



February 17, 2020

City of Manitowoc  
Attn: Kathleen McDaniel  
900 Quay Street  
Manitowoc, WI 54220

Subject: Response to Emerging Contaminant Work Plan Update #1  
Manitowoc City / Former Newton Tn Gravel Pit, 3130 Hecker Road, Manitowoc, WI  
BRRTS Activity # 02-36-000268

Dear Ms. McDaniel:

The DNR has reviewed the work plan titled *Emerging Contaminant Work Plan Update #1* received electronically on January 31, 2020. The work plan was submitted by Dave Henderson of AECOM on behalf of the City of Manitowoc. The DNR does not consider the work plan adequate to further define degree and extent of Per- and Polyfluoroalkyl Substances (PFAS) contamination under Wis. Admin. Code ch. NR 716 because the work plan does not include any off-site sampling in groundwater (monitoring wells, piezometers, and potable wells) and surface water (Silver Creek). The main concerns at this time are to better understand how PFAS is migrating off-site from the gravel pit and potential impacts to sensitive receptors (potable wells) off-site. This work plan does not address either of these concerns.

The work plan also indicates that potable well sampling for PFAS will not be completed until DNR has set enforcement standards. Even though there are no federal Maximum Contaminant Levels (MCLs) or Wis. Admin. Code ch. NR 140 groundwater quality standards established for PFAS compounds, PFAS compounds meet the definition of hazardous substance and/or environmental pollution under Wis. Stat. § 292.01 and are subject to regulation under Wis. Stat. ch. 292 and Wis. Admin. Code NR chs. 700 – 754 pertaining to remedial action sites. The DNR has the authority to require that responsible parties develop a site-specific cleanup standard for all contaminated environmental media in accordance with Wis. Admin. Code § NR 722.09, if no numeric cleanup standard exists. For further reference, please refer to the attached RR Report article, posted February 1, 2018.

On February 14, 2020, the DNR met with the City, AECOM, and Godfrey & Kahn to further discuss the work plan for PFAS. The DNR requests the following actions to investigate the migration pathways of concern:

- Sample groundwater for the remaining existing on-site piezometers and off-site monitoring wells and piezometers that haven't been sampled for PFAS yet;
- Sample surface water in multiple locations in Silver Creek to at least a minimum distance in the creek east of the Thunder Ridge Rd/Blackhawk Ct area. Field data also needs to be collected to understand the interaction between the surface water and groundwater;
- Propose a work plan that identifies and samples off-site potable wells east, southeast, and northeast of the gravel pit;
- DNR highly recommends utilizing the 36 analyte PFAS list for at least the initial round of sampling. For more details on laboratory certification for PFAS, refer to the following link: <https://dnr.wi.gov/topic/labCert/PFAS.html>. A reduced analyte list can be proposed in follow up sampling if there is appropriate justification to rule it out. Additional analytes provide additional lines of evidence to cause and significance of any detected contaminants.

- The site investigation is an iterative process, so concurrent to the above work, submit a preliminary outline which proposes additional sampling locations if another step-out is warranted, based on the interpretation of data collected.
- Include an alternative water management plan per Wis. Admin. Code § NR 716.17(1). This plan shall include a decision tree on what interim action(s) will be conducted to provide safe drinking water to well owners who are affected by PFAS contamination.
- While the environmental media identified above are the most imminent concerns at this time, please note that Wis. Admin. Code § NR 716.07 does require scoping for all environmental media that is affected or could potentially be affected by the PFAS contamination.

**Therefore, the City of Manitowoc has 30 days, by March 18, 2020, to submit a revised site investigation work plan with a scope that adequately addresses the concerns identified above.**

One electronic copy and one paper copy of the revised site investigation work plan should be sent to:

Tauren R. Beggs  
Remediation and Redevelopment Program  
Wisconsin Department of Natural Resources  
2984 Shawano Avenue  
Green Bay, WI 54313  
[Tauren.Beggs@wisconsin.gov](mailto:Tauren.Beggs@wisconsin.gov)

If you have questions, please contact the DNR Project Manager Tauren Beggs at 920-662-5178 or at [Tauren.Beggs@wisconsin.gov](mailto:Tauren.Beggs@wisconsin.gov) for more information.

Thank you for your cooperation.

Sincerely,



Roxanne N. Chronert  
Team Supervisor, Northeast Region  
Remediation & Redevelopment Program

Attachment: Wisconsin DNR's Remediation and Redevelopment Program Has Authority to Regulate Emerging Contaminants – including, PFAS Compounds, February 1, 2018

cc: Dave Henderson, AECOM ([dave.henderson@aecom.com](mailto:dave.henderson@aecom.com))  
Edward Witte, Godfrey & Kahn ([nwitte@gklaw.com](mailto:nwitte@gklaw.com))  
William J. Nelson, DNR LS/8 ([William.Nelson@wisconsin.gov](mailto:William.Nelson@wisconsin.gov))

# Wisconsin DNR's Remediation and Redevelopment Program Has Authority to Regulate Emerging Contaminants – including, PFAS Compounds

Remediation and Redevelopment Program News: Posted on February 1, 2018

Chemicals that have seen industrial use for decades are now beginning to be better understood by scientists and others concerned with their potential impacts to human health and the environment. Per- and polyfluoroalkyl compounds (PFASs) are a class of emerging contaminants known to impact environmental media, such as groundwater, soil, sediment and surface water.

Additional information about PFASs can be found on the EPA's [web page](#), the ITRC's collection of [fact sheets](#) and through the Agency for Toxic Substances and Disease Registry ([ATSDR](#)).

When discharged to the environment, PFAS compounds meet the definitions of hazardous substance and/or environmental pollution under Wis. Stat. § 292.01. Discharges of PFASs to the environment are subject to regulation under Wis. Stat. § 292 and the requirements for immediate notification, investigation, and remediation in Wis. Admin. Code chs. NR 700 through 754.

In Wisconsin law, the definitions of "environmental pollution" and "discharge" of a "hazardous substance" are not the same as the definition of a hazardous substance in the federal Superfund law and in some other states' laws. In Wisconsin:

- *"Environmental pollution" means the contaminating or rendering unclean or impure the air, land or waters of the state, or making the same injurious to public health, harmful for commercial or recreational use, or deleterious to fish, bird, animal or plant life. See Wis. Stats. § 292.01(4)*
- *"Discharge" means, but is not limited to, spilling, leaking, pumping, pouring, emitting, emptying or dumping. See Wis. Stats. § 292.01(3)*
- *"Hazardous substance" means any substance or combination of substances including any waste of a solid, semisolid, liquid or gaseous form which may cause or significantly contribute to an increase in mortality or an increase in serious irreversible or incapacitating reversible illness or which may pose a substantial present or potential hazard to human health or the environment because of its quantity, concentration or physical, chemical or infectious characteristics. This term includes, but is not limited to, substances which are toxic, corrosive, flammable, irritants, strong sensitizers or explosives as determined by the department. See Wis. Stats. § 292.01(5)*

In Wisconsin, persons responsible for the discharge of PFASs to the air, land or waters of the state will need to immediately notify the state, conduct a site investigation, determine the appropriate clean-up standards for the PFAS compounds in each media impacted (e.g., soil, groundwater, surface water and sediment), and conduct the necessary response actions.

**SOIL:** The RR Program has a [spreadsheet](#) with soil residual contaminant levels (RCLs) that were calculated using U.S. EPA's Regional Screening Level (RSL) web calculator following the procedures in Wis. Admin. Code § NR 720.12, for determining soil direct-contact RCLs protective of human health. The non-industrial direct contact RCL for both PFOA and PFOS is 1.26 mg/kg. The industrial direct contact RCL for both PFOA and PFOS is 16.4 mg/kg. There is no pre-determined, groundwater protective soil RCL for these compounds.

**OTHER MEDIA:** The DNR has authority to require that the responsible party develop a site-specific clean-up standard for all contaminated environmental media in accordance with Wis. Admin. Code § NR 722.09, if no numeric clean-up standard otherwise exists. This includes discharges and environmental pollution impacting the air, lands and waters of the state.

With respect to groundwater, federal Maximum Contaminant Levels (MCLs) and Wis. Admin. Code ch. NR 140 groundwater quality standards have not been established for PFAS compounds. However, the EPA currently has a cumulative [Health Advisory Level](#) (HAL) of 70 parts per trillion (ppt) for two of the most prevalent PFASs detected in drinking water.