

**STATE OF MICHIGAN
MICHIGAN OFFICE OF ADMINISTRATIVE HEARINGS AND RULES**

IN THE MATTER OF:

Docket No.: 18-011549

**Petitions of Michigan Citizens
for Water Conservation, and
Grand Traverse Band of Ottawa
and Chippewa Indians on the
permit issued to Nestle' Waters
North America, Inc.
(consolidated cases),**

Permit No.: 1701

**Act: Safe Drinking Water Act,
1976 PA 399**

**Agency: Department of Environment,
Great Lakes & Energy**

**Case Type: Drinking Water &
Environmental Health Division**

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PROPOSAL FOR DECISION

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**Issued and entered
this 24th day of April 2020
by Daniel L. Pulter
Administrative Law Judge**

PROPOSAL FOR DECISION

This contested case concerns an Application submitted by Nestlé Waters North America, Inc. (Nestlé) for a permit under the Safe Drinking Water Act (SDWA), being Act 399 of 1976, as amended. MCL 325.1001, *et seq.* A permit was issued on April 2, 2018, by the Drinking Water and Environmental Health Division (Division) of the Department of Environment, Great Lakes, and Energy (EGLE).¹ Michigan Citizens for Water Conservation (Citizens) challenged the permit by filing a Petition for Contested Case Hearing on June 1, 2018. On that date, the Grand Traverse Band of Ottawa and Chippewa Indians

¹ The permit in this case was issued by the Drinking Water and Municipal Assistance Division (DWMAD) of the Department of Environmental Quality (DEQ). Pursuant to Executive Order 2019-06, effective April 22, 2019, the name of the agency was changed to the Department of Environment, Great Lakes, and Energy. Similarly, the name of the Division was changed from DWMAD to the Drinking Water and Environmental Health Division. All citations in the record to DEQ shall be treated as a reference to EGLE, and all citations in the record to DWMAD shall be treated as a reference to the Division. In addition, Executive Order 2019-06 also abolished the Michigan Administrative Hearing System (MAHS) and created the Michigan Office of Administrative Hearings and Rules (MOAHR). In that Executive Order, the authorities, powers, duties, functions, and responsibilities of MAHS were transferred to MOAHR.

(Grand Traverse Band) also challenged the permit by filing a Petition for Contested Case Hearing. The Petitions filed by Citizens and the Grand Traverse Band (collectively Petitioners) were consolidated into a single proceeding by a Notice entered on June 5, 2018. Nestlé was granted leave to intervene by an Order entered on July 11, 2018.

JURISDICTION

In the Order entered on February 27, 2019, this Tribunal determined that the Legislature intended to incorporate § 32723 of the Natural Resources and Environmental Protection Act (NREPA) into § 17 of the SDWA. MCL 325.1017; MCL 324.32723. Under § 32723(12), “[a] person who is aggrieved by a determination of the department under this section related to a water withdrawal permit 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 324.32723(12). In their Petitions, the Petitioners claimed they were aggrieved by the issuance of a water withdrawal permit to Nestlé.

Consistent with § 32723(12), a contested case hearing was conducted in this matter. Specifically, the Parties filed their witnesses’ sworn direct testimony in accordance with the following schedule: the Division filed its sworn direct testimony on February 6, 2019; the Petitioners filed their sworn direct testimony on March 6, 2019; and Nestlé filed its sworn direct testimony on April 4, 2019. A hearing was conducted on May 20-23, 2019, 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.* Rebuttal Testimony and stipulated exhibits were also received into evidence on August 1, 2019. The record was closed on August 1, 2019. Closing Briefs were filed by the Parties on September 18, 2019; and Responses to Closing Briefs were filed on October 16, 2019. Supplemental Briefs were filed by the Petitioners and the Division on February 7, 2020, and Responses to Supplemental Briefs were filed on February 21, 2020. A hearing admitting exhibits and binding rebuttal testimony into the record was conducted on March 19, 2020.

PROPERTY RIGHTS PRESERVATION ACT

Pursuant to the Property Rights Preservation Act, 1996 PA 101, MCL 24.421, *et seq.*, the undersigned, in formulating this Proposal for Decision,² reviewed the Takings Assessment Guidelines and considered the issue of whether this governmental action equates to a constitutional taking of property. Const 1963, art 10 § 2.

PARTIES

I. Petitioners

Citizens was represented by Ross A. Hammersley and Rebecca L. Millican of the law firm Olson, Bzdok & Howard, PC. The Grand Traverse Band was represented by William Rastetter, who is of counsel with the law firm Olson, Bzdok & Howard, PC. The Petitioners collectively offered the testimony of the following witnesses:

1. Christopher P. Grobbel, Ph.D., the President of Grobbel Environmental & Planning Associates (1 Tr 40-42).
2. James Maturen, a resident of Reed City, Michigan, and former Osceola County Commissioner (1 Tr 42-53).
3. Maryann Borden, a resident of Ewart, Michigan (1 Tr 53-60).
4. Rhonda Lee Borden-Huff, a resident of Ewart, Michigan (1 Tr 60-68).
5. David Hyndman, Ph.D., a Professor of Hydrogeology and Environmental Geophysics at Michigan State University (1 Tr 205-328).
6. James Garavaglia, a Fish and Wildlife Biologist for the Grand Traverse Band of Ottawa and Chippewa Indians (2 Tr 633-736).
7. Mark Luttenton, Ph.D., a Professor of Biology at Grand Valley State University (3 Tr 745-862).

² Because the permit was issued by the Division under the authority of § 17 of the SDWA, § 1317 of the NREPA is inapposite in this case. MCL 325.1017; MCL 324.1317. See also MCL 324.1301(f). For such reason, this Tribunal has prepared a Proposal for Decision for the Director of EGLE.

Through these witnesses, the Petitioners entered Exhibits P-1 through P-46.³ On August 1, 2019, the Petitioners filed the rebuttal testimony of Dr. Mark Luttenton (5 Tr 1368-1377), Dr. Christopher P. Grobbel (5 Tr 1378-1383), Dr. David Hyndman (5 Tr 1383-1415), and James Garavaglia (5 Tr 1415-1425).

II. Respondent

The Division was represented by Neil D. Gordon and Elizabeth Morrisseau, Assistant Attorneys General. The Division offered the testimony of the following witnesses:

1. Peter Kailing, a Senior Wildlife Biologist for the Wildlife Division of the Department of Natural Resources (DNR) (1 Tr 24-33).
2. Katherine Kruse, an Environmental Justice and Tribal Liaison with EGLE (1 Tr 33-37).
3. Jill Van Dyke, a Geology Specialist with the Water Resources Division (WRD) who has expertise in computer modeling (1 Tr 69-203).
4. James Gamble, the Supervisor of the Source Water Unit for the Division (1 Tr 331-356).
5. Leah Clark, a Water Use Program Geologist with EGLE (1 Tr 357-407).
6. Marcy Knoll Wilmes, an Environmental Quality Analyst for the WRD (2 Tr 417-477).
7. Gary Kohlhepp, the Supervisor of the Lake Michigan Unit for the WRD (2 Tr 479-513).
8. Michael Pennington, a Wetland Mitigation and Banking Specialist for EGLE (2 Tr 514-564).
9. Scott Heintzelman, the Central Lake Michigan Unit Manager for the Fisheries Division of the DNR (2 Tr 565-592).
10. Tammy Newcomb, Ph.D., a Senior Water Policy Advisor for the DNR (2 Tr 593-632).

³ Most of the Exhibits in this contested case have been submitted electronically on compact disks (CD) 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 bottom of the exhibit.

Through these witnesses, the Division entered Exhibits R-1 through R-76, R-77,⁴ R-78,⁵ and R-83.⁶ On August 1, 2019, the Division filed the rebuttal testimony of Jill Van Dyke (5 Tr 1426-1428), Leah Clark (5 Tr 1428-1433), and Dr. Tammy Newcomb (5 Tr 1433-1435).

III. Intervenor

Nestlé was represented by Douglas A. Donnell and William A. Horn of the law firm Mika Myers, PLC. Nestlé offered the testimony of the following witnesses:

1. Charles Andrews, Ph.D., a geologist and hydrogeologist employed by S.S. Papadopoulos & Associates (3 Tr 864 to 4 Tr 1066).
2. Martin Jerome Boote, an environmental scientist with Environmental Consulting & Technology, Inc. (4 Tr 1067-1173).
3. Robert Douglas Workman, Ph.D., employed by Advanced Ecological Management, Inc. (4 Tr 1175-1270).
4. Joel Henry, a Senior Project Hydrogeologist for Golder Associates (4 Tr 1273-1287).
5. Arlene Anderson-Vincent, a Natural Resources Manager for Nestlé Waters North America Inc. (4 Tr 1288-1359).

Through these witnesses, Nestlé entered Exhibits I-1 through I-82. On August 1, 2019, Nestlé filed the rebuttal testimony of Dr. Charles Andrews (5 Tr 1437-1460), Arlene Anderson-Vincent (5 Tr 1461-1465), Martin Jerome Boote (5 Tr 1466-1471), and Dr. Robert Douglas Workman (5 Tr 1472-1484).

⁴ Exhibit R-77 was received into evidence at 3 Tr 1008, a copy of which was never provided to this Tribunal. However, that Exhibit is a letter dated June 21, 2017, and was later supplied by the Division to this Tribunal as part of Exhibit R-83.

⁵ Exhibit R-78 is the Report to the Michigan Legislature in response to 2006 Public Act 34, which was submitted at the request of this Tribunal. This Report was originally admitted into evidence as Exhibit R-77. Due to the duplicate exhibit number of the exhibit referenced in note 3 *supra*, it was renumbered herein as Exhibit R-78.

⁶ Exhibit R-83 is a compendium exhibit admitted by the Division, consisting of multiple PDF files on a CD. To the extent that this Proposal for Decision makes a reference to any document contained in this compendium, it will be completely described.

INTRODUCTION

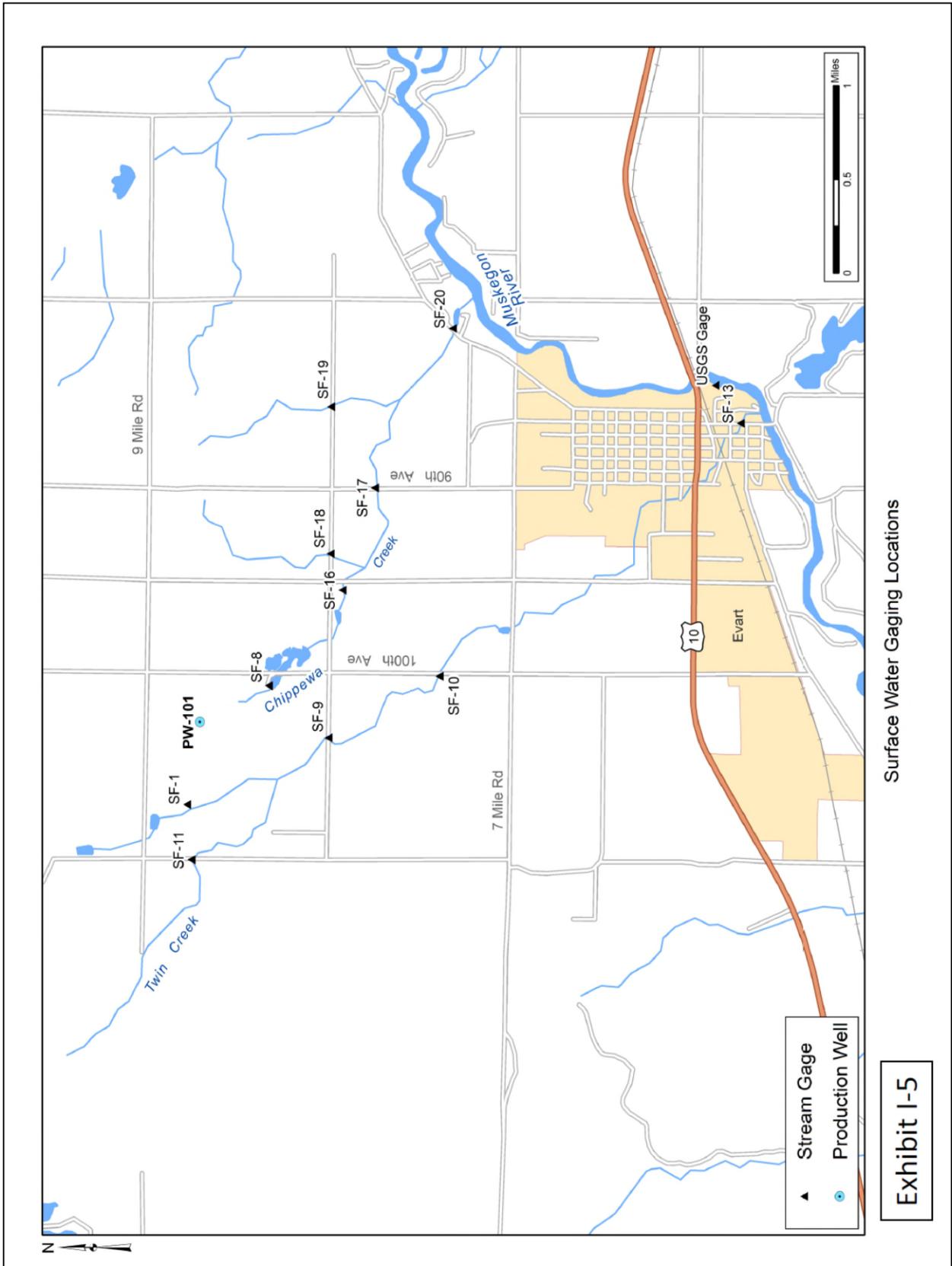
Nestlé owns a water bottling plant in Stanwood, Michigan. From this plant, it produces Ice Mountain Natural Spring Water. The source of water for the Stanwood plant are three water supply wells, one of which is Production Well PW-101, located in Osceola County, Michigan, which is the subject of this contested case.⁷ Water withdrawn from PW-101 is transported by pipeline approximately three miles to the load station in the City of Evart, where the water is loaded into tankers and transported to the Stanwood plant. There are numerous springs and seeps in the area of PW-101, such as White Pine Springs, so that the water from the well can be marketed as “spring water.”⁸ PW-101 is within the Chippewa Creek watershed, close to the topographic divide with the Twin Creek watershed.⁹ Commercial production from PW-101 did not commence until June of 2015. Between 2001 and 2015, Nestlé built the infrastructure for this well, in addition to conducting studies of the aquifer supplying water to the well and conducting environmental surveys of the watersheds that could be impacted by water production from the well. A chronological list of Nestlé’s activities related to the well and these studies is as follows:

The first aquifer test was performed in 2000. During this test, Nestlé conducted a seven-day aquifer test by withdrawing water simultaneously from three test wells at a combined rate of 723 gallons per minute (gpm). PW-101 was drilled in 2001. After drilling was completed, Nestlé conducted an aquifer test in the well in 2001 by withdrawing 400 gpm for seven days, and 700 gpm on the eighth day. Prior to conducting these aquifer tests, beginning in 2000 various monitoring points were established which allowed Nestlé to monitor groundwater levels and stream flows, and to determine how they changed during the testing period.

⁷ One of the other wells is located in Sanctuary Springs near Osprey Lake in Mecosta County, Michigan, which was the subject of the lawsuit entitled *Michigan Citizens for Water Conservation v Nestlé Waters North America, Inc*, 479 Mich 280; 737 NW2d 447 (2007).

⁸ PW-101 is sometimes referred to as the White Pine Springs Well, and the project area surrounding the well is sometimes referred to as the White Pine Springs area. For convenience, the well will be referred to herein as simply PW-101.

⁹ To provide the lay of the land, Exhibit I-5 has been included in this Proposal for Decision on page 7. This Exhibit provides the location of PW-101, Twin and Chippewa Creeks, as well as many of the stream flow gauges located on these streams and their tributaries.



Surface Water Gaging Locations

Exhibit I-5

The monitoring network consists of 39 monitoring wells (MW), including 10 wells instrumented with datalogging pressure transducers that record water levels once per day. There are 11 ten-foot deep groundwater drive points (DP), including 3 instrumented with datalogging pressure transducers that record water levels once per day. The network includes 8 stilling wells to measure surface water levels, including 3 instrumented with datalogging pressure transducers that record water levels once per day. There are 12 staff gauges and 2 surveyed bridge abutments that are used to measure surface water levels in springs, wetlands, and streams. While the network included up to a total of 10 v-notch weirs where spring flows were monitored, there are 3 remaining in the area. Finally, there are 10 gauging stations ¹⁰ where stream flow (SF) is manually measured with an electromagnetic flow meter. Data from at least portions of this network has been collected since 2000.

With respect to environmental studies performed in the area of PW-101, on February 6, 2004, the firm of Tilton & Associates, Inc. prepared a wetland assessment of the wetlands surrounding PW-101 based on data collected in 2003. On August 3, 2006, the firm of King & MacGregor Environmental, Inc. prepared a report of the aquatic communities near Twin and Chippewa Creeks, based on data collected from 2000 to 2004. Aquatic surveys were also conducted in 2003 and annually from 2008 through 2016 by Dr. Workman of Advanced Ecological Management, Inc. His report of the aquatic community was also prepared in 2016. A threatened and endangered (T&E) species report was similarly prepared by Dr. Workman in 2016, based on data collected in 2003 and annually from 2008 through 2016. In 2016, Environmental Consulting & Technology, Inc. prepared a report of potential effects to the wetlands surrounding PW-101, based on data and reports prepared or obtained in 2003 and 2004, and in 2015 and 2016. In 2016, a computer model of the groundwater system surrounding PW-101 was prepared by Dr. Andrews of S.S. Papadopoulos & Associates, Inc., based on data from the monitoring network. These reports and studies were included by Nestlé with its Application filed on July 19, 2016. Most recently, a survey of the fish community in Chippewa Creek was

¹⁰ Gauging stations are sometimes referred to as “gaging” stations, which is a common usage in the industry.

conducted by the DNR on July 24, 2018, and a survey of the fish community in Twin Creek was conducted by the DNR on July 23 and 25, 2018.

With respect to PW-101, Nestlé registered a withdrawal capacity for the well of 150 gpm on March 31, 2008. On April 8, 2008, Nestlé filed an application with EGLE to construct a water supply system. On that same date, Nestlé also filed an application for a permit to utilize the well as a Type IIa non-transient non-community water supply well for water bottling. The permit for water system construction was issued on August 28, 2008. On March 27, 2009, Nestlé received source approval from EGLE to utilize PW-101 as a Type IIa non-transient non-community water system, with a permitted capacity of 150 gpm. On April 16, 2015, Nestlé registered a 100 gpm increase in capacity of PW-101. As of that date, the authorized production capacity from PW-101 was 250 gpm. Nestlé commenced commercial production of water from PW-101 in June of 2015.

Prior to filing the Application which is the subject of this contested case, Nestlé also requested EGLE to conduct a site-specific review under Part 327 to authorize an increase in production capacity of PW-101 to 400 gpm. This site-specific review was conducted by EGLE, and the increase in capacity was approved under Part 327 by letters dated January 5, 2016, and April 9, 2018. Because a permit for this increase in capacity was also required under § 17 of the SDWA, Nestlé filed the Application on July 19, 2016, which is the subject of this contested case.

STATUTORY OVERVIEW

As noted *supra*, Nestlé's Application seeks to increase its withdrawal capacity from PW-101 by 150 gpm – from 250 gpm to 400 gpm. Section 17 of the SDWA is applicable to a person engaged in producing bottled drinking water, such as Nestlé. MCL 325.1017(1). The provision is implicated if the bottler proposes to produce bottled drinking water from “a new or increased large quantity withdrawal,” which is a withdrawal of greater than 200,000 gallons of water per day (gpd). MCL 325.1017(3). Nestlé's proposed withdrawal of 150 gpm constitutes an increase of 216,000 gpd (150 x 60 x 24). In order to obtain a § 17 permit, the applicant must file an application containing “an evaluation of environmental, hydrological, and hydrogeological conditions that exist and

the predicted effects of the intended withdrawal that provides a reasonable basis for the determination under this section to be made.” *Id.*

Upon receipt of such an application, EGLE is required to issue a § 17 permit if (a) the proposed use will meet the applicable standard provided in § 32723 of the NREPA; and (b) “[t]he person will undertake activities, if needed, to address hydrologic impacts commensurate with the nature and extent of the withdrawal” such as activities “related to stream flow regime, water quality, and aquifer protection.” MCL 325.1017(4). The “applicable standard” set forth in § 32723 of the NREPA is elucidated in subsection (6), including the requirement that “[t]he withdrawal will be implemented so as to ensure that the proposal will result in no individual or cumulative adverse resource impacts.” MCL 324.32723(6)(b). The phrase “adverse resource impact” is defined as including “any” of several enumerated occurrences. MCL 324.32701(1)(a). For a cold stream, an adverse resource impact occurs by “decreasing part of the index flow” such that, “the withdrawal will result in a 3% or more reduction in the density of thriving fish populations as determined by the thriving fish curve.” MCL 324.32701(1)(a)(ii)(A). The index flow of a stream is the “50% exceedance flow for the lowest summer flow month of the flow regime, for the applicable stream reach....” MCL 324.32701(1)(x). The determination of whether Nestlé’s proposed withdrawal will cause an adverse resource impact is one of the main issues of contention in this contested case.

MOTIONS FOR SUMMARY DISPOSITION

Prior to the commencement of the hearing on May 20, 2019, Nestlé and the Petitioners both filed Motions for Summary Disposition. In the Order entered on May 14, 2019, this Tribunal elected to reserve the issues raised by the Parties in their Motions for Summary Disposition and to address them in this Proposal for Decision. Each of the Motions will be addresses *infra*.

I. Petitioners’ Motion

Nestlé established a baseline capacity in PW-101 by registering its 150 gpm withdrawal capacity on March 31, 2008. Exhibit I-67. On April 16, 2015, Nestlé registered a 100 gpm increase in withdrawal capacity by use of the Water Withdrawal Assessment

Tool (WWAT).¹¹ Exhibit I-73. In their Motion for Summary Disposition, the Petitioners contend that instead of merely registering these withdrawals, Nestlé should have filed for § 17 permits individually authorizing both withdrawals. See MCL 325.1017. However, the Petitioners' Motion for Summary Disposition is beyond the scope of this contested case.

A basic tenant 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). In general, this Tribunal is charged with conducting a de novo review of an application for a permit. See *National Wildlife Fed'n (No. 2)*, *supra*. 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).

As noted *supra*, this contested case is "an extension of the initial application process for the purpose of arriving at a single final agency decision on the application...." *National Wildlife Fed'n (No. 2)*, 306 Mich App at 379. The Application filed by Nestlé requested the issuance of a § 17 permit authorizing an increase in withdrawal capacity in the amount of 150 gpm over previously registered capacity. See Exhibit I-21. The Petitioners' Motion does not relate to this Application but seeks a determination whether previously registered capacity should have been approved under § 17. As such, the Petitioners seek relief which is beyond the scope of this contested case. The Petitioners' claims that § 17 permits were required for such withdrawals must be brought by the Petitioners in another forum. The Petitioners' Motion for Summary Disposition is **DENIED.**

¹¹ The WWAT is an "internet-based water withdrawal assessment tool...." MCL 324.32706a(1). According to the Division, the WWAT "is a screening tool that separates proposed withdrawals that are unlikely to cause adverse resource impacts from those that require additional site-specific review." The Division's Closing Brief at p 10, citing MCL 324.32706a(2). See also Exhibit R-56.

II. Baseline Capacity

In its first Motion for Summary Disposition, Nestlé seeks a determination of baseline capacity from PW-101. The statutory scheme of Part 327 is premised on the concept of baseline capacity. Initially, a baseline capacity is the “applicable withdrawal capacity as reported to the department ... by the person making the withdrawal in the annual report submitted under section 32707 not later than April 1, 2009...” MCL 324.32701(1)(d)(i). The determination of “new or increased large quantity withdrawals” is in reference to this baseline capacity. Indeed, the phrase “new or increased large quantity withdrawal” is defined as “a new water withdrawal of over 100,000 gallons of water per day ... beyond the baseline capacity of a withdrawal.” MCL 324.32701(1)(cc). Because a “new or increased large quantity withdrawal” is statutorily defined as a withdrawal “beyond the baseline capacity of a withdrawal,” the determination of an “adverse resource impact” in this case is made with reference to the volume of the withdrawal beyond the baseline capacity. MCL 324.32702(1)(a). Since baseline capacity is central to the determination of whether there has been an “adverse resource impact,” it is necessary to resolve the factual and legal questions regarding the use of the phrase in this case.

The phrase “baseline capacity” is awkwardly defined in § 32701(1)(d). MCL 324.32701(1)(d). The Division contends that this definition, while not succinct, is unambiguous. The Division’s Response Brief at p 4. The Parties all rely upon the following portion of the definition contained in subsection (i)(B):

The system capacity used or developed to make a withdrawal on February 28, 2006, if the system capacity and a description of the system capacity are included in an annual report that is submitted under this part not later than April 1, 2009.

MCL 324.32701(1)(d)(i)(B). In this case, PW-101 was drilled in 2001. 4 Tr 1293. On March 31, 2008, Nestlé registered a withdrawal capacity of 150 gpm by submitting to EGLE a Water Use Registration Form. 4 Tr 1296; Exhibit I-67. On March 27, 2009, Nestlé received authority from EGLE to pump water from the well for bottling purposes. 4 Tr 1297; Exhibit I-72. In this source approval letter, EGLE classified the well as a “nontransient noncommunity water system (Type IIa) under the Michigan Safe Drinking Water Act,” with a “permitted capacity” of 150 gpm. *Id.* Finally, Nestlé submitted a Water

Use Reporting Form to EGLE on March 31, 2009, which again reported a “baseline capacity” of 150 gpm for PW-101. Exhibit I-69. Under the statutory definition of baseline capacity, Nestlé reported the withdrawal capacity to the Department no later than April 1, 2009. Exhibit I-67; Exhibit I-69. Indeed, EGLE recognized that this capacity was the “permitted capacity” before April 1, 2009. Exhibit I-72.

The Petitioners challenge Nestlé’s baseline capacity by alleging that Nestlé’s system capacity was not “used or developed to make a withdrawal on February 28, 2006.” MCL 324.32701(1)(d)(i)(B) (emphasis supplied). Particularly, the Petitioners argue that, as of February 28, 2006, Nestlé had not begun pumping from PW-101 and had not applied for or constructed its well house or pipeline. Petitioners’ Response to Nestlé’s Motion on Baseline Capacity at p 3. In its Response Brief, the Division contends that baseline capacity is based on registration, not actual usage. The Division’s Response Brief at p 5. The Division’s contention is consistent with legislative intent expressed in § 32702 that water use “registration and reporting” are essential to (a) “implement the principles of the Great Lakes Charter”; (b) “support the state’s opposition to diversion of waters of the Great Lakes Basin”; and (c) “provide a source of information on water use to protect Michigan’s rights when proposed water losses affect the level, flow, use, or quality of waters of the Great Lakes basin.” MCL 324.32702(1)(b). Moreover, Nestlé argues that PW-101 was “developed” in 2001 when it was drilled. Nestlé’s Reply to Petitioners’ Response to its Motion on Baseline Capacity at p 4. I agree. Based on the Legislative Findings and the record in this case, I find, as a Matter of Fact, that PW-101 was “developed” in 2001 when it was drilled. This finding is consistent with EGLE’s 2009 source approval letter, which indicates that PW-101 has a “permitted capacity” of 150 gpm. Exhibit I-72.

In their Supplemental Brief, the Petitioners once again challenge the baseline capacity of PW-101. That Brief was based on a recent decision of the Court of Appeals in *Nestlé Waters North America, Inc v Township of Osceola*, 2019 WL 6499586 (Mich App Dec 3, 2019) (unpublished).¹² This case was an appeal of the circuit court’s order

¹² Rule 7.215(C)(1) of the Michigan Court Rules of 1985 provides that “[a]n unpublished opinion is not precedentially binding under the rule of stare decisis.” MCR 7.215(C)(1). Moreover, the Supreme Court has held that “it is only opinions issued by the Supreme Court and published opinions of the Court of Appeals that have

which overturned the decision of the Osceola Township Planning Commission denying Nestlé's request for a permit to construct a booster pump building on a location zoned for agricultural uses. The Petitioners rely on that portion of the decision which rejects several of EGLE's findings in issuing the March 27, 2009, source approval letter. Specifically, in determining whether a zoning permit should be issued, the court held that despite any language in the 2009 letter, PW-101 was not a "public supply well" under the SDWA. Slip opinion at *10. However, the court did not invalidate the 2009 source approval letter or otherwise rule on the effectiveness of the authorization contained therein. Indeed, as noted by Nestlé, the Court of Appeals expressly held that its decision "will not have the effect of regulating plaintiff's water withdrawal" and "does not have the effect of regulating plaintiff's removal of water from the ground." Slip Opinion at *7-8. See also Nestlé's Response to Petitioner's Supplemental Brief. Because this contested case is "an extension of the initial application process for the purpose of arriving at a single final agency decision on the application," *National Wildlife Fed'n (No. 2)*, *supra*, the effectiveness of the 2009 source approval letter is beyond the scope of this contested case. Any challenge to the effectiveness of the 2009 source approval letter must be brought by the Petitioners in another forum.

Therefore, based on the record in this case, I find, as a Matter of Fact, that the baseline capacity for PW-101 is 150 gpm.

III. Ecological Impacts

In its second Motion, Nestlé sought summary disposition on the issue of alleged unacceptable ecological impacts from the project that is the subject of this contested case. However, the crux of this case is a determination of whether the requested increase in withdrawal capacity from PW-101 will result in individual or cumulative adverse resource impacts. MCL 324.32723(6)(b). Nestlé contends that summary disposition is appropriate because both the Division and Nestlé agree that no adverse resource impacts have occurred. However, the Petitioners presented evidence in opposition to such testimony. In fact, there are over 1400 pages of testimony in this case. Because facts

precedential effect under the rule of stare decisis." *City of Detroit v Qualls*, 434 Mich 340, 360 n 35; 454 NW2d 374 (1990).

are at issue in this contested case, Nestlé's Motion for Summary Disposition on unacceptable ecological effects is **DENIED**.

ADMINISTRATIVE COMPLETENESS

As noted *supra*, there are two criteria for the issuance of a permit under § 17 of the SDWA, namely the Department must find that (a) the proposed use meets the standards provided in § 32723 of the NREPA; and (b) the applicant will undertake activities to address hydrologic impacts commensurate with the nature and extent of the withdrawal, such as activities related to stream flow regime, water quality, and aquifer protection. MCL 325.1017(4). In their Closing Brief, the Petitioners allege that Nestlé failed to provide an evaluation of environmental, hydrological and hydrogeological conditions that exist at PW-101. Petitioners' Closing Brief at p 27. They also contend that Nestlé failed to provide an evaluation of the predicted effects of the intended withdrawal from PW-101. *Id* at p 28. The Petitioners therefore assert that Nestlé failed to provide evidence in this case which satisfy the statutory requirements.

Section 17 of the SDWA sets forth the requisite information to be included in an application, which is to include an "evaluation of environmental, hydrological, and hydrogeological conditions that exist and the predicted effects of the intended withdrawal that provides a reasonable basis for the determination under this section to be made." MCL 325.1017(3). In effect, the Petitioners are arguing the Application was not administratively complete because Nestlé purportedly did not provide the information required in §17(3). It is well settled that one of the predicates for receiving a final agency decision on an application through the contested case hearing process is "administrative completeness." See *Petition of CCMS Associates, Inc.*, 2000 WL 1597733, *7 (Mich.Dept.Nat. Res.). An application is considered administratively complete when it provides the information required under the statute and rules, along with the information required to review the proposed activity under the applicable statutory criteria. *Petition of Boerner*, 2019 WL 6717176, *17 (Mich.Dept.Nat.Res.).

In this case, Nestlé's application was filed on July 19, 2016. Exhibit I-21; 1 Tr 334-335. After completing an initial review of the information submitted with the Application, the Division sent a Request for Additional Information to Nestlé on February 14,

2017. Exhibit R-83. That request sought, *inter alia*, streamflow measurement data collected in Chippewa and Twin Creeks; a description of the methods used for habitat, fish collection, and macroinvertebrate collection; water temperature details for SF-9, SF-8 and SG-5; and water level measurement, soil samples and monitor well data in the identified wetlands. *Id.* Nestlé provided the requested information with a letter dated March 16, 2017. Exhibit R-83.

After reviewing this information, the Division once again determined that the information provided was insufficient to review the project under the applicable statutory criteria. To that end, the Division sent a second Request for Additional Information to Nestlé on June 21, 2017. Exhibit R-83. That request sought, *inter alia*, stratigraphic logs/data for any boring/well installed in the wetland areas; source and data used to determine the higher precipitation rates; and a detailed water budget analysis. *Id.* Most significantly, the request also sought “[a] revised groundwater model using improved methods to evaluate the interaction between the streams, aquifers, and wetlands.” *Id.* The requested information, including Nestlé’s revised groundwater model, was provided to the Division in November of 2017. See, e.g., Exhibit I-13 (Entitled “An Addendum to the Evaluation of Groundwater and Surface Water Conditions in the Vicinity of Well PW-101, Osceola County. Michigan”). The Division deemed that the Application was complete, and began to process it, culminating in the permit issued on April 2, 2018. Exhibit R-76.

In its Closing Brief, the Division recounted some of the information that was provided by Nestlé during the application process, including: First, Nestlé provided boring logs from 41 monitoring wells that characterize stratigraphy and groundwater conditions. See Figures 3.1a and 3.1b of Exhibit R-82; Exhibit I-21 at pp 81-287. Nestlé also provided well logs from local water supply wells. Exhibit R-83. Second, Nestlé supplied ten years of streamflow data collected monthly from six locations on Twin Creek and five locations on Chippewa Creek and an additional fifteen years of streamflow data collected less frequently from ten locations on Twin Creek and Chippewa Creek. See Appendix C to supplemental response located in Exhibit R-83; Exhibit I-36. Nestlé provided sixty-six years of annual and daily precipitation data from the nearby City of Ewart. Exhibit R-50; Exhibit R-83. Fourth, Nestlé submitted sixteen years of data about both surface water levels and groundwater levels, recorded both daily and less frequently from thirty-nine

locations in the springs, nearby wetlands, nearby monitoring wells, and both Twin and Chippewa Creeks. See, e.g., Exhibit R-48; Exhibit R-53 at p 1; Exhibit R-83 (WPS Water Levels and Flows; Summary of Weir Flow Measurements; Wetland Monitoring Well Long Term Data; Wetland Monitoring Well Data); Table 1 of Exhibit I-13; Table 1 of Exhibit I-19; Exhibit I-21 at pp 329-332, 347-349. Fifth, Nestlé provided nine years of macroinvertebrate data from four sites on Twin Creek and three sites on Chippewa Creek. Exhibit I-21 at pp 427-428. Sixth, Nestlé supplied ten years of field surveys of fish and associated stream habitats, including water temperature, dissolved oxygen, stream dimension, and qualitative habitat descriptions in both creeks. Exhibit R-83 (Appendix D to March 16, 2017 supplemental response). Seventh, Nestlé submitted an assessment of nearby wetlands, including identification of wetlands as perched or connected, information about vegetation within the wetlands, soil borings, monitoring wells, water level measurements, and a wetland delineation. Exhibit I-41; Exhibit I-42; Exhibit I-43. Finally, Nestlé supplied an assessment of T&E aquatic species for seven sample locations. Exhibit I-21 at pp 441-462. In addition to the foregoing, the Application and supporting materials contained a groundwater model and a revised groundwater model of the predicted effects of the intended withdrawal. Exhibit I-13; Exhibit I-17; Exhibit I-18; Exhibit I-19; Exhibit I-20; Exhibit I-21 at pp 288-345; Exhibit I-22.

Upon the review of such information, Ms. Wilmes explained that Nestlé provided data that allowed EGLE to determine the natural variation of aquatic life in Twin Creek and Chippewa Creek. 2 Tr 444. Mr. Kohlhepp testified that Nestlé's evaluation of temperature and dissolved oxygen was adequate. 2 Tr 481-483. Dr. Newcomb also stated that Nestlé's evaluation of fish within Twin Creek and Chippewa Creek was adequate. 2 Tr 609-610. Dr. Newcomb also agreed with Nestlé's evaluation of T&E species. 2 Tr 611-612. While Nestlé's reports regarding identification of perched wetlands contained discrepancies, such data was sufficient for Mr. Pennington to evaluate the wetlands after he conducted a site visit near PW-101. 2 Tr 529-530, 539. Finally, with respect to the revised groundwater model, Ms. Van Dyke testified that it "is able to predict the measured water level and flow data with low residual differences between the measured and the calculated values considering that the water levels are reported in terms of thousands of feet." 1 Tr 130-131.

Based on this record, I find, as a Matter of Fact, the information and data supplied by Nestlé was sufficient to provide an evaluation of environmental, hydrological, and hydrogeological conditions that exist at PW-101, and the predicted effects of the intended withdrawal, as required under § 17(3). MCL 325.1017(3). Accordingly, the Petitioners' contention concerning the sufficiency of the information provided in the application and in response to the Division's subsequent requests is without merit.

FINDINGS OF FACT

Production well PW-101 is a Type IIa public water supply well that was drilled in 2001 in south-central Osceola County, Michigan, approximately two and a half miles northwest of the City of Ewart. The well is located in the Northeast one-quarter of the Southwest one-quarter of the Northeast one-quarter (NE/4 SW/4 NE/4) of Section 20, Township 18 North, Range 8 East (T18N, R8E), Osceola Township, Osceola County, Michigan. It is located south of 9 Mile Road and West of 100th Avenue. It withdraws water from a glacial sand and gravel aquifer. The glacial deposits in the vicinity of the well are estimated to be between 400 to 600 feet thick. The well was constructed with an 87-foot stainless steel screen, the top of which was set 94 feet above grade. Stainless steel casing extends from the top of the screen to 1.6 feet above grade. A submersible pump is suspended on 66 feet of 4-inch diameter stainless steel drop pipe and is 64.4 feet below grade (29.6 feet above the top of the well screen). Exhibit I-21 at pp 6, 7, 8, 296.

The well is located within the Chippewa Creek watershed, close to the topographic divide with the Twin Creek watershed. Chippewa Creek and Twin Creek are tributaries of the Muskegon River, which is to the south. The area surrounding the well is characterized by gently rolling terrain at elevations between 1,000 feet above mean sea level along the Muskegon River to about 1,500 feet above mean sea level in the upland areas north of the well. The area surrounding the well is forested or agricultural land with a few residences. From a regional perspective, the area is bounded on the west by US-131, on the south by US-10, on the east by M-66, and on the northeast by M-115. Stream systems are located to the west, south and east of PW-101. However, there are no stream systems immediately north of the well. As a result, these lands act as a large

recharge area for the aquifer which feeds the well. Exhibit I-21 at pp 7, 296; Exhibit I-5; Exhibit I-14; 1 Tr 117.

The Muskegon River is the second-longest river in Michigan, and the second-longest tributary of Lake Michigan. It flows from Houghton Lake to Lake Michigan. The average flow of the River is 483,000 gpm for the period 2000 through 2015. The index flow during the same period is approximately 225,000 gpm, with August being the calendar month with the lowest median flow. Exhibit I-21 at p 12.

With respect to Chippewa Creek, its westernmost perennial headwaters are located approximately 1,700 feet southeast of PW-101. It is a cold water stream. It flows generally east-southeast for approximately 2.5 miles and enters the Muskegon River northeast of the City of Ewart. The surface catchment area of Chippewa Creek is 3.93 square miles. A series of low-head dams are located on Chippewa Creek southeast of PW-101. These dams create a series of recreational impoundments known as the Decker Ponds, which consist of an area of approximately 16.6 acres. The median flow of Chippewa Creek and one of its tributaries was measured at 2,058 gpm (at SF-17) and 195 gpm (at SF-19), respectively. The index flow for these water courses was measured at 1,892 gpm and 170 gpm, respectively. Exhibit I-21 at p 12; 1 Tr 364; Exhibit I-5.

With respect to Twin Creek, its headwaters are a series of wetlands east of Strawberry Lake, approximately 2.5 miles west-northwest of PW-101. It is also a cold water stream. This creek is approximately 5.5 miles in length and flows southeasterly to the Muskegon River near the 80th Street bridge in the City of Ewart. The surface catchment area of Twin Creek is 22.15 square miles. There are two dams located on the tributary branch of Twin Creek. The first is located approximately one-half mile north of 9 Mile Road, which creates a 3.8-acre impoundment. The second dam is located south of 9 Mile Road, which creates a 4.5-acre impoundment. A third low-head dam is located on the main branch of Twin Creek north of 7 Mile Road, which creates a 0.6-acre impoundment. Stream flow for Twin Creek, measured at SF-13, was 3,819 gpm, with an index flow of 3,326 gpm. Exhibit I-21 at p 13; 1 Tr 364; Exhibit I-4; Exhibit I-5.

PW-101 was drilled in 2001. 4 Tr 1293. On March 31, 2008, Nestlé registered a withdrawal capacity of 150 gpm by submitting to EGLE a Water Use Registration Form.¹³ 4 Tr 1296; Exhibit I-67. On April 8, 2008, Nestlé filed an application with EGLE to construct a water supply system. Exhibit I-70. On that same date, Nestlé also filed an application for a permit to utilize the well as a Type IIa non-transient non-community water supply well for water bottling. Exhibit I-70; 4 Tr 1297. The permit for water system construction was issued on August 28, 2008. Exhibit I-71. On March 27, 2009, Nestlé received source approval from EGLE to utilize PW-101 as a Type IIa non-transient non-community water system, with a permitted capacity of 150 gpm. Exhibit I-72. On April 16, 2015, Nestlé used the WWAT to register a 100 gpm increase in capacity of PW-101. Exhibit I-73. Nestlé commenced commercial production of water from PW-101 in June of 2015. 4 Tr 1297; Exhibit I-23.

Prior to filing the Application which is the subject of this contested case, Nestlé also requested EGLE to conduct a site-specific review under Part 327 to authorize an increase in production capacity of PW-101 to 400 gpm. Exhibit I-74. This site-specific review was conducted by EGLE, and the increase in capacity was approved under Part 327 by letters dated January 5, 2016, and April 9, 2018. *Id.* Because a permit for this increase in capacity was also required under § 17 of the SDWA, Nestlé filed the Application which is the subject of this contested case on April 16, 2015, seeking approval of an increase in withdrawal capacity to 400 gpm from PW-101.¹⁴ Exhibit I-21.

After completing an initial review of the information submitted with the Application, the Division sent a Request for Additional Information to Nestlé on February 14, 2017. Exhibit R-83. Nestlé responded to this Request by letter dated March 16, 2017. Exhibit R-83 (which is a letter from Golder Associates to EGLE).¹⁵ On June 21, 2017, the Division sent a second Request for Additional Information to Nestlé. Exhibit R-83. In this Request, the Division sought, *inter alia*, “[a] revised groundwater model using improved methods to evaluate the interaction between the streams, aquifers, and wetlands.” *Id.*

¹³ “[A] registration is separate and distinct from a permit under Part 327.” 1 Tr 360.

¹⁴ To understand the magnitude of the proposed withdrawal, it should be known that the City of Evert located southeast of PW-101 currently has a water supply well with a permitted capacity of 500 gpm. 4 Tr 1310.

¹⁵ This Letter can be found in Exhibit I-83 in a file entitled “Nestle Response to Feb Request.”

Nestlé's revised model was provided to the Division in November of 2017. See, e.g., Exhibit I-13 (Entitled "An Addendum to the Evaluation of Groundwater and Surface Water Conditions in the Vicinity of Well PW-101, Osceola County, Michigan"); Exhibit R-46; 2 Tr 113.

The Division issued Permit No. 1701 under § 17 of the SDWA on April 2, 2018, increasing the authorized withdrawal of water from PW-101 from 250 gpm to 400 gpm. Exhibit R-76. That permit contains numerous conditions that must be met by Nestlé. An excerpt of some of the relevant permit conditions is attached to this Proposal for Decision as an Appendix.

ACT 399 OF 1976: SAFE DRINKING WATER ACT

I. The Regulatory Framework

Section 17 of the SDWA provides that a person engaged in producing bottled drinking water in the state of Michigan must satisfy the requirements of that section. MCL 325.1017(1). Specifically, a person proposing to withdraw more than 200,000 gallons of water per day must file an application under § 17(3). MCL 325.1017(3). That application must contain "an evaluation of environmental, hydrological, and hydrogeological, conditions that exist and the predicted effects of the intended withdrawal...." *Id.* In order to obtain a permit under § 17, the Department must find that (a) the proposed use meets the standards provided in § 32723 of the NREPA; and (b) the applicant will undertake activities to address hydrologic impacts commensurate with the nature and extent of the withdrawal, such as activities related to stream flow regime, water quality, and aquifer protection. MCL 325.1017(4).

The relevant standards provided in § 32723 include the following:

- (a) All water withdrawn, less any consumptive use, is returned either naturally or after use, to the source watershed.
- (b) The withdrawal will be implemented so as to ensure that the proposal will result in no individual or cumulative adverse resource impacts. Cumulative adverse resource impacts under this subdivision shall be evaluated by the department based upon available information gathered by the department.

- (c) Subject to section 32726, the withdrawal will be implemented so as to ensure that it is in compliance with all applicable local, state, and federal laws as well as all legally binding regional interstate and international agreements, including the boundary waters treaty of 1909.
- (d) The proposed use is reasonable under common law principles of water law in Michigan.
- (e) For permit applications received on or after January 1, 2009, the applicant has self-certified that he or she is in compliance with environmentally sound and economically feasible water conservation measures developed by the applicable water user's sector under section 32708a or has self-certified that he or she is in compliance with environmentally sound and economically feasible water conservation measures developed for the water use associated with that specific withdrawal.
- (f) The department determines that the proposed withdrawal will not violate public or private rights and limitations imposed by Michigan water law or other Michigan common law duties.

MCL 324.32723(6)(a) – (f). With respect to the phrase “adverse resource impacts” referenced in § 32723(6)(b), it is defined for a cold stream as meaning the “withdrawal will result in a 3% or more reduction in the density of thriving fish populations as determined by the thriving fish curve.” MCL 324.32701(1)(a)(ii)(A). By statute, the phrase “adverse resource impacts” also refers to “reducing the flow of a stream or river by more than 25% of its index flow.” MCL 324.32701(1)(a)(vi). “Index flow” is defined as “the 50% exceedance flow for the lowest summer flow month of the flow regime, for the applicable stream reach....” MCL 324.32701(x). The Legislative findings of Part 327, Great Lakes Preservation, note that the waters of the state of Michigan are valuable public natural resources to be held in trust for the use and enjoyment of present and future residents. MCL 324.32702(1)(c). As part of that resource management, “[w]ater use registration and reporting are essential ... to provide a source of information on water use....” MCL 324.32702(1)(b).

II. Jurisdiction

Under § 17 of the SDWA, “[a] person who proposes to engage in producing bottled drinking water from a new or increased large quantity withdrawal of more than 200,000 gallons of water per day from the waters of the state ... shall submit an application to the department....” MCL 325.1701(3). The phrase “new or increased large quantity withdrawal” is not defined in the SDWA. See MCL 325.1002. However, that phrase is defined in Part 327 as “a new water withdrawal of over 100,000 gallons of water per day average in any consecutive 30-day period ... beyond the baseline capacity of a withdrawal.” MCL 324.32701(1)(cc). The Division used this definition in construing the language from § 17 and noted that, in the instant Application, “the total request above baseline is 250 gpm or 360,000 gallons per day (gpd) which exceeds the 200,000 gpd threshold that requires a permit.” Exhibit R-46. It is uncertain whether a definition from Part 327 should be used to define a phrase in the SDWA. Nevertheless, the requested increase in capacity from the well – over the registered capacity of 250 gpm (Exhibit I-73) – is 150 gpm, which is 216,000 gpd. Because, under either interpretation of the statute, Nestlé seeks an increased large quantity withdrawal of more than 200,000 gpd, I conclude, as a Matter of Law, that EGLE has jurisdiction over the increased withdrawal requested by Nestlé.

III. Standard of Review

In their Closing Briefs, the Parties have asserted varying standards of review for this contested case. However, as the Parties agree, this contested case is “an extension of the initial application process for the purpose of arriving at a single final agency decision on the application....” *National Wildlife Fed’n v Department of Env’tl Quality (No. 2)*, 306 Mich App 369, 379; 856 NW2d 394 (2014). As such, the Parties are obligated to put on proofs to support their respective positions. Therefore, a party may not simply argue that the other party failed to meet their burden. This Tribunal will review the proofs entered into evidence by all of the Parties to determine whether Nestlé is entitled to a permit under the statutory criteria.

IV. The Standards of § 32723

As noted *supra*, EGLE must find, before a permit can be issued, that the proposed use meets the standards contained in § 32723 of the NREPA. MCL 325.1017(4)(a). In their Closing Briefs, the Parties agree that the “standards” are set forth in § 32723(6). MCL 324.32723(6). Each of these standards will be reviewed *infra*.

A. Water Returned to the Source Watershed

The first requisite of § 32723(6) is that “[a]ll water withdrawn, less any consumptive use, is returned either naturally or after use, to the source watershed.” MCL 324.32723(6)(a). By statute, the phrase “source watershed” is defined as “the watershed from which a withdrawal originates.” MCL 324.32701(1)(kk). However, when water is withdrawn from the watershed of a direct tributary to a Great Lake, “the source watershed shall be considered to be the watershed of that Great Lake and its connecting waterways, with a preference for returning water to the watershed of the direct tributary from which it was withdrawn.” *Id.*

In its Closing Brief, Nestlé first contends that the withdrawal is from the watershed of the Muskegon River, a direct tributary of Lake Michigan. Nestlé’s Closing Brief at p 35. Neither the Petitioners nor the Division contested this assertion during the contested case hearing. While there does not appear to be a dispute among the Parties, it is necessary for this Tribunal to make a Finding of Fact as to each of the standards set forth in §32723(6). MCL 324.32723(6)(a). Accordingly, a review of the facts in this case is warranted.

As noted in the Findings of Fact, *supra*, PW-101 is located within the Chippewa Creek watershed, close to the topographic divide with the Twin Creek watershed. Exhibit I-21 at p 8. Chippewa Creek and Twin Creek are tributaries of the Muskegon River. *Id.* These tributaries would therefore be located within the watershed of the Muskegon River, which is the second-longest river in Michigan and the second-longest tributary of Lake Michigan. Exhibit I-21 at pp 12, 23. As such, I find, as a Matter of Fact, that the Muskegon River is a direct tributary of Lake Michigan. Hence, by statute, the watershed for the Muskegon River is considered the watershed of Lake Michigan, which I so find.

In its Application, Nestlé notes that “[a] small amount of water withdrawn from the White Pine Springs [PW-101] well may be discharged to groundwater and surface water at each of the following: (1) the well site in Osceola Township, (2) [Nestlé’s] load station in the City of Evert, and (3) the Stanwood bottling plant.” Exhibit I-21 at p 23. In addition, Ms. Anderson-Vincent similarly testified that limited amounts of water withdrawn from PW-101 are discharged to the ground at the wellhead. 4 Tr 1301. Also, “a limited amount of water is used to sanitize the pipeline and equipment at the load station” in the City of Evert. *Id.* Moreover, she stated that the water that is lost at the Stanwood bottling plant – through overflow of bottles, use in sanitization, or other bottling processes – is discharged to a nearby stream located in the Muskegon River watershed. 4 Tr 1301-1302. She further testified that “water not bottled is returned to the source watershed.” 4 Tr 1302. This evidence is uncontroverted in the record. Therefore, I find, as a Matter of Fact, that all water withdrawn from PW-101, less any consumptive use, is returned either naturally or after use to the source watershed.

B. No Adverse Resource Impacts

Under § 32723(6)(b), the withdrawal must be implemented to ensure that “the proposal will result in no individual or cumulative adverse resource impacts....” MCL 324.32723(6)(b). The phrase “adverse resource impact” is defined as including “any” of several enumerated occurrences. MCL 324.32701(1)(a). Two of the occurrences are implicated in this case:

1. “[D]ecreasing the flow of a cold river system by part of the index flow”¹⁶ such that, “[f]or a cold stream, the withdrawal will result in a 3% or more reduction in the density of thriving fish populations as determined by the thriving fish curve.” MCL 324.32701(1)(a)(ii)(A). For purposes of clarity, this definition of adverse resource impact will be referred to as the 3% rule.
2. “[D]ecreasing the flow of a stream or river by more than 25% of its index flow.” MCL 324.32701(1)(a)(vi). For purposes of clarity, this definition of adverse resource impact will be referred to as the 25% rule.

The facts in this case will be reviewed to determine the applicability of these rules.

¹⁶ The phrase “index flow” is defined as “the 50% exceedance flow for the lowest summer flow month of the flow regime, for the applicable stream reach....” MCL 324.32701(1)(x).

First, with respect to the 3% rule, Ms. Clark testified that Twin and Chippewa Creeks are cold water streams. 1 Tr 364. Dr. Luttenton described Chippewa Creek as a “cold water trout stream.” 3 Tr 758. Dr. Workman also stated that Twin and Chippewa Creek are cold water streams. 4 Tr 1193, 1202. Therefore, I find, as a Matter of Fact, that Twin and Chippewa Creeks are cold water streams. Because Twin and Chippewa Creeks are cold water streams, I conclude, as a Matter of Law, that the 3% rule is applicable in this contested case.

Second, despite the clear language of the 25% rule, the Division’s witnesses testified that Nestlé could not decrease the flow of a stream or river by more than 20% of index flow. 1 Tr 128, 137, 364, 406; 2 Tr 591, 628. At first blush, it appears that the Division is improperly reducing the 25% rule to 20%. MCL 324.32701(1)(a)(vi). However, Ms. Van Dyke explained that “an adverse resource impact to a cold stream system is based on a withdrawal that will cause a 3% or higher reduction in the density of the thriving fish population based on Michigan’s established thriving fish population curves. This has been correlated with a 20% or greater reduction in the index flow in a cold stream system.” 1 Tr 137. Ms. Van Dyke’s testimony also explained that, in order to satisfy the 3% rule, an applicant cannot reduce the index flow of a cold stream by more than 20%. See also Division’s Supplemental Brief at p 2; 3 Tr 927. In other words, the 3% rule provides a more stringent standard of “adverse resource impact” than the standard contained in the 25% rule. Based on the foregoing, the application of the 3% rule is consistent with the 25% rule as expressed in MCL 324.32701(1)(a)(vi). Because the testimony concerning the 3% rule was not controverted by any party to this contested case, I find, as a Matter of Fact, that a 20% or greater reduction in the index flow in a cold stream system will cause a 3% or higher reduction in the density of the thriving fish population based on Michigan’s established thriving fish population curves.

In determining whether the proposed withdrawal will cause an adverse resource impact, this Tribunal will review the testimony related to both the anticipated reduction in index flow, as well as the anticipated effects of the withdrawal on the thriving fish population of Twin Creek and Chippewa Creek.

1. Reduction in Index Flow

In order to determine whether a proposed withdrawal will cause an adverse resource impact, this Tribunal must ascertain whether the proposed withdrawal will cause a 20% or greater reduction in the index flow. Evidence of the anticipated effects of the proposed withdrawal was submitted in this case by virtue of a computer model. Nestlé's first computer model prepared by Dr. Andrews was presented with its Application. See Exhibit I-19. The original model domain consisted of a land area from the Muskegon River to west of Strawberry Lake on the west, to south of Big Long Lake on the north, and to west of Whetstone Creek and its watershed on the east. See Exhibit I-14. The regional extent of the first computer model covers an area over 50 square miles. 1 Tr 123. In her review of Nestlé's computer model, Ms. Van Dyke determined that "the first conceptual model was not sufficiently complex to adequately assess the potential impacts of the proposed water withdrawal on the streams, seeps, and springs." 1 Tr 80.

Accordingly, in its second Request for Additional Information to Nestlé dated June 21, 2017, the Division requested "[a] revised groundwater model using improved methods to evaluate the interaction between the streams, aquifers, and wetlands." Exhibit R-83. In support of its revised computer model, Nestlé was required to provide, at a minimum, 20 types of information, including the computer inputs utilized by Nestlé so that the Division could confirm the results of the model in its computer program Groundwater Vistas. *Id.* Nestlé's revised model was provided to the Division on November 17, 2017. Exhibit I-13; 2 Tr 113. The model domain for the revised model consisted of a regional land area from west of US-131 in the west, to the Muskegon River to the South, to east of Middle Branch River (which is east of M-66) on the east, and to north of Rose Lake and the East Branch of the Pine River to the north. See Exhibit I-14. The regional extent of the revised computer model covers an area over 320 square miles. 1 Tr 82. This model domain was established to include all locations where potential groundwater level changes from pumping could be greater than 0.05 feet. 3 Tr 877.

With respect to the revised computer model, Ms. Van Dyke testified that "the groundwater model is able to predict the measured water level and flow data with low residual differences between the measured and the calculated values considering that the water levels are reported in terms of thousands of feet." 1 Tr 130-131. Ms. Van Dyke

opined that, “I could find no evidence that this increased withdrawal to 400 gpm will cause an adverse resource impact based on the data available and the groundwater model predictions.” 1 Tr 137. Similarly, Dr. Andrews testified that most of the flow reductions that result from the requested increase of capacity will occur in Twin and Chippewa Creeks. 3 Tr 878. He testified that the calculated change in stream levels for these two Creeks is less than 1/4 of an inch. 3 Tr 881. Based on the model, the calculated reduction in index flow at the mouth of Twin Creek (SF-13) and Chippewa Creek (SF-20) is less than 4%. Exhibit I-8. Finally, Dr. Andrews opined that a 250 gpm increase in pumping will not result in a reduction in index flow by more than 20%. 3 Tr 927-928.

a. Challenges to the Computer Model

Dr. Hyndman raised several challenges to the revised computer model proffered by Nestlé. The revised computer model was indeed the principle method by which Nestlé predicted the effects of the intended withdrawal in order to provide a reasonable basis for the determination for the permitting decision under § 17. MCL 325.1017(3). As a result, each of Dr. Hyndman’s challenges to the revised model will be reviewed.

(i) Integrated Surface Water/Groundwater Model

Initially, Dr. Hyndman testified that “[m]odels ... can provide an excellent tool to examine how existing or proposed alterations to a system will affect its flows and levels.” 1 Tr 233. He noted that, “[c]omplex models can give more precise answers, but too many unknown parameters can lead to misleading results, particularly when those models are used to make predictions outside the conditions to which they were calibrated.” *Id.* With this background, Dr. Hyndman first opined that Nestlé should have prepared an integrated surface water/groundwater model. 1 Tr 219. He stated that such a model would “use input weather station data, collected at the site, as well as available from sources such as [the National Oceanic and Atmospheric Administration (NOAA)] and [the National Aeronautical and Space Administration (NASA)], along with satellite imagery of vegetation characteristics, to predict groundwater recharge, water table levels, and streamflows through time.” 1 Tr 238. Finally, in his rebuttal testimony, Dr. Hyndman stated that “the

information that is required for an integrated model beyond what is input into a ground-water model is readily available from the internet.” 5 Tr 1391.

In response to Dr. Hyndman’s testimony, Ms. Van Dyke stated that integrated surface water/groundwater models are tools that can provide the opportunity to better simulate the hydrologic cycle at a local scale, such as immediately surrounding PW-101. 1 Tr 81. However, “the potential impact predictions of integrated models are often less” than groundwater models, but “the predictions of the groundwater models alone are likely to be more conservative and less accurate....” *Id.* In this case, Ms. Van Dyke opined that Nestlé’s revised groundwater model “was able to reproduce the calibration water level and stream flow targets with low residual errors....” *Id.* She concluded that “the level of detail needed to meet the goals of the Nestlé groundwater model predictions did not require stepping up to an integrated groundwater-surface model at this point.” *Id.*

Dr. Andrews testified that his model was based on 16 years of site-specific data obtained from monitoring wells and stream gauges near PW-101. 3 Tr 878, 902; 5 Tr 1443. Moreover, he stated that both integrated models and groundwater models require a balance between inflows (groundwater recharge) and outflows (stream flows plus water withdrawals from PW-101). 5 Tr 1443. He noted that none of the recharge values espoused by Dr. Hyndman came close to balancing with outflows. *Id.*

It is axiomatic that the weight given to testimony is not dependent upon the number of witnesses. *Dewey v Perkins*, 295 Mich 611, 616; 295 NW 333 (1940). In cases tried without a jury, the trier of fact may give such weight to which the testimony, in his opinion, is entitled. *Lather v Michigan Public Service Co*, 332 Mich 683, 690; 52 NW2d 551 (1952). Moreover, the resolution of conflicting expert testimony falls within the province of the trier of fact. See *Goodman v Stafford*, 20 Mich App 631, 637; 174 NW2d 593 (1969).

In this case, the Division, Nestlé and the Petitioners all presented expert witnesses to testify as to the appropriate model to be employed. All three expert witnesses were professionals in their fields and were highly credentialed. While the Petitioners note that “Dr. Hyndman ... has spent nearly 20 years modeling the entire Muskegon River watershed,” Petitioners’ Closing Brief at p 10, Dr. Hyndman was not asked by the Petitioners to prepare a model in this case. 1 Tr 265. From the record, there is no evidence to indicate whether an integrated model would yield any different results from Nestlé’s

revised groundwater model. Moreover, Dr. Hyndman testified that he cannot quantify the predicted impacts from pumping in this case because he did not prepare a model. 1 Tr 283, 308. In fact, while the inputs to Nestlé's revised groundwater model were available, Dr. Hyndman did not run his own groundwater model to determine if the results were accurate. 1 Tr 272. Therefore, from the record, the only evidence in the case regarding the predicted effects from increased pumping from PW-101 is Nestlé's revised groundwater model. As a result, I am unwilling to reject the model employed by Nestlé based solely upon the uncorroborated testimony of Dr. Hyndman. Accordingly, based on the record in this case, I find, as a Matter of Fact, that Nestlé's revised groundwater model is entitled to receive greater weight than the testimony offered by Dr. Hyndman. See *Petition of Boerner*, 2019 WL 6717176, *51 (Mich.Dept.Nat.Res.). For this reason, I reject the Petitioners' contention that an integrated surface water/groundwater model is more appropriate than Nestlé's revised groundwater model.

(ii) Low Conductivity Zone

During his direct examination, Dr. Hyndman made three challenges to Nestlé's revised groundwater model. 1 Tr 214-215. His first challenge was to a low conductivity zone to the south of PW-101. *Id.* In support of his challenge, Dr. Hyndman testified that, "[w]hile some of the well cores taken in that area showed low-conductivity sediments, extrapolating those limited measurements to create a continuous low-conductivity zone ... that nearly perfectly underlies the two streams in question is difficult to justify...." 1 Tr 215. In her rebuttal testimony, Ms. Van Dyke responded that the distribution of low conductivity in Nestlé's revised computer model "is variable and not a continuous low conductivity zone...." 5 Tr 1428. Dr. Andrews, on the other hand, noted that, "[d]ata compiled and interpreted from a large number of borehole logs indicated the subsurface glacial geologic materials change from almost entirely sand near PW-101 to a mixture of mostly clay to the south in the vicinity of Twin and Chippewa Creek." 3 Tr 910-911. Additionally, he testified that, "I determined that the observed stream flows and groundwater levels could only be explained with a conceptual model that incorporated a change in aquifer characteristics from primarily sand to much finer grained materials to the south of PW-101 in the vicinity of Twin Creek and Chippewa Creek." 3 Tr 911. In other words,

the measured flows and measured water levels could not be replicated in the computer model without the lower conductivity zones near Twin Creek and Chippewa Creek. I find that Dr. Andrews' testimony is credible and entitled to receive greater weight. Therefore, Dr. Hyndman's challenge to the computer model based on low conductivity zones is without merit.

(iii) Groundwater Recharge

Dr. Hyndman's next challenge to the computer model is based on groundwater recharge. 1 Tr 215. Specifically, he testified that Nestlé's revised groundwater model "assumes a static distribution of recharge in space, and does not assess year-to-year variability which clearly occurs in reality." 1 Tr 217. In her testimony, Ms. Van Dyke explained that the recharge values used in Nestlé's initial model were too high overall and were not appropriate based on published and local climate station data. 1 Tr 114. However, with respect to Nestlé's revised groundwater model, Ms. Van Dyke noted that the recharge data was based on United States Geological Survey (USGS) data and the Michigan State University/EGLE Groundwater Inventory Mapping Project data estimates that varied over the regional model area. 1 Tr 124. Ms. Van Dyke further testified that, "based upon my review, the modified model was determined to be capable of matching the groundwater levels and stream flows measured to date in conditions that are consistent with the precipitation and recharge assumptions applied in the model." 1 Tr 126-127. She opined that, "the overall predictions from the model match the target water levels and stream flows with low residual differences." 1 Tr 127. I find that Ms. Van Dyke's testimony is credible and entitled to receive greater weight. Therefore, Dr. Hyndman's challenge to the computer model based on groundwater recharge is without merit.

Nevertheless, Ms. Van Dyke noted that, "the groundwater model will need to be verified with future data and the recharge and other climate related conditions assumed in the conceptual model should be periodically reviewed for continued validity." 1 Tr 127. Indeed, it should be noted that the permit contains conditions which call for the continued verification of Nestlé's revised computer model with newly obtained monitoring data. Specifically, the permit provides that "[t]he effectiveness of the groundwater model shall

be reviewed on an annual basis” including an “assessment of the continued validity of the recharge assumptions along with supporting data.” Exhibit R-76 at p 9. I find, as a Matter of Fact, that the monitoring conditions in the permit related to groundwater recharge are adequate.

(iv) Evapotranspiration

Dr. Hyndman’s third challenge to the computer model is based on evapotranspiration. 1 Tr 215. Evapotranspiration (ET) consists of both evaporation, which is the amount of water going directly to the atmosphere, and transpiration, which is the process by which plants transpire water to the atmosphere. 1 Tr 288. Dr. Hyndman suggested that “[f]our or more feet of water a year can evaporate from wetlands, or be transpired by wetland plants....” 1 Tr 217. Dr. Hyndman testified that Nestlé’s revised groundwater model “lacks any evapotranspiration from groundwater-connected wetlands and includes groundwater recharge on those wetlands, which will significantly overestimate water table levels near those wetlands, particularly during dry seasons.” 1 Tr 215.

In response, Dr. Andrews testified that Nestlé’s revised groundwater model used 30 inches (almost 3 feet) as annual ET from the wetlands, based on data from Michigan State University Meteorological Station at Sackett Farm, Mecosta County, Michigan. 3 Tr 919. Dr. Andrews first notes that Dr. Hyndman’s 4-foot figure for ET greatly exceeds the information obtained from Sackett Farm, and is inconsistent with the large number of perched wetlands in the vicinity of PW-101 that remain wet all year. 3 Tr 920. Based on 4-feet of ET, Dr. Andrews opined that perched wetlands would be seasonally dry since they receive no input of water from groundwater. *Id.* Dr. Andrews further opined that the more than 1,000 wetlands within the model domain, most of which are perched, is empirical evidence that precipitation substantially exceeds ET within these wetlands. *Id.* I find that Dr. Andrew’s testimony is credible and entitled to receive greater weight. Therefore, Dr. Hyndman’s challenge to the computer model based on ET is without merit.

b. Measurement of Index Flow

There are two questions that need to be resolved before this Tribunal can determine whether Nestlé’s proposed withdrawal will constitute an adverse resource impact.

First, this Tribunal must make a factual finding where index flow is to be measured on Twin Creek and Chippewa Creek. Second, this Tribunal must conclude from the statutory scheme the applicable portion of Nestlé's proposed withdrawal to be used in the determination of an adverse resource impact. Each of these questions will be addressed *infra*.

(i) Where Is Index Flow Measured?

Ms. Clark testified that index flow is measured at the mouth of each watershed management area. 1 Tr 373. Hence, the index flow for Twin Creek and Chippewa Creek is to be measured at the mouths of these two stream systems. *Id.* No testimony from any other party to this contested case was proffered to rebut this testimony. Therefore, I find, as a Matter of Fact, that index flow for Twin Creek and Chippewa Creek is to be determined at the mouths of these two stream systems. Therefore, index flow for Twin Creek is to be measured at SF-13 and the index flow for Chippewa Creek is to be measured at SF-20, which are the stream flow gauges at the mouths of these two creeks. A map depiction of the location of SF-13 and SF-20 is contained in Exhibit I-5, *supra*.¹⁷

(ii) What Percentage of the Withdrawal Is Measured?

The second question to be answered is what percentage of Nestlé's withdrawal is to be measured to determine if it exceeds 20% of index flow. To understand this query, it is important to remember that Nestlé's registered baseline capacity from PW-101 is 150 gpm. See the Motion for Summary Disposition section of this Proposal for Decision. On April 16, 2015, Nestlé registered a 100 gpm increase in withdrawal capacity by use of the WWAT. Exhibit I-73. By virtue of its Application in this case, Nestlé seeks to increase its authorized capacity to 400 gpm. Exhibit R-28; Exhibit I-21. From the statute, it is unclear what percentage of the proposed withdrawal should be used in the determination of an adverse resource impact. The Petitioners contend that the entire 400 gpm should be

¹⁷ SF-13 is located at the 80th Street bridge in Evart, approximately 800 feet upstream of the mouth of Twin Creek at the Muskegon River. Exhibit R-28 at p 12; Exhibit I-21 at p 13. There is no direct measurement at SF-20, which is located near the mouth of Chippewa Creek. Exhibit R-57. For the location of SF-20, see Exhibit I-5. To determine a measurement amount for SF-20, the streams flows measured at the mouths of the two branches of Chippewa Creek (SF17 and SF-19) are added together. Exhibit R-57. For the location of SF-17 and SF-19, see Exhibit I-5, *supra*.

used in this computation. See, e.g., 1 Tr 213. The Division, on the other hand, suggests that the total request above baseline (or 250 gpm) should be used in this determination.

To understand the Division's position, it is helpful to review the testimony of Ms. Clark, as follows:

The allowed reduction in stream index flow, as defined in Part 327, depends on the stream's temperature classification. Twin and Chippewa Creeks are both classified as cold streams. Part 327 allows for a maximum decrease in stream index flow of 20 percent for cold streams. This reduction is cumulative for all new or increased large quantity withdrawals developed since October 1, 2008. No other new or increased withdrawals were identified in the Twin or Chippewa Creek watershed during the review. Under Part 327, withdrawal capacity reported to the department no later than April 1, 2009 qualifies as 'baseline capacity' and is considered an approved existing withdrawal amount. Nestle has an established baseline capacity of 150 gpm, which is not subject to the prohibition of causing an [adverse resource impact (ARI)].

1 Tr 364. Based on Ms. Clark's testimony, it is helpful to review the provisions of Part 327.

First, according to the definition, "index flow" is to be calculated as of October 1, 2008. MCL 324.32701(1)(x). Second, to qualify as baseline capacity, it must be registered with the agency by no later than April 1, 2009. MCL 324.32701(1)(d). Third, all Parties agree that Nestlé's Application seeks approval of a "new or increased large quantity withdrawal" which is defined as "a new water withdrawal ... beyond the baseline capacity of a withdrawal." MCL 324.32701(1)(cc). However, the definition of "adverse resource impact" does not recite that the determination is limited to that portion of the withdrawal capacity that exceeds baseline capacity. MCL 324.32701(1)(a). Because this definition is equally susceptible to more than a single meaning, the statutory provision is ambiguous. *Lansing Mayor v Public Serv Com'n*, 470 Mich 154, 166; 680 NW2d 840 (2004). Therefore, it is necessary to review canons of statutory construction.

The fundamental purpose of statutory construction is to assist in both discovering and giving effect to legislative intent. *Ansell v Department of Commerce*, 222 Mich App 347, 355; 564 NW2d 519 (1997). If the language of a statute is unclear or of a doubtful meaning, it must be given a reasonable construction, looking to the legislative purpose. *Blackwell v Bornstein*, 100 Mich App 550, 554; 299 NW2d 397 (1980). When construing

a statutory phrase, the meaning of the phrase itself must be considered, but also its placement and purpose within the statutory scheme. *People v Morey*, 461 Mich 325, 330; 603 NW2d 250 (1999).

The determination of adverse resource impact in this case may be based on one of three withdrawal capacities: 150 gpm, 250 gpm, and 400 gpm. The use of 150 gpm constitutes the increase in capacity from Nestlé's previously registered capacity, 250 gpm. Exhibit I-73. It makes sense to employ 150 gpm because only the increase in requested capacity would be used in the determination of whether the new withdrawal quantity would create an adverse resource impact. The Petitioners' contention that 400 gpm should be used as the measuring stick would require Nestlé to have two of its previously registered withdrawal capacities (150 gpm and 250 gpm) examined by the agency. However, neither of these alternatives draw any support from the statutory scheme.

The Division's contention draws support from the statutory scheme. A "new or increased large quantity withdrawal" is defined as "a new water withdrawal ... beyond the baseline capacity of a withdrawal." MCL 324.32701(1)(cc). From this definition, a legislative intent can be gleaned: only baseline capacity should be exempt from inclusion in the definition of "new or increased large quantity withdrawal." Because the Legislature intended all new withdrawals above baseline capacity to be subject to Part 327, I conclude, as a Matter of Law, that the Legislature intended the agency to use that portion of the proposed withdrawal above baseline capacity in its determination of "adverse resource impact."

(iii) Evidence Related to Adverse Resource Impacts

Applying the facts to the law in this case, according to the Division the index flow for Twin Creek is 2693 gpm, measured at SF-13.¹⁸ Exhibit R-57. The anticipated flow reduction for Twin Creek from increasing the withdrawals from PW-101 from 150 gpm to 400 gpm is 99 gpm. Exhibit R-57; Exhibit I-8. A reduction of 99 gpm is 3.7% ($99 \div 2693$)

¹⁸ Recall that index flow is to be calculated as of October 1, 2008. MCL 324.327(1)(x). Ms. Clark testified that "[n]o other new or increased withdrawals were identified in the Twin or Chippewa Creek watersheds during the review." 3 Tr 364. For such reason, it is reasonable to infer that any measured index flow from Twin and Chippewa Creeks is the same as the index flow for these streams effective October 1, 2008.

of the index flow of Twin Creek. Exhibit R-57. According to the Division, the index flow for Chippewa Creek is 2244 measured at SF-20. The anticipated flow reduction of Chippewa Creek from increasing withdrawals from PW-101 from 150 gpm to 400 gpm is 97 gpm. Exhibit R-57; Exhibit I-8. A reduction of 97 gpm is 4.3% ($97 \div 2244$) of the index flow of Chippewa Creek. Exhibit R-57. The calculated reduction in stream water levels in Twin Creek and Chippewa Creek is about 1/4 of an inch. 3 Tr 881. The model predicts a roughly 50/50 division of pumping impacts between Twin Creek and Chippewa Creek. 3 Tr 922. Because the predicted impacts from the proposed withdrawal will lead to less than a 20% reduction in index flow in Twin and Chippewa Creeks, the model predicts that there will be no adverse resource impacts from the proposed withdrawal. MCL 324.32723(6)(b); MCL 324.32701(1)(a)(ii)(A); MCL 324.32701(1)(a)(vi).

The Petitioners did not present evidence regarding the index flow of Twin and Chippewa Creeks. Nestlé, on the other hand, suggested that the index flow of Twin Creek measured at SF-13 is 3096 gpm, which is 403 gpm higher than the Division's computation. Exhibit I-8; Exhibit R-57. Nestlé's contention of index flow in Chippewa Creek measured at SF-20 is 2595 gpm, which is 351 gpm higher than the Division's computation. *Id.* Using Nestlé's computation of index flow, the proposed withdrawal is expected to cause a 3.2% ($99 \div 3096$) decrease in index flow to Twin Creek, and a 3.7% ($97 \div 2595$) decrease in index flow to Chippewa Creek. *Id.* Therefore, Nestlé's computations similarly suggest that there will be no adverse resource impacts from the proposed withdrawal. MCL 324.32723(6)(b); MCL 324.32701(1)(a)(ii)(A); MCL 324.32701(1)(a)(vi). There is no evidence in the record that the proposed withdrawal will cause a 20% or higher reduction in index flow in Twin and Chippewa Creeks, measured at the mouths of the streams.

Although index flow should be measured at the downstream end of each water management area, the Division determined the decrease in index flow at each of the stream flow gauging stations.¹⁹ Exhibit R-57. With respect to Twin Creek, the gauging

¹⁹ Because the Division's computations are more conservative than Nestlé's, for brevity all determinations hereafter will rely upon the Division's suggested computations.

stations are SF-1, SF-2, SF-11, SF-9 and SF-10. See Exhibit I-5. The percent reduction in index flow at each of these gauging stations is as follows:

- At SF-1, the index flow is 539 gpm. Exhibit R-57. The anticipated flow reduction from increasing the withdrawals from PW-101 from 150 gpm to 400 gpm is 36 gpm. *Id.* A reduction of 36 gpm is 6.7% ($36 \div 539$) of the index flow at SF-1. *Id.*
- At SF-2, the index flow is 628 gpm.²⁰ *Id.* The anticipated flow reduction from increasing the withdrawals from PW-101 from 150 gpm to 400 gpm is 40 gpm. *Id.* A reduction of 40 gpm is 6.4% ($40 \div 628$) of the index flow at SF-2. *Id.*
- At SF-11, the index flow is 494 gpm. *Id.* The anticipated flow reduction from increasing the withdrawals from PW-101 from 150 gpm to 400 gpm is 7 gpm. *Id.* A reduction of 7 gpm is 1.4% ($7 \div 494$) of the index flow at SF-11. *Id.*
- At SF-9, the index flow is 2199 gpm. *Id.* The anticipated flow reduction from increasing the withdrawals from PW-101 from 150 gpm to 400 gpm is 93 gpm. *Id.* A reduction of 93 gpm is 4.2% ($93 \div 2199$) of the index flow at SF-9. *Id.*
- At SF-10, the index flow is 2154 gpm. *Id.* The anticipated flow reduction from increasing the withdrawals from PW-101 from 150 gpm to 400 gpm is 94 gpm. *Id.* A reduction of 94 gpm is 4.4% ($94 \div 2154$) of the index flow at SF-10. *Id.*

Therefore, even if flow reductions were required to be measured at each of the stream flow gauging stations on Twin Creek (instead of at the mouth of the stream system), the anticipated flow reduction at each of such gauging stations is less than 20%. *Id.*

With respect to Chippewa Creek, the gauging stations are SF-8, SF-16, SF-17, SF-18 and SF-19. See Exhibit I-5. The percent reduction in index flow at each of these gauging stations is as follows:

- At SF-8, the index flow is 90 gpm. Exhibit R-57. The anticipated flow reduction from increasing the withdrawals from PW-101 from 150 gpm to 400 gpm is 16 gpm. *Id.* A reduction of 16 gpm is 17.8% ($16 \div 90$) of the index flow at SF-8. *Id.*
- At SF-16, the index flow is 898 gpm. *Id.* The anticipated flow reduction from increasing the withdrawals from PW-101 from 150 gpm to 400 gpm is

²⁰ For a map depicting the location of SF-2 on Twin Creek, see Exhibit I-21 at p 328.

61 gpm. *Id.* A reduction of 61 gpm is 6.8% ($61 \div 898$) of the index flow at SF-16. *Id.*

- At SF-17, the index flow is 1616 gpm. *Id.* The anticipated flow reduction from increasing the withdrawals from PW-101 from 150 gpm to 400 gpm is 89 gpm. *Id.* A reduction of 89 gpm is 5.5% ($89 \div 1616$) of the index flow at SF-17. *Id.*
- At SF-18, the index flow is 628 gpm. *Id.* The anticipated flow reduction from increasing the withdrawals from PW-101 from 150 gpm to 400 gpm is 28 gpm. *Id.* A reduction of 28 gpm is 4.5% ($28 \div 628$) of the index flow at SF-18. *Id.*
- At SF-19, the index flow is 138 gpm. *Id.* The anticipated flow reduction from increasing the withdrawals from PW-101 from 150 gpm to 400 gpm is 4 gpm. *Id.* A reduction of 4 gpm is 2.9% ($4 \div 138$) of the index flow at SF-19. *Id.*

Hence, even if flow reductions were required to be measured at each of the stream flow gauging stations on Chippewa Creek (instead of at the mouth of the stream system), the anticipated flow reduction at each of such gauging stations is less than 20%. *Id.*

Also, as noted *supra*, the determination of adverse resource impacts is to be measured at the mouth of each of the stream systems, based on a withdrawal of 250 gpm, which is the amount of the proposed withdrawal in excess of Nestlé's baseline capacity. The Petitioners have contended that the Division should have determined the flow reduction based on the entire proposed withdrawal capacity of 400 gpm. Because the Division calculated the decrease in index flow based on a 400 gpm withdrawal, it is helpful to review the results of this determination as well. Specifically, the Division recited that the index flow for Twin Creek is 2693 gpm, measured at SF-13. *Id.* The anticipated flow reduction of Twin Creek from withdrawals of 400 gpm from PW-101 is 158 gpm. *Id.* A reduction of 158 gpm is 5.9% ($158 \div 2693$) of the index flow of Twin Creek. *Id.* With respect to Chippewa Creek, the Division recited that the index flow is 2244 measured at SF-20. *Id.* The anticipated flow reduction of Chippewa Creek from withdrawals of 400 gpm from PW-101 is 154 gpm. *Id.* A reduction of 154 gpm is 6.9% ($154 \div 2244$) of the index flow of Chippewa Creek. *Id.* Even basing a flow reduction of 400 gpm measured at the mouth of the stream systems, it is anticipated that the flow reduction will result in less than a 20% reduction in index flow in Twin and Chippewa Creeks.

While the flow reductions are to be measured at the mouths of each of the stream systems, the Division determined the effect of a 400 gpm withdrawal on stream flow at each of the stream gauging stations. *Id.* With respect to Twin Creek, the percent reduction in index flow at each gauging station is as follows:

- At SF-1, the index flow is 539 gpm. *Id.* The anticipated flow reduction from withdrawals from PW-101 of 400 gpm is 58 gpm. *Id.* A reduction of 58 gpm is 10.8% ($58 \div 539$) of the index flow at SF-1. *Id.*
- At SF-2, the index flow is 628 gpm. *Id.* The anticipated flow reduction from withdrawals from PW-101 of 400 gpm is 63 gpm. *Id.* A reduction of 63 gpm is 10.0% ($63 \div 628$) of the index flow at SF-2. *Id.*
- At SF-11, the index flow is 494 gpm. *Id.* The anticipated flow reduction from withdrawals from PW-101 of 400 gpm is 11 gpm. *Id.* A reduction of 11 gpm is 2.2% ($11 \div 494$) of the index flow at SF-11. *Id.*
- At SF-9, the index flow is 2199 gpm. *Id.* The anticipated flow reduction from withdrawals from PW-101 of 400 gpm is 151 gpm. *Id.* A reduction of 151 gpm is 6.9% ($151 \div 2199$) of the index flow at SF-9. *Id.*
- At SF-10, the index flow is 2154 gpm. *Id.* The anticipated flow reduction from withdrawals from PW-101 of 400 gpm is 94 gpm. *Id.* A reduction of 94 gpm is 4.4% ($94 \div 2154$) of the index flow at SF-10. *Id.*

Even basing a flow reduction of 400 gpm measured at each of the stream flow gauging stations on Twin Creek, the anticipated flow reduction at each of such gauging stations is less than 20%. *Id.*

With respect to Chippewa Creek, the percent reduction in index flow at each gauging station is as follows:

- At SF-8, the index flow is 90 gpm. *Id.* The anticipated flow reduction from withdrawals from PW-101 of 400 gpm is 24 gpm. *Id.* A reduction of 24 gpm is 26.7% ($24 \div 90$) of the index flow at SF-8. *Id.*
- At SF-16, the index flow is 898 gpm. *Id.* The anticipated flow reduction from withdrawals from PW-101 of 400 gpm is 96 gpm. *Id.* A reduction of 96 gpm is 10.7% ($96 \div 898$) of the index flow at SF-16. *Id.*
- At SF-17, the index flow is 1616 gpm. *Id.* The anticipated flow reduction from withdrawals from PW-101 of 400 gpm is 142 gpm. *Id.* A reduction of 142 gpm is 8.8% ($142 \div 1616$) of the index flow at SF-17. *Id.*

- At SF-18, the index flow is 628 gpm. *Id.* The anticipated flow reduction from withdrawals from PW-101 of 400 gpm is 46 gpm. *Id.* A reduction of 46 gpm is 7.3% ($46 \div 628$) of the index flow at SF-18. *Id.*
- At SF-19, the index flow is 138 gpm. *Id.* The anticipated flow reduction from withdrawals from PW-101 of 400 gpm is 6 gpm. *Id.* A reduction of 6 gpm is 4.4% ($6 \div 138$) of the index flow at SF-19. *Id.*

Even basing a flow reduction of 400 gpm measured at each of the stream flow gauging stations on Chippewa Creek, the anticipated flow reduction at each of such gauging stations (except SF-8) is less than 20%. *Id.*

With respect to SF-8, it should be noted that the validity of the readings was questioned. Specifically, Ms. Van Dyke testified that the stream is very small at SF-8, and the area is subject to temporary ponding of water. 1 Tr 128. Indeed, at this location, Chippewa Creek is approximately 2.5 feet wide and less than 6 inches deep. Exhibit R-53 at p 3. Also, SF-8 is upstream from, and adjacent to, the Decker Ponds, a group of impoundments created by the damming of Chippewa Creek. 4 Tr 1046, 1201; Exhibit I-6. Due to the ponding of water, there was difficulty in collecting measurements and getting accurate measurements at SF-8. 1 Tr 184, 187. To account for the concern over the validity of the measurements, the permit was conditioned on requiring Nestlé to monitor flow in the headwaters of Twin and Chippewa Creeks and to reduce pumping if the allowed reduction in index flow at SF-8 is observed for a two week period. 1 Tr 366, 371; R-76 at p 6.

Finally, it should be noted that testimony was proffered by three individuals on behalf of the Petitioners. First, Mr. Maturen testified regarding water levels in Twin and Chippewa Creeks by measuring the high-water marks on the roadway culverts near PW-101. 1 Tr 46. He inferred that the highest rust marks on the culverts is correlated with the high-water levels in these creeks. 1 Tr 47-48. While the credibility of Mr. Maturen, a former Osceola County Commissioner (1 Tr 45), is not questioned, the determination of an adverse resource impact in this case is not based on measured water levels. Rather, an adverse resource impact is a statutorily defined impact that is based on a 3% or more reduction in the density of thriving fish populations, which is correlated with a 20% or more reduction in index flow in these cold stream systems. MCL 324.32701(1)(a)(ii)(A); 1 Tr

137. Mr. Maturen's testimony simply fails to address a computed reduction in stream flow caused by the proposed withdrawal.

Secondly, Ms. Borden testified that Twin Creek "does not run as fast as it used to...." 1 Tr 57. Based on water levels on the nearby culverts, she also suggested that the water levels have decreased over time. 1 Tr 58. Finally, Ms. Borden-Huff testified that Chippewa Creek is shallower than it used to be, such that canoeing is more difficult. 1 Tr 64-65. While such testimony is helpful to assist in the assessment of the current status of these streams, Ms. Borden's and Ms. Borden-Huff's testimony do not address a computed reduction in stream flow caused by the proposed withdrawal. As a result, based on the testimony of Mr. Maturen, Ms. Borden and Ms. Borden-Huff, there was no evidence provided to support a finding of an adverse resource impact.

Based upon the evidence in the record, as exemplified *supra*, I find, as a Matter of Fact, that the predicted impacts from the proposed withdrawal will lead to less than a 20% reduction in index flow in Twin and Chippewa Creeks. MCL 324.32723(6)(b); MCL 324.32701(1)(a)(ii)(A); MCL 324.32701(1)(a)(vi).

2. Thriving Fish Populations

In addition to monitoring the reductions in index flow of Twin and Chippewa Creeks, it is necessary to review the thriving fish populations of such streams. As noted *supra*, the 3% rule provides that an adverse resource impact will occur if the withdrawal results in a 3% or more reduction in the density of thriving fish populations as determined by the thriving fish curve. MCL 324.32701(1)(a)(ii)(A). The 3% rule is a predictive rule which requires the applicant to establish "the predicted effects of the intended withdrawal...." MCL 325.1017(3). Because it is difficult to predict a reduction in the density of fish, the Division employed the standard in this case that an adverse resource impact will occur under the 3% rule if a 20% or greater reduction in the index flow were to occur in a cold stream system. 1 Tr 137; Exhibit R-78.

Each party to this case proffered evidence regarding the fish populations present in Twin and Chippewa Creeks. However, the Division contends that the testimony proffered by the Petitioners was intended for their now withdrawn claim under Part 17, the

Michigan Environmental Protection Act (MEPA).²¹ MCL 324.1701, *et seq.* See the Division's Closing Brief at p 4. Nevertheless, this Tribunal will review the evidence presented at the hearing in order to determine if it establishes that the withdrawal will cause a 3% or more reduction in the density of thriving fish populations.

a. Procedure 51

Before addressing the evidence related to thriving fish populations, a preliminary question must be addressed. Specifically, during the contested case hearing, the Petitioners suggested that the results of Nestlé's fish surveys conducted in Twin and Chippewa Creeks must be rejected because these surveys were not conducted in accordance with EGLE's Procedure 51 (P-51). Initially, it should be noted that P-51 was not admitted as an exhibit in the record. According to Ms. Wilmes, P-51 is approximately 20 to 30 pages in length. 2 Tr 471. In general, a written procedure, such as P-51, is the best evidence of the contents of the procedure. MRE 1002 ("To prove the content of a writing, ... the original writing ... is required"). Because none of the parties made a best evidence objection to any testimony regarding P-51, this Tribunal can rely upon the testimony of witnesses in assessing the requirements of the Procedure.

According to the testimony of Ms. Wilmes, "[t]he State of Michigan uses a stream monitoring method known as Procedure 51 to sample a stretch of stream and produce a score for the habitat and macroinvertebrate community." 2 Tr 422. P-51 is used to assess whether a water body is meeting water quality standards for indigenous aquatic life and wildlife. 2 Tr 428. Ms. Wilmes was asked whether Nestlé, in performing its surveys of Twin and Chippewa Creeks, had supplied all the data requested by EGLE. 2 Tr 429. In response, she testified that the data was incomplete because it was not collected in accordance with P-51. 2 Tr 430. P-51 "involves a qualitative assessment of macroinvertebrate, fish and habitat." *Id.* The Procedure contains a methodology to score macroinvertebrate and habitat data. *Id.* Because Nestlé's data had not been collected in accordance with P-51, Ms. Wilmes was unable to score the data. *Id.* Nevertheless, she graphed the data and looked at trends instead of using the P-51 scoring process. *Id.* She

²¹ The Petitioners' MEPA claim was withdrawn as part of the Stipulation and Order entered on May 17, 2019.

also performed an aquatic life review based on current data as well as model predictions. 2 Tr 431. Based on her review of all available data, including a site visit she performed at the project area, she concluded that, “the stream temperature and stream depth predictions from the groundwater withdrawal are expected to provide negligible impacts to the aquatic life of Twin and Chippewa Creek.” 2 Tr 433.

Ms. Wilmes’ testimony regarding P-51 was clarified on cross-examination. Specifically, she noted that Nestlé’s sampling was consistent with P-51. 2 Tr 438. She stated that (a) Nestlé sampled all available habitats which is required by P-51, (b) Nestlé used a kick net which is required by P-51, and (c) Nestlé used two people in sampling the stream reaches which is also required by P-51. *Id.* When asked how Nestlé’s sampling was deficient under P-51, Ms. Wilmes stated that, “we were not provided scores as you would see in Procedure 51 for macroinvertebrates, and we also did not see the habitat forms that Procedure 51 creates.” 2 Tr 439. Because she was not provided with P-51 scoring, she graphed the data to look for trends. 2 Tr 440. Ms. Wilmes stated that this trend data, available for years 2003 to 2016, provided information on how the sensitive taxa within these streams have changed over that time frame. 2 Tr 441.

Mr. Garavaglia’s testimony implicated P-51 in one respect. He opined that, “the failure to use Procedure 51 or a similar set of procedures for collecting and analyzing macroinvertebrate data greatly diminishes the degree to which changes in macroinvertebrate abundance can be detected.” 2 Tr 658. While Mr. Garavaglia was critical that Nestlé did not use P-51, he readily admitted that he does not use P-51 in his stream survey work. 2 Tr 696. Moreover, Mr. Garavaglia espoused that macroinvertebrate sampling should occur prior to electrofishing.²² 2 Tr 657-658. Because P-51 provides that fish should be sampled before macroinvertebrates, 2 Tr 476, 511, 1207, the credibility of Mr. Garavaglia’s opinions regarding P-51 is called into question.

Dr. Workman testified that, in performing his surveys in this case, he followed P-51 by (a) surveying fish, (b) surveying macroinvertebrates, and (c) evaluating the aquatic habitat. 4 Tr 1187. Dr. Workman emphasized that P-51 is dependent upon visual

²² In electrofishing, a current is placed into the water which draws the fish toward the probe so that they can be collected for biological information. 2 Tr 586-587, 644-645. This electroshock feature is non-lethal for the fish. 2 Tr 587. The fish are released downstream from the electroshocked area. 2 Tr 609.

observation of both overall habitat and stream characteristics. 4 Tr 1192-1193. He noted that his surveying went beyond P-51 because the Procedure requires identification down to the “family” level, while his identification went down to the “genus” or even “species” level. 4 Tr 1190. He conceded that the only deficiency in his work *vis-à-vis* P-51 is that he did not tabulate the data he collected to produce a score or metric for each stream segment. *Id.* However, Dr. Workman explained that, “[s]ince I was looking at the data in a more detailed sense, I felt that using very broad categories of scoring would add nothing to my understanding of the communities I was observing.” *Id.* In fact, he emphasized that, “while I did not expressly state in my reports that I was following the P-51 protocol, I met or exceeded those requirements with the exception of producing the overall P-51 habitat score.” 4 Tr 1191. Nevertheless, Exhibit I-81 is a P-51 scoring performed by Dr. Workman for years 2003-2016 with respect to the habitat observed at SF-1 on Twin Creek and SF-16 on Chippewa Creek. This Exhibit indicates that these two sampling stations obtain a P-51 community rating of “acceptable.” Exhibit I-81.

Based on the record in this case, I find, as a Matter of Fact, that Nestlé’s sampling of aquatic resources conducted in Twin and Chippewa Creeks was performed in accordance with the requisites of Procedure 51.

b. One-Pass or Three-Pass Fish Surveys

The Petitioners challenged most of the fish surveys performed by the DNR and Nestlé because they were one-pass surveys. Mr. Heintzelman testified that he performed a one-pass survey of Twin and Chippewa Creeks in July of 2018. 2 Tr 567, 590. He opined that, with watersheds of this size, it is more important to understand the fish community rather than the quantitative numbers of the fish in the watershed. 2 Tr 582. Hence, a one pass electrofishing sampling event is sufficient. 2 Tr 586. Conversely, a quantitative assessment would require multiple passes. *Id.*

Dr. Newcomb explained that a multiple pass survey is used when you are interested in calculating a population abundance estimate. 2 Tr 609. She stated that a multiple pass survey is a method employed when you want to determine a statistical variance from year to year, or month to month. 2 Tr 618. She noted that a single pass sampling is used when you do not need a population abundance determination but are

interested in a sampling reflective of the fish community. 2 Tr 609-610. A single pass survey is used when determining the presence and prevalence of fish communities. 2 Tr 618-619.

In his testimony, Mr. Garavaglia was critical of Nestlé's sampling protocols. 2 Tr 645. Specifically, he noted that Nestlé used a multiple pass survey in 2003 but conducted single pass surveys in subsequent years. *Id.* He stated that a single pass survey merely provides a measure of relative abundance but does not provide a statistical variance over time. *Id.* Mr. Garavaglia testified that the data provided by Nestlé yields an idea of the species present and a measure of abundance but is not a valid metric in determining a variance in abundance over time. 2 Tr 648. He opined that the data provided by Nestlé was insufficient to determine diminishment of the fisheries in Twin and Chippewa Creeks. 2 Tr 648-649. On cross-examination, Mr. Garavaglia conceded that Nestlé's "surveys aren't necessarily inadequate, however, I am not necessarily concerned with fish communities. I am concerned with the actual number of fish." 2 Tr 699. He was thus concerned with more of a statistical variance from year to year.

Dr. Luttenton conducted a fish survey in December of 2018 on behalf of the Petitioners. 3 Tr 767. Dr. Luttenton did not perform a three-pass survey. Rather, he conducted a one-pass survey. 3 Tr 784.

Dr. Workman's first survey, conducted on behalf of Nestlé in the summer and winter of 2003, was a multi-pass survey. 3 Tr 1189. He used a three-pass survey to obtain a baseline assessment and understanding of the streams. *Id.* The surveys he conducted thereafter were not to focus on absolute population numbers, but the overall composition of the fish community and its variability from year to year. *Id.* His subsequent surveys were a single-pass survey. 4 Tr 1189-1190. His goal in performing these surveys "was to evaluate the natural variability of these communities before any pumping began, and after pumping started in 2015." 4 Tr 1191.

Given such evidence, it is helpful to review the statutory scheme. The 3% rule is a predictive rule to determine if the proposed withdrawal will cause a 3% or greater reduction in the "thriving fish population." MCL 324.32701(1)(a)(ii)(A). The phrase "thriving fish population" is defined as "the fish species that are expected to flourish at very high densities in stream reaches having specific drainage area, index flow, and

summer temperature characteristics.” MCL 324.32701(1)(oo). Based on the record before me, I am unable to conclude that the definition of “thriving fish population” is limited to evidence obtained from a three-pass fish survey. Therefore, I conclude, as a Matter of Law, that evidence from either one-pass or three-pass fish surveys may be used in the determination of thriving fish populations.

c. Evidence of Thriving Fish Populations

Mr. Heintzelman testified that he performed a survey of Twin and Chippewa Creeks in July of 2018 using the Random Status and Trends protocol.²³ 2 Tr 567. During his sampling of Chippewa Creek on July 24, 2018, a total of 173 fish representing 6 species were caught. 2 Tr 567-568. A report of the results of this survey is reflected in Exhibit R-26. In his sampling of Twin Creek on July 23 and 25, 2018, a total of 124 fish were caught, representing 9 species, with the most common species being brown trout. 2 Tr 569. In fact, one of the brown trout captured was 15 inches in length. 2 Tr 569. A report of the results of this survey is reflected in Exhibit R-27. Based on his surveys of these streams, Mr. Heintzelman testified that he does not believe that the proposed withdrawal will cause an adverse resource impact to Twin or Chippewa Creeks. 2 Tr 570-571. He explained that his use of the phrase “adverse resource impact” is not referring to a 20% reduction in index flow, but rather relates to the fish community. 2 Tr 591-592.

Dr. Newcomb next testified that the DNR did not have any serious reservations about issuing the permit, but that its concerns with the proposed withdrawal related to potential uncertainty in the effects of the withdrawal in the headwater regions of Twin and Chippewa Creeks. 2 Tr 595. To address these concerns, the DNR requested specific monitoring locations for aquatic biota, temperature, and flow, including thresholds indicating when the proposed withdrawal should be suspended. *Id.* She testified that the analysis that was performed is consistent with every other analysis done throughout the state for water withdrawal, and that she is confident that the monitoring conditions that are required in this permit will help the DNR to quickly address any issues that may come

²³ A Random Status and Trends protocol is a robust sampling program that has a fish community assessment and a habitat measurement. 2 Tr 574.

about in the headwater regions of these watersheds. 2 Tr 617. See Exhibit R-76 at pp 7-8

In his testimony, Dr. Luttenton opined that impacts to the fish community has “already occurred at current pumping rates.” 3 Tr 755. Specifically, he noted that, according to fish surveys on Twin Creek, brook trout numbers have decreased by 37.5% between 2003 and 2016. 3 Tr 755. He explained that brown trout surveyed at SF-1 have decreased by 100% between 2003 and 2016. *Id.* He stated that brown trout measured at SF-9 have declined by 95.5% between 2000 and 2016. *Id.* In reviewing Nestlé’s data for years 2003 through 2015, he opined that “it appears that the fish community may have already changed.” 3 Tr 759. In support of his opinion, he noted that the data collected between 2000 and 2004, when compared with the data reported in 2016, indicate “there were fewer fish species reported from Chippewa Creek in the 2016 report.” *Id.* In addition, Dr. Luttenton conducted a fish survey in December of 2018. 3 Tr 767. The results of his survey are similar to the results of the DNR’s 2018 survey. 3 Tr 784. See Exhibit P-3.

On cross-examination, Dr. Luttenton conceded that, at the time he prepared his report (Exhibit P-2), he believed that Nestlé had been pumping PW-101 since 2008. 3 Tr 792. He conceded his testimony assumed that changes had already occurred in the environment around PW-101 prior to 2015. 3 Tr 793. Dr. Luttenton was then informed that Nestlé had not pumped on a continuous basis from PW-101 until June of 2015, which is when Nestlé pumped for the first time over 100 gpm. *Id.* See Exhibit I-23. In response, Dr. Luttenton testified that pumping from PW-101 at less than 40 gpm had caused the impacts he cited in his report. 3 Tr 797.

On re-direct examination, Dr. Luttenton was questioned regarding the pump tests that occurred in 2000 and 2001. 3 Tr 830. He noted that the 2000 test pumped two or three wells at 700 gallons per minute for about a week. *Id.* The 2001 pump test was for 100 gpm for an extended period and then 700 gpm for a short period.²⁴ *Id.* Dr. Luttenton

²⁴ According to the testimony of Ms. Van Dyke, a seven-day aquifer test was conducted in wells TW-1, TW-2, and TW-3 in 2000; and a nine-day aquifer test was conducted in PW-101 in 2001. 1 Tr 136. Dr. Andrews testified that the three wells were pumped at a combined rate of 723 gpm for seven days, while PW-101 was pumped at 400 gpm for eight days, and 700 gpm for one additional day. 5 Tr 1449-1450.

attributed the impacts he observed in the environment to these pump tests. 3 Tr 832. In his rebuttal testimony, Dr. Luttenton also points to pump tests that occurred in 2011 and 2012. 5 Tr 1374. He felt these two pump tests were significant because they withdrew 2.5 million gallons and 11 million gallons of water, respectively. ²⁵ *Id.*

Next, Dr. Workman testified that aquatic surveys were performed at thirteen locations, seven on Twin Creek and six on Chippewa Creek. 4 Tr 1187. He opined that, based on the predicted reduction in groundwater discharge in both streams due to the proposed withdrawal, no perceptible degradation of the aquatic habitat or aquatic communities will result. 4 Tr 1188. His opinion is based on aquatic surveys, visual observations of the streams, and knowledge of the fish and macroinvertebrate communities. *Id.* He testified that, starting in 2008, he commenced conducting annual sampling events at selected locations along Twin and Chippewa Creeks. 3 Tr 1189. He chose sampling locations where he believed the effect of withdrawals from PW-101 would be observed. *Id.* Initially, he selected five sampling locations, four on Twin Creek and one on Chippewa Creek. *Id.*

Dr. Workman opined that he “observed a range of natural variability in these stream characteristics both before and after continuous pumping began in 2015 with little discernable difference between the two times [sic] periods.” 4 Tr 1192. He stated that, over fifteen years, he conducted over 22 surveys and visual observations of these two streams, with each survey event lasting approximately one day. *Id.* Since 2013, he has conducted site visits to these streams at least three times per year. *Id.*

Dr. Workman also opined that, “I would expect any coldwater stream, including but certainly not limited to these two streams, to exhibit variability in community composition from year to year.” 4 Tr 1193. With respect to the fish community present in Twin and Chippewa Creeks, Dr. Workman proffered three Exhibits. See Exhibit I-29 at p 11; Exhibit I-31 at p 17; Exhibit I-33 at pp 3-6, 34-43. In evaluating the data, Dr. Workman looked for discernable trends that suggest a meaningful change in fish habitat. 4 Tr 1203. Finally, he opined that, “I have not been able to observe any impact from [Nestlé’s] current

²⁵ In response to this testimony, Dr. Andrews testified that, during the time period of the tests, the total flow of water in Twin Creek was 215 million gallons and the total flow of water in Chippewa Creeks was 155 million, such that 2.5 million gallons of water is merely 0.7% of the combined flow of these two streams. 5 Tr 1453.

pumping rate, compared to the stream conditions that existed prior to mid-2015, when continuous pumping began.” 4 Tr 1199.

One of the impacts on the presence of certain fish species was the extreme cold weather in the winters of 2013-2014 and 2014-2015, which caused the streams to freeze solid from top to bottom. 4 Tr 1204. The freezing of the streams in these winters would yield lower population numbers in 2015 and 2016. 4 Tr 1205. Dr. Workman also testified that the DNR’s fish survey conducted in 2018, as well as the fish survey performed by Dr. Luttenton in December of 2018, indicate healthy populations including brown and brook trout.²⁶ 4 Tr 1210. Dr. Workman testified that the variations in populations espoused by Dr. Luttenton has nothing to do with pumping but with the natural variability in these streams. 4 Tr 1212. To illustrate this opinion, Dr. Workman noted that, at SF-5, brook trout populations declined before pumping began but increased after continuous pumping commenced. 4 Tr 1212; Exhibit I-79; Exhibit I-80. Similarly, at SF-5-6, brook trout populations remained constant, while at SF-9, more brook trout were captured in 2015 and 2016 than were captured in 2000, 2003 and 2011. 4 Tr 1212-1213; Exhibit I-79; Exhibit I-80. Finally, Dr. Workman did not attribute the varying percentages in terms of fish community to anything other than natural variability. 4 Tr 1258.

Dr. Luttenton’s testimony is inconsistent. His opinions were based on Nestlé’s 2003 and 2016 reports. 3 Tr 755. The 2016 report expressly recites that it was based on fish surveys conducted between 2003 and 2013. Exhibit I-31 at pp 5, 6, 17. Dr. Luttenton’s opinions were based on pre-pumping conditions because pumping began in commercial quantities in June of 2015. Exhibit I-23. When confronted with this error, he argued that the fish population had been impacted by *de minimis* pumping that had occurred in 2012. Exhibit I-23. Then, during re-direct examination, his opinion once again changed to argue that the fish population had been impacted by pump tests conducted in 2000 and 2001. While Dr. Luttenton argued that brook and brown trout populations had decreased, 3 Tr 755, the 2018 surveys conducted by both the DNR and Dr. Luttenton

²⁶ The DNR’s 2018 survey of Chippewa Creek found 1 brook trout and 59 brown trout. Exhibit R-26 at p 3. The DNR’s 2018 survey of Twin Creek found 29 brook trout and 45 brown trout. Exhibit R-27 at p 4. Dr. Luttenton’s survey in December of 2018 found a total of 2 brook trout and 207 brown trout at all survey locations on Chippewa Creek. Exhibit P-3. Dr. Luttenton also found a total of 39 brook trout and 101 brown trout at all survey locations on Twin Creek. Exhibit P-3.

indicated that brook and brown trout populations in these streams had increased since 2013. Compare Exhibit I-31 at p 17 with Exhibits R-26, R-27 and P-3. Therefore, I find, as a matter of fact, that Mr. Heintzelman's and Dr. Workman's testimony is entitled to receive greater weight than the testimony offered by Dr. Luttenton. I also find, as a Matter of Fact, that a 3% or greater reduction in the thriving fish population did not occur in Twin and Chippewa Creeks. Because no evidence was presented to support a predicted decrease, I find, as a Matter of Fact, that the proposed withdrawal will not cause a predicted decrease of 3% or greater in the thriving fish population in Twin and Chippewa Creeks. Moreover, I find, as a Matter of Fact, that the conditions in the permit to monitor the headwaters of Twin and Chippewa Creeks are adequate.

Because the proposed withdrawal will not cause a 20% or greater reduction in index flow in Twin and Chippewa Creeks, and because the proposed withdrawal will not cause a 3% or greater reduction in thriving fish population in Twin and Chippewa Creeks, I find, as a Matter of Fact, that the proposed withdrawal will not cause an adverse resource impact.

C. Compliance with Laws

Under § 32723(6)(c), EGLE must ensure that "the withdrawal will be implemented ... in compliance with all applicable local, state, and federal laws as well as all legally binding regional interstate and international agreements, including the boundary waters treaty of 1909." MCL 324.32723(6)(c). Nestlé presented evidence to EGLE in its Application that the proposed withdrawal will comply with such laws. See, e.g., Exhibit R-28 at p 23; Exhibit I-21 at p 24. In their Petition, Citizens argued that the proposed withdrawal fails to satisfy these laws. See, e.g., Citizens' Petition at pp 16-17.²⁷ However, the Petitioners presented evidence in this case regarding only two statutory schemes: Part 303 and Part 365. MCL 324.30301, *et seq*; MCL 324.36501, *et seq*. A review of these statutes is warranted.

²⁷ The allegations contained in Citizens' Petition was incorporated by reference into the Grand Traverse Band's Petition. Grand Traverse Band's Petition at p 8.

1. Part 303

Part 303, Wetlands Protection, is implicated if a jurisdictional activity occurs in the proposed project. MCL 324.30304. The jurisdictional activities identified in Part 303 are (a) placing fill material in a wetland, (b) dredging or removing soil from a wetland, (c) constructing or operating a use in a wetland, and (d) draining surface water from a wetland. *Id.* In this case, the proposed project involves the withdrawal of water from PW-101. Hence, the jurisdictional question in this case is whether PW-101 will drain surface water from a wetland. In its Response Brief, the Division correctly noted that “[t]he statute does not limit this prohibition spatially – draining surface water from the surface of a wetland is just as prohibited as draining surface water from below a wetland.” The Division’s Response Brief at p 21. See also 2 Tr 527. The Division further explained that “groundwater is connected to surface water, and it is thus physically possible to drain surface water from a wetland, in violation of Part 303, from either above or below the surface.” *Id.* Therefore, a review of the record is necessary to determine whether the surface water of a wetland in this case will be drained by a withdrawal of groundwater from PW-101.

Initially, it should be noted that there are more than 1,000 wetlands within the model domain. 3 Tr 920. Most of these wetlands have been identified as perched. *Id.* Wetlands that are disconnected from groundwater are perched. 1 Tr 218; 2 Tr 529; Exhibit R-17; Exhibit I-26. Perched wetlands commonly “form above low-permeability substrates where infiltration is restricted....” 4 Tr 1083. Mr. Pennington testified that raising or lowering of groundwater tables do not have any effect on water levels in perched wetlands. 2 Tr 521. Conversely, “[w]etlands that are connected to the groundwater table are affected by water withdrawals and raising and lowering the groundwater table.” *Id.* Most notably, Mr. Pennington explained that withdrawing groundwater in the proximity of a wetland does not necessarily result in draining surface water from the wetland. 2 Tr 528. Rather, the question is dependent on several factors, such as “the elevation of the wetland, the type of underlying soils, the extent of drawdown, and timing of drawdown.” *Id.* Mr. Pennington opined that removing 4 inches of water from a wetland would result

in impacts to the wetland. 2 Tr 529; Exhibit R-18. However, he testified that a drawdown of surface water within the wetland of 0.3 feet was not likely to cause any effect on wetland plants or ecology. 2 Tr 563.

Mr. Pennington's responsibilities in the project were to determine if there would be an impact to wetlands that would require a Part 303 permit. 2 Tr 530. His conclusions are reflected in Exhibit R-22. With respect to the proposed withdrawal from PW-101, this report noted that "the average drawdown of wetland complexes connected to the water table ranged between .03 and .3 feet." Exhibit R-22 at p 3. See also Exhibit I-7. Based upon the predicted drawdown within wetlands, the report noted that "a permit is not required at this time." Exhibit R-22 at p 4. See also 2 Tr 531.

Mr. Boote testified that the 2003 assessment performed by Tilton & Associates identified 70 wetlands in the vicinity of PW-101, and six of them were connected to the source aquifer (*i.e.*, non-perched). 4 Tr 1079. These six wetlands – Wetlands A, CC, H, G, PP, and R – were assessed in a 2016 report. 4 Tr 1102. See Attachment E to the Application, Exhibit I-21 at pp 350-409. Since 2011, annual surveys have been conducted with respect to four of the connected wetlands closest to PW-101, being Wetlands R, A, G, and H. 5 Tr 1468. Mr. Boote noted that these four wetlands have remained saturated, even inundated, during dry years. 5 Tr 1469. Mr. Boote opined that, "it is my professional opinion that the degree of potential change in wetland water levels is not great enough to cause measurable or observable changes in any of the wetlands." 4 Tr 1107. On cross-examination, Mr. Boote also opined that, "if the drawdown is very small, even under dry conditions, it's not going to substantially affect the wetland or it's not going to cause ecological effects." 4 Tr 1152.

Dr. Andrews prepared Exhibit I-7, which is a table that illustrates the forecasted impact of pumping on all nearby wetlands that are potentially connected to groundwater. 3 Tr 880; Exhibit I-7. Two of these wetlands – Wetlands A and R – are greater than 5 acres. 3 Tr 880.²⁸ The forecasted water level change in these wetlands from pumping is 0.05 feet. 3 Tr 880; Exhibit I-7.

²⁸ A regulated wetland under Part 303 includes those that are greater than 5 acres in size. MCL 324.30301(1)(n).

The Petitioners' wetlands expert in this case is Dr. Grobbel. His direct testimony related to authenticating Exhibit P-24, which is his public comment to EGLE dated February 10, 2017. Dr. Grobbel does not, in either Exhibit P-24 or in his rebuttal testimony, recite the amount of the anticipated drawdown of surface water from any wetland within the vicinity of PW-101. 5 Tr 1378-1383; Exhibit P-24. Dr. Luttenton testified in his rebuttal testimony regarding delineation of wetlands. See 5 Tr 1368-1373. However, he did not testify with respect to the anticipated drawdown of surface water from any wetland within the vicinity of PW-101. Therefore, the testimony of Mr. Pennington, Mr. Boote and Dr. Andrews is unrebutted. Accordingly, I find, as a Matter of Fact, that the anticipated drawdown in the wetlands surrounding PW-101 will be between .03 and .3 feet which does not constitute draining surface water from a wetland. I conclude, as a Matter of Law, that a Part 303 permit is not currently required in this case.

It should be noted, however, that the permit contains the following conditions regarding monitoring the effects of the proposed withdrawal upon the surrounding wetlands: First, the permit requires Nestlé to conduct a Level 3 Wetland Identification Program (WIP) assessment of all wetlands located south of Nine Mile, west of 95th Avenue, north of Eight Mile and east of 110th. This program is to verify wetland boundaries every two years to detect changes in such boundaries. Exhibit R-76 at p 10. Second, the permit requires Nestlé to conduct a floristic quality assessment in Wetlands A, B, C, CC, D, E, F, G, H, LL, Q, and R. The initial baseline survey is to be completed three times throughout the growing season prior to increasing pumping rates. After increased pumping commences, the permit requires Nestlé to conduct a floristic quality assessment every year in Wetlands A, B, C, CC, D, E, F, G, H, LL, Q, and R between July 15 and August 31. Exhibit R-76 at pp 10, 11. Third, the permit requires Nestlé to develop a vegetation sampling plan to detect potential changes to wetland hydrology and plant communities, particularly in Wetlands A, B, C, CC, D, E, F, G, H, LL, Q, and the east side of Wetland R. Exhibit R-76 at p 11. Fourth, the permit requires Nestlé to conduct a meander each year in Wetlands A, B, C, CC, D, E, F, G, H, LL, Q, and R to search for visible signs of vegetation stress including stress to trees and shrubs. Exhibit R-76 at p 11. If the foregoing monitoring plan indicates that wetland performance standards are not met, the permit requires Nestlé to reduce pumping to 250 gpm and to notify the Department.

Exhibit R-76 at p 12. If any deficiency in wetland monitoring indicates that a Part 303 permit is necessary, the permit requires a reduction in pumping to 250 gpm so that such a permit could be obtained by Nestlé. I find, as a Matter of Fact, that such wetland monitoring conditions in the permit are adequate.

2. Part 365

Under Part 365, Endangered Species Protection, the prohibited activity is the “taking” of T&E species. MCL 324.36505(1). With respect to fish and wildlife, a “take” is defined as activities which harass, harm, pursue, hunt, shoot, wound, kill, trap, capture, and collect T&E species. MCL 324.36501(f). With respect to plants, a “take” is defined as activities that collect, pick, cut, dig up, or destroy T&E plant species. MCL 324.36501(g). For Part 365 to be implicated in this case, there must be a taking of plants, fish or wildlife by Nestlé’s proposed activity of withdrawing water from PW-101.

Dr. Newcomb testified regarding the T&E review performed by the DNR. Specifically, she noted that it was determined that only four mussel species and one fish species (a minnow species) had the potential to be in the watershed. 2 Tr 596, 612. She stated that, “there were no historical accounts of those species in these rivers and that the habitats required by those species further suggested that it was highly unlikely that they were in this area.” *Id.* On cross-examination, Dr. Newcomb testified that she personally conducted the review for T&E species along with the DNR’s T&E species coordinator. 2 Tr 611. In her review, Dr. Newcomb first determined which species could potentially be in the area based on the Michigan Natural Features Inventory (MNFI). *Id.* Next, the review involved looking at specific habitat requirements for the five identified species. 2 Tr 612. As to the minnow species, it was determined that it is a big river species and is unlikely to be found in these headwater reaches. *Id.* As to the four mussel species, Dr. Newcomb opined that they are found in larger rivers, and their host fish are warm water fish, such as bluegill and sucker.²⁹ *Id.* In addition, Peter Kailing, DNR’s wildlife biologist,

²⁹ To reproduce, freshwater mussels will release tiny larvae called glochidia, which attach to the gills of fish. 2 Tr 629, 660. Each species of freshwater mussels has a particular type of fish that will act as its host. 2 Tr 631, 660. For example, the host fish for slippershell mussels is mottled sculpin. 2 Tr 663. However, a mussel cannot reproduce unless its host fish is present in the stream. Exhibit P-16 at p 2. When the glochidia has developed sufficiently on the gills of its host, it falls off into the sediment and becomes a baby freshwater mussel. 2 Tr 629, 660. After detaching from its host fish, the mussel spends the remainder of its life in the substrate. Exhibit P-16 at p 2.

determined that there were no wildlife T&E species of concern within the project area. 2 Tr 613.

Mr. Garavaglia testified on behalf of the Petitioners that the MNFI indicates that six T&E species of mussels are in Osceola County. 2 Tr 661-662. Mr. Garavaglia disagreed with DNR's determination that there are no T&E mussel species present in the habitats identified in Twin and Chippewa Creeks. 2 Tr 662. His disagreement is based on his opinion that, "[n]o evidence has been provided that Twin or Chippewa creeks have ever been sampled for mussels using scientifically valid methods." 2 Tr 663. Mr. Garavaglia noted that the host fish for the six mussel species have been found in Twin and Chippewa Creeks. 2 Tr 663-665. He opined that "[t]he habitat requirements of some of the above species are present in Twin and Chippewa Creeks, as are the required host species." 2 Tr 665. He testified that, "it is quite possible for one or more of the above species to be present in either Twin or Chippewa Creek" but that, "[w]ithout a proper survey to determine what mussel species are present and at what density, a determination as to whether there has been an impact to the mussel community by Nestle's pumping operations will be impossible." *Id.* On cross-examination, Mr. Garavaglia admitted that he has not conducted any field surveys in either Twin or Chippewa Creeks. 2 Tr 677. Mr. Garavaglia also conceded that the dams on these creeks would impede the upstream migration of the host fish for mussels. 2 Tr 693.

Nestlé submitted both the report and the testimony of Dr. Workman. In his report, Dr. Workman noted that surveys were conducted at SF-1, SF-5-6, SF-8, SF-9, and SF-16. Exhibit I-32 at pp 3, 9. At these locations, D-framed kick nets were used in the surveys. *Id.* at p 4. According to the report, "[n]o listed fish or macroinvertebrate species, including freshwater mussels have been observed in Twin or Chippewa Creeks ... since 2003" and that, "it is unlikely that the streams in the vicinity of the [PW-101] well contain fish or mussels that are listed as threatened, endangered, or special concern." *Id.* at 5. Mr. Garavaglia criticized this report because he opined that mussels should not be sampled by use of D-framed kick nets, but by buckets with a transparent bottom. 2 Tr 659. See also Exhibit P-20 at p 2.

In his testimony, Dr. Workman stated that every time he conducted fish and macroinvertebrate surveys in Twin and Chippewa Creeks, he inspected for mussels in

the stream bottom material he captured in the net. 4 Tr 1208. Dr. Workman also testified that, "I am constantly visually inspecting the stream bottom throughout each 100-foot reach of the stream I am sampling." *Id.* He noted that this type of inspection, "can be accomplished because the water in these reaches is very clear and the streams are very shallow." *Id.* Significantly, Dr. Workman testified that, "[d]uring the course of my over 22 sampling events of these two streams, I have never encountered any mussels, threatened and endangered, or otherwise, and given the presence of significant organic matter at a number of the sample locations, I do not consider these streams ideal habitat for mussels." 4 Tr 1208-1209. Dr. Workman also noted that he was not surprised that he did not observe any mussels on these streams because the host fish for these mussel species cannot move upstream due to the dams and other control structures that impede fish movement. 4 Tr 1209.

Finally, Mr. Boote or his staff conducted a T&E review with respect to wetland, stream, and floodplain impacts on T&E plant species. 4 Tr 1068, 1092. In addition to being required for the issuance of a permit under § 17 of the SWDA, an assessment of impacts to T&E species was required by the United States Fish and Wildlife Service for federal T&E species review. *Id.* Mr. Boote's assessment was conducted in 2014. 4 Tr 1093. He testified that, "[w]e eliminated the potential of T&E species being present or being impacted based on our review of site conditions, habitat suitability, location of work, and potential for the project to impact those T&E species." *Id.*

I find the testimony of Dr. Newcomb and Dr. Workman are both credible and consistent. Mr. Garavaglia did not conduct a mussel survey for T&E species in these stream reaches. 2 Tr 694. Hence, there is no evidence in the record which controverts the testimony of Dr. Workman, who physically conducted surveys for mussels in these streams. 4 Tr 1208-1209. Even if, *arguendo*, there were T&E mussel species in Twin Creek and Chippewa Creek, there was no evidence presented in the record that any of such species would be negatively impacted by the proposed withdrawal. Therefore, based upon the record, I find, as a Matter of Fact, that the proposed withdrawal will be implemented in such a manner that it will not constitute a taking of any T&E fish or wildlife species protected by state or federal laws. Also, because no testimony was presented to controvert the testimony of Mr. Boote, I find, as a Matter of Fact, that the proposed

withdrawal will be implemented in such a manner that it will not constitute a taking of any T&E plant species protected by state or federal laws.

D. Common Law Principles of Water Law

Under § 32723(6)(d), EGLE must ensure that “[t]he proposed use is reasonable under common law principles of water law in Michigan.” MCL 324.32723(6)(d). Nestlé presented evidence to EGLE in its Application that the withdrawal will comply with such common law principles. See, e.g., Exhibit R-28 at pp 23-25; Exhibit I-21 at pp 24-26. See also Nestlé’s Closing Brief at pp 45-49. In their Petition, the Petitioners argued that the proposed withdrawal fails to satisfy such principles. See, e.g., Citizens’ Petition at pp 16-17. Prior to the commencement of the contested case hearing, the Parties stipulated to the dismissal of certain claims raised by the Petitions so that such claims can be brought in Circuit Court instead of before this Tribunal, including claims related to common law principles of water law in Michigan. From a review of the Order entered on May 17, 2019, these claims are properly preserved for review in Circuit Court. Therefore, there being no evidence on this record that the proposed use is unreasonable under such principles, I find, as a Matter of Fact, that the proposed use is reasonable under common law principles of water law in Michigan.

E. The Applicant’s Self-Certification

Under § 32723(6)(e), Nestlé must self-certify that it “is in compliance with environmentally sound and economically feasible water conservation measures developed by the applicable water user’s sector ... or developed for the water use associated with that specific withdrawal.” MCL 324.32723(6)(e). The Application contained Attachment A-10, which is Nestlé’s certification that it is in compliance with the water conservation measures developed by the beverage industry sector. Exhibit I-21 at p 80. This attachment expressly recites that Nestlé, “hereby certifies that it is in compliance with the accepted water conservation practices as developed and submitted to [EGLE] for the beverage industry sector.” *Id.* No evidence was presented to contest Nestlé’s self-certification. Therefore, I find, as a Matter of Fact, that Nestlé has certified that it is in compliance with environmentally sound and economically feasible water conservation measures developed by the applicable water user’s sector.

F. Public or Private Rights and Limitations

Under § 32723(6)(f), EGLE must determine that “the proposed withdrawal will not violate public or private rights and limitations imposed by Michigan water law or other Michigan common law duties.” MCL 324.32723(6)(f). Nestlé presented evidence to EGLE in its Application that the withdrawal will comply with such rights, limitations, and duties. See, e.g., Exhibit R-28 at pp 27-28; Exhibit I-21 at pp 28-29. Prior to the commencement of the contested case hearing, the Parties stipulated to the dismissal of certain claims raised by the Petitions so that such claims can be brought in Circuit Court instead of before this Tribunal, including claims related to public or private rights and limitations imposed by Michigan water law or other Michigan common law duties. From a review of the Order entered on May 17, 2019, these claims are properly preserved for review in Circuit Court. Therefore, there being no evidence on this record that the proposed withdrawal will violate such rights, limitations, and duties, I find, as a Matter of Fact, that the proposed withdrawal will not violate public or private rights and limitations imposed by Michigan water law or other Michigan common law duties.

V. Addressing Hydrologic Impacts

Finally, under § 17(4)(b), EGLE must determine that the applicant “will undertake activities, if needed, to address hydrologic impacts commensurate with the nature and extent of the withdrawal.” MCL 325.1017(4)(b). The statute notes that “[t]hese activities may include those related to the stream flow regime, water quality, and aquifer protection.” *Id.* The record in this case contains evidence regarding the activities that Nestlé will undertake to address hydrologic impacts. Specifically, Ms. Anderson-Vincent testified that there are 15 Type IIb public water supply wells on Spring Hill Camps, nine of which are located within a one-mile radius of PW-101. 4 Tr 1309. Ms. Anderson-Vincent stated that Nestlé and Spring Hill Camps entered into an agreement which, *inter alia*, requires Nestlé to address impacts caused by withdrawals from PW-101 on water wells located on the Spring Hill Camps property. 4 Tr 1294. Moreover, “the agreement also requires Nestlé to address material and unusual changes in the water level of a surface water

body or wetland located on the Spring Hill Camps property if caused by withdrawals from” PW-101. *Id.* This agreement also restricts surface uses that could potentially harm Nestlé’s water source or limit recharge of the aquifer. 3 Tr 1308.

Nestlé has also entered into an agreement with the Township of Osceola. Exhibit I-76. Under this agreement, a person who believes their water well may have been impacted by the proposed withdrawal can have their complaint investigated; and, if the impact is attributable to Nestlé’s withdrawal, the impact would be remedied at Nestlé’s expense. *Id.*; 3 Tr 1310. Finally, the permit itself provides that if impacts to streams or wetlands result from the proposed withdrawal, the approved 150 gpm increase in capacity will be suspended, and Nestlé’s withdrawals will be reduced to its previously registered capacity of 250 gpm. Exhibit R-76 at pp 5, 6, 12.

No party presented evidence challenging the above-referenced evidence proffered by Nestlé. As a result, I find, as a Matter of Fact, that Nestlé has demonstrated that it will undertake activities, if needed, to address hydrologic impacts commensurate with the nature and extent of the withdrawal.

VI. Summary

To summarize the Findings of Fact, PW-101 was “developed” in 2001 when it was drilled. The baseline capacity for PW-101 is 150 gpm. The information and data supplied by Nestlé was sufficient to provide an evaluation of environmental, hydrological, and hydrogeological conditions that exist at PW-101, and the predicted effects of the intended withdrawal. The Muskegon River is a direct tributary of Lake Michigan. The watershed for the Muskegon River is considered the watershed of Lake Michigan. All water withdrawn from PW-101, less any consumptive use, is returned either naturally, or after use, to the source watershed. Twin and Chippewa Creeks are cold water streams. A 20% or greater reduction in the index flow in a cold-stream system will cause a 3% or higher reduction in the density of the thriving fish population based on Michigan’s established thriving fish population curves.

Nestlé’s revised groundwater model is entitled to receive greater weight than the testimony offered by Dr. Hyndman. Dr. Andrews’ testimony regarding a low conductivity zone south of Twin Creek and Chippewa Creek is credible and entitled to receive greater

weight than the testimony of Dr. Hyndman. Ms. Van Dyke's testimony regarding ground-water recharge is credible and entitled to receive greater weight than the testimony of Dr. Hyndman. Dr. Andrew's testimony regarding evapotranspiration is credible and entitled to receive greater weight than the testimony of Dr. Hyndman.

Index flow is to be determined at the mouths of Twin Creek and Chippewa Creek. The predicted impacts from the proposed withdrawal will lead to less than a 20% reduction in index flow in Twin and Chippewa Creeks. Nestlé's sampling of aquatic resources conducted in Twin and Chippewa Creeks was performed in accordance with the requisites of Procedure 51. The testimony of Mr. Heintzelman and Dr. Workman is entitled to receive greater weight than the testimony offered by Dr. Luttenton. A 3% or greater reduction in the thriving fish population did not occur in Twin and Chippewa Creeks. Because no evidence was presented to support Dr. Luttenton's predicted decrease, the proposed withdrawal will not cause a predicted decrease of 3% or greater in the thriving fish population in Twin and Chippewa Creeks. The conditions in the permit to monitor the headwaters of Twin and Chippewa Creeks are adequate. Because the proposed withdrawal will not cause a 20% or greater reduction in index flow in Twin and Chippewa Creeks, and because the proposed withdrawal will not cause a 3% or greater reduction in thriving fish population in Twin and Chippewa Creeks, the proposed withdrawal will not cause an adverse resource impact.

The anticipated drawdown in the wetlands surrounding PW-101 will be between .03 and .3 feet which does not constitute draining surface water from a wetland. The wetland monitoring conditions in the permit are adequate. The proposed withdrawal will be implemented in such a manner that it will not constitute a taking of any threatened or endangered fish or wildlife species protected by state or federal laws. The proposed withdrawal will be implemented in such a manner that it will not constitute a taking of any threatened and endangered plant species protected by state or federal laws. The proposed use is reasonable under common law principles of water law in Michigan. Nestlé has certified that it is in compliance with environmentally sound and economically feasible water conservation measures developed by the applicable water user's sector. The proposed withdrawal will not violate public or private rights and limitations imposed by Michigan water law or other Michigan common law duties. Nestlé has demonstrated that

it will undertake activities, if needed, to address hydrologic impacts commensurate with the nature and extent of the withdrawal.

CONCLUSIONS OF LAW

Based on the Findings of Fact, I conclude, as a Matter of Law:

1. In their Motion for Summary Disposition, the Petitioners seek relief which is beyond the scope of this contested case. *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); *In Re Quality Service Standard*, 204 Mich App 607, 611; 516 NW2d 142 (1994); *Fox v Board of Regents of the University of Michigan*, 375 Mich 238, 242; 134 NW2d 146 (1965); *National Wildlife Fed'n v Department of Env'tl Quality (No. 2)*, 306 Mich App 369, 379; 856 NW2d 394 (2014).
2. The Petitioners' claim challenging the effectiveness of the 2009 source approval letter is beyond the scope of this contested case. *York, supra*; *Coffman, supra*; *In Re Quality Service Standard, supra*; *Fox, supra*; *National Wildlife Fed'n (No. 2), supra*.
3. Because facts are at issue in this contested case, Nestlé's Motion for Summary Disposition on unacceptable ecological effects is denied.
4. Because Nestlé seeks an increased large quantity withdrawal of more than 200,000 gpd, EGLE has jurisdiction over the increased withdrawal requested by Nestlé. MCL 325.1701(3).
5. The Legislature intended the agency to use that portion of the proposed withdrawal above baseline capacity in its determination of "adverse resource impact." MCL 324.32701(1)(cc); MCL 324.32701(1)(a); *Ansell v Department of Commerce*, 222 Mich App 347, 355; 564 NW2d 519 (1997); *Blackwell v Bornstein*, 100 Mich App 550, 554; 299 NW2d 397 (1980); *People v Morey*, 461 Mich 325, 330; 603 NW2d 250 (1999).
6. Because Twin and Chippewa Creeks are cold water streams, the 3% rule is applicable in this contested case. MCL 324.32701(1)(a)(ii)(A).
7. The definition of "thriving fish population" is not limited to evidence obtained from a three-pass fish survey but may be obtained from evidence of either one-pass or three-pass surveys. MCL 324.32701(1)(oo).
8. Because the proposed water withdrawal is not anticipated to drain surface water from wetlands, a Part 303 permit is not currently required in this case. MCL 324.30304(d).

PROPOSAL FOR DECISION

Based on the Findings of Fact and Conclusions of Law, I propose that the Final Determination and Order approve the activity proposed in the Application submitted by Nestlé Waters North America, Inc. (Exhibit I-21), consistent with Permit No. 1701 issued on April 2, 2018 (Exhibit R-76).



Daniel L. Pulter
Administrative Law Judge

EXCEPTIONS

The Parties have until May 15, 2020, which is twenty-one (21) days from the date of this Proposal for Decision, to file Exceptions. R 792.10132. If an opposing party chooses to file a Response to the Exceptions, it must be filed by May 29, 2020, which is fourteen (14) days after Exceptions are due. R 792.10132. The filings shall be sent via email to: MOAHR-GA@michigan.gov with a copy sent to all other parties.

PROOF OF SERVICE

I hereby state, to the best of my knowledge, information and belief, that a copy of the foregoing document was served upon all parties and/or attorneys of record in this matter via email this 24th day of April, 2020.



E. Cussans

**Michigan Office of Administrative
Hearings and Rules**

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APPENDIX OF PERMIT CONDITIONS

An excerpt of some of the relevant conditions contained in Permit No. 1701 issued under § 17 of the SDWA on April 2, 2018 include the following:

- “Before withdrawing water above the previously approved 250 gpm, the permittee must submit monitoring plans and Quality Assurance Project Plans (QAPP) to the Department for consideration and approval.” Exhibit R-76 at p 4.
- “If at any time the Department determines that monitoring is not performed in compliance with the approved plans, and upon written notification from the Department, the additional capacity authorized by this permit (250 gpm) is suspended until the Department reinstates it.” Exhibit R-76 at p 5.
- “Continuous streamflow monitoring at SF-8 during the summer and fall months (June to October) to verify the modeled flow reductions, better define stream flow at this location, and assess if an adverse resource impact occurs as a result of the permitted increase to 400 gpm.... If flows fall below 72 gpm for a period of 14 days, then pumping levels shall be reduced to 250 gpm. Permitted pumping levels may resume, if all other permit conditions are met, once sustained streamflow of 72 gpm or more is measured for an equivalent 14-day period.” Exhibit R-76 at p 6.
- “Continuous streamflow monitoring at SF-1 during the summer and fall months (June to October) to verify the modeled flow reductions and better define stream flow at this location.... If flows fall below 431 gpm for a period of 14 days, then pumping levels shall be reduced to 250 gpm. Permitted pumping levels may resume, if all other permit conditions are met, once sustained streamflow of 431 gpm or more is measured for an equivalent 14-day period.” Exhibit R-76 at p 6.
- “Continuous temperature measurement shall be made on an hourly basis from June through September at four locations (SF1, SF9, SF8, and SF16) using an instream temperature logger. Logger data shall be compiled once every two (2) weeks at a minimum.... The permittee shall notify the Department within 24 hours of compiling the temperature logger data if, at any time

during the two-week period, the temperature rises above 68 degrees Fahrenheit in June, July or August, or rises above 63 degrees Fahrenheit in September. The notification shall include all the data from the two-week period, and the permittee shall provide a report to the Department including an assessment of the cause of the elevated temperature and any proposed corrective actions.” Exhibit R-76 at pp 7, 8.

- “A two-week continuous dissolved oxygen (DO) study shall be conducted each year at four locations (SF1, SF9, SF8, and SF16) during hot, low-flow conditions which typically occur in August. Sampling shall be conducted using an installed DO meter, with readings recorded hourly. Baseline DO sampling shall be conducted at these locations after approval of the monitoring plan and QAPP and prior to implementing the permitted increased pumping.... The permittee shall notify the Department within 24 hours of compiling the dissolved oxygen data if, at any time during the study period, the dissolved oxygen is below seven (7) milligrams per liter. The notification shall include all the dissolved oxygen data, and the permittee shall provide a report to the Department, including an assessment of the cause of the low dissolved oxygen; and any proposed corrective actions.” Exhibit R-76 at pp 7, 8.
- “Macroinvertebrate sampling shall be conducted in July each year at four (4) locations (SF1, SF9, SF8, and SF16). Samples should not be collected soon after a heavy rain event when stream flows are elevated.... A baseline assessment will be conducted after approval of the monitoring plan and QAPP and prior to implementing the permitted increased pumping. The threshold for action will be a decline of three (3) metric points from the baseline score in any one year or over multiple years.” Exhibit R-76 at p 7.
- “Water depth and stream width will be measured at four locations (SF1, SF9, SF8, and SF16) once each year during low-flow conditions (typically July or August). Results will be compared with previous measurements. In addition, water depth and stream width will be measured upstream and downstream of existing culverts at six road/stream crossings (T2, T3, T8,

T18, C2, and C3) once each year during low-flow conditions (typically July or August).” Exhibit R-76 at p 7.

- “The fish community will be monitored in July of each year at four locations (SF1, SF9, SF8, and SF16).” Exhibit R-76 at p 8.
- “Following the baseline data collection, permittee shall monitor the water levels at each groundwater monitoring location (MW, DP, Vent, Seep) identified in the section above on a monthly basis.” Exhibit R-76 at p 9.
- “The newly collected groundwater level and flow data measurements shall be used to validate the existing modified MODFLOW groundwater model and provide a report that details the findings including any need to revise the existing model based on the new data. The effectiveness of the groundwater model shall be reviewed on an annual basis. This review will also include assessment of the continued validity of the recharge assumptions along with supporting data. Should the drawdown or water level declines observed in the monitoring data exceed what is predicted based on the groundwater model, pumping levels will be reduced to 250 gpm and drawdown and water levels shall be monitored on a monthly basis until water levels recover.” Exhibit R-76 at p 9.
- “The permittee shall conduct a Level 3 Wetland Identification Program (WIP) assessment of all wetlands located south of Nine Mile, west of 95th Avenue, north of Eight Mile and east of 110th. All wetland boundaries shall be flagged in the field and surveyed using a submeter accuracy GPS. Wetland boundaries shall be verified in the field every two years to detect potential changes to wetland boundaries. Any reduction in wetland area over 0.01 acre per wetland shall be noted and reported to the Department. The boundaries of wetlands A, B, C, CC, D, E, F, G, H, LL, Q, and the east side of R shall be permanently staked in the field (after confirmation by Department staff) to allow for quick visual assessment of changes to wetland boundaries.” Exhibit R-76 at p 10.
- “The permittee shall conduct a detailed comprehensive floristic quality assessment (using FQI and mean C) in the following wetlands: A, B, C,

CC, D, E, F, G, H, LL, Q, and R. The initial baseline survey shall be completed three (3) times (early June, mid July, and late August) throughout the growing season prior to increasing pumping rates to document floristic quality of the wetlands and document any threatened, endangered or special concern species, as well as plants that have high C value. A qualified botanist shall conduct the survey.... The permittee shall conduct a floristic quality assessment every year in wetlands A, B, C, CC, D, E, F, G, H, LL, Q, and R between July 15 and August 31.....” Exhibit R-76 at pp 10, 11.

- “The permittee shall develop a detailed vegetation sampling plan to detect potential changes to wetland hydrology and plant communities. The sampling pan shall include transects in wetlands A, B, C, CC, D, E, F, G, H, LL, Q, and the east side of R which shall be oriented perpendicular to groundwater contours. A qualified individual able to identify plants to genus and species must conduct the wetland vegetation monitoring. The Department reserves the right to reject reports with substandard monitoring data.” Exhibit R-76 at p 11.
- “The permittee shall conduct a meander each year in wetlands A, B, C, CC, D, E, F, G, H, LL, Q, and R once between July 15 and August 31 to search for visible signs of vegetation stress including stress to trees and shrubs (e.g. wilting, discolored leaves, mortality, etc.)” Exhibit R-76 at p 11.
- “If the [wetland] performance standards listed above are not met, the permittee shall reduce pumping to 250 gpm and notify the Department.... The permittee shall provide a written summary to the Department of all the problem areas that have been identified and potential corrective measures to address them, including any potential corrective actions based on results of the monitoring data and site observations.” Exhibit R-76 at p 12.