Roads and Bridges: Potential Environmental Impacts from the Public Interest Perspective

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Site Selection

Citizens to Preserve Overton Park, Inc. v. Volpe, 401 U.S. 402 (1971)

- Petitioner challenged the Secretary's decision to authorize the use of federal funds to construct a highway through a public park in TN.
- The Supreme Court held that the use of federal funds for highway construction through the park was barred, except in the most unusual circumstances.

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Site Selection

Environmental Rights Amendment

Payne v. Kassab, 312 A.2d 86 (Pa. Commw. 1973) has been overruled.

- Simply complying with the *Payne* test is not sufficient.
- But what more is required?

NEPA analysis does not satisfy the ERA

- NEPA is essentially procedural. *See Vt. Yankee Nuclear Power Corp. v. NRDC,* 435 U.S. 519 (1978)

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Site Selection

Forrest Fragmentation:

- Frequently raised regarding Forest Service land and violations of Roadless Rules.
- In Pennsylvania, impacts from roads related to natural gas extraction.

Water Crossings:

- Difficult to avoid Exceptional Value and High Quality waters across the state

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Site Selection

Reducing impacts through site selection can be difficult because:

- In Pennsylvania, road infrastructure is largely **already existent.**
  - Over 100,000 miles of roads in Pennsylvania
- It is difficult to avoid resources with **long linear project.**

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Construction

The construction phase involves vegetation removal, earth moving, and road building activities and environmental impacts such as:

- Increase noise disturbance for surroundings;
- Exhaust and particulate emissions from construction vehicles; and
- Erosion and sediment stormwater runoff entering local waters.

Generally considered temporary.

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Post Construction

Stormwater Management

25 Pa. Code § 102.8 requires management of the net change for storms up to and including the 2-year/24-hour storm.

- What is the appropriate rainfall rate to use?
- How to incorporate trends towards increased intensity and frequency of storms?

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Operation

- Chloride-based deicing and anti-icing agents such as sodium chloride are now routinely used to clear snow and ice on impervious roadway surfaces.
- Excess chloride concentrations may inflict serious harm on human health and the environment.

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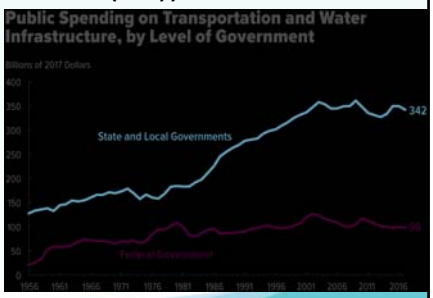
Maintenance

Aging roadway infrastructure requires attention, but may also have environmental impacts.

- PTC expansion projects across the state
- Bridge Replacements (e.g. Sheephole/ Headquarters Road bridge crossing Tinicum Creek (EV))

Less government money spent on infrastructure maintenance.



Source: Congressional Budget Office

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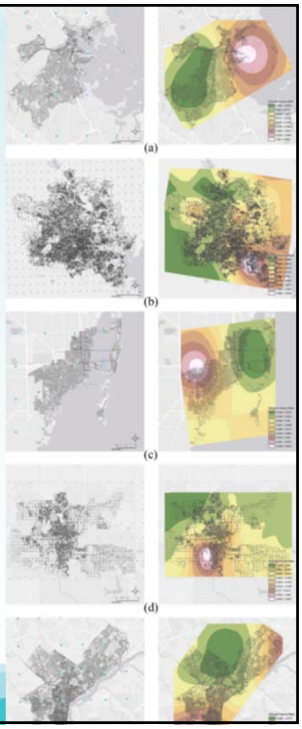
Climate Change

Climate change is likely to damage transportation infrastructure by affecting the reliability and capacity through:

- higher temperatures;
- more severe storms;
- more severe flooding; and
- higher storm surges.



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Questions?
Thank you!
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