

**U.S. DEPARTMENT OF ENERGY
OFFICE OF ENERGY EFFICIENCY AND RENEWABLE ENERGY
NEPA DETERMINATION**



RECIPIENT: Forest Preserve District of DuPage County

STATE: IL

PROJECT TITLE : Willowbrook Wildlife Center Efficiency Improvements

Funding Opportunity Announcement Number	Procurement Instrument Number	NEPA Control Number	CID Number
CDS	DE-EE0010686	GFO-0010686-001	GO10686

Based on my review of the information concerning the proposed action, as NEPA Compliance Officer (authorized under DOE Policy 451.1), I have made the following determination:

CX, EA, EIS APPENDIX AND NUMBER:

Description:

A9 Information gathering, analysis, and dissemination

Information gathering (including, but not limited to, literature surveys, inventories, site visits, and audits), data analysis (including, but not limited to, computer modeling), document preparation (including, but not limited to, conceptual design, feasibility studies, and analytical energy supply and demand studies), and information dissemination (including, but not limited to, document publication and distribution, and classroom training and informational programs), but not including site characterization or environmental monitoring. (See also B3.1 of appendix B to this subpart.)

B5.16 Solar photovoltaic systems

The installation, modification, operation, and removal of commercially available solar photovoltaic systems located on a building or other structure (such as rooftop, parking lot or facility, and mounted to signage, lighting, gates, or fences), or if located on land, generally comprising less than 10 acres within a previously disturbed or developed area. Covered actions would be in accordance with applicable requirements (such as local land use and zoning requirements) in the proposed project area and would incorporate appropriate control technologies and best management practices.

B5.19 Ground source heat pumps

The installation, modification, operation, and removal of commercially available smallscale ground source heat pumps to support operations in single facilities (such as a school or community center) or contiguous facilities (such as an office complex) (1) only where (a) major associated activities (such as drilling and discharge) are regulated, and (b) appropriate leakage and contaminant control measures would be in place (including for cross-contamination between aquifers); (2) that would not have the potential to cause significant changes in subsurface temperature; and (3) would be located within a previously disturbed or developed area. Covered actions would be in accordance with applicable requirements (such as local land use and zoning requirements) in the proposed project area and would incorporate appropriate control technologies and best management practices.

Rationale for determination:

The U.S. Department of Energy (DOE) is administering congressionally directed spending to Forest Preserve District of DuPage County (FPDDC) to install solar arrays and a geothermal field for a ground source heat pump system at the Willowbrook Wildlife Center in Glen Ellyn, IL. The installation of these systems would provide the wildlife center the ability to become energy net zero. Solar arrays and geothermal field would be installed as part of an overall facility improvement and expansion plan.

This award will be executed over 2 budget periods and 8 tasks.

Activities in Tasks 1 and 2 include gathering permits and procuring contractors for installation of solar and geothermal components. HVAC systems associated with geothermal heating would be installed in task 3. Task 4 includes the installation of 3 solar arrays, 64 geothermal wells and the associated systems for each. An educational net zero exhibit would be installed in task 6, task 7 and 8 would include installation closeout and commissioning, and performance monitoring of solar arrays and geothermal systems.

Three solar arrays would be installed, two roof-mounted arrays and one ground-mounted; one roof-mounted on an existing building built in 2023, a ground-mounted array adjacent to this building, and a roof-mounted array on the rehabilitation clinic and visitor center, a newly constructed building to be completed with the expansion plan. The ground-mounted array would require an area of approximately 4500 square feet.

A third-party contractor would drill 8 geothermal wells per week, 64 total, for a drilling duration of 2 months. Geothermal system piping would take an additional month to install, for a total of 3 months completion time. The geothermal wells and system would be installed on the south and west sides of the to-be constructed rehabilitation clinic and visitor center. All disturbances associated with solar arrays and geothermal wells and systems fall within the

disturbance boundaries of the improvement and expansion plan of the Willowbrook Wildlife Center.

A geothermal heat pump, also known as ground source heat pump would be used with ground heat exchangers to circulate fluid through a closed-loop design. The pipes are typically made of plastic tubing and would be installed approximately 450 feet vertically. The system uses the constant ground thermal properties to provide a heating/cooling source, through the closed-loop system, into an installed building HVAC system. The recipient and third-party drilling operator would be responsible for obtaining the adequate permits for the drilling geothermal wells.

Existing corporate health, safety, and environmental policies, procedures, local drill permits, and regulations would be followed, including personnel training, proper personal protective equipment (PPE), engineering controls, monitoring, and internal assessments. Project activities would occur within the disturbance boundaries of the facility improvement and expansion plan; therefore, no adverse impacts to sensitive resources are expected as a result of the proposed activities of the congressionally directed spending.

DOE has considered the scale, duration, and nature of the proposed activities to determine potential impacts on sensitive resources, including those of an ecological, historical, cultural, and socioeconomic nature, and found no effects that would be expected to result from the proposed project activities.

NEPA PROVISION

DOE has made a final NEPA determination.

Notes:

Building Technologies Office (BTO)
NEPA review completed by Dustin Hill, 11/8/2023.

FOR CATEGORICAL EXCLUSION DETERMINATIONS

The proposed action (or the part of the proposal defined in the Rationale above) fits within a class of actions that is listed in Appendix A or B to 10 CFR Part 1021, Subpart D. To fit within the classes of actions listed in 10 CFR Part 1021, Subpart D, Appendix B, a proposal must be one that would not: (1) threaten a violation of applicable statutory, regulatory, or permit requirements for environment, safety, and health, or similar requirements of DOE or Executive Orders; (2) require siting and construction or major expansion of waste storage, disposal, recovery, or treatment facilities (including incinerators), but the proposal may include categorically excluded waste storage, disposal, recovery, or treatment actions or facilities; (3) disturb hazardous substances, pollutants, contaminants, or CERCLA-excluded petroleum and natural gas products that preexist in the environment such that there would be uncontrolled or unpermitted releases; (4) have the potential to cause significant impacts on environmentally sensitive resources, including, but not limited to, those listed in paragraph B(4) of 10 CFR Part 1021, Subpart D, Appendix B; (5) involve genetically engineered organisms, synthetic biology, governmentally designated noxious weeds, or invasive species, unless the proposed activity would be contained or confined in a manner designed and operated to prevent unauthorized release into the environment and conducted in accordance with applicable requirements, such as those listed in paragraph B(5) of 10 CFR Part 1021, Subpart D, Appendix B.

There are no extraordinary circumstances related to the proposed action that may affect the significance of the environmental effects of the proposal.

The proposed action has not been segmented to meet the definition of a categorical exclusion. This proposal is not connected to other actions with potentially significant impacts (40 CFR 1508.25(a)(1)), is not related to other actions with individually insignificant but cumulatively significant impacts (40 CFR 1508.27(b)(7)), and is not precluded by 40 CFR 1506.1 or 10 CFR 1021.211 concerning limitations on actions during preparation of an environmental impact statement.

The proposed action is categorically excluded from further NEPA review.

SIGNATURE OF THIS MEMORANDUM CONSTITUTES A RECORD OF THIS DECISION.

NEPA Compliance Officer Signature:

 Electronically
Signed By: Casey Strickland
NEPA Compliance Officer

Date: 11/9/2023

FIELD OFFICE MANAGER DETERMINATION

- Field Office Manager review not required
- Field Office Manager review required

BASED ON MY REVIEW I CONCUR WITH THE DETERMINATION OF THE NCO :

Field Office Manager's Signature: _____
Field Office Manager

Date: _____