

# Allegan County Ground Water Study Ad-Hoc Work Group



Human Services Building  
3255 – 122<sup>nd</sup> Avenue  
Allegan, MI 49010  
269-673-5411 Main Office  
269-673-4172 Main Fax  
<http://www.allegancounty.org>

Chairperson, Tom Kunetz  
Vice-Chairperson, John "Ric" Curtis

Dean Kapenga,  
County Commissioner  
Representative  
[dakapenga@allegancounty.org](mailto:dakapenga@allegancounty.org)

Chad Kraai,  
Well Driller  
[chad@kraaiwelldrilling.com](mailto:chad@kraaiwelldrilling.com)

Brian Talsma,  
Conservation District  
Representative  
[brian.talsma@macd.org](mailto:brian.talsma@macd.org)

Doug Sweeris,  
Municipal Water Supply  
Representative  
[dsweeris@cityofallegan.org](mailto:dsweeris@cityofallegan.org)

Erick Elgin,  
Academic Representative  
[elgineri@msu.edu](mailto:elgineri@msu.edu)

Jay Drozd,  
Agriculture Representative  
[jaydrozd@yahoo.com](mailto:jaydrozd@yahoo.com)

John "Ric" Curtis, Vice-chair  
Community Representative  
[ric\\_curtis@comcast.net](mailto:ric_curtis@comcast.net)

John Shagonaby,  
Tribal Representative  
[John\\_Shagonaby@qit-nsn.gov](mailto:John_Shagonaby@qit-nsn.gov)

Tom Kunetz, Chair  
Community Representative  
[tomkunetz@gmail.com](mailto:tomkunetz@gmail.com)

Zachary Curtis,  
Consultant  
[zach@magnet4water.com](mailto:zach@magnet4water.com)

## WATER STUDY WORKGROUP – AGENDA

Wednesday, January 11, 2023 – 2PM

Human Services Building, Karl Zimmerman Room  
3255 122<sup>nd</sup> Avenue, Allegan, MI 49010  
Virtual Meeting Options – Connectivity Instructions

2PM

**CALL TO ORDER:**  
**ROLL CALL:**  
**PUBLIC PARTICIPATION:**  
**PRESENTATIONS:**  
**COMMUNICATIONS:**  
**DISCUSSION ITEMS:**

- 1) Review action items (Dunham)
- 2) Presentation by Tri County (Ingham/Clinton/Eaton) Planning Commission (10 min brief overview, 20 min Q&A) (Lauren Schnoebelen)
- 3) Review of modified Scope of Work for Groundwater Protection Plan RFP (Kunetz)
- 4) Phase 2 Groundwater Study update (Z. Curtis)

---

## **PUBLIC PARTICIPATION:** **ADJOURNMENT:**

### Workgroup Tasks and Deliverables:

1. Review the final Allegan County Groundwater Study, conducted by Hydrosimulatics, Inc. and submitted to the Board on March 25, 2021.
2. Provide regular updates to the Board and a final written summary of observations and recommendations of the workgroup, within one-year of the appointment of its members, relative to the study content (and any other aspects of Allegan County's current and future state relative to water quality, including recommendations for how the County (as a geographic area) should proceed with next steps (if any) and provide particular focus on Hydrosimulatics, Inc. recommendation to pursue an interactive Decision Support System. All recommendations must be specific as to the management/oversight model, funding, root need/issue to be addressed and expected results of any next steps to be considered.
3. The Allegan County Health Department will participate in the discussions of the work group and will provide administrative support, guidance and expertise.
4. As an ad-hoc workgroup, the work of the group will be considered complete upon the delivery of item number 2 above.



# Allegan County

# Water Study Group



Allegan County  
3283 122<sup>nd</sup> Ave  
Allegan, MI 49010

# STEP 1: Connect to the Meeting

- **OPTION 1: Zoom over Telephone**

- Call (929) 205-6099 -or- (312) 626-6799 -or- (253) 215-8782
- Type in Meeting ID: 897 7693 0617, then #, then # again
- Type in Meeting Password: 2022, then #
- To raise your hand to speak, press \*9
- To Mute and Unmute, press \*6

<STOP here>

You do not have to continue reading the rest of the instructions.

- **OPTION 2: Zoom over Web browser**

- Open Internet Explorer or Chrome
- Navigate to <https://zoom.us/j/89776930617>

- Meeting Password: 2022

<Continue with the rest of the instructions>

# STEP 2: Enter registration information

The screenshot shows a web browser window with the URL `zoom.us/webinar/register/WN_YneHxuk_SjqfnMwchbtUEg`. The page title is "Webinar Registration".

Registration details:

- Topic: BOC Meeting - 4/9/2020
- Time: Apr 9, 2020 01:00 PM in Eastern Time (US and Canada)

Registration form fields (marked as required with an asterisk):

- First Name \*
- Last Name \*
- Email Address \*
- Confirm Email Address \*

Below the form is a reCAPTCHA box with the text "I'm not a robot" and a "reCAPTCHA Privacy - Terms" link. A blue arrow points to this box with the instruction "2. Click this box".

At the bottom of the form is a blue button labeled "Join Webinar in Progress". A blue arrow points to this button with the instruction "4. Click when done.".

At the bottom right, a reCAPTCHA challenge is visible, showing a grid of images with the instruction "Select all images with". A blue arrow points to this challenge with the instruction "3. Answer challenge question".

The footer contains navigation links:

- About: Zoom Blog, Customers, Our Team, Why Zoom, Features, Careers, Integrations, Partners, Investors
- Download: Meetings Client, Zoom Rooms Client, Browser Extension, Outlook Plug-in, Lync Plug-in, iPhone/iPad App, Android App
- Sales: 1.888.799.9666, Contact Sales, Plans & Pricing, Request a Demo, Webinars and Events
- Support: Test Zoom, Account, Support Center, Live Training, Feedback, Contact Us, Accessibility

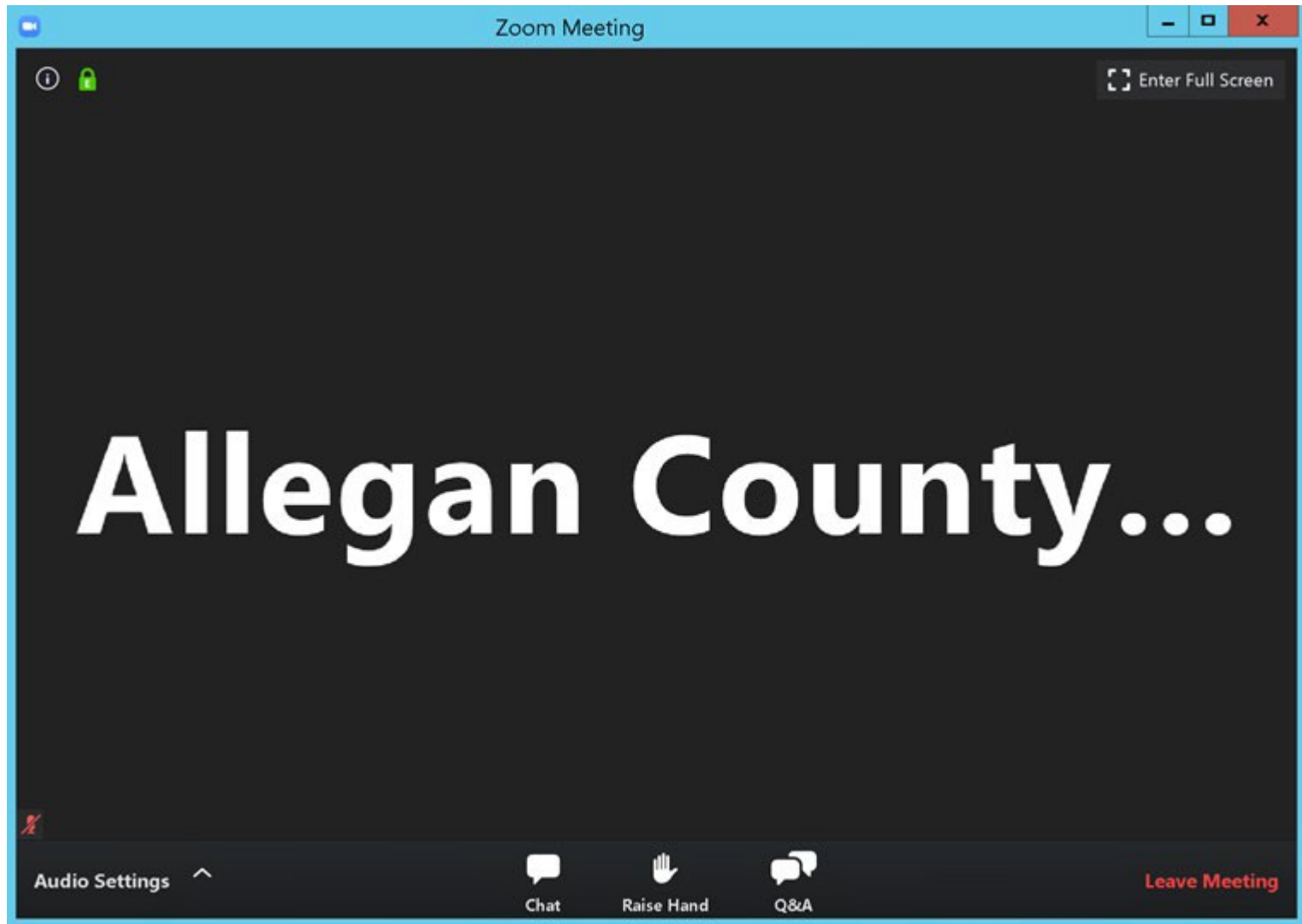
1. Enter name and email

2. Click this box

4. Click when done.

3. Answer challenge question

STEP 3: This Window will appear when connected.



# STEP 4: Adjust audio settings (if needed)

The screenshot shows the Zoom application interface. A vertical black bar on the left side of the screen has a blue arrow labeled '1' pointing to it. A blue arrow labeled '2' points to the 'Audio' settings panel. The 'Audio' panel is open, showing options for 'Speaker' and 'Microphone'. The 'Speaker' section includes a 'Test Speaker' button and a 'Remote Audio' dropdown menu. Below these are sliders for 'Output Level' and 'Volume'. The 'Microphone' section includes a 'Test Mic' button and a dropdown menu. Below these are sliders for 'Input Level' and 'Volume', and a checked checkbox for 'Automatically adjust volume'. At the bottom of the panel, there are several unchecked checkboxes: 'Use separate audio device to play ringtone simultaneously', 'Automatically join audio by computer when joining a meeting', and 'Mute my microphone when joining a meeting'. There are also two checked checkboxes: 'Press and hold SPACE key to temporarily unmute yourself' and 'Sync buttons on headset'. An 'Advanced' button is located at the bottom right of the panel. In the background, a meeting window is visible with a title bar that says 'Economic Development - Greg King, Director' and 'ADMINISTRATIVE REPORTS:'. Below the title bar, there is a list of 'CONSENT ITEMS:' with one item: '1. Motion to approve of claims paid and to incorporate into proceedings of the Board (3/20/20 & 3/27/20)'. At the bottom of the screen, there is a meeting control bar with icons for 'Chat', 'Raise Hand', and 'Q&A'.

Settings

General

Video

**Audio**

Share Screen

Virtual Background

Recording

Statistics

Feedback

Keyboard Shortcuts

Accessibility

Speaker

Test Speaker Remote Audio

Output Level:

Volume:

Microphone

Test Mic

Input Level:

Volume:

Automatically adjust volume

Use separate audio device to play ringtone simultaneously

Automatically join audio by computer when joining a meeting

Mute my microphone when joining a meeting

Press and hold SPACE key to temporarily unmute yourself

Sync buttons on headset

Advanced

Economic Development — Greg King, Director  
ADMINISTRATIVE REPORTS:

CONSENT ITEMS:

1. Motion to approve of claims paid and to incorporate into proceedings of the Board (3/20/20 & 3/27/20)

Audio Settings

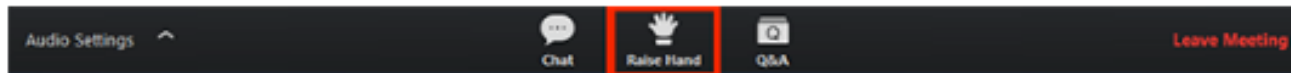
Chat Raise Hand Q&A

# STEP 5: Raise hand to be recognized to speak.

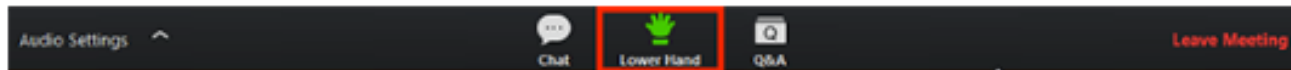
- Once “Raise Hand” is clicked, the Board Chairperson will receive notice and may UNMUTE your microphone when ready and verbally recognize you to speak.

On bottom of screen.

1. Click **Raise Hand** in the Webinar Controls.



2. The host will be notified that you've raised your hand.
3. Click **Lower Hand** to lower it if needed.



# STEP 6: To leave the meeting

The screenshot shows a Zoom meeting window. At the top, a green banner reads "You are viewing Allegan County Administration's screen" with a "View Options" dropdown. In the top right corner, there are window control buttons and an "Enter Full Screen" button. The main area displays a Microsoft Word document titled "BOC20200409\_agenda [Compatibility Mode] - Word" by "Steve Sedore". The document content includes the Allegan County Board of Commissioners logo and contact information for Jim Storey and Gale Dugan. The agenda items are listed under "BOARD OF COMMISSIONERS MEETING - AGENDA", including sections for District 1, 2, 3, and 4, and a central list of items like "CALL TO ORDER", "ROLL CALL", "OPENING PRAYER", "PLEDGE OF ALLEGIANCE", "COMMUNICATIONS", "APPROVAL OF MINUTES", "PUBLIC PARTICIPATION", "ADDITIONAL AGENDA ITEMS", "PRESENTATIONS", "PROCLAMATIONS", "INFORMATIONAL SESSION", and "ADMINISTRATIVE REPORTS". A blue arrow points to the "Leave Meeting" button in the bottom right corner of the Zoom window. The bottom control bar includes "Audio Settings", "Chat", "Raise Hand", "Q&A", and "Leave Meeting".



# **Request for Proposals for Development of a Groundwater Protection Plan for Allegan County**

## SCOPE OF WORK

### 1.0 BACKGROUND

Historically and presently, practically all the water supply in Allegan County is from two geologic aquifers as groundwater. In select areas, water supply is the responsibility of a municipal utility. In the rest of the County, water supply is from private wells. There are approximately 21,348 private household wells, 671 irrigation wells, and 32 industrial wells in Allegan County. These private wells account for 93% of all the wells in the County by number. The remainder 7% are municipal water utility wells. Virtually the entire population of the County shares the two aquifers. Yet neither the County government nor the local units of government (LUG) hold oversight for private wells after permitting has occurred for new, hook-up to existing, and replacements. In other words, the water supply is largely unregulated, with no protection from overdraft, neighbor impacts, drought, climate change, or contamination.

A resilient supply of clean water is essential for public health and economic vitality of all of Allegan County. Since all well owners in the County, whether private or public, draw from the same two aquifers, it would be prudent for the municipalities to join together to establish a county-wide plan that protects the water quality and water quantity of these aquifers, now, and into the future. By joining together, each LUG will be helping to protect the interests and health of its own citizens and businesses by acting on a regional basis.

The objective of this project is to develop a Groundwater Protection Plan for the entire county. Since the County government has limited authority beyond permitting for regulating private wells or water supply, the Groundwater Protection plan would be created through a voluntary partnership between the County and LUGs, with each partner contributing resources towards the creation and operation of the Groundwater Protection Plan. The purpose of the Groundwater Protection Plan is to provide the mechanism to understand the current state, and actively monitor the aquifers of Allegan County on a regional basis, in order to be proactive in identifying and addressing conditions that could negatively impact the groundwater quantity and/or groundwater quality, with the goal of protecting public health and ensuring economic vitality.

### 2.0 TASKS

Given the nature of this project's objective, which seeks to form a voluntary partnership, the tasks are presented as "outcome-based" tasks rather than "prescriptive" tasks. The successful proposer will need to be adaptive and creative in their approach to meet the objectives based

on the response of the various participants. The County and the Groundwater Study Ad Hoc Work Group will work closely with the Consultant as work progresses to collaboratively determine next steps.

## 2.1 Convene and Educate Stakeholders

2.1.1. Provide information to LUGs and other stakeholders regarding the critical nature of the groundwater supply and the interdependence that each may have upon the others, thus resulting in a desire to continue to participate in future convenings.

2.1.2. The Consultant shall organize and lead a minimum of one kick-off meeting no later than June 30, 2023, consisting of representatives from each LUG. The purpose of this is kick-off meeting is to educate the participants, at a minimum, in: the hydrogeologic conditions which provide the County's groundwater supply, sources of recharge and withdrawals, areas of contamination, and potential future migration of contaminants. The presentation will lead to the introduction of the concept of a county-wide Groundwater Protection Plan. Explain how an Allegan County Groundwater Protection Plan could supplement and enhance local source water protection plans but not replace them, yet would have the advantage of going beyond current source water protection plans by offering protection to the many private well owners who are not covered under any source water protection plan. The consultant may reference, as a minimum, the Allegan County Groundwater Studies Phase 1 and Phase 2 documents, supplemented by the Consultant's own expertise. Logistics for the meetings (location, times, invitations, refreshments, audio/visual technology, meeting minutes, etc.) will be the responsibility of the Consultant, in coordination with the County.

## 2.2 Draft Groundwater Protection Plan Framework

2.2.1. Research and develop a recommendation, or options to be considered, regarding the framework for a Groundwater Protection Plan, which, in its final form, each LUG representative can use to take back to its government to make the case for obtaining that LUG's participation in the subsequent drafting of the detailed, final Plan. Such plan may incorporate alternatives to groundwater usage, recommendations for ordinances, or any other measures that may protect water availability and quality. The framework shall include recommendations for the governance, funding and operational management of the plan and the execution of the plan.

2.2.2. The consultant shall organize and lead subsequent convenings of representatives of the LUGs. The consultant shall plan for up to three (3) convenings with LUG representatives, either in-person or virtually, to come to a consensus on the framework for the Groundwater Protection Plan. Invited to these convenings may be representatives

from related stakeholders, such as EGLE, well drillers, Michigan Geologic Survey, etc. to offer expertise and information. Such invitations will be at the discretion of the consultant, in consultation with the County. The Consultant should offer EGLE's model of a source water protection plan as a starting point, then develop the details through participatory discussion and agreement. Logistics for the meetings (location, times, invitations, refreshments, audio/visual technology, meeting minutes, etc.) will be the responsibility of the Consultant.

## 2.3 Develop the Details of the Groundwater Protection Plan

2.3.1. The desired outcome of this task is to further develop the framework of the Groundwater Protection Plan developed in task 2.2 into a fully operational and actionable plan acceptable to all the participants.

2.3.2. The Consultant will work in an interactive fashion with the participants to create the details for the Groundwater Protection Plan. The general process will be for the Consultant to prepare drafts of documents, then present these documents to the participants, in-person, virtually, via email, or any combination of means that the participants have decided upon. Participants will review the documents and provide written and verbal comments, which the Consultant will evaluate for editing the documents, then present the edited drafts to the participants for review and feedback. Throughout this process, the Consultant will be expected to use their experience and expertise to offer recommendations and guide the participants toward decisions.

2.3.3. The Groundwater Protection Plan is envisioned to consist of the elements contained in EGLE's source water protection plan model, as further detailed below. Ultimately, the participants will define the final plan scope and content.

### 2.3.3.1. Protection Area Delineation

Generally, the protection area comprises the entire county. However, because of hydrogeological considerations, the consultant shall delineate the actual boundaries of the protection area, which may include areas outside the county borders. The consultant shall use the report "Allegan County Groundwater Study—Phase 1: Understanding the Big Picture" by Hydrosimulatics, Inc. for this purpose. The consultant may supplement this information with additional information.

### 2.3.3.2. Contaminant Source Inventory

The known sources of contamination and the areas of greatest concern are identified in the report "Allegan County Groundwater Study, Phase 2: Screening-Level Modeling,

Risk Analysis, and Ranking,” by Hydrosimulatics, Inc. This report shall be used as the basis for this task.

#### 2.3.3.3. Water Demand Projections and Water Supply Accounting

A. In order for the government partners to monitor the groundwater supply to ensure adequate quantities are available for all of the various uses throughout the county, it is necessary to create an accounting of groundwater withdrawals, which can be compared to known aquifer capacity calculations. The Consultant shall prepare an estimate of the current usage of groundwater by various categories of users, i.e. private residential wells, municipal supply, industrial, commercial, and agriculture, allocated per municipality. The consultant shall then prepare a projection of future water demand by category and municipality, using event horizons of fifteen years and thirty years. The projections would best be presented in ranges such as “Highest, Lowest, and Most Likely.” Reference state, county, and local information such as population data, economic development plans, future trends, etc. to estimate current and future states.

B. The Consultant shall recommend an accounting system to monitor the groundwater withdrawal rate on an annual timeframe in each municipality. This accounting system shall include a procedure to track the installation of new wells, as well as the abandonment of existing wells. This accounting system will allow comparison of groundwater availability (further described in paragraph C. below) to water demand, so that potential shortages in supply can be identified in advance before supply levels become critical. This accounting system will provide the data for recommendations for affected municipalities to be proactive in protecting the ground water supply.

C. The County government has established a goal of installing not more than 24 groundwater level monitoring wells throughout the county. Currently two monitoring wells are installed. These monitoring wells will eventually have remote level sensors. This data should be collected, stored, reported and analyzed to determine if water supply is trending up or down. This information is necessary to determine water availability, which will be compared to water withdrawal (further described in paragraph B. above). The Consultant shall facilitate discussion with the participants to establish a protocol for periodic comparison of the water withdrawal accounting (Paragraph B.) with the water supply availability estimates (paragraph C.), and future demand estimates (paragraph A.).

#### 2.3.3.4. Contingency Plan

The Consultant shall facilitate with the participants the creation of a Contingency Plan that will identify procedures to respond to both immediate events (eg. toxic spill) and long term events (eg. drought, dropping groundwater levels, increased population).

#### 2.3.3.5. Public Communication and Outreach Plan

The Consultant shall facilitate discussion with the participants as to specific components they wish to see in this plan. Based on the input from the participants, the County will issue an RFP for retaining a public communication consultant to create the public communication and outreach plan as requested by the participants. Such a plan may include the following elements:

- A. Educational programs, online tutorials, in-person meetings, websites, printed materials, and mailers about where the county's drinking water comes from, and ways in which residents can help protect the aquifer and surface water, such as properly maintained septic systems, storm water management, and capping of abandoned wells.
- B. Online County-wide map showing up-to-date information on groundwater levels derived from the monitoring wells program.
- C. Serve as a clearinghouse of information to assist residents and local units of government on information such as where to find technical support, application for loans and grants, and references for water quality laboratories

#### 2.3.3.6. Plan Management

The Consultant shall facilitate with the participants the creation of an actionable system that ensures that the intent of the Groundwater Protection Plan is carried out. Elements of the management framework may include but are not limited to:

- A. Monitor groundwater quality.
- B. Establish "trigger points" which require action should a trigger point be exceeded. Create a dashboard to compare actual conditions with trigger points.
- C. Establish a template to periodically report to the public on the state of the aquifers.
- D. Coordination with related agencies such as EGLE and MDOT for remediation efforts.
- E. Review of all new large withdrawal wells to ensure adequate aquifer capacity and prevent impact to neighboring wells.
- F. Review of new industries to insure adequate protection of groundwater from accidental spills of potential contaminants.
- G. Establish a procedure to periodically review and update the Groundwater Protection Plan.
- H. Determination of the desire for the development of a Decision Support System tool (DSS). The Allegan County Groundwater Study: Phase 1 recommended the creation of a DSS. Refer to pages 25-27 of this report for more information on the purpose and potential functionality of a DSS. The consultant shall facilitate a discussion with the participants if the procurement of a DSS is desirable.

## 2.4. Contributions of Governmental Units

2.4.1. The desired outcome of this task is to obtain commitments from each participating LUG for resources. The commitments shall be in the form of resolutions from the governing bodies of each participating LUG.

2.4.2. The County government has committed to contributing the following resources to the Groundwater Protection Plan:

- A. Allegan County Groundwater Study—Phase 1: “Understanding the Big Picture”
- B. Allegan County Groundwater Study, Phase 2: “Screening-Level Modeling, Risk Analysis, and Ranking”
- C. Up to 24 monitoring wells located around the County
- D. The establishment of current and future groundwater demand estimates. (To be completed by the Consultant under this project.)
- E. Facilitation of convenings of participants from each LUG, including all costs, subject to County approval, for venues, logistics, etc. (To be completed by the Consultant under this project.)
- F. Integrating the participants’ feedback into a comprehensive, written, and actionable Groundwater Protection Plan. (To be completed by the Consultant under this project.)
- G. Funding and hiring a consultant to develop a Public Communication and Outreach Plan, as defined by the participants.
- H. Participation by a representative from the County Health Department in all meetings, discussions, and Plan development efforts.
- I. Participation and advisory support from the Allegan County Ad Hoc Groundwater Work Group.

2.4.3. The LUGs are expected to contribute the following resources to the Groundwater Protection Plan:

- A. Participation by a representative from the LUG in all meetings, discussions, and Plan development efforts.
- B. Once the Groundwater Protection Plan is approved, participation by a representative from the LUG for implementation of the Plan.
- C. Annual funding to support the operation of the Groundwater Protection Plan.
- D. Funding share for the DSS, if procured.
- E. Access agreements with the County for monitoring wells that may be desirable to be installed on LUG property.
- F. Sharing of information concerning activities within the LUG that may impact the objectives of the Groundwater Protection Plan.