

**U.S. Department of Commerce
National Institute for Standards and Technology
CHIPS Program Office**

FINDING OF NO SIGNIFICANT IMPACT

**Final Programmatic Environmental Assessment for Modernization and Expansion of
Existing Semiconductor Fabrication Facilities under the CHIPS Incentives Program**

NIST-CPO/FONSI-001

AGENCY: National Institute for Standards and Technology, CHIPS Program Office (CPO)

ACTION: Finding of No Significant Impact

SUMMARY: The CHIPS Program Office (CPO) within the National Institute of Standards and Technology, an agency of the U.S. Department of Commerce, prepared a Final Programmatic Environmental Assessment (PEA) pursuant to the National Environmental Policy Act, 42 U.S.C. § 4321 *et seq.*, and the Council on Environmental Quality NEPA implementing regulations, 40 C.F.R. Parts 1500-1508.

Proposed Action

CPO is considering providing federal financial assistance under the CHIPS Incentives Program for the proposed modernization or expansion of existing current-generation, mature-node, or leading-edge front- or back-end commercial semiconductor fabrication facilities within existing facility footprints (hereinafter referred to as the “Proposed Action”).

The purpose of CPO’s Proposed Action is to invest in U.S. production of strategically important semiconductor chips and ensure a sufficient, sustainable, and secure supply of older, current, and next-generation chips for national security purposes and critical manufacturing industries. The need for CPO’s action is to fulfill the agency’s statutory responsibilities under the CHIPS Act, including the requirements of 15 U.S.C. § 4652 to incentivize investment in facilities and equipment in the United States for the fabrication, assembly, testing, advanced packaging, production, or research and development of semiconductors, materials used to manufacture semiconductors, or semiconductor manufacturing equipment.

No Action Alternative

Under the “no action alternative” evaluated under the PEA, CPO would not provide federal financial assistance for proposed semiconductor fab modernization and expansion projects. For purposes of the PEA analysis, the no action alternative assumes that applicants would decide not

to undertake or complete proposed modernization and expansion projects at existing fabs, and such fabs would therefore continue production at current rates, using existing equipment, within existing fab facility footprints. The no action alternative also assumes that applicants' existing facilities would continue to meet applicable permit conditions and regulatory standards.

Programmatic Environmental Review

Most projects focused solely on modernizing or expanding existing fabs will use similar technologies and thus will have similar environmental effects. Accordingly, CPO prepared the PEA to analyze the typical direct, indirect, and cumulative environmental effects of providing CHIPS financial assistance for modernization and expansion at an existing semiconductor fabs.

Based on its analysis, CPO determined that such projects generally will not result in significant adverse environmental effects. Therefore, CPO is issuing this finding of no significant impact (FONSI) for the Proposed Action and approves the Final PEA concurrent with the FONSI. CPO anticipates that for many projects that fall within the range of activities being considered as part of the Proposed Action, CPO will be able to apply the PEA and FONSI and conclude the NEPA process without additional project-specific analysis. To determine whether the PEA may be applied to an applicant's proposed project, CPO will conduct preliminary environmental due diligence and confirm the specific types of activities for which the applicant seeks to use CHIPS financial assistance, which may not be known until the Department signs a Preliminary Memorandum of Terms with the applicant.

If a proposed project's activities fall within the range of activities under the Proposed Action, CPO will apply the PEA to the project using a PEA Decision Document (PDD) and will finalize the PDD as the NEPA decision document for the project. CPO anticipates that for most semiconductor fab modernization and expansion projects, the PDD will be sufficient to document the project's potential environmental effects. CPO may require larger modernization or expansion projects to incorporate established best management practices (BMPs) or mitigation to avoid significant effects. In the rare case where CPO finds that a proposed modernization or expansion project could result in potentially significant effects or where the significance of the effects is unknown, and the project cannot rely on established BMPs or mitigation to avoid significant effects, CPO will require the applicant to prepare a tiered environmental assessment (EA).

Environmental Effects

The PEA analyzes the potential environmental effects of the Proposed Action and the no action alternative. All potentially relevant environmental resource areas were considered for analysis in the PEA. To focus the analysis, potential effects to the following resource areas were not analyzed in detail because they would be anticipated to be negligible or non-existent for proposed projects reviewed under the PEA:

- Land Use
- Cultural and Historic Resources
- Geology, Topography, and Soil
- Coastal Barrier Resources and Wild and Scenic Rivers
- Wetlands and Floodplains

- Terrestrial Biological Resources
- Visual Resources
- Transportation and Traffic

For proposed projects with more than negligible potential effects to these resource areas based on site-specific conditions, CPO will require the preparation of a tiered EA.

For other resource areas, the environmental consequences analysis in the PEA considers how the condition of a resource may change as a result of implementing the no action alternative or the Proposed Action and describes the effects in terms of type (i.e., direct, indirect, or cumulative, and beneficial or adverse), duration, and magnitude, which CPO considered in combination to determine whether effects are significant.

CPO may require applicants to commit to mitigation or BMPs to reduce proposed projects' environmental effects. CPO will work with applicants to determine mitigation and BMPs appropriately tailored to address potential effects and will incorporate all such relevant commitments in NEPA decisions and as conditions of final CHIPS awards.

The PEA also analyzes the cumulative effects of multiple semiconductor fab modernization and expansion projects supported with CHIPS financial assistance. Modernization activities under the Proposed Action would occur at existing, mature semiconductor facilities that would generally be 'stand-alone' and not likely to induce significant cumulative adverse local effects. Activities under the Proposed Action would likely include production increases with resulting minor environmental effects when compared to the expected overall expansion of the industry.

Public Involvement

CPO published a Notice of Availability of the Draft PEA for public comment in the *Federal Register* on December 27, 2023.¹ CPO extended the 30-day public comment period by two weeks from January 25, 2024, to February 9, 2024.²

The Department received seven comment submissions on the Draft PEA. Commenters included semiconductor manufacturing companies, industry organizations, and non-governmental organizations.

CPO considered the input received and has responded to comments in **Appendix E** of the Final PEA. CPO made revisions to the PEA in response to comments where appropriate.

FOR FURTHER INFORMATION: Additional information and copies of the Final PEA and this Finding of No Significant Impact (FONSI) are available to all interested parties and the public from the following contact:

¹ "Notice of Availability of Draft Programmatic Environmental Assessment for Modernization and Internal Expansion of Existing Semiconductor Fabrication Facilities Under the CHIPS Incentives Program," 88 Fed. Reg. 89372 (Dec. 27, 2023).

² 89 Fed. Reg. 6506 (Feb. 1, 2024).

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A copy of the Final PEA and this FONSI are also available on the following website:
<https://www.nist.gov/chips/national-environmental-policy-act-nepa>.

DETERMINATION: Based on its analysis, CPO determined that the Proposed Action to provide federal financial assistance for the proposed modernization or expansion of existing current-generation, mature-node, or leading-edge front- or back-end commercial semiconductor fabrication facilities within existing fab facility footprints normally will not result in significant adverse environmental effects. Thus, preparation of a programmatic environmental impact statement (EIS) is not required, and CPO is issuing this FONSI for the Proposed Action. The Final PEA is approved in accordance with this FONSI.



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