

SUPPLEMENT ANALYSIS TO FINAL ENVIRONMENTAL ASSESSMENT: PACIFIC NORTHWEST NATIONAL LABORATORY RICHLAND CAMPUS FUTURE DEVELOPMENT, RICHLAND, WASHINGTON

Introduction

The Department of Energy (DOE) has prepared this supplement analysis (SA) to evaluate an existing environmental assessment (EA) (listed below) as part of a five-year review to identify potential changes that could have bearing on the potential environmental impacts previously analyzed. DOE's National Environmental Policy Act (NEPA) regulations state that "DOE shall evaluate site wide NEPA documents prepared under 10 CFR 1021.330(c) at least every five years" (10 CFR 1021.330(d)), and "DOE shall evaluate site-wide EAs by means of an analysis similar to the Supplement Analysis to determine whether the existing site-wide EA remains adequate, whether to prepare a new site-wide EA, revise the FONSI, or prepare a site wide EIS, as appropriate." (10 CFR 1021.330(e)). This SA provides sufficient information for DOE to determine whether (1) to supplement an existing EA, (2) to prepare a new EA, or (3) no further NEPA documentation is required. (10 CFR 1021.330(e)).

Existing EA evaluated in this SA:

- Final Environmental Assessment: Pacific Northwest National Laboratory Richland Campus Future Development, Richland, Washington (DOE/EA-2025), https://science.osti.gov/-/media/ssp/pdf/nepa-documents/ea-eis/pnso/2017/PNNL_RCFD_EA_and_FONSI.pdf

Changes to the Proposed Action or New Circumstances or Information¹

DOE signed the Finding of No Significant Impact (FONSI) determination for DOE /EA-2025 in September 2017. This SA analyzes whether there have been changes to the scope of the proposed action or to the environment that would change DOE's determination of impact.

DOE identified one campus development project in the short term (< 5 years) that it did not analyze for impacts in DOE/EA-2025. The project aims to install a ground source heat pump in the southern, developed portion of the Pacific Northwest National Laboratory (PNNL) Richland Campus to seasonally heat a complex of buildings (PSL, MATH, ROB, LSL2, and Auditorium) (Gourley 2021).

The affected environment analyzed in DOE/EA-2025 has not changed significantly since the original analysis.

Background

In September 2017, in a FONSI for the Final Environmental Assessment: Pacific Northwest National Laboratory Richland Campus Future Development, Richland, Washington (DOE/EA-2025), DOE-PNSO determined that future development of the PNNL Richland Campus would not result in significant impacts to the environment (DOE 2017). Since signing of the FONSI, initial future development activities have occurred and planning is underway for new facilities and infrastructure at the PNNL Richland

¹ Throughout this document, the phrase "changes to the proposed action or new circumstances or information" refers to a substantial change to the proposed action that may be relevant to environmental concerns or significant new circumstances or information that may be relevant to environmental concerns and have bearing on the proposed action or its impacts (10 CFR 1021.314).

Campus. This SA has been prepared five years after the publishing of the FONSI to analyze whether impacts assessed in DOE/EA-2025 still bound the impacts anticipated from future development activities or whether additional NEPA analyses are required to support decision making.

The Proposed Action in DOE/EA-2025 is to construct and operate new facilities and infrastructure envisioned in the PNNL 2017 Richland Campus Master Plan (PNNL 2017) at the PNNL Richland Campus. In addition to new facilities, existing facilities would be maintained and refurbished or demolished as reasonable and based on mission needs. The Proposed Action analyzed within DOE/EA-2025 is bound by the PNNL Richland Campus Master Plan (CMP; PNNL 2017). The CMP has not been updated since 2017, when DOE/EA-2025 was published.

The PNNL Annual Laboratory Plan (PNNL 2022a), which is updated annually, provides an analysis of ongoing and proposed projects and investment priorities of the PNNL Richland Campus. To evaluate if future planned activities remain bound by the Proposed Action in DOE/EA-2025, scope within the PNNL Annual Laboratory Plan was analyzed. The PNNL Annual Laboratory Plan presents a 10-year strategy for infrastructure, including facility modernization, development, and maintenance (PNNL 2022a). As part of this SA, the infrastructure and facility projects within the PNNL Richland Campus boundary planned for the short term (< 5 years) in the PNNL Annual Laboratory Plan were analyzed. This analysis found that the scope of the PNNL Annual Laboratory Plan remains within the bounds of the CMP, and therefore, within the bounds of the Proposed Action in DOE/EA-2025. As such, DOE/EA-2025 remains bound by the plan that was originally analyzed. Changes to the CMP could require additional NEPA analysis to support decision making.

The ground source heat pump project referenced in *Changes to the Proposed Action or New Circumstances or Information* was not explicitly described in the PNNL Annual Laboratory Plan. This project was evaluated under NEPA for potential environmental impacts. DOE has categorically excluded the installation, modification, operation, and removal of ground source heat pumps in *B5.19 Ground source heat pumps* (10 CFR Part 1021). DOE-PNSO has prepared a project-specific categorical exclusion as the project fits all applicable criteria in B5.19 and has no extraordinary circumstances. The project has no potential for significant environmental impacts.

Resource Areas Not Analyzed in this SA

The following resource areas are not analyzed in this SA because they have not changed and will not be significantly affected by the changes to the Proposed Action or new circumstances or information:

- Land Use – No Change
- Air Quality – No Change
- Soils and Geological Resources – No Change
- Water Resources – No Change
- Cultural Resources – There have been no new Historic Properties identified within the PNNL Richland Campus boundary since DOE/EA-2025 was published.
- Wetlands and Floodplains – No Change
- Socioeconomics – No Change
- Transportation and Traffic – No Change
- Human Health and Safety – No Change
- Visual Resource – No Change
- Noise and Vibration – No Change
- Utilities and Infrastructure – No Change
- Waste Generation and Disposition – No Change
- Accidents – No Change
- Intentional Destructive Acts – No Change
- Cumulative Impacts – No Change

Resource Areas Analyzed in this SA

Biological Resources are analyzed in this SA as new circumstances may have a significant affect on potential environmental impacts. Table 1 shows a comparison between the environmental impacts analyzed in DOE/EA-2025 and those described in this SA. The most recently completed survey of biological resources found no significant changes in biological resources within the PNNL Richland Campus boundary (PNNL 2022b). No endangered or threatened species have been observed during biological field surveys of the PNNL Richland Campus since DOE/EA-2025 was published. Since DOE/EA-2025 was published, two new species that have the potential to occur within the PNNL Richland Campus have been proposed for listing under the Endangered Species Act (ESA).

The monarch butterfly (*Danaus plexippus*) was proposed for listing as Threatened under the ESA in December 2024. The species range extends over the continental United States, including the PNNL-Richland campus and Proposed Action area. Monarch butterflies have not been observed during biological resource surveys of the Proposed Action area, but this does not preclude their presence in the area. No proposed critical habitat is within the Proposed Action area. Losses of monarch butterfly overwintering, breeding, and migration habitat are believed to be continuing threats to the species (WAFWA 2019). The Proposed Action area does not contain monarch butterfly overwintering habitat. Eastern Washington includes spring and summer breeding areas for monarch butterflies (WAFWA 2019). Monarch butterfly larvae feed exclusively on milkweed (primarily *Asclepias* sp.) plants. Individual milkweed plants or very small populations have been observed during periodic biological resource surveys of the Proposed Action area; all observations were within the Preservation Designated Area (PDA). This area will continue to be managed for the protection of cultural and biological resources, and potential monarch breeding habitat will not be affected by the Proposed Action. Riparian areas act as

migration corridors for migratory monarchs in the western United States (WAFWA 2019). Although riparian habitat is present within the action area, the Proposed Action will not affect this habitat. The removal of shrub steppe habitat as part of the Proposed Action may result in the removal of nectar sources for adult monarch butterflies including forbs and rabbitbrush. Given the continued availability of nectar sources in the PDA and the lack of observations of this species within the Proposed Action area, it is expected the Proposed Action will have no effect on monarch butterflies.

Suckley's cuckoo bumble bee (*Bombus suckleyi*) was proposed for listing as Endangered under the ESA in December 2024. The species range extends over the western United States, including the PNNL-Richland campus and Proposed Action area. However, the species has not been observed in the contiguous United States since 2017 (CBD 2020). Washington State has no record of Suckley's cuckoo bumble bee since 2002, and occurrences pre-2002 were over 30 miles from the Proposed Action area (CBD 2020). Critical habitat has not been designated for this species. Suckley's cuckoo bumble bee is not expected to occur within the Proposed Action area, and the Proposed Action will have no effect on the species.

Table 1. Comparison of Potential Environmental Impacts			
Resource Area	Summary of Potential Impacts in DOE/EA-2025	Summary of Potential Impacts as a Result of Changes to the Proposed Action or New Circumstances or Information	Difference in Potential Impacts
Biological Resources	Proposed development would remove native shrub-steppe habitats. Wildlife present west of George Washington Way could suffer direct mortality, disturbance, and displacement. A mitigation action plan would be implemented to mitigate for habitat loss and potential impacts to wildlife, including migratory birds. (DOE/EA-2025, Table S.1)	New circumstances, specifically the listing of two species under the ESA with ranges extending over the Proposed Action area, were evaluated. The Proposed Action will result in no effect to these species. No additional impacts beyond those described in DOE/EA-2025 are anticipated. See above analysis for additional detail.	None.

Mitigation

No changes to mitigation are expected and DOE will implement mitigation as described in DOE/EA-2025.

Determination

In accordance with the NEPA and DOE's implementing NEPA regulations, DOE prepared this supplement analysis to evaluate whether the existing EA remains adequate or whether to prepare an EA supplement or a new EA. DOE concludes that there are no significant changes to the Proposed Action and no new circumstances or information, therefore any changes relevant to environmental concerns are not significant and therefore do not require a supplement to the Final Environmental Assessment: Pacific Northwest National Laboratory Richland Campus Future Development, Richland, Washington (DOE/EA-2025), consistent with 10 CFR 1021.330. No further NEPA documentation is required.

PNSO Site Office Manager

[SIGNATURE, DATE OF SIGNATURE, AND TITLE OF THE APPROVING OFFICIAL.]

References

10 CFR Part 1021. *Code of Federal Regulations*, Title 10, *Energy*, Part 1021, “National Environmental Policy Act Implementing Procedures.” Washington, D.C. Available at <http://www.ecfr.gov/cgi-bin/textidx?SID=593541a546513ac55890ef94da62e084&mc=true&node=pt10.4.1021&rgn=div5>

Center for Biological Diversity (CBD). 2020. Petition to list Suckley’s cuckoo bumble bee (*Bombus suckleyi*) under the Endangered Species Act and concurrently designate critical habitat. Notice of Petition. Accessed February 18, 2025, at: https://ecosphere-documents-production-public.s3.amazonaws.com/sams/public_docs/petition/895.pdf

Gourley, Steven E. August 13, 2021. *DOE/PNNL Water Wells*. S718090-21-001. Draft Letter to the Washington Department of Ecology.

U.S. Department of Energy (DOE). 2017. *Finding of No Significant Impact (FONSI) and Final Environmental Assessment: Pacific Northwest National Laboratory Richland Campus Future Development, Richland, Washington*. DOE/EA-2025. Pacific Northwest Site Office, Richland, Washington. Accessed June 7, 2023, at https://science.osti.gov/-/media/ssp/pdf/nepa-documents/ea-eis/pnso/2017/PNNL_RCFD_EA_and_FONSI.pdf

Pacific Northwest National Laboratory (PNNL). 2017. *PNNL 2017 Richland Campus Master Plan*. FSP-PLAN-005. Prepared for the U.S. Department of Energy. Accessed June 7, 2023, at <https://www.pnnl.gov/sites/default/files/media/file/2017CampusMasterPlan.pdf>

Pacific Northwest National Laboratory (PNNL). 2020. *PNNL Campus Strategy Management Plan*. FSP-PLAN-004 Rev. 12.

Pacific Northwest National Laboratory (PNNL). 2022a. *Pacific Northwest National Laboratory’s Annual Laboratory Plan*. Prepared for the U.S. Department of Energy.

Pacific Northwest National Laboratory (PNNL). 2022b. *Pacific Northwest National Laboratory Annual Site Environmental Report for Calendar Year 2021*. PNNL-33213. Prepared for the U.S. Department of Energy. Accessed June 7, 2023, at <https://www.pnnl.gov/sites/default/files/media/file/PNNLEnvironmentalReportforCalendarYear2021.pdf>

Western Association of Fish and Wildlife Agencies (WAFWA). 2019. Western monarch butterfly conservation plan, 2019-2069. Version 1.0. Accessed February 18, 2025, at https://wafwa.org/wpdm-package/western-monarch-butterfly-conservation-plan-2019-2069/?ind=1602171186650&filename=WAFWA_Monarch_Conservation_Plan.pdf&wpdmdl=13048&refresh=67b4d6a73df701739904679