

Soil Stabilization: Information Required for Environmental Review

This Job Aid is to help communities applying for Hazard Mitigation Assistance grants for soil stabilization mitigation projects. It outlines the required documentation needed for FEMA to carry out an Environmental Planning and Historic Preservation review of a project.

ABOUT THIS RESOURCE

It is required by law that all projects funded with Hazard Mitigation Assistance (HMA) grants comply with Environmental Planning and Historic Preservation (EHP) laws, regulations and Executive Orders (EOs). During the EHP review process, FEMA evaluates the potential impacts of the project on the human and natural environment.



Figure 1. A photo of a soil stabilization project along a riverbank below a roadway.

FEMA begins the EHP review process once the project application is submitted. It is your responsibility as the subapplicant to provide documentation that accurately describes the project, its purpose, location, existing environmental conditions in the project area, potential project impacts, best management practices (BMPs), different alternatives considered for the project and mitigation strategies to address environmental impacts of the project.

FEMA will assess the potential impacts of the project. The applicant must wait until the EHP review has been completed by FEMA before starting work on the project. FEMA will also conduct a technical review to verify your project's technical feasibility and cost-effectiveness. Refer to the Soil Stabilization Technical Review Job Aid.

Table of Contents

What is the EHP Review?	2
What Information is Required for the EHP Review of Soil Stabilization Projects?	2
1. Scope of Work	3
2. Project Area and Structure Information	5
3. Potential Impacts on People, the Environment, and Cultural Resources	8
What Happens Next?	13
Scope of Work Checklist	15

What is the EHP Review?

During the EHP review, FEMA assesses the potential impacts of your project on nearby physical, cultural (historic and archaeological), biological and social resources. The National Environmental Policy Act (NEPA) requires FEMA and other federal agencies to assess the environmental impacts of proposed federal actions prior to making decisions. FEMA must also ensure your project is compliant with various federal laws and presidential EOs, such as the Clean Water Act (CWA), the Endangered Species Act (ESA), the National Historic Preservation Act (NHPA), EO 11988 on floodplains and EO 11990 on wetlands. The EHP review may include consultation with other federal and state agencies, which may add time to the review process.

Projects with less potential for impacts may be covered by a Categorical Exclusion (CATEX) under NEPA. Complex projects may need more extensive review through the preparation of an Environmental Assessment (EA) or an Environmental Impact Statement (EIS). For your project, FEMA will prepare or provide support for the development of the NEPA-required documentation, and you can help by providing the information discussed in this Job Aid.

FEMA has predetermined that projects complying with certain criteria do not have significant environmental impacts and may be covered by a CATEX for NEPA compliance. Soil stabilization projects may meet the criteria for a variety of CATEXs, including CATEX N4 *Federal Assistance for Actions Involving Stream Work and Modification and Floodways*, CATEX N6 *Federal Assistance for Relocation/Realignment of Structures and Facilities*, CATEX N7 *Federal Assistance for Structure and Facility Upgrades*, CATEX N8 *Federal Assistance for New Construction Activities of Less Than One Acre in Undisturbed or Undeveloped Areas* and CATEX N12 *Federal Assistance for Planting of Indigenous Vegetation*. Acquisition/demolition or the relocation of a residence(s) are other techniques that can be used to address soil stabilization hazards. For those projects, refer to the *Acquisition and Relocation: Information Required for Environmental Review* Job Aid.

What Information is Required for the EHP Review of Soil Stabilization Projects?

This section outlines information that should be included in your application so that FEMA can review your project for EHP compliance. FEMA HMA program staff will conduct a review to make sure the project complies with HMA program eligibility. For each item, there is an explanation as to why it is needed, where you can find this information

and an example of how the information should be provided to FEMA. Each piece of information requested is needed to develop a comprehensive project description to be included with your application.

1. SCOPE OF WORK

1A: What are you proposing to do?

- Describe your soil stabilization project's scope of work. Explain how the soils would be stabilized (e.g., using retaining walls, installing geotextiles, using stabilizing sod, installing vegetative buffer strips, preserving mature vegetation, decreasing slope angles, stabilizing with riprap or other means of slope anchoring, reseeding and planting ground cover, mulching with straw and/or chips, planting grass to prevent noxious weeds).
- If the project would disturb the ground for any reason (e.g., clearing a staging area), describe the activities (both temporary and permanent) that would require ground disturbance and show the locations on a map or plan view; include the length, width and depth of the ground disturbance.
- Describe the existing condition of the ground surface (e.g., pavement, landscape shrubs and trees, previously undisturbed soils with vegetation) that would be disturbed.

Why It's Needed: Soil stabilization projects are intended to mitigate erosion or landslides caused by natural disaster events such as floods and wildfires. A complete project description is essential for FEMA to understand how the project may impact human, environmental and cultural resources. The methods used to stabilize soils may temporarily increase erosion and sedimentation, impact species or affect human communities. Ground disturbance could affect archaeological resources, soils or utilities. FEMA will use this information to evaluate impacts and it may affect the complexity of the EHP review.

Potential Sources: Project architects, engineers, design plans or drawings, contractors

EXAMPLE:

The city proposes to regrade the contours of the shoreline slope into gradual incline and plant a dense fibrous mat of native grasses to stabilize approximately 500 feet of Lake Ontario shoreline. The existing slope is eroding and contains non-organic fill such as concrete rubble, grasses and invasive plant species. The eroding slope is threatening adjacent properties and it is anticipated that the slope will fail completely within 10 years. Regrading the slope would require up to 3 feet of soil excavation over an area of approximately 7,500 square feet.

1B: How would the project area be accessed and where would the staging areas be located?

- Describe how the project area would be accessed. Show the boundaries of the access routes or points on a map or plan view of the project area and describe the surface type (e.g., asphalt, dirt, gravel).
- If any new access routes would need to be created for the work to be completed, show where the routes would be located on a map or plan view of the project area.

- Describe where materials and equipment would be stored and staged during construction. Show the boundaries of the staging areas on a map or plan view of the project area and describe the surface type (e.g., asphalt, dirt, gravel).
- If the creation of new access routes or staging areas would require ground disturbance or vegetation removal, describe the extent of the ground disturbance (see Item 1A) and vegetation removal (see Item 3I).
- Describe the vehicles and equipment that would be used to implement the project.
- Describe any local restrictions on equipment use (e.g., seasonal or daily restrictions, work hours, local noise ordinances).

Why It's Needed: Construction of the project may require a new access point or leveling a staging area for construction. FEMA will evaluate the potential for impacts from activities that disturb the ground or remove vegetation. Some types of equipment may have impacts related to erosion, noise, air pollution or accidental releases of fuel and lubricants. Vehicle and equipment use may cause ground disturbance that could impact archaeological resources.

Potential Sources: Project planners, construction contractors, engineers

EXAMPLE:

Equipment required for the project would include excavators and a compactor to regrade the slope, vehicles to transport crews and hand tools for the planting of vegetative strips. Equipment would only be operated during daytime hours, in accordance with the city's noise ordinance. The project area would be accessed via Rudolph Road and equipment would be staged in an empty asphalt lot adjacent to the project area. No vegetation would be removed for the staging and access areas; however, existing vegetation (primarily non-native species) would be removed from the slope. See attached aerial photo showing the project area, staging area and equipment access roads.

1C: What are alternatives to the project?

- Describe what would happen if the project were not implemented.
- If any other alternatives were developed, describe how they would have achieved the same goal and explain why those options were dismissed. If the public (including groups and agencies) provided input on the alternative(s), include the feedback you received.

Why It's Needed: FEMA may need to compare the impacts of the project with the impacts of alternatives (including any alternatives that were dismissed).

Potential Sources: Project planners, public outreach meetings, board meeting notes, preliminary designs

EXAMPLE:

Three alternatives were considered in addition to the proposed action: 1) Continue to clean up debris from the slope following storm events, 2) relocate the road and 3) no-action alternative. The first alternative was

dismissed because it would not address the need for the project (the unstable slope), and a heavy rainstorm could cause a significant slope failure. The second alternative is not financially feasible because it would require relocation of the road through a dense forest with steep topography. If the project is not implemented (the no-action alternative), the slope would continue sliding into the roadway, threatening to cut off access to important Tribal services and causing erosion and sedimentation into a downslope stream.

1D: What is the project schedule?

- Provide a schedule that includes construction, operation and maintenance activities, including the months or seasons when work would occur.

Why It's Needed: FEMA will use information on the timing and duration of different activities to evaluate the significance of impacts on people and the environment.

Potential Sources: Project engineer

EXAMPLE:

Site preparation for the material and equipment staging area is expected to take approximately 1 to 2 days. Removal of the existing vegetation and fill along the streambank would take approximately 1 week. Installation of the riprap along the streambanks would take an additional 1 week. Work would occur in the summer when stream flows are low. Annual maintenance would be conducted by the county each year for 10 years.

2. PROJECT AREA AND STRUCTURE INFORMATION

2A: Where is the project proposed to be constructed and/or affected structure(s) and infrastructure located?

- Provide the geographic coordinates (latitude and longitude) and the physical site address of the project area.
- Provide a geographic information system (GIS), computer-aided design (CAD), Google Earth files (.kmz), or map or image that clearly shows the boundaries of the project area. If your project area has a complex boundary, a GIS or .kmz file is preferred. The information provided should show the boundaries of all temporary and permanent project activities including staging areas, access routes, vegetation removal and the affected structure(s) or infrastructure.
- Provide an estimate of the area of ground disturbance in acres or square feet.
- Provide a few representative photographs of the surrounding area to the north, south, east and west of the project area.
- Provide engineering drawings, if available.

Why It's Needed: FEMA needs the project location and boundaries to evaluate existing conditions in the project area and potential project impacts.

Potential Sources: Municipal GIS or CAD data or Google Earth files developed for the project design, local building inspectors, tax assessor records, property deeds and engineering plans. The geographic coordinates of your project area can be obtained using software such as GIS or Google Earth, websites such as Google Maps, Bing Maps or latlong.net, smartphone mapping apps or with a Global Positioning System (GPS) device.

EXAMPLE:

The entire project is located within tribal trust property at 45.769772, -123.968452. The map and GIS shapefile included with the application show the project area boundaries, including the unstable slope, access route, equipment staging location and structure footprints. Engineering drawings showing the retaining wall design are also included with the application.



Figure 2. Example of a project site map. Map clearly shows the project area boundary and the staging areas. The site features are overlaid on an aerial photo and include a north arrow and a scale.

2B: Describe the structures in the project area.

- Provide a description of the structure(s) that would be affected by the stabilization project (i.e., altered, protected, or removed), including photographs of all sides and the year they were originally constructed.
- Provide a description, including size and dimensions, of any existing manmade soil stabilization structure(s) (e.g., seawall, retaining wall) in the project area.
- Describe any prior improvements or additions that have been made to the structure(s) to be protected (e.g., stone replaced with concrete, new windows, change in roofing material from the original construction), changes

to the original location (i.e., relocation) of the structure(s), or other changes to the original design of the structure(s).

- If the structure(s) is designated as historic or is in a designated historic district, provide information on the known historic property/district, as applicable.

Why It's Needed: FEMA will use the date of construction to screen whether affected structures might be historic and to help determine the effect the project may have on historic properties. Structures that are 45 years or older at the time of application may be eligible for listing in the National Register of Historic Places. Older structures may require additional EHP review. Photographs of the structure(s) may allow FEMA to make a determination without needing to visit the site. Actions that change the character or setting of structures and buildings may also change the cultural value of a building. This could have a negative impact on structures, buildings, sites, objects or historic districts that may be eligible for listing or be listed in the National Register of Historic Places.

Potential Sources: Tax assessor data (provide the URL for the tax assessor if possible), GIS-based tax assessor database

EXAMPLE:

Six residences would be protected by the proposed dune stabilization project. All structures were constructed after 2000. See the attached photos of the structures and maps of the current structure locations in proximity to the project area.



Photo of south and east side of building



Photo of north and west side of building

Figure 3. Photos showing the structure in the project area. Photos include all sides of the building from different cardinal directions.

3. POTENTIAL IMPACTS ON PEOPLE, THE ENVIRONMENT AND CULTURAL RESOURCES

3A: Has the public been notified or provided input?

- Explain any controversy that exists or could exist related to the project.
- Describe any existing or planned public engagement activities for the project.

Why It's Needed: If there is or could be controversy around a project, FEMA may need to use a higher level of NEPA documentation. Public input can help identify potential impacts on environmental and cultural resources or low-income and minority communities. You may also be involved in the publication of public notices, in accordance with FEMA procedures.

Potential Sources: Notices in the local newspapers, public outreach meetings, website postings, project planners

EXAMPLE:

The project is part of a larger shoreline improvement project. The city engaged the public as part of this larger project at three public meetings in 2019 and early 2020, and a virtual public meeting is planned in late 2020. Additionally, the city posts project information on their website and social media accounts. Public support for the shoreline improvement project has been positive and the city has incorporated substantive feedback into their planning efforts.

3B: Did you coordinate with or consult regulatory agencies?

- Describe any agency coordination and permits you obtained from federal, state or local agencies to implement the project. Provide copies of any coordination materials, permit applications or approvals.

Why It's Needed: If you have already coordinated with an agency, then FEMA may be able to avoid duplication of effort. FEMA also may coordinate with state or federal agencies that have issued permits and approvals to confirm findings, identify BMPs or determine mitigation measures for project impacts. Many agencies, including the U.S. Army Corps of Engineers, offer a pre-application process where you can learn more about the permits and conditions that may be required for your project.

Potential Sources: Project planners

EXAMPLE:

In February, the city consulted with the State Coastal Agency on the proposed dune stabilization project. The agency determined that the project would be consistent with state coastal zone policies. See attached consultation.

3C: Were environmental or cultural studies conducted?

- If any environmental or cultural studies were completed either for this project or for other projects in the same area by local, state or federal entities, please provide copies. Studies could include evaluations of cultural resources (e.g., historic, archaeological) or environmental resources (e.g., threatened and endangered species, wetlands, hydrology, geotechnical).

Why It's Needed: FEMA may use the findings during the EHP review to avoid duplicating efforts.

Potential Sources: Project contractor or engineer, EHP studies required by state law or local ordinances, environmental studies completed within or near the project area

EXAMPLE:

Five years ago, the Tribe completed an Environmental Assessment and Biological Assessment for a casino development within 0.5 miles of the project area. The same listed species are expected in the project area. Both reports are attached.

3D: Would your project encroach on floodplains?

- Describe the project activities in the floodplain, if applicable.
- For non-coastal projects that would include fill or changes to the floodplain, has a hydrologic and hydraulic (H&H) analysis been conducted? If yes, include the study with your application.

Why It's Needed: FEMA needs to understand whether your proposed project will physically impact a floodplain or whether the project could be impacted by flooding during and after construction pursuant to EO 11988 – Floodplain Management. If the project has the potential to impact floodplains, you may be involved in the publication of public notices required by FEMA procedures.

Potential Sources: Local floodplain agency/administrator, history of flooding/flood claims, [FEMA Flood Map Service Center](#)

EXAMPLE:

Based on a review of FIRM Map #360555C0069G, the entire project area is located within a floodplain (Zone AE). The project would stabilize the dunes by regrading the slopes, planting native grasses and rerouting public access to existing hardened access points. There would be no new fill imported for the project. The city has already obtained the state's coastal permit and is working with the local floodplain administrator to comply with the city's floodplain development ordinance.

3E: Are there surface waters or wetlands in the project area?

- Describe any surface waters in or near the project area (e.g., ponds, lakes, rivers, streams, wetlands, other waterbodies).
- Describe any measures that would be used to avoid waterbodies or avoid impacting water (e.g., setbacks, cofferdams, silt fence).
- Provide any permits or applications that were developed related to project impacts on surface waters.

Why It's Needed: FEMA needs to evaluate existing conditions and potential project impacts on water resources regulated by the CWA, the Coastal Zone Management Act, and EO 11990 – Protection of Wetlands. If the project has the potential to impact wetlands, you may be involved in the publication of public notices required by FEMA procedures. Temporary construction measures, such as silt fencing, and their manner of placement, may cause ground disturbance and could affect archaeological resources or Waters of the U.S.

Potential Sources: CWA permits and approvals, wetland delineations of the site, [National Wetlands Inventory \(NWI\) Mapper](#)

EXAMPLE:

The stabilization project would be completed in a riparian area along a stream, and there is one known wetland in the project area (see attached aerial map). The project is designed to avoid fill or excavation in this wetland. The area around the wetland would be replanted with native plants to avoid any indirect effects on adjacent waters such as stormwater runoff carrying pollutants into the wetland.

3F: What are the soil and topographic conditions in the project area?

- Describe any erosion conditions in the project area or conditions that may lead to erosion or slope failure (e.g., burn scars, cleared fire breaks, undercut shorelines, changes in hydrology/stream channel, steep slopes).

Why It's Needed: After a wildfire, soil may become hardened or more prone to erosion, thus preventing the regrowth of vegetation that would stabilize soils. Shorelines impacted by wave and wind action may also be at risk of failing. This information helps FEMA understand the existing conditions that the soil stabilization project is intended to address.

Potential Sources: Site visits, [Natural Resources Conservation Service \(NRCS\) Web Soil Survey](#), U.S. Geological Survey

EXAMPLE:

The project area is characterized by a sandy bluff along the shoreline. Wave action has undercut the bluff, so it is oversteep and at risk of failing. Additionally, the underlying soils have a high potential for erosion, based on a review of NRCS Web Soil Survey information.

3G: Would your project have an impact on hazardous or contaminated materials?

- Describe any known hazardous or contaminated materials that may be present in the project area or that are needed to implement the project.
- If your project would use any hazardous materials, describe the BMPs that would be used to minimize exposure of people and the environment to those materials and how the materials would be discarded.

Why It's Needed: The presence, management, use or generation of hazardous materials can impact the natural and human environment. FEMA needs to evaluate potential project impacts from (or use of) hazardous and contaminated materials regulated by federal and state law including the Comprehensive Environmental Response, Compensation, and Liability Act and the Resource Conservation and Recovery Act. Any site that has or has had recorded hazardous water issues will require a Clean Site Certification prior to grant approval.

Potential Sources: Project planner or engineer, and similar completed projects

EXAMPLE:

There is a buried oil fuel tank at the base of the unstable slope that will need to be removed before the slope can be reshaped. The State Department of Environmental Services was contacted to coordinate the removal or remediation of the tank, which would be completed in accordance with all applicable state laws. See attached correspondence with the Department of Environmental Services.

3H: Would your project use imported fill?

- If your project involves the use of fill, describe the type and source of the fill material.

Why It's Needed: FEMA needs to confirm that the fill used is free from contaminants and is compliant with federal and state hazardous and contaminated materials laws. FEMA also needs to evaluate the source of fill for potential effects to historic properties. If a borrow site is being used, it is also important to ensure that the area is not archaeologically sensitive.

Potential Sources: Project planner or engineer, landscape architects, and similar completed projects

EXAMPLE:

The proposed project would place riprap (rock) along the streambank to provide erosion and scour protection. The rock would be imported from a rock supply facility, which provides certified clean rock and soil material. The county has relied on this facility for other projects as well. A copy of the facility's license is attached to this application.

3I: Is vegetation removal required?

- If the project would remove vegetation for any reason, describe the type and amount or area of vegetation (e.g., two oak trees, one-quarter acre of turf grass).
- Describe how vegetation would be removed, if applicable (e.g., root ball removal, flush cut, dug up, chemical weed killer).
- Provide photographs of the vegetation to be removed in the project area.
- Would you restore vegetation after the project is complete or does the project include planting or seeding of vegetation? If so, describe where and how it will be planted (e.g., by hand, with machinery, broadcast seeding) and the types (e.g., grasses, trees, shrubs) and species of vegetation that would be planted.
- Would any special techniques be used to ensure survival of the plants/seeds (e.g., mulch, irrigation, protective fencing)?

Why It's Needed: Vegetation removal could cause the loss of habitat for wildlife species including an endangered or threatened species. Root ball removal could also impact archaeological resources that may be present within the root system. FEMA will evaluate the impact vegetation removal has on environmental and cultural resources.

Potential Sources: Project planner or engineer, landscape architects, and similar completed projects

EXAMPLE:

Vegetation along the current shoreline is predominantly composed of grasses and invasive species, such as blackberry, that are interspersed with non-organic fill (see attached photos). The existing vegetation (approximately 0.5 acres) and fill within the 7,500-square-foot project area would be removed with excavators and debris would be hauled to a disposal facility approximately 1 mile west of the project area. A dense mat of native plants would be planted with hand tools along the shoreline to restore the site.

3J: What Best Management Practices would the project use?

- List all BMPs to be implemented, as part of the project, to reduce potential impacts.

Why It's Needed: Most projects require BMPs to limit noise, dust and erosion while the project is being implemented. FEMA needs to document BMPs that will be used to ensure the project's environmental impacts will be avoided and minimized, where possible, in compliance with federal and state environmental laws.

Potential Sources: Project engineers, BMP guidance provided by federal, state or local environmental agencies, BMPs specified in permit approvals issued by federal, state or local agencies

EXAMPLE:

The city would implement the following BMPs during project implementation:

Air Quality: The selected contractor would keep vehicle and mechanical equipment running times to a minimum and all engines would be properly maintained.

Water Quality: A silt fence would be installed prior to excavation and regrading of the bank to minimize the potential for soil erosion while the project is being implemented.

Coastal Zone: All construction equipment would stay within the designated staging area. To protect sensitive dune environments, only handheld tools would be used.

Hazardous Materials: Equipment and vehicles would be inspected daily for fuel and fluid leaks. Any spills or leaks would promptly be contained and cleaned up and the equipment would be repaired. A spill prevention plan would be developed for hazardous materials to be used during project implementation. Storage and handling of hazardous and toxic materials would occur at least 150 feet from streams and waterbodies.

Noise: No project activities would occur between the hours of 10:00 p.m. and 7:00 a.m. in compliance with the town's noise ordinance.

What Happens Next?

The EHP review process occurs throughout the life cycle of the HMA project and has three specific steps where different aspects of the review process occur. The three steps are detailed below.

- Pre-Award:** This is the information and documentation gathering stage of the EHP grant review process. Following the directions provided in this Job Aid will help you create a comprehensive application that includes all foreseeable required information needed for the EHP review. Providing this information as quickly and as accurately as possible will help expedite the next steps and reduce the need for FEMA to request additional information. The need for additional information may significantly impact the length of time for the EHP review by up to 60 days, if not more, for every request for information sent.
- Formal EHP Review:** Once the required information and documentation is gathered, FEMA will review the project to ensure it is compliant with all EHP-related laws, EOs and regulations. The level of EHP review necessary for a particular project will depend on the type of project, its complexity and the potential impacts it may have on the human and natural environment. Less complex projects with no potential impacts may undergo a short EHP review, while more complex projects with several potential impacts may take longer to review and may require consultation with other federal/state agencies and/or the creation of an EA or EIS. At the end of this process, a

Record of Environmental Consideration (REC) will be completed, itemizing the project conditions that will be included with your award packet. These conditions could include measures such as reaching out to other federal agencies for potential permits, ensuring proper documentation is followed during waste disposal and stopping work if a sensitive historic resource is discovered. You will want to carefully review all the conditions in your award packet during project implementation to remain compliant with the grant.

- **Closeout:** Once the project is complete, the applicant (State/Tribe) will request project closeout from FEMA. FEMA will begin closing out the project and, during this time, will follow up on all the conditions stipulated in the REC. If any condition required you to document activities or outcomes, FEMA will request that documentation during closeout. If FEMA discovers that any of the conditions were not met, the project could be found non-compliant, and FEMA may seek to recover the grant money.

If deviations from the proposed scope of work result in design changes, the need for additional ground disturbance, additional removal of vegetation or result in any other unanticipated changes to the physical environment, you must contact FEMA, and a re-evaluation under NEPA and other applicable environmental laws would be conducted.

ADDITIONAL RESOURCES:

- Supplemental Job Aid – Erosion and Landslide Mitigation Technical Review
- FEMA's Office of Environmental and Historic Preservation – Home page of FEMA's EHP office
- HMA EHP At-a-Glance Guide – Provides a general overview of EHP review considerations
- FEMA Directive 108-1 – Legal document that directs how FEMA EHP reviews projects
- DHS Instruction Manual 023-01-001-01, Rev 01 – Appendix A lists CATEXs

Scope of Work Checklist

Below is a summary checklist of all the questions from the previous sections. Use this checklist to help you as you complete your information packet.

1. SCOPE OF WORK

- Describe your soil stabilization project's scope of work. Explain how the soils would be stabilized (e.g., using retaining walls, installing geotextiles, using stabilizing sod, installing vegetation buffer strips, preserving mature vegetation, decreasing slope angles, stabilizing with riprap or other means of slope anchoring, reseeding and planting ground cover, mulching with straw and/or chips, planting grass to prevent noxious weeds).
- If the project would disturb the ground for any reason (e.g., clearing a staging area), describe the activities (both temporary and permanent) that would require ground disturbance and show the locations on a map or plan view; include length, width and depth of the ground disturbance.
- Describe the existing condition of the ground surface (e.g., pavement, landscape shrubs and trees, previously undisturbed soils with vegetation) that would be disturbed.
- Describe how the project area would be accessed. Show the boundaries of the access routes or points on a map or plan view of the project area and describe the surface type (e.g., asphalt, dirt, gravel).
- If any new access routes would need to be created for the work to be completed, show where the routes would be located on a map or plan view of the project area.
- Describe where materials and equipment would be stored and staged during construction. Show the boundaries of the staging areas on a map or plan view of the project area and describe the surface type (e.g., asphalt, dirt, gravel).
- If the creation of new access routes or staging areas would require ground disturbance or vegetation removal, describe the extent of the ground disturbance (see Item 1A) and vegetation removal (see Item 3I).
- Describe the vehicles and equipment that would be used to implement the project.
- Describe any local restrictions on equipment use (e.g., seasonal or daily restrictions, work hours, local noise ordinances).
- Describe what would happen if the project were not implemented.
- If any other alternatives were developed, describe how they would have achieved the same goal and explain why those options were dismissed. If the public (including groups and agencies) provided input on the alternative(s), include the feedback you received.
- Provide a schedule that includes construction, operation and maintenance activities, including the months or seasons when work would occur.

2. PROJECT AREA AND STRUCTURE INFORMATION

- Provide the geographic coordinates (latitude and longitude) and the physical site address of the project area, if available.
- Provide a geographic information system (GIS), computer-aided design (CAD), Google Earth files (.kmz), or map or image that clearly shows the boundaries of the project area. If your project area has a complex boundary, a GIS or .kmz file is preferred. The information provided should show the boundaries of all temporary and permanent project activities including staging areas, access routes, any vegetation removal and the affected structure(s) or infrastructure.
- Provide an estimate of the area of ground disturbance in acres or square feet.
- Provide a few representative photographs of the surrounding area to the north, south, east and west of the project area.
- Provide engineering drawings, if available.
- Provide a description of the structure(s) that would be affected by the stabilization project (i.e., altered, protected, removed), including photographs of all sides and the year they were originally constructed.
- Provide a description, including size and dimensions, of any existing manmade soil stabilization structure(s) (e.g., seawall, retaining wall) in the project area.
- Describe any prior improvements or additions that have been made to the protected structure(s) (e.g., stone replaced with concrete, new windows, change in roofing material from original construction), changes to the original location (i.e., relocation) of the structure(s) or other changes to the original design of the structure(s).
- If the structure(s) is designated as historic or is in a designated historic district, provide information on the known historic property/district, as applicable.
- If the structure is more than 45 years old, provide a representative photograph of each side of the structure.

3. POTENTIAL IMPACTS ON PEOPLE, THE ENVIRONMENT AND CULTURAL RESOURCES

- Explain any controversy that exists or could exist related to the project.
- Describe any existing or planned public engagement activities for the project.
- Describe any agency coordination and permits you obtained from federal, state or local agencies to implement the project. Provide copies of any coordination materials, permit applications or approvals.
- If any environmental or cultural studies were completed either for the project or for other projects in the same area by local, state or federal entities, please provide copies. Studies could include evaluations of cultural resources (e.g., historic, archeological) or environmental resources (e.g., threatened and endangered species, wetlands, hydrology, geotechnical).
- Describe the project activities in the floodplain, if applicable.

- Describe any surface waters in or near the project area (e.g., ponds, lakes, rivers, streams, wetlands, other waterbodies).
- Describe any measures that would be used to avoid waterbodies or avoid impacting water (e.g., setbacks, cofferdams, silt fence).
- Provide any permits or applications that were developed related to project impacts on surface waters.
- Describe any erosion conditions in the project area or conditions that may lead to erosion or slope failure (e.g., burn scars, cleared fire breaks, undercut shorelines, changes in hydrology/stream channel, steep slopes).
- Describe any known hazardous or contaminated materials that may be present in the project area or that are needed to implement the project.
- If your project would use any hazardous materials, describe the BMPs that would be used to minimize exposure of people and the environment to those materials and how the materials would be discarded.
- If your project involves the use of fill, describe the type and source of the fill material.
- If the project would remove vegetation for any reason, describe the type and amount or area of vegetation (e.g., two oak trees, one-quarter acre of turf grass).
- Describe how vegetation would be removed, if applicable (e.g., root ball removal, flush cut, dug up, chemical weed killer).
- Provide photographs of the vegetation to be removed in the project area.
- Would you restore vegetation after the project is complete or does the project include planting or seeding of vegetation? If so, describe where and how it will be planted (e.g., by hand, with machinery, broadcast seeding) and the types (e.g., grasses, trees, shrubs) and species of vegetation that would be planted.
- Would any special technique be used to ensure survival of the plants/seeds (e.g., mulch, irrigation, protective fencing)?
- List all BMPs to be implemented as part of the project to reduce potential impacts.