



Puerto Rico Transportation Technology Transfer Center
Department of Civil Engineering and Surveying
University of Puerto Rico at Mayagüez
PO Box 9000 * Mayagüez, PR 00681
Tel. 787-834-6385 * Fax: 787-265-5695 * www.prltap.org



*30th Anniversary of Excellence in the Training of Transportation Officials at
Municipal, State and Federal Level in Puerto Rico and Virgin Islands*

Introduction to National Environmental Policy Act (NEPA) and Transportation Decision-Making



Instructor

Sangchul Hwang, PhD

Professor

Department of Civil Engineering and Surveying
UPR-Mayagüez

August 26, 2016





Introduction to NEPA and Transportation Decision-making

Sangchul (San) Hwang, PhD

Professor
Department of Civil Engineering
UPR-Mayagüez

August 26, 2016

Seminar Synopsis

Chapter	Page
1. Evolution of National Environmental Policy Act (NEPA)	4
2. NEPA Process Overview	37
3. Transportation Project Development under NEPA	52
3.1. Project Need	53
3.2. Impacts and Significance	60
3.3. Alternatives	67
3.4. Mitigation	74
3.5. Public Involvement	83
3.6. Inter-agency Coordination	93
3.7. Documentation	103
3.7.1. Categorical Exclusion	111
3.7.2. Environmental Assessment	119
3.7.3. Environmental Impact Assessment	130
3.7.4. Reevaluations	170
3.8. Other Laws and Regulations	178
4. Case Study	190
5. Seminar Review	203

For Self-Study

<https://www.environment.fhwa.dot.gov/projdev/index.asp>



U.S. Department of Transportation
Federal Highway Administration

About Programs Resources Briefing Room Contact Search FHWA



FHWA > HEP > Environment > Toolkit Home

Environmental Review Toolkit

[Home](#)[Planning and Environment](#)[NEPA and Project Development](#)[Accelerating Project Delivery](#)[Historic Preservation](#)[Section 4\(f\)](#)[Water, Wetlands, and Wildlife](#)

NEPA and Project Development

[Program Overview](#)

[NEPA Implementation](#)[NEPA and Transportation Decisionmaking](#)[NEPA Documentation](#)[Environmental Justice](#)[Safety and NEPA](#)[Interim Guidance on the Application of Travel and Land Use Forecasting in NEPA](#)[Bridge Case Study](#)[Active & Inactive Environmental Impact](#)

Program Overview



NEPA and Project Development

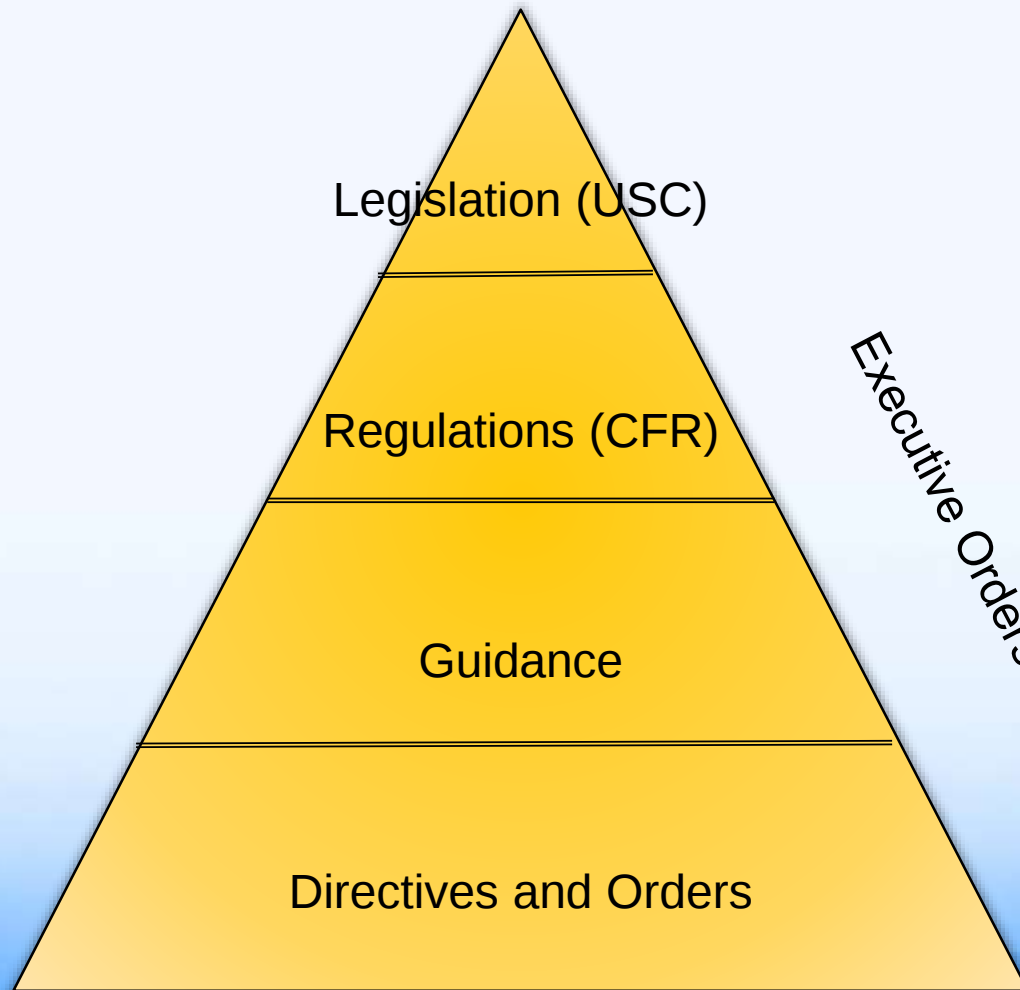
On January 1, 1970 the National Environmental Policy Act of 1969 (NEPA) was signed into Law. NEPA established a national environmental policy intentionally focused on Federal activities and the desire for a sustainable environment balanced with other essential needs of present and future generations of Americans.

1. Evolution of National Environmental Policy Act (NEPA)

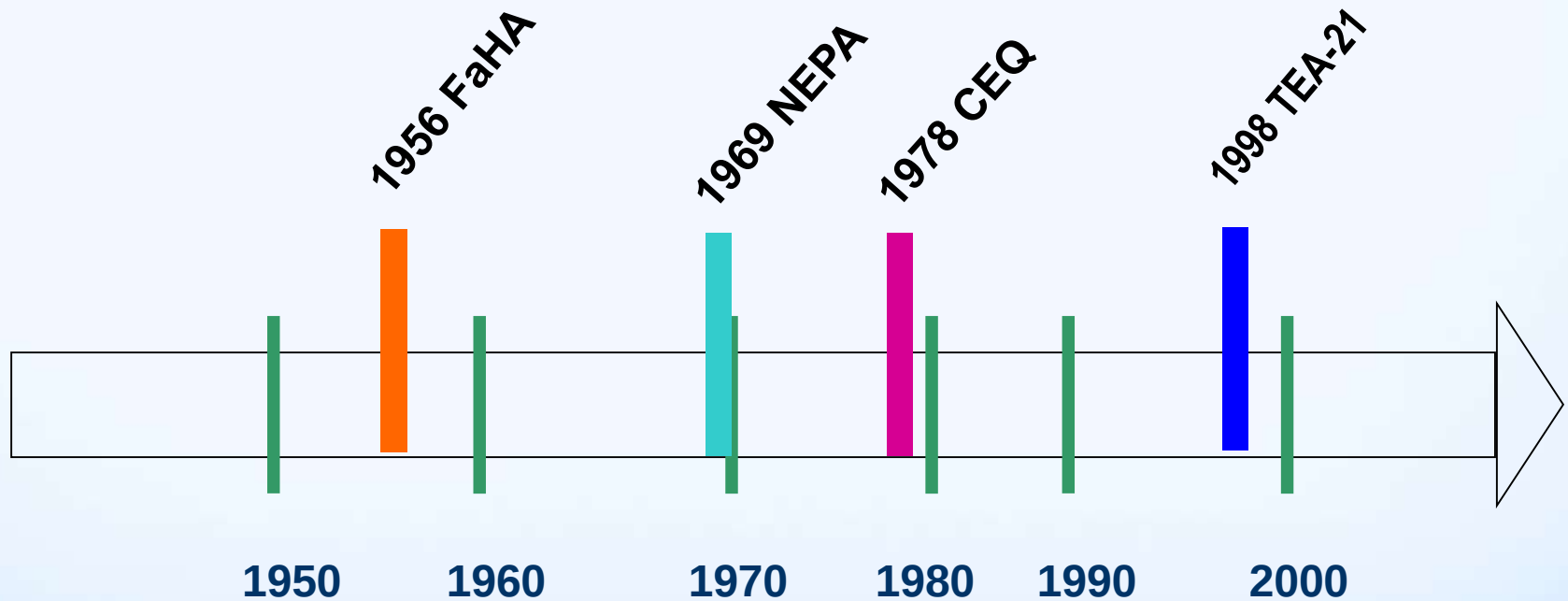
Learning Objectives

- Describe the source and hierarchy of legislation, regulation and guidance
- Learn evolution of NEPA transportation decision-making
- Recognize essential elements of NEPA

Hierarchy



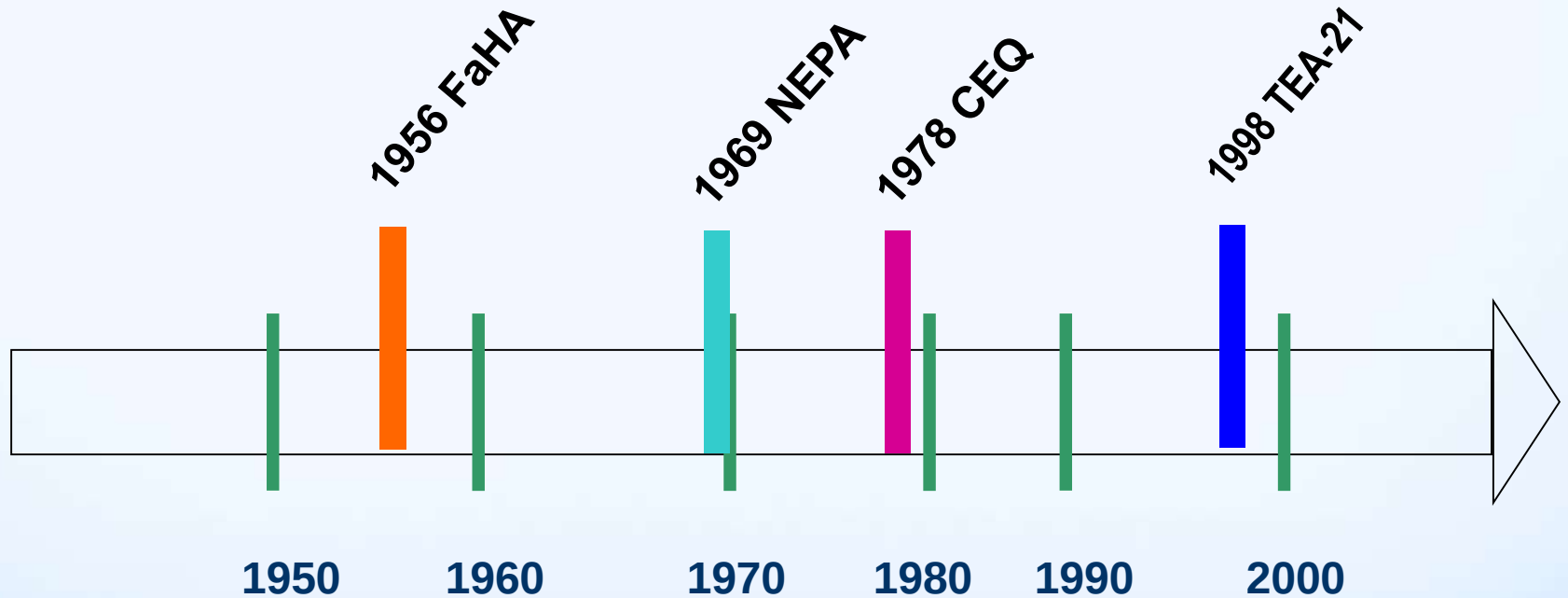
Evolution of Decision-making



Federal-Aid Highway Act of 1956 (FaHA)

- Construction of the National System of Interstate and Defense Highways shifted into high gear.
- The act launched the largest public works program yet undertaken.
- The act increased the authorized system extent to 41,000 miles.

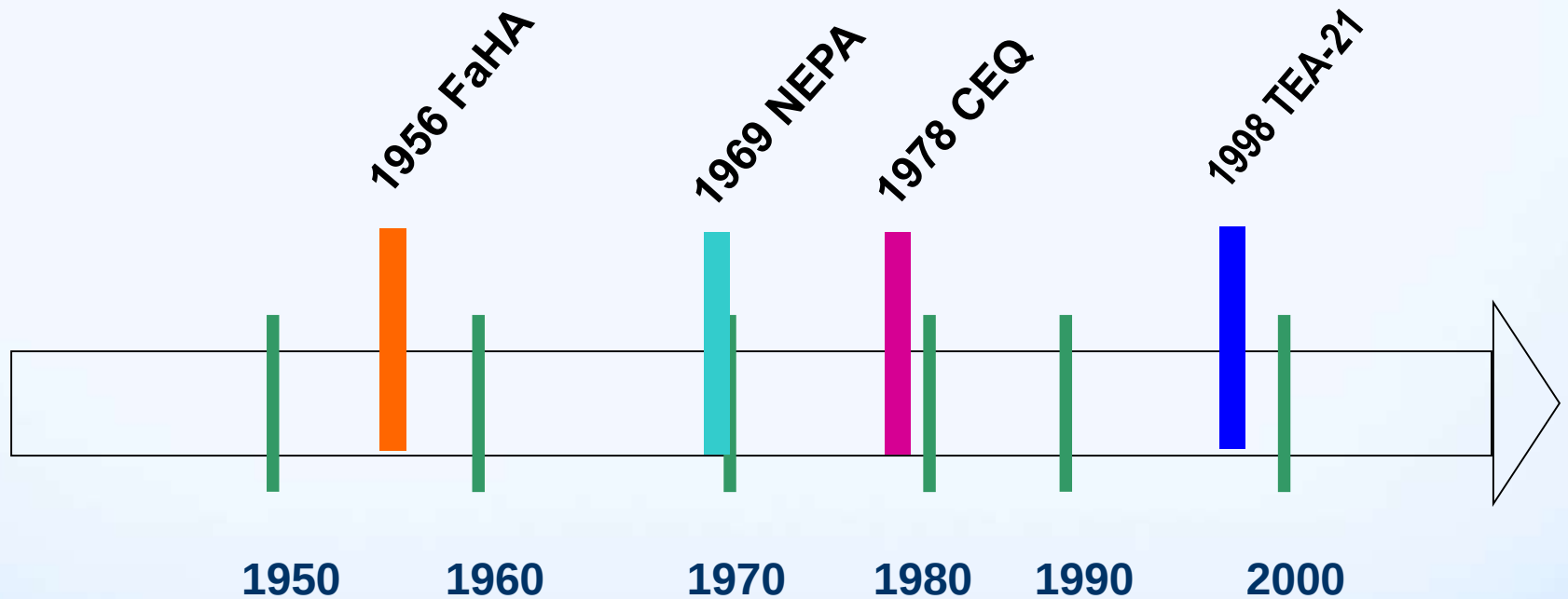
Evolution of Decision-making



National Environmental Policy Act of 1969 (NEPA)

- The basic national charter for protection of the environment.
- It establishes policy, sets goals, and provides means for carrying out the policy.

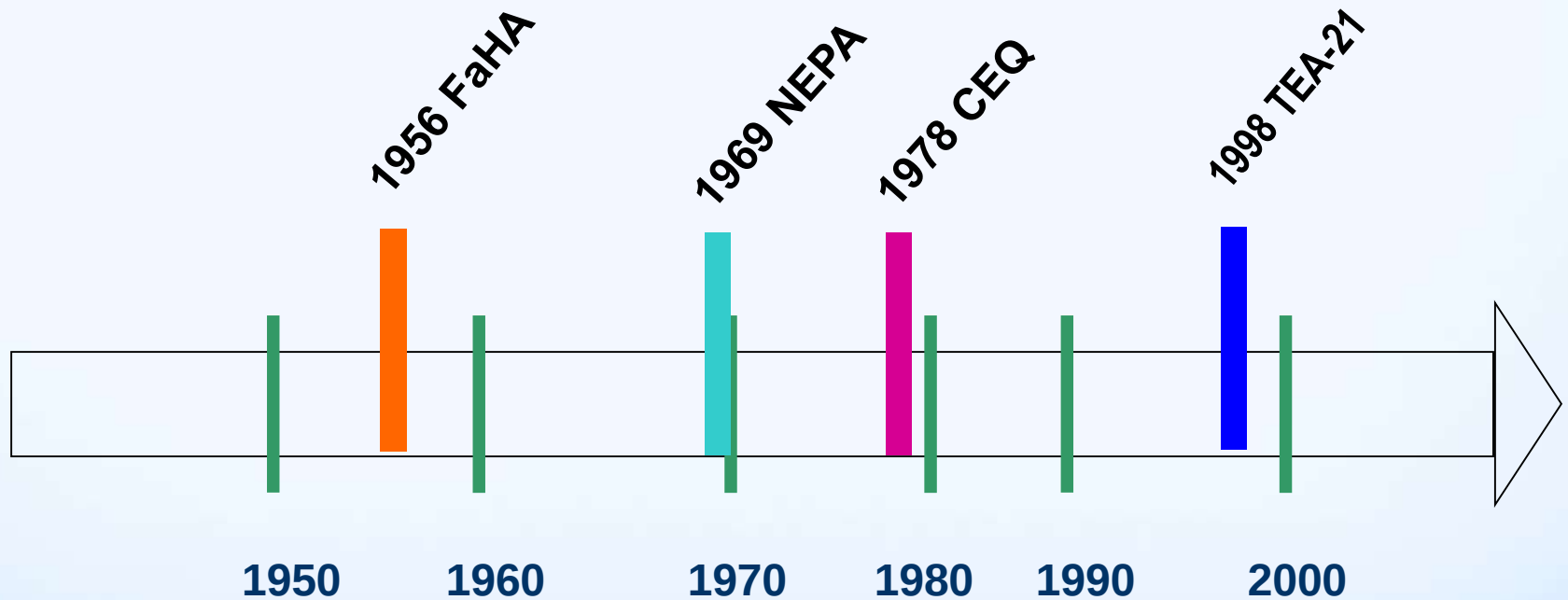
Evolution of Decision-making



Council on Environmental Quality (CEQ)'s Regulations (1978)

- Established uniform procedures for implementing the procedural provisions of the NEPA

Evolution of Decision-making



Transportation Equity Act for the 21st Century (TEA-21)

- Enacted June 9, 1998 - Public Law 105-178.
- TEA-21 authorizes the Federal surface transportation programs of highways, highway safety, and transit for the 6-year period 1998-2003.
- Improving safety, rebuilding infrastructures, protecting environment, R&D

NEPA

- Introduced in the Senate by Henry M. Jackson on February 18, 1969
- Signed into law by President Richard Nixon on January 1, 1970
- Declare a NATIONAL POLICY which will encourage productive and enjoyable harmony between humans and their environment to:
 - prevent or eliminate damage to the environment
 - stimulate the health and welfare of man
 - enrich the understanding of ecological systems and the natural resources important to the nation
 - (later.....) establish a Council on Environmental Quality (CEQ)

NEPA

- NEPA requires federal agencies to use a systematic interdisciplinary approach to the planning and decision-making that affected the environment.
- If federal money is involved, then NEPA compliance is required. The documents become the evidence of this compliance.
 - Environmental assessments (EAs) and environmental impact statements (EISs).
- NEPA does not apply to the President, Congress, or the federal courts.
- Exemptions apply when compliance with other environmental laws require an impact analysis similar to that mandated by NEPA.
 - Such laws include, but are not limited to, the Clean Air Act, Resource Conservation and Recovery Act, Safe Drinking Water Act, and the Federal Insecticide, Fungicide, and Rodenticide Act.

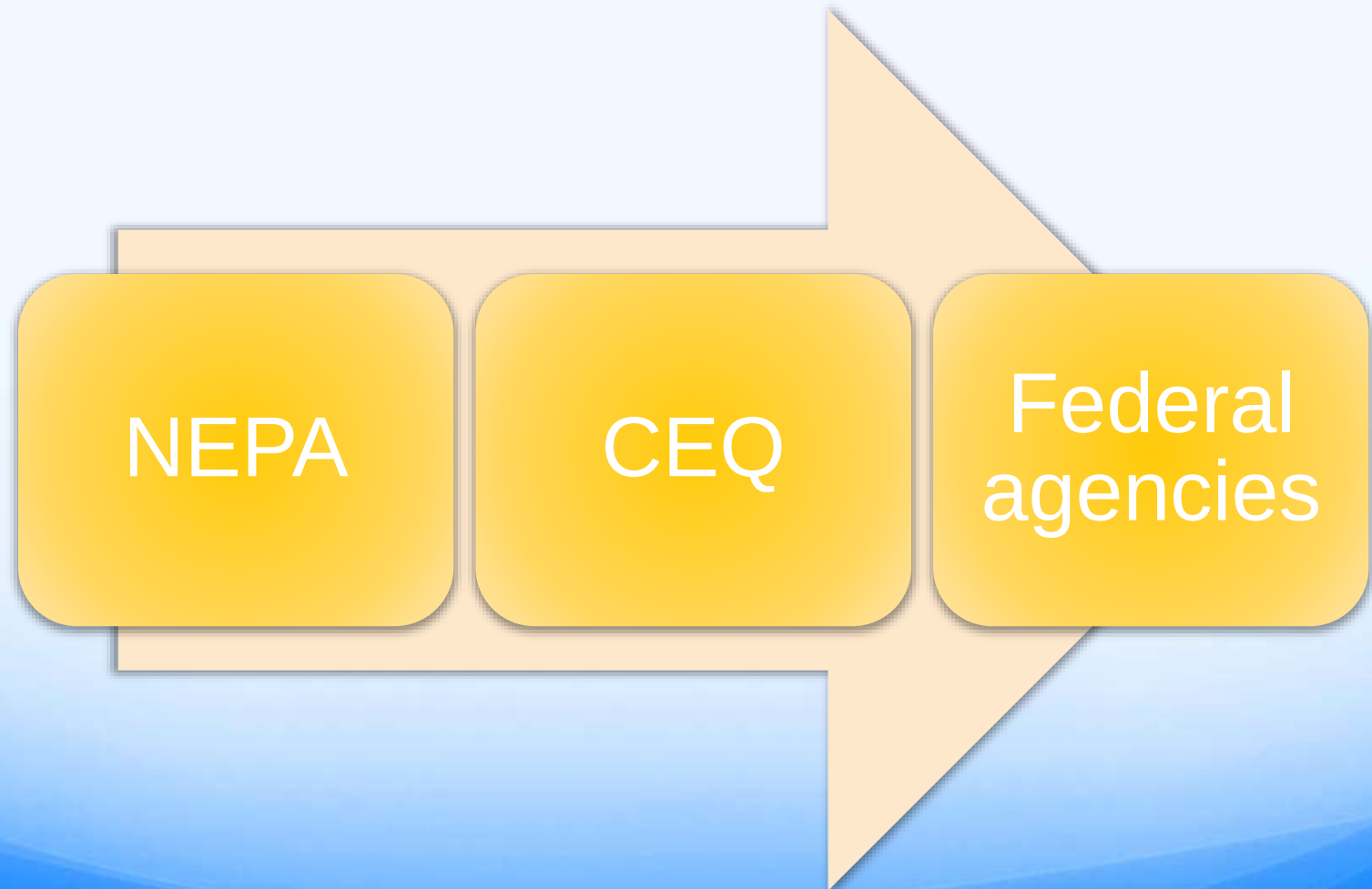
Sustainability

- Sustainability is based on a simple principle: Everything that we need for our survival and well-being depends, either directly or indirectly, on our natural environment.
- Sustainability creates and maintains the conditions under which humans and nature can exist in productive harmony, that permit fulfilling the social, economic and other requirements of present and future generations.
- Sustainability is important to making sure that we have and will continue to have, the water, materials, and resources to protect human health and our environment.

Federal Responsibility by NEPA

- Assure safe, healthful, productive, esthetically and culturally pleasing surroundings
- Attain widest range of benefit without degradation or undesirable and unintended consequences
- Preserve important historic, cultural, and natural aspects
- Achieve a balance between population and resource use
- Enhance the quality of the environment

NEPA Implementation



Key Roles of Council on Environmental Quality (CEQ)

- Assists Federal agencies in implementation of NEPA
- Monitors Federal environmental efforts and works closely with agencies to develop environmental policies and initiatives
- Prepares President's Environmental Quality Report

Specific Functions of CEQ

- Advise and assist the President in the development of environmental policies and proposed legislation as requested by the President;
- Advise the President on national and international policies relating to the environment;
- Identify, assess, and report on trends in environmental quality and recommend appropriate response strategies;
- Oversee federal agency implementation of the EIS process and act as a referee for interagency disputes regarding the adequacy of such assessments;
- Report annually to the President on the state of the environment through preparation of the annual Environmental Quality Report;

Specific Functions of CEQ

- Provide general support and leadership to the coordination of activities of the federal departments and agencies which affect, protect, and improve environmental quality;
- Support and participate in the government-wide effort to reinvent environmental regulation;
- Foster cooperation between the federal, state and local governments, the private sector and American citizens on matters of environmental concern;
- Interpret NEPA and the CEQ regulations in response to requests from federal, state and local agencies and citizens, and;
- Approve agency NEPA procedures and issue guidance to address systemic problems.

Goals & Key Areas of CEQ

- Principle goal of the CEQ Regulations [identified in the Policy, Purpose, and Mandate (1500)] ...
 - ... to improve the implementation of NEPA ...
 - ... all Federal agencies are charged with the responsibility to -
 - - **make Better Decisions - not just better documents,**
 - - reduce Paper Work and Delays,
 - - integrate NEPA with other planning and environmental procedures (merging, streamlining, one stop processing ...)
- To accomplish these goals, CEQ Regulations focus on 4 Key Areas:
 - early coordination,
 - faster, better processing,
 - uniform processing options for all agencies (EIS, EA, CE)
 - completing the environmental process (FONSI, ROD, CE)

Federal Highway Administration (FHWA)

- Agency of the Department of Transportation
- Mission is to improve the quality of the Nation's highway system and its intermodal connections
- Works co-operatively with partners to ensure transportation system plans and improvements
- Take full account of the impacts on the human and natural environment

FHWA NEPA Implementation

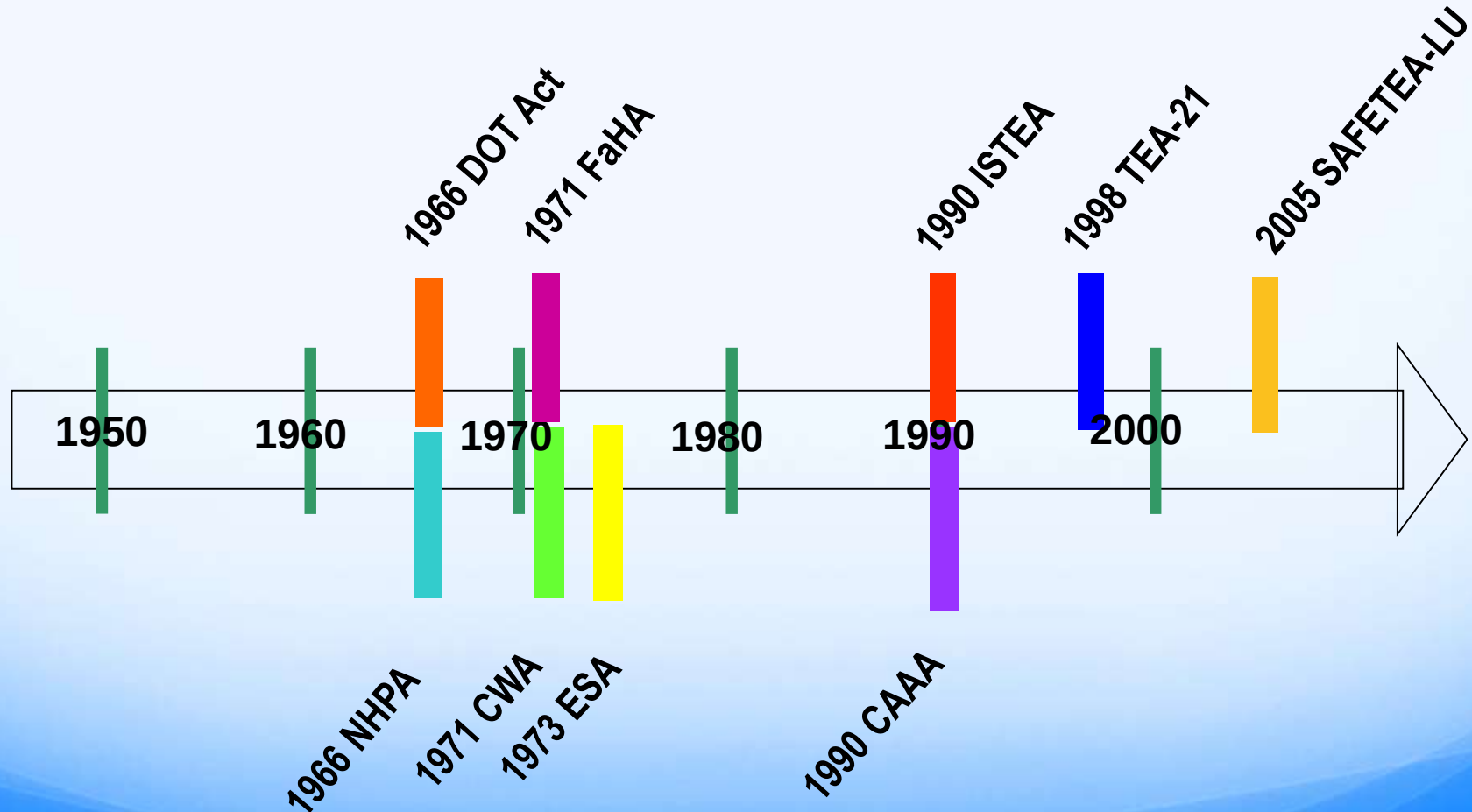
Policy

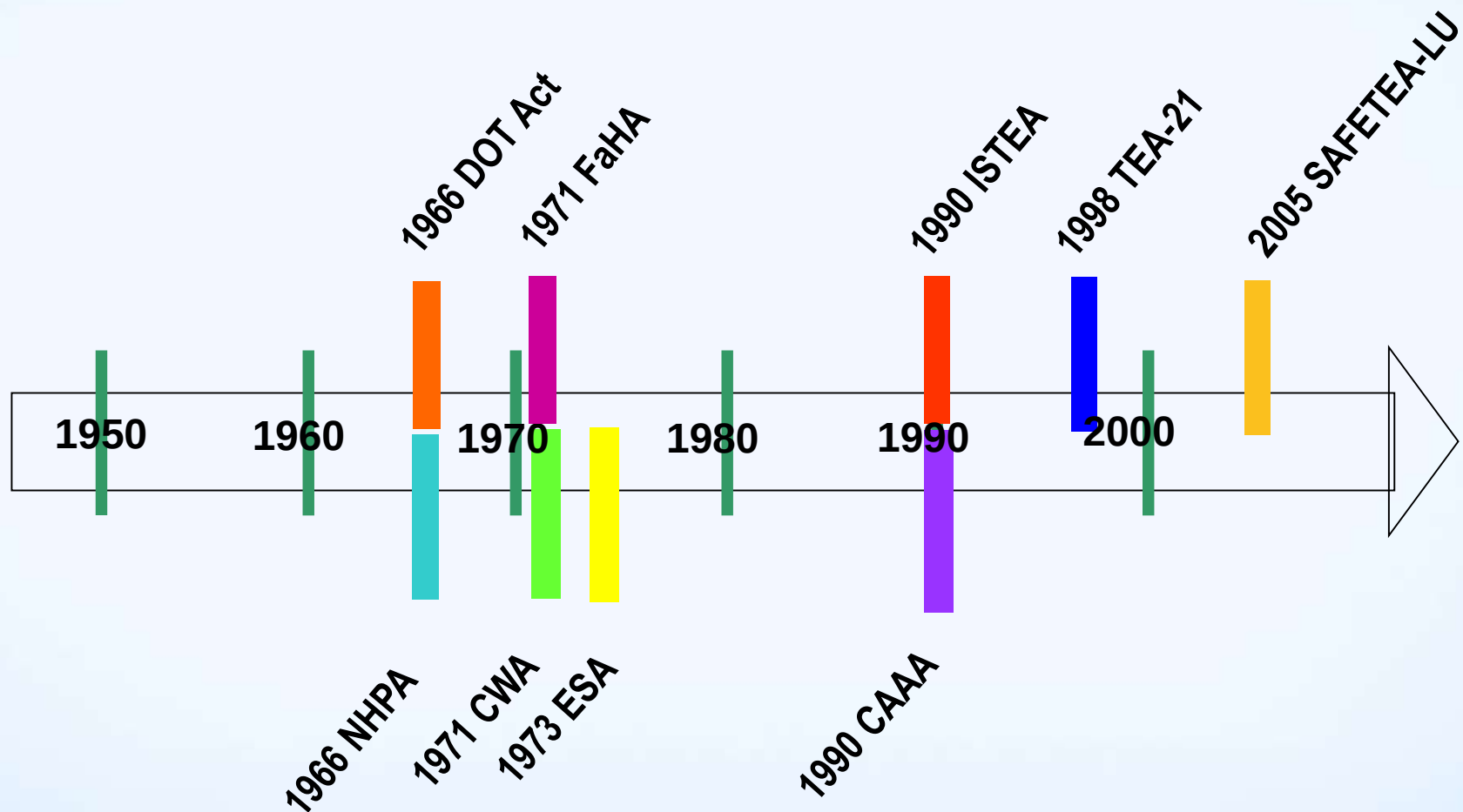
- Environmental investigations, reviews, and consultations be coordinated as a single process
- Compliance with applicable requirements
- Evaluate alternatives
- Make decisions in the best overall public interest
- Involve the public and agencies
- Use systematic and interdisciplinary approach
- Mitigate adverse effects

Project Development

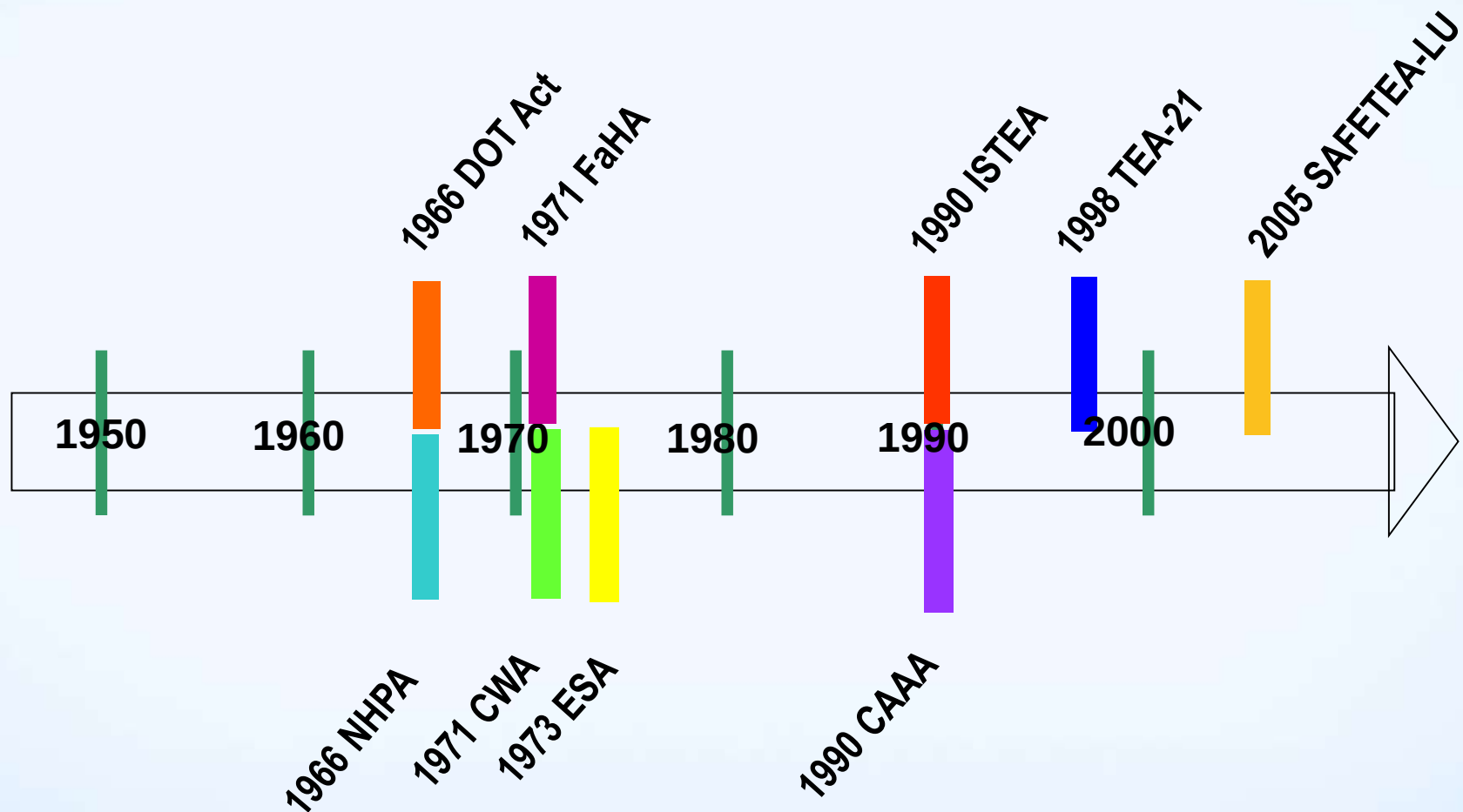
- Early and continuous interagency coordination and cooperation
- Meaningful evaluation of alternatives and avoidance of commitments before full evaluation
- Public involvement and hearing procedures
- Timing: final design, property acquisition, construction ... shall not proceed prior to CE, FONSI, ROD
- Approval ... constitutes acceptance of the general project location and concepts

Legislative Influences on/by NEPA

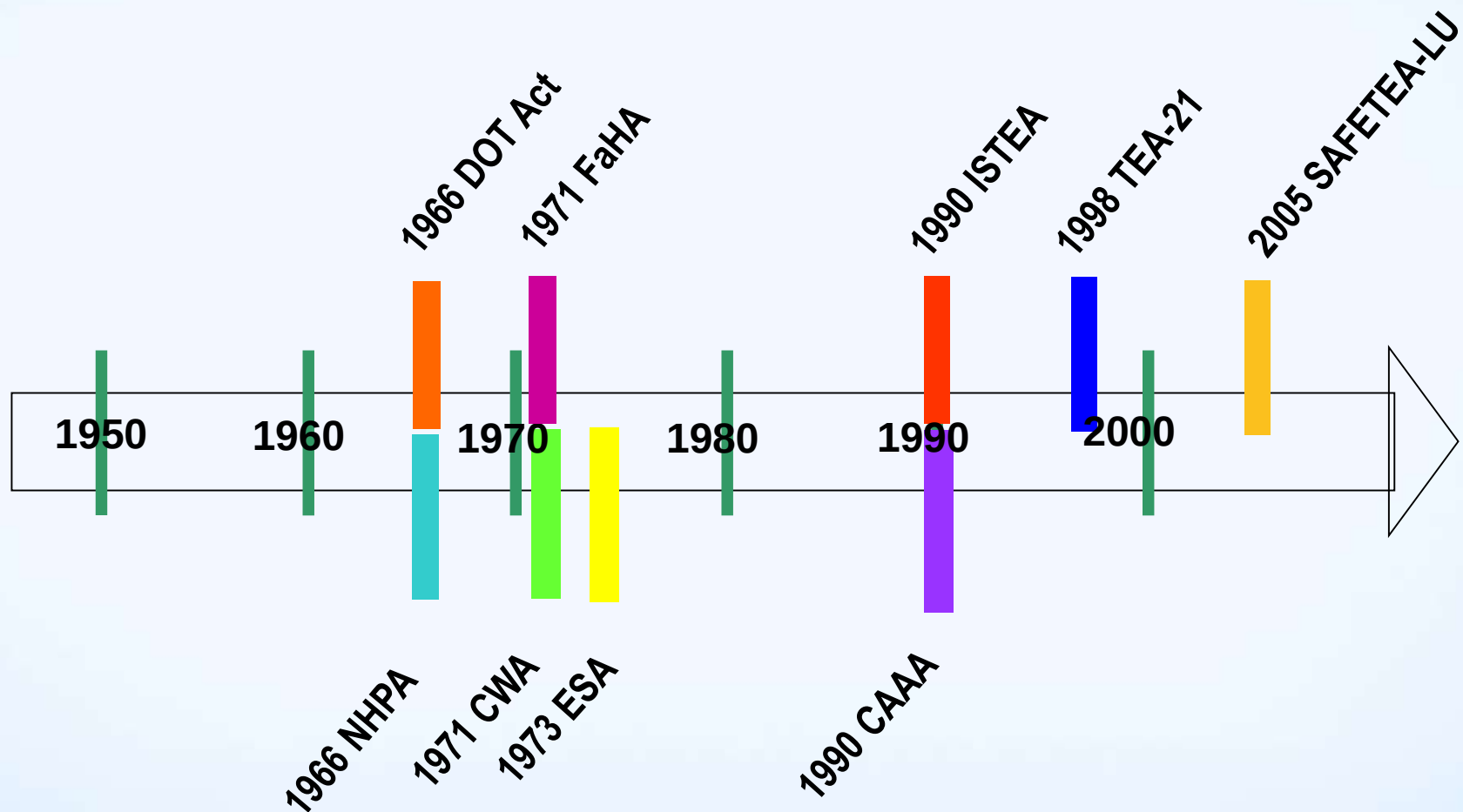




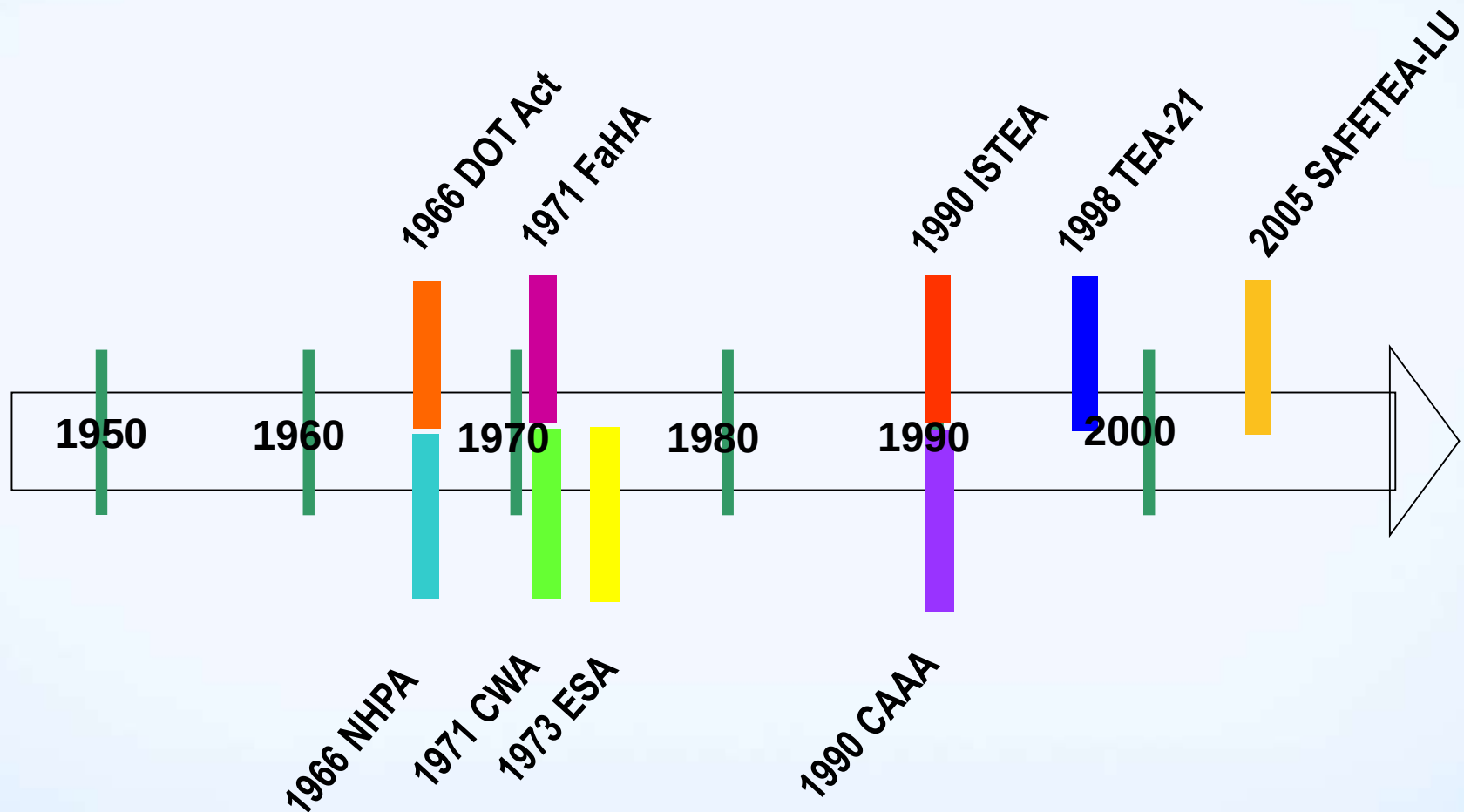
Department of Transportation (DOT) Act of 1966: Section 4(f) of the act required the preservation of natural areas. *This was the earliest statutory language directed at minimizing the negative effects of transportation construction projects on the natural environment*



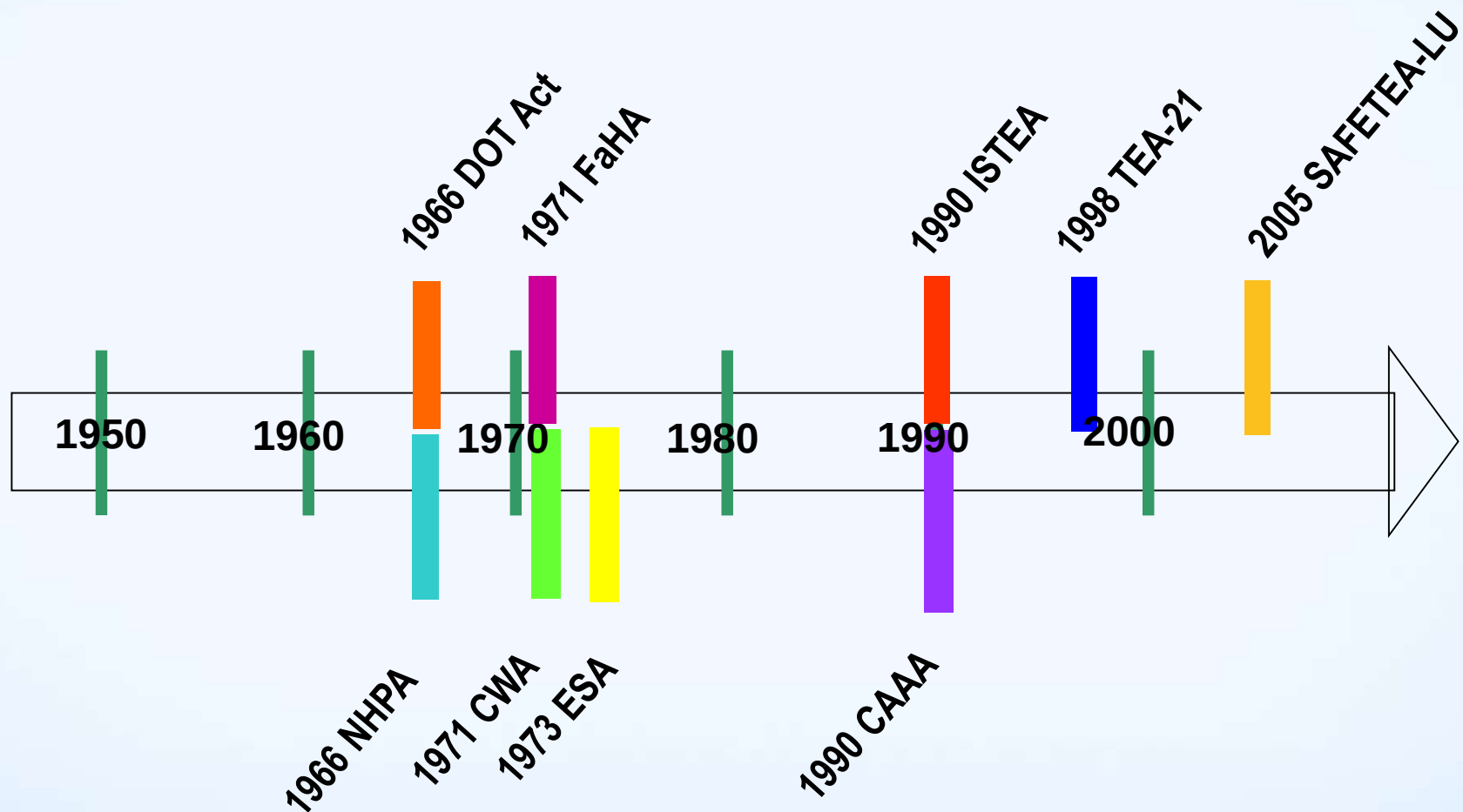
- National Historic Preservation Act (NHPA) of 1966: Section 106 is to identify historic properties, assess project effects and seek ways to avoid, minimize or mitigate any adverse effects



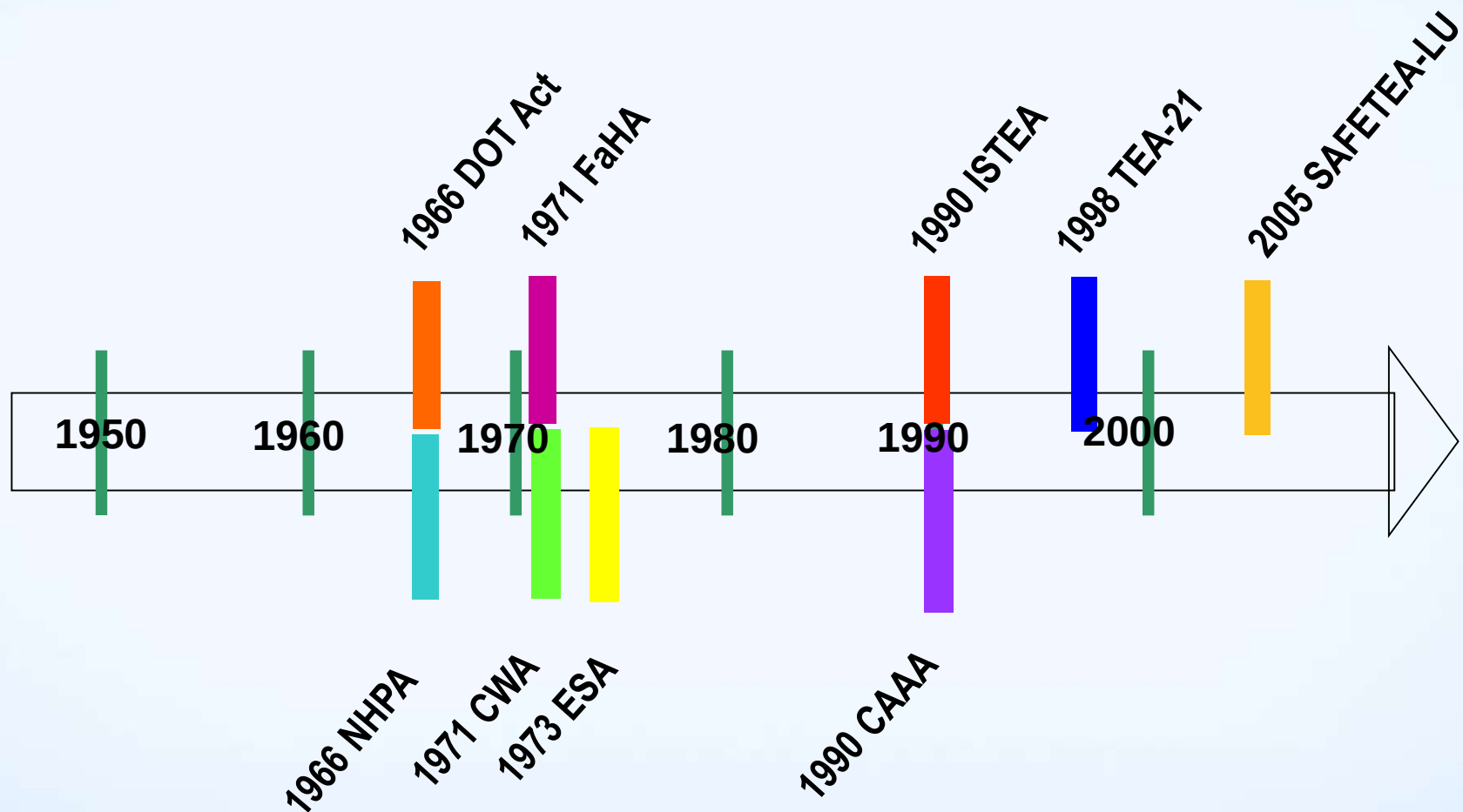
- Federal-aid Highway Program 1971: Requiring the state highway departments to obtain federal approvals at various stages in the highway building process.



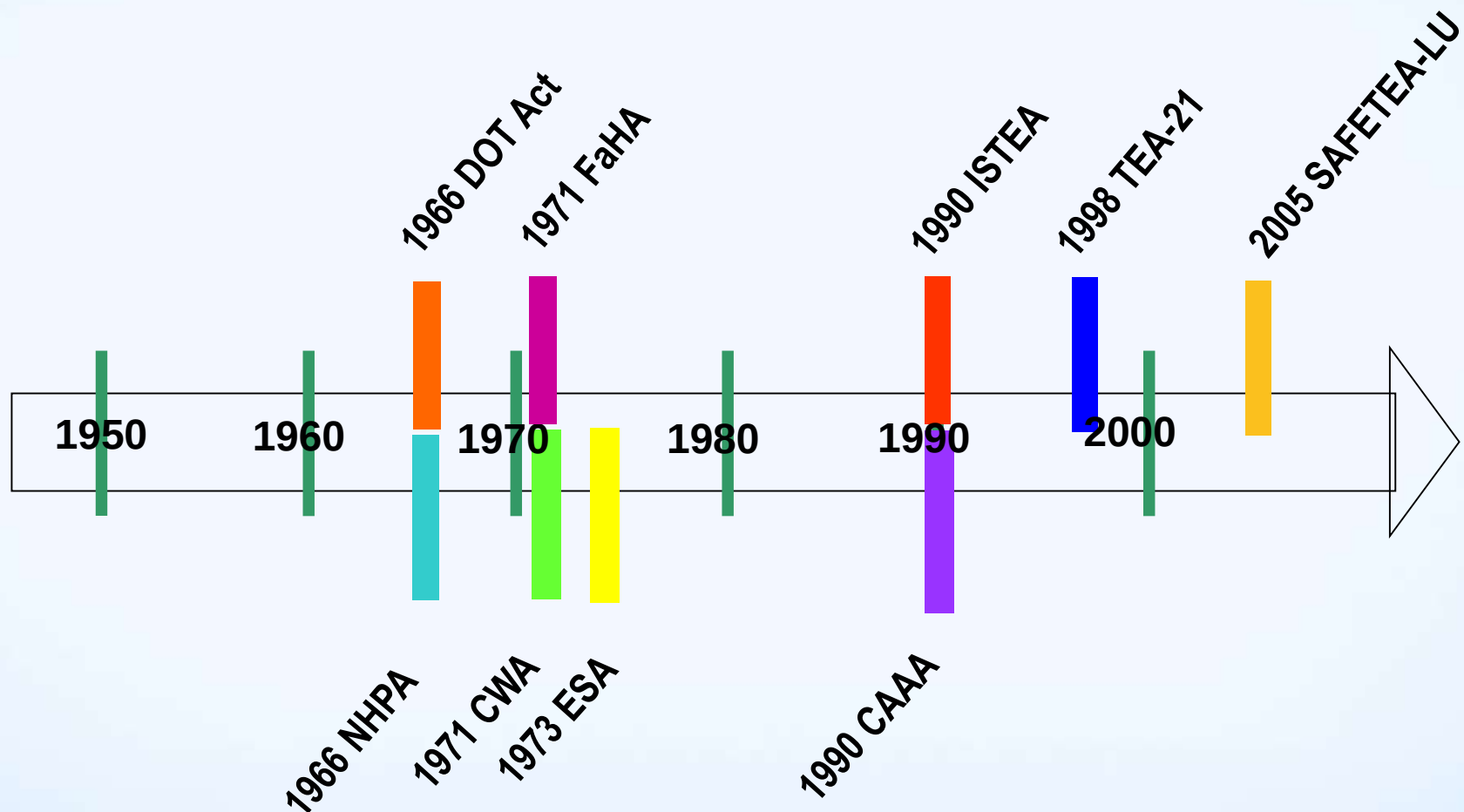
•Clean Water Act (CWA) 1971: broader goal of restoring and maintaining the chemical, physical, and biological integrity of the nation's waters so that they can support "the protection and propagation of fish, shellfish, and wildlife and recreation in and on the water."



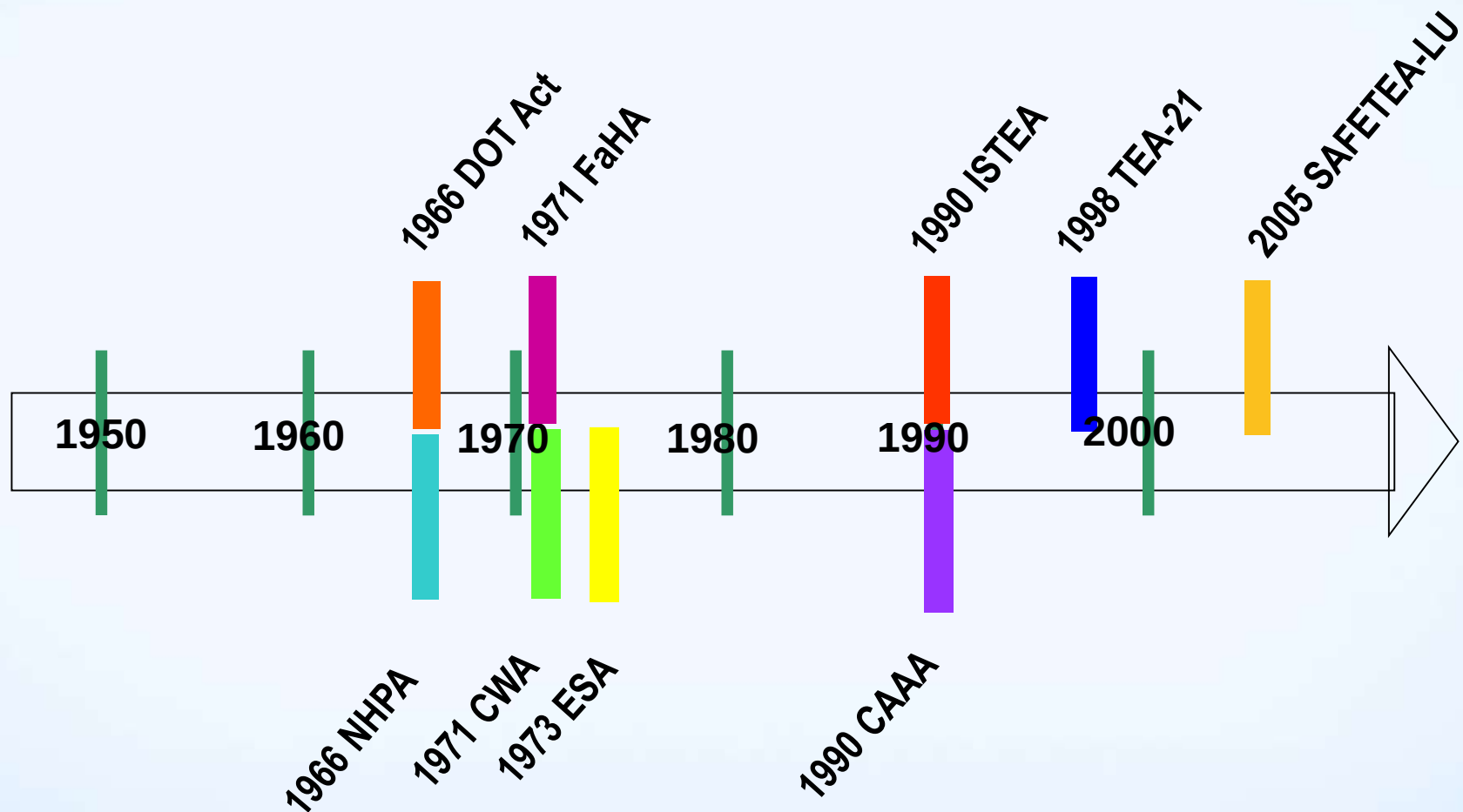
- 1973 Endangered Species Act (ESA): ecosystems upon which endangered species and threatened species depend may be conserved



- 1990 Clean Air Act as Amended (CAAA): Curb three major threats to the nation's environment and to the health of millions of Americans: acid rain, urban air pollution, and toxic air emissions.



• Intermodal Surface Transportation Efficiency Act of 1991 (ISTEA): "...develop a National Intermodal Transportation System that is economically efficient, environmentally sound, provides the foundation for the Nation to compete in the global economy and will move people and goods in an energy efficient manner."

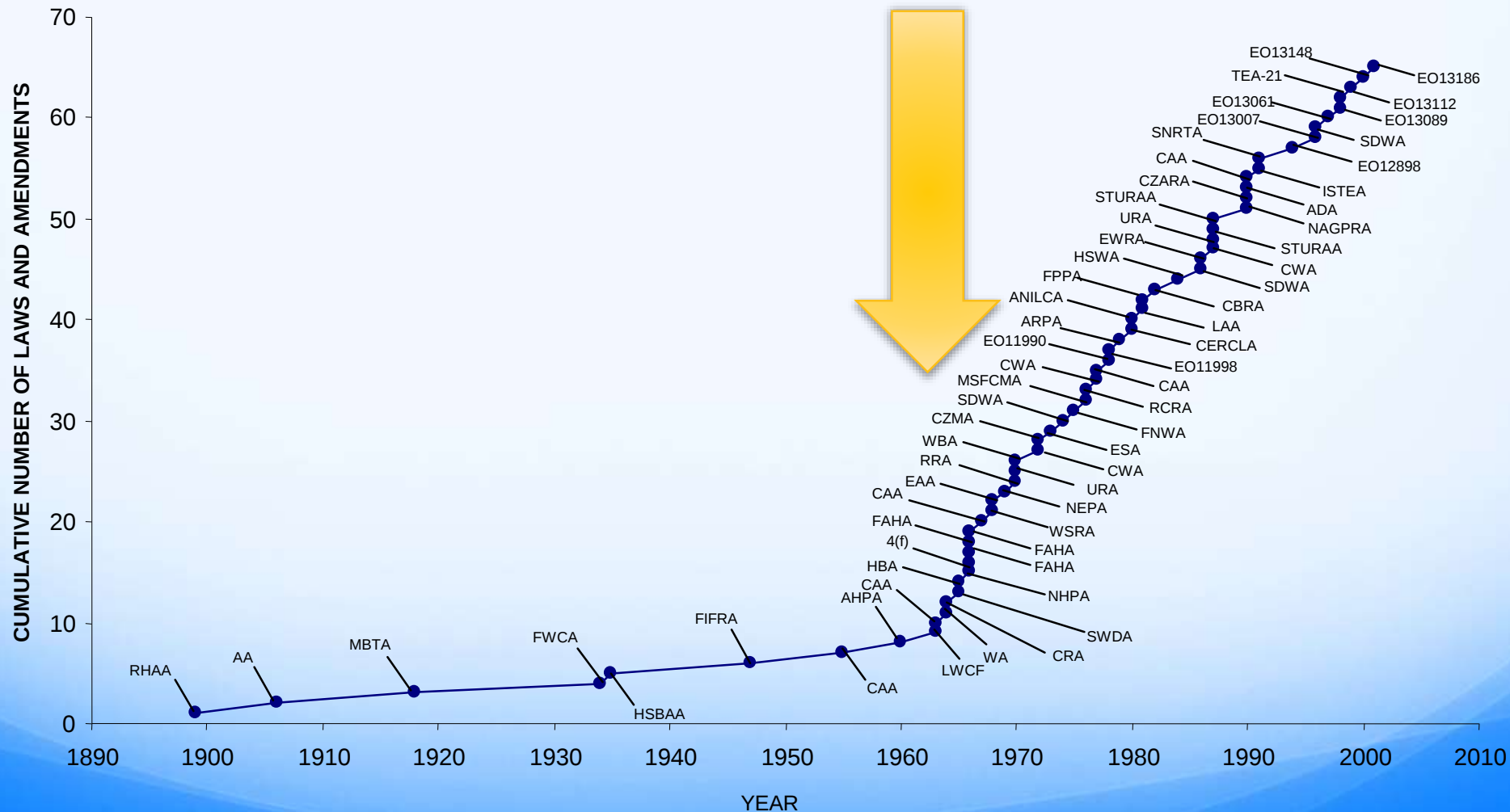


- Transportation Equity Act for the 21st Century (TEA-21) 1998 Federal surface transportation programs for highways, highway safety, and transit for the 6-year period 1998-2003

SAFETEA-LU

- On August 10, 2005, the President signed into law the **Safe, Accountable, Flexible, Efficient Transportation Equity Act: A Legacy for Users** (SAFETEA-LU).
- With guaranteed funding for highways, highway safety, and public transportation totaling \$244.1 billion, SAFETEA-LU represents the largest surface transportation investment in our Nation's history.
- The two landmark bills that brought surface transportation into the 21st century—the Intermodal Surface Transportation Efficiency Act of 1991 (ISTEA) and the Transportation Equity Act for the 21st Century (TEA-21)—shaped the highway program to meet the Nation's changing transportation needs.
- SAFETEA-LU builds on this firm foundation, supplying the funds and refining the programmatic framework for investments needed to maintain and grow our vital transportation infrastructure.

Federal Environmental Laws & Executive Orders affecting Transportation



Environmental Tag Team: JFK (1961-1963) Rachel Carson's *Silent Spring* (1962)





Environmental Policy

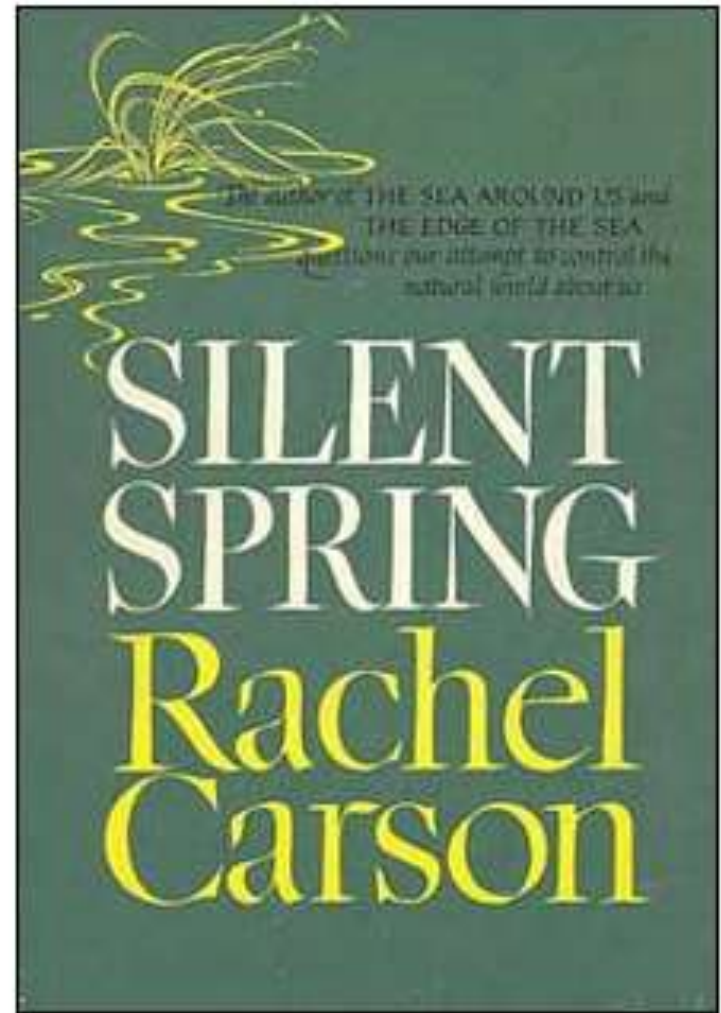
AT THE JOHN F. KENNEDY SCHOOL OF GOVERNMENT

[Home](#) | [Research](#) | [People](#) | [Publications](#) | [Courses](#) | [Student Funding](#) | [Contact](#)



The Harvard Kennedy School is the hub of environment and natural resource policy study and policy outreach at Harvard. The School has an exceptionally distinguished record of research, teaching, and policy involvement in this field.

Over the past decade, the number of faculty at the Kennedy School devoting all or a large part of their time to work in environment and resource policy has grown dramatically. Faculty members include five members of the National Academies of Science, winners of the nation's most prestigious awards for environmental excellence, President Obama's Science Advisor, two former members of the Council of Economic Advisors, the former Chair of the Environmental Economics Advisory Committee of the United States Environmental Protection Agency, the former Executive Secretary of the UN Convention on Biological Diversity, leading experts on restructuring of the electricity industry, members of the Intergovernmental Panel on Climate Change, and authorities on sustainable development.



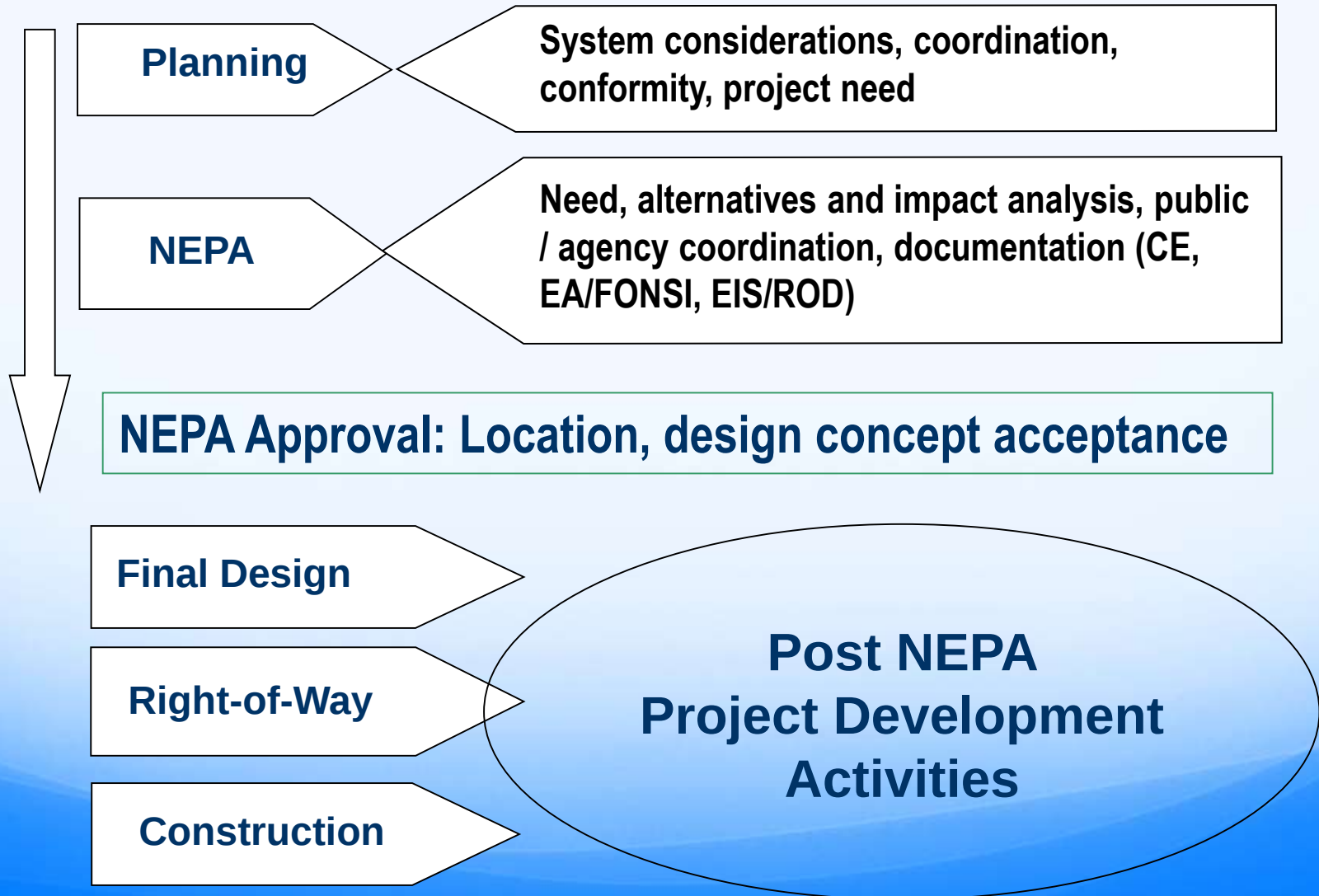
<http://www.rachelcarson.org>

2. NEPA Process

Learning Objectives

- Understand the context of NEPA in the overall project development process
- Recognize the differences between CE, EA, and EIS
- Define streamlining and environmental stewardship

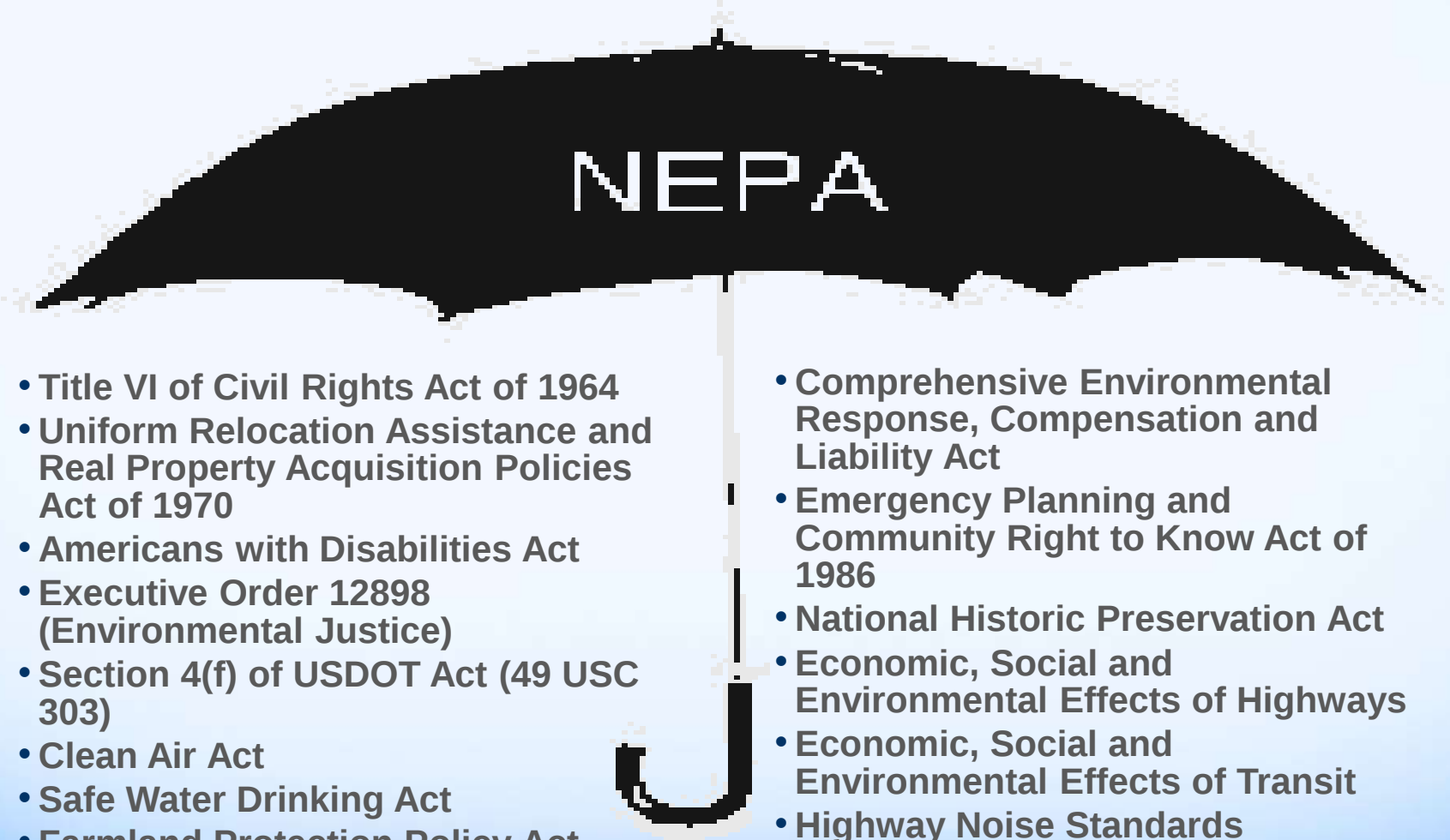
Project Development



NEPA Project Development

- Systematic and interdisciplinary approach
- Investigations, reviews, consultations and compliance coordinated as a single process
- Meaningful evaluation of alternatives
- Decisions made in the best overall public interest
- Early and continuous interagency and public involvement
- Mitigate adverse effects
- Some activities shall not proceed before CE, FONSI, ROD
- Acceptance of general project location and concepts

NEPA Umbrella

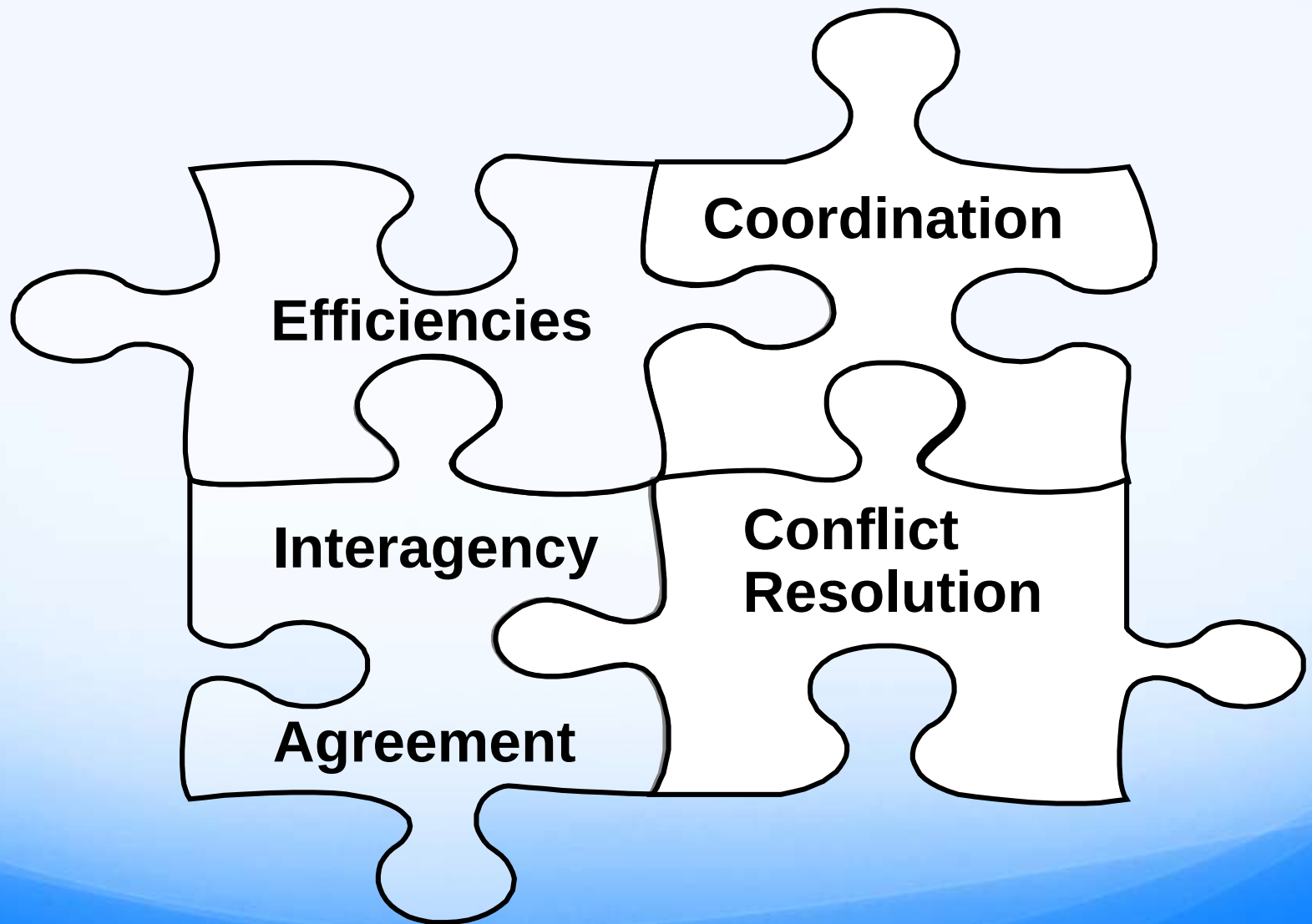


NEPA

- Title VI of Civil Rights Act of 1964
- Uniform Relocation Assistance and Real Property Acquisition Policies Act of 1970
- Americans with Disabilities Act
- Executive Order 12898 (Environmental Justice)
- Section 4(f) of USDOT Act (49 USC 303)
- Clean Air Act
- Safe Water Drinking Act
- Farmland Protection Policy Act
- Solid Waste Disposal Act
- Resource Conservation and Recovery Act of 1976
- Comprehensive Environmental Response, Compensation and Liability Act
- Emergency Planning and Community Right to Know Act of 1986
- National Historic Preservation Act
- Economic, Social and Environmental Effects of Highways
- Economic, Social and Environmental Effects of Transit
- Highway Noise Standards
- Public Hearing Requirements
- Archaeological and Historic Preservation Act
- Archaeological Resources Protection Act
- AND MORE...

NEPA Essential Elements

- Nuts and bolts of NEPA
 - Alternatives
 - Impacts
 - Mitigation
 - Public involvement
 - Interagency coordination
 - Documentation



Alternatives

Development and analysis

- Nuts and bolts of NEPA
 - Alternatives
 - Impacts
 - Mitigation
 - Public involvement
 - Interagency coordination
 - Documentation

- Reasonable alternatives
- Reasonable range
- No-build / No-action
- Avoidance / minimization

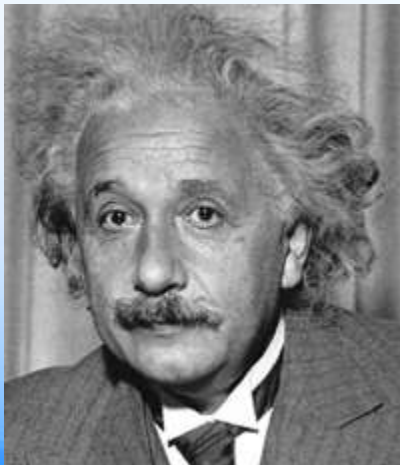
Impacts and Mitigation

- Environment?
- Impacts?
- Mitigation?

- Nuts and bolts of NEPA
 - Alternatives
 - Impacts
 - Mitigation
 - Public involvement
 - Interagency coordination
 - Documentation

The environment is
everything that
isn't me

- Albert Einstein -



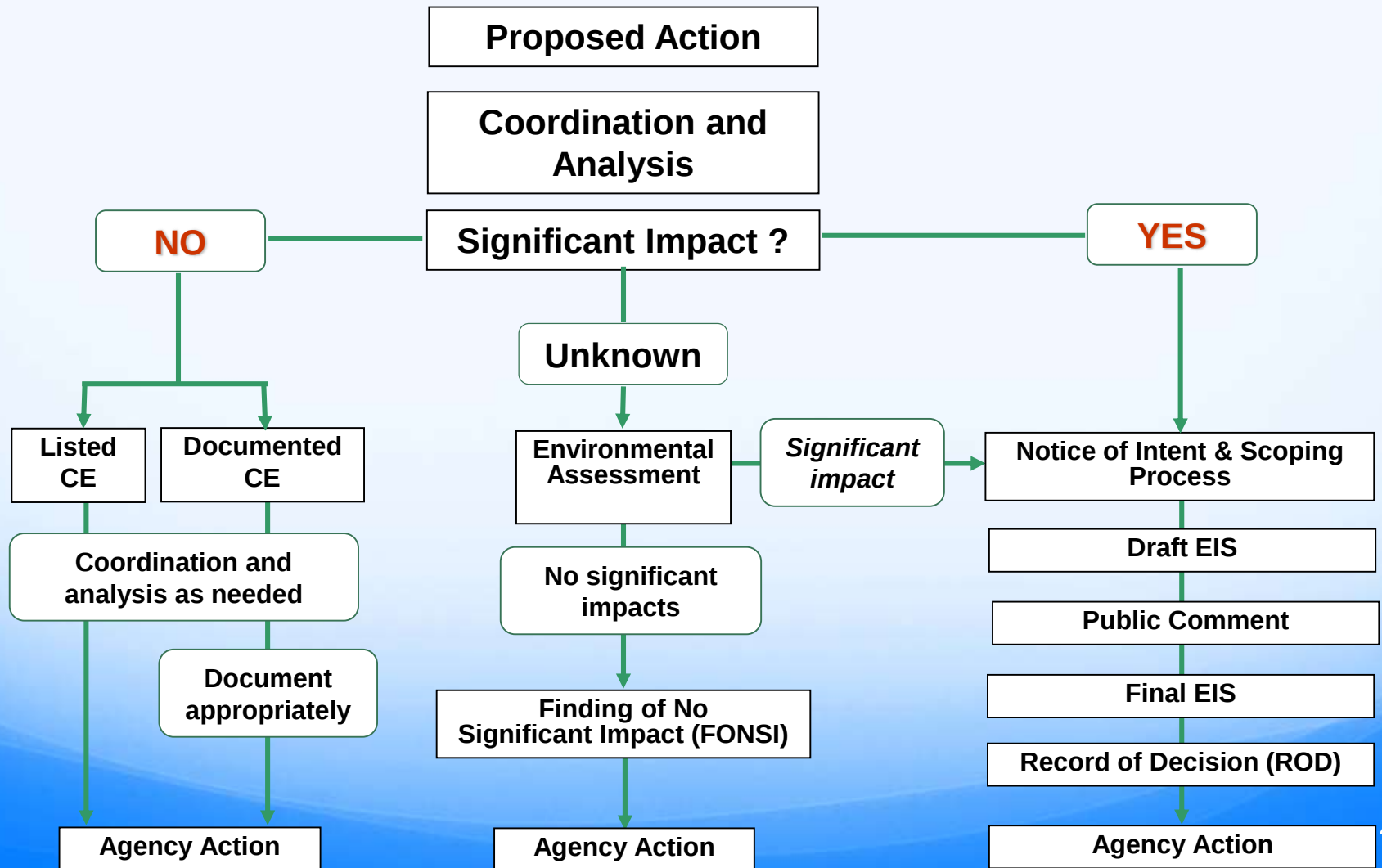
Public AND Agency Involvement

- Stakeholders
 - Who is the public? Who are stakeholders?
 - Anyone who may be affected by the outcome of the transportation project.
 - Hearings and meetings
- Nuts and bolts of NEPA
 - Alternatives
 - Impacts
 - Mitigation
 - Public involvement
 - Interagency coordination
 - Documentation

Documentation

- Evidence analysis of alternatives and impact
 - Informs decision-makers
 - Essential to involvement and coordination
 - Full and fair discussion
 - Administrative record
- Nuts and bolts of NEPA
 - Alternatives
 - Impacts
 - Mitigation
 - Public involvement
 - Interagency coordination
 - Documentation

NEPA Process Options



- An Environmental Impact Statement (EIS) is prepared for projects where it is known that the action will have a significant effect on the environment.
- An Environmental Assessment (EA) is prepared for actions in which the significance of the environmental impact is not clearly established.
 - Should environmental analysis and interagency review during the EA process find a project to have no significant impacts on the quality of the environment, a Finding of No Significant Impact (FONSI) is issued.
- Categorical Exclusions (CEs) are issued for actions that do not individually or cumulatively have a significant effect on the environment.

Environmental Streamlining

- Improve timeliness of environmental process
- Improve interagency cooperation
- Recognize limited resources – human, financial, time, etc.
- Resolve issues early
- Provide for mediation of process stumbling blocks
- Improves project management
- Fosters stewardship

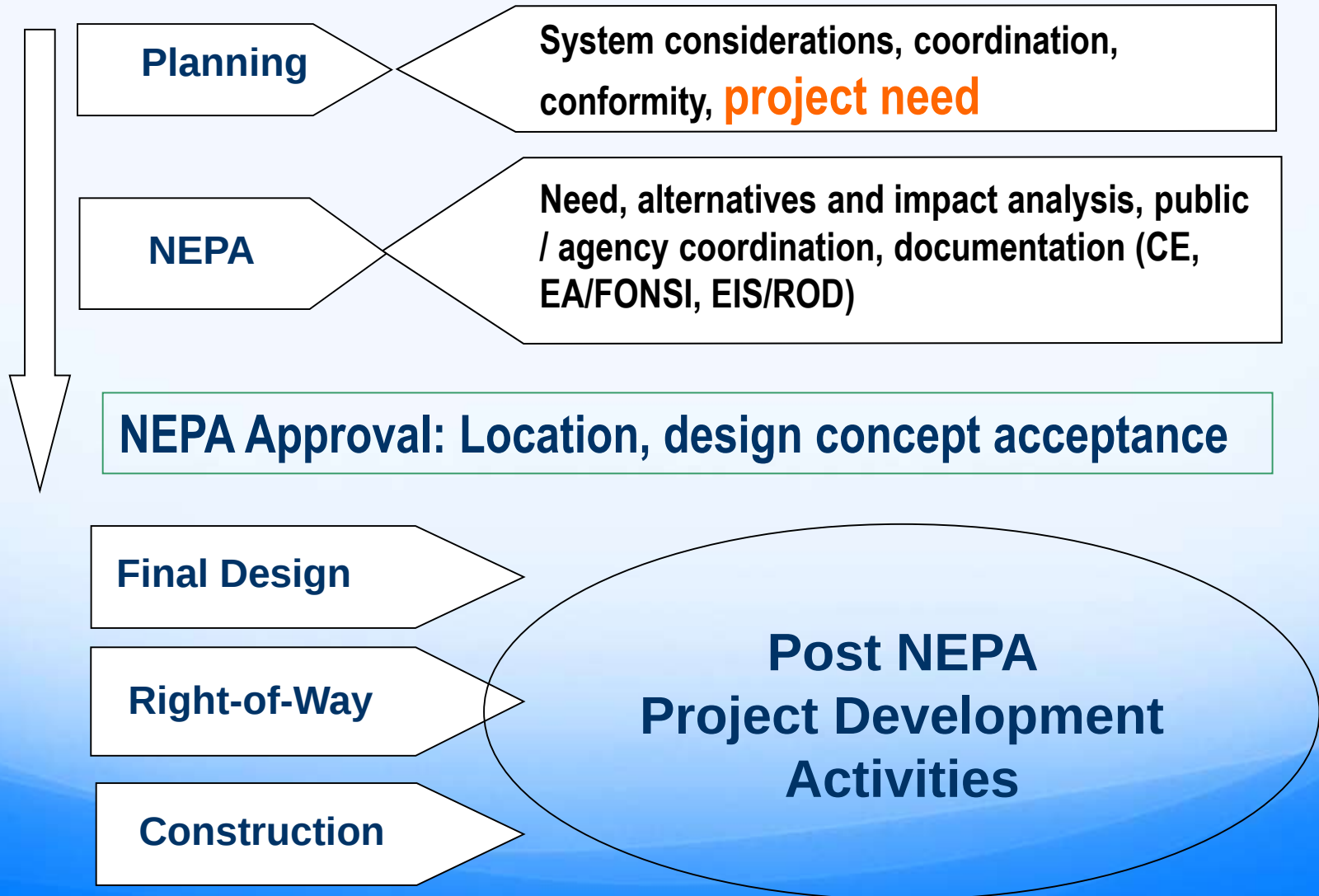
Environmental Stewardship

- Improving environmental conditions and quality of life when possible, not just complying with regulations
- Enhancing environmental protection and encouraging partnerships that promote eco-system conservation
- Addressing mobility and safety needs of the public
- Education
- Fostering new ways to manage the environment

3. Transportation Project Development under NEPA

3.1. Project Need

Project Development



Learning Objectives

- Define the role of purpose and need in project management
- Recognize the importance of purpose and need in decision-making process

Importance of Purpose and Need

- Provides critical foundation for successful decision-making
 - Establish **why** the agency is proposing to spend large amounts of taxpayers' money
- Provides basis for reasonable alternatives, evaluations and comparisons
 - Alternatives development and screening
 - Environmental analyses
- This is the “justification” of the project
 - Established reasons for moving forward with Federal action
 - Basis for no-action discussion

Examples of Need

- System linkage
 - How does it fit in the transportation system?
- Capacity and transportation demand
 - Is the capacity of the present facility inadequate for the present traffic?
 - Projected traffic? What capacity is needed? What is the level of service for existing and proposed facilities?
- Legislation
 - Is there a Federal, State, or local governmental mandate for the action?
- Social demands for economic development
 - New employment, schools, land use plans, recreation, etc.

Examples of Need

- Modal inter-relationships
 - How will the proposed facility interface with and serve to complement airports, rail and port facilities, mass transit services, etc.?
- Safety
 - Is the proposed project necessary to correct an existing or potential safety hazard?
 - Is the existing accident rate excessively high?
 - How will the proposed project improve it?
- Roadway deficiencies
 - Substandard geometrics, load limits on structures, inadequate cross-section, high maintenance costs, etc.

Documentation of Purpose and Need

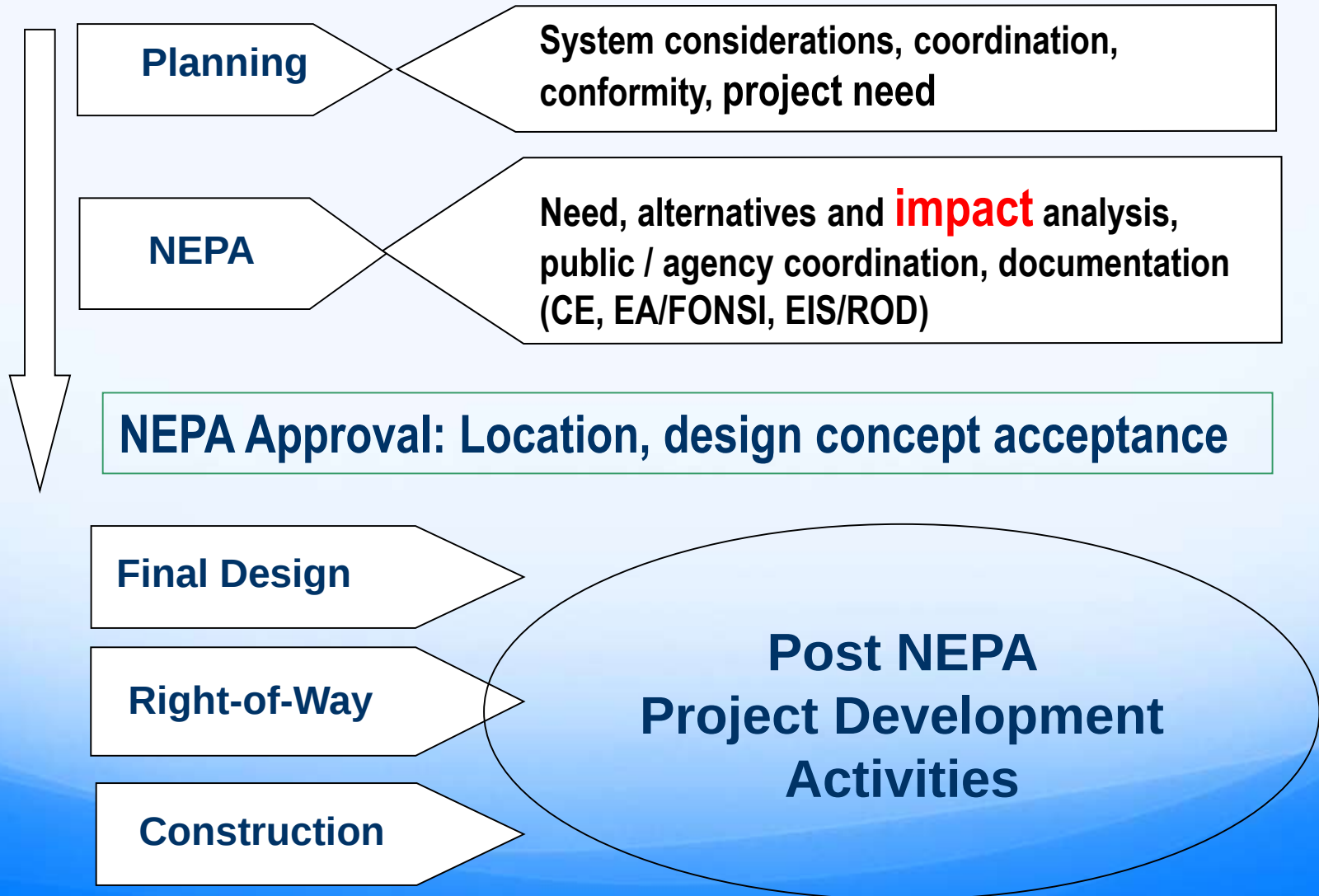
Clearly demonstrate a "need" exists

- Proposed action
- History and background
- Goals and objectives
- Be comprehensive, yet concise
- Articulate "need" in terms that are understandable to the general public
 - Also demonstrate the problems that will result if the project is not implemented.

“Need”, not “Want”

3.2. Impacts and Significance

Project Development

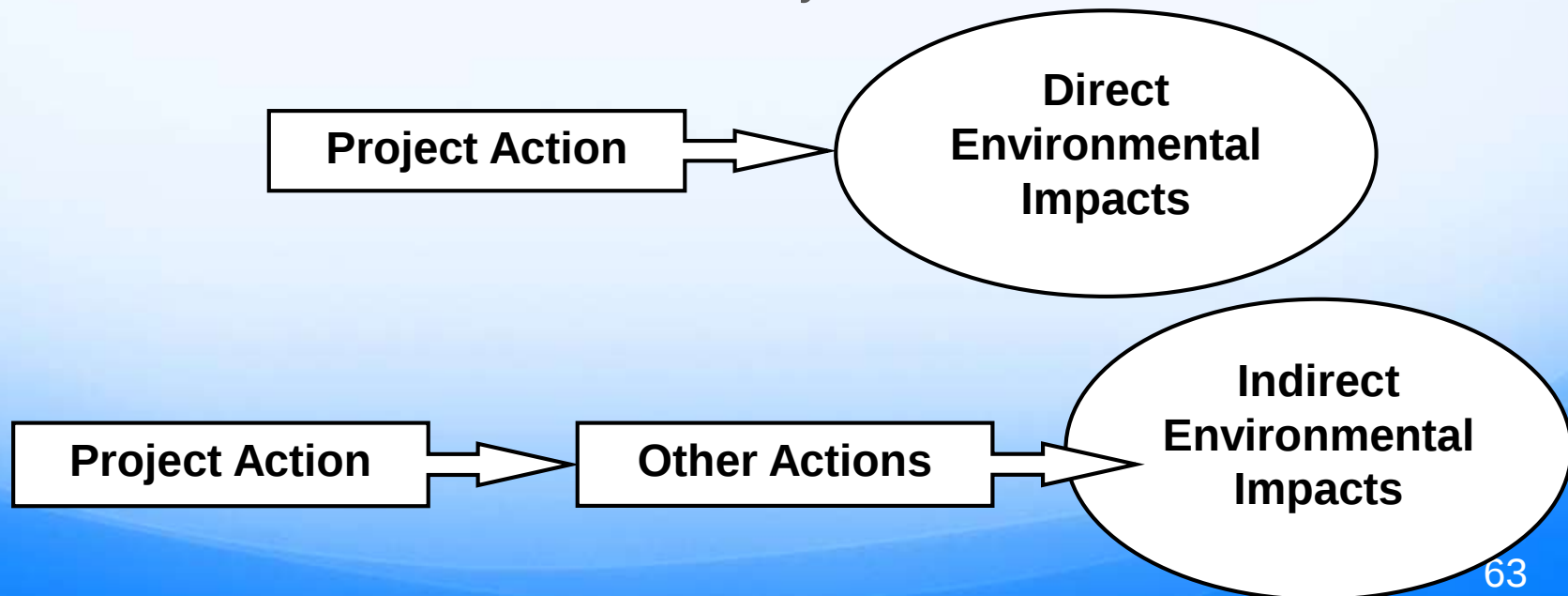


Learning Objectives

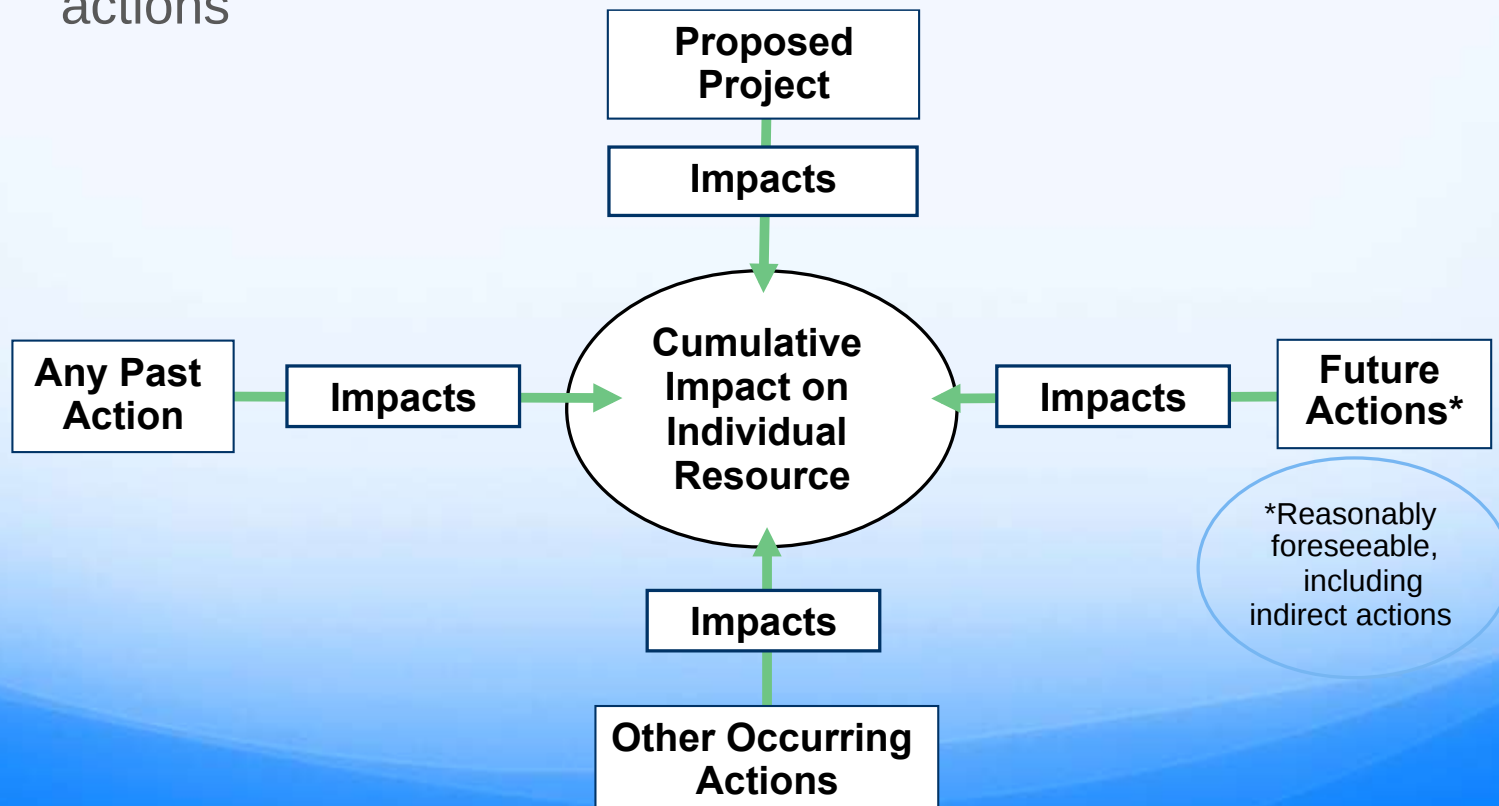
- Identify the significance of environmental impact
- Recognize the difficulty in determining significance

Types of Impacts

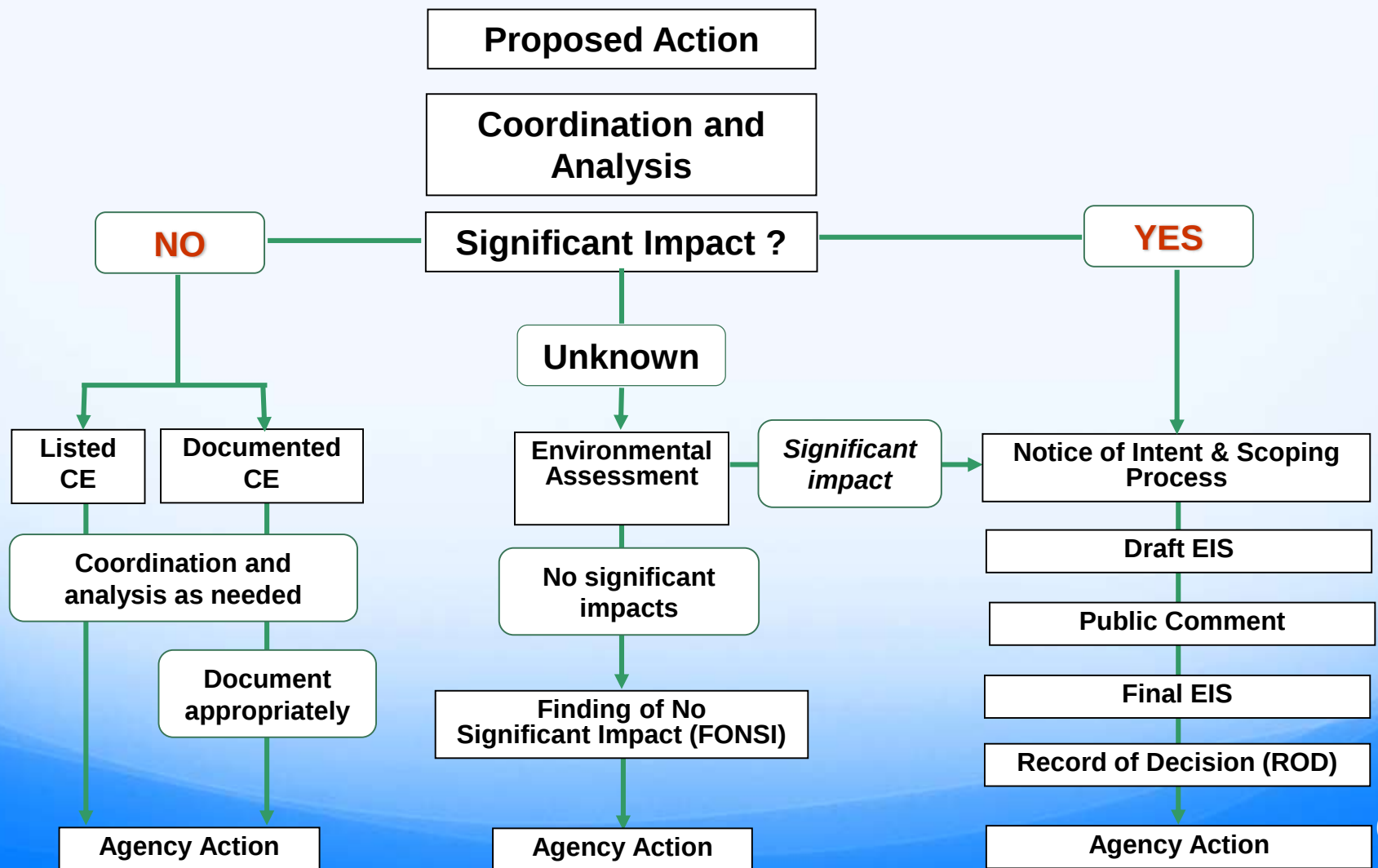
- Direct impacts
 - Caused by the action and occur at the same time and place
- Indirect (secondary) impacts
 - Caused the the action and are later in time or farther removed in distance, but are still reasonably foreseeable



- Cumulative impacts
 - Resulted from the incremental impacts of the action when added to other past, present, and reasonably foreseeable future actions

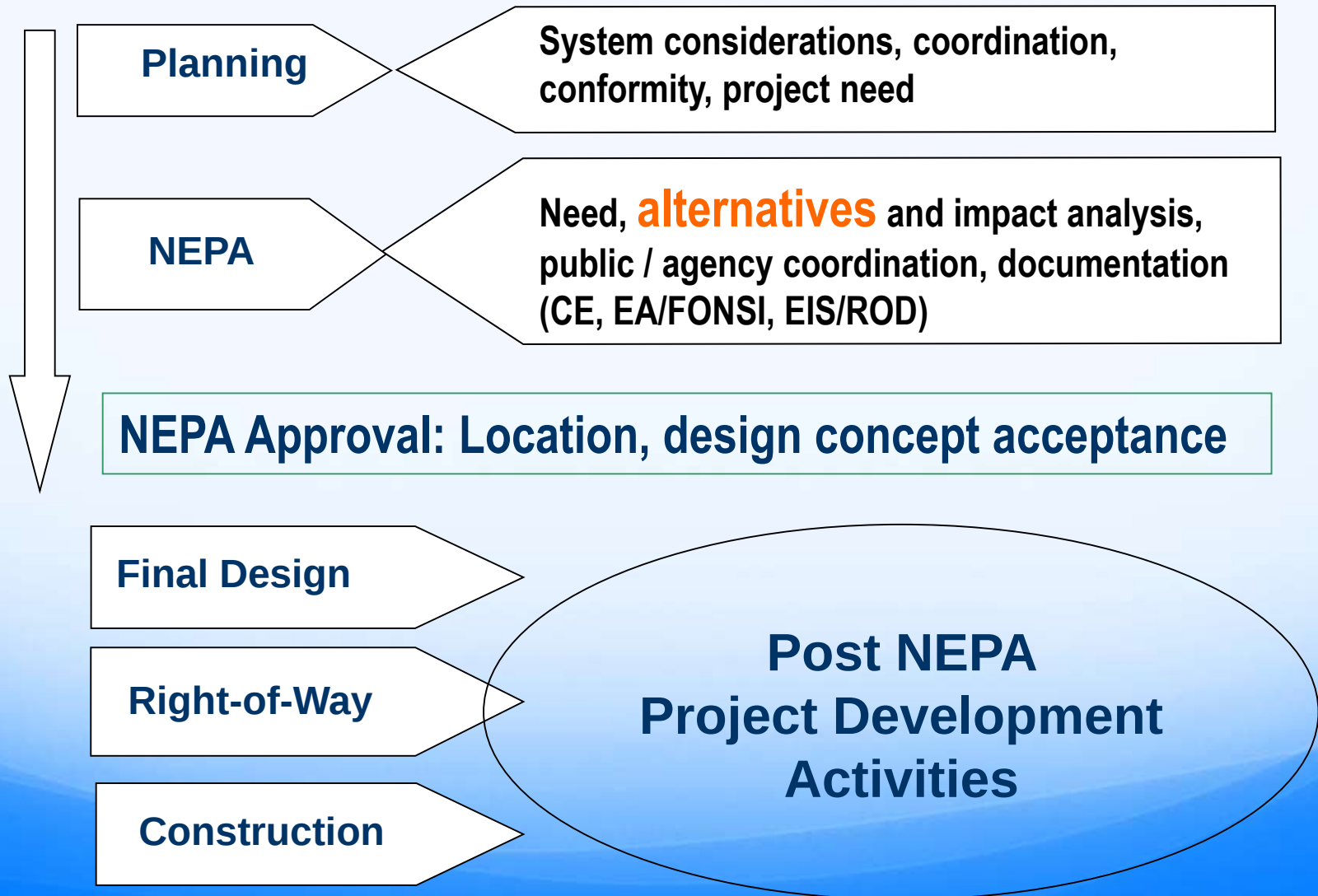


Significance of Impacts



- Important for choosing level of documentation
 - EA or EIS
- Shapes selection of documentation type
 - EA or EIS
- Requires input from various agencies and the public
- Is necessarily variable by location and project
 - Depending on context and intensity of impacts

3.3. Alternatives



Learning Objectives

- Identify screening/evaluation criteria
- Identify the benefits of identifying the criteria
- Define the types of alternatives

Alternatives

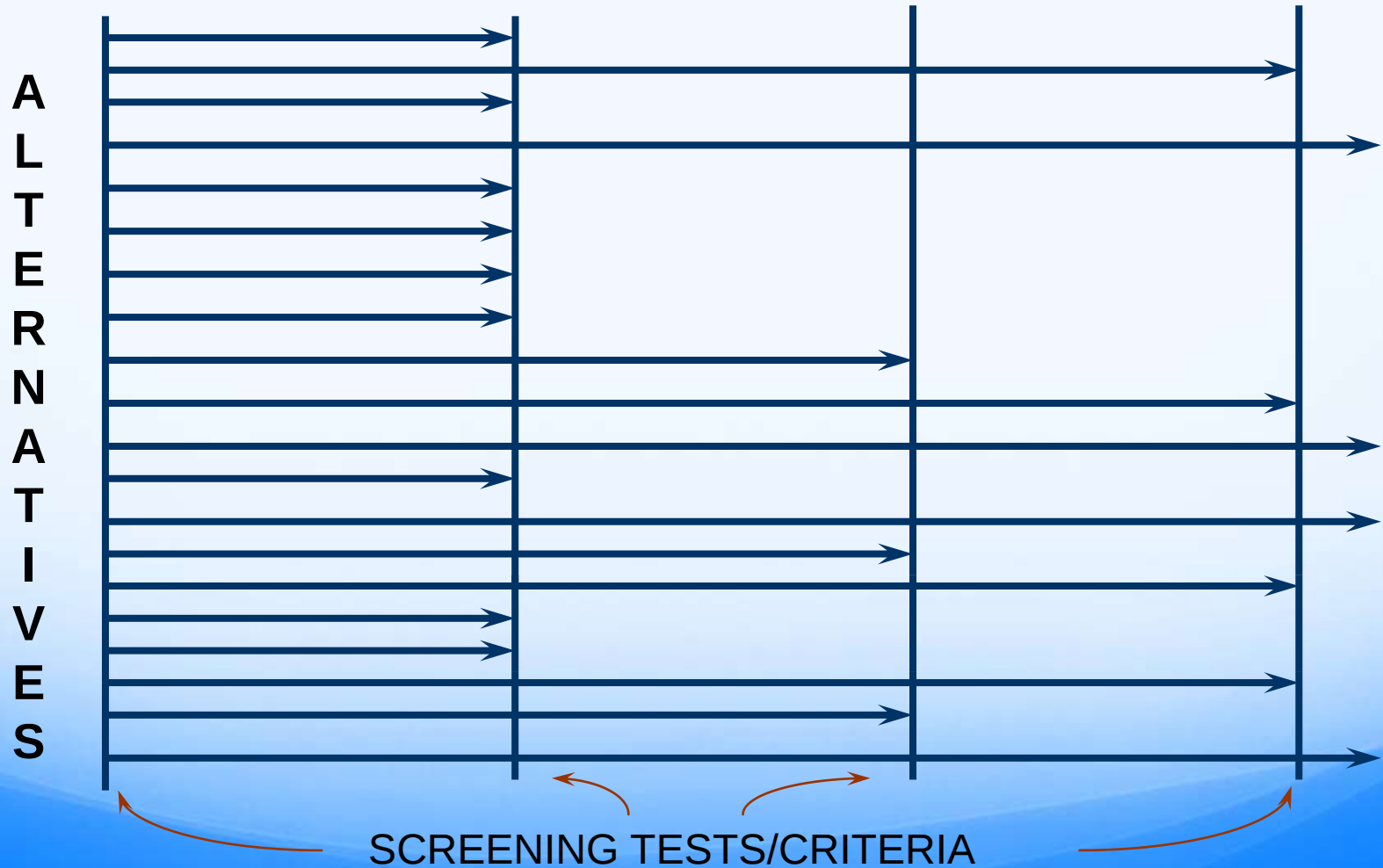
- Varies with Class of Action
- Rigorously explore and objectively evaluate in the EIS
 - ✓ Reasonable alternatives
 - ✓ Reasonable range
 - ✓ Reasonable number
- No-build / No-action
- Modal, physical, operational

Screening and Evaluation Criteria

- Purpose and Need
- Project goals
- Avoidance and minimization of environmental impact
 - ✓ Social and cultural
 - ✓ Natural
 - ✓ Physical
- Not biased, ethically and politically correct

Methods and Techniques

- Matrices, tables and graphics
- Quantitative and qualitative measures
- Level of effort commensurate with project location, number of alternatives



3.4. Mitigation

Learning Objectives

- Describe the role of mitigation in alternatives analysis and project development
- Explain the relationship between project mitigation and environmental stewardship

Mitigation Hierarchy

- Avoid
- Minimize
- Repair, rehabilitate, restore
- Preserve
- Compensate

Enhancement and Stewardship

- Congress recognizes that each person should enjoy a healthful environment and that each person has a responsibility to contribute to the preservation and enhancement of the environment
- Opportunities
 - Mitigation Banking
 - Ecosystem initiatives
 - Context Sensitive Design / Solutions
 - Conservation Partnerships

Enhancement and Stewardship

- Improving environmental conditions and quality of life when possible, not just complying with regulations
- Enhancing environmental protection and encouraging partnerships that promote eco-system conservation
- Addressing mobility and safety needs of the public
- Education
- Fostering new ways to manage the environment

Mitigation Banking

- Mitigation banking is the restoration, creation, enhancement, or preservation of a wetland, stream, or habitat conservation area which offsets expected adverse impacts to similar nearby ecosystems.
- In the United States, the federal government (under section 404 of the Clean Water Act) as well as many state and local governments, require mitigation for the disturbance or destruction of wetland, stream, or endangered wildlife habitat. Once approved by regulatory agencies the mitigation bank may sell credits to developers whose projects will impact these various ecosystems.
- Credits are the units of exchange and are defined as the ecological value associated with 1-acre (4,000 m²) of a wetland or ecosystem and the linear distance of a stream functioning at the highest possible capacity within the service area of the bank. Credits are evaluated by a Mitigation Bank Review Team (MBRT).
- The MBRT processes and permits the Mitigation Bank. They may consist of some or all of the following: U.S. Army Corps of Engineers, National Marine Fisheries Service, Environmental Protection Agency, US Fish and Wildlife Service, State Environmental Protection Divisions, Local Water Management Districts, County Environmental Departments, and Soil Conservation Service.

Context Sensitive Design (CSD)

Develop a transportation facility that:

- Fits its physical surroundings
- Preserves scenic, aesthetic, historic, and environmental resources
- Maintains safety and mobility



Mitigation Implementation

- Measures included in document must be implemented
- Implementation accomplished via stated process or plan
- Project management responsibilities include design and PS&E reviews, and consecutive inspections
 - PS&E: plans, specifications & estimates

Say what you mean and do what you said

Mitigation Documentation

- Categorical Exclusion (CE)
- Environmental Assessment (EA)
- Finding of No Significant Impact (FONSI)
- Draft of Environmental Impact Statement (EIS) and Final EIS
- Record of Decision (ROD)

3.5. Public Involvement

Learning Objectives

- Identify stakeholders
- Identify the elements of the public involvement plan
- List public involvement techniques

FHWA Regulations

- ... require “early and continuous opportunities...for the public to be involved in the identification of social, economic, and environmental impacts,” with requirements for public hearings

FHWA Policy

Actively involve the public in a process that is:

- Open
- Cooperative
- Collaborative
- Continuing

Public, Stakeholders, Partners, and Customers

- Interested public and residents
- Federal, State and local government agencies
- Traditionally under-served and under-represented communities
- Tribes
- Non-government organizations

Environmental Justice (EJ) Principles

- To avoid, minimize, or mitigate disproportionately high and adverse human health and environmental effects, including social and economic effects, on minority populations and low-income populations.
- To ensure the full and fair participation by all potentially affected communities in the transportation decision-making process.
- To prevent the denial of, reduction in, or significant delay in the receipt of benefits by minority and low-income populations.

Title VI of the Civil Rights Act prohibits discrimination on the basis of race, color, or national origin. Executive Order 12898 and the DOT and FHWA Orders on Environmental Justice address persons belonging to any of the following groups:

- Black, Hispanic, Asian, American Indian and Alaskan Native
- (added under EJ) Low-Income - a person whose household income (or in the case of a community or group, whose median household income) is at or below the U.S. Department of Health and Human Services poverty guidelines.

Added to the previous standard delineations of race/ethnicity was the category of:

- Native Hawaiian or Other Pacific Islander

Public Involvement Techniques

- Committees and task forces
- Public meetings and hearings
- Stakeholder interviews
- Newsletters
- Surveys
- Internet

Public Involvement Plan

- Goals and Objectives
- Stakeholders and Public Groups
- Outreach Techniques
- Schedule
- Evaluation and Revision

Plan Evaluation

- Involvement process supported the planning/decision-making process?
- All the “publics” been involved and heard?
- Citizens feel a “buy-in” to the decisions?
- A “critical mass” of interest created?
- Meetings useful and informative?
- Getting relevant information from the public?
- Getting media coverage?
- Input shaping the findings?
- Participants “see their input” in the process?

3.6. Inter-agency Coordination

Learning Objectives

- Identify the roles and responsibilities of agencies (lead and cooperating)
- Describe the benefits of interagency coordination relative to environmental streamlining

Interagency Coordination

- Early and continuous participation in the NEPA process
- Special expertise and information
- Agreements and concurrence
- Consultation and permitting
- Adoption of NEPA documents

Roles and Responsibilities of Agencies

- Cooperative decision-making in NEPA
- Contribute at key stages
- Identify and resolve important issues
- Input into project goals
- Assist in alternatives development
- Identify solutions to avoid and minimize impacts
- Reach consensus and agreement

Benefits

- Leads to effective transportation decisions
- Reduces process time and costs
- Builds trust and better working relationships
- Builds broad-based on-going support
- Results in best overall public interest decision making
- Protection of resources
- What about Challenges?

Lead Agency

- Sponsoring agencies
- Requests other agency participation
- Provides project information
- Conducts field reviews
- Holds scoping meetings
- Provides pre-draft and pre-final documents
- Ensures documentation is adequate for project and related decisions

Cooperating Agencies

- Other Federal agencies with jurisdiction by law or special expertise or interest
- State and local agencies
- Tribes
 - ✓ Government to Government
 - ✓ Federally recognized
 - ✓ On / off reservation

Cooperating Agencies

- Participate early in the NEPA process
- Participate in the Scoping process
- Develop information and analysis
- Provide staff support
- Attend joint field reviews
- Participate in public involvement activities
- Review draft environmental documents and provide comments

Potential Cooperating Agencies

USCOE

(Section 10/404 permits)



USFWS

(fish and wildlife habitat, stream relocations, wetlands)



NPS

(Section 6(f))



Coast Guard

(Section 9 permits)

ACHP

(historic and



EPA

(reservoirs, air quality, sole source aquifers)



State Resource Agency



City, County Agency

Managing Conflict

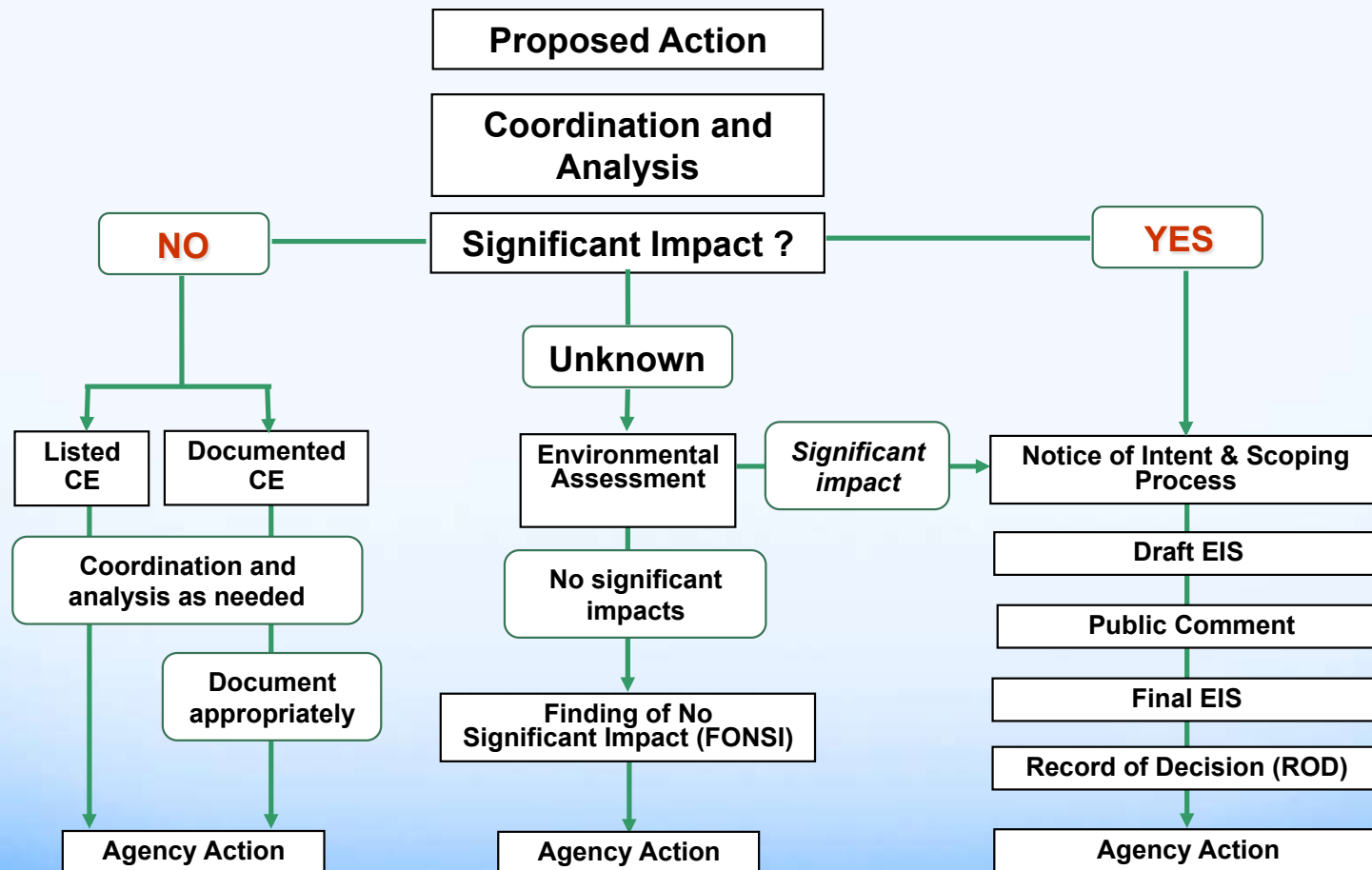
- Conflict Resolution
- Alternative dispute resolution (ADR)
- Interest based vs. position based negotiation
- Building trust
- Credibility
- Keep your word

3.7. Documentation

Learning Objectives

- Identify the NEPA process options and class of action criteria
- List principles of good documentation

NEPA Process Option (Classes of Action)



3 Classes of Action

- Categorical Exclusion (CE)
- Environmental Assessment (EA)
- Environmental Impact Statement (EIS)

Considerations and Other Factors

- Is the proposal highly complex?
- Is public or agency interest high?
- Is the project controversial?
- Are conditions stable or highly variable?
- Politics
- Timing
- Budget

Potential Consequences

- Legal challenges
- Unmet public and agency expectations
- Project schedule delays
- Budget overruns

Principles of Good Documentation

- Write to express, not to impress
- Keep it simple; use conversational tone
- Be analytical, not encyclopedic
- Follow CEQ suggested page limits
- Reference technical report and appendices
- Only briefly discuss non-important issues

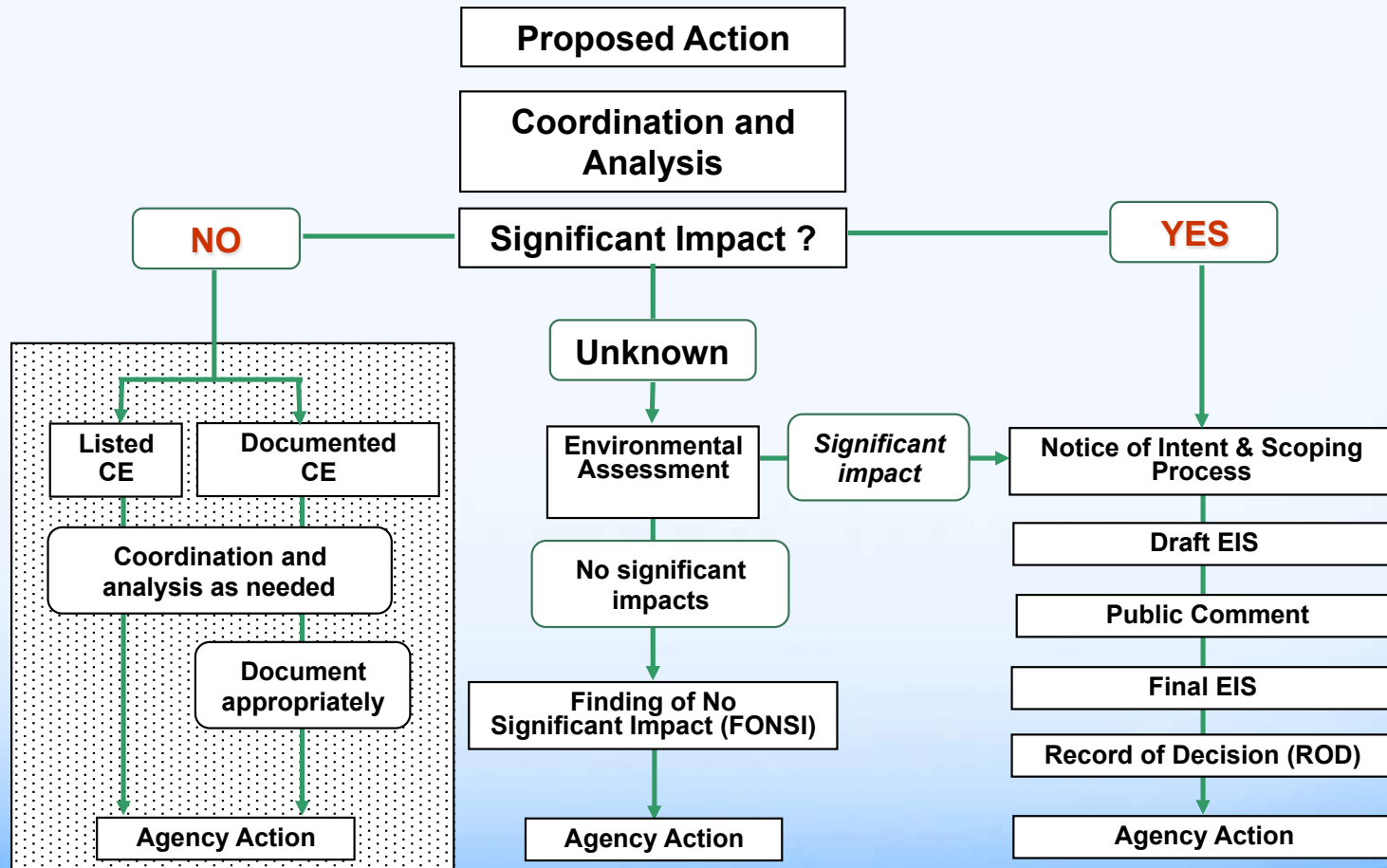
- Tables
 - Summarize data
 - Compare information
 - Minimize text
 - Use defined terms
- Graphics
 - Images and photos
 - Applicability
 - Content
 - Use of color/shading
 - Detail
 - Accuracy
 - Use of base maps

A picture is worth a
thousand words

3.7.1. Categorical Exclusion

- Define Categorical Exclusion (CE)
- Distinguish between a listed CE and a documented CE

Classes of Action



CE

- According to CEQ,
 - a category of actions which do not individually or cumulatively have a significant effect on the human environment and which have been found to have no such effect in procedures adopted by a Federal agency in adoption of these procedures.
- According to FHWA,
 - actions which do not induce significant impacts to planned growth or land use for the area; do not require the relocation of significant numbers of people; do not have a significant impact on any natural, cultural, recreational, historic or other resource; do not involve significant air, noise, or water quality impacts; do not have significant impacts on travel patterns; or do not otherwise, either individually or cumulatively, have any significant environmental impacts.
- Neither an environmental assessment (EA) nor an environmental impact statement (EIS) is required.

In Simpler Words,

- Actions that do not individually or cumulatively have a significant environmental effect are excluded from the requirement to prepare an EA or EIS.
- A specific list of CEs normally not requiring NEPA documentation is set forth in 23CFR §771.117(c).
- When appropriately documented, additional projects may also qualify as CEs pursuant to 23CFR § 771.117(d).

Documentation and Approval

- C List [23 CFR 771.117(c)]
 - List of actions that meet the criteria for CEs
 - Normally requires no further NEPA approvals
- a list of 21 ... categories are non-construction actions (e.g., planning, grants for training and research programs) or limited construction activities (e.g., pedestrian facilities, landscaping, fencing).
- These actions are automatically classified as CEs, and except where unusual circumstances are brought to FHWA's attention, do not require approval or documentation by FHWA. However, other environmental laws may still apply.
- For example, installation of traffic signals in a historic district may require compliance, or a proposed noise barrier which would use land protected would require preparation of an evaluation (23 CFR 771.135(i)).

- D List [23 CFR 771.117(d)]
 - lists examples of 12 actions ... However, it is not limited to these 12 examples. Other actions with a similar scope of work may qualify as CEs.
 - Additional actions which meet the criteria for a CE may be designated as CEs only after FHWA approval
 - Individual project approval required based on submitted documentation

C List

D List →

(2) Approval of utility installations along or across a transportation facility.

(3) Construction of bicycle and pedestrian lanes, paths, and facilities.

(4) Activities included in the State's *highway safety plan* under 23 U.S.C. 402.

(5) Transfer of Federal lands pursuant to 23 U.S.C. 107(d) and/or 23 U.S.C. 317 when the land transfer is in support of an action that is not otherwise subject to FHWA review under NEPA.

(6) The installation of noise barriers or alterations to existing publicly owned buildings to provide for noise reduction.

(7) Landscaping.

(8) Installation of fencing, signs, pavement markings, small passenger shelters, traffic signals, and railroad warning devices where no substantial land acquisition or traffic disruption will occur.

(1) Modernization of a highway by resurfacing, restoration, rehabilitation, reconstruction, adding shoulders, or adding auxiliary lanes (e.g., parking, weaving, turning, climbing).

(2) Highway safety or traffic operations improvement projects including the installation of ramp metering control devices and lighting.

(3) Bridge rehabilitation, reconstruction or replacement or the construction of grade separation to replace existing at-grade railroad crossings.

(4) Transportation corridor fringe parking facilities.

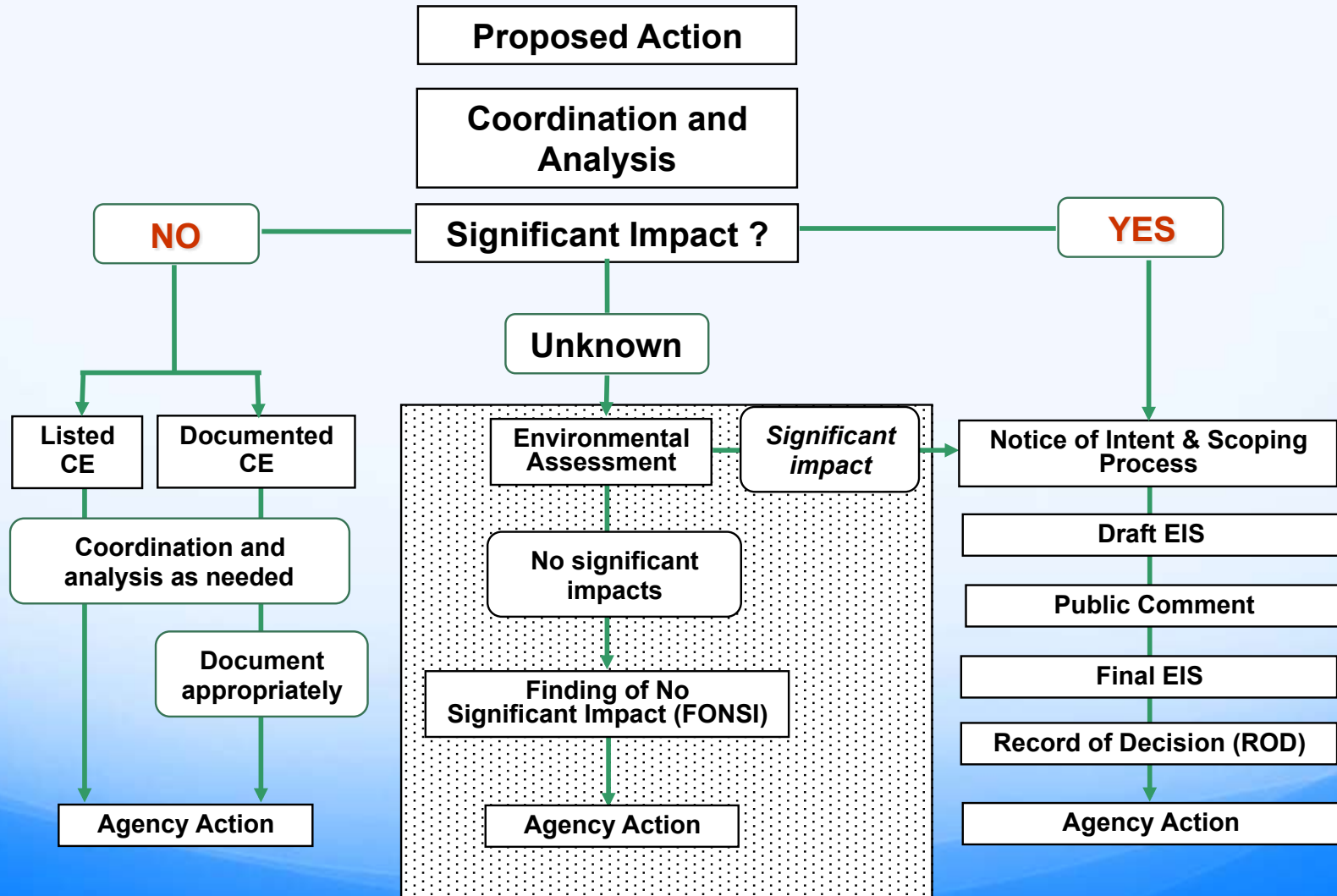
(5) Construction of new truck weigh stations or rest areas.

(6) Approvals for disposal of excess right-of-way or for joint or limited use of right-of-way, where the proposed use does not have significant adverse impacts.

(7) Approvals for changes in access control.

3.7.2. Environmental Assessment

Classes of Action



Learning Objectives

- Identify the purpose and intent of Environmental Assessments (EAs)
- List documentation requirements of EA
- Define Finding of No Significant Impact (FONSI)

EA

- Original intent for EAs was for concise documentation and to be a tool for EIS determination.
- Unfortunately, EAs have become a thing itself and a way for some to do early mitigation and avoid “significant” impacts and EIS.
- EAs have become large volumes and that isn’t meeting the intent.

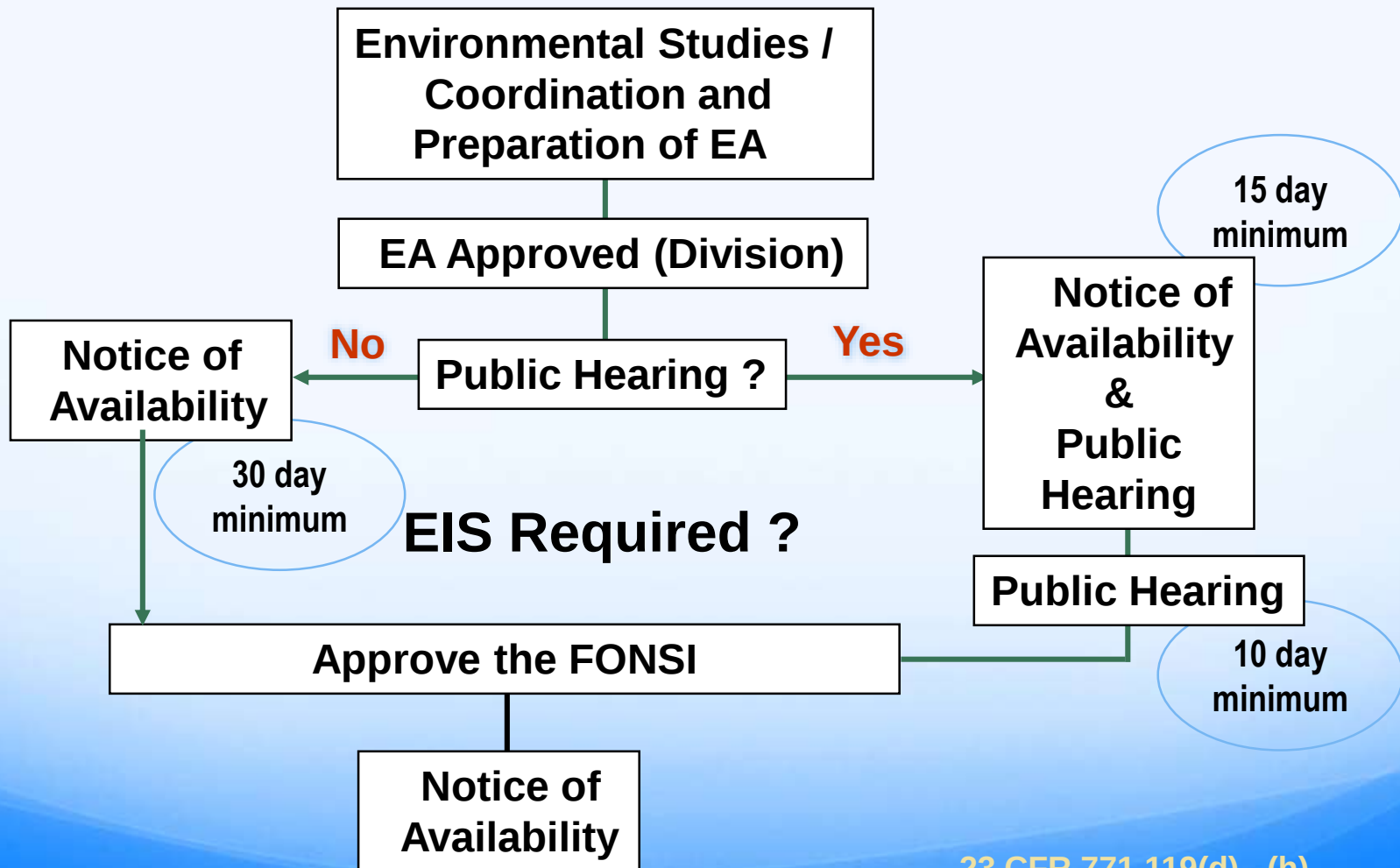
EA

- According to FHWA,
 - The primary purpose of an EA is to help the FHWA decide whether or not an EIS is needed. Therefore, the EA should address only those resources or features which the FHWA decide will have a likelihood for being significantly impacted.
 - The EA should be a concise document and should not contain long descriptions or detailed information which may have been gathered or analyses which may have been conducted for the proposed action.
 - Although the regulations do not set page limits, CEQ recommends that the length of EAs usually be less than 15 pages.
 - To minimize volume, the EA should use good quality maps and exhibits and incorporate by reference and summarize background data and technical analyses to support the concise discussions of the alternatives and their impacts.

EA

- A document that is prepared for an action where the significance of the social, economic, and environmental impacts are not clearly established.
- Concise public document
- Briefly provide evidence and analysis
- Include brief discussions of ...
- Not contain long descriptions or detailed data
- CEQ suggested page limits
- Not mini EISs

EA / FONSI Process



EA Suggested Format

- Cover Sheet
- Purpose and Need
- Alternatives Considered
- Impacts
- Mitigation
- Comments and Coordination
- Appendices (if any)
- Section 4(f) Evaluation (if any)
(<http://www.environment.fhwa.dot.gov/4f/4feval.asp>)
- Other Compliance Information

Section 4(f)

- Section 4(f) states that land from a publicly owned park, recreation area, wildlife or waterfowl refuge, or land of a historic site can be used for a transportation project only if:
 - There is no feasible and prudent alternatives to the use of these resources, and
 - All possible planning has been taken to minimize harm to the resource.
- The Section 4(f) evaluation should consider the net impact of all alternatives, including the "no-build" alternative, on the Section 4(f) property and surrounding areas. Net impact to the resource is a function of the:
 - Size of the Section 4(f) resource used
 - Location of the Section 4(f) resource used (relative to the entire property)
 - Severity of the usage
 - Function of the portion of the Section 4(f) resource used

- **Documentation Needs for a Section 4(f) Evaluation**

- Determination of applicability or non-applicability made by the FHWA Division Office. The Division Office states whether Section 4(f) does or does not apply to a particular property and why.
- Coordination efforts and results:
 - Significance of the property
 - Primary purpose of the land
 - Proposed transportation use
 - Mitigation and minimization of harm
- Avoidance alternatives analysis.
- Measures to minimize harm.

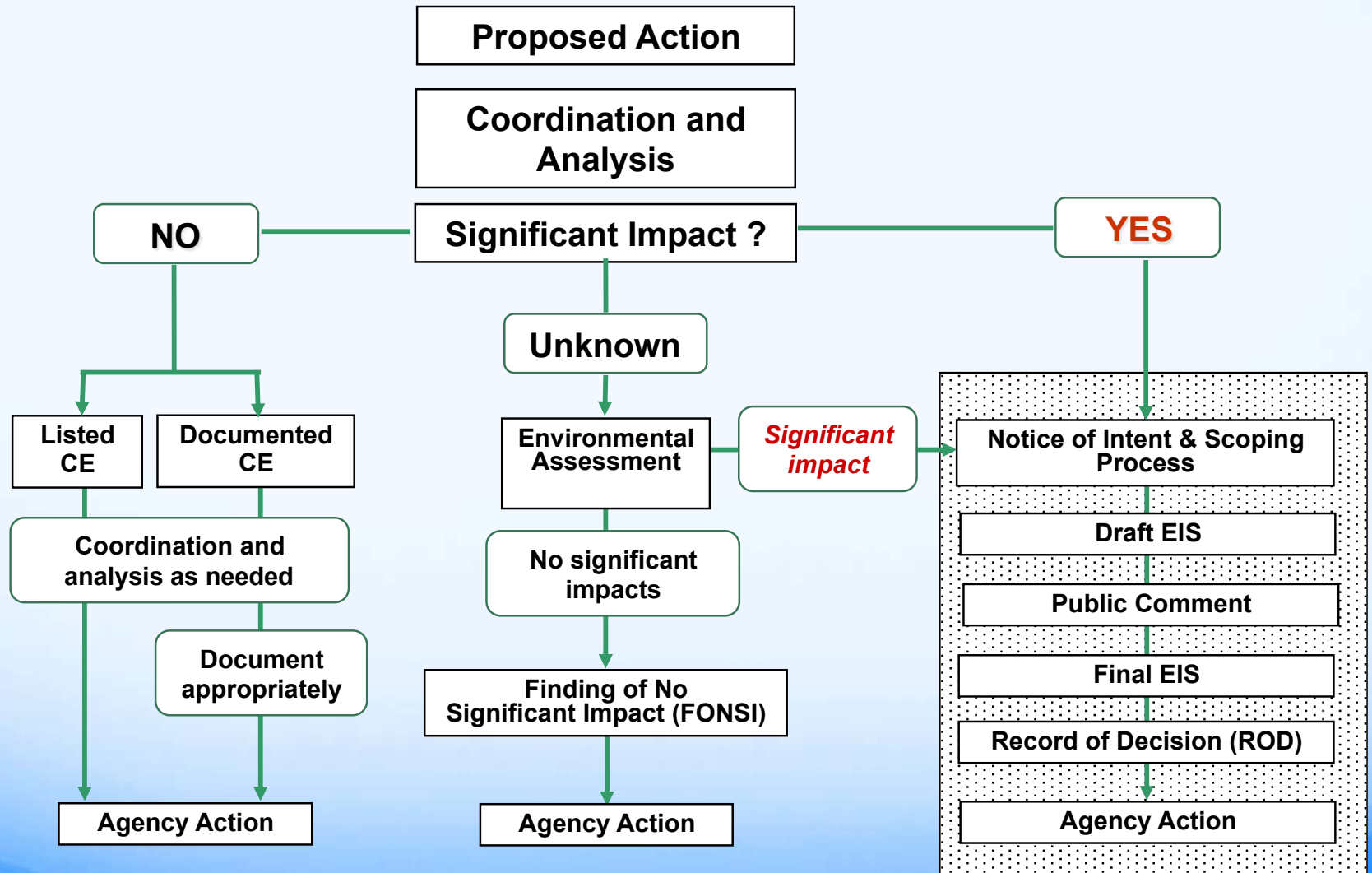
- **Section 4(f) Evaluation Format**

- Description of the project, including a concise statement of the project purpose and need. When a Section 4(f) evaluation is being done as part of an Environmental Impact Statement (EIS) or Environmental Assessment (EA), the corresponding section of the NEPA document can be referenced.
- Description of proposed actions.
- Description of the Section 4(f) resource.
- Description of the alternatives, including avoidance alternatives.
- Description of impacts.
- Discussion of mitigation measures.
- Discussion of coordination activities.

FONSI

- A document which briefly presents why an action does not have a significant impact
- It must include and reference the environmental assessment
 - Includes the EA and also mitigation commitments and decision or agreements that led to the FONSI.
- FONSI distribution
 - Approved (signed) by FHWA Division
 - Need NOT be circulated
 - Notice of availability
 - Sent to affected agencies
 - Sent to Statewide clearinghouse (EO 12372)
 - published in local newspaper (recommended)
 - Available upon request by the public

3.7.3. Environmental Impact Assessment

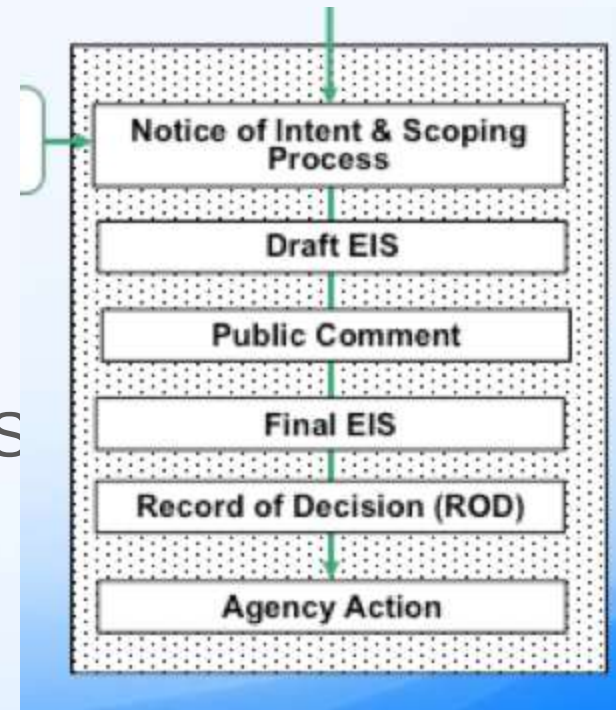


Learning Objectives

- Identify the purpose and intent of an EIS
- List documentation requirements of an EIS

Notice of Intent (NOI)

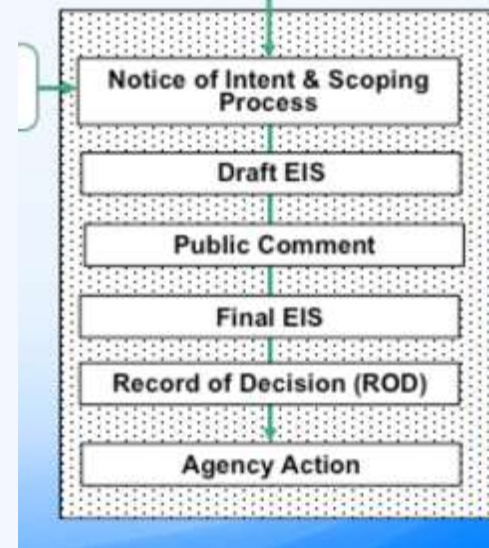
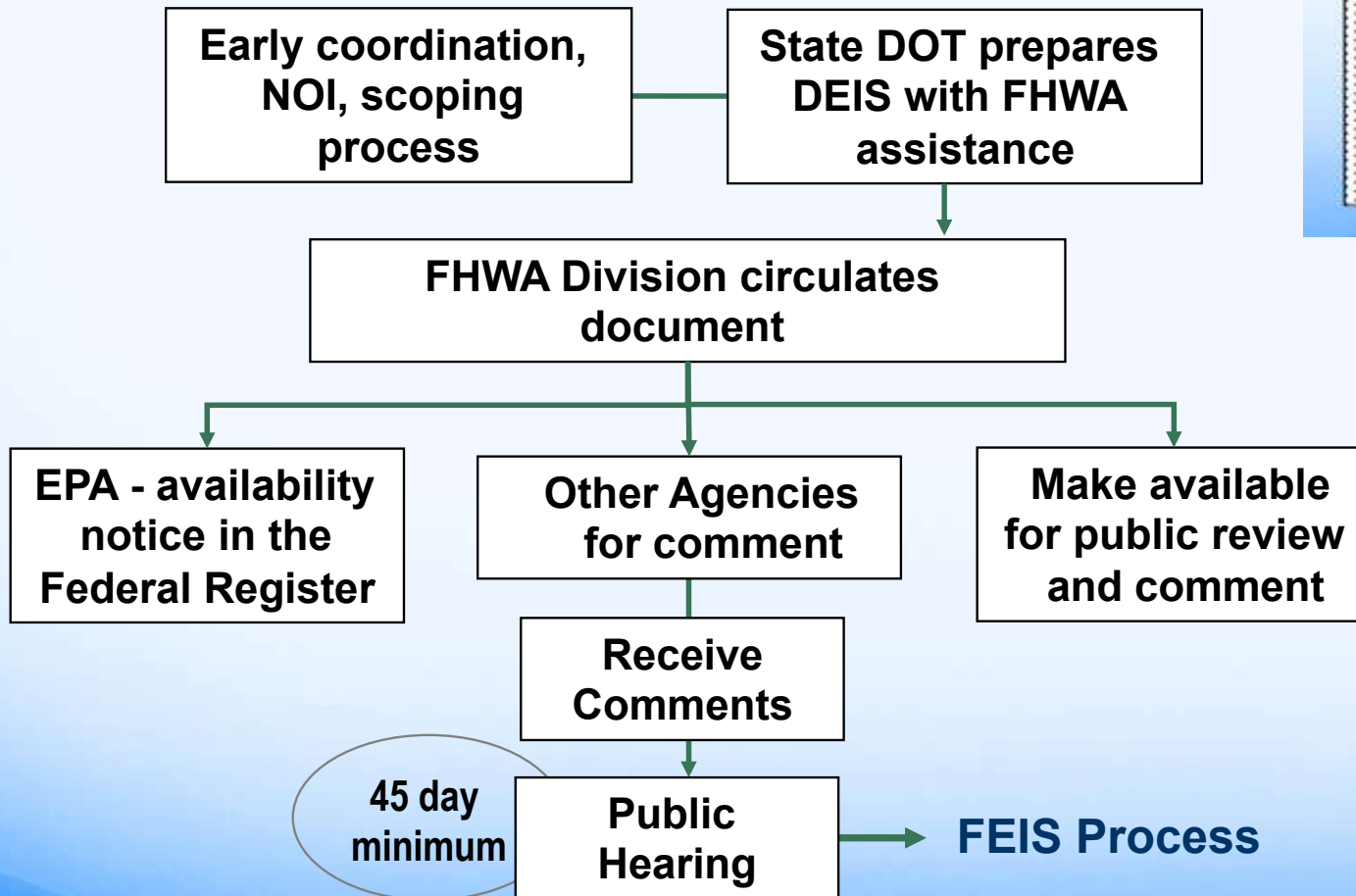
- Timing – as early as EIS is determined
- NOI submitted to FHWA for publication in the Federal Register
- Advises Federal agencies that an EIS will be prepared
- Content
 - Proposed action
 - Alternatives
 - Scoping process



Scoping

- Simply put: What is the scope of the project?
- This is a requirement!
- Scoping is often thought of as only an EIS step, not with other types of documents.
- Scoping describes the process and the alternatives if they are known.
- The NOI is done before scoping. The scoping meeting is announced in the Federal Register as part of the NOI, but think how many read the Federal Register. Therefore, consider other means of announcing scoping.

DEIS



EIS Format

1. Cover Sheet *
2. Summary *
3. Table of Contents *
4. Purpose and Need
5. Alternatives
6. Affected Environment
7. Environmental Consequences
8. List of Preparers *
9. EIS Distribution *
10. Index *
11. Comments and Coordination
12. Appendices

EIS Summary

- Description of proposed action
- Other actions and proposals in the area
- Reasonable alternatives
- Major environmental impacts
- Areas of controversy
- Unresolved issues if any
- Other federal actions
 - (404 permit, 106 agreement, etc.)

EIS Purpose and Need

- Clearly demonstrate a "need" exists
- Proposed action
- History and background
- Goals and objectives
- Be comprehensive, yet concise
- Articulate "need" in terms understandable to the general public

EIS Range of Alternatives

- No-action or No-build
- Transportation System Management (TSM) Alternatives
- Transit (especially in urban areas) Alternatives
- Build Alternatives
 - Representative and manageable number of highway alternatives
 - Improvement of existing
 - New location
 - Potentially multimodal

EIS Affected Environment

- Existing setting:
 - Social, economic, natural and manmade environment
- Environmentally sensitive features
- Use graphics and photographs
- Include area planning process with maps

EIS Environmental Consequences

- Relocation
- Noise, air, water
- Land use
- Wildlife
- Economic
- Social
- Section 4(f)
- Historic properties
- Construction related
- Wetlands and Floodplains
- Farmlands

EIS List of Preparers

- FHWA, state, consultant, or other personnel who made a substantial contribution to preparation of EIS
- Qualifications, including education background and/or experience
- Areas of EIS responsibility for each preparer
- FHWA officials responsible for review

EIS Comments and Coordination

- FHWA requirement - FHWA sets this section, not in the CEQ format
- Document early coordination process, including scoping
- Meetings with groups, individuals and agencies
- Include key issues and pertinent information received from public and agencies

EPA's §309 Review

- Section 309, which authorizes the EPA to review certain proposed actions of other federal agencies in accordance with the NEPA and to make those reviews public.
- If the proposing agency (the "lead" agency) does not make sufficient revisions and the project remains environmentally unsatisfactory, EPA may refer the matter to the President's Council on Environmental Quality (CEQ) for mediation.

EPA's EIS Rating System

- Rating environmental impacts
 - LO--lack of objections
 - EC--environmental concerns
 - EO--environmental objections
 - EU--environmental unsatisfactory
- Rating adequacy of the impact statement
 - 1--adequate
 - 2--insufficient information
 - 3--inadequate
- Adverse ratings (EU & 3) require Headquarters approval

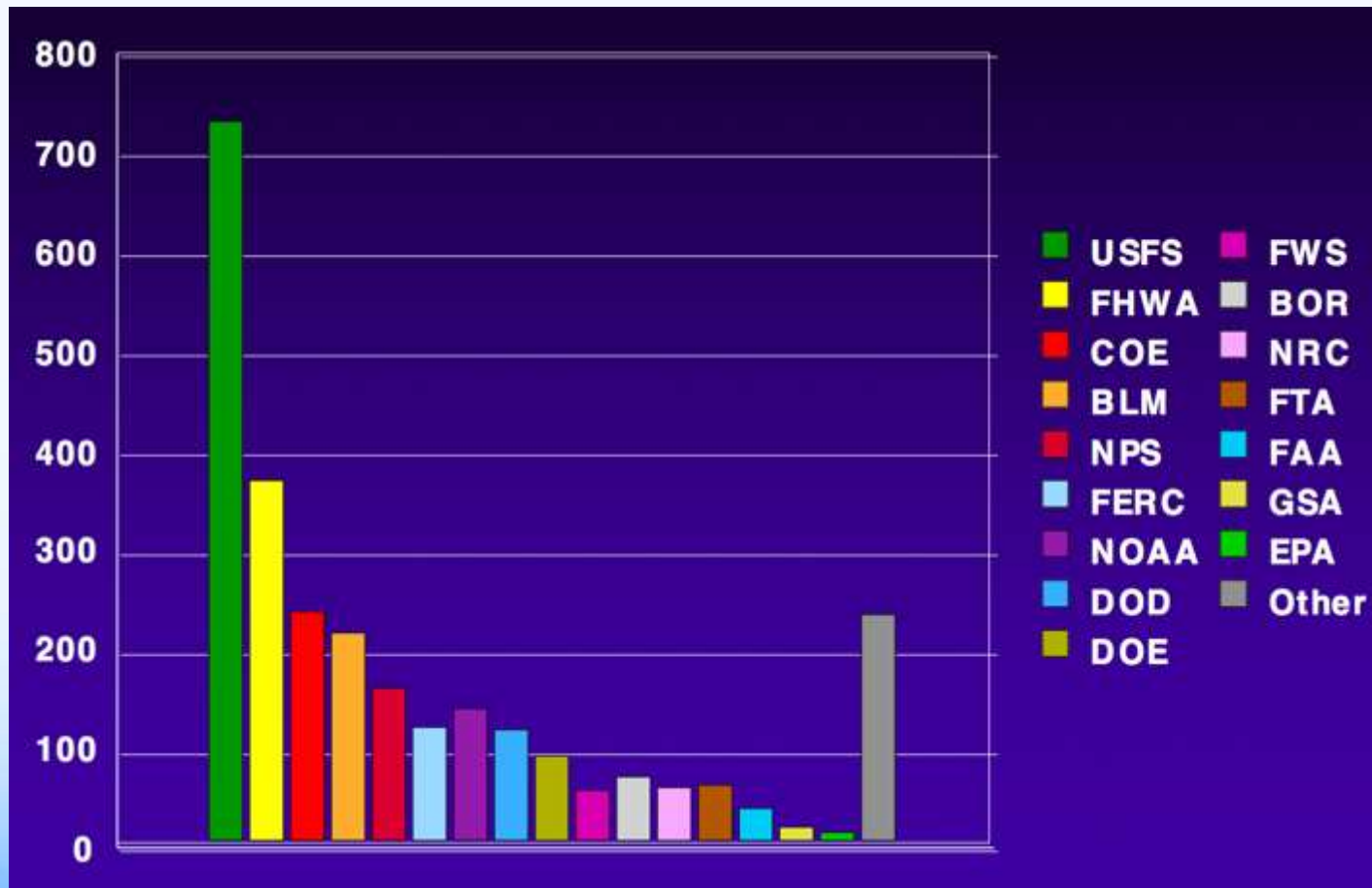
Filing EISs

- EISs must be distributed for public review before filing with EPA.
- EPA publishes notices of availability (NOAs) for EISs weekly in the Federal Register; notices appear on the Friday following the week of filing.
- EPA NOAs start the comment (DEISs) and wait (FEISs) periods.
- EPA can reduce prescribed comment/wait periods “upon a showing by the lead agency of compelling reasons of national policy” (40 CFR 1506.10[d]).

EISs Issued



EISs Filed by Agencies (2004-2008)



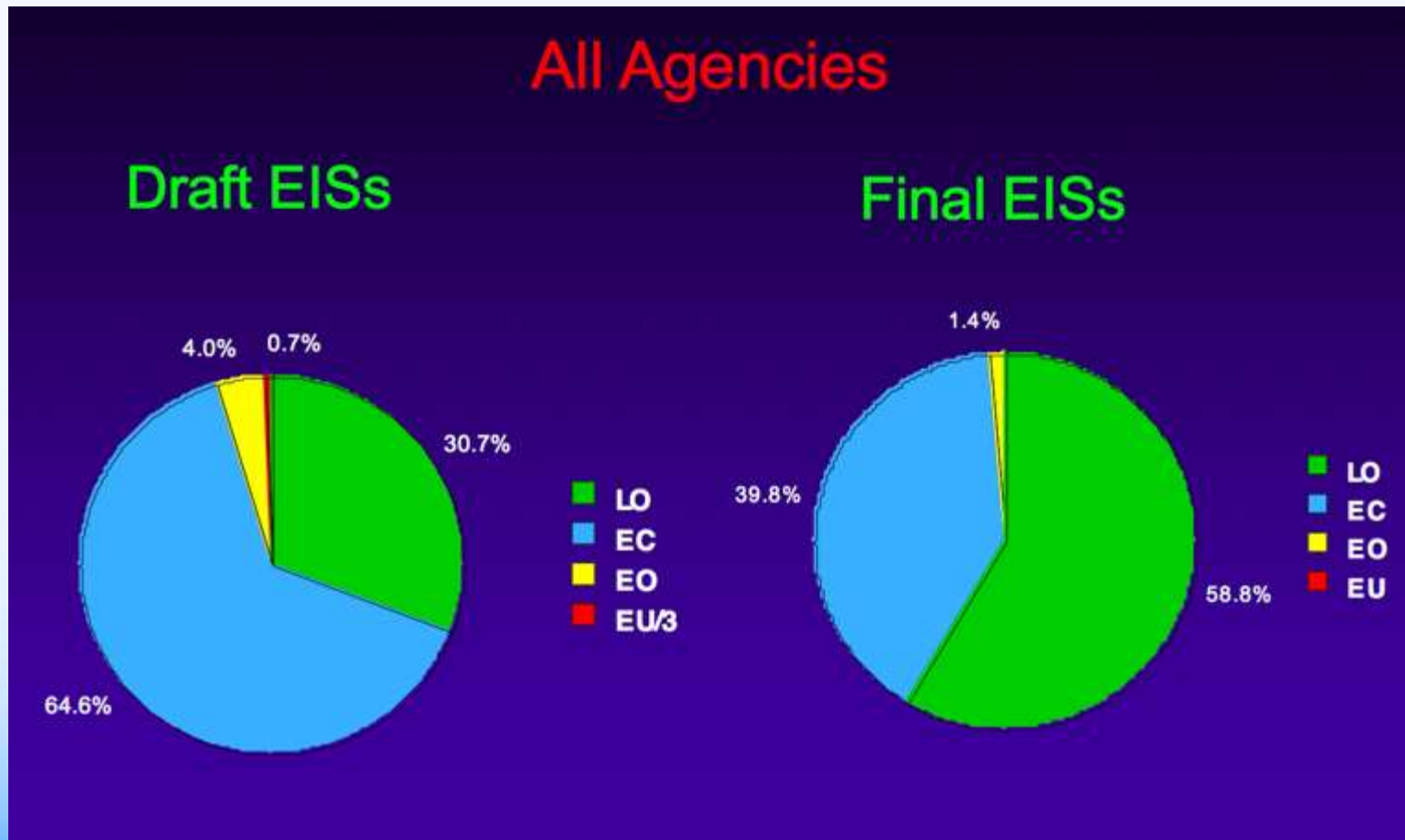
EPA Review Responsibilities

- Under Section 102 of NEPA, all federal agencies and the public can review EISs.
- Under Section 309 of the Clean Air Act, EPA must review:
 - legislation proposed by another federal agency;
 - newly authorized federal construction projects and major federal actions (i.e., EISs); and
 - regulations proposed by other federal agencies.
- Comments must be in writing, and must be made public.
- Any action deemed “unsatisfactory” from the standpoint of public health/environmental quality shall be referred to CEQ.

Important EPA Review Concerns

- Water quality
- Air quality
- Ground water/sole source aquifers
- Wetlands
- Hazardous waste issues
- Environmental Justice
- Cumulative Impacts

EIS Ratings 2004-2008



Rating system

- LO: Lack of Objections
- EC: Environmental Concerns
- EO: Environmental Objections
- EU: Environmentally Unsatisfactory
 - HQ approval required
- 1: Adequate
- 2: Insufficient Information
- 3: Inadequate
 - HQ approval required

Final EIS Options

- Traditional
- Condensed
- Abbreviated

Traditional FEIS Format

1. Cover sheet
2. Summary
3. Table of contents
4. Purpose and need
5. Alternatives
6. Affected environment
7. Environmental consequences
8. List of Preparers
9. EIS distribution
10. Comments and coordination
11. Index
12. Appendices

FEIS “Additions”

- Under this approach, the final EIS incorporates the draft EIS (essentially in its entirety) with changes made as appropriate throughout the document to reflect the selection of an alternative, modifications to the project, updated information on the affected environment, changes in the assessment of impacts, the selection of mitigation measures, wetland and floodplain findings, the results of coordination, comments received on the draft EIS and responses to these comments, etc.

Traditional FEIS “Additions”

- Preferred alternative and basis for decision
- Alternatives not preferred and reason for why not preferred
- Mitigation and enhancement measurements
- Major unresolved issues
- Coordination, comments, and responses
- Final 4(f) and other findings

Condensed FEIS

- This approach avoids repetition of material from the draft EIS by incorporating, by reference, the draft EIS. The final EIS is, thus, a much shorter document than under the traditional approach; however, it should afford the reader a complete overview of the project and its impacts on the human environment.
- The crux of this approach is to briefly reference and summarize information from the draft EIS which has not changed and to focus the final EIS discussion on changes in the project, its setting, impacts, technical analysis, and mitigation that have occurred since the draft EIS was circulated.
- In addition, the condensed final EIS must identify the preferred alternative, explain the basis for its selection, describe coordination efforts, and include agency and public comments, responses to these comments, and any required findings or determinations.

Condensed FEIS

- Reference and summarize DEIS information
- Discuss changes since the draft
 - Project, setting, impacts, analysis, mitigation
- Include FEIS “additional information”
 - Preferred alternative and basis for decision
 - Coordination efforts, agency and public comments, and responses
 - Findings, determinations and compliance

Abbreviated FEIS

- For Minor Changes Only
 - Factual corrections
 - Explain why comments warrant no further response
- Document consists of DEIS and attachments
 - Errata sheets
 - Separate section including pertinent FEIS “additional information”

FHWA HQs Prior Concurrence for EISs

- Headquarters will get involved for approval/signing under some circumstances.
- Inadequate coordination w/government agencies
- Inadequate discussion of social, economic, and environmental impacts
- Impacts are unusually great
- National policy issues
- Major unresolved issues
- Agency opposition on environmental grounds

Legal Sufficiency Review

- Final assurance by attorneys that everything has been done.
- Need to ensure project is ready for legal challenges-an internal review prior to release.
 - Legal minimums/requirements have been met?
 - Defensible in court?
 - Properly developed?
 - Answers questions
 - FEIS discussion is adequate?

FEIS Distribution

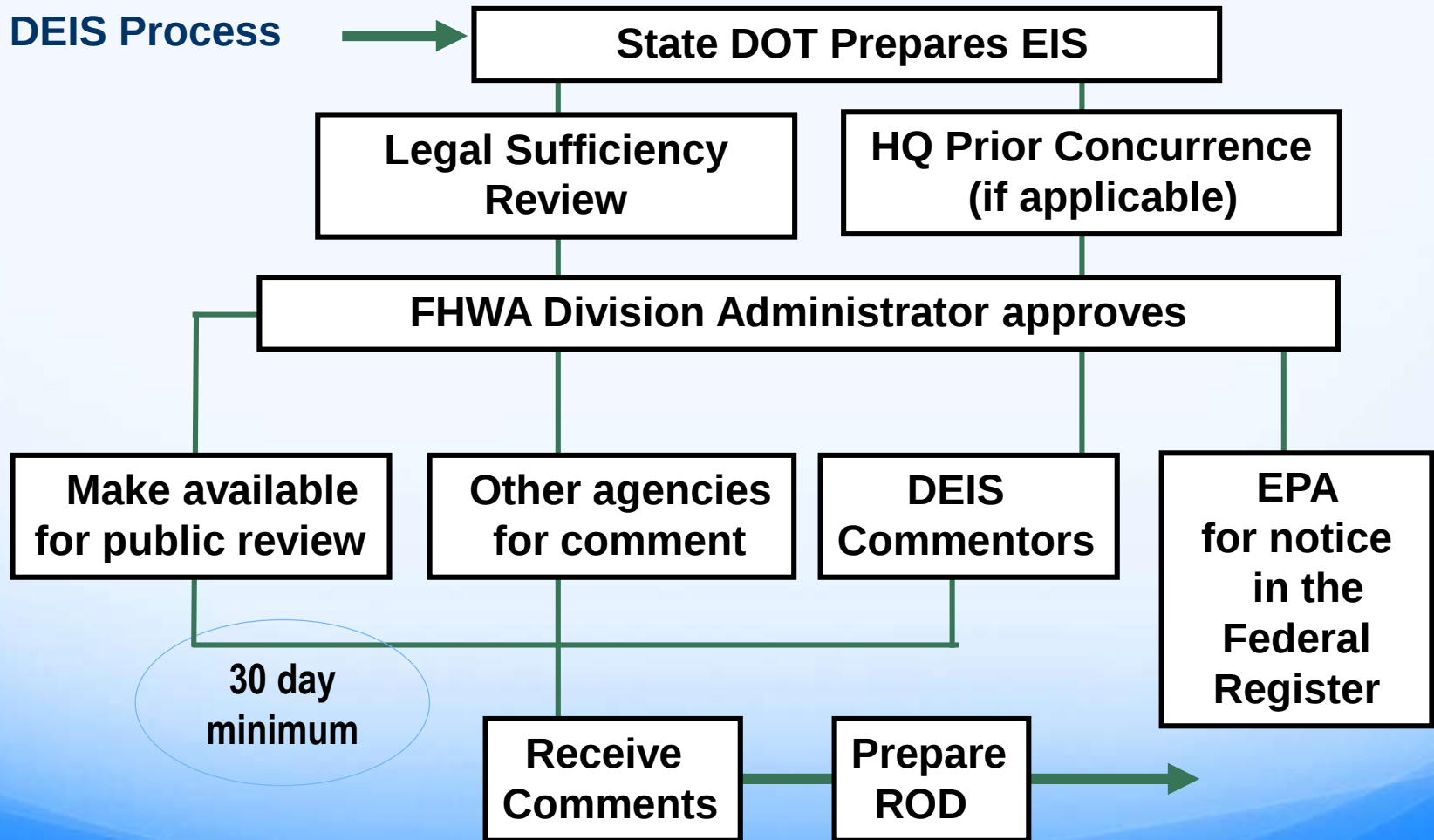
- File with EPA – (published in FR)
- EPA final §309 review
- Commentators on DEIS
- Requestors of FEIS
- Publish availability (local newspapers)

CEQ Referral Procedure

- When a Federal agency determines the project is environmentally unsatisfactory
- CEQ acts as arbitrator or otherwise rules on the dispute
- Specific time periods are mandated
- Referrals must occur within 25 days of FEIS of availability

FEIS Process

DEIS Process



Record of Decision

- Formats and Content
 - Incorporate by reference and cross reference FEIS
 - Decision - identify selected alternative
 - Alternatives considered
 - Discuss values considered and basis of decision
 - Identify “environmentally preferred” alternative(s)
 - Section 4(f) – summarize basis of approval
 - Measures to minimize harm - describe mitigation
 - Monitoring or enforcement program included
 - Comments on FEIS - substantive comments and responses

ROD

- Approval & Availability
 - Approval no sooner than
 - 30 days after Federal Register notice (FEIS)
 - 90 days after Federal Register notice (DEIS)
 - No further project approvals may be given until ROD is approved
 - Make available through public notice

Revised ROD

- Different alternative selected, but fully evaluated in FEIS
- Substantial changes to mitigation measures or findings
- Distribute revised ROD to all FEIS recipients

Supplemental EIS

- Required If Significant Impacts Result From Changes in Proposed Action
 - New Information
 - New Circumstances
 - New laws and regulations
 - Explain why the SEIS was prepared
 - Summarize and reference valid parts of original EIS
 - Evaluate changes and new impacts
- NOT Required if changes or new information or circumstances:
 - Do not result in previously unidentified significant impacts
 - Reduce adverse environmental impacts without additional new significant impacts

Supplemental vs. New EIS

Supplemental

- Flexible format
- Limited scope
- No NOI or scoping
- Addresses only changes or new information
- Reference original EIS
- Standard processing

New

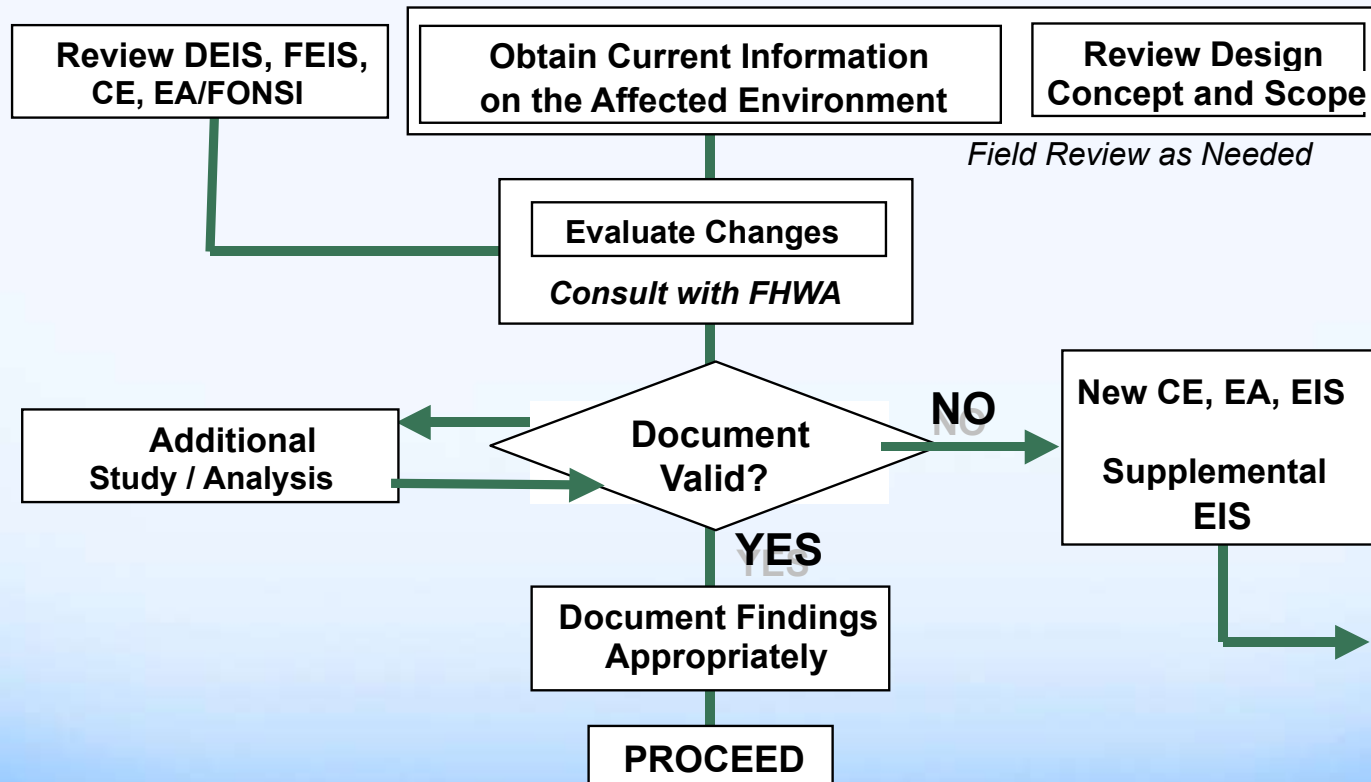
- CEQ/FHWA format
- Full scope
- NOI and scoping process
- Analysis reasonable alternatives and impacts and the no build
- Stand alone document
- Standard processing

3.7.4. Reevaluations

Learning Objectives

- Recognize when a reevaluation is required

Reevaluation Process



23 CFR 771.129

Purpose and Type

- A reevaluation is a reconsideration of the adequacy or validity of a Categorical Exclusion (CE) determination, a Finding of No Significant Impact (FONSI), or an Environmental Impact Statement (EIS).
- The purpose is to assess whether any factors would affect the validity of the CE determination or environmental document. A reevaluation considers such factors as whether:
 - There have been changes in the project or its surroundings and impacts
 - Any new issues have been identified
 - There are new circumstances
 - There is new information that was not considered in the original document
 - There have been changes in laws or regulations that apply to the project
- There are two types of reevaluations: consultations and written reevaluations.
 - Consultations are conducted for a CE determination, FONSI, or final EIS, before requesting major approvals or grants.
 - Written reevaluations are conducted for a draft EIS (DEIS) or FEIS under certain circumstances

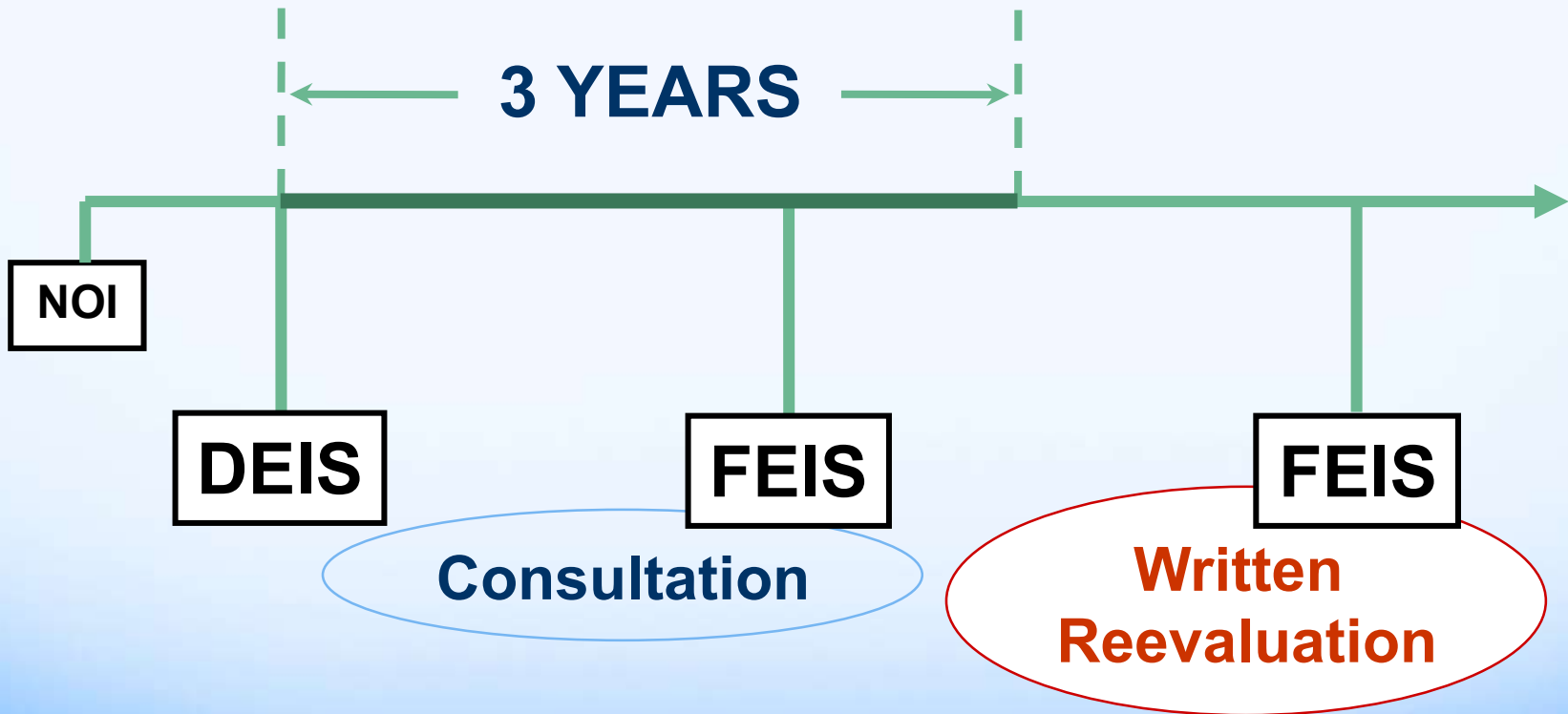
Consultation & Documentation

- CE, EA, EIS:
 - Consult before major approvals*
- EIS
 - Draft EIS validity period (written)
 - Final EIS validity period (written)
- Coordination with resource agencies

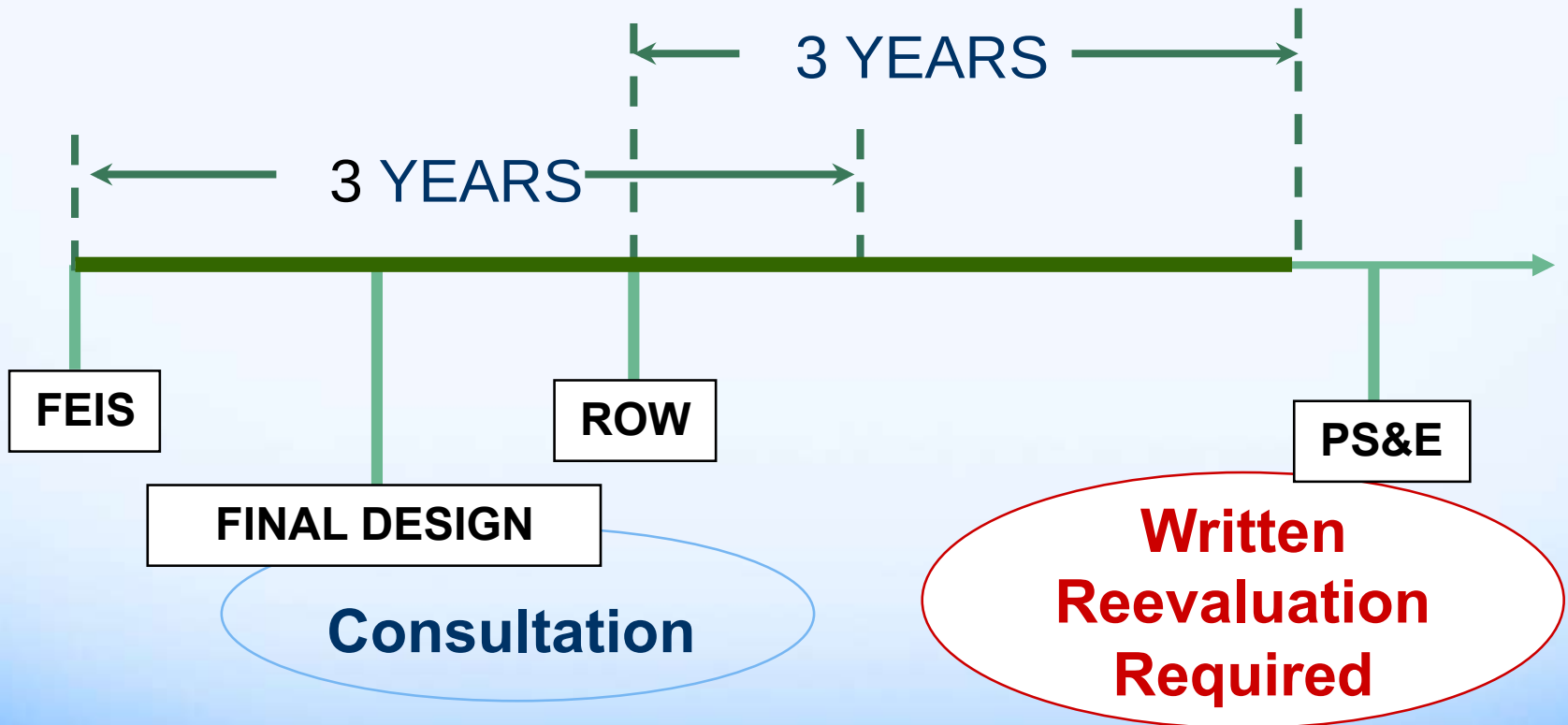
*Major Approvals- Design, ROW, Utilities PS&E, etc.

- Written reevaluations are necessary and required for EIS documents where the final EIS has not been issued within 3 years of the draft EISs or no major steps to advance a project have occurred in the last 3 years.
- For projects with an EA or CE, documentation is required as determined necessary by FHWA. This could be as simple as FHWA documenting a phone conversation, with a note to the project file, where assurance was given that no or only minor changes have occurred that affect the environmental document.

Draft EIS Reevaluation



Final EIS Validity



3.8. Other Laws and Requirements

Learning Objectives

- Identify other laws applicable in the NEPA project decision-making Process
- Identify the essential requirements of these laws and regulations

- Section 4(f) - Parks, recreation, refuges and historic properties
- Section 6(f) - (LWCFA)
- Section 106 (NHPA) - Historic property
- Section 404 (CWA) - Wetlands
- Section 7 (ESA) - Threatened and endangered species
- Conformity - (CAAA)
- Section 9 - Bridge Permits
- Others

Section 4(f)

- The Secretary may approve projects requiring the use of publicly owned land of a public park, recreation area, or wildlife/waterfowl refuge, or land of a historic site of national, state, or local significance (as determined by the officials having jurisdiction over the park, recreation area, refuge, or site) only if:
 - There is no feasible and prudent alternative to such use, and
 - The project includes all possible planning to minimize harm

Section 6(f) of the LWCFA

- State and local governments often obtain grants through the Land and Water Conservation Fund Act to acquire or make improvements to parks and recreation areas.
- Section 6(f) of this Act prohibits the conversion of property acquired or developed with these grants to a non-recreational purpose without the approval of the Department of the Interior's (DOI) National Park Service.
- Section 6(f) directs DOI to assure that replacement lands of equal value, location and usefulness are provided as conditions to such conversions.
- Consequently, where conversions of Section 6(f) lands are proposed for highway projects, replacement lands will be necessary.
- Regardless of the mitigation proposed, the Section 4(f) evaluation should document the National Park Service's tentative position relative to Section 6(f) conversion.

Section 106 of the NHPA

- National Historic Preservation Act (NHPA)
- Advisory Council on Historic Preservation (ACHP), State Historic Preservation Officer (SHPO), Native American Tribes (THPO), National Park Service (NPS)
- Avoid unnecessary harm to historic properties
 - Requires federal agencies to consider the effects of their actions on historic properties
 - Provides an opportunity for the ACHP and interested parties to comment on an undertaking

Section 404 – Clean Water Act

- Restore and maintain chemical, physical, and biological integrity of the Nation's waters through prevention, reduction, and elimination of pollution
- No discharge of dredged or fill material can be permitted if a practicable alternative exists that is less damaging to the aquatic environment or if the nation's waters would be significantly degraded
- Permit application must show that you have:
 - taken steps to avoid wetland impacts where practicable
 - minimized potential impacts to wetlands
 - provided compensation for any remaining, unavoidable impacts through activities to restore or create wetlands

Section 7 of the ESA

- Endangered Species Act of 1974
 - Fish and Wildlife Service (DOI) and National Marine Fisheries Service (NOAA) share responsibilities for administration of ESA
- FHWA / SDOT initiates consultation
- F&WS provides information (list) on occurrence of threatened and endangered species in area
- DOT survey for T&E species or critical habitat
- Biological assessment (or evaluation) to allow FHWA's determination of effect
 - “Not likely to adversely effect” – consultation complete
 - “Adversely effect” – formal consultation required
 - “No jeopardy” opinion required to advance project

Clean Air Act Amendments (1990)

- Under the 1990 CAAA, the U.S. DOT cannot fund, authorize, or approve Federal actions to support programs or projects which are not first found to conform to the CAA requirements.
- Federally funded highway and transit projects must be shown to conform to the State Implementation Plan (SIP)
- Plans / Transportation Improvement Program (TIPs) in non-attainment or maintenance areas must be in conformity with SIP
 - timely implementation of transportation control measures (TCMs)
 - meeting or furthering the annual reduction of emissions of Ozone, CO, PM₁₀, NOx
- Regional conformity and transportation planning versus project level hot spot analysis

Section 9 Bridge Permits

- U.S. Coast Guard has jurisdiction over bridges that cross navigable waters of the US (location and clearance of bridges and bridge permits)
- USCG approves the location and clearances of bridges through the issuance of bridge permits under the authority of Section 9 of the Rivers and Harbors Act of 1899, the General Bridge Act of 1946, and other authorities

Environmental Justice

- Executive Order 12898 - Federal Actions to Address Environmental Justice in Minority Populations and Low-Income Populations, February 1994
- DOT Order 5610.2 – DOT Actions to Address Environmental Justice in Minority Populations and Low-Income Populations, April 1997
- FHWA Order 6640.23 - FHWA Actions to Address Environmental Justice in Minority Populations and Low-Income Populations

- Fundamental concepts of Environmental Justice and Title VI
 - Avoid, minimize, and mitigate disproportionately high and adverse human health or environmental effects, including social and economic effects, on minority populations and low-income populations
 - Ensure the full and fair participation by all potentially affected communities in the transportation decision-making process
 - Prevent the denial of, reduction in, or significant delay in the receipt of benefits by minority populations and low-income populations

4. Case Study

Cidra Corridor from PR-7733 to PR-52 – Draft
Environmental Impact Assessment

Environmental Review Toolkit

Home

Planning and
Environment

NEPA and Project
Development

Accelerating
Project Delivery

Historic
Preservation

Section 4(f)

Water, Wetlands,
and Wildlife

NEPA and Project Development

Program Overview

NEPA Implementation

NEPA and Transportation
Decisionmaking

NEPA Documentation

Environmental Justice

Safety and NEPA

Interim Guidance on the
Application of Travel and
Land Use Forecasting in
NEPA

Active and Inactive Environmental Impact Statements (EISs)

NEW!

Last Updated: February 17, 2015

The following is a list of active and inactive FHWA EIS projects. Active EISs are those that are at some stage of project development (NOI, DEIS or FEIS). For these projects the public and other Federal, State, and local agencies have been notified of the FHWA's and State Department of Transportation's intent to prepare an EIS. Inactive EISs are either officially or unofficially on hold. If and when an inactive project becomes active again, it will be automatically moved to the active list. For additional information on any of the following projects, please contact the appropriate [FHWA Division Office](#).

[Active EISs](#)

[Inactive EISs](#)

Active EISs

<http://www.fhwa.dot.gov/exit.cfm?link=http://www.dot.state.fl.us/>>Florida --> <http://www.fhwa.dot.gov/exit.cfm?link=http://www.dotd.state.la.us/>>Louisiana --> <http://www.fhwa.dot.gov/exit.cfm?link=http://www.nevadadot.com/>>Nevada -->

State	Location	Project Title	NOI Date	DEIS Date	SEIS Date	FEIS Date
Puerto Rico	Cidra-Cayey	Cidra-Cayey Connector	4/13/2007	1/14/2011		

http://prt2.uprm.edu/Documentation/Seminars/Cidra_Corridor_from_Cidra_Industrial_Street_to_PR-52_DEIS_FHWA-PR-EIS-10-01-D.pdf

DRAFT-Environmental Impact Statement
Cidra Corridor from Cidra Industrial Street to PR-52

Appendix Q:
SAFETEA-LU Coordination Plan



The Puerto Rico Highway and Transportation Authority (PRHTA) is evaluating alternatives to improve mobility from the municipality of Cidra to the Puerto Rico Strategic Highway Network (PRSHN). The PRHTA, in cooperation with the Federal Highway Administration, prepared this Draft Environmental Impact Statement (DEIS) to evaluate the alternatives and their environmental, social, and economic impacts. This DEIS was prepared in accordance with the National Environmental Policy Act (NEPA), as amended and its implementing regulations, as well as the Puerto Rico Environmental Public Policy Act as amended.

Puerto Rico's Environmental Public Policy Act (EPPA)

- EPPA requires that state agencies study the environmental consequences of their actions, including permitting and financial assistance.
- It also requires them to take all feasible measures to avoid, minimize, and mitigate damage to the environment.
- It is important to note that EPPA expressly permits that NEPA documents may be used in lieu of a State document.

NEPA vs. EPPA

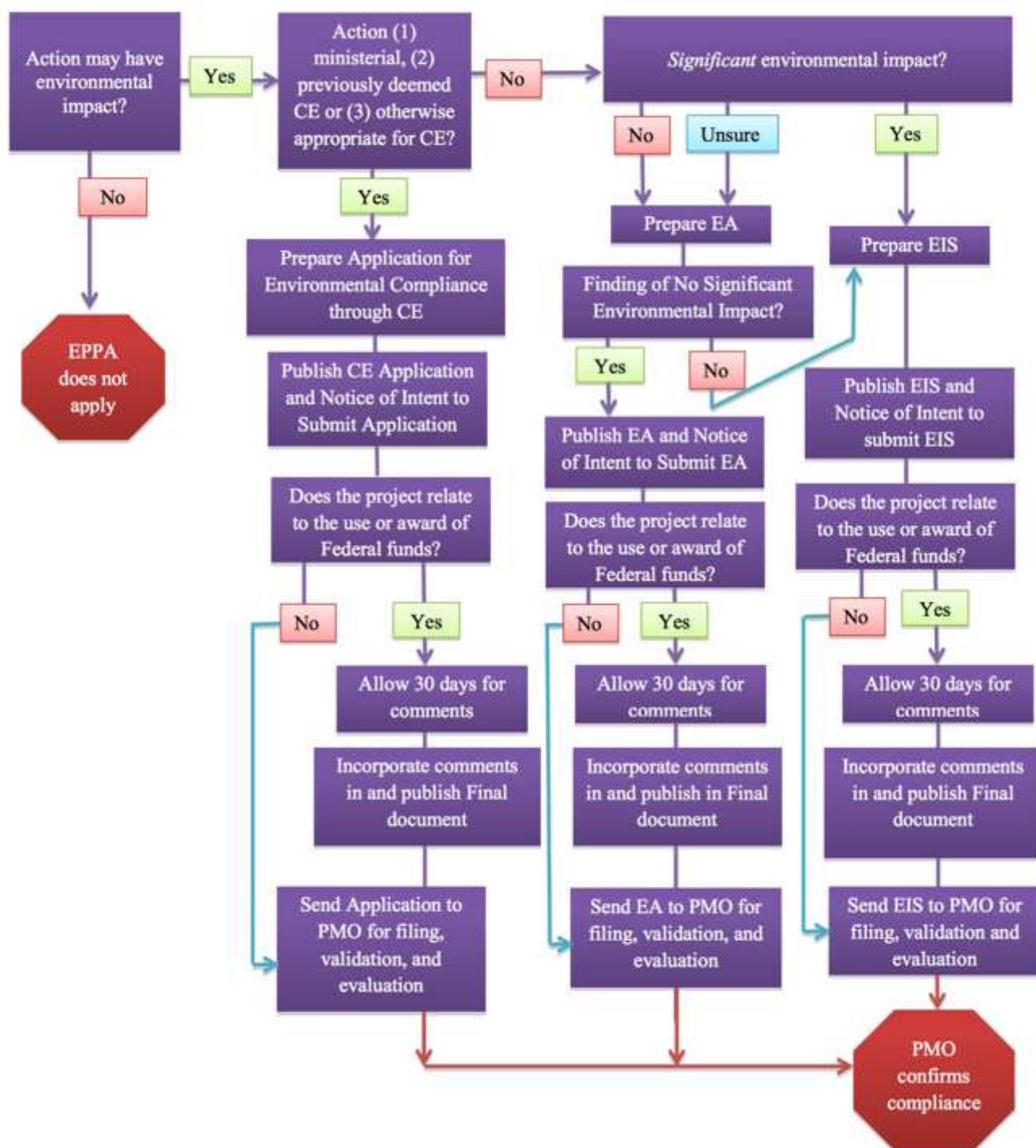
NEPA	EPPA
Categorical Exclusion (CE), 40 CFR 1508.4 , 40 CFR 1507.3	Categorical Exclusion, Regulations 109(BB) .
Environmental Assessment, 40 CFR 1508.9 , 40 CFR 1501.3	Environmental Assessment, Regulations 109(AA) .
Notice of Intent, 40 CFR 1508.22	Notice of Intent, Regulations 112(A) .
Draft Environmental Impact Statement (DEIS), 40 CFR 1502 , 40 CFR 1508.11	Draft Environmental Impact Statement, Regulations 109(I) , Regulations 112 .
Final Environmental Impact Statement (FEIS), 40 CFR 1502 , 40 CFR 1508.11	Final Environmental Impact Statement, Regulations 109(I) , Regulations 112 .
Finding of No Significant Impact, 40 CFR 1508.13	Finding of No Environmental Impact (FONEI), Regulations 109(K) .
Record of Decision, 40 CFR 1505.2	Final Determination, Regulations 109(L) .

NEPA vs. EPPA

- Under NEPA, each agency maintains a list of CEs specific to its operations that have no significant impact on the environment based on the agency's experience.
 - EPPA requires the EQB keep the list of CE actions. EPPA CEs may be determined by regulation or by EQB resolution.
- A NEPA EA must discuss alternative courses of action for any proposal that involves unresolved conflicts concerning alternative uses of available resources and the environmental impacts of alternatives.
 - Under EPPA, an analysis of alternatives is not required for an EA.

NEPA vs. EPPA

- NEPA and EPPA both require a public comment period after the publication of the DEIS and require agencies to address and incorporate any comments into the FEIS. The period lasts 45 days under NEPA and 30 days under EPPA.
- After the comment period, the Proposing Agency electronically files the environmental document, and the PMO validates the document for any deficiencies. Once the document has been validated, the PMO assigns a final file number and the document is sent to the Environmental Compliance Assurance Division (ECAD) for evaluation. The ECAD then issues a determination of environmental compliance, which accounts for the impacts evaluated and the mitigation measures referenced in the document. The EPPA process is complete once this determination is finalized.
 - NEPA does not require an agency's environmental document to be validated or evaluated by any entity or person. The NEPA process is complete as soon as the agency applies the CE or publishes the FONSI or Record of Decision.



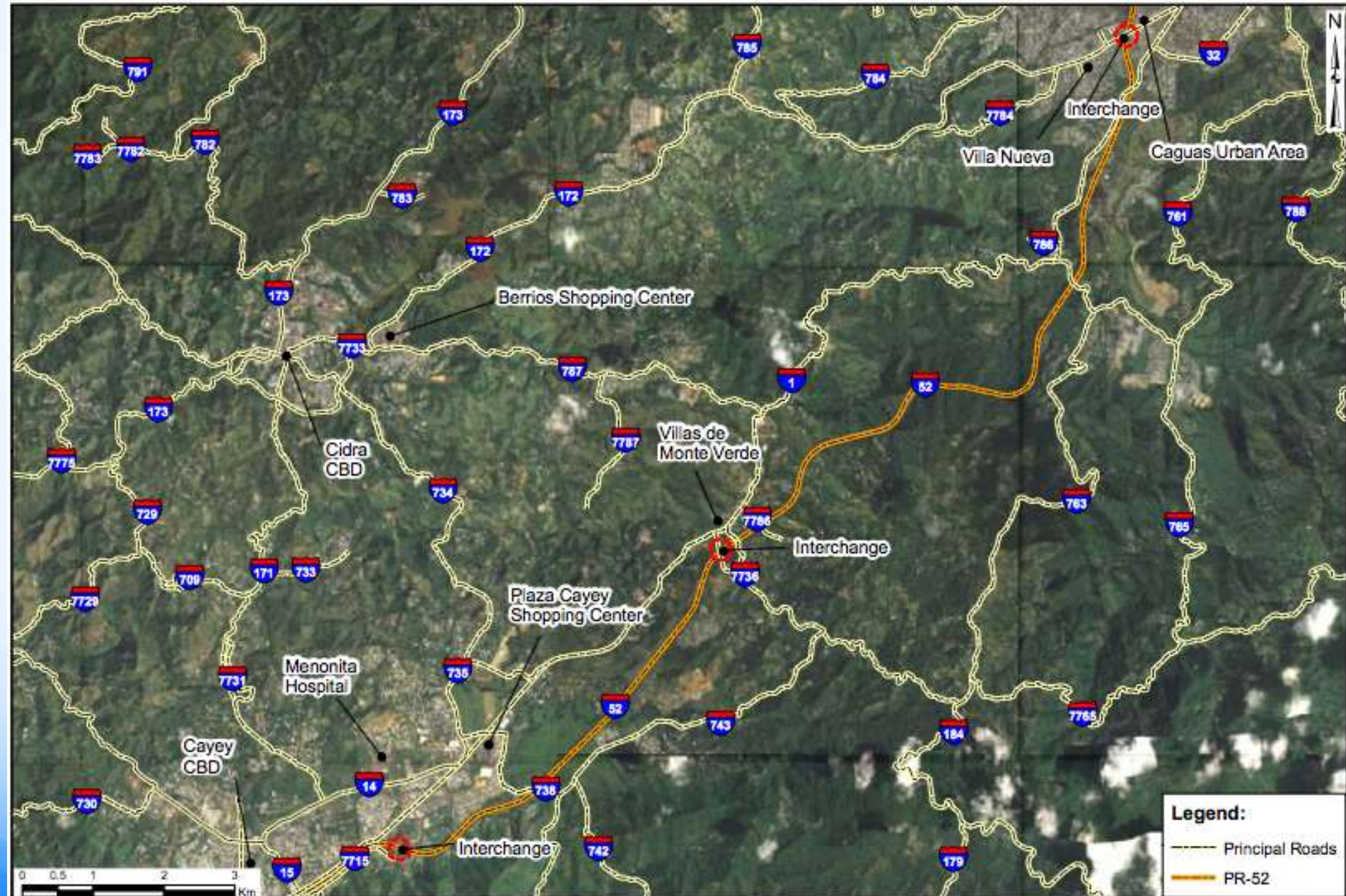


Figure 4. Existing Cidra CBD Access Roads from PR-52.

CIDRA CORRIDOR FROM CIDRA INDUSTRIAL STREET TO PR-52
DRAFT ENVIRONMENTAL IMPACT STATEMENT

Source: PRHTA



US Department of Transportation
Federal Highway Administration



Needs

- The existing geometric conditions of the access roads to Cidra from the PRSHN are not favorable and in many cases unsafe for the drivers using them. The poor conditions are exacerbated when heavy freight traffic is utilizing the road.

Table 2.1-1 Fatal accidents Along PR-172, PR-171, PR-787 and PR-734, 2000-2008.

Year	Roads			
	PR-172	PR-171	PR-787	PR-734
2000	3	2	0	0
2001	0	0	1	0
2002	3	1	0	2
2003	4	0	0	1
2004	3	1	0	0
2005	4	0	0	0
2006	8	0	1	1
2007	4	1	0	0
2008	3	0	0	1
Total	32	5	2	5

Source: Puerto Rico Safety Transit Commission

Table 2.1-2 No Action Alternative Intersections LOS (2018).

Intersection	LOS / Average Delay per Vehicle (sec)	
	AM (LOS/Average Delay)	PM (LOS/Average Delay)
PR-1 with PR-184	E (58.7)	E (68.9)
PR-1 with PR-14	D (37.5)	D (42.4)
PR-7733 with PR-734	F (361.5)	D (43.5)
PR-7733 with PR-171	F (1080.7)	F (93.5)
PR-7733 with PR-172	C (26.4)	B (16.6)
PR-171 with PR14	F (203.1)	E (74.5)
PR-734 with PR-735	B (13.5)	A (7.9)
PR-735(north) with PR-1	A (5.5)	A (6.9)
PR735(south) with PR-1	B (12.9)	C (22.9)
PR-1 with PR-738	A (9.9)	B (15.9)
PR-172 with PR-787	B (14.3)	C (20.8)
-1 with PR-787	B (18.9)	A (7.2)
743 with PR-742	F (161.9)	A (9.9)
34 with PR-52 NB	F (3895.2)	F (2536.2)
34 with PR-52 SB	F (589.8)	D (41.3)
733 with Factory	F (79.2)	F (1950.6)

Table 5.1-1 Cidra and Cayey Population Characteristics, Year 2000.

Geographic Area	Population 2000	Density (persons/mi ²)	Population 2012	Density (persons/mi ²)	Growth Rate (%)
Cidra	42,753	1,179	49,220	1,363	1.2
Cayey	47,370	913	48,711	939	0.2
Puerto Rico	3,808,610	1,111	4,051,566	1,182	0.5

Source: Puerto Rico Planning Board and 2000 Census.

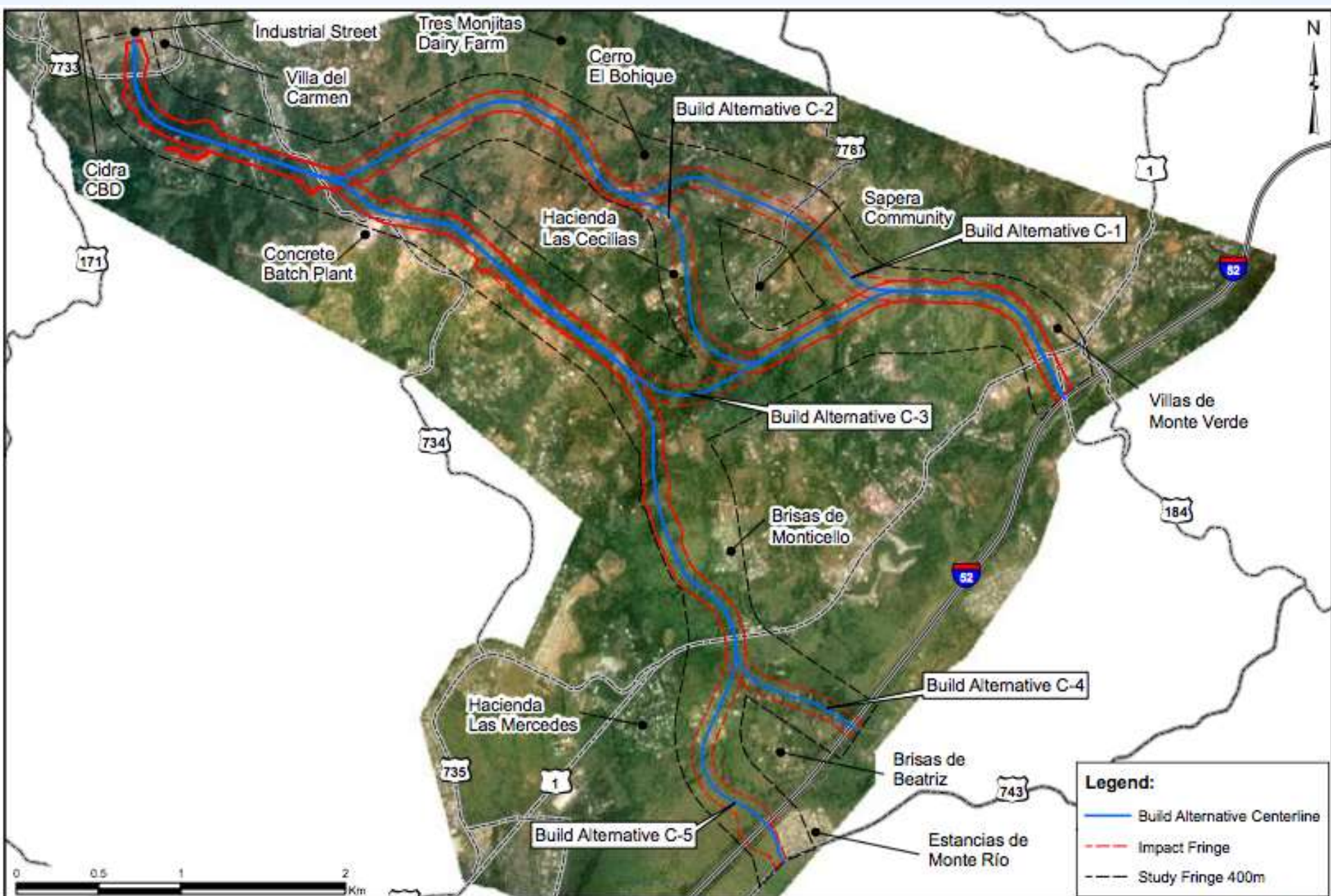


Figure 13. Location of Build Alternatives Corridors in 2008 Aerial Photo.

CIDRA CORRIDOR FROM CIDRA INDUSTRIAL STREET TO PR-52
DRAFT ENVIRONMENTAL IMPACT STATEMENT

C-3

The No Action Alternative is not a prudent alternative to manage the expected traffic in the future. There is not a significant difference in the environmental impacts, in total, between the Build Alternatives. However, Build Alternative C-3 shows a slightly less environmental impact and has the lowest implementation cost and higher benefit/cost ratio. To summarize, Build Alternative C-3: the preferred alternative:

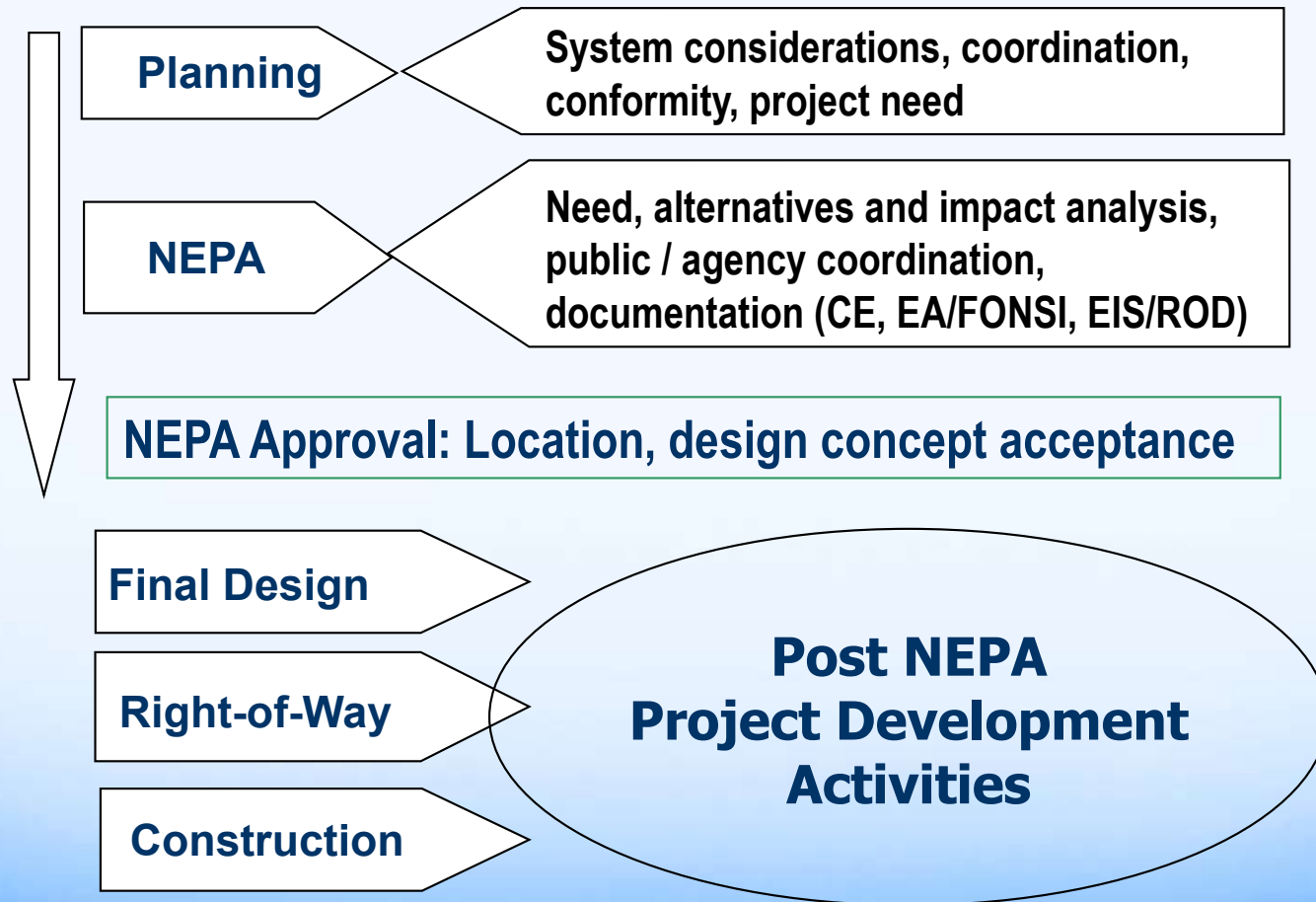
- Provides the second shortest route and has the lowest capital cost;
- Avoids the construction of any bridges over water bodies;
- Minimizes cultural resource impacts;
- Impacts 19% more plain pigeon habitat than the lowest-impact alternative; and
- Is equal to build alternative C-2 in having the lowest noise impacts.

5. Seminar Review

Seminar Goal

- Develop an awareness of NEPA principles and apply the essential elements of the NEPA decision-making process to foster stewardship and environmental streamlining in transportation project development

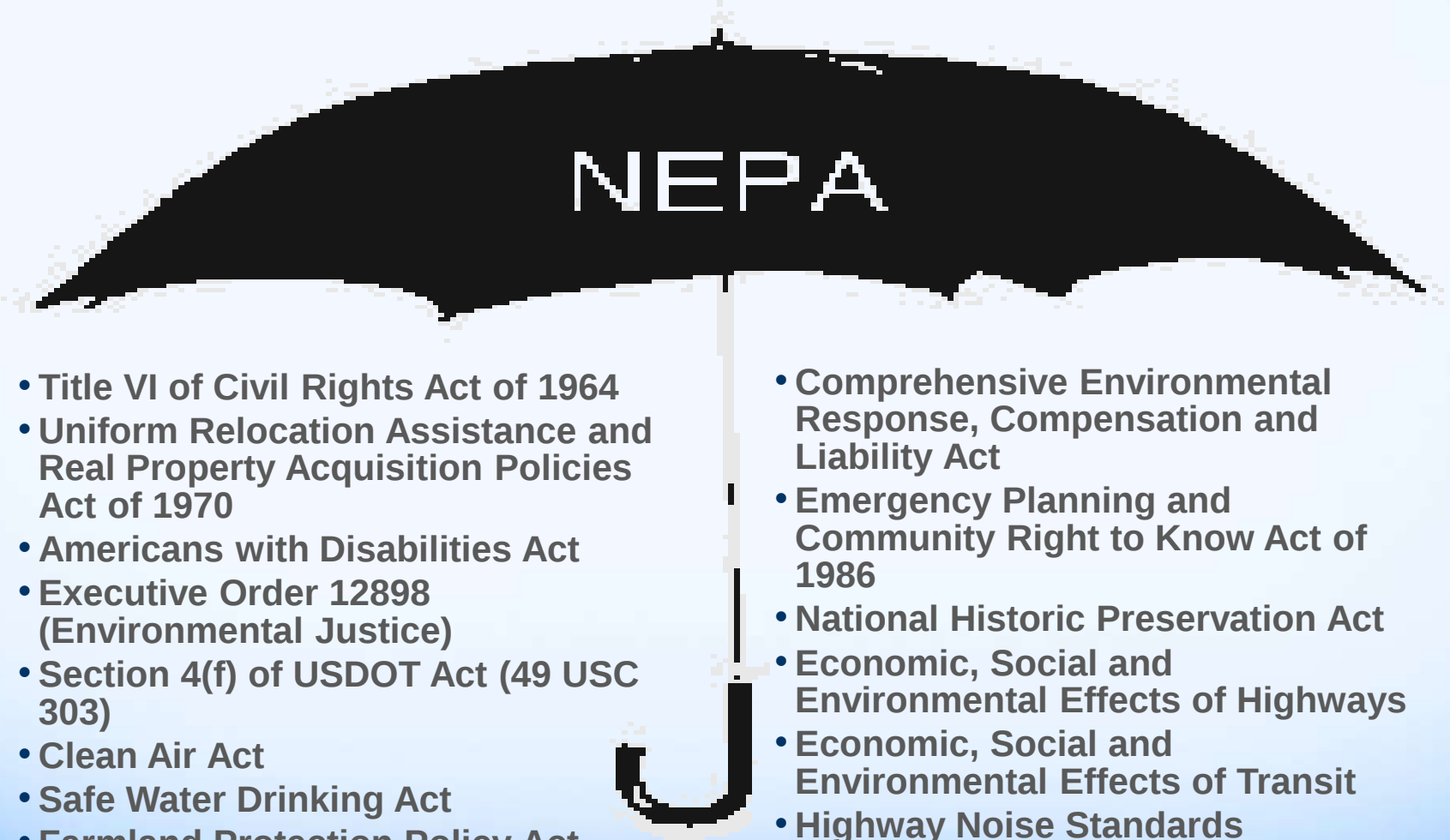
Transportation Project Development



Essential Elements of NEPA

- Alternatives
- Impacts
- Mitigation
- Public Involvement
- Interagency Coordination
- Documentation

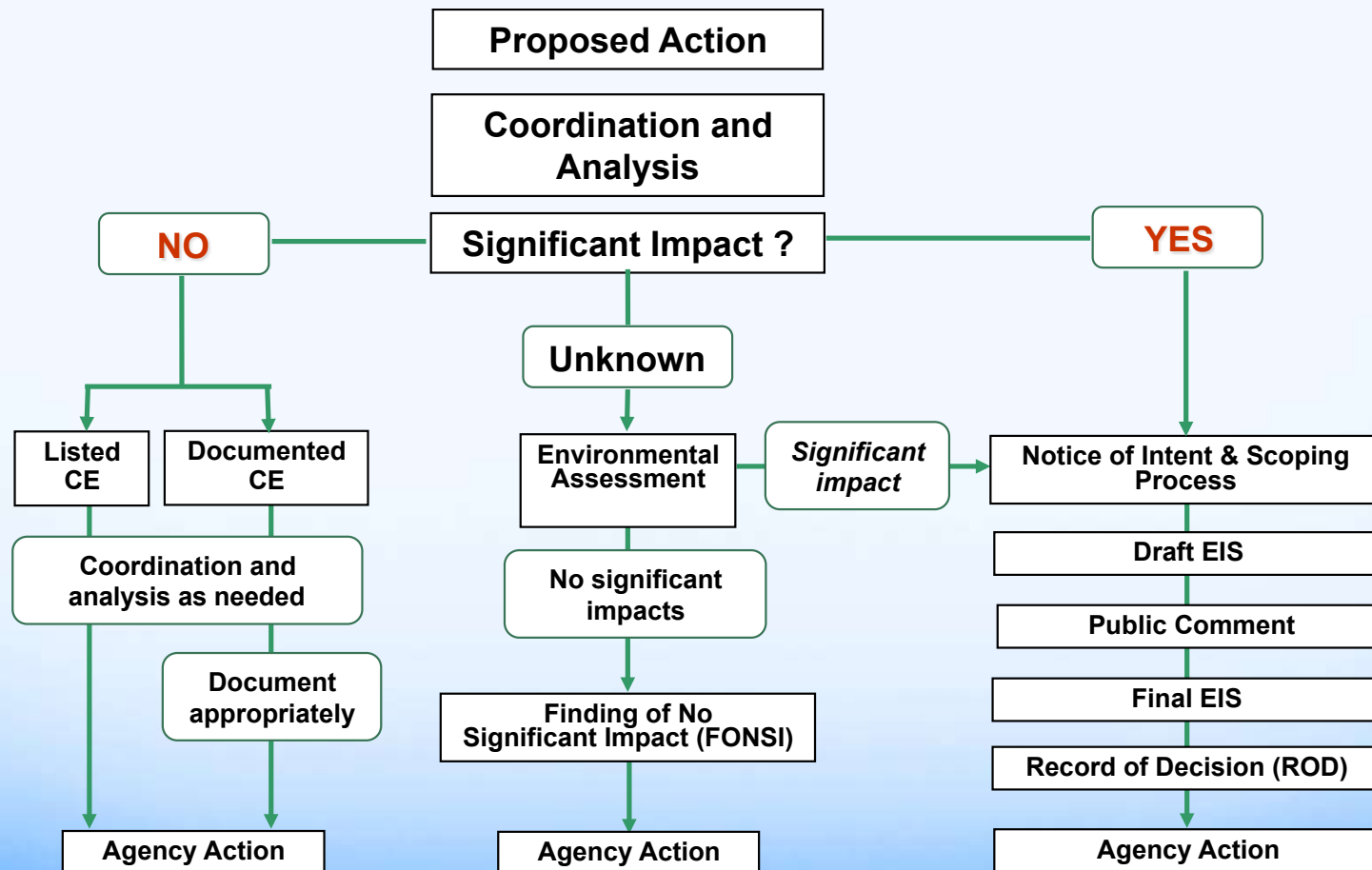
NEPA Umbrella



NEPA

- Title VI of Civil Rights Act of 1964
- Uniform Relocation Assistance and Real Property Acquisition Policies Act of 1970
- Americans with Disabilities Act
- Executive Order 12898 (Environmental Justice)
- Section 4(f) of USDOT Act (49 USC 303)
- Clean Air Act
- Safe Water Drinking Act
- Farmland Protection Policy Act
- Solid Waste Disposal Act
- Resource Conservation and Recovery Act of 1976
- Comprehensive Environmental Response, Compensation and Liability Act
- Emergency Planning and Community Right to Know Act of 1986
- National Historic Preservation Act
- Economic, Social and Environmental Effects of Highways
- Economic, Social and Environmental Effects of Transit
- Highway Noise Standards
- Public Hearing Requirements
- Archaeological and Historic Preservation Act
- Archaeological Resources Protection Act
- AND MORE...

NEPA Process Options (Classes of Action)



Contact Info.

Sangchul (San) Hwang, PhD

Professor

Environmental and Water Resources Engineering

Department of Civil Engineering

University of Puerto Rico

Mayagüez, PR 00681

(787) 832-4040 x3454

sangchul.hwang@upr.edu



Thank You!