



ENVIRONMENTAL SCOPING MEETING FOR THE KEMMERER UNIT 1 CONSTRUCTION PERMIT APPLICATION

Tuesday, July 16, 2024

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Joe O'Hara, Environmental Project Manager

Mallecia Sutton, Lead Licensing Project Manager

Purpose of the Meeting

- Provide an overview of the NRC's Mission
- Describe the NRC review process
- Discuss scoping process under NEPA and NRC's regulations
- Provide an overview of the project
- Describe how you can provide comments during the scoping period
- **Answer your questions, and listen to and gather your comments**



Nuclear Regulatory Commission

U.S. Nuclear Regulatory Commission

- Independent Federal Agency
 - Up to Five Commissioners
 - Professional Staff
- Almost 50 years regulating all civilian use of nuclear materials, including power and non-power reactors
- Mission: To protect public health and safety, promote common defense and security, and protect the environment

What the NRC Does

- Determines whether it is safe to build and operate a proposed nuclear reactor at a site
- Evaluates the environmental impacts of building and operating a nuclear reactor at the proposed site
- Inspects construction and safe operation of nuclear reactors
- Licenses reactor control room operators

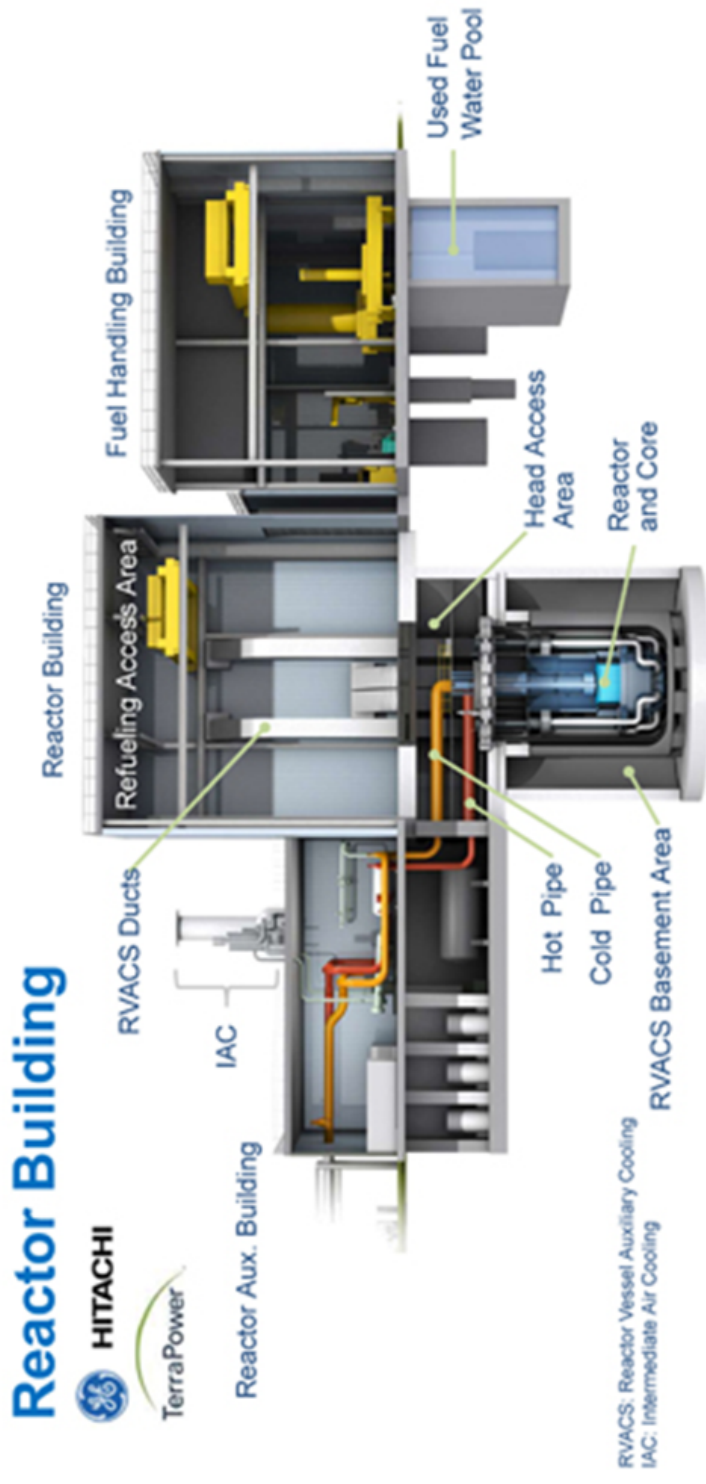
Construction Permit

- An NRC document that authorizes an applicant to build a nuclear facility
- An additional Operating License application and NRC review/approval of a final design is needed before the facility could start up

Construction Permit Hearing

- After the technical review is complete, the NRC must hold a "mandatory" hearing on the application to ensure agency requirements have been met
 - Staff presents its conclusions before either the Commission or a designated alternative (e.g., the Atomic Safety and Licensing Board)
- Interested persons may file a petition to legally challenge the application in a contested hearing
 - The petition period is currently open and will close on August 5

Kemmerer Unit 1 Facility

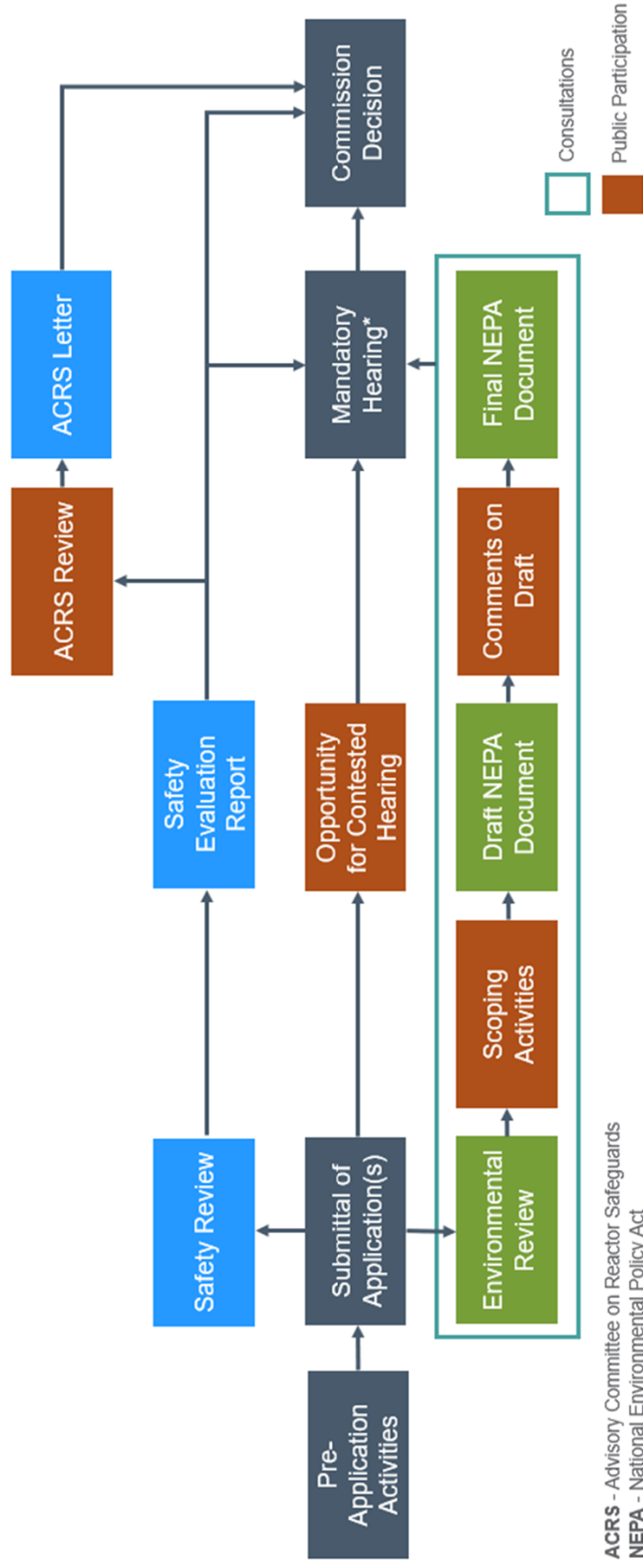


- Reactor Type – Pool-type sodium fast reactor
- Containment Type – Functional containment
- Power Level – 345 megawatts electric (Mwe), with peak output of 500 MWe (840 megawatts thermal)
- Fuel – Metallic uranium-zirconium (U-10Zr) HALEU fuel column with a sodium bond to HT9 cladding

NRC Safety Review Process

- TerraPower submitted its Kemmerer Unit 1 Construction Permit Application in March 2024; NRC accepted the application for review and began its detailed review of the application in May 2024.
- The NRC staff will clearly document its safety findings in a Safety Evaluation Report.
- The NRC staff currently expects to complete its Safety Evaluation Report in August 2026.

Licensing Process: Safety and Environmental Reviews



ACRS - Advisory Committee on Reactor Safeguards

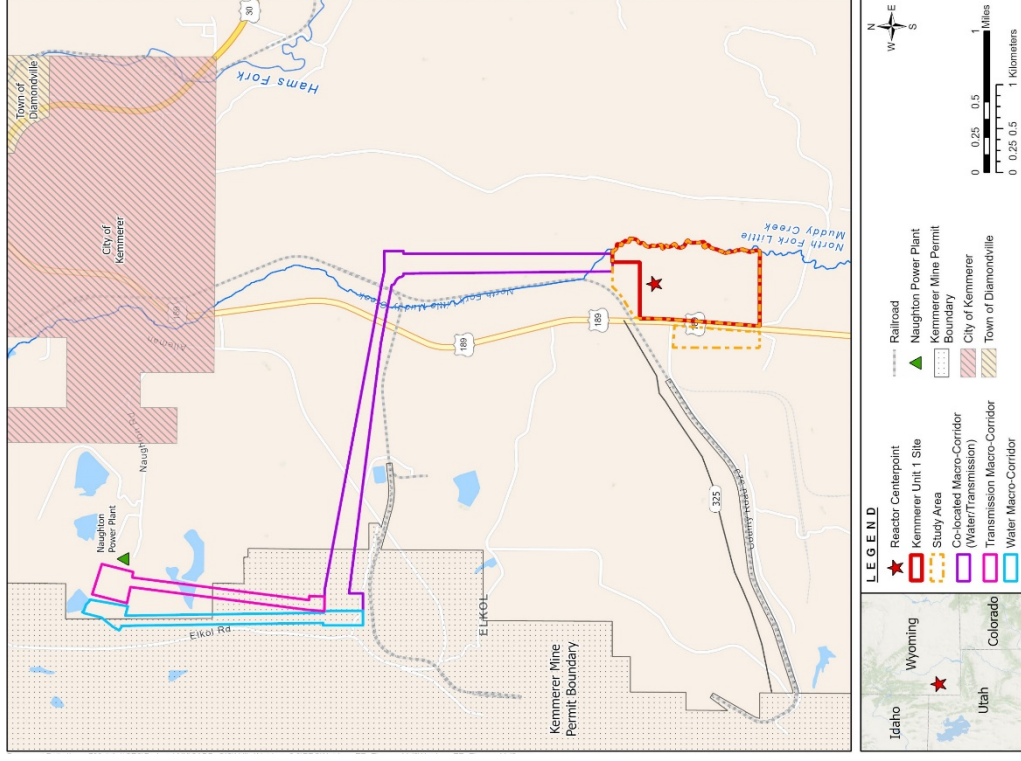
NEPA - National Environmental Policy Act

*Required for early site permits, construction permits, or combined licenses

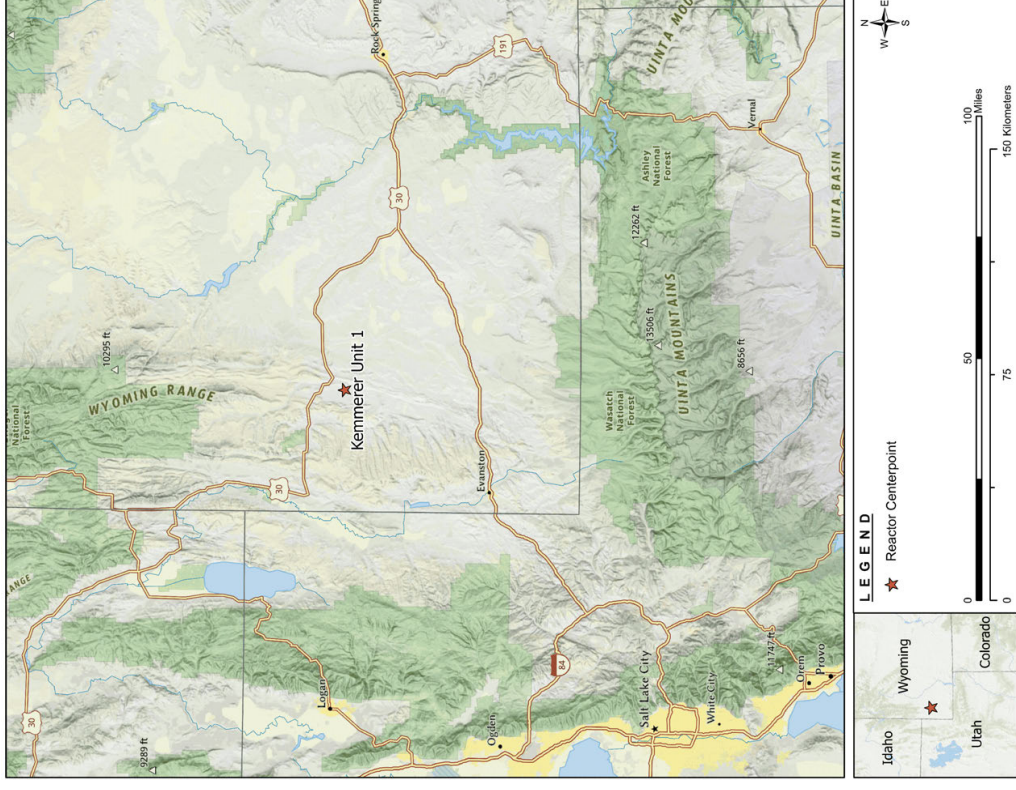


ENVIRONMENTAL REVIEW PROCESS AND ENVIRONMENTAL SCOPING

Proposed Kemmerer Unit 1 Site



(Source: Kemmerer Unit 1 Environmental Report, Ch 2)



(Source: Kemmerer Unit 1 Environmental Report, Ch 1)

- 334-acre site in Lincoln County, Wyoming
- 3 miles south of the City of Kemmerer, and 3.8 miles southeast of the Naughton Power Plant

Kemmerer Unit 1 Reactor

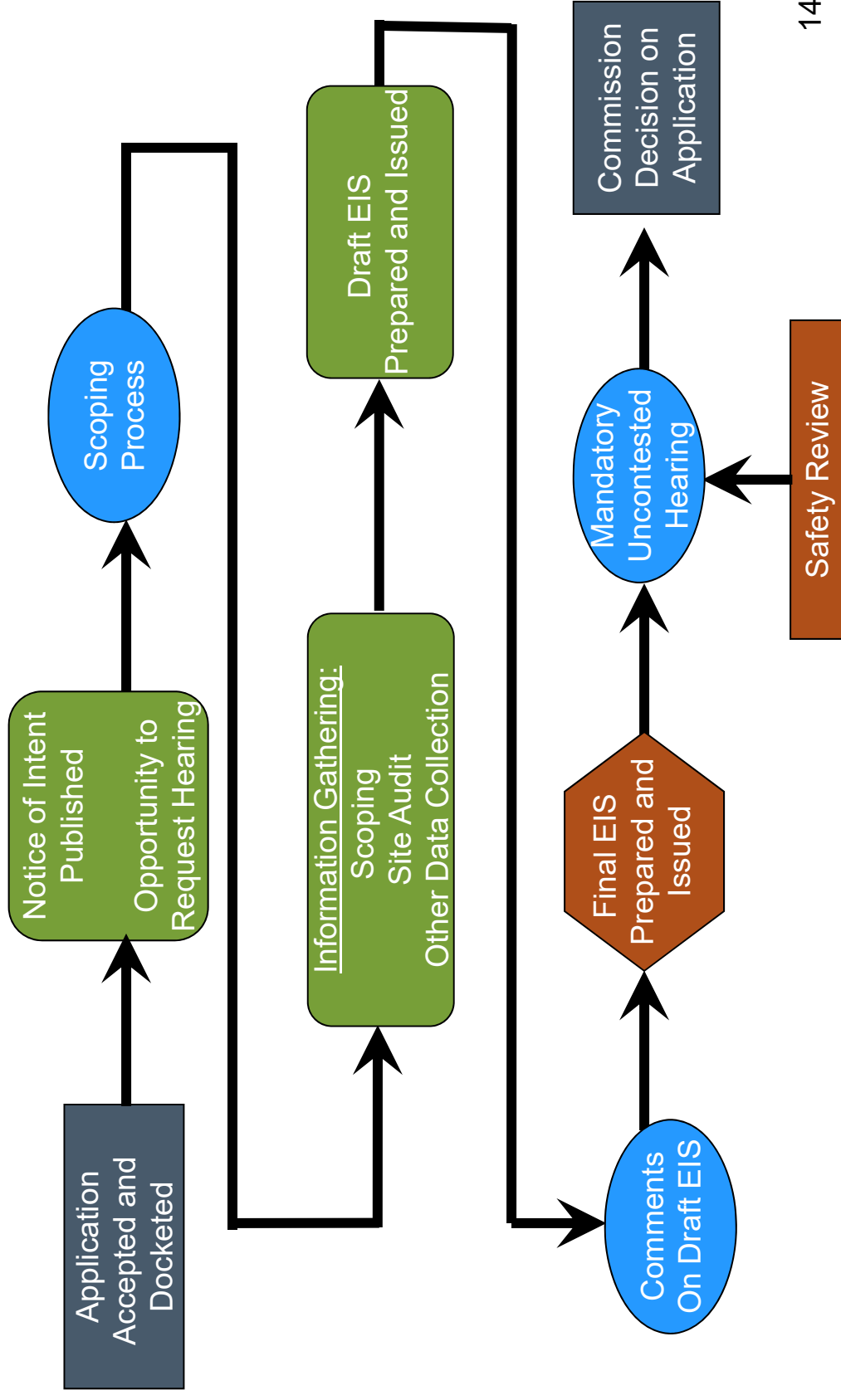


- Demonstration reactor for power production
- Public-private partnership with the DOE Advanced Reactor Demonstration Program
- 334-acre site
- Water corridor required to connect with Naughton Power Plant Raw Water Settling Basin
- New transmission corridor required to connect to existing Naughton Power Plant substation

Environmental Review

- Evaluate environmental impacts of construction and operation of a proposed nuclear facility per National Environmental Policy Act (NEPA)
- The NRC staff will summarize its findings in an Environmental Impact Statement (EIS)
- NRC systematic approach:
 - Regulations (10 CFR Part 51)
- Public Comments

Environmental Review Process



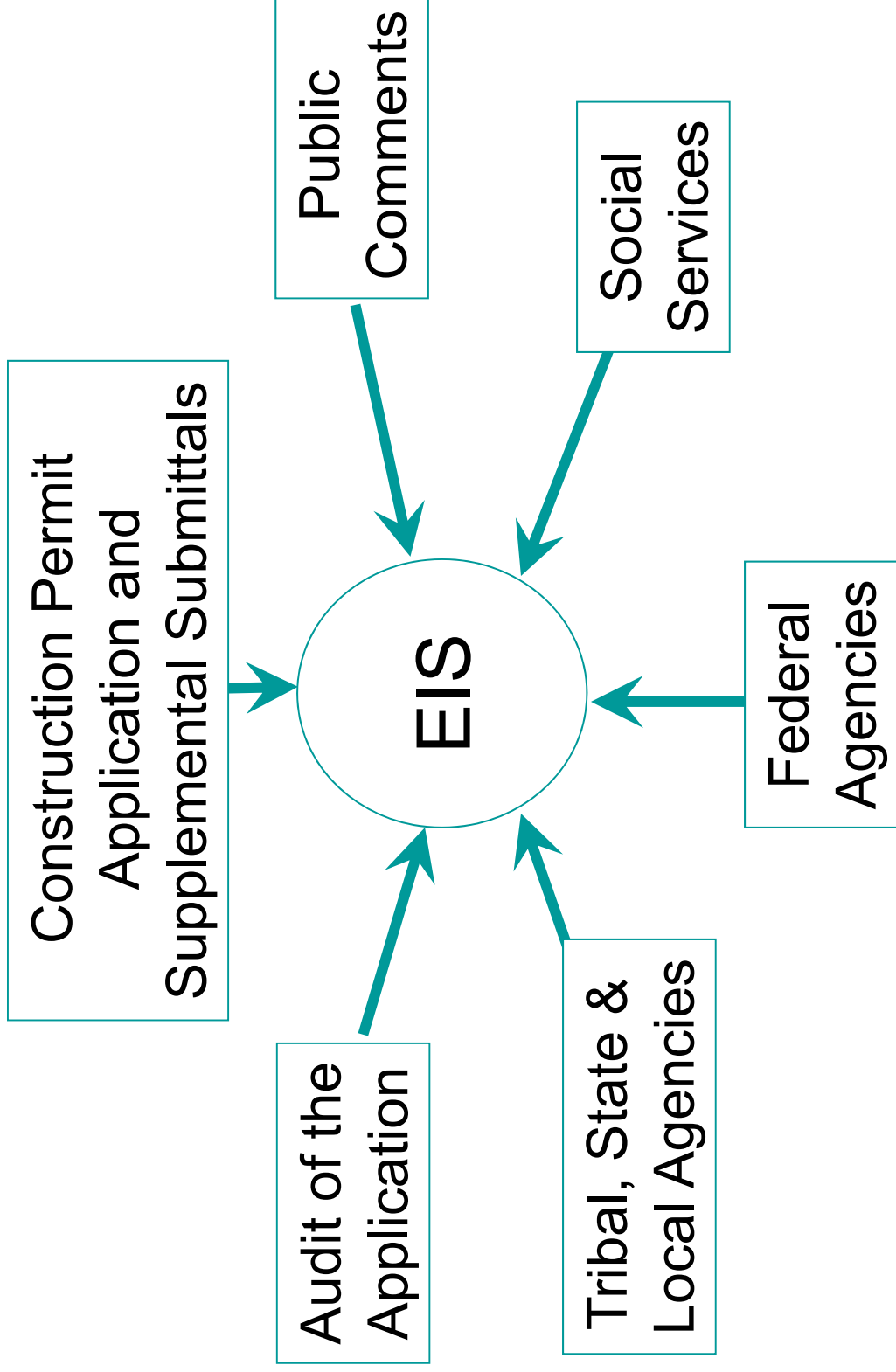
Cooperating Agencies

- Lead Agency: the Federal agency that has the responsibility of regulating or approving a major Federal action
- Cooperating Agency: any Federal agency other than the NRC which has jurisdiction by law or special expertise with respect to any environmental impact involved in a major Federal action
- USO is receiving funding through the Department of Energy's Advanced Reactor Demonstration Program
- DOE will be a cooperating agency on the NRC's construction permit EIS

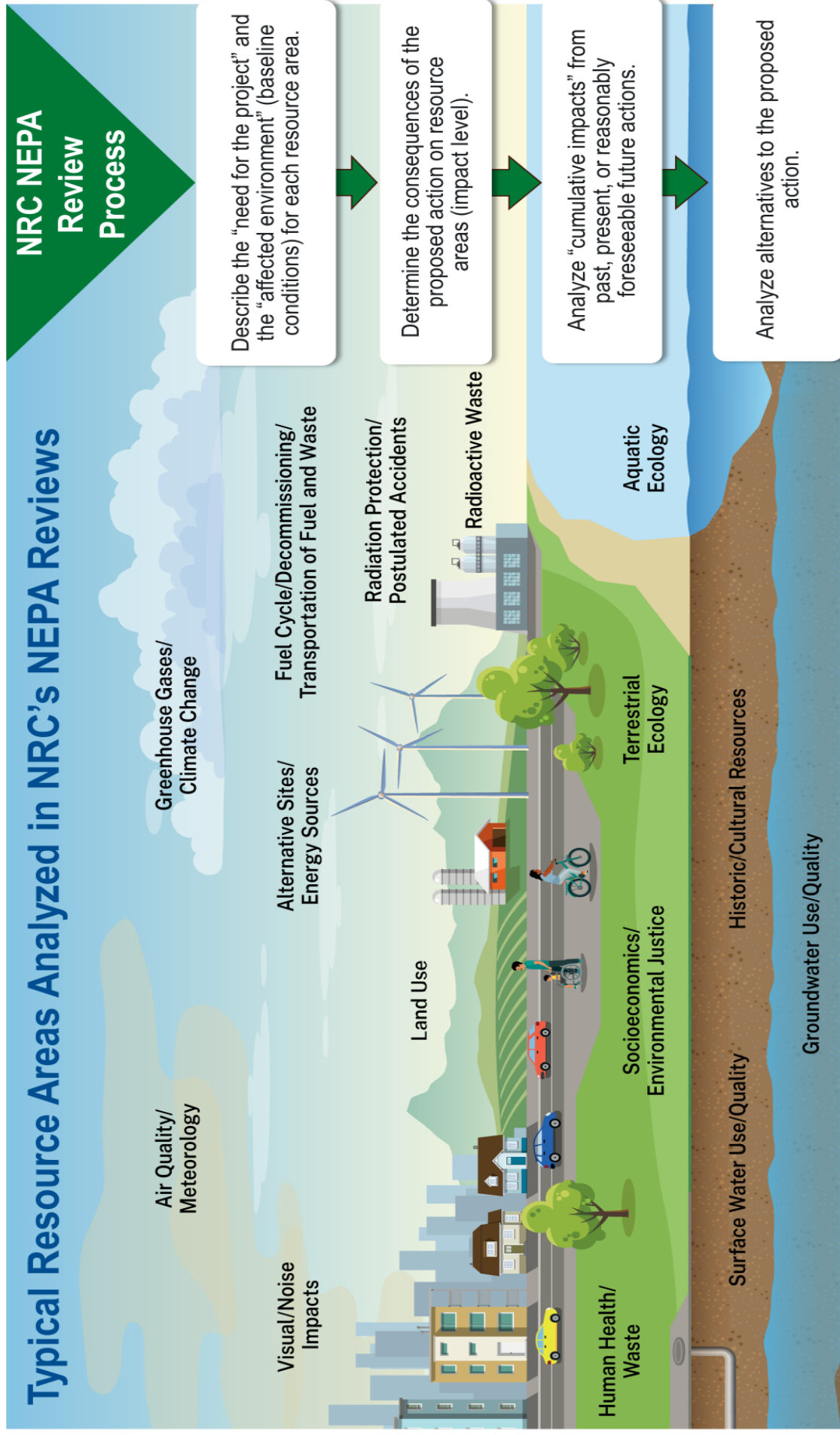
Environmental Scoping

- The scoping process helps determine the significant issues to be analyzed in the environmental impact statement
- The scoping period ends on **August 12, 2024**
- Comments that apply to the environmental review will be considered in development of the Draft EIS
- A Scoping Summary Report will be issued following the close of the scoping period

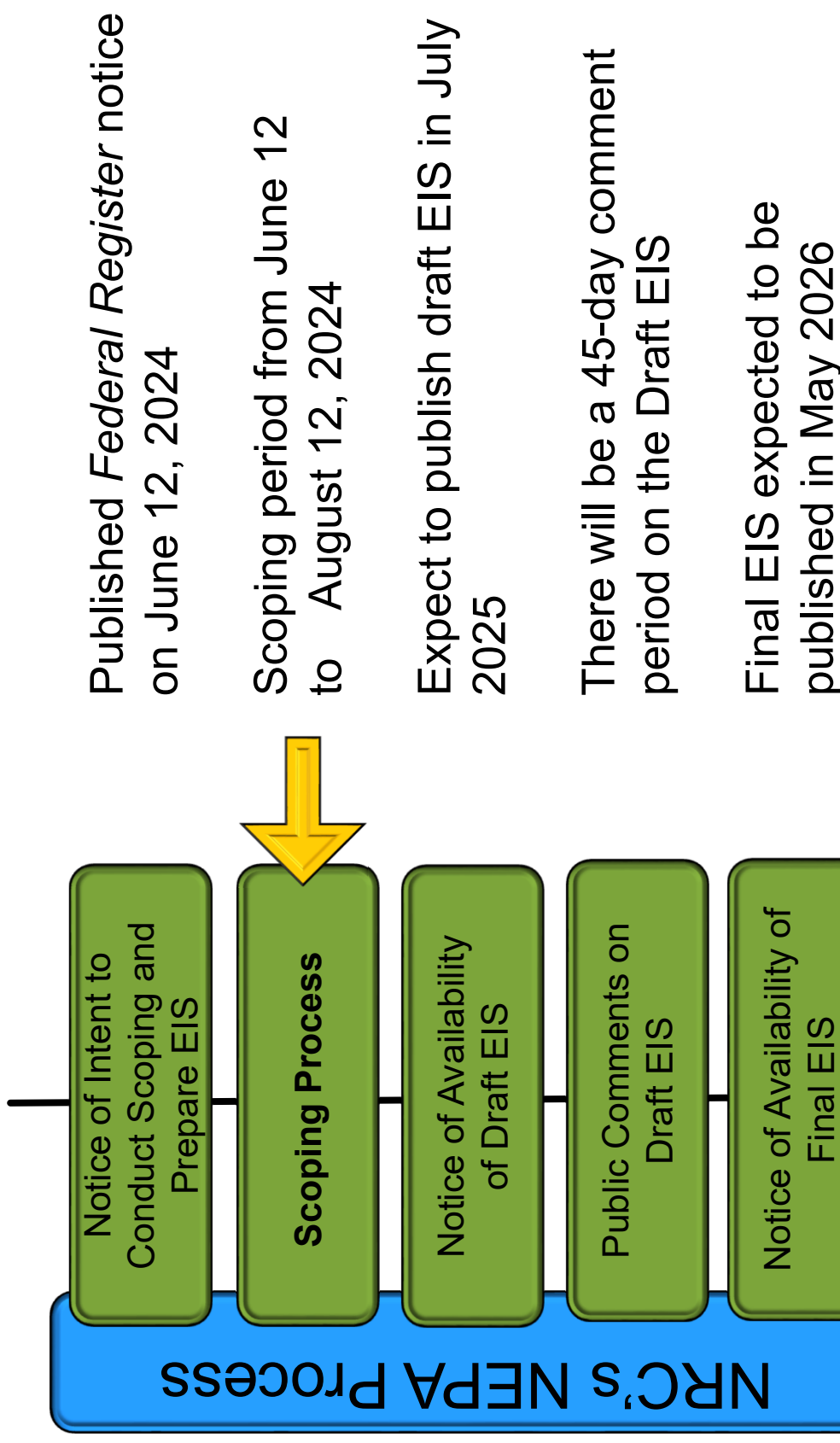
Information Gathering



Typical Resource Areas Analyzed in NRC's NEPA Reviews



Anticipated Environmental Review Schedule

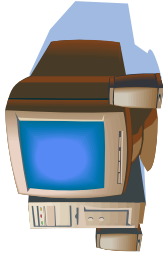


Contested Hearing

- Petition to Intervene requests to be filed no later than **August 5, 2024**
- Digital certificate or waiver required for filing a petition
- Instructions for e-filing are in the *Federal Register* hearing notice (89 FR 47997) or at www.nrc.gov/site-help/e-submittals.html
- Allow **10** business days for obtaining the digital certificate



Access to Kemmerer Unit 1 Documents



<https://www.nrc.gov/reactors/new-reactors/advanced/who-were-working-with/applicant-projects/terrapower.html>



Lincoln County Library
519 Emerald Street
Kemmerer, WY 83101



Additional Information

NRC TerraPower Project Web Site

<https://www.nrc.gov/reactors/new-reactors/advanced/who-were-working-with/applicant-projects/terrapower.html>

NRC Staff Points of Contacts:

- ✓ Patricia Vokoun, Environmental Project Manager, (800) 368-5642, ext. 3470, Patricia.Vokoun@nrc.gov
- ✓ Joe O'Hara, Environmental Project Manager, (800) 368-5642, ext. 6854, Joe.O'Hara@nrc.gov
- ✓ Mallecia Sutton, Safety Project Manager, (800) 368-5642, ext. 0673, Mallecia.Sutton@nrc.gov
- ✓ Stephanie Devlin-Gill, Safety Project Manager, (800) 368-5642, ext. 5301, Stephanie.Devlin-Gill@nrc.gov



Submitting Scoping Comments



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Washington, DC 20555-0001
ATTN: Program Management, Announcements
and Editing Staff

When submitting a comment, please provide your name and e-mail address so that we may provide a copy of the draft and final EIS

Comments are due by August 12, 2024