NRCS West Virginia

Preliminary Investigation Feasibility Report (PIFR)

Saltlick Creek

12-digit HUC 050302030304

August 21, 2024

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Summary

In January 2022, the West Virginia Conservation Agency (WVCA) submitted a request to the United States Department of Agriculture (USDA) Natural Resources Conservation Service (NRCS) for assistance addressing continued flooding on Saltlick Creek, where existing NRCS structures have exceeded their service life and O&M obligations and are not functioning to their full design capabilities.

The primary PL-566 project purpose is flood prevention, with additional project purposes and resource concerns including watershed protection, public recreation, agricultural water management, and water quality management.

The watershed is in parts of Braxton County, West Virginia. Sutton is the county seat of Braxton County, but is not within the watershed and drains to a different HUC 4 (Kanawha, HUC 0505) than Saltlick Creek (Upper Ohio, HUC 0503). The watershed is rural with small farms and communities. The main towns within the watershed are Flatwoods and Burnsville. Project implementation would affect local business owners and their clients, local homeowners and renters, and commuters and travelers who the various state and county roads within the watershed.

The Saltlick Creek Watershed contains existing Natural Resource Conservation Service (NRCS) watershed projects which provide flood prevention, watershed protection, and recreation benefits. However, the projects, though still serviceable, have exceeded their federally obligated operations and maintenance agreement terms.

The project is Program 566 compatible because it aims to prevent damage from flooding, further the utilization and disposal of water, and ensure proper utilization of land. The watershed is less than 250,000 acres, and, with populations of less than 50,000, Flatwoods and Burnsville are considered rural communities based on the USDA definition. In addition, the project has a local sponsor in the WVCA.

The project is significant because it has the potential to provide flood prevention within the watershed. Disruptions to travel and property damage to businesses and residences and to agricultural production areas due to flooding are recurring. The project could provide long-term relief with positive impacts to the environment, the economy, and to residents and business owners in the watershed.

Potential alternatives for addressing the sponsors concerns are the installation of new flood control dams, construction of flood control channels, rehabilitation of existing structures, repair of existing structures, decommission of structures, stream restoration, land treatment, low impact development, a combination of these alternatives, floodplain buyout and restoration, and a no action alternative. The baseline condition without Federal investment is a situation of continued flooding, negatively impacting residents and businesses. The alternatives that were developed include structural and non-structural measures consisting of land treatment practices and possible construction of new infrastructure. If the rehabilitation alternative is selected, the Rehabilitation Program would be used.

Applicable Agency Authority and Authorized Purposes

The table below provides documentation that the project is eligible for federal assistance and will meet statutory requirements.

Describe the potential project watershed area; how does the area meet the requirements outlined in NRCS's National Watershed Program Manual (See 506.50 NWPM Glossary - TTT. Watershed).		
Response: The West Virginia Conservation Agency requested assistance with conducting a Preliminary Investigation and Feasibility Report (PIFR) for a potential watershed project in the **Saltlick Creek Watershed, Braxton County, WV,** 12-digit HUC (050302030304, Saltlick Creek). This assistance is authorized under the Watershed Protection and Flood Prevention Act (Public Law 83-566). The WVCA is interested in being a sponsor for a watershed project in the watershed and meets the PL 83-566 criteria for a sponsor. Flood prevention, watershed protection, public recreation, agricultural water management, and water quality management would be the likely purposes of a potential watershed project.		
Will the project area exceed 250,000 acres in size? [1,2]	☐ YES	☒NO
If over 250,000 acres, will it be divided into sub-watersheds in one plan?	☐ YES	☒NO
Potential Project Area Size: **31,485** acres		
Will any single structure provide more than 12,500 acre-feet of floodwater detention capacity, or have 25,000 acre-feet of total capacity?	☐ YES[3]	☒NO
How many recreational developments will be included in the project area?		
• One development in a project area less than 75,000 acres	☐ YES	☒NO
• Two developments in a project area between 75,000 and 150,000 acres	☐ YES	☒NO
• Three developments in a project area greater than 150,000 acres	☐ YES	☒NO

Which authorized purposes will the project address? (Indicate only one purpose as primary):

	Primary	Other
• Flood prevention	☒	☐
• Watershed Protection	☐	☒
• Public Recreation	☐	☒
• Public Fish and Wildlife	☐	☐
• Agricultural Water Management	☐	☒
• Municipal or Industrial Water Supply	☐	☐
• Water Quality Management	☐	☒

Will the project produce substantial benefits to the general public, to communities, and to groups of landowners?	☒YES	☐NO[3]
Can the project be installed by individual or collective landowners under alternative cost-sharing assistance?	☐ YES[3]	☒NO
Will the project have strong local citizen and sponsor support through agreements to obtain land rights, permits, contribute the local cost of construction, and carry out operation and maintenance.	☒YES	☐ NO[3]
Will the project take place in a Special Designated Area? (if yes, check applicable area below.)	☒YES	☐NO

Appalachia ☒	Delaware River Basin ☐	Susquehanna River Basin ☐	Tennessee Valley ☐

1. For specific appropriations, the 250,000 acres is waived except for watershed projects with the flood prevention purpose.

2- Watersheds exceeding 250,000 acres can be broken up into smaller sub-watersheds.

3- The project will not meet the statutory requirements.

References:

16 USC 18 - §1004, Conditions for Federal assistance 7 CFR 611 - 11, Eligible Watershed Projects

Title 390, NWPM – 500.3 Eligible Purposes

Potential for 20% Agricultural (Rural) Benefits

Braxton County had a population of 12,447 people reported on the 2020 Census. No town within the county or within the watershed has a population of 5,000 or more people. As per the USDA definition, Flatwoods and Burnsville are rural communities because they have fewer than 50,000 people. Because Braxton County is a rural county and Flatwoods and Burnsville are rural communities, at least 20% of the benefits will meet the agricultural (rural) requirement. Populations potentially benefitting from a project would include agricultural producers, homeowners and renters, travelers and commuters, business owners, and the public.

References:
16 USC 18 - §1002, Definitions
Title 390, NWPM – 506.50 Glossary, MMM. Rural or Rural Communities

Project Overview

Proposed Project Name	Saltlick Creek Watershed,12-digit HUC (050302030304)
State	West Virginia
County	Braxton County
Congressional District	1st Congressional District
USGS Hydrologic Unit Code (HUC) and Watershed Name	12-digit HUC 050302030304, Saltlick Creek 

General Coordinates of the Watershed	Latitude 38.763° , Longitude -80.621°
Potential Project Area - Size	31,485 acres
Project Setting	Saltlick Creek drains a large part of Braxton County, West Virginia, including the town of Flatwoods and part of the town of Burnsville. Saltlick Creek flows into Little Kanawha River within the Burnsville city limits. The Little Kanawha River flows to the Ohio River at Parkersburg, WV. The Ohio River joins the Mississippi River at Cairo, Illinois. The Mississippi flows into the Gulf of Mexico. The total watershed drainage area is 31,485 acres, entirely in Braxton County, WV. The topography in the watershed ranges from an elevation of approximately 1,750' MSL in the headwaters near Fisher Knob and High Knob to a low point of approximate elevation 745' MSL at the confluence of Saltlick Creek with Little Kanawha River. The watershed, which lies entirely in Major Land Resource Area (MLRA) 126, Central Allegheny Plateau, is characterized by a dissected plateau underlain mainly by horizontally bedded sedimentary rocks. The narrow, level valleys and narrow, sloping ridgetops are separated by long, steep to very steep side slopes. West Virginia has a humid continental climate. North central West Virginia, much like the rest of the state, experiences moderately cold winters and warm, humid summers. West Virginia has the highest average elevation east of the Mississippi River, which helps moderate summer temperatures. The jet stream is located near or over the northeast during the winter bringing frequent storm systems to the watershed.

Figure 1: Location of HUC 12 050302030304 Saltlick Creek in West Virginia.

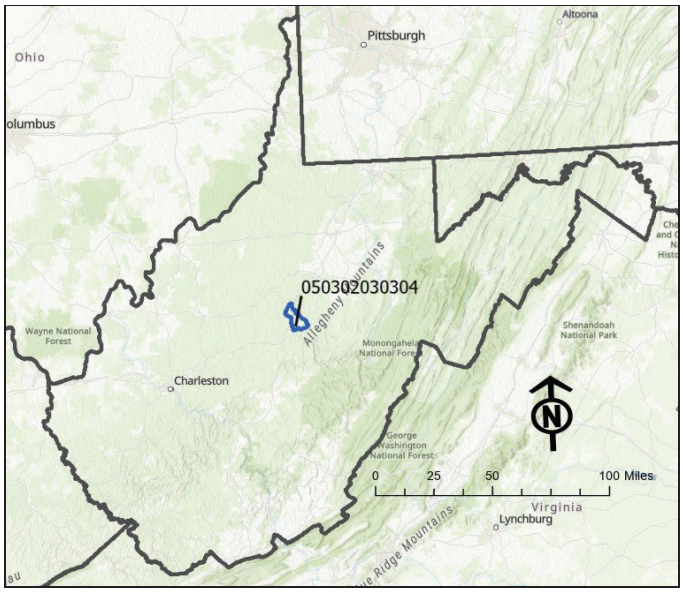


Figure 2: Location of HUC 12 050302030304 Saltlick Creek within HUC 10 0503020303 Upper Little Kanawha within HUC 8 05030203 Little Kanawha.

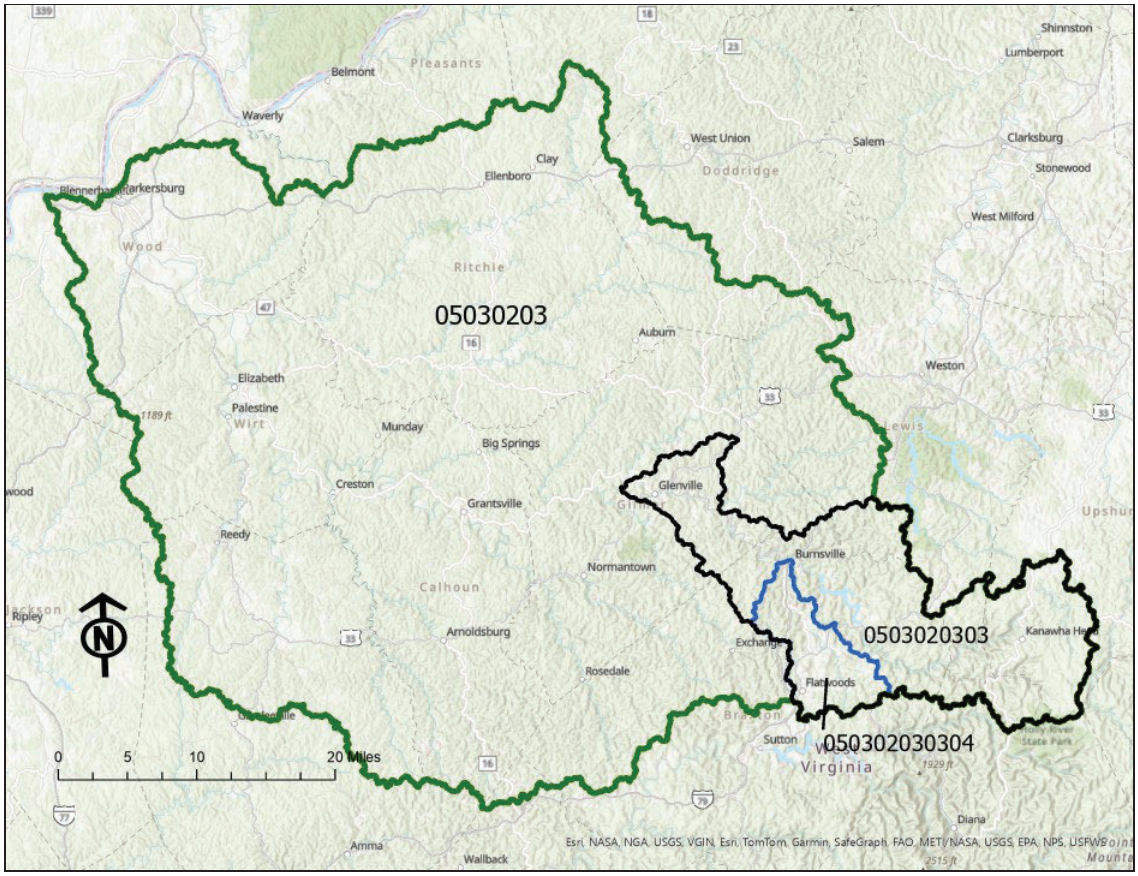
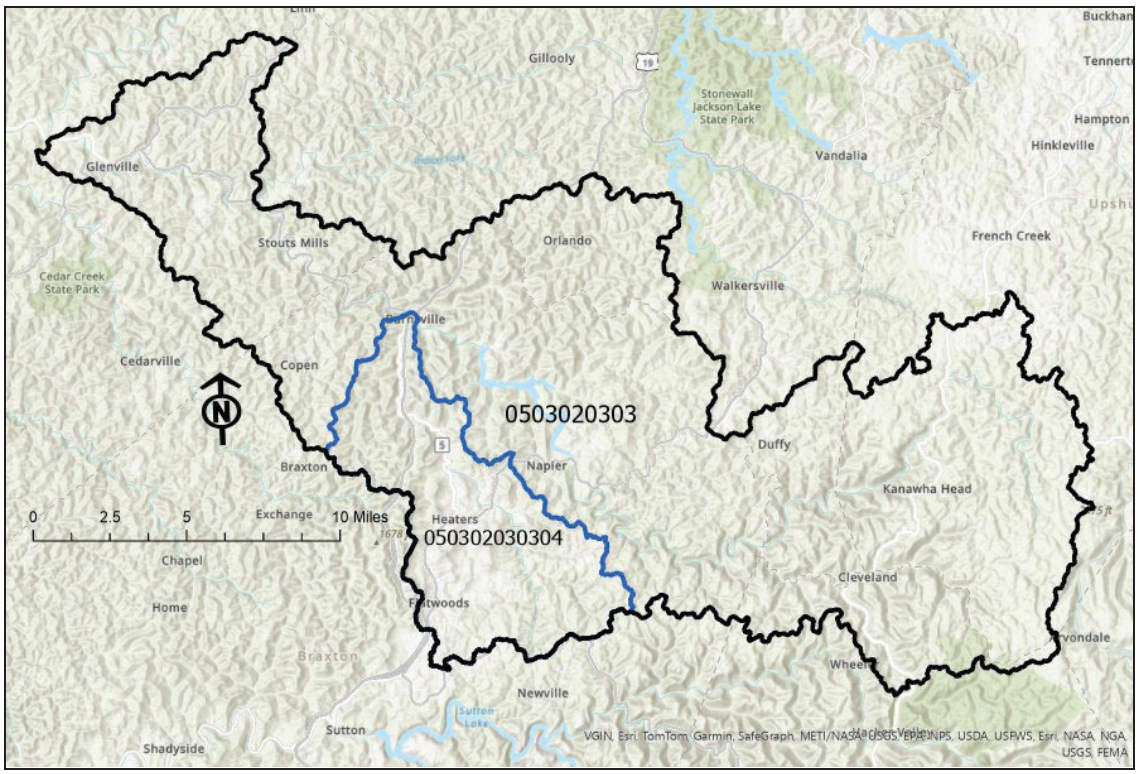


Figure 3: Location of HUC 12 050302030304 Saltlick Creek within HUC 10 0503020303 Upper Little Kanawha.



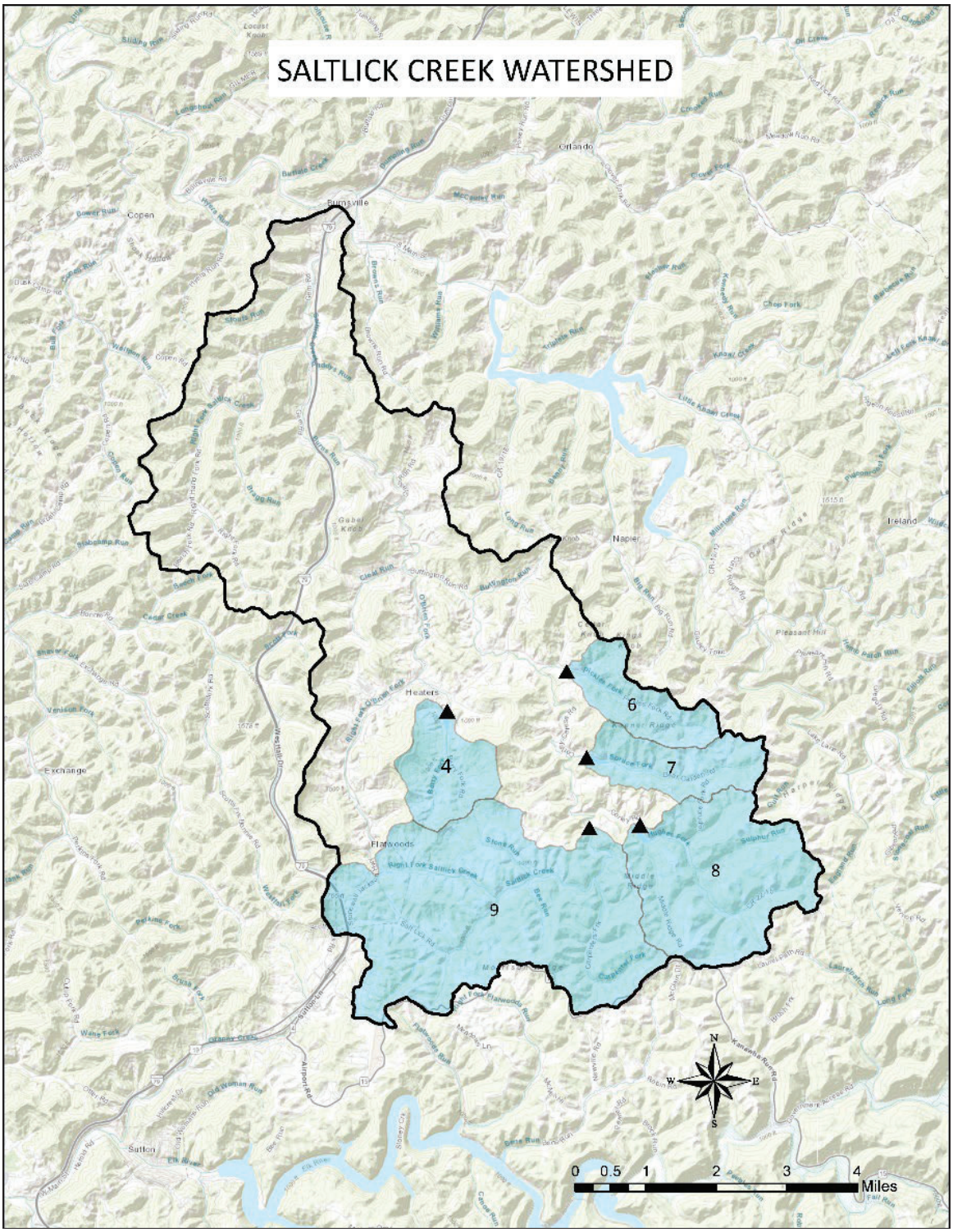
Resource Information

Soils	The project area lies within two Major Land Resource Areas, the Central Allegheny Plateau and the Eastern Allegheny Plateau and Mountains. The Central Allegheny Plateau occupies the western four-fifths of the county. The topography consists of nearly level to moderately steep ridgetops and steep or very steep side slopes. Much of the area consists of a series of benches on the side slopes that are commonly leveled and used for hay and pasture. Elevation ranges from 760 feet at the Elk River to more than 1,700 feet on the ridgetops. The Eastern Allegheny Plateau and Mountains occupy the eastern fifth of the county. The topography consists of some nearly level bottoms along streams and nearly level to moderately steep ridgetops, but mostly very steep, rugged side slopes used for timber production. Elevation in this MLRA in this area of the county ranges from about 1,000 feet on the valley floor to 2,160 feet at the summit of the high knob in the southeast edge of the county. The southern half of the county is drained by the Elk River. The surface rocks are of the Permian and Pennsylvanian Periods of the Paleozonic Era. The outcrops are sedimentary rocks. The northwestern third of the county is made up of interbedded sandstone, siltstone, red and gray shales, and coal of the Monongahela Formation. The central part of the county consists of interbedded red and gray shales, sandstone, siltstone, and coal of the Conemaugh Formation. The southeastern part of the county is made up of interbedded sandstone, siltstone, shale, and coal of the Allegheny and Kanawha Formations. Soil drainage ranges from well drained to moderately well drained. The soils on these slopes range from very steep to nearly level. The depth is classified as moderately deep to deep. In Braxton County, many processes are involved in the formation of soil horizons. The more important of these are the accumulation of organic matter, the reduction and transfer of iron, the formation and translocation of clay minerals, and the formation of soil structure. Such processes have been continuously taking place for thousands of years. Most of the well-drained soils on uplands in the county have a yellowish brown or weak red B horizon. These colors are caused mainly by the presence of iron oxides. The B horizon of these soils has blocky structure and commonly contains translocated clay materials. A fragipan has formed in the B horizon of the moderately well drained Buchanan soils on foot slopes and the moderately well drained Monongahela soils on terraces. This layer is dense and brittle, mottled, and slowly permeable or very slowly permeable to water and air. Most fragipans are grayish or mottled with gray. The moderately well drained soils in the county commonly are gray in color. The gray color resulted from intense reduction of iron during soil formation, in a process called gleying.

Water	Saltlick Creek and several tributaries, including Right Fork to the west and Hughes and Spruce Forks to the east, are the main streams in the watershed. Saltlick Creek meets the Little Kanawha River downstream from the watershed. There are five NRCS-assisted single-purpose floodwater retarding dams in the Saltlick Creek Watershed (see figure 4). The dams were designed and constructed in the 1960s. They have exceeded their service life and O&M obligations and are not functioning to their full design capabilities. Total Watershed Drainage Area: 31,485 acres, of which 12,612 acres are controlled.
Air	The watershed is not in an area recognized for regularly having impaired air quality or any significant air quality issues. Dust and fumes from project activity may temporarily adversely impact these areas.
Plants	The watershed provides for both agricultural crops as well as naturally vegetated forested areas utilized as wildlife habitat. As reported by US FWS, there are no threatened or endangered plant species, and no critical habitat is present within the watershed. See appendix E for more information.
Animals	The watershed is largely forested and has animal resources consisting of game, non-game, and invasive species. There are one threatened and one endangered bat species, one endangered fish species, three endangered clam species, and a candidate insect species within the watershed, but no critical habitat is present. See Appendix E for more information.
Energy	This area has various electrical, oil, and gas transmission facilities. Coal mines, both surface and deep mines, are abundant in this part of the state.

Human	**Demographics**: The 2020 U.S. Census reports the population of Braxton County at 12,447 residents. Approximately 96% of Braxton County residents are non-Hispanic whites, with African Americans making up approximately 1% of the population. The population density of Harrison County is 24.4 people per square mile, compared to 74.6 in West Virginia and 93.8 nationally. For the years 2018-2022, per capita income was $21,948 in Braxton County, while median household income was $42,245. The owner-occupied housing unit rate was 82% in Braxton County, with a median value of owner-occupied housing units of approximately $95,100. Median monthly rent was $595 in Braxton County. For the years 2018-2022, people under age 65 with a disability made up 12.8% of Harrison County residents, compared to 13.8% in West Virginia and 8.9% nationally. 11.7% of Harrison County residents had a bachelor's degree or higher, compared to 22.7% of state residents and 34.3% nationally. **Transportation:** Major highways within the watershed include US Interstate 79, which runs north to south through the northwest corner of the watershed. US Rt. 19/State Rt. 4 crosses the watershed east to west. State Rt. 5 runs north to south through the western part of the watershed, and State Rt. 15 runs east to west across the southern edge of the watershed. Small county roads run throughout the watershed, as well as utility infrastructure including power and telecommunication lines and gas pipelines. Other transportation infrastructure associated with an urban/suburban environment are present near Flatwoods and Burnsville, including but not limited to city streets, overhead and buried power and telecommunication lines, and natural gas distribution lines. **Recreation:** There is little federal or state-owned land in the watershed. The Burnsville Lake Wildlife Management Area is adjacent to the watershed to the northeast, and the Elk River Wildlife Management Area is south of but within close proximity to the watershed.

Figure 4: Existing NRCS structures and their drainages within the Saltlick Creek watershed.



Note: Existing dams denoted by black triangles, with watersheds shaded in blue.

Resources of Special Concern

Clean Water Act	Saltlick Creek is listed as impaired for iron and for fecal coliform bacteria in the US EPA approved TMDL for the Little Kanawha River watershed (approved 09-2023). The impairments are due to pollution from both point and non-point sources. Abandoned mine lands are a significant source of metals, including iron, that have led to the impairment. Failing septic system and straight pipes are a significant source of fecal coliform bacteria. Other significant stressors identified in the TMDL report for Saltlick Creek include sedimentation and organic enrichment.
Clean Air Act	The watershed is not in an area recognized for regularly having impaired air quality or significant air quality issues.
Coastal Zone Management	NA
Coral Reefs	NA
Cultural Resources	There are known cultural, archeological, and historically significant resources throughout the watershed. Consultation with Tribal Nations, West Virginia State Historic Preservation Officer, and other interested parties with vested interests in a yet to be determined area of potential effect will be conducted according to Section 106 of the National Historical Preservation Act (NHPA) of 1966, as amended.
Endangered & Threatened Species	The US Fish and Wildlife Service identifies 7 Federally listed threatened, endangered, or candidate species found in this watershed. According to the USFWS Information for Planning and Consultation (IPaC) regulatory review process, the project "may affect" 2 listed bat species: Indiana bat *myotis sodalist* (endangered) and northern long-eared bat *myotis septentrionalis* (threatened). Further consultation with USFWS is underway, and time of year restrictions may be placed on some project activity. See Appendix E for a complete USFWS IPaC Species list, determination letters, species survey guidelines, and project design guidelines aimed at minimizing impacts to T&E species.
Environmental Justice	Braxton County is completely within the Appalachian Region and is designated as a "limited-resource area" by USDA. Braxton County is also designated as "distressed" by the Appalachian Regional Commission, indicating that it is economically depressed and rank within the bottom 10% of counties in the nation. *Reference: https://www.arc.gov/distressed-designation-and-county-economic-status-classification-system/*
Essential Fish Habitat	There are no know essential fish habitats within the watershed. Saltlick Creek and its tributaries are not stocked with trout by WV DNR.

Floodplain Management	In January of 2010, Braxton County adopted a floodplain management ordinance that requires permits for repair, relocation, or construction of buildings, provides minimum standards for construction, and spells out penalties for violations of the ordinance. FEMA has designated much of the area adjacent to Saltlick Creek and its tributaries as Zone AE and Zone A. Much if this area is developed for agricultural and urban uses.
Invasive Species	Invasive species are found in the watershed. EDDMaps provides a web-based mapping system for documenting invasive species and pest distribution. See Appendix E for complete species lists. Note that the list is for Braxton County and is not specific to the watershed or project area.
Migratory Birds/Bald & Golden Eagle Protection Act	Migratory birds and eagles utilize the Saltlick Creek Watershed habitats. There are 10 USFWS listed Birds of Conservation Concern (BCC) in the area. See Appendix E for a complete list.
Natural Areas	**Federal**: There are no federally owned or operated lands within the watershed. **State**: The West Virginia Division of Natural Resources operates the Burnsville Lake Wildlife Management Area adjacent to and northeast of the Saltlick Creek watershed, and the Elk River Wildlife Management Area in close proximity to the south of the watershed. None of these areas are within the watershed. Stonewall Jackson Lake Wildlife Management Area, Stonewall Resort State Park, Cedar Creek State Park, and Holly River State Park are also within ten miles of the Saltlick Creek watershed.
Prime and Unique Farmlands	Within the Saltlick Creek watershed, there are 1,896 acres of Prime Farmland, which accounts for 6% of land in the watershed. Additionally, there are 6,870 acres of Farmland of Statewide Importance and 7,013 acres of Farmland of Local Importance (see Figure 5). There are no farmland protection boards actively conserving land in the watershed. Threat of conversion is considered low.
Riparian Area	There are riparian areas present in the watershed. Riparian areas found in this region are generally characterized as vegetated and un-vegetated. These areas are often forested or utilized as agricultural, urban, or residential purposes.
Scenic Beauty	Areas of potential scenic beauty in this watershed are typical of the Central Alleghany Plateau physiographic province and common to the region.
Wetlands	Within the Saltlick Creek watershed, there are 6,507 acres of wetland, consisting of 2 acres of Freshwater Emergent Wetlands, 0.1 acres of Freshwater Forested/Shrub Wetlands, 66 acres of Freshwater Pond, and 6439 acres of Riverine (see Figure 6). *Reference: US Fish and Wildlife Service National Wetlands Inventory.*
Wild and Scenic Rivers	No designated Wild and Scenic Rivers are in or near the project area.

Figure 5: Saltlick Creek watershed farmland classification map.

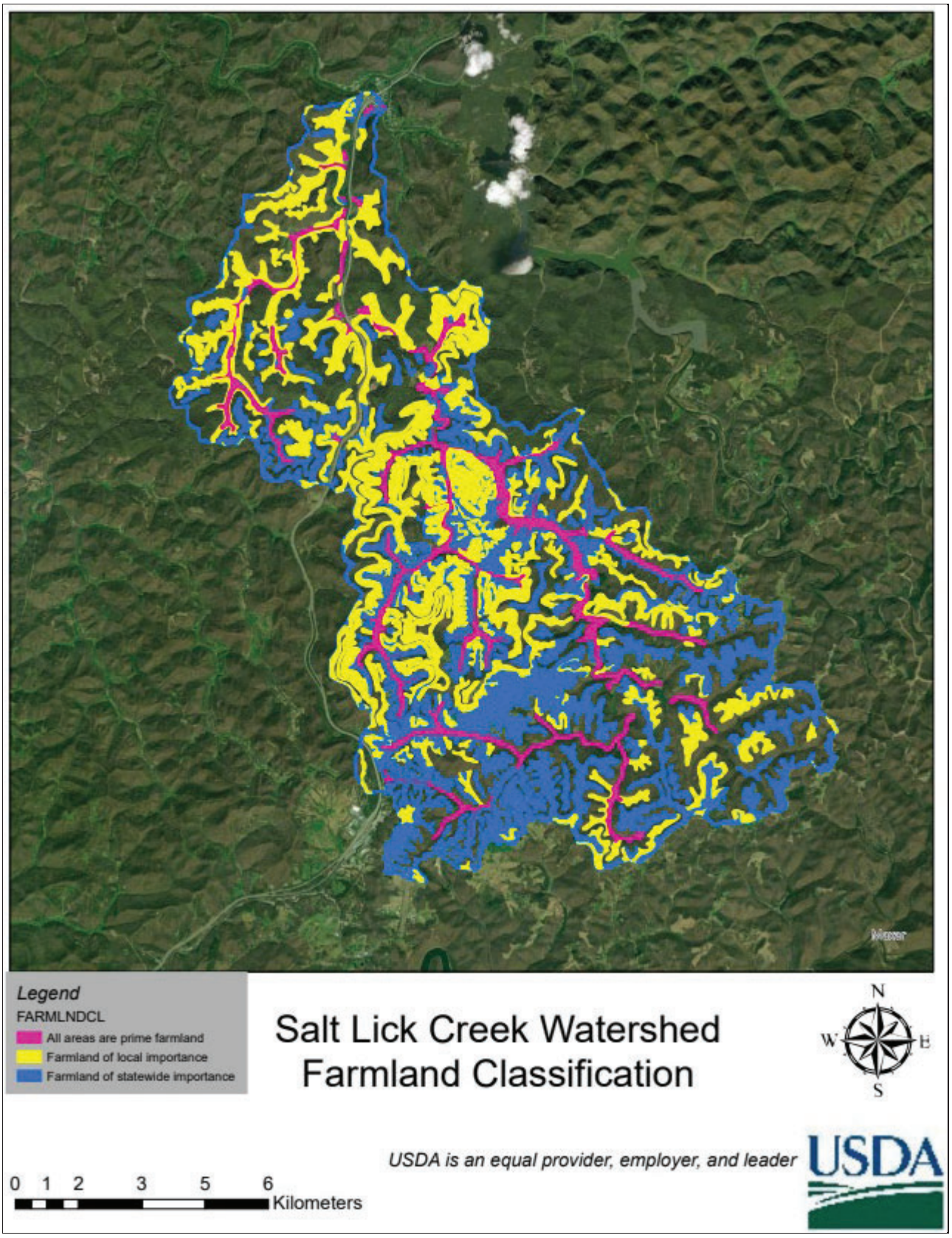
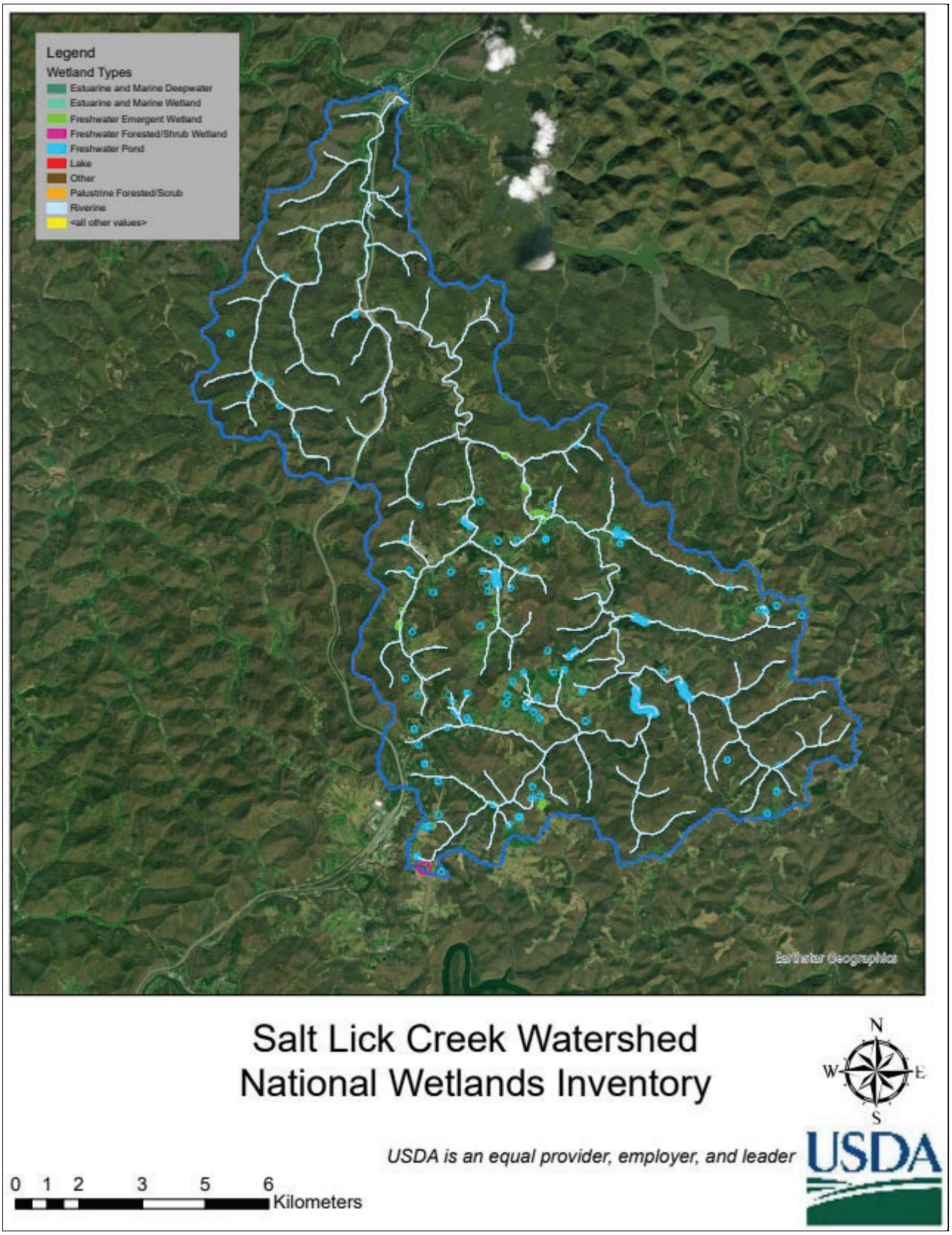


Figure 6: Saltlick Creek watershed USFWS National Wetlands Inventory map.



Proposed Project Purpose and Need Statement

The purpose of the proposed project is to address resource concerns in the Saltlick Creek watershed, where landowners and municipalities in flood prone areas are experiencing repeated flooding, destruction of property, and threats to human health and safety.

The PL 566 primary project purposes will be flood prevention, with watershed protection, public recreation, agricultural water management, and water quality management as additional objectives. If the rehabilitation alternative is chosen following the planning process, the Rehabilitation Program would be used for design and implementation phases.

The Saltlick Creek Watershed was the subject of a PL-83-566 project in the 1960s. The existing NRCS structures from that completed plan have exceeded their service life and O&M obligations and are not functioning to their full design capabilities. Because of this and changes in climate and land use over the past 50 years, some of the existing structures have been updated to a High Hazard Classification by WV DEP Dam Safety. Saltlick Creek Structure 4 has deterioration in the principal spillway system, conduit seepage, and significant untreated stress relief fractures in abutments. If a breach would occur at Saltlick Creek 4, the community of Heaters would have a high impact, resulting in the loss of potentially 83 buildings. Saltlick Creek Structure 6 has deterioration in the principal spillway system, conduit seepage, and significant stress relief fractures in the abutment. If a breach would occur, Saltlick Bridge community would be highly affected, with the potential to lose 71 buildings. Saltlick Creek 7 has conduit cracks or steady seepage and significant stress relief fractures in abutments. The community of Saltlick Bridge would be at high risk if a breach would occur from Saltlick Creek 7 as well, with the potential to lose 96 buildings. Saltlick Creek 8's conduit has a seepage and experiences significant stress relief fractures in the abutment. Saltlick Creek 9 has significant untreated stress relief fractures in abutments with the high potential for 235 buildings to be affected if a beach were to occur. Some of these existing structures are in need of repair, and some are in need of a more comprehensive engineering update. With these repairs and updates, flooding in the watershed could be limited.

Resource Concerns and Opportunities

The Federal Objective or the goal for the planning study according to the Principles, Requirements, and Guidelines for Water and Land Related Resources Implementation Studies (PR&G) is a water resources project that reflects national priorities, protects the environment, and encourages economic development. The Saltlick Creek Watershed contains water resources concerns and opportunities that offer the potential for a watershed project that achieves this Federal Objective.

Resources	**Concerns**	**Opportunities**
Water	• Flooding	• Reduce flood impacts • Address flood risk management concerns
Soil	• Soil loss is likely due to OM depletion, compaction resulting in reduced infiltration on agricultural lands and urban lands, impervious surfaces. Erosion on farms is most likely from overgrazing and bare soil areas.	• Reduce impacts to soils and improve soil health
Air	• No air quality issues present	• Monitor state air data for potential issues
Plant	• Lack of plant species diversity and presence of invasive species.	• Increase of plant diversity with the establishment of native regionally appropriate species.
Animals	• Lack of game and non-game species diversity and habitat diversity	• Provide appropriate game and non-game habitat.
Energy	• Potential damage to energy infrastructure from flooding	• Efficiencies in energy use • Improvements to air quality
Human	• Decreasing living standards due to flood risk	• Improvements to quality of life
Recreation	• Disparate recreational access • Underutilization of water-based recreation potential	• Increase accessibility to recreation for local residents • Increased water recreation opportunities
Environmental Justice	• Persistent poverty • Flooding of neighborhoods • Declining tax revenues for towns	• Overcome barriers to economic and human development
Cultural Resources / Historic Properties	• Full range of archaeological sites (Paleo-Indian to recent past) and historic properties eligible for listing on the National Registry of Historic Places	• Tribal and SHPO consultation

State, Tribal, Federal Stakeholder Engagement

Notification letters were sent out to the Elk Conservation District, the West Virginia Conservation Agency, and key federal agencies, as described in Executive Order 10584 Section 3, on April 19, 2023. A notification letter was sent out to Catawba Indian Nation, Shawnee Tribe, Eastern Shawnee Tribe of Oklahoma, and Absentee Shawnee Tribe on August 1st, 2023. There are known cultural, archeological, and historically significant resources throughout the watershed. Consultation with Tribal Nations, West Virginia State Historic Preservation Officer, and other interested parties with vested interests in a yet to be determined area of potential effect will be conducted according to Section 106 of the National Historical Preservation Act (NHPA) of 1966, as amended.

Potential Alternatives

During the PIFR process, broad categories of measures were identified to meet the stated purpose and need for the proposed project and alternatives were formulated according to PR&G criteria of completeness, effectiveness, efficiency, and acceptability. While all the potential alternatives listed may not be carried forward for full analysis during the planning process, this table documents that there are reasonable alternatives available to analyze and develop. The WV planning team also recognizes that during the planning process the NRCS team and local sponsors are likely to determine that the best alternative for the watershed is a combination of both nonstructural and structural measures.

Alternatives	Possible Positive Impacts and Effects	Possible Adverse Impacts and Effects
No Action	-No new costs to taxpayers or sponsors -no new maintenance requirements	-no flood protection -no public works project(s) -Structures remain out of compliance -hazard to public and infrastructure increases -maintenance becomes more expensive
Alt 1-New Flood Control Dams- Installation of additional flood control dams in the watershed to increase flood protection	-Increased flood protection -recreation opportunities -water supply, rural, ag, municipal, & industrial -aquatic habitat -short term construction jobs -Increased federal investment into local infrastructure -increased public safety -possible power generation capabilities included -ag water management	-Loss of private land through condemnation/easements -Loss of local tax base -Loss of farmland and/or terrestrial habitat -loss of stream habitat -aquatic organism passage barrier -long term maintenance burden on sponsors -potential relocations of homes, roads, & utilities -may require some local cost share funds

Alt 2-New Flood Control Channel-Channelization work in heavier populated area of the watershed to increase flood protection	-Increased flood protection in more urban areas -short term construction jobs -increased federal investment into local infrastructure -reduce significant risk to loss of life -provide maintenance easements alongside the constructed channel thus prohibiting future development in these areas and protecting existing urban wildlife habitat	-Loss of private land through condemnation/easements -long term maintenance burden on sponsors -potential relocations of utilities -may require some local cost share funds -loss of stream habitat & riparian areas -may only reduce flooding from higher frequency storms
Alt 3-Rehabilitation of existing NRCS structures in Watershed	-Increased flood protection -recreation opportunities -water supply, rural, ag, municipal, & industrial -aquatic habitat -short term construction jobs -Increased federal investment into local area infrastructure -Bring structures into compliance with WV DEP Dam Safety Regulations and current NRCS criteria -increased public safety -extend structure life -possible reduction of long term maintenance costs -possible power generation capabilities added -ag water management	-require local cost share funds (35%) -may require additional easements -continued maintenance by sponsors
Alt 4- Repair (Non-NRCS Driven)	-continues flood protection -continued present usage -short term construction jobs -continued public safety -extend structure life -possible reduction of long term maintenance costs	-may require additional easements -continued maintenance by sponsors -limited or no federal funds -repairs may not bring structures into compliance with WVDEP Dam Safety Regulations and current NRCS criteria

Alt 5 - Decommissioning of Structures	-restoring stream and riparian habitat -no long-term maintenance cost -return of local tax base with land usage -short term construction jobs -majority or all federal funds -re-introduction of natural occurring sediments back into the stream system	-loss of flood protection -some local funding may be required -loss of recreation & water supply -loss of aquatic habitat -Loss of several years of sediment storage, which would adversely impact the Chesapeake Bay
Alt 6 - Stream Restoration	-restoring stream and riparian habitat -reduced long term maintenance cost -short term construction jobs -majority or all federal funds -reduction in sediment and nutrients -increased outdoor recreation -relatively low cost -improved water quality -increase in fish and wildlife populations	-no flood protection -requires a fenced and maintained riparian area for cattle exclusion -possible loss of pasture due to fencing
Alt 7 - Land Treatment	-restoring forests and ag land to their production potential -no long-term maintenance cost -majority or all federal funds -reduction in sediment and nutrients -increased outdoor recreation -relatively low cost -improved water quality -increase in fish and wildlife populations -typically voluntary programs	-no flood protection -no public works project(s)

Alt 8 - Green Infrastructure/Low Impact Development	-aquatic habitat uplift -aesthetic improvements -improved water quality -extend life of flood control structures -permanent jobs maintaining structures -possible retrofitting existing structures for hydro power generation	-minor loss of land -maintenance burden on landowners/sponsors -increased cost of development
Alt 9- Floodplain Buyout, flood proofing affected homes, relocation of homes (May be an action outside of NRCS program authority)	-Elimination of threat to life and property -Floodplain converted to more natural condition including wetlands. -Increased wildlife habitat. -Enhanced learning and recreational opportunities	-Relocation of cemeteries and/or utilities. -Loss of cultural values in the community. -Displacement of local businesses, schools, and public facilities. -Increased resistance to relocation and property condemnation. -Increased cost of development.
Alt 10 – Combination of All Alternatives: Land Treatment, Stream Restoration, Rehab, Repair, Channelization, Green Infrastructure, New Structures, Buyouts	-combination of all the above -huge amount of federal money provided -several years of construction jobs -improved flood protection, water quality, recreation, & water supply -improved productivity on ag and forest land	-combination of all the above -large amount of cost share required from local sponsors -maintenance cost and burden increases

Potential Effects of Proposed Alternatives

Potential Effects of Proposed Alternatives on SWAPA + E + H Resources and Resources of Special Concern Use:

+ - Positive Impact - - Negative Impact 0 - No Impact * - effects for Alt 2 unknown at this stage

Resource Concerns: SWAPA + Energy + Human		
	Alt 1 – No Federal Action Description: The sponsor does not implement measures using federal funds	**Alt 2 – Federal Action:** Description: Combination of measures using federal funds
Soil	-	+
Water	-	+
Air	0	0
Plants	-	+
Animals	-	+
Energy	0	0
Human	-	+
Clean Air Act	0	0
Clean Water Act/Waters of the U.S.	0	0
Coastal Zone Management	0	0
Coral Reefs	0	0
Cultural Resources/Historic Properties	0	*
Endangered & Threatened Species	0	*
Environmental Justice	0	*
Essential Fish Habitat	0	0
Floodplain Management	0	+
Invasive Species	0	*
Migratory Birds/Bald and Golden Eagle Protection Act	0	*
Natural Areas	0	*

Facilitating Factors

- The West Virginia Conservation Agency is willing to work with NRCS to see the project through completion.

Obstructing Factors

- Local funding is dependent on state appropriations and local government budgets.

Environmental Document

Potentially viable alternatives to address flooding will be further defined in the next phase of planning. Additional needs such as watershed protection, public recreation, agricultural water management, and water quality management will be assessed in more detail if planning is authorized. At this point in the planning process, the interdisciplinary team has determined that the Environmental Document for the project may be an Environmental Assessment. However, it is acknowledged that an Environmental Impact Statement could be required if significant or controversial issues arise during further planning.

Sponsors

The West Virginia Conservation Agency is ready, willing, and able to sponsor a potential watershed project in the Saltlick Creek watershed. They meet the PL 83-566 sponsorship criteria for this potential watershed project. The West Virginia Conservation Agency has completed the WS-4, PIFR Sponsor Declaration form. A summary of the sponsor responses is included below. The completed WS-4 - PIFR Sponsor Declaration is included in Appendix B.

Sponsor Will:	Assist in Planning	Land Rights / Eminent Domain	Local Cost Share	O/M Funds	Permits	Land Treatment	In-Kind MOU
West Virginia Conservation Agency	Yes	Yes	Yes	Yes	Yes	Yes	Yes

Sponsor will:

- Assist in the locally led planning effort.
- Obtain needed land rights including the use of power of eminent domain, if necessary.
- Provide local cost-share funds and/or in-kind services to provide the required portion of total project costs.
- Provide funds for continuing operation and maintenance actions.
- Obtain required permits and approvals at sponsor cost.
- Provide leadership to help ensure adequate conservation land treatment measures are maintained on at least 50% of the watershed area above retention reservoirs.
- Before being credited with the value of any in-kind contribution for any in-kind services and/or acquisition of land rights, sponsor will sign a Memorandum of Understanding (MOU) with NRCS.

Potential Cooperating Agencies

Agency	Contact Information	Type of Involvement
US Army Corps of Engineers	USACE – Huntington District Planning Division Regulatory 502 8th Street Huntington, WV 25701 (304) 399-5211	Regulatory [X] Informed [X] Prepare permits or letters of permission document [X] Provide input [X]
US Fish and Wildlife Services	USFWS 6263 Appalachian Highway Davis, WV 26260 501-513-4470 FW5_WVFO@fws.gov	Regulatory [X] Informed [X] Prepare permits or letters of permission document [X] Provide input [X]
West Virginia Department of Environment Protection (WVDEP)	WVDEP 601 57th Street SE Charleston, WV 25304 (304) 926-0499	Regulatory [X] Informed [X] Prepare permits or letters of permission document [X] Provide input [X]
USDA Farm Service Agency	USDA-FSA 1550 Earl Core Road Morgantown, WV 26505 (304) 284-4800	Regulatory [ ] Informed [X] Prepare permits or letters of permission document [ ] Provide input [ ]
West Virginia Historic Preservation Office (WVSHPO)	WVSHPO Capitol Complex 1900 Kanawha Boulevard, East Charleston, WV 25305-0300 (304) 558-0220	Regulatory [X] Informed [X] Prepare permits or letters of permission document [X] Provide input [X]

Potential Stakeholders

Stakeholder	Role	Resources	Contribution
West Virginia Conservation Agency	Co-Sponsor	Cost-share funds	For Plan/EA attain permits and assists with Public Scoping Meetings, Mailings, and overall administration of the project.
Elk Conservation District	Support	Technical Assistance	For Plan/EA attain permits and assists with Public Scoping Meetings, Mailings, and overall administration of the project.
USDA-NRCS	Lead Agency for Plan- EA, FA/TA, Reviews	Funding assistance, Technical Reviews	Reviews for project location, inventory needs, Plan-EA supplement
Army Corps of Engineers (USACE)	Section 404 permit, Section 10 permit, Section 408 review	Technical Reviews, Wetlands-Waters of the U.S. Jurisdiction	Permitting, technical review
Catawba Indian Nation – Chief - Brian Harris	Permit- Cultural Review	Review of Project APE	Permit for Project APE
Catawba Indian Nation – Cultural Division Program Manager - Caitlin Rogers	Permit- Cultural Review	Review of Project APE	Permit for Project APE
Catawba Indian Nation - Tribal Historic Preservation Officer and Catawba Cultural Center Executive Director - Dr. Wenonah G. Haire	Permit- Cultural Review	Review of Project APE	Permit for Project APE
Absentee Shawnee Tribe - Cultural Preservation Director (NAGPRA) - Carol Butler	Permit- Cultural Review	Review of Project APE	Permit for Project APE
Absentee Shawnee Tribe - Tribal Governor - John Raymond Johnson	Permit- Cultural Review	Review of Project APE	Permit for Project APE
Shawnee Tribe - Chief - Benjamin Joseph Barnes	Permit- Cultural Review	Review of Project APE	Permit for Project APE
Shawnee Tribe - Tribal Historic Preservation Officer - Tonya Tipton	Permit- Cultural Review	Review of Project APE	Permit for Project APE
Eastern Shawnee Tribe of Oklahoma - Tribal Historic Preservation Officer/Director of Culture Preservation Programs/NAGPRA - Lora Nuckolls	Permit- Cultural Review	Review of Project APE	Permit for Project APE
Eastern Shawnee Tribe of Oklahoma - Chief - Glenna Wallace	Permit- Cultural Review	Review of Project APE	Permit for Project APE
West Virginia Historic Preservation Office (WVSHPO)	Permit- Cultural Review	Review of Project APE	Permit for Project APE
WVDEP	Permits	Review for Permits	Review for Permits

Notifications

Entity/Agency	Method and Date Notified
Governor (WV)	Mail, 5/15/2024
US Fish and Wildlife Service	Email, 4/19/2023
US Army Corps of Engineers	Email, 4/19/2023
Catawba Indian Nation	Mail, 8/1/2023
Absentee Shawnee Tribe	Mail, 8/1/2023
Shawnee Tribe	Mail, 8/1/2023
Eastern Shawnee Tribe of Oklahoma	Mail, 8/1/2023

Estimated Project Implementation Timeline

Alternative X (assumes 1 rehab site) funding dependent, multiple sites could be worked concurrently.

Planning Start*	October	2025
Planning End*	October	2028 (36 months typically)
Design Start*	December	2028
Design End*	December	2030 (24 months typically)
Construction Start*	March	2031
Construction End*	November	2034 (~42 months typically)

**Dependent on funding*

Recommendation

This preliminary investigation and feasibility report has been completed and submitted for approval to:

Jon Bourdon, West Virginia State Conservationist.

By:

Name: Clayton Scott Title: Resource Conservationist – Watershed Planner Date: August 20, 2024

Organization: Natural Resources Conservation Service (NRCS)

It has been determined that this potential PL-566 watershed operations project:

Does	Does Not	
☒	☐	meet the statutory acreage, volume/capacity of structure and recreational limit requirements;
☒	☐	meet the requirements of one or more Watershed Operations authorized purposes;
☒	☐	have the potential for a minimum of 20% agricultural, or rural, benefits;
☒	☐	have one or more viable alternatives;
☒	☐	have potential project sponsor(s) that meet and agree to all terms of responsibilities;
☐	☒	have apparent insurmountable obstacles.

Preparers Signature: Signature: CLAYTON SCOTT Digitally signed by CLAYTON SCOTT Date: 2024.08.21 11:02:31 -04'00' Date: _____

State Watershed Operations Program Manager: Signature: CHRISTI HICKS Digitally signed by CHRISTI HICKS Date: 2024.08.29 11:26:06 -04'00' Date: _____

State Technical Lead (SRC, SCE, Other): Signature: JEFFREY BARR Digitally signed by JEFFREY BARR Date: 2024.08.30 14:52:08 -04'00' Date: _____

	Not Recommended for Planning Funding
X	Accepted and Recommended for Planning Funding

State Conservationist: Signature: JON BOURDON Digitally signed by JON BOURDON Date: 2024.09.06 14:27:28 -04'00' Date: _____

Appendix

- Appendix A: Sponsor Letter of Request
- Appendix B: WS-4; Sponsor Authority and Role Declaration(s)
- Appendix C: Preliminary Environmental Evaluation (CPA 52)
- Appendix D: Forecasted NRCS Staffing Needs
- Appendix E: Supporting Information (T&E and Invasive Species)

Appendix A:

Sponsor Letter of Request

West Virginia
Conservation Agency

January 14, 2022

Jon Bourdon
State Conservationist
Natural Resources Conservation Service
1550 Earl Core Road, Suite 200
Morgantown, WV 26505

Dear Jon:

The West Virginia Conservation Agency respectfully requests Natural Resources Conservation Service Watershed Program planning assistance for several potential Public Law (PL) 83-566 projects and one PL-534 project in West Virginia.

Each of these watersheds contain high-hazard, small watershed flood-control structures, and several have exceeded their service life. Due to downstream development in the intervening years, hazard classifications on several of these dams have increased from significant to high.

The WVCA would like NRCS to evaluate the following structures to determine if additional structures may benefit the watershed by providing increased flood control, public water supply, and recreational opportunities.

PL-566 Projects

- Salt Lick Creek Watershed HUC 050302030304
- Harmon Creek Watershed HUC 0503010111
- Upper Deckers Creek Watershed HUC 0502000302
- Upper Grave Creek HUC 0503010608
- New Creek Watershed HUC 0207000204
- Marlin Run Watershed HUC 0505000302
- Mill Creek Watershed HUC 0503020206
- Dave Fork-Christian Fork Watershed HUC 0505000205
- Salem Fork Watershed HUC 0502000205
- Polk Creek Watershed HUC 0502000201
- Upper Buffalo Creek Watershed HUC 0502000303

PL-534 Projects

Warm Springs Run Watershed HUC 0207000405

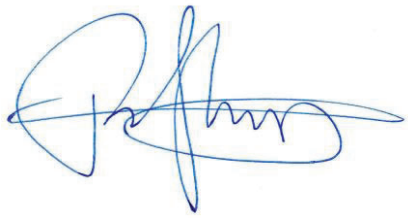
PHONE: (304) 558-2204
1900 KANAWHA BLVD., EAST
CHARLESTON, WV 25305
WWW.WVCA.US
FAX: (304) 558-1635

We also understand the following requirements of sponsorship:

- This is a local project and the role of USDA-NRCS is to provide technical and financial assistance to the local sponsor in order to carry out the project. As a local sponsor, we will be engaged in the planning process and decision-making aspects of these projects.
- Several guidance documents will be jointly developed throughout this project that define the roles and responsibilities of the local sponsors and NRCS. These documents may include a Memorandum of Understanding, a Watershed Agreement, and a Project Agreement. Additional documents may be developed as agreed to by all parties.
- Local sponsors are responsible, if necessary, for obtaining real property rights associated with these projects.
- Local sponsors are responsible for the non-federal cost share funds of these projects and commit to obtaining the non-federal match.

The WVCA looks forward to working with NRCS to complete a Preliminary Investigation Feasibility Report (PIFR). If you have any questions, please contact Gene Saurborn, WVCA Watershed Projects Director, at our Morgantown Field Office, 201 Scott Avenue, Morgantown, WV 26508. Phone: 304 285-3118

Sincerely,



Brian Farkas
Executive Director

cc: Don Dodd, Pam Yost, Julie Stutler, NRCS; Gene Saurborn, WVCA

Appendix B:

WS-4; Sponsor Authority and Role Declaration(s)

Watershed Programs Standard Memorandum
Preliminary Investigation – Feasibility Report
Sponsor Authority and Role Declaration

Form Number: WS-4
Version 2021-03-04

State: WV County: Braxton Watershed: Saltlick Creek

Project Name: Saltlick Creek Watershed

Sponsor's Name:	**West Virginia Conservation Agency**		
Sponsor's Mailing Address:	**1900 Kanawha Blvd East Charleston, WV 25305**		
Contact Name:	**Judith Lyons**	**Phone:**	**304-558-2204**
Title:	**Executive Director**	**Email:**	**jlyons@wvca.us**
Sponsor Website:	**https://www.wvca.us/**		

Description of the existing condition in the watershed that would be addressed through a Watershed Flood Prevention Operations program project.

Frequent flooding occurs in the Saltlick Creek Watershed. The flooding causes severe damages to neighborhood areas, crops. and infrastructure located in the floodplain. Sediment laden runoff on the surrounding areas is reducing the capacity of the creeks and drainage ditches to carry flood flows. Previously completed watershed projects are past their service life and O&M obligations and aren't functioning to full design capabilities. There is a need to provide reduction in floodwater damages and sediment being delivered into the Saltlick Creek Watershed.

Potential benefits of a Watershed Flood Prevention Operations program project.

Benefits of a project could provide watershed protection and agricultural water management by reducing floodwater damages, erosion and sediment loading to intensified agricultural areas, residential, and infrastructure in the Saltlick Creek Watershed located in Braxton County.

Watershed Programs Standard Memorandum
Preliminary Investigation – Feasibility Report
Sponsor Authority and Role Declaration

Form Number: WS-4
Version 2021-03-04

State: WV County: Braxton Watershed: Saltlick Creek

Project Name: Saltlick Creek Watershed

SPONSOR WILL:

- Assist in the locally led planning effort: YES __X___ NO _____
- Obtain needed land rights including the use of power of eminent domain, if necessary: YES __X___ NO _____
- Provide local cost-share funds and/or in-kind services to provide the required portion of total project costs: YES __X___ NO _____
- Provide Funds for continuing Operation and Maintenance actions: YES __X___ NO _____
- Obtain required permits and approvals at Sponsor cost: YES __X___ NO _____
- Provide leadership to help ensure adequate conservation land treatment measures are maintained on at least 50% of the watershed area above retention reservoirs: N/A _____ YES __X___ NO _____
- Before being credited with the value of any in-kind contribution for any in-kind services and/or acquisition of land rights, Sponsor will sign a Memorandum of Understanding (MOU) with NRCS: YES __X___ NO _____

Authorized Representative of Sponsor

Name (printed): Judith Lyons **Title:** Executive Director

Signature: Judith Lyons **Date:** 07-18-2024

Appendix C:

Preliminary Environmental Evaluation (CPA 52)

U.S. Department of Agriculture — NRCS-CPA-52
Natural Resources Conservation Service — 11/2019

ENVIRONMENTAL EVALUATION WORKSHEET

A. Client Name: The Elk Conservation District

B. Conservation Plan ID # (as applicable): Saltlick Creek PIFR
Program Authority (optional): PL-566

D. Client's Objective(s) (purpose):
The purpose of this project is to provide watershed protection and agricultural water management by reducing flood water damages, erosion and sedimentation loading in the Saltlick Creek Watershed.

C. Identification # (farm, tract, field #, etc. as required):
Saltlick Creek Watershed,
Braxton County, WV
12-digit HUC (050302030304)

E. Need for Action:
The baseline condition without federal investment is a of flood protection, incidental recreation, rural water supply , and other amenities associated with impoundments. Flooding is persistent and results in loss of property and crops, stream bank erosion, and sedimentation of streams.

H. Alternatives

No Action √ if RMS ☐	*Alternative 1* √ if RMS ☐	*Alternative 2* √ if RMS ☐
Flooding, sedimentation, and erosion would continue to be an issue for residents. As problems persist, land values, decreasing popluation, and land degradation would continue. Water supply would still be a concern for local residents. There would be no additional federal funds expended with this alternative	New Flood Control Dams- Installation of flood control dams in the watershed to increase flood protection. Focused funding for technical and financial assistance through the Watershed Protection and Flood Prevention Act would result in reduced sedimentation, improved water quality, protection of prime farmland, and reduce flooding in the Saltlick Creek Watershed.	New Flood Control Channel- Channelization work in more heavily populated areas of the watershed to increase flood protection. Focused funding for technical and financial assistance through the Watershed Protection and Flood Prevention Act would result in reduced sedimentation, improved water quality, protection of prime farmland, and reduce significant loss of life in the Saltlick Creek Watershed.

Resource Concerns

In Section "F" below, analyze, record, and address concerns identified through the Resources Inventory process. (See FOTG Section III - Resource Planning Criteria for guidance).

I. Effects of Alternatives

F. Resource Concerns and Existing/ Benchmark Conditions (Analyze and record the existing/benchmark conditions for each identified concern)	*No Action* — **Amount, Status, Description** *(Document both short and long term impacts)*	*No Action* — √ if does NOT meet PC	*Alternative 1* — **Amount, Status, Description** *(Document both short and long term impacts)*	*Alternative 1* — √ if does NOT meet PC	*Alternative 2* — **Amount, Status, Description** *(Document both short and long term impacts)*	*Alternative 2* — √ if does NOT meet PC
SOIL						
Sheet and rill erosion Sedimentation caused by erosion in the uplands of the watershed negatively impact Saltlick Creek and its tributaries. Sediment loading contributes to reduced channel capacity, further exasperating flood damages.	Continued degradation of the resource without any federal action.	☐ NOT meet PC	Increased flood control and holding capacity would decrease sediment loading within streams and reduce flooding impacts on stream bank erosion due to reduced flows.	☐ NOT meet PC	Channelization would reduce streambank erosion and sedimentation by protecting adjacent streambanks.	☐ NOT meet PC
WATER						
Ponding and flooding Flooding has been a historical issue in the watershed with the expected risk of flooding increasing over the next few decades as storms become more frequent and severe, and as the infrastructure ages. Flooding is a threat to property, access to utilities, emergency services, transportation, agricultural land, and crops.	Residences, businesses, and agricultural lands would continue to endure periodic flooding as storm frequency and intensity trends continue.	☐ NOT meet PC	Increased flood protection provided by installation of flood retention dams would reduce impacts of flooding within the watershed.	☐ NOT meet PC	Channelization would reduce the risk of flooding in more urban areas.	☐ NOT meet PC
Sediment transported to surface water Sedimentation caused by erosion in the uplands of the watershed negatively impact Saltlick Creek and its tributaries. Sediment loading contributes to reduced channel capacity, further exasperating flood damages. Floodplain scour of adjacent floodplains also increase the sediment load of floodwaters during flood events.	Resources would continue to be degredated. Frequent flooding will continues to scour streambanks, increasing sedimentation within streams and reducing channel capacity.	☐ NOT meet PC	Increased flood control and holding capacity would decrease sediment loading within streams and reduce flooding impacts on stream bank erosion due to reduced flows.	☐ NOT meet PC	Channelization would reduce streambank erosion and sedimentation by protecting adjacent streambanks.	☐ NOT meet PC

Nutrients transported to surface water Water quality is negatively affected by nutrients, failing septic systems, and runoff from rural landscapes within the watershed. Many streams within the watershed have elevated levels of fecal coliform from pasture/cropland, failing septic systems, and residential stormwater sources. Streams also have elevated levels of iron from abandoned mines, forest harvest, oil and gas production, roads, barren land, and streambank erosion.	Continued degradation of the resource without any federal action.	☐ NOT meet PC	Increased flood protection provided by construtions of flood retention dams would reduce impacts of flooding within the watershed. The risk of flood waters entering homes, businesses, and livestock feeding operations causing debris and other nutrients transported down the watershed would be reduced.	☐ NOT meet PC	The creation of the channel would likely result in the need for flood plain easements on properties adjacent to the streams that may not have functioning septic systems, thus reducing the fecal coliform in the stream.	☐ NOT meet PC

F. Resource Concerns and Existing/ Benchmark Conditions (Analyze and record the existing/benchmark conditions for each identified concern)	**I. (continued)**					
	No Action		***Alternative 1***		***Alternative 2***	
	Amount, Status, Description *(Document both short and long term impacts)*	**√ if does NOT meet PC**	**Amount, Status, Description** *(Document both short and long term impacts)*	**√ if does NOT meet PC**	**Amount, Status, Description** *(Document both short and long term impacts)*	**√ if does NOT meet PC**
AIR						
No resource concern identified Air quality is not currently a resource concern in the watershed.	Air quality would not be impacted with no action.	☐ NOT meet PC	Air quality may be slightly adversely impacted locally during construction activities (dust and exhaust from construction equipment). The increases are expected to remain well within the air quality standards and would be temporary.	☐ NOT meet PC	Air quality may be slightly adversely impacted locally during construction activities (dust and exhaust from construction equipment). The increases are expected to remain well within the air quality standards and would be temporary.	☐ NOT meet PC
PLANTS						
Plant structure and composition The watershed provides for both agricultural crops as well as naturally vegetated areas that provide wildlife habitat. There is a lack of plant species diversity, specifically along streams in riparian areas, and a presence of invasive species.	Agricultural crops and wildlife habitat would continue to be impacted by flooding.	☐ NOT meet PC	Agricultural crops and wildlife habitat would be enhanced from a reduction in flooding and decrease in sedimentation.	☐ NOT meet PC	Agricultural crops and wildlife habitat would be enhanced from a reduction in flooding and decrease in sedimentation.	☐ NOT meet PC
ANIMALS						
Terrestrial habitat for wildlife and invertebrates Game and non-game species of wildlife are found within the watershed, however habitat is not ideal. There are 7 threatened, endangered, or candidate species found in the watershed.	Wildlife will continue to be temporarily displaced during flood events. Changing vegetation along stream banks due to flood damage will continue to support invasive species over native, thus reducing the quality of wildlife habitat, food and shelter.	☐ NOT meet PC	Displacement of wildlife due to excessive flooding within the watershed would likely decrease. Habitat that supports this wildlife would be less likely to be disturbed and thus reduce the spread of invasive species. Terrestrial habitat would be disturbed in the short term due to construction.	☐ NOT meet PC	Channelization could result in a loss of riparian areas in some locations, but provide wildlife habitat in more urban areas through the removal of structures along the stream and future protection of the areas through conservation easements.	☐ NOT meet PC
Aquatic habitat for fish and other organisms Sedimentation and nutrients are negatively effecting aquatic fish and invertebrate species habitat.	Continued degradation of the resources with continued sedimentation in the stream negatively impacting aquatic invertebrate habitat.	☐ NOT meet PC	Aquatic habitat would be improved downstream of structures due to reduced sedimentation. Dams could pose a threat to aquatic habitat by restricting passage, depending on location in the watershed.	☐ NOT meet PC	Potential to negatively impact stream structure and habitat for aquatic species. Riparian areas could be decrease in some areas but enhanced in others though the removal of structures along stream and future protection of the areas through conservation easements.	☐ NOT meet PC
ENERGY						
No resource concern identified This area has various electrical, oil, and gas transmission facilities. Oil and gas wells are abundant.	No effect	☐ NOT meet PC	Hydroelectric power generation could be included as an element in the design of the structures to provide clean energy to the region.	☐ NOT meet PC	No effect	☐ NOT meet PC

Human Economic and Social Considerations			
Public Health and Safety Damaging floods occur on an annual basis with increasing severity over the past few decades. Flooding impacts residents' access to emergency services, results in loss of land, and creates unsanitary conditions in effected residences and businesses.	Agricultural landowners, residents, local businesses, transportation systems, and emergency services will continued to be negatively affected by continued flooding.	Installation of structures would increase flood protection of the counties' residences and business. It would also provide the opportunity for rural water supply, recreation opportunities, and a short term creation of jobs during construction.	Channelization would increase flood protection in more urban areas, create short term jobs during construction, and reduce significant risk to loss of life, however it may only reduce flooding from higher frequency storm events.

Special Environmental Concerns: Environmental Laws, Executive Orders, policies, etc.

In Section "G" complete and attach Environmental Procedures Guide Sheets for documentation as applicable. Items with a "●" may require a federal permit or consultation/coordination between the lead agency and another government agency. In these cases, effects may need to be determined in consultation with another agency. Planning and practice implementation may proceed for practices not involved in consultation.

G. Special Environmental Concerns (Document existing/ benchmark conditions)	J. Impacts to Special Environmental Concerns					
	No Action		*Alternative 1*		*Alternative 2*	
	Document all impacts (Attach Guide Sheets as applicable)	√ if needs further action	Document all impacts (Attach Guide Sheets as applicable)	√ if needs further action	Document all impacts (Attach Guide Sheets as applicable)	√ if needs further action
●Clean Air Act *Guide Sheet* The watershed is not in an area recognized for regularly having impaired air quality or significant air quality issues.	No Effect	☐	May Affect It is likely that no permitting or authorization is necessary. The activity is expected to only have minor local impacts to air quality during construction and would not be expected to violate standards. Advise the client to contact the appropriate air quality regulatory agency for verification.	☐	May Affect It is likely that no permitting or authorization is necessary. The activity is expected to only have minor local impacts to air quality during construction and would not be expected to violate standards. Advise the client to contact the appropriate air quality regulatory agency for verification.	☐
●Clean Water Act / Waters of the U.S. *Guide Sheet* Permitted actions may involve or likely result in the discharge or placement of dredged or fill material in or other pollutants into waters of the US. Ephemeral, intermittent, and perennial streams and certain wetlands will be considered as waters of the US. Mitigation for unavoidable impacts should be expected under Sec. 404 of the Clean Water Act.	No Effect	☐	May Affect Installation of any water control structures will involve the placement of fill material in streams and must comply with all applicable local, state, and federal laws. Compliance will require permits and must be obtained before construction begins. Mitigation for stream impacts may also be required.	☐	May Affect Installation of any structures within the stream that will involve the placement of fill material in streams and must comply with all applicable local, state, and federal laws. Compliance will require permits and must be obtained before construction begins. Mitigation for stream impacts may also be required.	☐
●Coastal Zone Management *Guide Sheet* There are no costal zones present in or near the watershed.	No Effect	☐	No Effect	☐	No Effect	☐
Coral Reefs *Guide Sheet* There are no coral reefs present in or near the watershed.	No Effect	☐	No Effect	☐	No Effect	☐

●Cultural Resources / Historic Properties *Guide Sheet* There are known cultural, archeological, and historically significant resources throughout the watershed. Consultation with Tribal Nations, West Virginia State Historic Preservation Officer, and other interested parties with vested interests in a yet to be determined area of potential effect will be conducted according to Section 106 of the National Historical Preservation Act (NHPA) of 1966, as amended.	No Effect	☐	May Affect Consultation with Tribal Nations, West Virginia State Historic Preservation Office (SHPO), and other interested parties will be conducted in according to Section 106 of the National Historical Preservation Act (NHPA) of 1966, as amended.	☐	May Affect Consultation with Tribal Nations, West Virginia State Historic Preservation Office (SHPO), and other interested parties will be conducted in according to Section 106 of the National Historical Preservation Act (NHPA) of 1966, as amended.	☐
●Endangered and Threatened Species *Guide Sheet* There is a total of 7 Federally listed threatened, endangered, or candidate species potentially found in this watershed listed by the US Fish and Wildlife Service (USFWS).	No action may have the potential to negatively impact federally listed aquatic species through continued sedimentation and habitat destruction.	☐	May Affect The structural alternative is not expected to create an adverse impact to threatened, endangered, or rare species. Federal, state, and local wildlife agencies will be consulted prior to construction.	☐	May Affect The structural alternative is not expected to create an adverse impact to threatened, endangered, or rare species. Federal, state, and local wildlife agencies will be consulted prior to construction.	☐
Environmental Justice *Guide Sheet* Braxton County is completely within the Appalachian Region. This county is designated as limited resource counties by USDA and 'distressed' by the Appalachian Regional Commission, indicating that local economy still needs improvement. Braxton County is predominately white at 97%. The poverty rate is 17.8%. WV poverty rate is 15.8% compared to the national rate of 11.4%.	No Effect	☐	No Effect No negative impacts are anticipated. The project would benefit historically underserved residents, landowners, and communities.	☐	No Effect No negative impacts are anticipated. The project would benefit historically underserved residents, landowners, and communities.	☐
●Essential Fish Habitat *Guide Sheet* This area is not designated as Essential Fish Habitat.	No Effect	☐	No Effect	☐	No Effect	☐
Floodplain Management *Guide Sheet* There is a major risk of flooding within the watershed over the next few decades.	No Effect Continued risk of flooding.	☐	May Affect This alternative will result in the protection of the floodplain due to decreased flooding impacts.	☐	May Affect This alternative will result in the protection of the floodplain due to decreased flooding impacts	☐
Invasive Species *Guide Sheet* Invasive species are found in the watershed.	No Effect Continued expansion on invasive species.	☐	May Affect Invasive species occur within the watershed. Care would be taken not to introduce invasive species in disturbed areas.	☐	May Affect Invasive species occur within the watershed. Care would be taken not to introduce invasive species in disturbed areas.	☐
●Migratory Birds/Bald and Golden Eagle Protection Act *Guide Sheet* Migratory birds and eagles utilize the Saltlick Creek Watershed habitats. There is a total of 10 federally listed birds in the area. The birds listed are birds of particular concern either because they occur on the USFWS Birds of Conservation Concern (BCC) list or warrant special attention in the project location.	No Effect	☐	No Effect Actions will not result in intentional or unintentional take of any migratory bird, nest, or egg.	☐	No Effect Actions will not result in intentional or unintentional take of any migratory bird, nest, or egg.	☐

Natural Areas *Guide Sheet* Federal: There are no federally operated lands within the watershed. State: The West Virginia Division of Natural Resources manages the Burnsville Lake Wildlife Management Area, which is adjacent to and northeast of the watershed. The Elk River Wildlife Management Area is in close proximity to the south.	No Effect	☐	No Effect	☐	No Effect	☐
Prime and Unique Farmlands *Guide Sheet* Presently there are 1,896 acres of Prime Farmland, which accounts for 6% of land in the study area. Additionally, there are 7,013 acres of Farmland of Local Importance and 6,870 acres of Farmland of Statewide Importance. There are no Farmland Protection Boards actively conserving land. The threat of conversion is low.	No Effect Continued potential threat to loss of prime farm land from streambank erosion.	☐	No Effect Alternative would provide protection of prime farmland through the reduction of streambank erosion.	☐	No Effect Alternative would provide protection of prime farmland through the reduction of streambank erosion.	☐
Riparian Area *Guide Sheet* There are riparian areas present in or near the project area. Riparian areas found in this region are generally characterized as vegetated and un-vegetated. These areas are often utilized for agricultural purposes.	No Effect Continued degradation of riparian land as streambanks erode and invasive species dominate regrowth.	☐	May Affect There are riparian areas present in or near the project area and may have the potential to be impacted.	☐	May Affect There are riparian areas present in or near the project area and may have the potential to be impacted.	☐
Scenic Beauty *Guide Sheet* Areas of potential scenic beauty in this watershed are typical of the Appalachian Plateau physiographic province and common to the region.	No Effect	☐	No Effect Action is not likely to negatively affect the scenic beauty of the area or alter the unique landscapes of the Allegheny Mountain physiographic province.	☐	No Effect Action is not likely to negatively affect the scenic beauty of the area or alter the unique landscapes of the Allegheny Mountain physiographic province.	☐
●Wetlands *Guide Sheet* There are 6,507.1 acres of wetlands within the Salt Lick Creek watershed which consist of the following: 2 acres of Freshwater Emergent Wetlands; 0.1 acres of Freshwater Forested/Shrub Wetlands; 66 acres of Freshwater Pond; and 6,439 acres of Riverine.	No Effect	☐	No Effect Action is not likely to negatively impact any wetlands in the watershed.	☐	No Effect Action is not likely to negatively impact any wetlands in the watershed.	☐
●Wild and Scenic Rivers *Guide Sheet* No designated Wild and Scenic Rivers and no Waters of Special Concern are in or near the project area.	No Effect	☐	No Effect	☐	No Effect	☐
K. Other Agencies and Broad Public Concerns	***No Action***		***Alternative 1***		***Alternative 2***	
Easements, Permissions, Public Review, or Permits Required and Agencies Consulted.	None		Installation of any water control structures will involve the placement of fill material in streams and must comply with all applicable local, state, and federal laws. Compliance will require permits and must be obtained before construction begins. Mitigation may also be required.		New Flood Control Channel-Channelization work in more heavily populated areas of the watershed to increase flood protection.	

Cumulative Effects Narrative (Describe the cumulative impacts considered, including past, present and known future actions regardless of who performed the actions)		Absent the proper and increased application of conservation practices, cumulative effects will likely lead to continued environmental degradation.	Installation of flood control dams would increase flood protection for the community, provide recreational opportunities, and potentially supply water and energy. There would be increase burden on local sponsors for maintenance and cost share would be required from the sponsor.	Channelization of streams would increase flood protection for the more urban sections of the community. There would be increase burden on local sponsors for maintenance and cost share would be required from the sponsor.
L. Mitigation (Record actions to avoid, minimize, and compensate)		None	Mitigation would likely be required for the length of streams impacted by construction of new impoundments. Vegetation will be established on disturbed areas immediately following construction to a vegetative plan developed conjunction with NRCS and local sponsors.	Mitigation could be required for the length of streams impacted by the channel. Vegetation will be established on disturbed areas immediately following construction to a vegetative plan developed conjunction with NRCS and local sponsors.
M. Preferred Alternative	√ preferred alternative	☐	☐	☐
	Supporting reason		Installation of additional flood control dams in the watershed to increase flood protection.	Installation of flood control channel in more heavily populated areas in the watershed to increase flood protection.
N. Context (Record context of alternatives analysis)		local	local	local
The significance of an action must be analyzed in several contexts such as society as a whole (human, national), the affected region, the affected interests, and the locality.				

U.S. Department of Agriculture — NRCS-CPA-52
Natural Resources Conservation Service — 11/2019

ENVIRONMENTAL EVALUATION WORKSHEET

A. Client Name: The Elk Conservation District

B. Conservation Plan ID # (as applicable): Saltlick Creek PIFR
Program Authority (optional): PL-566

D. Client's Objective(s) (purpose):
The purpose of this project is to provide watershed protection and agricultural water management by reducing flood water damages, erosion and sedimentation loading in the Saltlick Creek Watershed.

C. Identification # (farm, tract, field #, etc. as required):
Saltlick Creek Watershed,
Braxton County, WV
12-digit HUC (050302030304)

E. Need for Action:
The baseline condition without federal investment is a of flood protection, incidental recreation, rural water supply , and other amenities associated with impoundments. Flooding is persistent and results in loss of property and crops, stream bank erosion, and sedimentation of streams.

H. Alternatives

Alternative 3 √ if RMS ☐	*Alternative 4* √ if RMS ☐	*Alternative 5* √ if RMS ☐
Rehabilitation of existing NRCS structures in Watershed. Focused funding for technical and financial assistance through the Watershed Protection and Flood Prevention Act would result in extending the service life of the structures and extend their flood reduction values, as well as meet the new WV Dam Safety and current NRCS criteria.	Repair (Non-NRCS Driven) of existing structures in the watershed led by other local conservation agencies. There would be no federal funding for these repairs.	Decommissioning of Structures through focused technical and financial assistance through the Watershed Protection and Flood Prevention Act would result in restoration of the stream and riparian habitat.

Resource Concerns

In Section "F" below, analyze, record, and address concerns identified through the Resources Inventory process. (See FOTG Section III - Resource Planning Criteria for guidance).

I. Effects of Alternatives

F. Resource Concerns and Existing/ Benchmark Conditions (Analyze and record the existing/benchmark conditions for each identified concern)	*Alternative 3* — Amount, Status, Description (*Document both short and long term impacts*)	√ if does NOT meet PC	*Alternative 4* — Amount, Status, Description (*Document both short and long term impacts*)	√ if does NOT meet PC	*Alternative 5* — Amount, Status, Description (*Document both short and long term impacts*)	√ if does NOT meet PC
SOIL						
Sheet and rill erosion Sedimentation caused by erosion in the uplands of the watershed negatively impact Saltlick Creek and its tributaries. Sediment loading contributes to reduced channel capacity, further exasperating flood damages.	No change in the amount of sediment produced by flooding with the rehabilitation of existing structures.	☐ NOT meet PC	No change in the amount of sediment produced by flooding with the rehabilitation of existing structures.	☐ NOT meet PC	Decommissioning structures could potentially increase the amount of soil erosion in the short term as disturbed areas are revegetated. There would be a transition back to naturally occurring in the streambed.	☐ NOT meet PC
WATER						
Ponding and flooding Flooding has been a historical issue in the watershed with the expected risk of flooding increasing over the next few decades as storms become more frequent and severe, and as the infrastructure ages. Flooding is a threat to property, access to utilities, emergency services, transportation, agricultural land, and crops.	No change in the current amount of flooding in the watershed, but the rehabilitation would extend the service life of the dams to provide flood protection longer into the future.	☐ NOT meet PC	No change in the current amount of flooding in the watershed, but the repairs could extend the service life of the dams to provide flood protection longer into the future.	☐ NOT meet PC	Potential increase in flooding in the watershed without the retention and controlled release of flood waters by structures.	☐ NOT meet PC
Sediment transported to surface water Sedimentation caused by erosion in the uplands of the watershed negatively impact Saltlick Creek and its tributaries. Sediment loading contributes to reduced channel capacity, further exasperating flood damages. Floodplain scour of adjacent floodplains also increase the sediment load of floodwaters during flood events.	No change in the current amount of sedimentation in the watershed.	☐ NOT meet PC	No change in the current amount of sedimentation in the watershed.	☐ NOT meet PC	Additional sedimentation in the stream could be expected due to increased flows during flooding events causing increased streambank erosion.	☐ NOT meet PC

Nutrients transported to surface water Water quality is negatively affected by nutrients, failing septic systems, and runoff from rural landscapes within the watershed. Many streams within the watershed have elevated levels of fecal coliform from pasture/cropland, failing septic systems, and residential stormwater sources. Streams also have elevated levels of iron from abandoned mines, forest harvest, oil and gas production, roads, barren land, and streambank erosion.	No change in the current amount of nutrients transported within the watershed.	☐ NOT meet PC	No change in the current amount of nutrients transported within the watershed.	☐ NOT meet PC	Additional nutrients in the water could be expected due to increased flows during flooding events causing failures to structures, livestock feeding, or chemical storage areas.	☐ NOT meet PC
F. Resource Concerns and Existing/ Benchmark Conditions (Analyze and record the existing/benchmark conditions for each identified concern)	**I. (continued)**					
	Alternative3		***Alternative 4***		***Alternative 5***	
	Amount, Status, Description *(Document both short and long term impacts)*	**√ if does NOT meet PC**	**Amount, Status, Description** *(Document both short and long term impacts)*	**√ if does NOT meet PC**	**Amount, Status, Description** *(Document both short and long term impacts)*	**√ if does NOT meet PC**
AIR						
No resource concern identified Air quality is not currently a resource concern in the watershed.	Air quality may be slightly adversely impacted locally during construction activities (dust and exhaust from construction equipment). The increases are expected to remain well within the air quality standards and would be temporary.	☐ NOT meet PC	Air quality may be slightly adversely impacted locally during construction activities (dust and exhaust from construction equipment). The increases are expected to remain well within the air quality standards and would be temporary.	☐ NOT meet PC	Air quality may be slightly adversely impacted locally during construction activities (dust and exhaust from construction equipment). The increases are expected to remain well within the air quality standards and would be temporary.	☐ NOT meet PC
PLANTS						
Plant structure and composition The watershed provides for both agricultural crops as well as naturally vegetated areas that provide wildlife habitat. There is a lack of plant species diversity, specifically along streams in riparian areas, and a presence of invasive species.	No change to the agricultural crops or natural vegetation.	☐ NOT meet PC	No change to the agricultural crops or natural vegetation.	☐ NOT meet PC	Increased flooding and bank erosion could negatively impact species composition in pastureland and cropland, as well as cause disturbances that allow invasives to spread.	☐ NOT meet PC
ANIMALS						
Terrestrial habitat for wildlife and invertebrates Game and non-game species of wildlife are found within the watershed, however habitat is not ideal. There are 7 threatened, endangered, or candidate species found in the watershed.	Terrestrial habitat may be adversely effected in the short term due to construction, however would not be adversely impacted long term.	☐ NOT meet PC	Terrestrial habitat may be adversely effected in the short term due to construction, however would not be adversely impacted long term.	☐ NOT meet PC	Terrestrial habitat may be adversely effected in the short term during construction. Once structures are removed, early successional habitat would provide a benefit to wildlife.	☐ NOT meet PC
Aquatic habitat for fish and other organisms Sedimentation and nutrients are negatively effecting aquatic fish and invertebrate species habitat.	No change in the sedimentation of the streams, thus aquatic habitat would remain a resource concern.	☐ NOT meet PC	No change in the sedimentation of the streams, thus aquatic habitat would remain a resource concern.	☐ NOT meet PC	Aquatic habitat would be negatively effected by the increased intensity of flood events. Sedimentation loads would likely adversely affect the Chesapeake Bay.	☐ NOT meet PC
ENERGY						
No resource concern identified This area has various electrical, oil, and gas transmission facilities. Oil and gas wells are abundant.	Hydroelectric power generation could be included as an element in the design of the structures to provide clean energy to the region.	☐ NOT meet PC	No effect	☐ NOT meet PC	No effect	☐ NOT meet PC

Human Economic and Social Considerations			
Public Health and Safety Damaging floods occur on an annual basis with increasing severity over the past few decades. Flooding impacts residents' access to emergency services, results in loss of land, and creates unsanitary conditions in effected residences and businesses.	Rehabilitation of existing flood control structures would extend the flood control benefits further into the future and increase public safety by ensure the structures meet modern day safety standards.	Repair of existing flood control structures would extend the flood control benefits further into the future however repairs to the structures may not bring them into compliance with current WV DEP Dam Safety standards.	Decommission of existing structures would result in the loss of flood protection and increase risk of loss of life. There would also be a loss of recreation opportunities and a reduction in water supply for the area.

Special Environmental Concerns: Environmental Laws, Executive Orders, policies, etc.

In Section "G" complete and attach Environmental Procedures Guide Sheets for documentation as applicable. Items with a "●" may require a federal permit or consultation/coordination between the lead agency and another government agency. In these cases, effects may need to be determined in consultation with another agency. Planning and practice implementation may proceed for practices not involved in consultation.

G. Special Environmental Concerns (Document existing/ benchmark conditions)	J. Impacts to Special Environmental Concerns					
	Alternative 3		*Alternative 4*		*Alternative 5*	
	Document all impacts (Attach Guide Sheets as applicable)	√ if needs further action	Document all impacts (Attach Guide Sheets as applicable)	√ if needs further action	Document all impacts (Attach Guide Sheets as applicable)	√ if needs further action
●Clean Air Act *Guide Sheet* The watershed is not in an area recognized for regularly having impaired air quality or significant air quality issues.	May Affect It is likely that no permitting or authorization is necessary. The activity is expected to only have minor local impacts to air quality during construction and would not be expected to violate standards. Advise the client to contact the appropriate air quality regulatory agency for verification.	☐	May Affect It is likely that no permitting or authorization is necessary. The activity is expected to only have minor local impacts to air quality during construction and would not be expected to violate standards. Advise the client to contact the appropriate air quality regulatory agency for verification.	☐	May Affect It is likely that no permitting or authorization is necessary. The activity is expected to only have minor local impacts to air quality during construction and would not be expected to violate standards. Advise the client to contact the appropriate air quality regulatory agency for verification.	☐
●Clean Water Act / Waters of the U.S. *Guide Sheet* Permitted actions may involve or likely result in the discharge or placement of dredged or fill material in or other pollutants into waters of the US. Ephemeral, intermittent, and perennial streams and certain wetlands will be considered as waters of the US. Mitigation for unavoidable impacts should be expected under Sec. 404 of the Clean Water Act.	May Affect Construction involved with the rehabilitation of the dams could result in the placement of fill material in streams and must comply with all applicable local, state, and federal laws. Compliance will require permits and must be obtained before construction begins. Mitigation for stream impacts may also be required.	☐	May Affect Construction involved with the repair of the dams could result in the placement of fill material in streams and must comply with all applicable local, state, and federal laws. Compliance will require permits and must be obtained before construction begins. Mitigation for stream impacts may also be required.	☐	May Affect Construction involved with the removal of the dams could result in the placement of fill material in streams and must comply with all applicable local, state, and federal laws. Compliance will require permits and must be obtained before construction begins. Mitigation for stream impacts may also be required.	☐
●Coastal Zone Management *Guide Sheet* There are no costal zones present in or near the watershed.	No Effect	☐	No Effect	☐	No Effect	☐
Coral Reefs *Guide Sheet* There are no coral reefs present in or near the watershed.	No Effect	☐	No Effect	☐	No Effect	☐

●Cultural Resources / Historic Properties *Guide Sheet* There are known cultural, archeological, and historically significant resources throughout the watershed. Consultation with Tribal Nations, West Virginia State Historic Preservation Officer, and other interested parties with vested interests in a yet to be determined area of potential effect will be conducted according to Section 106 of the National Historical Preservation Act (NHPA) of 1966, as amended.	May Affect Consultation with Tribal Nations, West Virginia State Historic Preservation Office (SHPO), and other interested parties will be conducted in according to Section 106 of the National Historical Preservation Act (NHPA) of 1966, as amended.	☐	No Effect Consultation with Tribal Nations, West Virginia State Historic Preservation Office (SHPO), and other interested parties will be conducted in according to Section 106 of the National Historical Preservation Act (NHPA) of 1966, as amended.	☐	May Affect Consultation with Tribal Nations, West Virginia State Historic Preservation Office (SHPO), and other interested parties will be conducted in according to Section 106 of the National Historical Preservation Act (NHPA) of 1966, as amended.	☐
●Endangered and Threatened Species *Guide Sheet* There is a total of 7 Federally listed threatened, endangered, or candidate species potentially found in this watershed listed by the US Fish and Wildlife Service (USFWS).	May Affect This alternative is not expected to create an adverse impact to threatened, endangered, or rare species. Federal, state, and local wildlife agencies will be consulted prior to construction.	☐	May Affect This alternative is not expected to create an adverse impact to threatened, endangered, or rare species. Federal, state, and local wildlife agencies will be consulted prior to construction	☐	May Affect This alternative is not expected to create an adverse impact to threatened, endangered, or rare species. Federal, state, and local wildlife agencies will be consulted prior to construction	☐
Environmental Justice *Guide Sheet* Braxton County is completely within the Appalachian Region. This county is designated as limited resource counties by USDA and 'distressed' by the Appalachian Regional Commission, indicating that local economy still needs improvement. Braxton County is predominately white at 97%. The poverty rate is 17.8%. WV poverty rate is 15.8% compared to the national rate of 11.4%.	No Effect No negative impacts are anticipated. The project would benefit historically underserved residents, landowners, and communities.	☐	No Effect No negative impacts are anticipated. The project would benefit historically underserved residents, landowners, and communities.	☐	No Effect No negative impacts are anticipated. The project would benefit historically underserved residents, landowners, and communities.	☐
●Essential Fish Habitat *Guide Sheet* This area is not designated as Essential Fish Habitat.	No Effect	☐	No Effect	☐	No Effect	☐
Floodplain Management *Guide Sheet* There is a major risk of flooding within the watershed over the next few decades.	May Affect This alternative will result continued protection the floodplain by reducing flooding impacts further into the future.	☐	No Effect	☐	May Affect Increased flooding as the result of decommissioning the flood control structures could result in increased active management of floodplains and their functions.	☐
Invasive Species *Guide Sheet* Invasive species are found in the watershed.	May Affect Invasive species occur within the watershed. Care would be taken not to introduce invasive species in disturbed areas.	☐	May Affect Invasive species occur within the watershed. Care would be taken not to introduce invasive species in disturbed areas.	☐	May Affect Invasive species occur within the watershed. Care would be taken not to introduce invasive species in disturbed areas.	☐
●Migratory Birds/Bald and Golden Eagle Protection Act *Guide Sheet* Migratory birds and eagles utilize the Saltlick Creek Watershed habitats. There is a total of 10 federally listed birds in the area. The birds listed are birds of particular concern either because they occur on the USFWS Birds of Conservation Concern (BCC) list or warrant special attention in the project location.	No Effect Actions will not result in intentional or unintentional take of any migratory bird, nest, or egg.	☐	No Effect Actions will not result in intentional or unintentional take of any migratory bird, nest, or egg.	☐	No Effect Actions will not result in intentional or unintentional take of any migratory bird, nest, or egg.	☐

Natural Areas *Guide Sheet* Federal: There are no federally operated lands within the watershed. State: The West Virginia Division of Natural Resources manages the Burnsville Lake Wildlife Management Area, which is adjacent to and northeast of the watershed. The Elk River Wildlife Management Area is in close proximity to the south.	No Effect	☐	No Effect	☐	No Effect	☐
Prime and Unique Farmlands *Guide Sheet* Presently there are 1,896 acres of Prime Farmland, which accounts for 6% of land in the study area. Additionally, there are 7,013 acres of Farmland of Local Importance and 6,870 acres of Farmland of Statewide Importance. There are no Farmland Protection Boards actively conserving land. The threat of conversion is low.	May Affect Alternative would provide continued protection of prime farmland through the reduction of streambank erosion further into the future.	☐	May Affect Alternative would provide continued protection of prime farmland.	☐	May Affect Alternative may result in the loss of prime and unique farmlands through projected increase of streambank erosion cutting into farmland.	☐
Riparian Area *Guide Sheet* There are riparian areas present in or near the project area. Riparian areas found in this region are generally characterized as vegetated and un-vegetated. These areas are often utilized for agricultural purposes.	May Affect There are riparian areas present in or near the project area and may have the potential to be impacted.	☐	May Affect There are riparian areas present in or near the project area and may have the potential to be impacted.	☐	May Affect There are riparian areas present in or near the project area and may have the potential to be impacted.	☐
Scenic Beauty *Guide Sheet* Areas of potential scenic beauty in this watershed are typical of the Allegheny Mountain physiographic province and common to the region.	No Effect Action is not likely to negatively affect the scenic beauty of the area or alter the unique landscapes of the Ridge and Valley physiographic province.	☐	No Effect Action is not likely to negatively affect the scenic beauty of the area or alter the unique landscapes of the Ridge and Valley physiographic province.	☐	No Effect Action is not likely to negatively affect the scenic beauty of the area or alter the unique landscapes of the Ridge and Valley physiographic province.	☐
●Wetlands *Guide Sheet* There are 6,507.1 acres of wetlands within the Salt Lick Creek watershed which consist of the following: 2 acres of Freshwater Emergent Wetlands; 0.1 acres of Freshwater Forested/Shrub Wetlands; 66	No Effect Action is not likely to negatively impact any wetlands in the watershed.	☐	No Effect Action is not likely to negatively impact any wetlands in the watershed.	☐	No Effect Action is not likely to negatively impact any wetlands in the watershed.	☐
●Wild and Scenic Rivers *Guide Sheet* No designated Wild and Scenic Rivers and no Waters of Special Concern are in or near the project area.	No Effect	☐	No Effect	☐	No Effect	☐
K. Other Agencies and Broad Public Concerns	***Alternative 3***		***Alternative 4***		***Alternative 5***	
Easements, Permissions, Public Review, or Permits Required and Agencies Consulted.	Construction related to the rehabilitation of existing structures could involve the placement of fill material in streams and must comply with all applicable local, state, and federal laws. Compliance will require permits and must be obtained before construction begins. Mitigation may also be required.		Construction related to the repair of existing structures could involve the placement of fill material in streams and must comply with all applicable local, state, and federal laws. Compliance will require permits and must be obtained before construction begins. Mitigation may also be required.		Construction related to the decommissioning of existing structures could involve the placement of fill material in streams and must comply with all applicable local, state, and federal laws. Compliance will require permits and must be obtained before construction begins. Mitigation may also be required.	

Cumulative Effects Narrative (Describe the cumulative impacts considered, including past, present and known future actions regardless of who performed the actions)		Flood protection would be extended past the current service life of the structures, bring structures up to current engineering standards, and potentially create water supply and energy production for the area. Annual maintenance costs associated with the structures would likely decrease.	Repairs of existing structures would extend the life of their values and functions and possibly reduce the long term maintenance costs, however would not involve any federal cost share.	Decommissioning of structures could help restore the function of the stream and riparian area, provide short term job creation, and return the local tax base with land usage. There would be a nearly total loss in flood protection, recreation, and water supply.
L. Mitigation (Record actions to avoid, minimize, and compensate)		Mitigation could be required for areas of stream that may be impacted during construction and rehabilitation. Vegetation will be established on disturbed areas following construction to a vegetative plan developed in conjunction with NRCS and local sponsors.	Mitigation could be required for areas of stream that may be impacted during construction and repairs. Vegetation will be established on disturbed areas following construction to a vegetative plan developed in conjunction with NRCS and local sponsors.	Mitigation would likely not be required.
M. Preferred Alternative	√ preferred alternative	☐	☐	☐
	Supporting reason	Rehabilitation of existing flood control structures in the watershed would extend the life of their function.	Repairs of existing flood control structures in the watershed would extend the life of their function.	Decommissioning of structures within the watershed would result in stream and riparian area restoration.
N. Context (Record context of alternatives analysis)		local	local	local
The significance of an action must be analyzed in several contexts such as society as a whole (human, national), the affected region, the affected interests, and the locality.				

U.S. Department of Agriculture — NRCS-CPA-52
Natural Resources Conservation Service — 11/2019

ENVIRONMENTAL EVALUATION WORKSHEET

A. Client Name: The Elk Conservation District

B. Conservation Plan ID # (as applicable): Saltlick Creek PIFR
Program Authority (optional): PL-566

D. Client's Objective(s) (purpose):
The purpose of this project is to provide watershed protection and agricultural water management by reducing flood water damages, erosion and sedimentation loading in the Saltlick Creek Watershed.

C. Identification # (farm, tract, field #, etc. as required):
Saltlick Creek Watershed,
Braxton County, WV
12-digit HUC (050302030304)

E. Need for Action:
The baseline condition without federal investment is a of flood protection, incidental recreation, rural water supply , and other amenities associated with impoundments. Flooding is persistent and results in loss of property and crops, stream bank erosion, and sedimentation of streams.

H. Alternatives

Alternative 6 √ if RMS ☐	*Alternative 7* √ if RMS ☐	*Alternative 8* √ if RMS ☐
Natural Stream Restoration would restore the stream and riparian habitat to its natural function. Watershed Protection and Flood Prevention Act funding in conjunction with traditional Farm Bill programs, such as EQIP or NWQI, would focus technical and financial assistance to install practices typically associated with natural stream restoration.	Land Treatment- Conservation practice installation across all landuses to prevent soil loss, improve wildlife habitat, and improve water quality. Watershed Protection and Flood Prevention Act funding in conjunction with traditional Farm Bill programs, such as EQIP or NWQI, would focus technical and financial assistance to install practices typical for the region.	Green Infrastructure/Low Impact Development- Adaptation of practices such as wetland management/creation, rain gardens, pervious concrete, and tree plantings to assist the watershed in its capacity to handle flood waters. Technical and/or financial assistance could be available through Conservation Technical Assistance (CTA), traditional Farm Bill programs such as EQIP and NWQI, and local sponsors.

Resource Concerns

In Section "F" below, analyze, record, and address concerns identified through the Resources Inventory process. (See FOTG Section III - Resource Planning Criteria for guidance).

I. Effects of Alternatives

F. Resource Concerns and Existing/ Benchmark Conditions (Analyze and record the existing/benchmark conditions for each identified concern)	*Alternative 6* — **Amount, Status, Description** *(Document both short and long term impacts)*	√ if does NOT meet PC	*Alternative 7* — **Amount, Status, Description** *(Document both short and long term impacts)*	√ if does NOT meet PC	*Alternative 8* — **Amount, Status, Description** *(Document both short and long term impacts)*	√ if does NOT meet PC
SOIL						
Sheet and rill erosion Sedimentation caused by erosion in the uplands of the watershed negatively impact Saltlick Creek and its tributaries. Sediment loading contributes to reduced channel capacity, further flood damages.	No effect to upland erosion. Sedimentation caused by stream bank erosion would be decreased by the stabilization of streambanks.	☐ NOT meet PC	Forest stand improvement, prescribed grazing and associated practices, cover crop, reduced tillage, and other related land treatment practices typical for the region would decrease sheet and rill erosion on upland slopes and decrease sedimentation in the stream.	☐ NOT meet PC	Reduction in soil erosion from reduced velocities of water conveyance during high rain events.	☐ NOT meet PC
WATER						
Ponding and flooding Flooding has been a historical issue in the watershed with the expected risk of flooding increasing over the next few decades as storms become more frequent and severe, and as the infrastructure ages. Flooding is a threat to property, access to utilities, emergency services, transportation, agricultural land, and crops.	Natural stream restoration could increase the channel's capacity to hold flood waters.	☐ NOT meet PC	Proper management of upland slopes would reduce erosion and sedimentation in the stream. sedimentation. This would allow the stream to maintain its capacity and thus reduce flooding impacts.	☐ NOT meet PC	Flooding would be mitigated through installation of green infrastructure by increasing the water holding capacity and natural functions of wetlands and installation of rain gardens. The infrastructure would reduce damages caused by flash flood events.	☐ NOT meet PC
Sediment transported to surface water Sedimentation caused by erosion in the uplands of the watershed negatively impact Saltlick Creek and its tributaries. Sediment loading contributes to reduced channel capacity, further exasperating flood damages. Floodplain scour of adjacent floodplains also increase the sediment load of floodwaters during flood events.	There would be a reduction in sediments entering the watershed. Water quality would be beneficially effected and result in more outdoor recreation opportunities.	☐ NOT meet PC	There would be a reduction in sediments entering the watershed. Water quality would be beneficially effected and result in more outdoor recreation opportunities.	☐ NOT meet PC	Reduction in sediment entering the watershed and the watershed due to reduced velocities of water conveyance during high rain events.	☐ NOT meet PC

Nutrients transported to surface water Water quality is negatively affected by nutrients, failing septic systems, and runoff from rural landscapes within the watershed. Many streams within the watershed have elevated levels of fecal coliform from pasture/cropland, failing septic systems, and residential stormwater sources. Streams also have elevated levels of iron from abandoned mines, forest harvest, oil and gas production, roads, barren land, and streambank erosion.	There would be a reduction of nutrients in surface water with the exclusion of livestock from the stream in conjunction with natural stream and riparian area restoration.	☐ NOT meet PC	There would be a reduction of nutrients in surface water with the installation of conservation practices such as Nutrient Management, Prescribed Grazing, and Access Control.	☐ NOT meet PC	Enhancements and installation of wetlands and other green infrastructure can reduce nutrients transported to surface water within the local watershed as well as the watershed	☐ NOT meet PC
F. Resource Concerns and Existing/ Benchmark Conditions (Analyze and record the existing/benchmark conditions for each identified concern)	**I. (continued)**					
	Alternative 6		***Alternative 7***		***Alternative 8***	
	Amount, Status, Description *(Document both short and long term impacts)*	**√ if does NOT meet PC**	**Amount, Status, Description** *(Document both short and long term impacts)*	**√ if does NOT meet PC**	**Amount, Status, Description** *(Document both short and long term impacts)*	**√ if does NOT meet PC**
AIR						
No resource concern identified Air quality is not currently a resource concern in the watershed.	No effect	☐ NOT meet PC	Localized odors and particulate matter concerns could be addressed through conservation practices such as Waste Storage Facilities or Windbreaks/Shelterbelts.	☐ NOT meet PC	No effect	☐ NOT meet PC
PLANTS						
Plant structure and composition The watershed provides for both agricultural crops as well as naturally vegetated areas that provide wildlife habitat. There is a lack of plant species diversity, specifically along streams in riparian areas, and a presence of invasive species.	Improved riparian areas will provide more naturally occurring plant species. Fencing streams and restoration of riparian areas could result in a loss of pasture or crop land.	☐ NOT meet PC	Plant structure and composition would benefit from properly managed grazing (Prescribed Grazing and associated practices) as well as through implementation of Forest Stand Improvement in the watershed.	☐ NOT meet PC	Plant structure and composition would be improved through the installation of green infrastructure- wetlands, rain gardens, tree plantings, etc.	☐ NOT meet PC
ANIMALS						
Terrestrial habitat for wildlife and invertebrates Game and non-game species of wildlife are found within the watershed, however habitat is not ideal. There are 7 threatened, endangered, or candidate species found in the watershed.	Terrestrial habitat would be improved through the creation of riparian areas.	☐ NOT meet PC	Terrestrial wildlife habitat would be improved through proper livestock grazing in pastures, invasive species control across all landuses, and implementation of forest stand improvement in woodlands.	☐ NOT meet PC	Terrestrial habitat would be improved through the installation of green infrastructure- wetlands, rain gardens, tree plantings, etc.	☐ NOT meet PC
Aquatic habitat for fish and other organisms Sedimentation and nutrients are negatively effecting aquatic fish and invertebrate species habitat.	Aquatic habitat would be improved by installing practices return the streambed to a more natural value and function.	☐ NOT meet PC	Aquatic habitat would be improved by the reduction in sedimentation of the stream caused by upland soil erosion through the installation of conservation practices typical of the region.	☐ NOT meet PC	Aquatic habitat would be improved by the reduction and sedimentation of stream caused by high velocities of water during storm events. Aquatic habitat would also benefit from enhancement and installation of wetlands.	☐ NOT meet PC
ENERGY						
No resource concern identified This area has various electrical, oil, and gas transmission facilities. Oil and gas wells are abundant.	No effect	☐ NOT meet PC	No effect	☐ NOT meet PC	Existing structures could be retrofitted for hydroelectricity production.	☐ NOT meet PC

Human Economic and Social Considerations			
Public Health and Safety Damaging floods occur on an annual basis with increasing severity over the past few decades. Flooding impacts residents' access to emergency services, results in loss of land, and creates unsanitary conditions in effected residences and businesses.	While this alternative does not provide substantial, additional protection from flooding and risk of loss of life, it would create opportunities for increased outdoor recreation that is associated with healthy streams. Implementation of this alternative would likely reduce erosion, sedimentation, and flooding of roads and bridges, resulting in increased safety for the public and reduction in maintenance activates. There would also be less disruptions to regular traffic, as well as emergency vehicles.	While this alternative does not provide substantial, additional protection from flooding and risk of loss of life, it would create opportunities for increased outdoor recreation that is associated with healthy streams. Implementation of this alternative would likely reduce erosion, sedimentation, and flooding of roads and bridges, resulting in increased safety for the public and reduction in maintenance activates. There would also be less disruptions to regular traffic, as well as emergency vehicles.	This alternative would provide a reduction of damages from flash flooding events resulting in loss of life and transportation disruptions.

Special Environmental Concerns: Environmental Laws, Executive Orders, policies, etc.

In Section "G" complete and attach Environmental Procedures Guide Sheets for documentation as applicable. Items with a "●" may require a federal permit or consultation/coordination between the lead agency and another government agency. In these cases, effects may need to be determined in consultation with another agency. Planning and practice implementation may proceed for practices not involved in consultation.

G. Special Environmental Concerns (Document existing/ benchmark conditions)	J. Impacts to Special Environmental Concerns					
	Alternative 6		*Alternative 7*		*Alternative 8*	
	Document all impacts (Attach Guide Sheets as applicable)	√ if needs further action	Document all impacts (Attach Guide Sheets as applicable)	√ if needs further action	Document all impacts (Attach Guide Sheets as applicable)	√ if needs further action
●Clean Air Act *Guide Sheet* The watershed is not in an area recognized for regularly having impaired air quality or significant air quality issues.	May Affect It is likely that no permitting or authorization is necessary. The activity is expected to only have minor local impacts to air quality during construction and would not be expected to violate standards. Advise the client to contact the appropriate air quality regulatory agency for verification.	☐	No Effect Land treatment practices are not likely to negatively effect air quality.	☐	May Affect It is likely that no permitting or authorization is necessary. The activity is expected to only have minor local impacts to air quality during construction and would not be expected to violate standards. Advise the client to contact the appropriate air quality regulatory agency for verification.	☐
●Clean Water Act / Waters of the U.S. *Guide Sheet* Permitted actions may involve or likely result in the discharge or placement of dredged or fill material in or other pollutants into waters of the US. Ephemeral, intermittent, and perennial streams and certain wetlands will be considered as waters of the US. Mitigation for unavoidable impacts should be expected under Sec. 404 of the Clean Water Act.	May Affect Installation of any water control structures will involve the placement of fill material in streams and must comply with all applicable local, state, and federal laws. Compliance will require permits and must be obtained before construction begins. Mitigation for stream impacts may also be required.	☐	No Effect Land treatment practices are not likely to negatively effect Waters of the US.	☐	May Affect Installation of any water control structures will involve the placement of fill material in streams and must comply with all applicable local, state, and federal laws. Compliance will require permits and must be obtained before construction begins.	☐
●Coastal Zone Management *Guide Sheet* There are no costal zones present in or near the watershed.	No Effect	☐	No Effect	☐	No Effect	☐
Coral Reefs *Guide Sheet* There are no coral reefs present in or near the watershed.	No Effect	☐	No Effect	☐	No Effect	☐

●Cultural Resources / Historic Properties *Guide Sheet* There are known cultural, archeological, and historically significant resources throughout the watershed. Consultation with Tribal Nations, West Virginia State Historic Preservation Officer, and other interested parties with vested interests in a yet to be determined area of potential effect will be conducted according to Section 106 of the National Historical Preservation Act (NHPA) of 1966, as amended.	May Affect Consultation with Tribal Nations, West Virginia State Historic Preservation Office (SHPO), and other interested parties will be conducted in according to Section 106 of the National Historical Preservation Act (NHPA) of 1966, as amended.	☐	May Affect Consultation with Tribal Nations, West Virginia State Historic Preservation Office (SHPO), and other interested parties will be conducted in according to Section 106 of the National Historical Preservation Act (NHPA) of 1966, as amended.	☐	May Affect Consultation with Tribal Nations, West Virginia State Historic Preservation Office (SHPO), and other interested parties will be conducted in according to Section 106 of the National Historical Preservation Act (NHPA) of 1966, as amended.	☐
●Endangered and Threatened Species *Guide Sheet* There is a total of 7 Federally listed threatened, endangered, or candidate species potentially found in this watershed listed by the US Fish and Wildlife Service (USFWS).	May Affect This alternative is not expected to create an adverse impact to threatened, endangered, or rare species. Federal, state, and local wildlife agencies will be consulted prior to construction.	☐	May Affect This alternative is not expected to create an adverse impact to threatened, endangered, or rare species. Conservation practices will be evaluated on a plan by plan basis through the Interagency Coordinator Tool and all required avoidance strategies will be followed.	☐	May Affect This alternative is not expected to create an adverse impact to threatened, endangered, or rare species. Federal, state, and local wildlife agencies will be consulted prior to construction.	☐
Environmental Justice *Guide Sheet* Braxton County is completely within the Appalachian Region. This county is designated as limited resource counties by USDA and 'distressed' by the Appalachian Regional Commission, indicating that local economy still needs improvement. Braxton County is predominately white at 97%. The poverty rate is 17.8%. WV poverty rate is 15.8% compared to the national rate of 11.4%.	May Affect No negative impacts are anticipated. The project would benefit historically underserved residents, landowners, and communities.	☐	May Affect No negative impacts are anticipated. The project would benefit historically underserved residents, landowners, and communities.	☐		☐
●Essential Fish Habitat *Guide Sheet* This area is not designated as Essential Fish Habitat.	No Effect	☐	No Effect	☐	No Effect	☐
Floodplain Management *Guide Sheet* There is a major risk of flooding within the watershed over the next few decades.	May Affect Floodplain management would be a consideration during the design process of natural stream restoration and would likely be benefited.	☐	No Effect Land treatment practices are not likely to negatively effect flood plains. Annual flooding would likely be reduced to the decreased sedimentation of the stream.	☐	No Effect Annual flooding would likely be reduced to the decreased sedimentation of the stream and increase water holding capacities in wetlands and rain gardens.	☐
Invasive Species *Guide Sheet* Invasive species are found in the watershed.	May Affect Invasive species occur within the watershed. Care would be taken not to introduce invasive species in disturbed areas.	☐	May Affect Invasive species occur within the watershed and would be controlled through scheduled land treatment activates on privately owned or operated lands.	☐	May Affect Invasive species occur within the watershed. Care would be taken not to introduce invasive species in disturbed areas.	☐

●Migratory Birds/Bald and Golden Eagle Protection Act *Guide Sheet* Migratory birds and eagles utilize the Saltlick Creek Watershed habitats. There is a total of 10 federally listed birds in the area. The birds listed are birds of particular concern either because they occur on the USFWS Birds of Conservation Concern (BCC) list or warrant special attention in the project location.	No Effect Actions will not result in intentional or unintentional take of any migratory bird, nest, or egg.	☐	No Effect Actions will not result in intentional or unintentional take of any migratory bird, nest, or egg.	☐	No Effect Actions will not result in intentional or unintentional take of any migratory bird, nest, or egg.	☐
Natural Areas *Guide Sheet* Federal: There are no federally operated lands within the watershed. State: The West Virginia Division of Natural Resources manages the Burnsville Lake Wildlife Management Area, which is adjacent to and northeast of the watershed. The Elk River Wildlife Management Area is in close proximity to the south.	No Effect	☐	No Effect	☐	No Effect	☐
Prime and Unique Farmlands *Guide Sheet* Presently there are 1,896 acres of Prime Farmland, which accounts for 6% of land in the study area. Additionally, there are 7,013 acres of Farmland of Local Importance and 6,870 acres of Farmland of Statewide Importance. There are no Farmland Protection Boards actively conserving land. The threat of conversion is low.	No Effect Conversion of prime and unique farmlands is not anticipated with this alternative.	☐	No Effect Conversion of prime and unique farmlands is not anticipated with this alternative.	☐	No Effect Conservation of prime and unique farmlands is not anticipated with this alternative.	☐
Riparian Area *Guide Sheet* There are riparian areas present in or near the project area. Riparian areas found in this region are generally characterized as vegetated and un-vegetated. These areas are often utilized for agricultural purposes.	May Affect Riparian areas will be enhanced as part of this alternative.	☐	May Affect Riparian areas will be enhanced as part of this alternative.	☐	May Affect Riparian areas will be enhanced as part of this alternative.	☐
Scenic Beauty *Guide Sheet* Areas of potential scenic beauty in this watershed are typical of the Allegheny Plateau physiographic province and common to the region.	No Effect Action is not likely to negatively affect the scenic beauty of the area or alter the unique landscapes of the Allegheny Plateau physiographic province.	☐	No Effect Action is not likely to negatively affect the scenic beauty of the area or alter the unique landscapes of the Allegheny Plateau physiographic province.	☐	No Effect Action is not likely to negatively affect the scenic beauty of the area or alter the unique landscapes of the Allegheny Plateau physiographic province.	☐
●Wetlands *Guide Sheet* There are 6,507.1 acres of wetlands within the Salt Lick Creek watershed which consist of the following: 2 acres of Freshwater Emergent Wetlands; 0.1 acres of Freshwater Forested/Shrub Wetlands; 66 acres of Freshwater Pond; and 6,439 acres of Riverine.	No Effect Action is not likely to negatively impact any wetlands in the watershed.	☐	No Effect Action is not likely to negatively affect any wetlands in the watershed.	☐	May Affect Action is likely to have a positive impact on wetlands.	☐

●Wild and Scenic Rivers *Guide Sheet* No designated Wild and Scenic Rivers and no Waters of Special Concern are in or near the project area.		No Effect	☐	No Effect	☐	No Effect	☐
K. Other Agencies and Broad Public Concerns		***Alternative 6***		***Alternative 7***		***Alternative 8***	
Easements, Permissions, Public Review, or Permits Required and Agencies Consulted.		Implementation of natural stream restoration structures must comply with all applicable local, state, and federal laws. Compliance will require permits and must be obtained before construction begins.		No easements or permits are likely to be needed. Installation of all land treatment practices will comply with all applicable local, state, and federal laws. Any required permits will be obtained prior to construction.		Implementation of all infrastructure must comply with all applicable local, state, and federal laws. Compliance will require permits and must be obtained before construction begins.	
Cumulative Effects Narrative (Describe the cumulative impacts considered, including past, present and known future actions regardless of who performed the actions)		Natural stream restoration would benefit the overall health of the stream and provide additional outdoor recreational opportunities. When applied through out the watershed, the cumulative effects would reduce the impacts of flooding.		Income stability for landowners and farmers in the area, water quality improvements, and improvements to overall environmental health when practices are applied within the same region on many farms. The implementation would cumulatively reduce the impacts of flooding.		Green Infrastructure would benefit the over health of the stream and reduce impacts of flash flooding.	
L. Mitigation (Record actions to avoid, minimize, and compensate)		None		None		None	
M. Preferred Alternative	√ preferred alternative	☐		☐		☐	
	Supporting reason	Natural stream restoration would benefit the overall heath of the stream.		Implementation of conservation practices to prevent upland erosion causing sediment loading of the water ways.		Reduced impacts of flash flooding and improvement of stream health.	
N. Context (Record context of alternatives analysis)		local		local		local	
The significance of an action must be analyzed in several contexts such as society as a whole (human, national), the affected region, the affected interests, and the locality.							

U.S. Department of Agriculture — NRCS-CPA-52
Natural Resources Conservation Service — 11/2019

ENVIRONMENTAL EVALUATION WORKSHEET

A. Client Name: The Elk Conservation District

B. Conservation Plan ID # (as applicable): Saltlick Creek PIFR
Program Authority (optional): PL-566

D. Client's Objective(s) (purpose):
The purpose of this project is to provide watershed protection and agricultural water management by reducing flood water damages, erosion and sedimentation loading in the Saltlick Creek Watershed.

C. Identification # (farm, tract, field #, etc. as required):
Saltlick Creek Watershed,
Braxton County, WV
12-digit HUC (050302030304)

E. Need for Action:
The baseline condition without federal investment is a of flood protection, incidental recreation, rural water supply , and other amenities associated with impoundments. Flooding is persistent and results in loss of property and crops, stream bank erosion, and sedimentation of streams.

H. Alternatives

Alternative 9	√ if RMS ☐	*Alternative 10*	√ if RMS ☐	√ if RMS ☐
Floodplain Buyout and Restoration- Address repetitve flood damage by removing structures from the floodplain through demolition or relocation and employing conservation pratices to restore the floodplain to a natural condition. This alternative would address resource concerns associated with flooding, erosion and sedimentation, water quality, recreational opportunities, and fish and wildlife habitat. Appropriate conservation practices will be employed at areas where structures are removed to reestablish natural floodplain habitats. Technical and financial assistance would be focused in the area through the Watershed Protection and Flood Prevention Act as well as traditional Farm Bill programs.		Combination of all alternatives- Land Treatment, Stream Restoration, Channelization, Green Infrastructure, New Structures, and Buyouts. Strategic installation of a combination of all practices and structures evaluated in other alternatives could more fully address concerns associated with flooding, erosion and sedimentation, water quality, recreation, and water supply. Technical and financial assistance would be focused in the area through the Watershed Protection and Flood Prevention Act as well as traditional Farm Bill programs such as CTA, EQIP and NWQI, along with funding and in kind services provided by local sponsors		

Resource Concerns

In Section "F" below, analyze, record, and address concerns identified through the Resources Inventory process. (See FOTG Section III - Resource Planning Criteria for guidance).

I. Effects of Alternatives

F. Resource Concerns and Existing/ Benchmark Conditions (Analyze and record the existing/benchmark conditions for each identified concern)	*Alternative 9* — **Amount, Status, Description** *(Document both short and long term impacts)*	√ if does NOT meet PC	*Alternative 10* — **Amount, Status, Description** *(Document both short and long term impacts)*	√ if does NOT meet PC	**Amount, Status, Description** *(Document both short and long term impacts)*	√ if does NOT meet PC
SOIL						
Sheet and rill erosion Sedimentation caused by erosion in the uplands of the watershed negatively impact Saltlick Creek and its tributaries. Sediment loading contributes to reduced channel capacity, further exasperating flood damages.	Removing structures and applying conservation practices in floodplains buy-out areas would reduce soil erosion across all land uses and reduce sediment loads in waterways.	☐ NOT meet PC	Strategic installation of flood control structures, land treatment practices, natural stream restoration and green infrastructure would reduce soil erosion across all land uses and reduce sediment loads in waterways.	☐ NOT meet PC		☐ NOT meet PC
WATER						
Ponding and flooding Flooding has been a historical issue in the watershed with the expected risk of flooding increasing over the next few decades as storms become more frequent and severe, and as the infrastructure ages. Flooding is a threat to property, access to utilities, emergency services, transportation, agricultural land, and crops.	Removing structures and applying conservation practices in floodplains buy-out areas would reduce the impact of flooding on both private property and on public utilities, emergency services, and transportation.	☐ NOT meet PC	Strategic installation of flood control structures, land treatment practices, natural stream restoration and green infrastructure would reduce sedimentation of streams to allow more capacity during flood events and allow for more water retention and controlled flow from flood control dams and rain gardens/wetlands.	☐ NOT meet PC		☐ NOT meet PC

Sediment transported to surface water Sedimentation caused by erosion in the uplands of the watershed negatively impact Saltlick Creek and its tributaries. Sediment loading contributes to reduced channel capacity, further exasperating flood damages. Floodplain scour of adjacent floodplains also increase the sediment load of floodwaters during flood events.	Removing structures and applying conservation practices in floodplains buy-out areas would reduce sediment loads in waterways by reducing exposed and bare land within the flood plain and by providing a vegetated riparian buffer zone along the stream to reduce surface runoff from adjacent areas.	☐ NOT meet PC	Strategic installation of flood control structures, land treatment practices, natural stream restoration and green infrastructure would reduce sediment loads in waterways.	☐ NOT meet PC		☐ NOT meet PC
Nutrients transported to surface water Water quality is negatively affected by nutrients, failing septic systems, and runoff from rural landscapes within the watershed. Many streams within the watershed have elevated levels of fecal coliform from pasture/cropland, failing septic systems, and residential stormwater sources. Streams also have elevated levels of iron from abandoned mines, forest harvest, oil and gas production, roads, barren land, and streambank erosion.	Removing structures and applying conservation practices in floodplains buy-out areas would reduce nutients transported to surface waters by eliminating straigh pipe and failing septic systems within the flood plain and by providing a vegetated riparian buffer zone along the stream to reduce surface runoff from adjacent areas.	☐ NOT meet PC	Strategic installation of flood control structures, land treatment practices, natural stream restoration and green infrastructure nutrient transportation to waterways and the watershed	☐ NOT meet PC		☐ NOT meet PC

F. Resource Concerns and Existing/ Benchmark Conditions (Analyze and record the existing/benchmark conditions for each identified concern)	**I. (continued)**					
	Alternative 9		***Alternative 10***			
	Amount, Status, Description *(Document both short and long term impacts)*	**√ if does NOT meet PC**	**Amount, Status, Description** *(Document both short and long term impacts)*	**√ if does NOT meet PC**	**Amount, Status, Description** *(Document both short and long term impacts)*	**√ if does NOT meet PC**
AIR						
No resource concern identified Air quality is not currently a resource concern in the watershed.	Air quality may be slightly adversely impacted locally during construction activities (dust and exhaust from construction equipment). The increases are expected to remain well within the air quality standards and would be temporary.	☐ NOT meet PC	Air quality may be slightly adversely impacted locally during construction activities (dust and exhaust from construction equipment). The increases are expected to remain well within the air quality standards and would be temporary.	☐ NOT meet PC		☐ NOT meet PC
PLANTS						
Plant structure and composition The watershed provides for both agricultural crops as well as naturally vegetated areas that provide wildlife habitat. There is a lack of plant species diversity, specifically along streams in riparian areas, and a presence of invasive species.	Plant structure and composition would be improved in restored floodplain riparian areas. Native vegetation and hydrophytic vegetation would benefit from floodplain and wetland restoration.	☐ NOT meet PC	Plant structure and composition would be improved on cropland and pasture land, riparian areas would be restored to natural, native vegetation, hydrophytic vegetation would benefit from wetland restoration and green infrastructure.	☐ NOT meet PC		☐ NOT meet PC

ANIMALS							
Terrestrial habitat for wildlife and invertebrates Game and non-game species of wildlife are found within the watershed, however habitat is not ideal. There are 7 threatened, endangered, or candidate species found in the watershed.	Terrestrial streambank and floodplain habitats, including wetlands, would be increased and improved in floodplain buy-out areas through the implimentation of appropriate conservation practices.	☐ NOT meet PC	Terrestrial habitat would be improved through the implementation of wildlife oriented land treatment practices, riparian areas created as part of natural stream restoration and green infrastructure, and creation/enhancement of wetlands. Displacement of wildlife and destruction of habitat due to flooding would be significantly reduced.	☐ NOT meet PC		☐ NOT meet PC
Aquatic habitat for fish and other organisms Sedimentation and nutrients are negatively effecting aquatic fish and invertebrate species habitat.	The effects of sedimentation and nutrient enrichment on aquatic habitat would be reduced by eliminating sources of both and providing a restored floodplain riparian zone to reduce impacts from other areas.	☐ NOT meet PC	The effects of sedimentation on aquatic wildlife would be significantly controlled with a strategic implementation of all alternatives previously evaluated.	☐ NOT meet PC		☐ NOT meet PC
ENERGY							
No resource concern identified This area has various electrical, oil, and gas transmission facilities. Oil and gas wells are abundant.	Applicants that would choose to participate in a floodplain buyout would decrease energy use in the area.	☐ NOT meet PC	Hydroelectric power generation could be included as an element in the design of the structures to provide clean energy to the region.	☐ NOT meet PC		☐ NOT meet PC
Human Economic and Social Considerations							
Public Health and Safety Damaging floods occur on an annual basis with increasing severity over the past few decades. Flooding impacts residents' access to emergency services, results in loss of land, and creates unsanitary conditions in effected residences and businesses.	Removing structures and applying conservation practices in floodplains buy-out areas would reduce flood impacts to residences and businesses. It would also reduce the impact of flooding on emergency services, public utilities, and transportattion. Further, it would create short term structure demolision or relocation related jobs and could provide improved recreation opportunities through increased stream access.		Strategic planning and installation of all previously evaluated alternatives would increase flood protection of the counties' residences and business. It would also provide the opportunity for rural water supply, recreation opportunities, and a short term creation of jobs during construction. Over all watershed and stream health would be improved.			

Special Environmental Concerns: Environmental Laws, Executive Orders, policies, etc.

In Section "G" complete and attach Environmental Procedures Guide Sheets for documentation as applicable. Items with a "•" may require a federal permit or consultation/coordination between the lead agency and another government agency. In these cases, effects may need to be determined in consultation with another agency. Planning and practice implementation may proceed for practices not involved in consultation.

G. Special Environmental Concerns (Document existing/ benchmark conditions)	**J. Impacts to Special Environmental Concerns**					
	Alternative 9		***Alternative 10***			
	Document all impacts (Attach Guide Sheets as applicable)	√ if needs further action	Document all impacts (Attach Guide Sheets as applicable)	√ if needs further action	Document all impacts (Attach Guide Sheets as applicable)	√ if needs further action
•Clean Air Act *Guide Sheet* The watershed is not in an area recognized for regularly having impaired air quality or significant air quality issues.	May Affect It is likely that no permitting or authorization is necessary. The activity is expected to only have minor local impacts to air quality during construction and would not be expected to violate standards. Advise the client to contact the appropriate air quality regulatory agency for verification.	☐	May Affect It is likely that no permitting or authorization is necessary. The activity is expected to only have minor local impacts to air quality during construction and would not be expected to violate standards. Advise the client to contact the appropriate air quality regulatory agency for verification.	☐		☐

●Clean Water Act / Waters of the U.S. *Guide Sheet* Permitted actions may involve or likely result in the discharge or placement of dredged or fill material in or other pollutants into waters of the US. Ephemeral, intermittent, and perennial streams and certain wetlands will be considered as waters of the US. Mitigation for unavoidable impacts should be expected under Sec. 404 of the Clean Water Act.	May Affect Removal of structures, including buried septic lines or existing resident installed bank stabilization features, within the floodplain must comply with all applicable local, state, and federal laws. Compliance will require permits and must be obtained before construction begins. Mitigation for stream impacts may also be required.	☐	May Affect Installation of any water control structures will involve the placement of fill material in streams and must comply with all applicable local, state, and federal laws. Compliance will require permits and must be obtained before construction begins. Mitigation for stream impacts may also be required.	☐		☐
●Coastal Zone Management *Guide Sheet* There are no costal zones present in or near the watershed.	No Effect	☐	No Effect	☐		☐
Coral Reefs *Guide Sheet* There are no coral reefs present in or near the watershed.	No Effect	☐	No Effect	☐		☐
●Cultural Resources / Historic Properties *Guide Sheet* There are known cultural, archeological, and historically significant resources throughout the watershed. Consultation with Tribal Nations, West Virginia State Historic Preservation Officer, and other interested parties with vested interests in a yet to be determined area of potential effect will be conducted according to Section 106 of the National Historical Preservation Act (NHPA) of 1966, as amended.	May Affect Consultation with Tribal Nations, West Virginia State Historic Preservation Office (SHPO), and other interested parties will be conducted in according to Section 106 of the National Historical Preservation Act (NHPA) of 1966, as amended.	☐	May Affect Consultation with Tribal Nations, West Virginia State Historic Preservation Office (SHPO), and other interested parties will be conducted in according to Section 106 of the National Historical Preservation Act (NHPA) of 1966, as amended.	☐		☐
●Endangered and Threatened Species *Guide Sheet* There is a total of 7 Federally listed threatened, endangered, or candidate species potentially found in this watershed listed by the US Fish and Wildlife Service (USFWS).	May Affect Removing structures and applying conservation practices in floodplains buy-out areas may impact habitat for threatened, endangered, or rare species. Federal, state, and local wildlife agencies will be consulted prior to construction.	☐	May Affect The structural alternative is not expected to create an adverse impact to threatened, endangered, or rare species. Federal, state, and local wildlife agencies will be consulted prior to construction.	☐		☐
Environmental Justice *Guide Sheet* Braxton County is completely within the Appalachian Region. This county is designated as limited resource counties by USDA and 'distressed' by the Appalachian Regional Commission, indicating that local economy still needs improvement. Braxton County is predominately white at 97%. The poverty rate is 17.8%. WV poverty rate is 15.8% compared to the national rate of 11.4%.	No Effect No negative impacts are anticipated. The project would benefit historically underserved residents, landowners, and communities.	☐	No Effect No negative impacts are anticipated. The project would benefit historically underserved residents, landowners, and communities.	☐		☐
●Essential Fish Habitat *Guide Sheet* This area is not designated as Essential Fish Habitat.	No Effect	☐	No Effect	☐		☐

Floodplain Management *Guide Sheet* There is a major risk of flooding within the watershed over the next few decades.	May Affect This alternative will result in the protection of floodplains due to the decreased impacts of flooding.	☐	May Affect This alternative will result in the protection of floodplains due to the decreased impacts of flooding.	☐		☐
Invasive Species *Guide Sheet* Invasive species are found in the watershed.	May Affect Invasive species occur within the watershed. Care would be taken not to introduce invasive species in disturbed areas.	☐	May Affect Invasive species occur within the watershed. Care would be taken not to introduce invasive species in disturbed areas.	☐		☐
●Migratory Birds/Bald and Golden Eagle Protection Act *Guide Sheet* Migratory birds and eagles utilize the Saltlick Creek Watershed habitats. There is a total of 10 federally listed birds in the area. The birds listed are birds of particular concern either because they occur on the USFWS Birds of Conservation Concern (BCC) list or warrant special attention in the project location.	No Effect Actions will not result in intentional or unintentional take of any migratory bird, nest, or egg.	☐	No Effect Actions will not result in intentional or unintentional take of any migratory bird, nest, or egg.	☐		☐
Natural Areas *Guide Sheet* Federal: There are no federally operated lands within the watershed. State: The West Virginia Division of Natural Resources manages the Burnsville Lake Wildlife Management Area, which is adjacent to and northeast of the watershed. The Elk River Wildlife Management Area is in close proximity to the south.	No Effect	☐	No Effect	☐		☐
Prime and Unique Farmlands *Guide Sheet* Presently there are 1,896 acres of Prime Farmland, which accounts for 6% of land in the study area. Additionally, there are 7,013 acres of Farmland of Local Importance and 6,870 acres of Farmland of Statewide Importance. There are no Farmland Protection Boards actively conserving land. The threat of conversion is low.	No Effect Alternative would provide protection of prime farmland through the reduction of streambank erosion, sheet and rill erosion, and sedimentation of streams.	☐	May Affect Alternative would provide protection of prime farmland through the reduction of streambank erosion, sheet and rill erosion, and sedimentation of streams.	☐		☐
Riparian Area *Guide Sheet* There are riparian areas present in or near the project area. Riparian areas found in this region are generally characterized as vegetated and un-vegetated. These areas are often utilized for agricultural purposes.	May Affect Riparian areas would be enhanced through the installation of natural stream restoration, land treatment programs, and green infrastructure.	☐	May Affect Riparian areas would be enhanced through the installation of natural stream restoration, land treatment programs, and green infrastructure.	☐		☐
Scenic Beauty *Guide Sheet* Areas of potential scenic beauty in this watershed are typical of the Allegheny Mountain physiographic province and common to the region.	No Effect Action is not likely to negatively affect the scenic beauty of the area or alter the unique landscapes of the Appalachian Plateau physiographic province.	☐	No Effect Action is not likely to negatively affect the scenic beauty of the area or alter the unique landscapes of the Allegheny Mountain physiographic province.	☐		☐

•Wetlands *Guide Sheet* There are 6,507.1 acres of wetlands within the Salt Lick Creek watershed which consist of the following: 2 acres of Freshwater Emergent Wetlands; 0.1 acres of Freshwater Forested/Shrub Wetlands; 66 acres of Freshwater Pond; and 6,439 acres of Riverine.	May Affect Alternative would enhance the values and functions of wetlands and surrounding ecosystems.	☐	May Affect Alternative would enhance the values and functions of wetlands and surrounding ecosystems.	☐		☐
•Wild and Scenic Rivers *Guide Sheet* No designated Wild and Scenic Rivers and no Waters of Special Concern are in or near the project area.	No Effect	☐	No Effect	☐		☐
K. Other Agencies and Broad Public Concerns	***Alternative 9***		***Alternative 10***			
Easements, Permissions, Public Review, or Permits Required and Agencies Consulted.	Removing structures, including buried septic lines or existing resident installed bank stabilization features, and applying conservation practices in floodplains buy-out areas must comply with all applicable local, state, and federal laws. Compliance will require permits and must be obtained before construction begins. Mitigation may also be required.		Installation of any water control structures will involve the placement of fill material in streams and must comply with all applicable local, state, and federal laws. Compliance will require permits and must be obtained before construction begins. Mitigation may also be required.			
Cumulative Effects Narrative (Describe the cumulative impacts considered, including past, present and known future actions regardless of who performed the actions)	Removing structures and applying conservation practices in floodplains buy-out areas will improve the areas overall resilience to flooding and improve quality of life for the ecosystems and the residents.		Strategic installation of all previously evaluated alternatives across the watershed will improve the areas overall resilience to flooding and improve quality of life for the ecosystems and the residents.			
L. Mitigation (Record actions to avoid, minimize, and compensate)	Mitigation would likely be required for the length of streams impacted. Vegetation will be established on disturbed areas immediately according to a vegetative plan developed conjunction with NRCS and local sponsors.		Mitigation would likely be required for the length of streams impacted. Vegetation will be established on disturbed areas immediately following construction to a vegetative plan developed conjunction with NRCS and local sponsors.			
M. Preferred Alternative	√ preferred alternative	☐	☐		☐	
	Supporting reason	Removing structures and applying conservation practices in floodplains buy-out areas will reduce the impact of flooding.	Installation of various flood control and land treatment practices will provide a holistic approach to flood resiliency.			

N. Context (Record context of alternatives analysis) local

The significance of an action must be analyzed in several contexts such as society as a whole (human, national), the affected region, the affected interests, and the locality.

O. To the best of my knowledge, the data shown on this form is accurate and complete:

In the case where a non-NRCS person (e.g. a TSP) assists with planning they are to sign the first signature block and then NRCS is to sign the second block to verify the information's accuracy.

Signature (TSP if applicable)	Title	Date
JULIE STUTLER Digitally signed by JULIE STUTLER Date: 2024.06.17 09:18:59 -04'00'		
Signature (NRCS)	**Title**	**Date**

If preferred alternative is not a federal action where NRCS has control or responsibility and this NRCS-CPA-52 is shared with someone other than the client then indicate to whom this is being provided.

The following sections are to be completed by the Responsible Federal Official (RFO)

NRCS is the RFO if the action is subject to NRCS control and responsibility (e.g., actions financed, funded, assisted, conducted, regulated, or approved by NRCS). These actions do not include situations in which NRCS is only providing technical assistance because NRCS cannot control what the client ultimately does with that assistance and situations where NRCS is making a technical determination (such as Farm Bill HEL or wetland determinations) not associated with the planning process.

P. Determination of Significance or Extraordinary Circumstances

To answer the questions below, consider the severity (intensity) of impacts in the contexts identified above. Impacts may be both beneficial and adverse. A significant effect may exist even if the Federal agency believes that on balance the effect will be beneficial. Significance cannot be avoided by terming an action temporary or by breaking it down into small component parts.

If you answer ANY of the below questions "yes" then contact the State Environmental Liaison as there may be extraordinary circumstances and significance issues to consider and a site specific NEPA analysis may be required.

Yes	No	
☐	☒	• Is the preferred alternative expected to cause significant effects on public health or safety?
☒	☐	• Is the preferred alternative expected to significantly affect unique characteristics of the geographic area such as proximity to historic or cultural resources, park lands, prime farmlands, wetlands, wild and scenic rivers, or ecologically critical areas?
☒	☐	• Are the effects of the preferred alternative on the quality of the human environment likely to be highly controversial?
☐	☒	• Does the preferred alternative have highly uncertain effects or involve unique or unknown risks on the human environment?
☐	☒	• Does the preferred alternative establish a precedent for future actions with significant impacts or represent a decision in principle about a future consideration?
☐	☒	• Is the preferred alternative known or reasonably expected to have potentially significant environment impacts to the quality of the human environment either individually or cumulatively over time?
☐	☒	• Will the preferred alternative likely have a significant adverse effect on ANY of the special environmental concerns? Use the Evaluation Procedure Guide Sheets to assist in this determination. This includes, but is not limited to, concerns such as cultural or historical resources, endangered and threatened species, environmental justice, wetlands, floodplains, coastal zones, coral reefs, essential fish habitat, wild and scenic rivers, clean air, riparian areas, natural areas, and invasive species.
☐	☒	• Will the preferred alternative threaten a violation of Federal, State, or local law or requirements for the protection of the environment?

Q. NEPA Compliance Finding (check one)

The preferred alternative:		**Action required**
☐	1) is **not a federal action** where the agency has control or responsibility.	Document in "R.1" below. No additional analysis is required
☐	2) is a federal action **ALL** of which is **categorically excluded** from further environmental analysis **AND** there are **no extraordinary circumstances as identified in Section "P".**	Document in "R.2" below. No additional analysis is required
☐	3) is a federal action that has been **sufficiently analyzed** in an existing Agency state, regional, or national NEPA document **and** there are no predicted significant adverse environmental effects or extraordinary circumstances.	Document in "R.1" below. No additional analysis is required.
☐	4) is a federal action that has been sufficiently analyzed in another Federal agency's NEPA document (EA or EIS) that addresses the proposed NRCS action and its' effects **and has been formally adopted by NRCS**. NRCS is required to prepare and publish its own Finding of No Significant Impact for an EA or Record of Decision for an EIS when adopting another agency's EA or EIS document. (**Note: This box is not applicable to FSA)**	Contact the State Environmental Liaison for list of NEPA documents formally adopted and available for tiering. Document in "R.1" below. No additional analysis is required
☒	5) is a federal action that has **NOT** been sufficiently analyzed or may involve predicted significant adverse environmental effects or extraordinary circumstances and may require an EA or EIS.	Contact the State Environmental Liaison. Further NEPA analysis required.

R. Rationale Supporting the Finding	
R.1 Findings Documentation	
R.2 Applicable Categorical Exclusion(s) **(more than one may apply)** 7 CFR Part 650 *Compliance With NEPA* , subpart 650.6 *Categorical Exclusions* states prior to determining that a proposed action is categorically excluded under paragraph (d) of this section, the proposed action must meet six sideboard criteria. See NECH 610.116.	

I have considered the effects of the alternatives on the Resource Concerns, Economic and Social Considerations, Special Environmental Concerns, and Extraordinary Circumstances as defined by Agency regulation and policy and based on that made the finding indicated above.

S. Signature of Responsible Federal Official:

JON BOURDON Digitally signed by JON BOURDON Date: 2024.09.06 14:28:45 -04'00'

Signature	Title	Date

Additional notes

Appendix D:
Forecasted NRCS Staffing Needs

Salt Lick Creek Staffing Needs

	Planner	Engineer	Engineer	Biologist	Economist	Admin Asst
Phase 1 -Identify Problems, Opportunities, & Concerns						
Final plan of work	30	16	16	16	16	6
Public Participation plan	20	12	12	12	12	2
Gather Data	50	50	50	50	50	20
Consultation List	6				12	2
Final assessment	18	18	18	18	18	6
Total	**124**	**96**	**96**	**96**	**108**	**36**
Phase 2 -Determine Objectives						
Document Sponsor Objectives	6	6	6	6	6	2
Write purpose & Need statement	10	6	6	6	6	4
Agency consultation/coordination	12	12	12	12	12	4
Tribal consultation	20				20	4
Scoping public meeting	12	10	10	10	10	4
Write scope of plan	10	10	10	10	10	8
Total	**70**	**44**	**44**	**44**	**64**	**26**
Phase 3 -Inventory Resources						
Resource Inventories & watershed assessment						
Economic & Social Assessment						
Collect Population Demographics					15	2
Identify effcts to public health & safety					16	2
Identify effcts to homes, businesses & ag operations					80	6
Identify visual concerns					15	2
Collect economic data					40	4
Identify non-NEPA laws related to project	4	4	4	4	6	2
Identify approved regional water resource plans in project	2	2	2	2	2	2
Final economic and social assessment					60	6
Archaeological & Historic Assessment						
Literature review				240		10
Coordination with State Historic Preservation Officer				80		6
Final archaeologcial and historic assessment				350		10
Geologic Assessment & Engineering Assessment						
Review existing geologic investigations		20	20			
Enigneering Surveys		80	80			
Evaluate condition of existing structures		30	30			
Final geologic assessment and engineering assessment		100	100			
Total	**6**	**236**	**236**	**676**	**234**	**52**

Salt Lick Creek Staffing Needs

	Planner	Engineer	Engineer	Biologist	Economist	Admin Asst
Phase 4 -Analyze Resource Data						
Develop resource existing conditions	20	20	20	20	20	6
Economic & Social Assessment						
Quantify onsite/offsite damages					100	6
Economics and social effects (future without project condition)					40	6
Archaeological & Historic Assessment				16		
Geologic Assessment & Engineering Assessment						
Determine geologic investigation needs		40	40			
Review existing hydrology /hydraulic models		40	40			
Determine watershed conditions (CN, Tc, rainfall)		80	80			
Run preliminary hydraulics		40	40			
Develop hydrologic model for watershed		60	60			
Run hydrologic models		60	60			
Total	**20**	**340**	**340**	**36**	**160**	**18**
Phase 5 -Formulate Alternatives						
Analysis of initial alternatives						
Document alternatives eliminated from detailed study	10	12	12	8	8	10
Document reasonable alternatives	10	12	12	10	10	10
Identify permits, licenses, other entitlements required	4	4	4	4	4	2
Define mitigation strategies	8	6	6	10	10	4
Determine project costs for each alternative		22	22			4
Final plan of work	8	4	4	4	4	2
Final initial alternatives report	50	50	50	50	50	10
Total	**90**	**110**	**110**	**86**	**86**	**42**

Salt Lick Creek Staffing Needs

Phase 6 -Evaluate Alternatives	**Planner**	**Engineer**	**Engineer**	**Biologist**	**Economist**	**Admin Asst**
Summary & comparison of alternatives	12	12	12	12	12	4
Evaluate environmental resources	30			30		2
Geology		20	20			4
Foundation & slope stability		40	40			8
Sedimentation						
Hydrology & Hydraulics		110	110			20
Run hydrologic models		150	150			20
Breach inundation study		120	120			20
Develop floodplain maps						
Economics						
Determine economic benefits for each alternative					80	10
Trend analysis for alternatives					10	2
Claculate average annual damages					20	2
Calculate benefit cost ratio					6	
Detremine National Economic Efficiency plan					6	
Final summary & comparison of alternative table					180	20
Final environmental consequences narrative	100			100		20
Total	**142**	**452**	**452**	**142**	**314**	**132**

Phase 7 -Make Decisions						
Compare & review alternatives with sponsor	30	10	10	10	10	2
Evaluate environmental resources	440	110	110	110	110	40
Total	**470**	**120**	**120**	**120**	**120**	**42**

Phase 8 -Review & Draft Environmental Document						
Response to agencies and other interseted parties' comments	24	20	20	20	20	4
Repsonse NWMC and SLO review	100	40	40	40	40	10
Repsonse to HQ National Programmatic review	20	10	10	10	10	2
Complete plan	30	30	30	30	30	4
Total	**174**	**100**	**100**	**100**	**100**	**20**

Salt Lick Creek Staffing Needs,
assuming NRCS will conduct work with own staff

	Planner	Engineer	Engineer	Bilologist	Economist	Admin Asst	
Total Hours	1096	1498	1498	1300	1186	368	
Hourly Rate (includes overhead)	*$120.00*	*$100.00*	*$100.00*	*$100.00*	*$100.00*	*$75.00*	**TOTAL COST**
Total Cost	**$131,520.00**	**$149,800.00**	**$149,800.00**	**$130,000.00**	**$118,600.00**	**$27,600.00**	**$707,320.00**

Appendix E:

Supporting Information (T&E and Invasive Species)

Endangered species

Listed species and their critical habitats are managed by the Ecological Services Program of the U.S. Fish and Wildlife Service (USFWS) and the fisheries division of the National Oceanic and Atmospheric Administration (NOAA Fisheries).

Species and critical habitats under the sole responsibility of NOAA Fisheries are **not** shown on this list. Please contact NOAA Fisheries for species under their jurisdiction.

Additional information on endangered species data is provided below.

The following species are potentially affected by activities in this location:

THUMBNAILS | LIST

SPECIES GUIDELINES

Mammals

NAME	STATUS
Indiana Bat (CH) Myotis sodalis Wherever found	Endangered
Northern Long-eared Bat Myotis septentrionalis Wherever found	Threatened

Fishes

NAME	STATUS
Diamond Darter (CH) Crystallaria cincotta Wherever found	Endangered

Clams

NAME	STATUS
Clubshell Pleurobema clava	Endangered
Northern Riffleshell Epioblasma rangiana Wherever found	Endangered
Pink Mucket (pearlymussel) Lampsilis abrupta Wherever found	Endangered

Insects

NAME	STATUS
Monarch Butterfly Danaus plexippus Wherever found	Candidate

Critical habitats

Potential effects to critical habitat(s) in this location must be analyzed along with the endangered species themselves.

There are no critical habitats at this location.

Migratory birds

Certain birds are protected under the Migratory Bird Treaty Act and the Bald and Golden Eagle Protection Act.

Any person or organization who plans or conducts activities that may result in impacts to migratory birds, eagles, and their habitats should follow appropriate regulations and consider implementing appropriate conservation measures, as described below.

RELATED LINKS

Birds of Conservation Concern

Measures for avoiding and minimizing impacts to birds

Nationwide conservation measures for birds

The birds listed below are birds of particular concern either because they occur on the USFWS Birds of Conservation Concern (BCC) list or warrant special attention in your project location. To learn more about the levels of concern for birds on your list and how this list is generated, see the FAQ below. This is not a list of every bird you may find in this location, nor a guarantee that every bird on this list will be found in your project area. To see exact locations of where birders and the general public have sighted birds in and around your project area, visit the E-bird data mapping tool (Tip: enter your location, desired date range and a species on your list). For projects that occur off the Atlantic Coast, additional maps and models detailing the relative occurrence and abundance of bird species on your list are available. Links to additional information about Atlantic Coast birds, and other important information about your migratory bird list, including how to properly interpret and use your migratory bird report, can be found below.

For guidance on when to schedule activities or implement avoidance and minimization measures to reduce impacts to migratory birds on your list, click on the PROBABILITY OF PRESENCE SUMMARY at the top of your list to see when these birds are most likely to be present and breeding in your project area.

THUMBNAILS | LIST

PROBABILITY OF PRESENCE SUMMARY

NAME / LEVEL OF CONCERN	BREEDING SEASON
Bald Eagle *Haliaeetus leucocephalus* Non-BCC Vulnerable	Breeds Sep 1 to Aug 31
Black-billed Cuckoo *Coccyzus erythropthalmus* BCC Rangewide (CON)	Breeds May 15 to Oct 10
Black-capped Chickadee *Poecile atricapillus practicus* BCC - BCR	Breeds Apr 10 to Jul 31
Cerulean Warbler *Dendroica cerulea* BCC Rangewide (CON)	Breeds Apr 27 to Jul 20
Chimney Swift *Chaetura pelagica* BCC Rangewide (CON)	Breeds Mar 15 to Aug 25

Eastern Whip-poor-will Antrostomus vociferus BCC Rangewide (CON)	Breeds May 1 to Aug 20
Golden-winged Warbler Vermivora chrysoptera BCC Rangewide (CON)	Breeds May 1 to Jul 20
Kentucky Warbler Oporornis formosus BCC Rangewide (CON)	Breeds Apr 20 to Aug 20
Prairie Warbler Dendroica discolor BCC Rangewide (CON)	Breeds May 1 to Jul 31
Wood Thrush Hylocichla mustelina BCC Rangewide (CON)	Breeds May 10 to Aug 31

Listing status

The Endangered Species Act (ESA) and the guidance and policies of the U.S. Fish and Wildlife Service (Service) define many categories of listing statuses for species. As a general rule, IPaC uses the term "listed species" to generically refer to species that may belong to any of the categories.

Endangered (E)

Any species which is in danger of extinction throughout all or a significant portion of its range. Endangered species are protected by the take prohibitions of section 9 under the ESA.

Threatened (T)

Any species which is likely to become endangered within the foreseeable future throughout all or a significant portion of its range. Threatened species are protected by the take prohibitions of section 9, consistent with any protective regulations finalized under section 4(d) of the ESA.

Candidate (C)

Any species for which the Service has sufficient information on its biological status and threats to propose it as endangered or threatened under the ESA, but for which development of a proposed listing regulation is precluded by other higher priority listing activities. Candidate species are not protected by the take prohibitions of section 9 of the ESA.

Proposed endangered (PE)

Any species the Service has determined is in danger of extinction throughout all or a significant portion of its range and the Service has proposed a draft rule to list as endangered. Proposed endangered species are not protected by the take prohibitions of section 9 of the ESA until the rule to list is finalized. Under section 7(a)(4) of the ESA, federal agencies must confer with the Service if their action will jeopardize the continued existence of a proposed species.

Proposed threatened (PT)

Any species the Service has determined is likely to become endangered within the foreseeable future throughout all or a significant portion of its range and the Service has proposed a draft rule to list as threatened. Proposed threatened species are not protected by the take prohibitions of section 9, consistent with any protective regulations finalized under section 4(d) of the ESA, until the rule to list is finalized. Under section 7(a)(4) of the ESA, federal agencies must confer with the Service if their action will jeopardize the continued existence of a proposed species.

Similarity of Appearance, Endangered (SAE)

Any species listed as endangered due to similarity of appearance with another species that is listed as endangered. Species listed under a similarity of appearance are not biologically endangered and are not subject to section 7 consultation. Listing by similarity of appearance depends on the degree of difficulty law enforcement personnel would have in distinguishing the species from an endangered species and where the additional threat posed to the endangered species by the similarity of appearance. Species listed under a similarity of appearance may be protected by the take prohibitions of section 9 under the ESA, where they overlap with the listed entity they were listed to protect.

Similarity of Appearance, Threatened (SAT)

Any species listed as threatened due to similarity of appearance with another species that is listed as threatened. Species listed under a similarity of appearance are not biologically endangered and are not subject to section 7 consultation. Listing by similarity of appearance depends on the degree of difficulty law enforcement personnel would have in distinguishing the species from a threatened species and where the additional threat posed to the threatened species by the similarity of appearance. Species listed under a similarity of appearance may be protected by the take prohibitions of section 9 under the ESA, where they overlap with the listed entity they were listed to protect.

Proposed Similarity of Appearance, Endangered (PSAE)

Any species proposed for listing as endangered due to similarity of appearance with another species that is listed as endangered, but a final rule to list has not yet been published. Species proposed for listing under a similarity of appearance are not biologically endangered and are not subject to section 7 consultation. Listing by similarity of appearance depends on the degree of difficulty law enforcement personnel would have in distinguishing the species from an endangered species and where the additional threat posed to the endangered species by the similarity of appearance. Proposed similarity of appearance are not protected by the take prohibitions of section 9 of the ESA until the rule is finalized.

Proposed Similarity of Appearance, Threatened (PSAT)

Any species proposed for listing as threatened due to similarity of appearance with another species that is listed as threatened, but a final rule to list has not yet been published. Species proposed for listing under a similarity of appearance are not biologically threatened and are not subject to section 7 consultation. Listing by similarity of appearance depends on the degree of difficulty law enforcement personnel would have in distinguishing the species from a threatened species and where the additional threat posed to the threatened species by the similarity of appearance. Proposed threatened species are not protected by the take prohibitions of section 9 of the ESA until the rule is finalized.

Emergency listing, Endangered (EmE)

Any species for which the Secretary of the Department of the Interior (Secretary) has determined it is at significant immediate risk of survival and publishes an emergency listing as endangered. The emergency listing is temporary (240 days). During this time the Service evaluates the species under standard listing protocols. Emergency-listed endangered species are afforded all the protections afforded by the ESA.

Emergency listing, Threatened (EmT)

Any species for which the Secretary has determined it is at significant immediate risk of survival and publishes an emergency listing as threatened. The emergency listing is temporary (240 days). During this time the Service evaluates the species under standard listing protocols. Emergency-listed threatened species are protected by the take prohibitions of section 9, consistent with any protective regulations finalized under section 4(d) of the ESA.

Experimental population, Essential (EXPE)

A population that has been established within its historical range under section 10(j) of the ESA to aid recovery of the species. The Service has determined an essential population is necessary for the continued existence of the species. Essential experimental populations are treated as threatened species and afforded all the protections afforded to threatened species by the ESA.

Experimental population, Non-essential (EXPN)

A population that has been established within its historical range under section 10(j) of the ESA to aid recovery of the species. The Service has determined a non-essential population is not necessary for the continued existence of the species. For the purposes of consultation, non-essential experimental populations are treated as threatened species on National Wildlife Refuge and National Park land (require consultation under 7(a)(2) of the ESA) and as a proposed species on private land (no section 7(a)(2) requirements, but Federal agencies must not jeopardize their existence (section 7(a)(4))).

Proposed experimental population, Essential (PEXPE)

A population that has been proposed for establishment within its historical range under section 10(j) of the ESA to aid recovery of the species. The Service has proposed an essential population is necessary for the continued existence of the species. Proposed essential experimental populations will be treated as threatened species and afforded all the protections afforded to threatened species by the ESA when finalized. Prior to a final designation under section 10(j) of the ESA, proposed experimental populations do not require consultation under section 7(a)(2) of the ESA and are not protected by the take prohibitions of section 9. Federal agencies must confer with the Service for any actions that may jeopardize the continued existence of proposed species.

Proposed experimental population, Non-essential (PEXPN)

A population that has been proposed for establishment within its historical range under section 10(j) of the ESA to aid recovery of the species. The Service has determined a non-essential population is not necessary for the continued existence of the species. Once finalized, for the purposes of consultation, non-essential experimental populations are treated as threatened species on National Wildlife Refuge and National Park land (require consultation under 7(a)(2) of the ESA) and as a proposed species on private land (no section 7(a)(2) requirements, but Federal agencies must not jeopardize their existence (section 7(a)(4))). Federal agencies must confer with the Service for any actions that may jeopardize the continued existence of proposed species.

Birds of Conservation Concern (BBC)

Bird Conservation Region (BBR)

Continental United States and Alaska (CON)

USFWS Information for Planning and Consultation tool (IPac)

(https://ipac.ecosphere.fws.gov/location and upload shapefile of watershed)

(https://ipac.ecosphere.fws.gov/status/list)

Federally Threatened and Endangered Species in West Virginia

Federally Endangered Species		Critical Habitat	Year Listed
Indiana bat	*Myotis sodalis*	Y	1967
gray bat (accidental)	*Myotis grisescens*		1976
Pink mucket pearlymussel	*Lampsilis abrupta*		1976
Virginia big-eared bat	*Corynorhinus townsendii virginianus*	Y	1979
running buffalo clover *	*Trifolium stoloniferum*		1987
harperella	*Ptilimnium nodosum*		1988
shale barren rockcress	*Arabis serotina*		1989
fanshell	*Cyprogenia stegaria*		1990
purple cat's paw pearlymussel	*Epioblasma obliquata obliquata*		1990
northeastern bulrush *	*Scirpus ancistrochaetus*		1991
northern rifffleshell	*Epioblasma torulosa rangiana*		1993
clubshell	*Pleurobema clava*		1993
James spinymussel	*Pleurobema collina*		1998
snuffbox	*Epioblasma triquetra*		2012
rayed bean	*Villosa fabalis*		2012
spectaclecase	*Cumberlandia monodonta*		2012
sheepnose	*Plethobasus cyphyus*		2012
Diamond Darter	*Crystallaria cincotta*	Y	2013
Guyandotte River crayfish	*Cambarus veteranus*	proposed	2016
rusty patched bumble bee	*Bombus affinis*		2017
Candy Darter	*Etheostoma osburni*	proposed	2018
tubercled-blossom pearly mussel	*Epioblasma torulosa torulosa*	extirpated	

Federally Threatened Species		Critical Habitat	4(d) rule	Year Listed
flat-spired three-toothed land snail	*Triodopsis platysayoides*			1978
Madison Cave isopod	*Antrolana lira*	Y		1982
small whorled pogonia	*Isotria medeoloides*			1982
Cheat Mountain salamander	*Plethodon nettingi*			1989
Virginia spiraea	*Spiraea virginiana*			1990
northern long-eared bat	*Myotis septentrionalis*		Y	2015
Big Sandy crayfish	*Cambarus callainus*	proposed		2016
eastern black rail (accidental)	*Laterallus jamaicensis jamaicensis*		Y	2020

Species Propopsed for Listing		Critical Habitat	Status	Year Listed
round hickorynut	*Obovaria subrotunda*	Y	Thr.	2020
longsolid	*Fusconaia subrotunda*	Y	Thr.	2020

* Proposed for delisting

Revised: 30 September 2020

Invasive species examples:

- **Garlic mustard, Japanese honeysuckle** and **kudzu**- invaders of moist forest edges, even those without disturbance.
- **Purple loosestrife-** an incredibly invasive exotic now blanketing emergent wetlands along the Ohio River, and increasing along other major rivers throughout the state. In some cases it replaces native vegetation, threatens rare plant species, and destroys small wetlands.
- **Mile-a-minute**- a spiny vine found climbing 10-20 feet into trees, often smothering native shrubs and shading out herbaceous plants along the Ohio River and rivers in the Eastern Panhandle.

Garlic mustard

Spotted knapweed

- **Japanese knotweed and sachaline knotweed**- two stout, perennial clonal herbs that can out-compete all other vegetation in certain areas.
- **Spotted knapweed, barren brome and tree of heaven-** invaders of shale barrens, limestone glades and barrens, and native grassland communities.

What can you do?

- Become aware of the differences between native and non-native plants and the potential for invasive species to damage native ecosystems. The following items are available from the WVDNR:
  - ❖*Checklist of the Vascular Flora of West Virginia*, a checklist of the native and naturalized vascular plants of the state.
  - ❖*Native Shrubs in Wildlife Landscaping*, a series of information sheets about the use of 50 native shrubs in wildlife planting, produced by the West Virginia Native Plant Society and the West Virginia Wildlife Diversity program.
  - ❖A list of companies within the mid-Atlantic region from which alternative native stock can be purchased.
- Evaluate in advance the wisdom of introducing non-native plants into our state.
- Minimize habitat disturbance in natural areas, reducing the chance for invasion by non-native aggressive plants.
- In extreme cases, consider the eradication of highly problematic non-native invasive plant species, but carefully consider the potential consequences on the entire ecosystem and the likelihood of success. In less severe cases, try to minimize the impact of the invasive plant on the natural area.
- Help educate individuals of the seriousness of the problem and explore the use of native plant species in the management of public lands.
- If you find an unfamiliar plant and it appears to be spreading, have it identified by your local extension agent. If it is a potential invader, members of the WV Invasive Species Working Group will conduct an assessment and make recommendations.

Who is helping?

- The ***West Virginia Invasive Species Working Group***, an inclusive statewide group whose mission is to facilitate communication and collaboration for the prevention or reduction of the negative impacts of invasive species.
- The ***West Virginia Native Plant Society*** encourages nurserymen to cultivate plants native to West Virginia that could be used in conservation and ornamental projects throughout the state as alternatives to non-native invasive plant species.
- The ***West Virginia Garden Club, Inc.***, the West Virginia Native Plant Society and the WV Division of Natural Resources jointly produced this brochure.
- The ***West Virginia Native Plant Society*** and the ***West Virginia Natural Heritage Program*** have developed informative presentations about invasive plants. Please contact the DNR Elkins office *(below)* to arrange a presentation.
- Several organizations sponsor workshops on identifying problematic plant species.

West Virginia Division of Natural Resources in cooperation with: West Virginia Garden Clubs, Inc. West Virginia Native Plant Society

Cover photos: Background image of Japanese knotweed by Jil M. Swearinger, USDI National Park Service, www.forestryimages.org and Purple loosestrife (inset) by Linda Haugen, USDA Forest Service, www.forestryimages.org

Wildlife Diversity Program

Wildlife Resources
West Virginia Division of Natural Resources

P.O. Box 67
Elkins, WV 26241
(304) 637-0245
Fax: (304) 637-0250

10M 4/06

WVDNR WILDLIFE RESOURCES SECTION

Invasive Plants of West Virginia

www.wvdnr.gov

Kudzu

What are non-native invasive plants?

People have been moving Earth's plants from place to place for centuries. Many of the exotic plants we have introduced to our landscape by intention or accident have been beneficial to us and have had no unfortunate ecological impacts on natural communities. But a small percentage have spread from where they first became established, and have become serious threats to wetlands, shale barrens, prairies, glades and other rare ecosystems.

Invasive plants often get started in areas disturbed by such human activities as road and trail building, timbering, mining, and other activities that remove native vegetation, disturb the soil, or dramatically change the amount of sunlight or moisture that reaches the land. From such situations, a relatively small number of invasive species have moved into natural areas. These species have reproduced rapidly, forming stands that exclude nearly all other plant species. In the worst cases, they radically altered ecosystem processes and natural areas, and displaced native species.

Concerned citizens have long been sounding alarms about the effects of pollution and misuse of land on our native plant and animal communities.

Recently, increasing concern has been expressed that non-native plant species are invading and changing natural areas. These aggressive "weeds" are non-native invasive plants, sometimes referred to as exotic pest plants.

We value Natural Areas!

Natural areas are generally areas of limited development where naturally occurring, functioning ecosystems are supporting the greatest amount of natural biological diversity the nonliving resources (soil, sunlight, minerals, etc.) of that area can support.

- Healthy natural areas have seemingly endless interrelationships among the living and non-living parts of their ecosystems. Life thrives in such areas!
- Natural areas often support rare, threatened and endangered species of plants, animals, and fungi. The natural communities themselves are often rare enough or of such quality that society recognizes the value of conserving them.

Loosestrife infestation.

- Natural areas are valuable parts of the global landscape from which future generations can continue to learn about ecological processes. Areas such as Cranberry Glades, Cranesville Swamp, shale barrens, limestone glades and riverine marshes are a few West Virginia examples.

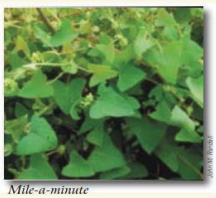
Non-native invasive plant species, in numerous examples around the world, have reduced available habitat for native species and/or eliminated associated native species altogether. This process has the potential to significantly reduce natural biological diversity.

How do they differ from native species?

Generally, the native plant species of West Virginia are those that were part of plant communities when North America was first settled by Europeans. Change in plant communities is a natural part of life. As Dr. John Randall (The Nature Conservancy) and Janet Marinelli (Brooklyn Botanic Garden), point out in their handbook, *Invasive Plants: Weeds of the Global Garden*:

"New species move in as the climate changes and as soils build up and become richer, or erode and become less fertile.

In the normal course of events, the arrival of new species may be the result of a single catastrophic event like a hurricane, or of gradual change over thousands of years. Humans have vastly accelerated the movement of plants, carrying thousands of species that could not have crossed natural barriers like oceans, mountain ranges and deserts, to new areas.



Mile-a-minute

Species that have flourished and spread on their own, only after people transported them across barriers they could not otherwise surmount, are considered non-natives. In many areas these plants have overwhelmed the native plants and animals."

Stilt grass overtaking an interior mud-flat wetland at Ohio River Island.

What challenges are there in controlling invasive plants?

The number of non-native invasive plant species in West Virginia is rising

Approximately 600 species, nearly 25% of vascular plants found in West Virginia outside of cultivation, are non-native. Each year, ecologists become more aware of the number of invasive plant species within the state and the threats they pose to natural communities.

Native stock plants are available

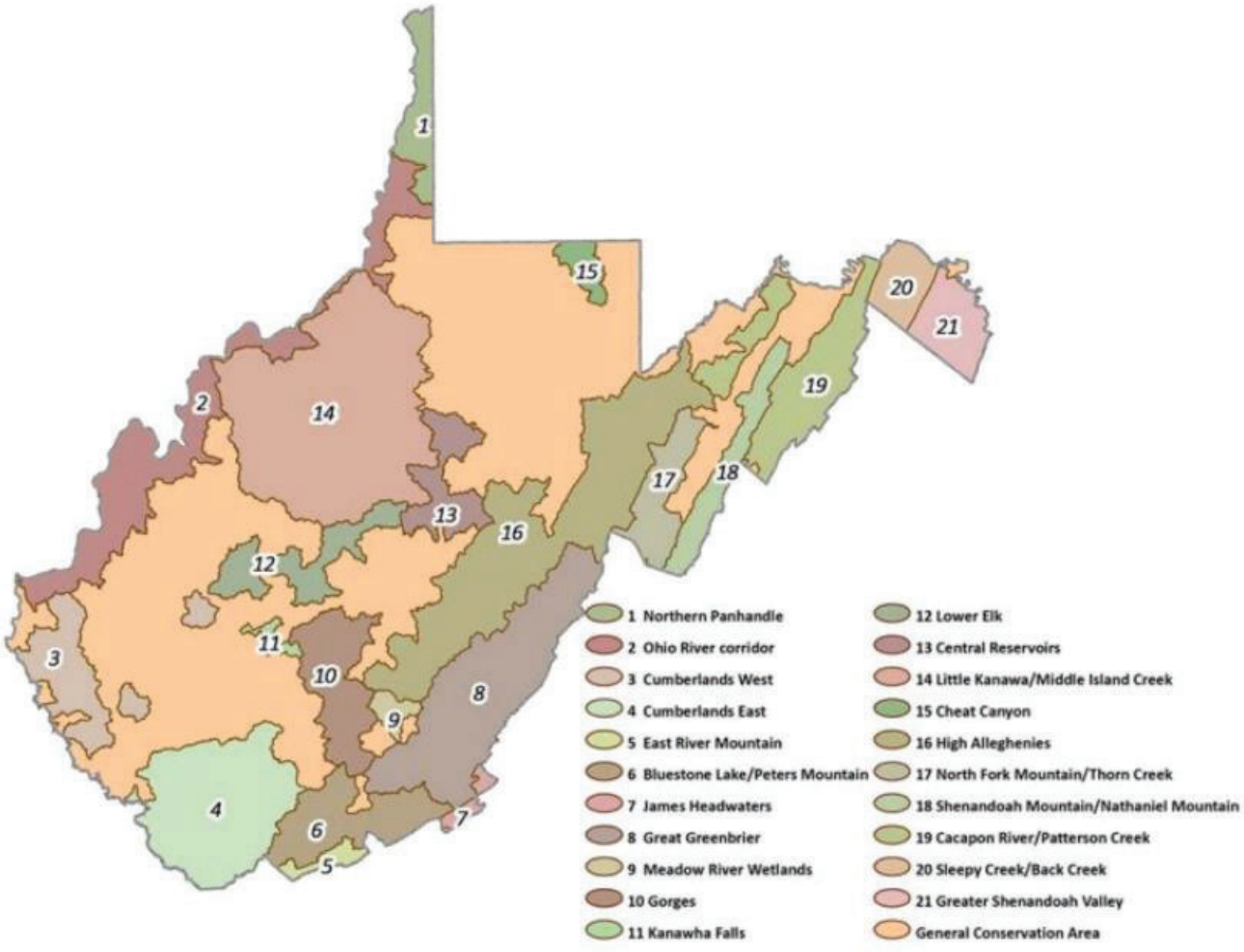
Many agencies and private landowners are using native alternatives for conservation purposes, and many West Virginia nurseries sell varieties derived from local communities to be sold as alternatives to exotic species.

Joe-Pye weed, a valuable native

[InvasivePlants.indd (wvdnr.gov)]

[listed species cheat sheet.xlsx (wvdnr.gov)]

WVDNR Conservation Focus Areas



[WV DNR Conservation Focus Areas]

Species of Greatest Conservation Need Found In Salt Lick Creek Watershed

Common Name	Scientific Name	Name Category	G Rank	S Rank
A Tiger Beetle	Cicindela unipunctata	Invertebrate Animal	S3	G4G5
American Kestrel	Falco sparverius	Vertebrate Animal	G5	S3BS3N
American Woodcock	Scolopax minor	Vertebrate Animal	G5	S3B
Bewick's Wren	Thryomanes bewickii altus	Vertebrate Animal	T2	SX
Black Vulture	Coragyps atratus	Vertebrate Animal	G5	S3
Black-billed Cuckoo	Coccyzus erythropthalmus	Vertebrate Animal	G5	S2B
Blue-winged Warbler	Vermivora cyanoptera	Vertebrate Animal	G5	S3B
Cerulean Warbler	Setophaga cerulea	Vertebrate Animal	G4	S2B
Channel Darter	Percina copelandi	Vertebrate Animal	G4	S2S3
Chimney Swift	Chaetura pelagica	Vertebrate Animal	G4G5	S3B
Clubshell	Pleurobema clava	Invertebrate Animal	G2	S1
Cliff Swallow	Petrochelidon pyrrhonota	Vertebrate Animal	G5	S3B
Dusky Darter	Percina sciera	Vertebrate Animal	G5	S3
Eastern Box Turtle	Terrapene carolina carolina	Vertebrate Animal	G5T5	S5
Eastern Meadowlark	Sturnella magna	Vertebrate Animal	G5	S3BS3N
Eastern Spotted Skunk	Spilogale putorius	Vertebrate Animal	G5	S1
Fatmucket	Lampsilis siliquoidea	Invertebrate Animal	G5	S3
Field Sparrow	Spizella pusilla	Vertebrate Animal	G5	S3BS3N
Flutedshell	Lasmigona costata	Invertebrate Animal	G5	S3
Fragile Papershell	Leptodea fragilis	Invertebrate Animal	G5	S3
Gemmed Satyr	Cyllopsis gemma	Invertebrate Animal	G4G5	S3
Giant Floater	Pyganodon grandis	Invertebrate Animal	G5	S3
Green Heron	Butorides virescens	Vertebrate Animal	G5	S3B
Hill Glyph	Glyphyalinia cumberlandiana	Invertebrate Animal	G4	S3
Kentucky Warbler	Geothlypis formosa	Vertebrate Animal	G5	S3B
Kidneyshell	Ptychobranchus fasciolaris	Invertebrate Animal	G4G5	S3
Louisiana Waterthrush	Parkesia motacilla	Vertebrate Animal	G5	S3B
Monkeyface	Quadrula metanevra	Invertebrate Animal	G4	S2
Mountain Chorus Frog	Pseudacris brachyphona	Vertebrate Animal	GNR	S4
Mucket	Actinonaias ligamentina	Invertebrate Animal	G5	S3
Northern Dusky Salamander	Desmognathus fuscus	Vertebrate Animal	G5	S5
(northern) Red Salamander	Pseudotriton ruber ruber	Vertebrate Animal	G5	S3
Northern Two-lined Salamander	Eurycea bislineata	Vertebrate Animal	G5	S5
Pimpleback	Quadrula pustulosa	Invertebrate Animal	G5	S3
Pink Heelsplitter	Potamilus alatus	Invertebrate Animal	G5	S3
Pistolgrip	Tritogonia verrucosa	Invertebrate Animal	G4G5	S3
Plain Pocketbook	Lampsilis cardium	Invertebrate Animal	G5	S3
Prairie Warbler	Setophaga discolor	Vertebrate Animal	G5	S3B
Rabbitsfoot	Quadrula cylindrica	Vertebrate Animal	G3G4	SX
Rainbow	Villosa iris	Invertebrate Animal	G5Q	S2
Rapids Clubtail	Gomphus quadricolor	Invertebrate Animal	G3G4	S3
Round Hickorynut	Obovaria subrotunda	Vascular Plant	G4	S3
Round Pigtoe	Pleurobema sintoxia	Invertebrate Animal	G4G5	S2
Seal Salamander	Desmognathus monticola	Vertebrate Animal	G5	S5
Snuffbox	Epioblasma triquetra	Invertebrate Animal	G3	S2
Spike	Elliptio dilatata	Invertebrate Animal	G5	S3
Squawfoot	Strophitus undulatus	Invertebrate Animal	G5	S3
Summer Tanager	Piranga rubra	Vertebrate Animal	G5	S3B
Tennessee Pondweed	Potamogeton tennesseensis	Vascular Plant	G2	S2
Threeridge	Amblema plicata	Invertebrate Animal	G5	S3
Wabash Pigtoe	Fusconaia flava	Invertebrate Animal	G5	S3
Wavy-rayed Lampmussel	Lampsilis fasciola	Invertebrate Animal	G5	S3
White-m Hairstreak	Parrhasius m-album	Invertebrate Animal	G5	S2

Common Name	Scientific Name	Name Category	G Rank	S Rank
Wood Thrush	Hylocichla mustelina	Vertebrate Animal	G4	S3B
Worm-eating Warbler	Helmitheros vermivorum	Vertebrate Animal	G5	S3B
Yellow-breasted Chat	Icteria virens	Vertebrate Animal	G5	S3B

Definitions for interpreting NatureServe's global (range-wide) conservation status ranks can be found at the following: Statuses | NatureServe Explorer

Nonindigenous Aquatic Species

None

Invasive Species

Animals:

Common Name	Scientific Name
pig (feral), wild boar at large	*Sus scrofa (feral type)*

Diseases:

Common Name	Scientific Name
beech bark disease	*Neonectria faginata*
butternut canker	*Ophiognomonia clavigignenti-juglandacearum*
chestnut blight or canker	*Cryphonectria parasitica*
cucurbit downy mildew	*Pseudoperonospora cubensis*
dogwood anthracnose	*Discula destructive*
oak wilt	*Bretziella fagacearum*
Phytophthora root rot	*Phytophthora cinnamomic*
rose rosette disease (RRD)	*Emaravirus RRD*
white pine blister rust	*Cronartium ribicola*

Insects:

Common Name	Scientific Name
brown marmorated stink bug	*Halyomorpha halys*
common pine shoot beetle, larger pine shoot beetle	*Tomicus piniperda*
emerald ash borer	*Agrilus planipennis*
hemlock woolly adelgid	*Adelges tsugae*
Japanese beetle	*Popillia japonica*
multicolored Asian lady beetle	*Harmonia axyridis*
southern pine beetle	*Dendroctonus frontalis*
spongy moth (formerly gypsy moth)	*Lymantria dispar*

Plants:

Common Name	Scientific Name
alfalfa	*Medicago sativa*
alfalfa	*Medicago sativa ssp. sativa*
American burnweed	*Erechtites hieraciifolius*
Amur honeysuckle	*Lonicera maackii*
annual ragweed	*Ambrosia artemisiifolia var. elatior*
annual sowthistle	*Sonchus oleraceus*
Asiatic dayflower	*Commelina communis*

Common Name	Scientific Name
autumn olive	*Elaeagnus umbellata*
bald brome	*Bromus racemosus*
barnyardgrass	*Echinochloa crus-galli*
bigroot morning-glory	*Ipomoea pandurata*
birdsfoot trefoil	*Lotus corniculatus*
bittersweets	*Celastrus spp.*
black locust	*Robinia pseudoacacia*
black medic	*Medicago lupulina*
black mustard	*Brassica nigra*
bouncingbet	*Saponaria officinalis*
bristlegrass	*Setaria spp.*
brittleleaf naiad	*Najas minor*
broadleaf dock	*Rumex obtusifolius*
broomsedge bluestem	*Andropogon virginicus*
buckhorn plantain	*Plantago lanceolata*
bull thistle	*Cirsium vulgare*
burcucumber	*Sicyos angulatus*
bush honeysuckles (exotic)	*Lonicera spp.*
Callery pear (Bradford pear)	*Pyrus calleryana*
Canada bluegrass	*Poa compressa*
Canada thistle	*Cirsium arvense*
Canadian horseweed	*Erigeron canadensis*
catnip	*Nepeta cataria*
chicory	*Cichorium intybus*
Chinese silvergrass	*Miscanthus sinensis*
Chinese yam	*Dioscorea polystachya*
coltsfoot	*Tussilago farfara*
common burdock, lesser burdock	*Arctium minus*
common chickweed	*Stellaria media*
common chickweed	*Stellaria pallida*
common cocklebur	*Xanthium strumarium*
common dandelion	*Taraxacum officinale ssp. officinale*
common mullein	*Verbascum thapsus*
common periwinkle	*Vinca minor*
common pokeweed	*Phytolacca americana*
common ragweed	*Ambrosia artemisiifolia*
common selfheal	*Prunella vulgaris*
common speedwell	*Veronica officinalis*
common St. Johnswort	*Hypericum perforatum*
common teasel	*Dipsacus fullonum*
common velvetgrass	*Holcus lanatus*
common vetch	*Vicia sativa*

Common Name	Scientific Name
common viper's bugloss, blueweed	*Echium vulgare*
corn speedwell	*Veronica arvensis*
creeping yellow loosestrife, creeping Jenny	*Lysimachia nummularia*
curly dock	*Rumex crispus*
curly dock	*Rumex crispus ssp. crispus*
cutleaf blackberry	*Rubus laciniatus*
cutleaf teasel	*Dipsacus laciniatus*
dandelion	*Taraxacum officinale*
Deptford pink	*Dianthus armeria*
dog rose	*Rosa canina*
eastern redcedar	*Juniperus virginiana*
eastern white pine	*Pinus strobus*
European common reed, Phragmites	*Phragmites australis ssp. australis*
European mountain-ash	*Sorbus aucuparia*
everlasting peavine	*Lathyrus latifolius*
fall panicum	*Panicum dichotomiflorum*
false strawberry	*Potentilla indica*
field brome	*Bromus arvensis*
field dodder	*Cuscuta pentagona*
field horsetail	*Equisetum arvense*
field pennycress	*Thlaspi arvense*
field pepperweed	*Lepidium campestre*
fiveangled dodder	*Cuscuta pentagona var. pentagona*
foxtail millet	*Setaria italica*
fragrant waterlily	*Nymphaea odorata*
garlic mustard	*Alliaria petiolata*
giant foxtail	*Setaria faberi*
giant knotweed	*Reynoutria sachalinensis*
giant ragweed	*Ambrosia trifida*
giant reed	*Arundo donax*
goosegrass	*Eleusine indica*
ground ivy	*Glechoma hederacea*
hairy cat's ear	*Hypochaeris radicata*
hairy galinsoga	*Galinsoga quadriradiata*
hairy vetch	*Vicia villosa*
hedge bindweed	*Calystegia sepium*
hedge mustard	*Sisymbrium officinale*
helleborine	*Epipactis helleborine*
hemp dogbane	*Apocynum cannabinum*
horsenettle	*Solanum carolinense*
ivyleaf morning-glory	*Ipomoea hederacea*
Japanese honeysuckle	*Lonicera japonica*

Common Name	Scientific Name
Japanese knotweed	*Reynoutria japonica*
Japanese spiraea	*Spiraea japonica*
Japanese stiltgrass	*Microstegium vimineum*
johnsongrass	*Sorghum halepense*
Kentucky bluegrass	*Poa pratensis*
Korean lespedeza	*Kummerowia stipulacea*
kudzu	*Pueraria montana var. lobata*
Kummerowia	*Kummerowia spp.*
lambsquarters	*Chenopodium album*
large crabgrass	*Digitaria sanguinalis*
large hop clover	*Trifolium campestre*
little starwort	*Stellaria graminea*
longleaf groundcherry	*Physalis longifolia*
Mahaleb cherry	*Prunus mahaleb*
marsh-pepper smartweed	*Persicaria hydropiper*
meadow fescue	*Festuca pratensis*
meadow hawkweed	*Hieracium caespitosum*
mexicantea	*Dysphania ambrosioides*
mimosa	*Albizia julibrissin*
Morrow's honeysuckle	*Lonicera morrowii*
moth mullein	*Verbascum blattaria*
mouse-eared hawkweed	*Pilosella officinarum*
multiflora rose	*Rosa multiflora*
musk thistle, nodding thistle	*Carduus nutans*
northern catalpa	*Catalpa speciosa*
northern white cedar	*Thuja occidentalis*
orchardgrass	*Dactylis glomerata*
oriental bittersweet	*Celastrus orbiculatus*
Oriental lady's thumb	*Persicaria longiseta*
oxeye daisy	*Leucanthemum vulgare*
pale smartweed	*Polygonum lapathifolium*
pale yellow iris, yellow flag iris	*Iris pseudacorus*
paradise apple	*Malus pumila*
peppermint	*Mentha x piperita*
perennial ryegrass	*Lolium perenne*
perennial ryegrass	*Lolium perenne ssp. perenne*
periwinkle	*Vinca spp.*
piedmont bedstraw	*Cruciata pedemontana*
pineapple-weed	*Matricaria discoidea*
poison hemlock	*Conium maculatum*
prickly lettuce	*Lactuca serriola*
princesstree	*Paulownia tomentosa*

Common Name	Scientific Name
purple crown-vetch	*Securigera varia*
purple cudweed	*Gamochaeta purpurea*
purple deadnettle	*Lamium purpureum*
purple loosestrife	*Lythrum salicaria*
quackgrass	*Elymus repens*
Queen Anne's lace, wild carrot	*Daucus carota*
rabbitfoot clover	*Trifolium arvense*
red clover	*Trifolium pratense*
red sorrel	*Rumex acetosella*
redtop	*Agrostis gigantea*
reed canarygrass	*Phalaris arundinacea*
rock dandelion	*Taraxacum erythrospermum*
sensitive partridgepea	*Chamaecrista nictitans*
sericea lespedeza	*Lespedeza cuneata*
showy fly honeysuckle, Bell's honeysuckle	*Lonicera x bella*
shrubby lespedeza	*Lespedeza bicolor*
small carpetgrass, joint-head grass	*Arthraxon hispidus*
smooth bedstraw	*Galium mollugo*
smooth brome	*Bromus inermis*
southern catalpa	*Catalpa bignonioides*
spanishneedles	*Bidens bipinnata*
spiny amaranth	*Amaranthus spinosus*
spiny plumeless thistle	*Carduus acanthoides*
spiny sowthistle	*Sonchus asper*
spotted knapweed	*Centaurea stoebe ssp. micranthos*
spotted spurge	*Euphorbia maculata*
spotted waterhemlock	*Cicuta maculata*
spring whitlowgrass	*Draba verna*
star-of-Bethlehem	*Ornithogalum umbellatum*
stinking chamomile	*Anthemis cotula*
sulfur cinquefoil	*Potentilla recta*
sweet autumn virginsbower	*Clematis terniflora*
sweet breath of spring	*Lonicera fragrantissima*
sweet cherry	*Prunus avium*
sweet vernalgrass	*Anthoxanthum odoratum*
tall buttercup	*Ranunculus acris*
tall fescue	*Festuca arundinacea*
tall lettuce	*Lactuca canadensis*
tall morning-glory	*Ipomoea purpurea*
tall oatgrass	*Arrhenatherum elatius*
tall thistle	*Cirsium altissimum*
Tatarian honeysuckle	*Lonicera tatarica*

Common Name	Scientific Name
tawny daylily	*Hemerocallis fulva*
thymeleaf sandwort	*Arenaria serpyllifolia*
thymeleaf speedwell	*Veronica serpyllifolia*
thymeleaf speedwell	*Veronica serpyllifolia ssp. serpyllifolia*
timothy	*Phleum pratense*
tree-of-heaven	*Ailanthus altissima*
velvetleaf	*Abutilon theophrasti*
Virginia pepperweed	*Lepidium virginicum*
water speedwell	*Veronica anagallis-aquatica*
waterpurslane	*Ludwigia palustris*
weeping lovegrass	*Eragrostis curvula*
white clover	*Trifolium repens*
white mulberry	*Morus alba*
white poplar	*Populus alba*
wild buckwheat	*Fallopia convolvulus*
wild garlic	*Allium vineale*
wild mustard	*Sinapis arvensis*
wild oat	*Avena fatua*
wild parsnip	*Pastinaca sativa*
willowleaf lettuce	*Lactuca saligna*
wine raspberry	*Rubus phoenicolasius*
woodland strawberry	*Fragaria vesca*
woodland strawberry	*Fragaria vesca ssp. vesca*
yellow bedstraw	*Galium verum*
yellow foxtail	*Setaria pumila*
yellow nutsedge	*Cyperus esculentus*
yellow rocket	*Barbarea vulgaris*
yellow sweet-clover	*Melilotus officinalis*
yellow woodsorrel	*Oxalis stricta*

Data taken from EDDMaps status of invasive species report on a county level.
(www.eddmaps.org/)

Essential Fish Habitat

None for WV

Data taken from National Oceanic and Atmospheric Administration (NOAA).
(https://habitat.noaa.gov/appa/efhmapper/?page=page_3)