ORIGINAL

IN THE SUPREME COURT OF OHIO

BOARD OF COMMISSIONERS OF FAIRFIELD COUNTY, OHIO, Appellant, v. SCOTT J. NALLY, DIRECTOR OF ENVIRONMENTAL PROTECTION, Appellee.	:	Case No. 2013-1085 On Appeal from the Franklin County Court of Appeals, Tenth Appellate District (Court of Appeals Case No. 11AP-508)

REPLY BRIEF OF APPELLANT BOARD OF COMMISSIONERS OF FAIRFIELD COUNTY, OHIO

STEPHEN P. SAMUELS (0007979)
Counsel of Record
JOSEPH M. REIDY (0030346)
STEPHEN N. HAUGHEY (0010459)
THADDEUS H. DRISCOLL (0083962)
FROST BROWN TODD LLC
One Columbus, Suite 2300
10 West Broad Street
Columbus, Ohio 43215-3484
(614) 464-1211
(614) 464-1737 (facsimile)
ssamuels@fbtlaw.com
jreidy@fbtlaw.com
shaughey@fbtlaw.com
tdriscoll@fbtlaw.com
Counsel for Appellant Board of Commissioners of Fairfield County, Ohio

MICHAEL DEWINE, ATTORNEY GENERAL OF OHIO
ERIC E. MURPHY (0083284)
State Solicitor
Counsel of Record
SAMUEL C. PETERSON (00831432)
Deputy Solicitor
L. SCOTT HELKOWSKI (0068622)
ALANA R. SHOCKEY (0085234)
Assistant Attorneys General
Ohio Attorney General's Office
30 East Broad Street, 17th Floor
Columbus, Ohio 43215
(614) 466-8980
eric.murphy@ohioattorneygeneral.gov
samuel.peterson@ohioattorneygeneral.gov
lawrence.helkowski@ohioattorneygeneral.gov
alana.shockey@ohioattorneygeneral.gov
Counsel for Appellee Scott Nally, Director Environmental Protection

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III. SUMMARY OF REPLY.

Although Ohio EPA's Response Brief makes imaginative use of the case law and the transcript below, it fails to address the heart of the question presented by this appeal: how and where will cities, counties, industry, farmers, developers, and others who are directly impacted by a TMDL, receive a *meaningful* opportunity to review and challenge the myriad scientific, economic, and other data, models, assumptions, policy choices, and other relevant information that was, or should have been, considered and properly weighed by Ohio EPA in establishing the TMDL. According to Ohio EPA, they do not have such rights. In the Agency's view, the only rights affected stakeholders have under Ohio law are to submit comments and, for point source dischargers, fight among themselves for a larger share of the tiny portion of the pollution pie that Ohio EPA has seen fit to distribute to them. Every other aspect of a TMDL is beyond challenge. ERAC and the Court of Appeals bought into this view of the law, ruling that once U.S. EPA approves a TMDL, the only matter that may be reviewed is a re-allocation of the point source wasteload "pie," and even that is a functionally unreviewable discretionary decision. Fairfield County, and the public and industry trade groups that have filed *amicus* briefs, believe that the public's rights are not so circumscribed, and urge this Court to reverse the lower Court's decision.

IV. REPLY ARGUMENT.

Fairfield County, Ohio's Proposition Of Law No. 1: A TMDL is a Rule that Must be Promulgated in Accordance with Ohio Law.

A. The General Assembly's Enactment of Statutes Addressing Certain Aspects of TMDLs, but not Whether They Must be Promulgated, is Irrelevant to Whether TMDLs are Rules under R.C. Chapter 119.

Without judicial or statutory support, Ohio EPA asserts that the General Assembly's (1) failure to state in the Revised Code that TMDLs must be promulgated as rules, (2) statement in

the Revised Code that Ohio EPA must promulgate water quality standards as rules, and (3) enactment of statutory provisions addressing certain aspects of TMDLs but not the Agency's rulemaking obligations, collectively means that the General Assembly did not intend TMDLs to be the subject of rulemaking. Response Brief at pp. 14-15. The argument is without merit.

First, if the General Assembly's failure to address the rulemaking obligations of an agency when the agency takes a particular action, while addressing other aspects of that agency's authority, means that the rulemaking obligations of R.C. Chapter 119 do not apply to such action, the broad rulemaking mandate codified in R.C. 119.02 has effectively been nullified. R.C. 119.02 is couched in clear obligatory terms:

> ***Every agency*** authorized by law to adopt, amend or rescind rules ***shall comply with the procedure described in sections 119.01 to 119.13***, inclusive, of the Revised Code, ***for the adoption, amendment or rescission of rules. Unless otherwise specifically provided by law, the failure of any agency to comply*** with such procedure ***shall invalidate any rule*** or amendment adopted, or the rescission of any rule. (emphasis added)

A broader, clearer directive is difficult to envision. The statute does not state or even suggest that it is effective only if the General Assembly confirms in an agency's enabling statute that rulemaking procedures are required for an action that constitutes "adopting, amending or rescinding rules." By its express terms, R.C. 119.02 is effective regardless whether a confirmatory statement was enacted by the General Assembly. The second sentence is equally instructive. It requires a specific statement from the General Assembly for an agency's rulemaking action to avoid being invalidated because the procedures for rulemaking were not followed.

The County does not dispute that, absent a violation of Ohio's Constitution the General Assembly can, if it desires, expressly exempt a particular agency rulemaking action from these

procedures.[1] Equally, if it desires, the General Assembly can expressly confirm that these procedures must be followed for a specific type of agency rulemaking action.[2] However, the absence of such specific legislative statements regarding TMDLs can scarcely be construed, as Ohio EPA asserts, as a pronouncement by the General Assembly that the broad mandate in R.C. 119.02 does not apply.

Second, Ohio EPA's novel suggestion that the General Assembly must confirm the rulemaking obligations of dozens of Ohio agencies each time it enacts legislation that authorizes them to regulate the rights and duties of residents, local governments, and businesses in this State comes without any authority. R.C. 119.02 is effectively the General Assembly's "safety net," requiring *all* agency rulemaking actions that are not expressly exempted from its requirements to be promulgated according to its procedures.

Because the General Assembly did not exempt Ohio EPA's authority to develop TMDLs from the obligations of R.C. Chapter 119, the Agency must follow those procedures if, as the County asserts, TMDLs are rules.

B. All TMDLs Developed by Ohio EPA are Rules that have Binding Legal Effect under Ohio Law Regardless of the Fact that Additional Steps are Required to Implement the TMDL.

Ohio EPA asserts that the TMDLs it develops are not rules because they are not binding or self-executing, but are simply "informational tools" that impose no independent legal obligations. Response Brief at pp. 20-24. However, under the express terms of Ohio EPA's TMDL rule, Ohio Adm. Code 3745-2-12, once the Agency establishes a TMDL, it has binding legal effect in several ways.

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[1] *See e.g.* R.C. 119.01(A)(1) (excluding several specific actions of the Industrial Commission and Bureau of Workers' Compensation under Chapter 4123 from the requirements of Chapter 119).
[2] *See e.g.* R.C. 6111.041 (specifying that Ohio EPA must follow the procedures of R.C. Chapter 119 when adopting, modifying or rescinding standards of water quality for Ohio's waters).

First, for each TMDL that Ohio EPA establishes, the Agency must develop an implementation plan to implement the TMDL, and if applicable water quality standards will not be immediately attained, the plan must include reasonable assurances that the water quality standards will be attained in a reasonable period of time. Ohio Adm. Code 3745-2-12(A)(2) & (E). Second, for each established TMDL, the Agency must use the pollutant loading allocations set forth therein to develop wasteload allocations and water quality-based effluent limits[3] for all affected point sources.[4] Ohio Adm. Code 3745-2-12(G). Therefore, contrary to Ohio EPA's argument, once the Agency establishes a TMDL, it is not just a recommendation or nonbinding informational tool.

It is irrelevant that the pollutant allocations in each TMDL that Ohio EPA establishes do not become effective against point sources of the pollutant until the Agency issues a permit to them with limits based on the allocations contained in the TMDL. Most, if not all or nearly all, of Ohio EPA's (and other agencies') rules set binding standards either on a statewide or regional basis, or on the basis of industry sector, which standards do not become effective and enforceable against the regulated community until they are applied in permits, administrative orders or other regulatory actions.[5] Because TMDLs prescribe standards that have general and uniform operation, they must be promulgated in accordance with the procedures in R.C. Chapter 119, even though some further action is required to give them effect. *See* R.C. 119.01(C)

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[3] Water quality-based effluent limits or "WQBELs" are the numeric limits imposed in discharge permits issued by Ohio EPA to point sources to ensure that applicable water quality standards for a waterbody are achieved and maintained. Ohio Adm. Code 3745-2-01 and 3745-2-02(A)-(B)(72).

[4] A "point source" is defined as any discernible, confined or discrete conveyance from which pollutants are discharged. Ohio Adm. Code 3745-2-02(50). A typical point source is a pipe that discharges pollutants into a waterbody.

[5] *See e.g.* Ohio Adm. Code Chapter 3745-17 (setting particulate air emission standards on a statewide basis), 3745-1 (setting water quality standards on a watershed or river basin basis), and 3745-29 (setting solid waste standards for owners and operators of landfills).

(definition of the term "rule"); 119.02 (requiring that all rules be promulgated regardless whether a permit will be needed to implement the rule).

C. TMDLs are Rules Because they Expand Existing Legal Obligations, and Regulate in Areas that are the Province of the General Assembly's Rulemaking Review Process.

Ohio EPA does not dispute that TMDLs establish standards that apply generally and uniformly to affected stakeholders, but claims that the TMDLs are nevertheless not rules because they do not expand existing legal obligations, but merely interpret the Agency's existing authority. Response Brief at pp. 16-19. The Agency vastly understates the sea change brought about by the establishment of a TMDL. First, once Ohio EPA establishes a TMDL, it creates legal obligations for the Agency's permitting decisions, mandating that permit limits be established using the pollutant allocations set forth in the TMDL. *See* Ohio Adm. Code 3745-2-12(G). Second, the following provisions in Ohio EPA's TMDL rule demonstrate that each TMDL creates new legal obligations for the affected stakeholders:

1. When developing a TMDL for a waterbody, Ohio EPA must first determine the maximum capacity of the particular waterbody to assimilate point and nonpoint source loadings of the pollutant in question. Once the TMDL is finalized, the capacity ceiling establishes a new, binding standard or cap that regulates the ability of dischargers along that stream to increase their loadings. Ohio Adm. Code 3745-2-12(B) & (I).

2. When developing a TMDL for a waterbody, Ohio EPA establishes a margin of error for its allocation of pollutant loadings and a reserve allocation of pollutant loadings for future growth, all without any regulatory criteria for guidance, the result of which is, once the TMDL is finalized, a second new standard or cap that also regulates the ability of dischargers to increase their loadings. Ohio Adm. Code 3745-2-12(J)-(K).

3. When a waterbody is impaired[6] for a pollutant contributed by both nonpoint sources[7] and point sources, Ohio EPA divides the TMDL's "pollution loading diet" (minus the margin of error and any reserve for future growth) among these sources, without any regulatory criteria to govern the process. *See* Ohio Adm. Code 3745-2-12(F)-(G). *See also* Joint Exhibit 13 (Big Walnut Creek TMDL) at pp. 104-106 (setting forth the Agency's final allocation of the "pollution diet" among the basin's point and nonpoint sources). The result of this process is the establishment of new, mandatory loading reductions arbitrarily divvied up among the sources along the stream.

These regulatory outcomes of Ohio EPA's TMDL process go far beyond just enforcing compliance with existing authority. They create new regulatory obligations where none existed before. In addition, they involve decisions that arbitrarily decide questions of future growth for a watershed, and decide who among multiple contributing sources in the watershed will be forced to undertake an Agency-ordained diet, how much of a diet, and at what cost. The creation of such new obligations is the essence of rulemaking.

In the absence of legislative or regulatory guidance to govern Ohio EPA's decisions about future growth and how to allocate a "pollution diet" among multiple sources, the Agency is treading into an area where the General Assembly has stated its intent to participate. One of JCARR's functions is to evaluate and influence important questions of growth and financial impacts associated with proposed rules. *See e.g.* R.C. 127.1, 121.39, and 121.82 (setting forth JCARR's requirements for submittal of detailed legal and fiscal analyses for all proposed rules). A decision by this Court that Ohio EPA must follow rulemaking procedures when establishing

[6] The word "impaired" is a term of art particular to the vernacular of TMDLs, meaning that the waterbody is currently unable to meet applicable water quality standards.
[7] Examples would be golf courses, streets and roadways, and agricultural surface runoff.

TMDLs will add an important layer of review and control over an agency process that lacks objective standards in critically important areas.

D. The Big Walnut Creek TMDL also Established New, Uniform, Binding Water Quality Standards for Phosphorus, and Thus was Separately Subject to Rulemaking under R.C. 6111.041.

Ohio EPA repeatedly asserts that because the Big Walnut Creek TMDL seeks only to enforce existing water quality standards rulemaking is not required. *See e.g.* Response Brief at pp. 2, 5-7, 16, 20-21. According to the Agency, the alleged existing water quality standard for phosphorus that is being enforced in the Big Walnut Creek TMDL is found at Ohio Adm. Code 3745-1-09. *Id.* at pp. 6-7. Ohio EPA is incorrect.

Ohio Adm. Code 3745-1-09 contains no water quality standards for phosphorus. The rule only sets forth aquatic life habitat, water supply, and recreational use designations for all waterbody segments located in the Scioto River drainage basin.[8] *Id.* In addition, the TMDL at issue in this appeal expressly states that Ohio EPA had not yet established numeric water quality standards for phosphorus. Joint Exhibit 13 (TMDL) at p. 23 ("...Ohio EPA does not currently have statewide numeric criteria for phosphorus...."). Ohio EPA also does not dispute that the numeric "target values" for phosphorus established in the TMDL (0.11 mg/l) came from an unpromulgated guidance document. *Id.* at p. 23-24 (showing source of the value as Ohio EPA's technical report "*Association Between Nutrients, Habitat, and the Aquatic Biota in Ohio Rivers and Streams*" (Ohio EPA, 1999)). *See also* App. Op. at ¶¶ 57, 76 (uncontested statement that the technical report was never promulgated as a rule).

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[8] *See* Ohio Adm. Code 3745-1-07(A)(1) ("Each water body in the state is assigned one or more aquatic life habitat use designations. Each water body may be assigned one or more water supply use designations and/or one recreational use designation. Thee use designations are defined in paragraph (B) of this rule. Water bodies are assigned use designations in rules 3745-1-08 to 3745-1-32 of the Administrative Code").

Finally, it cannot be disputed that the waterbodies in the Big Walnut Creek watershed constitute "waters of the State of Ohio" (*see* R.C. 6111.01(H)), and that the numeric phosphorus "target values" established in the TMDL are "water quality standards" for those waterbodies. *See* Ohio Adm. Code 3745-1-02(B)(89) (definition of water quality standards).

Because R.C. 6111.041 requires that Ohio EPA follow the rulemaking procedures in R.C. Chapter 119 when adopting water quality standards, the TMDL at issue in this appeal is unlawful for the separate reason that it sought to establish new, binding numeric water quality standards for phosphorus that had not undergone the rulemaking procedures in R.C. Chapter 119.

E. Requiring that Ohio EPA Promulgate TMDLs Guarantees Rather than Eliminates Flexibility for the Affected Stakeholders.

Ohio EPA asserts without authority that if it must promulgate TMDLs, the Agency will be unable to provide flexibility in discharge permits, because limits set forth in TMDLs established by Ohio EPA are only recommendations that it is free to adjust or even depart from when issuing permits, and rulemaking will negate that flexibility. Response Brief at pp. 24-25. These comforting assurances of regulatory flexibility are wholly inconsistent with the position the Agency successfully argued below, and is asserting before this Court.

The argument that allocations of pollutant loadings in a TMDL are only "recommendations" that the Agency is free to depart from is false. As demonstrated above, once Ohio EPA establishes a TMDL, the allocations of pollutant loadings therein shall be used by the Agency to set permit limits for the affected dischargers. Ohio Adm. Code 3745-2-12(G). Whether the allocations are called "recommendations" by Ohio EPA in TMDLs is irrelevant to the legal effect they have on the Agency's permitting decisions.[9] In addition, the flexibility that

[9] Indeed, Ohio EPA successfully argued below that once U.S. EPA approved the TMDL, Ohio EPA's flexibility, in terms of the ability to modify, or even delete, numeric permit limits called

Ohio EPA provided by imposing the County's new phosphorus limits in phases over a period of time is already part of the Agency's existing TMDL rule. Ohio Adm. Code 3745-2-12(E) ("A TMDL implementation plan may be based on attaining water quality standards over a period of time, with specific controls on individual sources being implemented in stages.").

Finally, the Agency can incorporate flexibility in a rule as easily as it can in a set of "recommendations." Requiring Ohio EPA to undergo rulemaking guarantees that it addresses important legal and economic questions about each TMDL as part of the General Assembly's rulemaking review. The rulemaking process ensures that stakeholders and the public have the ability to have meaningful input, including the right to seek additional flexibility.

F. The Case Law of Other Jurisdictions is Unanimous that TMDLs are Rules.

Ohio EPA attempts to discredit the County's authority demonstrating that other legislatures and judiciaries treat TMDLs as rules. Response Brief at pp. 35-37. The Agency's effort can be rebutted in a single sentence: every court that has addressed the issue has held, or at least stated in dicta, that TMDLs are rules. A more complete response follows.

Ohio EPA does not dispute the analysis of the Idaho Supreme Court in *Asarco Incorporated v. State of Idaho*, 69 P. 3d 139 (Id. Sup. Ct. 2003), which held that TMDLs are rules under Idaho's APA. *Id.* at 141-144. The fact that the Idaho legislature subsequently chose to amend the statute to exempt future TMDLs from rulemaking is irrelevant. Until such time as the General Assembly chooses to exempt Ohio EPA's TMDLs from rulemaking procedures, Ohio's APA requirements control.

The Agency is simply incorrect about Oregon. The process it follows includes issuance

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for in the TMDL, was limited to a re-allocation of the final "pollutant loading diet" in the TMDL. Consequently, the Agency's assertion that its "willingness" to be flexible will be harmed if rulemaking procedures are required for TMDLs rings hollow.

of TMDLs by agency order, approval of the TMDLs by U.S. EPA, and then incorporation of each TMDL into Oregon's administrative rules. *Compare* Or. Admin. R. 340-042-0060 (requiring issuance of TMDLs by order) *with* Or. Admin. R. 340-041-0103 (rule incorporating the Main Stem Columbia River TMDL). And the Agency does not dispute that the legislatures in California, Colorado, and Florida, three states with critical water resource issues, each require rulemaking for TMDLs.

Ohio EPA's analysis of *Missouri Soybean Association v. Missouri Clean Water Commission*, 102 S.W. 3d 10 (Mo. 2003) is equally incorrect. Contrary to the Agency's claim, the Missouri Supreme Court *did* conclude that TMDLs should proceed through rulemaking. *Id.* at 24 ("TMDLs are developed and implemented *through future regulations*...") (emphasis added).

The Agency's criticism of the County for citing dicta in decisions in Delaware and New Jersey misses the point: these courts, like every other court that has touched on the issue, consider TMDLs to be best characterized as rules or regulations. *See City of Rehoboth v. McKenzie*, Del. Super. Ct. No. 98C-12-023, 2000 WL 303634 (Feb. 29, 2000); *In re Adoption of Amendments to Ne., Upper Raritan, Sussex County & Upper Delaware Water Quality Mgmt. Plans*, N.J. Super. Ct. No. A-5266-07T3, 2009 WL 2148169 *5 n. 3 (July 21, 2009).

The Agency also wrongly cites the West Virginia case of *Monongahela Power Co. v. Chief, Office of Water Resources, Division of Environmental Protection*, 211 W. Va. 619 (2002) for the proposition that TMDLs are not state rulemaking. The TMDL at issue in that case was developed by U.S. EPA, not the state, and the issue was whether the federally-drafted TMDL was appealable to the state courts. *Id.* at 629 n. 17. That case is irrelevant to whether a state-developed TMDL is a rule under West Virginia law. Similarly, the Vermont rule cited by Ohio

EPA says nothing about rulemaking requirements for TMDLs developed by that state. *See* Vt. Code R. 16-3-504:3. Even less relevant is the Agency's citation to Massachusetts' guidance. *See* Response Brief at p. 37.

Finally, Ohio EPA's claim (Response Brief at p. 37) that if this Court decides that TMDLs must be promulgated as rules Ohio will be one of only a handful of states to require rulemaking misses the point. Each time a court has addressed whether TMDLs should be considered rules, it concluded that they are and must be promulgated as such.

G. U.S. EPA's Procedural Approval of State-Developed TMDLs is Irrelevant to Whether TMDLs are Rules that Must be Promulgated under a State's APA.

Ohio EPA's final argument as to why TMDLs need not be subject to rulemaking is that (1) approval of a waterbody's pollutant capacity set forth in a TMDL is a federal action by U.S. EPA, (2) U.S. EPA's approval of a state-submitted TMDL completes the joint federal-state TMDL process, without which approval the TMDL has no legal effect, and (3) the federal approval is an action that can be challenged in federal court. Response Brief at pp. 25-30. There are several flaws in this argument.

First, there is nothing in the federal Clean Water Act's TMDL provision that negates or preempts states' APA rulemaking requirements. *See* 33 U.S.C. 1313(d).[10] U.S. EPA's approval of state-issued TMDLs has no impact on the states' independent requirement that rules adopted by their agencies must undergo APA-related procedures. Second, as demonstrated in the County's Amended Merit Brief, U.S. EPA's approval of state-submitted TMDLs is a non-substantive procedural checklist that must be completed in 30 days, not a substantive review of, for example, whether the state correctly determined the applicable stream's assimilative pollutant

[10] In fact, the Clean Water Act has a savings provision that protects and preserves the states' rights to be more stringent than the minimum standards required under the federal Act. 33 U.S.C. 1370.

capacity.[11] *See* County's Amended Merit Brief at pp. 6-7 (*citing* U.S. EPA's guidance documents verifying its limited 30-day procedural review of state submitted TMDLs).

Third, a stream's pollutant assimilative capacity is but one of many substantive aspects of a state-issued TMDL that are reviewable. Ohio EPA's assertion about the alleged "substantive" scope of U.S. EPA's review of Ohio EPA's determination of stream capacity is not only incorrect, it overlooks the fact that it is Ohio EPA, not U.S. EPA, who is required by its own TMDL rule to establish that capacity as part of each TMDL (*see* Ohio Adm. Code 3745-2-12(I)), and it is Ohio EPA's action that is at issue in this appeal.

Finally, as demonstrated in the County's Amended Merit Brief, had the County attempted to assert a substantive challenge to the Big Walnut Creek TMDL in federal court, the County's suit would have been dismissed as unripe. *See* County's Amended Merit Brief at pp. 29-30 (*citing City of Arcadia v. U.S. EPA*, 265 F. Supp. 2d 1142, 1144-1145 (N.D. Cal. 2003); *Sierra Club v. Meiburg,* 296 F. 3d 1021, 1025 (11th Cir. 2002)). For all of these reasons, U.S. EPA's approval of the Big Walnut Creek TMDL is irrelevant to whether Ohio EPA was required to follow proper rulemaking procedures.

Fairfield County, Ohio's Proposition Of Law No. 2: The Right to a De Novo Review of Ohio EPA's TMDLs is Guaranteed by Ohio Law, and U.S. EPA's Approval does not Limit that Right.

Fairfield County, Ohio's Proposition of Law No. 3: A Ruling that U.S. EPA's Approval of an Ohio EPA-Developed TMDL Limits the Scope of Review under Ohio Law Insulates TMDLs from Meaningful Review and Denies Due Process of Law.

The County's Proposition of Law Nos. 2 and 3 present different but closely related aspects of the same premise: all parties potentially impacted by a TMDL have the statutory and

[11] Ohio EPA cites no authority to support its assertion that U.S. EPA undertakes a substantive review of the pollutant capacity of the waterbodies addressed in state-developed TMDLs or that affected parties can challenge the capacity determination in federal court. Response Brief at pp. 13, 25.

constitutional right to have a full and fair consideration of all of the material issues and relevant evidence. In its Amended Merit Brief, the County argued the statutory and constitutional issues separately. Ohio EPA's Response Brief conflates them into a single proposition that focuses primarily on the constitutional dimensions of the rulings below, largely sidestepping the statutory shortcomings discussed in the County's Amended Merit Brief. Response Brief at pp. 40-45. The County's reply will respond to the Agency's contentions as combined.

A. The Lower Tribunals did not Uphold the TMDL based on Ohio EPA's Evidence, but Relied on U.S. EPA's Approval, which the Tribunals Mistook as Both a Valid Basis to Uphold the TMDL, and a Limitation upon the County's Right to a *De Novo* Review.

Ohio EPA devotes a considerable portion of its Response Brief to the assertion that (1) the County was given a full and fair opportunity to present to ERAC any evidence it wished, (2) the Agency responded with evidence to support the TMDL, (3) ERAC ruled in favor of the Agency based on a *de novo* standard of review, and (4) the County is simply unhappy with the adverse outcome below and the Court of Appeal's affirmance. Response Brief at pp. 41-43. This argument is in part irrelevant and in part incorrect.

The County agrees that no limits were placed on its right to submit evidence to ERAC as part of the County's challenge to its discharge permit and the TMDL upon which the permit was based. But that is beside the point. The point is that an unfettered right to present evidence is meaningless if ERAC weighs the evidence against a standard of review that is different from, and truncates, the standard of review required by the General Assembly and denies due process. That is what happened below. As discussed in the County's Amended Merit Brief (pp. 21-24), both ERAC and the Court of Appeals upheld the Big Walnut Creek TMDL, not because it was

supported by a valid legal and factual evidentiary foundation,[12] but because it had been "properly promulgated," *i.e.*, approved, by U.S. EPA. App. Op. at ¶ 76; ERAC Decision at ¶¶ 76-78, 84. ERAC's holding is particularly telling:

> Based on the plain reading of U.S. EPA's decision [approval] document, U.S. EPA granted to Ohio EPA the authority to make adjustments to the WLAs [point source wasteload allocations] in the NPDES permitting process. Altering individual WLAs is not a mandate, but an option available to Ohio EPA allowing it to modify individual WLAs for point sources, providing that other established requirements are satisfied. ***United States EPA is clear, however, that should the Director decide to alter individual WLAs, the total WLA must remain the same and no reallocation between WLAs and LAs [nonpoint source load allocations] may occur.***

Id. at ¶ 78 (emphasis added). It is also clear that both lower tribunals based their truncated standard of review on a misreading of the impact of a U.S. EPA's regulation. ERAC Decision at ¶¶ 76-77, 84; App. Op. at ¶¶ 68-71, 80 (both *citing* 40 C.F.R. 122.44(d)(1)(vii)(B)). *See also* Amended Merit Brief at pp. 35-39 (demonstrating that this regulation does not operate to limit rights of appeal of state TMDLs under state law). Ohio EPA ignores these holdings from below, understandably preferring to concentrate on a selective view of the evidence that was submitted by the parties to ERAC, rather than on the erroneous standard of review used to decide the outcome.[13] Response Brief at pp. 41-43.

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[12] R.C. 3745.05(F); *Columbia Township Trustees v. Williams*, 11 Ohio Op. 3d 233, 236 (10th App. Dist. 1976) (standard of review).

[13] While the language of both lower decisions makes clear that federal approval of the TMDL controlled the outcome, the Court of Appeals did separately state, almost as an afterthought, that the testimony of Ohio EPA employee Fancher about fluctuations in dissolved oxygen levels that he observed a mile downstream of the County's WWTP supported the Agency's position that the WWTP's discharge of phosphorus was having an impact on Blacklick Creek. *See* App. Op at ¶ 65. However, ERAC's disposition of this testimony reveals its lack of credibility. First, ERAC, as the trier of fact, found that the location that Mr. Fancher relied upon for his dissolved oxygen analysis was so far downstream from the WWTP that intervening factors greatly affected the condition of the stream. *See* ERAC Decision at ¶ 81. More compelling is the fact that, due to Mr. Fancher's lack of qualifications, Ohio EPA never attempted to qualify him as an expert, and

Ohio EPA claims that the County had a full opportunity to challenge all aspects of the TMDL, but the fact is that the only issue that Ohio EPA, ERAC, and the Court of Appeals agreed may be reviewed is the allocation of the point source dischargers' share of the pollution diet. Thus, the fact that the County was not precluded from introducing evidence was illusory. The lower tribunals ruled that such evidence, no matter how persuasive, cannot negate the findings and recommendations in a federally-approved TMDL. That is not due process, and it does not satisfy the requirement of R.C. 3745.04 that an appellant is entitled to a *de novo* hearing.

The County's Amended Merit Brief identified many questions about TMDLs that Ohio EPA successfully argued below cannot be reviewed. Amended Merit Brief at pp. 33-35. The TMDL at issue in this appeal identified other important questions that the Agency itself raised during the development of the TMDL, which also escape review under the erroneous standard of review followed below:

- Should the TMDL, or at least portions of it, have been "calculated for individual stream segments [such as Blacklick Creek in the vicinity of the Tussing WWTP] or sub-basins, [rather than] the entire watershed?" [Joint Exhibit 13 at p. 28].
- Ohio EPA's determination of "the loading capacity [which] is dependent upon the physical, chemical, and biological processes occurring in the waterbody." [*Id.*].
- Ohio EPA's "allocation of the TMDL, [which] involves the equitable distribution of the loading capacity to all known sources in consideration of technical and economical feasibility as well as water quality-related implications." [*Id.*].
- An evaluation of "the method of development [of the nutrient TMDL which] has inherent

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his opinion that phosphorus from the WWTP was having an impact on Blacklick Creek was ordered stricken by ERAC. *See* Tr. Vol. IV, p. 87.

assumptions that results in uncertainty in the calculated load." [*Id.* at p. 37].

- The evaluation of the method Ohio EPA chose to calculate loading capacity, which "accounts only for physical dilution as a means of assimilation [of phosphorus, and] makes no attempt to account for the chemical and biological cycling of phosphorus through the system that could potentially increase the loading capacity of the streams." [*Id.* at p. 39].
- The review of Ohio EPA's decision to impose a stringent, conservative 0.11 mg/l phosphorus target value for the waterbodies, in light of the fact that full attainment was observed at concentrations above the target value [*Id.* at p. 43].

Given that Ohio EPA itself flagged these as essential issues, they too ought to be allowed to be meaningfully reviewed when a TMDL is challenged under R.C. 3745.04, but the erroneous standard of review precluded such review.

B. The County's Appeal does not Ask the Court to Reweigh the Evidence Submitted at the ERAC.

The County's appeal is not about a reweighing of the evidence submitted below. It is about the erroneous standard of review used by ERAC and affirmed by the Court of Appeals, and whether TMDLs are rules that must proceed under Ohio's rulemaking procedures codified in R.C. Chapter 119. Nevertheless, in an attempt to persuade the Court that the County's appeal is just about "sour grapes" over differences of opinion about the weight of evidence below, Ohio EPA spends a considerable portion of its Response Brief distorting the evidentiary record and the significance of the evidence introduced at the ERAC. Response Brief at pp. 7-12, 42-43. There are too many distortions and misrepresentations for the County to list them all. A few examples will have to suffice.

The Agency asserts that its evidence showed that when the County's WWTP reaches its maximum discharge capacity, the amount of phosphorus being discharged will exceed the

capacity of Blacklick Creek to absorb it. Response Brief at p. 42 (*citing* Ex. 6, Figure 3; and Tr. Vol. II, pp. 154-55 (Miltner testimony)). In truth, the cited evidence showed only that phosphorus concentrations immediately downstream of the WWTP have increased over time, not that any water quality standards would be exceeded. *Id.* By contrast, the County's experts were asked whether, to a reasonable degree of scientific certainly, current or future phosphorus discharges from the WWTP would cause an exceedence of water quality standards, and all answered no. *See* Tr. Vol. I, p. 125; 141-43 (Krejsa); Vol. II, p. 74-76 (Markowitz); Vol. IV, p. 147 (M. Mendel). Even Ohio EPA's own expert witness agreed with this testimony. *See* Tr. Vol. II, p. 170-171 (Miltner testimony).

Ohio EPA liberally cites the testimony of its employees Nygaard and Fancher as providing key testimony to support the limits recommended in the TMDL. Response Brief at pp. 8, 10-12, 43 (*citing* Nygaard testimony – Tr. Vol. III, pp. 174-186, and Fancher testimony - Vol. IV, pp. 80-89). But the Agency neglects to mention that ERAC granted the County's motion to strike much of this testimony. *See* Vol. III pp. 176, 178 (Nygaard); Vol. IV, p. 87 (Fancher).

The Agency also asserted that the testimony of its witnesses demonstrated that discharges from the County's WWTP were contributing to Blacklick Creek's failure to comply with water quality standards. Response Brief at pp. 42-43. But an examination of the transcript reveals that (1) none of Ohio EPA's witnesses testified that discharges from the County's WWTP were contributing to the Creek's failure to comply with applicable standards, and (2) the Agency's chief witness, Mr. Miltner, admitted that the only portions of Blacklick Creek that were in nonattainment were many miles upstream or downstream of the County's WWTP. *See* Tr. Vol.

III, pp. 170-177.[14]

In any event, Ohio EPA's statements regarding the evidence below, economical with the truth as they are, are beside the point. This appeal is not about a difference of opinion about the quantity and quality of the evidence. It is about an erroneous standard of review, based on a misguided view of U.S. EPA's approval of TMDLs, that rendered all other facts immaterial.

C. Whether Fairfield County Appealed U.S. EPA's Approval of the TMDL, or Commented on it when Ohio EPA Issued it in Draft, is Irrelevant to the County's Right to a *De Novo* Review of the TMDL under Ohio Law.

It is not clear why Ohio EPA devotes a full page of its Response Brief arguing that the approval of a TMDL by U.S. EPA is a federal action that cannot be challenged at ERAC pursuant to R.C. 3745.04 and 3745.05. Response Brief at pp. 44-45. That is and has been the County's position. It appears the Agency has misconstrued the purpose for the County's citation to these statutes. Those statutes guarantee a meaningful *de novo* hearing before ERAC on all actions of Ohio EPA. As has been shown, however, the *de novo* proceedings before ERAC were chimerical, thus violating Fairfield County' statutory rights. In addition, as demonstrated in the County's Amended Merit Brief and restated above, U.S. EPA's approval of the TMDL is a separate procedural process that is wholly independent of, and has no bearing on, the County's right to a substantive challenge of the merits of the TMDL under Ohio law.

Finally, Ohio EPA baldly asserts that the opportunity for public comment on the draft TMDL, combined with the availability of a federal APA challenge to U.S. EPA's procedural approval of the TMDL, satisfies the statutory and due process rights of adversely affected parties

[14] Additional demonstrations of Ohio EPA's distortions of the evidentiary record below can be found by comparing the trial transcript to the Agency's Statement of Facts (Response Brief at pp. 6-12), and then to the County's Statement of Facts (Amended Merit Brief at pp. 10-11). The most complete summary of the testimony is found in the Findings of Fact submitted by the County at ERAC, a copy of which is attached hereto as Appendix 1 for the Court's convenience.

like the County. Response Brief at pp. 45-46. The case cited by the Agency regarding notice and comment is a red herring, as it merely holds that if there was an opportunity for comment at the state level, U.S. EPA need not also do so. *Id.* (*citing City of Albuquerque v. Browner*, 97 F.3d 415 (10th Cir. 1996)). The ability to submit comments does not satisfy the statutory and constitutional right to have a full and fair opportunity to meaningfully challenge actions of the Ohio EPA. R.C. 3745.04 and 3745.05 provide the right to a *de novo* review of all actions of the Ohio EPA, regardless whether the Agency provides an opportunity for comment on its action, and regardless whether an affected stakeholder comments on the action. *Id.*

D. Fairfield County Never Limited its Right to a *De Novo* Review at the ERAC, and the County's Arguments below do not Contradict its Arguments to this Court.

Ohio EPA attempts to create dispositive arguments out of its assertion that the County allegedly agreed to limit its right to a *de novo* hearing on all aspects of the TMDL, and allegedly made arguments below that contradict those it make to this Court. Response Brief at pp. 32-33 (alleged agreement to limit review), pp. 30, 46 (alleged contradictions).

Ohio EPA's claim that the County changed its position fails legally and factually. From a legal perspective, the Agency's sole authority is a 1895 federal case, *Davis v. Wakelee*, 156 U.S. 680 (1895), which is wholly inapposite. In that case, the defendant obtained plaintiff's voluntary dismissal of its opposition to defendant's bankruptcy petition by agreeing that plaintiff would have a valid judgment against the defendant that would not be discharged in bankruptcy. *Id.* at 681-682. However, when the plaintiff sought to enforce the judgment, the defendant argued that the judgment was discharged, but the court would not accept defendant's change of heart. *Id.*

In the present case, the County never acquiesced to any part of the TMDL that was relevant to the phosphorus limits that the Agency imposed upon the County's WWTP. Nor did the County acquiesce in how the TMDL was implemented; and the State has consistently argued

that everything contained in the TMDL is beyond challenge. Therefore, nothing that the County has argued has induced the Agency to change its position.

Ohio EPA's claim (Response Brief p. 31) that the County successfully argued below that the recommendations contained in a TMDL report are not binding on the Agency is wrong. The fact is that, with one miniscule and qualified exception, the County has not succeeded, to date, in any of its factual and legal challenges to the TMDL, or to the application of the TMDL to its NPDES permit. All of the County's other claims—including, but by no means limited to, the application of an unpromulgated and draconian target value for phosphorus, the use of a reasonable margin of safety, a different analysis of/allocation for future growth, consideration that reductions in phosphorus discharges by the WWTP are not warranted, and a reallocation of the pollution diet between point and non-point sources--have been utterly rejected.

What the Agency characterizes as contradictory arguments is nothing more than alternative arguments asserted by the County. TMDLs are nonbinding recommendations if that argument would successfully enable the County to avoid the expensive new phosphorus limits below. But the argument did not prevail. In the alternative, as argued below, if TMDLs are binding in all but one meaningless aspect, which the Agency successfully claimed below, then TMDLs are operating as rules that must be properly promulgated under Ohio's APA. Alternative arguments do not create issues of estoppel, and Ohio EPA cites no authority to the contrary.

VII. CONCLUSION.

For all of the foregoing reasons, the County requests that the Court reverse the Court of Appeals and declare the Big Walnut Creek TMDL null and void.

Respectfully submitted,

STEPHEN P. SAMUELS (0007979)
Counsel of Record
JOSEPH M. REIDY (0030346)
STEPHEN N. HAUGHEY (0010459)
THADDEUS H. DRISCOLL (0083962)
FROST BROWN TODD LLC
One Columbus, Suite 2300
10 West Broad Street
Columbus, Ohio 43215-3484
(614) 464-1211
(614) 464-1737 (facsimile)
ssamuels@fbtlaw.com
jreidy@fbtlaw.com
shaughey@fbtlaw.com
tdriscoll@fbtlaw.com
Counsel for Appellant Board of Commissioners of Fairfield County

VIII. CERTIFICATE OF SERVICE.

I hereby certify that a copy of the foregoing Reply Brief of Appellant Board of Commissioners of Fairfield County was sent via regular U.S. Mail this 6th day of May 2014 upon the following counsel:

MICHAEL DEWINE (0009181)
Attorney General of Ohio
ERIC E. MURPHY (0083284)
State Solicitor
Counsel of Record
SAMUEL C. PETERSON (00831432)
Deputy Solicitor
L. SCOTT HELKOWSKI (0068622)
ALANA R. SHOCKEY (0085234)
Assistant Attorneys General
Ohio Attorney General's Office
30 East Broad Street, 17th Floor
Columbus, Ohio 43215
Counsel for Appellee Scott Nally
Director of Environmental Protection

STEPHEN N. HAUGHEY (0010459)
FROST BROWN TODD LLC
3300 Great American Tower
301 East Fourth Street
Cincinnati, Ohio 45202

STEPHEN J. SMITH (0001344)
FROST BROWN TODD LLC
One Columbus, Suite 2300
10 West Broad Street
Columbus, Ohio 43215
Counsel for Amicus Ohio Municipal League
and County Sanitary Engineers Association of Ohio

JOHN GOTHERMAN (0000504)
OHIO MUNICIPAL LEAGUE
175 S. Third Street, #510
Columbus, Ohio 43215-7100
Counsel for Amicus Ohio Municipal League

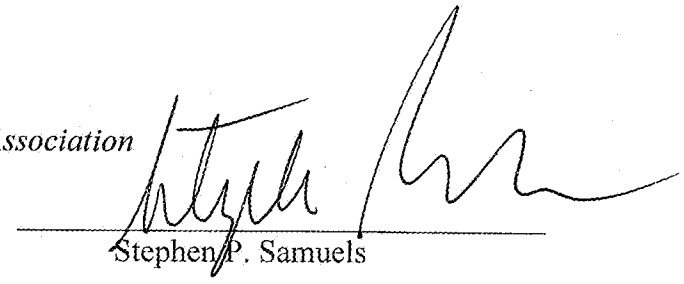
LINDA S. WOGGON (0059082)
OHIO CHAMBER OF COMMERCE

230 East Town Street
Columbus, Ohio 43215
Counsel for Amicus Ohio Chamber of Commerce

JESSICA E. DEMONTE (0072414)
ANDREW O. ETTER (0085013)
SQUIRE SANDERS LLP
2000 Huntington Center
41 South High Street
Columbus, Ohio 43215

JOHN D. LAZZARETTI (0080780)
SQUIRE SANDERS LLP
4900 Key Tower
127 Public Square
Cleveland, Ohio 44114
Counsel for Amicus Association of Ohio Metropolitan Wastewater Agencies

FRANK L. MERRILL (0039381)
BRICKER & ECKLER LLP
100 South Third Street
Columbus, Ohio 43215
Counsel for Amicus Ohio Manufacturers' Association



Stephen P. Samuels

4826-9809-1034.v1

BEFORE THE
ENVIRONMENTAL REVIEW AND APPEALS COMMISSION
STATE OF OHIO

BOARD OF COMMISSIONERS OF FAIRFIELD COUNTY,	:	**ERAC CASE NO. 235929**
	:	**Appeal from NPDES Permit**
Appellant,	:	
v.	:	
CHRIS KORLESKI, Director of Environmental Protection,	:	
Appellee.	:	

APPELLANT BOARD OF COMMISSIONERS OF FAIRFIELD COUNTY'S PROPOSED FINDINGS OF FACT AND CONCLUSIONS OF LAW

Submitted by:
Stephen P. Samuels (0007979)
Joseph M. Reidy (0030346)
Elizabeth E. Tulman (0005927)
Linda Mindrutiu (0082341)
SCHOTTENSTEIN ZOX & DUNN CO., LPA
250 West Street
Columbus, OH 43215
(614) 462-2700 (phone) & (614) 222-5135 (fax)
e-mail: ssamuels@szd.com; jreidy@szd.com; etulman@szd.com; lmindrutiu@szd.com

Attorneys for Appellant
Board of Commissioners of Fairfield County

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I. INTRODUCTION

This is an appeal by the Board of Commissioners of Fairfield County ("Fairfield County" or "County") from the Director's issuance of NPDES Permit No. 4PU00004#HD for the County's Tussing Road Water Reclamation Facility (the "Tussing Plant" or "Plant"). Fairfield County challenges the permit limits for phosphorus ("P") and Total Dissolved Solids ("TDS"). Ohio EPA contends these limits are necessary to preserve the warmwater habitat ("WWH") use designation for Blacklick Creek. However, at the *de novo* hearing, Fairfield County established that the limits are not legally defensible and are not based on a valid factual foundation. Thus, the Director's action was unlawful and unreasonable, and the permit limits for phosphorus and TDS must be vacated.

Unreasonable because uncontradicted testimony from experts in aquatic biology, ecology and biostatistics demonstrated that Blacklick Creek is and will remain in attainment of all WWH biocriteria. Ohio EPA's wholly unsubstantiated speculation that non-attainment of water quality standards might occur some time in the future does not remotely rise to the level of a valid factual foundation.

Unlawful because the Director did not comply with R.C. § 6111.03(J)(3). Among other defects, the P limit is not based on a promulgated water quality standard; the TDS limit is not technically achievable; neither limit is needed to "achieve and maintain" water quality standards; and the Director failed to base his determination on evidence relating to technical feasibility, economic reasonableness and how the removal of pollutants will benefit the people of the state.

The evidentiary hearing was conducted February 9 - 13, 2009. Joint Exhibits[1] 4-6, 8, 11, 13, 17-19, 21-26, 28, 30-34, 42, 43 and 46; County Exhibits A through BB; and OEPA Exhibits

[1] Joint Exhibits through No. 19 have the same number as labeled in the Certified Record.

2, 6, 8-10 and 13 were entered into evidence. (Transcript, v. 5, pp. 72-73.)[2] By agreement of the parties, the recorded testimony from the Hearing was transcribed and filed with the Commission.

II. PROPOSED FINDINGS OF FACT

A. The Tussing Plant and Surrounding Area

1. The Tussing Plant has approximately six thousand customers, mostly residential with a few commercial, and also treats the filter backwash water from the County's nearby water treatment plant. The Plant is located on the **east** side of Blacklick Creek, a few hundred yards west of S.R. 256 and approximately one-half mile south of I-70. (Vogel, v. 1, pp. 11, 13-14).

2. There are two golf courses in the vicinity of the Tussing Plant. Blacklick Creek Golf Course is located along the west bank of Blacklick Creek, approximately one-quarter of a mile north of the Plant. Turnberry Golf Course is also situated on the west bank of Blacklick Creek, from just upstream of the Plant's discharge point at River Mile (RM) 11.0 to RM 9.5. Several large culvert pipes drain the Turnberry Golf Course into Blacklick Creek at various points. (Vogel, v. 1, pp. 28-29; App. Exs. C & D).

3. On the east bank of the Creek, just downstream from the Plant's outfall, is a ravine that drains a large commercial (mall) complex on the east side of Route 256. Further downstream, at RM 10.3, a tributary drains an extensive residential area of Violet Township. (Vogel, v. 1, p. 33-35; App. Ex. C). The areas north, south and east of the Tussing Plant are developed with residences and commercial buildings. (Markowitz, v. 2, p. 105).

4. Robert Miltner, Ohio EPA's expert in water quality standards and aquatic biology, and Mike Bolton, Ohio EPA's expert in macroinvertebrate ecology acknowledged that non-point source discharges such as residential and commercial development can adversely influence water quality. Golf courses can be particularly problematic; they can be a source of

[2] The transcript is cited by reference to witness, volume number (1-5 instead of I - V) and page number herein.

nutrients and pesticides to a stream. (Miltner, v. 2, p. 158; Bolton, v. 5, p. 54-55; R. Mendel, v. 1, pp. 225, 227-228; Markowitz, v. 2, pp 40). It is a demonstrated fact that the greater amount of urbanization along a stream, the greater the potential impact on water quality. (Miltner, v.2, p. 162).

B. Improvements to the Tussing Plant

5. Fairfield County completed improvements to the Plant in 2005 at a cost of six million dollars ($6,000,000.00). This improved the level of treatment at the Plant and increased the volume of wastewater that could be treated from 2.0 to 3.0 million gallons per day (MGD). (Vogel, v. 1, pp. 11, 14). The Plant expansion consumed the remaining available land. The Plant is hemmed in by commercial and residential development, preventing the installation of additional waste treatment facilities. (Vogel, v. 1, pp. 19-22).

6. Kerry Hogan, former Director of Public Utilities for Fairfield County and current Director of Water Resources in the Wastewater Group of the Columbus office of URS, testified as an expert in wastewater treatment design. (Hogan, v. 3, pp. 81, 86). As Director of Public Utilities from 1998 to 2004, Mr. Hogan was involved in the planning and design of the improvements to the Tussing Plant that were completed in 2005. During this time he had frequent communications with Ohio EPA about the plant improvements. ("You want to coordinate with EPA on everything you are doing from initial planning phase all the way through design to ensure that you are meeting the EPA requirements.") (Hogan, v. 3, p. 89).

7. During the planning process, no one from EPA indicated that phosphorus or TDS limits were going to be imposed at Tussing Plant. There was some indication that nutrient removal might be required, but since no specifics were provided by OEPA as to what the limits might be or when they might be imposed, no provision for treating phosphorus (or TDS) was incorporated in the design. (Hogan, v.3, pp. 89-91).

8. David Frank was accepted by the Commission as an expert in wastewater treatment plant design and water treatment plant design. (Commission, v. 3, p. 9). Mr. Frank was responsible for the design of the Tussing Plant improvements and prepared the permit to install (PTI) application and associated plans. The application made no provision for direct phosphorus or TDS removal—some phosphorus removal occurs incidental to treatment processes designed to remove other substances—and Ohio EPA issued the PTI without requiring same. (Frank, v. 3, p. 14-15).

9. Mr. Frank has evaluated Plant operations since the upgrade and found it to be well operated and performing as expected. Post-upgrade monitoring data demonstrate that the P and TDS permit limits can not be met by the Plant as currently configured. (Frank, v. 3, pp. 19-20, 23-24, 43).

C. 2006 NPDES Permit Renewal

10. A draft NPDES Permit was issued by Ohio EPA in December of 2005, and Fairfield County timely commented on it. (Certified Record #5, #9, Jt. Ex. 11).

11. John Owen of Ohio EPA was responsible for developing the Permit limits. Owen testified that the sole reason he included a phosphorus limit in the Permit was because the limit was suggested in the Big Walnut Creek TMDL; Owen simply plugged the number into the Permit. (Owen, v. 3, pp. 137-141, 166). He did not conduct any independent analysis to evaluate whether a phosphorus limit was warranted or what the limit should be. (Owen, v. 3, p. 161).

12. Similarly, Owen derived the TDS limit by inputting data—estimated (low) stream flow, upstream TDS concentration and Plant flow—into a computer and using the number generated by the calculation. Neither he, nor anyone else at OEPA, did any biological, technical

or other analysis to determine if a TDS limit was needed or what the limit should be. (Owen, v. 3, p. 158).

13. Fairfield County engaged Mr. Frank, the engineer who had designed the Plant expansion to evaluate the cost and feasibility of meeting the P and TDS permit limits. His conclusions, and the basis for them, are set forth in his December 2007 "Permit Compliance Study." (Jt. Ex. 30). He determined that the final permit limit of 0.5 mg/l could only be met with the installation of five million dollars ($5,000,000.00) of additional equipment (Jt. Ex. 30, p. 10); and that the TDS limit was not technically feasible. (Frank, v. 3, p. 12; Jt. Ex. 30, p. 13).

D. **Ohio EPA's Justification for the Phosphorus Limit**

14. Eric Nygaard, an Environmental Specialist in the NPDES Unit Division of Ohio EPA, requested Matt Fancher to prepare a memorandum that reviewed the basis for the P limit in order to address the comments submitted by Fairfield County. (Nygaard, v. 3, pp. 177-178). In reviewing the permit limits, Mr. Nygaard did not evaluate the biological impact —or, more accurately, the lack thereof—of current or future discharges of phosphorus and TDS from the Tussing Plant. (Nygaard, v. 3, pp. 197).

15. The Director presented evidence that the P limit in the Permit was based on the Technical Support Document for Big Walnut Creek Watershed (Big Walnut TSD), of which Blacklick Creek is a part, the Big Walnut TMDL Report and on the memorandum prepared by Fancher.

16. A TSD is a repository of information obtained from a field survey of a watershed and Ohio EPA's interpretation of the data. (Miltner, v. 2, p. 128). It contains biological and chemical water quality data, habitat evaluations, and assesses whether improvements to water quality have occurred over time. (Markowitz, v. 2, pp. 31-36).

17. The Big Walnut TSD shows attainment of all biocriteria upstream and downstream of the Tussing Plant discharge. (Markowitz, v. 2, pp. 31-36; Miltner, v. 2, p. 170-171; Krejsa, v. 1, p. 121; See also, Joint Ex. 17, p. 15).

18. Fancher's "analysis" of the P limit in the Permit, set forth in his memorandum dated April 11, 2006, relied on (a) a 10-point difference in the TSD ICI[3] scores upstream and downstream of the Plant (even though both ICI scores met the biocriteria standard), (b) a slightly wider fluctuation in diurnal dissolved oxygen (D.O.) levels at RM 10.2 than at RM 11.25 (even though all D.O. levels met numerical D.O. water quality standards[4]), and (c) putative evidence of "excessive algal production associated with a nutrient enriched condition." Fancher speculated that it was possible that future violations of water quality might occur if the flow through the Plant increased in the future.

19. Mr. Fancher's conclusion about the occurrence of "excessive algal production" was based solely on the plot of D.O. measurements (See Figure 2 in Jt. Ex. 6) taken once over a 48-hour period of time upstream and (far) downstream of the Tussing Plant. Fancher testified that he never visited Blacklick Creek. (Fancher, v. 4, pp. 109-110). In fact, all of Fancher's conclusions were based on his interpretation of selected data summaries and his "understanding" of the Technical Support Document. (Fancher, v. 4, p. 110). He came to these conclusions without any formal education in biology or any other recognized expertise. Mr. Fancher testified

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[3] ICI, an acronym for Invertebrate Community Index, is a scoring system developed by the Ohio EPA to assess the health of aquatic macroinvertebrates in streams. It is one of the three biocriteria standards to measure attainment of aquatic uses. The other biocriteria measure the health of the fish community and are known as IBI (Index of Biotic Integrity) and MIwb (Modified Index of well being). OAC 3745-1-07(B) and Table 7-15.

[4] There are specific numerical criteria for D.O. in OAC 3745-1-07. In warmwater habitat streams, D.O. is not to fall below a daily average of 5.0 mg/l or a minimum of 4.0 mg/l. In addition to designated uses, Ohio water quality standards also have narrative and chemical specific numerical criteria. OAC 3745-1-07(A). There is a specific numerical criterion for TDS (1500 mg/l); there is no numerical criterion for phosphorus applicable to all dischargers. OAC 3745-1-07.

that although he was qualified to compare a biocriteria result to regulatory standards to evaluate compliance with the rule, he was not qualified to interpret the results. (Fancher, v. 4, p. 116).

E. Examination of Data used to Justify Phosphorus Limit

1. Background

20. Fairfield County's experts[5] concluded, based on (a) the data collected by Ohio EPA, (b) data generated by Fairfield County pursuant to its NPDES permit, (c) data collected by EnviroScience, (d) a review of scientific literature and (e) their experience and observation at this and other sites, that the Tussing Plant did not currently have an adverse impact on Blacklick Creek water quality, or on the attainment or maintenance of the Creek's designated use. They further testified that there was no data or other information to support OEPA's—or, more accurately, Mr. Fancher's—speculation that increased flow (from 2MGD to 3 MGD) from the Tussing Plant would have an adverse impact on water quality. (Dr. Markowitz, v. 2, pp. 75-76; M. Mendel, v. 4, p. 147; Krejsa, v. 1, p. 142). Ohio EPA utterly failed to respond to, much less refute, the testimony of Fairfield County's experts that phosphorus and TDS limits were not based on a valid factual foundation. Indeed, the testimony of Mr. Miltner, Ohio EPA's expert in water quality standards and aquatic biology, supported the conclusions of Fairfield County's experts.

21. Phosphorus is an essential nutrient for aquatic life. However, it is possible to have so much phosphorus (or other nutrients, such as nitrogen) in a body of water that nuisance (*i.e.*, excessive) growths of algae result. An excessive amount of algae can reduce the D.O. in

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[5] Mr. James Krejsa, a biologist and employee of EnviroScience, was admitted as an expert in aquatic biology, aquatic ecology, biological surveys, impact evaluation, biological criteria and water quality. (v. 1, p.84) Ms. Rhonda Mendel of EnviroScience, an aquatic entomologist, was admitted as an expert in macroinvertebrate aquatic ecology and aquatic biology, water quality, biological monitoring and sampling as they relate to macroinvertebrates, biological criteria associated with macroinvertebrates and macroinvertebrate identification. (v. 1, p. 188-189) Dr. Daniel Markowitz was admitted as an expert in aquatic ecology and aquatic biology. (v. 2, p. 21) Dr. Michael Mendel was admitted as an expert in aquatic biology, macroinvertebrate ecology and biostatistics. (v. 4, p. 125).

the water body at night to a concentration lower than is needed to sustain aquatic life. (Markowitz, v. 2, pp. 42-45).

22. Because the amount of phosphorus a stream can assimilate is highly dependent on the physical characteristics of the stream, it is not possible to develop a single phosphorus concentration that is appropriate for all streams. (Markowitz, v. 2, p. 45). Good gradient and substrate in a stream increase its capacity to assimilate phosphorus. (Miltner, v. 2, p. 65). The phosphorus data graphed on Joint Exhibit 6 indicates that Blacklick Creek has excellent assimilative capacity,[6] and the phosphorus discharged by the Tussing Plant is fully assimilated within a short distance from the outfall. (Markowitz, v. 2, pp. 34-35, 65). Further proof of this fact is that not a single witness ever observed excessive algal growth in Blacklick Creek downstream of the Tussing Plant, even though Ohio EPA and County personnel have inspected the stream many times. (Markowitz, v. 2, p. 27-29; Bolton, v. 5, pp. 50-51; Nygaard, v. 3, p. 196; Owen, v. 3, p. 162; Fancher, v. 4, p. 109-110).

[6] Assimilative capacity is the ecosystem's ability to consume a substance, in this case phosphorus, and support a healthy and diverse aquatic populations of fish and benthic macroinvertebrates.

2. **Biocriteria Scores for Blacklick Creek**

(i) Background

23. Biological surveys and Ohio EPA's biocriteria involve the evaluation of the health of fish and benthic macroinvertebrates and an assessment of their habitat, since "habitat drives everything." (Krejsa, v. 1, pp. 76-77). The impact of a discharger on aquatic life can be assessed by selecting appropriate sample locations upstream and downstream of the discharger. (Krejsa, v. 1, p. 97).

24. A good "reference site" is a location that is representative of stream conditions in the absence of the pollutant source being evaluated, but is otherwise comparable to the conditions found below the source. A reference site should be selected to exclude other potential impacts on water quality. (Krejsa, v. 1, pp. 99-100; Markowitz, v. 2, p. 37). For benthic macroinvertebrates, Ohio EPA's reference site for the Tussing Plant was located at RM 11.3, slightly north of the Tussing Road Bridge. Its reference fish site was at RM 11.4. (Krejsa, v. 1, p. 97).

(ii) EnviroScience Study

25. In 2007, Fairfield County retained EnviroScience to determine (i) if the Plant discharge was having an adverse impact on Blacklick Creek and (ii) if there was any direct correlation between TDS or phosphorus and water quality. (Krejsa, v. 1, p. 81; Markowitz, v. 2, p. 25). Because Ohio EPA's decision to impose a phosphorus limit appeared to be based predominately on the 10-point difference between the ICI scores obtained in 2000, EnviroScience conducted an upstream/downstream study. (R. Mendel, v. 1, pp. 191-192). EnviroScience's sampling occurred when plant flows were near 2.0 MGD, approximately 50% higher than when Ohio EPA did its study. (Vogel, v. 1, p.24).

26. EnviroScience staff followed the Ohio EPA-recommended macroinvertebrate sampling procedures, but improved upon the sampling performed in 2000 by Ohio EPA. The Hester-Dendy samplers were placed to better isolate the impact from the Tussing Plant. (Krejsa, v.1, p. 86-87, 89; Markowitz, v. 2, p. 36-38). In the sampling it conducted in 2000, Ohio EPA had chosen a reference sampling site upstream of the tributary entering Blacklick Creek at the Tussing Road Bridge, which tributary drains surface water from a residential development. (Vogel, v. 1, p. 32; Ex. D). Runoff from the Tussing Bridge also drains to Blacklick Creek downstream of Ohio EPA's reference sample site. Thus, OEPA's downstream, though not its upstream, sampling site reflected the impact of these pollutant sources in addition to the Plant effluent.

27. EnviroScience selected an upstream (reference) site below the tributary at the Tussing Road Bridge to account for impacts from the residential development and road runoff. (Markowitz, v. 2, p. 37). The downstream sampling location selected by Dr. Markowitz was approximately the same as Ohio EPA's – it was not possible to isolate the effect of the Plant from the effect of the golf course, or the tributary draining the shopping mall parking lot that enters Blacklick Creek immediately below the Plant, as both are located within the mixing zone for the Tussing Plant effluent.[7] (Markowitz, v. 2, pp. 39-40).

28. The only material way that EnviroScience's procedure differed from Ohio EPA's was that EnviroScience counted and identified **every** organism to calculate the ICI, instead of following Ohio EPA's standard approach of counting only part of the sample and multiplying. (R. Mendel v. 1, p. 196-197; Krejsa v. 1, p. 94-95). For the sampling at Blacklick Creek, Ohio

[7] The mixing zone is the area downstream of the discharge of effluent before the effluent is fully mixed with the receiving water body. Biocriteria sampling done in the mixing zone is not used to evaluate attainment. (Miltner, v. 2, p. 170).

EPA counted about 2% of the macroinvertebrates. (Krejsa, v. 1, p. 95). OEPA's subsampling procedure is not necessarily an accurate representation of the full sample and may introduce errors into the ICI calculation. (R. Mendel, v.1, p. 191, 198-199). To avoid introducing such error, Ms. Mendel counted every organism. (R. Mendel, v. 1, p. 198).

(iii) Comparison of EnviroScience study and Ohio EPA 2000 study

29. The results of EnviroScience's sampling are compared to Ohio EPA's sampling in Exhibit Q. Ms. Mendel, an expert in macroinvertebrate aquatic ecology and aquatic biology, as well as in water quality, biological monitoring and sampling as they relate to macroinvertebrates, biological criteria associated with macroinvertebrates and macroinvertebrate identification,[8] explained the significance of the results. The ICI scores for the location downstream of the Tussing Plant discharge were essentially the same – a 38 in 2000 (OEPA) and a 36 in 2007 (ES). Both these scores are in attainment. (R. Mendel, v.1, p. 201-202). The upstream score obtained by EnviroScience in 2007 – 34 – is comparable to the downstream scores—38 and 36—from 2000 and 2007. (R. Mendel, v. 1, p. 202).

30. Ms. Mendel did a comprehensive analysis of the taxonomic data and found that the **upstream** location had **fewer** pollution sensitive species than the **downstream** location in both 2000 and in 2007. Similarly, the **upstream** location had **more** pollution tolerant species than the **downstream** location in both 2000 and 2007. (See, Appellant's Exhibit O). The increase in pollution sensitive taxa downstream would not occur if the Tussing Plant was adversely impacting Blacklick Creek. (R. Mendel, v. 1, pp. 208-211). This testimony was unrebutted.

[8] Ms. Mendel completed all training and testing for the Level 3 qualified data collector (QDC) certification under the credible data rules, OAC 3745-4-03, prior to doing the taxonomic identification for this project. She received a score of 100% on the test. (R. Mendel, v. 1, p. 185).

31. Mr. Krejsa, an expert in impact evaluation, aquatic biology, aquatic ecology, water quality, biological surveys and biological criteria (v. 1, p. 84), analyzed Ohio EPA's 1996 and 2000 fish data (*i.e.*, the IBI and MIwb scores) and found that the IBI and MIwb scores at the downstream location were higher than at the upstream site. These data do not support, indeed they contradict, Ohio EPA's speculation that phosphorus discharged by the Tussing Plant is adversely affecting aquatic life. If phosphorus were a problem, the fish scores would decrease at the downstream location. (App. Ex. R & S; Krejsa, v. 1, pp. 115-120). No one from Ohio EPA disagreed. Indeed, Ohio EPA's Associations Report (Jt. Ex. 21) found that fish are more adversely affected by phosphorus than are benthic organisms. (M. Mendel, v. 4, pp. 145-146).

32. Mr. Krejsa also discussed Exhibit Q, which depicts all ICI scores from the sampling location immediately downstream of the Plant and all upstream locations where OEPA determined Blacklick Creek was in attainment. (Krejsa, v. 1, pp. 111). The average ICI score is 39.25. The average is significant in determining whether any of the data may be unrepresentative due to natural variability. (Krejsa, v. 1, p. 112.). The reference site used by Ohio EPA in 2000 scored a 48, the highest upstream score recorded along 16 miles of Blacklick Creek, and 9 points higher than the average. (Exhibit Q).

33. Dr. Michael Mendel, an expert in aquatic biology, macroinvertebrate ecology and biostatistics, described the "within site variability" of the data appearing in Exhibit Q. The average score of 39 was representative of what was happening in Blacklick Creek; the score of 48 at RM 11.3 was a big departure from the other scores, and likely an anomaly. (M. Mendel, v. 4, p. 125). In Dr. Mendel's expert opinion, Fancher's assumption that the 10-point drop in the ICI score downstream of the Tussing Plant was significant was insupportable. (M. Mendel, v. 4, p. 127; See also App. Ex. P).

(iv) "Within Site" Variability

34. Fancher completely neglected to account for "within site" variability, a phenomenon that was well documented in benthic communities in a watershed study conducted by Ohio EPA's Jeff DeShon.[9] (M. Mendel, v. 4, pp. 128-129). The study results are summarized in Appellant's Exhibit G at Appendix D, a portion of Ohio EPA's biological field sampling manual. Mr. DeShon studied an unimpacted location on Big Darby Creek, and obtained ICI scores from 19 juxtaposed Hester-Dendy samplers. There was a 16 point difference between the high and low ICI score, and a 10 point difference between the median score and the high score. (Krejsa, v. 1, pp. 105-106; M. Mendel, v. 4, p. 130-131; R. Mendel, v. 1, p. 217). The scores ranged from 28 to 44. Mr. Krejsa referred to this same study and the concept of natural variability: the scientific truth that multiple measurements of a biological system will give different numbers, because biological systems are dynamic and therefore variable. (Krejsa, v. 1, p. 104; M. Mendel, v. 4, pp. 129-131). Mr. DeShon's study demonstrates that a single Hester-Dendy sample result is a notoriously unreliable, and therefore arbitrary, basis for making a management decision, such as a phosphorus permit limit. (M. Mendel, v. 4, pp. 129-131).

35. Mr. Mendel compared the difference in DeShon's ICI scores (shown in Exhibit P) with the 2000 ICI data that Ohio EPA collected in Blacklick Creek upstream of the Tussing Plant. When compared to the median upstream Blacklick Creek score of 39, it is apparent that the score of 48 immediately upstream of the Tussing Plant is an anomaly – reflecting the "within site" variability in scores that is expected, but not representative of the average unimpacted stream conditions. (M. Mendel, v. 4, pp. 132-133; See also, Markowitz, v. 2, p. 68; Krejsa, v. 1, pp. 107-109). This testimony was unrebutted.

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[9] Jeff DeShon is the head of the benthic macroinvertebrate biosurvey group of Ohio EPA, where Mike Bolton is also employed. (R. Mendel, v. 1, p. 211; Krejsa, v. 1, p. 105).

(v) Subsampling errors

36. Dr. Mendel also explained that Fancher's supposition failed to acknowledge the inaccuracy that can result from subsampling techniques. (M. Mendel, v. 4, pp. 135-143). Ohio EPA's method for counting macroinvertebrates allows for counting only a portion of the organisms collected, the scientific name for which is subsampling. Subsampling introduces error. To compensate for this error, it is essential that samples be randomized and that a pilot study be conducted to determine how well the subsampling technique represents the total sample. (M. Mendel, pp. 136-137). Because Ohio EPA has never conducted a pilot study of its subsampling technique, and also does not randomize samples, its data from upstream and downstream of the Plant are insufficient to draw any reliable conclusions about the differences between the two communities. (M. Mendel, v. 4, p. 142). Subsampling errors also could explain the high score upstream of the Plant. (Markowitz, v. 2, p. 68). This testimony was unrebutted.

(vi) Biological consistency

37. Thirdly, Dr. Mendel explained that when doing biostatistics, it is important to ask whether the data makes biological sense in the context of other data and information. (M. Mendel., v. 4, p. 145). Ohio EPA's index scores for fish—the IBI and the MIwb—both increase downstream of the Tussing Plant. However, all the testifying experts, and the Associations Report, agreed that fish are more sensitive to phosphorus than macroinvertebrates. The fact that the fish data are inconsistent with the single ICI upstream sample is yet a further indication that the upstream score of 48 for ICI is not representative of the stream site conditions. (M. Mendel, v. 4, pp. 145-146). This testimony was unrebutted.

38. Robert Miltner, one of the authors of the Associations Report, testified that the Associations Report demonstrated that there is a very strong relationship between habitat and

biocriteria, and a much lesser relationship between nutrients (principally phosphorus) and biocriteria. (Miltner, v. 2, p. 163-164, 166-167). The habitat at the upstream sampling location (QHEI score of 76.5) is significantly better than that at the downstream site (QHEI of 70.0). This is an alternative, and more plausible, explanation for the difference in the ICI scores in the TSD.

39. Dr. Mendel concluded to a reasonable degree of scientific certainty that there was insufficient data to support imposing a phosphorus limit. (M. Mendel, v. 4, pp. 147).

3. **D.O. Data in Blacklick Creek and Diurnal Swings**

40. The D.O. data cited in Fancher's memo do not, to a reasonable degree of scientific certainty, establish the existence of nutrient enrichment downstream of the Tussing Plant. (Markowitz, v. 2, p. 74).

41. The dissolved oxygen data upon which Fancher relied did not meet the Ohio EPA protocol. Due to the natural variability of D.O. data, OEPA itself requires at least 7 days of data before it is considered representative. (Krejsa, v. 1, pp. 130-134). The TSD only had 2 days of data. D.O. sampling should be substantially longer than 2 days to eliminate the variables that affect D.O., which can differ greatly from site to site and time to time. (Markowitz, v. 2, p. 71). This testimony was unrebutted.

42. Fancher's assumption—that the slightly larger D.O. diurnal swing at RM 10, over a mile downstream of the Tussing Plant, "proved" the Plant was causing nutrient enrichment—is insupportable for additional reasons. Where nutrients are a problem in a stream, there will be a dense algal mass and a nighttime D.O. that violates the water quality standards. (Markowitz, v. 2, p. 92-93). However, all of the D.O. data meet WWH water quality standards. (Miltner, v. 2, pp. 177-79), and no nuisance growths of algae have ever been observed downstream of the Plant.

43. The dissolved oxygen sampling locations chosen by OEPA were at RM 11.25 and 10.20. For a number of reasons, these locations (and the OEPA sampling protocol) are not

remotely adequate to determine if D.O. is being impacted by anthropogenic causes and, if so, whether the Tussing Plant is one of them.

44. Ms. Mendel testified that the golf courses that adjoin well over a mile of Blacklick Creek are significant contributors of nutrients (phosphorus and nitrogen), and provide an alternative (and much more likely) explanation for the diurnal swings in Ohio EPA's inadequate data set, as it is well-documented in the literature that runoff from golf courses will increase algal growth. (R. Mendel, v. 1, pp. 227-229; see also Miltner, v. 2, p. 158; Markowitz, v. 2, p. 66-67, 72; Krejsa, v. 1, pp. 127-128). Ms. Mendel has personally observed algal mats completely covering a waterway alongside a golf course, where the entire upstream area was a pristine creek with no visible algal growth. (R. Mendel, v. 1, p. 228).

45. Mr. Markowitz had recently reviewed a very extensive data set of D.O. measurements in the Columbus area—38 sites that were monitored an entire summer—and found that differences comparable to those appearing in Fancher's memo were quite common and not indicative of nutrient enrichment. Fancher's data set was far too abbreviated to conclude that there is a problem. (Markowitz, v. 2, pp. 72-74).

46. In addition to the golf course, and the other pollutant sources in the vicinity of the Plant discussed above, there is a large tributary draining a large urbanized area immediately upstream of where the downstream D.O. sample was taken. (Vogel, v.1, p. 35, App. Ex. C). This tributary's contribution of pollutants will, of course, be reflected in the downstream sample.

47. For all of these reasons, the extant data simply do not permit the conclusion that the D.O. at RM 10.20 has been impacted by man-induced causes, that the cause is nutrient enrichment, or that the Tussing Plant is a material contributor.

4. **Speculation about Future Impairment**

48. Ohio EPA offered no evidence to substantiate Fancher's speculation that (future) increased Plant flows might "possibly" cause downstream conditions to worsen. But even if some "worsening" might occur, that is not the test. OEPA needed to present a valid factual foundation to establish that limiting the concentration of phosphorus to the final limit of 0.5 mg/l (and, for that matter, the interim limit of 1.0 mg/l) is needed to assure that phosphorus will not cause or contribute to a violation of biocriteria (or a nuisance growth of algae). OAC 3745-2-06. This it utterly failed to do.

> Q: [You] did not independently evaluate the biological impact that a discharge of phosphorus from the plant would have on the stream at a 3 million gallon per day flow, did you?
>
> A: I did not.

(Nygaard, v. 3, pp. 198)

49. No one has ever observed nutrient enrichment downstream of the Tussing Plant, despite a substantial increase in flow between 1996 and 2007 (Vogel, v. 1, p. 24; Krejsa, v. 1, p. 143;R. Mendel, v. 1, p. 201-202). No other characteristics of non-attainment associated with an increased phosphorus load have been observed either. (Markowitz, v. 2, pp. 75-76; R. Mendel, v. 1, p. 230). Although the Plant has the potential to further increase its discharge (and phosphorus loading), Mr. Fancher's speculation that the stream conditions will/might "worsen" is a "the sky is falling" prediction, unsupported by data or scientific analysis. (Markowitz, v. 2, p. 75). Fairfield County's experts concluded to a reasonable degree of scientific certainty that the Tussing Plant did not have reasonable potential to cause non-attainment of water quality standards in Blacklick Creek if the flow increases to 3 MGD. (J. Krejsa, v. 1, p. 125; 141-143; Markowitz, v. 2, p. 74-76; M. Mendel, v. 4, p. 147). This testimony was unrebutted.

F. Ohio EPA's Reliance on the Big Walnut TMDL as Mandating the Phosphorus Limit Is in Error.

1. Background

50. The Director has claimed that the P limit in the NPDES permit is required by the Big Walnut Creek TMDL.

51. A TMDL is a study designed to determine the total amount of various types of pollutants that a water body can accommodate on a daily basis – a Total Maximum Daily Load. (Markowitz, v. 2, p. 23). It is essential that these studies be thoroughly, carefully and thoughtfully performed because "[u]ltimately coming out of these things there are going to be regulatory actions." (Gallaway, v. 4, p. 13).

52. To be sure, the Big Walnut Creek TMDL found some sections of Blacklick Creek in non-attainment (*i.e.*, impaired), but none of these sections was remotely close to the Tussing Plant. They were mostly located in the headwaters of Blacklick Creek, ten miles upstream of the Plant, and due principally to failing home sewage treatment systems. (Jt. Ex. 17, p. 129). The TMDL did not attribute any area of non-attainment to discharges from the Plant. (Markowitz, v. 2, p. 24). Imposing a load allocation on the Tussing Plant is obviously not going to correct non-attainment in the headwaters. (Markowitz, v. 2, pp. 47-49).

53. US EPA's approval of the Big Walnut Creek TMDL stated:

> The individual WLAs [wasteload allocations] may take the form of uniform percentage reductions or individual mass based limitations for dischargers .... *These individual WLAs may be adjusted during the NPDES permitting process.*

(App. Ex. N, p. 9.). US EPA's TMDL process clearly allows for the state to give a permittee a higher load than set forth in the TMDL. Also, a reallocation of the loading between point source dischargers and non-point source dischargers is permitted. The State only need revise the TMDL report.

2. The TMDL loading allocation for Blacklick Creek is fraught with errors

54. Mr. Fancher was tasked with running the model to determine phosphorus loadings on the lower reach of Big Walnut Creek (which includes Blacklick Creek). Because he was a neophyte at the time, Mr. Fancher used what is called the simple model. A more accurate, albeit complex, model was used by the more experienced modeler who did the work on the upper reach of Big Walnut Creek. (Fancher, v. 4, pp. 91-92). The model used by Fancher did not account for the assimilation of phosphorus by the biological community, stream gradient, substrate and other factors, so the results were more conservative than warranted, especially in Blacklick Creek. (Fancher, v. 4, p. 93-94). Moreover, the calculation included a 10% margin of safety, instead of the 5% safety margin applied to the upper reach of Big Walnut Creek. (Jt. Ex. 13, p. 44; Fancher, v. 4, p. 74). Thus, the model over-estimated the existing load and the appropriate margin of safety. In other words, more phosphorus may be discharged to Blacklick Creek without harming water quality than Mr. Fancher calculated.

55. Mr. Fancher calculated the phosphorus loading that could be discharged by point sources to Blacklick Creek using a "target value" of 0.11 mg/l because it was contained in the Associations Report (Jt. Ex. 21). Mr. Fancher did not know the basis for the target values in the report, but had always been told to use the Associations Report for in-stream phosphorus target values. (Fancher v. 4, pp. 99). He assumed that the concentration of phosphorus in the stream could not exceed 0.11 mg/l.

56. Using the 0.11 mg/l target value for phosphorus, Mr. Fancher initially performed a wasteload allocation (WLA) for point source dischargers using a 1.0 mg/l P limit. The 1.0 limit required a 90% reduction from non-point source dischargers to meet the 0.11 mg/l "goal". (Fancher, v. 4, p. 78). Concluding that these numbers "just didn't add up,"—whatever that might

mean----Fancher next applied a 0.5 mg/l P limit. This number was given to him by someone at Ohio EPA to try next. (Fancher, v. 4, pp. 104-105). According to the model, if all the point sources on Blacklick Creek meet a 0.5 mg/l limit, non-point sources will only need to reduce their phosphorus loads by 80%. The model used by Fancher projected that 44,631 pounds per year, or approximately 86% of the phosphorus, currently comes from non-point sources, as compared to 7,461 pounds per year from point source dischargers. (Jt. Ex. 13, Table 5.2.E.) However, Ohio EPA does not have regulatory authority over non-point sources, and therefore no way to require reduction of phosphorus from them. (Gallaway, v. 4, p. 56). And, in fact, no non point source controls are being implemented to reduce phosphorus loads to Blacklick Creek from those sources. (Owen, v. 3, pp. 168-169).

57. Therefore, limiting the phosphorus discharged from the Tussing Plant will not have a noticeable impact on Blacklick Creek.

58. Although Fancher used target values from the Associations Report, the report itself reveals that there are locations with phosphorus concentrations ten to twenty times higher than the "target value" of 0.11 mg/l that attain WWH; indeed, some meet exceptional warmwater habitat values. (Markowitz, v. 2, p. 57-60; Miltner, v. 2, pp. 167-168). Thus, even aside from the legal impediments, it is not scientifically justifiable to use the 0.11 mg/l phosphorus value to establish permit limits. (Markowitz, v. 2, p. 62).

59. Phosphorus uptake in streams is so variable that no single constant concentration can be said to be protective of water quality for all bodies of water. Thus, there is no reliable evidence that reducing the concentration of phosphorus to 0.11 mg/l will result in any material beneficial change to aquatic life in Blacklick Creek (or in any specific body of water). Before imposing a phosphorus limit, "we should be able to show definitively that there will be an effect

[on biocriteria] if we reduce [phosphorus], and [the data] does not show that cause and effect relationship." (Markowitz, v. 2, p. 62). (See also Miltner, v. 2, pp. 168-169: "Nutrient values should not be interpreted without considering biological information, as it is possible for biocriteria scores to be met in the presence of high nutrient values." And Miltner, v. 2, p. 189: "Water quality standards should only be imposed if the water has been determined to be impaired by nutrients, and biocriteria is the measurement of attainment.")

G. Ohio EPA's Justification for TDS Limit

1. Background

60. In addition to the phosphorus limit in the Tussing Plant NPDES Permit, Fairfield County appealed the TDS limit and terms related to its implementation.

61. Total Dissolved Solids (TDS) is a generic term for substances that dissolve in water. Some of those substances can be toxic – kill or harm aquatic life – if the concentrations are too high. (Markowitz, v. 2, pp. 77-78). However, OEPA did not base the TDS limit in the Tussing Plant NPDES permit on data that showed that the TDS being discharged by the Plant would have an adverse effect on the biology of Blacklick Creek. Rather, Ohio EPA based the TDS limit on a rote arithmetic calculation.

62. Using Plant flow and stream data (specifically, imputed low flow and upstream TDS concentrations) and a computer to perform the calculation, John Owen (the principal author of the permit) came up with a permit limit of 1,646 mg/l for TDS. (Owen, v. 3, pp. 145-149). The validity of this number is questionable. Cross-examination of Mr. Owen established that there were errors in the output. (Owen, v. 3, p. 158-160).

2. Discharges of TDS (and phosphorus) from the Plant are not toxic to aquatic life

63. A Whole Effluent Toxicity (WET) test evaluates the toxicity of undiluted effluent on aquatic organisms. Ms. Mendel has eleven years experience performing and interpreting WET testing. (R. Mendel, v. 1, p. 219). She reviewed the WET tests performed by Ohio EPA and Fairfield County on Plant effluent. The tests revealed that the effluent has not had an adverse effect. Based on those tests and other data, she concluded that the effluent was "not toxic to aquatic organisms." (R. Mendel, v. 1, p. 222; See also Markowitz, v. 2, p. 78).

64. Ohio EPA conducted two sampling events in the Tussing Plant mixing zone (*i.e.*, before significant dilution occurred) as part of the 2000 Big Walnut Creek TSD, to determine if the effluent was harmful to aquatic life. The conclusion: the effluent was not toxic. (Bolton, v. 5, p. 29).

65. If the Tussing Plant's discharge of TDS was harmful to aquatic life, the effect would be manifested in reduced IBI, MIwb and/or ICI scores. However, the scores not only show attainment of WWH standards, they are comparable to (or better than) the upstream scores. No toxic impact is occurring. (Markowitz, v. 2, p. 78-79). Ohio EPA obviously concurs. It has removed the requirement for Fairfield County to conduct WET tests on the Tussing Plant effluent. (See Jt. Ex. 4).

66. When the results of the WET testing are considered in connection with the ten years of compliant downstream biocriteria measurements, the absence of toxicity in the mixing zone, the expert testimony of Ms. Mendel, Dr. Markowitz, and the complete lack of any contrary testimony from Ohio EPA, it is clear that there is no valid factual foundation to impose a TDS limit (or phosphorus limit) in the permit.

3. The TDS limit is not technically achievable

67. Mr. Frank testified as an expert in wastewater treatment plant design and water treatment plant design. (Frank, v. 3, p. 9). After evaluating the various options available to treat or remove TDS at the Plant, Mr. Frank concluded that there are no technically feasible alternatives. (Frank, v. 3, pp. 39-42).

68. The technology most frequently used to treat TDS is a reverse osmosis membrane ("RO"), which filters the wastewater at a molecular level to remove the salt ions. Employing this technology at the Tussing Plant would produce a highly TDS-laden wastestream of several hundred thousand gallons a day that would have to be hauled off-site for disposal. That consequence alone makes RO infeasible. In addition, however, is the added complication that there is not sufficient space at the Tussing Plant to install the number of membranes required. (Frank, v. 3, pp. 38-41).

69. Mr. Frank also examined a "no discharge" alternative, which requires storing and then land-applying the treated wastewater. However, for the Tussing Plant, storage capacity of 130 acres (approximately 52 city blocks) would be needed, which is not available in the vicinity of the Plant. In addition, there is not sufficient land available on which to apply the wastewater. Thus, the no discharge alternative is not viable. (Frank, v. 3, pp. 39-40).

70. Mr. Frank also evaluated Ohio EPA's suggestion that the County could dilute the wastewater with water from the wells the County uses to supply its water treatment plant. However, because the groundwater contains TDS and the aquifer is already depressed by existing operations, this option is not viable. (Frank, v.3, pp. 41-42; Vogel, v. 1, p. 38-40).

71. Removing the water treatment plant's TDS-laden discharge from the Tussing Plant was also evaluated. However, elimination of the water treatment plant wastewater would not achieve compliance with the 1,646 mg/l TDS permit limit. (Frank, v.3, pp. 57-59).

72. At the time Mr. Owen drafted the permit to include a TDS limit, he was not aware whether any publicly owned treatment plants in Ohio were treating TDS. (Owen, v. 3, p. 163). None are. Indeed, only a very few plants in (the arid southwest areas of) the **country** are removing TDS, and they are doing so in order that the water may be re-used. (Frank, v. 3, pp. 43-45; Hogan, v. 3, pp. 95-96).

73. It is not technically feasible to meet the 1,646 mg/l permit limit for total dissolved solids. (Frank, v. 3, p. 43).

H. Ohio EPA failed to give consideration to the technical feasibility or economic reasonableness of removing phosphorus and TDS, or how the people of the state would be benefitted from the conditions expected to result from removal of these pollutants.

74. The cost of meeting the final phosphorus limit of 0.5 mg/l is more than Five Million Dollars ($5,000,000.00). (Frank, v. 3, pp. 11-12).

75. Mr. Owen testified that when the TDS limit was calculated, he did not consider whether there was technology that could achieve, at the Tussing location, the TDS limits demanded by the permit. (Owen, v.3, p. 162). Mr. Owen could not recall whether he had conducted an analysis of the treatment technologies available for the Plant to meet a 0.5 mg/l phosphorus limit. He did not analyze the economic reasonableness for meeting either the TDS or phosphorus limit, or undertake a cost-benefit analysis to determine whether and what benefits would be achieved by meeting the limits. (Owen, v. 3, pp. 163-164).

76. Likewise, Mr. Fancher did not conduct any investigation to determine whether the Plant could meet the 0.5 mg/l P limit, or what the cost might be. He merely assumed the limit was achievable. (Fancher, v. 4, pp. 104-105).

77. In short, Ohio EPA presented no evidence that anyone at the Agency considered, much less evaluated, evidence regarding the R.C. § 6111.03(J) economic, technical or benefit factors prior to issuing the NPDES permit.

III. STANDARD OF REVIEW

This Commission may not uphold the Director's action if it finds that the Director's action was unlawful or unreasonable. R.C. § 3745.05; *Citizens Committee to Preserve Lake Logan v. Williams* (10th Dist. 1977), 56 Ohio App. 2d 61, 70. Unlawful is "that which is not in accordance with law." *Id.* Unreasonable is "that which is not in accordance with reason, or that which has no [valid] factual foundation." *Id.*

The evidence must be reliable, probative and substantial. *General Electric Lighting v. Koncelik*, 10th Dist. No. 05AP-310, 05AP-323, 2006-Ohio-1655 at *3. The evidence must also amount to factual data, not "unsupported and unsupportable predictions." *Columbus Coated Fabrics Daron v. McAvoy*, Case No. EBR 79-3 (1979), 1979 WL 10815, p. 4. The Commission must consider the evidence presented at the hearing to determine whether a valid factual foundation existed for the Director's action. *Citizens Committee*, 56 Ohio App.2d at 70; *General Electric Lighting*, 2006-Ohio-1655 at *14, 16.

A valid factual foundation for the imposition of limitations on emissions requires the Director to show that there is a direct correlation between emissions controls and emissions standards. *General Electric Lighting*, 2006-Ohio-1655 at 10. In *General Electric Lighting*, the Tenth District Court of Appeals affirmed a decision by this Commission holding that restrictions on power inputs in an air permit were unreasonable because the evidence revealed the restrictions did not have a valid factual foundation. The Director had imposed operational restrictions in a Title V permit purportedly pursuant to OAC 3745-77-07(A)(1), which allowed restrictions necessary to assure compliance with applicable requirements for particulate emissions. However, the evidence demonstrated there was no direct correlation between emission controls and the operational restrictions that Ohio EPA sought to impose. Expert testimony and data revealed that different operational restrictions would not necessarily increase

or decrease the emissions and that power inputs alone, without consideration of the other factors that affect emissions, did not have a significant or predictable relationship to emission controls.

The Court of Appeals held that Ohio EPA needed to prove a "direct correlation" between regulatory standards for emission control and restrictions imposed in a permit in order to satisfy the standard of valid factual foundation. *General Electric Lighting* at *10.

> ERAC cited [evidence] that demonstrated there was no "direct correlation" between emissions and voltage or current and, thus, the prescribed power ranges did not "directly relate" to the enforceability of the particulate emissions.

Id. at *9.

> Given such a weak correlation [between emission standards and power inputs], attempting to assure compliance with emissions standards by using power inputs alone was not reasonable. Ohio EPA's lack of valid factual evidence demonstrating a closer correlation was fatal to its contention that operational restrictions were reasonable.

Id. at *14.

> The crux of this "direct correlation" requirement is that power input alone, without consideration of other factors that affect emissions, must have a significant, foreseeable relationship to emissions in order for the limitation solely on power input to be based on a valid factual foundation.

Id at *10.

Applying the "direct correlation" standard to the Director's action in this case, the phosphorus and TDS limits imposed on the Tussing Plant in the NPDES Permit must be based on a significant, foreseeable causal relationship between the limits imposed and attainment of the water quality standards applicable to Blacklick Creek. Unsupported predictions are not enough.

IV. PROPOSED CONCLUSIONS OF LAW

1. The TDS and phosphorus limits are unlawful because they are neither necessary nor appropriate.

R.C. § 6111.03(J)(3) states that the Director shall impose water quality related effluent limits only "where necessary and appropriate" "to achieve and maintain applicable standards of quality for the waters of the state." **All** of the sampling data demonstrates that Blacklick Creek attains its designated use (warmwater habitat), meets applicable biocriteria and otherwise complies with water quality standards[10] downstream of the Tussing Plant.

2. The phosphorus and TDS limits are unreasonable because they are not supported by substantial, reliable and probative evidence.

A. Contrary to the Ohio EPA's assertion, Blacklick Creek downstream of the Plant is in attainment of biocriteria.

Ohio EPA measures attainment of water quality standards and designated uses, such as warmwater habitat, by three biocriteria. OAC 3745-1-07 (A) & (B). The Index of Biotic Integrity (IBI) and Modified Index of Well Being (MIwb) measure the diversity and abundance of fish; the Invertebrate Community Index (ICI) evaluates the macroinvertebrate community (*e.g.*, aquatic insects and worms). (CR 17-26, Krejsa v. 1, p. 102-103) Biocriteria values are codified in Ohio's Water Quality Standards in OAC 3745-01-07, Table 7-15.

The table in Exhibit T compares the biocriteria values representing attainment of the WWH use designation with the Ohio EPA 2000 sampling results in Blacklick Creek downstream of the Tussing Plant, RM 11.0. This is the sample location which Mr. Fancher asserted showed

[10] "Water quality standards contain two distinct elements: designated uses [e.g. WWH]; and numerical or narrative criteria designed to protect and measure attainment of the uses." OAC 3745-1-07(A). There is a specific numerical criterion for TDS (1500 mg/l); there is no numerical criterion for phosphorus. OAC 3745-1-07. Instead, Table 7-11 states: "Total phosphorus as P shall be limited to the extent necessary to prevent nuisance growths of algae, weeds, and slimes that result in a violation of the water quality criteria set forth in paragraph (E) of rule 3745-1-04 of the Administrative Code or, for public water supplies, that result in taste or odor problems. In areas where such nuisance growths exist, phosphorus discharges from point sources determined significant by the director shall not exceed a daily average of one milligram per liter as total P, or such stricter requirements as may be imposed by the director in accordance with the international joint commission (United State-Canada agreement)."

"mild nutrient impacts." The first number in the Attainment Standard column is the number appearing in Table 7-15. The number in parentheses is what Ohio EPA considers the non-significant departure value, *i.e.* a score 4 points below the attainment value is nevertheless deemed by Ohio EPA to be in attainment of warmwater habitat.

Biocriteria Index	Attainment Standard	RM 11.0 Result in 2000
IBI	40 (36)	44
Miwb	8.3	8.6
ICI	36 (32)	38

(CR 17 pp. 31-32, Krejsa, v. 1, pp. 120-121). Each score at RM 11.0 is above the attainment value for warmwater habitat, and the TSD lists RM 11.0 as being in "FULL" attainment. (CR 17-31.) Mr. Fancher's statement that Blacklick Creek shows "mild nutrient impact" downstream of the Tussing Plant is simply contradicted by the facts.

B. Ohio EPA offered no credible evidence that the Tussing Plant discharge is contributing to non-attainment in Blacklick Creek.

Ohio EPA relied on insufficient data and made unsupportable inferences when it concluded that the Plant was contributing to non-attainment in Blacklick Creek. Despite data showing full attainment in Blacklick Creek downstream of the Plant, Ohio EPA illogically leapt to the conclusions that Blacklick Creek has been negatively impacted, that the putative impact is due to nutrient enrichment, and that the source was the Tussing Plant discharge. These conclusions are based principally on a 10-point change in the ICI score between the upstream and downstream sampling locations in the 2000 sampling. However, the difference in the upstream and downstream ICI scores has never been observed before or since.

Ohio EPA has not conducted any biological studies of Blacklick Creek since 2000 to confirm the accuracy or replicability of this solitary sampling event. Mr. DeShon's study

showing that there is high variability in ICI scores in the same location at the same time in the absence of anthropomorphic influences—*i.e.*, that the odds are overwhelming that a single ICI score may be unrepresentative—was completely ignored by Ohio EPA. No Ohio EPA field person has documented or even observed nuisance growths of algae downstream of the Tussing Plant discharge point. It was manifestly erroneous for Ohio EPA to rely on this lone, highly dubious and scientifically indefensible data point to conclude that there is an adverse impact from the Tussing Plant, or that the Plant's discharge will result in non-attainment of warmwater habitat. To be direct, it is junk science. It hardly fails to establish a "direct correlation" based on reliable, probative and substantial evidence between the discharge of phosphorus from the Plant and attainment, as is required by *General Electric Lighting*.

Nor is Ohio EPA's reliance on the 48-hour sampling event of D.O. from locations upstream and (far) downstream of the Plant, taken in 2002, sufficient to prove that the Plant is adversely affecting Blacklick Creek. That evidence is not reliable, probative or substantial. The uncontroverted expert testimony at the hearing demonstrated that (1) slight differences in diurnal D.O. swings are normal and expected to occur ("natural variability"); (2) the data do not show a violation of average or maximum D.O. water quality standards downstream of the Tussing Plant; (3) the downstream location did not isolate the impact of the Tussing Plant from numerous other factors, particularly golf course runoff, and cannot be used to establish cause and effect; (4) field conditions were not adequately documented, so it is not possible to rule out other causes for the D.O. fluctuations; and (5) the sampling was not conducted over a long enough period of time to be representative of actual conditions.

The TDS limit was derived from a computer calculation using the toxicity-based water quality standard of 1500 mg/l. This calculation is an estimate of what is expected to be a

protective limit. However, there is actual data in the form of biocriteria scores and WET testing demonstrating that the Plant's effluent (including the undiluted TDS and phosphorus in the effluent) is not toxic to aquatic organisms. Ohio EPA's testing of the mixing zone below the Plant also failed to disclose any evidence of toxicity. Experts Ms. Mendel and Dr. Markowitz both testified that TDS discharged by the Plant was not and would not adversely affect the aquatic community. Ohio EPA failed to rebut or contradict this testimony.

C. The evidence established that the aquatic community downstream of the Plant is not materially different from upstream.

Expert witnesses for Fairfield County presented 2007 sampling data that demonstrated continued attainment even after Plant flow and pollutant loadings had increased by 50%. These qualified experts offered their opinions that Blacklick Creek was assimilating phosphorus well, and that the TDS and phosphorus in the Plant effluent was demonstrably not toxic to aquatic organisms. The biological sampling of macroinvertebrates conducted by Fairfield County in 2007 showed the locations upstream and downstream of the Tussing Plant had similar ICI scores. The downstream scores reported by Ohio EPA and EnviroScience were consistent with the average upstream score. (Expert Report of Markowitz, Joint Exhibit 28, p. 10; R. Mendel, v. 1, pp. 201-202) Dr. Michael Mendel and Mr. Jamie Krejsa explained that natural variability was the likely explanation for the high upstream value obtained by Ohio EPA in 2000. (M. Mendel, v. 4, pp. 127-133; Krejsa, v. 1, pp. 106-09; Appendix D of Appellant's Exhibit G).

3. Ohio EPA unreasonably failed to consider nonpoint sources of phosphorus in Blacklick Creek.

According to the TMDL Report, more than 85% of the phosphorus loading in Blacklick Creek is from nonpoint sources. However, no controls have been, or likely will be, imposed on the nonpoint sources of phosphorus loading to Blacklick Creek. These unregulated nonpoint

sources will continue to contribute massive amounts of phosphorus to Blacklick Creek even if the Plant's discharge of phosphorus is reduced to zero.

Because the uncontrolled nonpoint sources contribute ten times more phosphorus to Blacklick Creek, limiting a single point source discharger like the Tussing Plant will not result in any material reduction of in-stream phosphorus that Ohio EPA's TMDL report suggests is required. Accordingly, imposition of a 0.5 mg/l phosphorus limit (requiring Fairfield County to spend in excess of $5,000,000.00) does not directly correlate to a meaningful reduction of phosphorus in Blacklick Creek, and is therefore clearly unreasonable under *General Electric Lighting.*

4. The Phosphorus and TDS permit limitations lack a valid factual foundation because the Director failed to demonstrate a direct correlation between the limitations and achievement of water quality standards.

The skimpy, inconsistent and unconfirmed data relied on by Ohio EPA fails to establish a "direct correlation" between potential future increases of phosphorus and TDS discharged from the Tussing Plant and non-attainment of water quality standards in Blacklick Creek, as required in *General Electric Lighting.* Ohio EPA's conclusions are speculative, and do not rise to the level of a valid factual foundation for the imposition of the P and TDS permit limitations. Because Ohio EPA failed to consider other environmental factors, its imposition of a phosphorus limit on the Tussing Plant was unreasonable.

In the Big Walnut Creek TMDL report, Ohio EPA speculated that there were "mild" impacts downstream of the Tussing Plant "due to nutrient enrichment" resulting from phosphorus in the Plant's effluent.[11] For this reason, a phosphorus limit was imposed in the

[11] Ohio EPA maintains that excessive nutrient enrichment causes nuisance growths of algae, but has no regulation to define "excessive" enrichment or "nuisance growth." Phosphorus is an essential nutrient for aquatic life. OAC 3745-1-04(E) provides that all waters of the state shall be "free from nutrients entering the water as a result of human activity in concentrations that create nuisance growths of aquatic weed and algae."

Plant's renewal NPDES permit. Yet, no Ohio EPA field sheets (completed at the time of the stream survey) or witnesses corroborated this conclusory statement. Ohio EPA offered no facts at the hearing to support the existence of nutrient enrichment downstream of the Plant. The testimony of Ohio EPA and Fairfield County witnesses unequivocally demonstrated that Ohio EPA did not take into account numerous other factors that affect water quality use attainment, including the natural ability of Blacklick Creek to assimilate phosphorus, habitat conditions, other point and non-point sources of nutrients (and other pollutants), including tributaries entering Blacklick Creek and golf courses, and the impact of extensive urbanization in the Blacklick Creek watershed.

The Director also offered no evidence establishing a direct correlation between the 0.11 mg/l phosphorus target value and the attainment of biocriteria. Mr. Fancher admitted during his testimony that he merely borrowed the number from the Associations Report, which acknowledges the absence of a direct correlation. Every expert witness who testified regarding the subject—even the author of the Report, Mr. Miltner—repudiated such a correlation.

The field data did not support Ohio EPA's assumption that higher flows and the concomitant increased loading of phosphorus and TDS would lead to non-attainment. Mr. Fancher's unqualified speculation of a nexus was soundly rebutted by the evidence and the expert testimony of well-qualified aquatic experts.

Ohio EPA offered no valid factual evidence, only speculation, that the phosphorus and TDS limits in the NPDES Permit have a direct correlation to achieving water quality standards.

5. **The Phosphorus and TDS limits are Unlawful and Unreasonable Because the Director Failed to Consider their Technical Feasibility, Economic Reasonableness and Cost/Benefit, as Required by R.C. § 6111.03(J)**

R.C. § 6111.03(J)(3) states:

> To achieve and maintain applicable standards of quality for the waters of the state adopted pursuant to section 6111.041 of the Revised Code, the director shall impose, where necessary and appropriate, as conditions of each permit, water quality related effluent limitations .... and, to the extent consistent with the [federal Water Pollution Control Act], **shall give consideration to, and base the determination on, evidence relating to the technical feasibility and economic reasonableness** of removing the polluting properties from those wastes **and to evidence relating to conditions calculated to result from that action and their relation to benefits to the people** of the state and to accomplishment of the purposes of this chapter.

R.C. § 6111.03(J)(3) (Emphasis added.)

Technical feasibility and economic reasonableness must be considered "to ensure that the balance between regulation and encouragement of business is properly struck." *Sandusky Dock Corporation* (2005), 106 Ohio St.3d 274, 278. The Ohio Supreme Court has held it "a short but necessary step for the director to formally comply" with the requirement to consider technical feasibility and economic reasonableness. *Id.* In *Sandusky*, the Court considered whether the Director had complied with R.C. § 3704.03(R), a statute similar to § 6111.03(J)(3), requiring the Director to consider technical feasibility and economic reasonableness when issuing, modifying, or revoking orders related to air emissions. Even though the Director demonstrated that he had informally considered technical feasibility and economic reasonableness, the *Sandusky* Court held that a formal consideration was required.

Relying on *Sandusky*, this Commission, in *LANXESS Corporation v. Koncelik* (2006), ERAC Case No. 315802, held that an Administrative Order related to air emissions issued by the Director to LANXESS was unlawful because the Agency had failed to consider the technical

feasibility and economic reasonableness of LANXESS' ability to comply with air emission requirements, as required by R.C. 3704.03. The Orders required LANXESS to install and operate a new containment system for one of its emissions units. In response to this requirement in the Orders, LANXESS proposed to purchase a containment unit. Although the Orders contained a statement that the Director had given consideration to technical feasibility and economic reasonableness, evidence demonstrated that the Director simply relied on LANXESS' proposal to purchase a unit as an inherent admission that this requirement was technically feasible and economically reasonable.

In rejecting the Director's position, the Commission stated that there was

> . . . no evidence herein to support a finding that the Director engaged in the "short but necessary step" of giving 'consideration to, and bas[ing] his determination on the technical feasibility and economic reasonableness of LANXESS being able to comply with the Orders.

LANXESS, ERAC Case No. 315802 at *21.

The OEPA has failed to come forward with evidence that the Director considered the technical feasibility, economic reasonableness or benefit/cost of the phosphorus and TDS limits he imposed in the NPDES Permit, as required by R.C. § 6111.03(J)(3). Testimony by the Ohio EPA staff involved in the permitting process confirms that these statutory factors were not considered. Moreover, the testimony by Ms. Mendel, Dr. Markowitz and Messrs. Frank, Vogel and Krejsa regarding these three factors demonstrates that (1) the TDS limit is not technically feasible, (2) the five million dollar price tag to reduce phosphorus to the level demanded by Ohio EPA is not economically reasonable and would have an adverse impact on residential customers of the Plant, and (3) there is no demonstrated benefit that will result from a reduction in phosphorus or TDS discharges from the Plant.

Had the Director formally considered (or evaluated at all) technical feasibility and economic reasonableness, as required by R.C. § 6111.03(J)(3), he would have concluded that the TDS limit in the Tussing Plant NPDES Permit is technically infeasible, the phosphorus limit of 0.5 mg/l is economically unreasonable and that limiting either pollutant is unwarranted because of the minimal or non-existent benefits to be achieved by the imposition of such limits. Because he failed to comply with R.C. § 6111.03(J)(3), the Director's imposition of phosphorus and TDS limitations in the Permit was unlawful.

6. **The phosphorus limit of 0.5 mg/l is unlawful as it is based on an unpromulgated "target value" for phosphorus.**

There is no explicit numerical water quality standard for phosphorus. Rather, Table 7-11 of OAC 3745-1-07 provides:

> Total phosphorus as P shall be limited to the extent necessary to prevent nuisance growths of algae, weeds, and slimes that result in a violation of the water quality criteria set forth in paragraph (E) of rule 3745-1-04 of the Administrative Code or, for public water supplies, that result in taste or odor problems. **In areas where such nuisance growths exist, phosphorus discharges from point sources determined significant by the director shall not exceed a daily average of one milligram per liter as total P**, or such stricter requirements as may be imposed by the director in accordance with the international joint commission (United State-Canada agreement).

However, no evidence was presented at the hearing to establish that there were or will be nuisance growths of algae downstream of the Plant. The evidence is to the contrary. Thus, the Director may not lawfully impose a phosphorus limit.

The 0.5 mg/l phosphorus limit for Tussing Plant is based on an unpromulgated "target value" for phosphorus derived from the Ohio EPA study commonly referred to as the

"Associations Report."[12] Mr. Fancher testified that he applied this "target" value as if it were a promulgated numeric water quality standard when he calculated the allowable phosphorus loading for Blacklick Creek. (Fancher, v. 4, p 101) However, it is unlawful for Ohio EPA to regulate on the basis of unpromulgated standards. *Jackson County Environmental Committee et al. v. Schregardus* (10th Dist. 1994), 95 Ohio App.3d 527 (holding that Ohio EPA could not regulate the land application of paper mill sludge through unpromulgated guidelines).

7. The Associations Report is not a valid factual foundation for the Phosphorus limit.

The Associations Report suggests an association between phosphorus loading and aquatic communities. However, the data in the Report do not establish a cause-effect relationship between a given amount of phosphorus that can be present in a stream and the viability of a healthy population of aquatic organisms. To the contrary, while the report finds that healthy communities exist with a 0.11 mg/l phosphorus concentration, it also identifies other sites in attainment with much higher concentrations of phosphorus. The data does not support the conclusion that phosphorus levels in a stream above 0.11 mg/l will cause a violation of the warmwater habitat use designation.

Since the issuance of the Associations Report (and the Big Walnut TMDL), Ohio EPA has acknowledged that because other factors—habitat, stream flow and gradient, and urbanization, to name a few—have an enormous effect on the biological community, phosphorus limitations are not appropriate until and unless there is a documented adverse impact caused by phosphorus. (Miltner, v.2, pp. 166-168.) Far from establishing a direct causal relationship

[12] The Associations Report is an Ohio EPA technical bulletin, which explicitly states on the cover page that it "does not represent Ohio EPA policy." (Joint Exhibit 21, p.i)

between phosphorus in the Tussing Plant effluent and attainment of the warmwater habitat use designation in Blacklick Creek, all the data indicates the stream is and will remain healthy.

Ohio EPA's reliance on data showing a weak association to impose phosphorus limits in this case is similar to its imposition of operational restrictions in the Title V air permit at issue in *General Electric Lighting*. In that case, Ohio EPA witnesses were unable to state that operating pollution control equipment outside the ranges it sought to impose on power inputs would cause a violation of the particulate emission standard. Conversely, witnesses for GE Lighting presented data to establish that there were many other variables contributing to compliance with the standard, and the power inputs that Ohio EPA proposed to control were not "directly correlated" with emissions control. The court concluded that Ohio EPA had no valid factual foundation for imposing the limits. There is little to distinguish the facts of *General Electric* from the facts of the present case.

> 8. **The Director may not lawfully impose additional regulatory controls on the Plant for phosphorus because the Plant is meeting all chemical-specific and whole-effluent criteria applicable to phosphorus, and it is not the primary cause of nonattainment.**

OAC 3745-1-07(A)(6)(b) sets forth the procedure the Director must follow to address nonattainment.

> Demonstrated nonattainment of the applicable biological criteria in a water body with concomitant evidence that the associated chemical-specific aquatic life criteria and whole-effluent criteria are met will cause the director to seek and establish, if possible, the cause of the nonattainment of the designated use. The director shall evaluate the existing designated use and, where not attainable, propose to change the designated use. Where the designated use is attainable and the cause of the nonattainment has been established, the director shall, wherever necessary and appropriate, implement regulatory controls or make other recommendations regarding water resource management to restore the designated use. Additional regulatory controls **shall not be imposed on point sources** that are meeting all applicable chemical-specific and whole-effluent criteria unless:

> (i) The point sources are shown to be the contributing **primary** cause of the nonattainment;
>
> (ii) The application of additional or alternate treatment or technology can **reasonably be expected to lead to attainment** of the designated use; **and**
>
> (iii) The director has given due consideration to the factors specified in division (J) of section 6111.03 of the Revised Code.

OAC 3745-1-07(A)(6)(b) (emphasis added).

The Director failed to follow the procedure delineated in OAC 3745-1-07(A)(6)(b) when setting the permit limits for phosphorus. The Director maintains (erroneously) that the discharge of phosphorus from the Plant has impaired water quality, resulting in nutrient enrichment. Pursuant to OAC 3745-1-07(A)(6)(b), if the designated use is attainable and the cause of nonattainment has been established, the Director may implement regulatory controls. However, additional regulatory controls shall not be imposed on a point source that meets chemical specific and whole-effluent criteria unless that point source is the primary contributing cause of the nonattainment. In light of the fact that, according to the TMDL, 85% of phosphorus loadings are attributable to nonpoint sources, the Plant is not the **primary contributing cause.**

The evidence presented at the hearing showed that the nonattainment in segments of Blacklick Creek — none of which is impacted by the Tussing Plant -- is caused mostly by nonpoint sources (failing home septic systems). According to Ohio EPA's calculation, non-point source runoff contributes about ten-fold the amount of phosphorus as the direct dischargers. The Tussing Plant is not the primary cause of nonattainment; indeed, it is not a cause of non-attainment at all.

Further, the Tussing Plant meets all applicable chemical-specific and whole effluent criteria for phosphorus: (1) there is no numeric water quality standard for phosphorus (except

that in Table 7-11, which does not apply), (2) no nuisance growth of algae or weeds has been observed (See OAC 3745-1-04(E) and, (3) discharges of phosphorus are not causing a violation of water quality standards.

Finally, under OAC 3745-1-07(A)(6)(b)(ii), the Director must find that the additional treatment will reasonably lead to attainment. The evidentiary record does not support this finding, nor was any evidence presented that the Director even conducted the requisite analysis. There is no evidence that the Director followed OAC 3745-1-06(A)(6)(b) in imposing a phosphorus limit. Accordingly, the phosphorus limit is unlawful and unreasonable.

9. The Big Walnut Creek TMDL does not require the Director to impose the 0.5 mg/l phosphorus limit.

The Director has argued that because the TMDL was approved by USEPA, he is required to impose a 0.5 mg/l phosphorus limit on the Tussing Plant. As Fairfield County showed in its Response to the Director's Summary Affirmance Motion, this argument is unconvincing. In its September 26, 2005 Approval Letter, U.S. EPA stated "by this letter, U.S. EPA hereby approves 60 TMDLs in the Big Walnut Creek watershed." (App. Ex. M). In its Decision Document for the Big Walnut Creek TMDL Report, U.S. EPA stated that "EPA is not required to nor does it approve TMDL implementation plans." (App. Ex. N at p.12). Therefore, implementation of the TMDL is left to the discretion of the Director.

This discretion includes determining the phosphorus limits for point sources such as the Tussing Plant. Contrary to the Director's assertion, Table 5.2.F of the Big Walnut TMDL does not require that a 0.5 mg/l TP limit must be imposed in the NPDES Permit for the Plant. (Director's Motion at p.12). Table 5.2.F does not identify any TMDLs; rather, it identifies Permit Limits and WLA's (wasteload allocations). The 0.5 mg/l phosphorus limit in Table 5.2.F

is a proposed WLA for the Tussing Plant. As U.S. EPA states in the Decision Document, WLAs may be adjusted during the NPDES permitting process.

> The individual WLAs may take the form of uniform percentage reductions or individual mass based limitations for dischargers .... *These individual WLAs may be adjusted during the NPDES permitting process.* If the WLAs are adjusted, the individual effluent limits for each permit issued to a discharger on the impaired water must be consistent with the assumptions and requirements of the adjusted WLAs in the TMDL.... If a draft permit provides for a higher load for a discharger than the corresponding individual WLA in the TMDL, the State/Tribe must demonstrate that the total WLA in the TMDL will be achieved through reductions in the remaining individual WLAs and that localized impairments will not result.... *EPA does not require the establishment of a new TMDL to reflect these revised allocations as long as the total WLA, as expressed in the TMDL, remains the same or decreases*, and there is no reallocation between the total WLA and the total LA [load allocation].

(App. Ex. N at p. 9). [Emphasis added]. Adjustment of the individual WLA for the Tussing Plant is clearly within the discretion of the Director.

The TMDL Report itself leaves substantial room for discretion in implementation by the Director. The TMDL process is labeled "iterative." (Jt. Ex. 13, at 23). The TMDL Report also states that nutrient targets, such as for phosphorus, are not codified in Ohio's water quality standards and "therefore, there is a certain degree of flexibility as to how they can be used in a TMDL setting." (Jt. Ex. 13, at 24)

> 10. **The Director's issuance of a Permit based on the Big Walnut TMDL was unlawful because Ohio EPA never prepared a TMDL implementation plan**

OAC 3745-2-12(A)(2) states:

> TMDLs shall be established and implemented through a TMDL implementation plan. An implementation plan shall address attainment of applicable water quality standards . . . for each pollutant for which a TMDL is established.

The Big Walnut TMDL does not contain an implementation plan. The report specifically states that: "[a]n implementation plan is not included in this report . . ." (Jt. Ex. 13, at 1) Ohio EPA

did not offer into evidence an implementation plan at the hearing. Mr. Gallaway's attempt to explain why an implementation plan was not included in the TMDL Report is irrelevant. (Gallaway, v. 4, p. 46-48). The fact is that Ohio EPA has not promulgated an implementation plan for the Big Walnut Creek TMDL, despite a clear requirement to do so under OAC 3745-2-12(A)(2). Because Ohio EPA failed to comply with OAC 3745-2-12(A)(2), its issuance of an NPDES permit with the phosphorus limit based on the TMDL is unlawful.

11. The TDS limit is not necessary to maintain attainment with the WWH use designation for Blacklick Creek.

Ohio EPA has adopted a water quality standard for TDS of 1500 mg/l, and imposed the TDS permit limitation purportedly to attain the WWH use designation for Blacklick Creek. The Tussing Plant has repeatedly discharged TDS in amounts higher than the permit limit. However, all the data confirms that Blacklick Creek is in attainment of WWH. Ms. Mendel reviewed whole effluent toxicity (WET) testing conducted in the last two years on the Tussing Plant's effluent and concluded that, to a reasonable degree of scientific certainty, the effluent was not toxic to aquatic life, despite concentrations of TDS in the effluent substantially in excess of that number. Similarly, Ohio EPA's witness Mr. Bolton acknowledged that Ohio EPA's WET testing also demonstrated no toxicity. The downstream biocriteria scores show that the plant is not harmful to the aquatic biota.

Ohio EPA's did not take any of this information into account. Mr. Owen testified at the hearing that he made no evaluation whether a TDS limit was needed to protect aquatic biota; he merely input data into the computer and accepted the limit it provided. Ohio EPA failed to present reliable, probative and substantial evidence that there is a "direct correlation" between limiting TDS from the Tussing Plant and attainment of the water quality standards, as required by the *General Electric Lighting* decision. Rather, the undisputed evidence establishes that there

is no connection. In the absence of a valid factual foundation for the TDS limit, it is unreasonable and should be vacated.

12. **Imposing a TDS limit is unlawful and unreasonable because the attainment of biocriteria takes precedence over numerical water quality standards.**

The Tussing Plant's TDS limit is based on the numerical chemical water quality standard for TDS. However, pursuant to OAC 3745-1-07(A)(6)(a), attainment of biocriteria supercedes numerical water quality standards.

> (a) **Demonstrated attainment of the applicable biological criteria in a water body will take precedence over the application of selected chemical-specific aquatic life** or whole-effluent **criteria** associated with these uses when the director, upon considering appropriately detailed chemical, physical and biological data, finds that one or more chemical-specific or whole-effluent criteria are inappropriate. In such cases the **options which exist include:** .....
>
> (ii) The director may proceed with establishing water quality based effluent limits consistent with attainment of the designated use.

OAC 3745-1-07(A)(6)(a) (emphasis added). In other words, attainment of biological criteria trumps numerical criteria. (Miltner, v. 2, p. 189).

TDS discharges from the Tussing Plant were not limited in the NPDES Permit prior to the permit appealed in this case. The water segment downstream of the Tussing Plant is, and has been, in full attainment of all biological criteria since 1996 sampling by Ohio EPA. As stated in OAC 3745-1-07(A)(6), biological criteria "provide a **direct measure** of attainment of the warm water habitat . . . aquatic life use." (Emphasis added.) The TDS numerical water quality standard is a chemical specific aquatic standard.[13] OAC 3745-1-7, Table 7-1. Because Blacklick Creek

[13] U.S. EPA has developed some recommendations for water quality standards to be adopted by states. U.S. EPA has developed no numerical standard for TDS. The most recent analysis by U.S. EPA references studies showing

attains the aquatic biocriteria for WWH designation downstream of the Tussing Plant, OAC 3745-1-07(A)(6)(a) precludes the imposition of new limits for chemical-specific aquatic criteria. Accordingly, it is unlawful and unreasonable to impose the TDS limit in the Permit.

13. **The TDS limit is unlawful because it is not technically feasible.**

David Frank, the civil engineer who designed the most recent improvements to the Tussing Plant, thoroughly explored the options for treating TDS and concluded that there is no technically feasible way for the Tussing Plant to meet the limit. Mr. Frank's expert testimony was unrebutted. Therefore, the Director acted unreasonably in imposing a TDS limit in the Permit. R.C. § 6111.03(J)(3).

V. CONCLUSION

Ohio EPA relied on inadequate and unreliable data, disregarded other substantial data, failed to abide by its own laws and regulations, and substituted speculation, bias and arbitrary decision-making for reliable scientific methods and analysis. For these reasons, Appellant Fairfield County Board of Commissioners respectfully requests the Commission rule that the Director acted both unlawfully and unreasonably in imposing interim and final NPDES permit limits and implementation terms for phosphorus and TDS on the Tussing Plant, and order the Director to modify the Permit by removing these limitations.

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that aquatic life can survive in waters with TDS as high as 10,000 mg/l to 15,000 mg/l, ten times greater than Ohio EPA's standard. Quality Criteria for Water, U.S. EPA (May 1, 1986). View at: (htphosphorus://www.epa.gov/waterscience/criteria/wqctable/#gold)

{H1535226 1 }

Respectfully submitted,

SCHOTTENSTEIN ZOX & DUNN CO., LPA

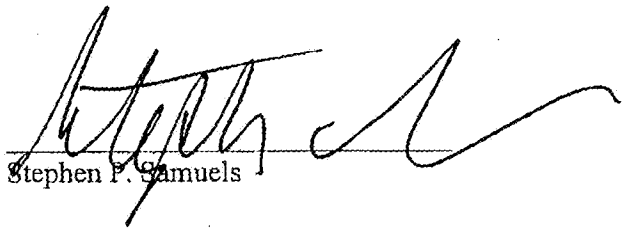
Stephen P. Samuels (0007979)
Joseph M. Reidy (0030346)
Elizabeth E. Tulman (0005927)
Linda Mindrutiu (0082341)
250 West Street
Columbus, OH 43215
(614) 462-2700 (phone) & (614) 222-5135 (fax)
e-mail: ssamuels@szd.com; jreidy@szd.com;
etulman@szd.com; lmindrutiu@szd.com

Attorneys for Appellant
Board of Commissioners of Fairfield County

CERTIFICATE OF SERVICE

I hereby certify that a copy of the foregoing Appellant Fairfield County Board of Commissioners Proposed Findings of Fact and Conclusions of Law was sent this 22nd day of May, 2009 by regular U.S. mail and electronic mail to:

L. Scott Helkowski
Assistant Attorney General
Environmental Enforcement Section
Public Protection Division
30 East Broad Street - 25th floor
Columbus, Ohio 43215-3400
Office: (614) 466-2766
Facsimile: (614) 644-1926
E-mail: lhelkowski@ag.state.oh.us
Counsel for Appellee, Director



Stephen P. Samuels