



Preliminary Results of Environmental Review Oyster Creek Nuclear Generating Station

U.S. Nuclear Regulatory Commission
July 12, 2006





Purpose of Today's Meeting

-
- Discuss NRC's license renewal process
 - Describe the environmental review
 - Discuss the results of our review
 - Provide the review schedule
 - Accept any comments you may have today
 - Describe how to submit comments



NRC's Regulatory Oversight

-
- Atomic Energy Act
 - Issue operating licenses
 - Regulate civilian use of nuclear materials
 - NRC's Mission
 - Public health and safety
 - Promote common defense and security
 - Protect the environment

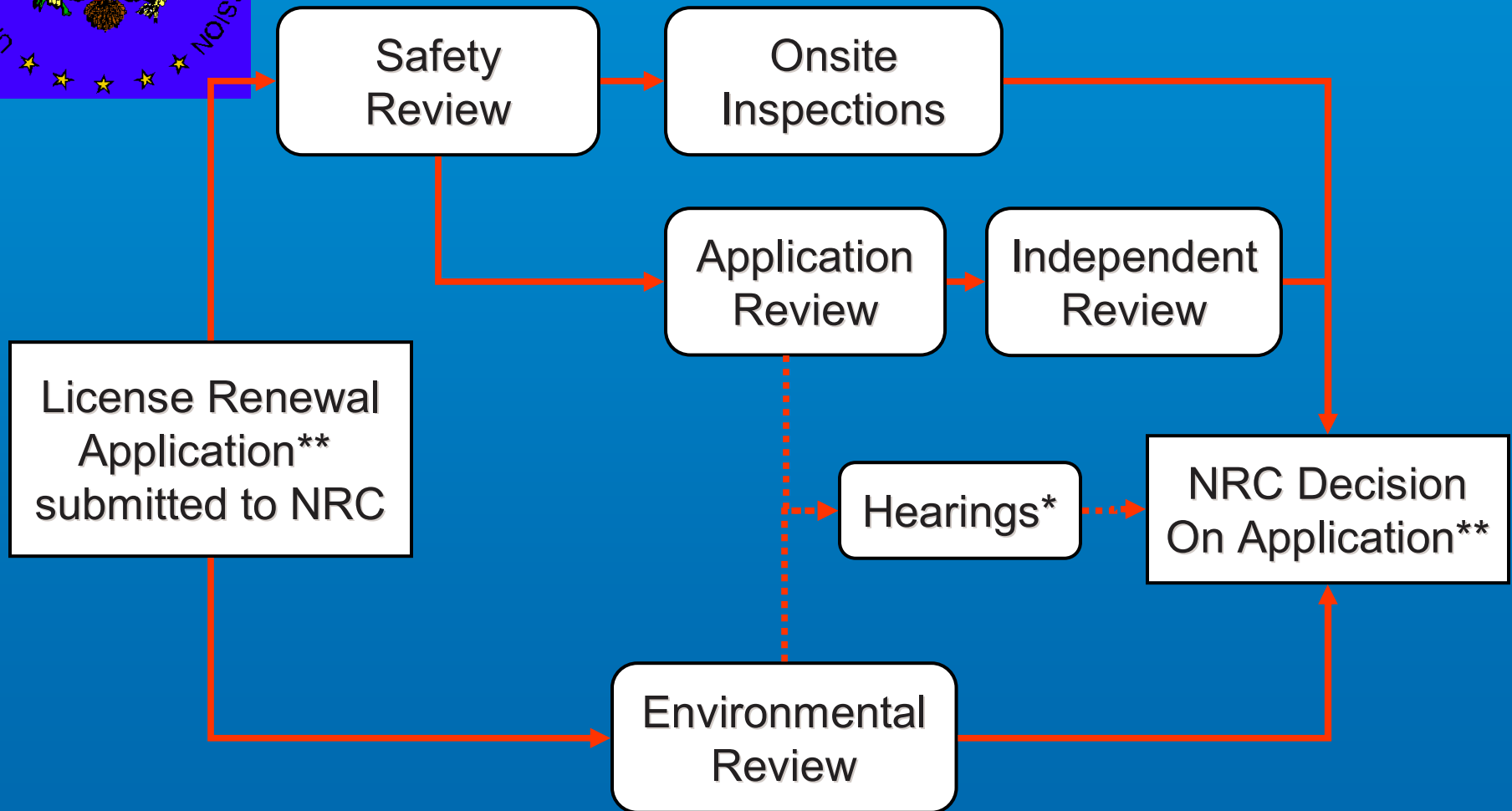


Oyster Creek Nuclear Generating Station License Renewal

- Operating license expires April 9, 2009
- Application requests authorization to operate Oyster Creek for an additional 20 years.



License Renewal Process



* If a Request for Hearing is Granted

** Available at www.nrc.gov



Scope of License Renewal Safety Review

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- Limited to aging management
 - Systems, structures and components important to safety
 - Determined by license renewal scoping criteria
 - Current issues that are out of scope
 - Security
 - Emergency Planning
 - Safety Performance

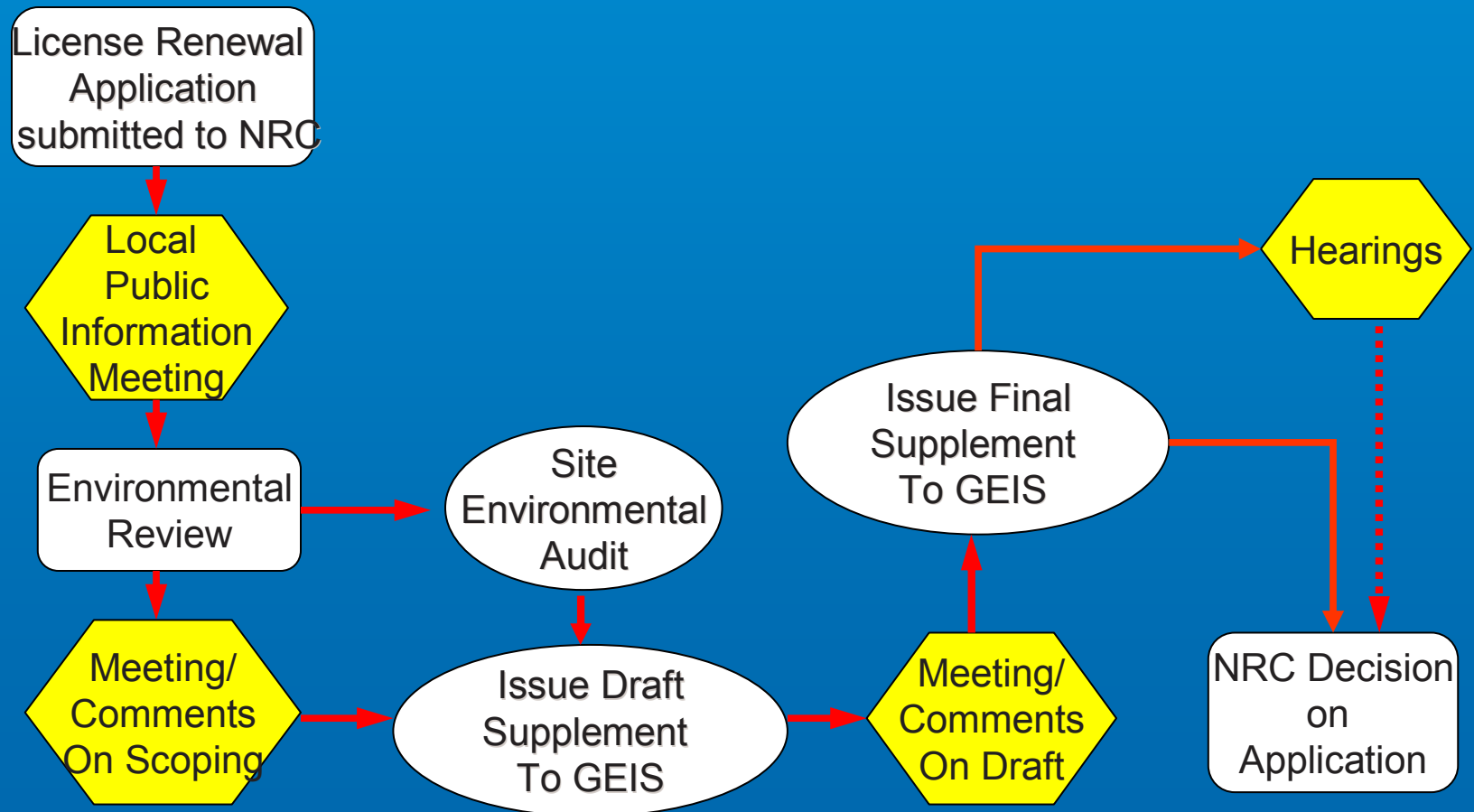


Safety Review Process

- Safety evaluation
 - Audits
 - Evaluation of technical information
- Plant inspections
- Independent review
 - Advisory Committee on Reactor Safeguards (ACRS)



Environmental Review Process





National Environmental Policy Act (NEPA)

- NEPA requires Federal agencies to use a systematic approach to consider environmental impacts.
- An Environmental Impact Statement (EIS) is required for major Federal actions significantly affecting the quality of the human environment.
- Commission has determined that a supplement to the “Generic EIS for License Renewal of Nuclear Plants” will be prepared for a license renewal application.



Decision Standard for Environmental Review

To determine whether or not the adverse environmental impacts of license renewal for Oyster Creek Nuclear Generating Station are so great that preserving the option of license renewal for energy planning decisionmakers would be unreasonable.

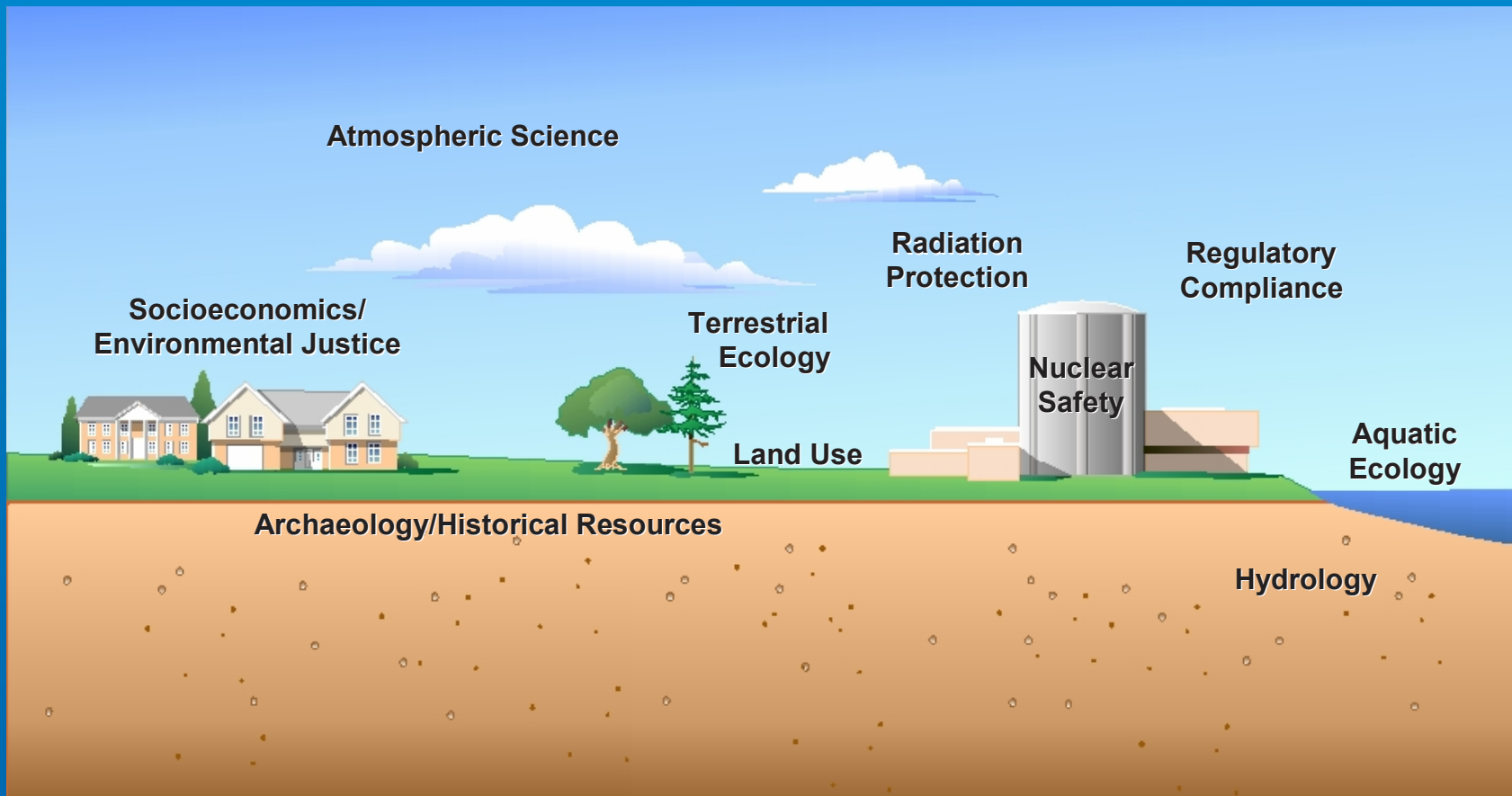


Environmental Review Milestones

Application Received	July 22, 2005
Notice of Intent	September 16, 2005
Scoping Public Meetings	November 1, 2005
Scoping Period Ended	November 25, 2005
Draft SEIS Issued	June 9, 2006
Draft SEIS Public Meetings	July 12, 2006
Draft SEIS Comments Due	September 8, 2006
Final SEIS Issued	January 2007

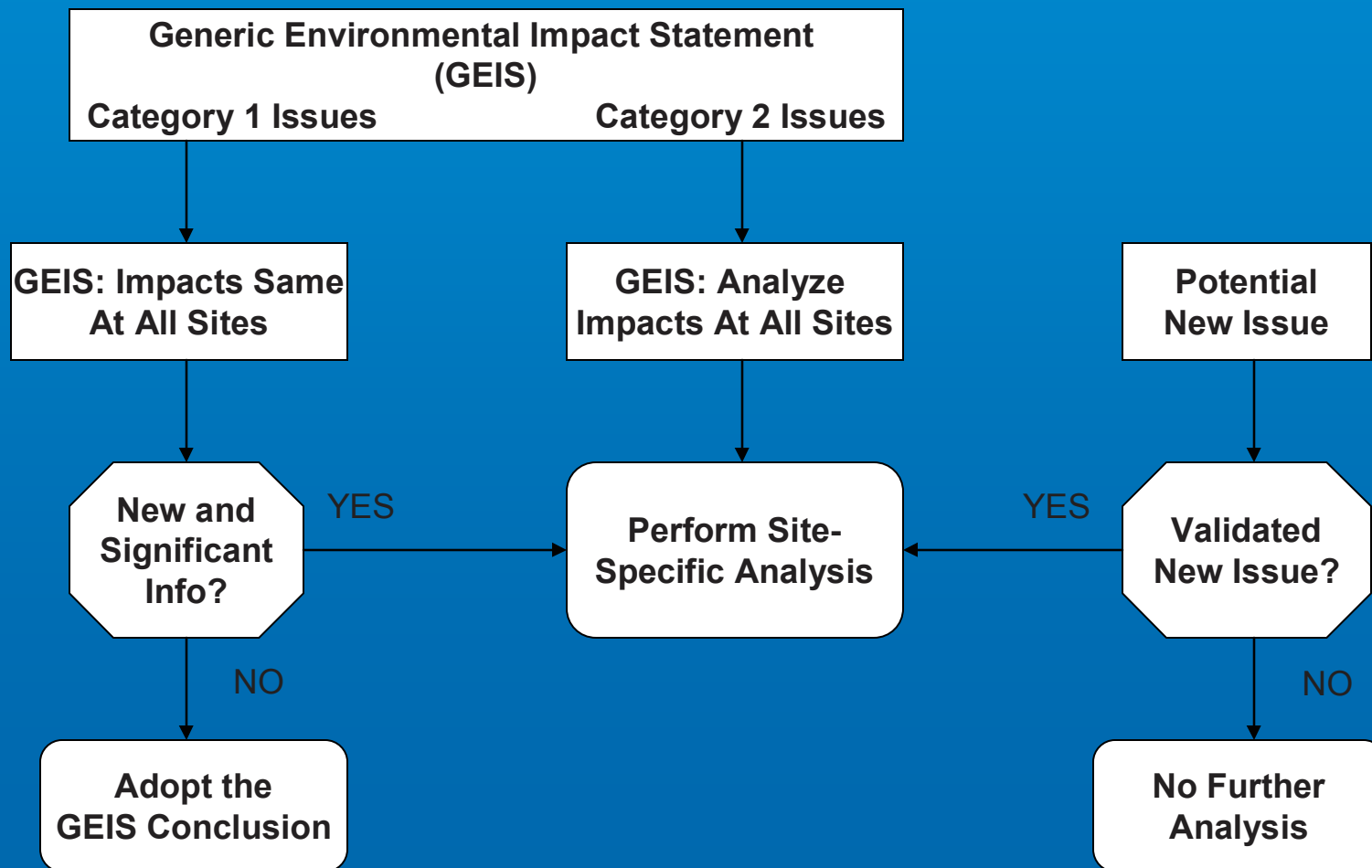


Team Expertise





Analytical Approach



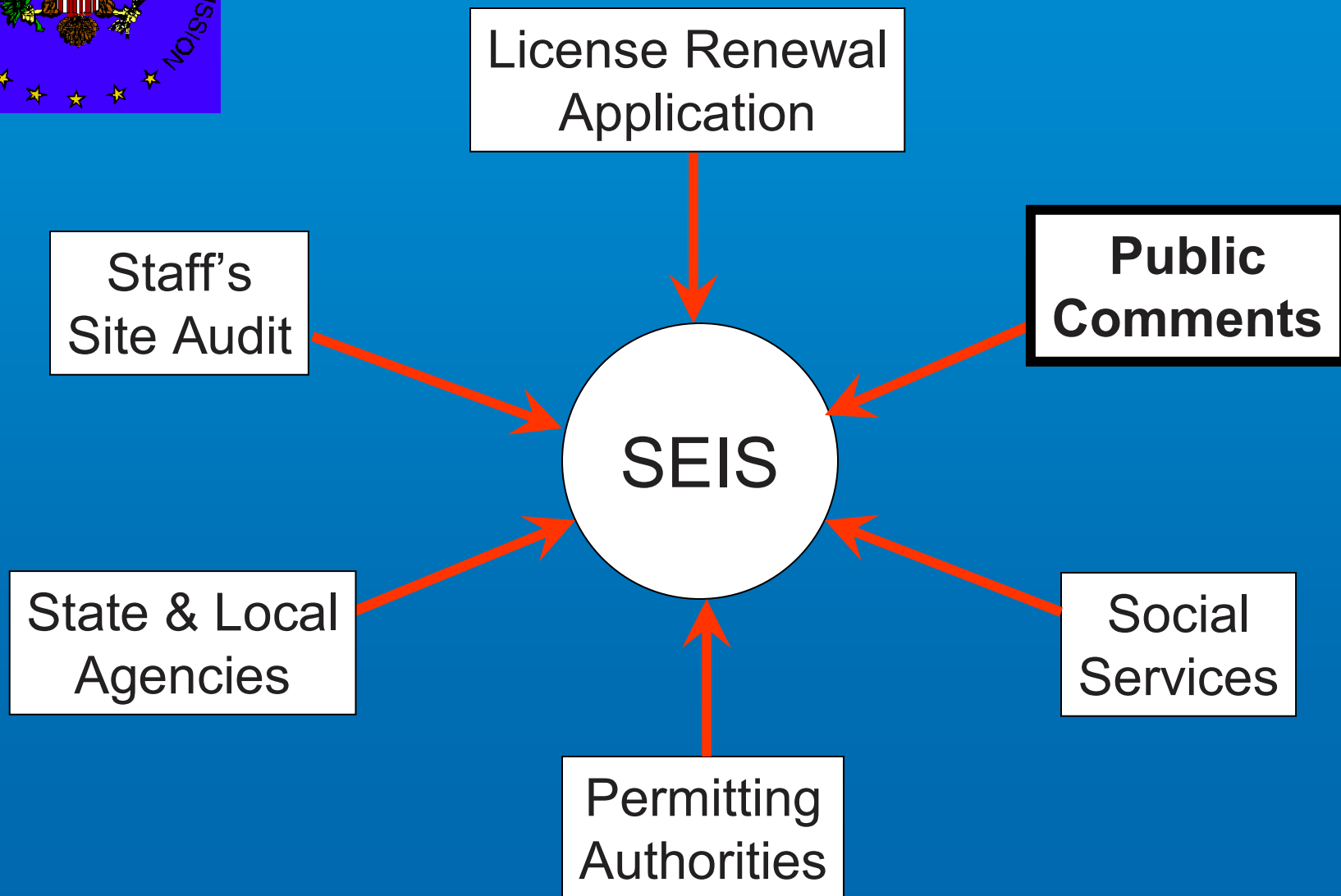


How Impacts are Quantified

- NRC-defined impact levels:
 - **SMALL**: *Effect is not detectable or too small to destabilize or noticeably alter any important attribute of the resource*
 - **MODERATE**: *Effect is sufficient to alter noticeably, but not destabilize, important attributes of the resource*
 - **LARGE**: *Effect is clearly noticeable and sufficient to destabilize important attributes of the resource*
- Consistent with the Council on Environmental Quality guidance for NEPA analyses



Information Gathering





Environmental Impacts of Continued Operation

- Cooling system
- Transmission line
- Radiological
- Socioeconomics
- Groundwater use and quality
- Threatened or endangered species
- Cumulative impacts
- Accidents



Cooling System Impacts

-
- Category 2 issues
 - Entrainment of fish and shellfish in early life stages
 - Impingement of fish and shellfish
 - Heat shock
 - Preliminary findings
 - Impacts would be SMALL



Radiological Impacts

-
- Category 1 issues
 - Radiation exposures to the public
 - Occupational radiation exposures
 - Preliminary findings
 - No new and significant information identified
 - GEIS concluded impacts would be SMALL



Threatened or Endangered Species

- Threatened or endangered species in the vicinity include five species of sea turtles and the bald eagle
- 2005 Biological Opinion for sea turtle establishes incidental take limits
- No impacts expected to bald eagle
- Impacts would be SMALL





Cumulative Impacts of Operation

- Impacts of renewal term operations combined with other past, present, and reasonably foreseeable future actions
 - Evaluated to end of 20-year renewal term
 - Geographic boundaries dependent on resource
- Cumulative impacts would be SMALL



Other Environmental Impacts Evaluated

- Uranium fuel cycle and solid waste management
- Decommissioning



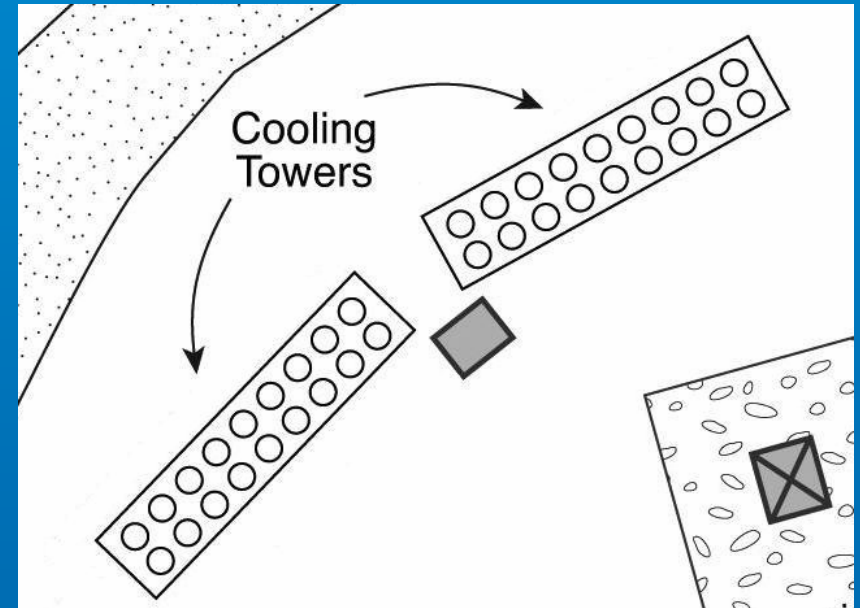
Alternatives to License Renewal

- No-action
- Alternative energy sources
 - New generation (coal, natural gas, nuclear)
 - Purchased electrical power
 - Other alternatives (oil, wind, solar, conservation)
 - Combination of alternatives
- Environmental effects of alternatives, in at least some impact categories, reach MODERATE or LARGE significance



Cooling System Alternatives

- Closed-cycle cooling using hybrid mechanical draft cooling towers
- Modification of existing once-through system with wetland restoration
- Most impacts would be **SMALL** except closed-cycle system could have **MODERATE** impacts on air quality





Preliminary Conclusions

-
- GEIS conclusions on Category 1 issues adopted
 - Impacts resulting from Category 2 issues would be of SMALL significance
 - Environmental effects of alternatives may reach MODERATE or LARGE significance



Postulated Accidents

- Design-basis accidents
- Severe accidents
 - Severe accident mitigation alternatives (SAMAs)



Preliminary Results of SAMA Evaluation

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- 136 potential SAMAs considered
 - Number of SAMAs reduced to 37 based on screening process
 - Detailed cost-benefit analysis shows that 15 SAMAs could be cost beneficial
 - None are required to be implemented as part of license renewal



Preliminary Conclusions

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- Impacts of license renewal would be SMALL for all impact areas.
 - Impacts of alternatives may reach MODERATE to LARGE.
 - The staff's preliminary recommendation is that the adverse environmental impacts of license renewal for Oyster Creek Nuclear Generating Station are not so great that preserving the option of license renewal for energy planning decisionmakers would be unreasonable.



Environmental Review Milestones

- Draft SEIS issued – **June 9, 2006**
- Comment period ends – **September 8, 2006**
- Issuance of Final SEIS – **January 2007**



Additional Information

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- NRC contact: Dr. Michael T. Masnik (800) 368-5642, Ext. 1191
 - Documents located at the Lacey Township Library (10 East Lacey Road, Forked River, New Jersey 08731)
 - Draft SEIS can also be viewed at: www.nrc.gov/reading-rm/doc-collections/nuregs/staff/sr1437/supplement28/



Submitting Comments

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- By mail: Chief, Rules and Directives Branch
Division of Administrative Services
Mailstop T-6D59
U.S. Nuclear Regulatory Commission
Washington DC 20555
 - In person: 11545 Rockville Pike
Rockville, Maryland
 - By e-mail: OysterCreekEIS@nrc.gov

