



Antrim County United Through Ecology (ACUTE)

December 13, 2013, Meeting Notes
Trichloroethylene (TCE) Groundwater Plume

Attendees: Gary Knapp, Three Lakes Association (TLA); Dean Branson, TLA; Steve Grill, Council of Property Owners Associations; Joe Elliott, Gourdie-Fraser Engineer; Janice Adams, DEQ-RRD, Gaylord; William Koenig, Mancelona Area Water and Sewer Authority (MAWSA); Peter Bigford, Shanty Creek Resort; Gary Street, Freshwater Future; David Peterson, Helena Twp.; David DeYoung, DEQ-ODWMA; Leslie Meyers, TLA; Chuck Edwards, Health Dept. of NW Michigan; Brad Slater, DEQ-Office of Drinking Water; Jon Bloemker, DEQ-Office of Drinking Water; Steve Murray, AMEC E&I; Len Mankowski, AMEC E&I; Linda Gallagher, Antrim Review; Mike Griffin, Coldwell Banker Realty; Grenetta Thomassey, Tip of the Mitt Watershed Council;; Jim Peters, Oil & Gas Industry; Jack Harmon, Cedar River Village; Jan Lindsay, Schuss Village; Art Lennox, Summit Village Assoc.; David Howelman, Antrim County; Duane Drake, TLA; Susan Leach-Sittel, TLA; Fred Sittel, TLA; Chuck Johnson, Mancelona Twp./MAWSA; Roxann Flake, Custer Twp./MAWSA; Larry Murton, MAWSA; Randy Rothe, DEQ-RRD.

1. **Welcome and introductions by Gary Knapp.** The primary purpose of this meeting was to seek a consensus on a timeline for when the TCE Plume will arrive at the Cedar River Well Field, and to develop a framework for advocating State appropriations to fund the engineering and construction of a new well field to proactively address this problem.

Historical perspective: Although our current focus is the “Wickes TCE plume” environmental advocacy and community engagement began with the Tar Lake Superfund site. Working with the Environmental Protection Agency (EPA) and the MI Department of Environmental Quality (MDEQ) Community Resource Development (CRD) coordinated the removal of 47 tons of tar and tar substances that were removed from a ground depression just south of the DURA Plant (previously Wickes Manufacturing). A groundwater contamination plume that originates at the Tar lake site moved approximately five and a half miles in a northwesterly direction – from the site. A second plume, which the MDEQ refers to as the Wickes Manufacturing TCE Plume, runs parallel with the Tar Lake plume. Since 2003, when it was formed by CRD, Antrim County United Through Ecology (ACUTE) has facilitated the bringing together of different stakeholders organizations, government and non-governmental. The primary focus of ACUTE was/is to work through a non-adversarial facilitated consensus (model) process in order to mitigate the environmental impact of these industrial catastrophes. In 2011, at the urging of several ACUTE members, the State of Michigan appropriated \$300,000 for a preliminary engineering study to explore options regarding the Cedar River Well Field. At a meeting in March 2012 a consensus was reached to relocate the Cedar River Well Field to the east side of Mancelona. We are here today to develop a timeline and an action plan for appropriating the funds to site, design and construct the new well field east of Mancelona and upgradient of the TCE plume. The intent is to be proactive and get out ahead of the TCE plume impacting the Cedar River Well Field – which provides approximately half of the MAWSA municipal water supply. By providing more lead time to get through the full process, up to and including construction, avoids the risk of losing the municipal water system and saves money.

2. **2a Leonard Mankowski, AMEC, (presentation attached).** Working in partnership with the DEQ, Health Department and MAWSA, there has been a lot of testing and studies to stay ahead of the plume. There is an interactive website available for people to check on their property: <http://bizhost-c5.mactec.biz/wickes/> Leonard's presentation includes maps of the plume location; TCE risks and threats; challenges include the size and depth; TCE is a synthetic that does not naturally breakdown in the present sandy conditions; 2008 Feasibility Study shows that it has been spreading for 50-60 years, the most cost effective approach is to monitor the plume, restrict new well installation and replace or treat impacted water supply wells; 2013 maps showing the TCE shallow and deep water plumes (the deep zone is the same aquifer as the CRWF), the ground water flow is slower in the deep zone than in the shallow zone, the map also shows routine sampling sites. Presentation continued with the map of expansion rates: shallow being 300-350 ft per year, detection of TCE in the sentinel wells in front of the CRWF anticipated to occur in the shallow aquifer by 2016 and 2017, and at the CRWF in 2019; water usage, including the impacts of recharge and refresh events. Rate acceleration is seen more in the intermediate aquifer, not the shallow aquifer.

Summary:

DEQ continues to monitor TCE plume migration.

In 2013 MDEQ funded expansion of water service.

Current migration rates suggest shallow-aquifer TCE will arrive at MW-6s (sentinel well #1) approximately spring 2016, MW-5s (sentinel well #2) approximately fall 2017, and OW-2s (overlying the CRWF intake screens), in approximately 5.5 to 6 years (2019).

CRWF pumping has not been found to significantly influence the shallow aquifer.

TCE in the intermediate aquifer is migrating more slowly than the shallow plume.

Reduction of maximum pumping rates and duration at the CRWF may reduce the risk to the intermediate aquifer. Increased storage at CRWF in 2015 could reduce the need for higher pumping rates during peak demand.

Deep plume concentrations have been trending downward and there is no evidence of expansion.

TCE has been detected in the deep aquifer at Schuss Mtn. Rd., moving more slowly.

The Shanty Creek Well Field lacks a significant confining layer and is more susceptible to TCE contamination (approximately 8-10 years).

DEQ 2013 study / test results to be on the website in the next couple of months.

Discussion: The following people provided addition information and perspectives:

2b Chuck Edwards, Health Department of NW Michigan, regarding the monitoring of residential wells: There are a total of six contaminated wells. The Health Department will continue monitoring in the spring from the official list provided by DEQ for 2014, which has 36 residential wells on it. Based on the information, likely three years out there will be a further need to expand the residential well monitoring into the Shanty Creek area. The Health Department's job is to check the wells and make sure there is appropriate action taken. Test results are sent to property owners. There are no testing or connection fees but there is a regular water bill once connected. People can opt out, then there is no more testing and any connection to the water system is at their own cost. The main reason people do not want to connect is because they want to keep their own water supply/well.

Summary:

Working to keep people informed and moved off contaminated wells on to the municipal water system.

2c Mike Griffin of Coldwell Banker Realty, Jack Harmon of Cedar River Village, Art Lennox of Summit Home Owners Assoc., Jan Lindsay of Schuss Mtn. Property Owners Assoc. regarding the real estate/property values side: Generally the TCE plume issue is well publicized, people have questions about the details. Resale is an issue for those that have opted out of connecting to the water system. Hook-up charge is approximately \$5,000 so it can break a deal. It is a real concern but misunderstanding and fear has killed more deals than the reality. It has depressed real estate values and the number of sales. There have been deals not closed because of the plume and the hook up fees but the **uncertainty is the biggest problem**. What do people do? They just stop looking in the area. People do not trust what they are being told; it feels like the issue is being underplayed. Property values are an issue. Most of the older development built in the '70s at Shanty Creek have private wells. That would require a complete system to be put in. Degradation through the older well casings is a concern.

2d Dave DeYoung of DEQ: Extending the water mains is the most expensive. Property owners only have to pay for the distance from the water main to their home. When water mains are extended to residential homes, part of the agreement with the property owner is that they must abandon their existing residential well – people do not want to give up their well. It can be hard to convince people.

2e Bill Koenig, MAWSA: View this as pieces of the puzzle. Some things are just stop gaps, such as merely changing the rates that water is pumped. Finding a new supply of safe, clean water is the hard part of the puzzle. Laying new main, etc., is the easy part.

2f Pete Bigford, Shanty Creek Resort: If the plume were to get to the well that would be it for Shanty Creek, even the rumor would be devastating and likely put us out of business. \$15 million goes into the community, including \$7 million on annual payroll for 600+ employees plus goods and services in the community and hundreds of thousands of dollars in property taxes. Not addressing this TCE plume problem would be devastating to the whole community.

Summary:

Property values are affected.

Communities are and will be greatly affected financially.

Degradation of old well casings is a concern.

Reducing the uncertainty about a safe, clean water supply is the most important priority.

- 3. Joe Elliott-Gourdie-Fraser:** Cedar River Well Field replacement, preliminary engineering findings, including proactive and reactive cost estimates. June of 2013 consensus to pursue a different well, referred to as Option 3. Presentation (attached) includes current work in progress; maps of wells, storage, water mains, and proposed well field; time line; cost estimates. Because it is not definite that the previously proposed well site (north of the Cedar River) would not get affected a different site has been selected. This site has better water quality and water pressure at a lower horsepower, creating a long term cost savings. There has been extensive model testing by the DEQ.

Dave Howelman of Antrim County states that there has been a lot done already, this is moving in the right direction and we need more money so we can stop hooking up residential property as TCE plume continues to migrate. Once water mains are in place it will be less expensive for people to hook up compared to drilling their own wells.

Summary:

The next six months will be completing the already planned investigation, test well, design schematic and water system model using the appropriated funds by June 2014.

Design Schematic includes two phases:

Phase I: Storage, estimate \$1.4M; Phase II: Supply, estimate \$1.3M

There would be a significant cost savings (~\$200,000) if Phases I and II were funded at one time, and an additional ~\$500,000 if construction proceeds proactively rather than reactively.

Recommended Next Step: Secure funding for Option 3, new well field on the east side of Mancelona.

4. Representative Greg MacMaster: Although unavailable for the meeting, Representative MacMaster will be actively involved in the process of appropriating State funds for the new well field.

Money is needed and what this group says will have a huge impact on securing funds. Rep. MacMaster needs a consensus from this group in order to effectively advocate for the DEQ Appropriations. We are competing with the rest of the state with environmental issues. We need to engage the whole community to educate and empower. We must be proactive vs. reactive to protect the \$17M investment in the existing public water system (MAWSA). We must bring together our timeline and budgetary time-line. The 2014 budget is set. The State legislature will be working on the State budget for FY2015 for the next four or five months. In requesting funds we can break it down into phases or we can go for it all. DEQ states that they do not want to gamble (roll the dice) and hope that contamination will not happen. Grenetta Thomassey of Tip of the Mitt Watershed Council works with the legislature in Lansing regularly. Economics is critical so use both dates (perceived and technical). Suggests advocating for the whole lump sum showing the cost savings. Breaking it down means dealing with a whole new legislature in the middle of the project and having to start "educating" the new State legislators like no previous work had been done.

5. Wrap-up, next steps, and ACUTE Consensus Outcome Statements from Dec. 13th meeting:

- ✓ Earliest date when the TCE plume could reach the Cedar River Well Field?
2016 perception date, perception effects property values (with a list of local economic impacts). Action: develop an economic outlook document with jobs, property values, etc.
2017 DEQ's technical date for when the TCE plume could reach the sentinel wells.
- ✓ How much does this group recommend be appropriated for FY 2015?
Full amount, broken down into phases with the urgency on Phase I storage.
- ✓ **Begin advocating for funding immediately. Legislature is putting together 2015 budget, which is expected to be in near final form by approximately May 2014.**
- ✓ Investigate other funding sources.

Next Meeting: January 24, 2014, 10 AM, Shanty Creek Resort, Fireside Room

Respectfully Submitted

Lois MacLean

ACUTE Administrative Assistant