

## NEPA: Analyzing Impacts (#1620-10)



### Lesson 3 Determining Significance

## Determining Significance

### Objectives:

- Determine severity or intensity of an impact by considering one or more factors.
- Determine context of an impact by comparing it to the existing environment.
- Identify potential significance thresholds for a resource or program.

## Determining Significance

### Things to Ponder:

- If you're working on an EA, you must determine if the impacts will be significant.
- To avoid being arbitrary and capricious, be sure to have good rationale.
- To assess the severity of impacts, determine their significance using the CEQ guidance (40 CFR 1508.27).
- By using good rationale that is well-documented, your determination is more likely to be objective and defensible.

## Determining Significance

### Overview

To determine significance of an impact, you must determine its context and intensity.

– **Intensity:** severity or extent of the impact. Look at direct, indirect, and cumulative effects to determine intensity.

– **Context:** relationship of impact to its environment, as described in the Affected Environment. Short- and long-term effects are relevant.

## Determining Significance

### Overview

A low intensity impact can be significant or not, depending on the context.

For example, let's say a project would adversely affect 1 acre of salamander habitat. The impact would be significant if it were the last acre of habitat in the state, but would **not** be significant if there were a million acres of habitat in the state.

## Determining Significance

### Determining Impact Severity/Intensity (CEQ, 40 CFR 1508.27(b))

Consider:

1. impacts that may be both beneficial and adverse.
2. degree to which action affects public health and safety.
3. unique characteristics of geographic area.
4. degree to which effects may be highly controversial.
5. highly uncertain effects or unique or unknown risks.
6. degree to which action may establish precedent for future actions with significant impacts.

## Determining Significance

### Determining Impact Severity/Intensity (CEQ, 40 CFR 1508.27(b))

#### Consider:

7. individually insignificant but cumulatively significant impacts.
8. degree to which action may affect objects eligible for listing in the National Register of Historic Places.
9. degree to which action could adversely affect listed species or their critical habitat.
10. whether the action could violate federal, state, or local law or requirements for protecting the environment.

## Determining Significance

### Techniques for Determining Impact Significance:

1. Comparison and conclusion
2. Recognized expert
3. Policy of agencies with administrative jurisdiction
4. Similar experience or example
5. Law or regulation
6. Critical nature of the resource, the action, or the impact
7. Threshold from an approved model or analysis approach

## Determining Significance

NOTE: Although you don't have to make a significance determination in an EIS, you should still disclose the context and intensity of impacts.

### Did You Know?

A finding that the impacts are significant or not **must** be based on the analysis in the EA or EIS and should directly reference it.

## Exercise 3: Significance Thresholds

### Resources and Programs

Transportation	Cultural Resources	Water Resources	Livestock Grazing
Social & Economic	Visual Resources	Fisheries	Wildlife
Air Resources	Land Use & Realty	Vegetation	Biodiversity
Noise	Geology and Soils	Wetlands	Recreation

### Exercise Instructions

1. Type three resources or programs (from the list above) on the line below.
2. Type the potential significance threshold for each resource or program in the boxes.
3. Compare your answers with the instructor's.

**Did You Know?** When you are doing this for an actual project, the impact indicators would be for the issues, not for resources or programs.

Resource or Program	Potential Significance Threshold
1. _____	<input type="text"/>
2. _____	<input type="text"/>
3. _____	<input type="text"/>

### Exercise 3: Review

Resource/Program	Significance Threshold ( <i>examples</i> )
Transportation	
Social & Economic	
Air Resources	
Noise	
Cultural Resources	
Visual Resources	

### Exercise 3: Review

Resource/Program	Significance Threshold ( <i>examples</i> )
Land Use & Realty	
Geology & Soils	
Water Resources	
Fisheries	
Vegetation	

## Exercise 3: Review

Resource/Program	Significance Threshold ( <i>examples</i> )
Wetlands	
Livestock Grazing	
Wildlife	
Biodiversity	
Recreation	

## Significance Quiz and Scenarios

First, you are going to be presented with a short quiz based on impact significance. Don't worry! The quiz isn't graded. It's only intended to review what you learned in this lesson.



After you have completed the quiz, you will be presented with two scenarios. After you read each scenario, you will be asked several questions about the context of the impact, the intensity factors, and whether the impact is significant or not.

Continue

## Significance Quiz

### Quiz – Question 2

Read the following and select the best answer.

A significance determination must be made for which of the following NEPA documents:

- a. Categorical Exclusion (CX)
- b. Determination of NEPA Adequacy (DNA)
- c. Environmental Assessment (EA)
- d. Environmental Impact Statement (EIS)

Continue

## Significance Quiz

### Quiz – Question 3

Read the following and select the best answer.

What is the purpose of a significance determination?

- a. To decide whether an EIS is necessary.
- b. To determine the context and intensity of mitigation.
- c. To determine whether the action is consistent with the land use plan.
- d. To decide if the project will be approved or denied.

Continue



## Significance Quiz

### Quiz – Question 4

Read the following and type the best answers in the boxes.

As specified in the CEQ Regulations (40 CFR [1508.27]), to determine the significance of an impact, you must consider both the  and the  of the impact.

Continue

## Significance Quiz

### Quiz – Question 5

Read the following and type the best answers in the boxes.

To determine context, you would compare the potential impacts to the  of the resources, which can be found in  section of the NEPA document.

- a. alternatives
- b. affected environment
- c. existing condition
- d. desired condition

Continue

## Significance Quiz

### Quiz – Question 6

Read the following and type the best answers in the boxes.

To determine the , which refers to the  of an impact, you would consider the 10 factors described by the CEQ in 40 CFR 1508.27.

- a. context
- b. significance
- c. severity
- d. intensity

Continue

## Scenario 1 – Fuels Treatment

**Proposed Action:** Treat 5,000 acres within the 2 million-acre planning area using management-ignited fire. The fuels treatments will occur mostly in wildland-urban interface areas over the next five years. The objective is to create a mosaic pattern of burned and unburned areas to reduce the threat of large wildfires, maximize benefits to wildlife and domestic livestock grazing, and reduce the amount of interior chaparral.

**Additional Information:** There are 50,000 acres of interior chaparral in the planning area. These areas are in Fire Condition Class 3 (*Fire regimes and vegetation attributes have been significantly altered from their historical range. The risk of losing key ecosystem components is high. Fire frequencies have departed from historical frequencies, resulting in dramatic changes to fire size, frequency, and intensity.*)

The treatment area is adjacent to the Big Rock Area of Critical Environmental Concern (*An area designated and administered by the BLM where special management attention is required to protect and prevent irreparable damage to historic, cultural, or scenic values, fish and wildlife resources, or other natural systems or processes, or to protect people from natural hazards.*), which has rare plants and habitat for a threatened warbler. There are no known cultural or historical resources in the area.

The public is in favor of removing chaparral in the areas indicated because they've seen the positive results from the treatments the field office has undertaken over the past few years to remove chaparral.

The action is consistent with federal, state, and local laws, such as the Federal Land Policy and Management Act, Clean Air Act, Clean Water Act; as well as being consistent with the BLM land use plan and the county plan.

Continue

## Scenario 1 – Fuels Treatment

### Question 1

1. Based on the Fuels Treatment Scenario on the previous page, which of the following best addresses the context of the impacts?
  - a. The area to be treated is localized and impacts will occur in the immediate treatment area only.
  - b. The area to be treated is less than one percent of the planning area.
  - c. Vegetation types in the area to be treated have 23% scrub oak, compared to the chaparral in the northern part of the state which is only 6% scrub oak.
  - d. Treating 5,000 acres will decrease the amount of interior chaparral in the planning area by 10%.

Continue

## Scenario 1 – Fuels Treatment

Below are the 10 intensity factors from the CEQ Regulations (40 CFR 1508.27(b)). The BLM NEPA Handbook recommends addressing them as reasons for the determination of significance or non-significance.

1. Impacts that may be both beneficial and adverse.
2. The degree to which the action may affect public health or safety.
3. Unique characteristics of the geographic area, such as proximity to historic or cultural resources, parklands, prime farmlands, wetlands, wild & scenic rivers, ecologically critical areas.
4. The degree to which the effects on the quality of the human environment are likely to be highly controversial.
5. The degree to which the possible effects on the environment are highly uncertain or involve unique or unknown risks.
6. The degree to which the action may establish a precedent for future actions.
7. Whether the action is related to other actions with individually insignificant but cumulatively significant impacts.
8. The degree to which the action may adversely affect areas or objects listed in or eligible for listing in the National Register of Historic Places or may destroy significant scientific, cultural, or historical resources.
9. The degree to which the action may adversely affect a threatened or endangered species or its critical habitat.
10. Whether the action threatens a violation of federal, state, or local law to protect the environment.

Next we'll address these factors to determine significance.

Continue

## Scenario 1 – Fuels Treatment

This is how we addressed 6 of the 10 intensity factors for the Fuels Treatment scenario.

Intensity Factor	Response
4. The degree to which the effects on the quality of the human environment are likely to be highly controversial.	We have burned 6,000 acres of interior chaparral in our field office over the past 10 years. The effects are well known and are not likely to be controversial.
5. The degree to which the possible effects on the environment are highly uncertain or involve unique or unknown risks.	Previous fuels treatment projects have resulted in the desired change in vegetation structure, improved forage production, and decreased wildfire risk. No unique or unknown risks are expected to occur from this project.
6. The degree to which the action may establish a precedent for future actions.	The action does not set a precedent for future actions; fuels treatments have occurred in the area.

Continue

## Scenario 1 – Fuels Treatment

This is how we addressed 6 of the 10 intensity factors for the Fuels Treatment scenario.

Intensity Factor	Response
7. Whether the action is related to other actions with individual insignificant but cumulatively significant impacts.	Effects are expected to be similar to effects from previous similar projects. Considering mitigation and the small percentage of the field office being treated, we don't anticipate impacts will be cumulatively significant.
8. The degree to which the action may adversely affect areas or objects listed in or eligible for listing in the National Register of Historic Places or may destroy significant scientific, cultural, or historical resources.	There are no known cultural or historical resources in the area (per survey conducted July 2008) so we don't anticipate loss or destruction.
10. Whether the action threatens a violation of federal, state, or local law to protect the environment.	Yes, action would be consistent with FLPMA, NEPA, CWA, CAA, county plan, and BLM land use plan.

Continue

## Scenario 1 – Fuels Treatment

### Question 2

Now it's your turn! How would you address the four remaining intensity factors for the Fuels Treatment scenario? Type your answers in the boxes below.

Intensity Factors	Response
1. Impacts that maybe both beneficial and adverse.	
2. The degree to which the action may affect public health or safety.	
3. Unique characteristics of the geographic area, such as proximity to special areas.	
9. Degree to which the action may adversely affect a threatened or endangered species or habitat.	

Continue

## Scenario 1 – Fuels Treatment

### Question 3

Based on the exercise you just completed on the intensity factors for the fuels treatment scenario, what would your findings be regarding significance?

- a. Based on the reasons given, I find no significant impacts; therefore, an EIS would **not** be required.
- b. Based on the reasons given, there would be significant impacts; therefore an EIS **would** be required.

## Scenario 2 – The Pipeline

### Question 1

Let's look at another way to consider context. CEQ Regulations (40 CFR 1508.27) say the significance of an action must be analyzed in several contexts such as society as a whole, the affected region, the affected interests, and the locality. Significance varies with the setting of the proposed action. So, in general, the more localized the action and impacts, the less likely it is to be significant. How you write your impact analysis will help.

Consider the context from the following statement and select the best answer:

The proposed pipeline project would remove vegetation on just 26 acres of the 26,000-acre project area. The disturbed area is within endangered gray wolf habitat in north-central Utah.

- a. Significant
- b. Not significant
- c. Could be significant, because it's within endangered species habitat.
- d. Could be not significant, because only 0.01% of the project area would be disturbed.

Continue

## Scenario 2 – The Pipeline

### Question 2

Consider the context from the following statement and select the best answer.

The proposed pipeline project would remove all vegetation on 26 acres (0.01% of the project area) of the existing 260 acres of endangered gray wolf habitat in north-central Utah. Because of the location of the pipeline, it would effectively decrease the amount of wolf habitat by 40% due to habitat fragmentation. The wolf habitat in north-central Utah habitat is crucial to the survival of the 20 known individuals in the area and by decreasing the habitat by 40%, it is expected to support 8 fewer animals (40%).

- a. Significant because of the location of the disturbance.
- b. Not significant because of the amount of the disturbance.

Continue

## Summary

- Shun the 2-sentence FONSI.
- Document rationale for conclusions.
- Document assumptions.
- Show your work.
- If you didn't document it, it didn't happen!
- Use the 2008 BLM NEPA Handbook (H-1790-1) (Significance is covered in Section 7.3).