STATE OF MICHIGAN 22ND JUDICIAL CIRCUIT	**PRAECIPE FOR CIVIL / DOMESTIC MOTION**	CASE NO.: 88-34734-CE JUDGE: Connors

Address: Central Assignment, 101 E. Huron St., P.O. Box 8645, Ann Arbor, Michigan 48107-8645 **Telephone:** (734) 222-3383 **Fax:** (734) 222-3084

ALL BLANKS ON THIS PRAECIPE MUST BE PROPERLY COMPLETED. FAILURE TO COMPLY WITH THIS REQUIREMENT MAY RESULT IN THE COURT DECIDING NOT TO HEAR YOUR MOTION.

Attorney General for the State of Michigan ex rel. Michigan Department of Natural Resources and Environment (Plaintiff) VS Gelman Sciences, Inc. d/b/a Pall Life Sciences, a Michigan corporation (Defendant)

1. I wish to place a Motion for (state nature of motion in brief form): Intervention by Huron River Watershed Council

on the Motion Docket for Thursday (Day), 12/15/2016 (Date) at 9 a.m. (Time).

BEFORE SUBMITTING THIS PRAECIPE TO THE COURT, YOU ARE REQUIRED TO CONTACT THE OTHER ATTORNEY OR PARTY (if in Pro Per) TO DETERMINE WHETHER THE SUBJECT OF YOUR MOTION IS A CONTESTED ISSUE. PLEASE INDICATE BELOW THAT YOU HAVE COMPLIED WITH THIS REQUIREMENT, OR EXPLAIN WHY IT WAS NOT POSSIBLE TO DO SO.

2. ☒ a. I have contacted opposing attorney/party and have been informed*that this motion will / will not **(CIRCLE ONE)** be contested.
*Or have not heard from opposing counsel and so am assuming that it will be contested.

☐ b. I have not contacted opposing attorney/party for the following reason: _____

3. ☒ Are you serving by **MAIL**?
Opposing party must be served at least 9 days before the hearing date.

OR

☐ Are you serving in **PERSON**?
Opposing party must be served at least 7 days before the hearing date.

4. ☒ Motion has been filed with the Clerk's Office

Dated: December 5, 2016

(Signature of Moving Attorney/Party)

Brian J. Negele
(Name of Attorney for Plaintiff)

_____
(Name of Attorney for Plaintiff)

Michael L. Caldwell
(Name of Attorney for Defendant)

Alan D. Wasserman
(Name of Attorney for Defendant)

Attorney for Huron River Watershed Council

4444 2nd Avenue
(Street Address of Moving Attorney/Party)

Detroit, MI 48201
(City, State, and Zip Code of Moving Attorney/Party)

586-255-8857
(Telephone Number of Moving Attorney/Party)

PRAECIPES shall be FILED in the Central Assignment Office, Room 1110, at least 7 days before the time set for hearing.

COURT USE ONLY **(Do Not Write below line)**

_____ Adj to _____ _____ Adj to _____

(Rev. 2/16)

STATE OF MICHIGAN

IN THE CIRCUIT COURT FOR THE COUNTY OF WASHTENAW

ATTORNEY GENERAL FOR THE STATE OF MICHIGAN, *ex rel.* MICHIGAN DEPARTMENT OF NATURAL RESOURCES AND ENVIRONMENT,

Case No. 88-34734-CE

Hon. Timothy P. Connors

Plaintiffs,

-v-

GELMAN SCIENCES, INC., d/b/a PALL LIFE SCIENCES, a Michigan Corporation,

Defendant.

Certificate Of Service

I certify that on this date I personally served a true and correct copy of the following documents:

- Motion By Huron River Watershed Council To Intervene (with exhibits, including a pleading)
- Brief In Support Of Motion By Huron River Watershed Council To Intervene, Or In The Alternative To Participate As Amicus Curiae
- Praecipe to schedule motion hearing

on the following persons in the manner indicated:

Person(s) served	*Party/ies represented*	*Method of service*
Brian J. Negele Assistant Attorney General Environment, Natural Resources and Agriculture Division P.O. Box 30755 Lansing, MI 48909 negeleb@michigan.gov	Plaintiffs Attorney General of the State of Michigan, Michigan Department of Environmental Quality	Certified U.S. Mail and email

Michael L. Caldwell Zausmer, August, & Caldwell, P.C. 31700 Middlebelt Road, Suite 150 Farmington Hills, MI 48334 mcaldwell@zacfirm.com Alan D. Wasserman Williams Acosta, PLLC 533 Griswold Street, Suite 1000 Detroit, MI 48226 awasserman@williamsacosta.com	Defendant Gelman Sciences, Inc. d/b/a Pall Life Sciences	Certified U.S. Mail and email
Frederick J. Dindoffer Thomas P. Breutsch Nathan D. Dupes 1901 St. Antoine, 6th Floor Detroit, MI 48226 ndupes@bodmanlaw.com Stephen K. Postema City Attorney Abigail Elias Assistant City Attorney City of Ann Arbor 301 E. Huron, Third Floor Ann Arbor, MI 48107 spostema@a2gov.org	Would-be Intervenor City of Ann Arbor (courtesy copy)	Email

Respectfully Submitted,

GREAT LAKES ENVIRONMENTAL LAW CENTER

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STATE OF MICHIGAN

IN THE CIRCUIT COURT FOR THE COUNTY OF WASHTENAW

ATTORNEY GENERAL FOR THE STATE OF MICHIGAN, *ex rel.* MICHIGAN DEPARTMENT OF NATURAL RESOURCES AND ENVIRONMENT,

Case No. 88-34734-CE

Hon. Timothy P. Connors

Plaintiffs,

-v-

GELMAN SCIENCES, INC., d/b/a PALL LIFE SCIENCES, a Michigan Corporation,

Defendant.

ORDER REGARDING
HURON RIVER WATERSHED COUNCIL'S MOTION TO INTERVENE

At a session of said Court, held in the County of Washtenaw
City of Ann Arbor, State of Michigan, on_____

PRESENT: Hon. _____
CIRCUIT COURT JUDGE

In consideration of the Huron River Watershed Council's motion to intervene and all relevant responses,

IT IS HEREBY ORDERED that:

1. The motion to intervene is granted and the Huron River Watershed Council is permitted to intervene in the above-docketed matter;

2. The caption shall be amended to read as follows:

ATTORNEY GENERAL FOR THE STATE OF MICHIGAN, *ex rel.* MICHIGAN DEPARTMENT OF NATURAL RESOURCES AND ENVIRONMENT,

Plaintiffs,

and

HURON RIVER WATERSHED COUNCIL,

Intervening Plaintiff,

-v-

GELMAN SCIENCES, INC., d/b/a PALL LIFE SCIENCES, a Michigan Corporation,

Defendant.

Case No. 88-34734-CE

Hon. Timothy P. Connors

IT IS SO ORDERED

Timothy P. Connors
Circuit Judge

STATE OF MICHIGAN

IN THE CIRCUIT COURT FOR THE COUNTY OF WASHTENAW

ATTORNEY GENERAL FOR THE STATE OF MICHIGAN, *ex rel.* MICHIGAN DEPARTMENT OF NATURAL RESOURCES AND ENVIRONMENT,

Case No. 88-34734-CE

Hon. Timothy P. Connors

Plaintiffs,

-v-

GELMAN SCIENCES, INC., d/b/a PALL LIFE SCIENCES, a Michigan Corporation,

Defendant.

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MOTION BY HURON RIVER WATERSHED COUNCIL TO INTERVENE

The Huron River Watershed Council ("Council") moves to intervene in this case as a plaintiff under MCR 2.209 and MCL 324.20137(8).

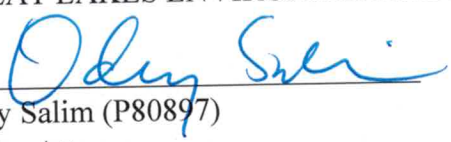
In further support of its motion, the Council relies on the attached brief. Also included are a praecipe to schedule a hearing, exhibits to the brief that include a pleading, and a certificate of service.

Regarding notice that this motion would be filed, undersigned counsel was only able to provide notice to counsel for the Plaintiffs and Defendant on the morning of its filing, and was

not able to provide them with a version of the motion before filing. Because no definitive responses were received as to whether the motion would be contested or uncontested, the motion is being treated as contested.

Respectfully Submitted,

GREAT LAKES ENVIRONMENTAL LAW CENTER

By: 

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STATE OF MICHIGAN

IN THE CIRCUIT COURT FOR THE COUNTY OF WASHTENAW

ATTORNEY GENERAL FOR THE STATE OF MICHIGAN, *ex rel.* MICHIGAN DEPARTMENT OF NATURAL RESOURCES AND ENVIRONMENT,

Case No. 88-34734-CE

Hon. Timothy P. Connors

Plaintiffs,

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BRIEF BY HURON RIVER WATERSHED COUNCIL IN SUPPORT OF MOTION TO INTERVENE

1. Introduction

This case is about Defendant's contamination of the Huron River watershed's soils, groundwater, and surface waters with the toxic chemical 1,4-dioxane ("dioxane"). The contamination began nearly three decades ago, continues to this day, and is growing ever closer to the Huron River and its tributaries (if it hasn't already reached them), threatening to worsen

their quality and ecological health. The Huron River Watershed Council's ("Council") participation in this case will help to reduce the risk to the watershed – particularly to aquatic life and recreation in at-risk surface water bodies.

The State of Michigan ("State" or "Michigan"), mainly through the Department of Environmental Quality ("DEQ") has been attempting to enforce the cleanup laws, Part 201 of the Natural Resources and Environmental Protection Act ("NREPA")[1], and while we appreciate its efforts, they have not been sufficient. The plume has gotten larger, not smaller; certain monitoring wells are detecting dioxane at levels higher than before; the full extent and movement of the plume is still not known; there is information to indicate that the State's and Defendant's assumptions about how the plume is moving are wrong; and each negotiation between the State and Defendant seemingly provides Defendant with more leeway, not less.

The Council is deeply concerned. If it hasn't already vented to them, the plume is at the very least approaching the Huron River and its tributaries. Dioxane is a hazardous, toxic substance that poses a threat to the health of the aquatic life community and to recreational interests, both of which the Council exists to protect. The Council's narrow but important objective for wanting to intervene in this litigation is to protect the Huron River watershed, which includes both surface waters and the groundwater that connects to them. The Council understands the importance of surface water health to aquatic life and recreational opportunities and works to improve that surface water health or itself and its members. The State and Defendant have proved that they cannot alone protect the Council's surface water interests, so the Council wants the opportunity to work with all the parties and the court to ensure that the Council's surface water interests are adequately protected.

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[1] Act 451 of 1994.

2. Background on the Huron River Watershed Council

The Huron River Watershed Council is a membership-based Michigan nonprofit corporation. The Council was founded in 1965 and is southeast Michigan's oldest environmental organization dedicated to river protection.

The Council's mission is to protect and restore the Huron River for healthy and vibrant communities. Among other things, the Council fulfils its mission by monitoring streams within the Huron River watershed, educating the public, working to reduce pollution, providing policy and technical assistance to communities, and protecting drinking water.

The Council has worked to improve the health of the surface waters of the Huron River watershed. For example, the Council: implemented Michigan's first total maximum daily load scheme for phosphorous with regard to Ford and Belleville lakes; is leading the watershed-wide effort to eliminate the use of coal tar-based sealcoat due to the potential for toxic polycyclic aromatic hydrocarbons to enter and pollute the surface waters; worked to improve fish habitat in the Ypsilanti river segments; has installed trail makers and waterproof maps to facilitate the use of the Huron River Water Trail along the river; has worked to improve Allen Creek by monitoring it to determine the cause of degradation in order to develop a restoration scheme; and by advocating for and facilitating green infrastructure to reduce stormwater pollution.

The Council has approximately 900 members who reside in Washtenaw County and approximately 650 members who reside in the Ann Arbor area. Many of those members use and enjoy the surface waters and are concerned about the health of surface waters and the aquatic life in them. The threat of dioxane entering the surface waters of the Huron River watershed, or having entered the surface waters of the Huron River watershed, harms the interests that the Council and its members have in stream health, aquatic life, and recreational opportunities. The

Council also has approximately 38 local governments who are active members, many of whom are located downstream of Ann Arbor along the Huron River and its tributaries.

3. Pertinent factual background of the case before the court

The Gelman site is located in Washtenaw County. Historically, filter devices were manufactured at the plant and dioxane was used at the site as solvent. From the 1960s to the 1980s, Defendant released or discharged the toxic, hazardous chemical 1,4-dioxane at or near its property, in violation of Michigan's waste management laws. Dioxane is a probable human carcinogen and can be toxic to aquatic life.

The released dioxane entered the aquifer below or near Defendant's property and has migrated and is continuing to migrate through the groundwaters of Washtenaw County.[2] Apart from groundwaters, there has been dioxane contamination of drinking water wells and certain tributaries like Honey Creek have been vulnerable to the plume.

After the State commenced a lawsuit against Defendant to enforce Michigan's waste management and remediation laws, the parties entered into a consent judgment in 1992. The 1992 consent judgment called for a true remedial remedy, which is to say it required the removal of the contamination from the aquifer. E.g. ¶¶ III.L. (defining "remedial action" as "removal, treatment, and proper disposal) and V.A. (defining as objectives for the Evergreen system the interception and containment of the leading edge of the plume and subsequent removal of the contaminant). The 1992 consent judgment also placed a stringent groundwater surface water interface ("GSI") standard, which is the screening level for dioxane that would trigger certain remedial action, the point being to prevent the dioxane from entering the surface water at unacceptably high concentrations in those areas where groundwater vents or discharges to the

[2] See maps, Exhibits 1 and 2.

surface waterbody. ¶¶ VI (stating as an objective the prevention of "venting of groundwater contamination into Honey Creek") and VI.A. ("to prevent the discharge of contaminated groundwater from the Marshy Area into the Honey Creek Tributary in concentrations in excess of 100 ug/l […]."). Removing contamination is consistent with Part 201 of NREPA. See MCL 324.20118(4) (referring to Mich Admin Code, R. 299.3).

Since 1992, the negotiated agreements have grown less protective. The 1996 consent judgment (the first amendment) lowered the contamination definition from 3 ug/l to 77 ug/l, removed the prevention objective regarding venting to Honey Creek, and lowered the GSI level from 100 ug/l to 2000 ug/l. The 2005 consent judgment (the third amendment) further lowered the contamination definition from 77 ug/l to 85 ug/l, and further lowered the GSI level from 2000 ug/l to 2800 ug/l.

Since then, the State has taken a positive step to improve the situation by promulgating emergency rules effective October 27, 2016.[3] These emergency rules last for six months, did not go through public notice and comment (because, as emergency rules, they did not need to), and will presumably be incorporated into any future agreement between the parties. The emergency rules define the dioxane drinking water cleanup criterion as 7.2 ug/l and the vapor intrusion screening criterion as 29 ug/l. This is a welcome development, but the Council is concerned that, in the context of the State admitting that it still does not know the full extent of the plume and that its prior assumptions about which dioxane levels would be protective were quite wrong, the State did not also reconsider its assumptions about the appropriateness of the current GSI screening level of 2800 ug/l.[4]

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[3] Exhibit 3.

[4] The *generic* GSI screening level for dioxane is 2,800 ug/l. Mich Admin Code, R. 299.44 (Table 1). However, Part 201 of NREPA contemplates the possibility that DEQ will sometimes develop

At a May 9, 2016 meeting, Professor Lawrence Lemke, now a Professor and Chair of the Department of Earth and Atmospheric Sciences at Central Michigan University (formerly director of the Environmental Science Program at Wayne State University), described the research he and his graduate students have been performing on the fate and transport of the dioxane plume.[5] According to Lemke: dioxane has probably already reached the Huron River; the plume may be spreading non-uniformly as "finger-like extensions" through "preferred-flow pathways" that are "cutting between monitoring wells that are spaced far apart and perhaps not screening at the right depths"; and that the Allen Creek watershed – a tributary to the Huron River – may be serving as "a sink for 1,4-dioxane".[6] That dioxane does not easily biodegrade makes it a worse threat to the rivers because it can remain in the water column at persistent concentrations for a relatively long time.

4. Legal standards that apply to intervention

The rules of civil procedure provide two paths to intervention. MCR 2.209(a) allows intervention by right either when a Michigan statute or court rule confers an unconditional right to intervene or when:

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site-specific criteria for a cleanup action. See MCL 324.20120b (for numeric or nonnumeric site-specific criteria). In fact, the statute specifically allows for that in the context of GSI. MCL 324.20120b(c) and 324.20120e(d).

It is also the case that Part 31 of NREPA, and more specifically the implementing rules, which deal with water quality standards such as protected water uses and water quality criteria, provide a basis for establishing maximum surface water concentrations for dioxane and accompanying monitoring parameters. See Mich Admin Code, R 323.1000 and 323.1157

[5] Stanton, *Professor says dioxane probably has reached Huron River already*, M Live (May 13, 2016), available at http://www.mlive.com/news/ann-arbor/index.ssf/2016/05/professor_says_dioxane_plume_m.html (last checked Dec. 4, 2016) (Exhibit 4).

[6] Id. For a map of the Allen Creek watershed, see Exhibit 5.

> the applicant claims an interest relating to the property or transaction which is the subject of the action and is so situated that the disposition of the action may as a practical matter impair or impede the applicant's ability to protect that interest, unless the applicant's interest is adequately represented by existing parties.

MCR 2.209(b) allows permissive intervention when a Michigan statute or court rule confers an unconditional right to intervene or when the applicant's claim or defense and the main action have a question of law or fact in common. In both cases, motioning must be timely.

Part 201 of NREPA provides another path. MCL 324.20137(8) states in full that:

> In an action commenced under this part, any person may intervene as a matter of right if that person claims an interest relating to the subject matter of the action and is situated so that the disposition of the action may, as a practical matter, impair or impede the person's ability to protect that interest, unless the court finds the person's interest is adequately represented by an existing party.

Part 201's intervention standard is, for all intents and purposes, the same as that in MCR 2.209 in that it examines how disposition of the matter may affect the would-be intervener, and whether the would-be intervener's interests are already adequately represented by a party to the matter.

Whether to allow a person to intervene is within the trial court's discretion. Precision Pipe & Supply, Inc. v. Meram Const., Inc., 195 Mich App 153, 156; 489 NW2d 166 (1992). "The rule for intervention should be liberally construed to allow intervention where the applicant's interest may be inadequately represented." Neal v. Neal, 219 Mich App 490, 492; 557 NW2d 133 (1996). Intervention "may not be proper where it will have the effect of delaying the action or producing a multifariousness of parties and causes of action." Precision Pipe, 195 Mich App at 156. The burden of showing that none of the other parties adequately represents a would-be intervenor's interests is minimal. D'Agostini v. City of Roseville, 396 Mich 185, 189; 240 NW2d 252 (1976). The state does not adequately represent an intervenor's interests when

those interests are narrower than those of the general public. Karrip v. Cannon, 115 Mich App 726, 732; 321 NW2d 690 (1982) (holding that a proposed intervenor's interests in accessing a lake for fishing and other forms of recreation were narrower than the state's interest in generally protecting the lake). Whether a motion to intervene is based on context and various factors. Bradley v. Milliken, 828 F2d 1186, 1191 (6th Cir 1987).

5. The Council's interest in protecting the vulnerable surface waters of the Huron River from the dioxane plume.

The attached complaint[7], which represents more fully the Council's legal interest in this matter, contains a single claim under the Michigan Environmental Protection Act, which is Part 17 of NREPA. MCL 324.1701-1706. MEPA authorizes "any person" to bring an action "for the protection of air, water, and other natural resources and the public trust in these resources from pollution, impairment, or destruction." MCL 324.1701(1). The pollution, impairment, or destruction can be present or threatened. MCL 324.1702(1). MEPA applies to groundwater contamination, Attorney General v. Thomas Solvent Co., 380 N.W.2d 53 (Mich. App. 1985), and to groundwater's effect on surface water. Michigan Citizens for Water Conservation v. Nestlé Waters North America, Inc., 737 N.W.2d 447 (Mich. App. 2007). Rivers and the aquatic life in the water are public trust resources. For relief, MEPA provides for declaratory and injunctive relief, as well as the adoption of appropriate remedial standards. MCL 324.1701.

Given who the Council is as described in section 2 above, and given the factual background from section 3 above, the Council is rightfully concerned about the risk of dioxane contamination of the surface waters. The Council itself, as well as its members, want healthy aquatic life and recreational opportunities in the Huron River and its tributaries.

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[7] Exhibit 6.

The Council believes that moving forward, at the very least, there should be: a reconsideration of the plume modeling so that we can know where the dioxane likely is, where it is likely to go, and when; a reconsideration of the monitoring well network based on improved plume modeling; monitoring of dioxane levels in the surface waters; an analysis of which dioxane level might be acceptable in the at-risk surface waters and the imposition of that level as an enforceable standard; development of a response plan in the event that dioxane has reached or does reach the surface waters in certain concentrations. The Council is in the process of trying to retain experts who can contribute to the discussion of improved surface water protection.

6. The Council's basis for intervention

MCR 2.209(a)(3)

The Council satisfies the elements of MCR 2.209(a)(3). The disposition of this case will have an obvious impact on the Council's interest in the Huron River watershed because any further modifications of the remedial scheme, through consent judgment or otherwise, will affect how the surface waters are to be protected, which includes monitoring, reporting, and standards development. That in turn has an impact on the Council's and its members' interests in the surface waters.

The State and Defendant have proved that they cannot alone adequately protect the surface water interest. While the State wants to protect the general public from the risk of dioxane, the Council is narrowly focused on its and its members' interests in the surface waters.

The Council appreciates and supports Ann Arbor's motion to intervene, but as demonstrated by its legal brief supporting its motion, Ann Arbor is mainly and understandably interested in protection of the watershed from a drinking water perspective, not from the perspective of aquatic life and recreational interests.

MCR 2.209(b)(2)

The Council satisfies the elements of MCR 2.209(b)(2). The Council's claim is that Defendant has created a threat to the health of the Huron River watershed and is not doing enough to protect it. The facts of the Council's claim overlap significantly with the facts of this case as they both relate to the dioxane plume, the current remedial scheme, and possible alterations to the remedial scheme.

MCL 324.20137(8) and MCR 2.209(b)(1)

The Council satisfies the elements of MCL 324.20137(8). MCL 324.20137(8) contains essentially the same requirements as MCR 2.209(a)(3), and if the court agrees that the Council satisfies one, the other should be satisfied. Also, if the court agrees that the Council satisfies the elements of MCL 324.20137(8), then MCR 2.209(b)(1) is satisfied since MCL 324.20147(8) is a statutory conditional right to intervene.

Timeliness

The Council's motion is timely. Whether a motion to intervene is timely:

> should be evaluated in the context of all relevant circumstances, such as the purpose of the motion to intervene, the length of time the applicant for intervention should have known of his interest in the case, whether the original parties would be prejudiced by further delays, whether there are any unusual circumstances which would bear on granting or denying the motion and to what stage the lawsuit has progressed.

Bradley v. Milliken, 828 F.2d 1186, 1191 (6th Cir. 1987).

The first consent judgment was entered in 1992 and much has taken place since then. While the Council is admittedly motioning several years after commencement of the action, this phase in the remedial process constitutes a major reset and restart. New information about fate and transport modeling has been made public, revealing that the plume may not be traveling as

assumed. The DEQ has promulgated emergency rules based on an admission that its prior assumptions were wrong about which concentrations of dioxane would be sufficiently protective. Promulgation of those emergency rules marks the first time since the 1992 consent judgment that a newly established dioxane standard is more protective, not less protective, than the last. The plume has spread significantly eastward and is ever closer to surface water bodies.

Circumstances have changed, which call for an improved approach to remediating the aquifer and protecting the surface water bodies. The Council is motioning to intervene now, before any additional amendment to the consent judgment is finalized and entered, and before any new court order is issued that establishes modified standards. The Council's intervention would be narrowly focused on surface water protection. Therefore, the motion is timely.

Standing

Michigan's standing doctrine is a "limited, prudential" one. Lansing Sch. Educ. Ass'n v. Lansing Bd. of Educ., 487 Mich. 349, 372; 792 NW2d 686 (2010). "A litigant has standing whenever there is a legal cause of action" or, when a cause of action is not provided at law, the court should find standing "if the litigant has a special injury or right, or substantial interest, that will be detrimentally affected in a manner different from the citizenry at large or if the statutory scheme implies that the Legislature intended to confer standing on the litigant." Id.

MEPA creates an express cause of action that the Council can employ, and so based on that alone the Council meets the Lansing Schools test.

The Council also meets the Lansing Schools test because it has a special injury and substantial interest that will be affected differently from the citizenry at large. The Council is an organization uniquely devoted to the Huron River watershed. The Council has already invested resources in improving the watershed's surface waters, making them a better place to recreate,

and making them healthier for aquatic life. The Council has members that live in the watershed and the Council exists in part to facilitate those members' ability to recreate and enjoy the aquatic life in its surface waters. MEPA's statutory scheme is focused on the protection of current and future threats to water and natural resources, which is precisely what the Council wants to address in terms of dioxane contamination.

7. Conclusion

The Council seeks to intervene not to further complicate the matter, but to ensure that the surface waters the Council exists to protect are in fact protected. To that end, the Council will focus its contributions on the protection of aquatic life and recreational interests in those surface water bodies and segments that are at risk of dioxane pollution. While the Council reserves its right to do what is necessary to protect its surface water interests, the Council will certainly try to resolve any dispute by negotiated settlement. Ideally, to save on time and costs, there would be an improved fourth amendment to the consent judgment that is acceptable to all future parties.

Respectfully Submitted,

GREAT LAKES ENVIRONMENTAL LAW CENTER

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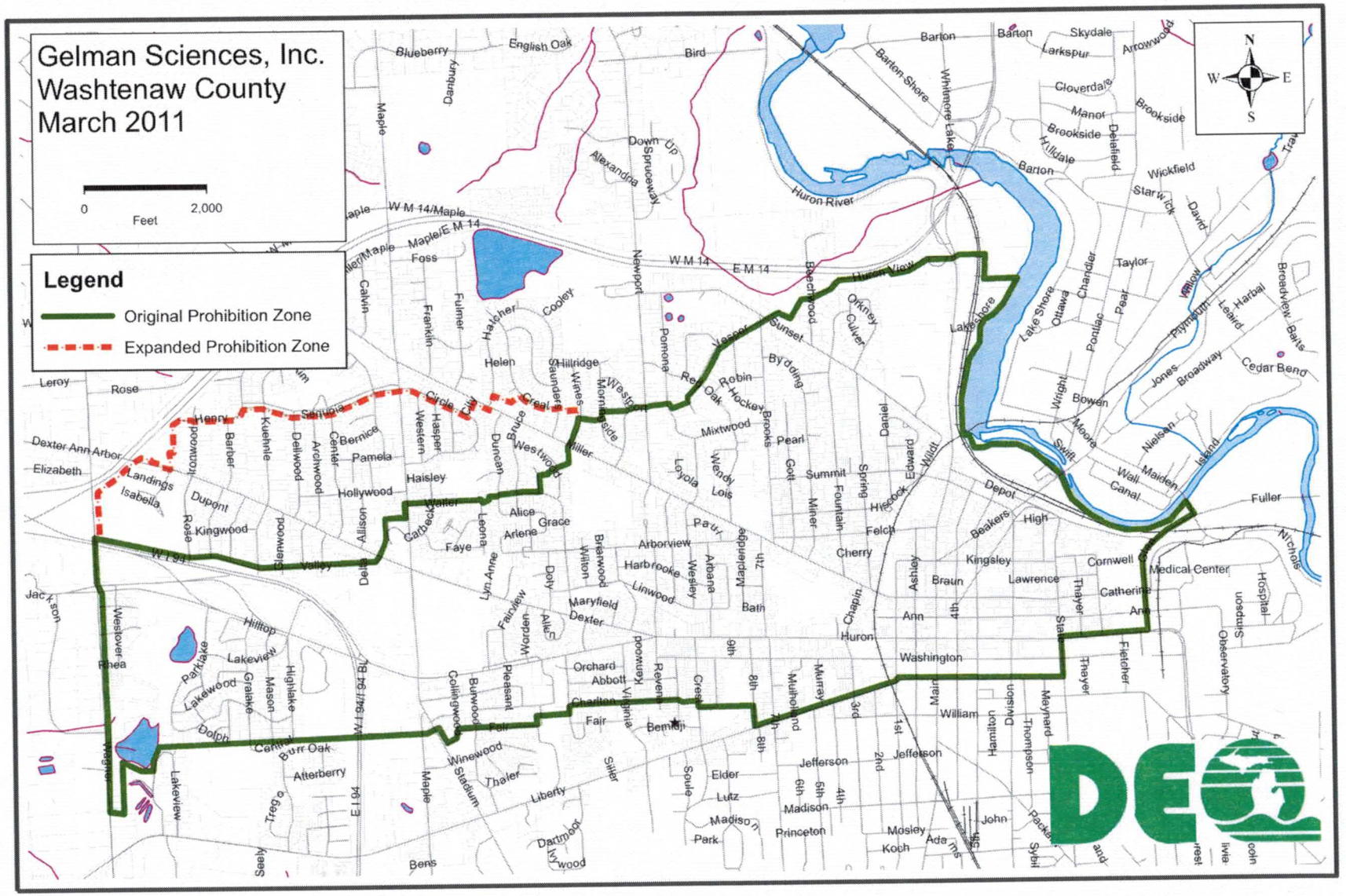
EXHIBIT 1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Bens
Maple
Sasse
Tregaron
Lakeview
Barton
Skydale
Larkspur
Arrowood
Barton Shore
Whitmore Lake
Cloverdale
Manor
Brookside
Delafield
Hilldale
Wickfield
Starwick
David
Taylor
Chandler
Peat
Pontiac
Lake Shore
Ottawa
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Aiken
Orchard
Abbott
Charlton
Fair
Bemidji
Virginia
Revere
Crest
Mulholland
Murray
Pleasant
Burwood
Collingwood
Bayswood
Bayberry
Bird
Blueberry
English Oak
Danbury
Down
Up
Sprucewood
Alexandra
Newport
Pomona
Bacon
Orkney
Culver
Huron View
Byedding
Loyola
Wendy
Lois
Bruce
Duncan
Westwood
Monmouth
Westgate
Cooley
Hatcher
Fulmer
Franklin
Calvin
Helen
Hillridge
Launder
Wines
Circle
Creal
Bernice
Pamela
Haisley
Hollywood
Walter
Carbeck
Alice
Grace
Arlene
Faye
Leona
Valley
Allison
Dellwood
Archwood
Center
Barber
Kuehnle
Henry
Seneca
Rosewood
Dupont
Kingwood
Landings
Isabella
Elizabeth
Dexter Ann Arbor
Leroy
Rose
Maple
Danbury
Bird
Blueberry
English Oak
Barton
Barton Shore
Whitmore Lake
Huron River
Cloverdale
Manor
Brookside
Delafield
Hilldale
Wickfield
Starwick
David
Taylor
Chandler
Peat
Pontiac
Lake Shore
Ottawa
Plymouth
Leaird
Harbal
Broadview
Balts
Cedar Bend
Broadway
Jones
Wright
Bowen
Moore
Swift
Nielsen
Island
Maiden
Wall
Canal
Depot
Fuller
Nichols
Medical Center
Hospital
Observatory
Stimson
Catherine
Cornwell
Kingsley
Lawrence
Braun
Ashley
Thayer
Fletcher
Maynard
Thompson
Division
Hamilton
Main
State
Ann
Huron
Washington
William
Jefferson
Madison
Princeton
Park
Elder
Lutz
Soule
Miller
Sunset
Yaster
Robin
Oak
Hockey
Mixtwood
Brooks
Pearl
Gott
Summit
Miner
Fountain
Spring
Higcock
Edward
Wildt
Daniel
Beakers
High
Felch
Cherry
Chapin
Bath
Linwood
Wesley
Arbana
Harbrooke
Arborview
Wilton
Brierwood
Maryfield
Dexter
Dohy
Lyn Anne
Fairview
Worden
Aiken
Orchard
Abbott
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Dupont
Kingwood
Landings
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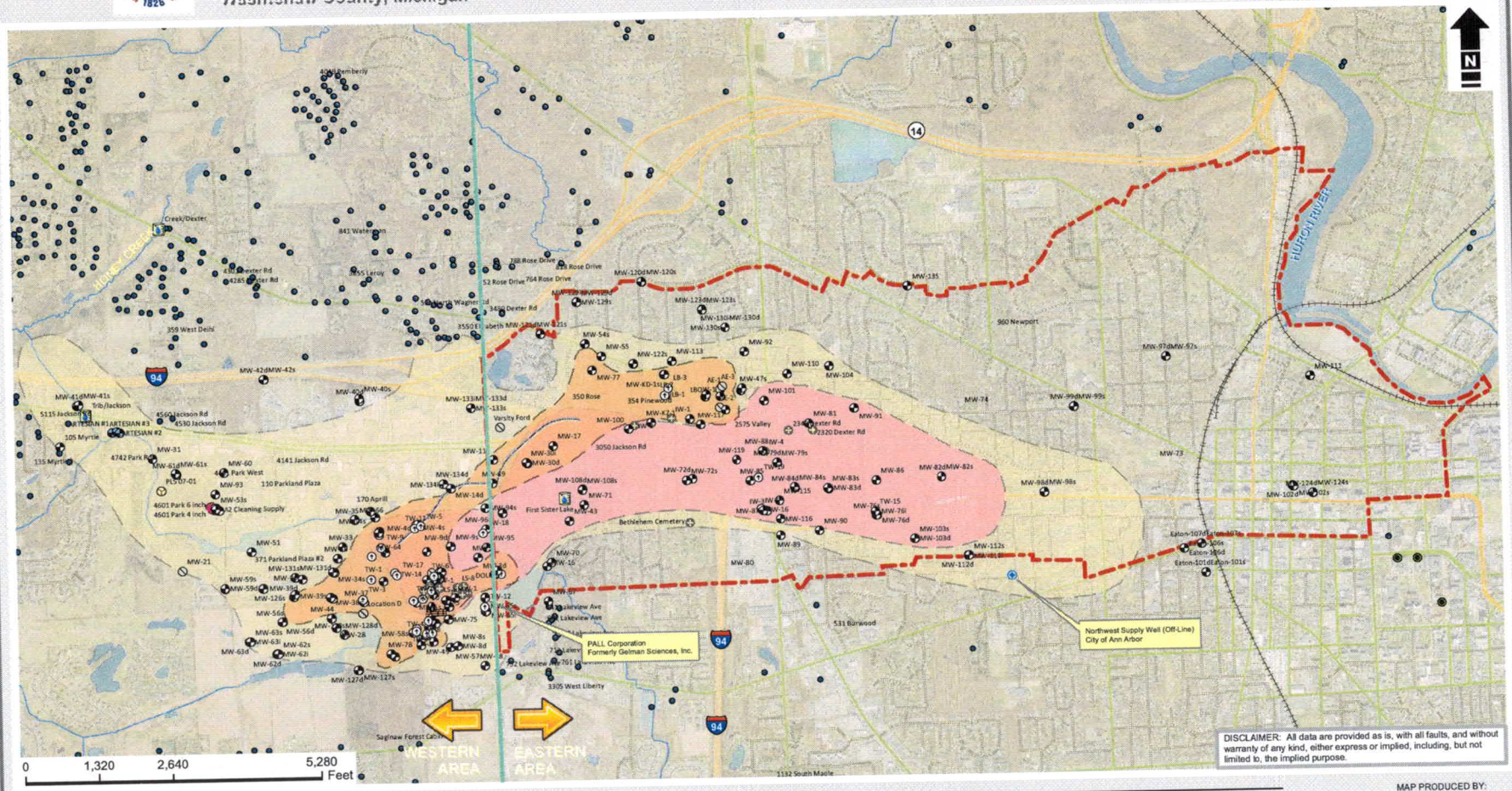
Elizabeth
Dexter Ann Arbor
Leroy
Rose
Maple
Foss
W M 14/Maple
E M 14
Huron River
DEQ

EXHIBIT 2

PALL CORPORATION (formerly Gelman Sciences, Inc.)

1,4-Dioxane Plumes, Well Locations, and Groundwater Use Prohibition Zone (PZ)

Washtenaw County, Michigan



KEY

- Monitoring Wells
- Injection Wells
- Extraction Wells
- Artesian Wells
- Misc. Wells
- Hydrogeologic Test Borings
- Abandoned Wells
- Horizontal Pipeline/Well Screen
- Surface Water Sampling Location
- U of M Research Water Supply Well
- Residential Wells
- Unit E or Deep Aquifer Plume (>85 ppb)
- Core & Evergreen Plume (>85 ppb)
- Little Lake Area Plume (>85 ppb)
- Groundwater Water Use Prohibition Zone
- Treatment System
- Estimated Plume (>1 ppb)
  --Depiction represents an estimation of the 1,4-dioxane plume based on sampling locations that have detections of 1,4-dioxane greater than 1 part per billion (ppb) or sampling locations with historical detections greater than 1 ppb that may currently be below detectable levels.

MAP PRODUCED BY:
Environmental Health Division
Department of Public Health
Washtenaw County, Michigan

SOURCES:
MiGDL
PALL/MDEQ Database
Washtenaw County GIS

EXHIBIT 3

DEPARTMENT OF ENVIRONMENTAL QUALITY

REMEDIATION AND REDEVELOPMENT DIVISION

ESTABLISHMENT OF CLEANUP CRITERIA FOR 1,4-DIOXANE

EMERGENCY RULES

Filed with the Secretary of State on

These rules take effect upon filing with the Secretary of State and shall remain in effect for 6 months.

(By the authority conferred on the Department of Environmental Quality by 1994 PA 451, 1969 PA 306, MCL 324.20104(1), MCL 324.20120a(17), and MCL 24.248)

FINDING OF EMERGENCY

These rules are promulgated by the Department of Environmental Quality to establish cleanup criteria for 1,4-dioxane under the authority of Part 201, Environmental Remediation, of the Natural Resources and Environmental Protection Act, 1994 PA 451, as amended. The Department of Environmental Quality finds that releases of 1,4-dioxane have occurred throughout Michigan that pose a threat to public health, safety, or welfare of its citizens and the environment. Recent shallow groundwater investigations in the Ann Arbor area have detected 1,4-dioxane in the groundwater in close proximity to residential homes. The known area of 1,4-dioxane groundwater contamination in Ann Arbor covers several square miles defined by a boundary of 85 parts per billion, the current residential cleanup criteria. The extent of 1,4-dioxane groundwater contamination that is less than 85 parts per billion, but greater than 7.2 parts per billion, is unknown; and 1,4-dioxane contamination is expected to be present beneath many square miles of the city of Ann Arbor occupied by residential dwellings. The current cleanup criteria for 1,4-dioxane, initially established in 2002, are outdated and are not protective of public health with respect to the drinking water ingestion pathway and the vapor intrusion pathway.

These rules establish the 1,4-dioxane cleanup criterion for the drinking water ingestion pathway at 7.2 parts per billion and the vapor intrusion screening criterion at 29 parts per billion. These criteria are calculated using the latest United States Environmental Protection Agency toxicity data for the chemical 1,4-dioxane and the Department of Environmental Quality's residential exposure algorithms to protect both children and adults from unsafe levels of the chemical.

The Department of Environmental Quality, therefore, finds that the current cleanup criteria for 1,4-dioxane are not protective of public health with respect to the drinking water ingestion pathway and the vapor intrusion pathway, which, therefore, requires

the promulgation of emergency rules without following the notice and participation procedures required by sections 41, 42, and 48 of 1969 PA 306, as amended, MCL 24.241, MCL 24.242, and MCL 24.248 of the Michigan Compiled Laws.

Rule 1. The residential drinking water cleanup criterion for 1,4-dioxane in groundwater is 7.2 parts per billion.

Rule 2. The residential vapor intrusion screening criterion for 1,4-dioxane is 29 parts per billion.

MICHIGAN DEPARTMENT OF ENVIRONMENTAL QUALITY

C. Heidi Grether

C. Heidi Grether
Director

Pursuant to Section 48(1) of 1969 PA 306, as amended, MCL 24.248(1), I hereby concur in the finding of the Department of Environmental Quality that circumstances creating an emergency have occurred and the public interest requires the promulgation of the above rule.

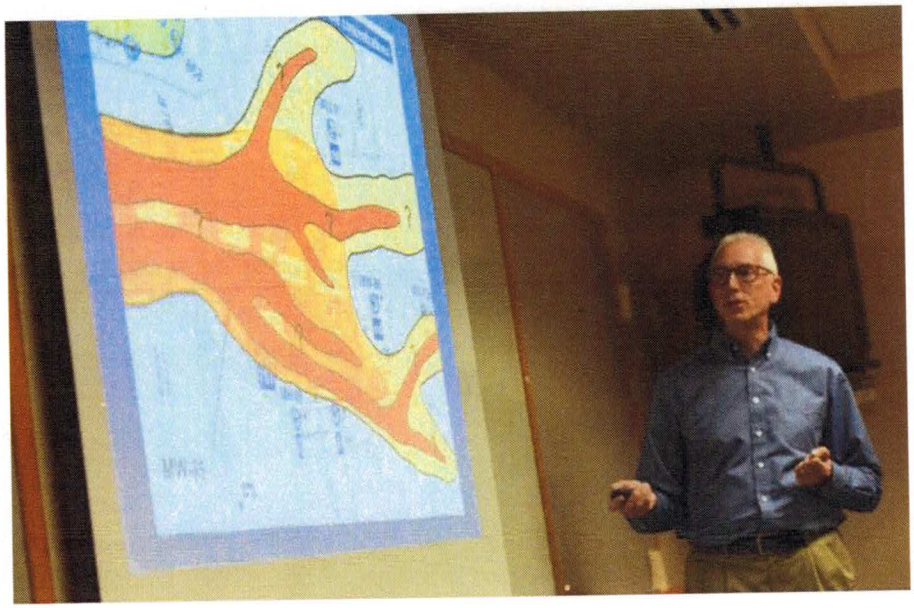
Governor

10-27-16

Date

EXHIBIT 4

Professor says dioxane probably has reached Huron River already



Larry Lemke, a hydrogeologist and director of the Environmental Science Program at Wayne State University, presents his research on the Gelman dioxane plume at the Coalition for Action on Remediation of Dioxane meeting on May 9, 2016. *(Ryan Stanton | The Ann Arbor News)*

By **Ryan Stanton | ryanstanton@mlive.com**
Email the author | **Follow on Twitter**
on May 13, 2016 at 5:35 AM

DIOXANE IN ANN ARBOR

ANN ARBOR, MI — Larry Lemke made his very first hand-contoured map of the Gelman dioxane plume in 1998, a year after he moved to Ann Arbor.

At the time, a lot was still unknown about the extent of the toxic pollution spreading through the area's groundwater from the former Gelman Sciences site on Wagner Road, and exactly where it was heading.

Today, there still are many uncertainties, though data from scattered monitoring wells paint a rough picture of the plume.

Lemke, a hydrogeologist and director of the Environmental Science Program at Wayne State University, has spent years studying the issue, analyzing the complexities of the area's geology and modeling the spread of the plume, which most maps depict as a big, amorphous blob — one that's slowly moving in the general direction of the Huron River, but not quite there yet.

Lemke isn't convinced it's that simple.

"As far as 1,4-dioxane transport to the Huron River, it's probably already there, and it's going to persist for many decades to come," the professor said this week, presenting an alternate theory on how the pollution may be spreading.

Lemke believes finger-like extensions of the plume may be finding preferred-flow pathways underground, cutting between monitoring wells that are spaced far apart and perhaps not screening at the right depths.

"Is it possible that there could be a significant plume — if that's what you want to call it — of 1,4-dioxane that is moving past the monitoring-well network that we have in place? That's a very real possibility," he said.

"Could it be moving by and bypassing the monitoring-well system and going to the north? The model suggests that's a possibility."

Lemke believes at least some of the dioxane already has hit the Huron River downstream of Barton Pond. He didn't go as far as suggesting that dioxane has reached the river at levels that would be dangerous.

Efforts to contain Gelman plume have failed, city argues in court

Ann Arbor City Council votes to intervene in Gelman plume legal case

DEQ not sure better cleanup of Gelman dioxane plume is warranted

Mayor says Ann Arbor ready to intervene in Gelman plume litigation

Michigan DEQ issues emergency rules to establish safer dioxane standards

All Stories

And he emphasized he believes there's a low probability the plume will contaminate Barton Pond, where the city gets its drinking water.

Lemke spoke before a small crowd of citizens and public officials at the latest meeting of the Coalition for Action on Remediation of Dioxane.

Michigan Department of Environmental Quality officials and a state attorney who is preparing to make the state's case in court for a better strategy for addressing the plume were in attendance for the presentation.

Lemke said most maps of the plume, as drawn by the county and others, show some migration in recent years, though not all that much.

So, why is that?

Under one theory, Lemke said, it's possible the ongoing pump-and-treat remediation efforts over the last several years have done a really good job of hydraulic containment, arresting the progress of the plume.

"But I think that's a pretty low-probability explanation, particularly since we have been scaling back the amount of pumping and we don't really have strategically located pumping wells at the leading edge — or at least the identified leading edge — of the plume," he said, emphasizing that map depictions of the plume's edge are just guesses based on limited monitoring data.

Lemke said a more probable explanation is that the plume actually is advancing more than maps show, but there just aren't enough wells to detect it.

He challenges the Gaussian plume paradigm, the idea that there's a smooth gradation of dioxane. He calls that an unrealistic oversimplification.

He demonstrates his alternative to the Gaussian model using a Play-Doh Fun Factory in which colored dough is pressed through a series of pores, creating strands that spread out as they come out the other end.

"Those actually represent what I think are preferred-flow pathways for groundwater," Lemke said.

Lemke uses the demonstration to simplify his point. He and his graduate students have spent years collecting and analyzing data, creating complex models to better understand the plume and how it might be moving.

"You're looking at six, seven years of modeling work now coming to fruition," he said of the research findings he presented this week. "It could have been done much faster if we had hired a consulting firm to do this and they put lots of resources and lots of dollars behind it, but this was done in academia, which chugs along very slowly, and students come and students go."

When they first built a three-dimensional model and started to calibrate it, they found they had to include the Allen Creek watershed.

"As far as 1,4-dioxane transport to the Huron River, the Allen Creek is important for groundwater flow and it may be a sink for 1,4-dioxane," Lemke said.

Using the model, which makes some assumptions about the permeability of the sandy and gravely ground through which the dioxane-contaminated water is moving, they were able to track the theoretical migration of particles from Wagner Road east through Ann Arbor toward the Huron River. The model allows both vertical and horizontal movement of groundwater.

"If we just have a purely deterministic model, which is all aquifer and all aquitard, and we release those particles, here's what happens — they travel from west to east, almost like railroad tracks, until they get to either the Huron River or they get to the Allen Creek drain," Lemke said, noting the creek — much of it buried underground in pipes — discharges to the river near Argo Dam.

Adding a stochastic component to the model, Lemke said, gives a more complex picture with more particles going farther in different directions. With sequential-indicator simulation, he said, it's even more complex.

"And I really like this one because I can see preferred-flow pathways, I can see areas that are bypassed, and I can at least have a conceptual model that lets me explain why I could have a well with (no dioxane detected) and wells farther afield that have 1,4-dioxane," Lemke said.

"And it starts to look a little bit like the Play-Doh model."

With that model, he said, there's a much higher probability that dioxane could leave the groundwater prohibition zone in Ann Arbor and head north.

The modeling shows some particles reaching the river faster than others, depending on whether they go through a preferred pathway or a longer, more-torturous route. With a model using preferred-flow pathways, the fastest particles could travel from Wagner Road to the Huron River in anywhere from 4.7 to 17 years, while 74 to 351 years was the average.

Based on the modeling, Lemke concludes dioxane probably already has reached the Huron River somewhere. And for the dioxane that's still traveling, it could be around in Ann Arbor's groundwater for many years to come.

The different modeling shows anywhere from 10 to 56 percent of the particles ending up in the Allen Creek.

"The implication here is that the Allen Creek drain, whichever model we use, may be a sink for 1,4-dioxane," Lemke said.

Vince Caruso, a member of the Allen's Creek Watershed Group, said that's a concern, especially since there are places where people have direct access to the creek and there's talk of daylighting other parts in the years to come.

Lemke said the place of concern with the highest probability of dioxane entering the system is the West Park area or downstream from there.

"It's in the lower reaches where the water table and the surface elevations are starting to come closer and closer to one another," he said. "That's a much more logical place to go looking for the 1,4-dioxane at this time if it is seeping out."

- **Could people near Ann Arbor's West Park be exposed to dioxane?**

Bob Wagner, the DEQ's Remediation and Redevelopment Division chief, said he enjoyed Lemke's presentation and appreciates the work he's done. Local officials and the DEQ are in agreement that more monitoring is needed.

The DEQ actually has proposed putting an extra $700,000 worth of Clean Michigan Initiative funds toward the Gelman plume in the state's next fiscal year, which starts Oct. 1. The DEQ would be able to use the money for a wide range of items, including installing more wells and doing additional modeling.

Matt Naud, the city of Ann Arbor's environmental coordinator, said he appreciates Lemke's work, too, and he believes there's room for the DEQ to partner with Lemke to do some additional modeling.

Lemke compares "plume hunting" via monitoring wells to the board game Battleship. He said it's easy to find the large aircraft carrier and it's relatively easy to find the battleship, but it's a lot harder to find the smaller cruiser.

"So, if we think of a plume as like a flotilla of ships in our Navy coming by, and I've got a very closely spaced monitoring well network ... boom, I'm going to get a hit," he said. "I'm going to get a couple hits. I'm going to detect that plume.

"If on the other hand I have a very widely spaced monitoring network, which is what we have here, maybe I'm OK if I have a very wide, Gaussian-type plume — one of these anomalous, ameboid-type things," he said. "But on the other hand, if I have fingers that are coming through and my 1,4-dioxane is really going through these preferred-flow pathways, and I'm not lucky enough to have put just serendipitously my monitoring well in the right spot, I could easily miss it.

"And to compound this, this is not just a two-dimensional game. This is a three-dimensional game."

Lemke discussed the potential for dioxane to migrate toward Barton Pond and whether it would meet the radial flow of water from the pond escaping around Barton Dam. Though the DEQ has suggested such radial flow could keep dioxane from getting into the pond, acting as a natural hydraulic barrier, Lemke said the topography indicates the radial flow would be a very localized phenomenon right near the dam, not a barrier around the pond.

He also notes there are elevations as high as 950 feet heading into the Bird Hills area, and it's about a 150-foot drop from there to the pond.

"And you can see that there are a couple of drainages where the surface water is flowing down into Barton Pond, and groundwater tends to follow surface-water flow," Lemke said. "There's a concern that if the groundwater with 1,4-dioxane in it somehow gets north of M-14, it's a downhill path to Barton Pond from there, and I think that's essentially right. So ... just because there's a dam here, it is not protective of the groundwater infiltrating into Barton Pond.

"The good news, though, is this head differential is going to work to our advantage," he said, adding that dioxane headed north is far more likely to find a path to the river south of Barton Pond because it's 25 feet lower there.

But he said it's still conceivable that the dioxane could find its way to Barton Pond if there's a preferred-flow pathway.

"It could happen," he said. "We just don't know enough. We don't have the monitoring wells — the control points — to completely rule that out. The odds are in our favor that (below Barton Dam) is going to be a more preferred discharge point for any 1,4-dioxane that wants to get up there, but if enough of it got up far enough west, west of this pond, we could envision a potential scenario — a low-probability but high-consequence scenario — that could influence Barton Pond."

Lemke emphasized that no model fully captures reality, but it's important to proceed with multiple working hypotheses.

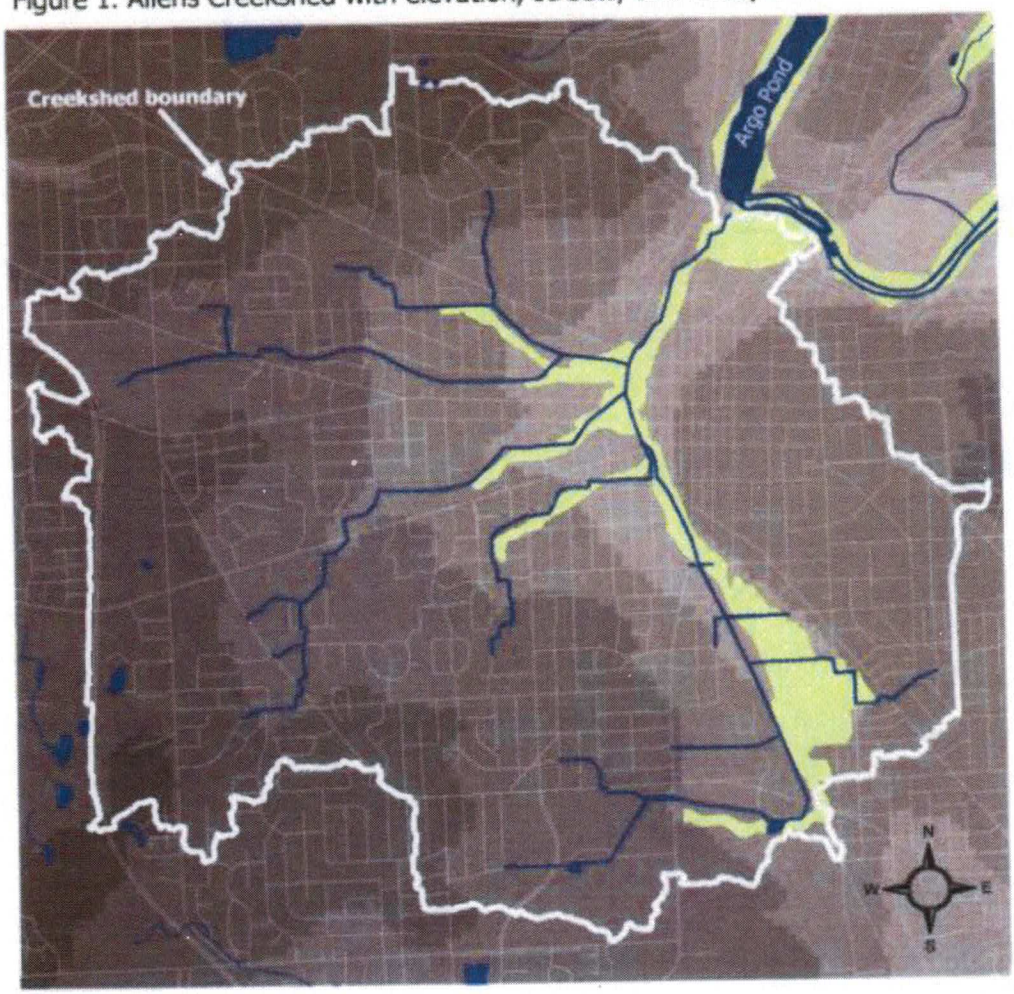
"The role of groundwater modeling — it's not definitive. But it can be very suggestive. It can be very useful in guiding us in how we think about what's going on and where we look for the 1,4-dioxane and where it may be," he said.

"A model is not supposed to tell us the answer the way it is. A model is supposed to inform us about the range of possibilities that could be out there."

Ryan Stanton covers the city beat for The Ann Arbor News. Reach him at ***ryanstanton@mlive.com.***

EXHIBIT 5

Figure 1. Allen's Creekshed with elevation, streets, and floodplain



elevation (feet)
770 - 787
787 - 841
841 - 895
895 - 948
948 - 1002
1002 - 1025

water
floodplain
streets

0.5 0 0.5 1 Miles

Data sources: City of Ann Arbor Planning Department, MIRIS
Projection: NAD 27
Map created by Huron River Watershed Council
August 2000

EXHIBIT 6

STATE OF MICHIGAN

IN THE CIRCUIT COURT FOR THE COUNTY OF WASHTENAW

ATTORNEY GENERAL FOR THE STATE OF MICHIGAN, *ex rel.* MICHIGAN DEPARTMENT OF NATURAL RESOURCES AND ENVIRONMENT,

Plaintiffs,

and

HURON RIVER WATERSHED COUNCIL,

Intervening Plaintiff,

-v-

GELMAN SCIENCES, INC., d/b/a PALL LIFE SCIENCES, a Michigan Corporation,

Defendant.

Case No. 88-34734-CE

Hon. Timothy P. Connors

GREAT LAKES ENVIRONMENTAL LAW CENTER
BY: Oday Salim (P80897)
Senior Attorney
Great Lakes Environmental Law Center
4444 2nd Avenue
Detroit, MI 48201
313-782-3372 office
586-255-8857 cell

Attorney for Huron River Watershed Council

COMPLAINT BY INTERVENOR HURON RIVER WATERSHED COUNCIL

The Huron River Watershed Council ("Council") states as follows for its complaint as intervenor:

//

Jurisdiction And Venue

1. This Court has jurisdiction pursuant to MCL 324.1701 (the Michigan Environmental Protection Act, Act 451 of 1994). The Council also seeks injunctive relief.
2. Venue is proper in this court pursuant to MCL 324.1701(1) because the alleged violation occurred or is likely to occur in Washtenaw County.

The Parties

3. Huron River Watershed Council is a membership-based Michigan nonprofit corporation.
4. The Council was founded in 1965 and is southeast Michigan's oldest environmental organization dedicated to river protection.
5. The Council's mission is to protect and restore the Huron River for healthy and vibrant communities.
6. Among other things, the Council fulfils its mission by monitoring streams within the Huron River watershed, educating the public, working to reduce pollution, providing policy and technical assistance to communities, and protecting drinking water.
7. The Council has worked to improve the health of the surface waters of the Huron River watershed. For example, the Council: implemented Michigan's first total maximum daily load scheme for phosphorous with regard to Ford and Belleville lakes; is leading the watershed-wide effort to eliminate the use of coal tar-based sealcoat due to the potential for toxic polycyclic aromatic hydrocarbons to enter and pollute the surface waters; worked to improve fish habitat in the Ypsilanti river segments; has installed trail makers and waterproof maps to facilitate the use of the Huron River Water Trail along the river; has worked to improve Allen Creek by monitoring it to determine the cause of degradation in order to

develop a restoration scheme; and by advocating for and facilitating green infrastructure to reduce stormwater pollution.

8. The Council has approximately 900 members who reside in Washtenaw County and approximately 650 members who reside in the Ann Arbor area.
9. The Council has approximately 38 local government members, many of whom are located downstream of Ann Arbor along the Huron River and its tributaries.
10. The threat of dioxane entering the surface waters of the Huron River watershed, or having entered the surface waters of the Huron River watershed, harms the interests that the Council and its members have in stream health, aquatic life, and recreational opportunities.
11. Defendant Gelman Sciences, Inc. d/b/a Pall Life Sciences ("Defendant") is a Michigan corporation that conducts business in Washtenaw County.
12. Defendant is the successor of a 1997 merger between Gelman Sciences, Inc. and Pall Acquisition Corporation.
13. Defendant owns real property with an address of 600 South Wagner Road, Ann Arbor, MI 48103.
14. Defendant conducts operations at its property.
15. The Attorney General for the State of Michigan ("State") is the original plaintiff in the docketed action.

Factual Background And Allegations

16. The Gelman site is located in Washtenaw County.
17. Historically, filter devices were manufactured at the plant and dioxane was used at the site as solvent.

18. From the 1960s to the 1980s, Defendant released or discharged the toxic, hazardous chemical 1,4-dioxane at or near its property, in violation of Michigan's waste management laws.

19. Dioxane is a probable human carcinogen and can be toxic to aquatic life.

20. The released dioxane entered the aquifer below or near Defendant's property and has migrated and is continuing to migrate through the groundwaters of Washtenaw County.

21. Apart from groundwaters, there has been dioxane contamination of drinking water wells.

22. After the State commenced a lawsuit against Defendant to enforce Michigan's waste management and remediation laws, the parties entered into a consent judgment in 1992.

23. The objectives of the 1992 consent judgment were to remove, treat, and properly dispose of the dioxane.

24. Over time, based on a series of negotiated agreements with the State, the Defendant has been allowed to meet increasingly lower remedial standards, including with respect to managing the risk of dioxane contamination to surface waters.

25. The 1992 consent judgment defined groundwater contamination as the presence of 3 ug/l or more of dioxane in the groundwater.

26. The 1992 consent judgment imposed a stringent groundwater surface water interface ("GSI") standard, which is the screening level for dioxane that would trigger certain remedial action, the point being to prevent the dioxane from entering the surface water at unacceptably high concentrations in those areas where groundwater vents or discharges to the surface waterbody. The GSI standard was 100 ug/l as to the Honey Creek watershed.

27. The 1996 consent judgment defined groundwater contamination as 77 ug/l, compared to 3 ug/l in 1992.

28. The 1996 consent judgment provided the more lenient GSI standard of 2000 ug/l, compared to 100 ug/l, as to Honey Creek.

29. The 2005 consent judgment defined groundwater contamination as 85 ug/l, compared to 77 ug/l in 1996 and 3 ug/l in 1992.

30. The 2005 consent judgment provided an even more lenient GSI standard of 2800 ug/l, compared to 2000 ug/l in 1996 and 100 ug/l in 1992, as to Honey Creek.

31. From 2005 through today, the objective of eliminating the dioxane in the groundwaters and thereby preventing the possibility that dioxane would reach the surface waters has shifted to mere containment of the dioxane within certain zones. The court established prohibition zones in order to "prevent human exposure to groundwater that is or may become contaminated with 1,4 dioxane at levels that exceed acceptable criteria." A Prohibition Zone was established in 2005, and due to further migration of dioxane through the groundwaters, in 2011 an Expanded Prohibition Zone was delineated.

32. The establishment of the prohibition zones, which in part run along the western bank of the Huron River, reflect a further migration of dioxane eastward toward the Huron River.

33. On October 17, 2016, the Department of Environmental Quality promulgated emergency rules that alter the dioxane standards for drinking water and vapor intrusion pathways. The new drinking water standard is 7.2 ug/l, and the vapor intrusion screening level is 29 ug/l. In its announcement, the State admitted that it still does not know the full extent of the dioxane plume ("The *known* area of 1,4-dioxane groundwater contamination in Ann Arbor covers several square miles […]." "The extent of 1,4-dioxane groundwater contamination that is less than 85 parts per billion, but greater than 7.2 parts per billion, is *unknown*; and 1,4-dioxane

contamination *is expected to be present* beneath many square miles of the city of Ann Arbor occupied by residential dwellings." (emphasis added)).

34. The State's emergency rules did nothing to alter the standards that apply to ensuring that dioxane does not harm the Huron River and its tributaries.

35. Dioxane is mobile in water and does not easily undergo biological or chemical degradation, which means that it can persist in groundwater and surface water.

36. Upon information and belief, the State's and Defendant's assumptions about how dioxane is migrating through the groundwaters are incorrect and do not reflect the best possible scientific standards.

37. Upon information and belief, dioxane is migrating to Allen Creek, which discharges into the Huron River.

38. Upon information and belief, the monitoring well scheme is insufficient to accurately assess the risk of dioxane entering the Huron River or its tributaries.

39. Upon information and belief, there is no measure in place to detect dioxane in the Huron River or its tributaries through sampling and analysis.

40. Upon information and belief, there is no maximum limit for dioxane in the Huron River or its tributaries that applies to Defendant's remedial activities.

Count 1: Violation Of The Michigan Environmental Protection Act

41. The Council incorporates by reference all preceding paragraphs of this Complaint.

42. Part 201 of NREPA requires Defendant to determine the nature and extent of the contamination; to stop or prevent the exacerbation of the contamination; and to protect natural resources from being harmed by the contamination. MCL 324.20114.

43. Part 31 of NREPA requires the maintenance of water quality standards. Various uses must be protected in all surface waters, including warmwater fishery, other indigenous aquatic life and wildlife, partial body contact recreation, and fish consumption. Mich Admin Code, R 323.1100. Toxic substances shall not be present in the surface waters "at levels that are or may become injurious to the public health, safety, or welfare, plant and animal life, or the designated uses of the waters." Mich Admin Code, R 323.1157. Regarding the protection of uses from toxic substances, there are various values, including human noncancer value, human cancer value, wildlife value, final chronic value, aquatic maximum value, and final acute value. These values can be generic or site-specific.

44. By allowing the release of dioxane into, and the migration of dioxane through, the groundwaters within the Huron River watershed, and by not adequately eliminating the contamination before it can reach the watershed's surface waters or adequately assessing the risk to the watershed's surface waters or not having an adequate response plan to address any dioxane that has reached or does reach the watershed's surface waters, Defendant has polluted, or impaired, or destroyed, or is likely to pollute, impair, or destroy Michigan's waters and natural resources and the public trust in those natural resources.

45. Wherefore, the Council respectfully requests that this Court enter judgment in the Council's favor and against Defendant that, at a minimum:

    a. Declares that Defendant has failed to comply with applicable laws and is in violation of the MEPA;

    b. Enjoins Defendant and requires Defendant: (i) to prevent dioxane from entering the surface waters of the Huron River watershed in concentrations that would be unlawfully injurious to humans or aquatic life; (ii) to use the best scientific practices and information

available to model the migration of the dioxane through the groundwaters; (iii) to develop and implement a groundwater monitoring and detection scheme that accurately assesses the risk of dioxane entering the surface waters of the Huron River watershed; (iv) to maintain dioxane levels in surface waters of the Huron River watershed to below an appropriate water quality criterion that would be protective of any relevant water use; (v) to develop and implement a surface water monitoring and detection scheme that accurately measures the concentration of dioxane in the surface waters of the Huron River watershed.

c. Awards the Council its costs in bringing this action.

Respectfully Submitted,

GREAT LAKES ENVIRONMENTAL LAW CENTER

By:_____

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