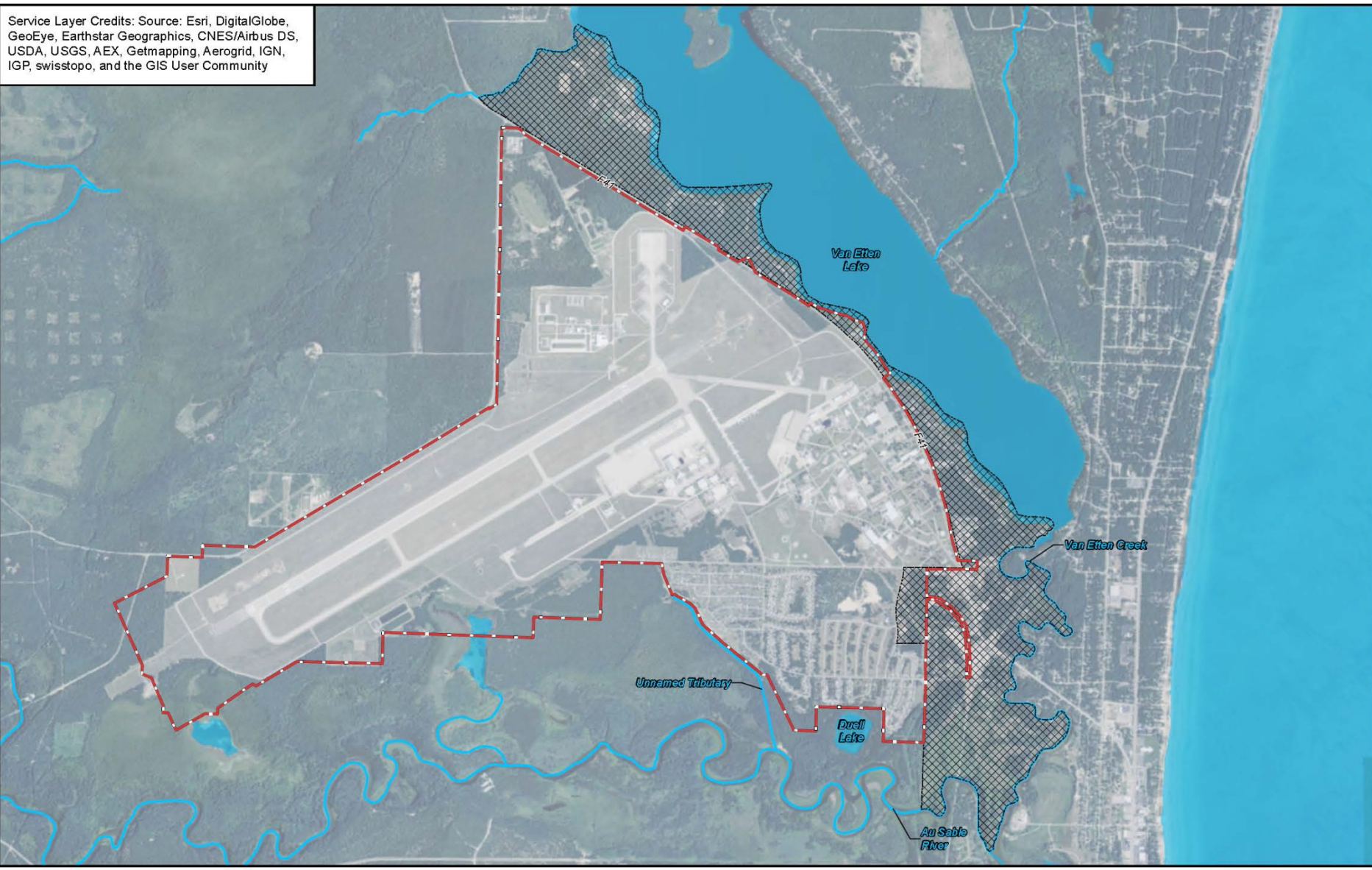


# Contamination at the Former Wurtsmith Air Force Base

March 23, 2016



Service Layer Credits: Source: Esri, DigitalGlobe, GeoEye, Earthstar Geographics, CNES/Airbus DS, USDA, USGS, AEX, Getmapping, Aerogrid, IGN, IGP, swisstopo, and the GIS User Community



**Air Force Civil Engineer Center**  
2261 Hughes Avenue  
Building 171, Ste 155



**FIGURE 1**  
**Site Layout**

**SYMBOL KEY**

 Well Survey Area Boundary



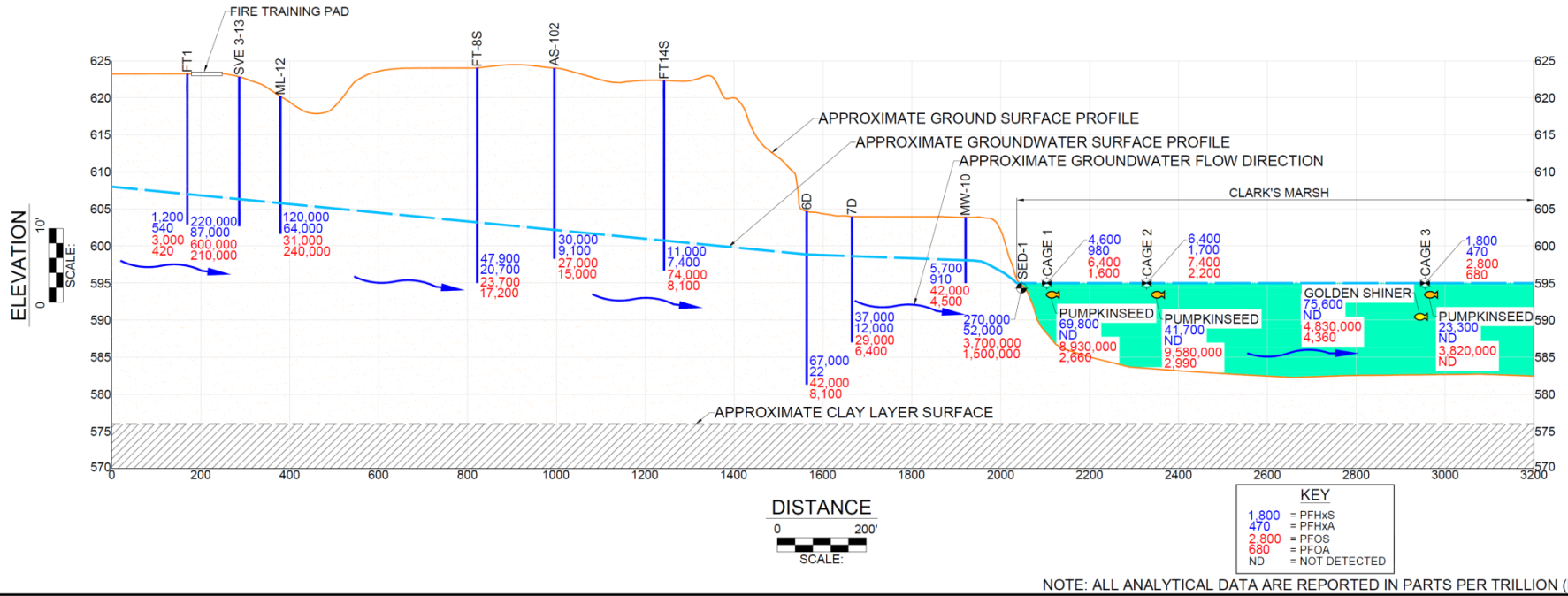
# Background History

- Perfluoroalkyl Chemicals (PFC) - PFCs were invented in the 1938 by 3M
- Extremely useful chemicals
- Familiar products include Scotchguard and Teflon
- 3,000 PFCs/PFAS in commerce today
- By far the most effective materials for putting out fuel fires - no reliable replacements
  - 3 minute rule

Fire Training Pad -  
Site FT02



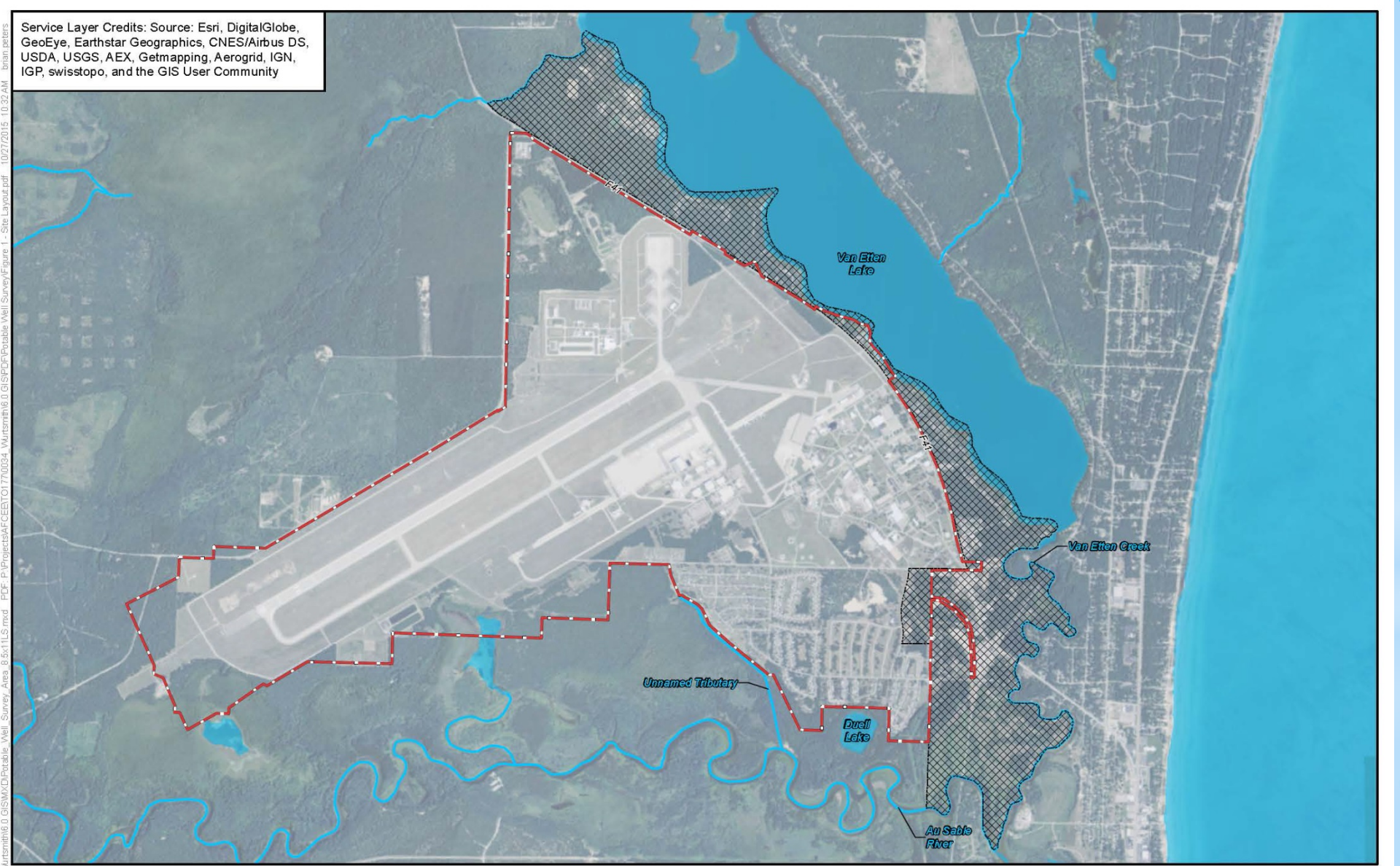
# \*How PFCs contaminated the Ground Water and the Fish



# Current Known Extent of Contamination (2016)

- Started testing the environment for PFCs in 2010
- Groundwater from approximately 200 wells (including residential wells) has been tested
- Also tested: surface water, sediments, soils, fish, tree swallows, and muskrats








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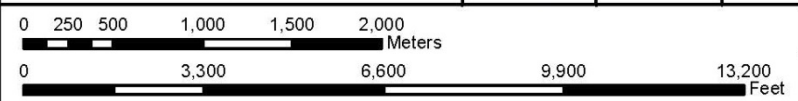
Document: P:\Projects\AFCEETOI\770034 - Wurtsmith\6.0 GIS\PDF\Potable\_Well\_Survey\_Area\_8.5x11LS.mxd  
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 10/27/2015 10:32 AM  
 brian.jeters

**Air Force Civil Engineer Center**  
 2261 Hughes Avenue  
 Building 171, Ste 155  
 JBSA Lackland, Texas 78236



**FIGURE 1**  
**Site Layout**  
 Former Wurtsmith Air Force Base, Oscoda, MI

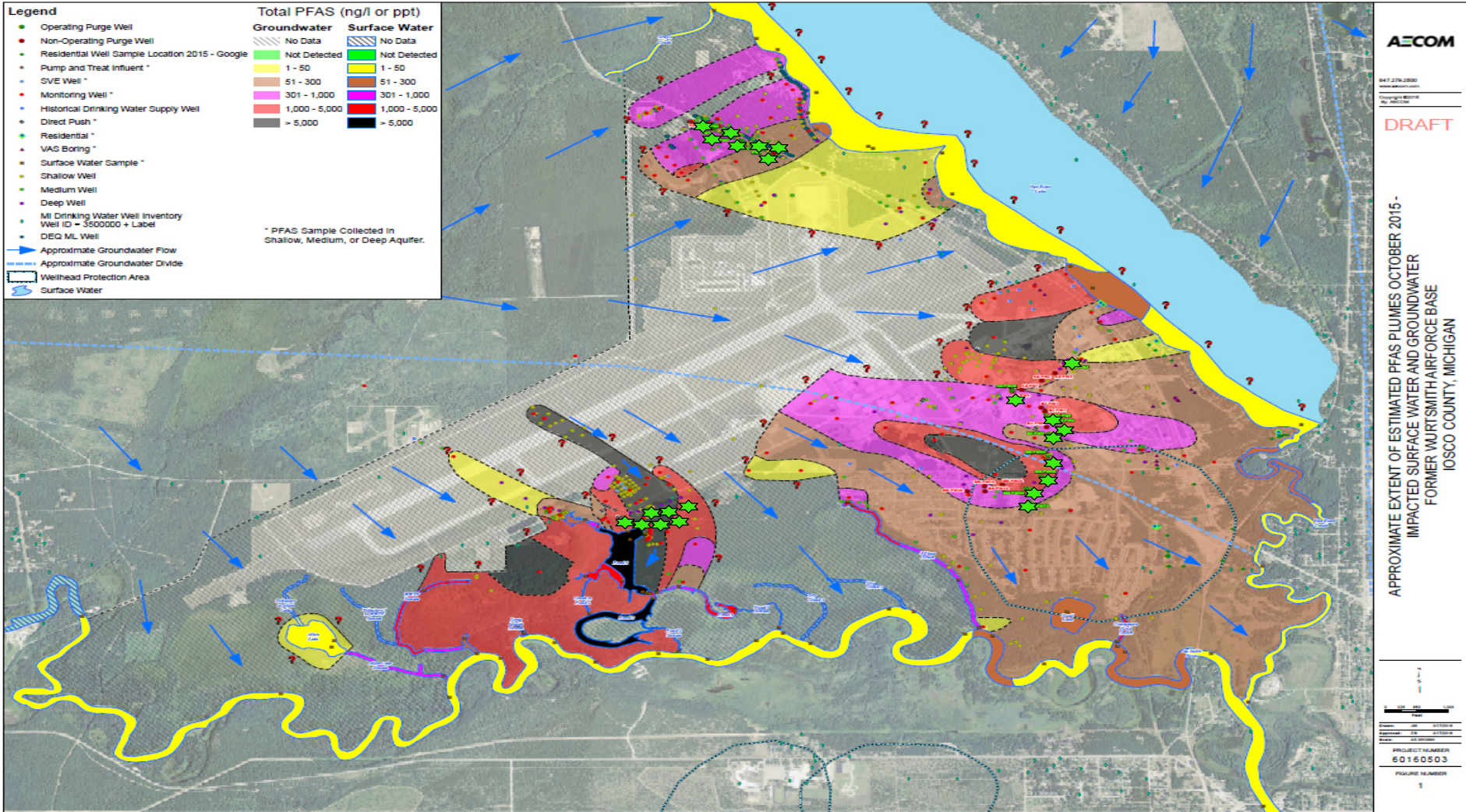
<b>SYMBOL KEY</b>	
	Well Survey Area Boundary
	Surface Water
	Former Wurtsmith AFB Installation Boundary



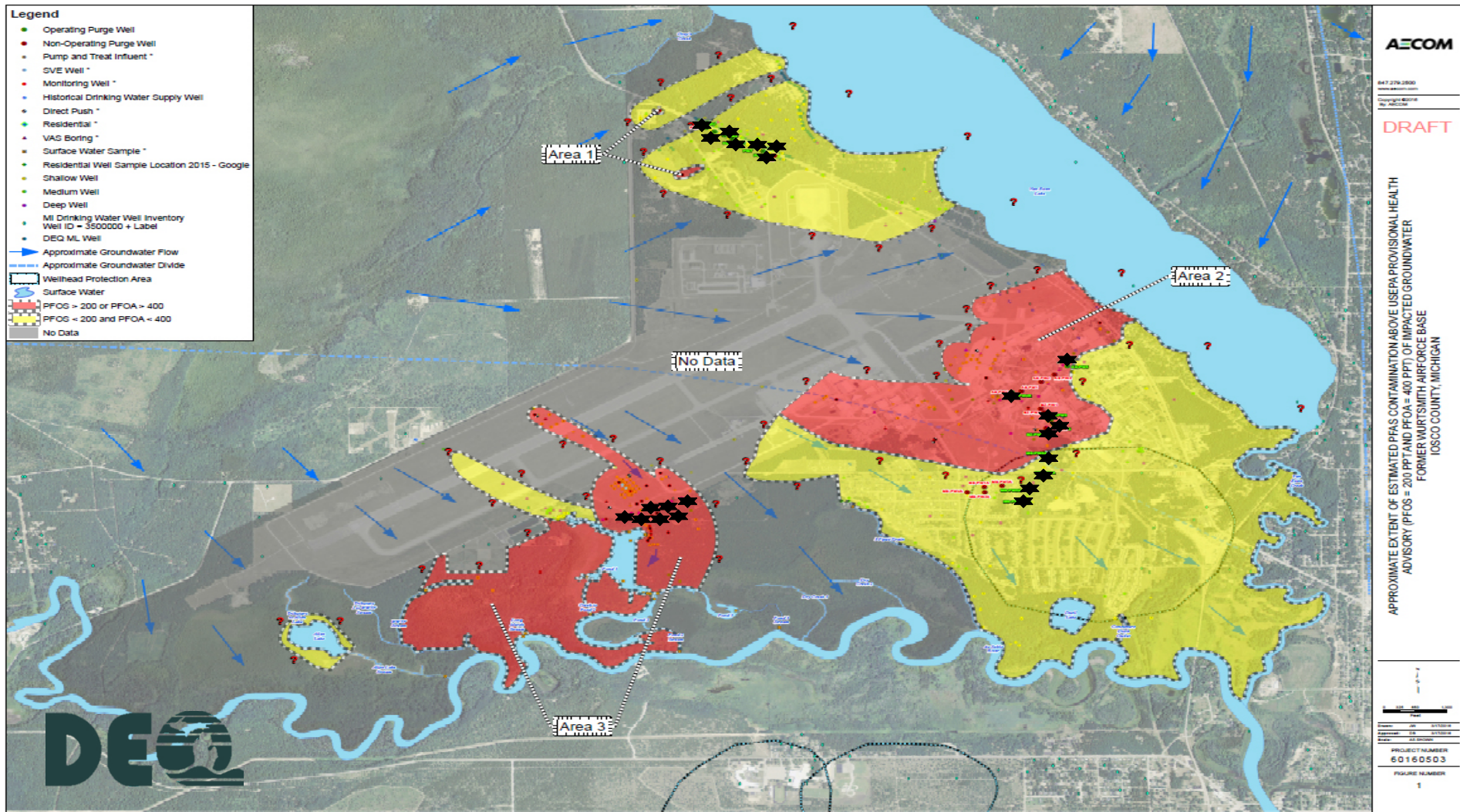
10/27/2015	Potable_Well_Survey_Area_8.5x11LS
PROJ: 775290177	Drawn: BRP



# Approximate Extent of PFC Groundwater Contamination



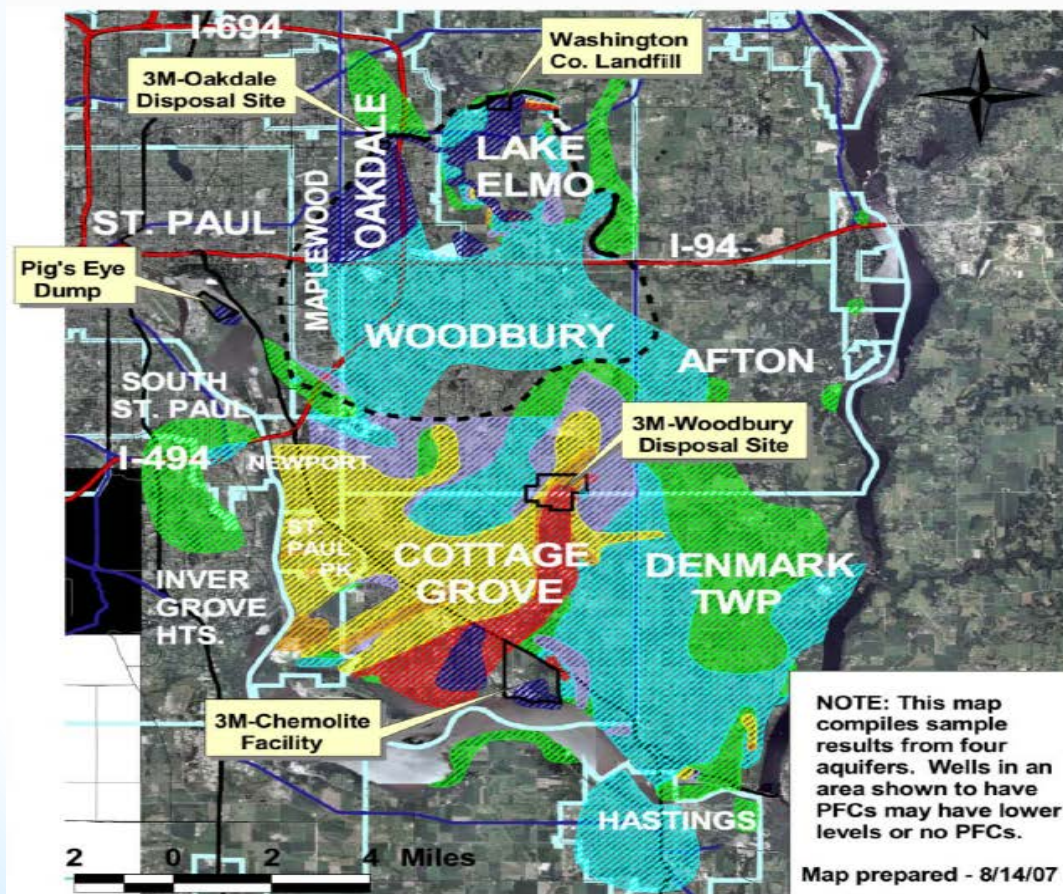
# Current Purge Wells Limiting Off- Base Movement of PFC Contamination



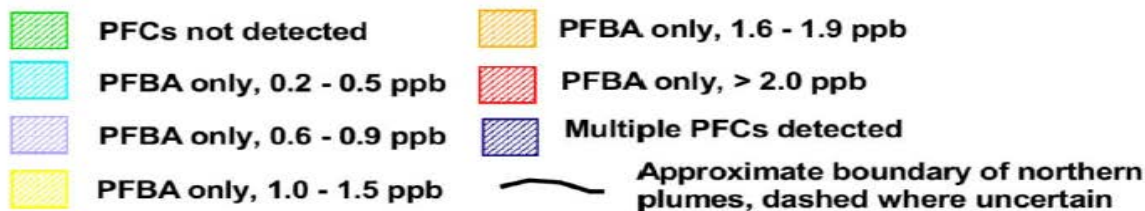
 Below PHA

 Above PHA

# PFC Contamination is not Unique to Michigan



## PFCs in the Southeast Metro Area



# Conclusions

- PFC contamination on, and around the base, is widespread
- Additional testing of groundwater is necessary near the off base residential wells
- Current on-base groundwater extraction wells appear to be minimizing the movement of highly contaminated water towards residential wells



# MDEQ's Letter to the Air Force

- Quarterly testing of residential wells with PFCs
- Expanding the testing of groundwater near residential wells
- Install sentinel wells to warn if highly contaminated groundwater is moving toward residential wells



# MDEQ's Letter to the Air Force

- Operate the groundwater extraction system to limit migration of contaminants
- Provide final remedy for the contamination problems



# What is Next

- The MDEQ and the Air Force will continue to test the residential water wells
- Additional testing for home owners that were not home for the earlier rounds of testing
- Cost of analysis is \$500 to \$700



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