STATE OF NORTH DAKOTA
NORTH DAKOTA PUBLIC SERVICE COMMISSION

IN THE MATTER OF A FORMAL HEARING REGARDING COYOTE CREEK MINING COMPANY'S APPLICATION FOR MINING PERMIT NACC-1302	)	PSC Case No. RC-13-850 OAH File No. 20140505 **COMPLAINANTS' PROPOSED FINDINGS OF FACT, CONCLUSIONS OF LAW, AND ORDER**

PRELIMINARY STATEMENT

On November 1, 2013, Coyote Creek Mining Company, L.L.C. applied for Surface Coal Mining Permit No. NACC-1302 for a new mine approximately ten miles southwest of Beulah, North Dakota. The permit application covers 8,091.511 acres of land located in all or portions of Sections 6 and 7, T142N, R88W; Sections 1, 2, 3, 11, and 12, T142N, R89W; Sections 19, 30, and 31, T143N, R88W; and Sections 23, 24, 25, 26, 27, 34, 35, and 36, T143N, R89W, all in Mercer County, North Dakota. On October 22, 2014, the Public Service Commission conditionally approved Permit No. NACC-1302, subject to the right of any person with an interest that is or may be adversely affected to request a formal hearing.

On November 24, 2014, the Commission received a request for a Formal Hearing in the matter from Mr. Casey Voigt, a landowner in the permit area. Mr. Voigt has concerns with the size of the permit area, the reclamation practices that would be used on land to be mined, his loss in agricultural production relating both to reclamation practices and the alluvial valley floor determination underlying the conditionally approved permit.

FINDINGS OF FACT

Alluvial Valley Floors: Definitions and applicable law

1. Federal and state law define "Alluvial valley floor" as "the unconsolidated stream-laid deposits holding streams where water availability is sufficient for subirrigation or flood irrigation agricultural activities."[1]

[1] 30 U.S.C. § 1291(1) (federal definition); N.D.C.C. § 38-14.1-02(1) (parallel state definition).

2. OSM guidance states that an AVF exists "when the following criteria are met":

    i. Geologic criteria:

        a. A topographic valley with a continuous perennial, intermittent, or ephemeral stream channel running through it; and

        b. Within that valley , those surface landforms that are either flood plains or terraces if these landforms are underlain by unconsolidated deposits; and

        c. Within that valley, those side-slope areas that can reasonably be shown to be underlain by alluvium and which are adjacent to flood plain or terrace landform areas.

    ii. Water availability criteria:

        a. Water is available by surface-water irrigation or subirrigation and is being, or has successfully been, used to enhance production of agriculturally useful vegetation; or

        b. Surface water is available and could be used to enhance production of agriculturally useful vegetation.[2]

3. Additionally, "'Flood irrigation' means, with respect to alluvial valley floors, supplying water to plants by natural overflow, or the diversion of flows in which the surface of the soil is largely covered by a sheet of water."[3]

4. "'Subirrigation' means, with respect to alluvial valley floors, the supplying of water to plants from a semisaturated or saturated subsurface zone where water is available for use by vegetation. Subirrigation may be identified by:

    a. Diurnal fluctuation of the water table, due to the differences in nighttime and daytime evapotranspiration rates;

    b. Increasing soil moisture from a portion of the root zone down to the saturated zone, due to capillary action;

    c. Mottling of the soils in the root zones;

    d. Existence of an important part of the root zone within the capillary fringe or water table of an alluvial aquifer; or

[2] OSM guidance II-11.
[3] N.D. Admin. Code 69-05.2-01-02(34); see also 30 CFR 701.5.

e. An increase in streamflow or a rise in ground water levels, shortly after the first killing frost on the valley floor."[4]

5. Federal and state law provides that "No [mining] permit or revision application shall be approved unless the application affirmatively demonstrates … that … the proposed surface coal mining operation, if located west of the one hundredth meridian west longitude, would—

    a. not interrupt, discontinue, or preclude farming on alluvial valley floors that are irrigated or naturally subirrigated...; [and]

    b. not materially damage the quantity or quality of water in surface or underground water systems that supply these valley floors…"[5]

6. Federal and state law requires mining operations to "preserv[e] throughout the mining and reclamation process the essential hydrologic functions of alluvial valley floors in the arid and semiarid areas of the country" (i.e., areas west of the one hundredth meridian).[6]

7. SMCRA draws a strict boundary requiring that all areas west of the 100th meridian undergo the same AVF analysis.

8. For mines located west of the 100th meridian, SMCRA places the burden on the permit applicant to "affirmatively demonstrate" that an AVF does not exist at the proposed mine site.[7]

9. An AVF "decision must be based on and supported by adequate technical data and analyses."[8]

10. The PCS's regulations state that "studies performed during the [AVF] investigation by the applicant…must include an appropriate combination, adapted to site-specific conditions, of the following:

    a. Mapping of the probable alluvial valley floor;

    b. Mapping of all lands included in the area used for agricultural activities;

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[4] N.D. Admin. Code 69-05.2-01-02(103); see also 30 CFR 701.5.
[5] 30 U.S.C. § 1260(b)(5); N.D.C.C. § 38-14.1-21(3)(e); N.D. Admin. Code 69-05.2-08-13(1).
[6] 30 U.S.C. § 1265(b)(10)(F); N.D.C.C. § 38-14.1-24(8)(g); N.D. Admin. Code 69-05.2-10-03(6)(b)(2)(b).
[7] 30 U.S.C. § 1260(b)(5); N.D.C.C. § 38-14.1-21(3)(e); N.D.A.C. 69-05.2-08-13(1).
[8] 48 Fed.Reg. 29802–03 (1983) (preamble to OSM AVF Guidance); *see also*. National Wildlife Fed'n v. Hodel, 839 F.2d 694, 729 (D.C. Cir. Jan. 29, 1988) (citing preamble to OSM AVF Guidance).

c. Topographic maps of all lands that are or were historically flood irrigated, showing the location of each diversion structure, ditch, dam and related reservoir;

d. Documentation that areas identified in this section are, or are not, subirrigated, based on ground water monitoring data, representative water quality, soil moisture measurements, and measurements of rooting depth, soil mottling, and water requirements of vegetation;

e. Documentation, based on representative sampling, that areas identified under this subdivision are, or are not, flood irrigable, based on streamflow, water quality, water yield, soils measurements, and topographic characteristics;

f. Analysis of a series of aerial photographs, including color infrared imagery capable of showing any late summer and fall differences between upland and valley floor vegetative growth and of a scale adequate for reconnaissance identification of areas that may be alluvial valley floors.[9]

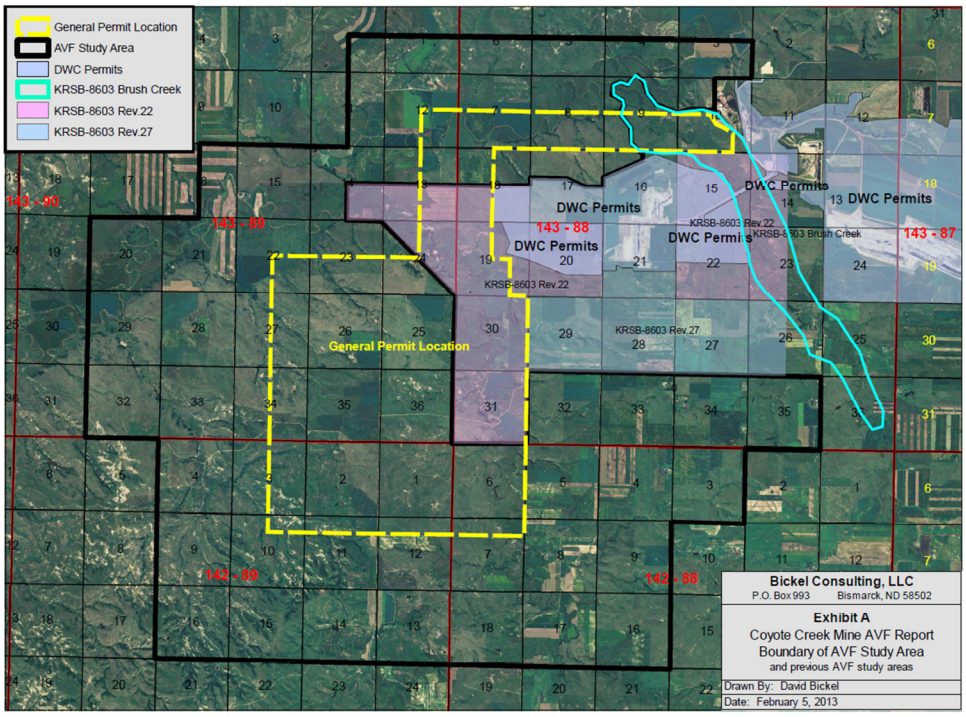
Applicable PSC alluvial valley floor determinations

11. Finding Number 5 of the PSC's conditionally approved NACC-1302, "Permit to engage in surface coal mining and reclamation operations" (hereinafter "NACC-1302") states: "The proposed mining operations will not interrupt, discontinue, or preclude farming on alluvial valley floors that are irrigated or naturally sub-irrigated or materially damage the quantity or quality of water in surface or underground water systems that supply these alluvial valley floors." The finding further states: "it has been determined that there are no alluvial valley floors within or adjacent to the permit area."[10]

12. Finding Number 5 of NACC-1302 is based upon two separate AVF determinations made by the PSC. This is most clearly shown in the map contained in Section 2.6.2 of CCM's application.[11] This color map depicts two distinct AVF study areas, each of which led to separate AVF determinations by the PSC. For convenience, that map is copied here:

[9] N.D. Admin. Code 69-05.2-08-13.
[10] CC Exhibit 10, at 4.
[11] CC Exhibit 10 at 2.6.2.

Section 2.6.2 Alluvial Valley Floor Study Area Map



13. The first AVF determination (hereafter "2009 AVF Determination") was completed for Revision 22 to Dakota Westmoreland Company's ("DWC") mining permit KRSB-8603. This determination included a large portion of the Coyote Creek valley, which is contained in part in Sections 19, 30, and 31 of T143N, R88W.

14. The 2009 AVF Determination was based on two documents: a study completed by DWC (hereafter "2009 AVF study"),[12] and a field study completed by the PSC (hereafter "2009 PSC field review").[13]

15. The second AVF determination (hereafter "2013 AVF Determination") was completed for NACC-1302 and encompasses all areas bounded in black in the map above not included in the 2009 AVF determination, principally the Knife River.

16. The 2013 AVF Determination was based on two documents: a study completed by CCM (hereafter "2013 AVF study"), and a field study completed by the PSC (hereafter "2013 PSC field review").

17. The 2009 AVF Determination and the 2013 AVF Determination and supporting studies, encompassed different geographic areas as shown in the map above. Together, the two AVF determinations form the basis for the PCS's finding number 5 of NACC-1302.

[12] CV Exhibit 5.
[13] PSC Exhibit 9.

The 2009 AVF Determination

18. During the January 2, 2015 formal hearing in this matter, Mr. Bickel, CCM's designated expert on alluvial valley floors, agreed that Coyote Creek meets the geologic requirements of an AVF as described by regulation.[14]

19. Thus, the only questions that are in dispute relate to the water availability criteria, specifically, whether at or along Coyote Creek:

    a. "Water is available by surface-water irrigation…and *is being, or has successfully been*, used to enhance production of agriculturally useful vegetation";

    b. "Water is available by…subirrigation and *is being, or has successfully been*, used to enhance production of agriculturally useful vegetation";

    c. "Surface water is available and *could be used* to enhance production of agriculturally useful vegetation"[15]

20. OSM has determined that Coyote Creek is "likely"[16] to meet the definition of an Alluvial Valley Floor based on likelihood that it meets all three water availability criteria: actual beneficial subirrigation, actual beneficial surface irrigation, and present water availability for beneficial surface irrigation.[17] Specifically, OSM's 1983 AVF reconnaissance survey (hereinafter "1983 OSM Survey") stated that in addition to "tributary water from Coyote Creek [being] used" to support "intensiv[e] irrigation" along the Knife River "between Crooked Creek and Elm Creek,"[18]

> Coyote Creek['s]…broad second terrace…is extensively used for pasture and hayfields. The lower parts of this terrace flood during high runoff; the other parts could be flood irrigated by spreading and/or pumping runoff water. Deep-rooting alfalfa probably receives beneficial moisture through subirrigation…[and additionally,] lower parts of [the upper reach of Coyote Creek] will occasionally flood, and all of it is flood irrigable.[19]

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[14] Transcript at 463 lines 1-8; *see also* CV Exhibit 3 at 30 ("The geologic criterion for alluvial valley floors - streamlaid unconsolidated deposits – is assumed").
[15] OSM Guidance, II-11 (emphasis added).
[16] CV Exhibit 2 at 1.
[17] *Id. at* 20, attached map.
[18] *Id.* at 12 at 12 (note that this page's numbering is missing, but the page can be identified as between page numbers 11 and 13, both of which are marked). Elm Creek is located at approximately 47.340742,-101.461759, just west of Stanton, and Crooked Creek is located at approximately 47.191987,-102.587171 between Marshall and Manning. Coyote Creek is located between these two points.
[19] *Id.* at 20, attached map.

21. The 1983 OSM survey "utilized field investigations, supplemented by interviews with agricultural producers, information from regulatory and land management agencies, from published reports, and from aerial photographs and Landsat imagery."[20]

22. The purpose of the 1983 OSM Survey was to document areas that should be studied in greater detail, i.e., areas whereby AVF determinations must be supported by "adequate technical data and analysis."[21] Here, given the extent of OSM's findings, the quantity of quality of technical data and analysis needed to support a negative AVF determination is substantial.

23. The 2009 AVF Study contains almost none of the information required by subparts "d," "e", and "f" of N.D. Admin. Code 69-05.2-08-13. These subparts all relate to present day water availability. The following table depicts what information described in subparts "d", "e," and "f" is contained in the 2009 AVF study in relation to Coyote Creek:

Groundwater monitoring data (N.D.A.C. 69-05.2-08-13(d))	**Data not collected.**
Groundwater quality data (N.D.A.C. 69-05.2-08-13(d))	**Data not collected.**
Soil moisture measurements (N.D.A.C. 69-05.2-08-13(d))	**Data not collected.**
Measurements of rooting depth (N.D.A.C. 69-05.2-08-13(d))	**Data not collected.**
Measurements of soil mottling (N.D.A.C. 69-05.2-08-13(d))	**Data not collected.**
Water requirements of vegetation (N.D.A.C. 69-05.2-08-13(d))	**Data not collected.**
Sampling of streamflow (N.D.A.C. 69-05.2-	**Data collected supports a positive AVF determination** (see "water yield data" below)

[20] CV exhibit 3 at 2.

[21] *See generally*, CV Exhibit, OSM Guidance, Ch. II (describing the purpose of reconnaissance surveys in relation to more detailed, later study).

08-13(e))	
Sampling of surface water quality (N.D.A.C. 69-05.2-08-13(e))	**Data collected supports a positive AVF determination**. Water quality data was collected, but only for salt content. The report found that Coyote Creek's salt content was 1,784 µmhos/cm and that this is near, but below 2,000 µmhos/cm, a "limit at which…water should not be used continuously on soils with restricted drainage." The data therefore established that surface water quality was adequate for use in agriculture.
Water yield data (N.D.A.C. 69-05.2-08-13(e))	**Data extrapolated supports a positive AVF determination.** Data was extrapolated from 1977-1983 USGS streamflow data. The 2009 AVF Study concluded that even excluding one abnormal year with four times as much flow as average, average water yield from Coyote Creek would allow for irrigation of 102 acres of crops with a foot of water based on June flows, and an additional 70 acres of crops with a foot of water based on July flows.[22]
Soils measurements (N.D.A.C. 69-05.2-08-13(e))	**Data not collected**.
Topographic characteristics (N.D.A.C. 69-05.2-08-13(e))	**Data collected supports a positive AVF determination**. The report relies on a "USGS topographic quad map" and a "more detailed presentation of topographic contours for part of the area" to determine that at least certain portions of Coyote Creek contain a "nearly level floodplain" of widths measuring from "1,200 to 1,500 feet" across.[23]
Analysis of aerial photographs, including infrared imagery capable of showing any late summer and fall differences between upland and valley floor vegetative growth (N.D.A.C. 69-05.2-08-13(f))	**Data not collected**.

24. The 2009 AVF Study determined that "Coyote Creek stream valley does not contain an alluvial valley floor." The study based this conclusion upon several subfindings, including that "subirrigation is not playing a role in enhancement of crop production."[24]

[22] Id. at 26.
[23] *Id.* at 8.
[24] CV Exhibit 3 at 30.

25. The 2009 AVF Study's rationale for finding no subirrigation on the Coyote Creek Valley consists of the following:[25] "The floodplain of Coyote Creek was walked in the spring of 2009…Surveys revealed that those plants nearest to the creek which should have the best access to subirrigation were, if anything, in poorer condition and/or had poorer population densities than the average plant in the field. The most productive plants were the beneficiaries of additional surface water, not ground water, by virtue of their location in or near the footslope position."[26]

26. A visual survey of vegetation described above is not recognized by North Dakota law as evidence tending to indicate subirrigation.[27] Moreover, the observations from the walkover are scientifically indefensible for several important reasons:

    a. The walkover of the field was conducted at the worst time of the year to assess the impact of subirrigation.[28]

    b. The subjective perception that there are progressive changes of plant vigor and population across the site is without any supporting data or documentation.[29]

    c. The walkover's observations could be explained by conditions other than a lack of subirrigation.[30]

    d. Observed plant patterns verify the existence of subirrigation.[31]

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[25] Transcript at 177 lines 3-16 (testimony of Charles Norris).
[26] CV Exhibit 3 at 29.
[27] *See* N.D.A.C. 69-05.2-08-13(d),(f) (containing no reference to visual walkovers of vegetation as appropriate method for determining existence of subirrigation); N.D.A.C. 69-05.2-01-02(103) (same).
[28] "It was done in early spring, mid-May, at a time of early annual growth. Late summer, long after spring rains, snowmelts, the spring water are gone, is the appropriate time to investigate subirrigation."[28] This is because "the time of year when subirrigation will be supporting the plant growth. During the spring there's lots of water in virtually any area for the early growth of crops. It's in the mid and late summer when things heat up, dry out, that you've lost the impact of spring rains and snowmelt, that there is not enough active water being provided by precipitation for active plant growth. That's the time of year when the influence of subirrigation can be observed." *Id.*
[29] *Id.* at 178-79.
[30] "(O)bservations are not the result of the [] 2009 growing season. They're the conditions going into the 2009 growing season. The previous winter, December of '08, January and February of '09, were exceptionally wet in Beulah. Those three months were 250 percent -- precipitation was 250 percent of the 30-year climatic average. March of 2009 recorded seven and a half times the normal precipitation. This is based on USDA climate data, the WETS table, that can be found at agacis.rec-acis.org/38057… There was no consideration that, for example, what was being looked at in terms of plant distributions was not stressed to the area, observed that the stress to the area was simply the result of perhaps prolonged submergence and scouring by flood waters in the areas nearest the stream in response to exceptional March precipitation that followed immediately after an unusually wet, snowy winter. Something other than a dismissal of subirrigation would appropriately have been considered and discussed, particularly since it was not the time of year when you can even see the effects of subirrigation." *Id.* at 179-80.
[31] "If the plant patterns perceived by the author in the 2009 report in fact exist, those patterns reflect drought stress rather than some other end -- I'm sorry -- if those patterns reflect drought stress rather than some other process or event. That stress is found exactly where it would be expected in the alluvial valley

e. There is no evidence that any of the crops in the floodplain are receiving water from anything but groundwater.[32]

27. The PSC conducted its own brief 2009 AVF field review (hereinafter "2009 PSC Field Review"), but data from this review is inadequate to support a finding of an AVF for the following reasons:

    a. The 2009 PSC Field Review did not visit the entirety of Coyote Creek and never visited the Voigts' alfalfa fields in Section 31 of T143N, R88W.

    b. The 2009 PSC Field Review was conducted in the middle of June, the wrong time of year to determine if subirrigation exists.[33]

28. The 2009 AVF Study and 2009 PSC Field Review are insufficient to "affirmatively demonstrate" that an AVF does not exist at Coyote Creek.

The totality of evidence points to the existence of an AVF on Coyote Creek

29. Based on these findings alone, the 2009 AVF Study's conclusion that an AVF does not exist at Coyote Creek is plainly erroneous. Rather, because the 2009 AVF Study found that average water yield from Coyote Creek was sufficient for irrigation of 102 acres of crops with a foot of water based on June flows, and an additional 70 acres of crops with a foot of water based on July flows, "surface water is available and could be used to enhance production of agriculturally useful vegetation."[34] This finding requires that Coyote Creek be classified as an AVF.

30. New evidence presented at the hearing indicates the existence of subirrigation at the Voigts' alfalfa fields in Section 31 of T143N, R88W. This evidence includes the Voigts' production records, testimony of Mr. Norris and Mr. Bickel, and analysis of applicable aerial infrared photography taken in late summer.

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sediments that do not have subirrigation support. It is a verification of the observation of OSM in 1985 that subirrigation in Coyote Creek drainage is important and it is a confirmation of OSM's expectation that AVF is likely." *Id.* at 183.

[32] The second sentence of the 2009 AVF Study stating that "The most productive plants were the beneficiaries of additional surface water, not ground water, by virtue of their location in or near the footslope position" is "innacurate or misleading" and "without merit." *Id.* at 184.

[33] "Late summer, long after spring rains, snowmelts, the spring water are gone, is the appropriate time to investigate subirrigation." Transcript at 177 lines 19-25.

[34] OSM Guidance, II-11.

31. The Voigts' production records compare alfalfa production on their lowland alfalfa fields to their upland alfalfa fields. On average, the lowland fields produce 7,648 lbs/acre, and the upland fields produce 4,835 lbs/acre.[35]

32. The additional productivity of the lowland alfalfa fields cannot be explained by on the basis of soil quality. Rather, CCM's mining permit application indicates that, if anything, soils are more productive at the upland fields than at the lowland fields.

33. The water table in the area of the Voigts' alfalfa fields range from 8.68 feet to 10.84 feet.[36] OSM's alfalfa subirrigation case study, contained in its AVF Guidance, indicates that at these groundwater depths, the expectation is that the Voigts' alfalfa fields would receive "a large portion of the[ir] water requirements" from groundwater.[37]

34. Coyote Creek's AVF expert stated that "when you plant alfalfa on Mr. Voigt's two fields, there is the potential that those plants can reach and utilize groundwater."[38]

35. Aerial photographs taken with color infrared film can distinguish actively transpiring plant communities from those which are senescent."[39]

36. Review of aerial infrared photography taken during the moisture stress period of late summer indicates that the Voigts' lowland alfalfa actively transpires, even during periods of moisture stress. "The water that supports this late-season vegetation, vegetation levels not seen on the surrounding uplands, can only be coming from naturally occurring subirrigation."[40]

37. Based upon this new information, the Voigts' lowland alfalfa fields located in Section 31 of T143N, R88W immediately adjacent to Coyote Creek are subirrigated.

Reclamation: applicable law

38. SMCRA requires mining companies to "Restore the land affected to a condition capable of supporting the uses which it was capable of supporting prior to any mining, or higher or better uses."[41]

39. At the Voigts' property, 92% of the land is native grassland,[42] a use defined under SMCRA as "land on which the natural potential plant cover is principally

[35] CV Exhibit 7.
[36] Transcript at 430-440; CC Exhibit 15 (well readings); CC Exhibit 16 (well readings).
[37] CV Exhibit 15, at C-34.
[38] Transcript at 467.
[39] CV Exhibit 15 at C-39.
[40] CV Exhibit 22 at par. 15.
[41] N.D.C.C. § 38-14.1-24(2).

composed of native grasses, grasslike plants, forbs, and shrubs valuable for forage and is used for grazing, browsing, or occasional hay production. Land used for facilities in support of ranching operations which is adjacent to or an integral part of these operations is also included."[43]

40. SMCRA further requires mining companies to, "at the minimum…[r]estore lands affected by the surface coal mining operation which have been designated for postmining agricultural purposes to the level of productivity equal to or greater than non-mined agricultural lands of similar soil types in the surrounding area, under equivalent management practices. For…grasslands, a diverse, effective and permanent vegetative cover shall be established of the same seasonal variety native to the area to be affected and capable of self-regeneration, plant succession, and at least equal in extent of cover and productivity to the natural vegetation of the area."[44]

Changes necessary for adequate reclamation

41. Throughout the history of North Dakota's reclamation program, only 1,684 acres of native grasslands have received final bond release.[45] And throughout that same time period, only 20.3% of all disturbed lands have ever attained final bond release, regardless of land use.[46]

42. At the Falkirk Mine, a mine owned by North American Coal and analogous in many ways to Coyote Creek Mine, no native grassland or tame grassland has ever received final bond release.[47]

43. Therefore, additional guidance is needed in permit NACC-1302 to ensure that reclamation is achieved.

44. Collection of soil health data during reclamation would be beneficial to the reclamation process and would allow CCM to make changes to its reclamation proactively, before problems with attaining productivity targets become apparent.

45. Specifically, the following information gathering during reclamation would facilitate meeting the Commission's reclamation goals for grasslands:

    a. One year after initial reclamation
        i. A reconnaissance of topographic aspects of reclaimed soils should be performed, "specifically examination of the soil floor" for "sinkholes" and "compaction" through a "penetrometer test."[48]

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[42] Transcript at 496 (testimony of Donn Steffen).
[43] N.D. Admin. Code 69-05.2-01-02.
[44] NDCC 38-14.1-24(17); *see also* N.D. Admin. Code 69-05.2-22-01; N.D. Admin. Code 69-05.2-22-02(3).
[45] *Id.*
[46] PSC Exhibit 8.
[47] PSC Exhibit 7.
[48] Transcript at 250-51.

b. Three to four years after initial reclamation, a general soil reconnaissance by a qualified soil surveyor should examine the following:
    i. To a depth of four feet, examination of profile of soil structure, root penetration, compaction, and electrical conductivity to determine salinity.
    ii. To a depth of one foot, measurements of soil organic carbon, microbial biomass carbon, infiltration, soil aggregate stability, and respiration.[49]

46. This type of information-gathering reflects the fact that soil science has advanced substantially over the past forty years. Today, soil health considers three overarching components: physical, chemical, and biological characteristics of soils. Healthy soils must exhibit positive aspects of all three categories, and modern soil science places particular emphasis on the biological component.[50]

47. Separate from information-gathering, native grasses are more productive than tame grasses.[51] Therefore, the Commission's existing allowance for 35% non-native grasses on reclaimed lands is no longer appropriate.

CONCLUSIONS OF LAW

48. An alluvial valley floor as defined under 30 U.S.C. § 1291(1) (federal definition) and N.D.C.C. § 38-14.1-02(1) (parallel state definition) exists at Coyote Creek, located in Mercer County, North Dakota. Specifically, Coyote Creek exhibits the geologic criteria necessary for an AVF and further exhibits two water availability criteria: (1) "Water is available by…subirrigation and is being, or has successfully been, used to enhance production of agriculturally useful vegetation"; (2) "Surface water is available and could be used to enhance production of agriculturally useful vegetation."[52]

49. The Commission has jurisdiction in this proceeding to add information-gathering requirements to this permit based upon its legal authority to interpret rules and statutes under its jurisdiction.[53]

50. The Commission's existing guideline allowing up to 35% tame grassland to constitute adequate reclamation of native grassland does not meet the requirement that reclamation re-establish "productivity equal to or greater than non-mined agricultural lands of similar soil types in the surrounding area…"[54]

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[49] Transcript at 252.
[50] Transcript at 249.
[51] Transcript at 343.
[52] OSM guidance II-11.
[53] *See generally*, LEGAL STATUS OF RULES, GUIDELINES, AND PRONOUNCEMENTS OF AGENCIES, North Dakota Legislative Council, October 1999, *available at* http://www.legis.nd.gov/files/events/memorandum/19127.pdf?20150306143416.
[54] NDCC 38-14.1-24(17); *see also* N.D. Admin. Code 69-05.2-22-01; N.D. Admin. Code 69-05.2-22-02(3).

ORDER

51. Approval for permit NACC-1302 is hereby withdrawn due to an incorrect alluvial valley floor determination.

52. Coyote Creek Mining Company may resubmit its application with updated information related to performance standards for Alluvial Valley Floors as set forth in 30 U.S.C. § 1260(b)(5); N.D.C.C. § 38-14.1-21(3)(e); N.D. Admin. Code 69-05.2-08-13(1); 30 U.S.C. § 1265(b)(10)(F); N.D.C.C. § 38-14.1-24(8)(g); N.D. Admin. Code 69-05.2-10-03(6)(b)(2)(b).

53. Upon resubmittal of the application, the Commission will attach the following conditions to permit NACC-1302:

    a. At time of reclamation, CCM shall obtain, record, and submit the following information to the Commission and to the surface owners of land that will be reclaimed:

        i. One year after initial reclamation:

            1. A reconnaissance of topographic aspects of reclaimed soils should be performed to examine the soil floor for ssinkholes and compaction through a penetrometer test.

        ii. Four years after initial reclamation, a general soil reconnaissance by a qualified soil surveyor shall examine the following:

            1. To a depth of four feet, soil structure, root penetration, compaction, and electrical conductivity.
            2. To a depth of one foot, soil organic carbon, microbial biomass carbon, infiltration, soil aggregate stability, and respiration.[55]

        iii. The above information shall be gathered in sufficient quantity and in sufficient locations to adequately represent the reclaimed area.

    b. Final bond release shall not be granted unless at least 90% native grasses have been established on reclaimed lands, in addition to all other applicable requirements.

[55] Transcript at 252.