



# Cumulative and Indirect Effects: Practical Analysis through Tactical Methods

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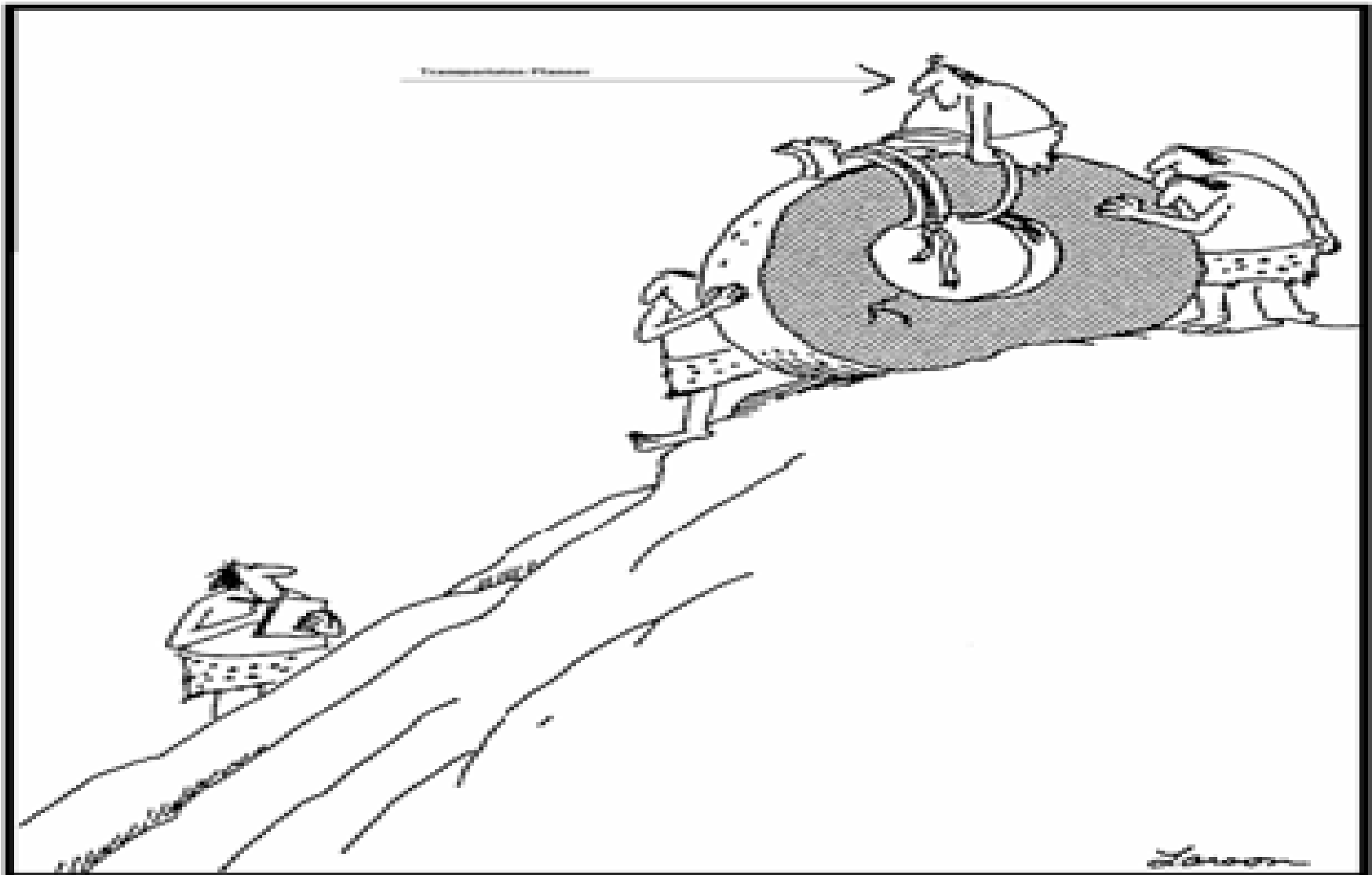
Office of the Chief Counsel

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# Why are Indirect & Cumulative Impacts Such an Issue ?

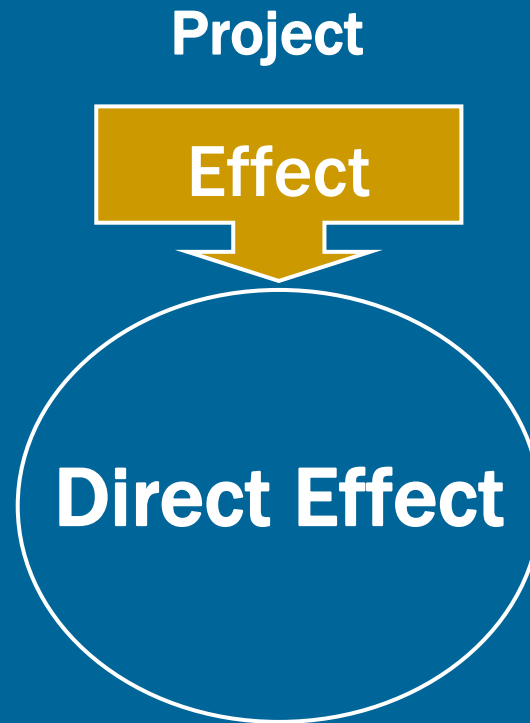
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- Numerous statutes require consideration of indirect (secondary) and cumulative impacts
- Differences in the requirements
- Complicated and complex issues – e.g., Sprawl
- Potential source of disagreement and delay in the environmental review process
- Thinking, understanding and interests vary
- Lawsuits – Administrative Record



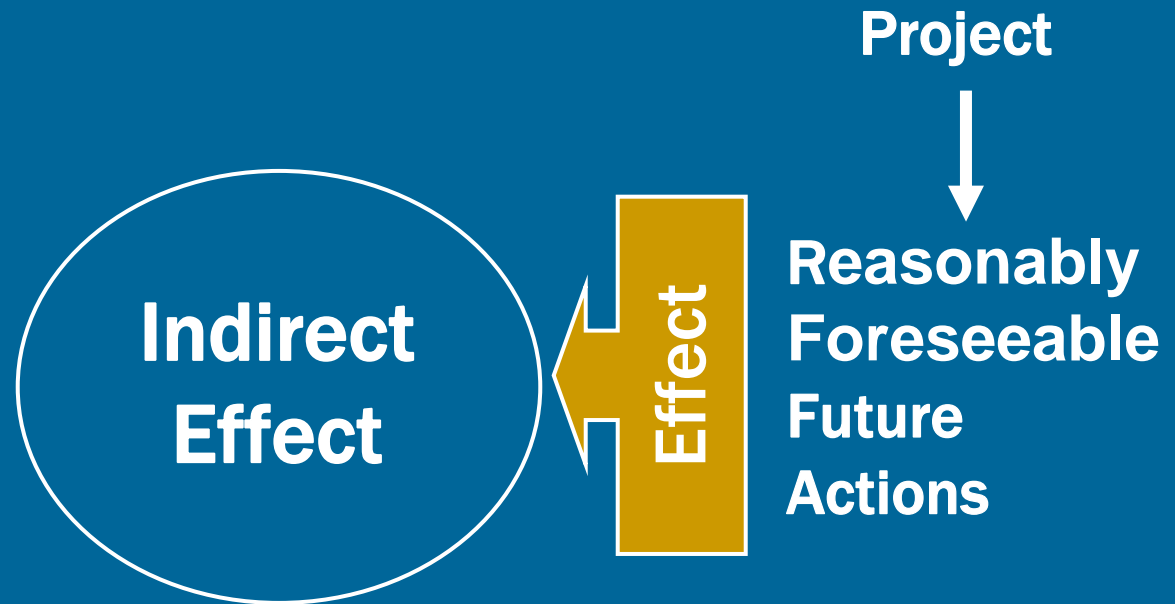
Early experiments in transportation

# Direct Effect



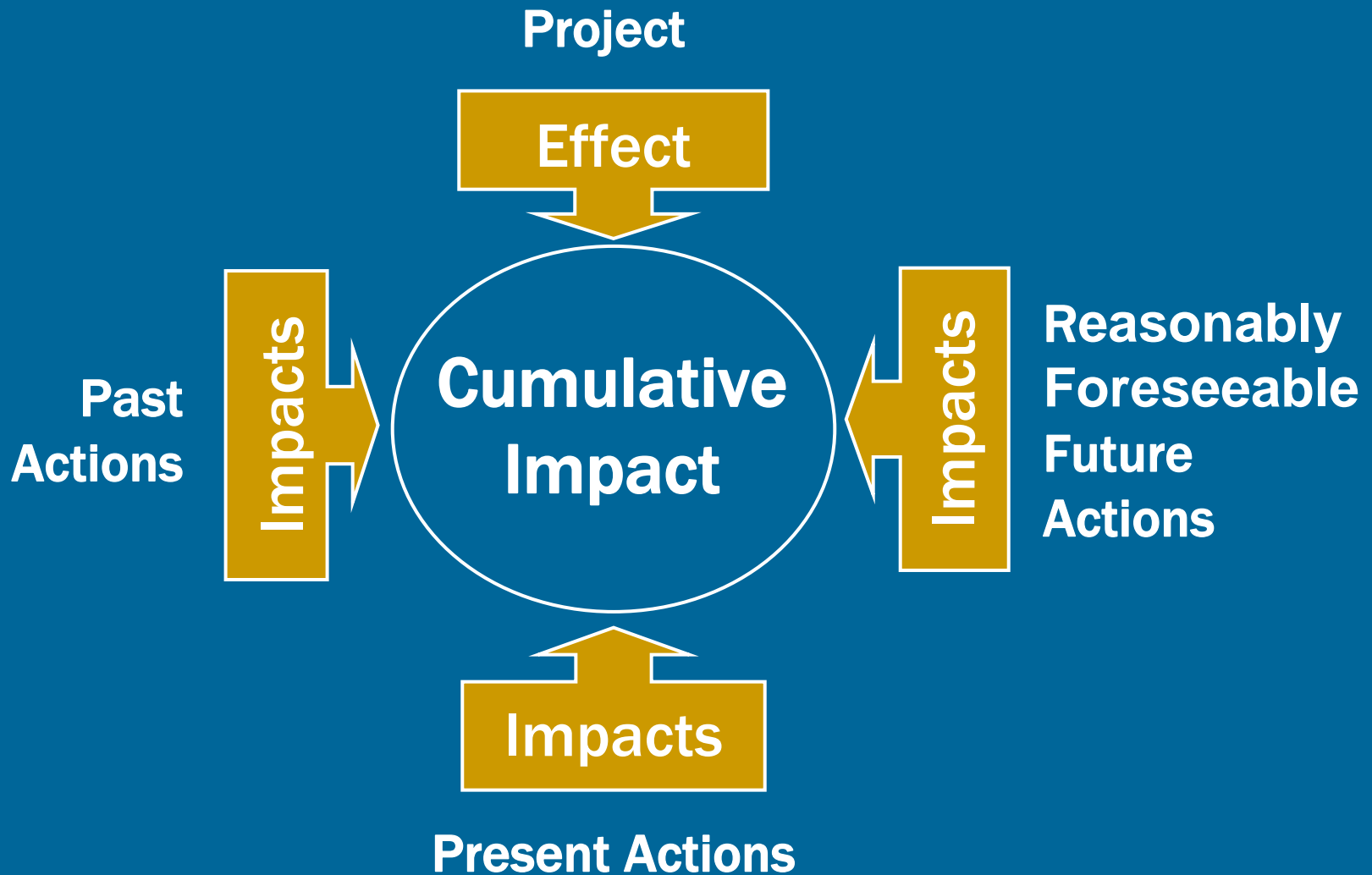
Caused by the action and occur at the same time and place

# Indirect Effects



Caused by the action and are later in time or farther removed in distance, but are reasonably foreseeable

# Cumulative Impact



# Indirect Effects

Are caused by the action and are later in time or farther removed in distance, but are still reasonably foreseeable. Indirect effects may include growth inducing effects and other effects related to induced changes in the pattern of land use, population density or growth rate, and related effects on air and water and other natural systems, including ecosystems.

40 CFR 1508.8



# Cumulative Impact

Impact on the environment which results from the incremental impact of the action when added to other past, present, and reasonably foreseeable future actions regardless of what agency (Federal or non-Federal) or person undertakes such other actions.

Can result from individually minor but collectively significant actions taking place over a period of time.

40 CFR 1508.7



# CEQ Considering Cumulative Effects

## Define the scope of analysis

- 1) Identify important and relevant cumulative effect issues associated with proposed action and define assessment goals
- 2) Establish the geographic scope of the analysis
- 3) Establish the time frame for the analysis
- 4) Identify other actions affecting the resources of concern



# CEQ Handbook - 11 Step Process

## Describe the affected environment

- 5) Characterize the resources identified in scoping in terms of their response to change and capacity to withstand stresses.
- 6) Characterize the stresses affecting these resources and their relation to regulatory thresholds.
- 7) Define a baseline condition for the resources, ecosystems, and human communities.



# CEQ Handbook - 11 Step Process

## Determine the environmental consequences

- 8) Identify important cause-and-effect relationships between human activities and resources.
- 9) Determine the magnitude and significance of cumulative effects.
- 10) Modify or add alternatives to avoid, minimize, or mitigate significant cumulative effects.
- 11) Monitor the cumulative effects of the selected alternative and adapt management.

# TxDOT's Eight Step Process

1. Identify the resources to consider
2. Define the study area for each affected resource
3. Describe the current health/historical context for each resource
4. Identify direct and indirect impacts that may contribute to a cumulative impact

# TxDOT's Eight Step Process

5. Identify other reasonably foreseeable actions that may affect resources
6. Assess the potential cumulative impacts to each resource
7. Report the results of the analysis
8. Assess and discuss mitigation issues for all adverse impacts

# Resources for TxDOT's Guidance

- **CEQ**
  - *Considering Cumulative Effects, 1997*
  - *Consideration of Past Actions, 2005*
- **Caltrans**
  - *Guidance for Preparers of CI's, 2005*
- **FHWA**
  - *Interim Guidance: Q&A on I&CI, 2003*
- **EO I&CI workgroup (*Baseline Report 2005*),  
NC DOT, WI DOT, MD DOT, FL DOT**



# Case Law – ICI Analysis – 5 Steps

1. What is the geographic area affected by the project?
2. What are the resources affected by the project?
3. What are the other past, present, and reasonably foreseeable actions that have impacted these resources?
4. What were those impacts?
5. What is the overall impact on these various resources from the accumulation of the actions?

*Fritiofson v. Alexander*, 772 F.2d 1225 (5th Cir. 1985)

# Case Law – Past Issues

- **Clairton Sportsmen's Club v. Pennsylvania Turnpike Comm'n, 882 F. Supp. 455 (W.D. Pa. 1995)**
- **Carmel-by-the-Sea v. U.S. DOT, 123 F.3d 1142, 1160 (9th Cir. 1997)**
- **Texas Committee on Natural Resources v. Van Winkle, 197 F. Supp.2d 586 (N.D. Tex. 2002)**
- **North Carolina Alliance for Transp. Reform, Inc. v. U.S. DOT 151 F.Supp.2d 661 (M.D.N.C. 2001)**

# Ten Practical or Tactical Suggestions

- Start with a Clear Understanding of the Terms
- Use a Systematic Approach
- Develop a Top Quality Baseline
- Define the Geographical Area
- Past, Present and Reasonably Foreseeable

# Top Ten (cont.)

- Utilize Maps, Diagrams and Photos
- GIS
- Early Coordination
- Use the Planning Process
- Document the Process and Findings

# Conclusion

- Questions
- Comments
- Thank You