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### 415.01 Introduction

This chapter provides the policy direction regarding the incorporation of climate change considerations and climate change-related effects throughout the environmental planning, review, and design process. The Council on Environmental Quality (CEQ) updated their National Environmental Policy Act (NEPA) implementing regulations ([40 CFR 1500-1508](#)) in 2024. This rule change includes new direction for federal agencies to pivot from only considering climate change impacts within Environmental Assessment (EA) and Environmental Impact Statement (EIS) cumulative effects analyses to integrating climate change considerations throughout the project delivery process (see [Chapter 100](#)).

NEPA requires that any agency proposing a major federal action ([40 CFR 1508.1\(w\)](#)) that may significantly affect the environment, to consider:

- Environmental impacts of the proposed action.
- Any unavoidable adverse environmental impacts.
- Alternatives to the proposed action.
- The relationship between local short term uses and long-term productivity of the environment.
- Any irreversible and irretrievable commitment of resources if the action is implemented.

CEQ NEPA regulations require federal agencies to incorporate climate change considerations at multiple points throughout their environmental review process, including affected environment, impact assessment, transportation resilience, cumulative effects, and mitigation strategies. See [Chapter 412](#) for information on requirements for indirect and cumulative effects.

State Environmental Policy Act (SEPA) rules direct state agencies to identify and evaluate probable impacts, alternatives, and mitigation measures, emphasizing important environmental impacts and alternatives.

### 415.01(1) **Recent changes**

In 2024, CEQ revised its NEPA regulations to restore some of the basic elements of its 1978 NEPA regulations that had been eliminated by the 2020 rulemaking. The 2024 rule change establishes:

- Climate Change is contained in the definition of “Effects or Impacts.” CEQ does not define climate change, but the term is used throughout the rule ([40 CFR 1508.1](#)).
- Alternatives analysis now must include documentation of climate change-related effects along with all the other effects ([40 CFR 1502.14](#), [40 CFR 1502.16](#)). Previously, WSDOT considered climate change-related effects (resilience/vulnerability) under cumulative effects, not in the analysis of alternatives (although we have been including greenhouse gas emissions within alternatives analysis).
- NEPA Environmental Impacts Statements (EIS) must include:
  - *Climate effects* - “where applicable, climate change-related effects, including, where feasible, quantification of greenhouse gas emissions, from the projected action and alternatives and the effects of climate change on the proposed action and alternatives.” (See [40 CFR 1502.16\(6\)](#))
  - *Adaptation measures* - “where applicable, relevant risk reduction, resiliency, or adaptation measures incorporated into the proposed action or alternatives, informed by relevant science and data on the affected environment and expected future conditions.” (See [40 CFR 1502.16\(9\)](#))
  - *Environmentally preferred alternative* - Environmentally preferable alternative or alternatives include those that address climate change-related effects, [40 CFR 1502.14\(f\)](#). CEQ also notes that this can be different from the proposed action. See [Chapter 400](#) for more information on environmentally preferred alternative.
- CEQ clarified the use of reliable data and resources to include Indigenous Knowledge to describe reasonably foreseeable environmental trends including climate-related changes to the environment (See [40 CFR 1502.15](#)).
- CEQ provides guidance to agencies on the use of climate change projections. “Where appropriate, agencies shall use projections when evaluating the reasonably foreseeable effects, including climate change-related effects. Such projections may employ mathematical or other models that project a range of possible future outcomes, so long as agencies disclose the relevant assumptions or limitations.” (See [40 CFR 1506.6\(d\)](#))
- CEQ clarified incomplete and unavailable information and requires an EIS to include an explanation when information is lacking ([40 CFR 1502.21](#)). See [Chapter 400](#) for more information on changes to environmental review and transportation decision making, including to NEPA documentation and processes.
- For the first time in NEPA, “Environmental Justice” is defined ([40 CFR 1508.1](#)). See [Chapter 460](#) for more information on updates relating to environmental justice.

On January 9, 2023, the CEQ published updated [Guidance on Consideration of Greenhouse Gas Emissions and Climate Change](#) on the Federal Register. This was directed by Presidential Executive Order 13990 [Protecting Public Health and the Environment and Restoring Science to Tackle the Climate Crisis](#). For more information about this CEQ guidance, see the Consideration of Climate Change subsection in 415.04(2).

Environmental justice is an important topic that should be considered during the assessment of climate change-related effects. Project teams should follow the direction in Chapters 458 and 460 regarding the use of the [Environmental Health Disparity tool](#) to consider cumulative human health effects. At the state level, the Healthy Environment for All (HEAL) Act ([Chapter 70A-02 RCW](#)) includes requirements to consider cumulative health impacts and climate-related effects.

WSDOT also received direction from the Integrated Climate Change Response Strategy codified in [Chapter 70A-05 RCW](#). This state law requires the following:

“State agencies shall consider current and future climate change impacts to the extent allowed under existing statutory authority and incorporate climate resilience and adaptation actions as priority activities when planning, designing, revising, or implementing relevant agency policies and programs. Agencies shall consider: The integrated climate change response strategy when designing, planning, and funding infrastructure projects; and incorporating natural resource adaptation actions and alternative energy sources when designing and planning infrastructure projects,” [RCW 70A-05-040](#).

## 415.02 Applicable statutes, regulations, executive orders, and policies

### 415.02(1) *Federal*

- 42 United States Code (U.S.C.) 4321 National Environmental Policy Act of 1969 (NEPA) - [42 U.S.C. Section 4321](#)
- CEQ NEPA Implementing Regulations – [40 CFR 1500 - 1508](#).
- FHWA, FRA, and FTA Rules – [23 CFR 771](#).

### 415.02(2) *State*

- SEPA [Chapter 43.21C RCW](#), and [RCW 43.21C.031](#).
- SEPA implementing regulations [WAC 197-11-792](#) and [WAC 197-11-060\(4\)](#).
- [Chapter 70A.02 RCW](#) Environmental Justice, also referred to as the HEAL Act.
- [Chapter 70A.05 RCW](#) Integrated Climate Change Response Strategy.

### 415.02(3) *Local*

- Local requirements will vary by jurisdiction.

## 415.03 Considerations during project development

### 415.03(1) *Planning*

Climate change-related effects to consider include current and future issues like increase in average winter precipitation and more extreme precipitation, impact on GHG emissions, and sea level rises. These issues can be effectively considered at a planning level to inform the proposed solutions. The WSDOT [Environmental Guidance for Planning Studies](#) webpage and [Chapter 200](#) include guidance for climate change considerations in planning studies, such as climate vulnerability and greenhouse gas emissions, during the planning process.

### **415.03(2) Scoping**

Chapter 300 explains the importance of public and agency outreach during pre-NEPA and scoping of our environmental documents. Often the members of the public raise concerns around issues that may seem outside the project. These concerns may indicate climate change-related effects that should be considered and integrated throughout the environmental review. For example, a pattern of development in the floodplain, increased flooding, and concerns surrounding future climate change projections.

### **415.03(3) Design**

NEPA documents developed during project design should disclose all climate change-related effects and respond to public and agency concerns, as appropriate and applicable to the environmental document. The proposed project should address the climate change-related effects, and include resiliency to address climate change impacts and other hazards. See WSDOT's [Climate Change-Related Effects](#) webpage for additional guidance.

If the action requires a HEAL Act Environmental Justice Assessment (EJA), consideration of climate change-effects will need to be included. See [Chapter 460](#) for more information on environmental justice.

### **415.03(4) Construction**

- N/A

### **415.03(5) Maintenance and Operations**

- See [Chapter 425](#) for more information on maintenance and operations and climate change-related effects from greenhouse gas emissions.

## **415.04 Analysis and documentation requirements**

### **415.04(1) Right size to classification (CE, EA, EIS)**

The level of the environmental document being prepared will dictate whether a climate change-related effects analysis should be prepared. Regardless of project impacts, WSDOT's EAs and EISs should include a discussion of climate change-related effects as presented below.

- **Categorical Exclusion (CE): Not Required** – These are minor projects without significant environmental impacts that are not required to document consideration of climate change-related effects. Documentation is optional. There may be unusual circumstances requiring such an analysis.
- **Environmental Assessment (EA): Required** – These are projects in which the significance of environmental impacts is unknown. EAs must consider and document climate change-related effects to determine whether an EIS is required.
- **Environmental Impact Statement (EIS): Required** – These are projects in which there are anticipated significant environmental impacts. EISs must consider and document climate change-related effects.

The following section provides more information on analysis and documentation of climate change-related effects.

## 415.04(2) Analysis and documentation for NEPA

Per new NEPA rulemaking, climate change is now included under the definition of effects or impacts. The NEPA project lead determines the approach for documenting climate change-related effects. Options include:

1. Preparing a separate chapter or section on climate change-related effects.
2. Integrating the disclosure of climate change-related effects within the individual discipline studies in the applicable chapters or sections.

In either of the cases above, a separate climate change-related effects discipline report or technical memo may help to keep the document size to a minimum.

### Recommended resources

WSDOT follows CEQ NEPA regulations on climate change-related effects. WSDOT GIS includes data to evaluate climate change and natural hazards. Local agencies maintain land use information as well as emergency management plans that contain valuable information on flooding and other natural hazards. Engagement with local communities, local agencies, tribes, and representatives from traditionally underrepresented, underserved, and overburdened communities to discover issues of most concern. The State Department of Health's [Environmental Health Disparities tool](#) is a great resource. For a list of resources, see WSDOT's [Guidance for NEPA and SEPA Project-Level Climate Change Evaluations](#) on the [Climate Change-Related Effects](#) webpage.

### Considerations of Climate Change

For EAs and EISs, consideration of climate change must be documented throughout the NEPA process. The following consideration should occur in multiple points throughout the process, including affected environment, impact assessment, transportation resilience, and cumulative effects:

1. **Affected Environment:** The CEQ updated ruling incorporates climate change into the definition of affected environment and observing both past and future considerations of climate change-related effects.
2. **Alternatives Analysis:** The CEQ final rule requires the environmentally preferable alternatives to address climate-change related effects. Refer to [Chapter 400](#) for more information on environmentally preferred alternatives. This ruling also requires the proposed actions, any identified alternatives, and the no action scenario to evaluate past and future climate change-related effects.
3. **Impact Analysis:** The CEQ ruling further directions agencies to incorporate climate change considerations into the analysis of impacts, requiring WSDOT to look at both past trends and future predictions to assess how climate change may exacerbate impacts from the proposed projects and alternatives.
4. **Transportation Resilience:** When reviewing the proposed project and alternatives, WSDOT should consider potential climate change co-benefit results from actions if completed.
5. **Cumulative effects:** Climate change-related effects should be addressed and included under cumulative effects. Refer to [Chapter 412](#) for more information on cumulative effects.

## Climate change-related effects

Climate change-related effects is not defined by CEQ, but is a term used throughout the rule (40 CFR 1500 - 1508). WSDOT interprets CEQ's use of the term in alignment with National Cooperative Highway Research Program's (NCHRP) description from [Considering Greenhouse Gas Emissions and Climate Change in Environmental Reviews: Conduct of Research Report](#) as follows:

- Impacts to the completed project, such as more frequent or severe inundation and damage caused by sea level rise or coastal flooding.
- Effects on travel, safety, the economy, etc. due to climate-related disruptions to the facility.
- The project's potential impact on the built and natural environmental, to the degree that these impacts may be worsened by climate change.
- Beneficial effects of a project to climate resilience.

For the purposes of environmental reviews, WSDOT has divided climate change-related effects into to topic areas: greenhouse gas emissions and climate change resiliency. CEQ directs climate change-related effects on vulnerable and overburdened communities to be considered and documented. Refer to [Chapter 460](#) for more information on vulnerable and overburdened communities and environmental justice at WSDOT.

**Greenhouse gases emissions** – The emission of greenhouse gases (such as carbon dioxide) and issues related to global climate change should be discussed in EAs and EISs. The discussion should include efforts currently underway in Washington State to reduce GHG emissions and the effects of current projects on GHG emissions. For quantifying GHG climate change-related effects, see [Chapter 425](#). More information is also available on WSDOT's [Air Quality, Energy and Greenhouse Gas Emissions](#) and [Climate Change-Related Effects](#) webpages.

**Climate Change Resiliency** – Project teams are expected to examine reliable data and resources about climate trends and consider ways to make their proposed projects more resilient to both past and future climate impacts and severe storm events. Past trends for a specific resource (water, habitat, air) alone may not be accurate predictions for the future; instead, we need to look at science-based projections of the changing climate throughout the environmental review process. WSDOT advises project teams to follow the direction in [WSDOT's Guidance for Project-Level Climate Change Evaluations](#), or contact the Climate Mitigation and Adaptation Branch Manager.

### **415.04(3) Analysis and documentation for SEPA only (No federal nexus)**

Projects without a federal nexus should follow procedures for climate change-related effects impact analysis like NEPA (above) to satisfy SEPA requirements. For more information on SEPA guidance for indirect and cumulative impacts, see [Chapter 412](#).

### **415.04(4) Required documentation for climate change-related effects**

WSDOT projects that are preparing a NEPA EA or EIS should document the analysis of climate change-related effects per the current CEQ and federal lead agency NEPA regulations. WSDOT project teams should follow the documentation requirements described in WSDOT's webpages for [Climate Change-Related Effects](#) and [Air Quality, Energy and Greenhouse Gas Emissions](#).

Climate change-related effects can either be discussed in each element of the environmental analysis or included in a separate section of the environmental document. A separate section is most appropriate when there are many climate change-related effects that are interrelated across disciplines. Most project teams find it useful to have a separate discipline report or technical memo to document the details of methodology and findings. In some cases where there are few climate change-related effects, a project team can write climate change-related effects entirely within the EA or EIS rather than within a separate technical memo or discipline report.

Whatever the approach, ensure the discussion of climate change-related effects is easy to find.

## **415.05 External engagement**

Public involvement and inclusive engagement are central to NEPA and SEPA. It is part of successfully identifying climate change-related effects of a proposed project. Tribal leaders and staff have very deep knowledge of the trends that have adversely impacted tribal resources. This information is useful in preparing the climate change-related effects analysis and in identifying potential mitigation. Environmental justice community members and local government staff are also useful resources.

## **415.06 Internal Roles and responsibilities**

The following offices have a key role in climate change-related effects analysis. See the [NEPA Roles Table](#) on the [NEPA and SEPA](#) webpage for more information about general NEPA documentation roles.

### **415.06(1) *Region/Modal Planning Office***

Conduct environmental screening to locate WSDOT assets that are vulnerable to climate threats. Consult with local planning partners to determine availability of additional area-specific climate data. Use this information to document how climate change and extreme weather vulnerability are considered and to propose practical long-term solutions that improve resilience. Provide documentation and recommendations to environmental staff.

### **415.06(2) *Region/Modal Environmental Office***

Identify resource areas that require a climate change-related effects analysis under NEPA. Prepare analysis or review analysis prepared by environmental technical experts.

### **415.06(3) *Environmental technical experts***

WSDOT environmental staff or consultants perform technical analysis to determine climate change-related effects for the range of environmental disciplines evaluated under NEPA. WSDOT environmental technical experts can help develop consultant scopes of work and should review consultant work to ensure requirements are met and the analysis is technically sound.

### **415.06(4) Headquarters Environmental Services Office**

The Environmental Services Office (ESO) keeps the climate change-related guidance current and consistent with rules and regulations. The [NEPA/SEPA Program](#) is available to consult on the climate analysis. ESO NEPA Specialists provide support and technical NEPA assistance with CE, EA, and EIS documentation.

### **415.07 Mitigation**

It is the project team's responsibility to define mitigation for climate change-related effects. Mitigation requirements are discussed within the other discipline chapters. For more information on cumulative effects and potential mitigation, see [Section 412.07](#). For guidance on climate change-related effects mitigation strategies, WSDOT advises project teams use Chapter 5.6 of [NCHRP's Considering Greenhouse Gas Emissions and Climate Change in Environmental Reviews: Conduct of Research Report](#).

### **415.08 Applicable permits and approval process**

There are no permits or approvals associated with climate change-related effects.

### **415.09 Abbreviations and acronyms**

AASHTO	American Association of State Highway and Transportation Officials
CEQ	Council on Environmental Quality
CE	Categorical Exclusion
CFR	Code of Federal Regulations
EA	Environmental Assessment
EIS	Environmental Impact Statement
EJA	Environmental Justice Assessment
ESA	Endangered Species Act
GHG	greenhouse gases
HEAL Act	Healthy Environment for All Act
NCHRP	National Cooperative Highway Research Program
NEPA	National Environmental Policy Act
SEPA	State Environmental Policy Act



## 415.10 Glossary

**Affecting** – Affecting means will or may have an effect on ([40 CFR 1508.1\(b\)](#)).

**Effects** – Effects include ([40 CFR 1508.1\(i\)\(4\)](#)):

- Ecological, aesthetic, historic, cultural, economic, social, or health, such as disproportionate and adverse effects on communities with environmental justice concerns, whether direct, indirect, or cumulative;
- Impacts on Tribal resources and climate change-related effects, including the contribution of a proposed action and its alternatives to climate change, and the reasonably foreseeable effects of climate change on the proposed action and its alternatives; and
- Those resulting from actions which may have both beneficial and adverse effects, even if on balance the agency believes that the effects will be beneficial.

**Environmentally preferable alternative** – The alternative or alternatives that will best promote the national environmental policy as expressed in section 101 of NEPA ([40 CFR 1508.1\(n\)](#)).

**Extraordinary circumstances** – Projects with extraordinary circumstances may include factors or circumstances that raise impacts from a normally categorically excluded action to a significant effect. Examples include potential substantial effects on sensitive environmental resources, historic properties, or cultural resources; potential substantial disproportionate and adverse effects on environmental justice communities; and potential substantial effects associated with climate change ([40 CFR 1508.1\(o\)](#)).

**Irretrievable** – Impossible to retrieve or recover.

**Irreversible** – Impossible to reverse.

**Mitigation** – According to [40 CFR 1508.1\(s\)](#), includes: (a) Avoiding the adverse effect; (b) Minimizing adverse effects by limiting the degree or magnitude; (c) Rectifying the adverse effect by repairing, rehabilitating, or restoring; (d) Reducing or eliminating the adverse effect over time; and (e) Compensating by replacing or providing substitute resources.

**Reasonably Foreseeable** – Outcomes that are sufficiently likely to occur such that a person of ordinary prudence would take it into account in reaching a decision ([40 CFR 1508.1\(ii\)](#)).

**Resource** – Resources are defined by NEPA and SEPA implementing regulations as “natural or depletable” resources ([40 CFR 1502.16](#), [WAC 197-11-440\(6\)](#)) and renewable or nonrenewable resources ([WAC 197-11-444](#)). Resources are defined by FHWA [Technical Advisory T 6640.8A](#) (October 30, 1987) as “natural, physical, human, and fiscal resources” in guidance on irreversible and irretrievable commitments of resources.

**Significance** – The significance of a potential impact on the natural or built environment depends upon context and intensity. In considering whether an adverse effect of the proposed action is significant, agencies shall examine both the context of the action and the intensity of the effect. In assessing context and intensity, agencies should consider the duration of the effect. Other considerations include: setting, likelihood of occurrence, and severity, magnitude, or duration of the impact. Almost every transportation project that would be recognized as major federal action, no matter how limited in scope, has some effect on the environment. Additional information and examples for determining significance is found in [Chapter 400](#). [40 CFR 1508.1](#).

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