



# **PUBLIC MEETING**



**DRAFT ENVIRONMENTAL IMPACT STATEMENT  
FOR THE CALVERT CLIFFS NUCLEAR POWER  
PLANT UNIT 3  
COMBINED LICENSE APPLICATION**

Robert Schaaf, Branch Chief  
Laura Quinn, Environmental Project Manager

# Purposes of this meeting



- Describe the NRC's review process leading up to today.
- Provide the schedule from today forward.
- Share NRC's preliminary recommendation with you.
- Describe how you can provide comments.
- **Listen to and gather your comments.**

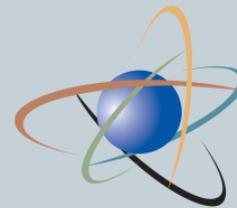
# U.S. Nuclear Regulatory Commission



- NRC's mission:
  - Protect public health and safety
  - Promote common defense and security
  - Protect the environment.
- The NRC is an Independent Agency.
- The NRC has over 30 years of experience regulating operating reactors and other civilian uses of nuclear materials.



Source: U.S. NRC



**U.S. NRC**  
UNITED STATES NUCLEAR REGULATORY COMMISSION  
*Protecting People and the Environment*

# U.S. Army Corps of Engineers PUBLIC HEARING

Corps Application Name:  
NAB-2007-08123-M05 (Calvert Cliffs 3 Nuclear Project,  
LLC/Unistar Nuclear Operating Services, LLC)

Kathy Anderson  
Section Chief, Maryland Section Southern  
Regulatory Branch

Baltimore District

May 25, 2010



US Army Corps of Engineers  
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# Combined License



- Calvert Cliffs 3 Nuclear Project, LLC and UniStar Nuclear Operating Services, LLC (collectively referred to as UniStar) applied for a combined license (COL) for one new nuclear unit (Unit 3) at the Calvert Cliffs Site.
  - A combined license gives authorization to construct and operate a new nuclear unit.
  - Unit 3, if approved, would be built on the same site as Calvert Cliffs Units 1 and 2.
  - There are two NRC reviews for the Calvert Cliffs COL application – safety and environmental.



Source: UniStar ER 2009

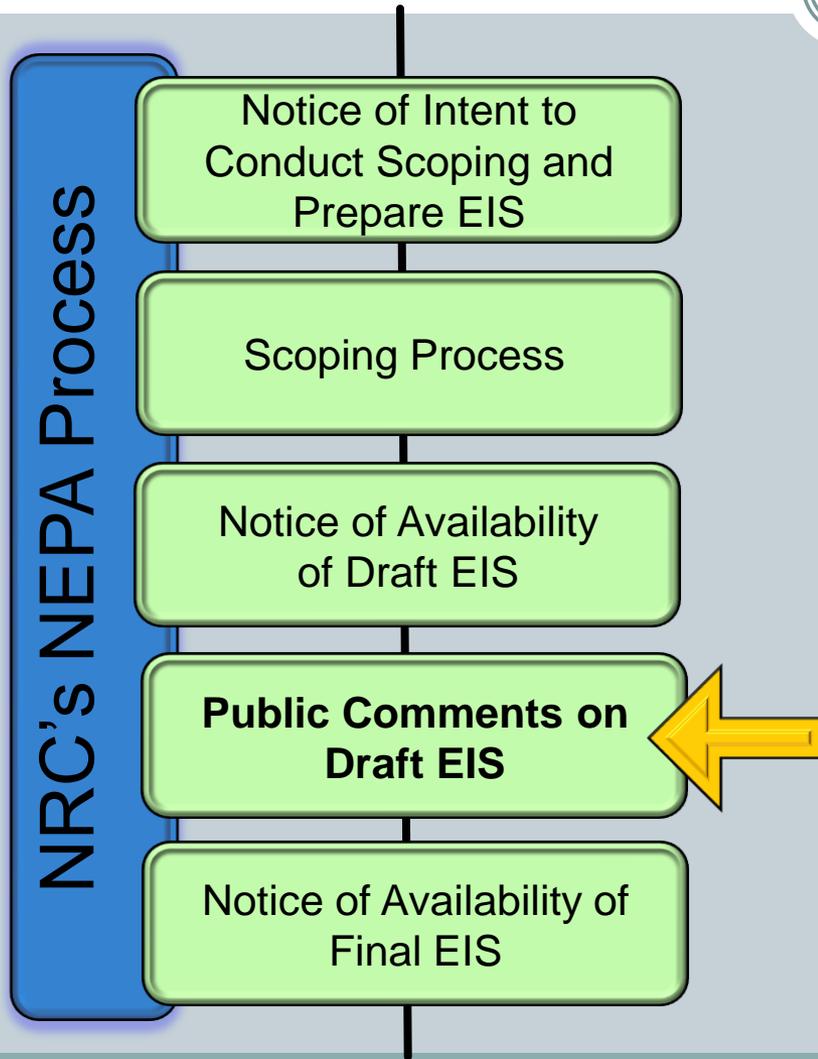
# Environmental Review



- NRC is reviewing the combined license application and is the lead agency.
- U.S. Army Corps of Engineers, Baltimore District is reviewing a Corps permit application for Unit 3 and is a cooperating agency on the environmental review and preparation of the EIS.
- The NRC and Corps staff make up the review team.



# Review Process & Schedule



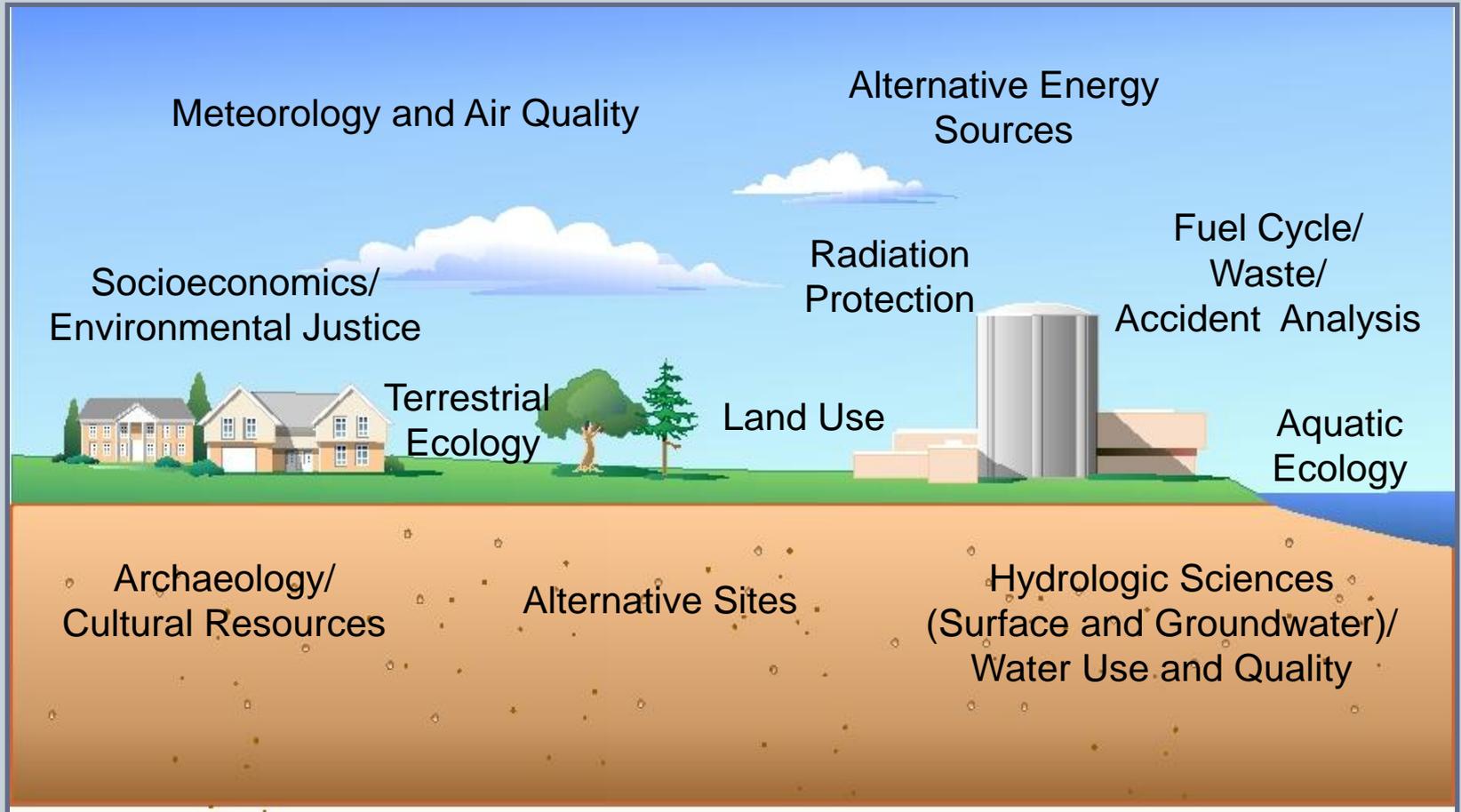
- Published *Federal Register* notice in February 2008.
- Scoping period from Feb. 2008 to April 2008; scoping meetings held on March 19, 2008 in Solomons.
- Published *Federal Register* notice on April 26, 2010.
- **Comment period on Draft EIS is from April 26 to July 9, 2010.**
- Final EIS expected to be published in February 2011.

# Organization of EIS



- Chapter 1 – Introduction
- Chapter 2 – Affected Environment
- Chapter 3 – Site Layout and Plant Description
- Chapter 4 – Construction Impacts
- Chapter 5 – Operation Impacts
- Chapter 6 – Fuel Cycle, Transportation, and Decommissioning Impacts
- Chapter 7 – Cumulative Impacts
- Chapter 8 – Need for Power
- Chapter 9 – Environmental Impacts of Alternatives
- Chapter 10 – Conclusions and Recommendation
  
- Appendices A – M (Scoping Comments are in Appendix D)

# Resource Areas



Source U.S. NRC

# How Impacts are Quantified



NRC has established three levels of impact:

***SMALL:*** Effect is not detectable, or so minor it will neither destabilize nor 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.

# Water Resources Impacts

- Analysis includes impacts on surface water and groundwater use and quality.
- The review team concludes impacts for use and quality for both surface water and groundwater would be **SMALL** for both building and operation.
  - Surface water and groundwater use would remain within existing permitted limits.
  - UniStar would comply with state permit for discharge into the Chesapeake Bay and follow best management practices.



Source: NASA

# Ecological Impacts

- Evaluated impacts on birds, fish, wildlife, plants, and wetlands on the Calvert Cliffs site and nearby area.
  - The review team consulted with Maryland Dept. of the Environment, Maryland Dept. of Natural Resources, U.S. Fish and Wildlife Service, and National Marine Fisheries Service.
- The review team concluded that impacts for both terrestrial and aquatic ecology would be MODERATE for building and SMALL for operation.



Source: NMFS



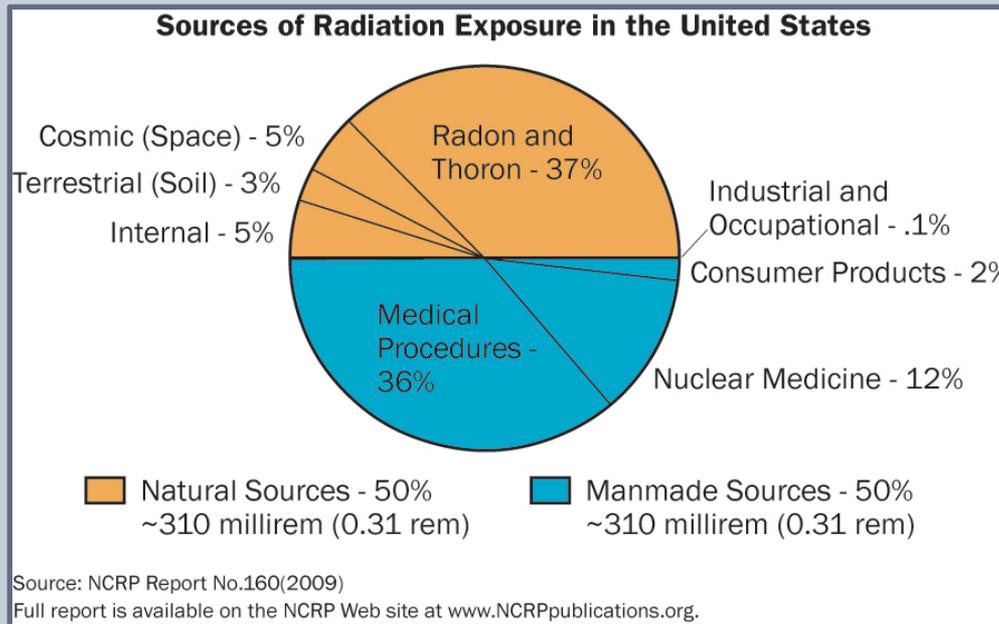
Source: U.S. FWS



Source: NOAA

# Radiological Impacts

- Includes impacts on construction workers, members of the public, plant workers, and wildlife.



- Doses to workers would be SMALL and below regulatory limits.
- Doses to members of the public from construction and operation would be SMALL and below regulatory limits.
- Doses to wildlife would also be SMALL and below relevant guidelines.

# Socioeconomics and Environmental Justice

- Socioeconomics includes impacts on taxes, housing, education, traffic, and public services.
  - The review team found that adverse impacts would be SMALL to MODERATE for building and SMALL for operation. Beneficial impacts would be SMALL to LARGE for both building and operation.
    - Most impacts are in Calvert County.
- Environmental justice review focuses on low-income and minority populations.
  - Minority and low-income populations would not be disproportionately effected during building or operation of Unit 3.



Source: FHWA



Source: U.S. DHS

# Cultural and Historic Resources



Source: GAI Consultants 2008 on behalf of UniStar

- Cultural includes impacts on historic archaeological and architectural properties or sites.
  - The NRC and Corps staff found a total of 3 sites potentially eligible for the National Register of Historic Places that would be adversely affected.

- The review team found that the impacts for cultural resources would be **LARGE** for building and **SMALL** for operation of Unit 3.



Source: GAI Consultants 2008 on behalf of UniStar



# Cumulative Impacts



- Cumulative impacts include the impacts from the proposed action (Unit 3) with other past, present, and reasonably foreseeable future actions.
  - Examples include:
    - Calvert Cliffs Units 1 and 2
    - Dominion Cove Point Pier Reinforcement Project.
    - Mid-Atlantic Power Pathway (MAPP)
- Cumulative adverse impacts ranged from SMALL to MODERATE for most resource areas except for cultural resources, which would be LARGE. Cumulative tax impacts would be beneficial and range from SMALL to LARGE with most impacts in Calvert County.

# Need for Power

- NRC staff relied upon:
  - The decision by the Maryland Public Service Commission (MPSC) to grant UniStar a Certificate of Public Convenience and Necessity for Unit 3.
  - Reports prepared by MPSC and the Reliability First Corporation.



Source: UniStar ER 2009

- NRC staff determined that, collectively, the decision and reports were sufficiently systematic, comprehensive, subject to confirmation, and responsive to forecasting to uncertainty that additional independent staff review was not needed.
- Based on the decision and the reports, NRC staff concluded that there is a need for new baseload generating capacity in Maryland by 2018 in excess of the planned output of Unit 3.

# Alternatives



- **Alternative Energy**

- None of the feasible baseload alternatives would be environmentally preferable.



Source: TVA

- **Alternative Sites**

- The Calvert site was compared to 3 alternative sites.
- Analysis showed none of the alternative sites would be environmentally preferable to the Calvert Cliffs site.



Source: NREL



Source: U.S. DOE

- **Alternative System Designs**

- No alternative cooling system would be environmentally preferable to the proposed design.



Source: U.S. NRC

# Preliminary Recommendation



- The NRC staff's preliminary recommendation to the Commission is that the combined license be issued.
- Most of the environmental impacts are expected to be SMALL.
- None of the feasible alternative energy sources evaluated would be environmentally preferable.
- None of the alternative sites would be environmentally preferable to the Calvert Cliffs site.

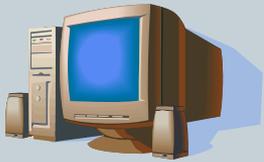
# Access to the Draft EIS



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[www.nrc.gov/reading-rm/doc-collections/nuregs/staff/sr1936](http://www.nrc.gov/reading-rm/doc-collections/nuregs/staff/sr1936)



Calvert Library

Southern Branch

20 Appeal Lane

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Calvert Library

Prince Frederick

850 Costley Way

Prince Frederick, MD

# Submitting Comments on Draft EIS



CalvertCliffsCOLAEIS@nrc.gov



<http://www.nrc.gov/public-involve/doc-comment/form.html>



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COMMENTS ARE DUE BY **JULY 9, 2010**