

**Take Aways from call with MICH Dept Health and Human Services**

**January 8, 2024**

Attendees:

**MDHHS**

Vern Johnson([johnsonv16@michigan.gov](mailto:johnsonv16@michigan.gov)): Public Health Consultant - Division of Local Health Services

Kory Groetsch, Anthony Oliveri, Jennifer Gray, Carin Speidel, Marcus Wasilevich, Gerald Tiernan

**ACHD**

Randy Rapp:([rrapp@allegancounty.org](mailto:rrapp@allegancounty.org)) EH Services Manager

**Groundwater Study Work Group**

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

Ric Curtis Vice Chair

Tom gave a presentation on:

1. Allegan County Groundwater Work Group
2. Allegan County Groundwater Protection Strategy
3. Contaminated Sites Risk Mapping and Source Inventory
4. County-wide Groundwater Water Table Monitoring Wells
5. Private Residential Wells Assistance Program
6. Public Education and Outreach Program

1. Overall, the response from HHS to the work the county has accomplished to date is “Wonderful, Awesome, Amazing, Gold!”

2. After the contamination risk map is done, HHS would like to have a conversation with county about private wells that are at risk. HHS can offer to help these residents to manage the concern with information on tap water sampling.

3. Suggestion: activities like this risk modeling tend to die on the vine if they are not tended. Suggest the County creates a plan to keep the model relevant: add new sites, remove sites where remediation is done, etc.

4. The risk map and phase 2 study can help HHS with their own project of vapor intrusion. Randy to send email to Vern Johnson with Phase 2 report PDF.

5. HHS can help with public education. They have fact sheets on chemicals of concern. They already have public information sheets on the shelf for some of these things. Provided websites to Randy for some of these documents.

6. Recommendation: Put a procedure in place so that any new, large quantity withdraw well is first reviewed in the hydrogeologic model for its impact on contaminant transport, and aquifer impact, before it is permitted. Currently, ACHD only finds out about it after the well is permitted. Randy: this is something we hope the future governance group will tackle.

7. HHS will send a representative to attend the April 23 workshop. Will speak for two minutes to support the idea of creating a governance structure. Will coordinate with Work Group in advance to set talking points.

# **Alleghan County Groundwater Protection Strategy**

January 8, 2024

Presented by

Tom Kunetz, Alleghan County Groundwater Work Group Chairperson



# AGENDA

1. Introduction of attendees
2. Allegan County Groundwater Work Group
3. Allegan County Groundwater Protection Strategy
4. County-wide Groundwater Water Table Monitoring Wells
5. Private Residential Wells Assistance Program
6. Public Education and Outreach

# Introduction of Attendees

- **MDHHS**

Vern Johnson([johnsonv16@michigan.gov](mailto:johnsonv16@michigan.gov)):

Public Health Consultant - Division of Local Health Services

Anthony Oliveri

Jennifer Gray

Carin Speidel

Marcus Wasilevich

G. Tiernan

Jacqui Barr

Michelle Benin

Jess Coogins

Ruth Scherman-Siver

- **ACHD**

Randy Rapp:([rrapp@allegancounty.org](mailto:rrapp@allegancounty.org))

EH Services Manager

- **Groundwater Study Work Group**

Tom Kunetz:([tomkunetz@gmail.com](mailto:tomkunetz@gmail.com))

Chair

Ric Curtis

Vice Chair

# Allegan County Groundwater Work Group

Purpose: To advise the Board of Commissioners on determining future activities concerning the protection of the county's groundwater supply that will take into consideration water quality and maintain the quantity required for human and agricultural use.

- Created in 2021 by the Allegan County Board of Commissioners
- Cross-sectional members of the community including:
  - Tribal representative
  - Well driller representative
  - Agriculture representative
  - Michigan State University representative
  - Health Department representative
  - Commissioner representative
  - Municipal utility representative
  - County Conservation District representative
  - Community representative

# Allegheny County Groundwater Protection Strategy

- Modeled on EGLE's Source Water Protection Plan elements, but on a larger scale
- Consultant (William & Works) experienced in hydrogeology and regional planning has been retained to facilitate the project

# Allegan County Groundwater Protection Strategy

1. Groundwater Assessment Report—Completion April 2024
  - a. Groundwater Protection Area Delineation--  
Completed
  - b. Groundwater Contamination Risk Map—In Progress
  - c. Contamination Source Inventory—In Progress
  - d. Groundwater Demand and Future Projections—In  
Progress



# Allegan County Groundwater Protection Strategy

2. Convening of local units in workshops to educate and set priorities—April 23, 2024
3. Synthesize feedback into a locally-driven strategy—Q2 2024
4. Establish governance entity—Q3-Q4 2024

# Groundwater Contamination Risk Map and Source Inventory

**Background: 351 sites of groundwater concern in Allegan County**

## **Overarching Goal:**

- Create a countywide groundwater contamination risk map to guide future groundwater management
- Overlay with population density, economically disadvantaged populations
- Make specific recommendations for next steps at highest priority sites (top 25 sites)

# Groundwater Contamination Risk Map and Source Inventory

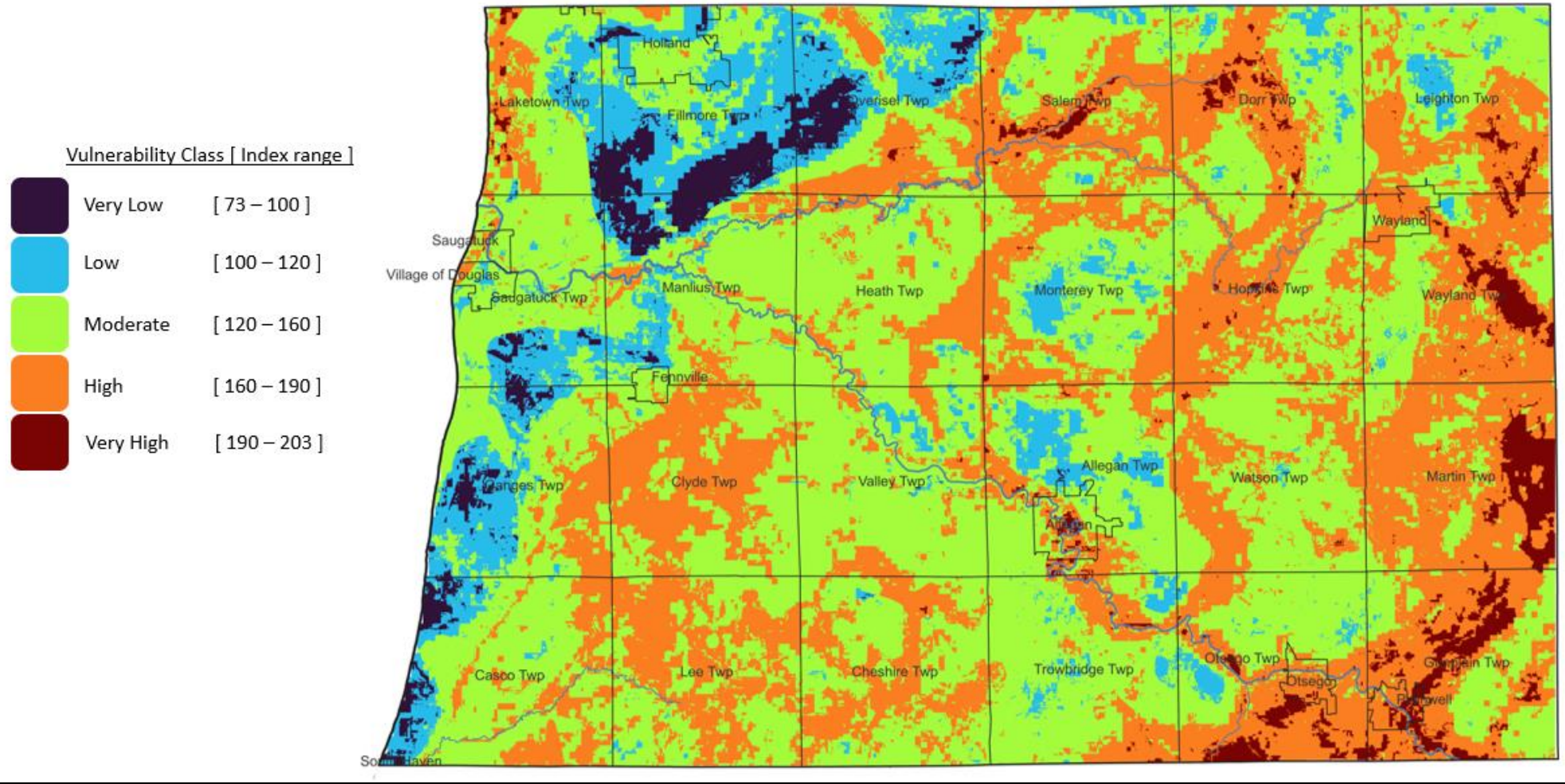
## Combining On-Site and Off-Site “Risk Potential” Perspectives:

### Phase 2 Groundwater Study:

- “Hydrogeologic Risk” and Aquifer Vulnerability (sensitivity to surface pollution)
- Screening-level modeling of groundwater flow paths, plume travel times (off-site migration)

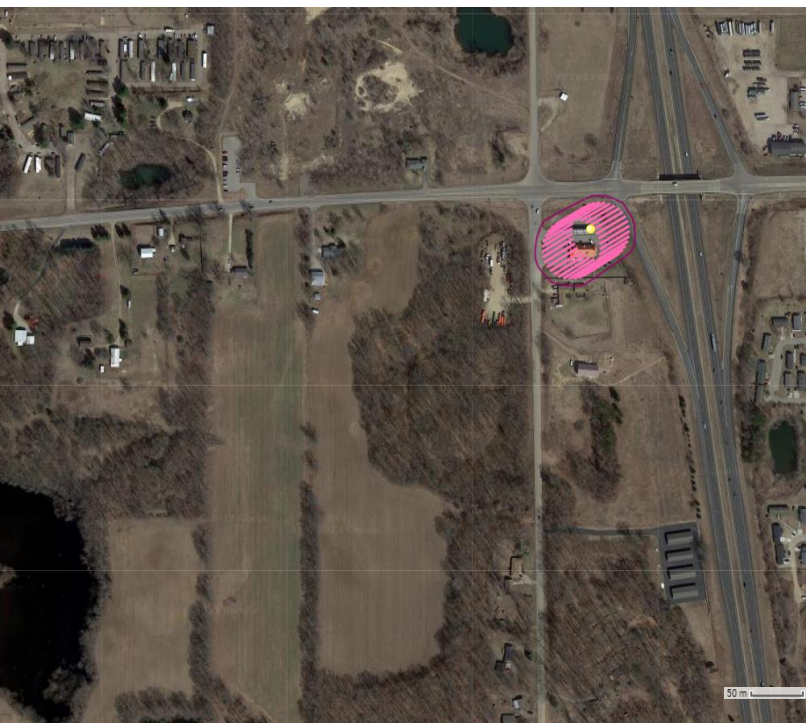
Aquifer Vulnerability or Sensitivity to Surface Pollution (Phase 2 Study)  
or “How easy is it for a pollutant released at the surface to actually get down into the aquifer?”

## Vulnerability Class Map





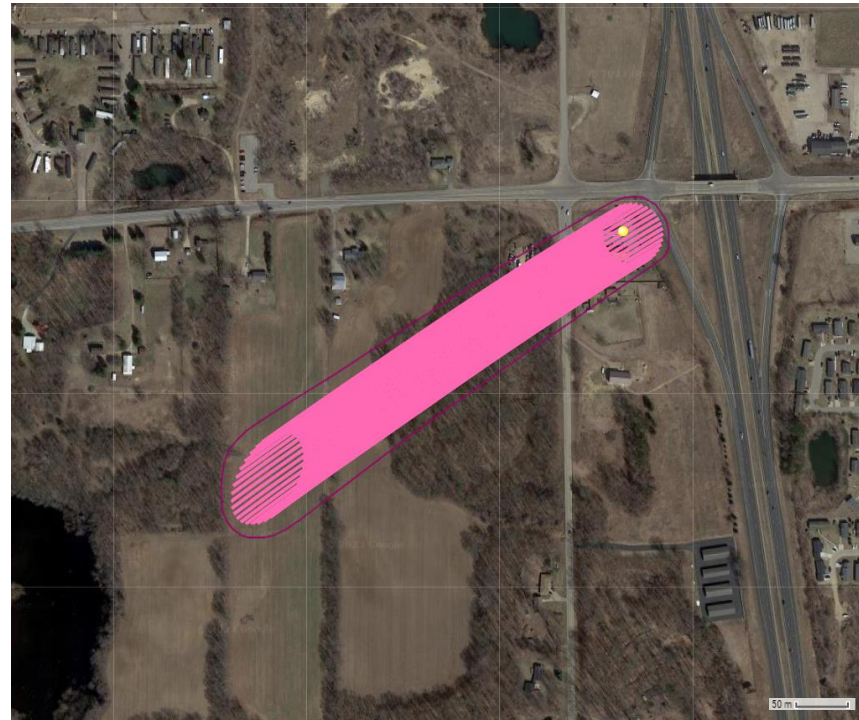
# Example of Results



2 Years



10 Years



20 Years



Impact Area



Particle Path-lines

**00002991,  
Martin Marathon  
(LUST Site)**





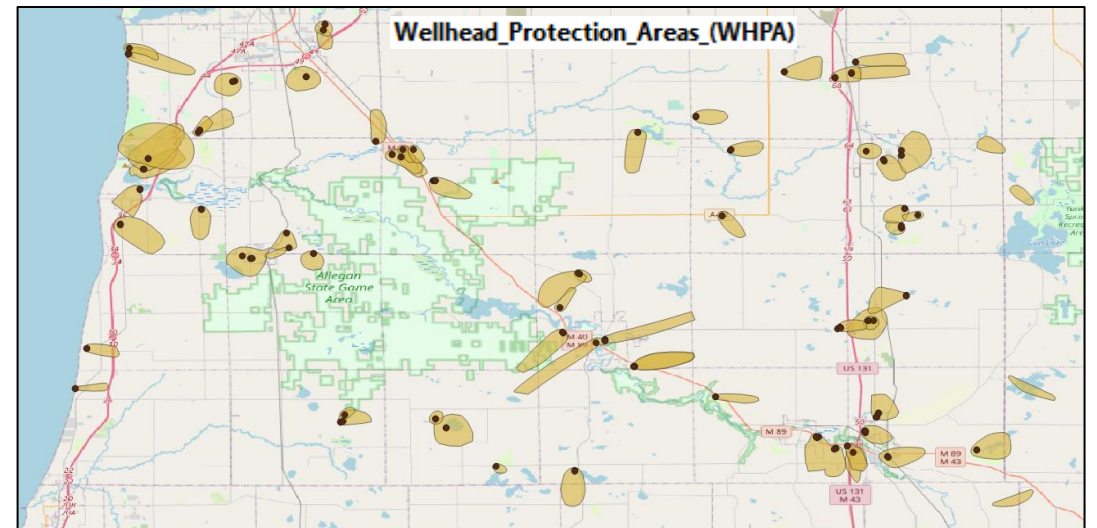
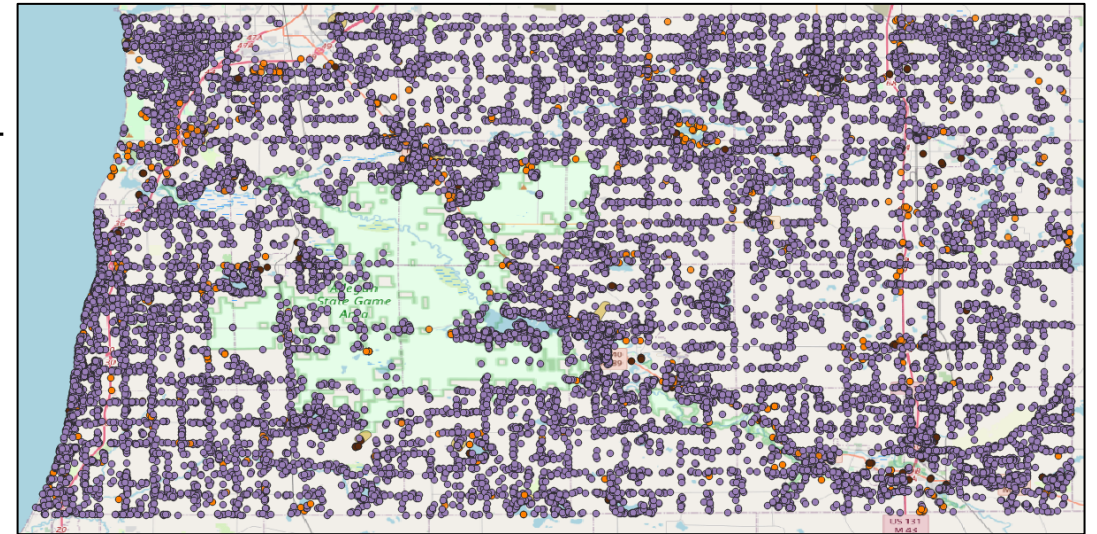
# Impact Areas in Relation to Drinking Water Wells

## EXAMPLE

- Receptors / layers of interest:
  - Type 1 Wells and their WHPAs
  - Type 2 or Type 2 PS wells
  - Private household wells
- Total Score out of 100
  - 100/100 represents highest risk
  - 0/100 represents no risk
- What leads to higher scores?
  - Private wells or Public wells within or near impact areas
    - Higher score if wells is directly within an impact area
    - higher score if within/close to for 2yr vs. 10 yr. or 20yr. Impact areas
    - Higher score when relatively large number of private wells and/or at least one community wells
  - Impact areas overlap / are within WHPA
    - Higher Score if impact areas are completely contained in WHPA

### Drinking Water Wells

- HOSHLD
- TY1PU
- TY2PU
- TY3PU



Top 20 Sites

Based on

**Drinking Water Scores  
(weighted average)**

SiteID	Site Name	DW score	NDW Score	SW score	AQVul Score	Total Score
3000288	1258, 1260 Lincoln Road & Village EMH Pk	100	5	20	0.8	45.2
3000036	International Harvester	100	20	60	0.5	40
<b>50002085</b>	<b>Glenn Country Store</b>	100	20	60	0.5	40
Site 123	Otsego Township SLF	95	0	55	0.8	49
3000239	North Pointe Plaza	95	20	55	0.6	43.1
Site 95	Allegan Township Dump	95	60	40	0.5	40.75
3000356	687 North 10th Street	90	60	75	0.9	71.7
<b>00015681</b>	<b>Wayland Self Serve</b>	90	65	30	0.9	64.05
3000016	Section 25 Gun Plain Township	90	0	75	0.8	51
3000004	Allegan Metal Finishing	90	30	25	0.8	48.2
Site 1990	Heath Twp Landfill	90	60	50	0.6	47.8
3000350	6530 Sanctuary Way	90	25	50	0.6	41.5
3000241	Lincoln (1600) Road, LLC	90	15	65	0.5	37.75
3000322	3295 Blue Star Highway	90	0	15	0.5	25.5
3000306	203 South Main Street	85	70	40	0.9	65.15
3000277	114 Pine Street	85	70	40	0.8	58.8
<b>00015678</b>	<b>Martin (LUST Site)</b>	85	85	0	0.8	54.4
3000426	4634 4671 East Washington Street & 3501	85	15	95	0.7	51.9
<b>00006437</b>	<b>Hamilton Farm Bureau Cooperative</b>	85	15	95	0.7	51.9
3000283	1218 M-89 Highway	85	0	60	0.9	50.25
3000285	124 Locust Street	85	0	50	0.9	48.25
3000384	East 1/2 of SE 1/4 Section 29	85	0	45	0.9	47.25
3000324	3506 M-40	85	15	95	0.6	47.2
3000424	4645 4670 Washington Street & 4621 135th	85	15	95	0.6	47.2
3000287	1255 Lincoln Road	85	20	30	0.8	44.8
3000037	Jersey Street Plainwell	85	7	0	0.9	40.14
3000392	Swing Bridge (50,60,70,80,90) Ln & Kewat	85	0	65	0.5	34.25
3000393	Union Street & Blue Star Highway	85	0	65	0.5	34.25
3000007	Exit 41 LF	85	10	10	0.7	33.85
Site108	Fillmore Twp dump	85	0	30	0.6	31.5
3000031	Sunrise LF	85	0	0	0.5	21.25

LUST sites shown in red font

# Groundwater Contamination Risk Map and Source Inventory

## Combining On-Site and Off-Site “Risk Potential” Perspectives:

### Source Inventory Task:

- Focus on environmental exposure & health risk
- Site history, chemicals of concern, soil and shallow groundwater samples (on-site conditions)
- EGLE Risk Categories (overall, drinking ingestion, inhalation, groundwater-surface water interface,...)



# Groundwater Contamination Risk Map and Source Inventory

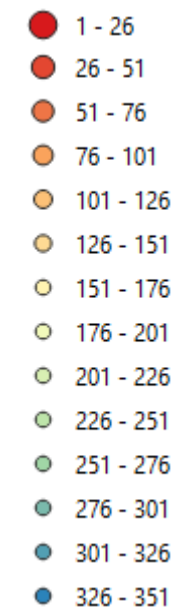
**RIDE system data-pull of all 351 sites is finished ✓**

- “Master spreadsheet” – site ID, address, name, chemicals, risk categories, document metadata
- GIS “digital twin” - for spatial mapping, color coding, interactive exploration

**Combine RIDE inventory analysis** with Phase 2 results and other information to create composite risk map(s) for the county

## Phase 2

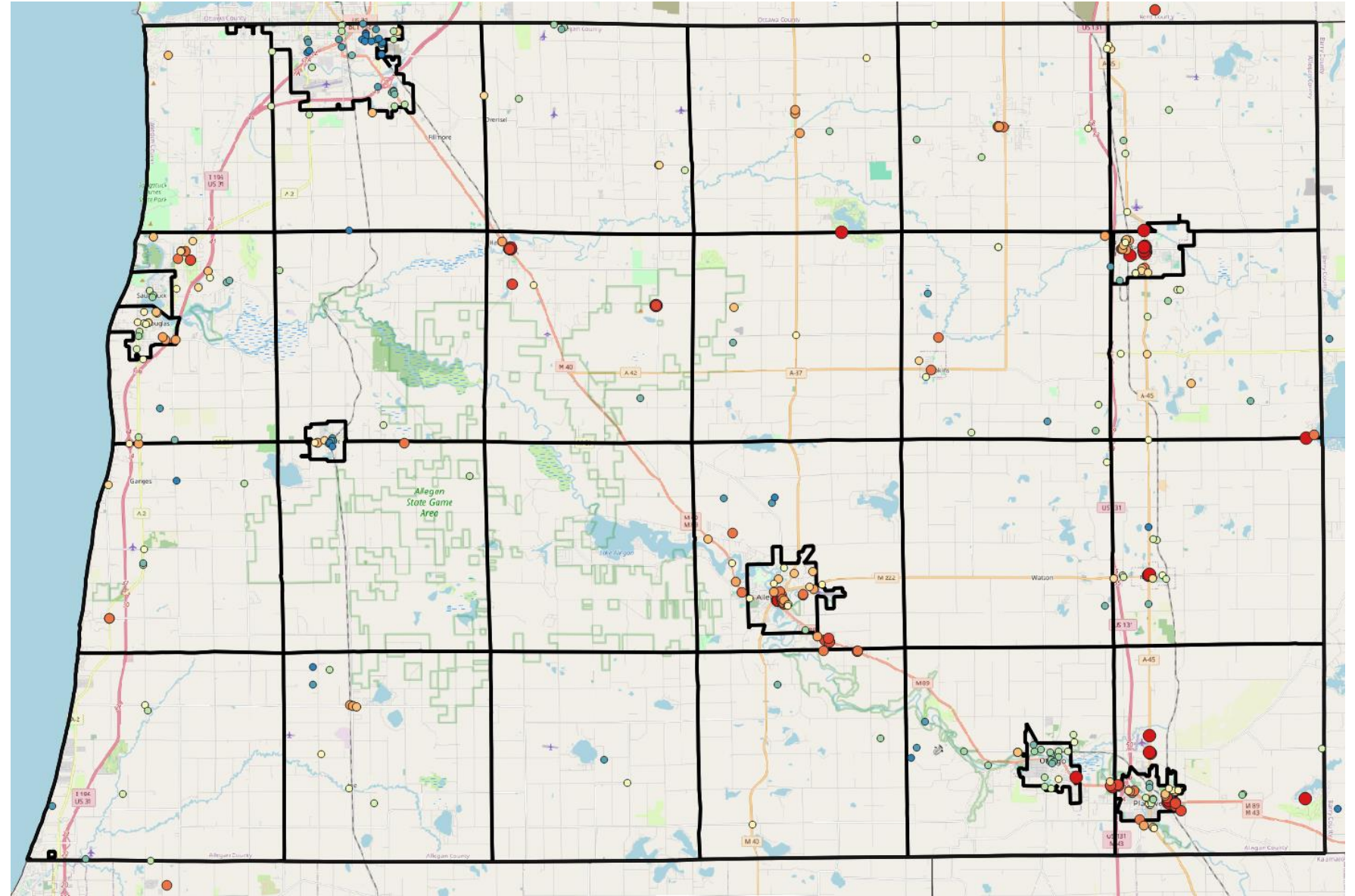
### Risk Ranking



### Risk based:

- Aquifer vulnerability (ability for surface pollution to infiltrate into underlying aquifer)
- Plume migration potential (groundwater flow paths)
- Proximity to water wells (especially drinking water wells) and surface water

Not For Release



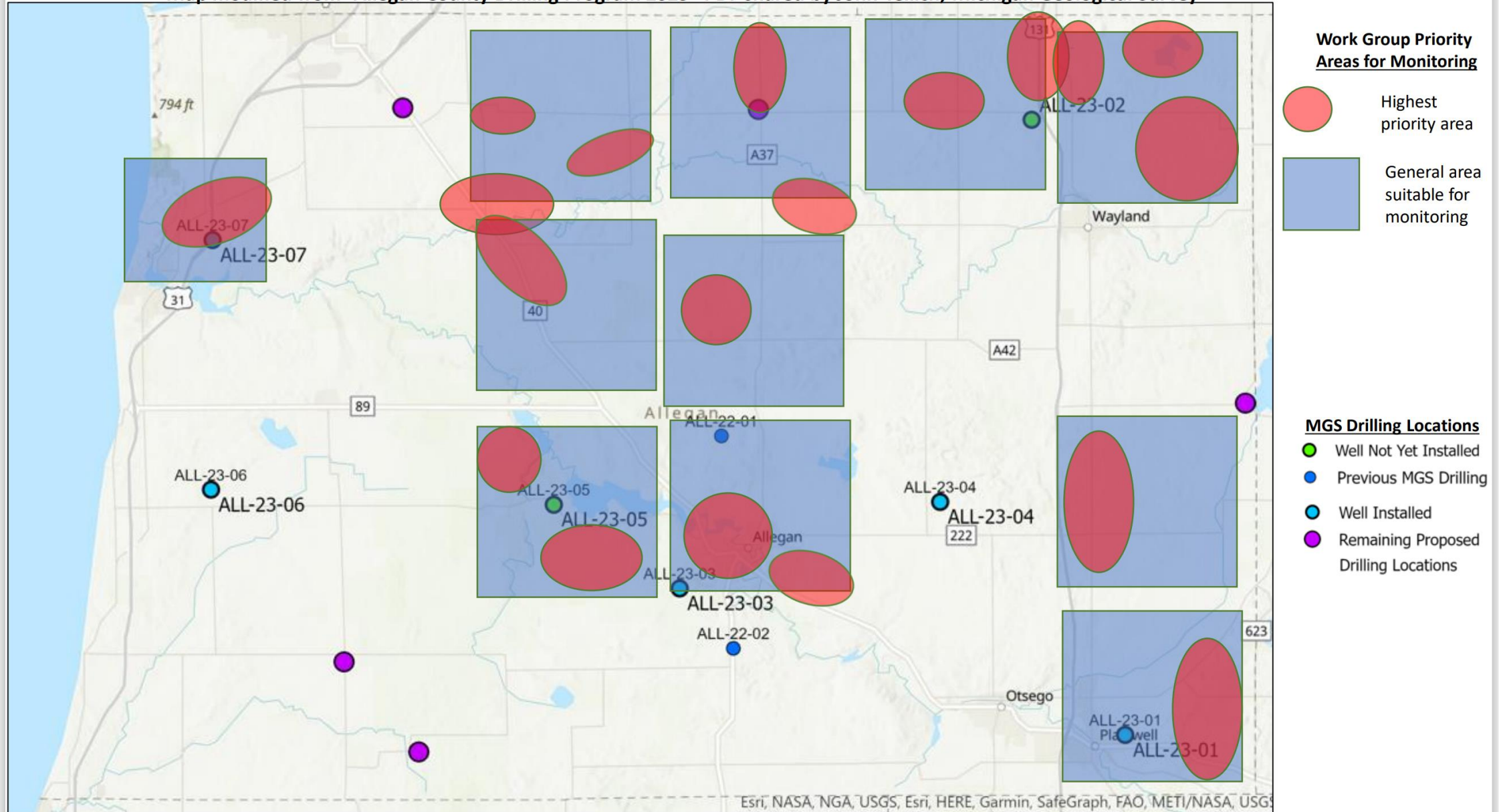
# Groundwater Level Monitoring System

Purpose: Provide the County with historical groundwater table data taken from geologically relevant areas, to provide an early-warning system for aquifer capacity reduction.

- Eleven geologically relevant zones identified
- Monitoring wells have been installed at four sites in partnership with Michigan Geologic Survey, with more planned
- Data will be sent to National Ground-Water Monitoring Network to be publicly available

# Groundwater Level Monitoring Wells

Map modified from "Allegan County Drilling Program 2023" PDF shared by John Yellich, Michigan Geological Survey





# Private Residential Wells Assistance Program

Purpose: To provide financial assistance to private residential well owners to enable them to repair or replace underperforming wells to ensure that every resident of Allegan County has access to a safe, reliable source of drinking water

- County's ARPA funds will be applied
- Looking to leverage existing assistance programs to make county's funds stretch
- RFP sent to NGOs to administer the program for Allegan County

# Public Education and Outreach

1. Health Department Public Information Office, will provide educational content to the general public concerning groundwater and public health—**In Progress**
2. NGO will provide outreach for Private Well Assistance Program
3. After convening of LGUs, public outreach content will be determined by the group



# Allegan County Water Study Workgroup

## Meeting Minutes

Wednesday, January 17, 2024 2:00 pm

Member Name	Group	Attendance	Notes
Dean Kapenga	County Commission	Present	
Chad Kraai	Well Driller	Absent	
Brian Talsma	Conservation District	Online	
Doug Sweeris	Municipal Water Supply	Present	
Ruth Kline	MSU Extension	Online	
Brad Lubbers	Agriculture	Present	
John "Ric" Curtis	Community	Present	
Liz Binoniemi-Smith	Tribal	Online	
Jaclyn Hulst	Community	Online	
Tom Kunetz	Community	Online	
Zachary Curtis	Consultant	Online	

Guests and staff: In Person: Randy Rapp, Jill Dunham  
Zoom: Scott Jones, Dan Wedge

Next meeting: Wednesday, February 7, 2023

### I. Approval of Agenda

- A. Agenda approved

### II. Action Items from previous meeting

- A. Randy to overlay the monitoring wells drilled by MGS with the Red Zone map created by Zach to see if all the red zones are covered. **DONE**
- B. For any Red Zones not covered, Randy to check with MGS if they intend to install any of these wells in 2024, or the County needs to proceed the advertise for bids for wells on County property, and coordinate with LGUs to have well drilled on their property.
- C. Randy to contact John Yellich every week until he gets the draft agreement back to Valdis for final handling. **DONE**
- D. Tom to notify work group by email when the date for the convening of LGUs is set. **DONE**

### III. Discussion

#### A. Groundwater Protection Strategy Update (Rakestraw)

1. Zach is working on the GW contamination map
2. Dan Whalen is working on demand and projections work
  - a) ID average and max demand
  - b) ID all irrigation wells and resolving their water use per year
  - c) ID all Mobile home parks
  - d) Dense private water wells
  - e) Housing growth
  - f) GW assessment report – preliminary draft reviewed earlier this month. Final draft end of Feb – draft review at GWS in March.
  - g) Translate technical jargon into lay terms.
  - h) Document methodology
3. LGU convening April 23 at Trestle Stop 4-7:30
4. Questions
  - a) Dean: where does the education for the community fit? First step is educating the LGUs.
  - b) Timeline in 2024? April convening with LGU; research on potential management strategies – a 2<sup>nd</sup> convening in Aug/sep
  - c) Tom offered that he will be updating the BOC in February.
  - d) Ruth: will workshop include basic gw information/education? Yes, basics will be covered – what is gw? gw flow models, how aquifers function
  - e) Jaclyn: growth patterns? What info are you looking at? Minimum parcel size? Primary dataset is pop growth. Considered future land use, but have 20-30 year horizon. Planning documents are potential, but not much idea how long it will take to grow. Looking at building permits, census data.
5. Zach thanked Jaclyn - has put a lot of work in on risk... Stressed that there will be significant education offered at the LGU convening. Definition of roles.

#### B. Groundwater Monitoring Wells (Rapp)

1. We have received a map of MI groundwater and combined info. Emailed John Yellich on locations for wells this summer. Four glacial geologists on his staff working on that – not decided yet. MGS has a geology objective; we have a hydrogeology objective. John Yellich doing geologic boring holes and sealing with PVC cap, unless we want monitoring. So far, we want monitoring for all wells they drilled in 2023.
2. Monitoring – 4 monitoring wells with no monitoring equipment yet. In February, John Yellich will provide a map of when they will have the monitoring equipment in place. Randy will notify John Yellich that we want monitoring equipment in all wells MGS put in last year.



3. Valdis emailed that the contract with MGS and AC is complete.
  4. Dan Wedge offered that we can put a monitoring well near Fennville public wells. County property adjacent is being sold.
  5. Jaclyn: what type of info will be used for monitoring equipment? What research has been done on efficacy and quality,
- C. Private Well Assistance Program (Rapp)**
1. Rob offered there are three NGOs interested in assisting with the Private Well Assistance. Randy will request an update for our Feb 7th meeting.
- D. Public Education and Outreach (Rapp)**
1. Discussion with Rob – would like to see ACHD create the education materials – info graphics – post to Facebook page and website – general information on aquifers and water recharge.
  2. Ruth noted there are considerable groundwater educational materials – Care for my Well, etc on DHHS website.
  3. Lindsay (AC Health Dept) will have a short presentation on “Health in all policies” at our April 23 LGU meeting.
- E. MI Dept of Health and Human Services Presentation (Kunetz)**
1. Tom and Randy presented to MDHHS (presentation attached)

## IV. New Action Items

- A. Jill will send out invite to everyone for the April 23 meeting at Trestle Stop.
- B. Randy will connect Lindsay Maunz with Ruth and Jaclyn. Share document that Ruth and Jaclyn created and advise on which items to share on the website.

Meeting adjourned 3:13 p.m.