APPENDIX C

ENVIRONMENTAL IMPACT STATEMENT SIGNIFICANCE CRITERIA

Environmental Impact Statement Significance Criteria

As Section 3.0 of this EIS indicates, a project such as this can have a wide variety of impacts on different components of the environment. The importance, or "significance," of each of these diverse impacts depends on several factors. Some of these factors are matters of objective fact. For example, if a Federal law would clearly be violated by any aspect of the proposed action, then that would obviously be a significant impact. Other factors affecting significance are matters of judgment, such as the importance of losing some wildlife habitat. The CEQ regulations on NEPA provide a list of factors to be considered in determining impact significance. These factors are presented in the text box at the right. The study team used an assessment method that combines these multiple factors into an overall assessment of significance.

CEQ Regulations on Significance (40 CFR 1508.27)

The rating of an impact as "significant" in NEPA requires consideration of both the context and intensity of the impact.

- **Context:** The significance of an action must be analyzed in several contexts, including society as a whole, the affected region, the affected interests, and the locality. Both short- and long-term effects on an action should be analyzed.

- **Intensity:** Intensity refers to the severity of an impact. In evaluating the intensity of an impact of the proposed action, the following should be considered:

  - Impacts that may be both beneficial and adverse;
  - Effects on human health and safety;
  - Unique characteristics of the geographic area;
  - Highly controversial effects;
  - Highly uncertain or risky effects;
  - Potential for the action to set a precedence for future actions with significant effects;
  - Cumulative effects;
  - Adverse effects on significant scientific, cultural, or historic resources;
  - Adverse effects on a Threatened or Endangered species or its habitat; and
  - Whether the action violates or threatens a Federal, State, or local law or requirement.

During the planning stage of the study, the study team reviewed similar construction projects and documentation to ascertain the activities associated with the proposed action, and the types of impacts they could cause. Research was supplemented by professional judgment concerning impacts of typical concern for any large construction project. An environmental evaluation diagram (**Figure 3.1-1**), which lists the potential impacts for that activity, was developed for each activity associated with the proposed action.

The study team then identified the following major factors that influence the significance of most types of impacts:

- Magnitude of the impact (how much);
- Duration or frequency of the impact (how long or how often);
- Extent of the impact (how far);
- Likelihood of the impact occurring (probability); and
- Intensity of the impact (e.g., unique setting, unprecedented impacts, uncertain impacts, and controversiality).

For each of these factors, the team identified several levels of that factor, as shown below.

Magnitude:
- major
- moderate
- minor

Duration:
- long term
- medium term (intermittent)
- short term

Extent:
- large
- medium (localized)
- small (limited)

Likelihood:
- probable
- possible
- unlikely

Intensity:
- severe
- moderate
- slight

The team discussed and identified which combinations of these factors would constitute various overall ratings of significance, as shown in **Table C-1**. Given this general structure, applied to all types of impacts on all environmental resources, each member of the study team then developed specific definitions of these levels for each resource area. That is, biologists formulated a definition of what would constitute an impact of major magnitude on biological resources, what would be an impact of moderate magnitude, and so on. The archeologists similarly defined what would constitute an impact of major magnitude on cultural resources, and so on, through all the levels of each of the significance factors. These criteria are presented following this discussion.

For the fifth major factor presented above, intensity, the study team developed a set of definitions, based on intensifying factors, for each level that are applicable to impacts in essentially all resources areas. In other words, no resource-specific definitions are needed for intensity. These definitions are as follows:

- **Severe**:
  Impacts occur in such close proximity to National Parks, National Register sites, or other especially valued, unique, or protected sites, that the valued features of those nearby sites are severely jeopardized;
  OR
  Impacts are completely unprecedented; no similar impacts have ever been known to occur;
  OR
  The types, extent, or probability of the impacts cannot be reasonably predicted;
  OR
  There is substantial and sustained dispute among subject matter experts, agencies, organizations, and/or citizens about the nature or importance of the impacts.

- **Moderate**:
  Impacts would occur at sufficient distance from any protected site that the valued features would be imperceptibly altered;

OR
There is moderate confidence in the accuracy of the predictions as to types, extent, and likelihood of the impacts;
OR
There is moderate dispute among subject matter experts, agencies, organizations, and/or citizens about the nature or importance of the impacts.

- **Slight**:
  Impacts would occur at sufficient distance from any protected site that the valued features would be imperceptibly altered;
  OR
  The types, extent, or probability of the impacts can be reasonably predicted with only slight uncertainty;
  OR
  There is very limited dispute among subject matter experts, agencies, organizations, and/or citizens about the nature or importance of the impacts.

With this structure established for this study, the team then conducted the study. When the study team had obtained the information they needed to predict the magnitude, duration, extent, likelihood, and any intensifying factors associated with the impacts for each of the resource areas, they compared their predictions to these pre-established criteria to determine the levels of significance of the impacts they had predicted. The conclusions regarding the significance of the predicted impacts for each resource area presented in Sections 3.2.1 through 3.2.14 of this EIS are all, therefore, based on reference to this set of criteria, all of which have a common structure and rationale. Through the use of this approach, diverse impacts are assessed on a common footing. If a biological impact is rated by the study team as "very significant," the team intends that rating to have essentially the same meaning as a "very significant" impact rating in any other resource area.

As indicated above, assessing significance does involve judgment, and this approach does not remove that element from the process. What this method does is organize the analysts' judgment, and make the bases for their judgment more explicit and more uniform. Accordingly, the study team does not present their assessments as indisputable facts, but merely as the considered judgments of the professional team based on the explicit factors and considerations as described here.

Table C –1. Criteria for Rating Impacts

Levels of Impact					Impact Rating
Magnitude	**Duration**	**Extent**	**Likelihood**	**Intensity**	
Major	Any Level	Large or Medium	Probable	Any	**Very Significant**
Major	Long-term	Large or Medium	Possible	Any	
Major	Medium-term, intermittent, or short-term	Any Level	Possible	Severe	
Major	Medium-term, intermittent, or short-term	Any Level	Possible	Moderate or Slight	**Moderately Significant**
Moderate	Any Level	Large or Medium	Probable	Any	
Major	Any Level	Small	Probable	Any	
Major	Long-term	Small	Possible	Any	
Moderate	Any Level	Large	Possible	Any	
Moderate	Any Level	Medium or Small	Possible	Any	
Moderate	Any Level	Small	Probable	Any	
Major	Any Level	Large	Unlikely	Any	
Major	Long-term	Medium or Small	Unlikely	Any	
Minor	Any Level	Large	Probable	Any	
Minor	Long-term	Medium or Small	Probable	Any	
Major	Medium-term, intermittent, or short-term	Medium or Small	Unlikely	Any	
Minor	Medium-term or intermittent	Medium	Probable	Any	**Insignificant**
Minor	Any Level	Large	Possible	Any	
Minor	Long-term	Medium or Small	Possible	Any	
Moderate to Minor	Any Level	Any Level	Unlikely	Any	
Minor	Short-term	Medium	Probable	Any	
Minor	Medium-term, intermittent, or short-term	Small	Probable	Any	
Minor	Medium-term, intermittent, or short-term	Medium or Small	Possible	Any	

SIGNIFICANCE DEFINITIONS

IMPACT: SOIL EROSION

Term	Definition
Magnitude	
Major	Secondary effects (e.g., building damage, siltation of surface water)
Moderate	Aesthetic effects
Minor	Imperceptible changes
Duration	
Long-term	Through facility life (greater than 30 years)
Medium-term (limited or intermittent)	Recurrent
Short-term	During critical activities only (e.g., during construction)
Extent	
Large	Greater than 100 square yards (sq. yd.)
Medium (localized)	Approximately 10 sq. yd.
Small (limited)	Less than approximately 1 sq. yd.
Likelihood	
Probable	Occurs under typical operating conditions
Possible	Occurs under worst-case operating conditions
Unlikely	Occurs under upset/malfunction conditions

SIGNIFICANCE DEFINITIONS

IMPACT: SOIL CONTAMINATION

Term	Definition
Magnitude	
Major	Posing secondary (e.g., health) risks
Moderate	-------
Minor	No associated health risks
Duration	
Long-term	Cumulative over operational life
Medium-term (limited or intermittent)	Recurrent, or residues cumulating
Short-term	Easily cleared up or self-remediating (e.g., biological breakdown, volatilizing)
Extent	
Large	Greater than 100 cubic yards (cu. yd.) (100 sq. yd. surface area)
Medium (localized)	Approximately 10 cu. yd. (10 sq. yd. surface area)
Small (limited)	Less than 1 cu. yd. (2 sq. yd. surface area)
Likelihood	
Probable	Occurs under typical operating conditions
Possible	Occurs under worst-case operating conditions
Unlikely	Occurs under upset/malfunction conditions

SIGNIFICANCE DEFINITIONS

IMPACT: LOSS OF PRIME FARMLAND

Term	Definition
Magnitude	
Major	Project would impact areas of prime and unique farmland.
Moderate	-------
Minor	Project would impact areas dedicated to built-up uses, but with soils usually considered prime.
Duration	
Long-term	Project life of 20 years or more
Medium-term (limited or intermittent)	-------
Short-term	Project life of 5 years or less
Extent	
Large	Over 1,000 acres of prime and unique farmland is taken out of the resource base.
Medium (localized)	50 to 1,000 acres of prime and unique farmland is taken out of the resource base.
Small (limited)	Less than 50 acres of prime and unique farmland is taken out of the resource base.
Likelihood	
Probable	Occurs under typical operating conditions
Possible	Occurs under worst-case operating conditions
Unlikely	Occurs under upset/malfunction conditions

SIGNIFICANCE DEFINITIONS

IMPACT: AIR QUALITY DEGRADATION

Term	Definition
Magnitude	
Major	Would exceed a Federal or State standard
Moderate	Change greater than 50% of a Federal or State standard
Minor	Change less than 50% Federal or State standard or increment
Duration	
Long-term	Annual
Medium-term (limited or intermittent)	24 hours to 1 month
Short-term	1 to 8 hours
Extent	
Large	Widespread impact in several directions
Medium (localized)	A compass sector (22.5 degrees)
Small (limited)	A single receptor
Likelihood	
Probable	Occurs under typical operating conditions
Possible	Occurs under worst-case operating conditions
Unlikely	Occurs under upset/malfunction conditions

Source: Clean Air Act.

SIGNIFICANCE DEFINITIONS

IMPACT: DOWNSTREAM WATER FLOW REDUCTIONS

Term	Definition
Magnitude	
Major	Would eliminates or sharply curtail existing aquatic life or human uses dependent on in-stream flows or water withdrawals
Moderate	Would substantially interfere with existing aquatic life or human uses dependent on in-stream flows or water withdrawals
Minor	Any observable reductions in existing aquatic life (diversity and/or biomass) or impairment of human uses or withdrawals
Duration	
Long-term	Project life is more than 20 years
Medium-term (limited or intermittent)	Project life is 5 to 20 years
Short-term	Project life is less than 5 years
Extent	
Large	Effects extend downstream to the Kentucky River
Medium (localized)	Effects extend downstream to water course, which is a tributary of the dammed stream
Small (limited)	Effects extend downstream only along dammed stream itself
Likelihood	
Probable	Occurs under typical operating conditions
Possible	Occurs under worst case operating conditions
Unlikely	Occurs under upset/malfunction conditions

SIGNIFICANCE DEFINITIONS

IMPACT: SURFACE WATER QUALITY DEGRADATION

Term	Definition	
Magnitude		
Major	Immediately observable impact (e.g., fish kills), or any contamination posing secondary health risks	
Moderate	Some observable biological response (e.g., avoidance)	
Minor	No biological response would be observed	
Duration (Duration is somewhat parameter- and criteria-specific and must be considered in that context.)	Input Oriented	Event Oriented
Long-term	Sufficient period to exhibit chronic effects	Continuous series of events greater than 1 to 2 years
Medium-term (limited or intermittent)	Sufficient to exhibit acute and some subacute effects	Intermittent events over a maximum of 1 to 2 years
Short-term	Sufficient period to exhibit acute effects	Single event
Extent		
Large	a. Effect over entire watershed (water body) or multiple watershed, or b. Greater than 40% of major water body	
Medium (localized)	a. Effect greater than 25% of watershed (basin), or b. Greater than 50% of a small water body, or c. Greater than 10%, but less than 40%, of a major water body	
Small (limited)	Effect less than 25% of a single watershed, or less than 10% of a major water body. May include entire area of 1 to 2 small ponds (less than 5 acres) or a small seasonal wetland.	
Likelihood		
Probable	Occurs under typical operating conditions	
Possible	Occurs under worst-case operating conditions	
Unlikely	Occurs under upset/malfunction conditions	

SIGNIFICANCE DEFINITIONS

IMPACT: GROUNDWATER QUALITY DEGRADATION

Term	Definition	
Magnitude		
Major	Contamination that poses health risks by sharply exceeding drinking water standards and forcing well closures	
Moderate	Approaching or slightly exceeding drinking water standards on one or more parameters	
Minor	Degradation of baseline conditions on one or more parameters without approaching or exceeding standards	
Duration (Duration is somewhat parameter- and criteria-specific and must be considered in that context.)	Input-Oriented	Event-Oriented
Long-term	Sufficient period to exhibit chronic effects	Continuous series of events greater than 1 to 2 years
Medium-term (limited or intermittent)	Sufficient to exhibit acute and some subacute effects	Intermittent events over a maximum of 1 to 2 years
Short-term	Sufficient period to exhibit acute effects	Single event
Extent		
Large	a. Effect greater than entire aquifer, or b. Greater than 40% of a major aquifer	
Medium (localized)	a. Effect greater than 25% of a major aquifer, or b. Greater than 50% of a small aquifer, or c. Greater than 10 %, but less than 40%, of a major aquifer	
Small (limited)	Effect less than 25% of a single aquifer, or less than 10% of a major aquifer	
Likelihood		
Probable	Occurs under typical operating conditions	
Possible	Occurs under worst-case operating conditions	
Unlikely	Occurs under upset/malfunction conditions	

SIGNIFICANCE DEFINITIONS

IMPACT: WETLAND DEGRADATION

Term	Definition
Magnitude	
Major	In conflict with Federal or State wetland protection programs
Moderate	-------
Minor	Wetland losses would be mitigated through consultation with Federal and State agencies
Duration	
Long-term	Project life is more than 20 years
Medium-term (limited or intermittent)	Project life is 5 to 20 years
Short-term	Project life is less than 5 years
Extent	
Large	Greater than 5% of the regional resource
Medium (localized)	2% to 5% of the regional resource
Small (limited)	Less than 2% of the regional resource
Likelihood	
Probable	Occurs under typical operating conditions
Possible	Occurs under worst case operating conditions
Unlikely	Occurs under upset/malfunction conditions

Source: Executive Order 11990: Protection of Wetlands.

SIGNIFICANCE DEFINITIONS

IMPACT: FLOODPLAIN DAMAGE

Term	Definition
Magnitude	
Major	In conflict with Federal or State floodplain management
Moderate	In conflict with regional or County floodplain management
Minor	In conflict with nearby municipal or site-specific floodplain management plans or no conflicts
Duration	
Long-term	Project life is more than 20 years
Medium-term (limited or intermittent)	Project life is 5 to 20 years
Short-term	Project life is less than 5 years
Extent	
Large	The floodplain cannot be avoided and the floodway would be impaired
Medium (localized)	-------
Small (limited)	The floodplain cannot be avoided, but would not be impaired
Likelihood	
Probable	Occurs under typical operating conditions
Possible	Occurs under worst case operating conditions
Unlikely	Occurs under upset/malfunction conditions

Source: Executive Order 11988: Floodplain Management.

SIGNIFICANCE DEFINITIONS

IMPACT: TERRESTRIAL RESOURCES/BIOLOGICAL RESOURCES DEGRADATION

Term	Definition
Magnitude	
Major	Loss of any Threatened or Endangered species, loss or degradation of any critical habitat. Impacts to Threatened or Endangered species are considered to be of major magnitude unless a Biological Assessment team report has been prepared and indicates otherwise.
Moderate	Loss of any sensitive species or habitats; loss or degradation of any unusual plant communities
Minor	Loss or degradation of undisturbed/developed vegetation or habitat in affected area
Duration	
Long-term	Greater than 1 year (or during critical periods)
Medium-term (limited or intermittent)	One month to 1 year
Short-term	Less than 1 month
Extent	
Large	Greater than 5% of regional (as defined by county or space center boundaries, if known) resources
Medium (localized)	2% to 5% of regional resources
Small (limited)	Less than 2% of regional resources
Likelihood	
Probable	Occurs under typical operating conditions
Possible	Occurs under worst-case operating conditions
Unlikely	Occurs under upset/malfunction conditions

SIGNIFICANCE DEFINITIONS

IMPACT: RECREATION DEGRADATION

Term	Definition
Magnitude	
Major	Project would eliminate areas of prime or unique recreation opportunities or facilities
Moderate	Reduction of recreational opportunities within the area
Minor	Slight modification of recreation opportunities within the area
Duration	
Long-term	Project life is more than 20 years
Medium-term (limited or intermittent)	Project life is 5 to 20 years
Short-term	Project life is less than 5 years
Extent	
Large	Users from the State of Kentucky or beyond
Medium (localized)	Users from Jackson County and neighboring counties
Small (limited)	Predominantly local users
Likelihood	
Probable	Occurs under typical operating conditions
Possible	Occurs under worst-case operating conditions
Unlikely	Occurs under upset/malfunction conditions

SIGNIFICANCE DEFINITIONS

IMPACT: CULTURAL RESOURCE DEGRADATION

Term	Definition
Magnitude	
Major	Project would adversely affect a site listed on or eligible for listing on the National Register of Historic Places or World Heritage List, and mitigation of adverse effects is unsuccessful or not possible.
Moderate	-------
Minor	Project would adversely affect a site listed on or eligible for listing on the National Register of Historic Places, and mitigation of adverse effects is successful.
Duration	
Long-term	More than 5 years
Medium-term (limited or intermittent)	1 to 5 years
Short-term	Less than 1 year
Extent	
Large	Most of the historic or archaeological site or district affected (more than 50%)
Medium (localized)	Part of the historic or archaeological site or district affected (5 to 50%)
Small (limited)	Small portion of the historic or archaeological site or district affected (less than 5%)
Likelihood	
Probable	Occurs under typical operating conditions
Possible	Occurs under worst-case operating conditions
Unlikely	Occurs under upset/malfunction conditions

Sources: National Historic Preservation Act;
36 CFR 800: Protection of Historic and Cultural Properties.

SIGNIFICANCE DEFINITIONS

IMPACT: HAZARDOUS WASTE

Term	Definition
Magnitude	
Major	Large generator of hazardous waste (i.e., generates greater than 1000 kg of hazardous waste in a calendar month)
Moderate	Large intermittent generator of hazardous waste
Minor	Small quantity generator (i.e., generates less then 1000 kg of hazardous waste in a calendar month)
Duration	
Long-term	Generates hazardous waste throughout the life of the project
Medium-term (limited or intermittent)	Intermittent generator of hazardous waste
Short-term	Generates hazardous waste only during infrequent operations
Extent	
Large	Generates hazardous waste during all phases of construction and operation
Medium (localized)	Generates hazardous waste during about one-half of the duration of construction and operation
Small (limited)	Generates hazardous waste during less than one-half of the duration of construction and operation
Likelihood	
Probable	Occurs under typical operating conditions
Possible	Occurs under worst-case operating conditions
Unlikely	Occurs under upset/malfunction conditions

SIGNIFICANCE DEFINITIONS

IMPACT: SOLID WASTE

Term	Definition
Magnitude	
Major	Existing landfill capacity less than 2 years, or no existing capacity or groundwater contamination
Moderate	Existing landfill capacity would be depleted in 7 to 2 years; no groundwater contamination
Minor	Existing landfill capacity would be depleted in more than 7 years; no groundwater contamination
Duration	
Long-term	Siting and permitting of new disposal facility would take more than 3 years; or groundwater contamination
Medium-term (limited or intermittent)	Siting and permitting of new disposal facility would take from 1 to 3 years
Short-term	Siting and permitting of new disposal facility would take less than 1 year; no groundwater contamination
Extent	
Large	Multiple landfills needed or a large landfill needed to expand capacity (greater than 100 acres); or large groundwater contaminant plume
Medium (localized)	Moderate-sized landfill needed (40 to 100 acres)
Small (limited)	Small landfill needed (less than 40 acres)
Likelihood	
Probable	Occurs under typical facility operating conditions
Possible	Occurs under worst-case operating conditions
Unlikely	Occurs under upset/malfunction conditions

SIGNIFICANCE DEFINITIONS

IMPACT: LAND USE CONFLICTS

Term	Definition
Magnitude	
Major	In conflict with Federal or State land use plans
Moderate	In conflict with regional or County land use plans
Minor	In conflict with nearby municipal or site-specific land use plans
Duration	
Long-term	Project life is more than 20 years
Medium-term (limited or intermittent)	Project life is 5 to 20 years
Short-term	Project life is less than 5 years
Extent	
Large	Proposed project occupies an area greater than 5% of the planning area jurisdiction.
Medium (localized)	------
Small (limited)	Proposed project occupies an area less than 5% of the planning area jurisdiction.
Likelihood	
Probable	Occurs under typical operating conditions
Possible	Occurs under worst-case operating conditions
Unlikely	Occurs under upset/malfunction conditions

SIGNIFICANCE DEFINITIONS

IMPACT: LOSS OF AGRICULTURAL LAND USE

Term	Definition
Magnitude	
Major	A 25% or greater reduction in crop yields per acre
Moderate	A 5% to 25% reduction in crop yields per acre
Minor	A less than 5 % reduction in crop yields per acre
Duration	
Long-term	More than 1 growing season
Medium-term	-------
Short-term	Damage seen within part of a growing season
Extent	
Large	5% of County agricultural acres
Medium (localized)	2% to 5% of County agricultural acres
Small (limited)	1% or less of County agricultural acres
Likelihood	
Probable	Occurs under typical operating conditions
Possible	Occurs under worst-case operating conditions
Unlikely	Occurs under upset/malfunction conditions

SIGNIFICANCE DEFINITIONS

IMPACT: TRAFFIC CONGESTION

Term	Definition
Magnitude	
Major	Service level decreased to E or below; Vehicle spacing is at approximately 6 car lengths
Moderate	Service level decrease to D; Vehicle spacing is at or above 165 feet, or 9 car lengths
Minor	Service level remains at C or above; Vehicle spacing is in range of 220 feet, or 11 car lengths
Duration	
Long-term	More than 3 years (operational period)
Medium-term (limited or intermittent)	1 to 3 years (generally equivalent to construction period)
Short-term	Less than 1 year (associated with temporary road closures)
Extent	
Large	Multiple intersections or road segments on key access routes to community
Medium (localized)	1 to 3 intersections or road segments, primarily affects traffic routes
Small (limited)	1 intersection or road segment, not key location in local system
Likelihood	
Probable	Occurs under typical operating conditions
Possible	Occurs under worst-case operating conditions
Unlikely	Occurs under upset/ malfunction conditions

SIGNIFICANCE DEFINITIONS

IMPACT: NOISE

Term	Definition	
Magnitude	**A-Weighted (Humans)**	**Linear (Structures)**
Major	Greater than 100 decibel (dB) noise levels	Greater than 130 dB noise levels (15 pounds per square foot (PSF))
Moderate	Noise levels between 75 dB and 100 dB	Noise levels between 127 dB and 130 dB (10 to 15 PSF)
Minor	Noise levels less than 75 dB	Noise levels less than 127 dB (10 PSF)
Duration		
Long-term	More than 3 minutes	
Medium-term (limited or intermittent)	-------	
Short-term	3 minutes or less	
Extent		
Large	More than 1,000 persons exposed to greater than 80 dB, or 100 houses affected by structural damage	
Medium	100 to 1,000 people affected, or between 30 and 100 homes affected by structural damage	
Small	Less than 100 people affected, or less than 30 homes affected by structural damage	
Likelihood		
Probable	Occurs under typical operating conditions	
Possible	Occurs under worst-case operating conditions	
Unlikely	Occurs under upset/malfunction conditions	

SIGNIFICANCE DEFINITIONS

IMPACT: ALTER VISUAL QUALITY

Term	Definition
Magnitude	
Major	A modification, which is dominant in the landscape and demands attention.
Moderate	A modification, which attracts attention, but is not dominant.
Minor	A modification, which can be seen, but does not attract attention.
Duration	
Long-term	Project life of 20 years or more
Medium-term (limited or intermittent)	Project life of 5 to 10 years
Short-term	Project life of less than 5 years
Extent	
Large	Visual quality is altered for more than 1,000 people
Medium (localized)	Visual quality is altered for 100 to 1,000 people
Small (limited)	Visual quality is altered for less than 100 people
Likelihood	
Probable	Occurs under typical operating conditions
Possible	Occurs under worst-case operating conditions
Unlikely	Occurs under upset/malfunction conditions

Source: Bureau of Land Management: Visual Resource Management Guidelines.

SIGNIFICANCE DEFINITIONS

IMPACT: DEGRADE HUMAN HEALTH AND SAFETY

Term	Definition
Magnitude	
Major	Catastrophic event resulting in loss of life, severe injuries requiring hospitalization, or major property damage or loss.
Moderate	Event resulting in moderate injuries, which may require hospitalization, or moderate property damage or loss.
Minor	Event resulting in minor injuries, which do not require hospitalization, or minor property damage or loss.
Duration	
Long-term	Greater than 10 years to return to normal
Medium-term (limited or intermittent)	1 to 10 years to return to normal
Short-term	Less than 1 year to return to normal
Extent	
Large	Extending outside buffer zone into region, State, or nation
Medium (localized)	Confined to within buffer zone into region, State, or nation
Small (limited)	Confined to site or individual facility on the site
Likelihood	
Probable	Occurs under typical operating conditions
Possible	Occurs under worst-case operating conditions
Unlikely	Occurs under upset/malfunction conditions

SIGNIFICANCE DEFINITIONS

IMPACT: SOCIOECONOMICS

(Population or Employment Changes, or Changes in Housing and Service)

Term	Definition
Magnitude	
Major	Greater than 3% change in population, employment, or housing, if measurable
Moderate	2% to 3% change in population, employment, or housing, if measurable
Minor	Less than 1% change in population, employment, or housing, if measurable
Duration	
Long-term	More than 10 years
Medium-term (limited or intermittent)	3 to 10 years
Short-term	Less than 3 years (assuming a 3-year construction phase)
Extent	
Large	State, regional, or national
Medium (localized)	Entire study area
Small (limited)	Part of study area
Likelihood	
Probable	Greater than 50% chance of occurrence
Possible	5% to 50% chance of occurrence
Unlikely	Less than 5% chance of occurrence

SIGNIFICANCE DEFINITIONS

IMPACT: CHANGES IN INCOME

Term	Definition
Magnitude	
Major	Greater than 10% change in per capita income
Moderate	5% to 10% change in per capita income
Minor	Less than 5% change in per capita income.
Duration	
Long-term	Project-induced jobs remain in the County and directly contribute to individual income.
Medium-term	Temporary project money circulates through the region.
Short-term	Project-induced spending is localized and temporary.
Extent	
Large	Entire State is affected
Medium (localized)	Entire region or County is affected
Small (limited)	Study area only is affected
Likelihood	
Probable	Greater than 50% chance of occurrence
Possible	5% to 50% chance of occurrence
Unlikely	Less than 5% chance of occurrence

SIGNIFICANCE DEFINITIONS

IMPACT: CHANGES IN THE TAX BASE

Term	Definition
Magnitude	
Major	Greater than 10% of land withdrawn from the County's tax base
Moderate	2% to 10% of land withdrawn from the County's tax base
Minor	Less than 2% of land withdrawn from the County's tax base
Duration	
Long-term	Tax base suffers an irreplaceable loss.
Medium-term	Tax base requires new development over time to replace the loss.
Short-term	Tax base can replace the loss within immediate tax reassessments.
Extent	
Large	Entire County's revenue is affected by the loss to the tax base.
Medium (localized)	Entire study area tax assessment is affected.
Small (limited)	Part of study area tax assessment is affected.
Likelihood	
Probable	Greater than 50% chance of occurrence
Possible	5% to 50% chance of occurrence
Unlikely	Less than 5% chance of occurrence

SIGNIFICANCE DEFINITIONS

IMPACT: RESIDENTIAL RELOCATION

Term	Definition
Magnitude	
Major	Greater than 30 homes relocated or demolished and community structure is broken
Moderate	10 to 30 homes relocated or demolished
Minor	Less than 10 homes relocated or demolished and community remains intact
Duration	
Long-term	Indefinite
Medium-term	Greater than 5 years
Short-term	Less than 5 years
Extent	
Large	Entire study area is affected
Medium (localized)	Part of the study area is affected
Small (limited)	One street is affected
Likelihood	
Probable	80 to 100% chance of occurrence
Possible	20% to 80% chance of occurrence
Unlikely	Less than 20% chance of occurrence

SIGNIFICANCE DEFINITIONS

IMPACT: TAX ASSESSMENT CHANGES

Term	Definition
Magnitude	
Major	Landowner is forced to sell land and the demand for land throughout the area changes.
Moderate	Landowner changes land use due to new assessments.
Minor	Landowner continues current land use in existing location.
Duration	
Long-term	Permanent relocation out of the area
Medium-term	Tax assessment forces landowner to sell land after 5 to 10 years
Short-term	Tax assessment has short-term monetary impacts
Extent	
Large	Entire County is affected.
Medium (localized)	Entire study area is affected.
Small (limited)	Part of study area is affected.
Likelihood	
Probable	Private land is newly assessed as lakefront property.
Possible	Some of the private land is assessed as lakefront property, and the landowner has alternative means of subsistence.
Unlikely	Land does not become lakefront property and alternate means of subsistence exist for landowner.

SIGNIFICANCE DEFINITIONS

IMPACT: ENVIRONMENTAL JUSTICE

Term	Definition
Magnitude	
Major	Disproportionately high environmental impact, which affects an entire minority and low-income community, as well as pollution to fish/wildlife for subsistence consumption.
Moderate	-------
Minor	A disproportionate environmental impact, which affects a portion of a minority or low-income community.
Duration	
Long-term	Throughout the life of the project construction and operation
Medium-term (limited or intermittent)	Temporarily (from 2 to 6 months)
Short-term	Isolated incident or less than 2 months
Extent	
Large	100% of the impact is experienced by minority and/or low-income populations.
Medium (localized)	75% of the impact is experienced by minority and/or low-income populations.
Small (limited)	60% of the impact is experienced by minority and/or low-income populations.
Likelihood	
Probable	Occurs under typical operating conditions
Possible	Occurs under worst-case operating conditions
Unlikely	Occurs under upset/malfunction conditions

Sources: Executive Order 12898: Federal Actions to Address Environmental Justice in Minority Populations and Low-Income Populations;
Council on Environmental Quality: Environmental Justice, Guidance Under the National Environmental Policy Act.