca rubra	1	8		
		Kentucky Bluegrass	Poa pratensis	1	50		
		Perennial Ryegrass	Lolium perenne	3	16		
		Red Clover	Trifolium pratense	3	19		
342-7	Mesic Sites***	Smooth Bromegrass	Bromus inermis	7	22	B	EB, WW
		Creeping Red Fescue	Festuca rubra	2	16		
		Kentucky bluegrass	Poa pratensis	3	150		
		Birdsfoot trefoil	Lotus corniculatus	2	17		
342-8	Mesic Sites***	Smooth Bromegrass	Bromus inermis	15	47	B	WW, EB
		Creeping Red Fescue	Festuca rubra	2	16		
		Kentucky Bluegrass	Poa pratensis	2	100		
342-9	Mesic Sites***	Kentucky Bluegrass	Poa pratensis	3	150	C	WW, EB
		Creeping Red Fescue	Festuca rubra	4	32		
		Perennial Ryegrass	Lolium perenne	10	52		
342-10	Mesic Sites	Smooth Bromegrass	Bromus inermis	14	43	B	EB, WW, CSB
		Timothy	Phleum pratense	3	85		
		Red Clover	Trifolium pratense	3	19		
		Perennial Ryegrass	Lolium perenne	4	21		
342-11	Mesic Sites	Smooth Bromegrass	Bromus inermis	32	99	B	EB, WW
		Creeping Red Fescue	Festuca rubra	8	64		
342-12	Mesic Sites	Kentucky bluegrass	Poa pratensis	4	200	C	EB, WW
		Creeping Red Fescue	Festuca rubra	3	24		

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Seed Calculator Code*	Moisture Regimes	Common Name	Scientific Name	Seeding Rate in lb/ac PLS	Seeding Rate in Seeds/Ft ² PLS	Capacity Retardance	Type of Site**
342-13	Mesic Sites	Smooth Bromegrass	Bromus inermis	14	43	B	EB, WW, CSH
		Timothy	Phleum pratense	4	113		
		Red Clover	Trifolium pratense	3	19		
342-14	Mesic Sites	Smooth Bromegrass	Bromus inermis	15	47	B	EB, WW, CSH
		Timothy	Phleum pratense	3.5	99		
		Alsike Clover	Trifolium hybridum	2	32		
342-15	Mesic Sites	Smooth Bromegrass	Bromus inermis	15	47	B	EB, WW
		Timothy	Phleum pratense	3.5	99		
		Birdsfoot trefoil	Lotus corniculatus	3	26		
342-16	Wet Mesic Sites	Tall Fescue	Schedoneus arundinacea	5	26	B	CSB, EB, WW
		Timothy	Phleum pratense	3	85		
		Perennial Ryegrass	Lolium perenne	3	16		
		Red Clover	Trifolium pratense	3	19		
		Smooth Bromegrass	Bromus inermis	6	19		
		Kentucky Bluegrass	Poa pratensis	2	100		
342-17	Wet Mesic Sites	Redtop	Agrostis gigantea	1	115	C	WW, CSB, EB
		Timothy	Phleum pratense	3	85		
		Red Clover	Trifolium pratense	5	32		
342-18	Wet Mesic Sites	Timothy	Phleum pratense	3	85	B	WW, CSB, EB
		Perennial Ryegrass	Lolium perenne	3	16		
		Red Clover	Trifolium pratense	3	19		
		Smooth Bromegrass	Bromus inermis	6	19		
		Kentucky Bluegrass	Poa pratensis	2	100		
342-19	Wet Mesic Sites	Redtop	Agrostis gigantea	1	115	C	WW, CSB, EB
		Timothy	Phleum pratense	1	28		
		Red Clover	Trifolium pratense	4	25		
		Kentucky Bluegrass	Poa pratensis	2	100		
342-20	Wet Sites***	Redtop	Agrostis gigantea	2	229	C	WW
		Alsike Clover	Trifolium hybridum	2	31		
		Kentucky Bluegrass	Poa pratensis	2	100		
342-21	Wet Mesic Sites	Redtop	Agrostis gigantea	3	344	C	WW
		Alsike Clover	Trifolium hybridum	3	47		

*These codes represent the mixtures used in the Wisconsin Seed Calculator

**EB = Embankments, WW = Waterways, CSB = Channel and Streambanks

***Mixtures can be used on other site descriptions when not listed



U.S. Department of Agriculture
Natural Resources Conservation Service

How to Establish and Maintain Native Grasses, Forbs, and Legumes

Wisconsin Job Sheet 135

Natural Resources Conservation Service (NRCS)

Wisconsin

Landowner: _____ Tract: _____

If you are receiving financial assistance for completing this planting, refer to your agreement for any additional requirements or restrictions.

PURPOSE

This job sheet describes methods to establish and maintain native grasses, forbs, and legumes and applies to the following practice:

- ☐ Conservation Cover (327)
- ☐ Critical Area Planting (342)
- ☐ Forage and Biomass Planting (512)

Native species can be used to accomplish one or more of the following:

- Reduce soil erosion.
- Enhance pollinator and wildlife habitat.
- Increase forage supply during periods of low production.
- Produce feedstock for biofuel or energy production.
- Improve soil, water, and air quality.

For additional recommendations, refer to Wisconsin NRCS Agronomy Technical Note 5, Establishing and Maintaining Native Grasses, Forbs, and Legumes, at <http://www.wi.nrcs.usda.gov/technical/technotes.html>.



SPECIES SELECTION AND SEED QUALITY

1. Species and cultivars must be selected based upon the adaptation to site conditions, including appropriate moisture regime, climatic conditions, soil conditions, and landscape position.
2. Select species based on growth characteristics, fertility requirements, disease resistance, compatibility with other species, and the intended use of the seeding.
3. Mixtures must meet all requirements of the Wisconsin weed laws. Species identified as restricted or prohibited by law shall not be planted.
4. Seed must be of high quality and meet the requirements of the Wisconsin seed laws for certification. If certified seed is not available, non-certified seed may be used as long as the seed is tested for purity and germination by a testing laboratory following Association of Official Seed Analysts (AOSA) procedures. If you plan to use untested seed, prior approval must be granted from NRCS before planting.
5. Native species are not recommended in concentrated flow areas due to their slow establishment and growth characteristics.
6. If one or more of the species in the mix consists of more than 20 percent hard seed, the seeding rate for the species must be increased by the percent of hard seed.
7. Legume seeds must be inoculated prior to planting.

SEEDING PERIODS AND RATES

1. Seeding rates and species are provided on the attached seeding plan. Rates are based upon Pure Live Seed (PLS). In order to determine PLS, the seed must be tested for purity and germination. If you are receiving financial assistance for this practice, any changes to the species or rates listed in the seeding plan must be approved before seed is purchased.
2. Permanent, perennial vegetative cover will be established within the recommended seeding dates as shown on the attached seeding plan. When it is not possible to seed during the recommended seeding dates, a temporary cover will be required to reduce erosion until the seeding can be completed.
3. **Frost Seeding.** The frost seeding period in Wisconsin typically ranges from February to mid-March but may vary from year to year depending on the weather. Frost seeding is allowed only during the active freezing and thawing cycle and can be completed on fields where good seed-to-soil contact can be obtained. Do not frost seed on fields with solid ice or snow cover greater than 2 inches. Seeding rates must be increased by 15 percent. Refer to your seeding plan to determine if frost seeding is allowed for your situation.
4. **Dormant Seeding.** Dormant seeding occurs late in the fall when the soil temperature is cool enough to prevent germination until the following spring. This type of seeding provides greater risk of failure due to variability in weather and often has reduced yields. Seeding rates must be increased by 15 percent when seeding during this time period. Refer to your seeding plan to determine if dormant seeding is allowed for your situation.

FERTILIZER AND LIME REQUIREMENTS

For establishment of native species, soil testing and application of soil amendments is not a requirement.

SEEDING METHODS

Conventional Seeding

Conventional seeding includes preparing a firm seedbed by using tillage and packing equipment. The seed is broadcasted on the soil surface and incorporated by secondary tillage or packing tools.

Some native seeds are fluffy, light, and chaffy which require agitators in the seed boxes on the drill for the seed to flow uniformly. When possible, seed should be sorted according to size and shape and placed in the appropriate seed boxes to ensure uniform distribution across the field.

Seed can also be broadcast by using air seeders, fertilizer spreaders, or other types of rotary or drop seeder implements. When a small amount of seed is being applied over a large area, a carrier should be mixed with the seed. Carriers such as pelletized lime, fertilizer, cracked corn, saw dust, vermiculite, etc., may be used.

The seedbed should contain enough fine soil particles to provide uniform shallow coverage of the seed as well as contact with moisture and nutrients. It is important to have a firm seedbed. As a minimum, cultipack or roll before and after seeding. When walking on a properly prepared seedbed, the depth of your footprints should not exceed ¼ inch. Do not use heavy, no-till type drills to seed on conventionally prepared seedbeds. Heavy drills tend to sink into the soil and seeding depth will be difficult to control. Do not plant seed deeper than ¼ inch.

No-Till Seeding

No-till planting is the planting of grasses and/or forbs in the absence of tillage. No-till can be used to establish new seedings on land previously in row crops or existing sod. As with conventional seeding, seed placement should be no deeper than ¼ inch. A drill equipped for no-till planting must be used to obtain proper seeding depth unless the ground is soft enough to allow consistent penetration of disk openers of a conventional drill.

Herbicides are often necessary when using no-till methods of establishment. When using herbicides, be sure to read and follow all label directions.

No-Till Planting Into Crop Residue

Residue should be uniformly distributed over the field from the previous year's harvest. It is often preferred to plant new seedings into soybean stubble when using a no-till drill. No-tilling into large amounts of non-fragile residue such as corn stalks and small grain residue may reduce germination and seedling vigor. For spring weed control, use a nonselective herbicide to kill weeds prior to planting. Be careful not to select a herbicide that will have carryover or residual effects on your new seeding.

No-Till Planting Into Existing Sod

No-till planting can be used to completely renovate existing sod. In order to prepare a good seedbed for no-tilling into existing sod, plant litter and existing growth must be removed or altered prior to applying nonselective herbicides. Options to remove or reduce existing cover include mowing, burning, haying, or grazing.

- **Mowing:** Mow the site using a rotary mower or flail chopper to a height of 3 inches. Mowing equipment should uniformly distribute the mowed plant material over the field surface.
- **Burning:** Conduct a prescribed burn according to the requirements outlined in the burn plan. The burn plan must address safety concerns and document the appropriate timing for the burn.
- **Haying:** Mechanically harvest vegetation from the site the year before the planned seeding. The timing of the hay harvest should be planned to minimize the amount of re-growth that will occur prior to herbicide application.
- **Grazing:** Timing and duration of grazing must be intensive enough to significantly reduce the existing vegetative cover. If possible, begin the grazing at a time of the year when the standing vegetation is green and growing to increase the palatability and feed value of the forage which will result in a more uniform removal of the vegetation.

After the existing plant litter is altered or removed, allow plants to actively re-grow before applying a nonselective herbicide. Be aware of herbicides that may have carryover or residual effects. Timing of herbicide applications usually occurs in the spring before plants flower or early fall to actively growing plants. Herbicide applications in the fall often have greater efficacy, but air temperature should be above 50° F to improve plant uptake.

Interseeding

Interseeding includes any stand modification that maintains some vegetative component of the original stand. Interseeding is a good way to improve existing stands that lack plant diversity. It is **NOT** recommended to seed native species along with or into existing stands of introduced grasses/legumes (bromegrass, fescue, alfalfa, etc.). Introduced species are too competitive with the slower establishing native species. Any existing stands of

introduced species should be terminated prior to seeding native species.

For interseeding native species, existing plant growth and litter will need to be reduced, and the same options used for no-tilling into existing sod can be used. In addition, limited tillage can be used to suppress the existing cover.

- **Limited Tillage:** Limited tillage may also be used to suppress the existing stand. Fields can be tilled to a depth of 3 to 5 inches and should expose at least 50 percent of the soil surface. Careful consideration should be used when using limited tillage due to potential erosion concerns or the potential to encourage additional weed growth due to soil disturbance.

After reducing plant growth, herbicides can be used to suppress, not eliminate, vegetation prior to interseeding. One must consider the current types of plants in the field (grasses vs. broadleaves) and which species you want to suppress. In addition, current field conditions and timing of application must be considered before selecting a herbicide.

A drill equipped for no-till planting must be used to obtain proper seeding depth unless limited tillage is used to prepare the seedbed. In this case, seed may be broadcast or drilled. Use a cultipacker or roll the seedbed before and after seeding when tillage is used.

TEMPORARY COVER AND COMPANION CROPS

Temporary Cover

Temporary cover is required when seed or planting stock is not available, the normal planting period has passed, or where herbicide carryover is likely. A temporary cover will typically not be necessary on those areas where at least 50 percent of the ground is covered with either crop residue or vegetative cover.

Temporary cover crops must be clipped or terminated prior to seedhead emergence or before planting permanent cover.

Temporary Cover			
Species	Rate (lb. or bu. / acre)		Seeding Dates
	No Herbicide Carryover	Triazine Carryover Likely	
Forage Sorghum	1/2 bu.		5/15 - 7/15
Sorghum-Sudangrass Hybrid	1 bu.		
Sudangrass	1 bu.		
Winter Wheat	120 (2 bu.)	Not recommended	8/1 - 10/15
Winter Cereal Rye	112 (2 bu.)	Not recommended	
Oats	64 (2 bu.)	Not recommended	
Annual Ryegrass	20 lbs.	Not recommended	4/1 - 9/1

Companion Crops

Companion crops can be used to reduce the amount of erosion on critical sites, suppress weeds, and provide added protection for permanent perennial vegetation seeded during the first year of planting. Refer to your seeding plan to determine if companion crops are recommended for your situation.

OPERATION AND MAINTENANCE

Weed control during establishment is critical to ensure survival of the new stand. Mowing, herbicide application, or grazing may be used alone or in combination to control weeds before they go to seed. Graze or mow the existing stand at a height of 7 inches before weeds go to seed. If grazing the stand, be cautious of selective grazing where animals do not uniformly graze the stand. Be careful not to mow or graze when the soil is wet to avoid damage to seedlings. If residue will be left on the field, do not allow the vegetation to grow too high prior to mowing, otherwise excessive residue may accumulate and smother seedlings. Additional treatment may be needed every 3 to 4 weeks throughout the growing season until the stand becomes established. If using herbicides, be sure to follow all label directions.

Once the permanent vegetation is established, control noxious weeds or invading woody vegetation by spot mowing, spraying with herbicides, grazing, burning, or other methods appropriate for the site. To maximize wildlife benefits, mow before May 15 or after August 1 to protect nesting birds and provide cover.

Please note: If you are receiving financial assistance for this seeding, certain methods and timing of maintenance may not be allowed. Refer to your contract agreement for specific guidance.

CONSERVATION RESERVE PROGRAM (CRP) REQUIREMENTS

CRP rules allow the cover to be managed throughout the year to control weeds or woody vegetation UNTIL the cover is determined to be established (typically within the first 3 years of the contract).

Once the cover is established, no disturbance is allowed during the primary nesting season recorded in the CRP contract (May 15 through August 1). Spot clipping or spot spraying may be done during the primary nesting season with prior approval from the local Farm Service Agency (FSA) County Committee.

Any haying or grazing of CRP must be approved by the Farm Service Agency in advance.

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USDA-NRCS

April 2013

Wisconsin Job Sheet 135



U.S. Department of Agriculture
Natural Resources Conservation Service

How to Establish and Maintain Introduced Grasses and Legumes

Wisconsin Job Sheet 134

Natural Resources Conservation Service (NRCS)

Wisconsin

Landowner: _____ Tract: _____

If you are receiving financial assistance for completing this planting, refer to your agreement for any additional requirements or restrictions.

PURPOSE

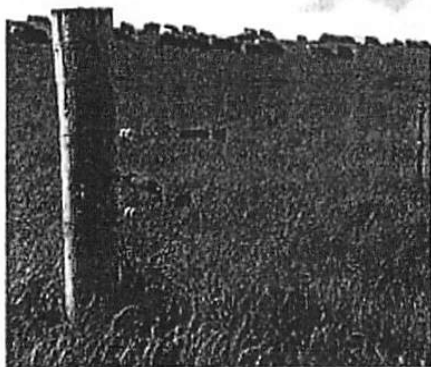
This job sheet describes methods to establish and maintain introduced grasses and legumes and applies to the following practice:

- ☐ Conservation Cover (327)
- ☐ Critical Area Planting (342)
- ☐ Forage and Biomass Planting (512)

Introduced grasses and legumes can be used to accomplish one or more of the following:

- Stabilize areas with existing or expected high rates of soil erosion.
- Enhance pollinator and wildlife habitat.
- Improve forage production and livestock health.
- Improve soil, water, and air quality.

For additional recommendations, refer to Wisconsin NRCS Agronomy Technical Note 6, Establishing and Maintaining Introduced Grasses and Legumes, located at <http://www.wi.nrcs.usda.gov/technical/technotes.html>.



SPECIES SELECTION AND SEED QUALITY

1. Species and cultivars must be selected based upon the adaptation to site conditions, including appropriate moisture regime or forage suitability group, climatic conditions, soil conditions, and landscape position.
2. Select species based on growth characteristics, fertility requirements, disease resistance, compatibility with other species, and the intended use of the seeding.
3. Mixtures must meet all requirements of the Wisconsin weed laws. Species identified as restricted or prohibited by law shall not be planted.
4. Seed must be of high quality and meet the requirements of the Wisconsin seed laws for certification. If you plan to use untested seed, prior approval must be granted from NRCS before planting. If certified seed is not available, non-certified seed may be used as long as the seed is tested for purity and germination by a testing laboratory following Association of Official Seed Analysts (AOSA) procedures.
5. If one or more of the species in the mix consists of more than 20 percent hard seed, the seeding rate for the species must be increased by the percent of hard seed.
6. Legume seeds must be inoculated prior to planting.

SEEDING PERIODS AND RATES

1. Seeding rates and species are provided on the attached seeding plan. Rates are based upon Pure Live Seed (PLS). In order to determine PLS, the seed must be tested for purity and germination. If you are receiving financial

assistance for this practice, any changes to the species or rates listed in the seeding plan must be approved before seed is purchased.

2. **Permanent, perennial vegetative cover** will be established within the recommended seeding dates as shown on the attached seeding plan. When it is not possible to seed during the recommended seeding dates, a temporary cover will be required to reduce erosion until the seeding can be completed.
3. **Frost Seeding.** The frost seeding period in Wisconsin typically ranges from February to mid-March but may vary from year to year depending on the weather. Frost seeding is allowed only during the active freezing and thawing cycle and can be completed on fields where good seed-to-soil contact can be obtained. Do not frost seed on fields with solid ice or snow cover greater than 2 inches. Seeding rates must be increased by 15 percent. Refer to your seeding plan to determine if frost seeding is allowed for your situation.
4. **Dormant Seeding.** Dormant seeding occurs late in the fall when the soil temperature is cool enough to prevent germination until the following spring. This type of seeding provides greater risk of failure due to variability in weather and often has reduced yields. Seeding rates must be increased by 15 percent when seeding during this time period. Refer to your seeding plan to determine if dormant seeding is allowed for your situation.

FERTILIZER AND LIME REQUIREMENTS

Forage and Biomass Planting (512)

If you are planting hayland or pasture, soil tests no older than 4 years must be taken according to UW Extension Publication A2100, Sampling Soils for Testing. You will need at least one sample for every 5 acres or less, and the samples must be analyzed at a Wisconsin certified soil testing laboratory. Any recommendations for fertilizer or lime will be applied based on UW Extension Publication A2809, Nutrient Application Guidelines for Field, Vegetable and Fruit Crops.

Conservation Cover (327) or Critical Area Planting (342)

When following either of these standards, you can choose to take a soil test using the procedure listed above or follow a general recommendation. If you choose not to obtain a soil test, a general recommendation of 150 pounds per acre of a 20-10-10 fertilizer and a minimum of 2 tons per acre of 80-89 lime may be used. Under certain conditions, fertilizer and/or lime requirements may be waived.

SEEDING METHODS

Conventional Seeding

Conventional seeding includes preparing a firm seedbed by using tillage and packing equipment. The seed is broadcasted on the soil surface and incorporated by secondary tillage or packing equipment.

When using a drill, seed should be sorted according to size and shape and placed in the appropriate seed boxes to ensure uniform distribution across the field.

Seed can also be broadcast by using air seeders, fertilizer spreaders, or other types of rotary or drop seeder implements. When a small amount of seed is being applied over a large area, a carrier should be mixed with the seed. Carriers such as pelletized lime, fertilizer, cracked corn, saw dust, vermiculite, etc., may be used.

The seedbed should contain enough fine soil particles to provide uniform shallow coverage of the seed as well as contact with moisture and nutrients. It is important to have a firm seedbed. As a minimum, cultipack or roll before and after seeding. When walking on a properly prepared seedbed, the depth of your footprints should not exceed 1/4 inch. Do not use heavy, no-till type drills to seed on conventionally prepared seedbeds. Heavy drills tend to sink into the soil and seeding depth will be difficult to control. Do not plant seed deeper than 1/4 inch.

No-Till Seeding

No-till planting is the planting of grasses and/or legumes in the absence of tillage. No-till can be used to establish new seedings on land previously in row crops or existing sod. As with conventional seeding, seed placement should be no deeper than 1/4 inch. A drill equipped for no-till planting must be used to obtain proper seeding depth unless the ground is soft enough to allow consistent penetration of disk openers of a conventional drill.

Herbicides are often necessary when using no-till methods of establishment. When using herbicides, be sure to read and follow all label directions.

No-Till Planting Into Crop Residue

Residue should be uniformly distributed over the field from the previous year's harvest. It is often preferred to plant new seedlings into soybean stubble when using a no-till drill. No-tilling into large amounts of non-fragile residue such as corn stalks and small grain residue may reduce germination and seedling vigor. For spring weed control, use a nonselective herbicide to kill weeds prior to planting. Be careful not to select a herbicide that will have carryover or residual effects on your new seeding.

No-Till Planting Into Existing Sod

No-till planting can be used to completely renovate existing sod. In order to prepare a good seedbed for no-tilling into existing sod, plant litter and existing growth must be removed or altered prior to applying nonselective herbicides. Options to remove or reduce existing cover include mowing, burning, haying, or grazing.

- **Mowing:** Mow the site using a rotary mower or flail chopper to a height of 3 inches. Mowing equipment should uniformly distribute the mowed plant material over the field surface.
- **Burning:** Conduct a prescribed burn according to the requirements outlined in the burn plan. The burn plan must address safety concerns and document the appropriate timing for the burn.
- **Haying:** Mechanically harvest vegetation from the site the year before the planned seeding. The timing of the hay harvest should be planned to minimize the amount of re-growth that will occur prior to herbicide application.
- **Grazing:** Timing and duration of grazing must be intensive enough to significantly reduce the existing vegetative cover. If possible, begin the grazing at a time of the year when the standing vegetation is green and growing to increase the palatability and feed value of the forage which will result in a more uniform removal of the vegetation.

After the existing plant litter is altered or removed, allow plants to actively re-grow before applying a nonselective herbicide. Be aware of herbicides that may have carryover or residual effects. Timing of herbicide applications usually occurs in the spring before plants flower or early fall to actively-growing plants. Herbicide applications in the fall often have

greater efficiency, but air temperature should be above 50° F to improve plant uptake.

Interseeding

Interseeding includes any stand modification that maintains some vegetative component of the original stand. Interseeding is a good way to improve existing stands that lack plant diversity or have low-yielding forage species. Existing plant growth and litter will need to be reduced, and the same options used for no-tilling into existing sod can be used. In addition, limited tillage can be used to suppress the existing cover.

- **Limited Tillage:** Limited tillage may also be used to suppress the existing stand. Fields can be tilled to a depth of 3 to 5 inches and should expose at least 50 percent of the soil surface. Careful consideration should be used when using limited tillage due to potential erosion concerns or the potential to encourage additional weed growth due to soil disturbance.

After reducing plant growth, herbicides can be used to suppress, not eliminate, vegetation prior to interseeding. One must consider the current types of plants in the field (grasses vs. broadleaves) and which species you want to suppress. In addition, current field conditions and timing of application must be considered before selecting a herbicide.

A drill equipped for no-till planting must be used to obtain proper seeding depth unless limited tillage is used to prepare the seedbed. In this case, seed may be broadcast or drilled. Use a cultipacker or roll the seedbed before and after seeding when tillage is used.

TEMPORARY COVER AND COMPANION CROPS

Temporary Cover

Temporary cover is required when seed or planting stock is not available, the normal planting period has passed, or where herbicide carryover is likely. A temporary cover will typically not be necessary on those areas where at least 50 percent of the ground is covered with either crop residue or vegetative cover.

Temporary cover crops must be clipped or terminated prior to seedhead emergence or before planting permanent cover.

Temporary Cover			
Species	Rate (lbs. or bu. / acre)		Seeding Dates
	No Herbicide Carryover	Triazine Herbicide Carryover Likely	
Forage Sorghum	1/2 bu.		5/15 - 7/15
Sorghum-Sudangrass Hybrid	1 bu.		
Sudangrass	1 bu.		
Winter Wheat	120 (2 bu.)	Not recommended	8/1 - 10/15
Winter Cereal Rye	112 (2 bu.)	Not recommended	
Onits	64 (2 bu.)	Not recommended	4/1 - 9/1
Annual Ryegrass	20 lbs.	Not recommended	4/1 - 9/1

Companion Crops

Companion crops can be used to reduce the amount of erosion on critical sites, suppress weeds, and provide added protection for permanent perennial vegetation seeded during the first year of planting. If the seeding is not used for hayland purposes, the companion crop must be mowed before seedhead emergence. Second and subsequent mowings may be necessary when re-growth provides competition to new plantings. Mowing should only remove the growth above the developing seedlings. Companion crops seeded late summer in most cases will not require clippings prior to the first killing frost unless the growing season is prolonged. Refer to your seeding plan to determine if companion crops are recommended for your situation.

OPERATION AND MAINTENANCE

Weed control during establishment is critical to ensure survival of the new stand. Mowing, herbicide application, or grazing may be used alone or in combination to control weeds before they go to seed. Graze or mow the existing stand at a height of 4 to 6 inches before weeds go to seed. If grazing the stand, be cautious of selective grazing where animals do not uniformly graze the stand. Be careful not to mow or graze when the soil is wet to avoid damage to seedlings. If residue will be left on the field, do not allow the vegetation to grow too high prior to mowing; otherwise, excessive residue may accumulate and smother seedlings. Additional treatment may be needed every 3 to 4 weeks

throughout the growing season until the stand becomes established. If using herbicides, be sure to follow all label directions.

Once the permanent vegetation is established, control noxious weeds or invading woody vegetation by spot mowing, spraying with herbicides, grazing, burning, or other methods appropriate for the site. To maximize wildlife benefits, mow before May 15 or after August 1 to protect nesting birds and provide cover.

Please note: If you are receiving financial assistance for this seeding, certain methods and timing of maintenance may not be allowed. Refer to your contract agreement for specific guidance.

CONSERVATION RESERVE PROGRAM (CRP) REQUIREMENTS

CRP rules allow the cover to be managed throughout the year to control weeds or woody vegetation UNTIL the cover is determined to be established (typically within the first 3 years of the contract).

Once the cover is established, no disturbance is allowed during the primary nesting season recorded in the CRP contract (May 15 through August 1). Spot clipping or spot spraying may be done during the primary nesting season with prior approval from the local Farm Service Agency (FSA) County Committee.

Any haying or grazing of CRP must be approved by the Farm Service Agency in advance.

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USDA-NRCS

April 2013

Wisconsin Job Sheet 134

MULCHING

(Acre)
Code 484

Natural Resources Conservation Service
Conservation Practice Standard

I. Definition

Applying plant residues, or other suitable materials produced off site to the land surface.

II. Purpose

This practice may be applied as part of a conservation management system to support one or more of the following purposes:

- conserve soil moisture,
- moderate soil temperature,
- provide erosion control,
- suppress weed growth,
- facilitate the establishment of vegetative cover,
- improve soil condition, and
- reduce airborne particulates.
- Reduce energy use associated with irrigation.

III. Conditions Where Practice Applies

This practice applies to all lands where mulches are needed. This practice may be used alone or in combination with other practices.

IV. Federal, Tribal, State, and Local Laws

Users of this standard shall comply with applicable federal, tribal, state and local laws, rules, regulations or permit requirements governing mulching. This standard does not contain the text of federal, tribal, state, or local laws.

V. Criteria

A. General Criteria Applicable to All Purposes

The type of mulching material selected should be based on cost, time of year, soils, percent slope, anticipated runoff velocities, and landscape position.

If the area to be mulched is to be seeded, see Wisconsin NRCS Field Office Technical Guide (FOTG) Section IV, Standard 342, Critical Area

Planting, for seedbed preparation, lime, fertilizer, and seeding requirements.

Mulch shall consist of either natural and/or artificial materials such as plant residue (including cereal grain straw, grass hay, wood chips, bark and wood fiber), byproducts, gravel, plastic, fabric, or other equivalent materials of sufficient dimension (depth or thickness) and durability to achieve the intended effect for the required time period.

1. Criteria for Site Preparation

Soil surface shall be prepared prior to the application of the mulch material in order to achieve desired purpose and to ensure optimum contact between soil and mulch. All areas to be mulched shall be reasonably smooth and free of rills, gullies, and debris.

Concentrated flow sources above the site where mulch is applied shall be diverted, or mulch designed to withstand anticipated runoff velocities shall be used.

2. Criteria for Materials

Mulch material shall be relatively free of disease, pesticides, chemicals, noxious weed seeds, and other pests and pathogens.

3. Criteria for Application

Criteria for mulch application applies to both seeded and unseeded areas.

Mulch shall be applied immediately after seeding or after final grading for unseeded areas.

The mulch material shall be evenly applied.

Manufactured mulches should be applied according to the manufacturer's specifications.

Conservation Practice Standards are reviewed periodically and updated if needed. To obtain the current version of the standard, download it from the electronic Field Office Technical Guide, or contact the NRCS State Office or the Wisconsin Land and Water Conservation Association office at (608) 441-3577.

NRCS, WI
3/13

Crimping (disking), wood cellulose fiber, tackifiers, netting, plowing, or other acceptable methods of anchoring will be used if needed to hold the mulch in place. Criteria are described in V.B. Mulch Anchoring Methods.

4. Mulch Application Rate

Straw and hay mulch shall be applied at the rate of 1 ½ to 2 tons per acre. This application results in a layer of 6 to 7 stems, 1 to 2 inches thick and shall provide a minimum 70% ground cover. Some soil surface can be seen after the application.

Wood chips or wood bark shall be applied at the rate of 6 to 9 tons per acre to achieve a minimum of 80 percent ground cover.

Wood cellulose fiber mulch, applied with a hydroseeder, shall be applied at the rate of 1,500 to 2,000 pounds per acre. Apply a tackifier when the slope exceeds 3 to 1.

Long-fibered wood cellulose shall be applied at the rate of ¾ to 1 ½ tons per acre.

Corn cobs shall be applied at the rate of 5 tons per acre.

Gravel shall be applied approximately 2 inches deep and shall consist of pieces ¾ to 2 inches in diameter and shall achieve a minimum of 90 percent ground cover.

5. Fiber Blankets and Mats

Erosion control products manufactured from wood fiber, straw, or paper are intended for use in high water velocity conditions. Design and install according to the manufacturer's instructions.

B. Criteria for Mulch Anchoring Methods

1. Mulch Anchoring Tool or Disk (Serrated Blades)

Apply mulch and pull a mulch anchoring tool over soil surface immediately following the mulch application. Use equipment with serrated straight disks spaced 6 to 10 inches or other suitable equipment approved by the Natural Resources Conservation Service (NRCS). Operate as close to the contour as possible. Mulch material should be

imbedded into the soil surface 2 to 3 inches. Use on areas where concentrated flow velocity is less than 4 feet per second.

2. Wood Cellulose Fiber

Apply wood cellulose fiber with a hydromulcher immediately after spreading mulch. Reduce straw or hay mulch applications to 3,000 pounds per acre and apply 750 pounds of wood fiber per acre over the surface of the straw or hay in combination with a nontoxic, biodegradable tackifier. Use on areas without concentrated flow.

3. Tackifier or Binder Material

Apply tackifier or binder material with suitable equipment by spraying product directly into the mulch as it is applied. Rate of application shall be according to manufacturer's recommendations. Material shall be nontoxic to plant life. Use only on areas without concentrated flow.

Follow the manufacturer's recommendations on mixing and temperature control. The mulch materials and tackifier shall be blown from a machine and uniformly deposited over the area in one operation.

The machine used for placement of mulch shall blow or eject by constant air stream a controlled amount of straw or hay. It shall also introduce into the air stream a spray of asphalt or similar product.

Mulch materials shall not contain moisture in excess of that which will permit uniform feeding through the machine.

4. Polypropylene Plastic or Jute Netting

Use netting on areas without concentrated flow or where concentrated flow velocity is less than 4 feet per second. Prior to recommending the use of netting, evaluate the potential for reptiles or other wildlife to become entrapped by the net. If a risk is identified, select a 100% degradable net (W1 DOT Class I Type A, Class II Type C), or an alternative mulch anchoring method.

Apply netting over the mulch application and staple according to manufacturer's recommendations.

On slopes, mats and nets may be run either up and down or cross slope. In areas of concentrated flow, mats and nets shall be laid parallel to the direction of flow and spread evenly without stretching to allow maximum contact with the soil. Adjacent edges should be overlapped a minimum of 3 inches with the adjoining mats or nets. Staples of 11 gauge or heavier will be used to hold the mats and nets in place. Staples shall be U-shaped with a 1-inch crown. Staple length shall be determined based on soil condition

Soil Condition	Staple Length
Highly compacted soils	6 inches
Friable soils	8 inches
Loose or sandy soils	10 inches

Lay downstream blankets first, working upstream. The netting side of the blanket shall be on the top side after installation. Mat and net edges and middles will be stapled according to manufacturer's recommendations.

5. Peg and Twine

After mulching, divide the area into blocks approximately one square yard in size. Drive 4 to 6 pegs per block to within 2 to 3 inches of the soil surface. Anchor mulch by stretching twine between pegs in a crisscross pattern on each block. Secure twine around each peg with two or more turns. Drive pegs flush with soil surface to allow mowing. Use on areas without concentrated flow.

6. Pinning

Cut mulch into soil surface with square edge spade or a dull disk. Make cuts in contour rows. Use on small areas without concentrated flow.

7. Soil

Small areas of mulch can be lightly covered with soil. The soil shall be free of stones and debris, and distributed over the mulch in a thin uniform layer. Use on small areas without concentrated flow.

8. Trenching or Weights

Bury edge of plastic in a trench 6 inches deep. Compact the soil over plastic in the trench. Use stones to hold plastic down in other places as needed. Use on small areas without concentrated flow.

C. Additional Criteria to Conserve Soil Moisture and/or Reduce Energy Use Associated with Irrigation

Mulch material applied to the soil surface shall cover at least 60 percent of the soil surface to reduce potential evaporation.

D. Additional Criteria Applicable to Moderate/Modify Soil Temperature

Nonporous, clear, infrared transmissible, and dark-colored material shall be used to raise soil and ambient air temperature below the mulch. Light-colored material will be used to cool soil and ambient soil temperature below the mulch. The mulch shall be applied to the desired soil and air temperature below the mulch can be achieved.

The material should be sufficient thickness to persist for the period of time required for the temperature modification.

The percent coverage shall be 100 percent over the area treated.

E. Additional Criteria Applicable to Control Weed Growth

Mulches applied around growing plants or prior to seedling development shall provide 100 percent ground cover. Thickness of the mulch shall be adequate to prevent emergence of targeted weeds. Use colored or infrared transmissible (IRT) plastic when plastic mulch is used.

F. Additional Criteria to Suppress Weed Growth

The thickness of mulch will be determined by the size and growth characteristics of the plant being mulched. Mulches shall be kept clear of the stems of plants where disease is likely to occur. Mulches applied around growing plants or prior to weed seedling development shall have 100 percent ground cover. Thickness of the mulch shall be adequate to prevent emergence of targeted weeds. Plastic mulches may be used.

G. Additional Criteria to Establish Vegetative Cover

Mulch shall be applied at a rate that achieves a minimum of 70 percent ground cover to provide protection from erosion and runoff and yet allow adequate light and air penetration to the seedbed to ensure proper germination and emergence.

H. Additional Criteria to Improve Soil Condition

Apply mulch materials with a carbon to nitrogen ratio (C:N) less than 30:1 so that soil nitrogen is not immobilized by soil biota. Do not apply mulch with C:N less than 20:1 to an area of designed flow in watercourses.

Use the Soil Conditioning Index to assess soil quality impacts and to determine the type and rate of the mulching material.

VI. Considerations

Additional recommendations relating to design that may enhance the use of, or avoid problems with, this practice but are not required to ensure its basic conservation functions are as follows.

- A. Consider mulching disturbed areas that will not have additional construction activity for 60 days, or completed sites that will not be permanently seeded for periods of 60 days or longer.
- B. Consider application of mulch immediately after a precipitation event or watering to conserve soil moisture. Ensure soil under shallow rooted crops is moist, as these crops require a constant supply of moisture.
- C. Consider anchoring straw or hay mulch or keep mulch moist to prevent blowing in wind-prone areas.
- D. Consider the impact of mulch materials with a high water holding capacity and/or high impermeability to water droplets which may reduce the water availability to plants.
- E. Consider the potential impact of fine-textured mulches (e.g., rice hulls) which allow less oxygen penetration than coarser materials. Fine-textured mulches should be applied in a layer no thicker than 2 inches.
- F. Consider the potential of organic materials with C:N ratios of less than 20:1 to release excess nitrate to adjoining surface waters.
- G. Consider the potential for mulch to provide habitat for beneficial insects and provide pest suppression.
- H. Consider the mulch color impact on plant growth. Clear mulches allow profuse weed growth and may negate the benefits of soil warming. Black mulches provide effective weed control. Wavelength selective (IRT) plastic provides the soil warming characteristics of clear mulch with the weed control ability of black mulch.
- I. Consider the potential for runoff from low permeability mulches (e.g., plastic) which may increase concentrated flow and erosion on un-mulched areas.
- J. Consider potential toxic allelopathic effects that mulch material may have on other organisms. Animal and plant pest species contained in the mulch may be incompatible with the intended use.
- K. Consider the potential for increased pathogenic activity within the applied mulch material.
- L. Consider the potential for mulch to cause disease and pest problems. Keep mulch 3 to 6 inches away from plant stems and crowns where an identified risk is present. Additional weed control may be needed around the plant base area.
- M. Consider the potential for deep mulch to provide nesting habitat for ground-burrowing rodents that can chew extensively on tree trunks and/or tree roots. Use of a light mulch applied after the first cold weather may prevent rodents from nesting.
- N. Consider the potential impacts of mulch material on aquatic environments due to changes in water chemistry or as waterborne debris.
- O. Consider the use of biodegradable staples in locations where wire staples are determined to be a risk.

VII. Plans and Specifications

Specifications shall be prepared for each site and purpose and recorded using approved specification sheets, job sheets, technical notes, narrative statements in the conservation plan, or other acceptable documentation.

Documentation shall include the following:

- purpose of the mulch;
- type of mulch material used;
- percent cover and/or thickness of mulch material;
- rate of mulch application (tons/acre, lbs/square foot);
- timing of application;
- site preparation;
- listing of netting, tackifiers, or method of anchoring; and
- operation and maintenance.

VIII. Operation and Maintenance

Mulched areas will be periodically inspected, and mulch shall be reinstalled or repaired as needed to accomplish the intended purpose.

Evaluate the effectiveness of the mulch (application, amount of cover provided, durability, etc.) and adjust the management or type of mulch to better meet the intended purpose(s).

Removal or incorporation of mulch materials as necessary after use shall be consistent with the intended purpose and site conditions.

Operation of equipment near and on the site shall not compromise the intended purpose of the mulch.

Prevent or repair any fire damage to the mulch material.

Properly collect and dispose of artificial mulch material after intended use.

Monitor and control undesirable weeds in mulched areas.

IX. References

USDA, NRCS Wisconsin Field Office Technical Guide (FOTG), Section I, Erosion Prediction, Revised Universal Soil Loss Equation (RUSLE2).

Toy, T.J., and G.R. Foster. (Ed.) 1998. Guidelines for the use of the Revised Universal Soil Loss Equation (RUSLE) Version 1.06 on mined lands, construction sites, and reclaimed lands. USD), OSMR.

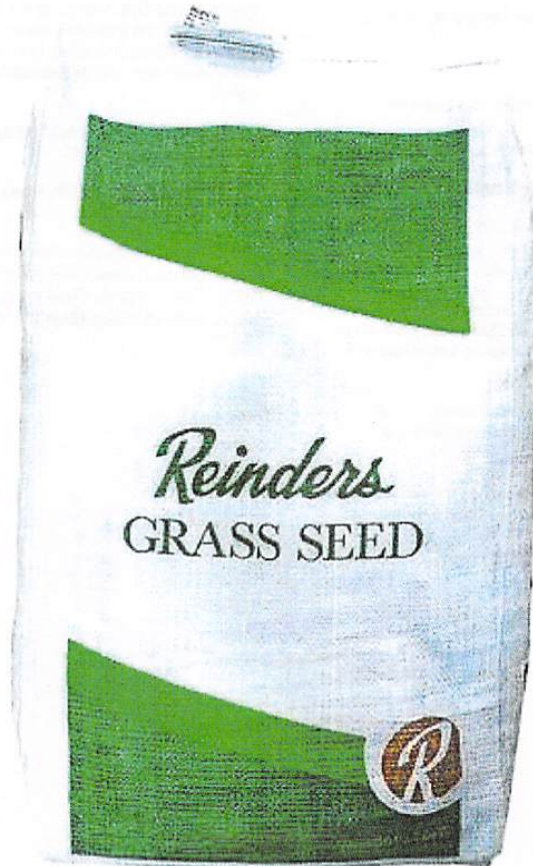
USDA, NRCS. 2002. National Agronomy Manual 190-V. Washington, D.C.

ASTM Designation: D 977, Standard Specification for Emulsified Asphalt I

Wisconsin Department of Transportation, Erosion Control Product Acceptability Lists (PAL): Erosion Mats, Class I Type A, Class II Type C; Tackifiers. <http://www.dot.wisconsin.gov/business/engrserve/docs/pal.pdf>

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Reinders - Wisconsin DOT No. 20 Seed Mix - 50 LB Bag



SKU: 3207-1400

Availability: In Stock

Your Price:

\$263.00 /bag - 1 +

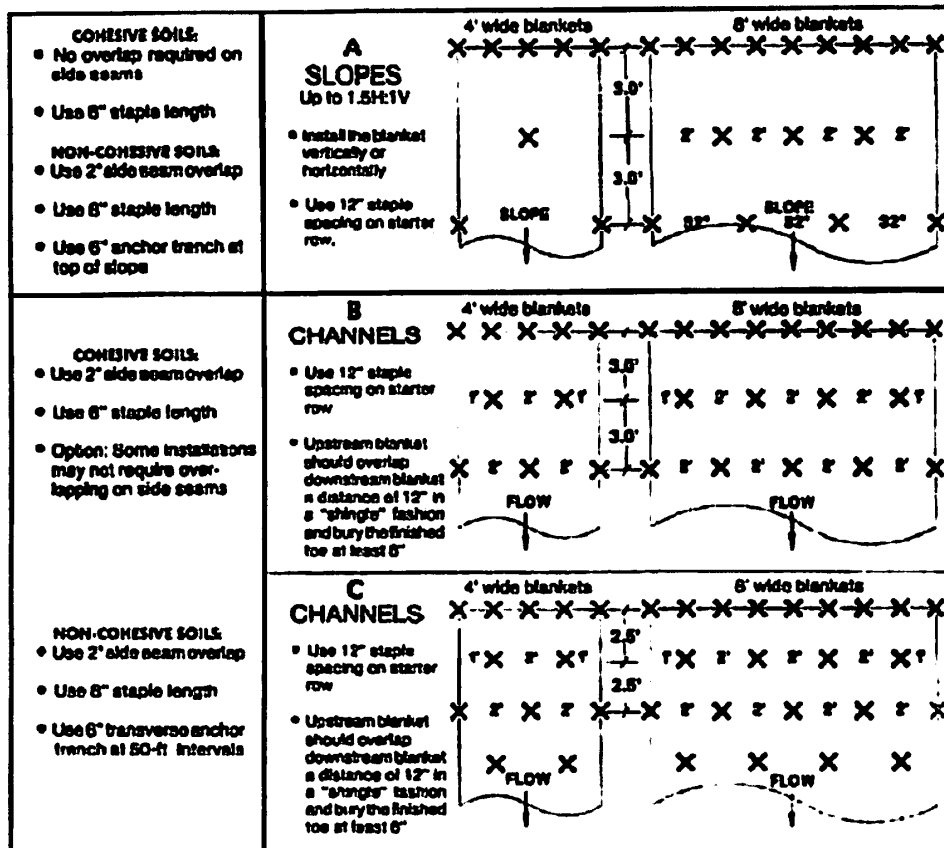
Erosion control blanket installation instructions

SLOPES

CHANNELS

Product	Staple Diagram				Seam Overlay		Install Notes	
Soils	Coarse	Fine Coarse	Clayey	Non-Cohesive	Coarse	Fine Coarse	Clayey	Non-Cohesive
Curlex I	A	A	D	E	--	F	H	I
Curlex II	A	A	D	E	--	F	H	I
QuickGrass	A	A	D	E	--	F	H	I

Product	Staple Diagram				Seam Overlay		Install Notes	
Soils	Coarse	Fine Coarse	Clayey	Non-Cohesive	Coarse	Fine Coarse	Clayey	Non-Cohesive
Curlex I	B	B	D	E	G	G		
Curlex II	B	B	D	E	G	G		
QuickGrass	B	B	D	E	G	G		
Curlex III	C	C	D	E	G	G		



D = 6x16 11 ga wire E = 8x26 11 ga wire F = 2' G = 6' H = Start 3' over grade break I = Start 3' over grade break & trench