**Former Wurtsmith AFB**
**Restoration Advisory Board (RAB) Meeting**
18 April 2018
5:30 – 7:57 pm Eastern Standard Time
Robert J. Parks Public Library
6010 N. Skeel Ave., Oscoda Township, MI 48750

**Final Meeting Minutes**

| **Members Present** | **Organization** | **Comment** |
|---|---|---|
| Tim Cummings | Oscoda Township | |
| Robert Delaney | Michigan Department of Environmental Quality (MDEQ) | |
| Christina Bush | Michigan Department of Health and Human Services (MDHHS) | |
| Bill Gaines | Community Member | |
| Arnie Leriche | Community Co-Chair | |
| Chuck Lichon | District Health Department #2 (DHD2) | |
| Matt Marrs | Air Force Civil Engineer Center (AFCEC)/Air Force Co-Chair | |
| Tony Martoglio | U.S. Department of Agriculture Forest Service (USFS) | |
| Joe Maxwell | Community Member | |
| Jeff Moss | AuSable Township | |
| Mike Munson | Oscoda-Wurtsmith Airport Authority (OWAA) | |
| Dan O'Conner (Alternate) | Community Member | |
| Jerry Schmidt | Community Member | |
| Dan Stock (Alternate) | Community Member | |
| Robert Tasior | Community Member | |
| Aaron Weed (Alternate) | Oscoda Township | |
| Cathy Wusterbarth | Community Member | |
| Catherine Larive (Alternate) | Community Member | |
| Ryan Mertz | Community Member | |
| Joe Plunkey | Community Member | |
| John Nordeen (alternate) | Oscoda Township | |
| Irene Dunn (alternate) | Community Member | |
| **Members Absent** | **Organization** | |
| Jim Davis (Alternate) | Community Member | |
| Martha Gottlieb (Alternate) | Community Member | |
| Matthew Hegwood | Community Member | |
| **Other Attendees** | **Organization** | |
| Saamih Bashir | AMEC (Air Force contractor) | |
| Dale Corsi | DLZ (MDEQ contractor) | |
| Jenny Haglund | Oscoda Press | |
| Breanne Humphreys | Cherokee (Air Force contractor) | |
| Michael Jury | MDEQ | |
| Bill Palmer | Trustee of Oscoda Township Board | |
| Paul Rekowski | AGEISS (Air Force contractor) | |
| Beth Flynn | AMEC (Air Force contractor) | |
| Malcolm McClendon | AFIMSC Public Affairs | |
| Val Delafuente | AFCEC BRAC Program | |
| Dirk Pohlmann | Bay West (Air Force contractor) | |
| Russell Williams | Van Etten Lake Resident | |
| Troy Techlin | Saginaw Chippewa Indian Tribe | |
| Charlotte S | | |
| Jessie Stuntebeck | U.S. Forest Service | |
| Mike Sebolwitz | | |
| Rose Mary Nentwig | Oscoda Resident & Librarian | |

| | | |
|---|---|---|
| Leslie Auriemmo | Forest Service, Huron-Manistee Forest Supervisor | |
| Chris Coulm | Oscoda Resident | |
| Greg Watson | Aerostar, LLC | |
| Vicky Cole | Van Etten Lake Resident | |
| David Dailey | Township of Greenbush Clerk | |
| Greg Cole | NOW – Group | |
| Lisa Williams | | |
| Gene Kirvan | AuSable River Steelheaders, Lake Huron Sport Fishing | |
| Carol Spaniola | NOW Group | |
| Jacob Bennett | Congressman Dan Kildee's office | |
| Marilyn Overholt | | |
| "Bus" Spaniola | NOW Group | |
| Lynn Winn | | |
| Dave Winn | | |
| Steve Sliver | MDEQ | |
| Carol Isaacs | MPART Director | |
| Melanie Brown | MDEQ, Communications Director | |
| **Facilitator** | **Organization** | |
| Tim Sueltenfuss | Galen Driscol (Air Force contractor) | |

**Attachments**
Attachment 1: RAB Agenda
Attachment 2: Meeting Slides
Attachment 3: MDEQ Slides
Attachment 4: Wurtsmith Project Tracker
Attachment 5: Public Information Guide
Attachment 6: Congressional Letter
Attachment 7: AF Acronym List
Attachment 8: RAB evaluation summary
Attachment 9: Action Item Tracker

**Welcome and Introductions (0h:05m:55s)**

Mr. Tim Sueltenfuss, facilitator, began the RAB meeting at 5:30 pm and welcomed RAB members and others in attendance. Mr. Sueltenfuss introduced Mr. Arnie Leriche, the RAB Community Co-Chair. Mr. Leriche welcomed the RAB members to the meeting. Mr. Leriche told the audience that he gave RAB leaders each a Rotary coin prior to the meeting to encourage honesty, goodwill, transparency and effective partnering to achieve expedited contamination resolution. Mr. Sueltenfuss introduced Mr. Matt Marrs, the Air Force Co-Chair and the Base Realignment and Closure (BRAC) Environmental Coordinator (BEC). Mr. Marrs welcomed the RAB members to the meeting and commended members for their enthusiasm and energy. Mr. Sueltenfuss initiated the presentation and the attendees introduced themselves.

**Introductions: (0h:7m:45s)**
Greater than 50% of community RAB members, greater than 50% of government RAB members, and both co-chairs were present, so a quorum was present in the event of an administrative decision. Mr. Sueltenfuss reviewed the agenda and reminded attendees to add their name to the sign-in sheet.

**Agenda: (0h:11m:0s)**
Per a decision made earlier between the RAB co-chairs, Mr. Sueltenfuss announced some adjustments would be made to make the RAB meeting more streamlined and efficient. Mr. Sueltenfuss noted the meeting was being video recorded and livestreamed on YouTube at:
https://www.youtube.com/watch?v=pyf47gX4d-w

**(0h:13m:00s):** Mr. Sueltenfuss highlighted one of the changes regarding the public comment period at the end of the meeting. He instructed those who plan to make a public comment to sign a separate sign-in sheet and fill out a comment card and asked them to step up the podium to make their comments within a three-minute time limit. After the comment he said the RAB members would confer to decide if a follow-up action is required. Mr. Sueltenfuss said the co-chairs agreed to extend the meeting by 10 minutes to add more time for the public comment period.

RAB members read and agreed to abide by the team ground rules:

- Respect one another and maintain an atmosphere of open dialogue and exchange of ideas.
- Use our time together efficiently, wisely and respectfully.
- Listen and remain open to differing points of view.
- Speak clearly and succinctly one person at a time; avoid interrupting others.
- Share information early, openly and honestly.
- Maintain a propensity for progress: prepare, discuss, document and move forward.
- Accurately and objectively relay to others the discussions that occur at board meetings.

**(0h:16m:00s):** Mr. Sueltenfuss initiated the stakeholder update portion of the meeting. Stakeholder updates were, and will continue to be, limited to stakeholders who provided 1-2 bullets on anything noteworthy that had occurred since the previous RAB meeting. He reminded the RAB that several emails requesting updates had been sent out in the past few weeks and that updates would be limited to those who provided input in advance.

Mr. Sueltenfuss introduced two senior members in attendance.

**(0h:16m:50s):** Mr. Val Delafuente, Air Force BRAC Program execution branch chief, introduced himself and his role. He talked about his previous employment with EPA and his current role as a mid-level program manager for the BRAC program. Mr. Delafuente said he puts together the projects and brings together subject matter experts; he supports policy and programming decisions made by senior leaders by putting together the funding and contracts needed to get the work done. He also discussed his experience with former Pease Air Force Base, New Hampshire.

**(0h:18m:26s):** Mr. Sueltenfuss introduced Ms. Carol Isaacs, Michigan Per- and Polyfluoroalkyl Substances (PFAS) Action Response Team (MPART) Director. Ms. Isaacs talked about meeting with members of the public to better understand the impacts and concerns felt by Oscoda residents and she expressed frustration at the amount of time that has passed since the issue came to light and her desire to help expedite resolution.

Ms. Isaacs said the state has committed to removing foam from Van Etten Lake this summer for a foam pilot study and work with the EPA to see what they can do in the long run. Ms. Isaacs also touched on the ongoing dispute resolution. She said the state doesn't perceive there is a real plan to remedy the issue long term. She said MPART wants characterization of contamination and a real plan to clean it up, long term.

**General Updates**
***Stakeholder/RAB Member Updates***

**Air Force**
***Matt Marrs (0h:22m:12s)***
Mr. Marrs touched on the latest of the new Granular Activated Carbon (GAC) treatment plant. He introduced the new site superintendent, Mr. Greg Watson with Aerostar. He noted the recent snowstorm put the project on hold for the past week, but that they're hopeful they can get back in the field quickly and stay on schedule.

Ms. Breanne Humphreys, AFIMSC public affairs support, provided a brief update on the new and improved Wurtsmith project Information Repository located in the Robert J. Parks Library.

**MDHHS**

***Christina Bush (oh23m:50s)***

Ms. Bush announced that MDHHS plans to sample fish in Van Etten Lake and the lower AuSable River once the ice melts. They also want to take fish out of Cedar Lake. She said it looks like they may be able to get deer meat samples, but she deferred to the U.S. Forest Service for forthcoming details on that. On the topic of foam, Ms. Bush said that MDHHS toxicologists are in talks with EPA toxicologists and the MDEQ as they work to learn more about the foam, which she characterized as a seemingly rare event. Ms. Bush also announced drinking water well re-sampling that will take place at two neighborhoods: Colbath and Pinecrest.

**Community Member Updates:**

***Arnie Leriche (0h:26m:27s)***

Mr. Arnie Leriche, Community Co-Chair, said the environmental agency and the Air Force are the key team to any remediation in the country. He asked, as a placeholder action item, both parties take a look at their respective authorities and bear down to minimum facts they need to develop an interim action, which the AF remediation process (CERCLA) allows. Mr. Leriche highlighted the FT-02 GAC Treatment System put in place in 2015 as an example of an interim mitigation action permitted and executed within the CERCLA process. He also cited examples at Pease with over $55 million spent on interim mitigation actions over 3 FFY's – 2015, 2016 and 2017 per USAF Press release on July 21, 2017 He requested this item be added to the RAB Action Item Tracker.[AI #20]

Mr. Leriche also cited a draft study completed by MDEQ and investigation work, including fire hydrant study which may be able to answer questions regarding potential historic drinking water exposure to past Wurtsmith residents and veterans. Mr. Leriche requested that the report on the modeling of the plumes, as promised to the Veterans, be released asap for the mitigation work he referenced earlier and to help aid veterans and long-term residents who may have been exposed to contamination for decades. Mr. Leriche requested the status and release of this report be added to the RAB Action Item tracker. [AI #21] [Note: Bob Delaney responded during his Update session that "upper management wants to have an outside expert or have it validated . . . because it's a really important report **(0h:53m12s).**

***Bill Gaines (0h:32m:33s)***

Mr. Gaines referred to the November 1, 2017, meeting where Ms. Beth Flynn discussed the PA. Mr. Gaines recalled Ms. Flynn insinuated the runway wasn't ever foamed and called into question the validity and thoroughness of the PA based on personal experience as a veteran and based on narratives from former Wurtsmtih service members with knowledge of Wurtsmith runway operations. Mr. Gaines read excerpts from several narratives on Aqueous Film-Forming Foam (AFFF) use on the runway at Wurtsmith.

Mr. Sueltenfuss thanked Mr. Gaines for contributing his perspective and asked Mr. Marrs for input on Mr. Gaines' comments. Mr. Marrs confirmed the Air Force will further evaluate the information Mr. Gaines brought to light.

***Cathy Wusterbarth (0h:38m:30s)***

Ms. Wusterbarth talked about the outreach and activism achieved through the work of a recently formed community action group NOW (Need Our Water). Ms. Wusterbarth said NOW successfully provided a voice through a variety of methods, including media, social media, and outreach and through establishing communication lines through state legislatures who have asked for a list of specific requests from the community. She outlined those requests which include: voting on bills regarding the Safe Drinking Water Act and the "no stricter than" federal rule; mitigating the contamination at the source immediately, tying into municipal water supplies for those in contaminated areas, testing affected wells in contaminated areas throughout the year, being included in health studies or health monitoring, and enforcement of the MDEQ Rule 57 regarding water quality values.

**Break (0h:40m:15s)**

Mr. Sueltenfuss concluded the stakeholder update section of the agenda and announced a 10-minute break.

**MDEQ Update (0h:52m:20s)**
*Bob Delaney*
Mr. Delaney was permitted to provide a stakeholder update for MDEQ. This exception was allowed, but in the future the co-chairs will enforce the rule that speaking time is allocated only to stakeholders who provide updates and presentation materials in advance. He announced the residential sampling Ms. Bush referenced was already complete and residents would be receiving validated results soon. **(0h:53m12s)** He discussed the plume monitoring report Mr. Leriche mentioned and said MDEQ does have that report and "upper management wants to have an outside expert or have it validated . . . because it's a really important report"**.** Once complete it will be distributed. He said surface water sampling is coming up and they have a number of sites they plan to regularly sample to understand how climate and other variables may affect surface water levels of these contaminants. Mr. Delaney said MDEQ will be doing groundwater flow monitoring to better understand data in conjunction with the complex geology and hydrogeologic assessments of the area. He said MDEQ will be finishing drilling as part of their remedial investigation work. They had intended to do this drilling at the end of last year but it was delayed due to weather. They anticipate doing this work in June 2018.

**Wurtsmith USAF 2018 Activities (0h:55m:30s)**

Mr. Marrs began the Air Force presentation with a 2018 calendar timeline of project milestones and briefed progress on the Benzene/Arrow Street GAC Pump and Treat System (P&TS) currently under construction with the first 500gpm GAC

Mr. Marrs said AMEC Foster Wheeler will be back in the field in May conducting further Supplemental Site Inspection (SSI) work. Mr. Marrs introduced AMEC consultant Beth Flynn to provide an update on ongoing SSI work and upcoming sampling activities.

**(1h:04m:08s):** Ms. Flynn said AMEC finished the first round of SSI sampling in December 2017 at Areas 1,15, 2 and now Area 7. She reiterated the primary focus of sampling, in terms of priority areas, was protecting human health from drinking water exposure by prioritizing areas downgradient of contamination. Ms. Flynn summarized the process for collecting groundwater sample data at various depths to assess the downgradient extent of contamination to help determine where there is contamination, evaluate concentrations and determine where contamination may be moving. She said they will be stepping off base to gather samples from drinking water wells downgradient of the Air Force's investigation footprint.

She said they are also looking to further characterize the upgradient source areas. For example, in Area 1 the preliminary assessment identified it as a potential AFFF release site due to that location being an area where fire vehicles were likely tested and calibrated. She said based on Site Inspection results and initial SSI sampling, they know the site has higher levels of PFOS and PFOA, but they need to do additional sampling to better understand the size of the impacted area and if there are other source areas they're not aware of. Ms. Flynn said sampling results will also help the Air Force evaluate the effectiveness of the P&TS and identify concentrations that may be getting past the extraction wells.

Ms. Flynn said they will be installing additional monitoring wells to better identify concentration trends and evaluate areas where PFOS /PFOA could threaten residences. Ms. Flynn said all the data being gathered will feed into a groundwater model that will be used to help better understand contamination which is necessary to move forward with actions that protect human health and mitigate drinking water exposure.

**(1h:18m:30s):** Ms. Flynn highlighted the objectives of SSI sampling for Areas 2 and 7. She referenced the background of both areas. Based on the hydrogeology gathered from borings placed between the two sites, she said the sites seem to be co-mingling. They will be collecting additional samples; including vertical aquifer sampling (VAS), installing additional groundwater monitoring wells to better hydrogeology and groundwater flow and continue to protect drinking water receptors.

Field sampling is expected to begin mid-May.

**(1h:20m:25s):** Ms. Flynn then discussed the upcoming drinking water monitoring program. She explained the quarterly monitoring schedule will begin in May, and based on results will likely reduce to annual after that. The sampling will be conducted within the Air Force study area and include all potable wells. Ms. Flynn said the Air Force will be doing additional outreach — working with DHD2 and placing an advertisement — to notify all residents within the study area about the sampling and provide them with the information they need to have their DW sources sampled.

**(1h:28m:30s**): Mr. Gaines asked if VAS is a one-time sampling event. Ms. Flynn confirmed that it is and that VAS helps identify ideal locations for installing monitoring wells. Mr. Gaines stated that he would like to know when the work plan will be made public. Mr. Gaines commented on residential well sampling being primary located at an area south of the runway end. He stated he's concerned that he doesn't see private well sampling planned further north in the Air Force study area and asked if that could be done in 2018. Ms. Flynn showed on the map (slide 16) where PFOS/PFOA detections are indicated north of the runway area and said there are residences that will be sampled — if the homeowners grant the Air Force permission to sample — as part of the quarterly drinking water monitoring plan. As for the north end of the base, Ms. Flynn said the YMCA camp is on a municipal supply and therefore will not be part of the drinking water monitoring program.

Mr. Gaines also asked how much MDEQ and MDHHS data has been included in Air Force investigation.

Mr. Delaney confirmed MDEQ shares all their data with the Air Force. Mr. Leriche questioned whether or not the Air Force has done anything with the data. Mr. Marrs confirmed the Air Force does review and use data provided by outside agencies.

Ms. Flynn said the majority of the data provided on public documents is Air Force data because the nature of the investigation focuses on base.

Mr. Marrs clarified that while the Air Force is not currently investigating areas off base (outside the Air Force study area) that type of investigation work is part of the CERCLA process at a later phase.

Mr. Delaney volunteered to share agency data with anyone interested. Mr. Leriche reminded all stakeholders that project reports and other public information should be provided to the RAB. Mr. Delaney said the best way to achieve that would be to send the Air Force the documents and allow them to place them in their respective repositories.

**(1h:32m:00s):** Mr. Munson, Oscoda-Wurtsmith Airport Authority, expressed concern there might be some challenges with the Airport Authority and BRAC if there is not adequate communication. He expressed concern that without adequate communication, last minute arrangements could impact airport operations, like upcoming construction, or result in delaying Air Force investigation work. He asked that the two agencies work hand-in-hand to coordinate in advance and ensure both parties are minimally impacted. An action item for coordination was recorded.

Mr. Jeff Moss Community RAB member asked for a future agenda item to clarify how data collected from various agencies is reviewed and/or used, and whether or not it's currently used to show the whole site picture that's been pieced together to date.

A member of the community asked whether or not the communities on the east side of Van Etten Lake would have their wells tested. Mr. Marrs said the Air Force does not have plans currently to test those wells based on the current phase of the CERCLA process.

**RAB Business (1h:40m:38s)**

**AR/IR**
Ms. Humphreys, summarized organization improvements made to the information repository and highlighted the list of documents added to the AR since the 13 February 2018 meeting.

**Future meetings**
Mr. Marrs confirmed the Air Force would continue to schedule bi-monthly RAB meetings through the end of FY18, at which time they'll assess moving to a quarterly meeting schedule as they move into the winter months. Mr. Sueltenfuss stated the co-chairs had tentatively selected 6 June and 15 August as upcoming meeting dates. He indicated that RAB members would be contacted by email to confirm their availability on these dates.

**MDEQ presentation (1h:45m:15s)**
Mr. Delaney was allowed to provide a presentation to the RAB that had not been reviewed in advance of the meeting by the co-chairs, as is the protocol established by the co-chairs. This exception was allowed due to a request made during the meeting break by co-chair Leriche. Mr. Delaney provided a 20-minute summary of recent MDEQ sampling efforts and findings. Mr. Delaney presented a sampling map that is a conglomerate of Air Force and MDEQ sampling results. Based on current data findings, Mr. Delaney estimates approximately eight square miles of water is impacted by contamination. Recent investigation work included investigating under the AuSable and extending residential sampling to the Cedar Lake area. Mr. Delaney talked about the complexity of the plumes due to varying AFFF formulations over the years, resulting in different rates of plume migration.

Mr. Delaney pointed out an area to the east of Van Etten Lake where there are only a few low-level concentrations, north of Phelan Creek. He said all the chemicals are long-chain PFAS they're unsure where they're coming from, but they're very low concentrations they're not too concerned about.

Mr. Delaney pointed out an area near the mouth of the AuSable River and an area near the Colbath neighborhood where they've had several hits and said they just finished up additional residential sampling in these areas so they can determine where plumes are moving. He said the contamination identified at the mouth of the AuSable River is PFOS, but based on the lack of PFOS found in wells between the base and the two wells with higher concentrations, MDEQ doesn't believe this is related to any of the sources identified on the base, but more likely from isolated uses of AFFF for emergency response situations. Mr. Delaney pointed out an area near Cedar Lake where he said they've identified a small plume. He said the presence of PFAS is not a surprise since PFAS can be found virtually anywhere there are people, but that MDEQ is focused on that area for more investigation work since the concentrations are a bit higher. He said based on the signature and other data this plume is not coming from the base and that it's likely a different source.

At the south east side of Van Etten Lake, Mr. Delaney said the Air Force has stated that no evidence to date links PFOS/PFOA detected in wells in those areas to the base, and that even if it was, no action would be required since none of those drinking water sources sampled by MDEQ exceed the health advisory.

A resident, Russell Williams, asked about the depth of well testing and other variables that impact results. Mr. Delaney gave a few examples of well depth, geology and seasonal impacts, like melting snow, which can explain neighbors with notably different well results. He said based on this, instead of conducting additional sampling, MDEQ has provided filters to residents in the south east side of Van Etten Lake and asked the Air Force to investigate the plume.

An audience member asked if the testing completed on the east side of Van Etten Lake matched the "fingerprint" of contamination found on Wurtsmith. Mr. Delaney said certain areas did match, and others were very similar, though not a one-to-one match. He explained it's difficult to know for sure because they're still learning about how plume characteristics may change as they migrate.

**(1h:56m:31s):** Mr. Tim Cummings asked for clarification about Clark's Marsh and whether or not it's included in the Air Force's study area. He referenced Dr. TerMaath's comments at the 1 Nov 2017 RAB

meeting regarding the fact Clark's Marsh is part of the Air Force investigation by extension of FT-02. He asked, if the area is indeed part of the base, why they don't yet understand the nature of contamination. He asked that an Action Item be added and referenced back to the answer given by Dr. TerMaath on 1 Nov. (AI23 assigned)

Mr. Leriche asked about contamination found at the mouth of AuSable River. Mr. Leriche said he heard rumor that the Air Force firefighting teams had boats at the mouth of the river in case they had crashes on Lake Huron.

A member of the community (David Daily) asked Mr. Delaney if they've sampled surface water for nearby water bodies. Mr. Delaney confirmed MDEQ has sampled Van Etten Lake; Van Etten Creek and the AuSable River, but not Lake Huron. He said there are so many sources for PFAS and the Great Lakes are undoubtedly affected.

Mr. Delaney reminded the audience that MPART has a website with information, including a page on Wurtsmith that they're working on updating.

**(2h:03m:30s):** Ms. Bush gave an update on why there is sampling being conducted in the Colbath and Pinecrest neighborhoods. The last time Colbath was sampled, the monitoring wells yielded results slightly above the EPA lifetime health advisory (HA) for PFOS/PFOA. The Pinecrest wells had reduced to non-detect. Based on these results, Ms. Bush said they requested additional sampling to further assess these.

Ms. Wusterbarth read an April 18, 2018 letter from Michigan state leaders to the Assistant Secretary of the Air Force and Assistant Secretary of Defense. The letter asks that the DoD use this year's funding to stop additional contamination of groundwater and surface water coming from Wurtsmith.

**Public comment period (2h:06m:35s)**

**David Dailey (2h:10m:05s)**
***Township of Greenbush Clerk***
Citing slide #12, Mr. Dailey wanted to know about what's being done to prevent contamination from Clark's Marsh reaching the AuSable River. He's also interested in what's being done to contain contamination in various locations around the base.

Mr. Gaines asked about an unresolved action item: determine agency responsible for addressing sample results that exceed the EPA HA near the high school. Mr. Marrs said he is still waiting on an official Air Force response regarding that issue. Mr. Leriche inquired about MDEQ assistance until the Air Force has a response on that issue. Mr. Leriche also asked RAB members to provide a list of priority action items.

**Catherine Larive (2h:16m:20s)**
***Alternate RAB Member***
On Monday the 16th, Ms. Larive and her husband witnessed a film on Van Etten Lake. She asked what would be done about the foam and when it would be done. She expressed concern about potential health impacts to residents, veterans and children. She also raised concern about wildlife impacts, namely a mallard she witnessed in distress and wanted to know what would be done to address the foam and resulting issues.

Mr. Mike Jury, MDEQ, said he contacted the Department of Natural Resources to establish a process for responding to wildlife concerns in the future. He said individuals who spot any wildlife in distress, or deceased, to contact Mr. Jury and he will work with DNR to collect the wildlife and test it.

**(2h:19m:50s):** Ms. Carol Isaacs, MPART director, provided background on the investigation and other things being done in regard to the foam—a pilot study to be conducted this summer to work on foam collection/removal and inspection.

**David Winn (2h:22m:07s)**

***Van Etten Lake resident***
Mr. Winn asked if the new GAC treatment system going into operation in August is going to treat the water being discharged to Van Etten Creek to the 12 ppt standard. Mr. Marrs said that it should. He clarified that the system is designed to treat to that level, but it can't be guaranteed. Mr. Delaney said MDEQ will be there to enforce.

**RAB Member Closing Comments**

Mr. Moss asked to see an action item to discuss areas with surface water detections from Foote dam along the Au Sable River to Lake Huron. (Future Action Item 10 created)

**(2h:25m:30s):** Mr. Cummings noted he felt the RAB has devolved recently. This issue of PFAS has been tested by MDEQ since 2001. (Note: MDEQ testing began in 2011) He'd like to change the perspective from PFAS being an "emerging issue" to focus more on gaining control of contamination and preventing it from spreading.

**(2h:26m:25s):** Mr. Tony Martoglio, U.S. Forest Service, talked about their ability to work under CERCLA and their capabilities to augment the Air Force's investigation efforts. Moving forward, the USFS and Air Force are working together to establish the best way to move forward jointly. Some of the things the Forest Service is doing to help the Air Force or the MDEQ characterize contamination is by working with both agencies on locating monitoring wells within USFSs land. Clarks Marsh is within a larger analysis area where Forest Service personnel are currently surveying resources under the NEPA for activities proposed for this larger analysis. They have committed resources in the past and will commit more this summer to complete surveys in these areas where Forest Service proposed actions and future investigation work overlap.

Mr. Leriche encouraged members of the public to contact RAB members with comments, questions and let them know topics of importance so the RAB can facilitate the needs of the community.

**Next RAB meeting**
Mr. Sueltenfuss said he would be in touch with RAB members via email concerning proposed RAB meeting dates on 6 June and 15 August.

**Conclusion**

The RAB meeting adjourned at 7:57 p.m.

Former Wurtsmith AFB
Restoration Advisory Board Meeting
18 April 2018
Final Agenda

# RESTORATION ADVISORY BOARD (RAB) MEETING

**DATE/TIME:** Wednesday, April 18 2018, 5:30-7:35 p.m. EDT
**LOCATION:** Robert J. Parks Public Library, 6010 N. Skeel Ave., Oscoda, MI 48750
[Note: This meeting will be conducted as a teleconference in the event of inclement weather.]

**GROUND RULES:**

1. Respect one another and maintain an atmosphere of open dialogue and exchange of ideas.
2. Use our time together efficiently, wisely, and respectfully.
3. Listen and remain open to each other's varying points of view.
4. Speak clearly and succinctly one person at a time; avoid interrupting others.
5. Share information early, openly, and honestly.
6. Maintain a propensity for progress: prepare, discuss, document, and move forward.
7. Accurately and objectively relay to others the discussions that occur at board meetings.

| Topic | Purpose | Presenter | Time |
|---|---|---|---|
| | Introductions | | |
| Welcome | • Air Force and community co-chairs welcome RAB members and attendees.<br>• Participants introduce themselves and read ground rules.<br>• Facilitator summarizes agenda. | Matt Marrs<br>Arnie Leriche<br>All<br>Tim Sueltenfuss | 5:30-5:40 |
| | General Updates | | |
| Stakeholder/RAB Member Updates | • Government RAB members provide brief updates for their stakeholder organizations. | Government RAB members | 5:40-6:00 |
| | • Updates from other RAB members regarding matters pertinent to the RAB. | RAB Members | 6:00-6:10 |
| | BREAK | | 6:10-6:20 |
| 2018 Activities Calendar | • Air Force calendar of project activities planned through 2018. | Matt Marrs | 6:20-6:30 |
| Granular-Activated Carbon (GAC) System Update | • Update status on new GAC Treatment Plant. | Matt Marrs | 6:30-6:45 |
| Preliminary Prioritization Objectives | • Discuss future investigation and drinking water sampling activities based on SSI Phase I findings. | Matt Marrs<br>Beth Flynn, AMEC FW | 6:45-7:05 |
| | RAB Business | | |
| Meeting Minutes and Action Items | • Update status of previous meeting minutes.<br>• Update status of current action items. | Tim Sueltenfuss | 7:05-7:10 |

Former Wurtsmith AFB
Restoration Advisory Board Meeting
18 April 2018
Final Agenda

| Topic | Purpose | Presenter | Time |
|---|---|---|---|
| Schedule Next RAB Meeting | • Consider date for the next RAB meeting. | RAB members | 7:10-7:15 |
| Meeting Evaluation | • Evaluate elements of this meeting that worked well and elements that need change. (Note: All attendees are encouraged to complete written meeting evaluation forms.) | All | 7:15-7:20 |
| Public Comment | | | |
| Public Comment | • Public participants provide two-minute verbal comments to the RAB.<br>• [Note: Public participants may also choose to provide written comments.] | Public participants | 7:20-7:30 |
| Conclusion | | | |
| Conclusion | • Co-chairs offer closing remarks. | Co-chairs | 7:30-7:35 |
| RAB Meeting Adjourns | | | |

# Air Force Civil Engineer Center

# Wurtsmith Restoration Advisory Board Meeting

**18 April 2018**
**Matt Marrs**
**AFCEC/CIB**

# Wurtsmith RAB

## Welcome

Attachment 2

# Wurtsmith RAB Agenda

**WELCOME**

- Introductions
- Ground rules

**UPDATES**

- Stakeholder update

**BREAK** *10-minute* **BREAK**

**2018 ACTIVITIES**

- 2018 Activities Calendar
- Summer /Fall Activities
- DW Sampling Schedule

**RAB BUSINESS**

- 13 Feb. Meeting minutes
- Next meeting

**PUBLIC COMMENT**

- Two-minute limit

Attachment 2

# Wurtsmith RAB Ground Rules

| | |
|---|---|
| **01** | Respect one another and maintain an atmosphere of open dialogue and exchange of ideas. |
| **02** | Use our time together efficiently, wisely and respectfully. |
| **03** | Speak clearly and succinctly one person at a time; avoid interrupting others. |
| **04** | Listen and remain open to differing points of view. |
| **05** | Maintain a propensity for progress: prepare, discuss, document and move forward. |
| **06** | Share information early, openly and honestly |
| **07** | Accurately and objectively relay to others the discussions that occur at board meetings. |

# Wurtsmith RAB

## Updates

Attachment 2

# Wurtsmith RAB Stakeholder Updates

- New GAC P&TS location demo/construction began in March
- Improved IR setup

- Public Health Updates

Community RAB Members

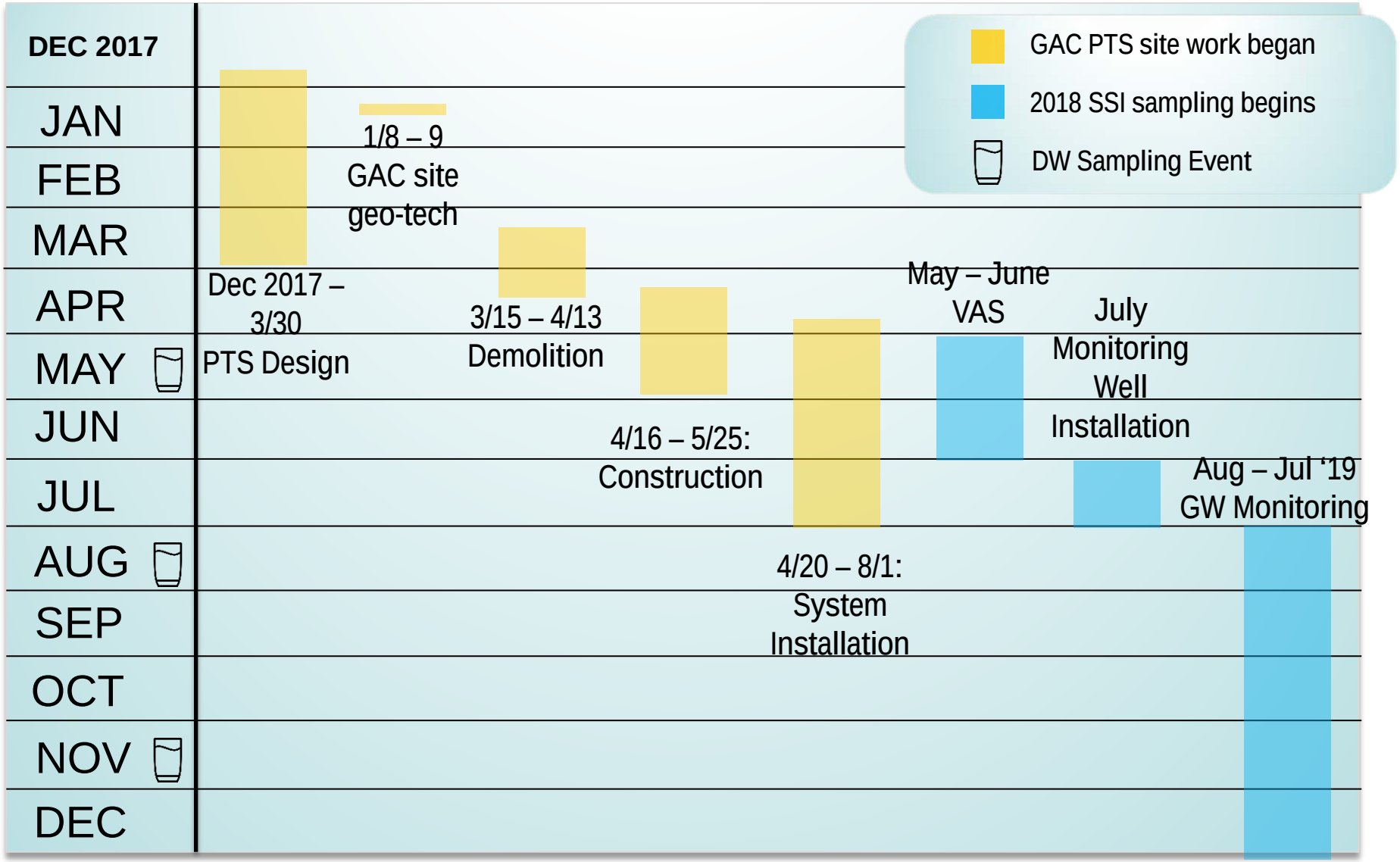
- Research USAF "CERCLA/AR 32-7020 vs DSMOA vs MDEQ Part 201 Remediation/Enforcement
- Status of MDEQ/MPART study & report: Modelling of PFAS Plumes Migration + Source - based on SW & GW sampling
- USAF Veteran anecdotes on AFFF use
- Community outreach, communication regarding remediation
- Summary of community requests on remediation

# Wurtsmith RAB

## 10-Minute Break

Attachment 2

# Wurtsmith RAB 2018 Activities



Attachment 2

# Wurtsmith RAB 2018 Activities

## Arrow Street/Benzene GAC PTS Update

- Began demolition work in March
- Full design submitted to AFCEC, MDEQ and USACE on March 30th
- Construction activities ongoing

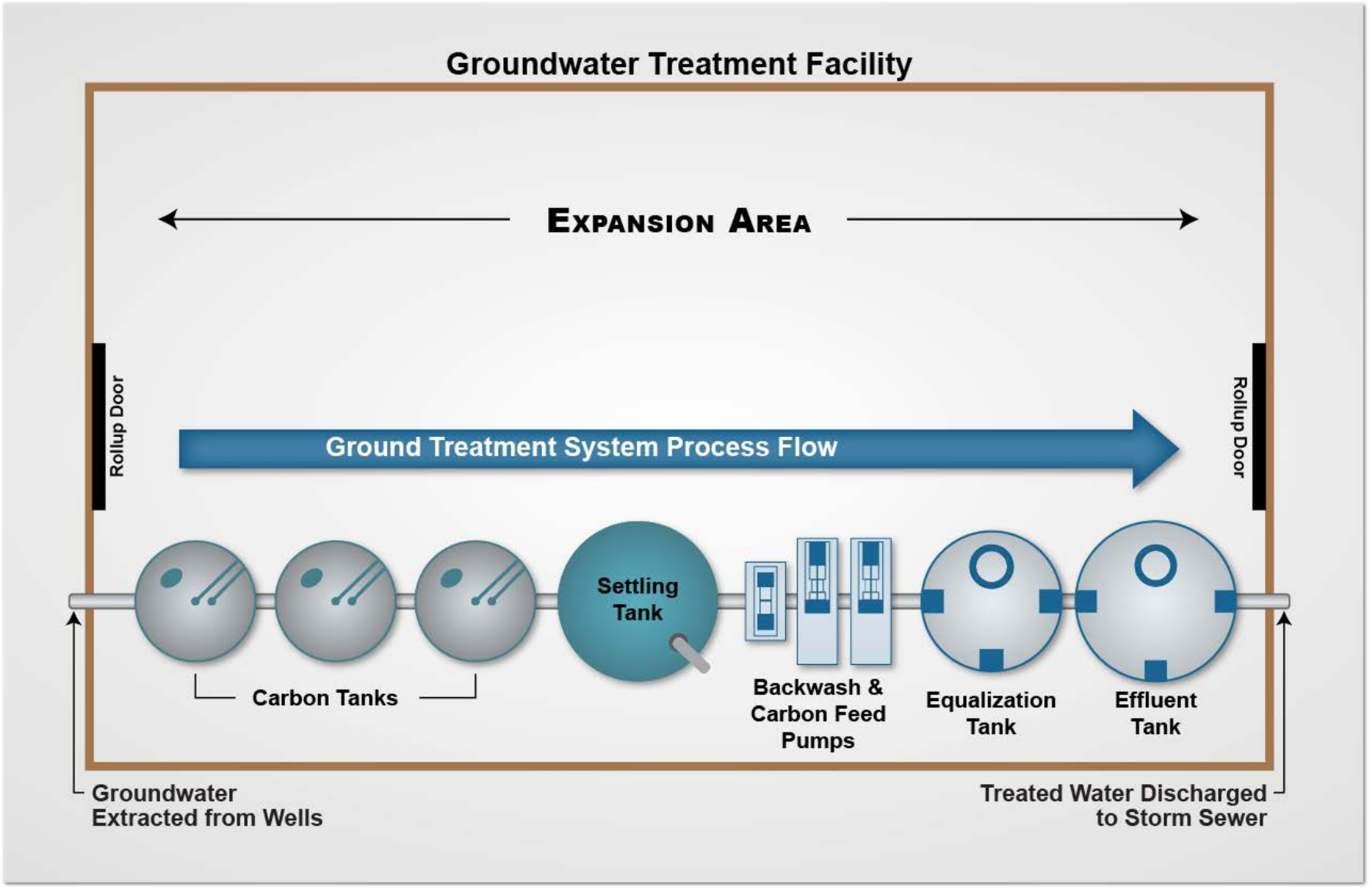
Ground Breaking

Vessel Delivery

GAC Vessels

Attachment 2

# Wurtsmith RAB 2018 Activities



Attachment 2

# Wurtsmith RAB 2018 Activities

**AFCEC wrapped up initial SSI sampling in Dec. 2017.**

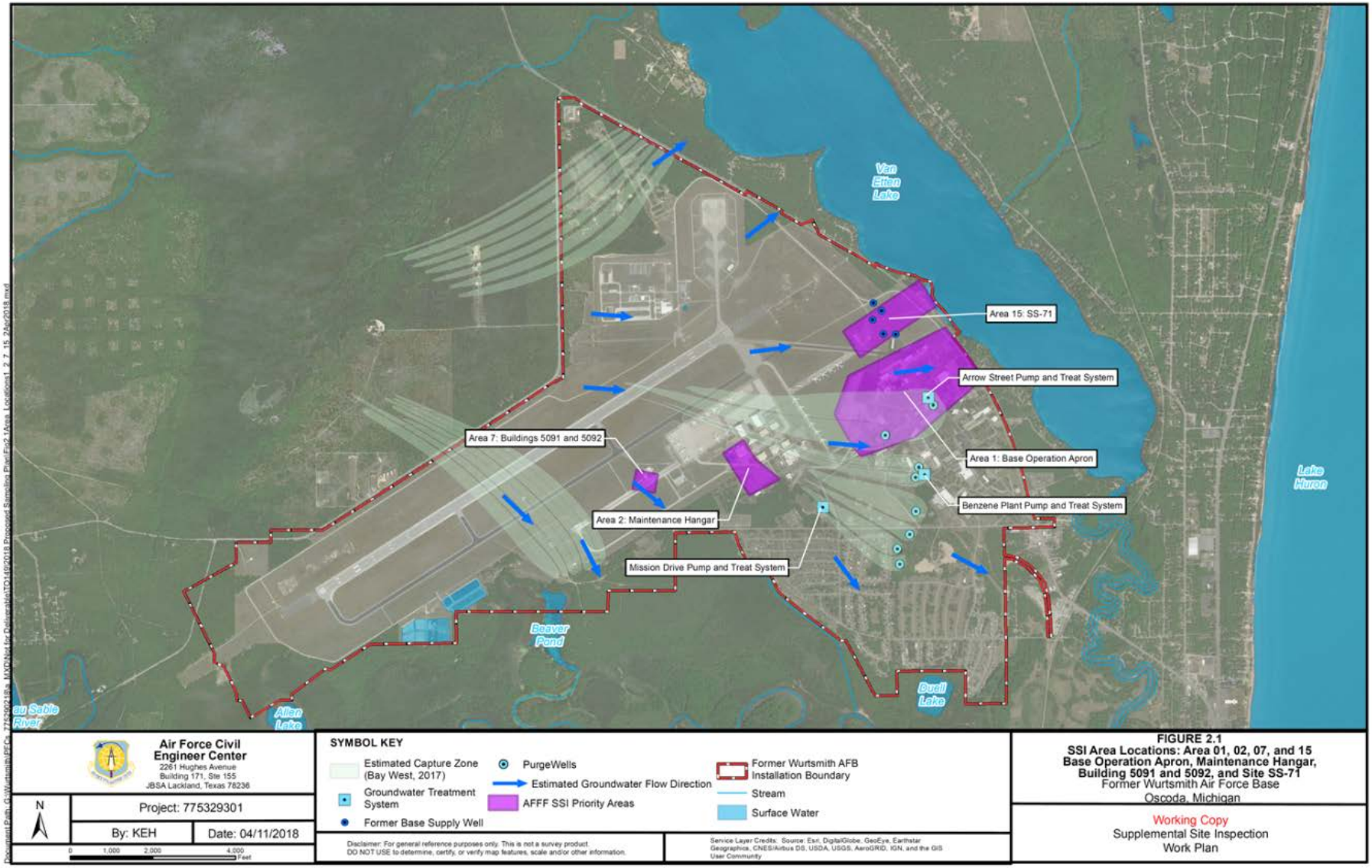
**AFCEC established preliminary prioritization objectives for PFOS/PFOA response actions based on validated 2017 results.**

## Preliminary Prioritization Objectives

- Protect drinking water receptors
- Monitor residential and public drinking water supplies

Attachment 2

# Wurtsmith RAB 2018 Activities



Attachment 2

# Wurtsmith RAB 2018 Activities

**Continue to protect drinking water receptors through further SSI sampling:**

## Areas 1 & 15

- Evaluate the down-gradient extent of contamination
- Further characterize up-gradient source area
- Evaluate effectiveness of Arrow/Benzene PTS
- Collect additional hydrogeologic data to better understand aquifer characteristics and GW flow
- Update GW Model

Attachment 2

# Wurtsmith RAB 2018 Activities

**Continue to protect drinking water receptors through further SSI sampling:**

## Area 2

- Define extent of contamination outside modeled Mission Drive Capture
- Evaluate Mission Drive PTS
- Collect additional hydrogeologic data to better understand aquifer characteristics
- Update GW Model

## Area 7

- Evaluate co-mingling of contamination with Area 2
- Collect additional hydrogeological data to better understand contaminant migration
- Update GW model

Attachment 2

# Wurtsmith RAB 2018 Activities

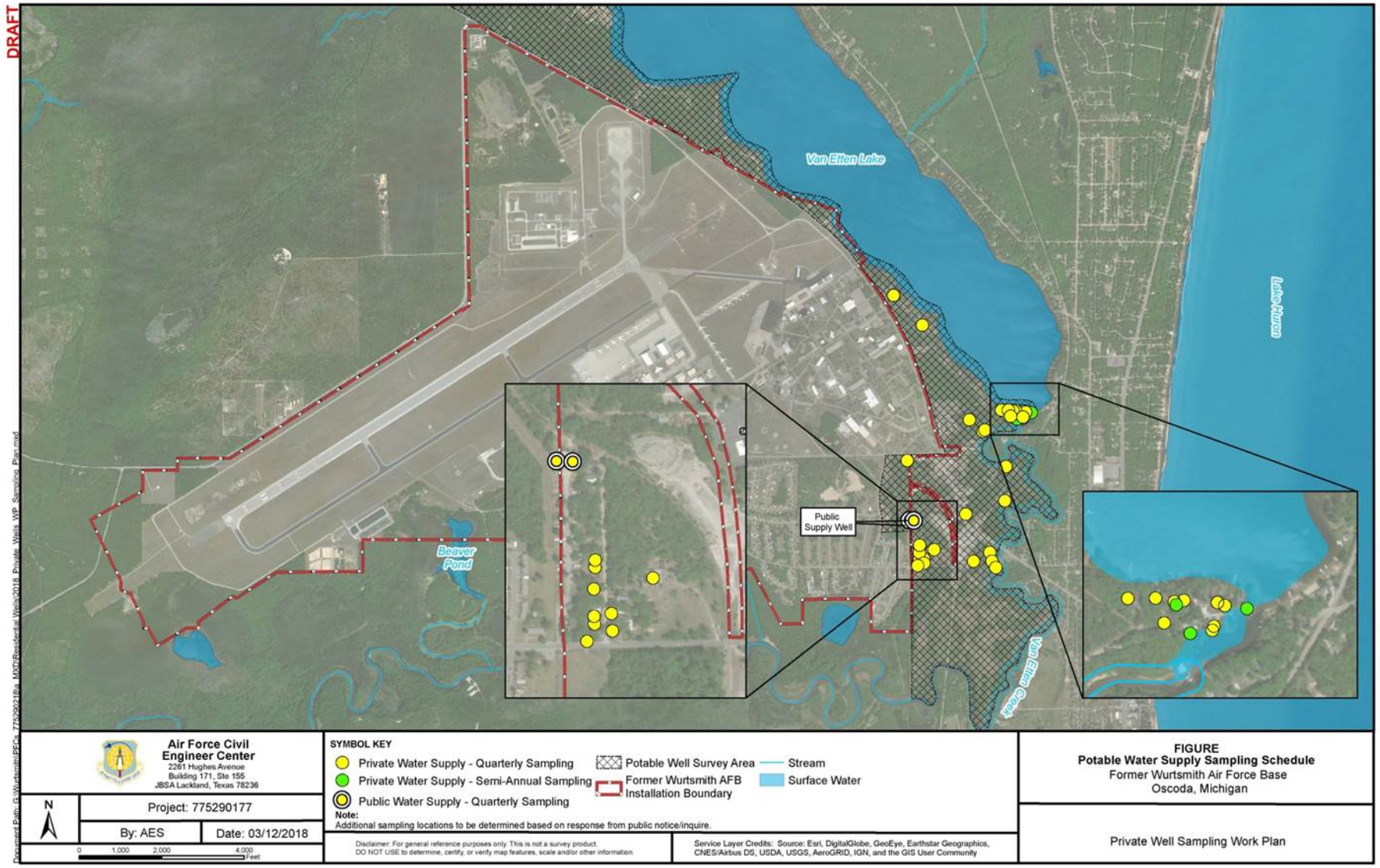
**Protect human health by monitoring residential and public drinking water supplies:**

The Air Force is implementing a monitoring schedule for two public-supply wells and 36+ residential wells for a three-year period.

- Quarterly/Semiannual sampling beginning May 2018
- Annual sampling additional two years
- Additional outreach to capture all DW sources within the Air Force study area

Attachment 2

# Wurtsmith RAB 2018 Activities



# Wurtsmith RAB

## RAB Business

Attachment 2

# Wurtsmith RAB
# RAB Business

- **Wurtsmith Project and RAB Documents**

| Document | |
|---|---|
| 2 Aug. minutes | IR |
| 19 Sep minutes + packet | IR |
| 13 Feb minutes | IR |
| RAB Handbook | IR |
| Wurtsmith RAB Operating Procedures | IR |
| 1992 & 2016 DSMOA | IR |
| RAB administrative docs | IR |

| | |
|---|---|
| Draft Final 2016 RAO Report: Arrow Street, Benzene Plant, and Mission Street P&TS | AR |
| DoD RAB Rule | IR |
| 571962- Data Gap for SS008 | AR |
| 571963- Data Gap for WP004 | AR |
| 571964- QAPP with Attachment E | AR |
| 571966- LUC/IC Report | AR |

- **Next RAB Meeting**
- **Meeting evaluation cards**

# Wurtsmith RAB

## Public Comment

# Wurtsmith RAB

## Public Comment Period

| | |
|---|---|
| ***01*** | Sign in and write your name on a card |
| ***02*** | Deliver your comments from the front of the room |
| ***03*** | Two minute time limit |
| ***04*** | RAB members will confer after your comment to see if a follow-up action is needed |

# Wurtsmith RAB

# Conclusion & Adjournment

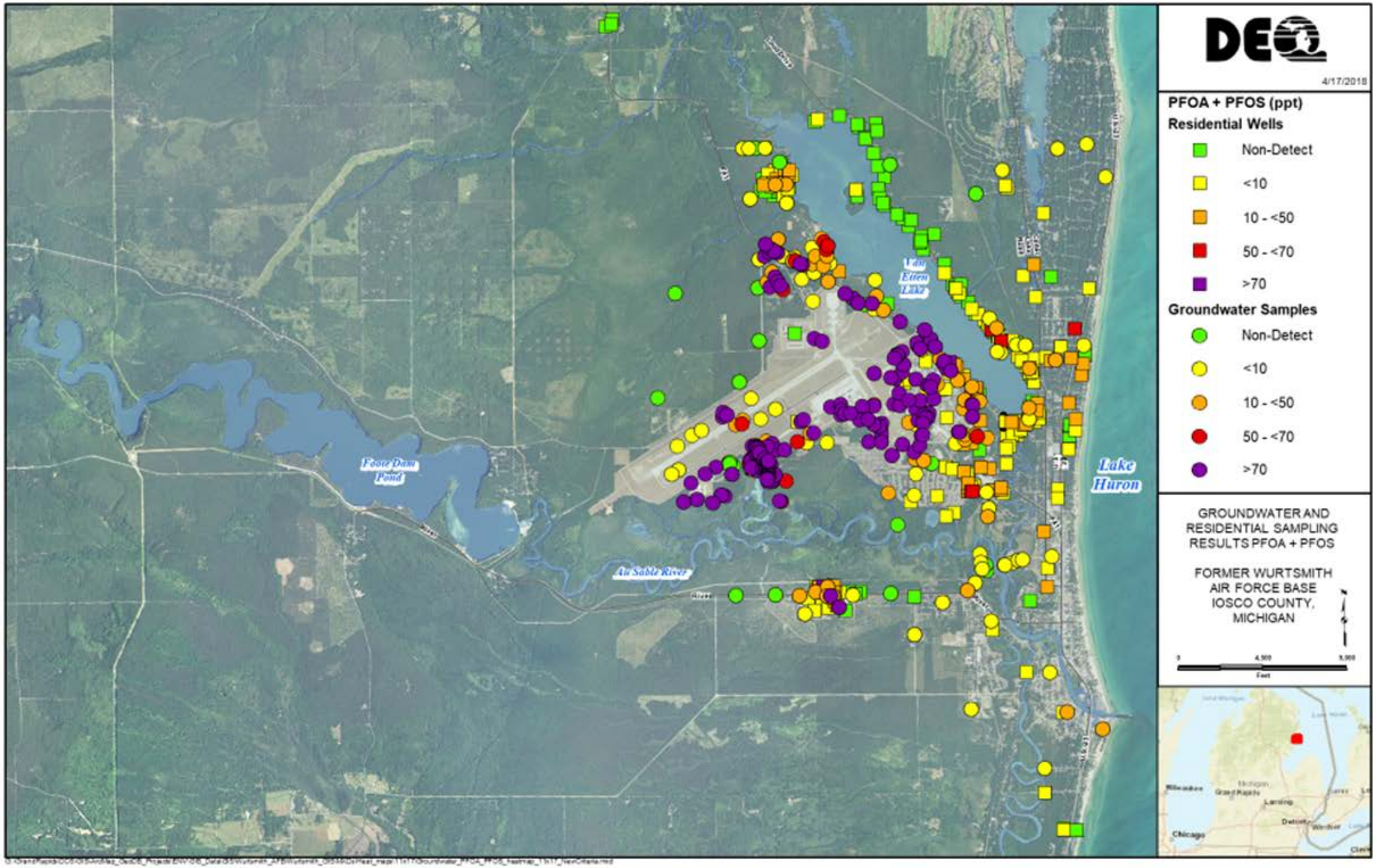
Attachment 2

Attachment 3

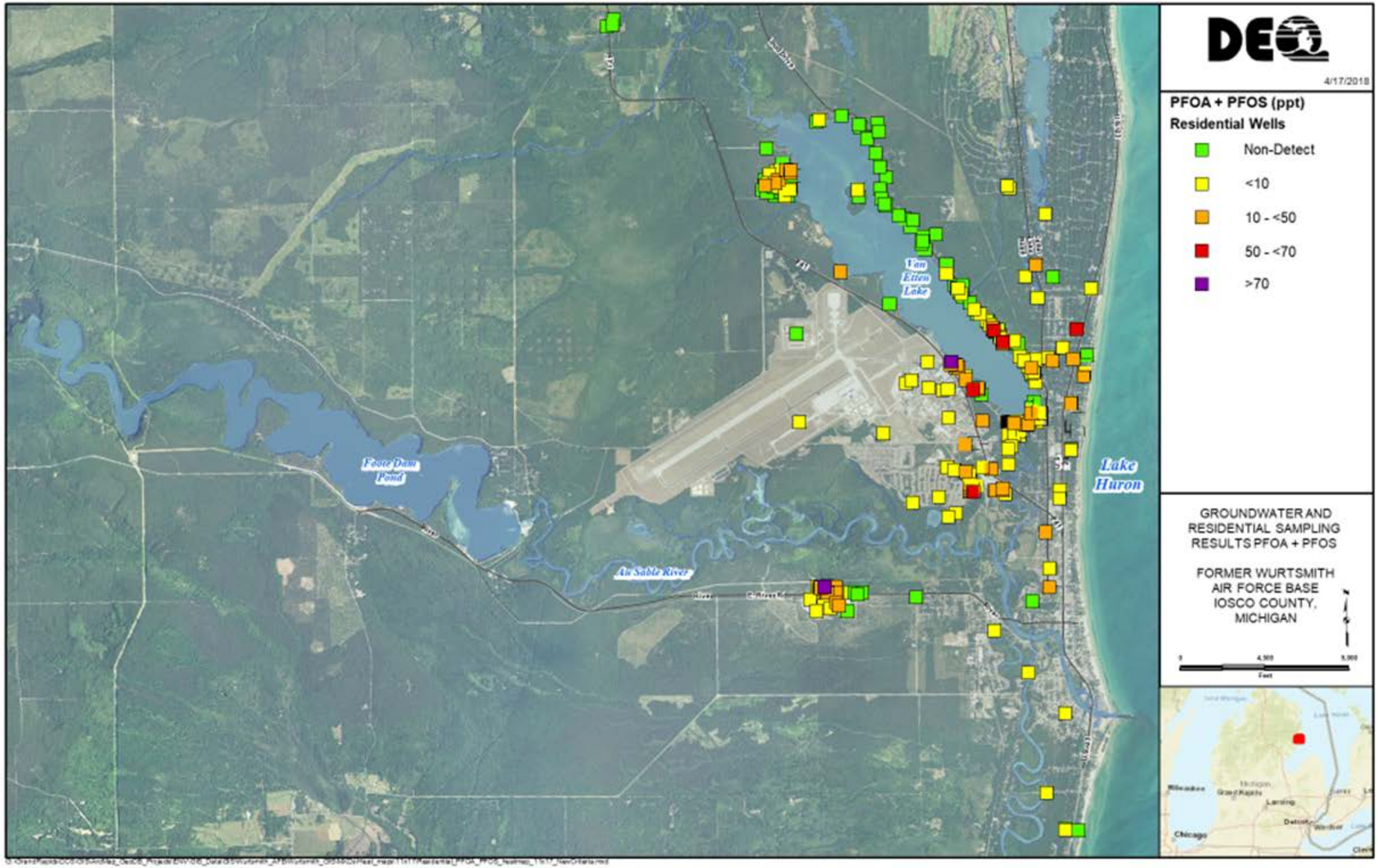
# Restoration Advisory Meeting
# MDEQ Update

APRIL 18, 2018

Attachment 3

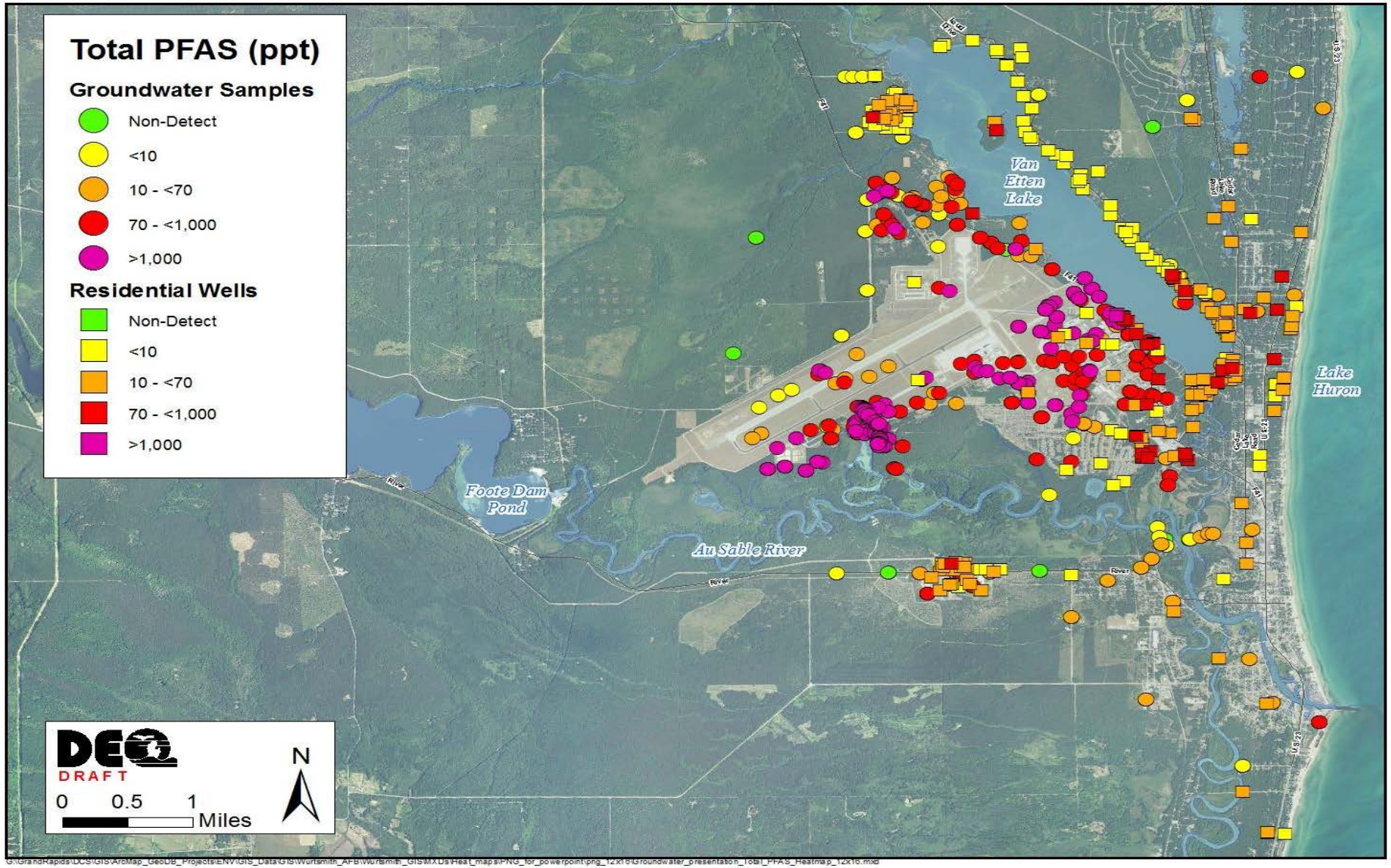


Attachment 3



Attachment 3

# Groundwater TotalPFAS



Attachment 3

# MDEQ
# Field Events

- Residential Well Sampling – Colbath & River Road Areas
- Addressing Foam
- Plume Modeling Report
- Surface Water Sampling

# MDEQ
# Field Events
# (Continued)

- Groundwater Flow Monitoring
- Well Drilling
- Fish Sampling
- Deer Herd Sampling

Attachment 3

# Link to State of Michigan, Wurtsmith Web Page Contact Information

http://www.michigan.gov/som/0,4669,7-192-45414_45929_83470---,00.html

Robert Delaney

delaneyr@michigan.gov

517-284-5085

# Former Wurtsmith AFB
# FY18 Projects, Programming and Updates
# 12 April 2018

| PROJECT | DESCRIPTION | STATUS UPDATE | PROJECTED COMPLETION |
|---|---|---|---|
| **New GAC treatment system** **Aerostar* | New treatment system will combine the Arrow Street and Benzene Plant influent streams and treat PFOS/PFOA using GAC treatment | Construction work began 2 April 2018 | August 2018 |
| **Supplemental Site Investigation** **AmecFW* | SSI sampling will gather additional data to build on initial site inspection work. SSI work will define plume locations, potential movement and understand plume fate | Phase II sampling begins in May and will include areas 1,2,7 and 15 | Phase 1: July 2019 (includes 2017 and 2018 fieldwork) |
| **Influent/ Effluent monitoring** | **PFOS/PFOA Influent/Effluent monitoring for Mission Street, Arrow Street and Benzene Plant PTS** | **With current contract scope and funding we sampled once in 2017 and once in 2018** | **TBD** |
| **Mission Street discharge mitigation** | PTS Discharge Mitigation for PFOS/PFOA above surface water discharge limit | PRD process for FY19 – contingent on funding | TBD |
| **Remedial Action, Operation and Monitoring** **Bay West* | Central Region Performance Based Remediation. Ongoing remedial operations, monitoring, optimization, site closures and five-year review | Ongoing | Bay West contract completion: June 2021 (follow-on PBR) |
| **LF30/31 remedy enhancements** | Incorporating recommendations from complex site investigation | PRD (*Program Requirements Development*) process for FY19 | TBD – contingent on funding |
| **LF30/31 Hydraulic Gradient Control** | Hydraulic Gradient Control to Prevent Leachate Migration. Feasibility study for phytoremediation | PRD process for FY19 – contingent on funding | TBD |
| **Remedial Action Site SS072** **Bay West PBR* | Full-scale Enhanced Bioremediation implementation to treat PCE contamination | Ongoing | Initial injection following system construction (2018), plus every 2 years |

Attachment 5

# AIR FORCE CIVIL ENGINEER CENTER
# BASE REALIGNMENT AND CLOSURE PROGRAM

## WHERE TO FIND WURTSMITH RESTORATION PROJECT INFORMATION…

## AFCEC Website

**http://www.afcec.af.mil/Home/BRAC/Wurtsmith**

The AFCEC website is an official Air Force website managed by the Air Force Installation and Mission Support Center's Public Affairs Office.

Online

The public site delivers news and information on AFCEC and the work the agency does to advance the Air Force mission, including Base Realignment and Closure.

The BRAC Program webpage includes sub pages for all BRAC installations. The Former Wurtsmith Air Force Base page provides historical background on Wurtsmith, base closure and ongoing environmental restoration work. All information on this site is Air Force-produced and cleared for public release.

- RAB Documents: agendas, minutes, presentations, training materials, etc.
- Air Force press releases/articles
- Project fact sheets
- Frequently Asked Questions
- Informational materials
- Photos/videos
- Announcements
- Administrative Record link
- Local Redevelopment Authority information and contacts

## Administrative Record

**http://afcec.publicadmin-record.us.af.mil**

The AR is the Air Force's official storage location and legal record for documents that form the basis for selecting a Comprehensive Environmental Response, Compensation and Liability Act, or CERCLA, response action. The database is organized by military site and includes sortable search filters to refine results. All documents include an AR number on the cover sheet. The AR is updated monthly by the Air Force as final documents are published.

- Public notices
- Official documents with public comments
- Proposed plans/work plans
- Records of Decision (RODs)
- Minutes from decisional BRAC Coordination Team Meetings
- Select draft reports
- Final Reports: Preliminary Assessments, Site Inspections, etc.

## Information Repository

**Robert J Parks Library: 6010 N Skeel Ave.**

The Air Force maintains a local IR of hard-copy documents for public access at all BRAC installations. The IR includes the same documents as the AR, as well as:

Local

- Monthly BCT meeting agendas and minutes
- Draft documents of public interest
- RAB Documents: agendas, minutes, presentations, training materials, etc.

**AFIMSC Public Affairs** **AFIMSC.PA.workflow@us.af.mil** **(210) 925-0956 or 1-866-725-7617**

# Congress of the United States
Washington, DC 20515

April 18, 2018

The Honorable John W. Henderson
Assistant Secretary of the Air Force for
Installations, Environment and Energy
1665 Air Force Pentagon
Washington, DC 20330

The Honorable Lucian Niemeyer
Assistant Secretary of Defense for
Energy, Installations and Environment
3400 Defense Pentagon, Room 5C646
Washington, DC 20301-3400

Assistant Secretary Henderson and Assistant Secretary Niemeyer:

Residents living near former Wurtsmith Air Force base (Wurtsmith) have had their groundwater and surface water contaminated by per- and polyfluoroalkyl substances (PFAS) from the use of aqueous film forming foam (AFFF) by the U.S. Department of Defense (DOD). We ask that the DOD use this year's funding to prioritize stopping additional contamination of groundwater and surface water coming from Wurtsmith.

Exposure to PFAS has been linked to cancer as well as thyroid, kidney, liver, heart and reproductive problems. In the Fiscal Year 2018 Consolidated Appropriations Act, Congress increased funding for environmental remediation at BRAC bases by $54 million, increasing the program to $310 million. In the accompanying committee report, it states specifically that the Secretary of the Air Force should prioritize clean up at PFAS contaminated sites. While we recognize there is a significant backlog of environmental remediation projects, the DOD should focus its funding on sites, such as Oscoda, Mich., that Congress intended.

In 2016, the U.S. Environmental Protection Agency (EPA) established new lifetime health advisories for two types of PFAS—perfluorooctanoic acid (PFOA) and perfluorooctanesulfonic acid (PFOS). In addition, pursuant to state law[1], the state of Michigan's cleanup criteria for groundwater for the protection of drinking water was established January 10, 2018. Furthermore, the state of Michigan has water quality standards which apply to surface waters, and also to groundwater venting to surface waters. Michigan regulations[2] specify that water quality standards shall be met in *all* waters of the state. The DOD must comply with Michigan's water quality standards and cleanup criteria, and must stop the movement of contamination from the former base into groundwater and surface waters near Wurtsmith.

The DOD is currently installing granulated activated carbon (GAC) filter systems in two locations where water is treated and returned to surface waters. However, according to extensive sampling conducted by the Michigan Department of Environmental Quality (MDEQ), there is still a significant volume of PFAS contamination in the groundwater on the former base and

[1] Part 201, Environmental Remediation, of the Natural Resources and Environmental Protection Act, 1994 PA 451, as amended.
[2] Part 4 Rules, Water Quality Standards (of Part 31, Water Resources Protection, of Act 451 of 1994)

PRINTED ON RECYCLED PAPER

flowing off-base in groundwater and entering surface water. Additional treatment of the contaminated groundwater, including additional GAC filter systems, is needed. The DOD should purchase and install additional GAC filter systems to treat the groundwater and ensure it is complying with Michigan's laws to prevent further contamination from Wurtsmith.

The MDEQ estimates that in 2018 alone, $36 million must be spent on remediation at Wurtsmith. Of that money, $33 million is needed to fund six treatment systems that withdraw contaminated groundwater, treat it using GAC filter systems to remove PFAS, and reinject treated water into the aquifer or discharge to surface water. All six GAC systems would treat the plume that directly contaminates Van Etten Lake in Oscoda near Wurtsmith. One of the six GAC systems would also treat a portion of the plume impacting a children's YMCA camp on the lake.

In addition, $3 million would be used for expansion of a currently planned Air Force treatment system to allow for increased volume of contaminated groundwater to be treated.

Overall, to completely remediate the PFAS contamination at Wurtsmith, the MDEQ estimates it will cost at least $180 million.

Frequently, we hear concerns from community leaders in Oscoda regarding the contamination's negative impact on the community's economy and housing market. The local tourist industry is losing business because people are afraid of being exposed to PFAS while companies are having difficulty attracting talent for jobs due to concern with safety of the water.

The community of Oscoda had this contamination done to them – it was not the local community's fault. The residents of Oscoda have already suffered through the closure of Wurtsmith, they should not continue to suffer from the DOD's actions. Thus, the DOD must immediately direct funds to stop further contamination of the groundwater and surface water.

Sincerely,

Daniel T. Kildee
MEMBER OF CONGRESS

Gary C. Peters
U.S. Senator

Debbie Stabenow
U.S. Senator

# AIR FORCE ACRONYM LIST: WURTSMITH RAB

**AF** – Air Force

**AFB** – Air Force Base

**AFCEC** – Air Force Civil Engineer Center

**AFFF** – Aqueous Film Forming Foam

**AFIMSC** – Air Force Installation and Mission Support Center

**AR** – Administrative Record

**ATSDR** – Agency for Toxic Substances and Disease Registry

**BCT** – BRAC Cleanup Team

**BEC** – BRAC Environmental Coordinator

**BRAC** – Base Realignment and Closure

**CERCLA** – Comprehensive Environmental Response, Compensation and Liability Act

**DERP** – Defense Environmental Restoration Program

**DoD** – Department of Defense

**DSMOA** – Defense and State Memorandum of Agreement

**DW** – Drinking Water

**EA** – Environmental Assessment

**EC** – Emerging Contaminant

**EIS** – Environmental Impact Statement

**EPA** – Environmental Protection Agency

**ERP** – Environmental Restoration Program

**ERD** – Enhanced Reductive Dechlorination

**ESE** — Extended Site Evaluation

**FAQs** – Frequently Asked Questions

**FOUO** – For Official Use Only

**FTA** – Fire Training Area

**GAC** – Granulated Activated Carbon

**GPM** – Gallons Per Minute

**GW** – Groundwater

**HA** – Health Advisory

**IR** – Information Repository

**IRP** – Installation Restoration Program

**IX** – Ion Exchange

**LHA** – Lifetime Health Advisory

**LUC** – Land Use Control

**MDEQ** – Michigan Department of Environmental Quality

**MDHHS** – Michigan Department of Health and Human Services

**MMRP** – Military Munitions Response Program

**NEPA** – National Environmental Policy Act

**NOV** – Notice Of Violation

**OP** – Operating Procedures

**OOC** – Out Of Cycle

**PA** – Preliminary Assessment

**PAO** – Public Affairs Office(r)

**PFAS** – Per- and Polyfluoroalkyl Substances

**PFCs** – Perfluorinated Compounds

**PFOS/PFOA** – Perfluorooctanesulfonic and Perfluorooctanoic Acids

**PM** – Project Manager

**POL** – Petroleum, Oil and Lubricant

**PPB** – Parts per Billion

**PPT** – Parts per Trillion

**PRD** – Program Requirements Development

**PTS** – Pump and Treat Systems

**RAB** – Restoration Advisory Board

**RAO** – Remedial Action Objectives

**RI** – Remedial Investigation

**ROD** – Record of Decision

**SC** – Site Closure

**SI** – Site Inspection

**SSI** – Supplemental Site Inspection

**TCE** – Trichloroethene or Trichloroethylene

**TRC** – Technical Review Committee

**USAF** – United States Air Force

**VI** – Vapor Intrusion

**VOCs** – Volatile Organic Compounds

**WBT** – Whole Base Transfer

# RAB Survey Feedback Summary

**14 April 18 Wurtsmith RAB meeting**

| MEETING EVALUATION | | | | | |
|---|---|---|---|---|---|
| | **Strongly Disagree** | **Disagree** | **Undecided** | **Agree** | **Strongly Agree** |
| Agenda content was comprehensive and relevant. | | 2 | 1 | 2 | |
| Presenters were effective. | | 1 | 2 | 2 | |
| Satisfied with meeting venue and set-up. | | | 1 | 3 | 1 |
| Overall, the meeting was worthwhile. | | | 1 | 4 | |

| STRENGTHS | IMPROVEMENTS |
|---|---|
| Lots of encouragement for government agencies to work together | Provide better timeline for complete remediation |
| Good moderation and forum | Seating around table is too tight |
| Meetings are improving | Need more info/updates from MDEQ and other agencies |
| Agenda content was relevant | Deliver full solutions |
| Open discussion | Action item review should be a priority |
| Lots of meaningful input | Unanswered action items |
| Less interruptions during presentations | |
| | |

Requests/Comments:

1. What other methods are being used to remove these chemicals?
2. Would like to see all data incorporated in maps and presentations
3. Provide timeline for follow-on actions
4. Since restoration activities are so slow, what else can be done to protect people in the community?

**Former Wurtsmith AFB Restoration Advisory Board Action Item Tracker**
**OPEN ACTION ITEMS as of 5/7/18**

| No. | Date Created | Action Item | Comments/Resolution | Status | Owner | Due Date |
|---|---|---|---|---|---|---|
| 13 | 13-Feb-18 | Consider viability of including a conference call option at future RAB meetings. | AF: Conference call option could be exercised in special circimstances as need arises. If so, a meeting room equipped with teleconference capability would be needed. | Open | Air Force (M. Marrs) | 6-Jun-18 |
| 14 | 13-Feb-18 | Provide GAC Treatment Plant plans to the Oscoda Planning Commission. | AF: A disk with completed design could be provided to the planning board for their records. Need an address to send it to. | Open | Air Force (M. Marrs) | 6-Jun-18 |
| 16 | 13-Feb-18 | Modify the FY18 Project Summary document by adding out-of-cycle funding requests and other projects. | | Open | Air Force (M. McClendon) | 18-Apr-18 |
| 17 | 13-Feb-18 | Consider placing a boom, or another structure, on Van Etten Creek to capture the foam. | | Open | MDEQ (B. Delaney) | 18-Apr-18 |
| 18 | 13-Feb-18 | Discuss how to integrate CERCLA and NEPA processes when USFS permitting requirements interact with the environmental restoration program at the former Wurtsmith AFB. | AF: DoD determined NEPA does not apply to response actions that fully comply with CERCLA and the NCP. The Air Force will cooperate with USFS for any requirements they have for actions proposed on USFS lands. | Open | Air Force (M. Marrs) and USFS (T. Martoglio) | 18-Apr-18 |
| 19 | 13-Feb-18 | Inform RAB members about the effectiveness of a resin exchange system (as compared to traditional PFOS/PFOA treatment systems such as GAC filtration). | AF: It is premature to try and present factual infomration on this. Resin for use for PFCs is in its infancy. It will take several years of experience to be able to provide any reliable information on resin for PFCs. We will provide information as it becomes available. Right now Pease and Reese are using the resin technology and, when case studies are devloped from that experience, presentations can be developed. | Open | Air Force (M. Marrs) | 18-Apr-18 |

| No. | Date Created | Action Item | Comments/Resolution | Status | Owner | Due Date |
|---|---|---|---|---|---|---|
| 20 | 13-Feb-18 | Determine agency responsible for addressing sample results that exceed the EPA lifetime HA for PFOS/PFOA at the plumes near the high school. | | Open | Air Force (M. Marrs) | 18-Apr-18 |
| 21 | 18-Apr-18 | Air Force and MDEQ collaborate to put in place interim remedial action to address PFOS/PFOA contamination until pump and treat systems are in place and functioning. | Requested by Arnie Leriche at 18 April 2018 RAB meeting. | Open | Air Force (M. Marrs) and MDEQ (B. Delaney) | TBD |
| 22 | 18-Apr-18 | Provide status of (and release) the MDEQ/MPART report entitled “Modeling of PFAS Plumes Migration and Source.” | Requested by Arnie Leriche at 18 April 2018 RAB meeting. | Open | MDEQ (B. Delaney) | TBD |
| 23 | 18-Apr-18 | Air Force and OWAA coordinate to deconflict investigative/remedial activities and airport operations. | Requested by Bill Gaines at 18 April 2018 RAB meeting. | Open | Air Force (M. Marrs) and Mike Munson (OWAA) | TBD |
| 24 | 18-Apr-18 | Describe extent, and sources of, contamination on National Forest system land (specifically Clark’s Marsh). Indicate which party was responsible for contaminating Clark’s Marsh. | Requested by Tony Martoglio and Tim Cummings at 18 April 2018 RAB meeting (between time 1:56:31 and 1:57:55 on video). | Open | Air Force (M. Marrs) | TBD |
| | | | | | | |
| | | | | | | |
| | | | | | | |

**Former Wurtsmith AFB Restoration Advisory Board Action Item Tracker**
**CLOSED ACTION ITEMS as of 5/7/18**

| No. | Date Created | Action Item | Comments/Resolution | Status | Owner | Date Completed | Old No. |
|---|---|---|---|---|---|---|---|
| 1 | 2-Aug-17 | The Air Force will develop a Wurtsmith-RAB-specific acronym list for RAB members. | | Closed | Air Force | 19-Sep-17 | n/a |
| 1 | 2-Aug-17 | Properly orient attendees to maps and figures when they are presented at RAB meetings and ensure that they are easily viewable. | This was converted from an AI to a RAB meeting standard. | Closed | All presenters | 3-May-18 | |
| 2 | 2-Aug-17 | The Air Force will provide an overview of the CERCLA process; explaining the process from site discovery to site closure. | | Closed | Air Force | 19-Sep-17 | n/a |
| 2 | 2-Aug-17 | When presenters discuss the EPA's Heath Advisory for PFOS/PFOA or other regulatory standards, indicate what environmental media they are talking about (ex: groundwater, surface water, soil, air, etc.). | This was converted from an AI to a RAB meeting standard. | Closed | All presenters | 3-May-18 | |
| 3 | 2-Aug-17 | The Air Force will create a frequently asked questions (FAQ) sheet concerning RABs and the Wurtsmith environmental program for RAB members. | | Closed | Air Force | 19-Sep-17 | n/a |
| 3 | 2-Aug-17 | When presenters discuss PFOS/PFOA levels, convert all measurements into parts per trillion. | This was converted from an AI to a RAB meeting standard. | Closed | All presenters | 3-May-18 | |
| 4 | 2-Aug-17 | The Air Force will email an electronic copy of the Draft Wurtsmith RAB Operating Procedures to the RAB members. | | Closed | Air Force | 15-Aug-17 | n/a |
| 4 | 19-Sep-17 | Advise RAB members which documents have been added to the AR/IR since the last RAB meeting. | This was converted from an AI to a RAB meeting standard. | Closed | Air Force (M. Marrs) | 3-May-18 | |
| 5 | 19-Sep-17 | The RAB should request that the next MDHHS public meeting be held in coordination with the November RAB meeting. So if the RAB is scheduled for November 1, the MDHHS should be held on November 2. | | Closed | Air Force | 13-Feb-18 | |
| 5 | 2-Aug-17 | As requested, the Air Force will email a copy of the former Pease AFB RAB Operating Procedures to the RAB members. | | Closed | Air Force | 15-Aug-17 | n/a |
| 6 | 1-Nov-17 | Include revision date on all documents shared with the RAB. | This was converted from an AI to a RAB meeting standard. | Closed | Air Force (M. Marrs) | 3-May-18 | |
| 6 | 2-Aug-17 | The Air Force will send out a link to the DoD RAB Rule and Handbook and the Wurtsmith BRAC webpages:RAB Handbook: http://www.denix.osd.mil/rab/home/unassigned/rab-rule-handbook/ ; DoD RAB Rule: https://www.gpo.gov/fdsys/granule/FR-2006-05-12/06-4246; Air Force Administrative Record: http://afcec.publicadmin-record.us.af.mil/ ; Wurtsmith BRAC webpage: http://www.afcec.af.mil/Home/BRAC/Wurtsmith.asp | | Closed | Air Force | 15-Aug-17 | n/a |
| 7 | 2-Aug-17 | The Air Force will specify points of contact for communicating with the RAB. | | Closed | Air Force | 15-Aug-17 | n/a |
| 7 | 1-Nov-17 | Send meeting presentations electronically to RAB members. | This was converted from an AI to a RAB meeting standard. | Closed | Air Force | 3-May-18 | |

| No. | Date Created | Action Item | Comments/Resolution | Status | Owner | Date Completed | Old No. |
|---|---|---|---|---|---|---|---|
| 8 | 2-Aug-17 | The Air Force will email the Community RAB members requesting interested parties or nominations for the Community Co-Chair position. | | Closed | Air Force | 15-Aug-17 | n/a |
| 9 | 2-Aug-17 | The Air Force will email the RAB members confirming the date, location and other items for the proposed RAB orientation/training on 19 September 2017. | | Closed | Air Force | 15-Aug-17 | n/a |
| 9 | 1-Nov-17 | Send MDHHS presentation to RAB members electronically. | Included as attachment to 1 Nov 2017 RAB minutes. | Closed | MDHHS (C. Bush) | 13-Feb-17 | |
| 10 | 1-Nov-17 | Clarify for RAB members the PFAS historical timeline, purpose, schedules, and locations of the GAC unit(s) [Arrow St and Benzene pump and treat systems]. Describe the information the Air Force has provided to the community about siting the GAC unit(s). | AF: One GAC treatment plant is in place a FT-02 and has been operating since March 2015. Only other GAC is for APTS and BPTS is scheduled for operation in August this year. | Closed | Air Force (M. Marrs) | 3-May-18 | |
| 11 | 19-Sep-17 | Community co-chair election | | Closed | All | 1-Nov-17 | n/a |
| 12 | 18-Jan-18 | Specify which documents are available at the information repository and which are available elsewhere (including detailed location/website link); record date that hard copy documents are placed in the information repository. | | Closed | Air Force (M. McClendon) | 18-Apr-18 | |
| 15 | 13-Feb-18 | Determine whether the contractor, which is constructing the GAC treatment plant, will be penalized for construction delays. | There are no liquidated damages built into the contract for the GAC facility. All contracts are reviewed and performance ratings are assigned based upon the contractor's success in meeting milestone dates for Wurtsmith. | Closed | Air Force (M. Marrs) | 3-May-18 | |

**Former Wurtsmith AFB Restoration Advisory Board Action Item Tracker**
**FUTURE AGENDA ITEMS as of 5/7/18**

| No. | Agenda Topic | Discussion Points | Timeframe |
|---|---|---|---|
| 2 | How to apply for Technical Assistance for Public Participation grants | Consider the following elements: support document management at library; video broadcasting RAB meetings; hold additional outreach meetings; include examples of grant scopes/outcomes. | 18-Apr-18 |
| 4 | Document management | 1) What types of documents does each stakeholder agency produce (pertaining to environmental restoration of the former Wurtsmith AFB)?; 2) How can RAB members and the public access these documents (e.g., Admin Record, elsewhere online, library, etc.)?; 3) When are such documents generally made available to the public? | 18-Apr-18 |
| 5 | Tiered approach and budget process | Discuss tiered approach by which the Air Force prioritizes investigative and remedial activities. Provide budget update. Consider inviting elected officials to address DoD funding. | TBD |
| 6 | Fish tissue sampling in Clark's Marsh | Provide update about fish tissue sampling in Clark's Marsh | TBD |
| 7 | Treatment systems for PFOS/PFOA contamination | Provide update on treatment systems the Air Force could employ to mitigate PFOS/PFOA contamination. | TBD |
| 8 | Residential well sampling | Identify residential wells the Air Force intends to sample during the upcoming three-year monitoring program. | TBD |
| 9 | Incorporating data from other stakeholder organizations | Describe how the Air Force incorporates, reviews, and utilizes data generated by MDEQ or other agencies. | TBD |
| 10 | PFOS/PFOA contamination via surface water to Lake Huron | Describe actions to mitigate PFOS/PFOA contamination via surface water into Lake Huron. Describe surface water detections to date. Indicate area that have been tested and additional areas that could be tested. [Note: Reference time 2:23:42 through 2:25:22 of 4/18/18 RAB video.] | TBD |
| | | | |
| | | | |
| | | | |

**Former Wurtsmith AFB Restoration Advisory Board Action Item Tracker**
**FUTURE MEETINGS as of 5/7/18**

| No. | Meeting/Site Visit | Topic | Comments | Location | Date/Time |
|---|---|---|---|---|---|
| 1 | Meeting | RAB meeting | | Oscoda library | 6 June 2018 approx 5:30-7:30 p.m. EDT |
| 2 | Meeting | RAB meeting | | Oscoda library | 15 Aug 2018 approx 5:30-7:30 p.m. EDT |
| | | | | | |
| | | | | | |
| | | | | | |
| | | | | | |
| | | | | | |
| | | | | | |
| | | | | | |
| | | | | | |
| | | | | | |

**Former Wurtsmith AFB Restoration Advisory Board Meeting Attendance Tracker**
**as of 4/18/18**

| Affiliation | Designation | 8/2/17 | 9/19/17 | 11/1/17 | 2/13/18 | 4/18/18 |
|---|---|---|---|---|---|---|
| **Community RAB members** | | | | | | |
| Community RAB Co-Chair | Arnie Leriche | ✓ | ✓ | ✓ | ✓ | ✓ |
| Community RAB Member Place 1 (Primary) | Joseph Plunkey | ✓ | ✓ | ✓ | | ✓ |
| Community RAB Member Place 1 (Alternate) | Daniel Stock | ✓ | ✓ | ✓ | ✓ | ✓ |
| Community RAB Member Place 2 (Primary) | Joseph Maxwell | ✓ | ✓ | ✓ | ✓ | ✓ |
| Community RAB Member Place 2 (Alternate) | Catherine Larive | ✓ | | ✓ | | ✓ |
| Community RAB Member Place 3 (Primary) | Cathy Wusterbarth | ✓ | ✓ | ✓ | ✓ | ✓ |
| Community RAB Member Place 3 (Alternate) | Martha Gottlieb | ✓ | | ✓ | | |
| Community RAB Member Place 4 (Primary) | Matthew Hegwood | ✓ | ✓ | ✓ | | |
| Community RAB Member Place 4 (Alternate) | Martha Gottlieb | | | | ✓ | |
| Community RAB Member Place 5 (Primary) | Ryan Mertz | | ✓ | ✓ | | ✓ |
| Community RAB Member Place 5 (Alternate) | Daniel Stock | | | | | ✓ |
| Community RAB Member Place 6 (Primary) | Robert Tasior | ✓ | ✓ | ✓ | ✓ | ✓ |
| Community RAB Member Place 6 (Alternate) | Irene Dunn | ✓ | ✓ | ✓ | | ✓ |
| Community RAB Member Place 7 (Primary) | William Gaines | ✓ | ✓ | ✓ | ✓ | ✓ |
| Community RAB Member Place 7 (Alternate) | James Davis | ✓ | ✓ | | | |
| Community RAB Member Place 8 (Primary) | Jerry Schmidt | ✓ | ✓ | ✓ | ✓ | ✓ |
| Community RAB Member Place 8 (Alternate) | James Davis | | | ✓ | | |
| Community RAB Member Place 9 (Alternate) | Daniel O'Connor | ✓ | ✓ | ✓ | ✓ | ✓ |
| **Government RAB members** | | | | | | |
| Government RAB Member: Air Force Co-Chair (Primary) | Matt Marrs | ✓ | ✓ | ✓ | ✓ | ✓ |
| Government RAB Member: Air Force Co-Chair (Other) | | | | | | |
| Government RAB Member: Oscoda Township (Primary) | Tim Cummings | | ✓ | ✓ | ✓ | ✓ |
| Government RAB Member: Oscoda Township (Other) | | John Nordeen | | | | |
| Government RAB Member: AuSable Township (Primary) | Jeff Moss | ✓ | ✓ | ✓ | ✓ | ✓ |
| Government RAB Member: AuSable Township (Other) | | | | | | |
| Government RAB Member: Michigan Department of Environmental Quality (Primary) | Bob Delaney | ✓ | ✓ | ✓ | ✓ | ✓ |
| Government RAB Member: Michigan Department of Environmental Quality (Other) | | | | | | |
| Government RAB Member: Oscoda Wurtsmith Airport Authority (Primary) | Michael Munson | ✓ | ✓ | ✓ | ✓ | ✓ |
| Government RAB Member: Oscoda Wurtsmith Airport Authority (Other) | | | | | | |
| Government RAB Member: Department of Health District #2 (Primary) | Chuck Lichon | ✓ | ✓ | ✓ | ✓ | ✓ |
| Government RAB Member: Department of Health District #2 (Other) | | | | | | |
| Government RAB Member: Michigan Department of Health & Human Services (Primary) | Chris Bush | ✓ | | ✓ | | ✓ |
| Government RAB Member: Michigan Department of Health & Human Services (Other) | | | | | Bill Farrell | |
| Government RAB Member: USDA Forest Service (Primary) | Tony Martoglio | ✓ | ✓ | ✓ | ✓ | ✓ |
| Government RAB Member: USDA Forest Service (Other) | | | | | | |