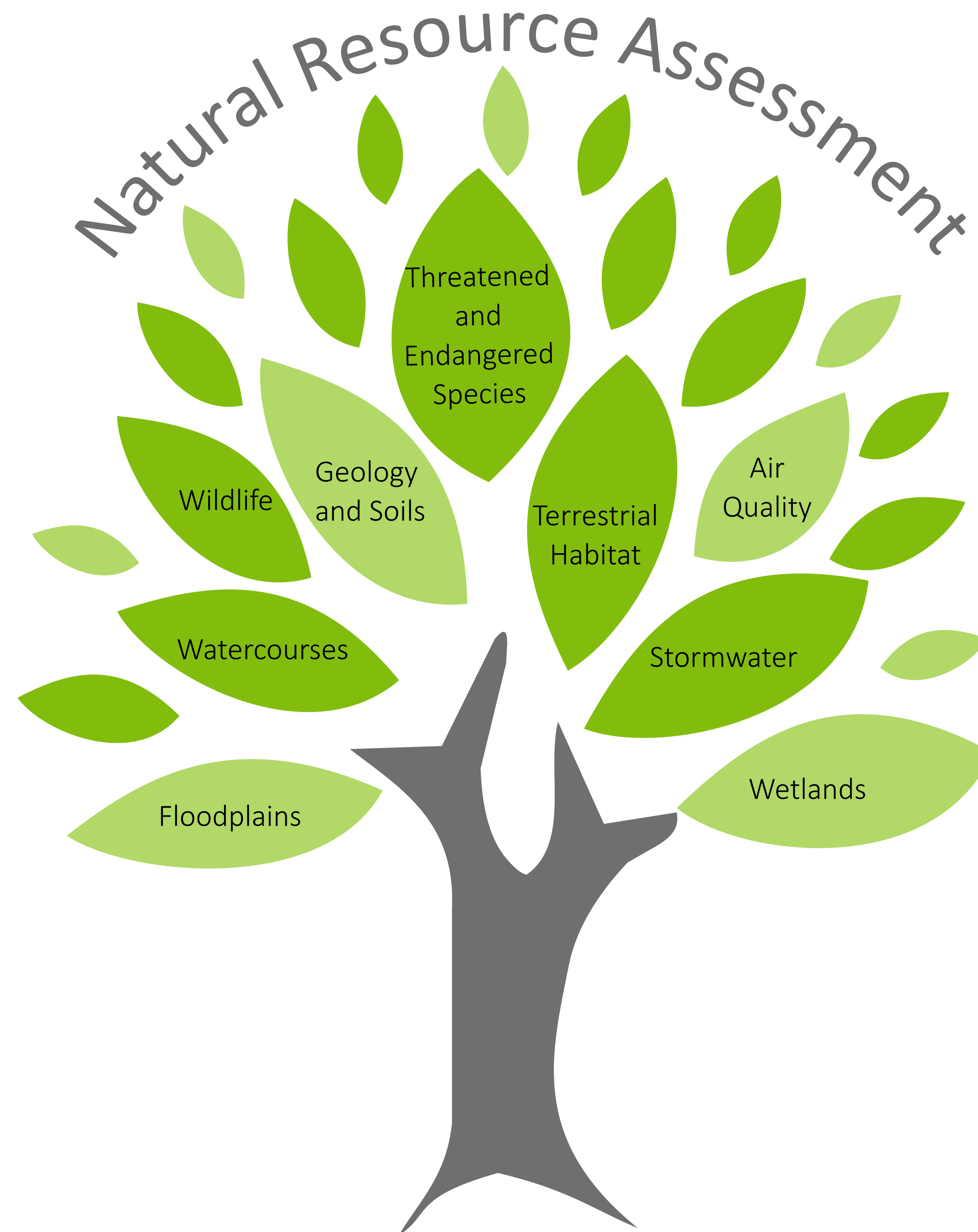


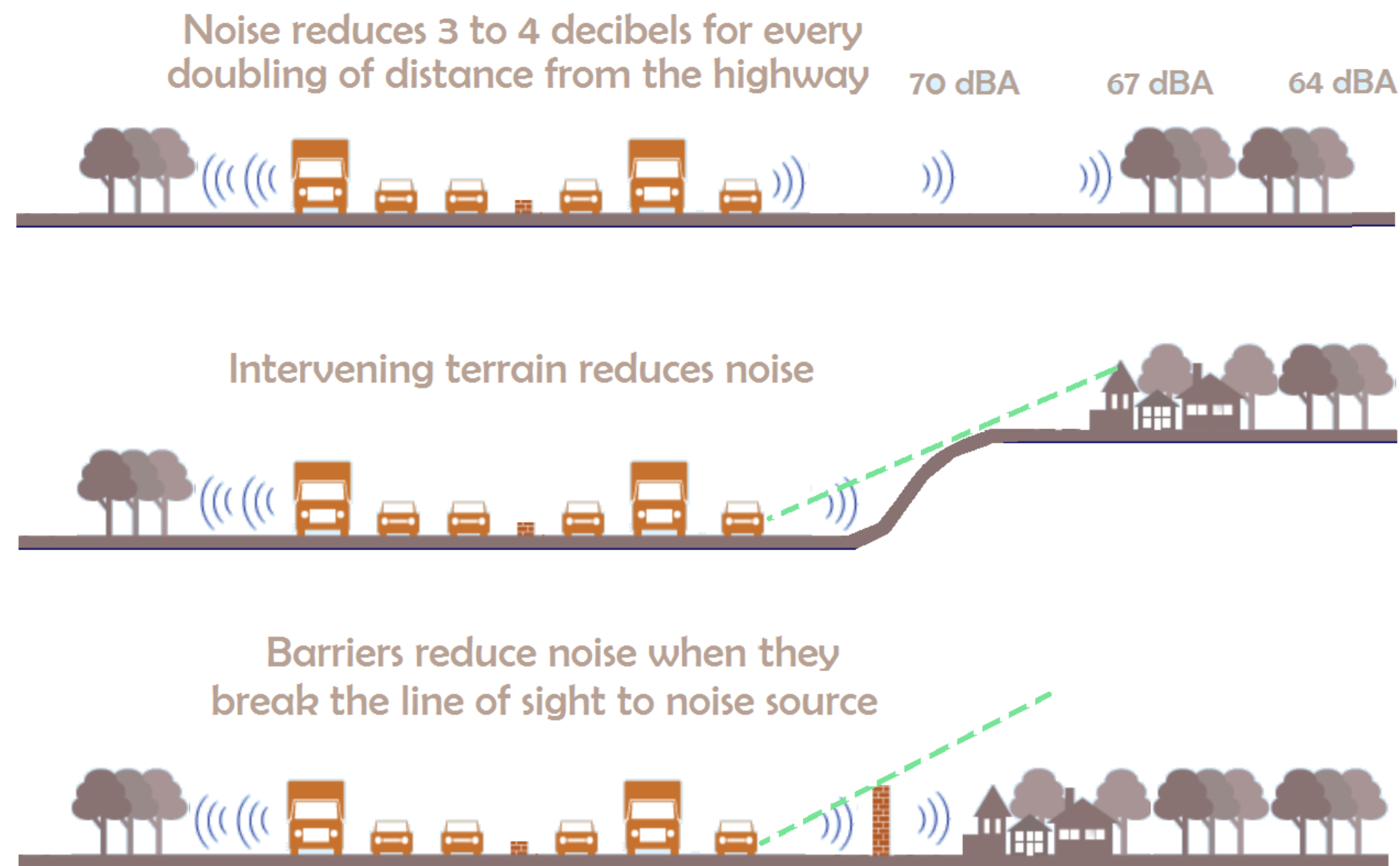
# Natural Environment

The natural environment is an important component of the environmental analysis. Each element will be evaluated in the context of future proposed improvements.

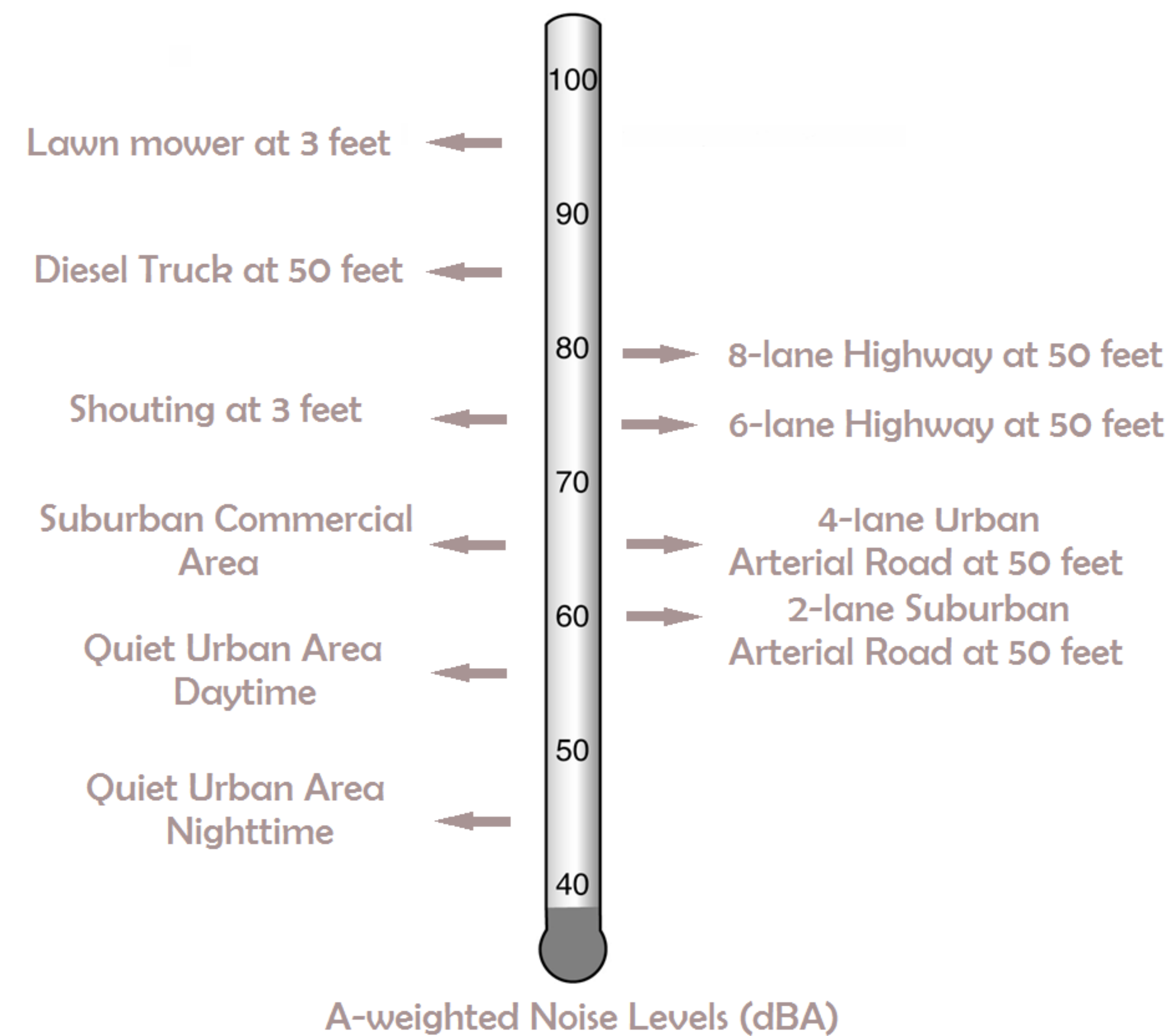




# Highway Noise



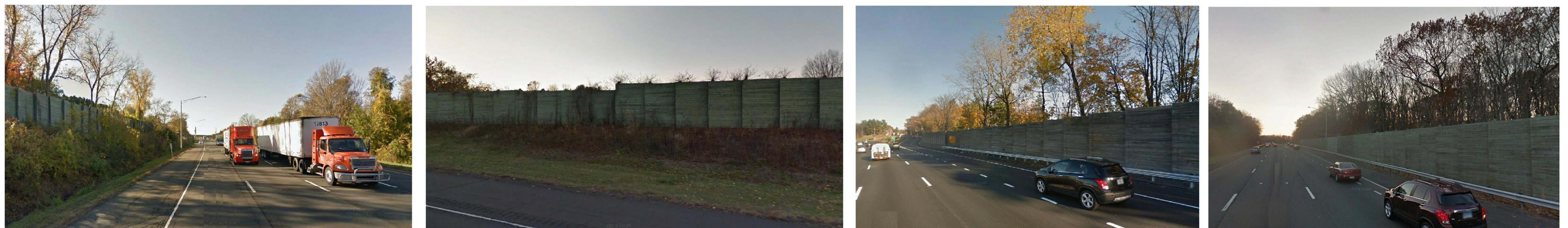
## Typical Noise Levels



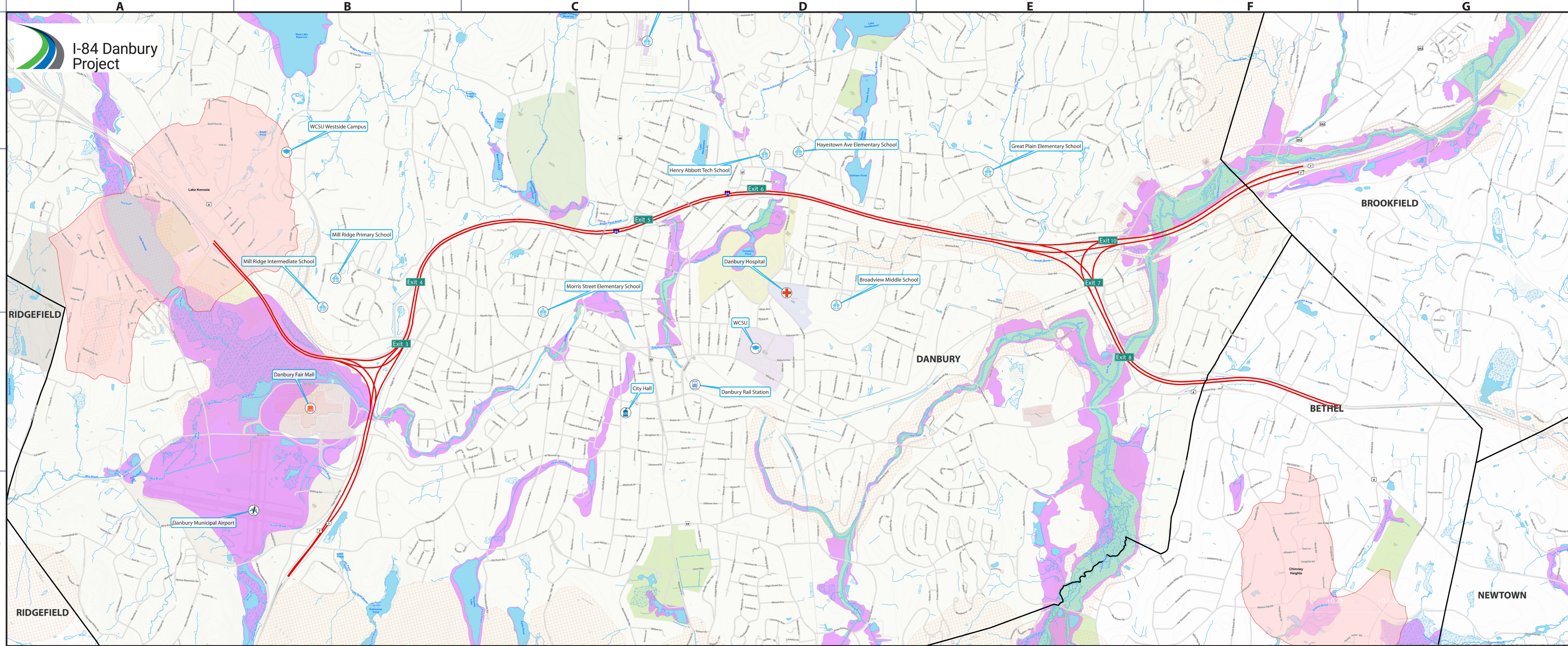
## How is Highway Noise Evaluated?

- Noise sensitive locations such as residences, schools, libraries, hospitals, places of worship and parks are identified
- Noise measurements are conducted at representative sites throughout the study area
- A Federal Highway Administration Traffic Noise Model (TNM) is developed to predict noise at all receptors
- Highway noise for future build conditions is predicted and compared to the CTDOT Noise Abatement Criteria (NAC)
- Noise abatement such as noise barriers is evaluated if noise levels exceed the NAC
- Noise barriers must meet feasibility and reasonableness criteria addressing:
  - Safety and maintenance
  - Acoustical effectiveness
  - Cost effectiveness
  - Viewpoints of residents

## Typical CTDOT highway noise barriers



Photos from Google Streetview



# The Environment

**Aquifer Protection Areas**  
 Aquifer Protection Areas refer to the lands surrounding public drinking water supplies such as wells and springs. These areas contain strict land use controls designed to protect the drinking water supplies from potential contamination. Within the project area, there are Aquifer Protection Areas surrounding Lake Kenosia in Danbury and the Chimney Heights wellfield in Bethel.

**Natural Diversity Database Areas**  
 Natural Diversity Database Areas represent known locations, both historic and present, of rare listed species and significant natural communities. State listed species are those listed as Endangered, Threatened or Special Concern under the Connecticut Endangered Species Act. To protect the exact locations of protected species from disturbance, the boundaries for these areas are generalized.

**100-Year Flood Zones**  
 100-Year Flood zones are areas that have a 1% or greater chance of being flooded in any given year. Local zoning regulations limit new development within flood zones. Most lenders require that properties within the 100-year flood zone obtain insurance through the National Flood Insurance Program (NFIP).

**FEMA Floodways**  
 A floodway is the channel of a river or stream and the part of the floodplain adjoining the channel that carry and discharge flood waters. An engineering analysis must be conducted for projects within the floodway to ensure that the project will not increase flood heights in surrounding areas. Floodways are regulated by the Federal Emergency Management Agency (FEMA).

