



# **New Reactor Licensing Process**

Thomas Fredrichs, Project Manager

Laura Quinn, Project Manager

Division of Site Environmental Reviews

Office of New Reactors

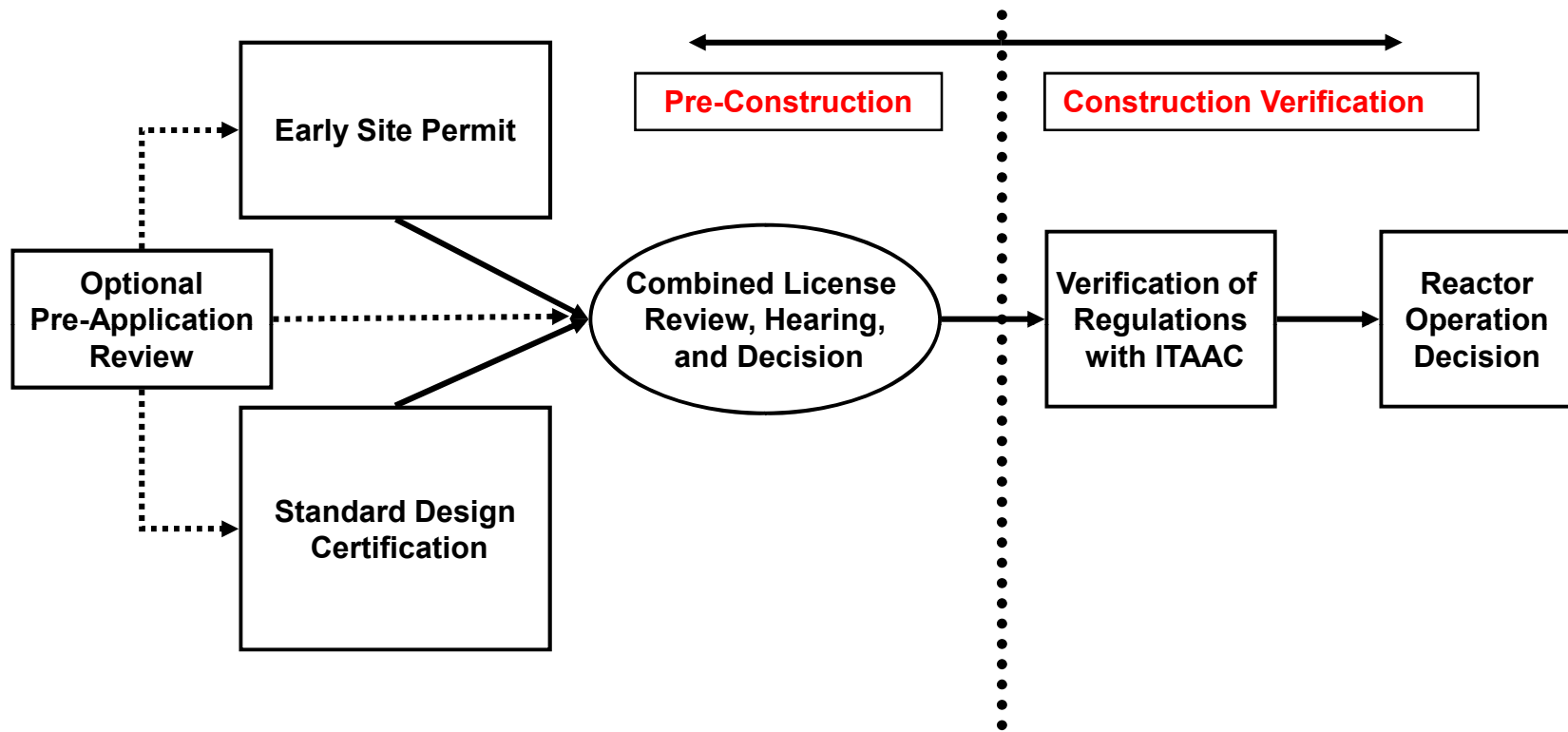
February 18, 2009



# Discussion Topics

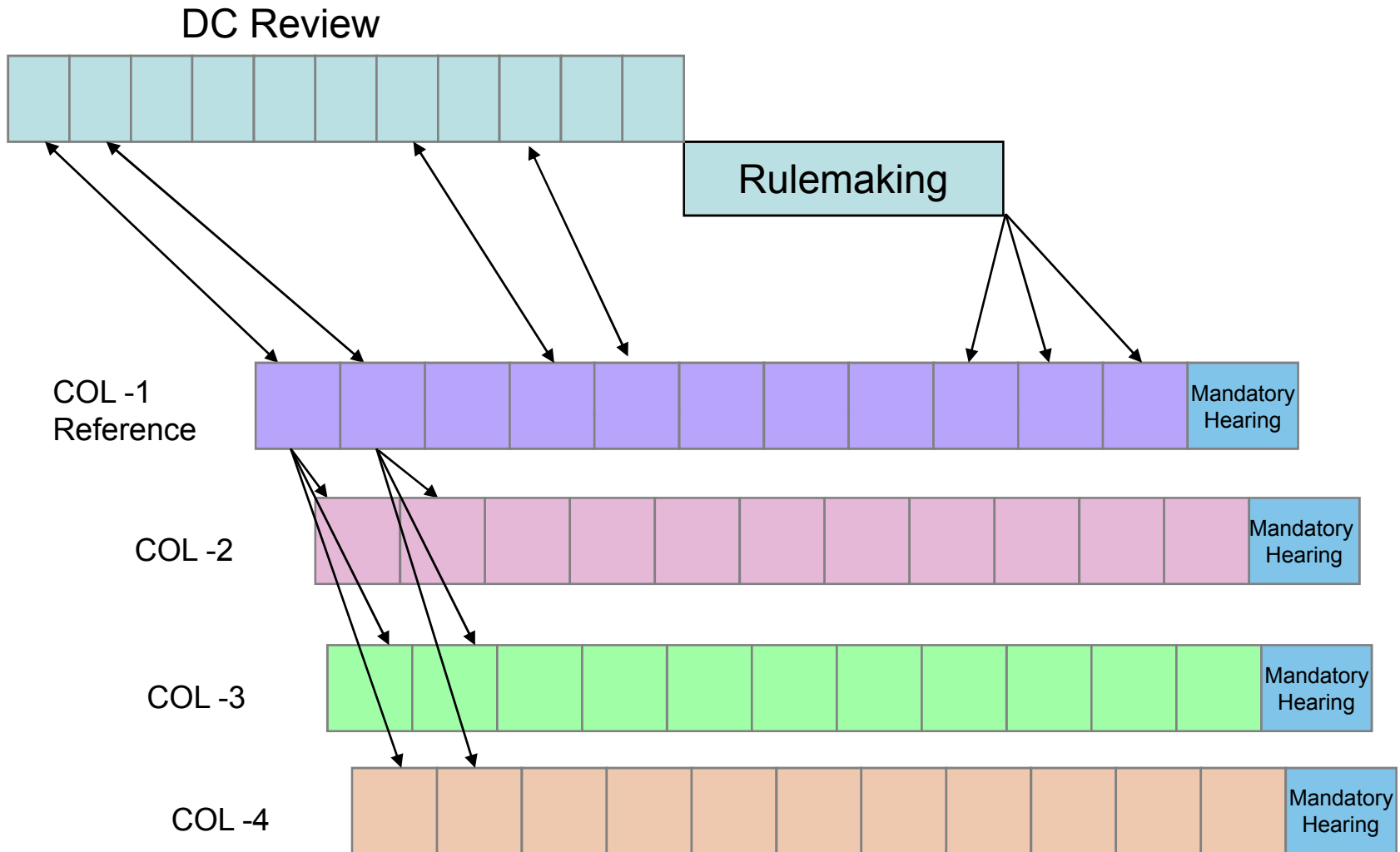
- NRC licensing process
- Limited work authorization (LWA) rule & NRC jurisdiction
- Scope of reviews
- Review and approval time frames
- Other agency participation

# Part 52 - Fitting the Pieces Together



- Licensing decisions finalized before major construction begins
- Inspections w/ITAAC to verify construction
- Limited work may be authorized before COL issuance

# One Design – Multiple Applications





# NEW REACTORS

- Industry informed NRC of plans to apply for combined licenses for approximately 34 new reactors
- NRC received 17 applications representing 26 reactors to date which are currently under review by the staff
- Each application references one of 5 standard designs



# COMBINED LICENSE (COL)

- Authorization from the NRC to construct and, with conditions, operate a nuclear power plant at a specific site and in accordance with laws and regulations

# COL HIGHLIGHTS

- Resolve all safety & environmental issues before authorizing construction/issuing license
- Prior to fuel load, must verify the facility has been constructed in accordance with the license
- Reduction of risk for companies building nuclear power plants

# Limited Work Authorization

- 10 CFR 50.10
- Defines “construction” under NRC authority
- Identifies what construction is not
  - “pre-construction”
- Allows some defined construction activities to proceed under LWA before COL issued



# Construction

- “Reasonable nexus” (72 FR 57426)
  - Radiological health and safety
  - Common defense and security
- Certain activities performed for systems, structures, or components (SSCs) meeting the reasonable nexus concept
  - Generally, foundation work, but not grading or excavation

# Construction – cont'd

- Activities under NRC jurisdiction
  - Driving of piles,
  - Subsurface preparation,
  - Placement of backfill, concrete, or permanent retaining walls within an excavation,
  - Installation of foundations, or
  - In-place assembly, erection, fabrication, or testing

# Construction – cont'd

- Applicable SSCs
  - Safety-related
  - Physical protection
  - Fire protection
  - Onsite emergency facilities

# Pre-construction

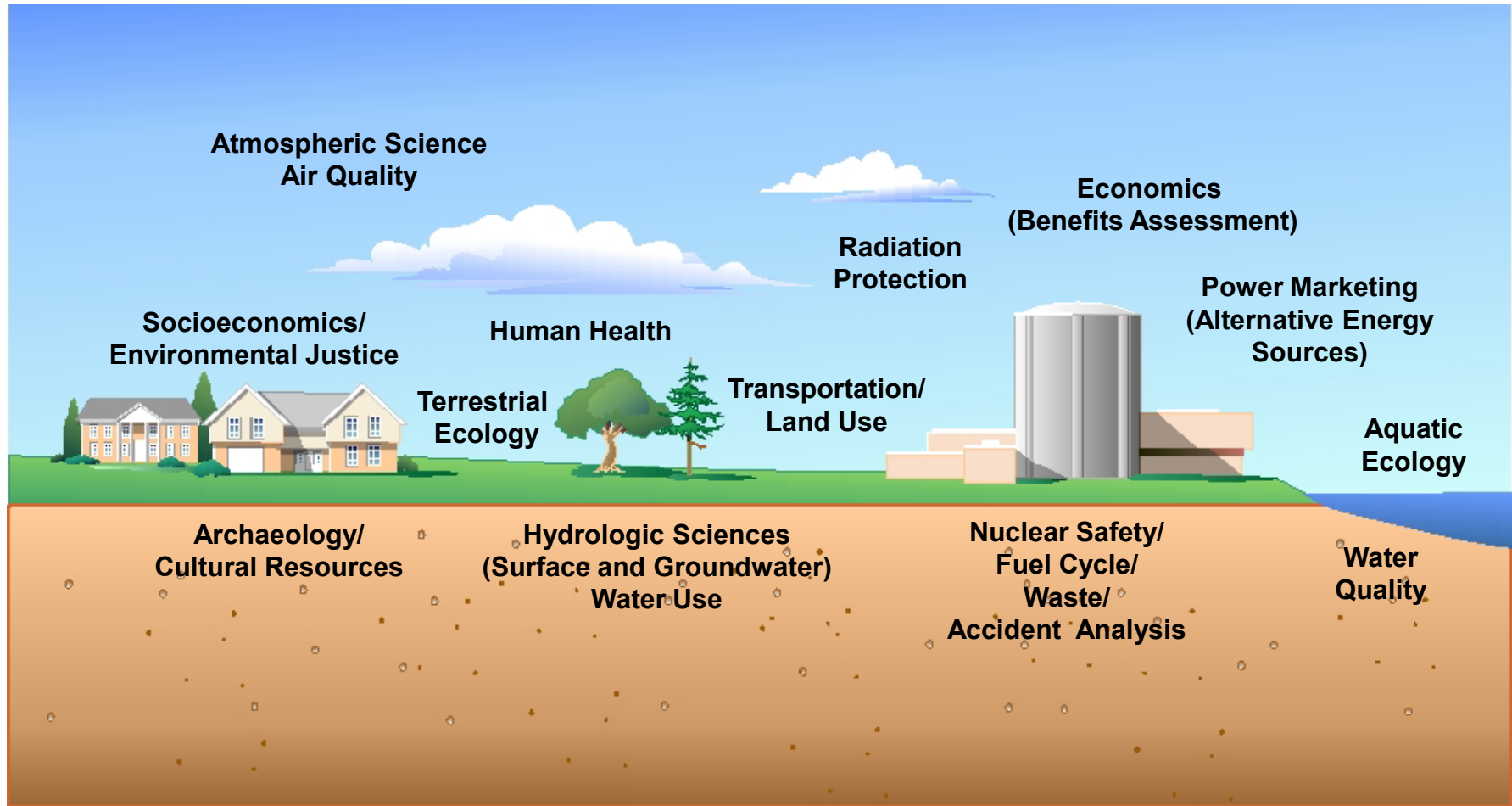
- Not under NRC jurisdiction
  - Site preparation
    - Clearing
    - Grading
    - Installing environmental mitigation measures
    - Temporary roads and borrow areas
  - Excavation
  - Non-safety related support buildings
  - Non-safety related service facilities



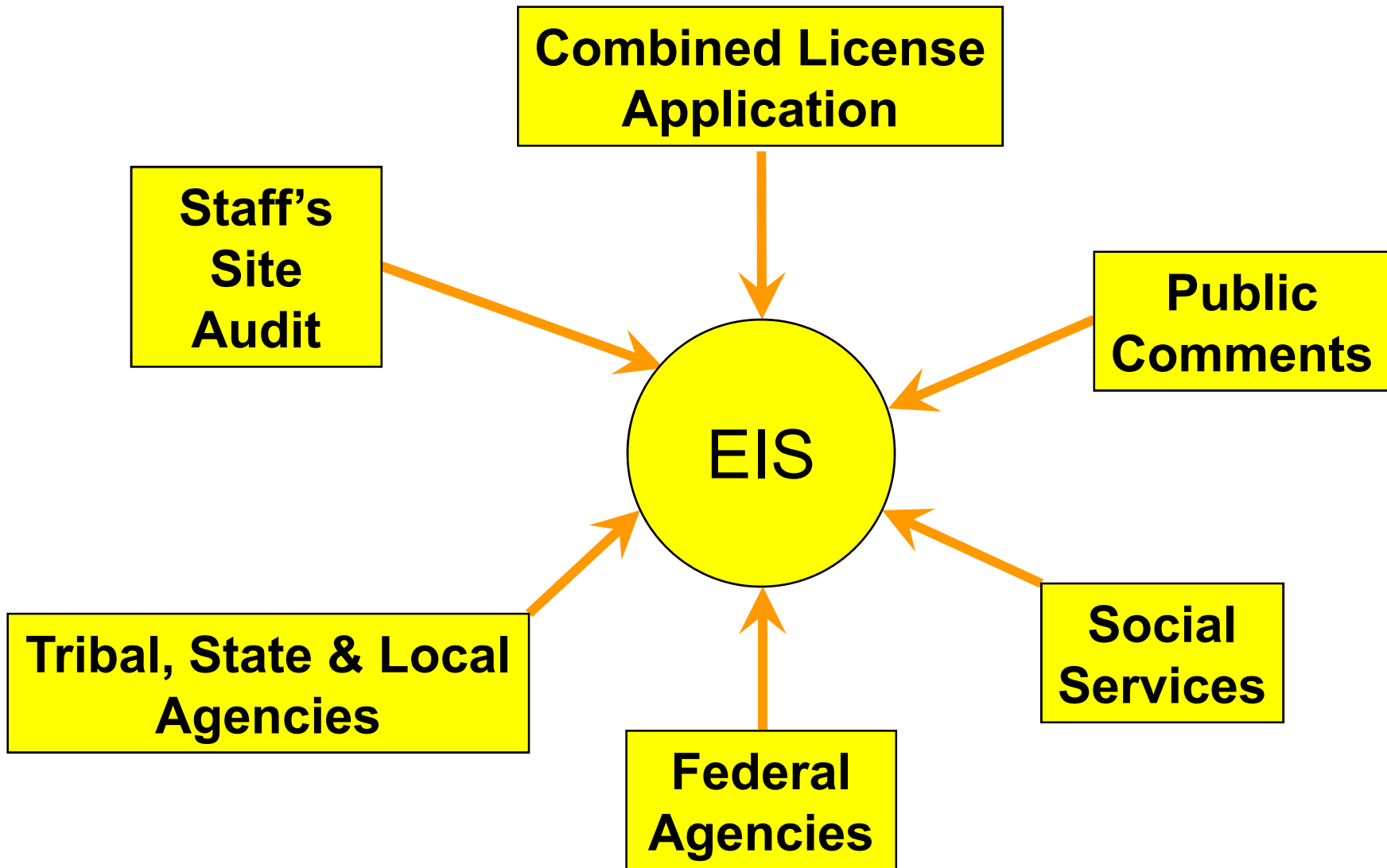
# Safety Review Scope

- Ensure facility will be constructed and operated safely by reviewing:
  - Design of facility
  - Quality assurance
  - Security plan
  - Radiation Protection
  - Emergency preparedness (with FEMA)
  - Operator Training
  - Applicant's process to verify that the nuclear plants will be built as designed and operated in accordance with NRC regulations
- Clearly document our safety findings
- Maintain an open and transparent process

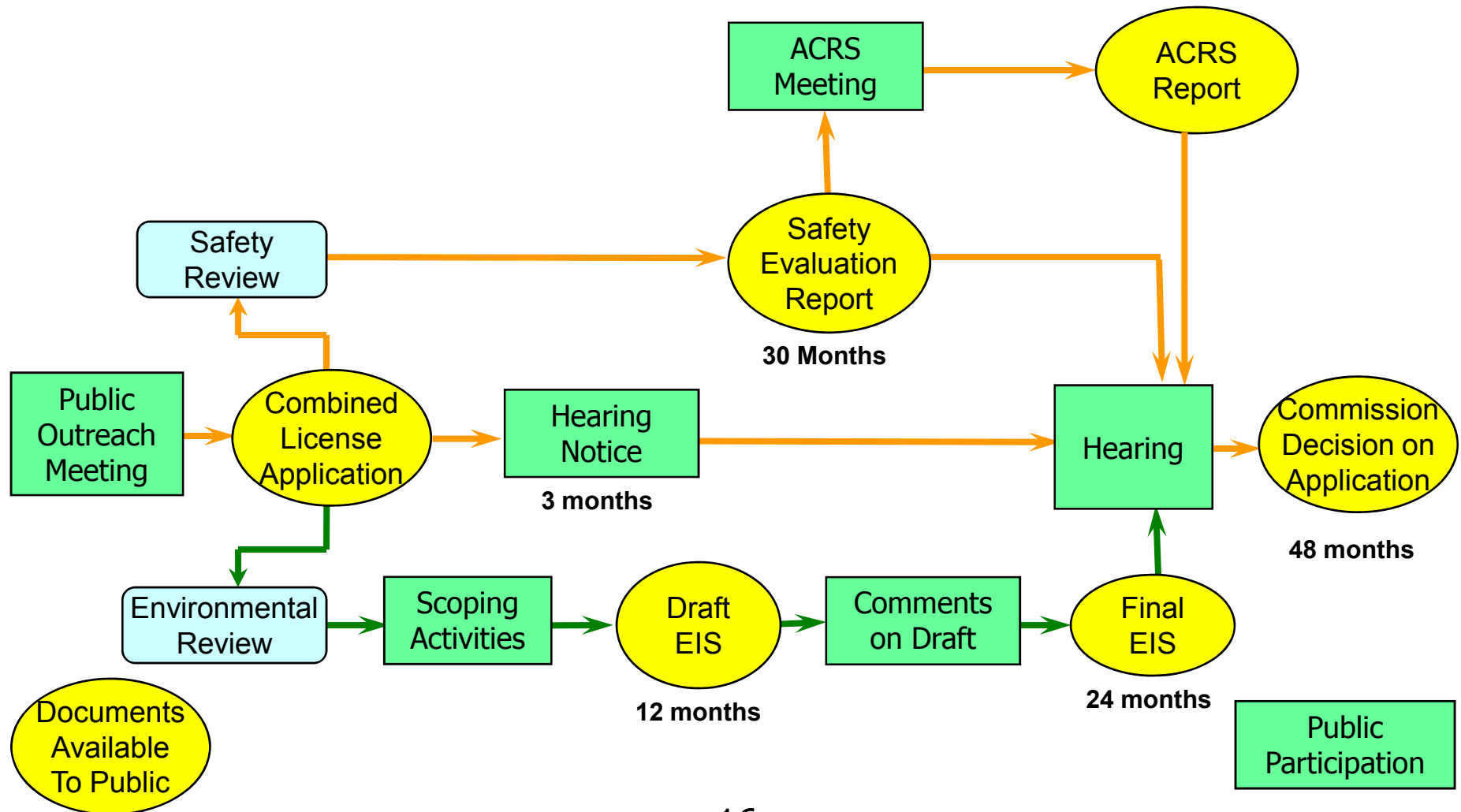
# Environmental Review Areas



# Information Gathering



# Combined License Application Time Frame







# Other Agency Participation

## Environmental

- US Army Corps – cooperating agency
- US Fish and Wildlife Service, Nat'l Marine Fisheries Service - consultation
- EPA – review EIS