



COLORADO

Division of Reclamation,
Mining and Safety

Department of Natural Resources

1313 Sherman St. Room 215
Denver, CO 80203

November 09, 2016

Leonard Read
Eastern Colorado Aggregates, RLLLP
P.O. Box 580
Rye, CO 81069

**RE: Midwestern Farms, Permit No. M-1993-059, Technical Revision No. 5 (TR-05)
Notice of Receipt, Adequacy Review No. 1**

Mr. Read:

On October 25, 2016, the Division of Reclamation, Mining and Safety (Division) received your request for Technical Revision, Revision No. TR-05, and the required fee, for the above referenced permit. The revision addresses the following items:

Reduce depth of topsoil, eliminate tree planting, eliminate wetland planting, reduce area to be topsoiled and seeded at request of CPW

The Division has reviewed your revision submittal and identified the following adequacy items that require additional information or clarification:

- 1) The sentence “The surface area of the pond shall not be increased above the existing 94 acres, except by removing the material separating the two ponds as described below” was exhibited as strikethrough text, indicating this is a deletion from the approved reclamation plan. However, this is contradictory to text added in the revision to address the area between the two ponds. Therefore, the Division believes this sentence was supposed to be an addition and not a deletion to the plan. If this is the case, please revise accordingly.
- 2) The revised text states “The sideslopes of the lake will be reclaimed to a final slope ranging from 3H:1V to 6H:1V for a distance of 30 feet into the lake”. How does the operator intend to achieve these slope gradients below water line? Will the lakes be dewatered? What equipment will be used to complete final grading of the lake shorelines? Please provide revised E-1 and E-2 cross-sections showing proposed reclaimed shoreline details (original E-1 and E-2 enclosed).



- 3) The revised text states “As shown in the previous table, the plant area of 49.2 acres will be left for industrial use. See the letter from the landowners at the end of this section requesting this final use.” The approved permit materials include a letter dated April 9, 1998, signed by George Tempel of Midwestern Farms, stating “The owners of Midwestern Farms are agreeable to classify the 36 acre gravel plant site as commercial/industrial use in the forthcoming revised mining plan”. It is not clear whether Midwestern Farms agrees to leaving the 49.2 acres of disturbed land located north of the railroad un-reclaimed for post-mining industrial/commercial use. Please provide a notarized letter from the landowner of this portion of the permit area, which demonstrates agreement with the post-mining industrial/commercial use for this area.
- 4) The sentence “Lakes will consist of 94 acres after full reclamation” was exhibited as strikethrough text, indicating this is a deletion from the approved reclamation plan. However, the Division believes this sentence was supposed to be an addition and not a deletion to the plan. If this is the case, please revise accordingly.
- 5) The revised text states that the approximately 150-foot wide section of land between the two existing lakes will be dredged to a depth of at least 10 feet at a 40-foot bottom width connecting the two lakes. What equipment will be used for this task? This proposed expansion of the lake will increase the amount of exposed groundwater on site. Therefore, pursuant to Rule 3.1.6(1)(a), please provide proof of compliance with the Division of Water Resources with regard to the total amount of exposed groundwater that will exist on site for final reclamation (e.g., well permit, augmentation plan).
- 6) The revised text proposes stripping topsoil from some portions of the site for use in retopsoiling disturbed land in other areas. Please provide an estimate of how many acres of land will be stripped of topsoil. Additionally, please indicate on the revised Exhibit F reclamation plan map the proposed location(s) where topsoil will be stripped. What is the approximate depth of topsoil to be stripped from these areas? After being stripped, would a minimum depth of 8 inches of topsoil remain in these areas? Please be sure this additional disturbed acreage is included in the maximum allowed disturbed acreage, and costs to revegetate these areas are included in the revised Exhibit L.
- 7) The revised text proposes leaving some portions of the disturbed land as “sandy gravelly beaches” that will not be retopsoiled or revegetated. The text refers to Exhibit F (reclamation plan map). However, the map submitted is blurry and illegible. Please submit a clean version of this map that is easy to read and determine what the different patterns indicated represent. Please be sure the map indicates which areas will be left unreclaimed as sandy gravelly beaches. Additionally, please be sure the map meets the requirements of Rule 6.2.1 including showing the name of the Applicant/Operator, be

prepared and signed by a registered land surveyor, professional engineer, or other qualified person, and giving the date it was prepared (or revised).

- 8) The approved post-mining land use for the affected lands includes industrial/commercial, rangeland, general agriculture (dryland farmland), recreation, and wildlife habitat. The revised reclamation plan is proposing a change in post-mining land use for the 64-acre area from dryland farmland to upland rangeland and recreation. Please add this proposed change in post-mining land use for a portion of the affected land on the Technical Revision cover sheet, under the brief description of the proposed revision. Additionally, please be sure the revised Exhibit F reclamation plan map portrays the proposed final land use for each portion of the affected lands, pursuant to Rule 6.4.6(b).
- 9) The revised text states “At this time, it is planned that irrigation will not be used in the reclaimed area due to the difficulty in grading the areas between the lakes and the interruption of the large fields by creating lakes, which are necessary from the mining of the material”. However, in the revised Exhibit L, a line item was added for “Temporary irrigation” of 141 acres. Please correct this discrepancy. If the revised reclamation plan will include the use of irrigation, pursuant to Rule 6.4.7(3) and (4), please provide an estimate of the project water requirements for reclamation (e.g., flow rate, annual volume) and the source of the water supply.
- 10) The revised text states “When the soils and any suitable fine material have been spread, the surface will be smoothed and worked until moderately fine where the seed is to be drilled; the surface will be left fairly rough where seed is to be broadcast.” Please specify what “any suitable fine material” refers to. Does the operator intend to backfill disturbed land with fines before replacing topsoil? If so, please provide an approximate depth for placement of backfilled material, and the location(s) of where the material will be obtained. Additionally, costs for this task would need to be added to the revised Exhibit L.
- 11) The revised revegetation plan proposes the use of one of two cover crop methods prior to planting the permanent seed mixture. Method 1 includes planting a cover crop consisting of sterile sorghum and tillage radishes between May 1 and June 15. Method 2 includes planting a cover crop consisting of sterile cereal grain and tillage radishes between September 1 and October 15 (as close to September 1 as possible).

The proposed permanent seed mixture is proposed to be seeded in accordance with whichever cover crop method is utilized. For method 1, the permanent seed mixture would be no-till drilled into the standing cover crop between November 1 and May 15 of the following year. For method 2, the permanent seed mixture would be no-till drilled

into the standing cover crop stubble the following November 1 to May 15, if the field is kept weed free with chemical fallow. Alternatively, for method 2, the permanent seed mixture can be no-till drilled into the growing sterile cereal grain in April or May following planting if chemical fallow is not an option.

The revised timetable section states “It is anticipated that grading and soil preparation will be completed this winter, with cover crop seeding commencing as close to December 1, 2016 as possible, and permanent seeding completed by June 15, 2017.” This timing is not consistent with either of the proposed cover crop methods and corresponding seeding plan. Please explain this discrepancy in the revised reclamation plan. It is the Division’s understanding that late planted radishes do not have adequate time to grow and develop the large taproot or aboveground biomass that is critical to their success as a cover crop. In accordance with the proposed cover crop methods, at this point in time, the earliest the cover crop could be planted would be between May 1 and June 15 of 2017 (method 1). Per method 1, the permanent seed mixture could then be drilled into the cover crop between November 1 and May 15 of 2017/2018.

Please be advised that regardless of the timetable followed for revegetating the affected lands, the land shall be revegetated in such a way as to establish a diverse, effective, and long-lasting vegetative cover that is capable of self-regeneration without continued dependence on irrigation, soil amendments, or fertilizer, and is at least equal in extent of cover to the natural vegetation of the surrounding area, pursuant to Rule 3.1.10(1). The permit will not be releasable until revegetated areas meet these requirements. Therefore, the Division recommends the operator not rush implementation of the revegetation plan, but follow the appropriate timetable for greatest probability of success in plant establishment and development.

- 12) The proposed permanent seed mixture includes the species Yellow Sweetclover (*Melilotus officinale*). This species is considered to be an invasive species as it readily invades open areas and may compete for resources with native species. Please remove Yellow Sweetclover from the proposed permanent seed mixture, or replace it with a species that is more compatible with native species.
- 13) In the revised revegetation plan, tree planting for lake shorelines has been removed. The revised text states “The trees to be planted will be placed in the areas as marked on Exhibit F, with final numbers, placement, and timing based upon consultation with CPW staff onsite.” Please be advised that the Division must approve the final reclamation plan for the affected lands, including any proposed revegetation plan(s). Therefore, if the proposed final reclamation plan for the site includes planting wetland species, trees, etc., this revegetation plan must remain part of the reclamation plan (and

required financial warranty). Otherwise, please remove all text that indicates additional plant species will be planted at a later date.

Additionally, any areas designated for a post-mining land use that is inconsistent with the revised revegetation plan (e.g., wildlife habitat) could potentially require a change in post-mining land use. Pursuant to Rule 3.1.8(2), the Division recommends the operator consult with Colorado Parks and Wildlife (CPW) regarding any revisions to the reclamation plan for lake shorelines with a post-mining land use of wildlife habitat. Before approving any changes to the revegetation plan for these areas, the Division will require the operator to provide a letter from CPW supporting the proposed changes (e.g., removing wetland species, tree planting) and confirming that the revised plan would provide suitable wildlife habitat.

- 14) In the revised revegetation plan, the wetland revegetation plan for lake shorelines has been removed. It appears that the revised revegetation plan would include one permanent grass/shrub seed mixture for all areas to be revegetated, and some portions of the shorelines would remain unreclaimed. Please explain how the revised revegetation plan would provide adequate wildlife habitat in accordance with the approved post-mining land use for the lake shorelines.
- 15) The revised text states “No more than 463.2 acres of the site will be disturbed at any given time”. However, the current approved maximum allowed disturbed acreage at any time is 390 acres (as of TR-03 approval). The Division realizes that this amount does not include the 49.2 acre industrial/commercial area located north of the railroad, which would not require reclamation. Including this area would give a total disturbance of 439.2 acres (390 acres + 49.2 acres), which is 24 acres less than the total proposed in the revised text. Please explain this discrepancy. Additionally, please add this proposed increase in maximum disturbed acreage on the Technical Revision cover sheet, under the brief description of the proposed revision. Please be sure that reclamation costs for all disturbed land, besides the 49.2 acre industrial/commercial area, are included in the revised Exhibit L.
- 16) The revised Exhibit F (reclamation plan map) submitted is not legible (as previously mentioned). Please provide a cleaner version of this map. Please be sure the map identifies the following:
 - a. Proposed maximum disturbed area
 - b. Proposed post-mining land use for each portion of the affected lands
 - c. Areas to be retopsoiled and revegetated (showing any differences in revegetation plan by area)
 - d. Areas to remain as sandy, gravelly beaches

- e. Areas to be stripped of topsoil for use in reclamation
 - f. Final slope gradients, including along pond shorelines
- 17) The revised Exhibit L should include costs for demolition of the conveyor belt that crosses the railroad tracks. Otherwise, if the structure has already been demolished and removed from the site, please state so in the revised text.
 - 18) The revised Exhibit L should include costs for planting the cover crop. It is unclear whether the seeding costs provided include these costs. The task for planting the cover crop should be listed as a separate line item from the task for planting the permanent seed mixture, as this task would occur separately.
 - 19) The revised Exhibit L should include costs for ripping the sand stockpile area and topsoil stockpile areas. The Division estimates a total of 73 acres for the entire processing and sand stockpiling area, and a total of 16.6 acres for the topsoil stockpile areas (see enclosed Google Earth images of site with Division markings).
 - 20) The revised Exhibit L should include costs to retopsoil and revegetate all disturbed land, minus the 38 acres that CPW recommends leaving as sandy beaches, and the 49.2 acre industrial/commercial area. Based on the current amount of disturbed land and the proposed additional 50 acres of “disturbed outer edges”, the Division estimates that approximately 306.5 acres of land will require retopsoiling and revegetating (390 acres disturbed + 50 acres additional disturbance – 95.5 acres lakes – 38 acres sandy beaches). However, the revised Exhibit L shows costs for retopsoiling and revegetating a total of 255 acres (64 acre farmland area + 141 acres in middle + 50 acres disturbed outer edges). Please revise the estimate to include costs for retopsoiling and revegetating all disturbed land that will require revegetation.
 - 21) The revised Exhibit L includes a line item for “Temporary irrigation” of 141 acres. However, the reclamation plan states that irrigation will not be used in the reclaimed area (as mentioned previously). Please remove this line item from Exhibit L if irrigation will not be used. If irrigation will be used for reclamation, the line item should remain in Exhibit L; however, please adjust the acreage to be irrigated to account for all disturbed land requiring revegetation.
 - 22) The revised Exhibit L includes a line item for “Remove area between two ponds”, with a total of 10,933 LCY to be excavated. Please explain how this value was derived. Additionally, please include in the reclamation plan text what equipment will be used for this task.

- 23) The revised Exhibit L includes a line item for “Shoreline grading”, with a total of 2,522 LCY to be moved. Please explain how this value was derived, including the proposed total length of shoreline to be graded. Additionally, please be sure to indicate on the revised Exhibit F reclamation plan map which portions of lake shorelines require grading.
- 24) The revised Exhibit L includes costs for reclaiming “Disturbed outer edges 50 acres”. Does this refer to the land proposed to have topsoil stripped for reclamation of other areas? Please identify the 50 acres of disturbed outer edges on the revised Exhibit E reclamation plan map. Additionally, if this does not refer to the land proposed to have topsoil stripped, please be sure to include an estimated acreage for such land in the revised reclamation plan, and include costs for reclaiming this land in the revised Exhibit L. Furthermore, the acreage proposed to have topsoil stripped should be added to the maximum disturbed acreage, if it is not already.
- 25) In the footnotes for the revised Exhibit L, there is a statement that “shorelines will remain as is, or sloped at 3:1 or 6:1 depending on CPW direction”. Please be advised the Division must approve the final grading plan for lake shorelines. In the revised reclamation plan, the operator commits to grading all disturbed slopes to 3H:1V or flatter, with lake shorelines ranging from 3H:1V to 6H:1V. As stated previously, the Division is requesting revised E-1 and E-2 cross-sections to show the proposed final grading of lake shorelines. Final grading of the lake shorelines must be consistent with the approved reclamation plan in order for the site to be released. Any shorelines left “as is” will not be acceptable for release if their slopes are steeper than the approved slope gradients.

This concludes the Division’s preliminary adequacy review of Technical Revision No. 5 (TR-05). The decision due date for this revision is currently set for November 24, 2016. If you are unable to provide satisfactory responses to any inadequacies prior to this date, it will be your responsibility to request an extension of time to allow for continued review of this revision.

If you have any questions, you may contact me by telephone at 303-866-3567, ext. 8129, or by email at amy.eschberger@state.co.us.

Sincerely,



Amy Eschberger
Environmental Protection Specialist

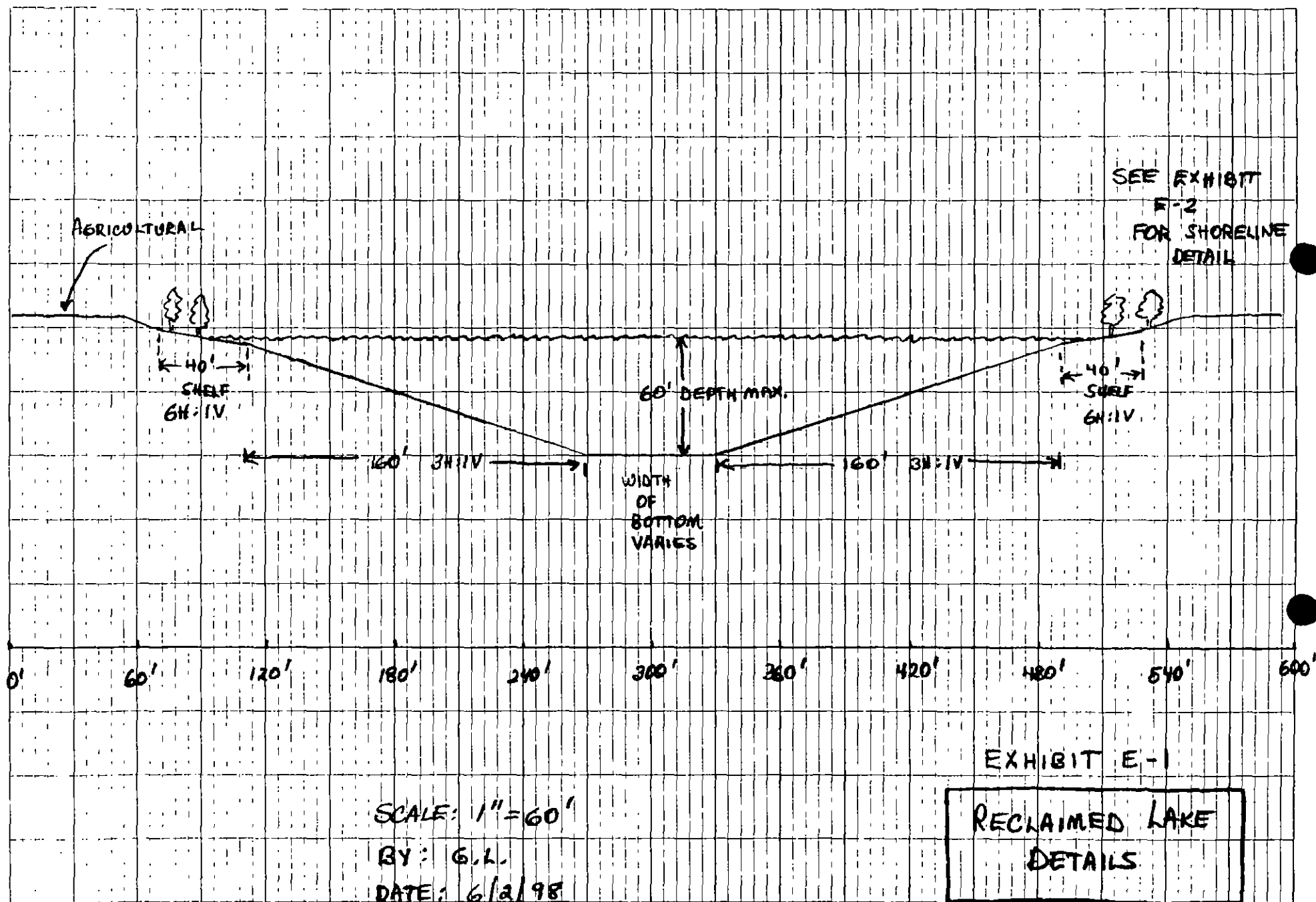
Enclosure(s): Original E-1 and E-2 cross-sections
Google Earth image of site with Division markings

Google Earth image of site with Division markings (Closer view of disturbed area)

Cc: George Tempel
Midwestern Farms
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Jackie Corday, CPW (via email: Jackie.corday@state.co.us)

Wally Erickson, DRMS



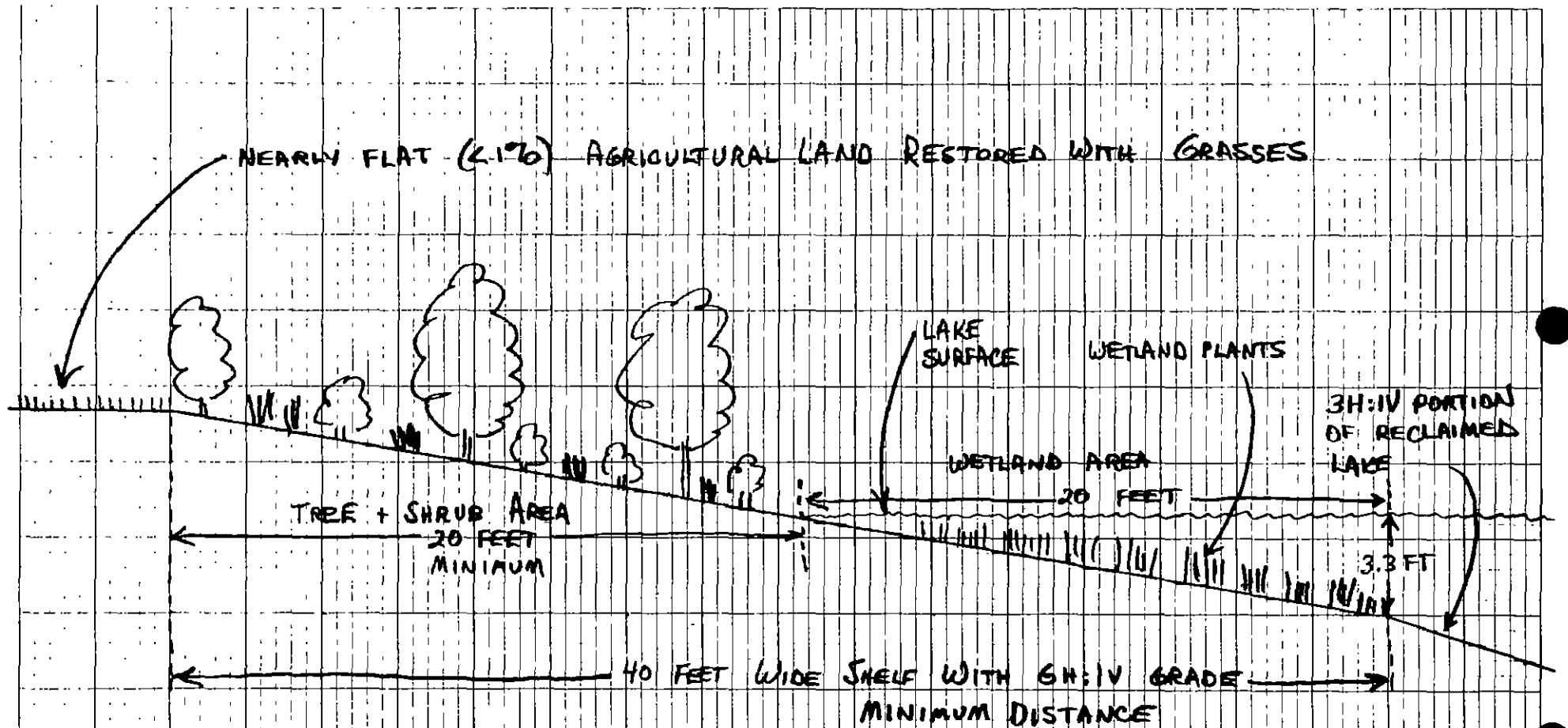


EXHIBIT E-2

RECLAIMED LAKESHORE DETAIL

BY: G.L.

SCALE: 1" = 5'

DATE: 6/4/98

M1993-059 / Midwestern Farms / Midwestern Farms

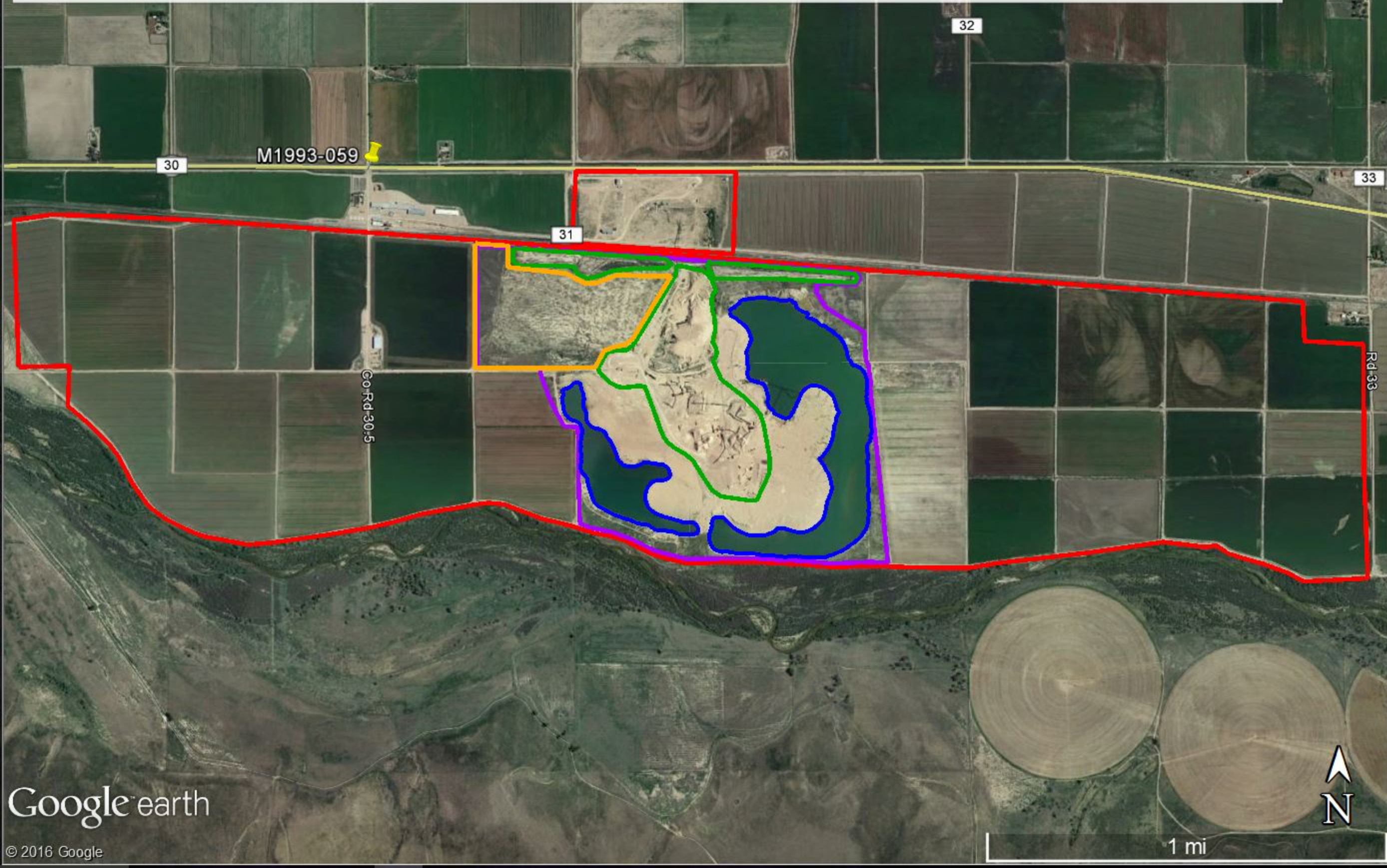
Red Outline = 1,479.2 acres = Approved Permit Area

Purple Outline = 390 acres = Maximum Disturbed Area (S. of railroad tracks)

Blue Outline = 95.5 acres = Exposed Groundwater (23.6 acres W. pond + 71.9 acres E. pond)

Orange Outline = 64.2 acres = Dryland farmland area

Green Outline = 89.6 acres = Areas to be ripped for reclamation (9.6 acres + 7 acres topsoil stockpile areas + 73 acres plant/stockpiling area)



M1993-059 / Midwestern Farms / Midwestern Farms

Closer View of Disturbed Area

Red Outline = 1,479.2 acres = Approved Permit Area

Purple Outline = 390 acres = Maximum Disturbed Area (S. of railroad tracks)

Blue Outline = 95.5 acres = Exposed Groundwater (23.6 acres W. pond + 71.9 acres E. pond)

Orange Outline = 64.2 acres = Dryland farmland area

Green Outline = 89.6 acres = Areas to be ripped for reclamation (9.6 acres + 7 acres topsoil stockpile areas + 73 acres plant/stockpiling area)

