STATE OF MICHIGAN
MICHIGAN OFFICE OF ADMINISTRATIVE HEARINGS AND RULES

IN THE MATTER OF:	**Docket No.: 20-009773**
Petition of Michigan Farm Bureau; Michigan Milk Producers Association; Michigan Allied Poultry Industries; Foremost Farms USA; Michigan Pork Producers Association; Dairy Farmers of America; Select Milk Producers, Inc.; and 163 Identified Livestock Farms	**Permit No.: MIG010000**
	Agency: Department of Environment, Great Lakes, and Energy
	Case Type: Water Resources Division

_____/

Issued and entered
this 13th day of January 2025
by Daniel L. Pulter
Administrative Law Judge

FINAL DECISION AND ORDER

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FINAL DECISION AND ORDER

This is a contested case to challenge the terms of a general permit issued by the Water Resources Division (WRD) of the Department of Environment, Great Lakes, and Energy (EGLE) pursuant to Part 31, Water Resources Protection, of the Natural Resources and Environmental Protection Act (NREPA), being 1994 PA 451, as amended. MCL 324.3101, *et seq*. The general permit is a National Pollutant Discharge Elimination System (NPDES) permit that was issued by the WRD on March 27, 2020, under the authority of Part 31. On May 26, 2020, a Petition for Contested Case Hearing that serves to challenge the general permit was collectively filed by Michigan Farm Bureau, the Michigan Milk Producers Association, the Michigan Pork Producers Association, Michigan Allied Poultry Industries, Foremost Farms USA, Dairy Farmers of America, and Select Milk Producers, Inc., together with 126 livestock farms identified on Exhibit B to the Petition (collectively Petitioners). See Procedural History, *infra*.

JURISDICTION

In its Closing Arguments, the WRD conceded that jurisdiction is appropriate in this contested case under MCL 324.3112(5), which provides that "[a] person who is aggrieved by … the reissuance … of an existing permit of the department executed pursuant to this section may file a sworn petition with the department setting forth the grounds and reasons for the complaint and requesting a contested case hearing on the matter…." (See WRD's Closing Arguments, p 9). In their Petition, Petitioners claimed they were aggrieved by the reissuance of the General Permit at issue in this matter. Consistent with § 3112(5), a contested case hearing was conducted in this matter. See Procedural History *infra*.

PROCEDURAL HISTORY

On March 27, 2020, the WRD issued an NPDES Wastewater Discharge General Permit for Concentrated Animal Feeding Operations, Permit No. MIG010000, which became effective on April 1, 2020. (Exhibit R-45). A Petition for Contested Case Hearing was timely filed with by Petitioners with the Michigan Office of Administrative Hearings and Rules (MOAHR) on May 26, 2020. The Petition was filed by seven farm associations

(Michigan Farm Bureau, the Michigan Milk Producers Association, the Michigan Pork Producers Association, Michigan Allied Poultry Industries, Foremost Farms USA, Dairy Farmers of America, and Select Milk Producers, Inc.) together with 126 livestock farms identified on Exhibit B to the Petition.[1] On August 10, 2020, the parties filed a Stipulation that 41 additional farms have been identified that wish to be included as petitioners in this case, and that one farm intended to withdraw from the case. The Order approving the joinder of 41 additional farms and the withdrawal of one farm was entered on August 10, 2020. Also, on December 28, 2021, Petitioners filed a Stipulation Regarding Withdrawal of Two Individual Farms. The Order approving the withdrawal of the two individual farms was entered on June 28, 2022. Hence, Petitioners currently consist of the seven agricultural associations referenced above, along with 163 individual farms.[2]

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[1] While Exhibit B to the Petition originally identified 126 individual farms, the Stipulation filed on August 10, 2020 clarifies that there were actually 127 individual farms, because one of the identified parties was the controlling entity for two separate farms.

[2] The 163 individual farms are identified as follows: (1) Bennett Farms Livestock, LLC; (2) Performance Farms, LLC; (3) Airport View Turkeys; (4) J and A Pork, LLC; (5) Swisslane Farms, Inc.; (6) Highland Dairy, LLC; (7) Edge Wood Dairy, LLC; (8) Walnutdale Farms, LLC; (9) Wilson Centennial Farm, LLC; (10) Bakerlads Farm; (11) Side Street Pork, LLC; (12) Hartland Farms, Inc.; (13) Kober Farms, LLC; (14) Simon Dairy Farm; (15) Skinner Farms, LLC; (16) Preston Hog Farms; (17) Pridgeon Farms, LLC; (18) Car Min Vu Dairy; (19) Wil-Le Farms, Inc.; (20) Hogquest Farms, LLC; (21) Meadowbrook Farms, LLC; (22) High Lean Pork-Parker Rd; (23) Heasley Farm; (24) John Schaendorf Dairy; (25) Halbert Dairy, LLC; (26) DeYoung Pork, Inc.-Plainwell; (27) DJN Cattle Farms, Inc. d/b/a Halliwill Farms; (28) Grand River Grain, LLC; (29) Grand River Grain North; (30) River Ridge Farms, Inc.; (31) White Acres Turkey Farm, LLC; (32) ATE Farms, LLC; (33) Bleich Dairy; (34) Valley View Pork, LLC; (35) Schuring Farms, LLC; (36) Schuring Swine, LLC; (37) Poll Farms Inc.; (38) Heinze Pork; (39) Flower Creek Swine, LLC; (40) Harvest Hill Farm; (41) Stoughton Creek Farms, LLC; (42) Lorenz Family Farms; (43) Bebow Dairy Farm; (44) Central Michigan Milk Producers, LLC; (45) Hoeve Farms; (46) J&J Russcher Properties, LLC; (47) Precision Pork Farm; (48) Seldom Rest Hog Farm; (49) JMax Dairy, LLC; (50) Willow Creek Farms; (51) Hass Feedlot LLC; (52) Alpine Pork, LLC; (53) Riverbend Farm, LLC; (54) Shamrock Farm, Inc.; (55) Ehinger Farm; (56) Baseline Farm; (57) Village Central Sandy Ridge; (58) Double Quad Farms; (59) Timmerman Farm, LLC; (60) Trestle Town Turkeys, Inc.; (61) Kleinheksel Farms, LLC; (62) Prairie View Dairy, LLC; (63) Terrehaven Farms, Inc.; (64) Meadow Rock Dairy, LLC; (65) Willow Point Dairy, LLC; (66) Clover Family Farms; (67) Karnemaats, LLC; (68) Sol Vista; (69) Hickory Gables, Inc.; (70) Centerwood Farms LLC; (71) New Flevo Dairy, Inc.; (72) S&T Barns - Booth; (73) S&T Barns - Fawn River; (74) S&T Barns - TSC; (75) S&T Barns-Haenni; (76) Sand Creek Dairy, LLC; (77) Vanderploeg Holsteins, LLC; (78) Cary's Pioneer Farm, Inc.; (79) Brook View Dairy, LLC; (80) Geerlings Hillside Farms, LLC; (81) Hillside Farms - Overisel; (82) Scenic View Dairy, LLC; (83) NVF, Inc.; (84) PSY Farms; (85) Konos, Inc.; (86) Konos, Inc, Martins Organics; (87) Holloo Farms, LLC; (88) Preferred Hog Farms, Inc.; (89) Oomen Brothers, Inc. d/b/a Oomen Brothers Hogs; (99) Petro Farms; (91) Crockery Creek - 74th; (92) Crockery Creek - 80th; (93) High-Lean Pork 3 - Hoover; (94) Huron Pork, LLC; (95) Nobel Family Dairy, LLC; (96) Veld Farms, LLC; (97) Burns Poultry Farms, Inc.; (98) Red Arrow Dairy, LLC; (99) KY-10 Farms, LLC; (100) Lucky 7 Farms, LLC; (101) Lucky 7 Dairy, LLC; (102) Payla Meadows, LLC; (103) R&R Pork, LLC; (104) Crossroads Dairy, LLC; (105) den Dulk Dairy Farm, LLC; (106) Cary Dairy Farm, Inc.; (107) Contract Finishers, Inc.; (108) Sandy Ridge Dairy, LLC; (109) T & H Dairy; (110) Packard Farms, LLC; (111) Ingleside Farms; (112) Gagnon Hog Farm, LLC; (113) Dutch Meadows Dairy, LLC; (114) Mayflower Dairy, LLC; (115) Stutzman Poultry Farms, LLC; (116) Scott McKenzie Farms; (117) Bradford Dairy; (118) Stewart Farms, LLC; (119) Y B Farmin, LLC; (120) Gallagher Dairy Farm, Inc.; (121) Adam Pork Powerhouses, LLC; (122) D&K Farms; (123) Liberty Beef Farms; (124) JBC Dairy Recycling; (125) Myers Farms; (126) Berlyn Acres, LLC; (127) Meadow Brook Dairy; (128) Nobis Dairy Farms; (129) Rapid Ridge; (130) Rich Ro Dairy-North; (131) Rich Ro Dairy-South; (132) Steenblik Dairy Inc.; (133) Terrell Pork; (134) Benthem Brothers, (continued…)

Pursuant to an Order entered on June 29, 2020, a prehearing conference was scheduled for August 11, 2020. At this conference, Petitioners and the WRD agreed to confer in an attempt to establish the contents of the administrative record, and to determine if discovery related to that record was necessary. The parties also agreed to reconvene the prehearing conference on September 16, 2020. (See Order entered on August 11, 2020). At the September 16, 2020 prehearing conference, the parties agreed to conduct an additional Status Conference on November 10, 2020. (See Order entered on September 16, 2020).

On July 20, 2020, Margrethe Kearney filed an Entry of Appearance but did not identify the parties whom she represented. Therefore, by an Order entered on August 5, 2020, Ms. Kearney was directed to file an application to intervene. The application to intervene was thereafter filed on September 8, 2020 by the Environmental Law & Policy Center, the Michigan Environmental Council, the Environmentally Concerned Citizens of South Central Michigan, Freshwater Future, For Love of Water, Food & Water Watch, Michigan League of Conservation Voters, and the Alliance for the Great Lakes (collectively Intervenors). In a Response filed on September 24, 2020, the WRD indicated that Intervenors "unquestionably have standing and should be allowed to intervene in this contested case proceeding." (WRD's Response to Motion to Intervene, p 5). Petitioners' brief in opposition to the application to intervene was filed on September 24, 2024. The application to intervene was granted by an Order entered on November 5, 2020. That Order also invited Intervenors to participate in the status conference scheduled for November 10, 2020.

The November 10, 2020 status conference date was converted to a prehearing conference, where the parties agreed to the following deadlines: (1) the WRD shall provide a copy of the administrative record to the parties by November 30, 2020; (2)

(…continued) Inc.; (135) Courter Farms - West; (136) Finish Line Farms; (137) Little Bend Piggery; (138) White Farms; (139) Laier Farms; (140) Deer Creek Poultry; (141) VDS Farms-Fulton; (142) VDS Farms-S Avenue; (143) Davis Farms; (144) Davis Pork; (145) Fairgrove Farms; (146) Makin Bacon Farm; (147) Les Schaper Farm; (148) Peaceful Road Farms; (149) GDW Farms; (150) GDW Turkey Farm-Fillmore; (151) GDW Turkey Farms-Land of Turkey; (152) Ottawa Turkey Farm; (153) Slater Farm; (154) Oomen Farms Ltd; (155) Dynasty Dairy; (156) Shupe Dairy Inc.; (157) Burns Family Farm; (158) Jahn Farms; (159) Van Oeffelen Farm Services; (160) Ruggles Beef; (161) Storey Farms LLC; (162) Courter Farms - East; and (163) Gernaat Family Farms. According to testimony in this case, den Dulk Dairy Farm, LLC (number 105, *supra*) is now known as Applegate Dairy. (Testimony of Scott Henry, 11 Tr 2883).

motions to dismiss may be filed by December 14, 2020, with responses by January 11, 2021; (3) the WRD shall file its written direct testimony and exhibits by February 8, 2021;[3] (4) Petitioners shall file their written direct testimony and exhibits by April 5, 2021; (5) Intervenors shall file their written direct testimony and exhibits by May 28, 2021; (6) rebuttal testimony and exhibits shall be filed by July 1, 2021; (7) motions to strike may be filed by August 2, 2021, with responses filed by August 16, 2021; (8) cross-examination and redirect testimony to be heard at a hearing commencing on August 30, 2021; and (9) oral arguments on motions to strike to be heard prior to the hearing on August 30, 2021. (See Order entered on November 12, 2020). By an Order dated August 2, 2021, the date for the in-person hearing, scheduled to commence on August 30, 2021, was converted to a videoconference hearing. The August 2, 2021 Order also required the parties to submit electronic hearing exhibits to the tribunal by no later than August 23, 2021.

By email dated November 24, 2020, the WRD requested an extension of the deadline for providing the administrative record to the parties. Because the requested extension was unopposed, it was granted by an email dated November 24, 2020. The WRD provided the parties with the administrative record on December 4, 2020. The administrative record totaled in excess of 20,400 pages. (See Proof of Service filed on December 16, 2020).

The WRD filed a motion to dismiss seventeen of the individual farm Petitioners on December 14, 2020. A response to the WRD's Motion was filed by Petitioners on January 11, 2021. The motion to dismiss was denied by an Order entered on August 2, 2021.

Pursuant to the January 21, 2021 Stipulation of the parties,[4] the WRD submitted its pre-filed direct testimony and its proposed hearing exhibits on March 8, 2021. Petitioners filed their pre-filed direct testimony and their proposed hearing exhibits on May 3, 2021. Intervenors submitted their pre-filed direct testimony and their proposed hearing exhibits on June 25, 2021. Rebuttal testimony and proposed rebuttal exhibits were filed

[3] The Scheduling Order entered on November 12, 2020 required the parties to submit their hearing exhibits on compact disks (CD) in a portable document format (PDF).

[4] On January 14, 2021, Petitioners filed a Motion to extend the deadlines for the filing of pre-filed direct testimony and rebuttal testimony. On January 21, 2021, the parties filed a Stipulation agreeing to extend the scheduling order dates. The January 21, 2021 Stipulation was approved by the Nunc Pro Tunc Order entered on October 15, 2024.

by the parties on July 29, 2021. Pursuant to an Order entered on August 23, 2021,[5] the parties were provided the opportunity to refile their direct testimony and exhibits, and their rebuttal testimony and exhibits. In accordance with the August 23, 2021 Order, Petitioners and Intervenors filed their revised testimony and exhibits on September 3, 2021; the WRD and Intervenors filed revised rebuttal testimony and exhibits on September 10, 2021; and Petitioners filed revised rebuttal testimony and exhibits on September 13, 2021. By an Order entered on September 20, 2021,[6] the tribunal requested the parties to re-file their direct and rebuttal testimony,[7] which was refiled by Petitioners on September 23, 2021, and by the WRD on September 24, 2021.

Petitioners filed six motions to strike on August 16, 2021. Revised motions to strike were filed on September 20, 2021. Intervenors' responses to the motions to strike were filed on September 27, 2021. The WRD's response to the motions to strike was filed on September 28, 2021. On December 6, 2021, at the commencement of the contested case hearing, Petitioners' motions to strike were denied.

One of Petitioners' revised motions to strike requested that portions of the WRD's rebuttal testimony be stricken, or, in the alternative, that Petitioners be allowed to file surrebuttal testimony. However, on September 24, 2021, the parties filed a Stipulation resolving that motion to strike, by agreeing to allow Petitioners to file surrebuttal testimony. The surrebuttal testimony of Laura Campbell was filed on November 15, 2021. In an Order dated November 22, 2021, the tribunal struck Petitioners' proposed pre-filed

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[5] In the August 23, 2021 Order, the parties were provided a deadline for filing Motions for the addition of new exhibits by September 20, 2021, with responses to Motions for the addition of new exhibits to be filed by October 4, 2021. Instead, on September 17, 2021, the parties filed a Stipulation agreeing to the filing of new exhibits. The September 17, 2021 Stipulation was approved by the Nunc Pro Tunc Order entered on October 15, 2024.

[6] In this Order, the tribunal indicated that it had several concerns with the parties' revised testimony and exhibits. First, the revised testimony was not clearly marked as "revised." Second, some of the parties submitted their hearing exhibits on a share-point site, rather than directly filing the exhibits with the tribunal. Third, the parties inserted excerpts of their exhibits or photographs in the pre-filed testimony, so they were instructed to remove such information from the pre-filed testimony (which would be placed verbatim in the official transcript of the case). (See Order entered on September 20, 2021).

[7] The tribunal also discovered that, upon the refiling of the pre-filed testimony of James DeYoung, two lines of his testimony were erroneously omitted. Petitioners were granted leave to re-file Mr. DeYoung's testimony to correct this omission. (See email correspondence to the parties on October 27, 2021). Mr. DeYoung's testimony was re-filed on October 27, 2021. Similarly, the tribunal requested that the testimony of Monica Day be re-filed without bullets, which are not used in transcripts. (See email correspondence to the parties on October 29, 2021). Ms. Day's testimony was re-filed on November 1, 2021. Intervenors also re-filed the testimony of Dr. John Ikerd, for similar reasons, on November 1, 2021.

surrebuttal testimony on the grounds that surrebuttal testimony was neither necessary nor permitted in the contested case.

On November 10, 2021, the parties also filed a Stipulation regarding impeachment exhibits and requested a status conference to discuss hearing logistics. By an Order entered on November 22, 2021, this Stipulation was approved, and the tribunal explained the order of presentation of testimony for the upcoming hearing, thereby negating the need for an additional status conference. Impeachment exhibits were filed by the WRD on November 30, 2021, by Intervenors on December 1, 2021, and by Petitioners on December 6, 2021.

A hearing was conducted over 13 days on December 6-10 and 13-17, 2021, and February 7-9, 2022, under the applicable provisions of the Administrative Procedures Act (APA), 1969 PA 306, as amended, for the purpose of conducting cross-examination, re-direct examination, and the receipt of additional exhibits into evidence. MCL 24.201, *et seq.* Due to COVID-19 and pursuant to MOAHR Administrative Hearing Standard No. 2021-1, the hearing was conducted via videoconference on the Microsoft Teams platform.

After the conclusion of the hearing on February 9, 2022, the record was left open until July 15, 2022 for the submission of written Closing Arguments, Responses to Closing Arguments, and hearing transcripts. Also, the record was supplemented by Exhibit P-151, filed on February 25, 2022.[8] The record was closed on July 15, 2022.

However, Supplemental Briefs were filed at the request of this tribunal on October 31, 2022 after the Michigan Court of Appeals decision was issued in tandem litigation entitled *Michigan Farm Bureau v Department of Environment, Great Lakes, & Energy*,

[8] Exhibits P-17, R-75 and R-113 are three copies of a public comment submitted to the WRD by seven certified Comprehensive Nutrient Management Plan (CNMP) providers representing 272 Concentrated Animal Feeding Operation (CAFO) facilities in the state of Michigan. The tribunal requested that Petitioners identify by testimony the 272 CAFO facilities represented by such CNMP providers. In lieu of proffering testimony, Petitioners elected to submit the Affidavit of Laura Campbell, which was filed with the tribunal on February 25, 2022, after the conclusion of the contested case hearing. This Affidavit is hereby received into evidence as Exhibit P-151 and is admitted for all purposes of the record. Of the 163 individual farms that are part of the Petitioners in this contested case, the seven CNMP providers did not represent seven of the farm Petitioners, to-wit: DJN Cattle Farms, Inc. d/b/a Halliwill Farms (number 29 in note 2, *supra*); Heinze Pork (number 40 in note 2, *supra*); Clover Family Farms (number 68 in note 2, *supra*); New Flevo Dairy, Inc. (number 73 in note 2, *supra*); Lucky 7 Dairy, LLC (number 103 in note 2, *supra*); Benthem Brothers, Inc. (number 136 in note 2, *supra*); and White Farms (number 140 in note 2, *supra*). (Exhibit P-151, p 2, ¶ 9).

343 Mich App 293; 997 NW2d 467 (2022).[9] On January 20, 2023, the parties filed a Stipulation to Stay the Contested Case Proceeding. The basis for the stay was the appeal of the Court of Appeals decision to the Michigan Supreme Court. An Order Granting Stay of Contested Case was entered on January 23, 2023, which stayed the issuance of this Final Decision and Order. The Michigan Supreme Court issued its decision on July 31, 2024. See *Michigan Farm Bureau v Department of Environment, Great Lakes, & Energy*, __ Mich __; 2024 WL 3610196 (2024) (cited as *Michigan Farm Bureau II*).[10] See also Section III(D) of this FDO.

The stay of this contested case was lifted by an Order entered on October 15, 2024. A Status Conference was held with the parties to the contested case on October 30, 2024. At the Status Conference, Petitioners requested that the tribunal set a briefing schedule to address the application of *Michigan Farm Bureau II* to the facts in this contested case. The parties agreed to a briefing schedule, and all such Briefs were filed by the parties by December 23, 2024.

PROPERTY RIGHTS PRESERVATION ACT

Pursuant to the Property Rights Preservation Act (PRPA), 1996 PA 101, MCL 24.421, *et seq.*, the undersigned, in formulating this Final Decision and Order (FDO), reviewed the Takings Assessment Guidelines and considered the issue of whether this governmental action equates to a constitutional taking of property. Const 1963, Art X, §2, as amended (eff. December 23, 2006).

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[9] In this decision, the Michigan Court of Appeals held that certain conditions in the 2020 CAFO General Permit at issue in this contested case "go beyond the scope of the promulgated rule" thereby expanding "the regulatory restrictions generally applicable to" Concentrated Animal Feeding Operations. 343 Mich App at 313. Hence, the Court of Appeals stated that these "new conditions are not merely guidelines but have the force and effect of 'rules' not formally promulgated." *Id*. However, the Court of Appeals held that the Court of Claims properly dismissed the case, because the plaintiffs did not first seek a declaratory ruling from EGLE before filing their case with the Court of Claims. 343 Mich App at 318.

[10] The Michigan Supreme Court affirmed the judgment of the Court of Appeals, but vacated its holding that the discretionary conditions of the 2020 CAFO General Permit are "rules" under the terms of the APA. Rather, the Court held that "neither the general permit nor the discretionary conditions in it are 'rules' under the APA…." ___ Mich ___, ___; 2024 WL 3610196, at *54.

PARTIES

I. Petitioners

Petitioners were represented by Attorneys Zachary C. Larsen and Michael J. Pattwell of the law firm Clark Hill, PLC. Petitioners collectively offered the testimony of the following witnesses:

1. Robert Dykhuis, who is the owner of Dykhuis Farms (8 Tr 1946-2067);[11]

2. Rick Sietsema, who is a part owner of Crockery Creek Turkey Farms, High Lean Pork, and Huron Pork (8 Tr 2069 to 9 Tr 2141);

3. Caleb Stewart, who is the owner and operator of Stewart Farms LLC (9 Tr 2142-2165);

4. Allison Brink, who is employed as the Executive Director of Michigan Allied Poultry Industries, Inc. (9 Tr 2167-2299);

5. Dr. James J. Averill, who was formerly employed as the Deputy Director of the Michigan Department of Agriculture & Rural Development (MDARD) (9 Tr 2305-2382);

6. Laura Campbell, who is employed as the manager of the Agricultural Ecology Department at Michigan Farm Bureau (10 Tr 2492-2798);

7. David Trainor, who is employed as a Professional Engineer with Shannon & Wilson, Inc. (10 Tr 2801-2872);

8. Scott Henry, who is the manager of Applegate Dairy (formerly den Dulk Dairy), Crossroads Dairy, Edgewood Dairy, Meadow Rock Dairy, Willow Point Dairy, Red Arrow Dairy, and Mayflower Dairy (11 Tr 2882-2901);

9. Kevin Elder, who was formerly employed as the Chief of the Division of Livestock Environmental Permitting for the Ohio Department of Agriculture (11 Tr 2906 to 12 Tr 3210); and

10. James DeYoung, who is the owner of CJD Farm Consulting, Inc. (12 Tr 3222-3340).

[11] All references to the Transcript herein will be to the applicable volume number and page number of the Transcript.

Through these witnesses, Petitioners entered Exhibits P-1 through P-59, P-61 through P-129, P-131, P-132, P-134, P-139, P-140, P-144 through P-146, P-149, and P-151.[12]

II. Respondent

The WRD was represented by Elizabeth A. Morrisseau and Jennifer A. Matuja (nee Rosa), Assistant Attorneys General. The WRD offered the testimony of the following witnesses:

1. Christine Alexander, who is employed as the Permits Section Manager for the WRD (1 Tr 52 to 2 Tr 301);

2. Megan McMahon, who is employed as a Water Quality Analyst for the WRD (2 Tr 303-355);

3. Bruce Washburn, who is employed as an Environmental Quality Specialist for the WRD (2 Tr 357 to 4 Tr 808);

4. Thad Cleary, who is employed as an Environmental Quality Analyst in the Nonpoint Source Program of the WRD (4 Tr 810-953);

5. Kevin Goodwin, who is employed as an Aquatic Biology Specialist in the Surface Water Assessment Section of the WRD (4 Tr 955-997);

6. Sylvia Heaton, who was formerly employed by, but is now retired from, the Water Quality and Aquatic Nuisance Control Permits Unit in the Permits Section of the WRD (5 Tr 1008-1285);

7. Molly Rippke, who is employed as an Aquatic Biology Specialist for the Surface Water Assessment Section of the WRD (5 Tr 1287 to 6 Tr 1449);

8. Sarah Holden, who is employed by the WRD as its statewide specialist for inland lake monitoring and biological assessment in surface waters (6 Tr 1450-1547);

9. Aaron Parker, who is employed as a Senior Aquatic Biologist for the WRD (6 Tr 1549 to 7 Tr 1631);

[12] The exhibits in this contested case have been submitted electronically in portable document format (PDF). All references to exhibit page numbers are to the PDF page number of the electronic exhibit, not the page number at the top or bottom of the exhibit. A description of the exhibits can be found in the hearing transcripts. (See, e.g., 1 Tr 5-28).

10. Mark Tonello, who is employed as a Fisheries Management Biologist in the Northwestern Lower Peninsula for the Michigan Department of Natural Resources (DNR) (7 Tr 1634-1659);

11. Jim Haywood, who is employed as a Senior Meteorologist performing air discharge model simulations, data management, and state-wide air quality forecasting for the WRD (7 Tr 1662-1697);

12. Amanda Chambers, who is employed as an Aquatic Biologist in the Lake Michigan Unit of the Surface Water Assessment Section of the WRD (7 Tr 1699-1749);

13. Eric Chatterson, who is employed as a Geology Specialist and whose work involves managing sites of environmental contamination for the WRD (7 Tr 1751-1828); and

14. Jeanette Makries, who is employed as a Senior Soil Scientist in the Groundwater Discharge Program within the Permits Section of the WRD (7 Tr 1830 to 8 Tr 1941).

Through these witnesses, the WRD entered Exhibits R-1 through R-153, R-157, R-158, R-180, R-193, R-197, R-200, R-211, R-221, R-227, R-253, R-275 and R-277.[13]

III. Intervenors

Intervenors were represented by Attorneys Margrethe K. Kearney, John Petoskey, and Robert Michaels of the Environmental Law & Policy Center. Intervenors offered the testimony of the following witnesses:

1. John Ikerd, Ph.D., who is a Professor Emeritus of Agricultural Economics for the University of Missouri-Columbia (10 Tr 2400-2487);

2. Kim de Groh, who is a Materials Research Engineer for the National Aeronautics and Space Administration (NASA) and is involved in the Flower Creek Monitoring Project in Oceana and Muskegon Counties, Michigan (13 Tr 3350-3432);

3. Monica Day, who was formerly employed in water resources management (13 Tr 3439-3532);

[13] The objections to the admission of Exhibit R-212 and Exhibit I-75 were sustained. Those exhibits have been marked "rejected" but have been included in the record for purposes of review and/or appeal.

4. John Klein, who is the President of Environmentally Concerned Citizens of South Central Michigan and is a resident of Wright Township in Ottawa County, Michigan, on Lime Lake (13 Tr 3535-3576); and

5. David Maturen, who formerly served as a Kalamazoo County Commissioner and has been involved in riparian rights issues on Indian Lake (13 Tr 3579-3622).

Through these witnesses, Intervenors entered Exhibits I-1 through I-49, I-51 through I-69, I-76, I-77, I-79, and I-80A.

INTRODUCTION

This contested case involves a number of competing interests. It involves the interests of Michigan farmers who desire to employ manure as their fertilizer choice. It involves the interests of large farms, known as Concentrated Animal Feeding Operations (CAFOs), who desire to manage their manure through land application of the waste product. It involves the interests of the public in using clean water resources in the state of Michigan. It involves the interests of the WRD in managing those water resources and in reducing the number of lakes and streams that are polluted with *Escherichia coli* (*E. coli*) and phosphorus (P). To help understand these competing interests, a little more explanation is required.

First, the land application of manure as a fertilizer is a beneficial practice. Manure is a valuable source of nutrients and micronutrients needed for crop growth. (See Testimony of Laura Campbell, 10 Tr 2515-2516). One of the nutrients available in manure is P. (*Id.*, 10 Tr 2811). Manure likewise contains microbes that liberate nutrients, enhance the uptake of nutrients by crops, and increase crop yield. (*Id*). In fact, organic farmers are required to utilize manure in lieu of commercial fertilizers. (Testimony of Caleb Stewart, 9 Tr 2149; Testimony of Rick Sietsema, 8 Tr 2089). It is also a less costly form of crop fertilizer because manure is often marketed for the cost of transportation or application of the product itself.[14] (Testimony of Rick Sietsema, 8 Tr 2092 and 9 Tr 2129; Testimony of Scott Henry, 11 Tr 2897). Due to the increasing number of CAFOs in

[14] For example, Mr. Sietsema testified that his poultry litter is sold for $50 a ton. (Testimony of Rick Sietsema, 9 Tr 2137). (But see Testimony of Rick Sietsema, 8 Tr 2084-2085) ("I am only able to get a $25 per ton value for it").

Michigan, manure is a fertilizer that has become more readily available. In fact, CAFOs are required to transport this by-product longer distances in order to dispose of their inventory of the waste product. (Testimony of Scott Henry, 11 Tr 2895; Exhibit P-76). (See also Exhibit P-75, p 1) ("the average manure hauling distance was" between 1 and 2.5 miles).[15] However, "manure cannot be hauled much more than a mile or so before the hauling costs exceed fertilizer value of the manure…."[16] (Exhibit I-45, p 2). (See also Testimony of Caleb Steward, 9 Tr 2162-2163) ("a two-mile increase in distance" to a land application site "doubles our spreading costs"). In fact, "dairy CAFOs spend between $116 and $129 per cow per year on hauling liquid manure for agronomic land application, costing between $81,000 and $450,000 annually." (Testimony of Laura Campbell, 10 Tr 2513-2514). Hence, the economics of manure management is as complex as its environmental considerations.[17]

In addition, Michigan's agri-food system accounts for an estimated $104.7 billion in direct, indirect and induced economic activity annually. (Exhibit P-74, p 2). However, as of 2019, the farmer's share of every dollar American consumers spend on food has fallen to just 14.6¢. (Exhibit I-41). According to the 2012 Agricultural Census, Michigan ranks 8th nationally in dairy milk sales, 11th nationally in hogs and pigs, and 22nd nationally in poultry and eggs.[18] (Exhibit P-67, p 342). CAFOs have become a more common part of the agri-food system in the state of Michigan.[19] CAFOs are farms that

[15] Mr. Elder testified that he obtains manure from a hog farm that is located ten miles from his farm. (Testimony of Kevin Elder, 11 Tr 3028).

[16] Conversely, "[m]ost poultry litter … is sold as a bit of a premium…." (Testimony of Caleb Stewart, 9 Tr 2152-2153).

[17] (See Exhibit P-75) (entitled "Economics of Liquid Manure Transport and Land Application").

[18] The Michigan Milk Producers Association, Dairy Farmers of America, Select Milk Producers, Inc., the Michigan Pork Producers Association, and Michigan Allied Poultry Industries are among the association Petitioners in this contested case.

[19] This case is not about the efficacy of CAFOs as a form of agri-business. (See Intervenors Response to Closing Arguments, p 4, citing Testimony of Dr. Ikerd, 10 Tr 2420-2432). Rather, this case is a challenge to the terms and conditions of the 2020 CAFO General Permit. Therefore, to the extent that any testimony addresses the use of "family farms" instead of CAFOs, it is irrelevant and given no weight from this tribunal in deciding the issues presented. MRE 401, 403.

house a large number of livestock.[20] According to Michigan's Administrative Rules, large CAFOs are defined, in part, as annual feeding operations that house more than 700 mature dairy cows, 2,500 swine, 55,000 turkeys, or 125,000 chickens. Mich Admin Code, R 323.2103(g).[21] The number of CAFOs have increased in the state of Michigan since 2002, when there were 82 large cattle CAFOs in the state.[22] At present, there are approximately 287 large CAFOs for all livestock species.[23] (Testimony of Dr. James Averill, 9 Tr 2327-2328).

Since CAFOs house a large number of livestock, they also generate a significant amount of waste.[24] For example, a 175-cow dairy farm can generate 1.5 million gallons of manure each year, while a 1,400-cow dairy CAFO can generate 12.2 million gallons of manure during the same period. (Exhibit P-75, pp 1-2). In fact, Petitioners' Exhibit P-56 indicates that, in 2017, Michigan's CAFOs produced approximately 3.3 billion gallons (or 12.2 billion liters) of manure, urine, and other liquid wastes. (Exhibit P-56, p 9). The production of such large amounts of waste contributes to an impact on the environment.

With respect to this impact, approximately 50 percent of Michigan's rivers and streams are not meeting water quality standards (WQS) for *E. coli*, and roughly 20 percent of Michigan's beaches have been closed due to bacterial pollution. (Exhibit R-37, p 5; Exhibit R-35). While human waste from large population centers such as Detroit and

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[20] The United States Court of Appeals for the Second Circuit described CAFOs as "large-scale industrial operations that raise extraordinary numbers of livestock." *Waterkeeper Alliance, Inc v EPA*, 399 F3d 486, 492 (CA 2, 2005) (hereinafter cited as *Waterkeeper*).

[21] Michigan's Administrative Rules governing CAFO operations are located in Rules 2101-2197. Mich Admin Code, RR 323.2101–323.2197. This portion of Michigan's Administrative Code is known as "Part 21." However, the NREPA is also divided into two hundred twenty-three (223) distinct Parts. For example, the sections of the NREPA regarding administration of the NPDES program are in Part 31. MCL 324.3101, *et seq*. To avoid any confusion between the NREPA and the Rules promulgated thereunder, this tribunal will refer to the Administrative Rules by Rule number instead of by Part.

[22] In 2002, records were kept with respect to the number of cattle CAFOs in the state of Michigan, but it is unknown as to how many CAFOs with other livestock species were in existence at that time. (Testimony of Bruce Washburn, 2 Tr 384).

[23] Of the 287 CAFOs, 160 large CAFOs (or 56%) are not contesting the 2020 CAFO General Permit. (Testimony of Bruce Washburn, 2 Tr 385).

[24] The Michigan Supreme Court noted that "a single large CAFO can produce 'one and a half times more than the annual sanitary waste produced by the city of Philadelphia….'" *Michigan Farm Bureau II*, __ Mich __; 2024 WL 3610196, at *3 (2024), quoting National Association of Local Boards of Health, *Understanding Concentrated Animal Feeding Operations and Their Impact on Communities* (2010), p 2.

Grand Rapids can contribute to increased *E. coli* pollution,[25] the WRD contends that there is a strong correlation between CAFOs and the increase in the amount of *E. coli* in rivers and lakes. (Testimony of Molly Rippke, 5 Tr 1301-1302; Exhibit R-41). In addition to *E. coli*, many rivers and lakes are polluted by excessive quantities of P. (Exhibit R-47). As a result, there are an increasing number of lakes which experience cyanobacteria algal blooms. (Exhibit R-27). In fact, Lake Erie has become infamous for its algal blooms that are visible from outer space. (See, e.g., Exhibit R-136, p 8, as shown *infra*).

Based on these environmental impacts, the WRD crafted a permit that seeks to reduce these water quality concerns. Specifically, the 2020 CAFO General Permit restricts land application of manure during the months of January through March. The permit also seeks to limit the amount of manure applied to agricultural fields based on soil P levels. To counter the WRD's concerns, Petitioners contend that winter application of manure is benign when it is properly incorporated into the ground. They also contend that a winter ban will make it difficult, if not impossible, to apply all their stored waste

[25] *E. coli* pollution can be caused by sewer overflows. (See Exhibits P-122, P-123 and P-124) (regarding EGLE's Combined Sewer Overflow, Sanitary Sewer Overflow, and Retention Treatment Basin Discharge Annual Reports for years 2018-2020). It can also be caused by septic systems. (See, e.g., Exhibit R-37, p 9) (slides 21 and 22); (Testimony of Molly Rippke, 6 Tr 1354-1356). See Section IV(E)(1) of this FDO, *infra*.

product prior to the spring planting of crops. They further contend that the reduced P limits are not based on science. The environmental Intervenors, on the other hand, contend that the 2020 CAFO General Permit does not go far enough. They argue that, when manure is applied to land in excess of crop needs, the land application acts merely as waste disposal. In order to issue a permit in this case, the WRD suggests that it made "policy choices between different, equally lawful options…." (WRD's Closing Arguments, p 9). These choices and other issues are addressed in this FDO.

FINDINGS OF FACT

The first NPDES general permit covering CAFOs was issued in 2002. (Testimony of Christine Alexander, 1 Tr 81). There were 82 farms subject to that permit. (Testimony of Bruce Washburn, 2 Tr 384). Subsequent CAFO general permits were issued in 2005, 2010, and 2015. (*Id*., 2 Tr 427). The 2005 CAFO General Permit followed industry standards for many practices, instead of establishing new requirements from a water quality perspective. (*Id.*). The 2015 CAFO General Permit (2015 Permit) was not significantly different from the 2005 and 2010 CAFO General Permits. (*Id*.; Testimony of Sylvia Heaton, 5 Tr 1078). The 2015 Permit was issued on April 30, 2015. (Exhibit R-96).

Prior to developing a draft of the 2020 CAFO General Permit (2020 Permit), Phil Argiroff, Assistant Director of the WRD, requested that the WRD Livestock Committee create a top ten priority list of issues to address in the permit.[26] (Testimony of Christine Alexander, 1 Tr 138; Testimony of Megan McMahon, 2 Tr 330; Testimony of Sylvia Heaton, 5 Tr 1046; Exhibit R-14). The top four priorities contained on this list included (1) prohibiting winter land application of CAFO waste; (2) modifying the requirements for manifesting CAFO waste;[27] (3) updating requirements for the annual report; and (4) lowering the soil P levels. (Testimony of Sylvia Heaton, 5 Tr 1047; Exhibit R-14).

[26] The Livestock Committee is a WRD workgroup focused on water pollution associated with the agricultural industry. (Testimony of Sylvia Heaton, 5 Tr 1045).

[27] "Manifesting" is where CAFO waste is sold, given away or otherwise transferred to another person such that the land application of the waste is no longer under the operational control of the CAFO which generated it. (Testimony of Christine Alexander, 1 Tr 184; Exhibit R-45, p 28). See also Mich Admin Code, R 323.2196(5)(e). See also Section IV(E) of this FDO.

Thereafter, the WRD met with a diverse group of stakeholders to discuss the agency's concerns with the 2015 Permit. (Testimony of Sylvia Heaton, 5 Tr 1038). The three stakeholder meetings occurred on March 11, 2019; May 20, 2019; and June 17, 2019. (Exhibits R-103 and Exhibit R-102; Exhibits R-105 and R-106; Exhibits R-108 and R-72; Exhibit R-139). After these meetings, a draft of the 2020 Permit was prepared and was thereafter sent to the United States Environmental Protection Agency (EPA) for review and comment on August 23, 2019.[28] (Exhibit R-98). The draft permit was sent to the EPA along with a fact sheet identifying the WQS that need to be attained, as well as the revised permit conditions proposed in order to reach attainment. (Testimony of Sylvia Heaton, 5 Tr 1122; Exhibit R-98, pp 42-44).

The draft permit was modified by the WRD following discussions with the EPA. (*Id*., 5 Tr 1121-1123). After obtaining the EPA's approval, the 2020 Permit was put up for public notice and public comment (hereinafter referred to as the "PN Draft"). (*Id*., 5 Tr 1038; Exhibit R-71). Specifically, the PN Draft was publicly noticed on October 30, 2019. (Testimony of Megan McMahon, 2 Tr 310). The public notice was posted on the Department calendar and in three newspapers. (*Id*., 2 Tr 309; Exhibit R-20). The public comment period commenced on November 1, 2019, and closed on December 18, 2019. (Exhibits R-20 and R-137). During the public comment period, there were approximately 2,400 comments submitted. (Testimony of Megan McMahon, 2 Tr 313; Exhibit R-112).

Three public meetings and public hearings occurred during the public comment period. The first public meeting occurred on December 3, 2019, at Adrian College at 6:00 p.m., with the public hearing occurring from 7:00 p.m. to 9:00 p.m. (*Id*., 2 Tr 310; Exhibit R-73). The second public meeting was held on December 5, 2019, at Grand Valley State University at 6:00 p.m., with the public hearing occurring from 7:00 p.m. to 9:00 p.m. (*Id*., 2 Tr 310). The third public meeting was held on December 9, 2019, at the Lansing Historical Center at 1:00 p.m., with the public hearing occurring from 2:00 p.m. to 4:00

[28] The term "draft permit" is defined in Rule 2102 as "a draft of a permit which is proposed to be issued by the department, which is prepared by staff of the department before public notice of an application for a permit by a discharger, and which contains proposed effluent standards and limitations, proposed compliance schedules, and other proposed conditions or restrictions deemed necessary by the department for a discharge." Mich Admin Code, R 323.2102(p).

p.m. (*Id*., 2 Tr 310; Exhibit R-136). Additional public meetings occurred at various times during the process for the issuance of the 2020 Permit. (See Exhibit R-139).

Petitioner Michigan Farm Bureau (MFB) submitted its public comments on the PN Draft on December 16, 2019. (Exhibit R-114). Subsequently, MFB met with the EGLE Director to discuss its concerns with the PN Draft. (Testimony of Sylvia Heaton, 5 Tr 1062). After its meeting, MFB sent a follow-up letter with comments on the PN Draft to the Director on January 29, 2020. (Exhibit R-115). Revisions to the PN Draft were made in response to the public comment by MFB. (Testimony of Sylvia Heaton, 5 Tr 1062). Additionally, Ms. Brink met with the WRD permit writers to share her concerns about the PN Draft on behalf of Petitioner Michigan Allied Poultry Industries (MAPI). (*Id*., 5 Tr 1067). After this meeting, Ms. Brink provided the WRD with proposed language for revised permit conditions on February 27, 2020. (Exhibit R-74). For the most part, the WRD adopted MAPI's proposed permit revisions as contained in Ms. Brink's public comment. (Testimony of Sylvia Heaton, 5 Tr 1068). Furthermore, numerous environmental groups, including Intervenors Environmentally Concerned Citizens of South Central Michigan, For Love of Water, and Food & Water Watch, submitted proposed revisions to the PN Draft in their public comment. (Exhibits R-123, R-124 and R-125). The WRD also revised the PN Draft based on public comment from these environmental groups. (Testimony of Sylvia Heaton, 5 Tr 1069-1070).

In fact, numerous revisions to the PN Draft were made at the suggestion of stakeholders during the public comment period. (See, e.g., Exhibit P-140; *Id*., 5 Tr 1061-1063; Exhibit R-21). For example, the PN Draft contained a winter ban on land application of CAFO waste from January 1 through March 19. (Exhibit R-71, p 19). The PN Draft was modified to restrict – but not prohibit – the application of CAFO waste from January 1 through March 31, unless certain requirements are met including "immediate" incorporation of the waste.[29] (Exhibit R-45, pp 20-21). The PN Draft was also modified based on the public comment by seven certified comprehensive nutrient management

[29] "Incorporation" essentially involves plowing the manure into the soil. (Testimony of Christine Alexander, 1 Tr 172). See Section IV(D)(2)(d)(ii) of this FDO, *infra*.

plan (CNMP) providers on behalf of 272 CAFO facilities in the state of Michigan.[30] (Exhibit P-17; Exhibit R-75; Exhibit R-113). Since there are approximately 287 large CAFOs in the state of Michigan, (Testimony of Dr. James Averill, 9 Tr 2327-2328), this requested revision was made on behalf of over 95% of the large CAFOs. The PN Draft was modified in two respects based on the public comment of the CNMP providers.

First, the PN Draft required the CAFOs to utilize the Michigan Phosphorus Risk Assessment (MPRA) tool to assess risk when land-applying manure. (Exhibit R-71, p 16; Testimony of Bruce Washburn, 2 Tr 416-417). The CNMP providers commented that this requirement should be eliminated. (Exhibit P-17, p 2; Exhibit R-75, p 2; Exhibit R-113, p 2). In lieu of eliminating the tool from the permit, the PN Draft was amended to allow for the use of the Bray P1 test as an alternative to the MPRA tool. (Exhibit R-45, p 16; Testimony of Christine Alexander, 1 Tr 143-145). Second, the CNMP providers commented that "[w]e collectively recognize the concerns that utilizing the MPRA was meant to address, so we would like to propose one of the following three options as alternatives." (Exhibit P-17, p 3; Exhibit R-75, p 3; Exhibit R-113, p 3). Among the three alternatives was a proposal to reduce the P levels by 10% in all watersheds, and by 20% in Total Maximum Daily Load (TMDL) watersheds.[31] (Exhibits P-17, R-75, and R-113) (p 4, Option 2). This proposal would generally reduce P levels to 135 parts per million (ppm) and would reduce P levels in TMDL watersheds to 120 ppm. (*Id*.). This option was adopted by the WRD. (Exhibit R-45, p 16; Testimony of Christine Alexander, 1 Tr 143-145). Exhibit R-99 is a redlined copy of the 2020 Permit demonstrating all revisions to the permit made in response to public comment.

The 2020 Permit was issued on March 27, 2020. (Exhibit R-45, p 2). On April 1, 2020, the WRD also issued a document summarizing its responses to the public comments. (Exhibit R-112). On that same day, the WRD also issued a TMDL guidance document, (Exhibit R-95), and an MPRA guidance document. (Exhibit R-97).

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[30] The Administrative Rules provide that each CAFO's CNMP "shall be approved by a certified CNMP provider." Mich Admin Code, R 323.2196(5)(a).

[31] The Clean Water Act provides two mechanisms to achieve its goals: the issuance of NPDES permits to regulate point source pollution, and the issuance of ambient WQS employed through TMDLs. See 33 USC 1311 and 1313. For an explanation of TMDLs, see Section IV(C)(2)(c)(ii) of this FDO, *infra*.

PART 31 – WATER RESOURCES PROTECTION

I. The Regulatory Framework

This action is a challenge to an NPDES permit issued by the WRD under the authority of Part 31 of the NREPA. MCL 324.3101, *et seq.* Under § 402 of the Water Pollution Control Act, more commonly known as the Clean Water Act (CWA), 33 USC 1342(b)**,** the State of Michigan was authorized by the EPA to administer its own NPDES program. *Michigan Farm Bureau v Department of Environmental Quality*, 292 Mich App 106, 110; 807 NW2d 866 (2011) (cited as *Michigan Farm Bureau I*). NPDES permits establish specific limits of pollution for an individual discharger from any "point source" defined as "a discharge that is released to the waters of the state by a discernible, confined, and discrete conveyance, including … from … [a] concentrated animal feeding operation…." Mich Admin Code, R 323.2104(c)(ix). Hence, according to Part 31 and its Administrative Rules, "CAFOs are point sources that require NPDES permits for discharges or potential discharges…." Mich Admin Code, R 323.2196(1). See also *Michigan Farm Bureau I, supra*.

The NPDES permit in this case is a general permit. "A 'general' NPDES permit is generally applicable to a group of point sources consisting of similar operations and similar types of waste discharges." *Texas Oil & Gas Ass'n v EPA*, 161 F3d 923, 929 (CA 5, 1998). "The benefit of the general permit process for individual dischargers is that approval is substantially quicker and less expensive than applying for an individual NPDES permit." *Ohio Valley Environmental Coalition v EPA*, 279 F Supp 2d 732, 758 (SD W Va, 2003). (See also Testimony of Christine Alexander, 1 Tr 71) (general permits "increase administrative efficiency"). Additional advantages to obtaining coverage under a general NPDES permit instead of an individual permit include permit consistency with other similar facilities, and permit requirements are available to an applicant prior to applying for the permit.

To be covered under an NPDES general permit, an applicant must apply for a Certificate of Coverage (COC). Mich Admin Code, R 323.2192. "Upon receipt of an application for coverage under an existing general permit, the department shall determine if the discharge meets the criteria for coverage under the general permit." Mich Admin

Code, R 323.2192(b). However, an applicant is not required to seek coverage under a general permit. Indeed, the Administrative Rules expressly provide that "[a]ny person having a discharge which is authorized, or proposing a discharge which may be authorized by a general permit, may request to be excluded from the coverage of the general permit and apply for an individual national permit…."[32] Mich Admin Code, R 323.2191(5). Nevertheless, it appears that the terms of the 2020 Permit are being applied as a baseline in the individual permits. (See Exhibit P-139; Testimony of Christine Alexander, 1 Tr 110). Moreover, the Administrative Rules also provide that the WRD "may deny an application for an individual national permit if it determines that the general permit is more appropriate." Mich Admin Code, R 323.2191(5).

Hence, CAFOs must apply for either an individual NPDES permit or for a COC under the general permit, unless the CAFO has received a no potential to discharge determination (NPTDD) from the WRD. Mich Admin Code, R 323.2196(1)(b). To obtain a NPTDD, the CAFO must follow the procedure set forth in Mich Admin Code, R 323.2196(4).[33] Of the large CAFOs in the state of Michigan, twelve have received a NPTDD, twenty-two have obtained individual permits from the WRD, and the balance of the large CAFOs are covered under the general permit. (Testimony of Laura Campbell, 10 Tr 2503).

Under the statutory and regulatory scheme, new permits are to be obtained under the NPDES program every five years. See Mich Admin Code, R 323.2150. Such a periodic reissuance of NPDES permits allows the Department to re-evaluate the permit and to adjust limitations or permit conditions, if necessary. (Testimony of Christine Alexander, 1 Tr 72). When the WRD issued the 2020 Permit on March 27, 2020, (Exhibit R-45), Petitioners challenged the permit in this proceeding. When permits such as the 2020 Permit are challenged in this tribunal, the parties operate under their existing

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[32] Ms. Makries testified that "individual permits require more sampling and more requirements that become more expensive." (Testimony of Jeanette Makries, 7 Tr 1883).

[33] To obtain a NPTDD, a CAFO must demonstrate that "there is no potential for any CAFO production area waste or CAFO process wastewater to be added to waters of the state under any circumstance or climatic condition." Mich Admin Code, R 323.2196(4)(a). The CAFO must also "include documentation showing that the CAFO has been verified under the livestock system of the [MAEAP program]…." Mich Admin Code, R 323.2196(4)(b). (See also Testimony of Bruce Washburn, 3 Tr 582). For a discussion of the MAEAP program, see Section IV(C)(2)(a)(ii) of this FDO, *infra*.

NPDES permits, which in this case is the 2015 Permit issued on April 30, 2015 (Exhibit R-96).[34] MCL 24.291(2).

In this case, both Petitioners and Intervenors have asserted challenges to the 2020 Permit. Each of these challenges will be addressed herein.

II. Jurisdiction

Part 31 provides, in part, that "[t]he department shall issue permits that will assure compliance with state standards to regulate municipal, industrial, and commercial discharges or storage of any substance that may affect the quality of the waters of the state." MCL 324.3106. In addition, § 3112(1) provides that "[a] person shall not discharge any waste or waste effluent into the waters of the state unless the person is in possession of a valid permit from the department." MCL 324.3112(1). As noted *supra*, CAFOs are considered a "point source" requiring an NPDES permit. Mich Admin Code, R 323.2104(c)(ix). Among the permits issued by the Department is a "general permit," defined as an NPDES permit that authorizes a category of similar discharges, issued by the Department pursuant to § 3112. Mich Admin Code, R 323.2103 (a) & (p). Rule 2191 recognizes that "the department may issue a general permit to cover a category of discharge" such as the 2020 Permit. Mich Admin Code, R 323.2191(1). Therefore, I conclude, as a Matter of Law, that the Department has jurisdiction to issue the 2020 Permit.

III. Standard of Review

There are four issues which need to be addressed with respect to the Standard of Review in this contested case. The first relates to whether this tribunal prepares a PFD or an FDO. The second relates to the content of the Administrative Record. The third relates to the operative law reviewed by the tribunal in determining whether the 2020 Permit is reasonable and consistent with the express language and intent of the regulatory scheme. See, e.g., *Petition of Fred Fuller*, 2006 WL 2037826, *10 (Mich.Dept.

[34] While the APA stays the effectiveness of a new permit that is being challenged, MCL 24.291, the WRD also issued an "administrative stay" of the 2020 Permit during the pendency of this contested case. (See WRD's Closing Arguments, p 3).

Nat.Res.). The fourth relates to the application of *Michigan Farm Bureau II* to the facts in this contested case.

A. Decision-Making Authority

In its Closing Arguments, the WRD asserts regarding decision-making authority that, "[u]nder the newly revised permitting requirements of the NREPA, this Tribunal will 'issue the final decision and order for the Department.'" (WRD's Closing Arguments, p 81), citing MCL 324.1317(1); MCL 324.1301(g). Section 1317(1) states:

> In a contested case regarding a permit, an administrative law judge shall preside, make the final decision, and issue the final decision and order for the department. Any party to the contested case, including the department, may, within 21 days after receiving the final decision and order, seek review of the final decision and order by an environmental permit panel by submitting a request to the director and notice to the hearing officer.

MCL 324.1317(1) (emphasis supplied). The term "permit" is defined in MCL 324.1301(f) and (g). The permit at issue in this case is not listed among those set forth in MCL 324.1301(f) and, therefore, must fall within the definition of "permit" in MCL 324.1301(g) in order for this tribunal to issue an FDO, as opposed to a PFD.

Section 1301(g) states:

> "Permit", as used in section 1313 to 1317, means any permit or operating license that meets both of the following conditions:
>
> (i) The applicant for the permit or operating license is not this state or a political subdivision of this state.
>
> (ii) The permit or operating license is issued by the department of environmental quality under this act or the rules promulgated under this act.

MCL 324.1301(g). Here, the permit at issue falls within the definition of "permit" under § 1301(g), as it is not a permit sought by this state or a political subdivision, and the permit is issued by EGLE, formerly the Department of Environmental Quality (DEQ), under the NREPA. Accordingly, this tribunal's decision in this matter is properly issued as an

FDO.[35] However, while this tribunal issues its decision following this contested case hearing as an FDO, the decision is still subject to additional review at the administrative level under MCL 324.1317.

In the amendments to the NREPA effective June 29, 2018, § 1313 established the "Environmental Permit Review Commission (EPRC)." MCL 324.1313. Section 1315 provided a procedure by which an applicant "may seek review by a panel [of the EPRC] before the permit has been approved or denied." MCL 324.1315. As noted in § 1317(1), the "final decision and order for the department" was also subject to review by the EPRC. MCL 324.1317(1). See also MCL 324.1317(2).

The EPRC, however, was abolished by Executive Order 2024-5, effective September 17, 2024 at 12:00 a.m., and "the authority to hear permit review appeals filed under MCL 324.1317 is transferred to the Director of EGLE or her or his designee." (EO 2024-5, p 7). Accordingly, in the event that any party to this matter seeks review of the FDO within 21 days after its receipt, they may do so by filing a petition for review under MCL 324.1317 and, in accordance with MCL 324.1317 and EO 2024-5, the Director of EGLE or her or his designee "may adopt, remand, modify, or reverse, in whole or in part," this FDO. MCL 324.1317(4). This tribunal concludes that the decision here is properly termed an FDO, which is a final decision at the administrative or agency level absent a party's timely petition for review to the EGLE Director.

B. Competent, Material and Substantial Evidence.

The WRD correctly states that this contested case constitutes de novo review of agency action. (WRD's Closing Arguments, p 8), citing *National Wildlife Federation v Department of Environmental Quality (No. 2)*, 306 Mich App 369; 856 NW2d 394 (2014). The WRD asserts that, because this tribunal is issuing an FDO, this tribunal's standard of review in assessing the WRD's proofs is to determine whether those proofs are supported by "competent, material and substantial evidence." However, this is a contested case to determine if the provisions of the 2020 Permit are reasonable and

[35] Indeed, in *Michigan Farm Bureau II*, the Michigan Supreme Court indicated that "an administrative law judge makes a final decision as to the permit." *Michigan Farm Bureau II*, __ Mich __, __; 2024 WL 3610196, at *10 (2024), citing MCL 324.1317(1).

consistent with the express language and intent of the regulatory scheme. See, e.g., *Petition of Fred Fuller*, 2006 WL 2037826, *10 (Mich.Dept.Nat.Res.). While this decision may be issued as an FDO, this is a contested case conducted pursuant to the APA, and is the only contested case that has been conducted with respect to the legality of the mandatory and discretionary conditions of the 2020 Permit. See Section III(D) of this FDO.

The Michigan Supreme Court has expressly held that "the proof required in an administrative law proceeding … is the same as that required in a civil judicial proceeding: a preponderance of the evidence." *Aquilina v General Motors Corp*, 403 Mich 206, 210-211; 267 NW2d 923 (1978). See also *Blue Cross & Blue Shield of Mich v Milliken*, 422 Mich 1, 89; 367 NW2d 1 (1985) (the Court stated that the preponderance of the evidence standard applies to proceedings before an administrative agency). See also *Bunce v Secretary of State*, 239 Mich App 204, 218; 607 NW2d 372 (1999) ("Our Supreme Court has held that the requisite standard of proof in administrative proceedings is generally the same as that used in civil cases—a preponderance of the evidence"). In employing this standard, the "preponderance of the evidence" is simply defined as "evidence which outweighs that which is offered to oppose it." *Martucci v Detroit Comm'r of Police*, 322 Mich 270, 274; 33 NW2d 789 (1948), quoting *Strand v Chicago & W M Ry Co*, 67 Mich 380; 34 NW 712 (1887). See also *Black's Law Dictionary* 1301 (9th ed 2009) (the trier of fact must find for the party that, on the whole, has the stronger evidence, however slight the edge may be).

In support of its assertion that the operative standard in this contested case should be reduced to the "competent, material, and substantial evidence" standard,[36] the WRD cites § 85 of the APA, which states, in relevant part:

> A decision or order shall not be made except upon consideration of the record as a whole or a portion of the record as may be cited by any party to the proceeding and as supported by and in accordance with the competent, material, and substantial evidence.

[36] The Michigan Supreme Court defined competent, material and substantial evidence as evidence that is "solid, true, reliable, [and] authoritative…." *Goff v Bil-Mar Foods, Inc. (After Remand)*, 454 Mich 507, 514 n 5; 563 NW2d 214 (1997) overruled on other grounds by *Mudel v Great Atlantic & Pacific Tea Co*, 462 Mich 691; 614 NW2d 607 (2000).

MCL 24.285 (emphasis supplied). In fact, the WRD asserts that the "competent, material, and substantial evidence" standard requires only "the amount of evidence that a reasonable mind would accept as sufficient to support a conclusion" and that the standard "*may be substantially less than a preponderance.*" (WRD's Closing Arguments, p 82) (italics in original), citing *Petition of Sierra Club*, 2018 WL 2148695, at *5 (2018) (review of a PFD by the DEQ Director).

Section 85, however, must be read in the context of the APA. MCL 24.285. Specifically, § 106(1) of the APA states in relevant part:

> Except when a statute or the constitution provides for a different scope of review, the court shall hold unlawful and set aside a decision or order of an agency if substantial rights of the petitioner have been prejudiced because the decision or order is any of the following:
>
> * * *
>
> (d) Not supported by competent, material and substantial evidence on the whole record.

MCL 24.306(1)(d). It is axiomatic that an agency's final order must be supported by competent, material and substantial evidence on the whole record, otherwise, a reviewing court "shall hold unlawful and set aside [the] decision and order" under MCL 24.306(1)(d). But this standard of review, also set forth in § 85 of the APA, does not trump the parties' burden, in a contested case, to establish facts by a preponderance of the evidence.

An additional issue needs to be addressed with respect to the scope of the administrative record in this contested case. To understand the standard of review, it is important to recall how contested cases normally reach this tribunal under Part 31. Specifically, Michigan law provides that "[a] person shall not discharge any waste or waste effluent into the waters of this state unless the person is in possession of a valid permit from the department." MCL 324.3112(1). To obtain such a permit, "[a]n application for a permit … shall be submitted to the department." MCL 324.3112(2). If the permit issued by the WRD is not acceptable to the applicant, he or she may "file a sworn petition with the department setting forth the grounds and reasons for the complaint and asking for a contested case hearing on the matter…." MCL 324.3113(3).

This tribunal has previously held that there are four predicates for a contested case to challenge a permit issued under the NREPA, *viz.* (1) the filing of an application by a proper applicant; (2) the proper processing of the application by the WRD; (3) an action or inaction by the WRD on the application; and (4) the timely filing of a petition for a contested case hearing. *Petition of CCMS Associates, Inc.*, 2000 WL 1597733, at *7 (Mich.Dept.Nat.Res.). The contested case is conducted pursuant to the APA. MCL 324.3113(3). However, the contested case is not an "appeal" of the permit issued by the WRD. Rather, the proceeding is "an extension of the initial application process for the purpose of arriving at a single final agency decision on the application…." *National Wildlife Federation,* 306 Mich App at 379. As a result, the parties are not limited to the evidence submitted with the application but are entitled to present additional evidence demonstrating entitlement (or lack of entitlement) to the permit under the statutory criteria. *Id*., 306 Mich App at 374-379.

However, this proceeding differs from a standard contested case brought as part of the application process for issuance of a permit. Initially, there were no applications for permits filed by Petitioners. Accordingly, rather than being an extension of the application process for the issuance of a permit, this contested case constitutes an extension of the agency's process for the issuance of a general permit. Consistent with *National Wildlife Federation, supra*, and since this contested case is not an appeal, the parties were allowed to present additional evidence – other than the evidence relied upon by the agency in the issuance of the permit – to demonstrate the propriety (or lack thereof) of the terms and conditions in the general permit.

With respect to the administrative record, the WRD was asked to produce all documents (other than privileged documents), including emails, related to the issuance of the general permit. As a result, the documents that were produced included, by way of example, the WRD's top ten priority list of issues to address in the permit. (Exhibit R-14). In accordance with the Scheduling Order, the WRD's production of those documents was to be completed by no later than November 30, 2020. (Scheduling Order entered on November 12, 2020). By email dated November 24, 2020, the WRD requested an extension of the deadline for providing the administrative record to the parties. Because

the requested extension was unopposed, it was granted by an email dated November 24, 2020. The WRD provided the parties with the administrative record on December 4, 2020. (See Proof of Service filed on December 16, 2020). At no time prior to the hearing that commenced on December 6, 2021, did Petitioners or Intervenors file a motion contending that the WRD failed to produce all relevant documents.

C. State and Federal Law.

In their Closing Arguments, Petitioners contend that the revised conditions of the 2020 Permit are not necessary to assure compliance with state and federal law. (Petitioners' Closing Arguments, p 66). Petitioners have misconstrued this tribunal's authority. This tribunal is not charged with determining whether the 2020 Permit is consistent with the CWA or extant federal law. Rather, this tribunal is charged with determining whether the 2020 Permit is consistent with state law.

In addressing jurisdiction, it is important to recall that a basic tenet of administrative law is that an agency has only those powers provided to it by statute. See *York v Detroit*, 438 Mich 744; 475 NW2d 346 (1991); *Coffman v State Board of Examiners in Optometry*, 331 Mich 582; 50 NW2d 322 (1951). To that end, this proceeding constitutes a de novo review of the agency's process for issuance of a general permit. Cf *National Wildlife Federation*, 306 Mich App at 379. In performing this function, the tribunal must operate under the authority of a statute or administrative rule, because "doubtful power does not exist." See *In Re Quality Service Standard*, 204 Mich App 607, 611; 516 NW2d 142 (1994). Absent that lawful authority to perform its function, this tribunal lacks subject matter jurisdiction and "any action with respect to such a cause, other than to dismiss it, is absolutely void." *Fox v Board of Regents of the University of Michigan*, 375 Mich 238, 242; 134 NW2d 146 (1965). However, this tribunal only has authority to review the permit's compliance with state law.

As noted *supra*, the "national permit" issued by the WRD in this case is an NPDES permit "issued by the department to a discharger pursuant to sections 3106 and 3112 of part 31 of the act…." Mich Admin Code, R 323.2103(p). In fact, § 3106 expressly provides that "[t]he department shall issue permits that will assure compliance with state

standards…." MCL 324.3106. Among those state standards is EGLE's statutory responsibility to "protect and conserve the water resources of the state…." MCL 324.3103(1). Indeed, Intervenors correctly state that EGLE's "authorization under the CWA is 'not a delegation of Federal authority,' but instead allows the state-administered program under NREPA to function 'in lieu of the Federal program.'" (Intervenors' Closing Arguments, p 8), citing *Michigan Farm Bureau I,* 292 Mich App at 110. In fact, the Michigan Court of Appeals held that, "[o]nce the EPA approves a state's request to administer its own NPDES program, that state's NPDES program is administered pursuant to *state law* rather than federal law." *Id.* (emphasis in original). Since Michigan's NPDES program is administered under state law, this tribunal must enter a decision under state law.

Moreover, permits issued under the NPDES program are similar to the permits issued under Part 303. While the WRD may have authority from the EPA to issue a permit under both § 404 of the CWA and under Part 303, it is this tribunal's responsibility to review the permit for compliance with state law. This tribunal has expressed the notion that a decision cannot be made under the CWA or federal law. See, e.g., *Petition of Tom Boerner,* Docket No. 18-013058 (Order on Pending Motions May 14, 2019); *Petition of Sierra Club*, Docket No. 14-020647 (Proposal for Decision Feb 1, 2017). In fact, the Michigan Supreme Court has recognized that, when addressing Part 303, there is no need to reach a decision based on federal law. *Huggett v Department of Natural Resources*, 464 Mich 711, 722; 629 NW2d 915 (2001). The Court held that, "[b]ecause we can discern the Legislature's intent on this question from the wetland provisions themselves, we need not concern ourselves with federal law in this case." *Id.* The *Huggett* decision was followed by the Michigan Court of Appeals in *Department of Environmental Quality v Gomez*, 318 Mich App 1, 43; 896 NW2d 39 (2016). See also *Garg v Macomb County Community Mental Health Serv*, 472 Mich 263, 284; 696 NW2d 646 (2005), amended 473 Mich 1205 (2005) ("While federal precedent may often be useful as guidance in this Court's interpretation of laws with federal analogues, such precedent cannot be allowed to rewrite Michigan law"). The reasoning of these decisions under Part 303 is equally applicable under Part 31.

It is true that § 3106 expressly provides that "[t]he department may set permit restrictions that will assure compliance with applicable federal law and regulations." MCL 324.3106. The agency, in fact, assures compliance with federal law and regulations by submitting a draft permit to the EPA for its review and approval. (Testimony of Sylvia Heaton, 5 Tr 1121-1123; Exhibit R-110). See also Mich Admin Code, R 323.2115(3) (requiring the draft permit to be mailed to the EPA Region V Administrator). Nevertheless, this tribunal has jurisdiction only over those portions of the Code of Federal Regulations (CFR) that are expressly incorporated by reference into state law. See Mich Admin Code, R 323.2189. To the extent that Petitioners raise a challenge to the 2020 Permit based solely on federal law, such a challenge is not within this tribunal's authority to adjudicate.

Therefore, based on the foregoing, this tribunal will proceed in this case under Part 31, leaving the claims raised under federal law to be adjudicated in another, appropriate forum.

D. Analysis of *Michigan Farm Bureau II*

At the Status Conference held on October 30, 2024, the parties agreed to a briefing schedule to address the application of the *Michigan Farm Bureau II* decision to the facts in this contested case. In *Michigan Farm Bureau II*, the Michigan Supreme Court made a distinction between "mandatory conditions" and "discretionary conditions." ___ Mich ___, ___; 2024 WL 3610196, at *6-8 (2024). It defined a "mandatory condition" as those conditions that "EPA and EGLE rules require every CAFO permit to include…." *Id*. at *8. The Court noted that 40 CFR 122.44(d)(1) requires EGLE to include conditions "in addition to or more stringent than" extant federal or state law that EGLE deems necessary to ensure WQS. *Id.* The Court referred to these conditions as "discretionary conditions" of the permit. *Id*.

In their Brief, Petitioners allege the implementation of the Michigan Supreme Court's holding requires a refashioning of the 2020 Permit. (Petitioners' Supplemental Post-Hearing Brief, p 1). Specifically, Petitioners contend that the Supreme Court's holding can be effectuated in one of two ways. First, the discretionary conditions of the 2020 Permit should be stricken from the permit and left to individualized permitting

decisions where a showing of necessity can be made by the WRD. (*Id*.). Alternatively, Petitioners contend that the discretionary conditions of the 2020 Permit should be separately placed in the COC as opt-ins for each farm. (*Id*.). Petitioners further assert that the discretionary conditions cannot be made applicable in the COC, unless the WRD demonstrates the "necessity" for the condition.[37] (Petitioners' Supplemental Post-Hearing Brief, pp 7-9). A review of *Michigan Farm Bureau II* makes it clear that Petitioners have misconstrued the Supreme Court's decision. (See also WRD's Supplemental Post-Hearing Brief; Intervenors' Supplemental Post-Hearing Brief).

Specifically, the Supreme Court held that the "EPA rules and EGLE rules create only a mandatory **minimum** set of conditions that every NPDES permit issued to a CAFO must contain." ___ Mich ___, ___; 2024 WL 3610196, at *6 (2024) (emphasis supplied). The Supreme Court further held that EGLE "**must** include conditions 'in addition to or more stringent than' the conditions set forth in the EPA rules that EGLE deems 'necessary to … [a]chieve applicable'" WQS. *Id*. at *6-7 (emphasis supplied). Nevertheless, the Court noted that "neither the general permit nor the discretionary conditions in it can have the force and effect of law…." *Id*. at *31. Rather, the COC has the force and effect of law. The Court explained that a CAFO that applies for and receives a COC is required to comply with the discretionary conditions of the general permit. *Id*. at *32. "That is because it is the [COC]—not the general permit itself—that grants the rights and imposes obligations on the CAFO." *Id*. at *38. Moreover, "[t]he [COC] is simply an individual permit that includes the discretionary conditions listed in the general permit." *Id*. at *39.

If a CAFO disagrees with the discretionary conditions in the general permit, that CAFO has the option of "apply[ing] for an individual permit with only the mandatory conditions, and EGLE must genuinely evaluate whether the discretionary conditions in the general permit **or other discretionary conditions** are necessary as applied to that

[37] Petitioners also contend, for the first time in their recent post-hearing brief, that the tribunal's review of the discretionary conditions of the 2020 Permit must include a review of the costs of implementation of the condition. (Petitioners' Supplemental Post Hearing Brief, pp 15-16). However, attention to costs was not raised by the Michigan Supreme Court in *Michigan Farm Bureau II*. Nor was this issue raised by Petitioners during the contested case. By failing to raise this issue during the contested case, Petitioners have waived the right to raise the issue at this stage in the proceedings. Cf *Department of Environmental Quality v Morley*, 314 Mich App 306, 318; 885 NW2d 892 (2015) ("This Court need not address an issue that is raised for the first time on appeal because it is not properly preserved for appellate review").

particular CAFO." *Id*. at *40 (emphasis supplied). Therefore, Petitioners are incorrect in asserting that the discretionary conditions of the general permit must be stricken from the 2020 Permit. Hence, by applying for a COC, a CAFO agrees to abide by the discretionary conditions of the 2020 Permit. However, if the CAFO disagrees with the discretionary conditions, it can apply for an individual permit, under which the WRD must evaluate whether the discretionary conditions are necessary as applied to that particular CAFO. Nevertheless, the WRD may include the discretionary conditions of the general permit and "other discretionary conditions" in the individual permit, which conditions are necessary to meet WQS. Hence, by applying for an individual permit, a CAFO could be required to comply with additional discretionary conditions that are not contained within the general permit. Accordingly, the benefit of agreeing to the terms of the general permit is that the CAFO may not be required to comply with "other discretionary conditions" that may be included if the CAFO opts to pursue an individual permit.

Petitioners assert that the WRD must demonstrate in this contested case the "necessity" for the discretionary conditions. The Supreme Court answered this question as well. The Court held that "when EGLE issues a general permit and CAFOs with coverage under the prior general permit petition for a contested case, such as here, EGLE must carry its burden to prove that any discretionary conditions in the general permit are necessary to achieve Part 4 [WQS] or to comply with applicable laws and regulations." *Id*. at *43. This is the standard which the tribunal will utilize in determining whether the proposed discretionary conditions are appropriate.

Finally, this tribunal agrees with Intervenors that the holding in *Michigan Farm Bureau II* is dispositive of arguments I and II in Petitioners' Closing Arguments. (Intervenors' Supplemental Post-Hearing Brief, p 3). Therefore, this tribunal will address all remaining arguments of the parties in this contested case.

IV. Challenges to the 2020 Permit

A. Whether the 2020 Permit Violates the PRPA?

One of Petitioners' objections to the 2020 Permit is that the WRD did not comply with the PRPA. (Petitioners' Closing Arguments, p 61). By statute, the PRPA provides

that the WRD, "[p]rior to taking a governmental action, … shall review the takings assessment guidelines … and shall consider the likelihood that the governmental action may result in a constitutional taking." MCL 23.424. During cross-examination, Ms. Alexander, who executed the 2020 Permit on behalf of the WRD, testified that the takings assessment guidelines were not reviewed to consider the likelihood that the issuance of the permit would result in a constitutional taking. (Testimony of Christine Alexander, 1 Tr 227). As a remedy for this alleged omission, Petitioners argue that this tribunal should either (a) eliminate the offending condition from the permit; or (b) require the agency to restart the permit development process. (Petitioners' Closing Arguments, p 62). However, Petitioners fail to understand the contested case process on this point.

As stated *supra*, a contested case is not an "appeal" of the agency action. Rather, upon the filing of a contested case, this tribunal is charged with conducting a de novo review of an application for a permit in order to ascertain whether the applicant is entitled to a permit under the statutory criteria. *See National Wildlife Federation, supra*. Hence, the contested case proceeding is "an extension of the initial application process for the purpose of arriving at a single final agency decision on the application…." 306 Mich App at 379. While this contested case is not a proceeding on an application for a permit, this case nevertheless is part of the formal process related to the issuance of a general permit by the Department, *i.e.*, the 2020 Permit. In other words, the process for issuance of the 2020 Permit is not finalized until this contested case is completed by the issuance of a final agency decision.

To that end, and as part of its decision-making, this tribunal undertakes a review of the taking assessment guidelines in accordance with the PRPA. In every decision issued by this tribunal, whether the decision is a PFD or an FDO, a review of such guidelines is undertaken. As a result, the final permit issued by the agency at the conclusion of the contested case complies with the PRPA. Therefore, Petitioners' contention that the Department must restart the permit development process or eliminate the offending condition from the permit is without merit.

B. Whether the 15-Day Notice Provision for Nitrogen Application Is Appropriate?

Consistent with the 2015 Permit, the 2020 Permit provides that CAFOs can apply "only one year" of nitrogen (N), "unless samples or other relevant data demonstrate additional N is needed for, or will be beneficial to, the crop." (Exhibit R-45, p 17) (Part I.B.3.c.3). However, in addition to the requirements of the 2015 Permit, the 2020 Permit also provides that "[t]he demonstration will be public noticed for a period of 15 calendar days." (*Id*.). The 2020 Permit further provides that, unless notified otherwise by the Department, the N may be applied after 18 calendar days following submittal of the request. (*Id*.). A review of the genesis of these revisions to the 2015 Permit is warranted.

The draft permit was sent to the EPA for review and comment on August 23, 2019. (Exhibit R-98). Among the provisions contained in the draft permit is the "CNMP revisions" section. (Exhibit R-98, p 21) (Part I.B.4.e.). This provision is substantially the same as the 2015 Permit. (See Exhibit R-96, pp 16-17). After reviewing the draft permit, the EPA's "preliminary comments" were sent to the WRD on September 25, 2019. (Exhibit R-110). Among its concerns, the EPA stated that the "CNMP revisions" section does not comport with 40 CFR 122.42(e)(6) and that substantial revisions to a CNMP must include applicable notice, *i.e.*, public notice, and review of the proposed revisions. (See Exhibit R-110, pp 3-4) (Item 4). To understand the EPA's concerns, it is helpful to briefly review the pertinent provisions of the CFR.

Initially, it should be noted that 40 CFR 122.42 was adopted by reference into Michigan's Administrative Rules. Mich Admin Code, R 323.2189(g). That provision of the CFR provides, in part, that "[a]ny permit issued to a CAFO must include a requirement to implement a nutrient management plan [NMP]…."[38] 40 CFR 122.42(e)(1). Section 122.42(e)(6) provides that CAFOs must advise the Director of any revisions of the CAFO's NMP. 40 CFR 122.42(e)(6). If the revision is "substantial," it must be put up for

[38] While Michigan's Administrative Rules do not require an NMP, they require a CNMP. Mich Admin Code, R 323.2196(5)(a). In issuing its Final Rule, the EPA determined that "a CAFO may rely upon a CNMP for purposes of certification eligibility, so long as the minimum NMP requirements of § 122.42(e)(1) and § 412.37(c) are met by the CAFO's plan, including all necessary operation and maintenance protocols." *Revised National Pollutant Discharge Elimination System Permit Regulation and Effluent Limitations Guidelines for Concentrated Animal Feeding Operations in Response to the Waterkeeper Decision; Final Rule*, 73 Fed Reg 70418, 70430 (2008). Note that 40 CFR 412 was also adopted by reference into Michigan's Administrative Rules. Mich Admin Code, R 323.2189(m).

public review and comment. 40 CFR 122.42(e)(6)(ii)(B). Because this provision was adopted by reference into Michigan's Administrative Rules, it constitutes Michigan law.[39]

Based on § 122.42, the draft permit was revised to comport with the EPA's request. (See Testimony of Sylvia Heaton, 5 Tr 1140-1144). Specifically, the draft permit was revised to define that a "substantial revision" of the CNMP includes "[a]ny changes to the maximum field-specific annual rates of application or to the maximum amounts of [N] and [P] derived from all sources for each crop…." (Exhibit R-45, p 24). This provision was further amended to explain that a "substantial revision" also involves "[c]hanges to site-specific components of the CAFO's CNMP, where such changes are likely to increase the risk of [N] and [P] transport from the site to surface waters of the state per Part I.B.3.c." (Exhibit R-45, p 24). The 15-day notice period was utilized, because that period was required for public notice of COCs. (Testimony of Sylvia Heaton, 5 Tr 1143).

Petitioners raise a number of objections to this new requirement in the 2020 Permit. First, Petitioners apparently object that the EPA's specific concern regarding additional N applications was not raised in writing. (Petitioners' Closing Arguments, p 80). It is true that Item 4 of Exhibit R-110 does not expressly state that N applications must comply with 40 CFR 122.42. (Exhibit R-110, pp 3-4). Indeed, Ms. Heaton admitted on cross-examination that she could not find a document from the EPA which expressed the new requirement. (Testimony of Sylvia Heaton, 5 Tr 1151). However, the tribunal is aware of no statutes or rules which mandate that EPA's objections to the draft permit must be in writing, and Petitioners have cited no such authority. Section 3106 merely provides that "[t]he department may set permit restrictions that will assure compliance with applicable federal law and regulations." MCL 324.3106. Moreover, when Ms. Heaton testified that the revision was at the request of the EPA (Testimony of Sylvia Heaton, 5 Tr 1147), Petitioners provided no reason for the tribunal to question the veracity of Ms. Heaton's testimony. See *People v Odom*, 276 Mich App 407, 416; 740 NW2d 557 (2007) ("The veracity of a witness is a matter for the trier of fact to discern").

[39] Because the public notice provision for additional N application is required by 40 CFR 122.42(e)(6), this revised condition of the 2020 Permit constitutes a "mandatory condition." *Michigan Farm Bureau II*, __ Mich __, __; 2024 WL 3610196, at *8 (2024).

Second, Petitioners object to this new requirement, because the 2015 Permit did not require public notice of additional N application, and there were no amendments to §122.42 since the issuance of the 2015 Permit. (Petitioners' Response to Closing Arguments, p 38). However, Ms. Heaton explained during cross-examination that "[t]he 2015 permit honestly did not have the correct language in it and we needed to change that." (Testimony of Sylvia Heaton, 5 Tr 1142). (See also *Id*., 5 Tr 1147) ("We weren't implementing that appropriately in the 2015 permit so that needed to change"); (*Id*., 5 Tr 1152) (EPA's "concern was that we weren't doing it correctly under the 2015 permit"). The mere fact that the 2015 Permit contained incorrect language does not justify Petitioners' implication that such improper language should remain in future permits.

Third, Petitioners contend that "EGLE's new 15-day noticing is likewise not necessary to assure compliance with federal or state regulations." (Petitioners' Closing Arguments, p 79). However, Exhibit R-110 expressly references the applicable provision requiring public notice of a "substantial revision" to the NMP. (Exhibit R-110, pp 3-4), citing 40 CFR 122.42(e)(6). Ms. Heaton expressly referenced this provision in her testimony. (Testimony of Sylvia Heaton, 5 Tr 1145-1146). Surprisingly, the only citation to § 122.42 by Petitioners in their Closing Arguments was to the fact that it was not amended since the 2015 Permit was issued. (Petitioners' Closing Arguments, p 18). Hence, while they contend that the revisions were not required by federal or state regulations, Petitioners have ignored the requirements of § 122.42.

That regulation expressly provides that "[a]ny permit issued to a CAFO must include the requirements in paragraphs (e)(1) through (e)(6) of this section." 40 CFR 122.42(e). Paragraph (e)(1) provides that "[a]ny permit issued to a CAFO must include a requirement to implement a [NMP]…." 40 CFR 122.42(e)(1). Paragraph (e)(6) covers "procedures to apply when a CAFO owner or operator makes changes to the CAFO's [NMP] previously submitted to the Director." 40 CFR 122.42(e)(6). Specifically, the Director is to review such revisions to the NMP. 40 CFR 122.42(e)(6)(ii). The regulation further provides that, "[i]f the Director determines that the changes to the terms of the [NMP] are substantial, the Director must notify the public and make the proposed changes and the information submitted by the CAFO owner or operator available for public review

and comment." 40 CFR 122.42(e)(6)(ii)(B). The regulation also states that "[t]he Director may establish … an appropriate period of time for the public to comment and request a hearing on the proposed changes…." *Id*. Finally, a substantial revision of the NMP includes "[a]ny changes … to the maximum amounts of [N] and [P] derived from all sources for each crop…." 40 CFR 122.42(e)(6)(iii)(B).

The 2020 Permit is consistent with these requirements. First, the 2020 Permit requires a CNMP. (Exhibit R-45, p 23) (Part I.B.4.). Second, the 2020 Permit provides that the CAFO must "identify changes from the previous version to the Department for review." (Exhibit R-45, p 24) (Part I.B.4.e.). Third, the 2020 Permit provides that "[s]ignificant revisions of the CNMP shall be public noticed for a period of 15 calendar days…." (*Id*.). The 2020 Permit defines a "significant change" as including "[a]ny changes to the maximum field-specific annual rates of application or to the maximum amounts of [N] and [P] derived from all sources for each crop…." (*Id*.). (See also Exhibit R-45, p 17) (Part I.B.3.c.). In all respects, the 15-day N notice requirements of the 2020 Permit comport with the requirements of § 122.42.

Finally, Petitioners contend that, due to an immediate need for N, this 15-day public notice requirement will frustrate farming and could cause a "million-dollar crop loss." (Petitioners' Closing Arguments, pp 79, 81). In fact, to alleviate the concerns of the CAFOs, Ms. Heaton explained in her rebuttal testimony that "the Department included in the permit an allowance to add anticipated [N] additions to a CNMP up front, and then the annual report could be updated to reflect actual [N] additions that were made to fields." (Testimony of Sylvia Heaton, 5 Tr 1088). During cross-examination, Ms. Heaton further explained that the possible need for additional N can be addressed in the CNMP at the time the COC is filed. (*Id*., 5 Tr 1143). In other words, when the CNMP is prepared, the farms can assume that an additional application of N will be needed during the growing season. By including the additional N in the CNMP, no further request to apply N will be necessary, and no public notice of revisions to the CNMP will be required. In fact, Ms. Heaton confirmed that "[i]f [the CAFOs] didn't end up using the additional N, additional [N] for side-dressing, no big deal, no worries." (*Id*., 5 Tr 1144). Ms. Heaton's opinion is consistent with Ms. Alexander, who executed the 2020 Permit as Manager of the Permits

Section of the WRD. (Testimony of Christine Alexander, 1 Tr 207-211; Exhibit R-45, p 2). Since the CAFOs are already required to prepare a CNMP, the mere inclusion of additional N in their CNMP will eliminate any possibility that a CAFO will be required to wait 18-days before it can apply N to its fields. Hence, the inclusion of anticipated N in a CAFO's CNMP constitutes a reasonable and workable solution to the concerns of Petitioners.[40]

Nevertheless, Ms. Campbell testified that, despite including the additional N application in the farm's CNMP, the "farms are quite concerned that another EGLE staffer could interpret that permit language a different way and still require advance notification because that's what the permit states." (Testimony of Laura Campbell, 10 Tr 2749). In response to this concern, the tribunal noted that it would propose a modification of the 2020 Permit that expressly clarifies that the 15-day N notice requirement is only applicable for those farms that do not provide for additional N application in their CNMP. (10 Tr 2749).

Based on the foregoing, I conclude, as a Matter of Law, that the 15-day notice for additional N application is a mandatory condition of the 2020 Permit that every CAFO NPDES permit must contain. I also conclude, as a Matter of Law, that the 2020 Permit's provisions regarding the 15-day notice for additional N application comports with requirements of the laws and rules under which the 2020 Permit was issued, and are reasonable and consistent with express language and intent of the regulatory scheme. Nevertheless, the tribunal hereby modifies the 2020 Permit to clarify that the 15-day N notice requirement is only applicable for those farms that do not provide for additional N application in their CNMP.

[40] In fact, the idea for including additional N applications in the CNMP originated by individual stakeholders and CNMP providers during the public comment period of the 2020 Permit. Specifically, after the PN Draft of the permit was publicly noticed, Mr. Washburn attended meetings with such individuals. (Testimony of Bruce Washburn, 2 Tr 407). It was the suggestion of these stakeholders to report additional N requirements through the CNMP instead of through a public notice requirement. (*Id*., 2 Tr 409).

C. Reduction of P Levels in the 2020 Permit.

1. The Problem Sought to Be Corrected.

To prevent impairments to water quality, Michigan adopted WQS, which "are the minimum levels of water quality to protect human health, wildlife and aquatic life." (Testimony of Sylvia Heaton, 5 Tr 1027). Section 3106 expressly provides that "[t]he department shall establish pollution standards for lakes, rivers, streams and other waters of the state in relation to the public use to which they are or may be put, as it considers necessary." MCL 324.3106. The express purpose of Michigan's WQS is set forth in Rule 41, as follows:

> to establish water quality requirements applicable to the Great Lakes, the connecting waters, and other surface waters of the state, to protect the public health and welfare, to enhance and maintain the quality of water, to protect the state's natural resources, and to serve the purposes of [12 USC 1251 and Part 31 of the NREPA], and the Great Lakes water quality agreement enacted November 22, 1978, and amended in 1987….

Mich Admin Code, R 323.1041. Michigan's WQS are either numeric or narrative. (Testimony of Sylvia Heaton, 5 Tr 1027). Numeric standards are those that "set specific numeric values to protect water quality that should not be exceeded." (*Id*.). An example of a numeric standard is the criterion for *E. coli*, which provides that "[a]ll surface waters of the state protected for total body contact recreation shall not contain more than 130 [*E. coli*] per 100 milliliters, as a 30-day geometric mean." Mich Admin Code, R 323.1062(1). Narrative standards, on the other hand, are "those that describe the minimum water quality characteristics needed to protect water quality…." (Testimony of Sylvia Heaton, 5 Tr 1027). An example of a narrative standard is the criterion for P, which provides that "nutrients[41] shall be limited to the extent necessary to prevent stimulation of growths of aquatic rooted, attached, suspended, and floating plants, fungi or bacteria which are or may become injurious to the designated uses of the surface waters of the state."[42] Mich

[41] While "nutrients" is not a defined term in the Administrative Rules, the term "plant nutrients" is defined as "the chemicals, including [N] and [P], necessary for the growth and reproduction of aquatic rooted, attached, and floating plants, fungi, or bacteria." Mich Admin Code, R 323.1044(j).

[42] The WQS for P also include a numeric standard of "1 milligram per liter [mg/l] of total phosphorus [(TP)] as a maximum monthly average effluent concentration…." Mich Admin Code, R 323.1060(1).

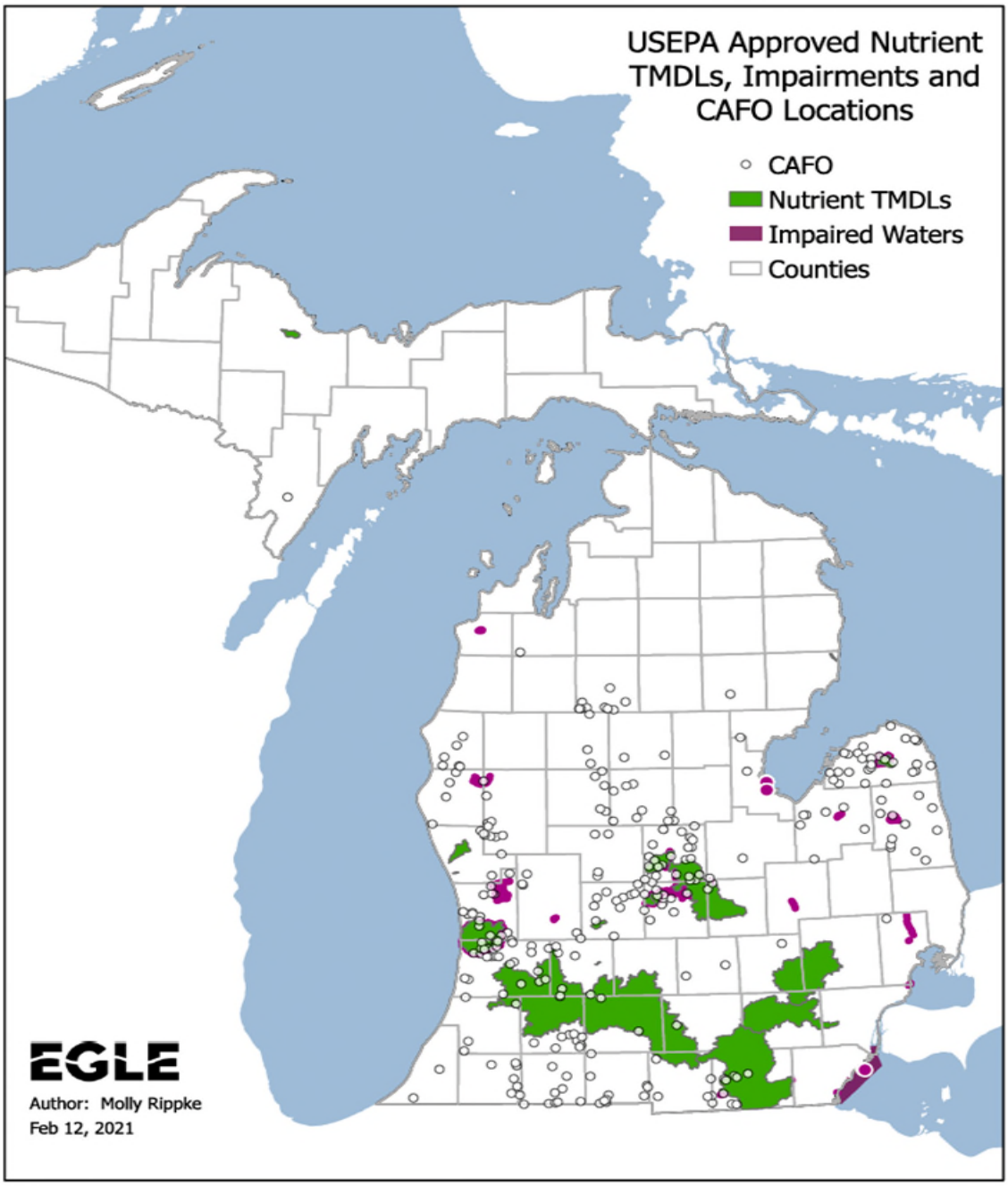
Admin Code, R 323.1060(2). Hence, this qualitative standard focused on the impacts of excess nutrients, not specific effluent limits.

It is axiomatic that P "is an essential nutrient for plant and animal life." (Testimony of Sarah Holden, 6 Tr 1462). See also Mich Admin Code, R 323.1044(j). Indeed, "P is required for photosynthesis, respiration, seed production, root growth and other critical functions." (Exhibit R-149, p 2). With respect to animals, "P is critical for proper bone and muscle growth, metabolism, reproduction, and overall animal performance." (*Id*.). When P is added to a waterbody, it causes an increase in plant or algae growth. (Testimony of Sarah Holden, 6 Tr 1462). However, there is a point where too much P becomes a problem. (*Id*.). When P levels are too high in a water body, excessive growth of plants and algae can result. (*Id*., 6 Tr 1463). Excessive plant or algae growth can cause impacts to habitat for aquatic organisms, as well as the chemistry of the waterbody. (*Id*.). Excessive plant and algae growth can also affect the availability of dissolved oxygen concentrations in the waterbody, which can, in turn, impact fish and other aquatic life. (*Id*.). Excessive plant and algae growth can also affect recreation on a water body by impacting the fisheries, by causing problems for boat motors, and by making the water less appealing for swimming, boating, or general recreation. (*Id*.). A significant amount of Michigan waters is impaired or has a TMDL in place due to excess nutrients, including P. (See Exhibit R-47) (which is displayed on page 40 of this FDO, *infra*).

Finally, P is connected to the occurrence of algal blooms in Michigan waterbodies. Algal blooms consist of an accumulation of either algae or cyanobacteria that presents with certain characteristics, such as high biomass, long duration of occurrence, high frequency of occurrence, coverage of a large surface area, and discoloration of ambient water. (Testimony of Aaron Parker, 6 Tr 1550). As with excessive plant growth, algal and cyanobacteria blooms can cause dissolved oxygen depletion.[43] (*Id*., 6 Tr 1558). Cyanobacteria (also known as blue-green algae) is considered harmful because, *inter alia*, it can produce breathable toxins.[44] (*Id*., 6 Tr 1558, 1559). One hundred twenty-five

[43] Michigan's WQS have established appropriate levels for dissolved oxygen in the Great Lakes, inland lakes, and in Michigan's rivers and streams. See Mich Admin Code, R 323.1064; Mich Admin Code, R 323.1065.

[44] The toxin-bearing algal blooms have been referred to as "HABs" for "harmful algal blooms." (Exhibit P-53, p 13).



(125) Michigan inland lakes have been documented with cyanobacteria blooms. (*Id*., 6 Tr 1571-1572). In general, "algal blooms contribute to a wide range of water-related problems including summer fish kills, unpalatability of drinking water, and formation of trihalomethane during water chlorination." (Exhibit P-88, pp 5-7). (See also Exhibit P-53,

p 14) ("These blooms caused taste and odor problems in drinking water supplies"). While algal blooms are caused by a combination of factors, one factor includes the availability of nutrients, typically high amounts of N or P. (Testimony of Aaron Parker, 6 Tr 1562).

"Most waterbodies have the potential to have a bloom under the right environmental conditions like high nutrient concentrations, warm and still water, etc., but more productive systems are more likely to have algal blooms." (Testimony of Sarah Holden, 6 Tr 1468). "Waterbodies with high nutrient concentrations are most likely to have significant algal blooms." (*Id*., 6 Tr 1469). "[L]akes with higher amounts of agricultural and urban land use in their watersheds are more likely to have algal blooms…." (*Id*.). The human activities that add to additional sources of nutrients and a higher probability of algal blooms include agricultural land practices, urban land practices, and industrial and municipal point sources of P. (*Id*., 6 Tr 1470). Algal blooms are concerning because they are occurring more frequently in waterbodies across the country. (*Id*.). (See, e.g., Exhibit P-54, p 17) ("In 2010 there were numerous algal blooms across the state [of Ohio] leading to 20 inland lakes with public health advisories").[45]

In fact, Lake Erie of the 1960s and 1970s was highly "eutrophic" and was subject to extensive algal blooms.[46] (Exhibit P-53, p 11). Petitioners' exhibit admits that "P is often the limiting element, and its control is of prime importance in reducing the accelerated eutrophication of fresh waters." (Exhibit P-90, p 6). (See also Exhibit R-149, p 3) ("Agricultural land use has been identified by the EPA as the major source of nutrients causing accelerated eutrophication in the nation's lakes and rivers"). "In 1972, the United States and Canada entered into the Great Lakes Water Quality Agreement [GLWQA] that established programs and measures that would reduce and control inputs of [P] to the

[45] Michigan's report, entitled "Michigan's Adaptive Management Plan to Reduce Phosphorus Loading into Lake Erie" was published in December 2021. It was proffered as Exhibit I-75 but not admitted into evidence, because the document was not listed on either the WRD's or Intervenors' exhibit list and was proffered for admission into evidence after the close of testimony at the hearing, which precluded Petitioners from questioning any witnesses on the document or from providing a witness to rebut the contents of the document. (13 Tr 3623-3627). See also MRE 403 ("Although relevant, evidence may be excluded if its probative value is substantially outweighed by the danger of unfair prejudice"). In their Closing Arguments, Intervenors misquoted MRE 403 by alleging that "any purported prejudice is far outweighed by the probative value of the" proposed exhibit. (Intervenors' Closing Arguments, p 17 n 5).

[46] "A eutrophic lake has high nutrient concentrations and high productivity." (Exhibit P-54, p 12). (See also Exhibit P-88, p 5) ("Eutrophication is the natural aging of lakes or streams brought on by nutrient enrichment").

Great Lakes Basin."[47] (Testimony of Sylvia Heaton, 5 Tr 1028-1029). In fact, '[t]he widespread adoption of [P] control programs reversed the highly eutrophic conditions and eliminated the algal blooms in Lake Erie by the 1980s."[48] (*Id*.).

However, blue-green algal blooms began to reappear in the western Lake Erie basin in the mid-1990s. (*Id*.). Additional agal blooms appeared in 2002–2011. (Exhibit P-53, pp 13, 18; Exhibit P-54, p 17). In fact, the summers of 2010 and 2011 brought "massive algal blooms" in Lake Erie that galvanized national attention. (Exhibit P-54, p 17). (See also Exhibit I-18) (discussing "[t]he recent resurgence of [HABs] in Lake Erie's western basin and depleted oxygen (hypoxia) in its central basin").

An Ohio task force[49] noted that the increasing degradation of Lake Erie was coincidental to an increasing trend in dissolved reactive phosphorus (DRP) loads that began to occur in the mid-1990s, despite the fact that total phosphorus (TP) loads were not increasing in the lake.[50] (*Id*.). "The increasing DRP was of particular concern because it is almost 100% bioavailable to support algal growth." (*Id*.). As of 2008, approximately 0.006 mg/l of DRP was derived from the Detroit River and 0.043 mg/l was derived from the River Raisin in Michigan, while the largest concentrations of DRP were derived from the Maumee (0.093 mg/l) and Sandusky Rivers (0.089 mg/l) in Ohio.[51] (Exhibit P-53, pp 20-21). (See also Exhibit I-18) (addressing nutrient loads from the Maumee River watershed); (Exhibit I-76) (a mass balance study computing the total N and P originating

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[47] The full text of this agreement can be found at www.epa.gov/glwqa.

[48] The reduction of algal blooms in the 1970s was due, in part, to the imposition of a 1 mg/l effluent standard applicable to wastewater treatment plants (WWTP) discharging more than 1 million gallons per day (MGD). (Exhibit P-53, p 14; Testimony of Sylvia Heaton, 5 Tr 1028-1029). Michigan's effluent standard for P was promulgated in 1979. Mich Admin Code, R 323.1060(1).

[49] Mr. Elder testified that he was a member of this task force. (Testimony of Kevin Elder, 11 Tr 2999; Exhibit P-53, p 2).

[50] During re-direct examination of Mr. Elder, Petitioners made much of the fact that the TP loads in Lake Erie have been decreasing. (Testimony of Kevin Elder, 12 Tr 3200-3202) (citing Figure 3-6 of Exhibit P-54). However, the Report of the Ohio Task Force expressly noted that "[t]his 're-eutrophication' of Lake Erie has occurred during a time in which [TP] loading has remained relatively constant (Figure 3)." (Exhibit P-53, p 18). The Task Force posited five potential causes of the re-eutrophication of Lake Erie, including "changes in bioavailable [P] loading that do not parallel changes in [TP] loading…." (*Id*.).

[51] (But see Testimony of Kevin Elder, 11 Tr 3042) ("The Detroit [River] also has more [P] imports to the lake, but not the concentration level in per volume of water" because "[t]he Maumee has a higher concentration per volume of water").

from Ohio watersheds, including the Maumee and Sandusky River watersheds). While there are multiple contributors of P into Lake Erie, agriculture was found to be a "major contributor."[52] (Exhibit P-54, p 15; Testimony of Kevin Elder, 12 Tr 3180). In fact, manure was found to contribute 10,190 metric tons (or 22,465,077.8 pounds) of P to Lake Erie, annually.[53] (Exhibit P-53, pp 38-39).[54]

In Michigan inland lakes, the WRD believes that there is a "relationship" between agricultural land use[55] and the occurrence of algal blooms.[56] (Testimony of Aaron Parker, 6 Tr 1574). In support of this position, Exhibit R-27 is a map which locates both cyanobacteria blooms from 2016 to 2020 compared to the location of CAFOs. Petitioners note that, while numerous CAFOs are in the thumb region of the state of Michigan, very few confirmed algal blooms were recorded in this area. (See Exhibit R-27). The WRD, on the other hand, explained the non-occurrence of algal blooms as the result of "very few inland lakes in that region of the state." (Testimony of Aaron Parker, 6 Tr 1574). Nevertheless, the WRD noted that "several instances of cyanobacteria blooms have been documented along Saginaw Bay…." (*Id*., 6 Tr 1575). In response, Petitioners pointed to the fact that four algal blooms were recorded across the Upper Peninsula, while only one CAFO is located in the Upper Peninsula, close to Menominee in the southwest. (See Exhibit R-27).

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[52] "[T]he majority of annual [P] loading into Lake Erie has been documented to be from the storm-pulsed runoff from the landscape into the tributaries that drain to Lake Erie…." (Exhibit P-53, p 37). "[A] large portion of the agricultural nonpoint source [P] load was attributed to particulate [P] attached to sediment particles." (Exhibit P-53, p 38). Mr. Elder confirmed that, when manure runs off of agricultural fields, it is generally referred to as a nonpoint source of pollution. (Testimony of Kevin Elder, 11 Tr 3037).

[53] The Final Report also notes that the increase of DRP in Lake Erie came at a time when "the numbers of farms and total animals raised have decreased, [but] the number of animals per farm has increased." (Exhibit P-53, p 38).

[54] But see Exhibit R-149, which recites that "[r]unoff and erosion (nonpoint source pollution) from urban sources such as construction, lawns, streets, etc. can also be locally significant sources of P…." (Exhibit P-53, p 53) (citations omitted). Indeed, the Ohio study noted that "[s]torm water runoff from urban areas is another source of [P] loading and can be locally significant" but that "[d]ata isolating urban [P] sources in Ohio are limited." (*Id*.). Nevertheless, one study claimed that urban sources of P "is very small relative to agricultural P contributions." (Exhibit R-149, p 11).

[55] Mr. Elder testified that those watersheds in Ohio that are 80% agriculture are impaired due to P. (Testimony of Kevin Elder, 12 Tr 3168).

[56] Note that Mr. Parker testified to only a "relationship" between agricultural land use and algal blooms. (Testimony of Aaron Parker, 6 Tr 1574). This is to be compared with the "strong correlation" alleged by the WRD to exist between agricultural land use and *E. coli* contamination in Michigan waterbodies. (Testimony of Molly Rippke, 5 Tr 1301, and 6 Tr 1408). See Section IV(D)(1) of this FDO, *infra*.

Hence, Petitioners dispute the "relationship" between agricultural land use and P levels in inland lakes and rivers. Mr. Trainer testified that, '[t]hough there is a relationship between elevated dissolved [P] and HABs, it is misleading to infer that this association is largely caused by CAFOs." (Testimony of David Trainor, 10 Tr 2839). However, the issue is not causation, but contribution. Ms. Holden credibly testified that "CAFOs contribute to [P] pollution in Michigan." (Testimony of Sarah Holden, 6 Tr 1478). Specifically, CAFOs generate a large amount of nutrient-laden waste within a small area. (*Id*.). This waste is then land-applied as fertilizer to agricultural fields. Indeed, one of Petitioners' exhibits concedes that "[a]gricultural lands are one of the major sources of nutrient loading in the Great Lakes." (Exhibit P-56, p 4). This article further concedes that "24 to 29% of the nutrient load to Lake Michigan and Ontario comes from manure." (*Id*.).

As discussed in more detail *infra*, the WRD's concerns with the land application of manure are four-fold. First, that the P-laden manure is applied to soils that already contain high concentrations of P. Second, that the P contained in the soil exceeds the concentration needed for optimum plant yield. Third, that liquid manure is frequently transported off the application lands. Fourth, that the manure is land-applied in the winter.[57]

With respect to the WRD's first concern, evidence in the record suggests that soil in a significant portion of Michigan farmland is infused with substantial amounts of P. In fact, one of Petitioners' exhibits is illustrative. Exhibit P-88 contains a map of agricultural soils analyzed by state soil test laboratories in the year 2000, indicating regional buildups of soil test P (STP) in the continental United States. (Exhibit P-88, p 14). According to this report, Michigan's STP levels are second only to Wisconsin in the Great Lakes region and is one of the highest in the nation.[58] (*Id*.). Michigan's STP level is almost twenty points higher than the states of Illinois and Indiana, and over twenty points higher than the state of Ohio. (*Id*.). That exhibit also explains that most soils analyzed near P-sensitive waterbodies, such as the Great Lakes, had STP levels "in the high or very high

[57] (See, e.g., Exhibit I-20, p 4) ("Runoff from winter-applied manure can be an important source of annual nutrient loadings to water bodies, with [N] and [P] being the most often reported contaminants of concern"). The WRD's concerns with the land application of manure in the winter are discussed in Section IV(D) of this FDO, *infra*.

[58] Only those states along the northeastern seaboard contain higher concentrations of STP. (Exhibit P-88, p 13-14).

categories, indicating that little or no supplemental P was required for the current crop and possibly for several future crops." (Exhibit P-88, p 13). Similar conclusions were reached in 1997. (Exhibit R-85, p 8) ("Most soils analyzed in these areas had [STP] levels in the high or very high categories, indicating that little or no supplemental P was required for the current crop, and possibly for several future crops"); (Exhibit R-149, p 8) ("Long-term manure applications have elevated the soil P level of many soils above the range necessary for optimum crop growth"). (See also Testimony of Bruce Washburn, 2 Tr 416). That 1997 report indicates that "more than 50% of Michigan's soils have excessive [P], and without limiting application of [P], those soil levels would not decrease." (*Id*., 2 Tr 416; Exhibit R-85, p 8).

The high STP levels in Michigan was corroborated by the testimony of Petitioners' witnesses. Specifically, Mr. Dykhuis testified that "most of [his] fields have been over the 150-ppm threshold…." (Testimony of Robert Dykhuis, 8 Tr 1970-1971). Similarly, Mr. Sietsema testified that, "[f]or the organic farmers that we manifest to, the [P] levels at fields are typically at or near the 150-ppm threshold." (Testimony of Rick Sietsema, 8 Tr 2090). Also, Mr. Henry testified that, of his 5,000 acres available for land application of manure, 400 acres (or 8% of his farmland) are in excess of 135 ppm of P.[59] (Testimony of Scott Henry, 11 Tr 2895). Similarly, Mr. Stewart testified that 61.4 of his 800 acres (or 8%) of his farmland is in excess of 120 ppm of P. (Testimony of Caleb Stewart, 9 Tr 2161). In addition, Ms. Brink testified that, of the farms she serves, 5-7% of available farmland is above 120 ppm of STP. (Testimony of Allison Brink, 9 Tr 2213). Therefore, based on Petitioners' testimony alone, it is reasonable to infer that a significant amount of farmland in Michigan is above 120 ppm Bray P1 STP levels. *Zytkewick v Ford Motor Co*, 340 Mich 309, 318; 65 NW2d 813 (1954) (evidence includes reasonable inferences that can be drawn from the facts).

Second, the WRD expressed concern that the concentration of P contained in manure is in excess of the amount needed for plant growth. Specifically, Mr. Cleary credibly testified that most crops only require 30 to 40 ppm of P from an agronomic

[59] The significance of the 135 ppm and 120 ppm levels will be explained, *infra*. See Section IV(C)(2)(a) of this FDO, *infra*.

perspective. (Testimony of Thad Cleary, 4 Tr 831). He noted that "[a] field that has a 150 ppm Bray P1 soil test, has 4 to 5 times the amount of [P] that is agronomically needed to grow most crops." (*Id*.). Similarly, Ms. Makries credibly testified about the "critical level" of P in the soil, which represents the amount of STP available to support 95 to 97% of the maximum crop yield. (Testimony of Jeanette Makries, 7 Tr 1846-1847; Exhibit R-81, p 13). She explained that, when STP levels are above the critical level, the crop is already at its maximum uptake capability for P. (*Id*., 7 Tr 1847; Exhibit R-81, p 5). She noted that, according to an MSU Extension Bulletin, the critical level for most field crops in Michigan is at or below 25 ppm of P. (*Id*., 7 Tr 1847, citing Exhibit R-81, pp 15-16). (See also Exhibit R-149, p 8) ("Long-term manure applications have elevated the soil P level of many soils above the range necessary for optimum crop growth").

Third, the WRD expressed concern that the P-laden manure is often transported off the application lands. Initially, other than poultry manure, CAFO manure is commonly in a slurry form that contains more water with a large amount of nutrients. (Testimony of Thad Cleary, 4 Tr 819-821). "When manure is applied to tiled fields, there is the potential for manure, including the nutrients and *E. coli* in the manure, to be discharged out of the tile line."[60] (*Id*., 4 Tr 822) (italics supplied). It was estimated that approximately 2.3 million acres of farmland have some form of subsurface agricultural drainage in Michigan. (Exhibit P-112, p 4). Mr. Cleary stated that, "[t]hirty years ago, the understanding was that most of the [P] lost to surface waters was attached to soil particles that were eroded and deposited in the stream." (Testimony of Thad Cleary, 4 Tr 839). He also testified that "that soluble [P] in surface runoff or tile line discharges contributes [P] to surface waters." (*Id*.). In addition, Ms. Makries testified that P "can accumulate in the upper soil profile increasing the risk of surface water contamination from runoff." (Testimony of Jeanette Makries, 7 Tr 1851) (citing Exhibit R-54, p 3). She noted that, "if soil test levels for [P] become very high, the risk of losing soluble [P] and sediment bound [P] by runoff and erosion increases." (*Id.,* citing Exhibit R-55, p 5). (See also Exhibit R-149, p 9) ("According to the EPA, agricultural runoff is <u>the</u> major source of stream and lake

[60] Agricultural tiles are below-ground drainage systems consisting of perforated pipes that lowers the groundwater table to allow for more uniform soil moisture conditions across farmland. (Testimony of Thad Cleary, 4 Tr 821). (See also Exhibit P-112, entitled "Agricultural Drainage").

contamination that prevents attainment of legislatively mandated water quality goals") (emphasis in original).

Based on the evidence in the record, I find, as a Matter of Fact, that CAFOs contribute[61] to P pollution in Michigan's rivers and lakes, including the Great Lakes, justifying a reduction of P limits in the 2020 Permit.[62]

2. Whether the Proposed P Levels Are Supported by Science?

a. The Public Comment Process

Michigan's Administrative Rules expressly provide that "an interested person may submit his or her views in writing on the application or department tentative determination, or both…." Mich Admin Code, R 323.2119(1). The Rule further provides that "[a]ll views submitted to the department in writing by interested persons during the comment period shall be retained and considered in the formulation of final determinations by the department on the permit application." Mich Admin Code, R 323.2119(2). Michigan's Administrative Rules are in accordance with the strictures of the CWA. See 33 USC 1251(e) ("Public participation in the development, revision, and enforcement of any regulation, standard, effluent limitation, plan, or program established by the Administrator or any State under this chapter shall be provided for, encouraged, and assisted by the Administrator and the States…").

It has been suggested that "the public comment period … is the most open, accessible forum possible and which comes at a stage where the Agency has the greatest ability to modify a draft permit." *Adams v EPA*, 38 F3d 43, 51 (CA 1, 1994). The process is "intended to alert the agency to potential problems with the draft permit and to ensure that it has an opportunity to address those problems before the permit becomes final." *Id*.

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[61] Indeed, to be an authorized discharge under the 2020 Permit, the discharge must "not cause **or contribute to** an exceedance of Michigan's [WQS]." (Exhibit R-45, p 6) (Part I.A.1.) (emphasis supplied). See Section IV(F) of this FDO, *infra*.

[62] In their Response to Closing Arguments, Petitioners assert that the WRD failed to support its claims that CAFOs have "caused" watershed impairments. (Petitioners' Response to Closing Arguments, pp 13-15). Contrary to Petitioners' assertion, the WRD has not alleged that CAFOs "caused" Michigan's P impairments, but that CAFOs have "contributed" to this pollution. On questioning from the tribunal, Ms. Heaton testified that P levels are a problem in the waters of the state and that all potential dischargers of P must reduce the amount of P discharged into state waters. (Testimony of Sylvia Heaton, 5 Tr 1243; Exhibit R-47).

The process was intended to "do more than pay lip service to public participation; instead '[t]he public must have a genuine opportunity to speak on the issue of protection of its waters' on federal, state and local levels." *Id*., citing *Natural Resources Defense Council, Inc v EPA*, 273 US App DC 180, 201 (1988). In fact, the "legislative history of the CWA also echoes the desire 'that its provisions be administered and enforced in a fishbowl-like atmosphere.'" 273 US App DC at 199.

The public comment process seeks comments not only from those who "speak on the issue of the protection of [state] waters," *Adams, supra*, but also from all who may be affected by the issuance of a permit. Consistent with *Natural Resources Defense Council, supra,* Ms. Alexander explained that "[t]he department invested an enormous amount of time into creating and implementing a transparent reissuance process." (Testimony of Christine Alexander, 1 Tr 61). Before commencing preparation of the draft permit, the Department conducted three stakeholder meetings. (Testimony of Sylvia Heaton, 5 Tr 1038; Exhibit R-102; Exhibit R-106; Exhibit R-72). Ms. Alexander noted that "the Department was very aware that the proposed changes to the [2015 Permit] would need to be thoroughly vetted with myriad interested stakeholders and permittees." (Testimony of Christine Alexander, 1 Tr 61). In fact, at the first such meeting, the WRD advised the stakeholders that it uses the comments received to discuss potential revisions to the general permit. (Exhibit R-138, p 4).

It was during these stakeholder meetings that the agency shared its concern regarding P contamination in Michigan waterbodies. Specifically, the WRD discussed nutrient related impairments (*i.e.,* P, nitrates, excess algae/plants) in the first stakeholder meeting. (See Exhibit R-102, p 10). Nutrient impairments were also touched on at the second stakeholder meeting. (Exhibit R-102, p 29). At the third stakeholder meeting, the WRD addressed in detail the issues related to P contamination. (Exhibit R-72, pp 20-27). In fact, during this meeting, the WRD explained its decision to utilize the MPRA tool as its method for determining when manure may be applied to agricultural fields. (*Id*., pp 13-27).

The PN Draft of the 2020 Permit was publicly noticed on October 30, 2019. (Testimony of Megan McMahon, 2 Tr 310). The public notice was posted on the

Department's calendar and in three newspapers. (*Id*., 2 Tr 309; Exhibit R-20). This Notice recites that "[t]hree public hearings on the draft permit are being held by the Department to seek additional public input on the proposed reissuance of the general permit." (Exhibit R-20). It further provides that "[c]omments or objections to the draft permit received through December 18, 2019, will be considered in the final decision to issue the permit." (*Id*.). The public comment period commenced on November 1, 2019, and closed on December 18, 2019. (Exhibits R-20 and R-137).

After the PN Draft of the permit was publicly noticed, Mr. Washburn attended meetings with individual stakeholders and CNMP providers. (Testimony of Bruce Washburn, 2 Tr 407). At meetings occurring on either December 4, 2019, January 8, 2020, or February 3, 2020, these stakeholders discussed the N noticing requirements of the 2020 Permit. (*Id*., 2 Tr 408). In fact, it was the suggestion of these stakeholders to report the potential need for additional N through the CNMP instead of through a public notice process. (*Id*., 2 Tr 409). This suggestion was ultimately employed in the 2020 Permit. See Section IV(B) of this FDO, *supra*.

Similarly, Ms. Brink met with the WRD permit writers to share her concerns on behalf of MAPI. (Testimony of Sylvia Heaton, 5 Tr 1067). MAPI is "the state trade association that represents commercial egg, turkey, and broiler farms and their young-stock network of hatcheries and pullet growers." (Testimony of Allison Brink, 9 Tr 2168). After this meeting, Ms. Brink provided the WRD with proposed language for revised permit conditions on February 27, 2020. (Exhibit R-74). These proposed revisions of the 2020 Permit related to handling of poultry litter.[63] (*Id*.). Ms. Heaton testified that "[t]here were minor wording revisions made, but, for the most part, we used the entirety of language that Ms. Brink provided…." (Testimony of Sylvia Heaton, 5 Tr 1068). In fact, on February 27, 2020, Ms. Heaton sent an email to Ms. Brink confirming the WRD's use of her revisions with "just a few minor edits to make it fit the 'permit language' requirements." (Exhibit R-122, p 2). In response, Ms. Brink replied: "Wonderful! Appreciate your willingness to work through the language on behalf of the poultry industry." (*Id*.).

[63] Poultry litter "is a dry manure" that "gets hauled with dump trucks [when applied] to the crop fields." (Testimony of Allison Brink, 9 Tr 2078).

During the public comment period, the WRD also received an undated public comment entitled "Recommendations of revisions to the draft CAFO Permit." (Exhibits P-17, R-75 and R-113) (p 2). The public comment was signed by Ms. Brink, and six other certified CNMP providers (Melissa Lehman, Beth Gruden, Deidre Iciek, James DeYoung, David Weber, and Kameron Southworth).[64] (*Id*.). This comment stated that it "is a collaborative effort of certified CNMP providers within the State, representing 272 permitted facilities."[65] (*Id*.). Since there are approximately 287 large CAFOs in the state of Michigan, (Testimony of Dr. James Averill, 9 Tr 2327-2328), this comment purported that it was written on behalf of 95% of the large CAFOs.[66]

The public comment stated that "[w]e advise eliminating the requirement to utilize the MPRA tool" because "it is simply too flawed to rely on in any capacity." (*Id*.). Second, the comment stated that "[w]e collectively recognize the concerns that utilizing the MPRA was meant to address, so would like to propose one of the following three options as alternatives." (Exhibits P-17, R-75 and R-113) (p 3). The first option proposed to "[r]educe P soil test categories by 20% in nutrient TMDL watersheds" while "all of the other existing permit parameters around these thresholds would remain…." (*Id*.). The second option proposed to "[r]educe P soil test categories by 10% in all areas, and 20% in TMDL watersheds." (Exhibits P-17, R-75 and R-113) (p 4). The third option proposed to "[r]educe P soil test limits by 10% in all areas." (*Id*.). Additional proposed revisions to the PN Draft were contained within the comment. (Exhibits P-17, R-75 and R-113) (pp 4-6).

The PN Draft required the CAFOs to comply with the MPRA tool to determine maximum annual land application rates. (Exhibit R-71, p 16) (Part I.B.3.c.). After receipt of the CNMP providers' public comment, the PN Draft was modified to require the use of

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[64] Ms. Brink (9 Tr 2167-2299) and Mr. DeYoung (12 Tr 3222-3340) were called as witnesses by Petitioners in this contested case.

[65] The 272 farms that are represented by the seven CNMP providers are identified in Tab 2 of Exhibit P-151.

[66] On February 12, 2020, Mr. Washburn sent an email to interested parties that included these seven CNMP providers, which stated, in part, that "I wanted to get your quick take on [N] recommendations for corn…." (Exhibit R-79). In response, David Weber, one of the seven CNMP providers, sent an email which stated that "[f]irst off, I think it is awesome that you asked for input, appreciate it…." (Exhibit R-80). Such communications are an example of the give and take between the agency and the public during the public comment period.

either the Bray P1 numerical limits or the MPRA and the EGLE MPRA guidance document to determine maximum annual land application rates. (Exhibit R-45, p 16) (Part I.B.3.c.). Also, the PN Draft provided that if the Bray P1 soil test result is 150 ppm P or more, CAFO waste applications shall be discontinued. (Exhibit R-71, p 15) (Part I.B.3.c.). After receipt of the CNMP providers' public comment, the PN Draft was modified to provide that if the Bray P1 soil test result is 135 ppm P or more, and the fields are not located within a P or N TMDL watershed, CAFO waste applications shall be discontinued. (Exhibit R-45, p 16) (Part I.B.3.c.). Additionally, the PN Draft was further modified to provide that if the Bray P1 soil test result is 120 ppm P or more, and the fields are located in a watershed covered by an approved P or N TMDL, CAFO waste applications shall be discontinued. (Exhibit R-45, p 16) (Part I.B.2.c.). Hence, these two P reductions in the 2020 Permit amount to a 20% reduction (150 ppm x .8 = 120 ppm) of P in TMDL watersheds, and a 10% reduction (150 ppm x .9 = 135 ppm) of P in all other watersheds, which is Option 2 from the public comment. (Exhibits P-17, R-75 and R-113) (p 4). In other words, the WRD modified the PN Draft based on the recommendations of the seven CAFO CNMP providers, representing 95% of the large CAFOs.

During the public comment period, there were approximately 2,400 comments submitted to the WRD. (Testimony of Megan McMahon, 2 Tr 313; Exhibit R-112). On April 1, 2020, the WRD issued a document summarizing its responses to the public comments. (Exhibit R-112). The WRD's response to the public comment of the CNMP providers was contained in this document, and states:

> EGLE agrees with the comment after reviewing the available literature provided regarding the lack of site evaluation of index ratings and scoring of the MPRA tool. The intent of requiring the use of the risk assessment tool was to address the sources and transport of nutrients from CAFO waste, while providing more robust protection of water quality. Based on additional technical information and public comments, the requirement to use only the MPRA tool was removed. A permittee can now either use the numerical Bray P1 [P] limits, or the MPRA tool to determine maximum annual land application rates. However, as an alternative to the change, the permit was revised to include a reduction in the allowable numerical Bray P1 [P] soil test results. The Bray P1 [P] soil test results in the permit have been reduced by 10% in areas that do not have an approved [P] or [N] [TMDL], and by 20% in those watersheds where there is an approved [P] or [N] TMDL. EGLE agrees with the comments suggesting alternatives to

> requiring the use of the MPRA tool, and reductions in levels of soil test results used for evaluating manure applications will aid in addressing the issue of excess [P] and [N] that are not removed by plant uptake….

(Exhibit R-112, p 27).

During the course of the contested case, the WRD suggested that the lowering of P levels to 120 ppm in TMDL watersheds and to 135 ppm in all other watersheds was due to a "compromise." (Testimony of Christine Alexander, 1 Tr 144, 146). The basis for the compromise was the public comment from the CNMP providers. (Exhibits P-17, R-75 and R-113). In their Closing Arguments, Petitioners challenge the concept of a compromise. Petitioners argue that "EGLE was not engaged in any contractual negotiation." (Petitioners' Closing Arguments, p 29). Rather, they assert that "EGLE [was] demanding that 'something has to change' … and declaring its intent to forcibly change the standards in any event." (*Id*., p 30) (citations omitted).

Petitioners are correct that there was no contractual negotiation. A license granted under a legislative enactment "is not a contract in the sense that the licensee has thereby acquired any vested or property rights, but is in the nature of a permit subject to the control of the State in the exercise of its police power." *Eastwood Park Amusement Co v Stark*, 325 Mich 60, 77; 38 NW2d 77 (1949), citing *Fitzpatrick v Liquor Control Comm*, 316 Mich 83, 92-93; 25 NW2d 118 (1946). In fact, Part 31 grants to EGLE "the exclusive authority to protect the waters of the state."[67] *City of Brighton v Hamburg Township*, 260 Mich App 345, 348; 677 NW2d 349 (2004). Hence, in issuing an NPDES permit, the WRD is exercising its police power under Part 31. Therefore, the 2020 Permit is not a contract under which any compromise could have occurred.

While the WRD was incorrect in its assertion of a "compromise," Petitioners are nevertheless incorrect in their analysis of the public comment process. They argue that the public comment from the CNMP providers should now be rejected, because "[n]o

[67] In its Response to Closing Arguments, Petitioners assert the novel contention that, when the WRD exercised its exclusive jurisdiction, it violated the "major questions" doctrine. (Petitioners' Response to Closing Arguments, pp 24-27), citing *In re Certified Questions from United States District Court*, 506 Mich 332; 958 NW2d 1 (2020). In this decision, the Michigan Supreme Court noted that administrative agencies do not have authority to "make law" but have authority and discretion as to its "execution." 506 Mich at 358. Petitioners' "major questions" argument was implicitly rejected by the Michigan Supreme Court when it held that EGLE had not engaged in unlawful rulemaking. *Michigan Farm Bureau II*, __ Mich __, __; 2024 WL 3610196 at *53 (2024) ("neither the general permit nor the discretionary conditions therein can have the force and effect of law, and so they cannot be 'rules' as defined by the APA").

attorneys were involved in drafting" it, and because "the CNMP providers [did not] seek client approval before sending" it. (Petitioners' Closing Arguments, p 30). They further contend that the P levels provided in the permit should be rejected, because they are "not based on science." (*Id*., p 89). However, this is the second revision to the 2020 Permit requested by Ms. Brink. As noted *supra*, her first requested revisions were on behalf of MAPI and were adopted in entirety by the WRD, with "just a few minor edits." (Testimony of Sylvia Heaton, 5 Tr 1068; Exhibit R-122, p 2).

In her second requested revision to the 2020 Permit, Ms. Brink was joined by six CNMP providers. Each of the seven CNMP providers signed the public comment, indicating their agreement with the contents of the document. (Exhibits P-17, R-75 and R-113) (p 2). These CNMP providers state that they are "representing 272 permitted facilities." (*Id*.). The word "representative" is defined by Black's Law Dictionary as "[o]ne who stands for or acts on behalf of another…." *Black's Law Dictionary* 1304 (7th ed 1999). Hence, in this document, the CNMP providers purport that they acted on behalf of 272 of the 287 (or 95%) of the large CAFOs. Since the document was submitted as part of the public comment process, Ms. Heaton testified that "I don't ever remember meeting with a CNMP provider where they were just representing their own interest. It was always the interest of the CAFO. They always came from that perspective." (Testimony of Sylvia Heaton, 5 Tr 1211). Indeed, when Ms. Brink acted on behalf of MAPI, it was reasonable for the WRD to rely on her authority to act on behalf of the Association. In this case, it was also reasonable for the WRD to rely on the authority of the seven CNMP providers to act on behalf of their represented CAFOs. To rule otherwise would negate the purpose of the public comment process.

Finally, a party to the public comment process should not be entitled to recommend revisions to a permit, and then later claim they were not authorized to send the public comment in the first place. This is what Petitioners now contend. (Petitioners' Closing Arguments, p 30). However, at no time after submitting their public comment (and prior to the commencement of the hearing in this contested case) did the CNMP providers retract their proposals contained in the public comment, nor did their represented CAFOs or the farm associations (MFB, the Michigan Milk Producers Association, the Michigan

Pork Producers Association, MAPI, Foremost Farms USA, Dairy Farmers of America, and Select Milk Producers, Inc.). Contrary to Petitioners' assertions, the process represents the give and take between the public and the agency.

As noted *supra*, the process is "intended to alert the agency to potential problems with the draft permit and to ensure that it has an opportunity to address those problems before the permit becomes final." *Adams v EPA*, 38 F3d at 51. In fact, Mr. Washburn testified that the CNMP providers likely know "the permit conditions better than the permitted farms or the industry as a whole. Department compliance staff interact with this group regularly and this group consults for the vast majority of the permitted CAFOs." (Testimony of Bruce Washburn, 2 Tr 401). The CNMP providers alerted the WRD to the problem of solely relying upon the MPRA. In the opinion of the CNMP providers, the problem was so severe that they were willing to live with lower P levels. After all, the WRD is required to consider "all views submitted to the department in writing … in the formulation of the final determinations by the department…." Mich Admin Code, R 323.2119(2).

Based on the foregoing, I find, as a Matter of Fact, that it was reasonable and appropriate for the WRD to rely upon the proposed reductions in the P levels set forth in the public comment from the CNMP providers.

b. The Science Behind the 150 ppm Standard.

In their Closing Arguments, Petitioners addressed their view of the science behind the 150-ppm standard. Petitioners state that "'on average' 'at the 8-inch depth soil sample, [soil] begins to lose the ability to hold onto [P]' at [STP] levels of 150 [ppm P] under the Bray P1 testing method." (Petitioners' Closing Arguments, p 7). They explain, "[t]hat means [P] will 'stay in solution for longer periods of time' at that level and higher losses of [P] can occur above that level." (*Id*., pp 7-8). They continue: "Below that level, there is a non-linear relationship between nutrient application and [P] losses." (*Id*., p 8). Finally, Petitioners assert that "nutrients that are placed in low-nutrient subsoils can attach 'even at higher levels than what is sampled for the topsoil.'" (*Id*.). In support of this

explanation, Petitioners cite the testimony of Mr. Elder. (Testimony of Kevin Elder, 11 Tr 2924-2926).

It must be recalled that expert testimony is admissible "if the court determines that scientific, technical, or other specialized knowledge will assist the trier of fact to understand the evidence or to determine a fact in issue…." MRE 702. The Michigan Supreme Court has held that, "while not dispositive, a lack of supporting literature is an important factor in determining the admissibility of expert witness testimony." *Edry v Adelman*, 486 Mich 634, 640; 786 NW2d 567 (2010). "While peer-reviewed, published literature is not always necessary or sufficient to meet the requirements of MRE 702, the lack of supporting literature, combined with the lack of any other form of support, rendered [the expert's] opinion unreliable and inadmissible under MRE 702." *Elher v Misra*, 499 Mich 11, 14; 878 NW2d 790 (2016). See also *Danhoff v Fahim*, ___ Mich ___, ___; 2024 WL 3333321, at *1 (2024). Because Mr. Elder's testimony is already contained within the record, the standards developed under MRE 702 will assist the tribunal in determining the weight to be afforded his testimony. See *Lather v Michigan Public Service Co*, 332 Mich 683, 690; 52 NW2d 551 (1952) (In cases tried without a jury, the trier of fact may give such weight to which the testimony, in his opinion, is entitled).

During his cross-examination, Mr. Elder provided testimony regarding the research that resulted in the 150-ppm standard. He testified that researchers Lee Jacobs, Jay Johnson and Brad Joern developed a graphic curve between the amount of P in the soil based on Bray P1 testing and the movement of dissolved P. (Testimony of Kevin Elder, 11 Tr 2995). According to Mr. Elder, this curve is reflected in Figure 34-12 on page 18 of Exhibit R-129. (*Id*., 11 Tr 2997). However, Figure 34-12 is not attributed to the research of Lee Jacobs, Jay Johnson and Brad Joern. Nowhere in Exhibit R-129 does the document attribute this curve to the research conducted by these individuals.

Mr. Elder then acknowledged that, with respect to the graph created by these researchers, "I was not part of the development…." (Testimony of Kevin Elder, 11 Tr 2998). He further explained that "Jay Johnson and Lee [Jacobs] and Brad Joern all put the same analysis together for Ohio, Michigan and Indiana and came up with 150 being that break point of Bray." (*Id*.). He stated that the three researchers "used all the soils

and made a similar graph, but I don't have that -- I don't know where that's at." (*Id*.). When he was asked if there was any question whether the 150-ppm number is too low, Mr. Elder responded "I do not know. That's not my area of expertise." (*Id*., 11 Tr 3001-3002). Hence, Mr. Elder testified regarding research of which he was not a part, and of which is not in his area of expertise.

The record also indicates that the research was performed at Mr. Elder's request. (*Id*., 11 Tr 3072-3073). Mr. Elder believed that the research was published, but he could not identify the publication in which it was printed. (*Id*., 11 Tr 3073-3074). He was also unaware whether the research was peer reviewed. (*Id*., 11 Tr 3074). For all of these reasons, this tribunal concludes that Mr. Elder's testimony is entitled to limited weight regarding the science behind the 150 ppm standard.

Intervenors contend that "Petitioners never filed any exhibit or pointed to any documents containing this research." (Intervenors' Closing Arguments, p 20). In response, Petitioners cite to three sources of evidence: the research "discussed" by Kevin Elder; "explained" in USDA documents from Andrew Sharpley and others (citing Exhibits P-88 and R-129), and "discussed" in exhibits introduced by WRD witness Jeanette Makries. (Petitioners' Response to Closing Arguments, p 10).

Mr. Elder's testimony has been addressed *supra*. Regarding the second source supporting the 150-ppm standard, Exhibits P-88 and R-129 are the same exhibit. The article was written in 2006 by Andrew Sharpley of the USDA-Agricultural Research Service and contains a graph with "hockey-stick" curves. (Exhibit P-88, pp 17-18) (Figures 34-12 and 34-13). The article explains that "[a] change point in the relationship between soil and surface runoff P was determined." (Exhibit P-88, p 17). The change point on the curve in Figure 34-12 is at 220 ppm Mehlich-3 [68] extractable soil

[68] There are two tests that are used to help predict available nutrient status in soils, the Mehlich-3 and the Bray P1 (also known as the Bray-Kurtz P1) tests. (Exhibit P-54, p 73). However, results from the Mehlich-3 test run 35% higher than the results from the Bray P1 test. (See Testimony of Thad Cleary, 4 Tr 866-867). (See also Exhibit P-19, p 19 n 3). Because the 2020 Permit provides that farms must use the Bray P1 test or the MPRA, (Exhibit R-45, p 16) (Part I.B.c.2), this FDO refers, when possible and in order to avoid confusion, to the P concentration levels obtained from the Bray P1 test rather than the Mehlich-3 test.

concentration of P, which is equal to 163 ppm Bray P1 soil concentration of P.[69] (*Id*.; Testimony of Thad Cleary, 4 Tr 904). The article explains that, at this change point, "[t]he potential for soil P release above this point is greater than below it." (Exhibit P-88, p 17). While Petitioners assert that this research provides science to support the 150-ppm standard, the article espouses that surface runoff of P occurs at higher than 150 ppm Bray P1 soil concentrations of P, being 163 ppm.[70] Hence, this article does not provide the science behind a 150-ppm standard. Since the original research was not cited in Mr. Sharpley's article, the tribunal is unable to evaluate the parameters that were utilized in the research. Therefore, this article fails to provide an adequate basis for the original research.

The third source of evidence suggested by Petitioners is Exhibit R-149 proffered into evidence by the WRD. (Petitioners' Response to Closing Arguments, p 10) (citing Exhibit R-149). That report suggests that "[a]t P soil test levels of **150 ppm**, manure and other sources of P should be discontinued until soil test levels decrease (Madison et al., 1998)." (Exhibit R-149, p 20) (emphasis in original). That article does not provide the science behind this standard, but cites an article by Madison *et al.*, that was not made a part of the record. From the foregoing, none of the evidence supplied by Petitioners provide competent evidence regarding the science behind a 150-ppm standard.

Finally, one additional source of the 150-ppm standard was contained in the record. Specifically, during her direct examination testimony, Ms. Campbell was asked if she had any knowledge regarding the determination of the 150-ppm standard. (Testimony of Laura Campbell, 10 Tr 2535). In support of her testimony, she generally cited to Exhibit P-89. Initially, Ms. Campbell's testimony conflicts with Mr. Elder's testimony. Mr. Elder identified the three individuals who performed the research: Lee Jacobs, Jay Johnson, and Brad Joern. (Testimony of Kevin Elder, 11 Tr 2995). Contrary to Mr. Elder, Ms. Campbell recited that the research was performed by North Central

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[69] Mr. Elder testified that Mehlich-3 is the predominant soil test analysis currently in use in the state of Ohio. (Testimony of Kevin Elder, 11 Tr 2997). (See also Exhibit P-54, p 73).

[70] The change point on Figure 34-13 is at 150 ppm Bray P1 soil concentration of P. (Exhibit P-88, p 18; Testimony of Thad Cleary, 4 Tr 907). However, that graph contains the P concentrations of subsurface flow of P. (Exhibit P-88, p 17). The 150-ppm standard reflected in the 2015 Permit and in prior iterations of the 2015 permit is with respect to surface runoff, not subsurface runoff. (See Exhibit R-96, pp 11-12) (Part I.B.3.c.).

Region Extension Service. (Testimony of Laura Campbell, 10 Tr 2535-2536). Exhibit P-89 is North Central Regional Research Publication No. 310. However, the author of the publication is B. G. Ellis from Michigan State University (MSU), and R.A. Olson from the University of Nebraska. The article recites that it "was prepared by the North Central Regional Committee…." (Exhibit P-89, p 2). Although the article identifies the members of the committee, Lee Jacobs, Jay Johnson, and Brad Joern were not members of the committee. (*Id*.).

While Ms. Campbell references Exhibit P-89, it is the only reference given by any of Petitioners' witnesses to the article. Instead of citing specific portions of Exhibit P-89, Ms. Campbell generally cites to the article, leaving the tribunal to attempt to locate the language which supports her testimony.[71] In fact, the Exhibit is not referenced in any of Petitioners' post-hearing briefs and Petitioners made no attempt to explain the research referenced in the article. For these reasons, the tribunal is also left to question the reliability of Ms. Campbell's testimony on this subject.[72]

Based on the record in this case, I find, as a Matter of Fact, that Petitioners have failed to support, by a preponderance of the evidence, the scientific basis for the 150-ppm standard.

c. Whether GAAMPs or MAEAP Standards Preclude the Lowering of the P Levels?

During the course of the contested case, Petitioners also relied upon generally accepted agricultural management practices (GAAMPs) and the standards of the Michigan agricultural environmental assurance program (MAEAP). Petitioners contend that these two programs preclude the reduction of P levels in the 2020 Permit. Each of these programs will be separately reviewed.

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[71] It is not the responsibility of this tribunal to find evidence within the exhibits that supports the arguments of the parties. See, e.g., *Mitcham v City of Detroit*, 355 Mich 182, 203; 94 NW2d 388 (1959).

[72] Curiously, the 150-ppm standard is set forth in the biosolids Rules, but documents supporting the scientific basis for this standard in such Rules were not provided by the parties. See Mich Admin Code, R 323.2410(8) ("For agricultural land, a person shall apply biosolids in accordance with agronomic rates. If the Bray P1 soil test level exceeds 300 pounds … per acre (150 ppm), … then the person shall not apply biosolids until the soil P test level decreases to less than … these values").

(i) GAAMPs

The Michigan Right to Farm Act (RTFA) was enacted in 1981. MCL 286.471, *et seq*. The RTFA provides that "[a] farm or farm operation shall not be a public or private nuisance if the farm or farm operation … conforms to [GAAMPs]." MCL 286.473(1). One of the Exhibits admitted into the record by Petitioners is a document entitled Generally Accepted Agricultural and Management Practices for Manure Management and Utilization. (Exhibit P-19). Among the GAAMPs is the following:

> If the Bray P1 soil test level for P reaches … 75 ppm …, manure applications should be managed at an agronomic rate where manure P added does not exceed the P removed by the harvested crop…. If the Bray P1 soil test reaches … 150 ppm … or higher, manure applications should be discontinued until nutrient harvest by crops reduces P test levels to less than [150 ppm]….

(Exhibit P-19, p 25). Ms. Campbell testified that, despite the WRD's attempt to lower P limits in the 2020 Permit, there have been no attempts to promulgate lower P application limits in the GAAMPs. (Testimony of Laura Campbell, 10 Tr 2549-2550). Hence, the implication is that, due to the generally accepted agricultural management practice, manure applications should cease only when STP levels equal 150 ppm or higher.

In response to these assertions, the WRD notes that the RTFA "was meant to 'protect farmers from the threat of extinction caused by nuisance suits arising out of alleged violations of local zoning ordinances and other local land use regulations as well as from the threat of private nuisance suits.'" (WRD's Closing Arguments, p 41), citing *Northville Twp v Coyne*, 170 Mich App 446, 449; 429 NW2d 185 (1988). To obtain the protections of the RTFA, the farm or farm operation must prove that it conforms to the applicable GAAMPs. *Williamston Twp v Hudson*, 311 Mich App 276, 290; 874 NW2d 419 (2015). Nevertheless, the WRD notes that the RTFA expressly provides that "[a]ctivities at a farm or farm operation are subject to applicable provisions of the [NREPA] … and the rules promulgated under that act." MCL 286.474(2).

Addressing the arguments of the parties, it is important to recall that the 2020 Permit is not an agricultural permit that was intended to employ only GAAMPs. Rather, according to the Administrative Rules, the 2020 Permit is a "national permit" which is "an NPDES permit … issued by the department to a discharger … for discharges into surface

waters." Mich Admin Code, R 323.2103(p). Under the CWA, the discharge of any pollutant into navigable waters is prohibited from any point source, unless the discharge is authorized by a permit issued under the NPDES program. *Sierra Club Mackinac Chapter v Department of Environmental Quality*, 277 Mich App 531, 534; 747 NW2d 321 (2008). "NPDES permits impose limitations on the discharge of pollutants…." *Yadkin Riverkeeper, Inc. v Duke Energy Carolinas, LLC*, 141 F Supp 3d 428, 435 (MD NC, 2015). Under the Administrative Rules, "CAFOs are point sources that require NPDES permits…." Mich Admin Code, R 323.2196(1).

Also, this contested case is not a nuisance suit against farms. Rather, this contested case concerns the issuance of an NPDES permit setting effluent limitations for P, among other pollutants.[73] The Michigan Court of Appeals has recognized that, "[a]lthough nutrients in the manure can act as a fertilizer when CAFO owners or operators properly apply it, when such owners or operators excessively or improperly apply it, manure has a number of potentially harmful pollutants that can infiltrate surface and ground waters." *Sierra Club Mackinac Chapter*, 277 Mich App at 535. Among the pollutants in manure is P. The lowering of P limits in an NPDES permit is clearly within EGLE's "exclusive authority to protect the waters of the state." *City of Brighton, supra*. Because the GAAMPs are subject to the NREPA and its Administrative Rules, MCL 286.474(2), I conclude, as a Matter of law, that EGLE has the authority to issue permits with P limits different from, and lower than, extant GAAMPs. See also *Michigan Farm Bureau II*, ___ Mich ___, ___; 2024 WL 3610196, at *6-7 (2024) (EGLE "must include conditions 'in addition to or more stringent than' the conditions set forth in the EPA rules that EGLE deems 'necessary to … [a]chieve applicable'" WQS).

(ii) MAEAP Standards

The MAEAP, on the other hand, is a program established by Part 87, Groundwater and Freshwater Protection, of the NREPA. MCL 324.8710. Part 87 expressly provides that "[t]he MAEAP shall be a voluntary program that is available to farms throughout the

[73] The Michigan Court of Appeals has held that "discharge rates of a CAFO's [NMP] are effluent limitations, as the [CWA] defines them." *Sierra Club Mackinac Chapter*, 277 Mich App at 533.

state." MCL 324.8710(1). Its purpose is to "promote natural resources conservation through education, technical assistance, and verification." *Id*. When a farm is MAEAP-verified, and is in compliance with extant MAEP standards, it is not responsible for payment of fines for discharges to the waters of the state. MCL 324.3109d(1). Rather, the farm may only be held responsible for "actual natural resources damages." MCL 324.3109d(1)(a). According to Ms. Campbell, MAEAP standards come from "state or federal law and regulations, GAAMPs, or university recommendations…." (Testimony of Laura Campbell, 10 Tr 2641). See also MCL 324.8707(1) ("The director, in conjunction with [MSU] Extension and [MSU] AgBioResearch, and in cooperation with the [USDA NRCS], the department of environmental quality, and other professional and industry organizations, shall develop conservation practices for approval by the commission of agriculture and rural development and upon approval shall promote their implementation").[74] What is unclear from the record is what GAAMPs have been incorporated into MAEAP standards. Therefore, the tribunal has no clarity from the record whether the GAAMP that allows for manure application on fields with STP levels up to 150 ppm were made a part of the MAEAP standards.[75]

Apparently, Petitioners' biggest concern with the 2020 Permit with respect to MAEAP verification relates to TMDLs. (Petitioners' Closing Arguments, p 91) ("Nothing in EGLEs general permit conditions for TMDLs accounts for a farm's MAEAP verification"). Part 31 expressly provides that "[i]f a MAEAP-verified farm is in compliance with all MAEAP standards applicable to the farming operation, the farm is considered to be implementing conservation and management practices needed to meet [TMDL] load implementation for impaired waters pursuant to 33 USC 1313." MCL 324.3109d(1)(c). The 2020 Permit provides that manure cannot be applied when the STP level is equal to

[74] While EGLE is among the entities involved in the implementation of MAEAP standards, EGLE has "exclusive authority to protect the waters of the state." *City of Brighton, supra*. As part of that exclusive jurisdiction, EGLE is required to issue NPDES permit conditions necessary to ensure compliance with "maximum daily loads established by and incorporated into the state's continuing planning process required pursuant to section 303 of the federal act." Mich Admin Code, R 323.2137(d). Hence, EGLE is not required to set effluent limits for NPDES permits based on MAEAP standards.

[75] Petitioners admitted Exhibit P-119 into evidence, which is a document entitled Livestock•A•Syst for Michigan Producers which purports to relate to MAEAP Verification. However, there was only one reference to this Exhibit in the record (Testimony of Laura Campbell, 10 Tr 2641), and Petitioners did not explain the use of the document.

or exceeds 135 ppm of P. (Exhibit R-45, p 16) (Part I.B.3.c.). However, when the application lands are located within a watershed containing a nutrient TMDL for P, manure cannot be applied when the STP level is equal to or exceeds 120 ppm of P. (*Id*.). Ms. Campbell argued that, under the 2020 Permit, "farms would not be considered to be implementing the conservation and management practices needed to meet TMDLs, unless they also implement additional practices which are not required in the statute…." (Testimony of Laura Campbell, 10 Tr 2588). She further contended that the 2020 Permit "undermines the incentives Michigan law provides for farms who voluntarily participate and complete MAEAP verification." (*Id*., 10 Tr 2589).

In order to address Petitioners' concerns, it is necessary to review how TMDLs function. Under § 303(d) of the CWA, the States are required to develop a list of impaired waters. 33 USC 1313(d). The inclusion of a water body on a state's list of impaired waters triggers the statutory requirement to establish a TMDL for that water body. 33 USC 1313(d)(1)(C). That section expressly requires the states to "establish for the waters identified … the TMDL … at a level necessary to implement the applicable [WQS]…." *Id*.

"A TMDL establishes the maximum daily discharge of pollutants into a waterway" from all sources. *Hayes v Whitman*, 264 F3d 1017, 1021 (CA 10, 2001). "In other words, the CWA requires each state to identify the maximum amount of each type of pollutant that a waterbody can handle without violating [WQS]." *San Francisco Baykeeper, Inc v Browner*, 147 F Supp 2d 991, 995 (ND Cal, 2001). By regulation, a TMDL is defined as "[t]he sum of the individual [wasteload allocations (WLA)][76] for point sources and [load allocations (LA)][77] for nonpoint sources and natural background … [and] can be expressed in terms of either mass per time, toxicity, or other appropriate measure."[78]

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[76] The term "wasteload allocation" is defined as "[t]he portion of a receiving water's loading capacity that is allocated to one of its existing or future point sources of pollution. WLAs constitute a type of water quality-based effluent limitation." 40 CFR 130.2(h).

[77] The term "load allocation" is defined as "[t]he portion of a receiving water's loading capacity that is attributed either to one of its existing or future nonpoint sources of pollution or to natural background sources. Load allocations are best estimates of the loading, which may range from reasonably accurate estimates to gross allotments, depending on the availability of data and appropriate techniques for predicting the loading. Wherever possible, natural and nonpoint source loads should be distinguished." 40 CFR 130.2(g).

[78] Note that the terms "load" or "loading" are defined as "[a]n amount of matter or thermal energy that is introduced into a receiving water; to introduce matter or thermal energy into a receiving water. Loading may be either (continued…)

40 CFR 130.2(i). The States are required to establish TMDLs "at levels necessary to attain and maintain the applicable narrative and numerical WQS with seasonal variations and a margin of safety which takes into account any lack of knowledge concerning the relationship between effluent limitations and water quality." 40 CFR 130.7(c)(1). To fulfill its delegated responsibility, EGLE has promulgated an Administrative Rule for the establishment of a TMDL. See Mich Admin Code, R 323.1207.

TMDLS are not self-implementing. *American Farm Bureau Federation v EPA*, 984 F Supp 2d 289, 297 (MD Pa, 2013). Hence, a TMDL does not, in and of itself, prohibit any conduct or require any actions. *City of Arcadia v EPA*, 265 F Supp 2d 1142, 1144 (ND Cal, 2003). Rather, "each TMDL represents a goal that may be implemented by adjusting pollutant discharge requirements in individual NPDES permits or establishing nonpoint source controls."[79] *Id*. "If pollution loads stay below the applicable TMDLs for a given body of water, then in theory the body of water should achieve its [WQS]." *Friends of Earth, Inc v EPA*, 371 US App DC 1, 4 (2006). Once a TMDL is approved by the EPA, the WRD is obligated by federal regulation to include in each NPDES permit any requirement necessary to (a) "[a]chieve [WQS] established under section 303 of the CWA"; and (b) "ensure that … [e]ffluent limits developed … are consistent with the assumptions and requirements of any available [WLA] for the discharge prepared by the State and approved by EPA pursuant to 40 CFR 130.7." 40 CFR 122.44(d)(1) and 122.44(d)(1)(vii)(B). Hence, the WRD is required to include in NPDES permits conditions necessary to ensure compliance with "maximum daily loads established by and incorporated into the state's continuing planning process required pursuant to section 303 of the federal act."[80] Mich Admin Code, R 323.2137(d).

(…continued) man-caused (pollutant loading) or natural (natural background loading)." 40 CFR 130.2(e). Similarly, the term "loading capacity" is defined as "[t]he greatest amount of loading that a water can receive without violating [WQS]." 40 CFR 130.2(f).

[79] Ms. Alexander also explained that, "[i]n some instances, the Department cannot authorize additional pollutants to a waterbody because there is no additional assimilative capacity" which is "the amount of a pollutant a waterbody can receive and still meet [WQS]." (Testimony of Christine Alexander, 1 Tr 79-80).

[80] Because EGLE is required to reduce pollutant limits within individual NPDES permits in a TMDL watershed in order to attain WQS, the reduction of such pollutant limits must be considered a "mandatory condition" of the permit. *Michigan Farm Bureau II*, __ Mich __, __; 2024 WL 3610196, at *8 (2024).

With this background, it is necessary to address § 3109d, which provides that, if the farm is in compliance with all MAEAP standards, "the farm is considered to be implementing conservation and management practices needed to meet [TMDL] implementation for impaired waters…." MCL 324.3109d(1)(c). That section does not prohibit point sources, such as CAFOs, from obtaining an NPDES permit. Nor does it prohibit EGLE from issuing NPDES permits with lower pollutant levels in order to meet WLA requirements in a TMDL.[81] Nor does EGLE's issuance of an NPDES permit with lower pollutant levels deprive a MAEAP-verified farm of its exemption from the payment of fines for discharges to the waters of the state. MCL 324.3109d(1). Any other ruling would undermine EGLE's "exclusive authority to protect the waters of the state." *City of Brighton, supra*. Therefore, I conclude, as a Matter of Law, that EGLE's lowering of STP levels in the 2020 Permit does not undermine the incentives Michigan law provides for farms who voluntarily participate and complete MAEAP verification.

d. Conclusions

As noted *supra*, this tribunal determined that Petitioners have not supported, by a preponderance of the evidence, the scientific basis for the 150-ppm standard. Assuming, *arguendo*, that the record had supported the 150-ppm standard, the tribunal will address whether it is appropriate to lower the P levels in the 2020 Permit. The tribunal's understanding of the science behind the 150-ppm standard is as follows:

In general, P exists in soil in organic and inorganic forms. (Exhibit P-88, p 7). In most soils, 50 to 75% of P is inorganic. (*Id*.). Inorganic P is usually associated with

[81] Exhibit R-151 is a Final Report dated November 1, 2007 published by DEQ and the Environmental Council of the States (ECOS) Regulatory Innovations Agreement entitled "Alternative Permitting Approach for [CAFOs] Project." The executive summary explains that "[t]he goal of the Alternative Permitting Approach for CAFOs (CAFO Project) was to determine if the [MAEAP] would be able to demonstrate equivalent or better environmental protection to that of [NPDES] CAFO general permit requirements." (Exhibit R-151, p 1). The executive summary explained that "[t]he MDEQ concludes that the MAEAP does not provide equivalent environmental protections to that of the NPDES permit" and that "[o]ne of the most significant deficiencies identified in the MAEAP is the failure to establish performance standards to meet the federal and state requirement for CAFO production areas to be designed, constructed, operated, and maintained to ensure a discharge resulting from a storm less than the 25-year, 24-hour event does not occur." (*Id*., p 1). The Executive Summary notes, however, that "[t]he MAEAP, in fact, more closely approximates the Michigan Clean Corporate Citizen Program and, with improvements, could meet the conditions of an effective environmental management system." (*Id*., p 3). The Executive Summary concludes that "in lieu of extending the CAFO Project, the MDEQ is taking appropriate steps to ensure that all large CAFOs obtain NPDES CAFO permit coverage in accordance with our rules." (*Id*., p 3).

aluminum (Al), iron (Fe), and calcium (Ca) compounds which have various solubility and plant availability. (*Id*., p 9). P can be rapidly fixed to the soil in a process known as "adsorption" in forms that are unavailable to plants,[82] depending on the potential hydrogen (pH) level of the soil and the type of the soil, such as the Al, Fe or Ca content of the soil. (*Id*.; Exhibit R-150, p 2). (See also Exhibit R-149, p 4) ("Soils generally contain 500-1,000 ppm of total P (inorganic and organic), but most of this is bound to soil particles ('fixed') and is unavailable for plant use").

Mr. Elder testified that, at 150 ppm Bray P1 levels, soils on average reach saturation where they no longer bind the P but instead it remains in solution as dissolved P. (Testimony of Kevin Elder, 11 Tr 2919, 3005). According to the article by Andrew Sharpley, this loss of P is now believed to occur at levels of 163 ppm of P. (Exhibit P-88, p 17). Significantly, however, Mr. Elder testified that, through biological activity, micronutrients in manure cause the release of P from the soil particles to make it available to the crops. (Testimony of Kevin Elder, 11 Tr 2921-2922). Mr. Elder conceded that "[t]here are many ways to [adsorb] or release [P]." (*Id*., 11 Tr 2921) (typographical error corrected). On cross-examination, he testified that "soil pH is a factor, application of lime can interfere with the [P] binding of the soil, and iron level affects the pH and will bind [P]." (*Id*., 11 Tr 3081).

To summarize, Petitioners contend that manure is necessary to release inorganic P from the soil, thereby making it available for crop uptake. Because P will continue to attach to soil until the P-content of the soil reaches 150 ppm under the Bray P1 soil test – or until 163 ppm according to Andrew Sharpley – Petitioners contend that CAFOs should be entitled to apply manure to soils up to Bray P1 STP levels of 150 ppm. This tribunal has six concerns with Petitioners' contention.

First, P often accumulates to higher levels in the top 1- to 2-inch layer of the soil than elsewhere in the soil. (Exhibit R-85, p 9). (See also Exhibit R-54, p 3; Testimony of Allison Brink, 9 Tr 2201). However, samples for STP tests are taken from "plow depth" or the zone of greatest root concentration, which is usually 6-8 inches deep. (Exhibit R-

[82] In the article by Andrew Sharpley entitled "Agricultural Phosphorus Management: Protecting Production and Water Quality," the process by which P binds to soil particles is called "sorption." (Exhibit P-88, p 9).

85, p 10; Exhibit P-90, p 18); (Petitioners' Closing Arguments, p 86) ("8-inch soil sample").[83] Hence, STP tests are taken at a level that is not measuring P loss through erosion but are measuring the amount of P available for plant uptake. Therefore, scientists have recognized that "different sampling procedures may be necessary for a soil test that is used to estimate the potential for P loss in surface runoff." (Exhibit R-90, p 10).

Second, STP tests are not a direct measure of TP or the total amount of plant-available P in the soil. (Exhibit R-149, p 13). Rather, the tests are to estimate plant availability of soil P. (Exhibit P-90, p 18; Exhibit R-85, p 10; Testimony of Kevin Elder, 11 Tr 3005) ("that test itself is measuring the [P] that's available to the plants"). Hence, "[t]here is no direct correlation between soil test values calibrated for crop response with soil test values causing nutrient pollution." (Exhibit R-149, p 28). "[T]herefore, they may not accurately reflect the release of soil P to surface or subsurface runoff water." (Exhibit R-85, p 10; Exhibit P-90, p 18).

Third, the 150-ppm standard is based on the "change point" where P will remain in solution as dissolved P instead of binding to the soil. (Petitioners' Brief, pp 27, 86; Exhibit P-90, p 18); (Exhibit P-88) ("this soil P change point or threshold among soils … shows the ability of soils to release P to runoff"); (Testimony of Kevin Elder, 11 Tr 2919) ("at levels of Bray P1 soil tests of 150 ppm … there was an increase in the potential dissolved [P] to move with water and not become attached to soil"). While TP consists of both particulate P and DRP, (Testimony of Kevin Elder, 11 Tr 3040-3041), "[u]p to 90% of the P transported from cropland is attached to sediment." (Exhibit R-85, p 9). (See also (Exhibit P-90, p 15) ("Sediment P … constitutes about 80% of P transported in surface runoff from most cultivated land"); (Exhibit P-88, p 15) ("Sediment P … constitutes 60% to 90% of P transported in surface runoff from most cultivated land"); (Exhibit P-53, p 38) ("a large portion of the agricultural nonpoint source [P] load was attributed to particulate [P] attached to sediment particles"). Hence, "surface runoff is the main mechanism by

[83] (But see Testimony of Kevin Elder, 11 Tr 3004) ("that soil test is a measurement of [P] in the top eight inches if it's done properly"). However, Mr. Elder admitted that "[t]he soil test doesn't address erosion." (*Id.*, 11 Tr 3009).

which P and sediment are exported from most watersheds…."[84] (Exhibit R-85, p 9). For this reason, "[l]osses of P in surface runoff increases with an increase in STP levels." (*Id*., p 10). In fact, an exhibit submitted by Petitioners recognizes that "[P] loss can increase if soil P levels are allowed to increase above optimum levels for crop production."[85] (Exhibit P-85, p 4).

Fourth, Petitioners assert that manure recycles the nutrients utilized in their harvested crops so that farmers do not have to replace these nutrients with chemical fertilizers.[86] (Petitioners' Closing Arguments, pp 2-3) (citing Testimony of James DeYoung, 12 Tr 3233). However, the amount of nutrients contained in manure exceeds the amount of nutrients needed to replace the nutrients utilized by the past season's harvested crops. Mr. Cleary credibly testified that most crops only require 30 to 40 ppm of P from an agronomic perspective. (Testimony of Thad Cleary, 4 Tr 831). (See also Exhibit P-49, p 16) ("The key to preventing manure nutrient overload is to balance manure nutrients with crop needs"); (Exhibit R-82, p 3) ("Twenty to thirty ppm [of P] is adequate for most field crops"). Mr. Cleary noted that "[a] field that has a 150 ppm Bray P1 soil test, has 4 to 5 times the amount of [P] that is agronomically needed to grow most crops." (*Id*.). In fact, one commentator noted that "[l]ong-term manure applications have elevated the soil P level of many soils above the range necessary for optimum crop growth." (Exhibit R-149, p 8).

Fifth, the purpose of the lower P limits in the 2020 Permit is to lower the amount of P that is bound to the soil. If CAFOs continue to apply manure to fields with high P content, the P levels will never decrease. "Continual long-term application of fertilizer or manure at levels exceeding crop needs will increase soil P levels…." (Exhibit P-90, p 12).

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[84] Mr. Dykhuis testified that farms may experience "gully erosion (where you can see that the soil has been washed away) and sheet erosion (where runoff occurs equally all over the land)." (Testimony of Robert Dykhuis, 8 Tr 1956). He explained that "[f]ields are the most vulnerable in the spring after tillage and planting because they are then the most susceptible to erosion unless the farmer implements reduced till or no till methods." (*Id*.).

[85] The EPA also explains that "incorporation (i.e., tilling the manure into the soil) allows nutrients to make immediate contact with soil particles and therefore minimizes certain nutrient losses" but that it "increases erosion and, therefore, increases particulate phosphorus losses." (Exhibit P-104, p 149; Exhibit R-141, p 150).

[86] "When manure or process wastewater is applied in accordance with practices designed to ensure appropriate agricultural utilization of nutrients, it … fulfills an important agricultural purpose, namely the fertilization of crops…." *National Pollutant Discharge Elimination System Permit Regulation and Effluent Limitation Guidelines and Standards for Concentrated Animal Feeding Operations (CAFOs); Final Rule*, 68 Fed Reg 7176, 7197 (2003) (Exhibit P-46, p 24).

(See also Exhibit P-49, p 16) ("When more manure nutrients are applied to the crops than the crops can use, nutrient levels [build] up in soil, leading to higher risk of nutrient runoff or leaching to surface and groundwater"). "Studies have shown that without additional P applications, 10 to 20 years of corn or soybean production are needed to reduce available soil P (Mehlich-3) levels from 150 ppm to agronomic threshold levels of about 20 ppm."[87] (Exhibit R-85, p 8). (See also Exhibit P-88, p 15). Plus, "[t]he amount of P necessary to cause water quality problems is very small compared to the amount of P required for crops or the amounts contained in manure and fertilizer-P applications." (Exhibit R-149, p 5).

Finally, Mr. Elder participated in the Ohio Lake Erie P Task Force. (Testimony of Kevin Elder, 11 Tr 2999; Exhibit P-53, p 3). That task force addressed, *inter alia*, the science behind the 150-ppm standard. (Exhibit P-53, p 49). The task force stated that "[t]he Soil Test Risk Assessment Procedure (STRAP) is used to predict risk of P transport based on the Bray-P1 extractable STP level." (*Id*.). The task force agreed that "[a]s STP levels increase above 150 mg/kg Bray-P1 is it presumed that there will be an increase of P transport and no additional [P] application is recommended." (*Id*.). However, the task force opined that "considering the increase of DRP in Ohio streams, the current threshold value of 150 mg P/kg is being brought into question."[88] (*Id*.). When asked if he agreed with this opinion stated by the task force, Mr. Elder testified that "I agree that there's additional research to be done, yes." (Testimony of Kevin Elder, 11 Tr 3001).

Based on the six concerns expressed *supra*, the WRD determined that it was necessary to lower maximum STP levels for manure application to 120 ppm in TMDL watersheds and to 135 ppm in all other watersheds in order to achieve WQS for P levels in Michigan inland lakes and rivers, as well as in the Great Lakes, particularly Lake Erie. Petitioners are not being singled out with reduced P limits in their NPDES permits. See,

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[87] The 150-ppm level from the Mehlich-3 test is equivalent to 111 ppm (150 ppm ÷ 1.35 = 111 ppm) under the Bray P1 test. The 20-ppm level from Mehlich-3 test is equivalent to 14.81 ppm (20 ppm ÷ 1.35 = 14.81 ppm) under the Bray P1 test.

[88] The value of 150 mg/kg is equivalent to 150 ppm of P. (See, e.g., Exhibit P-53, p 49) ("Currently, 150 mg/kg Bray-P1 extractable P is considered the threshold STP level where risk of increased P transport is considered likely") (endnote omitted); (Exhibit P-54, p 61) ("Once soil test P reaches 150 mg/kg Bray-P no additional P application is recommended").

e.g., *Petition of the Village of Dexter*, Docket No. 09-000003-R1 (FDO issued Nov 3, 2017) (lowering the P effluent limits in NPDES permits of 4 WWTPs).

Based upon the evidence in the record, I find, as a Matter of Fact, that the lowering of maximum STP levels for manure application to 120 ppm in TMDL watersheds and to 135 ppm in all other watersheds is necessary to achieve WQS.[89] Based on the evidence in the record, I conclude, as a Matter of Law, that the 2020 Permit's P levels comport with requirements of the laws and rules under which the 2020 Permit was issued, and are reasonable and consistent with express language and intent of the regulatory scheme.

3. Whether the MPRA Is an Appropriate Tool?

Mr. Cleary was on the committee that developed the MPRA. (Testimony of Thad Cleary, 4 Tr 848). The MPRA "is a field-level assessment tool designed to evaluate the relative potential for the off-site movement of [P] into surface water, which can be included in the conservation planning process." (Exhibit R-9, p 2; *id*., 4 Tr 829). The tool is to assess the risk from P in fertilizers – both commercial fertilizer and manure. (*Id*., 4 Tr 851). The 2015 Permit previously allowed the MPRA to be used as an alternative tool for the determination of manure application rates. (Exhibit R-96, p 11) (Part I.B.3.c.) ("The permittee may choose to use the Bray P1 numerical limits or the [MPRA] tool (Version 2.0, Nov. 2012) to determine application rates"). Therefore, at the time the PN Draft of the 2020 Permit was issued, the MPRA should have been a tool that was known by Petitioners. However, the PN Draft adopted the MPRA as the sole tool for the determination of manure application rates. (Exhibit R-71, p 16) (Part I.B.3.c.3) ("the permittee shall comply with the [MPRA] tool (Version 2.0, Nov. 2012) to determine maximum annual land application rates").

A copy of the tool is contained on page 9 of Exhibit R-9. The tool is divided into two parts: the transport factor and the source factor. (*Id*.; Testimony of Thad Cleary, 4 Tr 852). Each of these factors have additional variables that provide a score between zero

[89] In note 80, *supra*, the tribunal determined that the reduction of pollutant limits in NPDES permits within a TMDL watershed, in order to attain WQS set by the TMDL, must be considered a "mandatory condition" of the permit. However, the 2020 Permit's reduction of P from 150-ppm to 135-ppm must be considered a "discretionary condition" of the permit, because the reduction is not required by extant law or any TMDL-based pollutant limit. See *Michigan Farm Bureau II*, __ Mich __, __; 2024 WL 3610196, at *6-7 (2024).

(the least-risky) to eight (the most-risky). (*Id*.). There are five transport variables and four source variables. (Exhibit R-9, p 9; *Id*., 4 Tr 853). One of the variables under the transport factor is RCN – "runoff curve number" – that looks at the potential of a field to have water runoff and erosion. (Testimony of Thad Cleary, 4 Tr 855). An additional variable of the transport factor is setback distances.[90] (*Id*., 4 Tr 855). A 300-foot setback from surface waters receives a lower score than a setback that is less than 50 feet from surface waters. (Exhibit R-9, p 9). The next variable of the transport factor is subsurface drainage. (*Id*.). This factor addresses whether the field has agricultural tiles, and, if so, whether the tiles are in a patterned manner. (Testimony of Thad Cleary, 4 Tr 856). The final variable of the transportation factor determines whether the field has a vegetative buffer.[91] (Exhibit R-9, p 9). Hence, a field with a vegetative buffer at least 35 feet in width receives a lower score than a field that has no vegetative buffer. (*Id*.; Testimony of Thad Cleary, 4 Tr 856).

With respect to the variables of the source factor, the tool assesses the risk of applying either manure or commercial fertilizer. (Exhibit R-9, p 9). For manure, a lower score is obtained when the manure is incorporated within 2 days of application, than manure incorporated 8-30 days after application. (*Id*.). After arriving at a score from zero to eight for each variable, the scores are added together to yield a total score, with 11 or under being a "low risk"; 12-17 being a "medium risk"; and 18 or above as a "high risk." (Exhibit R-9, p 9).

Mr. Cleary noted that each of these computations must be performed for each individual crop field. (Testimony of Thad Cleary, 4 Tr 829). However, permittees can run the MPRA on portions of fields that have "sensitive areas" that are near surface waters or sloped, to prevent an entire field from being made unavailable for application.

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[90] A "setback" is the distance from "any surface water of the state" from which manure may be applied. (Exhibit R-45, p 22). The setback also applies to the distance from "open tile line intake structures, sinkholes, agricultural well heads, including but not limited to roadside ditches that are conduits to surface waters of the state (with the exception of surface waters of the state that are up-gradient of the land application)." (*Id*.). The 2020 Permit provides for a 100-foot setback. (*Id*.). (But see Exhibit R-135, p 12) (which is the permit for Medina Dairy, LLC, that provides for a 150-foot setback).

[91] The 2020 Permit defines "vegetated buffer" as "a narrow, permanent strip of dense perennial vegetation, established parallel to the contours of and perpendicular to the dominant slope of the field, for the purpose of slowing water runoff, enhancing water infiltration, and minimizing the risk of any potential nutrients or pollutants from leaving the field and reaching surface waters of the state." (Exhibit R-45, p 34). According to Part I.B.3.h. of the 2020 Permit, they are to be 35 feet in width. (Exhibit R-45, p 22). The "perennial" vegetation may consist of a crop such as Alfalfa or Timothy grass. (Testimony of Bruce Washburn, 3 Tr 586).

(Testimony of Sylvia Heaton, 5 Tr 1131). The WRD argues that the MPRA is superior to the Bray P1 tool that considers only the source of pollution but not the transport. (WRD's Closing Arguments, p 69). However, Petitioners note that a medium risk for manure application can be arrived at from two variables alone: STP levels, and lack of a buffer.[92] (Testimony of Thad Cleary, 4 Tr 858). In fact, the very committee that created the tool stated that "[a]ny attempt to use this index for regulatory purposes is beyond the intent of this assessment tool and the concept and philosophy of the group that developed it." (Exhibit R-9, p 4). Mr. Cleary testified that he was against the inclusion of this language in the document. (Testimony of Thad Cleary, 4 Tr 876).

Petitioners raised several concerns with respect to the MPRA. First, the Department of Agriculture and Rural Development (MDARD) supplied public comments against the use of the MPRA. (See Exhibit P-26). At the time MDARD made the public comments, Dr. Averill was the Deputy Director of MDARD. (Testimony of Dr. James Averill, 9 Tr 2316). He testified that "MDARD's primary concern with EGLE's proposed 2020 General Permit for CAFOs was a new permit condition which mandates the use of the [MPRA] model to determine application rates of manure to fields." (*Id*.). He noted that MDARD conceptually supports the use of risk indices. (*Id*.). Nevertheless, MDARD was concerned that the MPRA had never been validated. (*Id*., 9 Tr 2317). MDARD was also concerned that the model "has the potential to produce erroneous and even exceptionally punitive results in certain regions of Michigan." (*Id*.). Dr. Averill also explained that the model "has the potential to produce a skewed distribution of 'high risk' ratings for [P] that would unnecessarily prohibit manure application for certain farm fields." (*Id*.).

Second, three professors from MSU filed a public comment against the MPRA, *viz*., Ron Hendrick, Dean of the College of Agriculture and Natural Resources; Douglas Buhler, Director of AgBioResearch at MSU; and Jeffrey Dwyer, Director of MSU Extension. (Exhibit P-44). These professors concede that "[t]he tool was designed to provide guidance on recognizing P sources and reducing potential P loading from

[92] Petitioners also note that the tool gives one risk point for utilizing a 26-foot buffer, but two risk points for utilizing a 25-foot buffer. (Testimony of Thad Cleary, 4 Tr 861).

sediment to surface water." (*Id*., p 3). However, they note that "[r]isk values for each factor considered in the MPRA are added, assuming no interaction between one another." (*Id*., p 4). They state that "[o]ther risk indexes consider such interactions or do not weigh all factors equally." (*Id*.). They explain that "the potential mass of P movement (lb/day), compared to just the concentration (mg/L), must be considered when assessing risk." (*Id*., p 5). Finally, they state that "[t]he use of the MPRA in an NPDES permit must be carefully assessed as generalizations for heterogeneous crop land may fail to protect surface water or be excessively conservative to the point of causing farm hardships that do not result in surface water improvements." (*Id*.).

Third, the CNMP providers asserted that the MPRA "is simply too flawed to rely on in any capacity." (Exhibits P-17, R-75 and R-113) (p 2). In their public comment, the CNMP providers suggested that "there is a significant body of research that has taken place that questions the ability of P indices to mitigate [P] in our surfaces waters." (*Id*., p 3). They invited the WRD to review the article entitled *Evaluation of Phosphorus Indices after Twenty Years of Science and Development*. (Exhibit R-130). This article notes that "[t]he P Index concept was developed to reduce P loss from agricultural lands … and has since become ubiquitous in the field of nutrient management." (*Id*., p 2) (citations omitted). The article raises several concerns with the use of such P indices, *viz.*: "relatively few studies have been conducted to evaluate the accuracy of P Index ratings"; "[s]ome weighting factors … appear to have been arbitrarily selected and are poorly justified"; "the long-term application of the P Index … can allow for P application beyond crop requirement, resulting in continual [STP] buildup"; and "use of the P Index is not resulting in improved water quality…." (*Id*., p 3). However, of the Great Lakes states, only Wisconsin's P index was evaluated in this study. (*Id*., p 5) (Table 2).

Upon the WRD's receipt of the public comment from the CNMP providers, and upon its review of the article supplied by the CNMP providers (Exhibit R-130), the WRD stated that it "agrees with the comment after reviewing the available literature provided regarding the lack of site evaluation of index ratings and scoring of the MPRA tool." (Exhibit R-112, p 27). As a result, the WRD gave CAFOs the option of utilizing either the Bray P1 tool or the MPRA tool, which is the same as the 2015 Permit.

While Petitioners apparently do not object to being given an alternative between the MPRA and the Bray P1 tool, Intervenors contend that the MPRA should be used exclusively, because it "is the best available tool for assessing pollution risk from land application." (Intervenors' Closing Arguments, p 52). Intervenors contend that the parameters of the MPRA are vetted, well-known practices that have been proven to reduce risk. (*Id*., p 53) (citing Testimony of Bruce Washburn, 2 Tr 418). They concede that "the MPRA will typically require a consultant or trained technician" to complete the application of the tool. (*Id*., p 53). However, they argue that "the MPRA is 'just the documentation and quantification of a process that should already be occurring where manure is going to be applied.'" (*Id*.) (citing Testimony of Thad Cleary, 4 Tr 838).

Instead, Intervenors contend that exclusive reliance upon STP levels in the Bray P1 tool does not adequately assess risk of water pollution. (Intervenors' Closing Arguments, p 54). They assert that sloped land has a higher runoff risk than flatter land. They further assert that some soil types increase the risk of runoff because they are not readily permeable. However, prior to utilizing farmland for the application of manure, the 2020 Permit requires each CAFO to "conduct a field-by-field assessment of all land application areas" including an assessment of "slopes, [and] soil types…." (Exhibit R-45, p 14) (Part I.B.3.a.). This inspection is to ensure that the application "does not exceed the capacity of the soil to assimilate the CAFO waste…." (*Id*.). Therefore, Intervenors' assertion that the MPRA is required to assess the slopes and soil types is without merit.

Based upon the evidence in the record, I find, as a Matter of Fact, that the alternative use of either the Bray P1 tool or the MPRA is a discretionary condition of the 2020 Permit, which is necessary to achieve WQS. Based on the evidence in the record, I conclude, as a Matter of Law, that the use of either the MPRA or the Bray P1 method (combined with lower P levels) comports with requirements of the laws and rules under which the 2020 Permit was issued, and is reasonable and consistent with express language and intent of the regulatory scheme.

4. Setbacks and Buffers.

As noted *supra*, the MPRA provides for a lower risk rating for those applications of manure that utilize both a 100-foot setback and a 35-foot vegetative buffer. (Exhibit R-9). At the request of the CNMP providers, the MPRA was made optional by the WRD, such that a CAFO may instead choose to utilize the Bray P1 numerical limits. (Exhibit R-45, p 16) (Part I.B.3.c.). However, when using the Bray P1 method, the 2020 Permit requires for the first time that a CAFO must employ **both** a 100-foot setback **and** a 35-foot vegetative buffer. (Exhibit R-45, p 22) (Part I.B.3.h.). Under the 2015 Permit (and all prior iterations of the permit), the CAFO could choose **either** the 100-foot setback **or** the 35-foot vegetative buffer. (See Exhibit R-96, p 15) (Part I.B.3.g.).

Mr. Washburn testified that, when the MPRA was made optional, he considered other options for nutrient management practices that would make the two methods (MPRA and Bray P1) equivalent. (Testimony of Bruce Washburn, 2 Tr 401). His conclusion called for using both a 100-foot setback and a 35-foot vegetative buffer, because both are required for a low risk MPRA score. (*Id*.; Exhibit R-9). (See also Testimony of Sylvia Heaton, 5 Tr 1250) ("why hold the CAFOs to the rigid MPRA if we allow for that option of Bray P1 and put some of those other components in there [setbacks and buffers] to get to that water quality transport piece, then they would be similar"). Nevertheless, the WRD provided the CAFOs with the option for a demonstration of "an alternative practices compliance alternative … that minimize risk of transport of nutrients to surface waters." (Exhibit R-45, p 22) (Part I.B.3.h.).

In response, Petitioners note that, if they utilized buffers as required by the WRD, they would be unable to plant crops on a significant amount of their acreage. Specifically, Mr. Dykhuis testified that he would have 109 acres unavailable for planting crops due to the 35-foot buffer. (Testimony of Robert Dykhuis, 8 Tr 1967). Although he did not testify to the total lost acreage, Mr. Sietsema stated that he would lose 11.2 acres of his 40-acre fields and 19.4% of his 36-acre field. (Testimony of Rick Sietsema, 8 Tr 2087-2088). Mr. Stewart testified that he would lose 71.4 acres of his 800-acre farm. (Testimony of Caleb Stewart, 9 Tr 2158). Mr. Henry stated that he would lose 5-10% of his croplands being devoted to buffers. (Testimony of Scott Henry, 11 Tr 2894). Significantly, Ms. Campbell

credibly testified that "[a] vegetated buffer cannot be planted in crops that provide income or feed for livestock." (Testimony of Laura Campbell, 10 Tr 2570). Hence, she noted that a lost acre of production means a loss of 154 bushels (8,600 pounds) of corn or 47 bushels (2,800 pounds) of soybeans.[93] (*Id*., 10 Tr 2570-2571). Rather, Petitioners would only be allowed to plant crops such as Alfalfa or Timothy grass within the buffer.[94] (Testimony of Bruce Washburn, 3 Tr 586).

Petitioners also proffered the testimony of David Trainor, a Professional Engineer with a Bachelor of Science degree in Geology, a Bachelor of Science degree in Civil Engineering, and a Master of Science degree in Civil and Environmental Engineering. (Testimony of David Trainor, 10 Tr 2804). Mr. Trainor sponsored two exhibits of note. First, he sponsored a study by the Spicer Group entitled "Kawkawlin River Watershed Filter Strip Study." (Exhibit P-43). He also sponsored a Virginia study entitled "Vegetative Filter Strips for Agricultural Nonpoint Source Pollution Control." (Exhibit P-98). Based on these studies, Mr. Trainor testified that "[v]egetated buffers are more effective at stopping shallow surface flow than they are at stopping concentrated flow…." (Testimony of David Trainor, 10 Tr 2569-2570). (See also Exhibit P-98, p 6) ("In hilly areas, [vegetative filter strips (VFS)] were judged to be ineffective for removing sediment and nutrients from surface runoff because drainage usually concentrated in natural drainageways within the fields before reaching the VFS"). In addition, upon questioning from this tribunal, Mr. Trainor testified that buffer strips have diminished effectiveness in winter months when the vegetation goes dormant. (Testimony of David Trainor, 10 Tr 2864-2865) (citing Exhibit P-47).[95] In response to this testimony, the WRD asserts that "the Spicer Study only considered sediment, without regard to dissolved nutrients contained in runoff." (WRD's Closing Arguments, p 92).

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[93] Based on the 109 acres which Mr. Dykhuis testified he would lose, there would be a loss of either 16,786 bushels (or 940,016 pounds) of corn or 5,123 bushels (or 307,380 pounds) of soybeans (where 1 bushel of corn or soybeans equals approximately 60 pounds).

[94] The record does not contain the per acre yield of Alfalfa or Timothy grass, or the difference in market value of such crops compared to corn or soybeans.

[95] Note that this exhibit was also offered into evidence by Petitioners as Exhibit P-101.

Based upon the evidence in the record, Petitioners raised several objections to the requirement to utilize both the 100-foot setback and the 35-foot buffer. Initially, Petitioners assert that the required use of buffers constitutes an unconstitutional taking of property. (Petitioners' Closing Arguments, p 62). It should be noted that an administrative tribunal does not have the authority to decide constitutional questions. *Dation v Ford Motor Co*, 314 Mich 152; 22 NW2d 252 (1946). The authority to decide constitutional issues is vested in the judicial branch. See Const 1963 art VI, § 1. As a result, the prohibition on an agency of the executive branch deciding constitutional claims in a contested case is grounded on the separation of powers doctrine. Therefore, Petitioners' constitutional claims should be raised in Circuit Court.[96]

Petitioners also assert that setbacks and buffers are not jointly required under federal law. (Petitioners Closing Arguments, p 83), citing 40 CFR 412.4(c)(5). As noted in Section III(C) of this FDO, the tribunal's decision is based on Michigan law, not federal law. Moreover, as noted in Section III(D) of this FDO, the states may adopt or enforce requirements that are more stringent or more extensive than those required under federal law. 40 CFR 123.1(i)(1); 40 CFR 122.44(d)(1); *Michigan Farm Bureau II*, ___ Mich ___, ___; 2024 WL 3610196, at *6 (2024). Hence, while federal regulations require CAFOs to employ either a 100-foot setback or a 35-foot buffer, the WRD is not precluded from utilizing both methods under Michigan law.

However, based on the evidence in this case, the tribunal has three concerns with requiring both setbacks and buffers. First, the EPA expressly stated that it "decided not to require all fields receiving manure, litter, or other process wastewaters to have a vegetated buffer because that would unnecessarily require CAFOs to take that portion of the cropland out of production." *National Pollutant Discharge Elimination System Permit Regulation and Effluent Limitation Guidelines and Standards for Concentrated Animal*

[96] In Petitioners' Closing Arguments, they cite to *Wickman v City of Novi*, 413 Mich 617; 322 NW2d 103 (1982). In that case, the Michigan Supreme Court confirmed that "an agency exercising quasi-judicial power does not undertake the determination of constitutional questions or possess the power to hold statutes unconstitutional." 413 Mich at 646-647. *Wickman* was a challenge to a special assessment levied by a governmental unit for public improvements. The Supreme Court determined that the "plaintiffs' claim is merely an assertion, in constitutional terms, that the assessment was **arbitrary and without foundation**." *Id.* (emphasis supplied). Due to the emphasized language of *Wickman*, Petitioners assert that "this Tribunal can (and should) entertain constitutional challenges to executive action." (Petitioners' Closing Arguments, p 64). Based on separation of powers doctrine, this tribunal refuses to give *Wickman* such a broad interpretation.

Feeding Operations (CAFOs); Final Rule, 68 Fed Reg 7176, 7211 (2003) (Exhibit P-46, p 38). That language was contained in the Final Rule promulgated by the EPA prior to the reversal of the CAFO Rules by the Second Circuit Court of Appeals in *Waterkeeper, supra*. After remand, the EPA maintained the CAFOs' right to elect to use either a setback or a buffer in the Final Rule. See 40 CFR 412.4(c)(5); *Revised National Pollutant Discharge Elimination System Permit Regulation and Effluent Limitations Guidelines for Concentrated Animal Feeding Operations in Response to the Waterkeeper Decision; Final Rule*, 73 Fed Reg 70418, 70430 (2008).[97]

Second, the WRD decided to require both setbacks and buffers, because the MPRA required both. (Testimony of Bruce Washburn, 2 Tr 401; Testimony of Sylvia Heaton, 5 Tr 1250). The WRD's reasoning is flawed. Initially, the MPRA does not "require" both buffers and setbacks. Rather, when a CAFO utilizes both setbacks and buffers, the CAFO receives lower risk points in the analysis. A CAFO could conceivably receive a "low risk" score by utilizing a 100-foot setback without a 35-foot buffer. (See Exhibit R-9, p 9). More importantly, when the seven certified CNMP providers objected on several grounds to the use of the MPRA, the WRD "agree[d] with the comment ... regarding the lack of site evaluation of index ratings and scoring of the MPRA tool." (Exhibit R-112, p 26). If "scoring of the MPRA tool" is flawed, it makes no sense to require both setbacks and buffers based on a flawed tool.

Third, the WRD's objections to the Spicer study are similarly flawed. As noted in the Exhibit proffered by the WRD, "[u]p to 90% of the P transported from cropland is attached to sediment." (Exhibit R-85, p 9). (See also Exhibit P-88) ("Sediment P includes P associated with soil particles and organic material eroded during flow events and constitutes 60% to 90% of P transported in surface runoff from most cultivated land"); (Exhibit R-149, p 5). "[S]urface runoff is the main mechanism by which P and sediment are exported from most watersheds…." (Exhibit R-85, p 9). For this reason, "[l]osses of P in

[97] As noted *supra*, federal regulations provide CAFOs with the alternative of employing either a 100-foot setback or a 35-foot buffer. 40 CFR 412.4(c)(5). Since 40 CFR 412 was adopted by reference into the Michigan Administrative Code, Mich Admin Code, R 323.2189(2)(m), Michigan law does not expressly require both a 100-foot setback and a 35-foot buffer as a mandatory provision of a CAFO NPDES permit. Therefore, the WRD's requirement for CAFOs to employ both a 100-foot setback and a 35-foot buffer must be considered a discretionary condition of the 2020 Permit. *Michigan Farm Bureau II*, __ Mich __, __; 2024 WL 3610196, at *6-7 (2024).

surface runoff increases with an increase in STP levels." (*Id*., p 10). The WRD's objection to the Spicer study – that it "only considered sediment, without regard to dissolved nutrients contained in runoff" – thus provides an inadequate basis for the imposition of vegetative buffers.

Based upon the evidence in the record, I find, as a Matter of Fact, that the condition of the 2020 Permit to use both setbacks and buffers is a discretionary condition that is not necessary to achieve WQS. Based on the evidence in the record, I conclude, as a Matter of Law, that this condition **does not** comport with requirements of the laws and rules under which the 2020 Permit was issued, and **is not** reasonable or consistent with the express language and intent of the regulatory scheme. Therefore, I hereby modify the 2020 Permit to provide CAFOs with the option of utilizing **either** 100-foot setbacks **or** 35-foot vegetative buffers.[98]

D. The Restrictions on Winter Manure Application in the 2020 Permit.

1. The Problem Sought to Be Corrected.

Under the 2015 Permit, manure may be applied any time the ground is not frozen or snow-covered – even during the months of January through March.[99] (Exhibit R-96, p 14). However, the permit required that the manure must be "subsurface injected or incorporated into the soil within 24 hours of application." (*Id*., p 15). With respect to alfalfa, wheat stubble, or where no-till practices were used, the manure was to be surface-applied without incorporation to such pastures or perennial crops "only if the CAFO waste will not enter waters of the state." (*Id*.). As to frozen or snow-covered ground, the 2015 Permit similarly provided that "CAFO waste may be surface applied and not incorporated within 24 hours only if there is a field-by-field demonstration … showing that such land applica-

[98] If the WRD believes that a 100-foot setback, in and of itself, is not sufficiently protective of WQS, the WRD should investigate the need to increase the setback distance to greater than 100 feet in the next 5-year iteration of the 2020 Permit. Note that the permit for Medina Dairy, LLC provides for a 150-foot setback. (Exhibit R-135, p 12). Also, Mr. Elder testified that Ohio requires a 200-foot setback for manure applications on frozen or snow-covered ground. (Testimony of Kevin Elder, 11 Tr 2970-2971, 2974, and 12 Tr 3174; Exhibit R-157, p 10).

[99] The winter manure application provisions of the 2015 Permit are the same as prior iterations of the permit. (Testimony of Bruce Washburn, 2 Tr 427).

tion will not result in a situation where CAFO waste may enter waters of the state."[100] (*Id*.).

However, CAFO waste has been entering the waters of the state. Mr. Washburn, who is responsible for compliance oversight of more than 80 CAFO facilities in nine Michigan counties, testified regarding two discharges to the waters of the State related to winter application of CAFO waste. (Testimony of Bruce Washburn, 3 Tr 363, 375). Both of these discharges occurred in 2019 during the drafting of the 2020 Permit. (Exhibit R-60; Exhibit R-61). Ms. Heaton also testified with respect to a discharge of CAFO waste into state of Michigan waters that occurred on December 6, 2019. (Testimony of Sylvia Heaton, 5 Tr 1040). Ms. Alexander similarly testified regarding 6 discharges from CAFOs that occurred in 2019. (Testimony of Christine Alexander, 1 Tr 62, 165). See also *Department of Environment, Great Lakes, & Energy v Holloo Farms LLC*, ___ Mich App ___; 2024 WL 3906647 (2024) (which is an enforcement action against Petitioner Holloo Farms LLC for unlawful discharges related to "applying waste to frozen land" in 2019). (See also Exhibit R-61) (Violation Notice to Holloo Farms, LLC).

Considering that there are 287 large CAFOs in the state of Michigan, a total of nine discharges in 2019 to the waters of the state does not seem significant.[101] However, Mr. Washburn testified that the WRD only knows about the discharge if it gets reported, and not every farm reports their discharges.[102] (Testimony of Bruce Washburn, 2 Tr 431 and 3 Tr 563). Moreover, during Mr. Washburn's 13 years with the Department, he was involved in several hundred enforcement proceedings against CAFOs, and approximately 40 of those proceedings related to the unlawful discharge of manure. (*Id*., 3 Tr 588, 638-639 and 4 Tr 801-802). Mr. Washburn estimated that there are an average of 10 winter-time discharges of waste each year. (*Id*., 4 Tr 802). In fact, Mr. Washburn testified that

[100] No testimony was supplied in this contested case whether any CAFO ever employed the demonstration option, or what was required to satisfy the demonstration option. See Section IV(D)(2)(d)(v) of this FDO.

[101] (But see Exhibit R-106, p 34) (identifying "[a]t least 8 different discharges").

[102] The 2015 Permit (and presumably all prior iterations of CAFO NPDES permits) expressly provided that, "[i]f, for any reason, there is an overflow from CAFO waste storage structures and/or a discharge of pollutants to a surface water of the state from CAFO waste storage structures, production areas, or land application areas, the permittee shall report the overflow and/or discharge to the Department…." (Exhibit R-96, p 18) (Part I.C.1.).

the application of manure to frozen or snow-covered ground "has led to some of the worst discharges I have seen in my career." (*Id*., 2 Tr 389-340).

The record contains evidence that the amount of *E. coli* pollution in state of Michigan waters has increased significantly in recent years. Approximately 50 percent of Michigan's rivers and streams are not meeting WQS for *E. coli*, and roughly 20 percent of Michigan's beaches have been closed due to bacterial pollution. (Exhibit R-37, p 5; Exhibit R-35). In 2016, there were 4,500 stream-miles of waters needing a TMDL for *E. coli* impairment, while 9,000 stream-miles of waters already had a TMDL for *E. coli* impairment. (Exhibit R-37, p 6). Currently, Michigan waters that already have an *E. coli* TMDL include 16,831 stream-miles, representing 22% of Michigan stream-miles; 51 beaches; 16 lakes; and 1 shoreline. (Testimony of Molly Rippke, 5 Tr 1306-1307). Hence, almost a quarter of Michigan stream-miles is polluted with *E. coli*. (*Id*., 5 Tr 1306). In fact, after a 1.5-inch rain event in 2020, the Huron River Watershed Council found a concentration of 3,996 *E. coli* per 100 milliliters, which is more than 30 times the total body contact WQS. (Testimony of Molly Rippke, 5 Tr 1337); Mich Admin Code, R 323.1062(1).

"*E. coli* is a [bacterium] that lives in the intestines of warm-blooded animals, including humans." (*Id*., 5 Tr 1296) (italics supplied). Its presence in surface water "is an indicator of fecal pollution and other pathogens." (*Id*.). Humans are affected by this bacterium through ingestion or by contact. (*Id*.). "The higher the *E. coli* in the water, the higher the risk that a person will be impacted if they accidentally ingest or contact the water." (*Id*., 5 Tr 1296-1297) (italics supplied).

Ms. Rippke explained that there are a number of sources of *E. coli* pollution in Michigan's surface waters:

> Improperly treated or untreated human sewage (failing septic systems, illicit discharges, sanitary sewer overflows, combined sewer overflows, and land applied septage), livestock waste, pets, and nuisance wildlife. Livestock waste includes manure land-application and pasture runoff, illicit discharges of barn wash-water and milkhouse waste (water used to clean cows, equipment, and milking areas), improper manure storage, and livestock with direct access to or in close proximity to surface water.

(*Id*., 5 Tr 1296).[103] When asked if there is a correlation between high amounts of *E. coli* in waterbodies and agricultural land use, Ms. Rippke opined that "*E. coli* has a strong positive relationship with agricultural land cover in Michigan." (*Id*., 5 Tr 1301). Specifically, as agricultural land cover increases, *E. coli* increases, indicating that there is a correlation between *E. coli* in streams and agricultural land cover. (*Id*., 5 Tr 1292; Exhibit R-37, p 9). As can be seen graphically on Exhibit R-41 (which is displayed on page 82, *infra*) there is a significant amount of surface waters in the state of Michigan that are subject to *E. coli* TMDLs.[104]

Petitioners raise several objections to the contention that there is a "strong correlation" between *E. coli* impairment and agricultural land cover in Michigan. First, Petitioners challenge Ms. Rippke's statistical analysis, arguing that a "strong correlation" does not provide evidence of a "causal relationship." (Petitioner's Closing Arguments, pp 34-35). However, Ms. Rippke's proffered exhibits included a "[r]eminder that correlation does not equal causation." (Exhibit R-37, p 9). Nevertheless, Petitioners submitted the testimony of Dr. Averill that "I would consider the correlation of *E. coli* to agricultural land and population density to have a **moderate correlation**…." (Testimony of Dr. James Averill, 9 Tr 2309, 2331) (emphasis supplied). Despite the concession of a "moderate correlation," Petitioners argue that this tribunal should not give any weight to Ms. Rippke's testimony because she "made significant logical leaps, conflating correlation and causation…." (Petitioner's Closing Arguments, p 31), citing MRE 702. Despite their concession of a "moderate correlation," Petitioners also contend that the WRD did not "establish that any of those harms are attributable to the inadequacy of the existing [2015 Permit's] conditions and standards." (Petitioners' Closing Arguments, p 38).

As noted *supra*, Ms. Rippke explained that *E. coli* pollution in Michigan rivers alone has increased from 9,000 stream-miles in 2016 to 16,831 stream-miles currently.[105]

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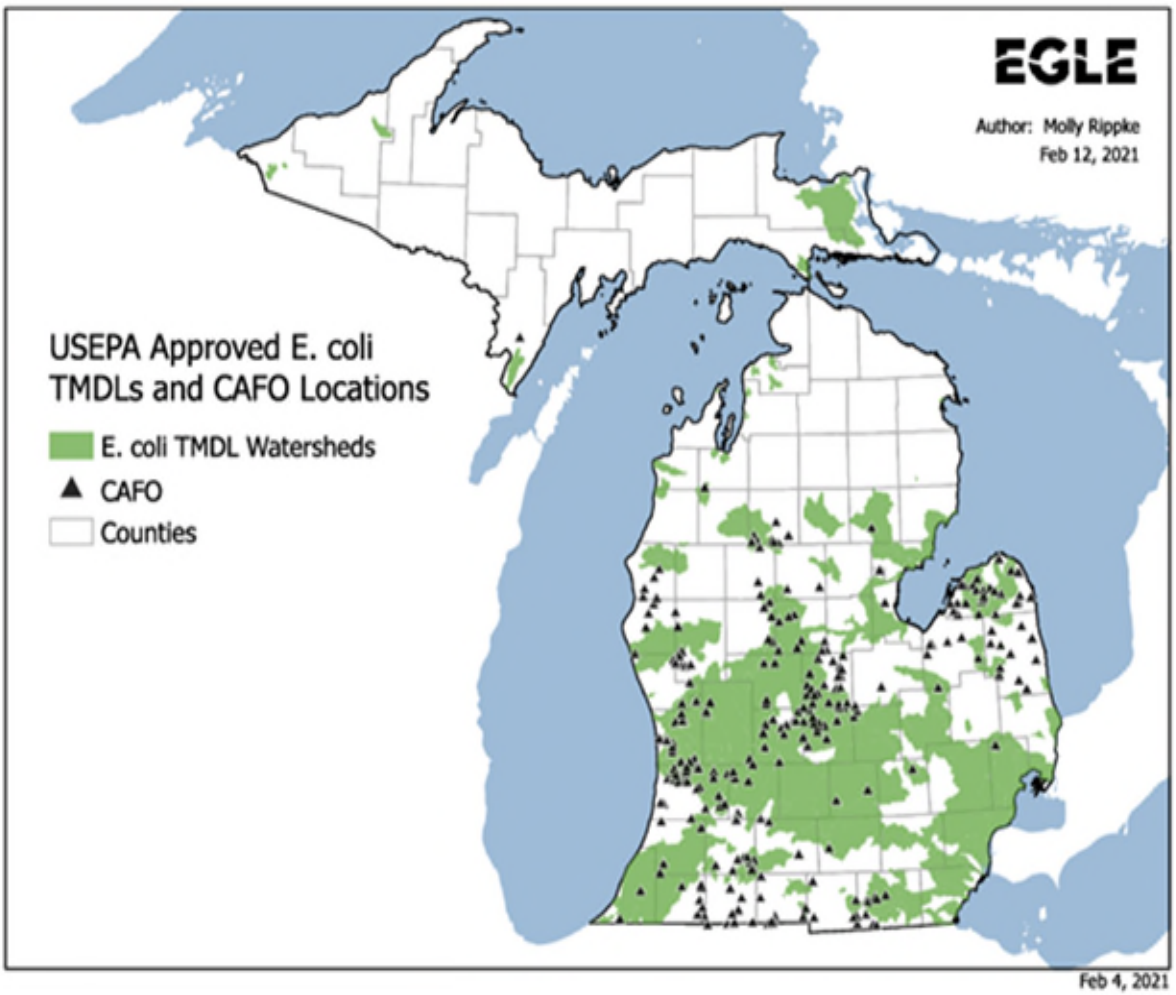
[103] In fact, Dr. Averill agreed with Ms. Rippke that "the presence of *E. coli* in Michigan waterways is a multi-factorial issue." (Testimony of Dr. James Averill, 9 Tr 2331) (italics supplied).

[104] When public comment was requested on the proposed state-wide *E. coli* TMDL, Ms. Rippke sent an email directly to Ms. Campbell of Petitioner MFB, advising her that the WRD was seeking public comment on such proposed TMDL. (Testimony of Molly Rippke, 5 Tr 1313; Exhibit R-44).

[105] The 9,000 and 16,831 stream-mile statistics represent the number of stream-miles that are subject to a TMDL. (Exhibit R-37, p 5; Exhibit R-35; Testimony of Molly Rippke, 5 Tr 1306-1307).

(Exhibit R-37, p 5; Exhibit R-35; Testimony of Molly Rippke, 5 Tr 1306-1307). As explained *supra*, when a surface water is placed on a list of impaired waters, 33 USC 1313(d), the WRD's obligation to establish a TMDL for such waters is triggered. 33 USC



1313(d)(1)(C). A TMDL requires the WRD to establish "the maximum daily discharge of pollutants into a waterway." *Hayes v Whitman*, 264 F3d at 1021. Hence, the WRD is to determine "[t]he sum of the individual WLA for point sources" such as CAFOs. 40 CFR 130.2(i). Then, to effectuate the TMDLs, the WRD must adjust "pollutant discharge requirements in individual NPDES permits…." *City of Arcadia v EPA*, 265 F Supp 2d at 1144. Even a "moderate correlation" between agriculture and pollution requires the WRD to revise NPDES permit terms to effectuate the TMDL, because the pollutant levels from

all point sources within the TMDL watershed must be reduced in NPDES permits within the TMDL watershed. *Hayes v Whitman, supra.* As a result, Petitioners' argument regarding the WRD's defective "statistical analysis" must fail.

Second, Petitioners contend that large population centers such as Detroit, Lansing, and Grand Rapids contribute to *E. coli* pollution in Michigan surface waters. I agree. From a review of Exhibit R-41 (which is displayed on page 82 of this FDO, *supra*), *E. coli* pollution is prevalent in surface waters near Sault Ste. Marie in the east of the Upper Peninsula, and near Menominee in the southwest of the Upper Peninsula. (Exhibit R-41). There are also *E. coli* TMDLs for surface waters near Detroit, Lansing, Grand Rapids, Muskegon, and St. Joseph. (Exhibit R-41). Petitioner's Exhibit P-56 also explained that "watersheds with more septic systems were statistically linked to higher levels of human specific fecal contamination; however, these were not correlated with high generic [*E. coli*] concentrations." (Exhibit P-56, p 4).

Ms. Rippke also agrees with Petitioners' contention. In her testimony, she explained that *E. coli* pollution is caused, in part, by "[i]mproperly treated or untreated human sewage (failing septic systems, illicit discharges, sanitary sewer overflows, combined sewer overflows, and land applied septage)…."[106] (Testimony of Molly Rippke, 5 Tr 1296). On cross-examination, she also agreed that the WRD was not "attributing causation to either septic systems or manure from agriculture. We're simply showing that there is a strong -- in my opinion and according to my study -- relationship between agricultural land cover and *E. coli*." (Testimony of Molly Rippke, 6 Tr 1407) (italics supplied).

To demonstrate that CAFOs are not being "singled out" and that the WRD is seeking to reduce *E. coli* pollution from all sources, including municipal sources, the WRD issued two NPDES general permits in 2008 for storm water discharges from municipal

[106] However, Ms. Rippke also credibly testified that "[w]e have actually very few waterbodies that receive combined sewer overflows" because "[m]ost of our combined sewer overflows in Michigan have been remedied." (*Id*., 6 Tr 1354). Nevertheless, she admitted that "Lansing is one of our few remaining combined sewer overflow permittees." (*Id*., 6 Tr 1354). In addition, Ms. Rippke credibly testified that "we always estimate that 25-ish percent of septic systems are failing, but to what degree they're failing is always an open question." (Testimony of Molly Rippke, 6 Tr 1440). She stated that "individual septic systems are very small compared to the gallons of waste that are produced by livestock, agriculture including CAFOs." (*Id*.). She commented that "the manure from a CAFO is being spread far and wide on the fields according to their permit. That is not true of a septic system." (*Id*., 6 Tr 1440-1441).

separate storm sewer systems (MS4s). (MIG610000 watershed permit) and (MIS049000 jurisdictional permit).[107] A total of 75 Michigan municipalities challenged the terms of the permits. "When stormwater flows over urban environs, it collects 'suspended metals, sediments, algae-promoting nutrients ([N] and [P]), floatable trash, used motor oil, raw sewage, pesticides, and other toxic contaminants[.]'" *See, e.g., Natural Resources Defense Council, Inc v County of Los Angeles*, 673 F3d 880, 884 (CA 9, 2011) (cited *NRDC*). The Ninth Circuit explained that "'[t]his runoff is a major contributor to water pollution in Southern California rivers and the Pacific Ocean and contributes to the sickening of many ocean users each year." *Id*. In the appeal of the *NRDC* case, the United States Supreme Court recognized that "the CWA and its implementing regulations require the operator of an MS4 serving a population area of at least 100,000 to obtain a [NPDES] permit before discharging storm water into navigable waters." *Los Angeles Co Flood Control Dist v NRDC*, 568 US 78, 80; 133 S Ct 710, 712; 184 L Ed 2d 547 (2013).[108] Hence, municipalities are not exempt from reducing *E. coli* concentrations in their NPDES permits. Nevertheless, this contested case is not about NPDES permits covering MS4s, but is about reducing *E. coli* concentrations in NPDES permits in TMDL watersheds that cover agricultural point sources.

Third, Petitioners also suggest that the WRD should have used "bacterial source tracking" (BST) to identify the causes of the *E. coli* contamination.[109] (See, e.g., Testimony of Dr. James Averill, 9 Tr 2319-2323; Exhibit P-64).[110] "BST may use one of several methods to differentiate between potential sources of fecal contamination, all of which follow a common sequence of analysis." (Exhibit P-64, p 1). First, BST is grouped into either molecular or non-molecular methods for determining the source of the fecal

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[107] That contested case was filed before EGLE or the Department of Environmental Quality (DEQ) decisions were adjudicated as part of MOAHR (or its predecessor the Michigan Administrative Hearing System (MAHS)), so the case did not possess a MOAHR or MAHS docket number. The undersigned ALJ was involved at the conclusion of that contested case.

[108] The issue in *Los Angeles Co* is not whether NPDES permits are required. Rather, this issue is whether the record was sufficient "to warrant a finding that the District's MS4 had discharged storm water containing the standards-exceeding pollutants detected at the downstream monitoring stations." 568 US at 80; 133 S Ct at 712.

[109] Exhibit P-56 speaks in terms of "microbial source tracking" (MST) instead of BST. (See Exhibit P-56, p 3).

[110] Exhibit P-64 is a publication by the EPA dated May of 2022, entitled "Wastewater Technology Fact Sheet Bacterial Source Tracking."

contamination. (*Id*.). Molecular methods rely upon DNA markers to identify the source of contamination. (*Id*.). Non-molecular methods use biochemical and chemical procedures for determining the source of fecal contamination. (Exhibit P-64, p 2). However, "chemical methods can only determine whether or not the source of fecal pathogens is human." (*Id*.).

In his testimony, Dr. Averill espoused the use of the "newer more-advanced molecular techniques to identify and track contaminants in … surface waters." (Testimony of Dr. James Averill, 9 Tr 2319). He explained that these molecular methods involve determining either the phenotype or genotype of the organism in order to obtain a DNA fingerprint for BST purposes. (*Id*., 9 Tr 2020). He stated that "[t]he generally-accepted scientific practice today is to use genotyping methods for source tracking." (*Id*., 9 Tr 2321). Among the most-widely used molecular methods are "whole-genome sequencing" and "polymerase chain reaction." (*Id*.). While he testified that "[w]hole-genome sequencing has become the gold standard for effectively evaluating the cause of a contaminant like *E. coli*, Dr. Averill acknowledged that "[t]he downside of utilizing this method is the cost to run the analysis and interpret the results." (*Id*.) (italics supplied).

From the foregoing, it is clear that Petitioners are not disputing the existence of *E. coli* in Michigan waters, but are challenging the source of the pollution, claiming that the pollution came from non-agricultural sources. It is well-settled that, "in contested cases under the APA, the proponent of an order or petition has the burden of proof and the burden of going forward." *Bunce v Secretary of State*, 239 Mich App 204, 216; 607 NW2d 372 (2000) (citations omitted). In this case, Petitioners could have demonstrated that they are not responsible for *E. coli* pollution in Michigan, by producing BST studies into evidence. However, the only affirmative evidence in the record is the testimony of Ms. Rippke that "*E. coli* has a strong positive relationship with agricultural land cover in Michigan." (Testimony of Molly Rippke, 5 Tr 1301). While he disagreed with the quantum of evidence presented by the WRD, Dr. Averill agreed that "I would consider the correlation of *E. coli* to agricultural land and population density to have a **moderate correlation**…." (Testimony of Dr. James Averill, 9 Tr 2309, 2331) (emphasis supplied).

Nevertheless, in Petitioners' own exhibits, it was conceded that bovine (cattle) and porcine (pig) DNA markers for *E. coli* increased across Michigan during spring melt and summer rain as compared with baseflow.[111] (Exhibit P-56, p 9). In this study, "[w]ater samples were collected from 30 large watersheds in Michigan's Lower Peninsula…, representing 65% of the region's drainage, plus 33 smaller … randomly selected watersheds spanning the range of the region's land use variability, for a total of 64 sites and 84% of the region's drainage…." (Exhibit P-56, p 4) (see also figure 1). The article stated that "[b]ovine and porcine markers were detected in 87% and 90%, respectively, of the watersheds over the three seasons" of the study. (*Id*., p 5). The article explained:

> Nonpoint sources of bovine and porcine manure pollution in Michigan rivers are prevalent throughout spring and summer seasons and are associated with multiple sources across impacted watersheds. Generally, manure is applied during crop planting season by injection (pig manure), or surface spreading (cow manure) can also happen throughout the year since the State of Michigan does not prohibit application of manure to frozen grounds.

(*Id*., p 9). This article concluded that "streamflow was an important transport factor contributing to the rapid and widespread temporal and spatial increase of manure accumulated markers in rivers draining agricultural and natural fields." (*Id*., p 10).

Based on the evidence in the record, I find, as a Matter of Fact, that CAFOs contribute to *E. coli* pollution in Michigan's rivers and lakes, justifying an amendment of the terms of the 2015 Permit.

2. Are Winter Restrictions on Land Application of Manure Appropriate?

a. Evidence Supporting Winter Restrictions

The WRD has long had concerns regarding the application of manure on frozen or snow-covered ground as it relates to water quality protection. (Testimony of Christine Alexander, 1 Tr 78-79). In 2005, the WRD adopted the "Technical Standard for Surface Application of [CAFO] Waste on Frozen or Snow-Covered Ground Without Incorporation

[111] Baseflow was defined as that time of year "when groundwater is the dominant contributor to river flow…." (Exhibit P-56, p 4).

or Injection." (Exhibit P-20). In this Technical Standard, the WRD states that, "[w]hen [CAFO] waste is surface-applied to frozen or snow-covered ground, without incorporation or injection, and that application is followed by rainfall or temperatures rising above freezing, the CAFO waste can run off into lakes, streams, or drains." (Exhibit P-20, p 2). The Technical Standard also states that "[d]ocumented evidence shows that this runoff can cause resource damage to the surface waters of the state." (*Id*.). More importantly, the Technical Standard provides that, "[b]ased on the frozen and/or snow-covered conditions, the minimal settling and breaking down of the waste during these conditions, and the inability to predict or control snowmelt and rainfall, there are no practices that can ensure the runoff from fields with surface-applied waste on frozen or snow-covered ground will not be polluted." (*Id*.).

As established in the Findings of Fact, NPDES permits are issued every five years under Michigan's program. Mich Admin Code, R 323.2150 ("A state or national permit … shall have a fixed term which shall not be more than 5 years"). The reissuance of NPDES permits every five years allows the Department to reevaluate the permit and to adjust limitations or permit conditions, if necessary. (Testimony of Christine Alexander, 1 Tr 72). The first NPDES General Permit covering CAFOs was issued in 2002. (*Id*., 1 Tr 81). Subsequent CAFO General Permits were issued in 2005, 2010, and 2015. (Testimony of Bruce Washburn, 2 Tr 427).

The record in this case contains Exhibit R-65, which is a Memorandum from the WRD Livestock Committee to Mr. Argiroff dated September 15, 2014. In this Memorandum, the Committee made recommendations regarding revisions to the April 1, 2010 CAFO General Permit that was expiring on April 1, 2015. (Exhibit R-65, p 2). Among the requested revisions, the Committee recommended "additional notification requirements associated with winter spreading of large CAFO waste be considered for the [2015 Permit]." (*Id*.). Finally, in the September 15, 2014 Memorandum, the Livestock Committee "urge[d] WRD management to consider prohibitions on winter spreading" in the 2020 Permit. (*Id*.).

The 2015 Permit (as well as all prior iterations of the permit) provided that "CAFO waste shall be subsurface injected or incorporated into the soil within 24 hours of

application." (Exhibit P-96, p 15) (Part I.B.3.f.). That provision further provided that "CAFO waste subsurface injected into frozen or snow-covered ground shall have substantial soil coverage of the applied CAFO waste." (*Id*.). Hence, CAFOs were prohibited from applying or injecting manure into frozen ground without soil covering the manure within the 24-hour period. The 2015 Permit further provided that, "[o]n ground that is frozen or snow-covered, CAFO waste may be surface applied and not incorporated within 24 hours only if there is a field-by-field demonstration…." (*Id*.) (Part I.B.3.f.2). The terms of the 2015 Permit were consistent with Mich Admin Code, R 323.2196(5)(a)(ix)(E) ("On ground that is not frozen or snow-covered, production area waste and CAFO process wastewater, if not subsurface-injected, shall be incorporated into the soil within 24 hours of application, except on no-till fields").

Two years after the issuance of the 2015 Permit, an article was published in July of 2017 by Steven R. Miller, *et al.* from MSU, entitled "Survey of Winter Manure Handling Practices on Small-to-Medium-Sized Michigan Farms and an Economic Assessment of Policy Change."[112] (Exhibit P-95).[113] This article, offered into evidence by Petitioners, concedes that "large quantities of nutrient runoff into surface water bodies can pose significant environmental, health and economic threats, as demonstrated with multiple beach closings and fish advisories due to algal blooms." (*Id*., p 2) (citations omitted). The article acknowledges that "a recent report by the International Joint Commission cites agriculture as a major source of [P] loadings to Lake Erie, and recommends banning the spreading of manure and other biosolids on frozen or snow-covered ground." (*Id*.). Despite this acknowledgment, the article notes that "Michigan is one of a few remaining Great Lakes states that does not have state-level mandates regarding winter manure application that go beyond the directives of the EPA."[114] (*Id*.). The article acknowledges

[112] The "small to medium sized Michigan farms" referenced in this article are farms that do not qualify as CAFOs and are not required to obtain NPDES permits. (Exhibit P-95, p 4) ("This analysis targets winter manure practices for smaller operations, as larger operations generally operate under more stringent guidelines as spelled out in each operation's [CNMP] and, in most cases, are regulated under a [NPDES] permit").

[113] This exhibit was also admitted into evidence in this case as Exhibit P-134.

[114] The phrase "go beyond the directives of the EPA" means that Michigan has not yet adopted standards that are more stringent than those required by the EPA. 40 CFR 123.1(i)(1); 40 CFR 122.44(d)(1); *Michigan Farm Bureau II*, ___ Mich ___, ___; 2024 WL 3610196, at *6 (2024).

that "[p]olicy makers in surrounding states have targeted winter manure applications." (*Id*., p 3).

One month later, on August 31, 2017, an article was published by Jason S. Smith, *et al.*, from Biosystems and Agricultural Engineering at MSU, entitled "Winter Manure Application: Management Practices and Environmental Impact, 2016 Manure and Soil Health Working Group Report." This exhibit was offered into evidence by Petitioners as Exhibit P-92.[115] The article acknowledges that "[t]he practice of manure application on frozen or snowy soil remains controversial." (Exhibit P-92, p 1; Exhibit I-20, p 2). The article also agrees that manure "application to frozen impermeable soils can increase the risk of manure and contaminants running off of fields during the spring thaw." (*Id*.). The article acknowledges that "[m]anure runoff carries a number of contaminants that can cause health impact to water bodies and decrease aesthetics." (Exhibit P-92, p 2; Exhibit I-20, p 3). Among the contaminants recognized by the article are nutrients (such as N and P), and pathogens (such as *E. coli*). (Exhibit P-92, pp 2-4; Exhibit I-20, pp 3-5).

This article states that "[r]unoff from winter-applied manure can be an important source of annual nutrient loadings to water bodies, with [N] and [P] being the most often reported contaminants of concern." (Exhibit P-92, p 3; Exhibit I-20, p 4). The article quotes a 1985 study that "estimated that 25% of annual [P] load to a Wisconsin lake was directly attributable to winter spread animal wastes." (*Id*.). The article also quotes a 1989 study that "estimated that 40% of Vermont's streams and lakes experienced significant water quality impairments from the addition of just two winter-spread fields in their watersheds." (*Id*.).

With respect to pathogens, the article states that "application of animal manure to impervious surfaces such as frozen ground can increase the risk of pathogen loss through runoff events relative to application in other seasons." (Exhibit P-92, p 4; Exhibit I-20, p 5). While the article acknowledges that there is a conflict in scientific studies, at least two studies have found that "[c]ool temperatures have been shown to improve the survival of fecal bacteria." (*Id*.). The article explains that the EPA and the NRCS have discouraged manure application during winter. (Exhibit P-92, p 1; Exhibit I-20, p 2). Most significantly,

[115] This exhibit was also admitted into evidence by Intervenors as Exhibit I-20.

the article indicates that the following states have instituted some form of a ban on winter manure applications: Vermont, Iowa, Maryland, Indiana, Minnesota, and Wisconsin. (Exhibit P-92, pp 6-7; Exhibit I-20, pp 7-8).

The EPA has also voiced concerns with winter manure application. In Appendix G of the NPDES Permit Writers' Manual for CAFOs, the EPA explains that "[t]he longer manure remains in the soil before plants take the nutrients up, the more likely those nutrients will be lost through volatilization, denitrification, leaching to subsurface drainage tile lines or ground water, and runoff to surface water." (Exhibit P-104, p 355; Exhibit R-141, p 356) (Appendix G). Specifically, the EPA suggests that, "[t]o use the greatest fraction of the nutrients in manure, late spring and early summer are the best times for land application." (*Id*.).

Similarly, in Appendix G-1, the EPA expressly states that "considerable research has demonstrated that runoff from manure application on frozen or snow-covered ground has a high risk of water quality impact." (Exhibit P-104, p 368; Exhibit R-141, p 369) (Appendix G-1). "Winter application of manure can increase microorganism losses in runoff from agricultural land compared to applications in other seasons." (Exhibit P-104, p 368; Exhibit R-141, p 369) (Appendix G-1). Indeed, the EPA notes that, "although some researchers have reported that freezing conditions are lethal to fecal bacteria …, research results are conflicting" because one researcher "found that [*E. coli*] can survive more than 100 days in manure frozen at minus 20 degrees Celsius."[116] (*Id*.) (citations omitted).

While it is a common industry practice to apply CAFO waste on frozen or snow-covered ground, Ms. Alexander credibly testified that the WRD "determined that applying CAFO waste during this time represents a high risk that warranted additional restrictions to protect water quality." (Testimony of Christine Alexander, 1 Tr 76). When CAFO waste is applied to a snow-covered field in the morning, there is an opportunity for the snow to melt in the afternoon sun. (*Id*.). The melting snow can cause the waste to pond on frozen ground, presenting a high risk of runoff during the next rain event. (*Id*., 1 Tr 76-77).

Ms. Heaton also credibly testified that "CAFO waste in general contains high levels of nutrients and *E. coli*, and when discharged into surface waters, are at levels that can

[116] Minus 20 degrees Celsius is equivalent to minus 4 degrees Fahrenheit ((-20°C x 9/5) + 32 = -4°F).

have negative impacts on the environment and human health." (Testimony of Sylvia Heaton, 5 Tr 1044). Mr. Washburn credibly testified that the 2015 permit was ineffective because there had been continuing concerns with winter manure application and runoff from agriculture fields, as well as additional water bodies being listed as impaired. (Testimony of Bruce Washburn, 2 Tr 287-388). Mr. Washburn opined that manure is applied in the winter when it is not necessary for crop production, and it is applied even when the CAFOs have sufficient storage capacity for the manure. (*Id*., 2 Tr 388).

In its Response to Closing Arguments, the WRD explained its objection to the winter application of manure. First, the concern is that most CAFO waste is liquid waste that is stored, by hundreds of thousands of gallons, in industrial waste storage structures. (WRD's Response to Closing Arguments, p 2) (citing Exhibit R-227, p 6) (listing the waste storage structures located at Dykhuis Farms, Inc.'s Village Central CAFO). The WRD explained that the NPDES permits for such farms focus on the threat that *liquid* discharges could occur from such regulated point sources. (*Id*., citing Testimony of Thad Cleary, 4 Tr 819) (emphasis in original).

The WRD described that the liquid slurry, along with any dissolved nutrients or bacteria, flow downslope due to gravity. (*Id*., citing Testimony of Eric Chatterson, 7 Tr 1758). The WRD stated that "[l]iquid moves downhill faster with rain and snowmelt." (*Id*., citing Testimony of Bruce Washburn, 3 Tr 562) ("the magnitude of discharges that occur during this time of year from frozen and snow covered ground is much greater than other times of the year"). The WRD also noted that liquid flows downhill faster when there are steep slopes. (*Id*., citing Testimony of Molly Rippke, 5 Tr 1322) ("Sloped land has a higher runoff risk than flatter land"). The WRD explained that liquid moves faster through some soil-types. (*Id*., citing Testimony of Eric Chatterson, 7 Tr 1758, 1783). The WRD also explained that "[l]iquid moves down through tile lines and preferential pathways, through groundwater to surface water." (*Id*., citing Testimony of Thad Cleary, 4 Tr 821-822; and Testimony of Kevin Elder, 11 Tr 3088, 3094). In addition, the more liquid that is applied, the faster the liquid will move. (*Id*., p 3, citing Testimony of Janet Makries, 8 Tr 1917-1918). Finally, it must be recalled that, according to Petitioners' own exhibit, 3.3 billion

gallons (or 12.2 billion liters) of manure, urine, and other liquid wastes must be annually disposed. (Exhibit P-56, p 9).

As established in the Findings of Fact, *supra*, the WRD Livestock Committee's top priority for the 2020 Permit was to prohibit the winter land application of CAFO waste. (Exhibit R-14; Testimony of Megan McMahon, 2 Tr 330; Testimony of Sylvia Heaton, 5 Tr 1046). To accomplish this priority, the PN Draft contained a winter ban on land application of CAFO waste from January 1 through March 19. (Exhibit R-71, p 19). Specifically, the PN Draft recited that "CAFO waste shall not be applied during the months of January, February or March 1 through March 19…."[117] (Exhibit R-71, p 19) (Part I.B.3.f.3).

Because the PN Draft amounted to an all-out ban on winter application of manure through March 19, the draft permit was the subject of great concern from the agricultural community. For example, MFB submitted its public comments on the PN Draft on December 16, 2020. (See Exhibit R-114, pp 11-12) (for comments regarding the winter ban).

As a result of public comment from the regulated community, the PN Draft was revised. The 2020 Permit, which was issued by the WRD on March 27, 2020, provides for what Petitioners have called a "presumptive ban" on winter manure application, because they contend the provisions, taken together, effectively prohibit manure application during January through March. (Petitioners' Closing Arguments, p 20). Ms. Alexander refers to the operative provisions as "restrictions on wintertime spreading with a demonstration option…." (Testimony of Christine Alexander, 1 Tr 119). As additional support for its decision to restrict winter manure application, the WRD offered into evidence Exhibit R-69, which is a list of jurisdictions in the United States and Canada that have banned, in whole or in part, the winter application of manure.

[117] With respect to the application of manure from March 20 through March 31, see Exhibit R-71 at pages 19-20. (Exhibit R-71) (Part I.B.3.f.4).

b. Petitioners' Reasons in Favor of Winter Manure Application

Petitioners first argue that there are no federal or state calendar-based restrictions on the land-application of manure. (Petitioners' Closing Arguments, p 71). As noted *supra*, the states may adopt or enforce conditions in NPDES permits that are more stringent or more extensive than those required under federal law. 40 CFR 123.1(i)(1); 40 CFR 122.44(d)(1); *Michigan Farm Bureau II*, ___ Mich ___, ___; 2024 WL 3610196, at *6 (2024). With respect to Michigan law, this objection essentially argues that the WRD is not entitled to craft a permit with conditions more stringent than those required by Rule 2196. Mich Admin Code, R 323.2196.

However, the Michigan Supreme Court held that "Part 31 of the NREPA requires EGLE to include any conditions in an NPDES permit that EGLE deems necessary to achieve applicable Part 4 [WQS] or to comply with applicable laws and regulations." *Michigan Farm Bureau II*, at *7. See also *Michigan Farm Bureau II*, at *6-7 ("EGLE must include conditions 'in addition to or more stringent than' the conditions set forth in the EPA rules that EGLE deems 'necessary to … [a]chieve [applicable]'" WQS). Therefore, the WRD is not prohibited from issuing NPDES permits with conditions more stringent than Rule 2196, when that condition is necessary to achieve WQS. To determine if the proposed winter ban is "necessary to achieve WQS," a review of the facts supporting Petitioners' arguments is warranted.

First, Petitioners assert that the ban is arbitrary, because "[w]inter spreading restrictions under a calendar-based approach will eliminate eligible days even when the fields are not frozen or snow covered." (Petitioners' Closing Arguments, p 72). Petitioners first assert that a calendar-based ban encourages land-application decisions to be based on calendar dates and not on soil or weather conditions. (Petitioners' Closing Arguments, p 72). This assertion was supported by the testimony of Mr. Elder with respect to the Grand Lake St. Marys Soil Water Conservation District. (Testimony of Kevin Elder, 11 Tr 2933). Specifically, Mr. Elder explained that the Ohio Legislature set calendar-based restrictions on manure applications by Rule within the district. (*Id*., 12 Tr 3148). He stated that "the calendar-date restrictions encourage farmers to engage in applications right

before the deadline or right after the deadline, and then manure is not being applied under ideal conditions." (*Id*., 11 Tr 2934). He testified that "time-related conditions tend to discourage good manure management." (*Id*.). He concluded that, instead of calendar-based restrictions, farmers should "apply manure based on weather conditions and field conditions so it can be done at a time when you do not receive gully-washer rains and when the plants … are available to use the manure."[118] (*Id*.). Mr. Elder also credibly testified that calendar-date restrictions "can lead to more total manure being applied in shorter periods of time and, if … bad weather conditions occur shortly after applications, then it will cause a larger runoff event of more nutrients [than] if they [were] applied during better soil conditions regardless of a prohibited [date] timeframe." (*Id*., 11 Tr 2940) (grammatical typos corrected).

In addition, Petitioners cite the testimony of Ms. Campbell for the contention that weather conditions vary from location to location in Michigan, and from year to year. (Petitioners' Closing Arguments, p 72). Specifically, Ms. Campbell testified that MSU's EnviroWeather stations measure soil temperatures at two inches soil depth. (Testimony of Laura Campbell, 10 Tr 2562). She stated that, in East Lansing, soil temperatures in 2021 were below freezing on 33 days from January 1 through March 31, with the last freezing date on February 26. (*Id*., 10 Tr 2563; Exhibit P-35). For the year 2020, however, Ms. Campbell testified that soil temperatures were below freezing on only three days during the entire period. (*Id*.; Exhibit P-36). In 2019, Ms. Campbell explained that there were 49 days during the January 1 through March 31 period when soil temperatures were below freezing, with the last freezing date on March 12. (*Id*.; Exhibit P-37). Finally, in 2018, she stated there were only 7 days when soil temperatures dropped below freezing. (*Id*.; Exhibit P-38). Hence, Ms. Campbell concluded that "over the last four years, the majority of days during January, February, and March would be appropriate for manure application with incorporation of CAFO manure in the East Lansing area…." (*Id*.).

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[118] However, Mr. Elder also testified that "[t]he key to preventing manure nutrient overload is to balance manure nutrients with crop needs." (Testimony of Kevin Elder, 11 Tr 3017). Mr. Elder conceded that "[m]ost of the time these livestock operations produce more nutrients than they have for growing their own crops." (*Id*., 11 Tr 3032). Moreover, he recognized that there are typically no crops growing between January and May to "take up nutrients," because the crops are only planted in April and May. (Testimony of Kevin Elder, 12 Tr 3136). Hence, winter-based manure application do not reflect crop needs for the nutrients. (See Testimony of Bruce Washburn, 4 Tr 779-780) (testifying that there is no agronomic need for applying manure during the winter).

Ms. Campbell made a similar comparison with soil temperatures in Kalkaska, Michigan. Specifically, in 2021, soil temperatures were below freezing for the January 1 through March 31 period on 29 days. (*Id*.; Exhibit P-39). In 2020, soil temperatures were below freezing on zero days. (*Id*.; Exhibit P-40). In 2019, soil temperatures were below freezing on 89 of 90 days. (*Id*.; Exhibit P-41). In 2018, soil temperatures were below freezing on 82 of 90 days, with the above-freezing days all in early January. (*Id*.; Exhibit P-42). Hence, under the terms of the 2015 Permit, Ms. Campbell concluded that farms near Kalkaska would have been prevented from applying manure in only two years of the four-year period. (*Id*., 10 Tr 2564). Expressed in a different way, Ms. Campbell concluded that farmers near Kalkaska would have been able to safely incorporate their winter-applied manure in January through March of 2020 and 2021.

Petitioners next assert that a winter ban "will likely shift manure applications to riskier times of the year." (Petitioners' Closing Argument, p 73). Ms. Brink testified that "large amounts of manure" will need to be applied "in small windows in high precipitation seasons." (Testimony of Allison Brink, 9 Tr 2205). Mr. Washburn agreed that the vast majority of CAFOs need to get their manure land-applied before they plant their crop. (Testimony of Bruce Washburn, 3 Tr 651). Mr. Dykhuis credibly testified that, "[f]or most crops, we cannot apply manure once a crop is planted."[119] (Testimony of Robert Dykhuis, 8 Tr 1961). Crops are normally planted between April 1 and late May. (See Testimony of Bruce Washburn, 3 Tr 574). Petitioners thus argue that March is a valuable time for farmers to apply manure to their fields, because "manure needs to be applied as close to when the nutrients will be used as possible." (Testimony of Robert Dykhuis, 8 Tr 1960). (See also Testimony of Scott Henry, 9 Tr 2889) ("Often in March, the ground is not frozen, and the weather is warm" and "[i]t is actually the perfect weather for spreading manure"). Oftentimes, March is "warm and dry." (Testimony of Robert Dykhuis, 8 Tr 1960). April is not as optimal for manure application due to rain or water saturation of the fields. (*Id*.). The 2015 Permit (and prior iterations of the permit) prevented the application of manure when the fields are saturated or when it is raining. (Exhibit R-96, p 14) (Part I.B.3.e.)

[119] Mr. Dykhuis explained that "there are limited exceptions. We can irrigate a limited amount of manure on top of our corn. Otherwise, everything has to be land applied either ahead of planting the crop or after the harvest of the crop." (Testimony of Robert Dykhuis, 8 Tr 1961).

("CAFO waste shall not be applied on land that is flooded or saturated with water at the time of land application" or "during rainfall events"). Hence, Mr. Dykhuis credibly testified that "overall, there are very few days in April where manure can be spread"). (Testimony of Robert Dykhuis, 8 Tr 1961).

Second, Petitioners assert that the January to March land application restrictions will create additional stress on Michigan roads. The County Road Association of Michigan, the Michigan Townships Association, and the Michigan Association of Counties (collectively referred to as Township and County Associations) filed a joint comment to the PN Draft dated December 17, 2019. In that comment, these agencies advise that "[o]ur members' collective financial obligations for local roads and bridges should make us key participants in any conversation on policy that could have disastrous impacts to our local and rural roads in late winter." (Exhibit P-32, p 2). They further assert:

> Seasonal weight restrictions – sometimes called frost laws – are a months-long period (March-May) across Michigan when frost is coming out of the roadbed leaving it spongy and wet, unable to drain fully due to the ice and frost remaining below the soil surface. During this time, county road agencies reduce legal load limits on all types of commercial vehicles – **except agricultural haulers including manure haulers**. By eliminating winter waste hauling, EGLE's proposed CAFO permit would increase the volume of manure-hauling traffic during this timeframe, potentially causing more damage to the vulnerable roads (paved and unpaved), bridges, shoulders and culverts.
>
> This could lead to damaging the road to the point that the agency has to close it as we are liable for safety, limiting access for emergency vehicles, residents living on the road and further commerce. Our emergency repair options are also limited during seasonal weight restrictions due to the weight of our vehicles.
>
> In fact, Michigan law requires that County Road agencies implement seasonal weight restrictions each March 1st – meaning that by the time the proposed NPDES permit restrictions are lifted for CAFOs, the seasonal weight restrictions on local roads will be in effect. Road conditions at this time make manure hauling more challenging for the farmer and road protection more difficult for road agencies given the volume of hauling that will occur later in the season.
>
> * * *

> Research by the Kansas Local Technical Assistance Program has shown that as few as 10 passes with a fully-loaded manure spreader can permanently damage a hard-surface road. This is of great concern to townships, which are the second-largest funding source for local roads, and county road agencies alike, as we strive to restore Michigan's 90,000 local road miles and 5,700 local bridges.

(Exhibit P-32, pp 2-3) (emphasis supplied).

Similarly, Mr. Sietsema testified that "the most practical time to field stack [poultry] litter for spring application is during the months of February and March—ahead of the county implemented frost laws prohibiting truck traffic delivering litter to rural areas on rural roads." (Testimony of Rick Sietsema, 8 Tr 2078). He explained that the poultry manure is "field stacked," and may remain stacked for 30 to 60 days before it is incorporated into the soil.[120] (*Id*., 9 Tr 2117). Mr. Sietsema testified that the dump trucks hauling poultry litter "are on the roads manifesting the turkey litter in January through March because of the farmers' need to be applying the litter ahead of planting in April through May." (*Id*., 8 Tr 2079). He further stated that "[o]nce frost laws are in effect, the dump trucks that haul manure cannot be on the road." (*Id*.).

However, on examination from the tribunal, Mr. Sietsema explained that his trucks that haul poultry manure "are regular trucks so we don't need an exemption for a commercial truck to go down a county road when weight restrictions are on." (Testimony of Rick Sietsema, 9 Tr 2114). He further stated that "[w]e do, however, have to permit and pay fees and depending on what the county's weight restriction program is to deliver feed and to get livestock out of our facilities, but some of these counties, like the one I actually live in, in Ottawa County, requires bonding of the roads." (*Id*., 9 Tr 2114-2115).

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[120] The 2015 Permit provides that "CAFO waste shall be subsurface injected or incorporated into the soil within 24 hours of application." (Exhibit R-96, p 15). There is no exception in this provision of the permit for field stacked poultry litter. Similarly, Rule 2196 provides that "[p]roduction area waste and CAFO process wastewater shall not be applied to frozen or snow-covered ground unless it is subsurface injected and there is substantial soil coverage of the applied production area waste and CAFO process wastewater, or it is surface-applied and incorporated within 24 hours." Mich Admin Code, R 323.2196(5)(a)(ix)(B). There is no exception in Rule 2196 for field stacked poultry litter. Arguably, poultry litter may be considered "applied" as of the time it is field stacked. Mr. Washburn testified that he did not believe that field stacking in January, February, or March would be prohibited by the 2020 Permit, but that "compliance staff have not had a great opportunity to discuss how we would deal with compliance on some of these issues." (Testimony of Bruch Washburn, 2 Tr 506-507). In their Closing Arguments, Petitioners contend that "[p]oultry litter must be 'stacked' in fields 'in the middle of February or early March' so that it can be applied 'later in the spring.'" (Petitioners' Closing Arguments, p 77). Even if the WRD compliance staff have no objection to this practice, the 2020 Permit should be modified to explain the practice and provide authorization for it.

He stated that "[w]e pay 10's and 20's or 30 thousands of dollars to bond a couple of miles of some roads so that we can feed our livestock let alone have to … deliver some poultry litter to a farmer that needs it for his crops in the spring." (*Id*., 9 Tr 2115). Because the county holds the CAFOs liable for any damage to a bonded road, Mr. Sietsema testified that "it's not feasible to … utilize the weight restriction policies within all the various counties in Michigan and to manifest during the weight restriction period." (*Id*.).

Third, Petitioners have raised the concern that a winter ban on manure application will overtax manure storage systems. Initially, it must be recalled that the 2020 Permit requires the following with respect to manure storage:

> During the period of November 1 to December 31 of each year, there shall be an available operational volume in the CAFO waste storage structures equal to the volume of CAFO waste generated from the operation of the CAFO in a six-month or greater time period (including normal precipitation and runoff in the production area during the same time period).

(Exhibit R-45, p 12) (Part I.B.1.d.2).[121] The article published by Steven R. Miller, *et al.* from MSU demonstrates the problems that farmers could encounter with their manure storage under a winter ban. (Exhibit P-95). Specifically, the article asserts:

> [Calendar-based manure application] restrictions can also result in excessive storage quantities against limited storage capacity, resulting in farms being caught with excessive inventory of manures that may threaten unplanned releases into water streams.
>
> While manure and wastewater storage and handling needs are highly specific to the conditions and location of each facility and differ from farm to farm, it is evident that it is costly to store manure. Manure systems using long-term storage with spreading, injection, or irrigation have greater direct costs to the farmer than a daily haul system. Borton et al. (1995) found that long-term storage systems increase diary operation costs by up to $65 per cow for small operations (60 cows) and $45 per cow for larger operations (250 cows). Garsow, Conner, and Nott (1992) found that investments in manure storage facilities yielded a negative annual return of 2.9-6.6%. Meals (1990) found that storage is the least cost effective means of managing phosphorous runoff, but it remains a central strategy.

[121] A similar provision requiring 6 months of manure storage can be found in the 2015 Permit at Part I.B.1.a.4. (Exhibit R-96, p 7).

> Manure storage provides temporary containment of manures that allow operators to apply to fields when conditions warrant. Limited storage space requires more frequent field applications resulting in less flexibility in determining when manure is applied. If manure cannot be applied because of field conditions or other field constraints, other options may include exporting manures off the farm as fertilizer to other fields.

(Exhibit P-95, p 3). Similarly, the article published by Jason S. Smith, *et al.*, from MSU states that "banning winter manure application outright may come with certain disadvantages as well. Overtaxing long-term storage systems can lead to overflows, spills, or the need to make emergency applications during the spring thaw months, which are most sensitive to manure application." (Exhibit P-92, pp 1-2) (citations omitted).

Mr. Dykhuis similarly testified regarding how a calendar-based restriction on manure application will overtax a CAFO's 6-month manure storage facility. Mr. Dykhuis credibly testified that, if manure cannot be applied in the spring, it generally cannot be applied to crops in the summer. (Testimony of Robert Dykhuis, 8 Tr 1959). Under such circumstances, the farmer must hope to get the right weather in the fall to be able to empty manure storage facilities by the year's end. (*Id*.). He further testified:

> If March is practically prohibited for the land application of manure and there are insufficient days in April that are available for spreading, then our farm would have to delay planting. Also, it means that a manure crew needs to be running while we are planting, which is a practical problem from a labor management standpoint. Farmers really cannot carry manure into the fall because the farmer does not know if he will have a wet or a dry fall. There may be insufficient dry days to apply in the fall in order to empty storage structures as required by the permit. If a farmer delays planting, that impacts production by reducing yield. Thus, being able to spread during the time prior to planting is important.
>
> … EGLE requires storage structures to empty by the end of the year. So six month storage from November or December when it is emptied gets a farmer to May or June. But the storage structure will be really full in the spring. By then, the farm needs to get manure land applied, emptied, and removed. If the farmer is unable to do so, then a larger spring rain event can cause overflows from the storage structure…. If a farmer does not empty the manure storage by December 31, the farm will be out of compliance. There have been a number of times in recent years with our farms where we have come pretty close to the last day to get the manure out and "emptied" by the end of the December.

> Accordingly, at that time, the farmer is pressured to remove any remaining manure from storage to meet EGLE's mandate that the storage structures are empty by the end of the year. That encourages farmers to simply land apply in order to empty the storage structures rather than basing their land application decision on whether the field conditions are appropriate. So EGLE's winter spreading restrictions may actually encourage poor management decisions that can cause a greater risk of runoff because manure is being applied at times when the fields are more wet and when soil is likely to run off.

(Testimony of Robert Dykhuis, 8 Tr 1962-1963).

Mr. Sietsema also testified regarding how a winter ban could affect a poultry farm's storage of manure. Specifically, he stated that "[t]urkey litter is produced continually while the birds are grown." (Testimony of Rick Sietsema, 8 Tr 2080). Flocks of birds are rotated through the barns in 12 to 14 weeks. (*Id*.). Poultry litter is removed from the barns between flocks and is placed in storage or is manifested.[122] (*Id*.). At any given time, there will be birds in 90% of his barns. (*Id*.). Mr. Sietsema explained that turkey litter is in two forms: a caked litter that is created by a concentration of bird activities underneath the feed lines, and a litter that is produced in combination with the wood shaving bedding on which the birds are bedded. (*Id*., 8 Tr 2081). The caked litter has a higher moisture content but may be removed when the turkeys are in the barn. (*Id*.). The litter that is produced with the bedding can only be removed when the barns are cleaned between flocks. (*Id*.). The caked litter is placed in the storage structure, and constitutes 20-40% of the total litter that is manifested. (*Id*.). The litter produced with bedding must be manifested in a timely manner for there to be room in the storage facility for the caked litter. (*Id*., 8 Tr 2081-2082).

Fourth, Petitioners argue that a winter ban on manure application will cause "compaction." Mr. Henry credibly testified that land application equipment, such as tractors and spreading equipment, cannot be used on muddy soils, because "the wetness of the soil will cause the soil to be compacted (or pushed) together so that it will be

[122] Mr. Sietsema testified that "[w]e manifest all of our manure…." (Testimony of Rick Sietsema, 8 Tr 2074). The winter restrictions on manifesting manure in the 2020 Permit are discussed in Section IV(E) of this FDO. However, Mr. Sietsema's testimony is relevant here to understand how a winter ban on manure application could affect a poultry farm which applies the litter on its own crop fields.

denser."[123] (Testimony of Scott Henry, 11 Tr 2891). (See also Testimony of Kevin Elder, 11 Tr 2934). Mr. Henry explained that compaction affects crop yield. (*Id*.). "If a farmer compacts the dirt and makes it denser, the soil will not allow roots to penetrate, and that will reduce a farm's crop production." (*Id*.). Indeed, Mr. Elder credibly testified that, "[o]nce compacted, it may take a long time -- sometimes many years -- for the soil to be restored to a better condition." (Testimony of Kevin Elder, 11 Tr 2934). Mr. Elder testified that compaction yield losses can last three to five years. (*Id*., 11 Tr 2935). In addition, "[c]ompaction increases runoff and lessens the ability of the soil to quickly adsorb or attach nutrients and water." (*Id*.). Finally, Petitioners assert that "lower adsorption and greater runoff directly correlate to increased nutrient loading."[124] (Petitioners' Closing Brief, p 76) (citing Testimony of Allison Brink, 9 Tr 2184) ("The more water that can be held in the soil structure, the less water is moving off the field and carrying sediment and nutrients with it").

Fifth, Petitioners assert that the "presumptive ban" will cause farmers to shift crop fertilization from manure to commercial fertilizers. Petitioners argue that, if there is a ban on land-applying manure, farmers are not prevented from applying commercial fertilizers. Mr. Elder testified that, "[i]f there is no ban on commercial nutrients, then there is a disincentive to apply manure and an actual encouragement to over-apply nutrients if manure has to be applied somewhere later." (Testimony of Kevin Elder, 11 Tr 2934). Mr. Sietsema also testified:

> Turkey manure is generally favored over some other manure resources for its ease of transport and field stacking, though it still receives much less consideration than commercial manure.[125] The nutrients provided by turkey manure has a commercial value of about $280-$300 per ton. With challenges in handling and spreading, I am only able to get a $25 per ton value for it. With added restraints and restrictions more crop producers will

[123] Recall that the public comment from the Township and County Associations cites Kansas research that "10 passes with a fully-loaded manure spreader can permanently damage a hard-surface road." (Exhibit P-32, p 3). If 10 passes with a fully loaded manure spreader can damage a road surface, it is inferred that they can cause compaction of crop fields. *Zytkewick,* 340 Mich at 318 (evidence includes reasonable inferences that can be drawn from the facts).

[124] The American Heritage Dictionary defines "adsorption" as "the assimilation of gas, vapor, or dissolved matter by the surface of a solid or liquid." American Heritage Dictionary 81 (2d ed 1985).

[125] It is believed that Mr. Sietsema meant to testify that turkey manure "still receives much less consideration than commercial [fertilizer]." (Testimony of Rick Sietsema, 8 Tr 2084).

> abandon manures as a natural source of crop nutrients and opt for the less complicated commercial fertilizers.

(Testimony of Rick Sietsema, 8 Tr 2084-2085). The implication of a shift to commercial fertilizers is that they are not subject to NPDES permits and could cause more adverse impacts to the environment.

Finally, Petitioners allege that the winter manure restrictions will have an adverse effect on their labor workforce. Mr. Dykhuis testified that March is a good month for land-applying manure, because it is a down time for his employees. (Testimony of Robert Dykhuis, 8 Tr 1960). He credibly testified that, "if the weather allows, it is a good opportunity to make productive use of labor before it is time to plant." (*Id*.). Similarly, Mr. Henry testified that "[i]t can be hard to hold onto farm employees because of idle times where there is no need for their help." (Testimony of Scott Henry, 11 Tr 2892). He further explained that, "[b]y utilizing spreading during pre-planting times, it gives the farm a reason to keep these employees on the payroll outside of the planting-through-harvest season." (*Id*.).

c. Intervenors' Reasons for a Complete Winter Ban

Intervenors contend that the 2020 Permit provides for "widespread waste disposal masquerading as crop fertilization…." (Intervenors' Closing Arguments, p 2). They state that there are two essential facts that make winter manure application more likely to cause runoff into Michigan's surface waters. First, Intervenors note that there are no crops to take up CAFO waste nutrients. (Intervenors' Response to Closing Arguments, p 30, citing Testimony of Jeanette Makries, 8 Tr 1939-1941; Testimony of Kevin Elder, 12 Tr 3136). Second, Intervenors point out that, because frozen ground is impervious, the waste will flow off the application field after the frost, ice and snow melt. (*Id*., citing Testimony of Thad Cleary, 4 Tr 928). Intervenors remind that, even if the soil is thawed at a two-inch depth, soil thaws from the surface down, so the ground can still be frozen at greater depth. (citing Testimony of Thad Clearly, 4 Tr 927-928). As a result, Intervenors state that the "[a]pplication of manure onto any frozen or snow covered surface carries a higher risk of runoff and subsequent loss of contaminants of concern into the environment than during

fall or spring application." (Intervenors' Response to Closing Arguments, p 30-31, quoting Exhibit P-92, p 13). Intervenors remind that CAFOs are required to have six months of waste storage capacity available between November 1 and December 31 each year. (citing Exhibit R-45, p 12) (Part I.B.1.d.2). Intervenors thus argue that CAFOs should have sufficient storage to avoid land-applying manure until at least May 1. (Intervenors Closing Arguments, p 40).

Intervenors also argue that the CAFO regulatory framework is uniquely lenient compared to other point sources of pollution. (Intervenors' Closing Arguments, p 27-28). First, Intervenors compare the 2020 Permit to NPDES permits issued to WWTPs. Initially, it should be noted that WWTPs have a discrete conveyance such as a pipe which discharges treated effluent from the facility into state of Michigan receiving waters. See Mich Admin Code, R 323.1044(m) ("'Receiving waters' means the surface waters of the state into which an effluent is or may be discharged"). In fact, Rule 2104 generally defines a "point source" as "a discharge that is released to the waters of the state by a discernible, confined, and discrete conveyance" such as "[a] pipe." Mich Admin Code, R 323.2104(c)(i). Since a WWTP discharges treated waste to the receiving waters, the facility's NPDES permit includes effluent limits for specific pollutants. See, e.g., *Petition of the Village of Dexter*, Docket No. 09-000003-R1 (PFD issued August 30, 2017, p 11) (noting that the TMDL provided for Ann Arbor's WLA for P to be set at 60 pounds per day for May, June and September, and 50 pounds per day for July and August).

In contrast to a WWTP, the waste from a CAFO is not a treated effluent, and it is not discharged through a pipe directly into a receiving water. Rather, there are two types of discharges[126] that are authorized by the 2020 Permit: an overflow from a waste storage structure, or a discharge from a land application area, but such overflow/discharge must not "cause or contribute to an exceedance of Michigan's [WQS]…." (Exhibit R-45, p 6) (Part I.A.1.). (See also Exhibit R-96, p 6) (the 2015 Permit) (Part I.A.1.). To be an "authorized" overflow, the storage structure must be properly designed, constructed, operated and maintained in accordance with the requirements of the permit, and the

[126] The 2020 Permit defines a "discharge" as "the addition of any waste, waste effluent, wastewater, pollutant, or any combination thereof to any surface water of the state." (Exhibit R-45, p 33).

overflow must be "caused by precipitation events." (Exhibit R-45, p 6) (Part I.A.1.a.). Similarly, to be an "authorized" discharge, "the land application areas [must be] managed in accordance with the [NMP] requirements set forth in Part I.B.3" of the 2020 Permit.[127] (Exhibit R-45, p 6) (Part I.A.1.b.).

Intervenors also compare the 2020 Permit to NPDES permits covering biosolids.[128] Ms. Rippke similarly testified that "ideally, regulation of CAFO waste should be like Michigan's approach to land-application of Biosolids." (Testimony of Molly Rippke, 5 Tr 1326). The word "biosolids" is defined as "solid, semisolid, or liquid residues generated during the treatment of sanitary sewage or domestic sewage in a treatment works." Mich Admin Code, R 323.2402(h). "Biosolids are the solids left over after the treatment of human wastewater…." (Testimony of Molly Rippke, 5 Tr 1326). The biosolids program regulates the use of biosolids. (Testimony of Bruce Washburn, 2 Tr 385). The program requires the monitoring of metals in the waste. (*Id*.). See also Mich Admin Code, R 323.2409(1) ("A person shall not apply bulk biosolids … if the concentration of any pollutant in the biosolids exceeds the ceiling concentration for the pollutant in table 1 of this rule").[129] Like manure, biosolids are required to be incorporated. (*Id*.). See Mich Admin Code, R 323.2415(4)(j) ("A person who applies biosolids to the land surface shall ensure that the biosolids are incorporated into the soil within 6 hours after application"). Surface application of biosolids to frozen or snow-covered grounds is prohibited. (*Id*.). See Mich Admin Code, R 323.2410(2) ("A person shall not apply bulk biosolids to

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[127] To be an "authorized" discharge under the 2015 Permit, the discharge must be "[p]recipitation caused runoff from land application areas and areas listed in Part I.B.3.h. that are managed in accordance with the NMP (see Part I.B. below)." (Exhibit R-96, p 6) (Part I.A.1.b.). Hence, an authorized discharge under the 2020 Permit need not be limited to "precipitation caused runoff." (Exhibit R-45, p 6) (Part I.A.1.b.). According to their Closing Arguments, Petitioners have not objected to the 2020 Permit's amendments to Part I.A.1. of the permit.

[128] The Administrative Rules provide that, "[f]or agricultural land, a person shall apply biosolids in accordance with agronomic rates. If the Bray P1 soil test level exceeds 300 pounds … per acre (150 ppm), … then the person shall not apply biosolids until the soil P test level decreases to less than … these values." Mich Admin Code, R 323.2410(8). (See also Testimony of Laura Campbell, 10 Tr 2539). For a discussion of the P level for manure application to crop lands, see Section IV(C) of this FDO.

[129] Table 1 includes ceiling concentrations for arsenic, cadmium, copper, lead, mercury, molybdenum, nickel, selenium, and zinc. Mich Admin Code, R 323.2409(5). Ms. Campbell credibly testified that biosolids "must be monitored for metals because municipal wastewater is likely to contain metals." (Testimony of Laura Campbell, 10 Tr 2655). No testimony was offered in this case with respect to manure containing similar metals as biosolids. (See, e.g., Testimony of Laura Campbell, 10 Tr 2515-2516) ("Manure is a highly valuable nutrient source, providing up to 16 pounds each of [N] and [P] per ton of dairy manure" and "contains 5 pounds of calcium, 2 pounds of magnesium, and 1.5 pounds of sulfur per ton"). (See also Exhibit P-81) (which contains a list of micronutrients in dairy manure).

agricultural land … that is … frozen, or snow-covered").[130] By permit requirement, the fields that receive biosolids must be inspected by the Department staff every five years for potential environmental issues. (Testimony of Molly Rippke, 5 Tr 1326). The most important difference between CAFO waste and biosolids is that biosolids must be treated, unlike CAFO waste. (*Id*., 2 Tr 385-386). See, e.g., Mich Admin Code, R 323.2414(2)(g)(ii) ("Biosolids that are used or disposed of shall be treated in 1 of the processes to further reduce pathogens…").[131] Intervenors note that generators of human waste biosolids must pay an annual land application fee, based on the volume of waste generated. See MCL 324.3132. Finally, Ms. Rippke conceded that biosolids are "very highly regulated."[132] (Testimony of Molly Rippke, 6 Tr 1420).

d. Analysis of the 2020 Permit's Winter Restrictions

The winter manure application restrictions of the 2020 Permit are contained within Appendix B to this FDO. All of the conditions contained in these provisions must be met before manure may be applied in January through March. (Testimony of Bruce Washburn, 2 Tr 500). As noted *supra*, Petitioners have raised a number of challenges to such provisions of the permit. This tribunal will address each of these challenges.

(i) January to March Calendar Restrictions

From a review of the evidence presented in this contested case, the tribunal finds it necessary to distinguish between restrictions placed on the months of January and February, with restrictions placed on the month of March. The evidence in this case has

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[130] But see Mich Admin Code, R 323.2410(3) ("A person may subsurface inject bulk biosolids on frozen or snow-covered ground as long as there is substantial soil coverage of the applied biosolids"). This Rule further provides that "[a] person shall not surface apply bulk biosolids, **other than exceptional quality biosolids**, on frozen or snow-covered ground, unless otherwise approved by the department." Mich Admin Code, R 323.2410(3) (emphasis supplied).

[131] Ms. Campbell also credibly testified that biosolids "are required to use treatment methods for pathogen reduction because they may contain human pathogens that can cause human illness." (Testimony of Laura Campbell, 10 Tr 2655).

[132] Mr. Washburn also stated that "the rules do not allow for manifesting" of biosolids. (Testimony of Bruce Washburn, 2 Tr 385). However, Ms. Campbell explained that "[t]here is no manifesting, or transfer, in their land application permits because wastewater treatment facilities do not own farmland -- it is all transferred, so the permit is written to incorporate all fields on which the biosolids may be applied, similar to a CAFO's CNMP plan for land application." (Testimony of Laura Campbell, 10 Tr 2655-2656). For a discussion of manifesting manure, see Section IV(E) of this FDO, *infra*.

created a demarcation between these calendar periods. The tribunal will limit its findings to these two separate calendar periods.

January and February

The following is an analysis of the facts related to each of the arguments Petitioners have raised in favor of land-applying manure in January and February:

- **Michigan's County Roads and Bridges**. The joint comment from the Township and County Associations was persuasive. (Exhibit P-32). However, according to this public comment, "agricultural haulers including manure haulers" are exempt from the "frost laws." (*Id*., p 2). Nevertheless, both the Township and County Associations and Petitioners argue that a winter ban on applying manure will cause agricultural manure haulers to shift manure deliveries to times of the year when frost laws are in effect, potentially causing damage to Michigan's rural roads and bridges. Mr. Sietsema testified that, "[o]nce frost laws are in effect, the dump trucks that haul [poultry] manure cannot be on the road." (Testimony of Rick Sietsema, 8 Tr 2079). However, Mr. Sietsema testified upon questioning from this tribunal that, "[w]hen weight restrictions come on, we have commercial trucks that deliver [poultry litter] to the CAFO or to the crop farmer that utilizes it." (*Id*., 9 Tr 2114). He further testified that the trucks that haul poultry manure "are regular trucks so we don't need an exemption for a commercial truck to go down a county road when weight restrictions are on." (*Id*.). Mr. Sietsema also credibly testified that "[w]e do, however, have to permit and pay fees and depending on what the county's weight restriction program is … some of these counties … requires bonding of the roads." (*Id*., 9 Tr 2114-2115). Similarly, Mr. Dykhuis testified that "we can get permits or get permission to run trucks" when the frost laws are applicable. (Testimony of Robert Dykhuis, 8 Tr 2038). While damage to county roads and bridges is an issue that is troubling to this tribunal, based

on the evidence in the record I find, as a Matter of Fact, that Petitioners will not be prevented from applying manure in March through May if the frost laws are in effect.

- **Elimination of Eligible Application Days**. Ms. Campbell testified regarding the number of "warm" days upon which manure could be applied. Her testimony argued that CAFOs should be allowed to determine for themselves whether the conditions are appropriate for applying manure. However, Ms. Campbell's testimony was limited to the two-inch depth of the soil. (See, e.g., Exhibits P-35 to P-42). Intervenors persuasively argue that soil freezes from the surface down, and also thaws from the surface down. (Intervenors' Response to Closing Arguments, p 32) (citing Testimony of Thad Cleary, 4 Tr 927-928). Ms. Makries credibly testified that "soil temperatures two inches deep may or may not reveal the conditions deeper in the soil." (Testimony of Jeanette Makries, 7 Tr 1841). (See also Testimony of Bruce Washburn, 2 Tr 504) ("frost exists … in the soil profile … from the top of the soil profile down). Ms. Makries opined that the two-inch soil depth is not sufficient to determine if the ground will stay thawed long enough to allow for the incorporation of manure into the soil. (Testimony of Jeanette Makries, 7 Tr 1841). This tribunal gives greater weight to the testimony of Mr. Cleary and Ms. Makries. Therefore, I find, as a Matter of Fact, that thawing in the two-inch soil depth is not a sufficient basis to apply manure in January and February.[133]

- **Shifting Manure Application to Riskier Times**. Petitioners' assertion that a winter ban will shift manure application to a riskier time of the year is

[133] This tribunal also has concerns with respect to injection or incorporation of manure into soil that has only two inches of thaw. Rule 2196 provides that manure "shall not be applied to frozen or snow-covered ground unless it is subsurface injected **and there is substantial soil coverage** of the applied [manure], or it is surface applied and **incorporated** within 24 hours." Mich Admin Code, R 323.2196(5)(a)(ix)(B) (emphasis supplied). Petitioners provided no testimony ensuring that manure may be injected with "substantial soil coverage" or adequately incorporated when only two inches of soil has thawed.

without merit. The evidence indicates that there is no riskier time of year for manure application than January or February. Initially, it should be recalled that "the vast majority of studies suggest that winter application of manure increases loss of nutrients with losses up to 27% of applied [P] and 22% of applied [N]." (Exhibit P-92, p 11) (citations omitted). The EPA explained that "[t]he longer manure remains in the soil before plants take the nutrients up, the more likely those nutrients will be lost through volatilization, denitrification, leaching to subsurface drainage tile lines or ground water, and runoff to surface water." (Exhibit P-104, p 355; Exhibit R-141, p 356) (Appendix G). (See also Testimony of Bruce Washburn, 3 Tr 604) ("not having a growing crop there and potentially not having a growing crop for several months would increase the time that nutrients cannot be captured by a growing crop and therefore there's a higher possibility that they could run off").

In addition, Mr. Trainor testified that a 35-foot vegetated buffer has diminished effectiveness in winter months when the vegetation goes dormant. (Testimony of David Trainor, 10 Tr 2864-2865) (citing Exhibit P-47). The EPA has stated that "[t]he purpose of a vegetated buffer is to slow the runoff from a land application site, enhance the filtration of the runoff, and minimize the risk of nutrients and other pollutants leaving the land application site and reaching surface waters." (Exhibit P-104, p 148; Exhibit R-141, p 149). Therefore, if vegetative buffers have limited effectiveness in the winter months, CAFOs who employ vegetative buffers will similarly have limited effectiveness in preventing runoff of manure during winter months.

Further, Mr. Dykhuis credibly testified that "[o]ur farm typically does not spread manure in January and February unless absolutely necessary." (Testimony of Robert Dykhuis, 8 Tr 1960). Rather, he credibly testified that "manure needs to be applied as close to when the nutrients will be used as

possible." (Testimony of Robert Dykhuis, 8 Tr 1960). (See also Testimony of Allison Brink, 9 Tr 2207) ("Agronomically speaking, we want the manure applied as close to crop production as possible"). Indeed, Mr. Elder credibly testified that farmers should "apply manure … when the plants … are available to use the manure." (Testimony of Kevin Elder, 11 Tr 2934). Mr. Washburn also credibly testified that crops are normally planted between April 1 and late May. (Testimony of Bruce Washburn, 3 Tr 574). Therefore, if manure should be applied "as close to when the nutrients will be used," it makes no sense to apply the nutrients in January or February. Accordingly, I find, as a Matter of Fact, that restrictions on manure application in January and February are appropriate, because the crops that utilize the nutrients in manure are not planted until two or three months later.

- **Limited Manure Storage Capacity**. Petitioners' argument that CAFOs have limited storage capacity does not justify the application of manure in January or February. Ms. Alexander credibly testified that "CAFO waste structures are designed to hold the untreated waste until it can be disposed of by land applying it to fields at a time and in a manner that is unlikely to result in unlawful discharges to surface waters of the state." (Testimony of Christine Alexander, 1 Tr 73). According to the 2020 Permit, CAFO waste storage facilities are to be emptied between the period of November 1 to December 31 of each year. (Exhibit R-45, p 12) (Part I.B.1.d.2). Assuming a CAFO empties its storage facility by November 1, which is the earliest date, the CAFO will have only used four months of its six-month storage capacity by the end of February. A ban on manure application in January and February will not overtax CAFO storage capacity, because the CAFO will still have two months storage capacity remaining as of February 28. Therefore, I find, as a Matter of Fact, that restrictions on manure application in January and February will not cause the CAFO's storage capacity to be overtaxed.

- **Compaction**. "The literature suggests that soil compaction … can be reduced when applying [manure] to frozen soil but at the potential expense of nutrient runoff." (Exhibit P-92, p 12). Nevertheless, Mr. Henry credibly testified that compaction is most likely to occur on muddy soils, because "the wetness of the soil will cause the soil to be compacted (or pushed) together so that it will be denser." (Testimony of Scott Henry, 11 Tr 2891). While the issue of compaction is legitimate, the concern does not justify manure application in January or February, when there are no crops to take up the nutrients from the manure, and due to the risk of nutrient runoff. Therefore, I find, as a Matter of Fact, that manure can be applied in months other than January or February, when the soil is not muddy, in order to prevent soil compaction.

- **Shifting to Commercial Fertilizers**. In this argument, Petitioners assert that, due to the winter application restrictions, farms that normally receive CAFO manure will shift to commercial fertilizers. Initially, this tribunal is unable to make a finding in this contested case based on speculation of what farms receiving CAFO manure may do in the future. Rather, this tribunal is required to make its determination based on a preponderance of the evidence in the record. *Aquilina, supra.* Therefore, a review of the evidence in the record is warranted.

  First, CAFOs that apply their own generated manure onto their own crop fields are not likely to shift to commercial fertilizers, since they have only six months of storage capacity, and the storage facilities need to be emptied between November 1 and December 31. (Exhibit R-45, p 12) (Part I.B.1.d.2). Second, organic farmers are required to utilize manure in lieu of commercial fertilizers, (Testimony of Caleb Stewart, 9 Tr 2149-2151; Testimony of Rick Sietsema, 8 Tr 2089), so organic farms are not likely to convert to commercial fertilizers. In fact, Mr. Sietsema credibly testified that

"most of the poultry litter that we manifest is provided to organic farmers…." (Testimony of Rick Sietsema, 8 Tr 2088).

Third, Petitioners' witnesses have advocated the benefits of manure over commercial fertilizers. Specifically, Ms. Brink credibly testified that "commercial fertilizer does not contain organic matter." (Testimony of Allison Brink, 9 Tr 2181). She also credibly testified that organic matter from manure increases the water-holding capacity of soil, increases infiltration of water, and enhances the retention of nutrients in the soil. (*Id*.). Ms. Campbell credibly testified that manure contains microbes that liberate nutrients, enhance the uptake of nutrients by crops, and increase crop yield. (Testimony of Laura Campbell, 10 Tr 2811). She further credibly testified that "[m]anure has an advantage over commercial fertilizer in that it has a broad spectrum of nutrients in one source and promotes healthy soil biological activity." (*Id*., 9 Tr 2180).

Fourth, the evidence in the record also indicated that manure is a less expensive option than commercial fertilizer. Ms. Campbell credibly testified that "an average-sized Michigan farm with soil deficient in common micronutrients might spend nearly $10,000 per year using [commercial] fertilizer instead of manure…." (Testimony of Laura Campbell, 10 Tr 2517). Also, Mr. Sietsema credibly testified that he sells his poultry litter for as low as $25 per ton. (Testimony of Rick Sietsema, 8 Tr 2084-2085). Mr. Sietsema also credibly testified that the cost of his pig manure is approximately 1¢ or 2¢ per gallon, so the cost for 2,000 gallons would be $10 to $20. (*Id*., 9 Tr 2129). On the other hand, Mr. Henry credibly testified that he "gives manure away at no cost to the other crop farmers." (Testimony of Scott Henry, 11 Tr 2897).

As noted *supra*, this tribunal is unable to base a decision on speculation of what may or may not occur in the future, such as farms shifting from manure to commercial fertilizer. Nevertheless, I find, as a Matter of Fact, that there are substantial reasons for farms to employ manure as their fertilizer choice, notwithstanding restrictions on manure applications in January or February.

- **Adverse Effect on Labor**. While the CAFOs may have idle labor available in January and February, this reason alone is not a sufficient basis for utilizing such months for applying manure. Therefore, I find, as a Matter of Fact, that an idle and available labor force is an insufficient ground for applying manure in January or February.

Based on the foregoing evidence in the record, I find, as a Matter of Fact, that the 2020 Permit's restrictions on applications of manure in January and February is a discretionary condition of the permit that is necessary to achieve WQS. Based on the foregoing evidence in the record, I conclude, as a Matter of Law, that this discretionary condition of the 2020 Permit comports with the requirements of the laws and rules under which the 2020 Permit was issued, and is reasonable and consistent with express language and intent of the regulatory scheme.

<u>March</u>

From the record, it is clear that the WRD is concerned that March is a problematic month for manure applications. It is axiomatic that "March is a transitional month…." (Testimony of Jim Haywood, 7 Tr 1668). Ms. Alexander testified that March is a risky month for manure applications, because "we do have a lot of rain in March." (Testimony of Christine Alexander, 1 Tr 181). However, Rule 2196 provides that manure "shall not be land-applied on ground that is flooded [or] saturated with water … where the [CAFO waste] may enter waters of the state." Mich Admin Code, R 323.2196(5)(a)(ix)(A). In addition, the 2020 Permit provides that "CAFO waste shall not be applied on land that is flooded or saturated with water at the time of land application" and that "CAFO waste shall

not be applied during rainfall events." (Exhibit R-45, p 20) (Part I.B.3.f. 1) & 2)). Hence, despite the new restrictions for the month of March, both Rule 2196 and the 2020 Permit contain requirements that are contemplated to protect WQS when the ground is "flooded or saturated with water."

Nevertheless, the WRD is also concerned that the ground may be frozen or snow covered in early March. However, with respect to the two-week period at the end of March, Ms. Alexander agreed that the ground is less likely to be frozen during that period in southern Michigan (*i.e.*, the southern half of the Lower Peninsula), but in the "northern counties that may or may not be the case."[134] (*Id*., 1 Tr 183). Similarly, Mr. Haywood, a meteorologist employed by the WRD, credibly testified that "[i]t would not be unreasonable to expect the southern part of the state to experience ground thaw 2-3 weeks before the northern part of the state." (Testimony of Jim Haywood, 7 Tr 1672). However, Mr. Haywood also credibly testified that, "[f]rom a meteorological perspective, … March stands an **equal chance** of being colder and wetter than average as it can be warmer and dryer." (Testimony of Jim Haywood, 7 Tr 1667) (emphasis supplied).

On the other hand, Mr. Dykhuis credibly testified that March is a "valuable month" for farmers. (Testimony of Robert Dykhuis, 8 Tr 1958). (See also Testimony of Allison Brink, 9 Tr 2206) ("There are times when there are good conditions to … spread … especially in the month of March"). It is important to explore the reasons why March is a "valuable month" for farmers. First, Mr. Henry credibly testified that, "[o]ften in March, the ground is not frozen, and the weather is warm. It is actually the perfect weather for spreading manure…." (Testimony of Scott Henry, 11 Tr 2889). Similarly, Mr. Dykhuis also credibly testified that "[i]t is often dry in March, which provides an excellent opportunity to land apply manure in excellent field conditions and weather conditions." (*Id*.). Mr. Dykhuis also explained that "the weather is often excellent in March and gives farmers a great time to get their spreading done early and in good conditions. Fertilizing early also allows an early start to planting, which provides a huge opportunity to maximize yield." (*Id*., 8 Tr 1961).

[134] A review of Exhibits R-47 and R-41, which are displayed on pages 40 and 82 of this FDO, respectively, indicate that the bulk of the CAFOs are located in the southern half of the Lower Peninsula of Michigan.

Second, Mr. Dykhuis credibly testified that "manure needs to be applied as close to when the nutrients will be used as possible." (Testimony of Robert Dykhuis, 8 Tr 1960). Similarly, Ms. Brink credibly testified that "[a]gronomically speaking, we want the manure applied as close to crop production as possible." (Testimony of Allison Brink, 9 Tr 2207). Additionally, Mr. Elder credibly testified that farmers should "apply manure … when the plants … are available to use the manure." (Testimony of Kevin Elder, 11 Tr 2934). Also, Ms. Brink credibly testified that "I would rather see manure applied in March than in September, because those nutrients applied in March are more readily available and will be utilized by a growing crop." (Testimony of Allison Brink, 9 Tr 2207).

Third, CAFOs must land-apply the manure before they plant their crops. Specifically, Mr. Washburn agreed that the vast majority of CAFOs need to get their manure land-applied before they plant their crop. (Testimony of Bruce Washburn, 3 Tr 651). Mr. Dykhuis credibly testified that, "[f]or most crops, we cannot apply manure once a crop is planted." (Testimony of Robert Dykhuis, 8 Tr 1961). In fact, planting usually occurs in late April or May. (Testimony of Bruce Washburn, 3 Tr 649; Testimony of Robert Dykhuis, 8 Tr 2034; Testimony of Rick Sietsema, 8 Tr 2078). However, planting is also dictated by weather conditions. (Testimony of Rick Sietsema, 9 Tr 2113). Moreover, the sooner the crop is planted, the better for crop yield, because "[a]ll farmers need to maximize their growing season as a factor to achieve the best yields possible." (Testimony of Allison Brink, 9 Tr 2207).[135]

Fourth, if manure is not applied in March, it must be applied in April. (Testimony of Robert Dykhuis, 8 Tr 1958; Testimony of Laura Campbell, 10 Tr 2524). However, as noted *supra*, April is typically a rainy month. (Testimony of Christine Alexander, 1 Tr 181) ("we know that it does rain a lot in April"). In fact, Mr. Haywood agreed that April and May "are very wet months." (Testimony of Jim Haywood, 7 Tr 1682). Mr. Dykhuis credibly testified that the weather conditions in April do not always allow for manure application because the fields are saturated or because it is raining. (Testimony of Robert Dykhuis, 8 Tr 1960). Mr. Dykhuis also credibly testified that "overall, there are very few days in

[135] Ms. Brink explained that "[a]ll crops need a specific amount of growing degree units (heat units) to grow and reach maturity. All farmers need to maximize their growing season as a factor to achieve the best yields possible. The best yields also draw the most nutrients from the soil." (Testimony of Allison Brink, 9 Tr 2207).

April where manure can be spread." (Testimony of Robert Dykhuis, 8 Tr 1961). Moreover, Mr. Sietsema credibly testified that "crops must be planted in the early springtime, typically in April and May. There is a relatively short window for doing so. During that time window, a crop farmer does not have time to move and apply manure." (Testimony of Rick Sietsema, 8 Tr 2078).

From the foregoing, the weight of the evidence favors allowing manure applications in March. Indeed, the restrictions on manure applications in the month of March appear to unreasonably interfere with spring operations of a farm. Moreover, based on the evidence in the record, I find, as a Matter of Fact, that the restrictions on manure applications in the month of March are not necessary to achieve WQS. Therefore, based on the foregoing evidence in the record, I conclude, as a Matter of Law, that the 2020 Permit's restrictions on applications of manure in March **do not** comport with the requirements of the laws and rules under which the 2020 Permit was issued, and **are not** reasonable and consistent with express language and intent of the regulatory scheme.

To achieve WQS, the 2020 Permit already provides that "CAFO waste shall not be applied on land that is flooded or saturated with water at the time of land application" and that "CAFO waste shall not be applied during rainfall events." (Exhibit R-45, p 20) (Part I.B.3.f. 1) & 2)). With respect to the month of March, I hereby modify the winter restrictions on the land application of manure by striking such provision from the month of March. I further modify the 2020 Permit to be consistent with Rule 2196 that CAFO waste "shall not be applied to frozen or snow-covered ground unless it is subsurface injected and there is substantial soil coverage of the [CAFO waste], or it is surface applied and incorporated within 24 hours." Mich Admin Code, R 323.2196(5)(a)(ix)(B). I also additionally require the WRD to modify the 2020 Permit to explain what is needed for adequate incorporation of the manure, *e.g.*, what plow depth in inches is necessary for adequate incorporation of the manure.

(ii) "Immediate" Incorporation

The restrictions on applying manure in January and February include a requirement for "immediate" incorporation of the CAFO waste.[136] (Exhibit R-45, p 20) (Part I.B.3.f.3.a) ("CAFO waste shall only be applied when waste can be incorporated immediately following application, or injected"). As noted in *Michigan Farm Bureau II*, the WRD is authorized to include "more stringent limitations" than are required by Rule 2196, provided that the condition is necessary to achieve WQS. *Michigan Farm Bureau II*, ___ Mich ___, ___; 2024 WL 3610196, at *6-7 (2024) (EGLE "must include conditions 'in addition to or more stringent than' the conditions set forth in the EPA rules that EGLE deems 'necessary to … [a]chieve applicable'" WQS). In this Section of the FDO, the tribunal will determine whether the requirement for "immediate" incorporation is necessary to achieve WQS.

It should be recalled that the 2020 Permit provides that "CAFO waste shall only be applied when waste can be incorporated immediately following application, or injected." (Exhibit R-45, p 20) (Part I.B.3.f.3). It should also be recalled that "incorporation" of the manure essentially involves plowing the manure into the soil. (Testimony of Christine Alexander, 1 Tr 172). The term "immediately" was not defined in the permit. Mr. Elder agreed that CAFO waste that is land-applied in January and February should be immediately incorporated into the soil, and testified that Ohio provides for such immediate incorporation. (Testimony of Kevin Elder, 12 Tr 3131). When the tribunal asked Mr. Elder to define the term "immediately," he testified that the term in Ohio means within 24 hours. (Testimony of Kevin Elder, 12 Tr 3185).

When Ms. Alexander was asked to define the term "immediately," she testified that the term meant that the tractor that incorporates the manure should follow behind the equipment that is applying the manure. (Testimony of Christine Alexander, 1 Tr 173). Similarly, Mr. Washburn testified that the term "immediately" meant that the tractor would follow behind the manure spreader. (Testimony of Bruce Washburn, 2 Tr 501; 3 Tr 649).

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[136] The restrictions on manure applications in the 2020 Permit apply to those applications in January through March. As noted *supra* in Section IV(D)(2)(d)(i) of this FDO, this tribunal determined that the winter restrictions should be eliminated for the month of March. Therefore, the analysis of all remaining winter restrictions on the application of manure will be made only with respect to the months of January and February.

It is believed that the WRD's requirement for "immediate" incorporation of the manure was to prevent the following occurrence: When CAFO waste is applied to snow-covered ground in the morning, and where the snow melts in the afternoon sun, the manure could run off the application lands into waters of the state. (Testimony of Christine Alexander, 1 Tr 76, 222-223, 225; Testimony of Bruce Washburn, 2 Tr 390, 398).

This tribunal notes that the 2020 permit expressly provides that "CAFO waste shall not be applied when two or more inches of frost and/or four or more inches of snow are present at the land application site at the time of application[.]" (Exhibit R-45, p 20) (Part I.B.3.f.3.b). Hence, when manure is land-applied in January or February, it can only be applied on lands with less than two inches of frost and less than four inches of snow, thereby preventing significant snowmelt on sunny days. With respect to the practice of having a tractor follow a manure spreader, Mr. Elder credibly testified that, "unless you've done that, it's not a pleasant thing to do. [Manure] builds up on the equipment. It has to have a little bit of time to soak in [to the soil] a little bit." (Testimony of Kevin Elder, 12 Tr 3185-3186).

The tribunal finds that the testimony of Mr. Elder is persuasive. The tribunal also recalls that Intervenors suggested that manure should be treated similarly to biosolids from a regulatory point of view. (Intervenors' Closing Arguments, p 29). Likewise, Ms. Rippke testified that "ideally, regulation of CAFO waste should be like Michigan's approach to land-application of Biosolids." (Testimony of Molly Rippke, 5 Tr 1326). It should be noted, however, that the Administrative Rules for biosolids provide that "[a] person who applies biosolids to the land surface shall ensure that the biosolids are incorporated into the soil within 6 hours after application to or placement on the land…." Mich Admin Code, R 323.2415(4)(j).

If CAFO waste should be treated similarly to biosolids, then applications of CAFO manure in January and February should occur, at the latest, within 6 hours of application. I find, as a Matter of Fact, that incorporation of manure within 6 hours of application would prevent the situation where the morning-applied manure runs off of the application lands in the afternoon sun. I also find, as a Matter of Fact, that this discretionary condition of the 2020 Permit that provides for "immediate" incorporation of CAFO manure – meaning

that the tractor must follow the manure spreader – is not necessary to achieve WQS. Accordingly, based on the foregoing evidence in the record, I conclude, as a Matter of Law, that the incorporation provision of the 2020 Permit **does not** comport with the requirements of the laws and rules under which the 2020 Permit was issued, and **are not** reasonable and consistent with express language and intent of the regulatory scheme. Rather, I hereby modify the 2020 Permit so that the term "immediately" with respect to the incorporation of CAFO waste in January and February is defined to mean within 6 hours of application.

(iii) 68 ppm or 60 ppm of P

As noted in the Findings of Fact, the 2020 Permit provides that manure can be applied to fields with a Bray P1 soil test of less than 135 ppm P, or less than 120 ppm P for a field located within a watershed subject to a P or N TMDL. (Exhibit R-45, p 16) (Parts I.B.3.c.1.a & I.B.3.c.2.a). The restrictions on applying manure in January and February also included a requirement for further lowering the P levels of the application lands. Specifically, the 2020 Permit provides that "[m]anure application on fields receiving CAFO waste must have a soil sample Bray P1 of no greater than 68 ppm P, or 60 ppm P if fields are located in watershed(s) covered by an approved [P] or [N] TMDL." (Exhibit R-45, p 20) (Part I.B.3.f.3.d). These P concentrations amount to half of the limit for applying manure in months other than January and February. (Testimony of Laura Campbell, 10 Tr 2543).

The reduction in P levels for January and February manure applications will have the effect of limiting the number of available acres upon which manure can be applied. Specifically, Mr. Henry testified that "[a]lmost all of the fields that are included in our CNMP will be above 60 [ppm]." (Testimony of Scott Henry, 11 Tr 2891). Similarly, Mr. Dykhuis testified that "[t]here are almost no fields with [P] that low for livestock farms." (Testimony of Robert Dykhuis, 8 Tr 1964). He further stated that "[c]rop farmers do not want to have their nutrient levels that low because it decreases their yields, so it is difficult to find crop farms with that low a level of [P] in their soil samples." (*Id*.). Additionally, Mr. Sietsema testified that "[v]ery few of the fields that we operate in our own crop farming

fall under that threshold." (Testimony of Rick Sietsema, 8 Tr 2086). He further stated that "it would be very difficult to find farms that are below 68 ppm [P], and a ban on land applying to fields above that threshold is a practical ban on land application during that time period." (*Id*., 8 Tr 2087). Similar testimony was also offered by Ms. Brink. (Testimony of Allison Brink, 9 Tr 2205-2206).

Mr. Washburn testified that there was no analysis by the agency to determine how much farmland would be below the 68-ppm threshold. (Testimony of Bruce Washburn, 2 Tr 505). On the other hand, Mr. Cleary acknowledged that many fields that are being actively used for farming are above the 68-ppm threshold. (Testimony of Thad Cleary, 4 Tr 893-894). Ms. Alexander explained that the application of CAFO waste on frozen or snow-covered ground "represents a high risk that warranted additional restrictions to protect water quality." (Testimony of Christine Alexander, 1 Tr 76). Ms. Alexander further testified that this reduction in P limits in January and February is due to the fact that there are no plants to take up the nutrients. (*Id*., 1 Tr 178-179). Ms. Makries also testified:

> Applying manure during the winter months is application during the period most vulnerable to runoff. Winter conditions increase the runoff possibilities due to less vegetation, frozen conditions, and possible uncontrolled snow melt. The chances of sediment runoff during this period are greater as timing of snow melt cannot be controlled…. Manure applied during the winter months may be scheduled around the permitted four inches of snow on the ground, but that snow stays on the ground while liquid precipitation would have infiltrated. As subsequent snowfall accumulates, the eventual melt is not an event that can be scheduled around, and the impact of runoff is that much greater. Limiting winter application to the most restrictive conditions is appropriate to protect water quality by preventing contamination.

(Testimony of Jeanette Makries, 7 Tr 1851-1852).

The lowering of maximum STP levels for manure application to 60 ppm in TMDL watersheds and to 68 ppm in all other watersheds is based on the risk of runoff to state of Michigan waters during this high-risk period. Based on the evidence in the record, I find, as a Matter of Fact, that the lowering of P limits for applications of manure in January and February is a discretionary condition of the 2020 Permit that is necessary to achieve WQS. Based on the evidence in the record, I conclude, as a Matter of Law, that the 2020 Permit's P levels for January and February manure applications comport with

requirements of the laws and rules under which the 2020 Permit was issued, and are reasonable and consistent with express language and intent of the regulatory scheme.

(iv) The Notification Requirement

The 2020 Permit contains a new requirement that "[t]wenty-four (24) hours prior to the land application of CAFO waste, the Department shall be notified" that the CAFO will be applying manure. (Exhibit R-45, p 20-21) (Part I.B.3.f.3). The notification is to include (i) "a topographic map of the specific land application location showing the directional flow to surface waters"; (ii) "the planned application rate, with no more than 1 crop year of P that can be applied"; and (iii) "the current total storage structure capacity in days at the CAFO facility." (*Id*.). Mr. Trainor testified that the notification requirement (along with the other winter-time restrictions) "present a significant hurdle for the permittee, particularly uniform documentation of frost and snow condition." (Testimony of David Trainor, 2834-2835). However, Mr. Elder testified that Ohio similarly requires CAFOs to provide notification of manure applications, but no notice is required if the ground is not frozen or snow covered.[137] (Testimony of Kevin Elder, 12 Tr 3132-3133).

Mr. Washburn explained the reason for the notification requirement. Initially, he testified that the 2015 Permit was ineffective, because the permit did not provide a means of tracking where manure was land-applied. (Testimony of Bruce Washburn, 2 Tr 387). He noted that "[t]he CAFO Program was modeled after the biosolids program as both deal with land application of waste to farmed fields…." (*Id*., 2 Tr 385). Mr. Washburn explained that "all land applications [of biosolids] are tracked…." (*Id*.). See also Mich Admin Code, R 323.2408. Mr. Washburn further explained that, due to the notification provisions of the 2020 Permit, "[t]he Department will be able to track when, where, and how much CAFO waste is being applied in a given location and … [t]he Department will be able to start documenting the amount of nutrients and other pollutants that are being discharged by CAFOs." (*Id*., 2 Tr 424). Finally, he stated that "[t]he data will be used to make

[137] Despite Ohio's notification requirements, Mr. Elder disagreed with that the 2020 Permit's requirement for notice prior to land application of manure in January and February. (Testimony of Kevin Elder, 12 Tr 3134).

correlations between land application of CAFO waste and water quality changes within the watersheds where CAFO waste is being applied." (*Id*.).

Based on the evidence in the record, I find, as a Matter of Fact, that the notification provisions of the 2020 Permit for applications of manure in January and February is a discretionary condition that is necessary to achieve WQS. Based on the evidence in the record, I conclude, as a Matter of Law, that this discretionary condition comports with requirements of the laws and rules under which the 2020 Permit was issued, and is reasonable and consistent with express language and intent of the regulatory scheme.

(v) The Demonstration Option

The 2020 Permit contains a demonstration option as an exemption to the restrictions to land-applying manure during the months of January and February. Specifically, the 2020 Permit provides:

> CAFO waste may be surface applied and not incorporated within 24 hours on ground that is frozen or snow-covered only if there is a field-by-field demonstration conducted within 48 hours prior to the application. The demonstration shall be conducted in accordance with Part III. Department 2005 Technical Standard for the Surface Application of CAFO Waste on Frozen or Snow-Covered Ground Without Incorporation or Injection, showing that such land application will not result in a situation where CAFO waste may enter surface waters of the state. The demonstration shall be submitted to the Department 24 hours prior to application on frozen or snow-covered ground. Demonstrations shall be kept with the Land Application Log. CAFO waste surface applied to ground that is frozen or snow-covered shall be limited to no more than one crop year of P per winter season, including pastures, perennial crops such as alfalfa, cover crops, or where no-till practices are used.

(Exhibit P-45, p 21-22) (Part I.B.3.g.2) (underlining in original). This tribunal has several concerns with respect to the demonstration option.

Other demonstration options are contained in the 2020 Permit. For example, a demonstration is provided in Part I.B.2.b. of the 2020 Permit. (Exhibit R-45, p 9) (Part I.B.2.b.). That provision specifies that "[t]he demonstration shall be accomplished through an evaluation by a professional engineer." (*Id*.). However, the demonstration option for wintertime CAFO manure applications does not provide any of the following information:

- What evidence needs to be provided in the demonstration?
- Must the demonstration be certified by a CNMP provider?
- How does the CAFO know whether its demonstration is sufficient for a wintertime application?
- Does the demonstration option contemplate the lower P concentrations of 60 ppm in TMDL watersheds and 68 ppm in all other watersheds?
- Does the WRD contemplate giving approval after receiving a demonstration, or is the demonstration *pro forma*?
- Does the WRD reserve the right to deny the land application of manure if it believes that the demonstration was inadequate?
- Does a CAFO have the right to challenge the denial of its demonstration?

In fact, Petitioners admitted into evidence Exhibit P-140, which is entitled "Suggested Changes to CAFO GP (after PN)."[138] According to Ms. Alexander, this document was most likely developed by Ms. Heaton.[139] (Testimony of Christine Alexander, 1 Tr 158). Exhibit P-140 provides that the Department will "[r]etain winter spreading prohibition for Jan 1 – March 19, but include opportunity to demonstrate in writing, **that must be approved by EGLE**…." (Exhibit P-140, p 2) (emphasis supplied). While Exhibit P-140 indicates that the WRD must provide approval of the demonstration option, such an intention is not reflected in Part I.B.3.g.2, *supra*. (Exhibit P-45, p 21-22) (Part I.B.3.g.2). As a result, I find, as a Matter of Fact, that the demonstration option of the 2020 Permit is vague and ambiguous, and does not plainly provide the requirements for the demonstration. Cf *In re Gentry*, 142 Mich App 701, 707; 369 NW2d 889 (1985) (holding that a statute is vague when it does not provide fair notice of the conduct proscribed).

Therefore, based on the evidence in the record, I find, as a Matter of Law, that the demonstration option, as written, is a discretionary condition of the 2020 Permit that is not necessary to achieve WQS. Based on the evidence in the record, I conclude, as a Matter of Law, that the 2020 Permit's demonstration option for applications of manure in January

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[138] That the term PN means "public notice." (See Testimony of Christine Alexander, 1 Tr 158-159).

[139] Curiously, Petitioners did not ask Ms. Heaton any questions with respect to Exhibit P-140. (See Testimony of Sylvia Heaton, 5 Tr 1008-1285).

and February **does not** comport with requirements of the laws and rules under which the 2020 Permit was issued, and **are not** reasonable and consistent with express language and intent of the regulatory scheme. This tribunal requires the WRD to modify this provision to plainly provide answers to the questions posed by this tribunal in the analysis, *supra*.

E. Manifesting Manure

Petitioners' Exhibit P-56 indicates that, in 2017, Michigan's CAFOs produced approximately 3.3 billion gallons (or 12.4 billion liters) of manure, urine, and other liquid wastes. (Exhibit P-56, p 9). Mr. Washburn testified that, "in 2018, approximately 39 percent of liquid waste and 53 percent of solid waste was manifested, and in 2019, approximately 45 percent of liquid waste and 53 percent of solid waste was manifested." (Testimony of Bruce Washburn, 2 Tr 430). The quantity of manifested CAFO waste in 2018 amounted to 1.36 billion gallons and 614,000 tons (or 1.2 billion pounds) of waste, and in 2019 amounted to 1.5 billion gallons and 667,000 tons (or 1.3 billion pounds) of waste. (*Id*.). Mr. Washburn explained that manifested waste "typically is higher strength waste because diluted wastewater has less value for third parties." (*Id*.). Of the Petitioners in this contested case, "22 of them manifest 100 percent of their waste." (*Id*.).

The term "manifesting" is not defined in the Administrative Rules. See Mich Admin Code, R 323.2103. Nor is it defined in the 2020 Permit. (See Exhibit R-45, p 34) (Part II.A). Of the WRD's list of priorities for the 2020 Permit, defining the terms "manifesting" and "operational control" was listed as the seventh most important priority. (Exhibit R-14, p 2). This priority was not accomplished in the 2020 Permit.

Even though the term is not defined, manifesting is addressed in Rule 2196(5)(e), which provides:

> Unless the department determines otherwise, in cases where production area waste or CAFO process wastewater is **sold, given away, or otherwise transferred to other persons** (recipient) and the land application of that production area waste or CAFO process wastewater is not under the operational control of the CAFO owner or operator that generates the production area waste or CAFO process wastewater (generator), a manifest shall be used to track the transfer and use of the production area waste or CAFO process wastewater.

Mich Admin Code, R 323.2196(5)(e) (emphasis supplied).[140] Therefore, from this Rule, "manifesting" is a term that applies when CAFO waste "is sold, given away, or otherwise transferred to other persons." *Id*. However, manifesting does not occur, unless the CAFO waste is no longer under the "operational control" of the CAFO which generated it. *Id*. The farm which receives the manifested waste is referred to as the "recipient," while the CAFO which generates the waste is referred to as the "generator."

Petitioners have raised three issues with respect to manifesting CAFO waste. First, Petitioners object to the winter ban on manifesting CAFO waste. Second, Petitioners object to identifying, by latitude and longitude, the lands upon which the manifested waste will be applied. Third, Petitioners object to the jurisdictional reach of manifesting. Each of these objections will be addressed *infra*.

1. The Winter Ban

As noted *supra*, the 2020 Permit provides that "CAFO waste shall not be applied during the months of January, February, or March unless" the permittee meets certain restrictions contained within the permit. (See Appendix B to this FDO). The WRD also determined that CAFO waste should not be manifested during this high-risk time period. Specifically, the 2020 Permit provides that "CAFO waste shall not be transferred to a recipient for land application of the CAFO waste during the months of January, February, or March." (Exhibit R-45, p 21) (Part I.B.3.f.4). Ms. Alexander explained that "[t]he Department … prohibited CAFO facilities from avoiding the otherwise applicable land application restriction by prohibiting manifesting for land application during the months of January, February, and March." (Testimony of Christine Alexander, 1 Tr 79). In other words, since the CAFOs could not land-apply manure in January, February, and March,

[140] In their Closing Arguments, the environmental Intervenors refer to untreated manure as "hazardous waste." (See, e.g., Intervenors' Closing Arguments, p 11). Similarly, in its Closing Arguments, the WRD suggests that the term "manifest" should be defined by borrowing from Part 111, Hazardous Waste Management, of the NREPA, which defines a "manifest" as "a form approved by the department used for identifying the quantity, composition, origin, routing, and destination of hazardous waste during its transportation from the point of generation to the point of disposal, treatment, or storage." MCL 324.11103(8). However, a "hazardous waste" is a "waste or a combination of waste and other discarded material … that … may cause or significantly contribute to an increase in mortality or an increase in serious irreversible illness or serious incapacitating but reversible illness, or may pose a substantial present or potential hazard to human health or the environment if improperly treated, stored, transported, disposed of, or otherwise managed." MCL 324.11103(3). While manure may contain pollutants, such as N, P and *E. coli*, there was no evidence presented in this contested case that manure should be treated as a "hazardous waste" within the Part 111 definition.

the manifesting ban of the 2020 Permit similarly prohibits the manifesting of manure for application in January, February and March. In fact, it would be impermissible to manifest manure during January through March even if the actual land application occurs in April. (*Id*., 1 Tr 192). While the WRD provided a demonstration option for CAFO application of its own generated manure, there are no demonstration options available for manifested waste. (*Id*., 1 Tr 193).

For its arguments against manifesting CAFO waste during January through March, Petitioners raised the same arguments they raised in response to the land application restrictions for January through March. (Petitioners' Closing Arguments, pp 78-79). Therefore, this tribunal incorporates herein its analysis with respect to Section IV(D)(2)(d) of this FDO. Based on such evidence, analysis and authorities, I find, as a Matter of Fact, that the 2020 Permit's ban on manifesting manure in January and February is a discretionary condition of the 2020 Permit that is necessary to achieve WQS.[141] Based on such evidence, analysis and authorities, I conclude, as a Matter of Law, that the 2020 Permit's ban on manifesting manure in January and February comports with the requirements of the laws and rules under which the 2020 Permit was issued, and is reasonable and consistent with express language and intent of the regulatory scheme.

In addition, based on such evidence, analysis and authorities, I find, as a Matter of Fact, that the ban on manifesting manure in March is a discretionary condition of the 2020 Permit that is not necessary to achieve WQS. Based on such evidence, analysis and authorities, I conclude, as a Matter of Law, that the 2020 Permit's ban on manifesting manure in March **does not** comport with the requirements of the laws and rules under which the 2020 Permit was issued, and **is not** reasonable and consistent with express language and intent of the regulatory scheme. Therefore, I hereby modify the 2020 Permit to provide that CAFO manure may be manifested during the month of March for the application of such waste during the month of March (or later months).[142]

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[141] Because the manifesting ban is not required by the terms of Rule 2196, it must be considered a "discretionary condition" of the 2020 Permit. *Michigan Farm Bureau II*, __ Mich __, __; 2024 WL 3610196, at *8 (2024).

[142] As explained in note 121, *supra*, the WRD has not determined whether it is lawful for CAFOs to field stack poultry litter during the winter ban (*i.e.,* January and February), such that the poultry litter can be applied to the land application area after the winter ban has lifted (*i.e.,* March and thereafter). Similarly, there is a question whether (continued…)

2. Latitude and Longitude of Application Lands

The second issue sought to be corrected in the 2020 Permit is that the manifest did not provide sufficient information regarding where the waste was being applied. Specifically, Rule 2196 provides that "a manifest shall be used to track the transfer and use of the" CAFO waste. Mich Admin Code, R 323.2195(5)(e). To track the waste, the manifest requires "[t]he name and address of the recipient" and the "[a]ddress or other description for the final destination of the" manure. Mich Admin Code, R 323.2196(5)(e)(ii) (C) & (I). Despite this requirement, Ms. Alexander explained that "the Department has had a difficult time understanding where manifested waste is applied…." (Testimony of Christine Alexander, 1 Tr 77). (See also Testimony of Sylvia Heaton, 5 Tr 1035) (The 2015 Permit "did not contain adequate requirements for manifested waste, so the Department did not have a clear picture where manure was being manifested"); (Testimony of Bruce Washburn, 2 Tr 431) (Information currently received by the WRD "includes an address, at best, otherwise crossroads. It is very difficult to know what extent manifested waste gets land applied in TMDL watersheds"). Indeed, Mr. Washburn explained that some of the manifests provide location information with no reference to where the manure was to be applied, such as "Bob's Back 40." (*Id*., 4 Tr 778).

Because the Department desired more accurate information, the 2020 Permit requires the manifest to provide "the latitude and longitude center of the site or sites used by the recipient for land application or other disposal or use of the CAFO waste…." (Exhibit R-45, p 29) (Part I.C.8.a.9). Mr. Washburn explained that the requirement to provide Global Positioning System (GPS) coordinates in the 2020 Permit gives the Department more precise information regarding the location of the land-applied waste. (Testimony of Bruce Washburn, 4 Tr 778). This condition of the 2020 Permit is similar to the requirements of the state of Ohio, which obligates the farm to provide a map of the

(…continued) manifested poultry litter can be field stacked in January or February, to be land applied in March (or later months). Even if the WRD compliance staff have no objection to the practice of field stacking manifested waste in January or February, the 2020 Permit should be modified to explain the practice and provide authorization for it.

lands to which manure was applied.[143] (See Exhibit R-158). (See also Testimony of Kevin Elder, 11 Tr 2982-2988).

Petitioners do not expressly request the tribunal to strike the requirement that manifest forms include latitude and longitude of the application fields. Instead, Petitioners request the tribunal to "conform" Part I.C.8.a to Part I.C.8.h. of the 2020 Permit to the requirements of Rule 2196(5)(e) (i) - (viii). Mich Admin Code, R 323.2196(5)(e) (i) – (viii). (See Petitioners' Closing Arguments, p 92). Petitioners apparently contend this is a permit requirement that is more stringent than Rule 2196 which should be stricken from the 2020 Permit. (See Intervenors' Response to Closing Arguments, p 18 n 10).

However, it should be noted that Rule 2196(5)(e)(ii)(I) provides that a manifest should provide an "[a]ddress **or other description** for the final destination of the production area waste or CAFO process wastewater." Mich Admin Code, R 323.2196(5)(e)(ii)(I) (emphasis supplied). Therefore, I find, as a Matter of Fact, that the latitude and longitude center of the site for land application is such an "other description for the final destination" of the CAFO waste, which is within the strictures of Rule 2196(5)(e)(ii)(I). Mich Admin Code, R 323.2196(5)(e)(ii)(I). Accordingly, based on the evidence in the record, I find, as a Matter of Fact, that the 2020 Permit's requirement that manifest forms include latitude and longitude of the application fields is a mandatory condition of the 2020 Permit that is necessary to achieve WQS.[144] Based on the evidence in the record, I conclude, as a Matter of Law, that this mandatory condition comports with the requirements of the laws and rules under which the 2020 Permit was issued, and is reasonable and consistent with express language and intent of the regulatory scheme.

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[143] For applications of manure in January or February, the CAFO must provide notification to the WRD that includes "a topographic map of the specific land application location showing the directional flow to surface waters…." (Exhibit R-45, p 20) (Part I.B.3.f.3). A similar requirement for a map of land application areas is found in Part I.B.3.a., but this map need only be kept in the CNMP for a minimum of 5 years. (Exhibit R-45, p 14) (Part 1.B.3.a.).

[144] Because Rule 2196 requires the CAFO to identify in the manifest the "address or other description for the final destination" of the CAFO manure, Mich Admin Code, R 323.2196(5)(e)(ii)(I), this provision constitutes a "mandatory provision" of the 2020 Permit. *Michigan Farm Bureau II*, __ Mich __, __; 2024 WL 3610196, at *8 (2024).

4. "Operational Control"

The third issue related to manifesting in the 2020 Permit involves the lack of a definition of "Operational Control." Petitioners contend that the WRD is abusing the term by attempting to seize jurisdiction over small non-CAFO farms. (Petitioners' Closing Arguments, p 82). A little more explanation is required to understand Petitioners' argument.

Under the 2020 Permit, "[d]ischarges from land application activities … that cause an exceedance of Michigan's [WQS] are prohibited."[145] (Exhibit R-45, p 7) (Part I.A.3.). To determine the meaning of "land application activities," it is necessary to review the definition of "land application area,"[146] which is defined in the Administrative Rules as follows:

> "Land application area" specifically for CAFOs means **land under the control** of an AFO owner or operator, whether it is owned, rented, leased, or subject to an access agreement to which production area waste or CAFO process wastewater is or may be applied. Land application area includes land not owned by the AFO owner or operator but the AFO owner or operator **has control** of the land application of production area waste or CAFO process wastewater.

Mich Admin Code, R 323.2103(f) (emphasis supplied). (See also Exhibit R-45, p 33) (Part II.A.). Recall also that a manifest is needed for the land application of manure that is not under the "operational control" of the CAFO that generates it. Mich Admin Code, R 323.2196(5)(e). Hence, if a discharge occurs during the application of manifested waste – which application is not under the operational control of the CAFO that generated it – the recipient of such manifested waste is responsible for the discharge, not the CAFO who generated the waste.

Petitioners claim that the WRD "has sought to hold farms responsible for actions of distinct entities based on loose attempts to connect the ownership of the two entitles." (Petitioners' Closing Arguments, p 82). To understand Petitioners' argument, it is also

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[145] For an explanation of those discharges that are authorized under the 2020 Permit, see Section IV(D)(2)(c) of this FDO.

[146] Petitioners' Closing Arguments erroneously cite to the federal regulation's definition of "land application area." (Petitioners' Closing Arguments, p 82). However, 40 CFR 122.23 has not been incorporated by reference into Michigan law. See Mich Admin Code, R 323.2189.

necessary to review the testimony of Mr. Washburn. He credibly testified that "[w]e have seen farms create legal entities to receive manifested waste, which allows the legal entity that operates the CAFO to avoid the responsibility of controlling the waste by manifesting it to a different corporate entity, even if it is run by the same people who run the CAFO."[147] (Testimony of Bruce Washburn, 2 Tr 388). Hence, some CAFOs have attempted to shield liability for discharges by manifesting the manure to a related entity.

The WRD seeks to keep the manure generator responsible for any discharges caused by the recipient of the manifested waste under such circumstances. Petitioners contend that the WRD's position amounts to an overreach of its jurisdiction. Therefore, Petitioners request this tribunal to amend the 2020 Permit by crafting a definition for "operational control." (Petitioners' Closing Arguments, p 92). To that end, Petitioners have supplied a proposed definition. (Petitioners' Closing Arguments, p 83). In its Response to Closing Arguments, the WRD has also provided a proposed definition of the term "operational control." (See WRD's Response to Closing Arguments, pp 12-14). Both of these requests must be denied for two reasons.

First, this tribunal does not have jurisdiction to craft provisions to be included in the 2020 Permit. Rather, this tribunal is only charged with determining whether the 2020 Permit is consistent with state law. See *National Wildlife Federation v Department of Environmental Quality (No. 2)*, 306 Mich App 369; 856 NW2d 394 (2014) ("the contested case proceeding [is] an extension of the initial application process for the purpose of arriving at a single final agency decision" on the statutory criteria). See also Section III(C) of this FDO. Second, the proposed definitions of operational control were not placed on public notice in the PN Draft of the permit, so that the public could comment on the proposed definitions. Mich Admin Code, R 323.2119. As noted in Section IV(D)(2)(a) of this FDO, "the public comment period … comes at a stage where the Agency has the greatest ability to modify a draft permit." *Adams, supra*. In this case, the public was deprived of an opportunity to comment on both Petitioners' and the WRD's proposed

[147] Mr. Washburn did not identify any examples of such a corporate entity which is involved in such a transfer. However, during cross-examination of Mr. Dykhuis, he admitted that his daughter's CAFO, Ehinger Farm (farm number 22 in note 2, *supra*), manifests all its manure to Dykhuis Farms. (Testimony of Robert Dykhuis, 8 Tr 2015-2016). It is uncertain whether such a transaction is the type of transfer of manure to which Mr. Washburn was referring.

definitions of "operational control." For the reasons set forth *supra*, this tribunal **DENIES** Petitioners' and the WRD's request for the tribunal to adopt a definition of "operational control."

However, Ms. Campbell testified as follows:

> EGLE should define "operational control" of manure to create a consistent standard for when manure must be included in a CAFO's CNMP or listed on a transfer manifest, including acknowledgment that "operational control" should mean decision-making control for a field, including planting, crop rotations, soil testing, conservation practices, and/or desired application rates. However, as reported to me by many famers, EGLE field staff often interpret "operational control" as the person performing the application. This has important implications for a farm's permitting, because if the permitted CAFO has "operational control" over the application of manure on a field, that field must be included in the farm's CNMP. However, even if a permitted CAFO applies the manure to another non-CAFO farmer's field, they may not be the ones making decisions about application rate, crop rotation, conservation practices, or other factors that must be known about a field to be included in a CNMP. That information is proprietary to the owner or operator of the field where manure is being applied.
>
> * * *
>
> Manure hauling and application equipment is expensive, and for many crop farms without livestock, it is therefore an investment they cannot make. However, these farms can benefit from the complete nutrients available in manure, the comparatively low cost of purchasing manure from a livestock farmer, and in the case of organic farmers, it may be the only source of nutrients available to them to comply with organic production rules. In these scenarios, it makes much more sense for the livestock farmer, who is highly likely to already own hauling and application equipment to land apply manure on their own farms to also haul and apply the manure on fields owned and managed by the crop farmer.
>
> Regardless of whether land is rented, leased, or owned by a farmer, the farmer operating that field is the one responsible for making management decisions about it: what crops to grow and in what rotation, nutrient application rates, times, sources, and locations, conservation practices, and land management during the off season when crops are not being grown.

(Testimony of Laura Campbell, 10 Tr 2533, 2608). This tribunal believes that "decision making control" for a field should not be used as an applicable definition for "operational control," because planting and crop rotations do not have relevance in the determination

of "operational control" over manure application on a field. This tribunal agrees that soil testing, conservation practices (such as use of setbacks and buffers), and application rates do have relevance.

Similarly, the tribunal has concerns regarding the definition of operational control suggested by the WRD. The WRD argues that the term should include situations when "CAFO waste is transferred by vessel, pipeline, or other mode of transportation … that are owned, operated, or otherwise controlled by the CAFO…." (WRD's Response to Closing Arguments, p 14). As Ms. Campbell testified, *supra*, investment in manure application equipment is an expense many crop farmers cannot make. (Testimony of Laura Campbell, 10 Tr 2608). Nevertheless, the tribunal is also concerned that the crop farmer could direct the CAFO to apply the manure in a manner that violates conservation practices provided for in the CAFO's NPDES permit. (See note 160, *infra*).

As a result, it is clear that a proposed definition of "operational control" should be included in the next iteration of the general permit, after appropriate public comment.[148]

F. TMDL Requirements

During the contested case, the WRD witnesses testified that, under the CAFO general permit, the Department did not know how much waste is land-applied in TMDL watersheds. (Testimony of Bruce Washburn, 430-431; Testimony of Sylvia Heaton, 5 Tr 1035-1036). It must be recalled that, once a TMDL is approved by the EPA, the WRD is obligated by federal regulation to include in each NPDES permit any requirement necessary to (a) "[a]chieve [WQS] established under section 303 of the CWA"; and (b) "ensure that … [e]ffluent limits developed … are consistent with the assumptions and requirements of any available [WLA] for the discharge prepared by the State and approved by EPA pursuant to 40 CFR 130.7." 40 CFR 122.44(d)(1) and 122.44(d)(1)(vii)(B). It must also be recalled that "discharge rates of a CAFO's [NMP] are effluent limitations, as the [CWA] defines them." *Sierra Club Mackinac Chapter, supra.*

[148] It will be necessary to include a definition of "operational control" in the next iteration of a CAFO general permit (*i.e.*, the 2025 Permit), because a proposed definition was not previously put up for public comment. See Mich Admin Code, R 323.2119.

Hence, the effluent limitations of a CAFO's CNMP must be consistent with the WLA provided for in the TMDL. (See Testimony of Molly Rippke, 5 Tr 1313-1314).

With respect to TMDLs, Part I.C.9 of the 2020 Permit, entitled "Total Maximum Daily Load (TMDL) Waters,"[149] provides as follows:

> **9. Total Maximum Daily Load (TMDL) Waters**
>
> a. [N] or [P] TMDL
> The Department expects that full compliance with the conditions of this permit will allow the permittee to meet the pollutant loading capacity(ies) set forth for [N] or [P] in an approved [TMDL]. The permittee's COC will indicate if the permittee's production area or land application areas are located within a watershed(s) covered by an approved [N] or [P] TMDL.
>
> b. *E. coli*, Biota, Dissolved Oxygen TMDL
> The permittee's COC will indicate if the permittee's production area or land application areas are located within a watershed(s) covered by an approved *E. coli*, biota, or dissolved oxygen TMDL. The Department has developed and published the "[TMDL] Guidance for [CAFOs]" regarding how to evaluate operations and determine additional pollutant control measures. The permittee shall complete the following actions within 24 months of receiving notification from the Department:
>
> 1) Conduct a **comprehensive evaluation** of its operations. A comprehensive evaluation shall identify sources of pollutants that have the potential to reach surface waters from production areas and/or land application areas.
>
> 2) Determine whether additional pollutant control measures need to be identified and implemented to meet the permittee's pollutant loading (or "concentration" in the case of *E. coli*) capacity(ies) set forth in the approved TMDL. Pollutant control measures, shall [sic] at a minimum, include those that

[149] The 2015 Permit contained a similar permit condition entitled "Water Quality Impaired Waters." (Exhibit R-96, pp 21-22) (Part I.C.10). This provision also required a TMDL guidance document. (*Id*.). However, such a document was never created by the Department. (Testimony of Christine Alexander, 1 Tr 84; Testimony of Sylvia Heaton, 5 Tr 1025). In its Closing Arguments, the WRD acknowledged that it never required permittees to comply with such conditions in the 2015 Permit. (WRD's Closing Arguments, p 100).

prevent surface runoff and subsurface drainage of CAFO waste from land application areas.

3) Submit a written **TMDL Evaluation Report** via MiWaters (https://miwaters.deq.state.mi.us) to the Department based on one of the following:

a) If the permittee, based on the **comprehensive evaluation**, determines that the pollutant loading or concentration allocation(s) established in the approved TMDL are being met, then the written **TMDL Evaluation Report** justifying that determination shall be submitted to the Department for approval, or

b) If the permittee determines that the pollutant loading or concentration allocation(s) established in the approved TMDL is being exceeded, then the written **TMDL Evaluation Report** submitted to the Department shall identify additional pollutant control measures that need to be implemented by the permittee to achieve compliance with the pollutant loading or concentration allocation(s) established in the approved TMDL. The permittee's written **TMDL Evaluation Report** shall also include an implementation schedule for each identified additional pollutant control measure.

Upon approval of the Department and if the written report identifies needed additional pollutant control measures, the permittee shall implement the additional pollutant control measures according to the implementation schedule. The approved **TMDL Evaluation Report** detailing the additional pollutant control measures and the associated implementation schedule shall be kept in the CNMP for a period of 5 years from the date of creation, and shall be an enforceable part of this permit.

(Exhibit R-45, p 31) (Part I.C.9.) (emphasis supplied). As further explanation of this provision, the WRD adopted a TMDL Guidance for CAFOs. (Exhibit R-95). (*Id*.). The

requirements of Part I.C.9. were further explained during the testimony of the WRD's witnesses.

First, Ms. Alexander explained that "[t]he Department will specify the TMDL applicable to the permittee in the [COC]. This will inform the permittee of the need to address the TMDL requirement section in the general permit." (Testimony of Christine Alexander, 1 Tr 80). Hence, the CAFOs will not know whether their land application areas are located within a TMDL watershed until it receives the COC from the WRD.

Second, for those CAFOs who apply manure to a land application area located within a nutrient (N or P) TMDL watershed, Mr. Washburn explained that the 2020 Permit provides for lower risk-management techniques and lower P thresholds in land application areas.[150] (Testimony of Bruce Washburn, 2 Tr 424). Hence, the observance of the terms and conditions of the 2020 Permit should yield compliance with the effluent limits in those TMDLs. (Testimony of Sylvia Heaton, 5 Tr 1223-1224).

Third, for those CAFOs who apply manure to land application areas located within an *E. coli*, biota, or dissolved oxygen TMDL watershed, the CAFO must conduct a "comprehensive evaluation." (Testimony of Christine Alexander, 1 Tr 202). The 2020 Permit provides that the comprehensive evaluation must determine whether "the pollutant loading or concentration allocation(s) established in the approved TMDL are being met…." (Exhibit R-45, p 31) (Part I.C.9.b.). Ms. Alexander explained that, in the comprehensive evaluation, the CAFO must identify a source of pollutants on their farm and determine what additional pollutant control measures are needed to address or control those pollutants. (Testimony of Christine Alexander, 1 Tr 204). Ms. Heaton explained that the "TMDL Guidance outlines how to evaluate operations and determine additional pollutant control measures…." (Testimony of Sylvia Heaton, 5 Tr 1025). Ms. Rippke testified that the Guidance "explains the minimum requirements of the evaluation including aspects of the site that require special attention, such as potential exposure areas or sensitive areas for land-application of manure." (Testimony of Molly Rippke, 5 Tr 1323). Ms. Rippke stated that "[t]he guidance document typically presents a menu of

[150] Ms. Rippke also testified that a majority of the CAFOs that are identified on Exhibit R-47 (displayed graphically on page 40 of this FDO) are not located within a nutrient (N or P) TMDL. (Testimony of Molly Rippke, 6 Tr 1537).

control measures." (*Id*.). Among the pollution control measures that may be implemented by the CAFO is the installation of a treatment facility. (Exhibit R-95, p 5; Testimony of Sylvia Heaton, 5 Tr 1081).

Fourth, after completing the comprehensive evaluation, the CAFO is required to submit a TMDL Evaluation Report to the WRD. (Testimony of Christine Alexander, 1 Tr 202; Testimony of Sylvia Heaton, 5 Tr 1178-1179). The 2020 Permit provides that this Report is to justify any determination that the pollutant loading or concentration allocations are being met.[151] (Exhibit R-45, p 31) (Part I.C.9.b.). If they are not being met, the TMDL Evaluation Report is required to include an implementation schedule for the pollutant control measures. (Testimony of Christine Alexander, 1 Tr 204). Mr. Washburn testified that the 2015 Permit provided that the TMDL Evaluation Report must be submitted within 15 months, while the 2020 Permit provides that it must be submitted within 24 months. (Testimony of Bruce Washburn, 2 Tr 424). This tribunal has several concerns with Part 1.C.9 of the 2020 Permit.

To understand the tribunal's concerns, it is helpful to review the arguments made by Petitioners in response to Intervenors' suggestion that CAFOs are regulated differently from other point sources.[152] In Petitioners' Response to Closing Arguments, they acknowledge that CAFOs are regulated differently than other point sources because there are *de facto* differences between CAFOs and other point sources. (Petitioners' Response to Closing Arguments, pp 15-16). Specifically, Petitioners explain that CAFOs do not discharge effluents through a "discernable, confined, and discrete conveyance" such as a "pipe, ditch, channel, tunnel, conduit or well." See Mich Admin Code, R 323.2104(c).[153] Instead, they correctly note that CAFOs are legislatively deemed to be a "point source." Mich Admin Code, R 323.2104(c)(ix).

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[151] Ms. Rippke testified that *E. coli* TMDLs in Michigan are "concentration" based, and are not load based. (Testimony of Molly Rippke, 6 Tr 1392). Therefore, every source of *E. coli*, whether it is a point source or nonpoint source, gets the same allocation in the TMDL that is equal to the numeric WQS. (*Id*.). See Mich Admin Code, R 323.1062(1) ("All surface waters of the state protected for total body contact recreation shall not contain more than 130 [*E. coli*] per 100 milliliters, as a 30-day geometric mean").

[152] See Section IV(D)(2)(c) of this FDO.

[153] Instead of citing Mich Admin Code, R 323.2104(c), Petitioners cite to 33 USC 1362(12). However, Petitioners should have cited to 33 USC 1362(14) for the definition of "point source."

Petitioners also correctly state that CAFOs are regulated even when they are not discharging pollutants. (Petitioners' Response to Closing Arguments, p 16), citing Mich Admin Code, R 323.2196(1)(b) ("All CAFO owners or operators shall apply either for an individual NPDES permit, or a certificate of coverage under an NPDES general permit, unless the owner or operator has received a determination from the department … that the CAFO has 'no potential to discharge'").[154] Petitioners also correctly note that most point sources apply for and receive an NPDES permit to cover a known discharge. (Petitioners' Response to Closing Arguments, p 16). Petitioners also correctly assert that "CAFOs must receive a permit aimed at *preventing* a discharge." (*Id*.) (emphasis in original). Finally, Petitioners correctly assert that "CAFOs must implement '[BMPs]' that affect all aspects of their operations rather than simply comply with numerical effluent limitations." (*Id*.). Given this background, the tribunal will analyze the written paragraphs of Part I.C.9. of the 2020 Permit.

First, Part I.C.9.b of the 2020 Permit relates to "*E. coli*, Biota, [and] Dissolved Oxygen TMDL[s]."[155] (Exhibit R-45, p 31) (Part I.C.9.b). However, the WRD only addressed three pollutants in this contested case: N, P, and *E. coli*. See Sections IV(B), IV(C)(1), and (IV)(D)(1) of this FDO. There was scant testimony regarding biota and dissolved oxygen TMDLS. Therefore, there was inadequate evidence in the record for the tribunal's assessment of the 2020 Permit as to biota or dissolved oxygen TMDLs.

Second, with respect to Part I.C.9.b.1, the 2020 Permit requests the permittee to "identify sources of pollutants that **have the potential** to reach surface waters from production areas and/or land application areas." (Exhibit R-45, p 31) (Part I.C.9.b.1) (emphasis supplied). However, the 2020 Permit defines a "discharge" as "the addition of any waste, waste effluent, wastewater, pollutant, or any combination thereof to any surface water of the state." (Exhibit R-45, p 33). Only two discharges under the 2020 Permit are "authorized." (Exhibit R-45, p 6) (Part I.A.1.). The first is an overflow from a waste storage structure that does "not cause **or contribute to** an exceedance of

[154] Hence, a CAFO is required to obtain an NPDES permit unless there is no "potential" to discharge. According to the American Heritage Dictionary, the term "potential" means "capable of being but not yet in existence…." American Heritage Dictionary 970 (2d ed 1985). Hence, a NPTDD means that the CAFO is "not capable" of a discharge.

[155] Because it has no concerns with Part I.C.9.a. of the 2020 Permit, the tribunal will limit its analysis to Part I.C.9.b.

Michigan's [WQS]." (*Id*.) (emphasis supplied). The second is a discharge from a land application area that does "not cause **or contribute to** an exceedance of Michigan's [WQS]." (*Id*.) (emphasis supplied). Hence, to be authorized, the discharge cannot even "contribute to" an exceedance of a WQS. All remaining discharges that occur under the 2020 Permit must be considered unlawful or "illicit" discharges, *i.e.*, a violation of the 2020 Permit.

Nevertheless, the 2020 Permit requests Petitioners to "predict" whether an unlawful or illicit discharge will occur in the future. Because only those permittees that have "no potential to discharge" are entitled to a NPTDD, the assumption is that all other permittees have the "potential" to discharge. (See note 154, *supra*). Hence, all permittees are required to predict their unlawful or illicit discharges from the production area or land application area that could occur in the future. Phrased differently, the permittees are being asked to determine "pollutant control measures" that limit unlawful violations of the permit that could potentially occur in the future (or could potentially never occur).

Third, in Part I.C.9.b.2 of the 2020 Permit, the permittee is to "[d]etermine whether additional pollutant control measures need to be identified and implemented to meet the permittee's pollutant loading (or 'concentration' in the case of *E. coli*) capacity(ies) set forth in the approved TMDL." (Exhibit R-45, p 31) (Part I.C.9.b.2). As Petitioners explained *supra*, the 2020 Permit is not a permit that sets an effluent limit in mg/l for each pollutant. Rather, this is a permit where the permittee seeks to eliminate the risk of a discharge through its BMPs. Indeed, the way to meet loading capacities in the TMDL is to prevent the occurrence of a discharge.[156] If the permittee is not currently discharging pollutants, why must it "determine whether additional pollutant control measures need to be identified and implemented?"

Fourth, in Part I.C.9.b.3.a of the 2020 Permit, the WRD requires permittees to submit a written TMDL Evaluation Report that "justifies" a CAFO's determination that "the

[156] The guidance document, in fact, suggests that an appropriate pollutant control measure is a treatment system. (Exhibit R-95, p 5). The need for a treatment system would imply that the WRD is considering discharges from production areas or land application areas to be acceptable occurrences. Only if pollutant bearing discharges are authorized by the 2020 Permit are treatment systems necessary. Otherwise, the focus should be on BMPs which prevent the occurrence of discharges. Indeed, pollutants like N and P enter state of Michigan waters due to erosion. See Section IV(C)(2)(d) of this FDO. Therefore, additional BMPs should be adopted that prevent soil erosion. Similar BMPs should be (and have been) adopted to prevent *E. coli* pollution. See Section IV(D)(2)(d)(i) of this FDO.

pollutant loading or concentration allocation(s) established in the approved TMDL are being met…." (Exhibit R-45, p 31) (Part I.C.9.b.3.a). In other words, the WRD is asking the CAFO to justify that it is complying with the 2020 Permit, *i.e.*, that it is not discharging pollutants from its production area or land application areas. Since CAFOs are already obligated to notify the WRD when a discharge occurs, (Exhibit R-45, p 26) (Part I.C.1), this provision of the 2020 Permit seems unnecessary.

Fifth, Part I.C.9.b.3.b of the 2020 Permit applies to permittees that exceed "the pollutant loading or concentration allocation(s) established in the approved TMDL…." (Exhibit R-45, p 31) (Part I.C.9.b.3.b). Since the pollutant loading or concentration allocation(s) will not be exceeded unless there is an illicit discharge, permittees are not exceeding these load capacities until a discharge occurs. Hence, this provision does not apply to any permittees until they have an illicit discharge.

Sixth, Part I.C.9.3 essentially requires the permittee to provide the WRD with a written report of its anticipated future violations of the permit. In other words, the regulated party is being asked to provide a written report to the regulator regarding how it may violate the permit terms in the future. It is therefore understandable why a regulated party may object to such a condition in a permit.

Finally, there was no evidence presented in this contested case where Part I.C.9 of the 2020 Permit originated. The WRD did not cite a template or other source for this provision of the permit. Specifically, the WRD did not cite a section of the EPA's "NPDES Permit Writers' Manual for [CAFOs]," (Exhibit P-104; Exhibit R-141), and did not cite any provision of an NPDES permit drafted by the EPA or another state's environmental protection agency. Hence, this provision appears to be a condition of the 2020 Permit solely created by the WRD. Therefore, there are no endorsements of such a provision from any regulatory agency in the record.

For each of the reasons stated *supra*, I find, as a Matter of Fact, that Part I.C.9. of the 2020 Permit is flawed and inadequate, and must be stricken from the permit.

Nevertheless, this tribunal understands the deficiencies which this provision of the 2020 Permit was meant to cure. To that end, the following are suggested modifications to the next iteration of the 2020 Permit to achieve similar results:

- First, the permittees of the 2020 Permit are agriculturally trained and educated individuals and entities. Indeed, the certified CNMP providers are also agriculturally trained and educated individuals. However, numerous times in this contested case, the WRD argued that the 2020 Permit is a water quality permit, not an agricultural permit. (See, e.g., Testimony of Bruce Washburn, 2 Tr 384, 427-428). Nevertheless, the WRD is asking the permittees to conduct an audit of its agricultural facilities and practices that will benefit WQS. However, CAFOs are not necessarily trained or educated in WQS, or in how to achieve WQS.

- Therefore, it is necessary for the CAFOs to appoint a water quality expert (the Agent) that is also trained in agricultural practices. Indeed, the WRD could provide the Agent with training in WQS. The WRD could also provide a list of approved Agents to choose from in conducting such an audit. Once contracted, the Agent is a representative of the permittee, not the WRD. The Agent could provide recommendations to the permittee with respect to needed practices that could limit the potential for discharges. This report is confidential to the permittee, and should not be provided to the WRD. The Agent would then send a verification letter to the WRD that he or she has conducted the audit and has implemented pollutant control measures to help prevent discharges. Such an arrangement will eliminate many (if not all) of the deficiencies expressed in Part I.C.9. of the 2020 Permit, as stated *supra*.

Based on the evidence in the record, I find, as a Matter of Fact, that the TMDL requirements of Part I.C.9. of the 2020 Permit is a discretionary condition that is not necessary to achieve WQS. Based on the evidence in the record, I conclude, as a Matter of Law, that this discretionary condition **does not** comport with requirements of the laws and rules under which the 2020 Permit was issued, and **is not** reasonable or consistent with the express language and intent of the regulatory scheme. Therefore, I hereby strike

Part I.C.9. of the 2020 Permit from the permit and that the future iterations of the 2020 Permit should be modified in a manner similar to the suggested modifications offered by this tribunal.

G. Additional Challenges to the 2020 Permit

1. Quarterly Reporting Requirements

To understand the proposed addition of quarterly reporting requirements, it is necessary to review the 2015 Permit. Specifically, the 2015 Permit required the permittee to keep a "Land Application Log" which was required to be "kept up-to-date…." (Exhibit R-96, p 14) (Part I.B.3.d.). In this log, the permittee was required to "document … in writing, at a minimum, records required by Part I.B.3. and all of the following information and inspection results in the specified document…." (*Id*.). The "specified document" referenced in the permit included the Daily Land Application Record, the Annual Report Form, and printouts of weather forecasts from the time of land application. (*Id*.). The Annual Report Form is presumably the form required by Part I.B.4.d. of the 2015 Permit, and required by Rule 2196(5)(f). (Exhibit R-96, p 16) (Part I.B.4.d.) ("The permittee shall submit an annual report for the preceding January 1 through December 31 (reporting period) to the Department by April 1 of each year"); Mich Admin Code, R 323.2196(5)(f) ("the CAFO owner or operator shall submit annual reports to the department"). Petitioners did not object to any of the provisions of the 2015 Permit, but argued that the conditions of such permit should be "left in place." (Petitioners' Closing Arguments, p 1).

The 2020 Permit similarly requires the filing of an annual report. (Exhibit R-45, p 23) (Part I.B.4.d). The permit also provides that the land application log "shall be kept up-to-date…." (Exhibit R-45, p 20) (Part I.B.3.d.). However, the 2020 Permit additionally requires the permittee to "submit the required 'Land Application Summary' form … within 30 days from each quarter ending March 31, June 30, September 30, and December 31 of each year…." (Exhibit R-35, p 20) (Part I.B.3.e.). Even though Petitioners are required to keep their land application log "up-to-date," they contend that the quarterly reports required by the 2020 Permit exceed the authority of Rule 2196, which only authorizes

annual reports. (Petitioners' Closing Arguments, p 61; Petitioners' Response to Closing Arguments, p 39).[157]

The PN Draft provided for monthly reporting, instead of quarterly reporting. (Testimony of Sylvia Heaton, 5 Tr 1066; Exhibit P-71, p 35). Because the agency could more closely track the application of the manure with monthly reporting, the WRD preferred monthly reports over quarterly reports. (Testimony of Bruce Washburn, 3 Tr 680-681). Mr. Washburn explained that, when manure is manifested in December, it could be applied in January, February or March. (*Id*.). With quarterly reporting, the agency would not know about the application of the manure until the end of April, because the quarterly reports are not due until 30 days after the end of the quarter. (*Id*.). Nevertheless, due to objections from stakeholders during the stakeholder meetings, the monthly reporting requirement of the PN Draft was reduced to quarterly reporting in the 2020 Permit. (Testimony of Sylvia Heaton, 5 Tr 1066). In her testimony, Ms. Campbell stated that, "[w]hile farmers do not object to increased transparency of reporting, the frequency of reporting would create additional burden or expense…." (Testimony of Laura Campbell, 10 Tr 2525). The additional burden or expense was not elucidated in the record.

It should be noted that one of Petitioners' witnesses described the annual manure application reports as being akin to "a farm's manure 'tax' reporting." (Testimony of Allison Brink, 9 Tr 2185). Ms. Brink's analogy is appropriate. For individuals with simple returns, an annual tax return is sufficient. However, individuals with more complex tax accounting are required to file quarterly returns. See, e.g., MCL 206.681(1) ("a taxpayer that reasonably expects liability for the tax year to exceed $800.00 shall file an estimated return and pay an estimated tax for each quarter of the taxpayer's tax year"). In a similar way, CAFOs house a large number of animals and can be expected to apply a large quantity of manure each year. (See, e.g., Exhibit I-44, p 3) (a 1,400-cow dairy CAFO can generate 12.2 million gallons of manure per year). Under such circumstances, and by

[157] Petitioners do not provide any authorities supporting their contention that, because Rule 2196 requires annual reports, the agency is somehow precluded from requiring additional reports (such as quarterly reports) from the permittees.

analogy with tax reporting, a quarterly report of manure application by the CAFO is appropriate and consistent with the regulatory authority granted to the WRD.

In addition, the WRD notes that Rule 2138 provides that "the department shall verify that the discharge authorized by the issued permit will not violate applicable [WQS]." Mich Admin Code, R 323.2138. Similarly, NPDES permits authorize CAFOs to discharge storm water from land application areas when "such discharges do not cause or contribute to a violation of [WQS]…." Mich Admin Code, R 323.2196(5)(d). Hence, the WRD argues that quarterly reports will help the Department verify that storm water discharges from land application areas do not cause or contribute to a violation of WQS. (WRD's Closing Arguments, p 107-108). I agree.

Since farmers are already required to keep a land application log that is "up-to-date," the tribunal is hard-pressed to find an additional burden or expense to Petitioners in providing such information in a quarterly report. Nor does Rule 2196's requirement to provide annual reports preclude the agency from requiring the information, or additional information, on a more frequent basis, in order to ensure WQS.

Therefore, based on the evidence in the record, I find, as a Matter of Fact, that the 2020 Permit's requirement that CAFOs file quarterly reports is a discretionary condition of the permit that is necessary to achieve WQS.[158] Based on the evidence in the record, I conclude, as a Matter of Law, that this discretionary condition comports with the requirements of the laws and rules under which the 2020 Permit was issued, and is reasonable and consistent with express language and intent of the regulatory scheme.

2. Information from the Manifest Recipient

Petitioners are required, by the terms of Rule 2196, to provide the following information in the manifest document: (a) a manifest document number; (b) the name, address and telephone number of the generator; (c) the name and address of the recipient; (d) the nutrient content of the production area waste or CAFO process wastewater being transferred; (e) the total quantity of production area waste or CAFO

[158] This requirement of the 2020 Permit must be considered a "discretionary condition" of the permit, because Rule 2196 only provides for the filing of an annual report. Mich Admin Code, R 323.2196(5)(f).; *Michigan Farm Bureau II*, ___ Mich ___, ___; 2024 WL 3610196, at *8 (2024).

process wastewater being transferred; (f) a statement regarding the recipient's responsibilities with respect to the transferred production area waste/CAFO process wastewater; (g) a required certification by the generator; (h) "other certification statements as may be required by the department"; (i) a property description for the final destination of the production area waste/CAFO process wastewater; and (j) "Locations for dates and signatures." Mich Admin Code, R 323.2196(5)(e)(ii)(A) – (J). In addition to this information, the 2020 Permit requires the generator to receive the following information from the recipient:

- "receive from the recipient, the soil [P] levels using the Bray P1 test method, no older than three years, that the recipient will use to determine the agronomic rates of land application of the CAFO waste"; and

- "obtain the completed 'Daily Manure Application Summary' from the recipient for each field on which the generator's CAFO waste was applied…."

(Exhibit R-45, p 29) (Part I.C.8.b. & c.). Hence, the generator is to receive two types of information from the recipient: (1) results of a Bray P1 test taken within the last three years for the land application area; and (2) a Daily Manure Application Summary for each field upon which the manifested waste was applied. Each of these new conditions to the 2020 Permit will be addressed separately, *infra.*

a. Results of Bray P1 Tests

Petitioners offered the testimony of Mr. Sietsema with respect to these new provisions of the 2020 Permit. Specifically, he stated:

> Now, per the new requirements in Part I.C.8 of the 2020 General Permit, EGLE is proposing to require a manifest to include information from recipients like the GPS coordinates of the sites used by the recipient for disposal, (Part I.C.8.a.9), and to obtain soil [P] testing from the recipients. (Part I.C.8.b.) This discourages the use of my manure by crop farmers by adding time and costs to each purchase compared to use of commercial fertilizer, and it places livestock farms like mine in the position of policing the conduct of crop farmers who buy my manure as fertilizer when I have no control over what those crop farmers do after it is manifested.

(Testimony of Rick Sietsema, 8 Tr 2077).

Initially, this tribunal notes that the new condition requiring GPS coordinates was addressed in Section IV(E)(2) of this FDO. With respect to the condition requiring a Bray P1 soil test, Mr. Sietsema did not explain how the required information would "discourage" the use of manifested manure or otherwise encourage farmers to utilize commercial fertilizers. In fact, according to Petitioners' own exhibits, soil tests, such as the Bray P1 test, "are designed to help producers predict available nutrient status in soils. Once existing nutrient levels are established, producers can use the data to determine what nutrients need to be applied for the crops, rotations and yield goals being targeted." (Exhibit P-54, p 73). In fact, soil tests are referred to as "a critical tool in nutrient management…." (*Id*.). Without such a soil test, non-CAFO farmers would not know the nutrient status of their soils to predict nutrient application rates for even commercial fertilizers. For these reasons, I find, as a Matter of Fact, that this revision to the 2015 Permit was appropriate.

Based on the evidence in the record, I find, as a Matter of Fact, that the requirement for recipients of manifested manure to provide to the generator the Bray P1 soil test results for the land application areas is a discretionary condition that is necessary to achieve WQS. Based on the evidence in the record, I conclude, as a Matter of Law, that this discretionary condition comports with requirements of the laws and rules under which the 2020 Permit was issued, and is reasonable or consistent with the express language and intent of the regulatory scheme.

b. Daily Manure Application Summary

The 2020 Permit requires the manifest recipient to provide the generator "the completed 'Daily Manure Application Summary' … for each field on which the generator's CAFO waste was applied…." (Exhibit R-45, p 29) (Part I.C.8.c.4). The term "Daily Manure Application Summary" is not defined in the 2020 Permit. (Exhibit R-45, p 32) (Part II.A.). However, the 2020 Permit requires the CAFO to complete a "Daily Manure Application Record" as described in Part I.B.3.b. of the 2020 Permit, as follows:

3) The permittee shall inspect each field no earlier than 48 hours prior to each land application of CAFO waste to that field to evaluate the current stability of the field for application. This inspection shall include, at a minimum, the state of all tile outlets, evidence of soil cracking, the moisture-holding capacity of the soil, crop maturity, and the condition of designated conservation practices (i.e., grassed waterways, buffers, diversions). Results and findings of all inspections shall be recorded in the Daily Manure Application Record.

4) The permittee shall visually inspect all tile outlets draining a given field immediately prior to the land application of CAFO wastes to that field. Tile outlets shall be inspected again upon completion of the land application to the field, or at the end of the working day should application continue on that field for more than one day. Include in the Daily Manure Application Record written descriptions of tile outlet inspection results and observe and compare color and odor of tile outlet effluents before and after land application.

5) All tiled fields to which CAFO wastes have been applied in the prior 30 days shall be visually inspected within 24 hours after the first rain event of one-half inch or greater, for signs of a discharge of CAFO waste. Written descriptions of tile inspection results shall be recorded in the Daily Manure Application Record. If an inspection reveals a discharge with color, odor, or other characteristics indicative of an unauthorized discharge of CAFO waste, the permittee shall immediately notify the department in accordance with the reporting procedures set forth in Part I.C.1. and monitor the discharge in accordance with Part I.A.2. of the permit. A copy of the Daily Manure Application Records shall be kept with the land application log.

6) The permittee shall inspect all land application equipment daily during use for leaks, structural integrity, and proper operation and maintenance. Land application equipment shall be calibrated annually to ensure proper operation rates. Written records of inspections, date of inspections, and calibrations according to the manufacturer's specifications shall be retained in the Daily Manure Application Record.

(Exhibit R-45, pp 15-16) (Part I.B.3.b.). In addition to the foregoing, Part I.B.3.d of the 2020 Permit also requires the "Daily Manure Application Record" to include the following information:

a) The time, date, quantity, method, location (Section, Township, County, latitude and longitude of field center), crop grown, and application rate for each location at which CAFO wastes are land applied.

b) The description of the forecast and of the weather conditions at the time of application and for 24 hours prior to and following application based on visual observation.

c) A review of the condition of conservation practices.

d) A statement whether the land was frozen or snow-covered at the time of application.

(Exhibit R-45, p 19) (Part I.B.3.d). This tribunal finds that Part I.C.8.c.4. of the 2020 Permit was intended to require CAFOs who manifest their manure to obtain such a "Daily Manure Application Record" from the recipient of the manure.

Initially, the tribunal is unable to locate in the administrative record any testimony by the WRD's witnesses why a manifest recipient should supply such significant and detailed information to the manifest generator.[159] See, e.g., *Michigan Farm Bureau II*, __ Mich __, __; 2024 WL 3610196 at *43 (2024) ("EGLE must carry its burden to prove that any discretionary conditions in the general permit are necessary to achieve Part 4 [WQS] or to comply with applicable laws and regulations"). More significantly, the WRD appears to be overreaching its jurisdiction on this point, Mich Admin Code, R 323.2104(c)(ix) (EGLE has jurisdiction over point source discharges, including CAFOs), because the provision essentially requires a non-regulated party to comply with the terms and conditions of the general permit. If the non-regulated farm does not agree to provide such information, the manifest generator would be in violation of the permit. This requirement would thus have a chilling effect upon CAFOs who manifest manure, because it may prevent them from manifesting manure when a recipient is unwilling to provide such detailed information. (See Testimony of Rick Sietsema, *supra*).

The WRD may argue that, by requiring such information from a manifest recipient, such a provision in the 2020 Permit is necessary to achieve WQS. To demonstrate how

[159] The WRD had a proposed Exhibit R-220 that was identified as "Daily Application Record Form." (1 Tr 24). However, this proposed exhibit was never offered into evidence by the WRD.

the WRD is overreaching its jurisdiction, this tribunal will provide an analogy. If the 2020 Permit were to entirely prohibit the practice of manifesting CAFO manure, the WRD could attempt to justify such a provision by alleging that the prohibition is necessary to achieve WQS. However, the WRD does not have the authority to prohibit the practice of manifesting CAFO manure. Indeed, the practice is authorized by Michigan law (*i.e.*, Rule 2196(5)(e)). Mich Admin Code, R 323.2196(5)(e). In a similar manner, the WRD is not authorized to require non-CAFOs – who are not required to obtain an NPDES permit – to abide by the terms of the 2020 Permit. Similarly, if a non-CAFO recipient were to receive manifested manure, it would be inappropriate for the WRD to penalize the CAFO generator if the recipient does not agree to provide the requested information. Nor would it be appropriate to condition the manifesting of manure upon a third party's agreement to provide such information. For these reasons, I find, as a Matter of Fact, that this revision to the 2015 Permit is not appropriate.[160]

Based on the evidence in the record, I find, as a Matter of Fact, that the requirement for recipients of manifested manure to provide a "Daily Manure Application Summary" is a discretionary condition that is not necessary to achieve WQS. Based on the evidence in the record, I conclude, as a Matter of Law, that this discretionary condition **does not** comport with requirements of the laws and rules under which the 2020 Permit was issued, and **is not** reasonable or consistent with the express language and intent of the regulatory scheme. Therefore, I hereby strike Part I.C.8.c.4. from the 2020 Permit.

[160] Notwithstanding this finding, this tribunal has many concerns with manifesting CAFO manure. Under the 2020 Permit, CAFOs may not apply manure closer than 100 feet from surface waters, **and** must incorporate the manure within 24 hours. (Exhibit R-45, pp 20, 21) (Parts I.B.3.f.3.c. & I.B.3.g). However, the applicable GAAMP for non-CAFO farmers requires the application of manure no closer than 150 feet from surface waters **unless** the manure is injected or incorporated within 48 hours. (See Exhibit P-19, p 27) (GAAMP 29). While this GAAMP also requires the non-CAFO farmer to utilize "conservation practices to protect against runoff and erosion losses to surface waters," this tribunal is concerned that the application of manure closer than 100 feet to state of Michigan waters could occur under this GAAMP and could cause discharges of pollutants to surface waters. Moreover, Ms. Campbell testified that many crop farmers who utilize manure instead of commercial fertilizer do not have the equipment to land-apply manure. (Testimony of Laura Campbell, 10 Tr 2608). Therefore, if the farmer who is the manifest recipient requests the CAFO to apply the manure closer than 100 feet from surface waters, even if the manure is incorporated within 48 hours, should the CAFO accede to such a request to apply the manure so close to surface waters?

H. The WRD's Request for Post-Hearing Revisions to the 2020 Permit

As noted in Section IV(C)(2)(a) of this FDO, Michigan's Administrative Rules expressly provide that "an interested person may submit his or her views in writing on the application or department tentative determination, or both…." Mich Admin Code, R 323.2119(1). The Rule further provides that "[a]ll views submitted to the department in writing by interested persons during the comment period shall be retained and considered in the formulation of final determinations by the department on the permit application." Mich Admin Code, R 323.2119(2). As noted in the Findings of Fact, the PN Draft was put up for public notice and public comment on October 30, 2019. (Testimony of Megan McMahon, 2 Tr 310). The public notice was posted on the Department calendar and in three newspapers. (*Id*., 2 Tr 309; Exhibit R-20). The public comment period commenced on November 1, 2019, and closed on December 18, 2019. (Exhibits R-20 and R-137). During the public comment period, there were approximately 2,400 comments submitted. (Testimony of Megan McMahon, 2 Tr 313; Exhibit R-112). Ms. Alexander testified that "[t]he department invested an enormous amount of time into creating and implementing a transparent reissuance process." (Testimony of Christine Alexander, 1 Tr 61).

After the reissuance process was completed, this tribunal conducted a contested case hearing over thirteen days. Fourteen witnesses offered testimony on behalf of the WRD in support of the 2020 Permit. One hundred sixty-five exhibits were admitted into evidence by the WRD. Despite its efforts to implement a transparent permitting process, after the close of the record the WRD requested two additional provisions be added to the 2020 Permit in its Closing Arguments.

Specifically, the WRD requests this tribunal to alter the 2020 Permit by adding subsection (j), entitled "Land Application Field Identification and Notification," on page 23 of the permit. (WRD's Closing Arguments, p 129). Similarly, the WRD also requests this tribunal to insert a groundwater monitoring condition, entitled "Groundwater Monitoring for Waste Storage Structure Exfiltration/Leakage," to the 2020 Permit. (WRD's Closing Arguments, p 130). Neither of these provisions have been put up for public comment. No testimony was proffered by the WRD with respect to the necessity of these

discretionary conditions in order to achieve WQS. *Michigan Farm Bureau II*, __ Mich __, __; 2024 WL 3610196 at *43 (2024).

Petitioners objected to the inclusion of these provisions in the 2020 Permit. (Petitioners' Response to Closing Arguments, pp 39-41). Specifically, Petitioners argue that the addition of these provisions would violate (1) Part 31 and the CWA public noticing requirements; (2) APA contested case procedures; and (3) basic due process principles. (*Id*., p 40). This tribunal agrees that the inclusion of such provisions at this stage of the proceedings is inappropriate.

First, this tribunal does not have jurisdiction to craft provisions to be included in the 2020 Permit. Rather, this tribunal is only charged with determining whether the 2020 Permit is consistent with state law. See *National Wildlife Federation v Department of Environmental Quality (No. 2)*, 306 Mich App 369; 856 NW2d 394 (2014) ("the contested case proceeding [is] an extension of the initial application process for the purpose of arriving at a single final agency decision" on the statutory criteria). See also Section III(C) of this FDO. Second, the two requested provisions were not placed on public notice in the PN Draft of the permit, so that the public could comment on the proposed permit conditions. Mich Admin Code, R 323.2119. As noted in Section IV(D)(2)(a) of this FDO, "the public comment period … comes at a stage where the Agency has the greatest ability to modify a draft permit." *Adams, supra*. In this case, the public was deprived of an opportunity to comment on the WRD's proposed new provisions. Third, according to *Michigan Farm Bureau II*, the WRD "must carry its burden to prove that any discretionary conditions in the general permit are necessary to achieve Part 4 [WQS] or to comply with applicable laws and regulations". *Michigan Farm Bureau II*, __ Mich __, __; 2024 WL 3610196 at *43 (2024). Since no evidence was presented with respect to the necessity for such provisions, the WRD has failed in its burden of proof.

For the reasons set forth *supra*, this tribunal **DENIES** the WRD's request for the tribunal to adopt the discretionary provisions entitled "Land Application Field Identification and Notification" and "Groundwater Monitoring for Waste Storage Structure Exfiltration/ Leakage."

I. Intervenors' Post-Hearing Request to Strengthen the 2020 Permit

As noted in the Findings of Fact, numerous environmental groups, including Intervenors Environmentally Concerned Citizens of South Central Michigan, For Love of Water, and Food & Water Watch, submitted proposed revisions to the PN Draft in their public comment. (Exhibits R-123, R-124 and R-125). The WRD revised the PN Draft based on public comment from these environmental groups. (Testimony of Sylvia Heaton, 5 Tr 1069-1070). Despite these timely requested revisions to the 2020 Permit, Intervenors have also requested six post-hearing revisions to the permit. (Intervenors' Closing Arguments, pp 36-76). In order to strengthen the 2020 Permit, Intervenors request this tribunal to modify the permit by (a) prohibiting waste application when there are two or more inches of frost and/or four of more inches of snow; (b) adding provisions that impose new requirements for manifesting manure; (c) prohibiting the application of liquid CAFO waste to tile-drained fields; (d) requiring analytical sampling and testing of tile drained discharges; and (e) modifying the waste storage capacity calculation guidelines.[161] (*Id*.).

As noted *supra*, this tribunal does not have jurisdiction to craft provisions to be included in the 2020 Permit. Rather, this tribunal is only charged with determining whether the 2020 Permit is consistent with state law. See *National Wildlife Federation v Department of Environmental Quality (No. 2)*, 306 Mich App 369; 856 NW2d 394 (2014) ("the contested case proceeding [is] an extension of the initial application process for the purpose of arriving at a single final agency decision" on the statutory criteria). See also Section III(C) of this FDO. Second, the requested provisions were not placed on public notice in the PN Draft of the permit, so that the public could comment on the proposed permit conditions. Mich Admin Code, R 323.2119. As noted in Section IV(D)(2)(a) of this FDO, "the public comment period … comes at a stage where the Agency has the greatest ability to modify a draft permit." *Adams, supra*. In this case, the public was deprived of an opportunity to comment on Intervenors' proposed provisions.

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[161] Intervenors also requested this tribunal to require the use of the MPRA as the sole risk assessment tool for the application of manure. (Intervenors' Closing Arguments, pp 52-62). This request was addressed in Section IV(C)(3) of this FDO, *supra*.

For the reasons set forth *supra*, this tribunal **DENIES** Intervenors' request for the tribunal to add provisions to the 2020 Permit at this stage of the proceedings in order to strengthen the permit.

V. Summary

To summarize the factual findings in this FDO, CAFOs contribute to P pollution in Michigan's rivers and lakes, including the Great Lakes, justifying a reduction of P limits in the 2020 Permit. It was reasonable and appropriate for the WRD to rely upon the proposed reductions in the P levels set forth in the public comment from the CNMP providers. Petitioners have failed to support, by a preponderance of the evidence, the scientific basis for the 150-ppm standard. The lowering of maximum STP levels for manure application to 120 ppm in TMDL watersheds and to 135 ppm in all other watersheds is necessary to achieve WQS. The alternative use of either the Bray P1 tool or the MPRA is a discretionary condition of the 2020 Permit, which is necessary to achieve WQS. The condition of the 2020 Permit to use both setbacks and buffers is a discretionary condition that is not necessary to achieve WQS.

CAFOs contribute to *E. coli* pollution in Michigan's rivers and lakes, justifying an amendment of the terms of the 2015 Permit. Petitioners will not be prevented from applying manure in March through May if the frost laws are in effect. Thawing in the two-inch soil depth is not a sufficient basis to apply manure in January and February. Restrictions on manure application in January and February are appropriate, because the crops that utilize the nutrients in manure are not planted until two or three months later. Restrictions on manure application in January and February will not cause the CAFO's storage capacity to be overtaxed. Manure can be applied in months other than January or February, when the soil is not muddy, in order to prevent soil compaction. There are substantial reasons for farms to employ manure as their fertilizer choice, notwithstanding restrictions on manure applications in January or February. An idle and available labor force is an insufficient ground for applying manure in January or February. The 2020 Permit's restrictions on applications of manure in January and February is a discretionary condition of the permit that is necessary to achieve WQS. The restrictions on manure

applications in the month of March are not necessary to achieve WQS. Incorporation of manure, within 6 hours of application, would prevent the situation where the morning applied manure runs off of the application lands in the afternoon sun. The condition of the 2020 Permit that provides for "immediate" incorporation of CAFO manure – meaning that the tractor must follow the manure spreader – is a discretionary condition that is not necessary to achieve WQS. The lowering of P limits for applications of manure in January and February is a discretionary condition of the 2020 Permit that is necessary to achieve WQS. The notification provisions of the 2020 Permit for applications of manure in January and February is a discretionary condition that is necessary to achieve WQS. The demonstration option of the 2020 Permit for applying manure in January or February is vague and ambiguous, and does not plainly provide the requirements for the demonstration. As written, the demonstration option is a discretionary condition of the 2020 Permit that is not necessary to achieve WQS.

The 2020 Permit's ban on manifesting manure in January and February is a discretionary condition of the 2020 Permit that is necessary to achieve WQS. The ban on manifesting manure in March is a discretionary condition of the 2020 Permit that is not necessary to achieve WQS. The latitude and longitude center of the site for land application is such an "other description for the final destination" of the CAFO waste, which is within the strictures of Rule 2196(5)(e)(ii)(I). Mich Admin Code, R 323.2196(5)(e)(ii)(I). The 2020 Permit's requirement that manifest forms include latitude and longitude of the application fields is a mandatory condition of the 2020 Permit that is necessary to achieve WQS.

The TMDL requirements of Part I.C.9. of the 2020 Permit are flawed and inadequate, and should be removed from the permit. The 2020 Permit's requirement that CAFOs file quarterly reports is a discretionary condition of the permit that is necessary to achieve WQS. Part I.C.8.b. of the 2020 Permit, requiring the generator to receive Bray P1 test results from the recipient of manifested manure, is appropriate. The requirement for the recipient of manifested manure to provide to the generator the Bray P1 soil test results for the land application areas is a discretionary condition that is necessary to achieve WQS. Part I.C.8.c. of the 2020 Permit, requiring the manure generator to receive

a Daily Manure Application Summary from the recipient of manifested manure, is not appropriate. The requirement for recipients of manifested manure to provide a "Daily Manure Application Summary" is a discretionary condition that is not necessary to achieve WQS.

CONCLUSIONS OF LAW

Based on the evidence in the record, including the Findings of Fact, I conclude, as a Matter of Law:

1. The Michigan Department of Environment, Great Lakes, and Energy (EGLE) has jurisdiction to issue the 2020 Permit. Mich Admin Code, R 323.2103 (a) & (p); Mich Admin Code, R 323.2191(1).
2. The 2020 Permit's provisions regarding the 15-day notice for additional N application comports with requirements of the laws and rules under which the 2020 Permit was issued, and are reasonable and consistent with express language and intent of the regulatory scheme. *Petition of Fred Fuller*, 2006 WL 2037826, *10 (Mich.Dept.Nat.Res.).
3. The 15-day notice for additional N application is a mandatory condition of the 2020 Permit that every CAFO NPDES permit must contain. 40 CFR 122.42(e); Mich Admin Code, R 323.2189(g).
4. EGLE has the authority to issue permits with P limits different from, and lower than, extant GAAMPs. *City of Brighton v Hamburg Township*, 260 Mich App 345, 348; 677 NW2d 349 (2004); *Michigan Farm Bureau II*, ___ Mich ___, ___; 2024 WL 3610196, at *6-7 (2024).
5. EGLE's lowering of STP levels in the 2020 Permit does not undermine the incentives Michigan law provides for farms who voluntarily participate and complete MAEAP verification. Mich Admin Code, R 323.2137(d); *City of Brighton v Hamburg Township*, 260 Mich App 345, 348; 677 NW2d 349 (2004).
6. The 2020 Permit's P levels comport with requirements of the laws and rules under which the 2020 Permit was issued, and are reasonable and

consistent with express language and intent of the regulatory scheme. *Petition of Fred Fuller*, 2006 WL 2037826, *10 (Mich.Dept.Nat.Res.).

7. EGLE is required to reduce pollutant limits within individual NPDES permits in a TMDL watershed in order to attain WQS, such that the reduction of P limits to 120 ppm in TMDL watersheds must be considered a mandatory condition of the permit. Mich Admin Code, R 323.2137(d); *Michigan Farm Bureau II*, __ Mich __, __; 2024 WL 3610196, at *8 (2024).
8. The use of either the MPRA or the Bray P1 method (combined with lower P levels) comports with requirements of the laws and rules under which the 2020 Permit was issued, and is reasonable and consistent with express language and intent of the regulatory scheme. *Petition of Fred Fuller*, 2006 WL 2037826, *10 (Mich.Dept.Nat.Res.).
9. The condition of the 2020 Permit to use both setbacks and buffers does not comport with requirements of the laws and rules under which the 2020 Permit was issued, and is not reasonable or consistent with the express language and intent of the regulatory scheme. *Petition of Fred Fuller*, 2006 WL 2037826, *10 (Mich.Dept.Nat.Res.).
10. The 2020 Permit's restrictions on applications of manure in January and February comport with the requirements of the laws and rules under which the 2020 Permit was issued, and are reasonable and consistent with express language and intent of the regulatory scheme. *Petition of Fred Fuller*, 2006 WL 2037826, *10 (Mich.Dept.Nat.Res.).
11. The 2020 Permit's restrictions on applications of manure in March do not comport with the requirements of the laws and rules under which the 2020 Permit was issued, and are not reasonable and consistent with express language and intent of the regulatory scheme. *Petition of Fred Fuller*, 2006 WL 2037826, *10 (Mich.Dept.Nat.Res.).
12. The 2020 Permit's requirements for "immediate" incorporation of CAFO manure – meaning that the tractor must follow the manure spreader – do not comport with the requirements of the laws and rules under which the

2020 Permit was issued, and are not reasonable and consistent with express language and intent of the regulatory scheme. *Petition of Fred Fuller*, 2006 WL 2037826, *10 (Mich.Dept.Nat.Res.).

13. The 2020 Permit's P levels for January and February manure applications comport with requirements of the laws and rules under which the 2020 Permit was issued, and are reasonable and consistent with express language and intent of the regulatory scheme. *Petition of Fred Fuller*, 2006 WL 2037826, *10 (Mich.Dept.Nat.Res.).
14. The notification provisions of the 2020 Permit for applications of manure in January and February comport with requirements of the laws and rules under which the 2020 Permit was issued, and are reasonable and consistent with express language and intent of the regulatory scheme. *Petition of Fred Fuller*, 2006 WL 2037826, *10 (Mich.Dept.Nat.Res.).
15. The 2020 Permit's demonstration option for applications of manure in January and February does not comport with requirements of the laws and rules under which the 2020 Permit was issued, and is not reasonable and consistent with express language and intent of the regulatory scheme. *Petition of Fred Fuller*, 2006 WL 2037826, *10 (Mich.Dept.Nat.Res.).
16. The 2020 Permit's ban on manifesting manure in January and February comports with the requirements of the laws and rules under which the 2020 Permit was issued, and is reasonable and consistent with express language and intent of the regulatory scheme. *Petition of Fred Fuller*, 2006 WL 2037826, *10 (Mich.Dept.Nat.Res.).
17. The 2020 Permit's ban on manifesting manure in March does not comport with the requirements of the laws and rules under which the 2020 Permit was issued, and is not reasonable and consistent with express language and intent of the regulatory scheme. *Petition of Fred Fuller*, 2006 WL 2037826, *10 (Mich.Dept.Nat.Res.).
18. The 2020 Permit's requirement that manifest forms include latitude and longitude of the application fields comports with the requirements of the

laws and rules under which the 2020 Permit was issued, and is reasonable and consistent with express language and intent of the regulatory scheme. *Petition of Fred Fuller*, 2006 WL 2037826, *10 (Mich.Dept.Nat.Res.).

19. The TMDL requirements of Part I.C.9. of the 2020 Permit do not comport with requirements of the laws and rules under which the 2020 Permit was issued, and are not reasonable or consistent with the express language and intent of the regulatory scheme. *Petition of Fred Fuller*, 2006 WL 2037826, *10 (Mich.Dept.Nat.Res.).

20. The 2020 Permit's requirement that CAFOs file quarterly reports comports with the requirements of the laws and rules under which the 2020 Permit was issued, and is reasonable and consistent with express language and intent of the regulatory scheme. *Petition of Fred Fuller*, 2006 WL 2037826, *10 (Mich.Dept.Nat.Res.).

21. Part I.C.8.b. of the 2020 Permit – which requires the manifested manure generator to receive from the manifested manure recipient the results of a Bray P-1 test taken within the last three years for the land application area – comports with requirements of the laws and rules under which the 2020 Permit was issued, and is reasonable or consistent with the express language and intent of the regulatory scheme. *Petition of Fred Fuller*, 2006 WL 2037826, *10 (Mich.Dept.Nat.Res.).

22. Part I.C.8.c.4. of the 2020 Permit – that requires the manifested manure generator to receive a Daily Manure Application Summary from the manifested manure recipient – does not comport with requirements of the laws and rules under which the 2020 Permit was issued, and is not reasonable or consistent with the express language and intent of the regulatory scheme. *Petition of Fred Fuller*, 2006 WL 2037826, *10 (Mich. Dept.Nat.Res.).

FINAL DECISION AND ORDER

Based on the Findings of Fact and Conclusions of Law, the CAFO General Permit No. MIG010000 (Exhibit R-45) is approved, and is modified in the following respects:

1. The 2020 Permit is hereby modified to clarify that the 15-day N notice requirement is only applicable for those farms that do not provide for additional N application in their CNMP;
2. The 2020 Permit is hereby modified to provide CAFOs with the option of utilizing either 100-foot setbacks or 35-foot vegetative buffers;
3. The 2020 Permit is hereby modified so that the term “immediately” with respect to the incorporation of CAFO waste in January and February is defined to mean within 6 hours of application;
4. The 2020 Permit should be modified by the WRD to explain whether the practice of field-stacking poultry litter in January or February is an acceptable practice under the permit;
5. The 2020 Permit should be modified by the WRD to plainly provide the requirements for the demonstration option for applying manure in January or February;
6. The 2020 Permit is hereby modified by striking the winter restrictions on the land application of manure in the month of March;
7. The 2020 Permit is hereby modified to provide that CAFO waste shall not be applied, during the month of March, to frozen or snow-covered ground unless it is subsurface injected and there is substantial soil coverage of the CAFO waste, or it is surface applied and incorporated within 24 hours;
8. The 2020 Permit should be modified by the WRD to explain what plow depth is necessary for adequate incorporation of the land-applied manure;
9. The 2020 Permit is hereby modified to provide that CAFO manure may be manifested during the month of March for the application of such waste during the month of March (or later months);

10. The 2020 Permit should be modified by the WRD to explain whether the practice of field stacking manifested poultry litter in January or February is an acceptable practice under the permit;
11. The 2020 Permit is hereby modified to delete Part I.C.9. from the 2020 Permit and, in future iterations of the permit, should be redrafted in a manner similar to the suggestions offered by the tribunal; and
12. The 2020 Permit is hereby modified to delete Part I.C.8.c.4. from the permit.

Daniel L. Pulter
Administrative Law Judge

OPPORTUNITY TO PETITION FOR REVIEW

Consistent with § 1317 of the NREPA, and in light of the abolishment of the Environmental Permit Review Commission, the parties may file a petition for review by the EGLE Director of this FDO within twenty-one (21) days after it is issued and entered. An opposing party may file a response to a petition for review within fourteen (14) days after a petition for review is filed (see computation of filing time at Mich Admin Code, R 792.10104). For any petition for review and response, a party must:

1. State the **case name and docket number** as shown on the first page of this FDO;

2. File with the Michigan Office of Administrative Hearings and Rules-General Adjudication, by **e-mail (preferred)**: MOAHR-GA@michigan.gov; **fax**: 517-763-0148; **regular mail**: MOAHR-GA, P.O. Box 30695, Lansing, Michigan 48909-8195; or **overnight carrier delivery (UPS, FedEx, DHL)**: MOAHR-GA, c/o Department of Licensing and Regulatory Affairs, Mail Services, 2407 N. Grand River Avenue, Lansing, Michigan 48906; and

3. **Serve a copy on all parties** to the proceeding at the email/regular mail addresses shown on the attached Proof of Service.

Notice to Agency to Provide MOAHR with Subsequent Agency or Court Orders

The state agency that is a party to this matter, and/or referred this matter to MOAHR, shall serve MOAHR with any subsequent orders entered as a result of this ALJ's decision or proposed decision, including but not limited to the agency's final order, order to remand the matter to MOAHR for further proceedings, or order on appeal, as soon as practicable following entry of the order to:

> Michigan Office of Administrative Hearings and Rules, General Adjudication, by **email (preferred)** to: MOAHR-GA@michigan.gov; **or by regular mail** to: MOAHR-GA, P.O. Box 30695, Lansing, Michigan 48909-8195.

See: Mich Admin Code, R 792.10120(2)(i).

PROOF OF SERVICE

I certify that I served a copy of the foregoing document upon all parties and/or attorneys, to their last-known addresses in the manner specified below, this 13th day of January 2025.

C. Gibson

C. Gibson
Michigan Office of Administrative Hearings and Rules

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APPENDIX A: ABBREVIATIONS

2015 Permit ..... 2015 CAFO General Permit

2020 Permit ..... 2020 CAFO General Permit

Al ..... aluminum

APA ..... Administrative Procedures Act

BMPs ..... best management practices

BST ..... bacterial source tracking

Ca ..... calcium

CAFO ..... concentrated animal feeding operation

CD ..... compact disks

CFR ..... Code of Federal Regulations

COC ..... certificate of coverage

CNMP ..... comprehensive nutrient management plan

CWA ..... Clean Water Act

DEQ ..... Michigan Department of Environmental Quality

DNA ..... deoxyribonucleic acid

DNR ..... Department of Natural Resources

DRP ..... dissolved reactive phosphorus

E. coli ..... Escherichia coli

ECOS ..... Environmental Council of the States

EGLE ..... Department of Environment, Great Lakes, and Energy

EPA ..... United States Environmental Protection Agency

EPRC ..... Environmental Permit Review Commission

APPENDIX A: ABBREVIATIONS, CONT'D

FDO.....Final Decision and Order

Fe ..... iron

Fed Reg .....Federal Register

GAAMP ..... generally accepted agricultural management practice

GLWQA.....Great Lakes Water Quality Agreement

GPS.....Global Positioning System

HABs ..... harmful algal blooms

Intervenors .....Environmental Law & Policy Center, *et al*.

K..... potassium

kg .....kilogram

LA.....load allocations

LC.....loading capacity

MAPI .....Petitioner Michigan Allied Poultry Industries

MAEAP..... Michigan agricultural environmental assurance program

MAHS..... Michigan Administrative Hearing System

MDARD .....Michigan Department of Agriculture and Rural Development

MDEQ ..... Michigan Department of Environmental Quality

MFB..... Petitioner Michigan Farm Bureau

mg .....milligram

MGD.....million gallons per day

mg/kg ..... milligram per kilogram

APPENDIX A: ABBREVIATIONS, CONT'D

mg/l ..... milligram per liter

MPRA ..... Michigan Phosphorus Risk Assessment

MS4s ..... municipal separate storm sewer systems

MST ..... microbial source tracking

MSU ..... Michigan State University

N ..... nitrogen

NASA ..... National Aeronautics and Space Administration

NMP ..... nutrient management plan

NPDES ..... National Pollutant Discharge Elimination System

NPTDD ..... no potential to discharge determination

NREPA ..... Natural Resources and Environmental Protection Act

NRCS ..... Natural Resources Conservation Service

P ..... phosphorus

Petitioners ..... Michigan Farm Bureau, *et al*.

PDF ..... portable document format

PFD ..... Proposal for Decision

pH ..... potential hydrogen

PN ..... Public Notice

PN Draft ..... public notice draft of the 2020 Permit

ppm ..... parts per million

PRPA ..... Property Rights Preservation Act

RTFA ..... Right to Farm Act

APPENDIX A: ABBREVIATIONS, CONT'D

STP ..... soil test phosphorus

STRAP ..... Soil Test Risk Assessment Procedure

Tr.....transcript

TMDL .....total maximum daily load

TP.....total phosphorus

USDA .....United States Department of Agriculture

VFS ..... vegetative filter strip

WLA ..... wasteload allocations

WRD..... Water Resources Division

WQS.....water quality standards

WWTP..... wastewater treatment plant

APPENDIX B: 2020 PERMIT WINTER MANURE APPLICATION RESTRICTIONS

3) CAFO waste shall not be applied during the months of January, February, or March unless the permittee submits a notification and meets the following conditions:

   (a) CAFO waste shall only be applied when waste can be incorporated immediately following application, or injected;

   (b) CAFO waste shall not be applied when two or more inches of frost and/or four or more inches of snow are present at the land application site at the time of application;

   (c) CAFO waste shall not be applied within 100 feet of any surface water of the state, open tile line intake structures, sinkholes, agricultural well heads, including but not limited to roadside ditches that are conduits to surface waters of the state (with the exception of surface waters of the state that are up-gradient of the land application).

   (d) Manure application on fields receiving CAFO waste must have a soil sample Bray P1 of no greater than 68 ppm P, or 60 ppm P if fields are located in watershed(s) covered by an approved [P] or [N] TMDL.

   (e) Twenty-four (24) hours prior to the land application of CAFO waste, the Department shall be notified, through a Department form via MiWaters (https://miwaters.deq.state.mi.us). The notification must include all of the following:

      i) a topographic map of the specific land application location showing the directional flow to surface waters;

      ii) the planned application rate, with no more than 1 crop year of P that can be applied;

      iii) the current total storage structure capacity in days at the CAFO facility.

(Exhibit R-45, pp 20-21) (Part I.B.3.f.3).