NORTHWATCH

June 5, 2026

Directorate of Contaminated Sites (Ontario)
Department of National Defence
22 Wing North Bay, Hornell Heights POH 1PO
Sent by E-mail: NorthBayPFAS-NorthBayPFAS@forces.gc.ca

Reference # 90412

Re. Installation of a Permeable Adsorptive Barrier (PAB) at 22 Wing North Bay

On April 28th, 2026 a notice was posted on the Impact Assessment Agency's public registry announcing a public comment period on an *Intent to Make a Determination* with respect to the Installation of a Permeable Adsorptive Barrier (PAB) at 22 Wing North Bay.

The notice indicates that comments are invited to help inform their decision, and that comments are invited on the project and its potential effects on the environment.

The notice states that:

The Department of National Defence (DND) is proposing a project. DND is proposing to install a 250 m long in-situ permeable adsorptive barrier (PAB) to remediate groundwater impacted by per- and polyfluoroalkyl substances (PFAS) within the bedrock valley at 22 Wing North Bay. Pilot-scale testing will be conducted to evaluate the performance of colloidal activated carbon (CAC) products followed by full-scale implementation and long-term monitoring. Project activities will include:

- *Installing upgradient and downgradient groundwater monitoring wells to assess conditions pre- and post-injections.*
- *Injecting CAC at select intervals to a depth of approximately 5-15 m below ground surface for a distance of up to 70 m for the pilot and approximately 250 m for the full-scale.*
- *Site restoration through landscaping, revegetation and contouring with existing grades as required.*
- *Long term groundwater monitoring to assess ongoing performance of the PAB.*

The initial comment period was very short; two subsequent extensions were announced, with a May 26, 2026 post indicating that the end date of the public comment period had been changed to June 5, 2026.

No additional information was posted to the registry.

Project Information

On May 15th the Department of National Defence provided two pages of summary information in response to our request for documentation supporting the proposed installation of the permeable absorptive barrier, including a description of the technology, examples or case studies of its application elsewhere, it's anticipated effectiveness, the expected time frame for the technology to remain effective, the required maintenance, the intended means of monitoring performance and confirming the effectiveness of the barrier over time, and the consideration of alternative to this technology or alternative means of carrying out this project.

On May 21st Department of National Defence convened an online meeting with representatives of DND's contaminated sites division and their consultants WSP with representatives from Northwatch, Nipissing Environmental Watch, the Trout Lake Conservation Association and the Canadian Environmental Law Association. In response to a followup request, DND provided two additional technical documents[1] on May 25th.

We greatly appreciate the time and attention DND and their consultants invested in responding to our questions both during the online meeting and through the provision of documents.

Northwatch's Interest

Northwatch is a regional environmental non-governmental organization in northeastern Ontario, with members throughout the region including in the Trout Lake watershed and in the City of North Bay, whose drinking water is contaminated with the PFAS contamination migrating off Department of National Defence properties. Northwatch's mandate is to advocate for environmental protection and to support public participation in environmental and social decision-making.

Generally speaking, we have two main areas of concerns with respect to the government and agency response to the extensive PFAS contamination:

> Pace and scope of the remediation program: are the right targets being set for cleanup and the best options selected, and is the program moving at the right pace, given the public health consequences of the PFAS contamination?
>
> Very limited public engagement: Over the last ten years since the public disclosure of the contamination there has been very limited public engagement. There have been

[1] *Targeted Remedial Options Evaluation, Treatment of PFAS within Bedrock Valley, 22 Wing PFAS Investigation,* WSP, December 2025, and *Proposal for Groundwater Remediation Pilot-Scale Testing within the 22 Wing Bedrock Valley (CCNO54)*, WSP, May 2026

two public "forums" (June 2024 and November 2025) and both have limited opportunities for the public to ask questions and hear the questions posed by fellow residents and the responses received. In the instance of the current comment period – the first invitation to the public to comment that we are aware of - public notice was limited to the item being included in a daily bulletin from the Impact Assessment Agency listing multiple assessment notices from across the country; to the best of our knowledge there were no local announcements or invitations to comment issued to the many residents and organizations who have identified their interest in this program.

Northwatch Comments

The widespread contamination, including of the City's drinking water supply and many private wells and properties, has been known to the City, DND, and the Ministry of the Environment for a decade.

Our response to the proposed installation of the permeable adsorptive barrier (PAB) is informed by what we learned about the 2025 soil removal project.

At the June 2024 information session the plans for remediation through soil removal were vague, with consultants saying the contaminated soils at the Fire Fighting Training Area (thought to be the most contaminated area) would be removed to a depth of 1 to 1.5 metres. There was no clear explanation as to how the decision would be made about the depth of soil removal, despite our definite interest and specific questions on this topic.

At the November 2025 information session, we learned that the soil removal was to an average depth of 1.3 metres, with a total volume of 26,000 tonnes of soil removed. When questioned (one-on-one, at the booth next door to the presentation hall, which was the only opportunity for questions) about how it was determined that 1.3 m was the appropriate depth (e.g. based on cost, or based on contaminant levels) the consultant explained that there is a federal guideline of 0.01 ml/kg but because the site was heavily contaminated that level was multiplied by ten, arriving at a standard of 0.1 ml/kg, meaning that the site – after remediation – will remain ten times more contaminated than the federal guideline permits.

This was the outcome we had hoped to avoid - the remediation program completed but remediation incomplete. In our view the decision to leave soil in place contaminated to 10 times higher than the federal guidelines was not in the public interest, and will leave a legacy of contamination on the site and presumably then also in downstream waterbodies.

The installation of the 250 m long in-situ permeable adsorptive barrier (PAB) is intended to remediate groundwater impacted by per- and polyfluoroalkyl substances. Our concern in general and more specifically – as informed by the decisions made in the soil removal

project – is that decisions will be made that result in less-than-optimal remediation. In the case of the soil removal project we do not expect that this project will be redone, even if the results are less than optimal; what is done is done. In the case of the permeable adsorptive barrier we are pleased that there is a pilot project being undertaken, we are pleased to have the opportunity to comment, and we request that there be further public engagement to review the findings of the pilot project in advance of making final decisions about the permeable adsorptive barrier.

Proposed Permeable Adsorptive Barrier

Our review of the report *"Proposal for Groundwater Remediation Pilot-Scale Testing within the 22 Wing Bedrock Valley"* (WSP, May 2026) raised a number of questions and sparked a number of comments and concerns, including:

- Monitoring wells will be installed to provide comparative results but it is not stated which parameters / chemicals will be monitored or the basis for selection of those parameters
- The pilot scale test will include installation of monitoring wells to collect baseline and post treatment groundwater samples of PFAS and non-PFAS parameters. It's not stated which parameters are being monitored for and the basis for the selection of parameters to be monitored
- It is stated that PFAS has impacted the overburden, shallow fractured bedrock and deeper fractured bedrock aquifers; it's not clear how deep the barriers will be relative the depth or the zones where the contamination is most concentrated
- the highest PFAS groundwater concentrations are generally found in deep overburden and upper fractured portion of the bedrock with and it's stated that the permeable adsorptive barrier remediation is targeting the saturated overburden through the installation of the 250 meter long PAB, but it's unclear if the zone of the overburden targeted for remediation is the zone(s) where the highest concentrations are found in the deep overburden and upper fractured portion of the bedrock,
- Task 2 is to evaluate the relative longevity of the proposed CAC products, and it seems that this is to be undertaken concurrent to the pilot project to evaluate for any major differences – for example, in sorption capacity; we question why that wasn't done prior to the selection of the CAC material
- We are concerned that in Table A, the CAC material from the supplier Intrapore is not described, and is instead identified as "confidential";
- Section 2.3.1 describes that the full-scale PAB would be located approximately five to six meters below ground surface to the top of the bedrock, but it's still not clearly

stated how this coincides - or does coincide - with the most contaminated zone of the overburden

- We don't find stated the rationale for the selection of 250 meters versus other lengths for the PAB, and similarly for the pilot project of length of 11.75 meters and 14.75 meters, or the decision for the depth for placement; the report indicates that the PAB will be eight meters deep (from five meters to 13 meters below surface) but – again – it is not clear how that intersects with the most contaminated zone(s)
- Section 2.3.5 Pilot Scale Test Execution, in the third paragraph, it indicates that groundwater samples will be collected for visual inspection of the potential presence of some CAC migration to those locations, but it will not be submitted for laboratory analysis; we question why it would not be submitted for laboratory analysis: What is the accuracy of visual inspections (compared to laboratory analysis)? What could the outcomes of either the visual inspections or laboratory analysis be in terms of what evaluating CAC migration? What is the expectation for CAC migration and what is the consequence if expectations are not met in terms of CAC migration?
- On Page 9, Task 3, the report indicates that WSP will prepare a report summarizing the methodology and results of the two PAB installations, including the September / October 2026 sampling event; this will be a good milestone for a follow-up meeting between DND and the public interest groups, and for a public meeting; we request in advance that the report be shared and that a meeting be convened shortly after the report is shared.
- The report also states that following one year of post-treatment monitoring (so after August 2027) a final report will be produced and this report will serve as a standalone repository of the data already provided in earlier deliverables; this report should be a public report; Table B included a proposed schedule of associated meetings and reporting (fall 2026 to winter 2028); production of the post-pilot project monitoring report would be an appropriate milestone for a public meeting and a meeting between DND, their agents and other agencies, and the public interest groups.

As discussed during our meeting of May 21st, we have a number of general concerns with the project and project approach:

- We have a general question or concern about the in-situ disposal of the CAC; it appears that there is no intention to retrieve or otherwise dispose of the CAC during or after the pilot project, and similarly, after the effectiveness of the CAC has expired during the long-term project

- There seem to be large uncertainties about the long-term retention of PFAS by the carbon which has been injected into the PFAS contaminated overburden, and on a related point there are uncertainties about the potential for future re-release of PFAS to groundwater after the carbon is no longer adsorbing the PFAS contaminants
- There seem to be large uncertainties about the longer-time frames for the PAB, e.g. how long the barrier will actually "catch" the PFAS, how the barrier's effectiveness will be measured in the medium and longer term, what the contingency and / or mitigation plans in the medium and longer term are when the effectiveness of the barrier and / or the CAC is declining; questions include those about the project timeline, and post-project responsibilities for mitigation or future remediation
- The various remediation projects must be considered as a whole program; during our meeting on May 21st public interest representatives expressed concern that the PFAS response is compartmentalized and it is difficult to consider the various components and projects and timelines relative to each other and as a whole approach

Conclusions

In general, we support remediation efforts on the part of the Department of National Defence and the City of North Bay. PFAS contamination is a public health concern, and the residents of North Bay deserve action, as do the downstream communities.

We have no objections to the Pilot Project *per se*, but as noted earlier in this submission we do have some outstanding questions and concerns, largely related to the selection of depth for placement for the barriers, the selection of the CAC material, the intention to dispose of the CAC *in situ*, and longer term contingency plans and project management.

We look forward to continued discussions and urge the Department to respond positively to our proposed milestone meetings, including but not limited to meetings following the September / October 2026 sampling event and again following one year of post-treatment monitoring (so after August 2027).

Thank you for your attention and consideration.

Brennain Lloyd
Northwatch Project Coordinator

cc. Karin Pratte, City of North Bay
Greg Ault, Ministry of the Environment, Conservation and Parks