

## Environmental 101: Issues and Regulations

## Transportation and the Environment

*All Federally-funded projects must follow the National Environmental Policy Act (NEPA) of 1969*

NEPA requires the Federal Highway Administration (FHWA) to examine and minimize/avoid potential impacts to the social and natural environment when considering approval of proposed transportation projects.

## Social and Natural Resources within the Study Area

- Water Resources
- Wetlands
- Floodplains
- Threatened and Endangered Species
- Agricultural Land/Soil
- Parks/Rec Areas – 4(f)
- Historic Sites
- Public Facilities
- Residences
- Businesses

## NEPA Umbrella

- Title VI of Civil Rights Act of 1964
- Uniform Relocation Assistance and Real Property Acquisition Policies Act of 1970
- Americans with Disabilities Act, 1991
- Executive Order 12898 (Environmental Justice)
- Section 4(f) of USDOT Act (49 USC 303)
- Clean Air Act
- Clean Water Act 404
- Executive Order 11990 (Protection of Wetlands)
- Endangered Species Act
- Farmland Protection Policy Act
- Solid Waste Disposal Act
- Resource Conservation and Recovery Act of 1976
- Noise 23 CFR 772
- Wetlands 23 CFR 777
- National Historic Preservation Act
- Economic, Social and Environmental Effects
- Highway Noise Standards
- Public Hearing Requirements 23 USC 128
- Archaeological and Historic Preservation Act
- Archaeological Resources Protection Act
- And more...



## Balance Impacts by Alternatives

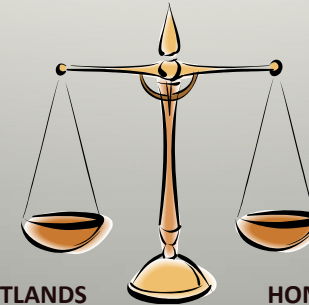
ALTERNATIVE  
1  
IMPACTS TO  
RESOURCES



ALTERNATIVE  
2  
IMPACTS TO  
RESOURCES

## Balance Impacts For Each Alternative

Impacts to Resources



WETLANDS

HOMES

## What Water Resources are located within the Project Study Area?

- Money Creek
- Six Mile Creek
- Kickapoo Creek
- Little Kickapoo Creek
- Little Kickapoo Creek North
- Sugar Creek



## Water Resource Regulations

- Clean Water Act (CWA)
  - 33 U.S.C. §1251 et seq. (1972)
- Illinois General Use Water Quality Regulations

## McLean County Watershed Issues

- Watershed Oversight Committee
- Total maximum Daily Load (TMDL) Studies for
  - Lake Bloomington
    - Phosphorous & Nitrogen
    - Completed June 2008
  - Kickapoo Creek
    - Fecal coliform

## What is a Wetland?

*Wetlands are transitional areas between wet and dry areas, defined by specific plants, soil, and hydrology.*

### Potential Wetland Types within the Study Area:

- Forested Wetlands
- Marshes
- Scrub-Shrub Wetlands
- Farmed Wetlands



## Why Are Wetlands Important?

*Wetlands have many important functions:*

- Provide Flood Control
- Act as Filter for Nutrients
- Improve Water Quality
- Provide Wildlife Habitat
  - 40% of Threatened and Endangered Species are found in wetlands
- Recharge and Discharge Groundwater Supplies



## Wetlands Regulations

- Clean Water Act of 1972 (Section 404)
- Interagency Wetland Policy Act of 1989
- Final Rule – CFR Part 777 Mitigation of Impacts to Wetlands and Natural Habitat
- Executive Order 11990: Protection of Wetlands



## What Do Wetland Regulations Say?

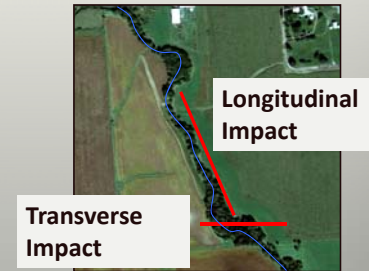
- Avoid
- Minimize
- Mitigate Means Replace Destroyed Wetlands at Greater than 1:1 Ratio

## What are Floodplains?

*Areas adjacent to a body of water that store floodwater during flood events*

Longitudinal Impact:  
Parallel to water body

Transverse Impact:  
Crosses water body



*Money Creek area, east of Bloomington-Normal*

A transverse impact crosses the floodplain once and typically is a lesser impact than a longitudinal impact.

Source: Google Maps

## Floodplain Regulations

- 23 CFR 650A
- Executive Order 11988: Balance between protecting lives and property with need to restore and preserve natural floodplains
- Floodplain Management and Protection Order (DOT 5650.2)
- Local floodplain control laws

## What Do Floodplain Regulations Say?

- A project may not increase the base flood elevation (BFE) by more than 1 foot, per FEMA.
- Avoid
- Minimize
- Mitigate by replacing storage capacity taken

## What are Threatened and Endangered (T&E) Species?

*An endangered species is a plant or animal at risk of becoming extinct throughout all or a significant portion of its range*

*A threatened species is a plant or animal likely to become endangered in the foreseeable future*

## What T&E Species are within the Project Study Area?



Loggerhead shrike  
State Threatened Species



Kirtland's Snake  
State Endangered Species

The Short-eared owl (*Asio flammeus*) is not listed on the Illinois Threatened and Endangered Species by County as of December 1, 2010

## T&E Regulations

- Federal Endangered Species Act of 1973
- Illinois Endangered Species Protection Act of 1972

## What Do T&E Regulations Require?

- Must take all feasible actions to avoid impacts to a T&E species and their habitat.
- If impacts are unavoidable must minimize impacts, and may be required to mitigate for the loss of habitat



## What are Agricultural Lands?

*Land used for the production of crops or raising livestock*



## Agricultural Regulations

- USDA/NRCS: Farmland Protection Policy Act
- Illinois Agricultural Areas Conservation and Protection Act of 1979



## What do Agricultural Land Regulations Say?

Minimize the unnecessary and irreversible conversion of prime and important farmland to nonagricultural uses.

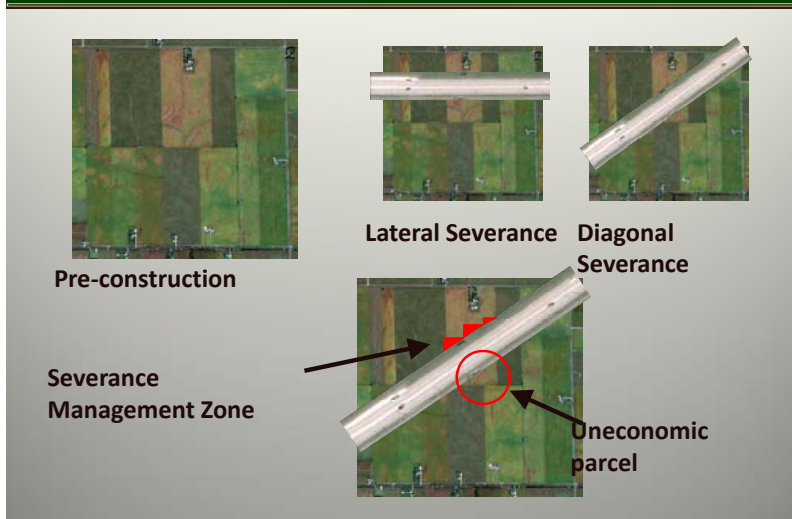


## Impacts We Will Assess

- Loss of Farmstead Buildings
- Farmland acres taken
- Access issues
- Farm severances
- Adverse travel
- Uneconomic parcels
- Centennial farms



## Typical Agricultural Impacts



## Agricultural Land

- Other Issues :
  - Drainage systems
    - The location of existing subsurface drainage, such as field tile systems, will be determined during final design
    - Existing surface and subsurface drainage systems maintained to the greatest extent possible
  - Borrow Pits
    - Minimize prime farmland used for borrow pits.

## Centennial/Sesquicentennial Farms

- Centennial Farm – Agricultural property owned by same family for 100 or more years
- Sesquicentennial Farm - Agricultural property owned by same family for 150 or more years

## How Do We Protect Parks, Bike Trails, and Historic Buildings?

### Section 4(f) Property:

*Any publicly owned park, recreational area, or wildlife and waterfowl refuge or a historic site (publicly or privately owned) of national, state, or local significance*

### Examples of Potential 4(f) Resources:

- Constitution Trail
- Eagle Crest Park, Towanda Park, & Walt Bittner Park
- Benjaminville Friends Meetinghouse and Burial Grounds
- Duncan Manor

## Parks and Constitution Trail



## Section 4(f) Regulations

Section 4(f) of the DOT Act of 1966 protects:

- Historic sites eligible for or listed on the National Register of Historic Places
- Park/recreation areas open to the public
- Publically-owned wildlife or waterfowl refuges

## What Do the 4(f) Regulations Say?

- Take all feasible and prudent actions to avoid impacting Section 4(f) properties
- Section 4(f) impacts can be minimized or mitigated
- If no feasible or prudent alternative to using a Section 4(f) property exists, FHWA may only approve the alternative that causes the least overall harm.

## Historic Sites

*Generally, a site at least 50 years old which possesses historical, architectural, or archaeological significance*

*May include buildings, bridges, landmarks, historic districts, archaeological sites*

### Examples of a Historic Site

- Route 66
- Duncan Manor
- Residence near Towanda



Residence Near Towanda



Historic U.S. Route 66



## Historic Sites Regulations

- Section 106 of the National Historic Preservation Act of 1966
- Section 4(f) of the DOT Act, 1966, as revised



## What Do The Historic Properties Regulations Say?

- Must take all feasible actions to avoid.
- If avoidance is not possible, the proposed act must be deemed a public necessity and be approved by federal and state agencies

## What Regulations Protect Public Facilities, Schools, and Places of Worship?

- There are no federal or state regulations protecting non-Section 4(f) public facilities, schools, or places of worship.
- Should avoid impacting these resources, if possible.



## Other Resources

- Groundwater
- Visual
- Noise
- Air Quality
- Environmental Justice
- Socioeconomics
- Special Waste

## Potential Sustainable Practices

- **Protecting Greenways**
- **Stormwater Treatment**
- **Mitigating Wetlands**
- **Construction Practices**

