NCDA&CS Hurricane Helene Agricultural Disaster Recovery Program USDA Block Grant Infrastructure Loss Repairs to Roads, Bridges, Culverts

Engineering Evaluation & Eligibility Determination Procedure

Document Control

SOP Title	Helene Block Grant – Infrastructure Repair - Roads, Bridges, Culverts
SOP ID / Reference #	HBG-ENG-001
Primary Section	Engineering Services
Cross-Sectional SOP	Yes
Other Sections Involved	Helene Block Grant Program Administration; Environmental Services
Operation / Topic	Engineering evaluation and eligibility determination for road, bridge and culvert repair under Helene Block Grant
Author(s)	Sam Just, Starr Silvis, Dalton Buchanan
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1. Purpose

This SOP establishes the engineering evaluation process for Access Roads and Stream Crossings submitted under the Hurricane Helene Block Grant Road Repair Program. It provides Division engineers and other staff holding the required JAA with a consistent, defensible methodology for determining project eligibility based on NRCS practice standard criteria.

This SOP only covers determinations pertaining to the engineering components of the evaluated site. Soil evaluations are outside the scope of this document and are the responsibility of a soil scientist as outlined in the Helene Block Grant – Soil Evaluation SOP (Reference #: HBG-SOIL-001).

Eligibility is determined under one of two tracks:

Track 1

NRCS Standard Repair: Roads, culverts, and bridge repairs are consistent with NRCS CPS 560 and 578 standards. The site may be eligible for **90% cost share** under **NRCS Standard Repair**.

Track 2

Alternative Repair: Roads, culverts, and bridge repairs do not meet NRCS CPS criteria, but a qualified engineer or staff with the appropriate JAA determines site conditions are stable, safe, and non-limiting for the current road use. The site may be eligible for **70% cost share** under **Alternative Repair**.

*A scaling factor may be applied for roads, bridges, and culverts if the amount needed to satisfy eligible applications is projected to exceed available funding. The scaling factor will reduce the cost share percentage for both Tracks.

2. Scope

This SOP outlines standard operating procedures for Engineering or JAA holding staff for evaluating:

- All existing roads and access routes submitted for Helene Block Grant Road Repair funding in federally declared disaster counties impacted by Hurricane Helene.
- Sites containing roads, culverts, and bridges that access active agricultural use land and have been demonstrably impacted by the effects of Hurricane Helene.

This SOP does not include:

- Soil analysis that is to be completed by Environmental Services or a qualified outside consultant according to HBG-SOIL-001.
- Detailed guidance on permitting or regulatory requirements that may be associated with Helene Block Grant road repair sites.
- Summary of relevant Conservation Practice Standards (CPS) that are referenced in this SOP.
- Evaluation process for bridge repairs. These will need to be completed by an NC licensed Professional Engineer.
- Final grant award decisions (determination is advisory to the program administrator).

3. Definitions & Acronyms

Term / Acronym	Definition
CPS	Conservation Practice Standard (NRCS)
CPS 560	NRCS Conservation Practice Standard for Access Road
CPS 578	NRCS Conservation Practice Standard for Stream Crossing
NRCS Standard Repair	Site may be eligible for 90% cost share. Road, culvert, and bridge repairs are consistent with NRCS CPS 560 and 578 standards.
Alternative Repair	Site may be eligible for 70% cost share. Road, culvert, and bridge repairs do not meet NRCS standards, but may be deemed stable, safe and non-limiting for the current road use.
HGB-SOIL-001	Helene Block Grant – Soil Evaluation SOP
NCDA&CS	NC Department of Agriculture and Consumer Services
NRCS	Natural Resources Conservation Service
DSWC	NC Division of Soil and Water Conservation

4. Roles & Responsibilities

Role / Position	Responsibilities
Division Engineer or JAA holding individual	Conducts Helene Block Grant evaluations. Responsible for desktop review, field verification, eligibility determination, and documentation.
Block Grant Program Administrator	Routes submitted road projects to Division. Receives completed determination documentation and makes final grant award decisions.
Landowner / Applicant	Provides site access. Supplies any available information on road construction history, materials used, or prior maintenance.
Soil Scientist	Receives soil determination as input for engineering design where required. Soils evaluation scope is outside this SOP.

5. Procedure

5.1 Triggering Event

A road repair project is submitted for Helene Block Grant eligibility review. The block grant program administrator routes the project to the local Soil and Water Conservation District and DSWC Engineering Services who initiate the application review process.

5.2 Step-by-Step Procedure

Step 1 – Intake and Coordination

Receive project referral from NCDA&CS. Confirm parcel location, road description, and applicable NRCS practice standard(s) (CPS 560 and/or 578).

Create an application folder in the SharePoint folder (https://ncconnect.sharepoint.com/sites/AGR-SoilWaterConservation - Go to Site Contents - Helene USDA Block Grant) for the county where the site is located. A template folder will be in each county folder following the format in **HBG-FILE STRUCTURE GUIDANCE**. Copy the folder before making any changes. The folder shall be named using the following convention: HBG_COUNTY_NAME _YR_MO_DA. (Name refers to the name of the Landowner/Applicant). Begin setting up the application folder following the file format provided in the **HBG-FILE STRUCTURE GUIDANCE** document.

Review the application to determine if the repair has already been constructed;

IF YES – Proceed to Step 2 – Desktop Review

IF NOT – Proceed to Step 4 – Analysis and Design

Step 2 – Desktop Review

Use the NRCS Area of Potential Effect (APE) tool to complete a desktop review of the project area. Document potential project constraints and concerns related to existing topography and drainage patterns in the "Additional Notes and Potential Constraints" section of the Helene Block Grant Decision Sheet for the relevant CPS (HBG_ENG_002_DS_CPSXXX). Identify and document regulatory requirements that may apply to the site (e.g., Floodplain Development Permit, Trout Buffer Variance). Use County GIS maps to identify parcels and save parcel map to folder.

Step 3 – Site Assessment of Repairs

Conduct site visit using the Helene Block Grant Field Sheet for the relevant CPS(s) (HBG_ENG_003_FS_CPSXXX) Complete the following while on site:

1. Observe and document condition of all roads and stream crossings. Verify damage is Helene disaster-related and eligible for Helene Block Grant Funding by confirming that infrastructure supports farm production. Assess the severity of Helene damage and the safety and stability of any roads or stream crossings.
2. Take site photos to be included in a photo log. Be sure to include all photos required by the field sheet, as well as any additional photos necessary to illustrate the condition of each structure and section of roadway that is included in the repair application.
3. Complete all measurements of installed components necessary for evaluating CPS requirements as well as for cost estimation purposes. Measurements will be recorded on the Field Sheet. (NOTE: Access Road with Stream Crossings will need to use a Field Sheet for both CPS 560 and CPS 578).

   SKIP Step 4 and Proceed to Step 5

Step 4 - Analysis and Design

For **incomplete repairs**, the Engineer or JAA holder will develop a repair design with the applicant that adheres to all applicable CPS and meets eligibility criteria for NRCS Standard Repair at a 90% cost share. If it is determined by an individual working under JAA that site constraints do not allow the repair to fully meet the CPS, the site will be referred to the Engineering Services staff for evaluation and design. The design process will include all steps typically required by Division or District staff for the design and implementation of Access Roads and Stream Crossings, including but not limited to, desktop review of site constraints, assessment, survey, soils investigation, engineering analysis and preliminary and final design.

If necessary, the design shall incorporate site stabilization and erosion control measures, such as Critical Area Planting (CPS 342), Mulching (CPS 484) and others as outlined in HBG_JAA LISTS.xlsx.

Step 5 – Cost Estimation and Contract

Complete a cost estimation using provided template (COUNTY_NAME_YR_MO_DAY _COST_ESTIMATE). Apply the unit costs from the NC Cost Share Program cost lists and calculate component costs. Use actual costs for non-standard items.

For **complete repairs**, gather invoices and calculate total construction costs. Compare the actual costs against estimated costs from the NC Cost Share Program cost list and select the lower of the two as the basis for the awarded amount.

A contract will be required in CS2. Separate guidance will be provided for preparing the contract. The cost estimate tool spreadsheet will be used as the basis for one lump-sum line-item component in the contract.

Step 6 – Eligibility Determination

For **complete repairs**, the Engineer or JAA holder will confirm if any completed repairs meet NRCS standards using the Helene Block Grant Decision Sheets (HBG_ENG_002_DS_CPSXXX). The Engineer or JAA holder will perform and document any analysis that is required to verify adherence to the applicable CPS. This may include, but is not limited to, evaluation of slopes and drainage for roads, hydraulic analysis of culverts using HY8 or similar approach, and reference of the soils report.

For repairs completed after the application to the USDA Helene Block Grant Program, complete an as-built inspection after construction using the Helene Block Grant Decision Sheet checklists to determine if it meets NRCS Standard Repair or if it meets Alternative Repair.

Use the Helene Block Grant Decision Sheets to document any components or conditions that do not meet CPS conditions and affect site eligibility. Those qualifying for Alternative Repair will be given the opportunity to upgrade the repair to NRCS Standard Repair including design development to meet CPS.

For all repairs include the scaling factor, once it has been established, in the cost estimate sheet.

Step 7 - Submittal Package

Prepare written determination letter using provided templates. If ineligible, prepare recommendations for the site to meet requirements for cost share.

For **complete repairs** a submittal package will be uploaded to the project folder. Upload Matrix is provided on the DSWC Block Grant Website. Following upload, submit Form: Helene Block Grant FINAL DETERMINATION Form https://forms.office.com/g/DEPskR9tp5 Upload will include a minimum of:

1. Helene Block Grant Decision Sheet (COUNTY_NAME_YR_MO_DAY_DS_CPS_XXX)
2. Signed determination letter (COUNTY_NAME_YR_MO_DAY _DETERMINATION_LETTER)
3. Helene Block Grant Field Sheet for each Practice (COUNTY_NAME_YR_MO_DAY _FS_CPS_XXX)
4. Soils Field Sheet, if soils investigation was required (Form HBG_SOIL_001_FS)
5. Photolog (COUNTY_NAME_ YR_MO_DAY_PHOTOS)
6. Cost-Estimate (COUNTY_NAME_YR_MO_DAY _COST_ESTIMATE)

For **incomplete repairs** a design submittal package will be sent to the District and the Applicant that includes:

1. Design Plans and specifications (COUNTY_NAME_YR_MO_DAY_PLANS)
2. Photolog (COUNTY_NAME_ YR_MO_DAY_PHOTOS)
3. Cost-Estimate (COUNTY_NAME_YR_MO_DAY _COST_ESTIMATE)

Once construction is completed, proceed to Step 6.

5.3 Decision Points

Project Complexity:

If desktop review of the application and site yields significant constraints, complexity or need for additional information, and the site may require input from Engineering Services staff. If the site includes bridges or other components outside of the JAA, knowledge, and experience of DSWC staff or their consultants, the site will need to be flagged as requiring engineering or consultation.

Regulatory/Environmental Permitting:

If upon desktop, or field review of a site, it is apparent that impacts to jurisdictional waters of the United States (WOTUS) are proposed, coordination with the United States Army Corps of Engineering (USACE) is required. This includes, but is not limited to, culvert crossings in perennial or intermittent streams or wetlands. Culvert repair/replacement for agricultural properties are typically exempt from formal review under conditions of the Nationwide Permit 3 (maintenance), however, the USACE holds the authority to determine if this exemption may apply.

If any features are located within a regulatory flood hazard area, the need for a floodplain development permit and no-rise certification prepared by a licensed engineer shall be evaluated.

70% Cost Share Determination:

If it is determined that a completed repair does not meet criteria described in the applicable NRCS Conservation Practice Standard, the repair will not be eligible for 90% cost share but may still be eligible for 70% cost share. To qualify for 70% cost share, it must be determined that the repair is stable, safe and non-limiting for the use.

1. **Access Roads (CPS 560):**

   An access road is considered stable and safe when it is passable and maintains structural integrity under current traffic load, even if it does not fully meet CPS 560 design criteria. At minimum, the following conditions must be observed: no active rutting or surface failure inconsistent with current use; no uncontrolled water flowing along or down the road surface causing active erosion or channeling; drainage structures present and passing flow without complete blockage, overtopping, or active road damage; cut and fill slopes not actively failing with no fresh slumping, cracking, toe bulging, or piping observed; road width adequate for current agricultural use even if below CPS minimums; and shoulders and disturbed areas not actively eroding in a manner causing offsite sediment discharge.

   A road that does not meet one or more CPS 560 criteria but satisfies all the above conditions may be determined stable and safe at the discretion of the evaluating engineer or JAA holder, with documented justification.

   If any of the following are observed during district pre-screen or field assessment, a soils review under HBG-SOIL-001 should be requested prior to or concurrent with engineering evaluation: active rutting, ponding or saturated soils at road surface, visible slope instability (slumping, cracking, toe bulging, or alligator cracking), active rilling or erosion on cut or fill slopes, or road surface without gravel or geotextile where side slopes exceed 2:1.

2. **Stream Crossings (CPS 578):**

   A stream crossing is considered stable and safe when it is passable under normal flow conditions and does not exhibit active structural or hydraulic failure, even if it does not fully meet CPS 578 design criteria. At minimum, the following conditions must be observed: no observable structural failure of the crossing or its fill material; no observable erosion in fill material or scour at the inlet/outlet delivering sediment to the stream; and crossing is not creating an upstream impoundment.

   A crossing that does not meet one or more CPS 578 criteria but satisfies all the above conditions may be determined stable and safe at the discretion of the evaluating engineer or JAA holder, with documented justification.

6. Health & Safety Considerations

- Wear appropriate PPE during field evaluation; high-visibility vest required when working adjacent to active roads
- Assess slope stability visually before approaching cut-face or fill slopes — do not evaluate actively slumping areas
- Follow NCDA heat and weather safety protocols for field work
- Notify supervisor of field evaluation schedule and site location prior to departure

7. Forms, Tools & References

Software / Systems:

- ArcGIS software
- NRCS APE Analysis WebTool for Environmental Evaluation analysis (Ver. 2.00)
- NRCS EFT (Engineering Field Tools)
- NRCS EFH-2 (Engineering Field Handbook)
- HY8
- Civil3D or other drafting software if creating project designs
- Adobe Acrobat, Microsoft Word, Microsoft Excel

Policies & Standards:

- NRCS CPS Access Road (Code 560)
- NRCS CPS Stream Crossing (Code 578)
- NC state-adopted versions of each CPS (supersede national where applicable)
- Helene Block Grant Road Repair Program Guidelines

8. Records & Documentation

Records Created:

- NRCS APE Map and Special Environmental Concern Report
- Photolog
- Field Checklist for relevant CPS
- Decision Sheets for relevant CPS
- Project designs, if applicable (CAD Files, PDFs)
- Excel, HY8 or other files created for repair analysis

- Signed determination letter
- Cost estimate
- Invoices, quotes, and estimates provided by property owner for completed work

Storage Location:

- Project folder created in the SharePoint folder for the County where the project is located
- Copy retained by Division Engineer or JAA holding individual

9. Training & Communication

- All evaluators must be a licensed Engineer or hold JAA for NRCS CPS 560 and 578
- District Staff that do not have JAA can assist evaluators through coordination and documentation
- New evaluators should complete at least one joint field evaluation with an experienced staff member before working independently
- SOP updates communicated to applicable staff by Division Engineer and posted to shared program files

10. Revision History

Version	Date	Description of Change	Author / Approved By
1.1	2026	Initial version — Helene Block Grant Road Repair Program	Sam Just, Starr Silvis, Dalton Buchanon