

Allegan County Water Study Workgroup

Meeting Minutes

Wednesday, March 1 2:00 pm

Member Name	Group	Attendance	Notes
Dean Kapenga	County Commission	In Person	
Chad Kraai	Well Driller	Zoom	
Brian Talsma	Conservation District	Zoom	
Doug Sweeris	Municipal Water Supply	Absent	
Erick Elgin	Academic	Absent	
Jay Drozd	Agriculture	Absent	
John "Ric" Curtis	Community	In Person	
John Shagonaby	Tribal	Absent	Liz attended for John
Tom Kunetz	Community	In Person	
Zachary Curtis	Consultant	Zoom	

Guests and staff: In Person: Randy Rapp, Jill Dunham, Jaclyn Hulst
Zoom: Liz Binoniemi-Smith, Scott Jones and Dan Wedge

Next meeting: Wednesday, March 15, 2023

I. Approval of Agenda

- A. Agenda approved

II. Action Items from previous meeting

- A. Randy – contact EGLE to find out if our Municipalities have transducers (static water level indicators) on their wells. **Yes**
- B. Zach suggested 5-10 monitoring wells, based on Hydrogeologic considerations. He will have a few to suggest for the March 1 meeting. **Zach will have these next meeting – 3/15**
- C. Erick Elgin - a list of water conservation groups around the state. **Update of list in process, but not complete – Erick not present for an update**
- D. Tom and Jill working on the RFP with Valdis – **ongoing and on today's agenda**
- E. Zach – Research definition of LUST; size? What determined it was leaky? **DONE**
 - 1. **US EPA website and another source**
 - 2. **UST = At least 10% of a tank plus piping UG is underground. Exceptions include septic tanks, ___**
 - 3. **Leaky appears to be observational. Zach didn't find criteria for leaky.**

- F. Randy – How did EGLE select the 7-9 sites that ACHD has to test out of 300+ contamination sites? **DONE**
Primarily by vulnerability – 4 PFAS sites plus old landfill or recent contamination. Once sampled several times, it comes off the test list, but stays on the map.
- G. Zach will provide shape file and excel list of the approx. 300 contamination sites. **Shape file provided to Randy; still need to provide the excel list.** Attached to the minutes.

III. Discussion

- A. Phase 2: Risk ranking results, and Recommendations (Z. Curtis)
 - 1. Zach reviewed the attached presentation
 - 2. Jaclyn: Why different Site ID formats?
 - a) 300... - Sites of Environmental Concern Layer from EGLE environmental mapper
 - b) Site 0000 – Landfills and waste handlers
 - c) MID (alpha) – PFAS sites from EGLE
 - 3. Dean: Who is the accountable party for cleanup? County or EGLE or?
 - a) Accountable party will need more research – next step
 - b) Some sites might have appropriate containment in place
 - 4. Chad: Hamilton – Any areas with high nitrate zones? In Hamilton, finding sites with low flow and with such high nitrates the water can't even be treated. Also, a severe problem just north of Martin, highest levels of nitrate Chad has ever seen (60-100 ppm) - near old fertilizer production facility and adjacent to gravel pit.
 - a) Nitrate sources were not considered in this particular study, because they are considered a distributed sources applied through fertilizer across large areas.
 - b) Back in phase one, we mapped out ground water nitrate concentrations in water wells. We did see elevated nitrates as you pointed out. Will be included in next phase.
- B. Draft RFP for consultant for Groundwater Protection Strategy (Kalnins)
 - 1. Valdis Kalnins reviewed the draft RFP with the workgroup
 - 2. Questions
 - a) Jaclyn – community notification/education can be part of a 2-prong approach with townships.

IV. Future Work Group meeting schedule (Kunetz)

NOTE: All future meetings of the Water Study Workgroup will be held in the County Services Building Board Room (where the Board of Commissioners meets).

Mar 15	Final comments to Hydrosimulatics on Phase 2	
Spring 2023	Review proposals for Water Supply Master Plan and Public Communication	

Summer 2023	Participate in information gathering sessions with the Water Supply Master Plan and the Public Communications RFP	
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V. Action Items

- A. Chad will review the list once he gets it from Zach and report whether the high nitrates site (60-100 ppm) north of Martin is on it.
- B.

Meeting adjourned 3:24 pm

==== Information on USTs ====

From epa.gov (US Environmental Protection Agency website):

"An underground storage tank system (UST) is a tank and any underground piping connected to the tank that has at least 10 percent of its combined volume underground. The [federal UST regulations](#) apply only to UST systems storing either petroleum or [certain hazardous substances](#)"

From Michigan Department of licensing and regulatory Affairs, Bureau of Fire Services, Storage Tank Division, Underground Storage Tank Regulations:

"Underground storage tank system" or "UST system" or "tank system" means a tank or combination of tanks, including underground pipes connected to the tank or tanks or underground ancillary equipment containment systems, if any, which is, was, or may have been, used to contain an accumulation of regulated substances and the volume of which, including the volume of underground pipes connected to the tank or tanks, is 10% or more beneath the surface of the ground. An UST system does not include any of the following:

- (a) A farm or residential tank that has a capacity of 1,100 gallons or less and that is used for storing motor fuel for noncommercial purposes.
- (b) A tank used for storing heating oil for consumptive use on the premises where the oil is stored.
- (c) A septic tank.

(d) A pipeline facility, including the following:

(1) A surface impoundment, pit, pond, or lagoon.

(2) A stormwater or wastewater collection system.

(3) A flow-through process tank.

(4) A liquid trap or associated gathering lines directly related to oil or gas production and gathering operations.

(5) A storage tank situated in an underground area, such as a basement, cellar, mine, drift, shaft, or tunnel if the storage tank is situated on or above the surface of the floor.

(6) Any pipes connected to a tank that is described in subparagraphs (a) to (i) and (k) to (7) of this paragraph.

(8) An UST system holding hazardous wastes listed or identified under the provisions of subtitle C

of the solid waste disposal act of 1965, title II of Public Law 89-272, as amended, 42 U.S.C. section 6921 to section 6931 and section 6933 to section 6939b, or a mixture of the hazardous waste

and other regulated substances.

(9) A wastewater treatment tank system that is part of a wastewater treatment facility regulated

under the provisions of section 307(b) of title III or section 402 of title IV of the federal water pollution control act of 1972, as amended, 33 U.S.C. section 1317 and section 342.

(10) Equipment or machinery that contains regulated substances for operational purposes, such as

hydraulic lift tanks and electrical equipment tanks.

(11) An UST system that has a capacity of 110 gallons or less.

(12) An UST system that contains a de minimis concentration of regulated substances.

Please see

the definition of "de minimis concentration."

(13) An emergency spill or overflow containment UST system that is emptied within 10 days after use.

Alleghan County Groundwater Work Group

Meeting, 3/1/23

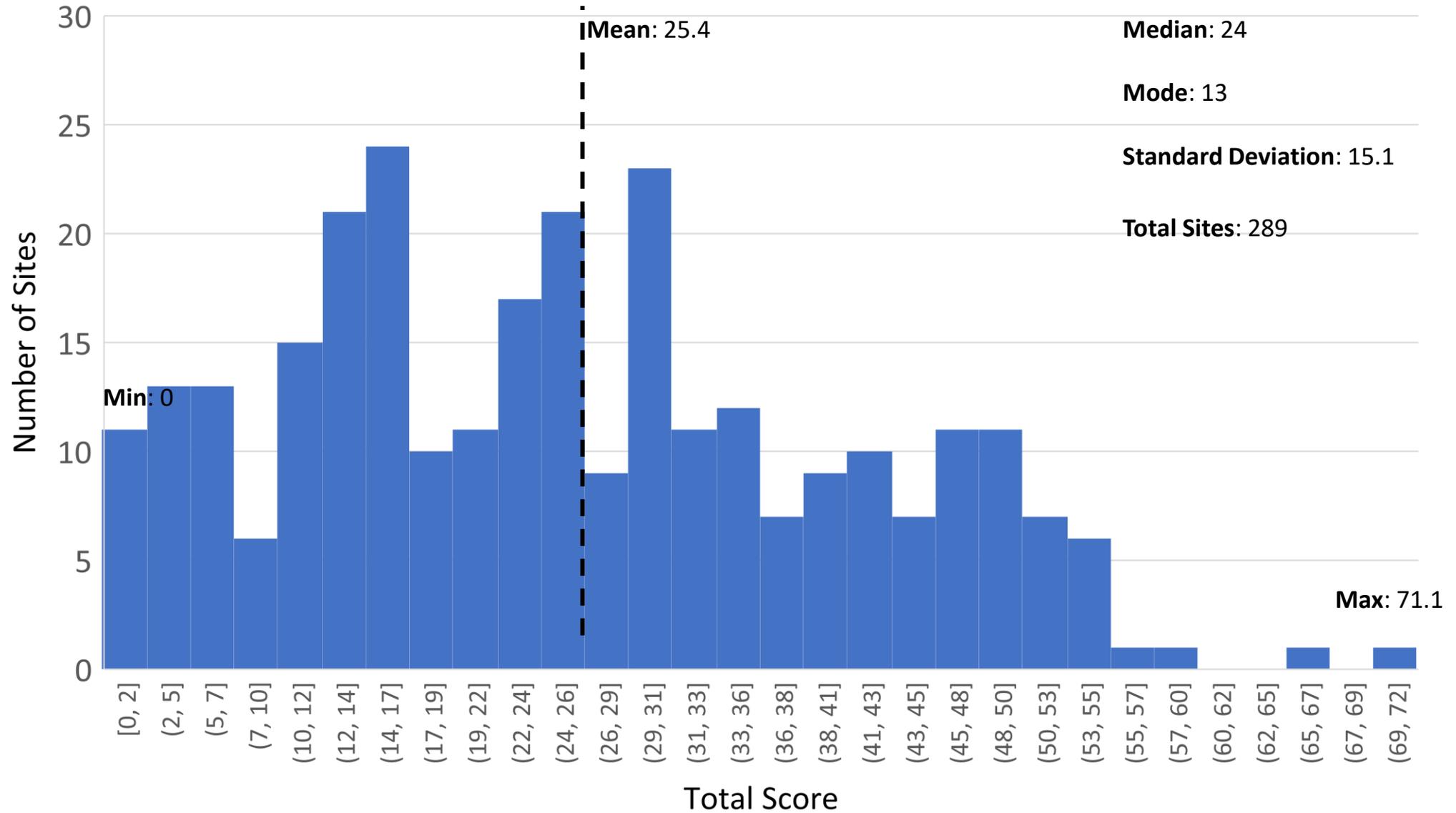
Alleghan County Groundwater Study - Phase 2 Updates

**By Zachary Curtis,
HydroSimulatics INC.**

Status of Risk Ranking Analysis (Phase 2 GW Study)

- Site-by-site scoring for entire site portfolio is FINISHED
- Rankings tables and Histograms FINISHED
 - Total Score
 - Drinking Water Score
 - Non-Drinking Water Score
 - Surface Water Score
 - Aquifer Vulnerability Score
- Map-based presentation of Rankings is ALMOST FINISHED

Histogram, Total Scores (Risk Ranking)



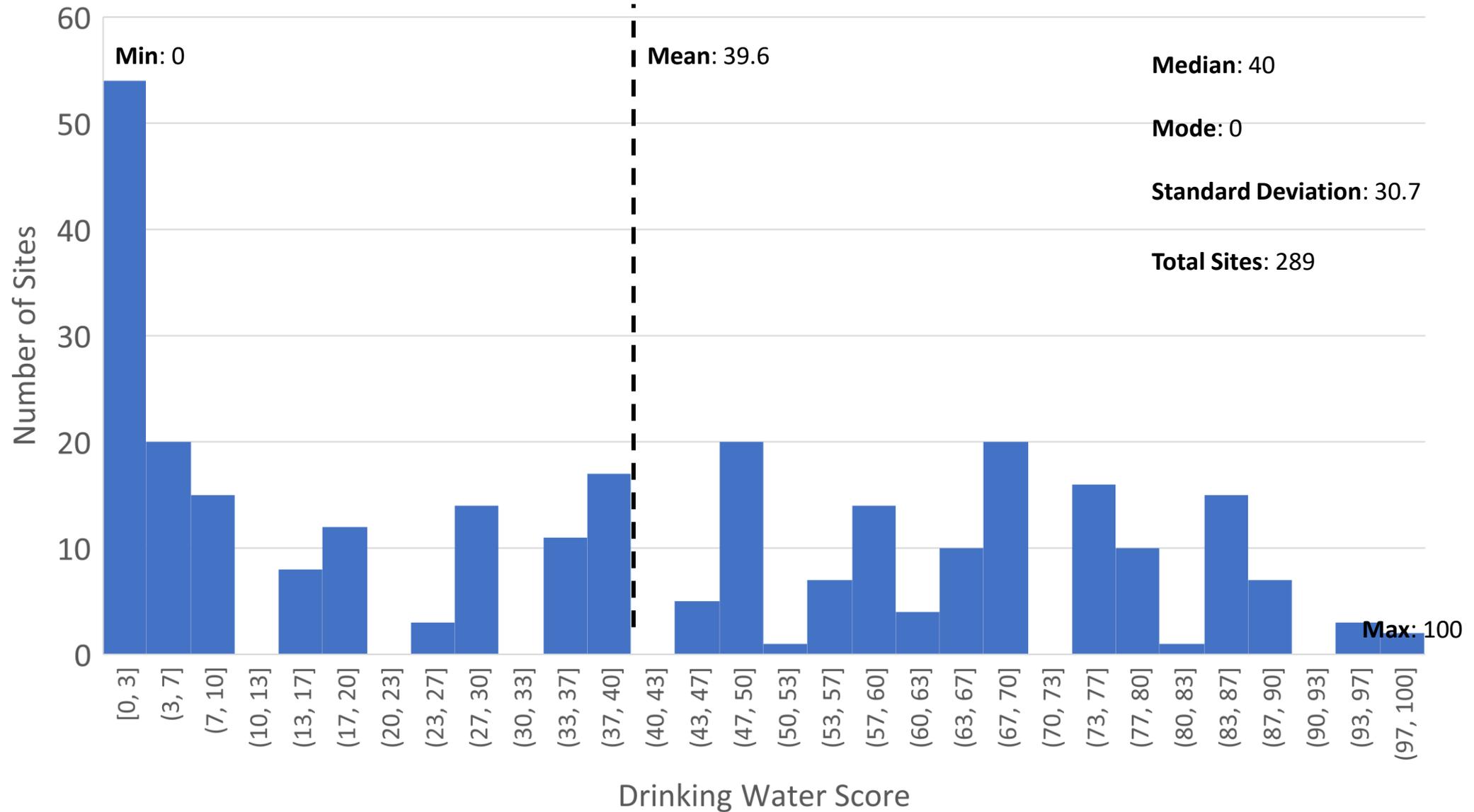
Top 20 Sites

Based on

TOTAL SCORE
(weighted average)

SiteID	Site Name	DW score	NDW Score	SW score	AQVul Score	Total Score
3000356	687 North 10th Street	90	60	75	0.9	71.7
3000306	203 South Main Street	85	70	40	0.9	65.15
3000277	114 Pine Street	85	70	40	0.8	58.8
3000325	3603 N. Main Street	40	90	75	0.9	57.3
3000211	585 10th St. Plainwell	80	55	20	0.9	54.85
11505	Ridderman Card -OP	80	55	20	0.9	54.85
3000360	712 East Bridge Street	75	15	60	1	54
3000367	798 E. Bridge Street Fmrly 760 E. Bridge	75	15	60	1	54
3000268	101 124th Avenue	60	85	20	0.9	53.95
3000265	150 North Main Street	75	45	40	0.9	53.9
3000014	Angle Steel Div (Kewaunee Scientific)	70	17	60	1	52.1
3000421	243 Hubbard Street, Allegan	80	0	60	1	52
3000310	236 Hubbard Street	80	0	60	1	52
3000426	4634 4671 East Washington Street & 3501	85	15	95	0.7	51.9
3000016	Section 25 Gun Plain Township	90	0	75	0.8	51
3000299	159 N. Main Street	80	45	40	0.8	50.8
3000283	1218 M-89 Highway	85	0	60	0.9	50.25
3000436	637 West Sycamore Street, Wayland	75	30	40	0.9	49.85
Site 123	Otsego Township SLF	95	0	55	0.8	49

Histogram, Drinking Water Score (Risk Ranking)



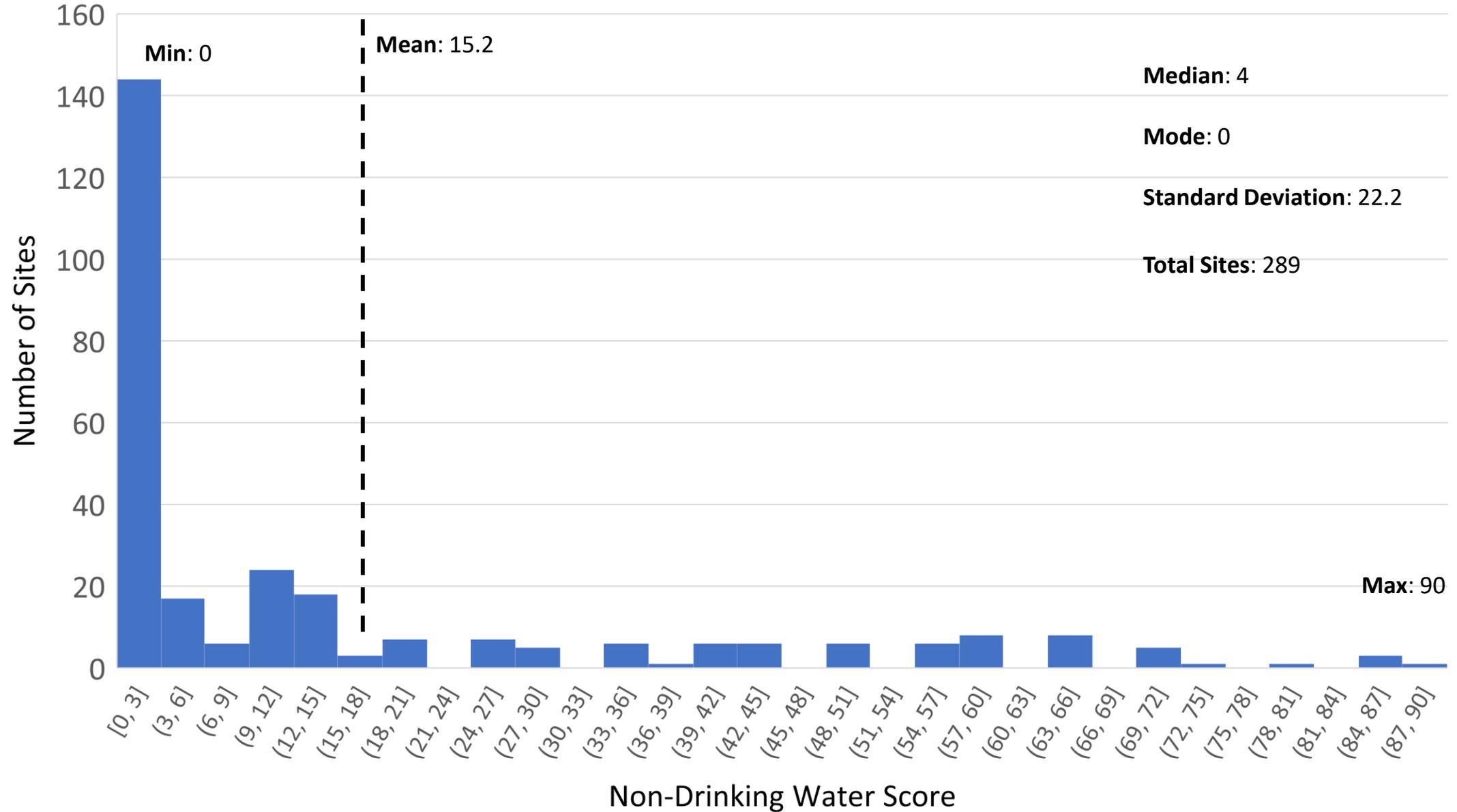
Top 20 Sites

Based on

Drinking Water
Score

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
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
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
3000426	4634 4671 East Washington Street & 3501	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

Histogram, Non-Drinking Water Score (Risk Ranking)



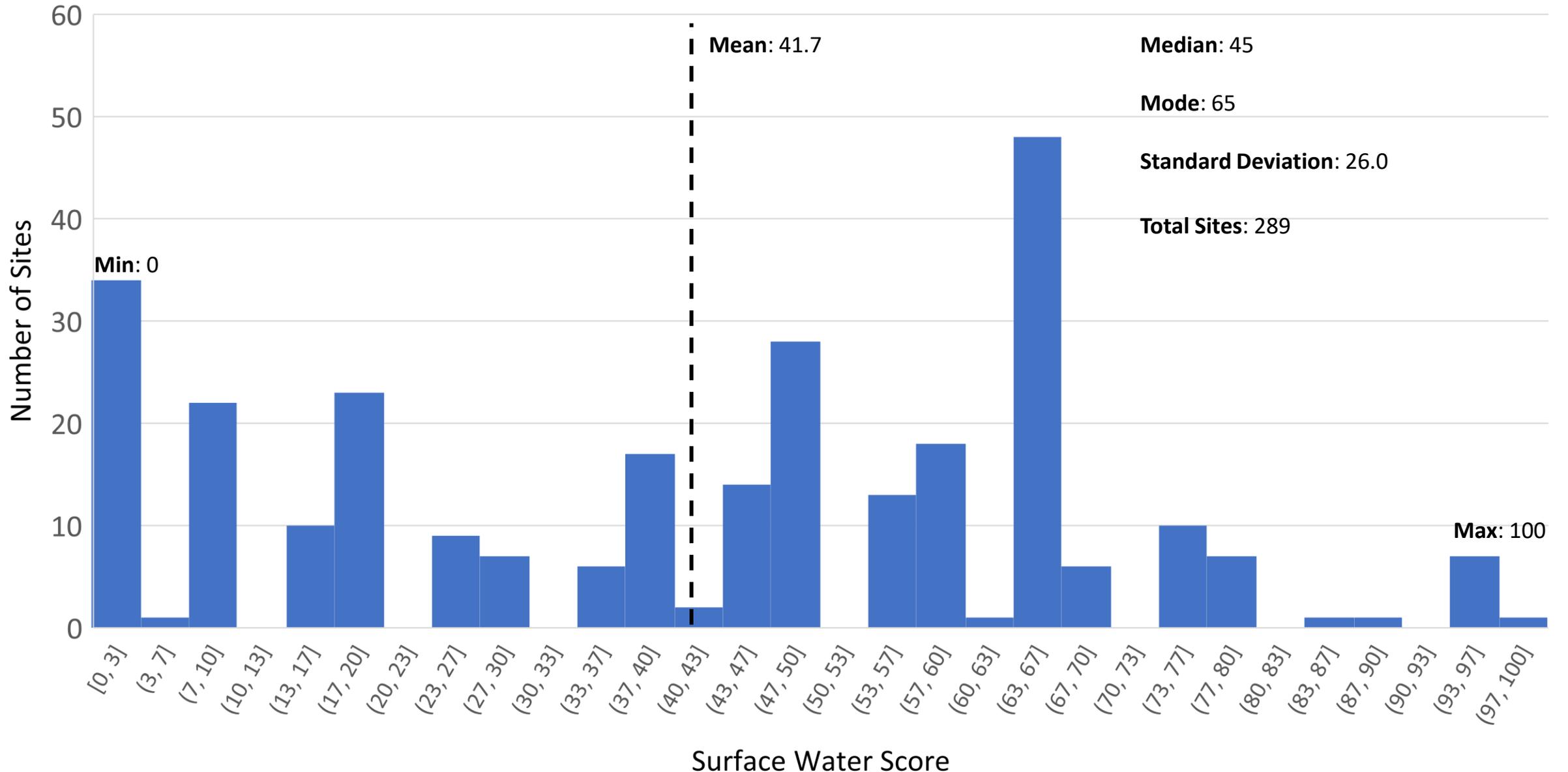
Top 20 Sites

Based on

**Non-Drinking
Water Score**

SiteID	Site Name	DW score	NDW Score	SW score	AQVul Score	Total Score
3000325	3603 N. Main Street	40	90	75	0.9	57.3
3000268	101 124th Avenue	60	85	20	0.9	53.95
Site 120	Menasha Corporation	0	85	55	0.5	23.75
3000438	6784-6874 Wiley Road, Douglas	60	85	45	0.5	36.75
3000321	3292 Lincoln Road	20	80	20	0.7	27.8
3000439	6494 Clearbrook Drive & 6402 and 6500 13	75	75	60	0.6	48
3000306	203 South Main Street	85	70	40	0.9	65.15
3000277	114 Pine Street	85	70	40	0.8	58.8
3000222	58th Street and 106th Ave Dump	5	70	55	0.7	27.45
3000282	1187 Lincoln Road (Trowbridge Twp)	70	70	50	0.6	43.6
3000029	Res Wells Lincoln Rd	65	70	50	0.6	42.1
70000514	Lincoln Avenue Area Groundwater	0	65	10	0.7	15.65
3000442	788 Lincoln Avenue, Holland	0	65	10	0.7	15.65
3000219	Baseline Road Pesticide Barn	10	65	0	0.7	17.15
3000151	Boyce, Lelia Public Administrato	70	65	80	0.6	48.7
3000152	Boyce, Lelia Public Admins 1	70	65	80	0.6	48.7
Site 762	Pease Avenue Pictures (site and WHPAs in Ottawa County)	60	65	70	0.6	43.7
3000259	Menasha Corp Landfill	0	65	55	0.5	20.75
Site 97	Brown Brothers Landfill	50	65	15	0.3	16.35
3000356	687 North 10th Street	90	60	75	0.9	71.7
Site 1990	Heath Twp Landfill	90	60	50	0.6	47.8
3000358	700 North Main Street	60	60	43	0.5	32.6
Site 95	Allegan Township Dump	95	60	40	0.5	40.75
3000336	4346 48th Street	50	60	65	0.4	30.2
3000414	Lalli Brothers Express LTD LSE	40	60	25	0.4	20.2
3000355	6797 118th Avenue	10	60	80	0.3	22.9
3000198	Ebert Farm	10	60	25	0.2	9.6

Histogram, Surface Water Score (Risk Ranking)



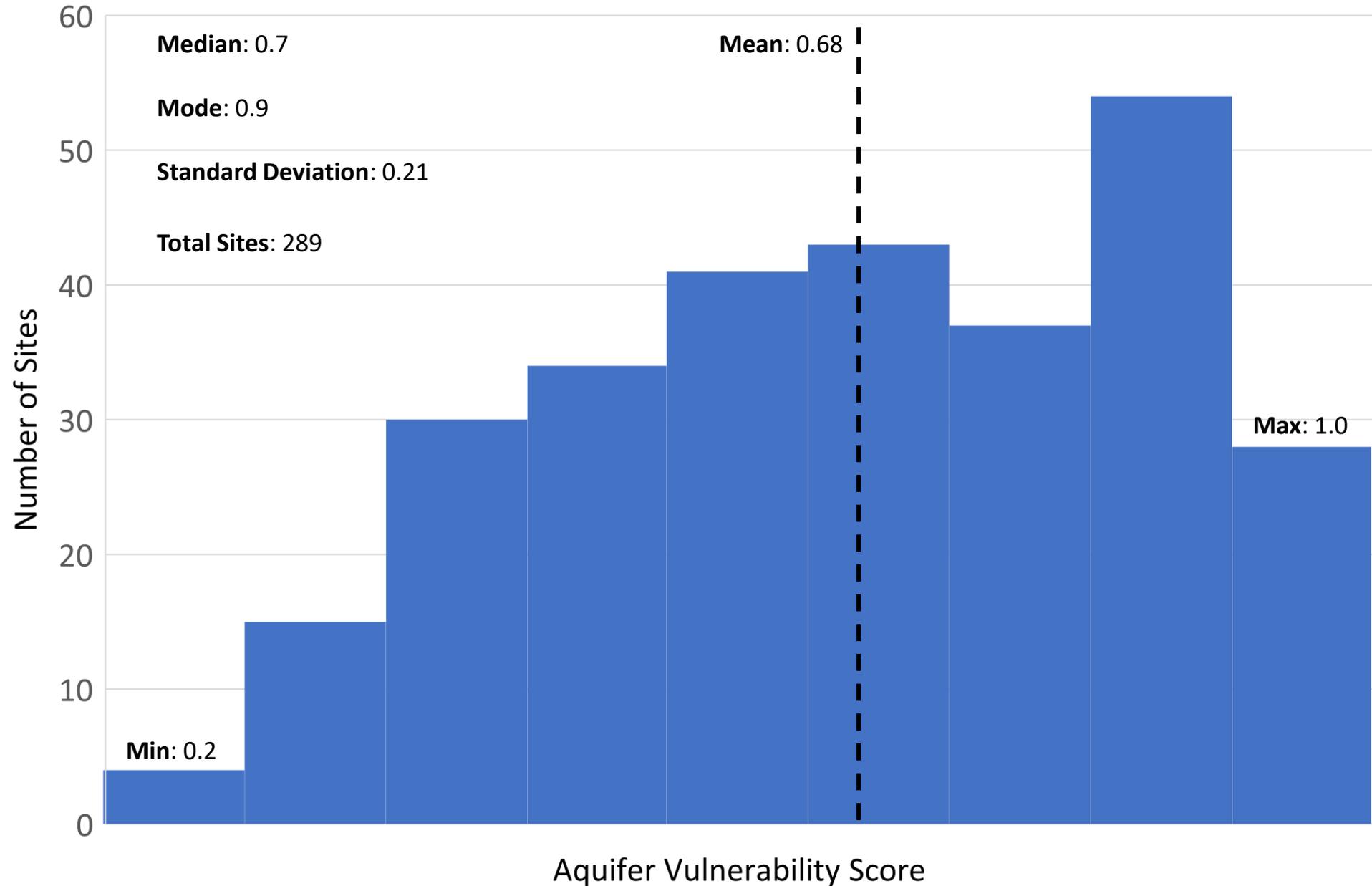
Top 20 Sites

Based on

**Surface Water
Score**

SiteID	Site Name	DW score	NDW Score	SW score	AQVul Score	Total Score
3000039	136th & 12th	40	0	100	0.9	38
3000426	4634 4671 East Washington Street & 3501	85	15	95	0.7	51.9
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
Site 135	Castleton-Maple Grove Dump	5	10	95	0.7	22.85
3000329	3717 Division Avenue	15	0	95	0.6	23.5
Site 117	Lee Twp Dump	0	0	95	0.7	19
Site 98	Casco Township Dump	0	0	95	0.6	19
Site 100	Clyde Manlius & Ganges Trash	0	0	90	0.7	18
3000018	MDOT Fennville	70	0	85	0.7	41.5
3000151	Boyce, Lelia Public Administrato	70	65	80	0.6	48.7
3000152	Boyce, Lelia Public Admins 1	70	65	80	0.6	48.7
3000355	6797 118th Avenue	10	60	80	0.3	22.9
3000244	Superior St (1112) W., Wayland	60	15	80	0.6	36.7
3000264	1134 West Superior Street	55	12	80	0.6	34.66
MID-980-588-495	Bush Oil Company	45	0	80	0.7	31.75
3000237	Wayland Recycling, Inc.	40	0	77	0.9	33.4
3000325	3603 N. Main Street	40	90	75	0.9	57.3
3000356	687 North 10th Street	90	60	75	0.9	71.7
Site 131	Bruce Girke; J & J Tires	35	40	75	0.6	32.7
3000349	641 W. Elm Street	40	10	75	0.9	35.7
3000332	4066 & 4070 Division Street Wayland	10	5	75	0.9	20.85
Site 107	Fennville City dump	10	5	75	0.7	19.55
3000016	Section 25 Gun Plain Township	90	0	75	0.8	51
3000316	309 Clark Street	20	0	75	0.9	24
3000293	1300 & 1400 S. Washington Avenue	0	0	75	0.4	15
3000335	4302 30th Street	0	0	75	0.9	15

Histogram, Aquifer Vulnerability Score (Risk Ranking)



Top 20 Sites

Based on

**Aquifer
Vulnerability
Score**

SiteID	Site Name	DW score	NDW Score	SW score	AQVul Score	Total Score
3000302	1840 142nd Avenue	65	0	70	1	46.5
3000023	Pilgrim Farms Pickle Plant	15	0	70	1	21.5
3000270	105-113 Brady Street	68	0	65	1	47
3000423	101 Brady Street, Allegan	68	0	65	1	47
3000272	111 Hubbard Street	68	0	65	1	47
3000271	110 Water Street (portion of)	65	0	65	1	45.5
3000333	406 Water Street	62	0	65	1	44
8231	Mr Steven K Angle (LUST site)	62	0	65	1	44
3000340	558, 520, and 512 Water Street	60	0	65	1	43
3000267	100 Monroe Street	55	0	65	1	40.5
3000391	Southwest 1/4 of Sec 28, T2N, R13W City	35	0	65	1	30.5
3000420	119 West Bridge Street, Plainwell	25	0	65	1	25.5
3000430	211 North Main Street, Plainwell, MI 490	20	0	65	1	23
3000429	201 Bannister Street, Plainwell, MI 4908	0	0	65	1	13
3000014	Angle Steel Div (Kewaunee Scientific)	70	17	60	1	52.1
3000360	712 East Bridge Street	75	15	60	1	54
3000367	798 E. Bridge Street Fmrly 760 E. Bridge	75	15	60	1	54
3000421	243 Hubbard Street, Allegan	80	0	60	1	52
3000310	236 Hubbard Street	80	0	60	1	52
3000422	140 East Bridge Street, Plainwell, MI 49	20	0	60	1	22
9400	Wesco #9 (LUST site)	30	55	50	1	41.5
3000261	Allegan (554) Street	28	55	50	1	40.5
3000345	610 South Platt Street	35	0	50	1	27.5
MID-092-947-928	Drug & Laboratory Disposal, Inc.	35	17	45	1	31.6
3000331	400 Broad Street	35	15	45	1	31
3000002	A 1 Disposal Corp Plainwell	35	15	45	1	31
3000063	Acorn St Industrial Park	30	7	40	1	25.1
3000022	Parker Hannifin Corporation	20	0	40	1	18

Next Steps

- FINISH the map-based presentation of risk ranking analysis
 - Site “symbols” of different colors/sizes based on Risk scores
- PREPARE Final Report with rankings and recommendations
- Submit supporting technical documentation
 - Groundwater Model Development/Calibration (submitted ✓)
 - Impact Area Analysis (submitted ✓)
 - WHPA delineation, Type 1 wells (will submit with Final Report)
 - Risk Ranking Analysis & Results (will be contained in Final Report)

Questions / Discussion