PATRICK
ENGINEERING

October 5, 2012

Mr. Mel Pleines
Chairman
Mahomet Aquifer Consortium
201 Devonshire Drive
Champaign, Illinois 61820

Subject: Review of Sole Source Aquifer Implications
Mahomet Aquifer

Reference: Patrick Project No. 21253.050

Dear Mr. Pleines:

Patrick Engineering Inc. (Patrick) is pleased to provide this letter report to the Mahomet Aquifer Consortium (MAC) to provide a review of the potential impact of having the Mahomet Aquifer certified by the U.S. Environmental Protection Agency (USEPA) as a Sole Source Aquifer under the Clean Water Act of 1974. This letter report is being submitted in accordance with Patrick's proposal to the MAC dated May 23, 2012.

BACKGROUND

The Mahomet Aquifer currently provides a critical percentage of the total water supply of east-central Illinois. There is a growing movement by several municipalities, counties, and private parties to have the Mahomet Aquifer declared a Sole Source Aquifer under the Clean Water Act of 1974. This act provides that any project receiving federal funding which takes place in a location which could have a potential impact on a Sole Source Aquifer is subject to a due diligence study of the potential that they will contaminate the aquifer.

The Mahomet Aquifer Consortium (MAC) has asked Patrick to provide an objective third-party review of the possible implications of such a sole-source certification, especially with respect to regulatory burdens on industry or agriculture, increased project costs, project delays, etc. This letter report summarizes the results of that third-party review.

SCOPE OF INVESTIGATION

There are currently no other Sole Source Aquifers located in Illinois , although eight sole source aquifers do exist within USEPA Region V. The Sole Source Aquifer program is a federally administered program, so the experiences of institutions, residents, and private enterprises in the vicinity of other Sole Source Aquifers located elsewhere within USEPA Region V were considered be a reasonable starting point from which to evaluate the possible implications of a Sole Source Mahomet Aquifer designation.

Patrick investigated two Sole Source Aquifers within Region V:

1. **The St. Joseph Aquifer:** This aquifer is located in north central Indiana, in the vicinity of South Bend and Mishawaka. It resides in fine to medium grained sand with zones of coarse sand and gravel. The thickness of the aquifer varies from 20 feet (near the southern boundary of the St. Joseph River Basin) to approximately 400 feet thick (over the buried bedrock valley at the western edge of Elkhart County). The St. Joseph Aquifer was designated a Sole Source Aquifer in 1988. The location of the St. Joseph Aquifer is shown on Figure 1.
2. **The Miami Buried Valley Aquifer:** This aquifer is located in southwest Ohio, and resides in shallow glacial deposits (largely sand and gravel) coincident with the valleys created by large rivers and streams. The Aquifer Preservation Subdistrict includes all, or portions of, nine counties including Butler, Clark, Greene, Hamilton, Miami, Montgomery, Preble, Shelby, and Warren counties. The Miami Valley Aquifer was designated a Sole Source Aquifer in 1988. The location of the Miami Valley Aquifer is shown on Figure 2.

Both of these aquifers were designated Sole Source in 1988; the designation is permanent, requiring legislative action to rescind. Each of the above aquifers was selected for this study on the basis of its relative size, and their associated land use. Each of these aquifers is associated with residential, commercial, industrial, and agricultural usage; land uses that are also present within the area of the Mahomet Aquifer.

The investigation of these two aquifers was conducted in two phases: Shareholder Interviews, and Review of USEPA Sole Source Aquifer Documents. Each phase of the investigation and its results are discussed briefly below.

SHAREHOLDER INTERVIEWS

For each of the two investigated sole source aquifers, Patrick contacted a number of private and public organizations and agencies operating within the vicinity of the designated aquifer. These generally included:

a. State/local chambers of commerce
b. State/local farm bureaus
c. Local water supply/utility authorities
d. Environmental or conservancy groups
e. Regulatory agencies

Patrick attempted in most cases to speak with the person at each such organization that would be most likely to have direct knowledge or experience with the Sole Source Aquifer (SSA) program (e.g., president, spokesperson, etc.). During these interviews, all of which were conducted by phone, a number of questions were posed to each interviewee, which included at a minimum:

1. Are you or your organization aware of the SSA program in your area?

2. If yes, have you or your organization had any direct experience with the SSA program?

3. What pros/cons have you observed with the SSA program?

4. Are you aware of any cases where the SSA designation has caused additional modifications to be made to a planned project?

5. Are you aware of any cases where there have been either cost increases or decreases to project specifically because of the SSA designation?

6. What are your overall impressions or opinions regarding the SSA program?

Respondents' answers to the initial questions were used to determine whether further questioning was merited. For example, if the respondent had no experience with the SSA program, then no further questions about specific cases or project costs related to the program were asked. Answers to each of these questions were recorded, and were analyzed in aggregate for each of the organizations called for each of the aquifers included in Patrick's study.

St. Joseph Aquifer Interviews

A total of 21 organizations or agencies were contacted with respect to the St. Joseph Aquifer system in north-central Indiana. These included:

1 Conservancy Group (Friends of the St. Joseph River Valley Association)

5 Chambers of Commerce
- Elkhart County Chamber of Commerce
- Warsaw/Kosciusko County Chamber of Commerce
- LaGrange County Chamber of Commerce
- Noble County Chamber of Commerce
- St. Joseph County Chamber of Commerce

5 State/Local Farm Bureaus:
- Indiana Farm Bureau
- St. Joseph County Farm Bureau
- Koscuisko County Farm Bureau
- LaGrange County Farm Bureau
- Noble County Farm Bureau

5 Local Soil or Water Districts
- St. Joseph County Soil & Water Conservation District
- Elkhart County Soil and Water District
- Warsaw/Kosciusko County Soil & Water Conservation District
- LaGrange County Soil & Water Conservation District
- Noble County Soil & Water Conservation District

5 Water Departments/Authorities
- Mishawaka Municipal Water Utility
- South Bend Water Works
- City of Elkhart Public Works
- LaGrange County Regional Utility District

- Kendallville Water Department

The single environmental conservancy group Patrick contacted (the Friends of the St. Joseph River Valley Association) was not familiar with the SSA program. Of the five chambers of commerce contacted by Patrick, two were unaware of the SSA program; the remaining three were familiar with the SSA program, but had no direct experience with the program, and were unaware of any experiences of their members. None of the five farm bureaus contacted by Patrick were aware of the SSA program. Of the water departments contacted by Patrick, three were unaware of the SSA program; the remaining two had no direct experience with the program. Of the five soil and water conservation districts contacted, two were unaware of the SSA program, and two were aware of the program, but had no direct experience with it. The Warsaw/Kosciusko County Soil & Water Conservation District was the only local organization that Patrick contacted which claimed to have direct experience with the SSA Program. This experience was limited to the knowledge that a local water supply project had to file a request for the USEPA environmental review of the project. In this case, the USEPA had agreed that the project posed no significant threat to the underlying aquifer.

The interviews with these local organizations provide only anecdotal evidence, but the bulk of this evidence is certainly suggestive. Patrick focused on organizations that would reasonably have the highest degree of experience with the SSA Program, and would also be expected to have the strongest opinions with regard to that program. Nonetheless, the overwhelming majority of organizations that Patrick contacted was either completely unaware of the SSA Program, or had no direct experience with it. Though this evidence is anecdotal, it does suggest that no undue regulatory or cost burdens are being experienced by the commercial, industrial, or agricultural communities as a result of how the SSA Program is being implemented, at least in the vicinity of the St. Joseph Aquifer. If any such burdens were being experienced by the regulated community, it seems reasonable to expect that at least one of the organizations listed above would be aware of it, and would have raised this complaint during the interviews.

More direct empirical evidence of how the SSA Program is being implemented for the St. Joseph Aquifer was collected separately by a review of the complete USEPA file for the St. Joseph SSA Program, which is described later in this report.

Miami Valley Aquifer Interviews

A total of 60 organizations or agencies were contacted with respect to the Miami Valley Aquifer system in north-central Indiana. These included:

1 Conservancy Group (Miami Conservancy District)

1 Regional Planning Commission (Miami Valley Regional Planning Commission)

20 Chambers of Commerce

- Hamilton County Chamber of Commerce
- Cincinnati Regional Chamber of Commerce
- Over-the-Rhine Chamber of Commerce
- Fairfield Chamber of Commerce

- Loveland Chamber of Commerce
- Sharonville Chamber of Commerce
- Norwood Chamber of Commerce
- Oxford Chamber of Commerce
- Middleton Chamber of Commerce
- Clermont County Chamber of Commerce
- Youngstown-Warren Regional County Chamber of Commerce
- Montgomery County Chamber of Commerce
- Preble County Chamber of Commerce
- Xenia Chamber of Commerce
- Troy Chamber of Commerce
- Urbana Chamber of Commerce
- Springfield Chamber of Commerce
- Sidney-Shelby Chamber of Commerce
- Logan County Chamber of Commerce
- Darke County Chamber of Commerce

13 State/Local Farm Bureaus:

- Ohio Farm Bureau
- Hamilton County Farm Bureau
- Butler County Farm Bureau
- Clermont Farm Bureau
- Warren County Farm Bureau
- Montgomery County Farm Bureau
- Preble County Farm Bureau
- Greene County Farm Bureau
- Miami County Farm Bureau
- Champaign County Farm Bureau
- Clark County Farm Bureau
- Logan County Farm Bureau
- Darke County Farm Bureau

13 Local Soil or Water Districts

- Hamilton County Soil & Water Conservation District
- Butler County Soil and Water Conservation District
- Clermont County Soil & Water Conservation District
- Warren County Soil & Water Conservation District
- Montgomery County Soil & Water Conservation District
- Preble County Soil & Water Conservation District
- Greene County Soil & Water Conservation District
- Miami County Soil & Water Conservation District
- Champaign County Soil & Water Conservation District
- Clark County Soil & Water Conservation District
- Shelby County Soil & Water Conservation District
- Logan County Soil & Water Conservation District
- Darke County Soil & Water Conservation District

12 Water Departments/Authorities

- Butler County Water District
- Clermont County Water Department
- Warren County Water Department
- Dayton Water Department
- Camden Water Department
- Greene County Water Department
- Miami Water Department
- Urbana Water Department
- Clark Water Department
- Shelby County Water Department
- Bellefontaine Water Plant
- Greenville Water Department

Of the twenty chambers of commerce contacted by Patrick, fifteen were unaware of the SSA program; the remaining five had no direct experience with the program, and were unaware of any experiences of their members. Of the thirteen farm bureaus contacted by Patrick, twelve were unaware of the SSA program, and the remaining bureau had no experience with the program. Of the thirteen soil and water conservation districts contacted, three were unaware of the SSA program, seven had no direct experience with it, and three (Montgomery, Butler, and Hamilton Counties) were able to offer opinions associated with the program (summarized below). Of the twelve water departments contacted by Patrick, nine were unaware of the SSA program, two had no direct experience with the program, and one (the Dayton Water Department) was able to offer some opinions regarding the program (summarized below).

The Miami Valley Regional Planning Commission (the Commission) was very familiar with the program, having been directly involved in developing the application for sole-source aquifer status back in the 1980s. The Commission spokesperson (Mr. Matt Lindsay) generally indicated a very favorable opinion of the program, noting that over 90% of private well users use this aquifer in the applicable area, and that all of the municipalities in the area similarly use this aquifer as their primary water source. The Commission is responsible for keeping the official map of the Miami Valley Aquifer, which has been modified from time to time, based upon comments from the local municipalities. The Commission believes that the SSA Program provides much needed protection of the aquifer, and is unaware of any case where the program has caused an undue cost burden to the regulated community. The Commission was unaware of any opposition to the SSA Program.

The Miami Conservancy District, represented by Mr. Mike Eckler, was also directly involved in the original sole source aquifer application, and supports the SSA Program. Mr. Eckler indicated that he supported the degree of protection that the program provides, but admitted that the level of protection provided is minimal. Mr. Eckler indicated that Ohio regulates the location of new landfills on the basis of the sole-source aquifer designation, but was unaware of any particular case where landfill siting had been either approved or denied on this basis near the Miami Valley aquifer. Mr. Eckler believed that more significant protection of groundwater resources is provided by individual sets of regulations maintained by the various municipalities in the area.

The Dayton Water Department (Mr. Jim Schumaker) was familiar with the SSA Program, having begun to pump from the Miami Valley Aquifer almost immediately after the sole source designation was made (1988). Mr. Schumaker noted that one local business was required to install a larger retention basin as a result of the program, but no specifics were given. Mr. Schumaker was unaware of any other particular impacts the program has had on local users, but generally believes that water quality has improved because of the program.

The Montgomery County Soil and Water Conservation District (Ms. Kristen Lauer) was familiar with the SSA Program, and pointed out that the District provides grants to plant vegetation to improve local drainage. However, Ms. Lauer was unaware of any specific instance of a federally-funded project being either reviewed or modified in any way based upon the sole-source designation of the Miami aquifer.

The Butler County Soil and Water Conservation District was familiar with the SSA Program, and noted their own work in protecting the aquifer through surface drainage projects. However, the District was unaware of any specific instance of a federally-funded project being either reviewed or modified in any way based upon the sole-source designation of the Miami aquifer.

The Hamilton County Soil and Water Conservation District (Mr. Brian Bohl) was familiar with the SSA Program, but noted that the District's work was primarily related to protecting the aquifer through surface drainage projects. Mr. Bohl was unaware of any specific instance in Hamilton County of a federally-funded project being either reviewed or modified in any way based upon the sole-source designation of the Miami aquifer. Mr. Bohl had a generally favorable opinion regarding the SSA Program, believing that it provided needed protection to the sole-source aquifer.

Overall, the interview data indicated that out of the 60 organizations or agencies contacted, 54 of them either were unaware of the SSA Program or had no direct experience with it. This was consistent with the response generated by the St. Joseph aquifer interviews. Not a single interviewee offered any sort of negative opinion with respect to the program. Taken together, this anecdotal data appears to suggest that no undue regulatory or cost burdens are being experienced by the commercial, industrial, or agricultural communities as a result of how the SSA Program is being implemented in the vicinity of the Miami Valley Aquifer.

More direct empirical evidence of how the SSA Program is being implemented for the Miami Valley Aquifer was collected separately by a review of the complete USEPA file for the Miami Valley SSA Program, which is described later in this report.

Regulatory Interviews

Patrick also spoke with both the Illinois EPA and the USEPA regarding their opinions on the effectiveness of the SSA Program in Region V. The first interview was with Mr. Rick Cobb, of the Illinois EPA, Bureau of Water.

Mr. Cobb first noted that Illinois does not currently have any sole source aquifers within its borders, so he did not have any direct experience with the SSA Program, and has therefore not formed an

opinion. However, in his communications with regulators in adjoining states, he had not heard any negative comments regarding the program. He believed that the consensus regulatory opinion was that the sole source designation had helped increase awareness of the need to protect sensitive aquifers in the region.

Patrick also spoke with Mr. Bill Spaulding of the USEPA, who is responsible for the administration of the SSA Program in Region V. Mr. Spaulding is currently the individual who performs all of the USEPA environmental reviews of federally-funded projects in Region V associated with the SSA Program.

Mr. Spaulding generally has a favorable opinion of the SSA Program. He believes that it creates an increased awareness of the sensitivity of sole source aquifers. He noted that there is generally an increased level of paperwork involved in completing a federally-funded project in the vicinity of a sole source aquifer, but did not believe this constituted an undue burden on the regulated community, and even if it did, it was well worth the environmental protection the SSA Program provided.

Mr. Spaulding was unaware of any projects that had been denied due to the existence of the SSA Program, though he suggested that some increased environmental protection measures are sometimes proposed in the application process.

Mr. Spaulding noted that some states (including Illinois) have restrictions on the siting of landfill facilities based upon their proximity to a sole source aquifer, but noted that these restriction differ from state to state; he was unaware of the specific regulations in Illinois. (Illinois landfill regulations are discussed later in this report.)

Mr. Spaulding noted that some agencies specify criteria in advance which determine whether or not a USEPA review of the project is necessary. The Department of Transportation, for example, maintains a Memorandum of Understanding (MOU) which specifically exempts road projects from these reviews. In most cases, however, there are not blanket exemptions from the review process. Each state is different in terms of the determination of how projects are sent to Region V USEPA for review.

Summary of Interview Data

Taken as a whole, the interview data, while only anecdotal, provided strong evidence that the SSA Program, at least as it is being implemented in Region V, is not being viewed as an undue regulatory or cost burden by the regulated community. The only opinions of the SSA Program that were given to Patrick were positive, though it is true that the overwhelming majority of the interviewees were completely unaware of the program. Because of the anecdotal nature of these individual interviews, Patrick was inclined to give somewhat less weight to this evidence than to the evidence collected in the next phase of the investigation, which was a detailed review of the USEPA review files associated with the two sole source aquifers in question.

USEPA REVIEW FILES

Patrick submitted a Freedom of Information Act (FOIA) request to the USEPA in order to obtain a copy of the complete USEPA review files over the past three years related to both of the studied aquifers. USEPA complied with this request, and submitted each of the formal requests for USEPA

review, as required under the SSA Program, as well as the response letter that USEPA issued in each case. These requests and responses are summarized below, and in the attached Tables 1 and 2.

The first notable observation about the two file sets submitted by USEPA is the significant difference in their relative sizes: The USEPA St. Joseph Aquifer file contained a total of 65 project review requests related to the SSA Program, over a three-year period. The Miami Valley Aquifer file, over the same three-year period, contained only five such requests. All five of the Miami Valley review requests were related to the sanitary sewer upgrade projects.

It is not clear why there is such a discrepancy in the number of project review requests. It is likely, as noted by Mr. Spaulding himself, that the states simply handle these requests differently. In any case, it is extremely unlikely that there have only been five federally-funded projects in the vicinity of the Miami Valley aquifer in the past three years. Mr. Spaulding has confirmed that the file is complete, and only five such requests have been received by his office in the past three-year period.

Another possible reason for so few review requests, is that the relevant funding agencies have Memorandums of Understanding (MOUs) with USEPA exempting certain kinds of projects from review. For example, the Department of Transportation (DOT) has an MOU with USEPA exempting road projects from environmental review. However, most of the agencies' MOUs merely stipulate that reviews will be conducted if federal funding is involved, and include logistical details for conducting the review.

The second notable observation about these files, is that for each project review request, the USEPA concluded that the aquifer in question would not be significantly impacted by the proposed project, and every project was approved without modification or amendment. In each case, the USEPA suggested that the project should be conducted using Best Management Practices wherever possible.

These approvals were granted by USEPA in a standard, one-page form letter, used in virtually all cases, which noted the USEPA's conclusion, and further suggested that the project should be conducted using Best Management Practices wherever possible.

The project review requests submitted to USEPA were very brief, rarely longer than one-page, typically including a brief description and location of the project, and sometimes including a map, but typically providing no details with regard to how the sole-source aquifer would be protected by the proposed project plan. Almost no submittal to the USEPA included even basic details of spill prevention plans, contingency plans, or any project details related to any form of environmental protection. In only two cases was an environmental evaluation provided to the USEPA (in both cases, environmental remediation projects that had already completed the initial stages of an Environmental Impact Study).

The timely and near universal universal approval of the projects that come before USEPA Region V goes a long way toward explaining why there is such a lack of negative opinion regarding the SSA Program by the regulated community. The regulated community appears to be getting timely USEPA approvals for their projects, on a routine basis.

Patrick's conclusion based upon our review of the USEPA SSA Program files is that this program as being implemented is creating virtually no additional cost or regulatory burdens to federally-funded projects beyond those already anticipated by the implementing agencies.

SSA DESIGNATION IMPACT ON LANDFILL SITING

In Illinois, the only further implication of the SSA Program (beyond the mandated USEPA review of federally-funded projects in the SSA area) is its impact on siting landfills, and landfill expansions within the state.

35 IAC Part 811.302(b) defined how Illinois restricts landfill siting with respect to a sole-source aquifer:

> *No part of a unit [landfill] may be located within the recharge zone or within 366 meters (1200 feet), vertically or horizontally, of a sole-source aquifer designated by the United States Environmental Protection Agency pursuant to Section 1424(e) of the Safe Drinking Water Act (42 USC 300f et seq.), unless there is a stratum between the bottom of the waste disposal unit and the top of the aquifer that meets the following minimum requirements:*
>
> *1) The stratum has a minimum thickness of 15.2 meters (50 feet);*
>
> *2) The maximum hydraulic conductivity in both the horizontal and vertical directions is no greater than 1×10^{-7} centimeters per second, as determined by in situ borehole or equivalent tests;*
>
> *3) There is no indication of continuous sand or silt seams, faults, fractures, or cracks within the stratum that may provide paths for migration; and*
>
> *4) Age dating of extracted water samples from both the aquifer and the stratum indicates that the time of travel for water percolating downward through the relatively impermeable stratum is no faster than 15.2 meters (50 feet) in 100 years.*

The above restrictions do not necessarily prohibit the construction of a landfill (even a hazardous waste landfill) in the vicinity of a sole-source aquifer, but require some additional design conditions be met, and some additional design protections be added to the design of such a landfill.

Should you have any questions regarding the contents of this summary report, please contact me at 630/795-7464 or at rfrendt@patrickengineeringco.com.

Sincerely,
PATRICK ENGINEERING INC.

Richard M. Frendt, P.E.
Project Manager

Enclosures: Figures
Tables

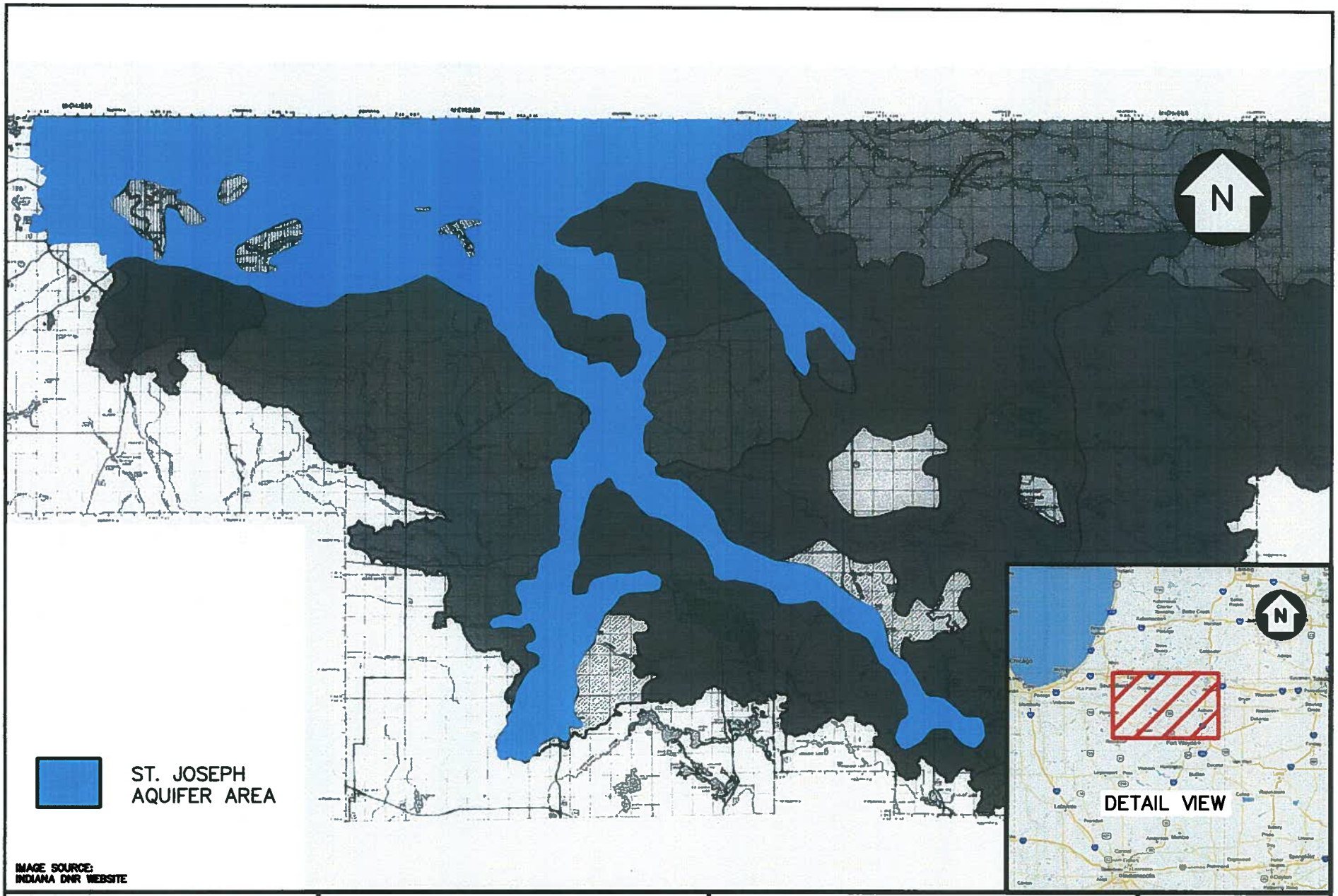

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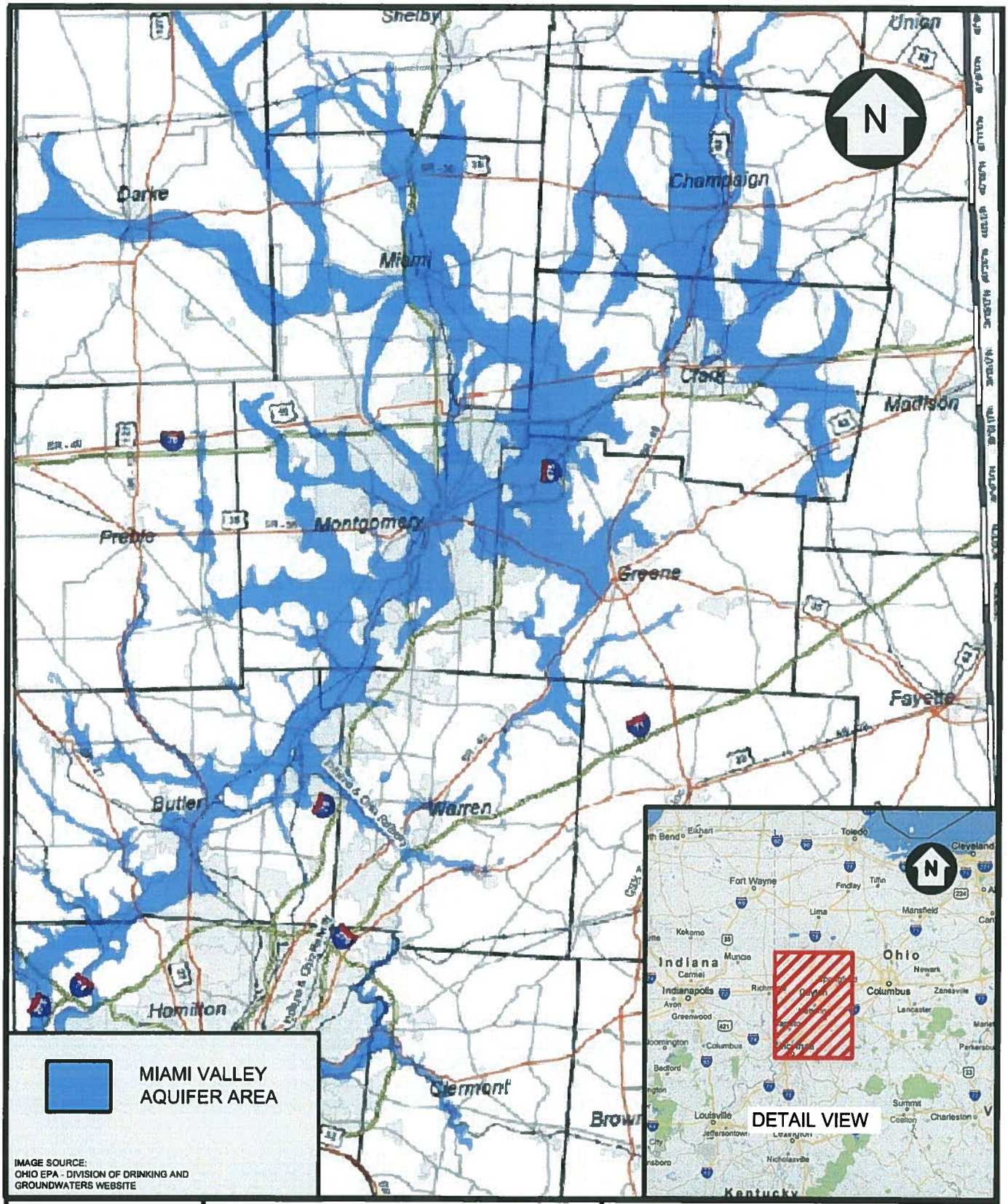
FIGURE 1

ST. JOSEPH AQUIFER
NORTH CENTRAL INDIANA

Date: AUG. 2012

Proj No.: 21253.050

App. By: RMF



Date: AUG. 2012	FIGURE 2	PATRICK ENGINEERING INC.
Proj No.: 21253.050	**MIAMI VALLEY AQUIFER SOUTHWESTERN OHIO**	4970 Varsity Drive Lisle, Illinois 60532-4101 TEL. (630) 795-7200 FAX (630) 724-1681
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Table 1
SUMMARY OF USEPA SOLE SOURCE AQUIFER FILES
St. Joseph Aquifer
North Central Indiana
Mahomet Aquifer Consortium
21253.050

#	Aquifer	State	FOIA Document	Funding Source	Project Type	Study areas	Response	EPA Review Comments & Recommendations	Response Date	Request Date
1	St. Joseph	Indiana	City of Nappanee NSP3 Env. Review		Residential rehabilitation.	Residential		Not in Designated Area	7/27/2012	7/26/2012
2	St. Joseph	Indiana	Neighborhood Development Associates	CDBG-D funds	Residential rehab/weatherization of 28-42 houses.		No substantial threat.	Adequate design and monitoring plans to be followed during construction for stormwater.	6/4/2012	5/8/2012
3	St. Joseph	Indiana	Economic Development District & Regional Planning Commission	Community Focus Fund (CFF)	Oakwood Park renovations: parking/drive/alley/sidewalk reconstruction & rehabilitation.	Residential	No substantial threat.	Appropriate safeguards and best management practices in place to not endanger water sources.	2/22/2012	2/16/2012
4	St. Joseph	Indiana	American Structurepoint, Inc.		Fullerton Pike Corridor - 3.2 miles roadway improvements.	Industrial/Commercial/Residential	No substantial threat.	Appropriate safeguards and best management practices in place to not endanger water sources.	2/13/2012	2/7/2012
5	St. Joseph	Indiana	Economic Development District & Regional Planning Commission	Community Focus Fund (CFF)	New community center building (7,460 sq. feet), new parking log.		No substantial threat.	Appropriate safeguards and best management practices in place to not endanger water sources.	1/30/2012	1/24/2012
6	St. Joseph	Indiana	The Area Plan Commission of Tippecanoe County		Metropolitan Transportation Plan 2040 - long range plan.		No substantial threat.	Appropriate safeguards and best management practices in place to not endanger water sources.	4/30/2012	4/20/2012
7	St. Joseph	Indiana	DLZ Engineers		McKinley Avenue Grade Separation & Railroad Crossing.		Specific alternative not yet chosen.	Reserves opportunity to review chosen build alternative for project once identified.	4/24/2012	4/12/2012
8	St. Joseph	Indiana	American Structurepoint, Inc.		Michigan Boulevard Phase II Roadway Improvements - 2.1 miles.			Not in Designated Area.	4/19/2012	4/9/2012
9	St. Joseph	Indiana	United Consulting/Elkhart County Commissioners	Federal and local funds.	New multi-use pedestrian/bike path, approximately 2300 feet.		No substantial threat.	Appropriate safeguards and best management practices in place to not endanger water sources.	3/5/2012	2/22/2012
10	St. Joseph	Indiana	INDOT LaPorte District		SR933 Bridge Rehabilitation - 4 lane 'urban-principal bridge'.		No substantial threat.	Appropriate safeguards and best management practices in place to not endanger water sources.	12/12/2011	12/9/2012
11	St. Joseph	Indiana	RW Armstrong	Federal and local funds.	County Road 6 intersection improvements - roundabout and new storm basin.		No substantial threat.	Appropriate safeguards and best management practices in place to not endanger water sources.	11/10/2011	10/26/2011
12	St. Joseph	Indiana	State Revolving Fund Load Program	Indiana SRF	Sanitary Sewer feasibility study.		No substantial threat.	Appropriate safeguards and best management practices in place to not endanger water sources.	9/13/2011	9/2/2011
13	St. Joseph	Indiana	Hughes Associates, Inc.	US Dept. Housing & Urban Development EDI-SP	Airport runway & taxiways rehabilitation (approx. 500 feet).		No substantial threat.	Appropriate safeguards and best management practices in place to not endanger water sources.	9/12/2011	9/1/2011
14	St. Joseph	Indiana	Michiana Area Council of Governments		New transit transfer center approx. 5,000 to 10,000 sq. ft.		No substantial threat.	Appropriate safeguards and best management practices in place to not endanger water sources.	8/17/2011	7/21/2011
15	St. Joseph	Indiana	Abonmarche		Approximately 1000 feet of roadway improvements and widening.	Residential/Commercial	No substantial threat.	Appropriate safeguards and best management practices in place to not endanger water sources.	7/12/2011	7/5/2011
16	St. Joseph	Indiana	American Structurepoint, Inc.		Road improvements - new roundabout and surface drainage.		No substantial threat.	Appropriate safeguards and best management practices in place to not endanger water sources.	6/23/2011	6/16/2011
17	St. Joseph	Indiana	RW Armstrong		County Bridge No. 127 Replacement - two lane single-span bridge.		No substantial threat.	Appropriate safeguards and best management practices in place to not endanger water sources.	6/15/2011	6/10/2011
18	St. Joseph	Indiana	Jean A Wright		559 E. Market Street - no other information provided.			Not in Designated Area.	6/6/2011	
19	St. Joseph	Indiana	State Revolving Fund Loan Program	ARRA SRF Loan	Approximately 1,000 of sewer rehabilitation and 2,650 feet of new installation.	Residential	No substantial threat.	Appropriate safeguards and best management practices in place to not endanger water sources.	5/23/2011	5/13/2011
20	St. Joseph	Indiana	DLZ Engineers		Two new drainage basins (size unknown) for Harrison Road Reconstruction.		No substantial threat.	Appropriate safeguards and best management practices in place to not endanger water sources.	5/17/2011	5/13/2011
21	St. Joseph	Indiana	United Consulting	Federal and local funds.	Elkhard County Bridge No. 363 Replacement - 4 lane, 264 feet in length.		No substantial threat.	Appropriate safeguards and best management practices in place to not endanger water sources.	2/23/2011	2/15/2011
22	St. Joseph	Indiana	DLZ Engineers		Reconstruction of 0.8 miles of existing sidewalk and surface drainage improvements.		No substantial threat.	Appropriate safeguards and best management practices in place to not endanger water sources.	2/10/2011	1/26/2011
23	St. Joseph	Indiana	Butler, Fairman & Seufert, Inc.		Approximately 1 mile of roadway improvements. Approx. 0.3 miles of new multi-use path	Residential/Commercial/Agricultural	No substantial threat.	Appropriate safeguards and best management practices in place to not endanger water sources.	1/11/2011	1/6/2011
24	St. Joseph	Indiana	Economic Development District & Regional Planning Commission	Community Focus Fund	Wastewater Treatment Plant Improvements - new 3rd lagoon and extension of force main.		No substantial threat.	Appropriate safeguards and best management practices in place to not endanger water sources.	12/28/2010	12/20/2010
25	St. Joseph	Indiana	Butler, Fairman & Seufert, Inc.		Roadway intersection improvements/signalization. New guardrail along trail - 3,200 feet.		No substantial threat.	Appropriate safeguards and best management practices in place to not endanger water sources.	12/21/2010	

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21253.050

#	Aquifer	State	FOIA Document	Funding Source	Project Type	Study areas	Response	EPA Review Comments & Recommendations	Response Date	Request Date
26	St. Joseph	Indiana	DLZ Engineers		Roadway reconstruction/new lanes - approx. 9,000 feet. New storm sewer.		No substantial threat.	Appropriate safeguards and best management practices in place to not endanger water sources.	12/15/2010	11/30/2010
27	St. Joseph	Indiana	American Structurepoint, Inc.	Federal and local funds.	Approx. 1.4 miles of new guardrail and path improvements.	Agricultural/Residential	No substantial threat.	Appropriate safeguards and best management practices in place to not endanger water sources.	11/29/2010	11/19/2010
28	St. Joseph	Indiana	The Troyer Group	FHWA	New multi-use trail and sidewalks.	Residential	No substantial threat.	Appropriate safeguards and best management practices in place to not endanger water sources.	11/16/2010	11/5/2010
29	St. Joseph	Indiana	Burgess & Niple, Inc		Approximately 2.6 miles of new roadway construction/additional lanes.	Residential/Commercial/Agricultural	No substantial threat.	Appropriate safeguards and best management practices in place to not endanger water sources.	10/27/2010	10/20/2010
30	St. Joseph	Indiana	INDOT - Ft Wayne District		US 6 Bridge Replacement - 805 feet in length.		No substantial threat.	Appropriate safeguards and best management practices in place to not endanger water sources.	9/1/2010	8/26/2010
31	St. Joseph	Indiana	DLZ Engineers		Approx. 5,500 feet of new multi-use trail.		No substantial threat.	Appropriate safeguards and best management practices in place to not endanger water sources.	9/1/2010	8/26/2012
32	St. Joseph	Indiana	Economic Development District & Regional Planning Commission	Disaster Recover 2 grant	Two - 150,000 sq. ft. manufacturing facilities		No substantial threat.	Appropriate safeguards and best management practices in place to not endanger water sources.	8/26/2010	8/17/2010
33	St. Joseph	Indiana	INDOT - Ft Wayne District		Asphalt resurface/improvements and upgrades to traffic signals.		No substantial threat.	Appropriate safeguards and best management practices in place to not endanger water sources.	8/19/2010	8/12/2010
34	St. Joseph	Indiana	Economic Development District & Regional Planning Commission	Disaster Recover 2 grant	Removal of 200 log jams on Noble County/Elkhart River.			Not in Designated Area.	7/29/2010	7/26/2010
35	St. Joseph	Indiana	Bernardin, Lochmueller & Associates	FHWA	Traffic signal modernization.	Commercial/Residential	No substantial threat.	Appropriate safeguards and best management practices in place to not endanger water sources.	7/20/2010	7/12/2010
36	St. Joseph	Indiana	St Joseph River Basin Commission		Proposed Technology Park - no details provided.			Not in Designated Area.	6/30/2010	
37	St. Joseph	Indiana	Economic Development District & Regional Planning Commission	Disaster Recover 2 grant	Sylvan Lake Dam rehabilitation - approximately 550 feet of new rip rap and automatic monitoring system.			Not in Designated Area.	6/30/2010	6/22/2010
38	St. Joseph	Indiana	Economic Development District & Regional Planning Commission	Disaster Recover 2 grant	New 29,000 sq. ft. manufacturing facility.			Not in Designated Area.	6/10/2010	5/27/2010
39	St. Joseph	Indiana	Neighborhood Development Associates LLC	Disaster Recover 2 grant	New municipal well and iron filtration plant. (~4 acre site)			Not in Designated Area.	6/14/2010	5/26/2010
40	St. Joseph	Indiana	Economic Development District & Regional Planning Commission	Disaster Recover 2 grant	Upgrade wastewater treatment plant - new structures, lift stations and 1,250 feet of sewer.		No substantial threat.	Appropriate safeguards and best management practices in place to not endanger water sources.	6/1/2010	5/17/2010
41	St. Joseph	Indiana	ASC Group, Inc.		New signalized intersection.		No substantial threat.	Appropriate safeguards and best management practices in place to not endanger water sources.	6/1/2010	5/24/2010
42	St. Joseph	Indiana	State Revolving Fund Loan Programs		Approx. 375 feet of sewer rehabilitation and 2,300 feet of force main.		No substantial threat.	Appropriate safeguards and best management practices in place to not endanger water sources.	4/7/2010	4/6/2010
43	St. Joseph	Indiana	Priority Project Resources, Inc.	CDBG Grant ~$500,000	New 4,270 sq. ft. addition to fire station.	Commercial		Not in Designated Area	3/15/2010	3/15/2010
44	St. Joseph	Indiana	Kenna Consulting	CDBG Grant	Approx. 5,600 feet of sewer rehabilitation		No substantial threat.	Appropriate safeguards and best management practices in place to not endanger water sources.	3/9/2010	3/8/2010
45	St. Joseph	Indiana	Butler, Fairman & Seufert, Inc.		New 1.1 multi-use trail		No substantial threat.	Appropriate safeguards and best management practices in place to not endanger water sources.	3/5/2010	3/2/2010
46	St. Joseph	Indiana	RP Murphy and Associates	Disaster Recover 2 grant	Mobile home stormwater improvements and new detention pond.	Residential/Agricultural		Not in Designated Area	2/24/2010	2/19/2010
47	St. Joseph	Indiana	RP Murphy and Associates	Disaster Recover 2 grant	Downtown Commercial District - new sanitary sewer utility construction.		No substantial threat.	Appropriate safeguards and best management practices in place to not endanger water sources.	1/26/2010	1/20/2010
48	St. Joseph	Indiana	American Structurepoint, Inc.		New intersection/roundabout construction - feasibility study.		No substantial threat.	Appropriate safeguards and best management practices in place to not endanger water sources.	1/19/2010	1/8/2010
49	St. Joseph	Indiana	The Troyer Group	Federal funds.	Approx. 1,500 sq. ft. expansion of medical facility.		No substantial threat.	Appropriate safeguards and best management practices in place to not endanger water sources.	12/18/2009	12/17/2009
50	St. Joseph	Indiana	State Revolving Fund Loan Programs	Waste Water State Revolving Fund (~$900,000)	River Race Remediation Project - redevelopment of 7 sites for mixed use residential/commercial. Remedial approach - excavation and disposal for soil and groundwater contamination.	Residential/Commercial	No substantial threat.	Appropriate safeguards and best management practices in place to not endanger water sources.	12/10/2009	12/9/2009

Table 1
SUMMARY OF USEPA SOLE SOURCE AQUIFER FILES
St. Joseph Aquifer
North Central Indiana
Mahomet Aquifer Consortium
21253.050

#	Aquifer	State	FOIA Document	Funding Source	Project Type	Study areas	Response	EPA Review Comments & Recommendations	Response Date	Request Date
51	St. Joseph	Indiana	Neighborhood Development Associates LLC		Rehabilitation of 18-owner units and new sewer connections.			Not in Designated Area.	12/8/2009	12/1/2009
52	St. Joseph	Indiana	State Revolving Fund Loan Programs	Waste Water State Revolving Fund	Elkhart Foundry & Machine Company - site remediation - excavation and disposal of soil contamination, including Elkhart River stream bank. Notes: will not impact sole source aquifer.	Commercial	No substantial threat.	Appropriate safeguards and best management practices in place to not endanger water sources.	12/7/2009	11/23/2009
53	St. Joseph	Indiana	Department of Planning and Community Development		Rehabilitation of 20 units for senior housing.	Commercial	No substantial threat.	Appropriate safeguards and best management practices in place to not endanger water sources.	12/3/2009	12/2/2009
54	St. Joseph	Indiana	State Revolving Fund Loan Programs	~$8.4 million	Approximately 9,146 feet of storm sewer installation, 1,560 feet of infiltration systems, pavement removal and replacement. Notes: May require dewatering for sewer installation but will not adversely affect the aquifer.	Residential	No substantial threat.	Appropriate safeguards and best management practices in place to not endanger water sources.	11/16/2009	11/10/2009
55	St. Joseph	Indiana	Abonmarche		Reconstruction of existing roadway and new retention basin.		No substantial threat.	Appropriate safeguards and best management practices in place to not endanger water sources.	11/2/2009	10/28/2009
56	St. Joseph	Indiana	Ken Hereg & Associates		Ewing Avenue Reconstruction.		No substantial threat.	Appropriate safeguards and best management practices in place to not endanger water sources.	10/22/2009	10/9/2009
57	St. Joseph	Indiana	Fleis and Vendenbrink	USDA Rural Development (federal funds)	Source water system improvements including replacing existing standpipe, new water main and pump upgrades.		No substantial threat.	Appropriate safeguards and best management practices in place to not endanger water sources.	9/14/2009	8/25/2009
58	St. Joseph	Indiana	ASC Group, Inc.		SR331 Gimes Ditch Bridge Replacement and 1000 feet of roadway improvements.		No substantial threat.	Appropriate safeguards and best management practices in place to not endanger water sources.	9/14/2009	8/12/2009
59	St. Joseph	Indiana	The City of Ligonier	CDBG ($229,000)	Owner-occupied housing rehabilitation and weatherization.		No substantial threat.	Appropriate safeguards and best management practices in place to not endanger water sources.	8/26/2009	8/5/2009
60	St. Joseph	Indiana	American Structurepoint, Inc.	Federal Transit Admin (federal funds)	New bus transfer transit center and parking garage.		No substantial threat.	Appropriate safeguards and best management practices in place to not endanger water sources.	8/18/2009	8/5/2009
61	St. Joseph	Indiana	American Structurepoint, Inc.	Federal funds.	Intersection improvements - roundabout construction; traffic signal upgrades.		No substantial threat.	Appropriate safeguards and best management practices in place to not endanger water sources.	8/18/2009	8/12/2009
62	St. Joseph	Indiana	State Revolving Fund Loan Programs	federal funds (~$3 million)	Wastewater Treatment Plant Improvements - new controls and communication systems.		No substantial threat.	Appropriate safeguards and best management practices in place to not endanger water sources.	7/20/2009	7/13/2009
63	St. Joseph	Indiana	Neighborhood Development Associates LLC		Senior housing improvements and 5 foreclosed property improvements.		No substantial threat.	Not in Designated Area.	7/15/2009	6/24/2009
64	St. Joseph	Indiana	Department of Health and Human Services	Federal funds.	Single house well and septic system replacement.	Residential	No substantial threat.	Appropriate safeguards and best management practices in place to not endanger water sources.	7/7/2009	7/1/2009
65	St. Joseph	Indiana	American Structurepoint, Inc.		Hively Avenue Grade Separation roadway improvements.	Commercial/Residential	No substantial threat.	Appropriate safeguards and best management practices in place to not endanger water sources.	7/7/2009	7/1/2009

- **Shaded cells indicate that information was not available.**

Table 2
SUMMARY OF USEPA SOLE SOURCE AQUIFER FILES
Miami Valley Aquifer
Southwestern Ohio
Mahomet Aquifer Consortium
21253.050

#	Aquifer	State	FOIA Document	Funding Source	Costs	Project Type	Response	EPA Review Comments & Recommendations	Response Date	Request Date
1	Miami Valley	Ohio	Ohio Environmental Protection Agency		$2.5 million	Approximately 8,800 feet of water main, 60 water meters and 7,500 feet of new sanitary sewer.	No substantial threat.	Appropriate safeguards and best management practices in place to not endanger water sources.	4/20/2011	4/19/2011
2	Miami Valley	Ohio	Ohio Environmental Protection Agency			Approximately 2.1 lies of force main and 1,600 feet of new sanitary sewer.	No substantial threat.	Appropriate safeguards and best management practices in place to not endanger water sources.	7/29/2010	7/29/2010
3	Miami Valley	Ohio	Ohio Environmental Protection Agency	ARRA		Approximately 2,500 feet of sanitary sewer improvements.	No substantial threat.	Appropriate safeguards and best management practices in place to not endanger water sources.		11/23/2009
4	Miami Valley	Ohio	Ohio Environmental Protection Agency			Approximately 15,000 feet of sanitary sewer improvements.	No substantial threat.	Appropriate safeguards and best management practices in place to not endanger water sources.		11/13/2009
5	Miami Valley	Ohio	Ohio Environmental Protection Agency	ARRA and Ohio Water Pollution Control Loan Fund		Approximately 3,950 feet of sanitary sewer improvements.	No substantial threat.	Appropriate safeguards and best management practices in place to not endanger water sources.	10/8/2009	10/8/2009

- **Shaded cells indicate that information was not available.**