



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

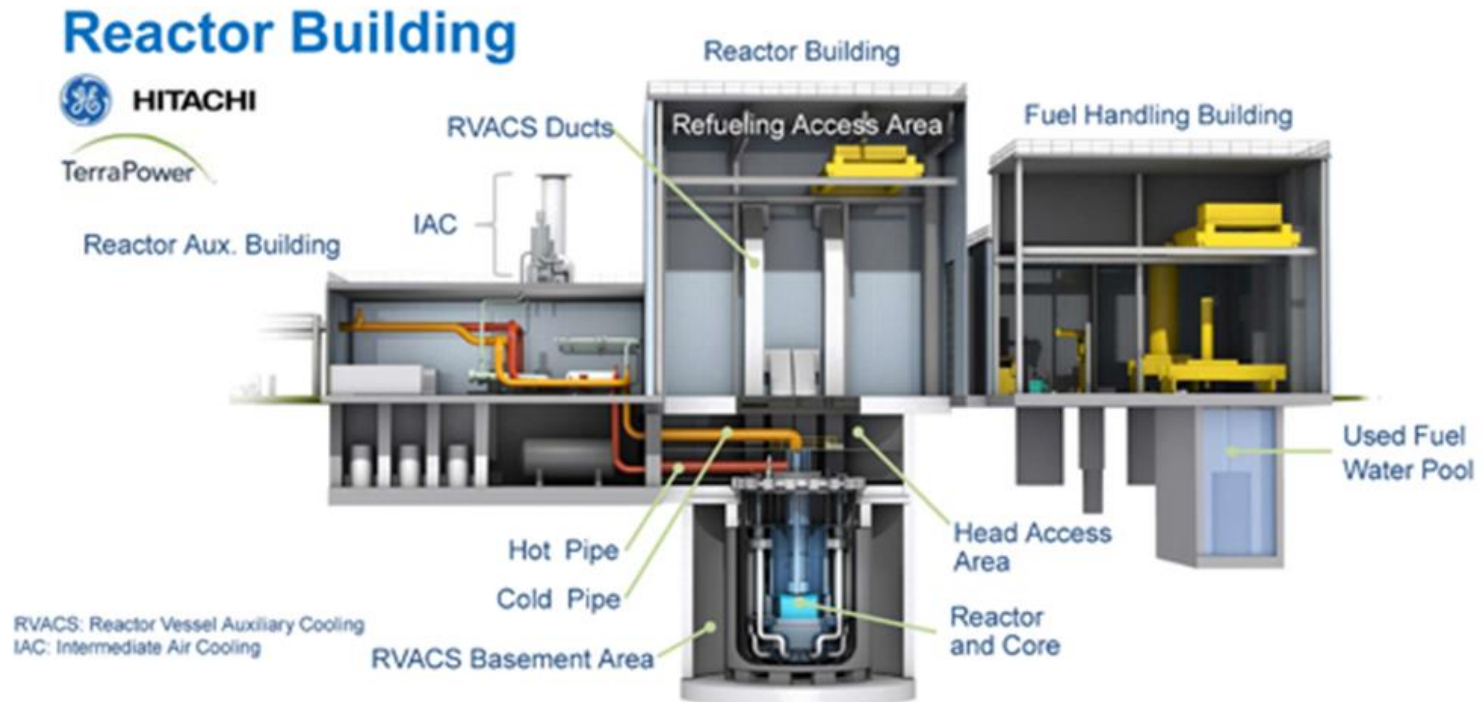
Construction Permit

- 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

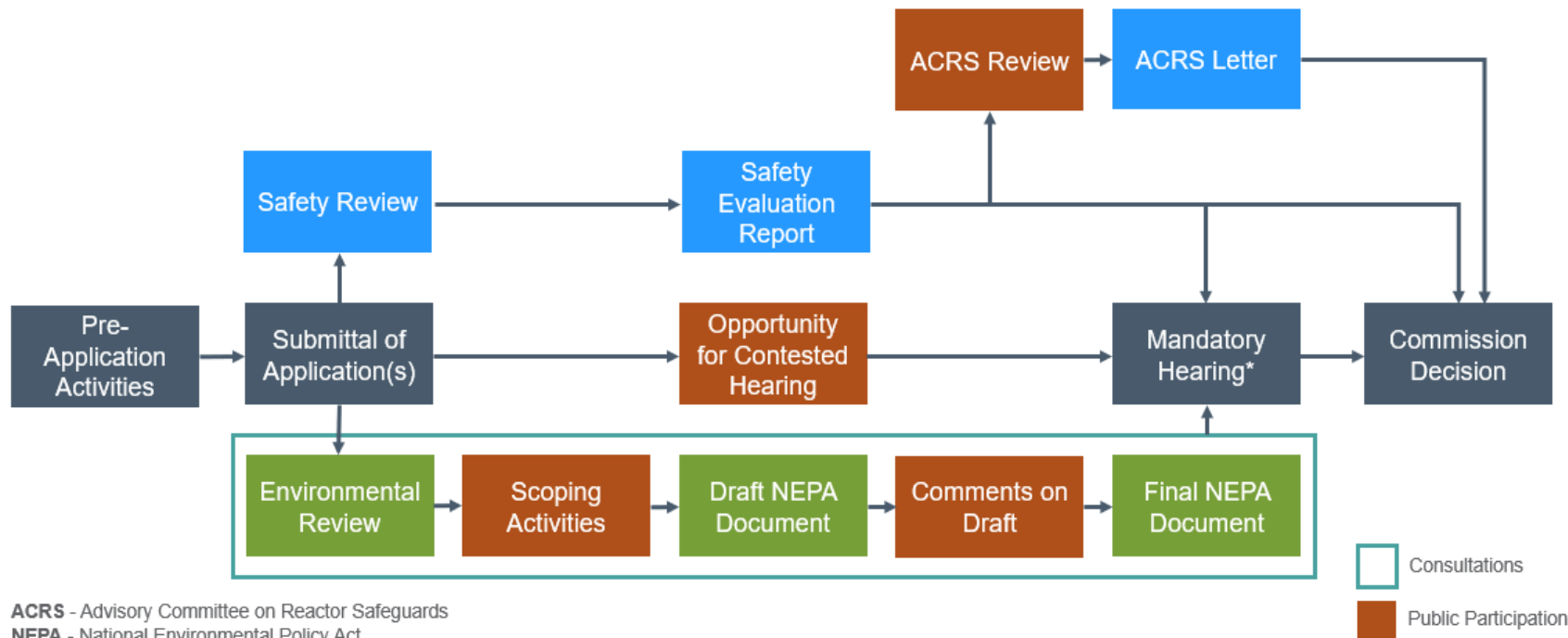


- Reactor Type – Pool-type sodium fast reactor
- Containment Type – Functional containment
- Power Level – 345 megawatts electric (Mwe), with peak output of 500 MWe (840 megawatts thermal)
- Fuel – Metallic uranium-zirconium (U-10Zr) HALEU fuel column with a sodium bond to HT9 cladding

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

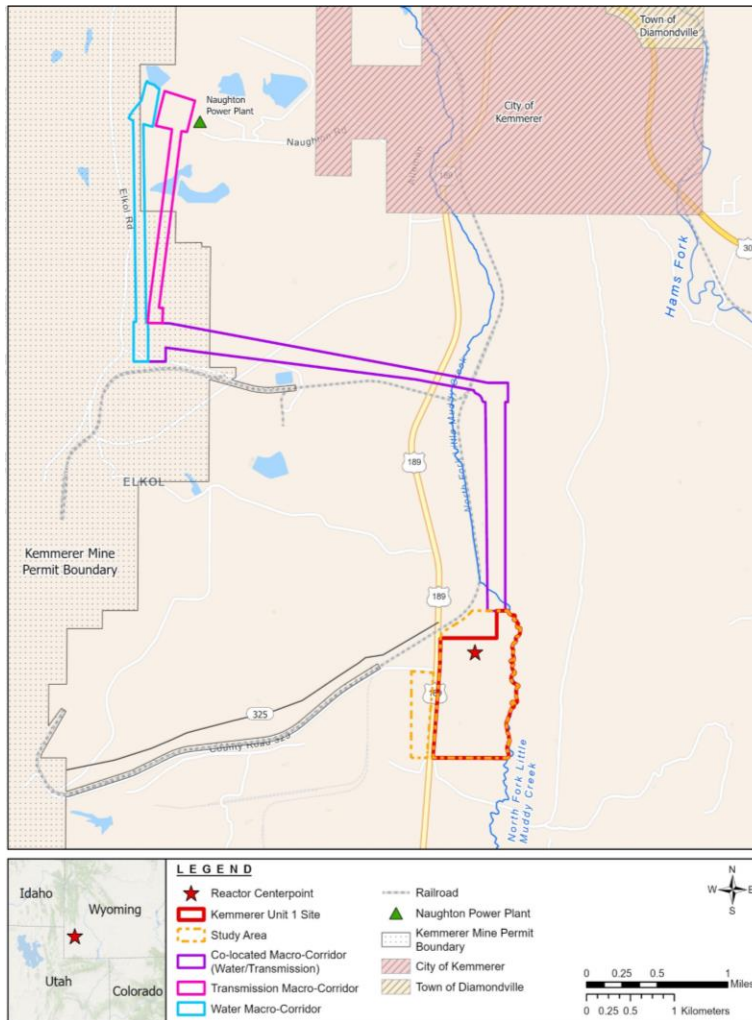
NEPA - National Environmental Policy Act

*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

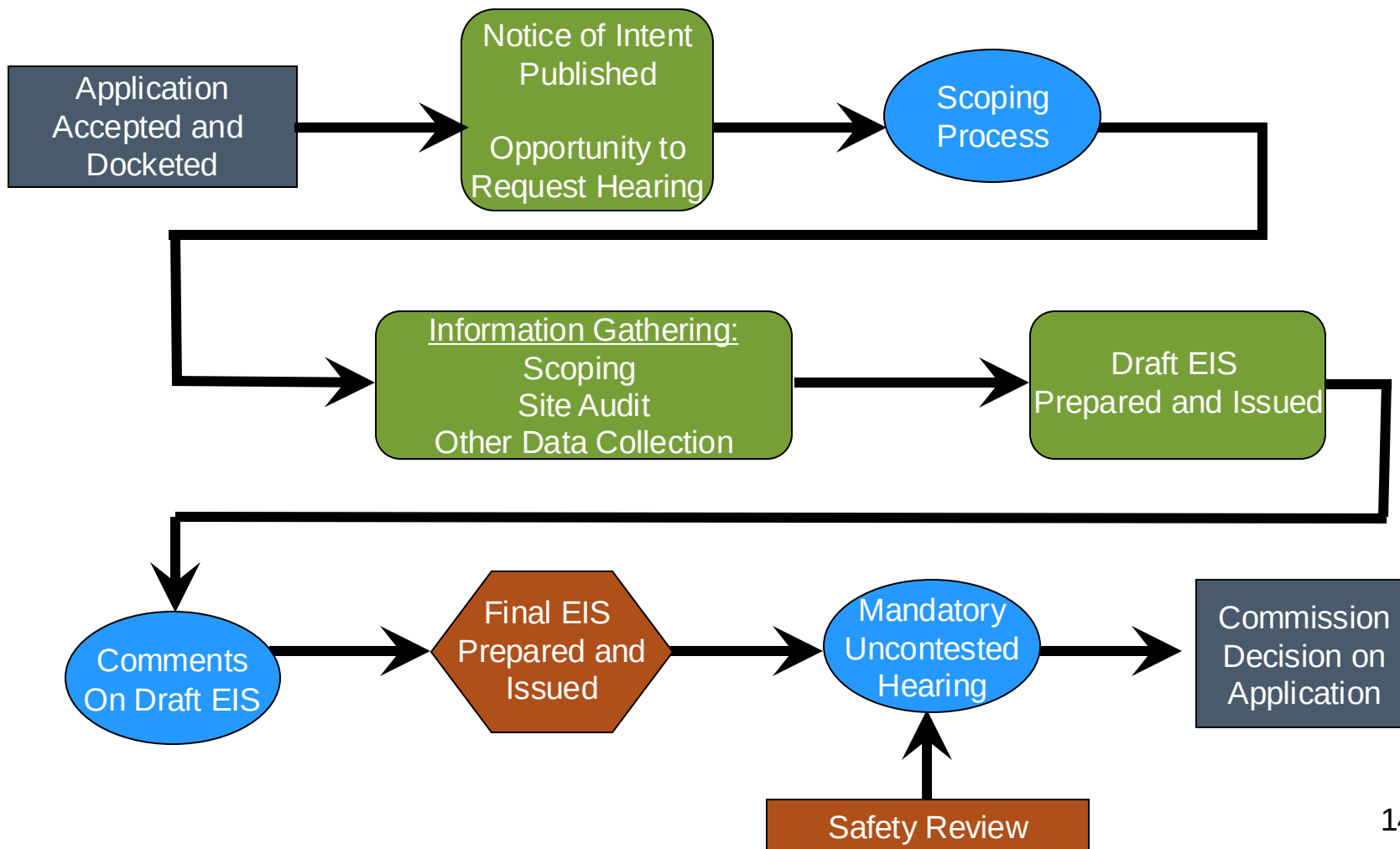


- Demonstration reactor for power production
- Public-private partnership with the DOE Advanced Reactor Demonstration Program
- 334-acre site
- Water corridor required to connect with Naughton Power Plant Raw Water Settling Basin
- New transmission corridor required to connect to existing Naughton Power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



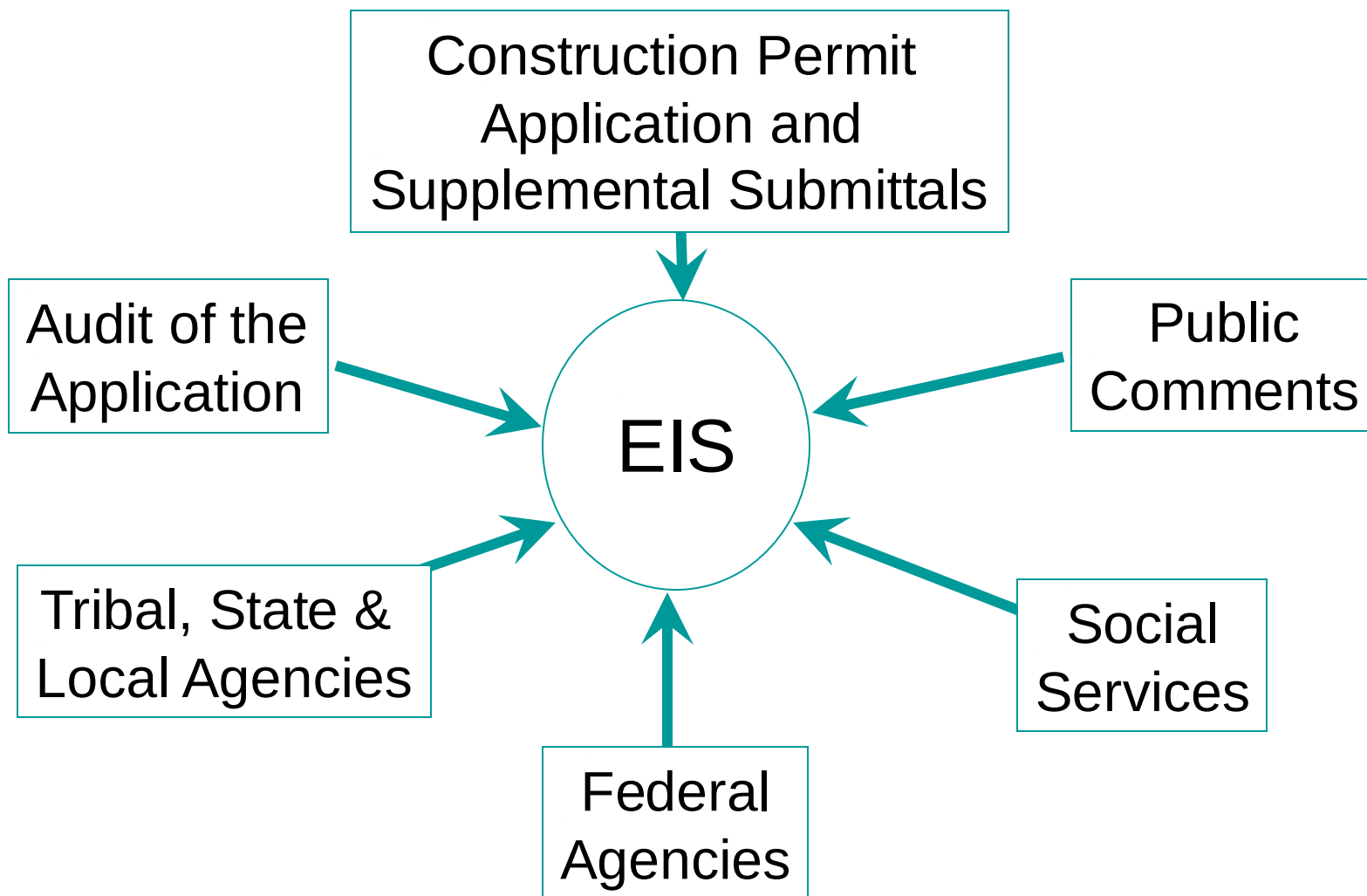
Cooperating Agencies

- 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

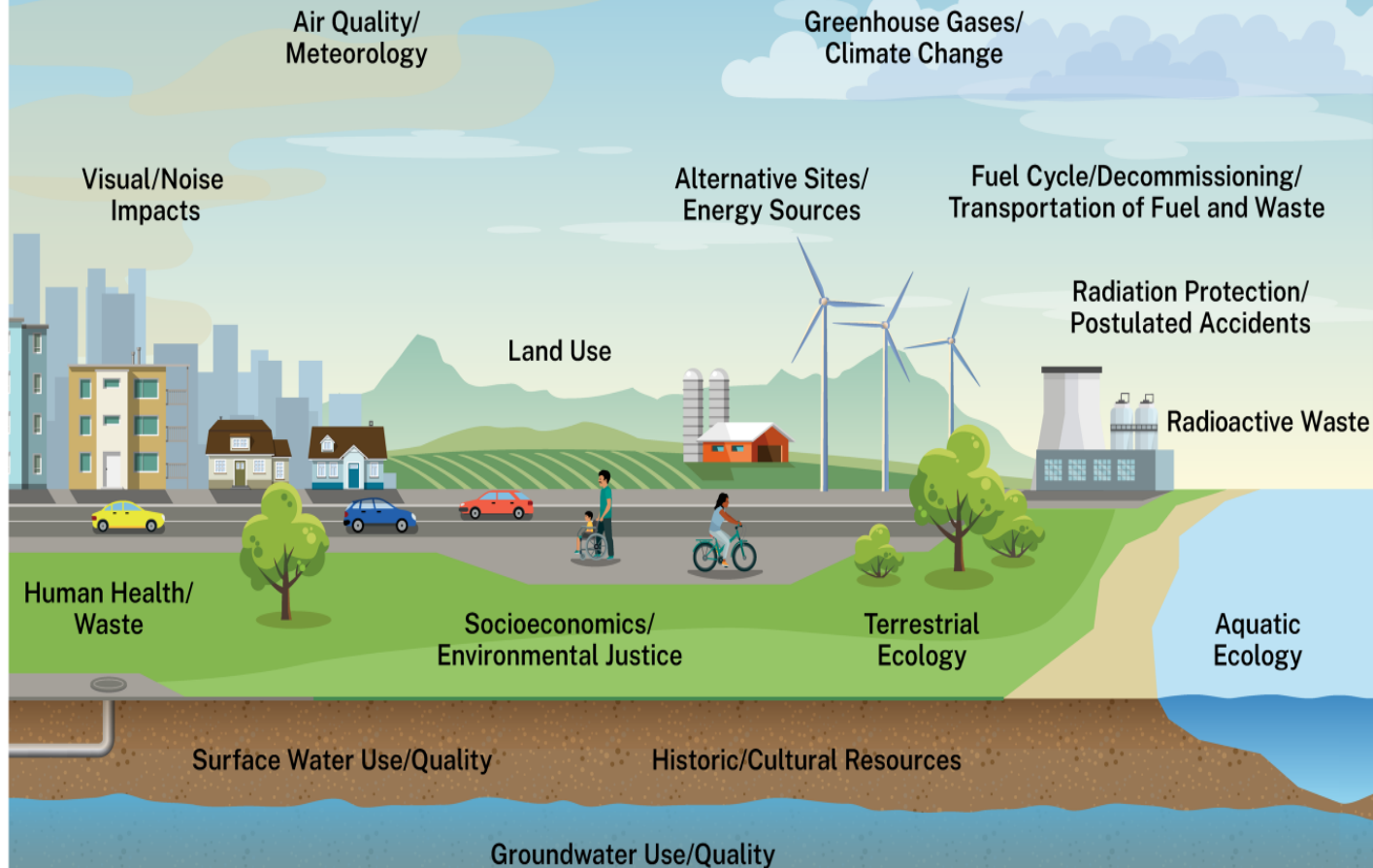
- The scoping process helps determine the significant issues to be analyzed in the environmental impact statement
- The scoping period ends on **August 12, 2024**
- Comments that apply to the environmental review will be considered in development of the Draft EIS
- A Scoping Summary Report will be issued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

Information Gathering



Typical Resource Areas Analyzed in NRC's NEPA Reviews

NRC NEPA Review Process



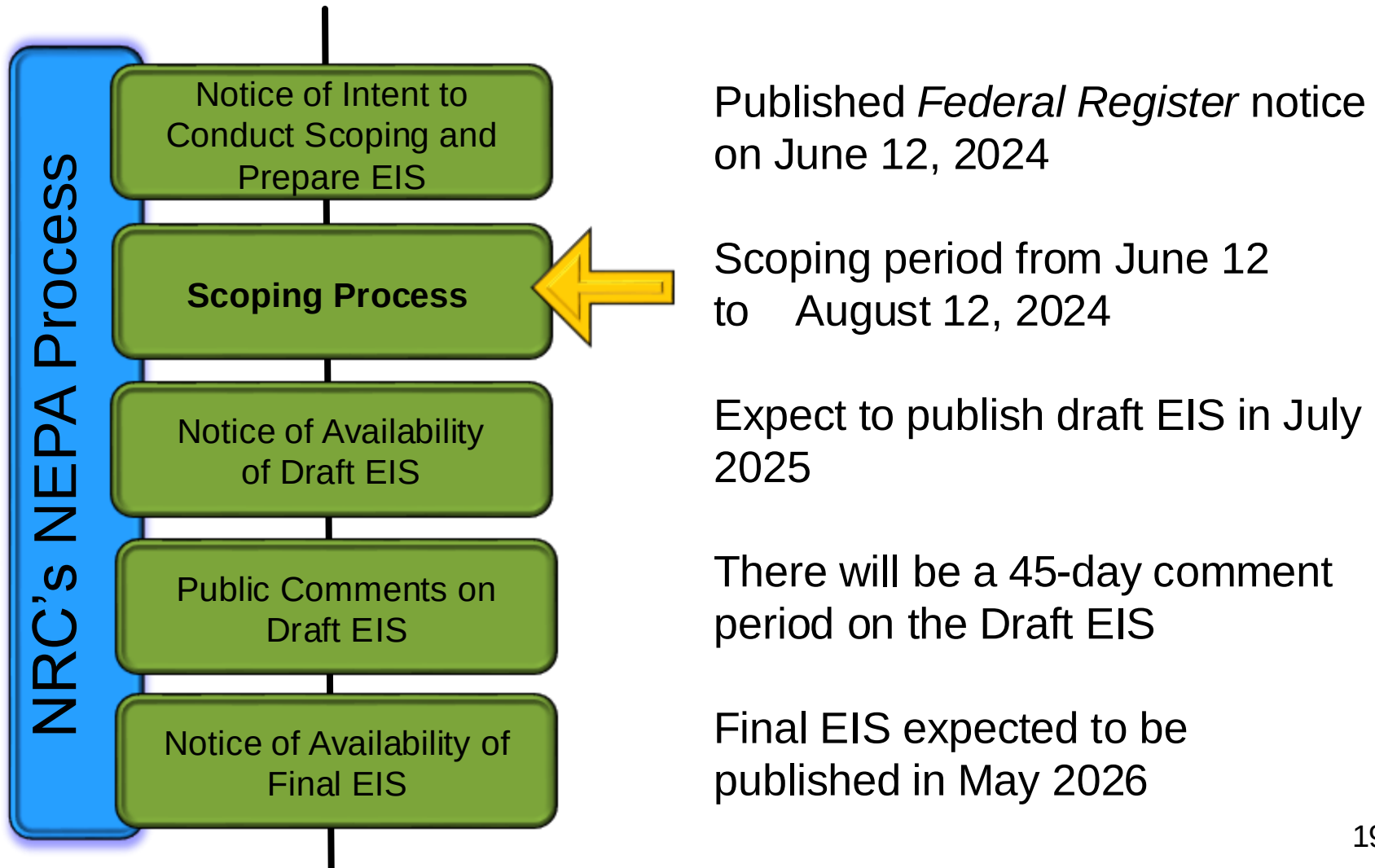
Describe the "need for the project" and the "affected environment" (baseline conditions) for each resource area.

Determine the consequences of the proposed action on resource areas (impact level).

Analyze "cumulative impacts" from past, present, or reasonably foreseeable future actions.

Analyze alternatives to the proposed action.

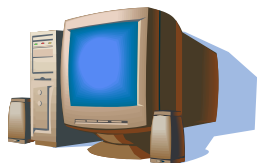
Anticipated Environmental Review Schedule



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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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**