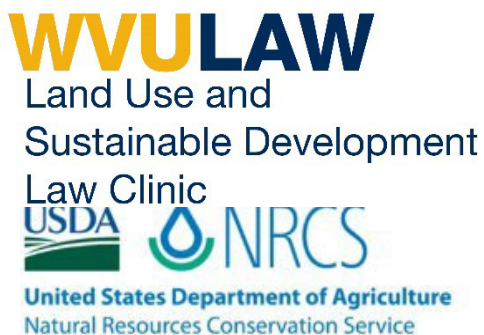


# WATERSHED PLAN – ENVIRONMENTAL ASSESSMENT VOLUNTARY FLOODPLAIN BUYOUT ALONG UPPER GUYANDOTTE RIVER

Wyoming County, West Virginia



*Photo Source: [https://www.register-herald.com/news/july-8-2001-flooding-ravaged-wyoming-county/article\\_c35e52e1-4997-5528-b8a0-ad7420aced4c.html](https://www.register-herald.com/news/july-8-2001-flooding-ravaged-wyoming-county/article_c35e52e1-4997-5528-b8a0-ad7420aced4c.html)*



## **SPONSORING LOCAL ORGANIZATIONS:**

Wyoming County Commission

## **PREPARED BY:**

Land Use and Sustainable Development Law Clinic, West Virginia  
University College of Law

## **FUNDED AND PREPARED BY:**

United States Department of Agriculture Natural Resources  
Conservation Service

**Watershed Agreement**  
**Between the**  
**Wyoming County Commission**  
**Assisted by the**  
**West Virginia University Land Use and Sustainable Development Law Clinic**  
**And the**  
**United States Department of Agriculture**  
**Natural Resources Conservation Service**  
**(Referred to herein as NRCS)**

Whereas, application has been made to the Secretary of Agriculture by the Sponsors for assistance in preparing a plan for the Upper Guyandotte River Watershed, Wyoming County, West Virginia, under the authority of the Watershed Protection and Flood Prevention Act, Public Law 83-566 (16 U.S.C. 1001-1008); and

Whereas, the responsibility for administration of the Watershed Protection and Flood Prevention Act, as amended, has been assigned by the Secretary of Agriculture to NRCS; and

Whereas, a plan has been developed through the cooperative efforts of the sponsors and NRCS to address repetitive flooding concerns in the Upper Guyandotte River Watershed, West Virginia, hereinafter referred to as the Watershed Plan – Environmental Assessment (Plan-EA), which is annexed to and made a part of this agreement;

Now, therefore, in view of the foregoing considerations, the Secretary of Agriculture, through NRCS, and the sponsors hereby agree that this Plan-EA will be carried out in compliance with the terms, conditions, and stipulations provided for in this Plan-EA, including the following:

1. **Term.** The term of this agreement is for the installation period and evaluated life of the project (100 years) and does not commit NRCS to assistance of any kind beyond the end of the evaluated life.
2. **Costs.** The costs shown in this plan are preliminary estimates. Final costs to be borne by the parties hereto will be the actual costs incurred in the installation of works of improvement.
3. **Real Property.** The sponsors will acquire such real property as will be needed in connection with the works of improvement. The amounts and percentages of the real property acquisition costs to

be borne by the sponsors and NRCS are as shown in the cost-share table in section 5 hereof. The sponsors agree that all land acquired for measures, other than land treatment practices, with financial or credit assistance under this agreement will not be sold or otherwise disposed of for the evaluated life of the project except to a public agency that will continue to maintain and operate the development in accordance with the operation and maintenance agreement.

4. **Uniform Relocation Assistance and Real Property Acquisition Policies Act.** The sponsors hereby agree to comply with all of the policies and procedures of the Uniform Relocation Assistance and Real Property Acquisition Policies Act (42 U.S.C. Section 4601 et seq. as further implemented through regulations in 49 CFR Part 24 and 7 CFR Part 21) when acquiring real property interests for this federally assisted project. If the sponsor is legally unable to comply with the real property acquisition requirements, it agrees that, before any Federal financial assistance is furnished, it will provide a statement to that effect, supported by an opinion of the chief legal officer of the state containing a full discussion of the facts and law involved. This statement may be accepted as constituting compliance.
5. **Cost-share for Watershed Project Plans.** The following table shows the cost share percentages and amounts for watershed project plan implementation

Cost-share Table for Watershed Operation					
<b>Works of Improvement</b>	<b>NRCS</b>		<b>Sponsors</b>		<b>Total</b>
<b>Cost-Sharable Items</b>	Percent	Cost	Percent	Cost	Cost
Voluntary Floodplain Buyout Construction <sup>1</sup>	100	\$800,000	0	0	\$800,00
Engineering <sup>2</sup>	100	\$132,500	0	0	\$132,500
Real Property Rights <sup>3</sup>	100	\$2,310,000	0	0	\$2,310,000
Relocation Payments <sup>4</sup>	100	\$930,000	0	0	\$930,000
Subtotal Cost-Sharable Items		\$3,917,500			\$3,917,500
<b>Non-Cost Sharable Items</b>					
NRCS Technical Assistance / Engineering	100	0	0	0	\$0
Project Administration <sup>5</sup>	90%	\$132,500	10%	\$13,300	\$145,800
Water, Mineral, and other Resource Rights	0	0	0	0	\$0
Permits	0	0	0	0	\$0
Real Property Rights	0	0	0	0	\$0
Relocation Beyond Decent, Safe and Sanitary	0	0	0	0	\$0
Non Project Costs	0	0	0	0	\$0
Subtotal Non-Cost Sharable Items		\$132,500		\$13,300	\$145,800

Footnotes:

<sup>1</sup> Demolition and site restoration costs.

<sup>2</sup> Includes costs for preparing technical specifications, contract administration, construction inspection, etc.

<sup>3</sup> Includes costs for property acquisition as per NWPM 500.42.C (1-3).

<sup>4</sup> Relocation payment per applicant increased from \$22,500 to \$31,000. This voluntary floodplain buyout follows the Uniform Relocation Assistance (URA) Act, The URA relocation payment was increased in May of 2023 from \$22,500 to \$31,000. Final Plan-EA tables display incentive as \$22,500.

<sup>5</sup> Project Administration 3.5% of construction.

6. **Land Treatment Agreements.** Not applicable to this project.
7. **Floodplain Management.** Floodplain management will be enforced by the Local Sponsors through parcel deed restriction. Wyoming County Commission agrees to hold title to the acquired parcels and enforce deed restrictions.
8. **Water and Mineral Rights.** The sponsors will acquire or provide assurance that landowners or resource users have acquired such water, mineral, or other natural resources rights pursuant to State law as may be needed in the installation and operation of the works of improvement.
9. **Permits.** The sponsors will obtain and bear the cost for all necessary Federal, State, and local permits required by law, ordinance, or regulation for installation of the works of improvement. These costs are not eligible as part of the sponsors' cost share.
10. **NRCS Assistance.** This agreement is not a fund-obligating document. Financial and other assistance to be furnished by NRCS in carrying out the plan is contingent upon the fulfillment of applicable laws and regulations and the availability of appropriations for this purpose.
11. **Additional Agreements.** A separate agreement will be entered into between NRCS and the sponsors before either party initiates work involving funds of the other party. Such agreements will set forth in detail the financial and working arrangements and other conditions that are applicable to the specific works of improvement.
12. **Amendments.** This plan may be amended or revised only by mutual agreement of the parties hereto, except that NRCS may deauthorize or terminate funding at any time it determines that the sponsors have failed to comply with the conditions of this agreement or when the program funding or authority expires. In this case, NRCS must promptly notify the sponsors in writing of the determination and the reasons for the deauthorization of project funding, together with the effective date. Payments made to the sponsors or recoveries by NRCS must be in accordance with the legal rights and liabilities of the parties when project funding has been deauthorized. An amendment to incorporate changes affecting a specific measure may be made by mutual agreement between NRCS and the sponsors having specific responsibilities for the measure involved.
13. **Prohibitions.** No member of or delegate to Congress, or resident commissioner, may be admitted to any share or part of this plan or to any benefit that may arise therefrom; but this provision may not be construed to extend to this agreement if made with a corporation for its general benefit.
14. **Operation and Maintenance (O&M).** The sponsors will be responsible for the operation, maintenance, and any needed replacement of the works of improvement by actually performing the work or arranging for such work, in accordance with an O&M agreement. An O&M agreement will be entered into before Federal funds are obligated and will continue for the project life (100 years). Although the sponsors' responsibility to the Federal Government for O&M ends when the O&M agreement expires upon completion of the evaluated life of measures covered by the agreement, the sponsors acknowledge that continued liabilities and responsibilities associated with works of improvement may exist beyond the evaluated life.
15. **Emergency Action Plan.** Not applicable to this project.
16. **Nondiscrimination Provisions.** In accordance with Federal civil rights law and U.S. Department of Agriculture (USDA) civil rights regulations and policies, the USDA, its Agencies, offices, and employees, and institutions participating in or administering USDA programs are prohibited from discriminating based on race, color, national origin, religion, sex, gender identity



(including gender expression), sexual orientation, disability, age, marital status, family/parental status, income derived from a public assistance program, political beliefs, or reprisal or retaliation for prior civil rights activity, in any program or activity conducted or funded by USDA (not all bases apply to all programs). Remedies and complaint filing deadlines vary by program or incident.

Persons with disabilities who require alternative means of communication for program information (e.g., Braille, large print, audiotape, American Sign Language, etc.) should contact the responsible Agency or USDA's TARGET Center at (202) 720-2600 (voice and TTY) or contact USDA through the Federal Relay Service at (800) 877-8339. Additionally, program information may be made available in languages other than English.

To file a program discrimination complaint, complete the USDA Program Discrimination Complaint Form, AD-3027, found online at [How to File a Program Discrimination Complaint](#) and at any USDA office or write a letter addressed to USDA and provide in the letter all of the information requested in the form. To request a copy of the complaint form, call (866) 632-9992. Submit your completed form or letter to USDA by: (1) mail: U.S. Department of Agriculture, Office of the Assistant Secretary for Civil Rights, 1400 Independence Avenue, SW, Washington, D.C. 20250-9410; (2) fax: (202) 690-7442; or (3) email: [program.intake@usda.gov](mailto:program.intake@usda.gov).

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By signing this agreement, the recipient assures the Department of Agriculture that the program or activities provided for under this agreement will be conducted in compliance with all applicable Federal civil rights laws, rules, regulations, and policies.

- 17. Certification Regarding Drug-Free Workplace Requirements (7 CFR Part 3021).** By signing this Watershed Agreement, the sponsors are providing the certification set out below. If it is later determined that the sponsors knowingly rendered a false certification, or otherwise violated the requirements of the Drug-Free Workplace Act, the NRCS, in addition to any other remedies available to the Federal Government, may take action authorized under the Drug-Free Workplace Act.

*Controlled substance* means a controlled substance in schedules I through V of the Controlled Substances Act (21 U.S.C. Section 812) and as further defined by regulation (21 CFR Sections 1308.11 through 1308.15);

*Conviction* means a finding of guilt (including a plea of nolo contendere) or imposition of sentence, or both, by any judicial body charged with the responsibility to determine violations of the Federal or State criminal drug statutes;

*Criminal drug statute* means a Federal or non-Federal criminal statute involving the manufacturing, distribution, dispensing, use, or possession of any controlled substance;

*Employee* means the employee of a grantee directly engaged in the performance of work under a grant, including (i) all direct charge employees, (ii) all indirect charge employees unless their impact or involvement is insignificant to the performance of the grant, and (iii) temporary personnel and consultants who are directly engaged in the performance of

work under the grant and who are on the grantee's payroll. This definition does not include workers not on the payroll of the grantee (e.g., volunteers, even if used to meet a matching requirement, consultants or independent contractors not on the grantees' payroll, or employees of subrecipients or subcontractors in covered workplaces).

Certification:

A. The sponsors certify that they will or will continue to provide a drug-free workplace by—

- (1) Publishing a statement notifying employees that the unlawful manufacture, distribution, dispensing, possession, or use of a controlled substance is prohibited in the grantee's workplace and specifying the actions that will be taken against employees for violation of such prohibition.
- (2) Establishing an ongoing drug-free awareness program to inform employees about—
  - (a) The danger of drug abuse in the workplace.
  - (b) The grantee's policy of maintaining a drug-free workplace.
  - (c) Any available drug counseling, rehabilitation, and employee assistance programs.
  - (d) The penalties that may be imposed upon employees for drug abuse violations occurring in the workplace.
- (3) Making it a requirement that each employee to be engaged in the performance of the grant be given a copy of the statement required by paragraph (1).
- (4) Notifying the employee in the statement required by paragraph (1) that, as a condition of employment under the grant, the employee must—
  - (a) Abide by the terms of the statement; and
  - (b) Notify the employer in writing of his or her conviction for a violation of a criminal drug statute occurring in the workplace no later than 5 calendar days after such conviction.
- (5) Notifying the NRCS in writing, within 10 calendar days after receiving notice under paragraph (4)(b) from an employee or otherwise receiving actual notice of such conviction. Employers of convicted employees must provide notice, including position title, to every grant officer or other designee on whose grant activity the convicted employee was working, unless the Federal agency has designated a central point for the receipt of such notices. Notice must include the identification numbers of each affected grant.
- (6) Taking one of the following actions, within 30 calendar days of receiving notice under paragraph (4)(b), with respect to any employee who is so convicted—
  - (a) Taking appropriate personnel action against such an employee, up to and including termination, consistent with the requirements of the Rehabilitation Act of 1973, as amended; or

- (b) Requiring such employee to participate satisfactorily in a drug abuse assistance or rehabilitation program approved for such purposes by a Federal, State, or local health, law enforcement, or other appropriate agency.
  - (7) Making a good faith effort to continue to maintain a drug-free workplace through implementation of paragraphs (1), (2), (3), (4), (5), and (6).
- B. The sponsors may provide a list of the sites for the performance of work done in connection with a specific project or other agreement.
- C. Agencies will keep the original of all disclosure reports in the official files of the agency.

#### **18. Certification Regarding Lobbying**

- A. The sponsors certify to the best of their knowledge and belief, that—
  - (1) No Federal appropriated funds have been paid or will be paid, by or on behalf of the sponsors, to any person for influencing or attempting to influence an officer or employee of an agency, Member of Congress, an officer or employee of Congress, or an employee of a Member of Congress in connection with the awarding of any Federal contract, the making of any Federal grant, the making of any Federal loan, the entering into of any cooperative agreement, and the extension, continuation, renewal, amendment, or modification of any Federal contract, grant, loan, or cooperative agreement.
  - (2) If any funds other than Federal appropriated funds have been paid or will be paid to any person for influencing or attempting to influence an officer or employee of any agency, a Member of Congress, an officer or employee of Congress, or an employee of a Member of Congress in connection with this Federal contract, grant, loan, or cooperative agreement, the undersigned must complete and submit Standard Form LLL, “Disclosure Form to Report Lobbying,” in accordance with its instructions.
  - (3) The sponsors must require that the language of this certification be included in the award documents for all subawards at all tiers (including subcontracts, subgrants, and contracts under grants, loans, and cooperative agreements) and that all subrecipients must certify and disclose accordingly.
- B. This certification is a material representation of fact upon which reliance was placed when this transaction was made or entered into. Submission of this certification is a prerequisite for making or entering into this transaction imposed by 31 U.S.C. Section 1352. Any person who fails to file the required certification shall be subject to a civil penalty of not less than \$10,000 and not more than \$100,000 for each such failure.

#### **19. Certification Regarding Debarment, Suspension, and Other Responsibility Matters—Primary Covered Transactions (7 CFR Part 3017).**

- A. The sponsors certify to the best of their knowledge and belief, that they and their principals—

- (1) Are not presently debarred, suspended, proposed for debarment, declared ineligible, or voluntarily excluded from covered transactions by any Federal department or agency;
  - (2) Have not within a 3-year period preceding this proposal been convicted of or had a civil judgment rendered against them for commission of fraud or a criminal offense in connection with obtaining, attempting to obtain, or performing a public (Federal, State, or local) transaction or contract under a public transaction; violation of Federal or State antitrust statutes or commission of embezzlement, theft, forgery, bribery, falsification or destruction of records, making false statements, or receiving stolen property;
  - (3) Are not presently indicted for or otherwise criminally or civilly charged by a governmental entity (Federal, State, or local) with commission of any of the offenses enumerated in paragraph A(2) of this certification; and
  - (4) Have not within a 3-year period preceding this application/proposal had one or more public transactions (Federal, State, or local) terminated for cause or default.
- B. Where the primary sponsors are unable to certify to any of the statements in this certification, such prospective participant must attach an explanation to this agreement.

**20. Clean Air and Water Certification.**

(Applicable if this agreement exceeds \$100,000, or a facility to be used has been subject of a conviction under the Clean Air Act (42 U.S.C. Section 7413(c)) or the Federal Water Pollution Control Act (33 U.S.C. Section 1319(c)) and is listed by EPA, or is not otherwise exempt.)

- A. The project sponsoring organizations signatory to this agreement certify as follows:
- (1) Any facility to be utilized in the performance of this proposed agreement is (\_\_\_), is not (☒) listed on the Environmental Protection Agency List of Violating Facilities.
  - (2) To promptly notify the NRCS-State administrative officer prior to the signing of this agreement by NRCS, of the receipt of any communication from the Director, Office of Federal Activities, U.S. Environmental Protection Agency, indicating that any facility which is proposed for use under this agreement is under consideration to be listed on the Environmental Protection Agency List of Violating Facilities.
  - (3) To include substantially this certification, including this subparagraph, in every nonexempt subagreement.
- B. The project sponsoring organizations signatory to this agreement agree as follows:
- (1) To comply with all the requirements of section 114 of the Clean Air Act as amended (42 U.S.C. Section 7414) and section 308 of the Federal Water Pollution Control Act (33 U.S.C. Section 1318), respectively, relating to inspection, monitoring, entry, reports, and information, as well as other requirements

specified in section 114 and section 308 of the Air Act and the Water Act, issued there under before the signing of this agreement by NRCS.

- (2) That no portion of the work required by this agreement will be performed in facilities listed on the EPA List of Violating Facilities on the date when this agreement was signed by NRCS unless and until the EPA eliminates the name of such facility or facilities from such listing.
- (3) To use their best efforts to comply with clean air standards and clean water standards at the facilities in which the agreement is being performed.
- (4) To insert the substance of the provisions of this clause in any nonexempt subagreement.

C. The terms used in this clause have the following meanings:

- (1) The term “Air Act” means the Clean Air Act, as amended (42 U.S.C. Section 7401 et seq.).
- (2) The term “Water Act” means Federal Water Pollution Control Act, as amended (33 U.S.C. Section 1251 et seq.).
- (3) The term “clean air standards” means any enforceable rules, regulations, guidelines, standards, limitations, orders, controls, prohibitions, or other requirements which are contained in, issued under, or otherwise adopted pursuant to the Air Act or Executive Order 11738, an applicable implementation plan as described in section 110 of the Air Act (42 U.S.C. Section 7414) or an approved implementation procedure under section 112 of the Air Act (42 U.S.C. Section 7412).
- (4) The term “clean water standards” means any enforceable limitation, control, condition, prohibition, standards, or other requirement which is promulgated pursuant to the Water Act or contained in a permit issued to a discharger by the Environmental Protection Agency or by a State under an approved program, as authorized by section 402 of the Water Act (33 U.S.C. Section 1342), or by a local government to assure compliance with pretreatment regulations as required by section 307 of the Water Act (33 U.S.C. Section 1317).
- (5) The term “facility” means any building, plant, installation, structure, mine, vessel, or other floating craft, location or site of operations, owned, leased, or supervised by a sponsor, to be utilized in the performance of an agreement or subagreement. Where a location or site of operations contains or includes more than one building, plant, installation, or structure, the entire location will be deemed to be a facility except where the Director, Office of Federal Activities, Environmental Protection Agency, determines that independent facilities are collocated in one geographical area.

21. **Assurances and Compliance.** As a condition of the grant or cooperative agreement, the sponsor assures and certifies that it is in compliance with and will comply in the course of the agreement with all applicable laws, regulations, Executive orders and other generally

applicable requirements, including those set out below which are hereby incorporated in this agreement by reference, and such other statutory provisions as are specifically set forth herein.

State, Local, and Indian Tribal Governments: OMB Circular Nos. A-87, A-102, A-129, and A-133; and 7 CFR Parts 3015, 3016, 3017, 3018, 3021, and 3052.

Nonprofit Organizations, Hospitals, Institutions of Higher Learning: OMB Circular Nos. A-110, A-122, A-129, and A-133; and 7 CFR Parts 3015, 3017, 3018, 3019, 3021 and 3052.

- 22. Examination of Records.** The sponsors must give the NRCS or the Comptroller General, through any authorized representative, access to and the right to examine all records, books, papers, or documents related to this agreement, and retain all records related to this agreement for a period of three years after completion of the terms of this agreement in accordance with the applicable OMB Circular.

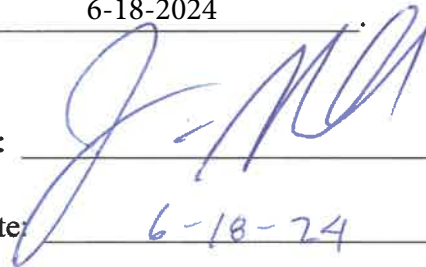


23. **Signatures.**

Wyoming County Commission  
24 Main Avenue  
Pineville, WV 24874

By: Jason Mullins  
Title: **President**  
Date: 6-18-2024

The signing of this agreement was authorized by a resolution of the governing body of  
the **Wyoming County Commission** adopted at a meeting held on  
6-18-2024.

By:   
Date: 6-18-24

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Natural Resources Conservation Service  
UNITED STATES DEPARTMENT OF AGRICULTURE

Approved by:

**JON  
BOURDON**

Digitally signed by JON  
BOURDON

Date: 2024.06.24 10:57:35

-04'00'

**JON BOURDON**

**State Conservationist**

Date: \_\_\_\_\_

## Fly Sheet

Document: Watershed Plan, Environmental Assessment (Plan-EA)  
Title of Proposed Action: Voluntary Floodplain Buyout  
Location: Wyoming County, West Virginia, Third Congressional District  
Sponsoring Agencies: Wyoming County Commission  
Lead Agency: U.S.D.A. Natural Resources Conservation Service  
Cooperating Agencies: U.S. Army Corps of Engineers

Authority: This plan is prepared under the authority of the Watershed Protection and Flood Prevention Act of 1954 (Public Law 83-566), as amended.

Abstract: Residents in the Upper Guyandotte River Watershed (Upper Guyandotte Watershed) are subjected to repetitive flooding because of concentrated development in the floodplain. The West Virginia Flood Tool and supplemental information were used to quantify flood damages for 140 homes, structures, and outbuildings to determine a cost-effective solution. The watershed is distressed, with low per capita income and very low housing values. No structural measures were feasible in addressing the flooding problem. The recommended solution is a voluntary floodplain buyout for approximately 30 properties. Total project cost is \$4,063,300. The benefit-to-cost ratio is 1.5 to 1.0.

Contact Information for Comments and Inquiries on this Plan-EA: Christi Hicks, Assistant State Conservationist, Water Resources, Natural Resources Conservation Service, United Department of Agriculture; 500 East Main Street, Romney, West Virginia 26757, (304) 276-5636, Christi.Hicks@usda.gov. Comments and inquiries must be received by January 15, 2024.

Contact Information for Landowner Questions on Applications: Staci Thornsby, Staff Attorney, Land Use and Sustainable Development Law Clinic, West Virginia University College of Law, Office G4, 1 Law School Drive, Morgantown, WV 26505, (304) 293-8840, upperguyanwatershed@mail.wvu.edu.

*This plan was prepared by the Land Use and Sustainable Development Law Clinic at West Virginia University College of Law in cooperation with Sponsoring Local Organization the Wyoming County Commission.*

In accordance with Federal civil rights law and U.S. Department of Agriculture (USDA) civil rights regulations and policies, the USDA, its Agencies, offices, and employees, and institutions participating in or administering USDA programs are prohibited from discriminating based on race, color, national origin, religion, sex, gender identity (including gender expression), sexual orientation, disability, age, marital status, family/parental status, income derived from a public assistance program, political beliefs, or reprisal or retaliation for prior civil rights activity, in any program or activity conducted or funded by USDA (not all bases apply to all programs). Remedies and complaint filing deadlines vary by program or incident. Persons with disabilities who require alternative means of communication for program information (e.g., Braille, large print, audiotope, American Sign Language, etc.) should contact the responsible Agency or USDA's TARGET Center at (202) 720-2600 (voice and TTY) or contact USDA through the Federal Relay Service at (800) 877-8339. Additionally, program information may be made available in languages other than English. To file a program discrimination complaint, complete the USDA Program Discrimination Complaint Form, AD-3027, found online at How to File a Program Discrimination Complaint and at any USDA office or write a letter addressed to USDA and provide in the letter all of the information requested in the form. To request a copy of the complaint form, call (866) 632-9992. Submit your completed form or letter to USDA by: (1) mail: U.S. Department of Agriculture, Office of the Assistant Secretary for Civil Rights, 1400 Independence Avenue, SW, Washington, D.C. 20250-9410; (2) fax: (202) 690-7442; or (3) email: program.intake@usda.gov. USDA is an equal opportunity provider, employer, and lender.

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# SUMMARY

## *Office of Management and Budget Fact Sheet*

### **Summary Watershed Plan–Environmental Assessment Document For Upper Guyandotte River Watershed Voluntary Floodplain Buyout Wyoming County, West Virginia Congressional District #3**

#### **Sponsors**

This plan was prepared by the Land Use and Sustainable Development Law Clinic, at West Virginia University College of Law in cooperation with Sponsoring Local Organization the Wyoming County Commission.

#### **Project Authorization**

The Upper Guyandotte River Watershed (Upper Guyandotte Watershed) project is planned for implementation under the authority of Public Law 83-566, Watershed and Flood Prevention Act (16 U.S.C. § 1001-1008, et. seq.) 1954.

#### **Project Location**

Upper Guyandotte River Watershed, Wyoming County, West Virginia.

#### **Preferred Alternative**

The *preferred alternative* is a voluntary floodplain buyout.

#### **Purpose and Need for Action**

The purpose of this project is flood prevention and flood damage reduction. There is a need to reduce repetitive flood damage to properties in the Upper Guyandotte Watershed.

#### **Description of the Preferred Alternative**

The *preferred alternative* is a voluntary floodplain buyout to remove houses from the floodplain. An estimated 68 properties will be eligible for buyout consideration, with an anticipated 30 residential properties ultimately being acquired after the application and ranking processes. As each participating property is identified, the impacts and benefits of each property will undergo site-specific review in an Environmental Evaluation, Form CPA-52, tiered to this Plan-EA. Properties in the program would be demolished, and the floodplain would be returned to natural floodplain conditions. In-ground infrastructure, such as septic systems, would be removed or stabilized as appropriate.

## **Resource Information**

- Latitude 37.3954, Longitude -81.360 (Matheny)
- Hydrologic Unit Code:<sup>1</sup> 0507010102 and 0507010103<sup>2</sup>
- Humid, continental climate
- Watershed size: 231,516 acres (362 square miles)<sup>3</sup>
- Land uses:<sup>4</sup> 87% forest, 6% grassland, mining disturbance 5%, development 1%, pasture <1%, open water <1%, wetlands <1%, agriculture <1%, within the watershed<sup>5</sup>
- Land ownership: 100% privately owned properties along Upper Guyandotte proposed for purchase; watershed-wide, 4% federal, 2% state/local, 94% privately<sup>6</sup>; notably, 79% owned by absentee corporations for timber and coal extraction within the watershed<sup>7</sup>
- Topography: Steep mountains with narrow ridgetops and deep valleys
- Population and demographics: Wyoming County population of 23,796, declining 8.5% from 2010 to 2018; per capita income \$42,332; poverty rate 22.4%<sup>8</sup>
- Resource concerns: flood damage, health and safety, water quality, watershed resiliency, riparian and stream habitat, social and economic sustainability, floodplain management, cultural resources, environmental justice
- No environmental mitigation measures are anticipated for this project

## **Alternative Plans Considered**

Alternative 1, No Action: No Action consists of no works of improvement and no reduction in current or future flood damage. Alternative 2, Voluntary Floodplain Buyout: A voluntary buyout of approximately 30 residences that are the most vulnerable will reduce flood damage and improve human health and safety.

## **Project Costs (by Purpose and Funding)**

**Table A: Project Costs**  
Upper Guyandotte River Watershed Plan-EA

<b>Cost Component</b>	<b>PL83-566 Funds</b>	<b>Other Funds</b>
Construction	\$ 800,000	\$0
Engineering	\$ 132,500	\$0
Real Property Rights	\$2,310,000	\$0
Relocation Payments	\$ 675,000	\$0
Project Administration	\$ 132,500	\$13,300
Total	\$4,050,000 (99.7%)	\$13,300 (0.3%)

## **Project Benefits**

The project will yield monetary and other benefits because perpetual flood damage will be reduced for properties acquired through voluntary floodplain buyout. Specifically, such benefits will include reduced flood debris load, avoided costs to restore damaged houses, and avoided costs to obtain temporary housing during flood restoration. Nonmonetary benefits include improved human health and safety, reduced emergency service needs, improved potential for recreational use of Upper Guyandotte River, improved environmental justice, better floodplain function, improved habitat, improved watershed resiliency, improved quality of life, and other nonmonetary benefits.

Number of direct beneficiaries: an estimated 72 onsite beneficiaries in the approximately 30 residences to be acquired; 7,932 offsite beneficiaries in downstream communities that will have reduced flood debris, improved water quality, and reduced emergency service needs

Benefit-to-cost ratio (2.25% discount rate): 1.5 to 1.0

### **Net Economic Benefits**

\$47,500

### **Funding Schedule**

(budget year +5)

Year	Federal fiscal year	Activities			Federal funds	Nonfederal funds
1	2021	outreach, application, ranking, design, contracting			\$ 750,000.00	\$13,300.00
2	2022	property acquisition steps			\$1,100,000.00	\$ -
3	2023	demolition and restoration			\$1,000,000.00	\$ -
4	2024	demolition and restoration			\$ 436,800.00	\$ -
5	2025	project completion			\$ 750,000.00	\$ -
				Subtotal	\$4,036,800.00	\$ 13,300.00
				Total	\$4,050,800.00	

### **Tiering to the Plan-EA**

The Voluntary Floodplain Buyout Along Upper Guyandotte Watershed is in the planning stage. Through the process described in this Plan-EA, and with considerable support from local and state agencies, NRCS has developed a list of 68 properties that will meet the sponsors' objectives. All of these properties and their respective communities have received a planning-level analysis to ensure that potential buyout of each property appears capable of reducing flood damage.

As the specific property owners who will voluntarily choose to participate in the program have not yet been identified, though approximately 30 participating properties are expected to be acquired, a tiered approach has been taken in this Plan-EA to enable site-specific review of each participating property after those properties have been identified. This document intends to present an analysis in sufficient detail to allow implementation of a proposed action within the *project area* with minimal additional NEPA analysis.

Tiering is a staged approach to NEPA, as described in the Council on Environmental Quality's Regulations for Implementing the Procedural Provisions of NEPA (40 CFR 1500 to 1508). Broad programs and issues are described in initial analyses, while site-specific proposals and impacts are described in subsequent site-specific studies. The tiered process permits the lead agency to focus on issues that are ready for decision and exclude from consideration issues already decided or not yet developed.

This Plan-EA, then, serves as the planning-level analysis of environmental impacts and benefits from the commitment of NRCS technical and financial assistance funds. Discussions focus on the Upper Guyandotte River-wide environmental setting, preliminary cost estimates, and general areawide impacts. NRCS will complete an Environmental Evaluation (EE), using Form NRCS-CPA-52, tiered to this Plan-EA for site-specific review of each property that is brought forward for participation in the buyout. The EE process determines if a particular individual site and project meets applicable project specifications and whether the site-specific environmental effects are consistent with those as described and developed in this Plan-EA.

In the design phase, the sponsors will develop objective and clearly delineated ranking criteria to inform application materials provided by property owners interested in participating in the buyout. This will enable objectively prioritizing buyout properties to maximize the project's purpose of reducing flood damage. Objective criteria may include, but are not limited to, flood depth, location within the regulatory floodway, location within the Special Flood Hazard Area, the presence and nature of structures located on the property, contiguous properties, and community ingress and egress.

### **Project Life**

Project evaluated at FY 2022 water resources project discount rate of 2.25% for 100 years.

### **Environmental Impacts**

No environmental issues were identified at the scoping stage. If issues arise during the public comment period, they will be identified in the Final Plan-EA.

### **Major Conclusions**

[Section reserved until public comment period ends.]

### **Areas of Controversy**

[Section reserved until public comment period ends.]

### **Issues to be Resolved**

[Section reserved until public comment period ends.]

### **Evidence of Unusual Congressional or Local Interest**

[Section reserved until public comment period ends.]

Is this report in compliance with executive orders, public laws, and other statutes governing the formulation of water resources projects?    √ yes \_\_\_\_ no

## 1.0 PURPOSE AND NEED FOR ACTION

The purpose of this project is to reduce flood damage along the Upper Guyandotte River. This project will reduce both physical and economic harm to individuals and communities from flood events and enhance floodplain resiliency in the *project area*. There is a need to address repetitive flood damage to properties in the Upper Guyandotte Watershed (Hydrologic Unit 507010102 and 507010103).

## 2.0 SCOPE OF ENVIRONMENTAL ASSESSMENT

This section documents the range of issues and impacts considered during planning. The concerns identified during project scoping are summarized in Table 2.1. The degree of concern and relevance to the *preferred alternative* were determined by the consensus of the planning team, otherwise referred to as planners. A project scoping meeting was held at Twin Falls State Park on October 16, 2018. Notice to begin planning was published in the Beckley Register Herald, the Welch News, and the Bluefield Daily Telegraph newspapers and on the NRCS website. Letters were mailed or emailed to resource agencies, local leaders, and stakeholders.

Fifteen individuals attended the scoping meeting, representing federal, state, and local stakeholders. Additional information was requested by the Environmental Protection Agency, the West Virginia Department of Health and Human Resources, and the West Virginia State Historic Preservation Office, as representatives of these agencies were unable to attend the scoping meeting.

**Table 2.1: Summary of Concerns and Rationale**

ITEM/CONCERN	Relevant to the <i>preferred alternative</i> ?		RATIONALE
	YES	NO	
Flooding	X		Project purpose; chronic flooding resulting in severe property damage; loss of life.
Public Health and Safety	X		Emergency services required during floods.
Erosion & Sediment		X	Best management practices will be used during the demolition phase of the project to minimize short-term erosion and sediment impacts. Long-term reduction in erosion and sediment may be realized as streambanks return to natural vegetation.
Prime or Other Important Farmland		X	The majority of the <i>project area</i> is not prime farmland. A small portion could be prime farmland if drained. Refer to Web Soil Survey available at <a href="https://websoilsurvey.sc.egov.usda.gov/App/HomePage.htm">https://websoilsurvey.sc.egov.usda.gov/App/HomePage.htm</a> and appended maps.

Water Quality	X		Concentrated housing in floodplains equates to more impermeable surface. The project involves removing existing homes, revegetating the sites, not clearing new land, and not creating new development; therefore, the proposed action would have negligible impacts to water quality.
Water Quantity		X	The project involves removing existing homes, revegetating the sites, not clearing new land, and not creating new development; therefore, the proposed action would have negligible impacts to water quantity.
Regional Water Management Plans & Coastal Zone Management Areas		X	West Virginia is a landlocked state with no Coastal Zone Management Area-designated coastal areas. Wyoming County is not subject to any regional water management plans.

ITEM/CONCERN	Relevant to the preferred alternative?		RATIONALE
	YES	NO	
Floodplain Management	X		Dense development in floodplains due to topography; project involves voluntary removal of at-risk structures within flood-prone areas, increased floodplain resiliency, and directing residential development outside of floodplain; Wyoming County Commission seeks compatible use of floodplains that will economically and socially benefit residents; sponsors request consistent, practical terms for mitigated properties across NRCS, FEMA, USACE.
Wetlands, Waters of the U.S.	X		Not identified as a resource concern but project is anticipated to have positive impacts.
Wild and Scenic Rivers		X	None present in the <i>project area</i> . <sup>1</sup>
Air Quality		X	Not included in state non-attainment area.
Invasive Plant Species		X	There are roughly twenty-nine species of non-native invasive plants of record in the Upper Guyandotte watershed. The five most common species recorded are the Tree-of-heaven ( <i>Ailanthus altissima</i> ), multiflora rose ( <i>Rosa multiflora</i> ), Japanese knotweed ( <i>Polygonum cuspidatum</i> ), Japanese honeysuckle ( <i>Lonicera japonica</i> ), and Japanese stiltgrass ( <i>Microstegium vimineum</i> ). <sup>2</sup> Proactive removal of invasive species will take place where practicable in concert with other remediation activities in the <i>project area</i> ; best management practices will be the standard, and site monitoring will occur.

Invasive Animal Species		X	Emerald Ash Borer, an invasive beetle may be present in the <i>project area</i> . <sup>3</sup> Nutria have also been identified in the watershed. <sup>4</sup> Further, general invasive species present in West Virginia are the spotted lantern fly, hemlock wooly adelgid and gypsy moth, any of which may be present within the <i>project area</i> . <sup>5</sup> Aquatic invasive species include didymo, the rusty and virile crayfish, and Asian carp, any of which may also be present but have not been recorded yet in the watershed. <sup>6</sup> The project will have no appreciable effects on known or unknown invasive species.
Natural Areas		X	No designated areas. <sup>7</sup>
Riparian Areas	X		Project anticipated to have incidental positive impacts.



Fish & Wildlife Habitat	X		The three predominant habitat types in the Upper Guyandotte Watershed are Southern Appalachian Oak Forest, South-Central Interior Mesophytic Forest, and Allegheny-Cumberland Dry Oak Forest and Woodland. <sup>8</sup> Roughly 87% of the land cover is forest, 6% is grassland, 5% is mine disturbance, 1% is development, less 1% is open water, and less than 1% is wetlands. <sup>9</sup> For the endangered Guyandotte River Crayfish, all known records are between 230 to 520 m (750 to 1,700 ft) elevation. <sup>10</sup> Habitat is associated with faster-flowing waters, unembedded substrates, and slab boulders. <sup>11</sup> Ideal habitat has natural variation in flow, seasonal flooding to transport sediment, and aquatic habitat protected from riparian activities that degrade the features previously mentioned. <sup>12</sup> The project's removal of existing structures would reduce riparian impervious surface area, and may lessen sedimentation that negatively impacts the Guyandotte River Crayfish. The project is anticipated to have incidental positive impacts on habitat.
Coral Reefs		X	Not applicable, as West Virginia is a land-locked state that does not drain directly into waters containing coral reefs.

ITEM/CONCERN	Relevant to the preferred alternative?		RATIONALE
	YES	NO	
Threatened & Endangered Plants		X	USFWS has listed two flowering plants found in this watershed. The Virginia Spiraea ( <i>Spiraea virginiana</i> ) is a threatened species and the Northeastern Bulrush ( <i>Scirpus ancistrochaetus</i> ) is endangered. Additionally, the project is removing existing homes and revegetating the sites, not clearing new land nor creating new development. Therefore, the proposed action would have negligible impacts to threatened and endangered plants.
Threatened & Endangered Animals		X	The USFWS has listed six species found in this watershed. Three mammals: The Northern Long-eared Bat ( <i>Myotis septentrionalis</i> ) is threatened, and the Gray Bat ( <i>Myotis grisescens</i> ) and Indiana Bat ( <i>Myotis sodalis</i> ) are endangered. One insect, the Monarch Butterfly ( <i>Danaus plexippus</i> ), is a candidate species, which means it is a species under consideration for official listing for which there is sufficient information to support listing. Two crustaceans: The Big Sandy Crayfish ( <i>Cambarus callainus</i> ) is threatened, and the Guyandotte River Crayfish ( <i>Cambarus veteranus</i> ) is endangered. The Upper Guyandotte watershed is designated as critical habitat for the endangered Guyandotte River Crayfish. <sup>19</sup> Further, the FWS determined that the mine portals and caves in Wyoming County may also be home to the endangered Virginia big-eared bat, and the gray bat. <sup>20</sup> In 2013, a new species of crayfish, the Coalfields Crayfish ( <i>Cambarus theepiensis</i> ), was identified at a number of locations in the watershed. Endemic to the junction of the Cumberland Mountains and Appalachian Plateau in eastern Kentucky and southwestern West Virginia, it occurs in the Lower Ohio, Big Sandy, Twelvepole, and Guyandotte watersheds. The recommendation is that it should be classified as G3 due to its limited range (Loughman et al. 2013). However, the project is removing existing homes and revegetating the sites. The project is not clearing new land or new development. Therefore, the proposed action would have negligible impacts to threatened and endangered animals. USFWS consultation and findings

			will occur during review of the Plan-EA.
Forest Resources		X	The project involves removing existing homes and revegetating the sites, not clearing new land and not creating new development; therefore, the proposed action would have negligible impacts to forest resources.
Migratory Birds		X	Certain birds are protected under the Migratory Bird Act and the Bald and Golden Eagle Protection Act and therefore, may be listed as Birds of Conservation Concern (BCC). The USFWS has listed ten migratory birds in this watershed as follows: Black-billed Cuckoo ( <i>Coccyzus erythrophthalmus</i> ), Black-capped Chickadee ( <i>Poecile atricapillus praticus</i> ), Canada Warbler ( <i>Cardellina canadensis</i> ), Cerulean Warbler ( <i>Dendroica cerula</i> ), Eastern Whip-poor-will ( <i>Antrostomus vociferus</i> ), Kentucky Warbler ( <i>Oporonis formosus</i> ), Prairie Warbler ( <i>Dendroica discolor</i> ), Prothonotary Warbler ( <i>Protonotaria citrea</i> ), Red-headed Woodpecker ( <i>Melanerpes erythrocephalus</i> ), and Wood Thrush ( <i>Hylocichla mustelina</i> ). The project involves removing existing homes and revegetating the sites, not clearing new land and not creating new development; therefore, the proposed action would have negligible impacts to migratory birds.
Cultural Resources	X		Consultation is ongoing with WVSHPO, tribes, and historical societies.

ITEM/CONCERN	Relevant to the preferred alternative?		RATIONALE
	YES	NO	
Environmental Justice	X		Watershed demographics indicate high poverty rates, low educational levels, high disability rates, chronic unemployment, high rates of opioid addiction; Wyoming County is designated as economically distressed by Appalachian Regional Commission; the project will be implemented in disadvantaged areas.
Ecological Critical Areas		X	This resource does not exist in the <i>project area</i> . No federal or state ecologically critical areas are shown on the appended maps.
Regional Water Plan		X	The project is removing existing homes and revegetating the sites, not clearing new land and not creating new development; therefore, the proposed action would have negligible impacts on the WVDEP Water Management Plan.
National Parks, Monuments, Historical Sites		X	This resource does not exist in the <i>project area</i> . No federal or state parks, monuments, or historic sites are shown on the appended maps.
Parklands, Scenic Areas		X	None located in the <i>project area</i> .
Significant Scientific Features		X	None located in the <i>project area</i> .
Recreation		X	Project would directly affect only residential properties and would not adversely impact recreational facilities.

Social and Economic Conditions	X		Resource concerns identified by Wyoming County Commission: lack of affordable, quality housing may cause applicants to move from area; flood-free housing sites not available due to absentee corporate land holdings; community cohesion may diminish; tax base and utility customer base could be negatively impacted if participants move from area. Scope of the project is intentionally small to minimize social and economic disruption and maximize the ability of sponsors to afford project responsibilities.
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## 3.0 AFFECTED ENVIRONMENT

The *project area*, for purposes of this project, is the Upper Guyandotte Watershed located in Wyoming County, West Virginia.

### **3.1 Floodwater Damage**

Floods and flood impacts have been documented in West Virginia since the earliest settlements. Indeed, “[f]lood-producing extreme precipitation over the rugged topography is the costliest and most severe natural hazard for the state.”<sup>1</sup> In addition to creating safety and public health hazards, floods result in loss of life. Floods are the leading cause of death from natural disasters in the United States. Between 1960 and 1996, there were 252 deaths from floods or flash floods in West Virginia. This is more than any other state except Texas (619) and California (258). If the 125 deaths caused by the Buffalo Creek disaster in 1972 were excluded, West Virginia would still rank tenth in flood fatalities during this period. Six people perished in southern West Virginia during the July 2001 flood.<sup>2</sup> Twenty-three people were killed in the June 2016 flood in central and southern West Virginia watersheds. It is well established by both data and anecdotal accounts that West Virginia has a long history of deaths, mental trauma, and property damage attributable to flooding.

In just eight years, from 1996 to 2004, West Virginia had 16 federal disaster declarations involving flooding. All 55 counties were included in at least one of those declarations. The costs associated with these events have been substantial, with the Federal Emergency Management Agency (“FEMA”) disbursing over \$500 million in assistance payments for property damage in West Virginia during this time period.<sup>3</sup> Like the varied and severe adverse impacts from flooding experienced across the state of West Virginia, flooding in Wyoming County has been frequent, tragic, and costly. In the last four decades, there have been at least 14 federal disaster declarations related to flooding in Wyoming County.<sup>4</sup>

Record flooding occurred in the upper Guyandotte River basin in July of 1977, with a gauge maintained by the National Weather Service in Pineville, West Virginia, measuring a depth of 17.76 feet, some 2.5 feet higher than the previously recorded record. Communities downstream experienced crests of 39.09 feet. Damages for the flood were estimated by the United States Army Corps of Engineers (“USACE”) at more than \$10 million in the Guyandotte River basin.<sup>5</sup> Since then, the Upper Guyandotte drainage has suffered repeated flood events.

According to National Weather Service data, as collected by the Iowa State University – Iowa Environmental Mesonet, from 1989 through 2018, all or part of Wyoming County, West Virginia, has been affected by the following:

- 109 Areal Flood Advisories
- 193 Areal Flood Warnings
- 257 Areal Flood Watch
- 621 Flash Flood Warnings
- 654 Flash Flood Watch
- 1 Flood Advisory
- 24 Flood Warnings

Included among the flood events in the Upper Guyandotte watershed during this time, a new record flood event occurred on July 8, 2001, which the Beckley Register Herald called the worst disaster in Wyoming County history.<sup>5a</sup>

The 2001 flood was the result of approximately 11 inches of rainfall in the watershed over a four-hour period. It ravaged the area, with estimates of 12 feet of water running through the downtown area of Mullens, West Virginia, and 7 feet through Oceana, West Virginia. According to Dean Meadows, the Emergency Services Director for Wyoming County, “[a]long the Guyandotte and its tributaries, nearly 75 percent of the homes suffered extensive damage or were destroyed.” Moreover, “[e]very road in the county was blocked off for a while . . . [t]he county was virtually shut down as far as egress and regress.”

Fortunately, only one fatality was attributed to the event, but the impact on local residents was traumatic and lasting.

"It's never happened here like this," said Bill Wade, who is 82. "I saw a school bus completely covered in water. I saw a casket floating down the street. I saw motor homes and mobile homes floating in front of me." "I might leave now," said Doug Acord, 47, in Corinne, where the Guyandotte River normally is around 6 inches deep but ran about 20 feet deep on Sunday. "We just cleaned up a couple of months ago and now this is worse. I'm getting tired of this."<sup>5b</sup>

On July 8, 2001, the discharge at the United States Geological Survey gauge #03202400, Guyandotte River near Baileysville, West Virginia, was 46,400 cubic feet per second, while the mean daily discharge for July 8, at the same gauge station since 1984 is only 475 cubic feet per second (cfs).<sup>6</sup>

Wyoming County experienced several million dollars per year in average annual losses due to flooding from 1960 through 2012, according to NOAA's National Climatic Data Center and the United States Geological Survey's ("USGS") National Geophysical Data Center.<sup>7</sup>

There is a need to reduce the harmful effects of repetitive flooding in the Upper Guyandotte River watershed. Homes are continually inundated with floodwaters, perpetuating the cycle of flood, recovery, and repair. Residents are in danger during each flood event, as waters rise unpredictably and often too quickly for evacuation. Opportunities for housing to be improved and modernized are not realized because financial and other resources are continuously in flood-recovery mode.

Table 3.1: Residential Flooding at Proposed Project Site shows of the 68 structures evaluated, all structures would be flooded during 50- and 100-year storm events, 61 structures would be flooded during a 10-year storm event.

**Table 3.1: Residential Flooding at Proposed Project Site**

<i>Proposed Project Site</i>	Structures Evaluated	Structures Flooded at 10-Year Storm	Structures Flooded at 50-Year Storm	Structures Flooded at 100-Year Storm
<b>Matheny</b>	68	61	68	68

### **3.2 Public Health and Safety**

Residents currently live in flood-prone areas. In particular, the elderly, disabled, and young are most at risk, especially with flash flooding. Flash flooding—quickly rising waters with little warning—is of concern in this watershed. The watershed’s topography, with steep hillsides and narrow streams, makes the area susceptible to flash floods. Furthermore, during a flood event of any sort, primary escape routes also may flood, thus making vehicle travel or other travel dangerous, and perhaps impossible. The limited ingress and egress points to the *proposed project site* by emergency services or for evacuation of residents is a serious risk to human health and safety.

In addition to existing public health and safety concerns from flooding, there may also be public health concerns from the practice of straight-piping by existing homes. Straight-piping is the process of using pipes, most commonly PVC, to discharge wastewater from toilets, sinks, bathing facilities, and washing machines directly into streams.

### **3.3 Water Quality**

Beyond the severe threat to life and property posed by floods and flood impacts to the narrow valley floodplains in the Upper Guyandotte Watershed, the lack of wastewater infrastructure also results in a water resource challenge for the area’s residents. According to the 2006 Upper Guyandotte River Watershed Based Plan, “66% of watershed households have an inadequate or an unidentified method of wastewater treatment;”<sup>8</sup> only 9% of homes in the watershed have a permitted septic system.<sup>9</sup> Failing septic system and illegal discharges of untreated household wastewater are the primary source of non-point source fecal coliform bacteria pollution in the Upper Guyandotte.<sup>10</sup> Raw sewage being discharged into waterways by straight-piping has been identified as “the biggest threat in water supplies throughout southern West Virginia . . . by a long shot.”<sup>11</sup>

Straight-pipes and faulty sewage collection systems cause raw sewage discharge into Upper Guyandotte River. Due to the “[s]teepness of terrain, depth to bedrock, . . . and the relative isolation of individual communities,” traditional sewage collection systems are not cost effective in many areas.<sup>12</sup> Existing systems are stressed due to the continual decline in population and the resulting lack of funds for basic maintenance and future upgrades. Additionally, 75% to 85% of the land in

the watershed is owned by out-of-state interests, making the acquisition of easements potentially quite burdensome.<sup>13</sup> The dumping of untreated sewage into the Upper Guyandotte creates a public health hazard and improving water quality to a level that supports fishing, swimming, and other recreation has been identified as a watershed goal.<sup>14</sup>

Metal pollution from non-point sources, particularly abandoned mine lands, is also an issue in the Upper Guyandotte watershed. Per the most recent 303(d) impaired waters list for West Virginia, specific segments of the watershed are impaired by high concentrations of iron, aluminum, and selenium, which may all be released from polluted mine drainage.<sup>15</sup> According to the 2006 Upper Guyandotte River Watershed Based Plan, the Upper Guyandotte River is also impacted by a number of active coal mining sites and four bond forfeiture sites that discharge polluted mine drainage.<sup>16</sup>

Many waterways in the Upper Guyandotte Watershed were included on West Virginia's 303(d) list of impaired waters for 2016 (the most recent list available). R.D. Bailey Lake, a 630-acre lake along the Upper Guyandotte River, was designated as impaired by PCBs in its entirety in 2016, 2014, and 2012.<sup>17</sup> Significant tributaries to the Upper Guyandotte River, including Island Creek, Slab Fork, Winding Gulf, and Pinnacle Creek, were also listed as impaired on the 2016 303(d) list of impaired waters for West Virginia. Island Creek's entire length, 18.1 miles, was listed for biological impairment; Slab Fork's entire length, 4.0 miles, was listed for both selenium and biological impairment; Winding Gulf's entire length, 15.5 miles, was listed for fecal coliform impairment; and Pinnacle Creek's entire length, 26.6 miles, was listed for biological impairment.<sup>18</sup>

In 2004, the USEPA, in partnership with the WVDEP, developed a TMDL for the entire Guyandotte River basin.<sup>19</sup> The TMDL was developed for pH, metals, and fecal coliform impaired streams within the watershed.<sup>20</sup> While the mainstem of the Guyandotte River was the only stream specified as being impaired for fecal coliform bacteria, load reductions were required for major tributaries.<sup>21</sup> Upstream of the *proposed project site*, Laurel Fork flows through Matheny before joining the Clear Fork in Oceana, West Virginia.<sup>22</sup> Laurel Fork has TMDL criteria for biological, iron, and manganese impairments.<sup>23</sup> The Laurel Fork travels approximately 18 miles before reaching Matheny, with many streams leading into Laurel Fork and passing through a variety of small towns.<sup>24</sup> Laurel Fork flows through Glen Rogers, Ravencliff, Sabine, Glen Fork, and Jesse prior to reaching Matheny.<sup>25</sup> Most streams that flow into Laurel Fork were listed as biologically and iron impaired. Examples include Chestnut Flats Branch, Trough Fork, and Cabin Branch.<sup>26</sup> The Laurel Branch and Lick Branch are listed as impaired for selenium for their entire lengths.<sup>27</sup>

### **3.4 Floodplain Management**

Within the watershed, many homes and related community infrastructure are located in the floodplain. Specifically, the Special Flood Hazard Area (SFHA) is the 100-year floodplain (sometimes referred to as base flood or 1% annual chance flood), the area with a 1% chance of flooding within a given year. Similarly, the 500-year floodplain is the area with a 0.2% chance of flooding within a given year. To this end, Executive Order (EO) 11988 requires that federal agencies like NRCS examine alternatives to avoid adverse effects and incompatible development in floodplains, while EO 13690 establishes standards and processes for consideration of public input.

West Virginia has developed a statewide flood plan, and its continued implementation could be

key to ameliorate flood problems. This plan has the goals, among others, of reducing loss of life, reducing property damage, protecting waterway and floodplain environments, and reducing personal and economic losses to flooding. Wyoming County, in which most of the Upper Guyandotte Watershed lies, does not have code enforcement or a building code, however a floodplain ordinance does regulate new construction in the floodplain. Portions of the *project area* are within the regulatory floodway.

### **3.5 Wetlands and Waters of the United States**

The Guyandotte River flows 166 miles through five counties in West Virginia: Wyoming, Mingo, Logan, Lincoln, and Cabell.<sup>28</sup> The river is a tributary of the Ohio River and is formed by the confluence of three streams on the border of Wyoming County and Raleigh County as it flows away from Raleigh County: Winding Gulf, Stonecoal Creek, and Devils Fork.<sup>29</sup> Its largest tributary is the Mud River, which flows into the Guyandotte at Barboursville, West Virginia.<sup>30</sup> From its formation on the Raleigh County and Wyoming County line, the Upper Guyandotte Watershed includes portions of Logan County and Mingo County, as well as all of Wyoming County.<sup>31</sup> For purposes of this description, only the portion of the Upper Guyandotte Watershed that is in Wyoming County is discussed.

It is uncontroverted that the Guyandotte is an important waterway, but it has never been realistically navigable.<sup>38</sup> In an attempt to harvest the region's timber and coal resources, the Guyandotte Navigation Company was created in 1848 to build a lock and dam system, but they were poorly built, and the project was flooded in 1861.<sup>39</sup> In 1980, the U.S. Army Corps of Engineers established a dam to control the flooding just upstream of Gilbert, West Virginia.<sup>40</sup> The creation of this dam established R.D. Bailey Lake, which exists near the center of the river's course.<sup>41</sup>

While the locations of the main stem of the Guyandotte and its tributaries are well established, wetlands are not extensively found or documented in the watershed. According to a land cover analysis conducted in 2009, the Upper Guyandotte River Watershed is primarily comprised of deciduous, hardwood, and mixed forest. There are some wetlands that are primarily located in riparian areas and floodplains, and comprise approximately less than one percent of land cover area.<sup>42</sup> From 1971 to 1992, data was collected for the West Virginia NWI and published in 1996.<sup>43</sup> While the accuracy of the wetland locations and the existence of the wetlands today may be questionable due to the age of the data, 47 acres were found to be palustrine emergent wetland, 27 acres were found to be palustrine forested wetland, and 65 acres were found to be palustrine shrub-scrub wetland, all whilst considering a 50-meter wetland buffer to include the immediately surrounding wetland habitat.<sup>44</sup> The Wetlands Water Quality index used provided that most wetlands were in good or fair condition, with a few very good catchments.<sup>45</sup> It is likely that, to the extent wetlands once existed, they were converted for residential, commercial, industrial, or similar use.

### **3.6 Riparian Areas**

Riparian areas in the subject watershed are a combination of developed lots for commercial and industrial use; residential areas with lawns and gardens; and vacant, abandoned, or unused property. Streambanks in residential communities have light to moderate vegetation. In areas of

heavier commercial or industrial use (current and former), vegetation is sparse. Streambanks outside of populated areas are more heavily vegetated given reduced development. The watershed is not experiencing an appreciable influx of new development.

### **3.7 Fish and Wildlife Habitat**

The fish habitat in the Upper Guyandotte spans roughly 246 miles and contains both cold- and warm-water fisheries.<sup>46</sup> The majority of the Upper Guyandotte is a warmwater fishery (217 miles), and is home to various species, including Guyandotte River Spotted Bass, smallmouth bass, bluegill, catfish, carp, crappie, gar, musky, and walleye.<sup>47</sup> The remaining 29 miles are considered a cold-water fishery that is home to what is widely considered the best wild rainbow trout fishery in the state.<sup>48</sup> In addition, the Upper Guyandotte was stocked with hatchery rainbow trout for the first time by the State in 2021, citing improved water quality conditions as the impetus for the decision.<sup>49</sup>

The river is also home to the Guyandotte River Crayfish (*Cambarus veteranus*), and this species was listed under the Endangered Species Act in 2016.<sup>50</sup> In 2017, the U.S. Fish and Wildlife Service designated parts of the Upper Guyandotte as critical habitat.<sup>51</sup> Notably, the endangered crustacean has lost roughly 90% of its range and is now only found in Wyoming County.<sup>52</sup> The primary threat to the Guyandotte River Crayfish is coal mining, logging, on- and off-road transportation, and oil and gas development, all of which can increase erosion, sedimentation, and changes in water flow.<sup>53</sup> The land adjacent to the Upper Guyandotte is home to many other species as well, including squirrel, grouse, turkey, mink, and whitetail deer.<sup>54</sup>

### **3.8 Cultural and Historic Resources**

This Plan-EA is taking a phased approach to addressing cultural resources. After initial review and consultation with SHPO, it has been determined that no previously known archaeological sites are within the floodplain itself. Additional cultural resource survey will be required upon definition of the area of potential effect. For each property enrolled in this program, NRCS West Virginia will follow the process as specified in 36 CFR 800.4. For any properties determined to be eligible for inclusion within the National Register of Historic Places, NRCS West Virginia will resolve adverse effects in accordance with 36 CFR 800.5-6.

Where construction has not yet begun and a cultural resource is discovered after Section 106 review is complete, NRCS West Virginia will seek avoidance or minimization strategies in consultation with SHPO, interested Indian Tribes, and other consulting parties to resolve adverse effects in accordance with 36 CFR Part 800.6. If a potential historic property is discovered or unanticipated effects to historic properties are found after implementation, installation, or construction has begun, NRCS West Virginia will halt all work and proceed with the post-review discoveries in accordance with 36 CFR 800.13.

When human remains are discovered, NRCS West Virginia will follow all applicable federal, tribal, and state burial laws and ordinances, including the Native American Graves Protection and Repatriation Act, and implementing regulations, when on tribal or federal lands, and related human rights and health statutes, where appropriate. NRCS West Virginia will also refer to the Advisory Council on Historic Preservation's (ACHP) Policy Statement regarding Treatment of Burial Sites, Human Remains and Funerary Objects and the ACHP's Section 106 Archaeology Guidance.



NRCS West Virginia will also follow USDA and NRCS policy on treatment of human remains and consultation.

Additionally, the watershed has numerous communities with a history of coal mining. Much of the housing and the related built environment is associated with coal camps from the early to mid-twentieth century.

### **3.9 Environmental Justice**

Wyoming County is considered a distressed county, indicating the population and geographic area have experienced environmental injustices. Poverty is much higher at 22.4% than the West Virginia rate of 16% and the national rate of 12%. The median household income of \$42,332 in Wyoming County is below the West Virginia median of \$46,711 and less than the national median of \$62,843. Wyoming County is categorized as having “persistent poverty” by the U.S. Census.<sup>55</sup>

The 2019 U.S. Census estimates indicate that 97.7% of the population in Wyoming County is White and 0.07% is African-American or Black, which is lower than the African-American population percentage in the state at 3.6%. A little over 1% of the population identifies as being more than one race.<sup>56</sup> Ethnicity characteristics of Wyoming County are representative of the smaller geographic area being considered. There was a high influx of African-Americans migrating to Southern West Virginia in the early 20th century to work in the coal industry. However, the African-American population has declined by nearly two percentage points since 2000. All populations, including minority populations, in the watershed are environmental justice populations.

Wyoming County is rated *low* for resiliency according to the Hazards & Vulnerability Research Institute.<sup>57</sup> The baseline resilience indicator (BRIC) score of 2.5 ranks Wyoming County 204th lowest out of 3,142 counties nationwide. The BRIC score is a composite score that evaluates resilience to natural disasters based on social, economic, community capital, institutional, infrastructural, and environmental attributes. Specifically, Wyoming County ranks 74th lowest in the United States in social resiliency and 60th lowest in economic resiliency.<sup>58</sup>

Spatial Hazard Events and Losses Database for the United States (SHELDUS) data and maps illustrate the magnitude of flooding and other hazards in Wyoming County. As shown in Figure 3.1, flooding is by far the costliest hazard in the State of West Virginia and, in turn, Wyoming County is the second most hazardous county in the state in terms of cost. In 2001, Wyoming County had a devastating flood event that left some communities with up to 12 feet of rushing water in downtown.<sup>59</sup> The 2001 flood caused \$88,911,497.90 in property damage adjusted for 2019 US Currency value.<sup>60</sup>

Wyoming County is also rated in the medium to high range of all counties statewide and nationwide for social vulnerability to environmental hazards (SoVI score).<sup>61</sup> Social vulnerability refers to “the characteristics of a person or group and their situation that influence their capacity to anticipate, cope with, resist, or recover from the impact of a hazard.” Social vulnerability is most apparent after a hazard event has occurred, when different patterns of suffering and recovery are observed among certain groups in the population, e.g. the aged, the poor, minorities. Such groups may not only be the least prepared for an emergency but also often live in more hazardous locations or in substandard housing, have the fewest resources, and lack the knowledge or a sense

of political efficacy to claim access to resources to assist in recovery.<sup>62</sup>

“Social Vulnerability Analysis (SVA) describes the relationship between social characteristics and vulnerability to hazards (better documenting who is at risk) and the distribution of tangible and intangible hazard effects (primarily focusing on impacts described in the Other Social Effects account).”<sup>63</sup> Refer to Figures 3.2 and 3.3 for nationwide SoVI scores and resilience values for the relevant area.

Economic resilience is also low in Wyoming County, as illustrated by a 2019 study commissioned by the Appalachian Regional Commission.<sup>64</sup> The county is among the least resilient due to a host of factors, such as age distribution, workforce participation, high disability rates, lack of local economic diversity, outmigration, low educational levels, and other determinants. Withstanding and recovering from chronic flooding is more difficult in areas that lack economic, social, and environmental resilience.

**Figure 3.1: SHELDUS Data on West Virginia Hazards**

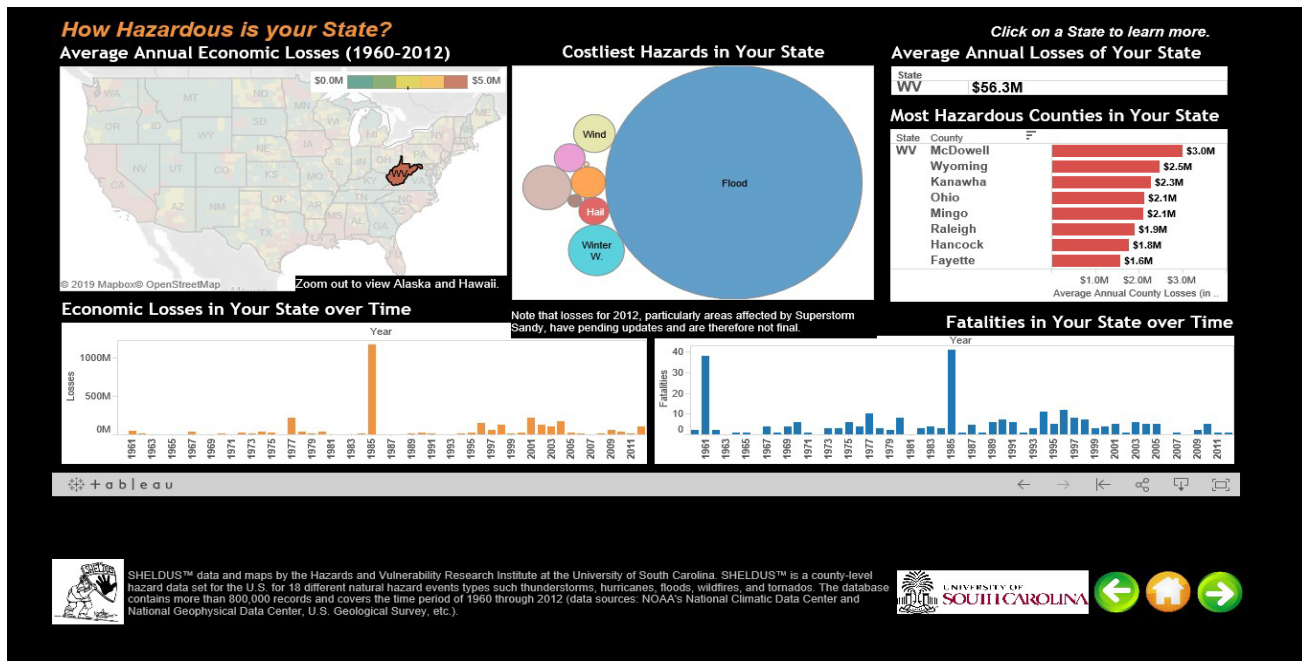
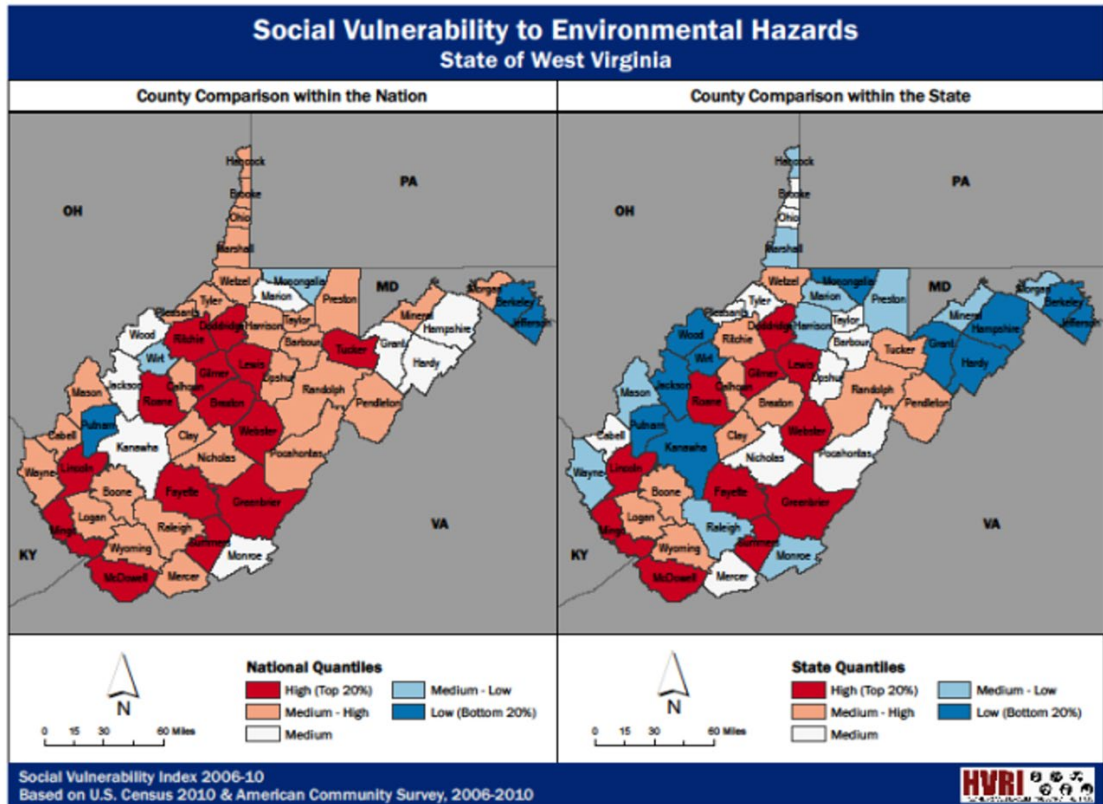
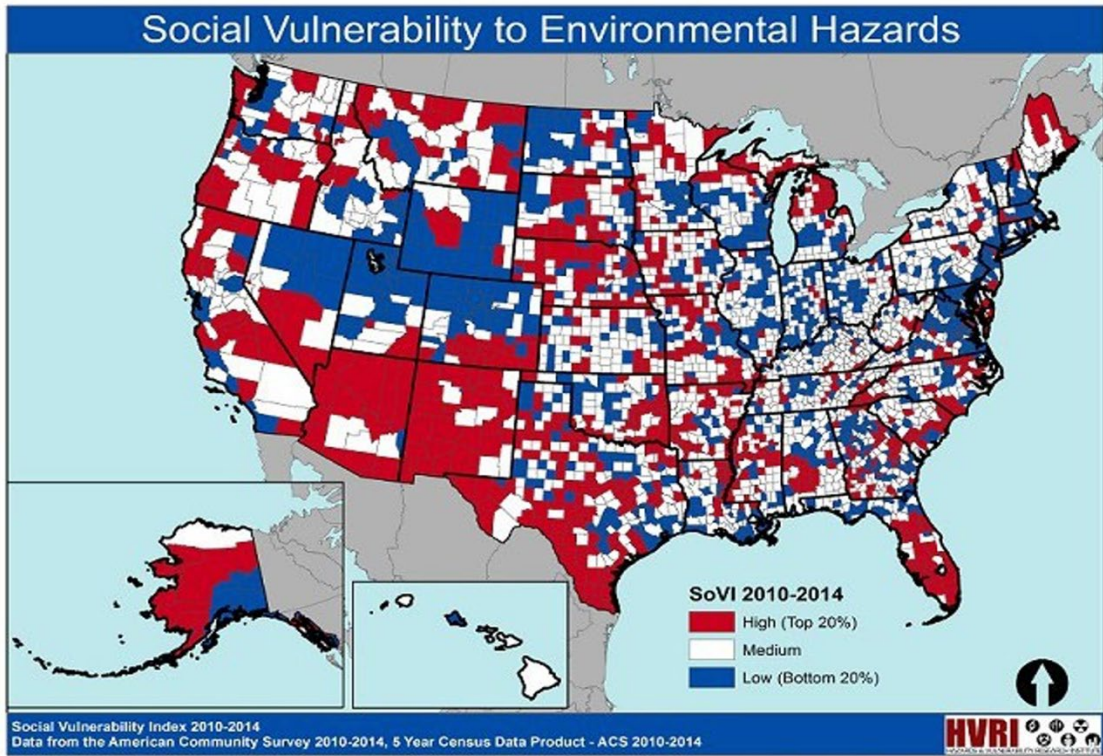
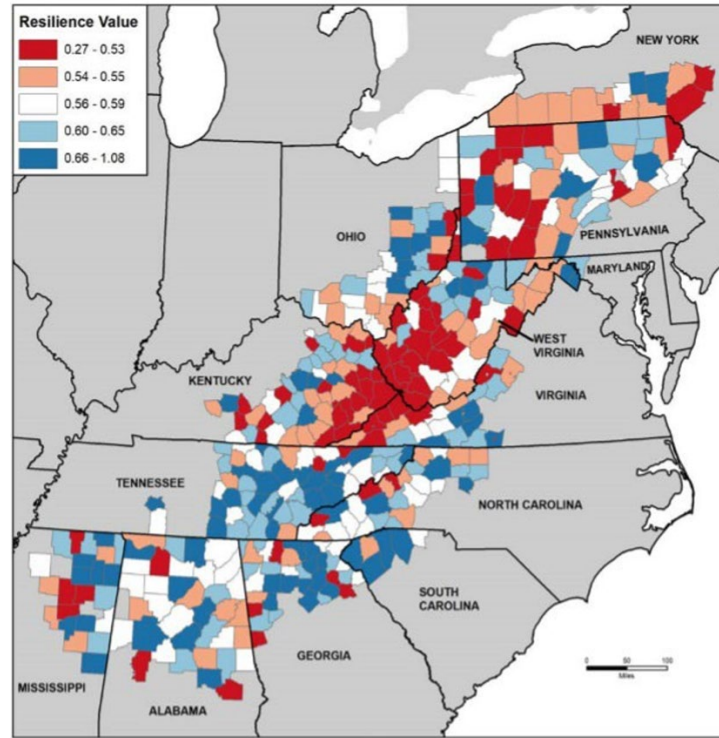


Figure 3.2: Social Vulnerability to Environmental Hazards



**Figure 3.3: Resilience Values in Appalachia**



### **3.10 Social and Economic Conditions**

#### ***Population***

The Upper Guyandotte Watershed spans across the northern portion of Wyoming County. The county was robust and flourishing in the early to mid-1900s, but like many areas rich in natural resources, Wyoming County has been subject to the boom-bust cycles of extractive industries.

Wyoming County is sparsely populated. In 2010, the population was 23,796.<sup>65</sup> The county has experienced population decline since 1980. The county's peak population was in 1980 with 36,000 people. The decline of the coal industry has resulted in many people leaving the county. Population estimates as of July 2019 show an additional decrease of people, with a total population of 20,786. The City of Mullens, with 1,559 residents, has the most people of the county's three municipalities. The Town of Oceana has 1,394 residents, and the Town of Pineville is the smallest municipality with 668 people. Pineville is the county seat.

Regional population centers near the watershed include Charleston, West Virginia (87 miles from Pineville); Beckley, West Virginia (43 miles); and Bluefield, West Virginia (53 miles). Ethnicity characteristics of Wyoming County are representative of the smaller geographic area being considered. The 2019 U.S. Census estimates indicate that 97.7% of the population in Wyoming County is White and 0.07% is African-American or Black, which is lower than the African-American population percentage in the state at 3.6%. A little over one percent of the population identifies as being more than one race.<sup>66</sup> All populations, including minority populations, in the

watershed are environmental justice populations.

### ***Income***

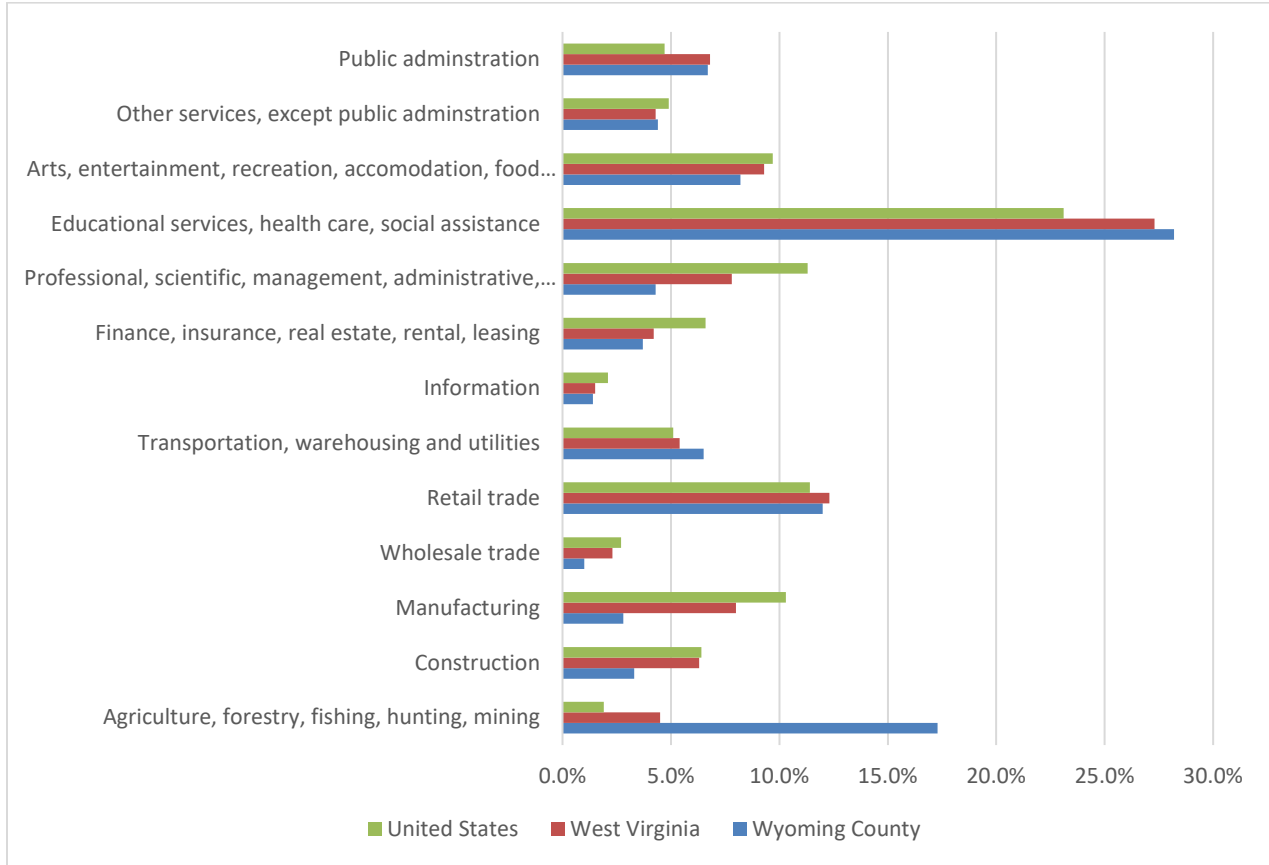
Wyoming County's economy has heavily relied on the coal industry. With the decline of coal industry and lack of job opportunities otherwise, many people have moved from the county. Statistics from the US Census indicate poor economic conditions. The Appalachian Regional Commission has designated Wyoming County as a distressed county. The following statistics compare conditions in Wyoming County relative to the state and nation. This data is taken from the American Community Survey (2013-2017): Table 3.2: Economic Characteristics shows a lower median household income and greater unemployment rate and poverty rate compared with the state and nation.

**Table 3.2: Economic Characteristics  
Upper Guyandotte Watershed  
Wyoming County, WV**

<b>Item</b>	<b>United States</b>	<b>West Virginia</b>	<b>Wyoming Co.</b>
Median Household Income	57, 652	44,061	37,644
Unemployment Rate	6.6%	7.2%	11.7%
Poverty Rate	14.6%	17.8%	22.2%
Population with Bachelor's Degree or Higher	30.9%	19.9%	9.3%

The number of residents that have received a bachelor's degree or higher in the county is also much lower than the state and national average. This is most likely due to employment being dominated by the coal industry. Figure 3.4: Employment by Industry shows employment by industry in Wyoming County compared to West Virginia and the United States. Wyoming County still has more residents employed in mining than the state and nation. However, with the decline of coal-related jobs, employment has been concentrated in educational services, health care, and social assistance. People in West Virginia and the United States are employed at greater rates in professional services, manufacturing, construction, wholesale trade, and finance than they are in Wyoming County. Employment in these sectors typically pays a higher wage, which could explain the low median household income in Wyoming County.

**Figure 3.4: Employment by Industry**



Housing values in the Upper Guyandotte Watershed are significantly lower than state and national averages. Table 3.3: Housing Values shows the median value of a home in Wyoming County as \$67,900, which is significantly less than the estimated median home value for the state of West Virginia.

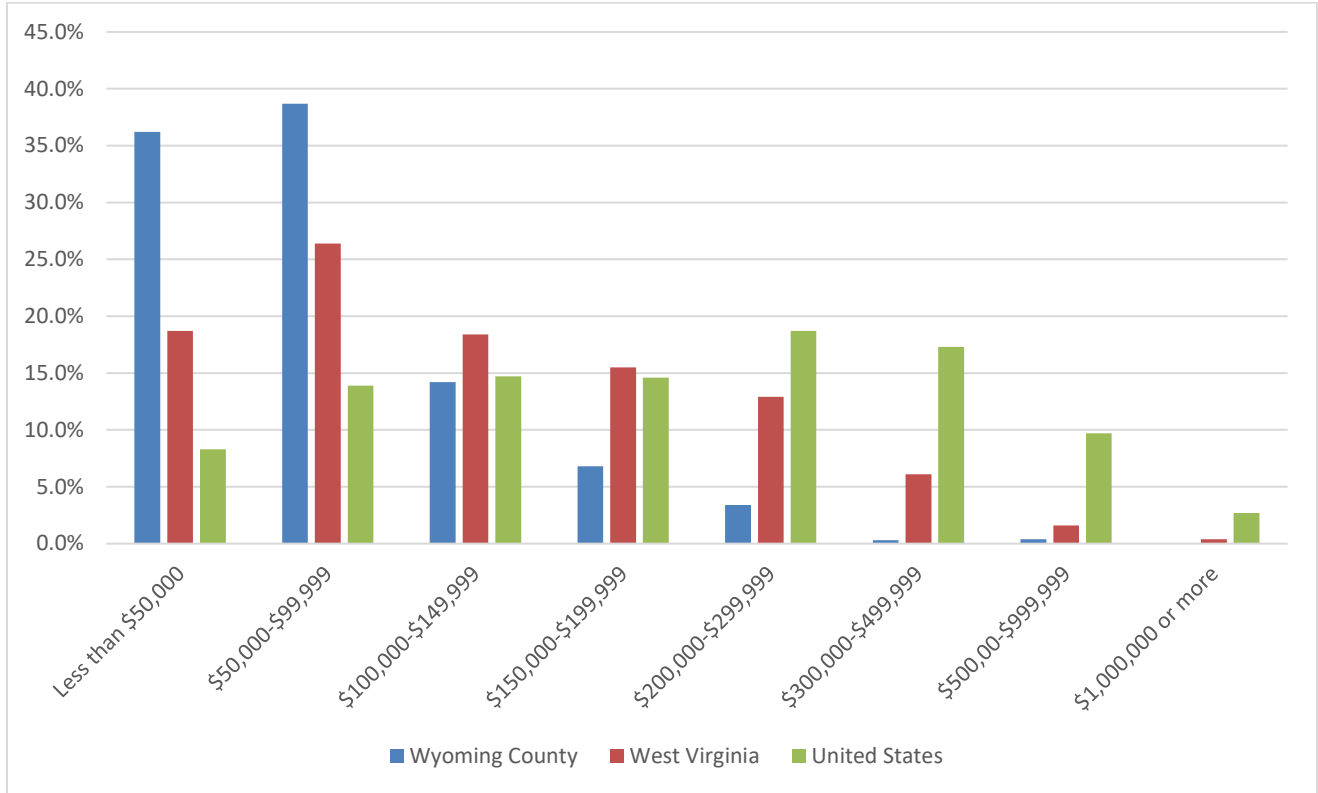
**Table 3.3: Housing Values  
Upper Guyandotte Watershed  
Wyoming County, WV**

Item	United States	West Virginia	Wyoming Co.
Median Home Value	\$193,500	\$111,600	\$67,900

Figure 3.5: Housing Value Distribution shows that approximately 36% of housing in Wyoming County is valued at less than \$50,000, compared to 19% of the housing in the state, and less than 8% of the housing in the country. Approximately 39% of homes are valued between \$50,000 to \$99,999.



**Figure 3.5: Housing Value Distribution**



Approximately 16% of housing units in Wyoming County are classified as vacant. The statewide housing vacancy rate average is 17%, while the national average is 12%. The City of Mullens has the highest vacancy rate in the county, with 22% of all housing units being categorized as vacant.

Although Wyoming County currently lacks a formal code enforcement program or inventory of vacant and uninhabitable structures, many structures appear uninhabitable due to visible evidence of structural decay, prior flooding impacts, and fire damage.

Land in Wyoming County is largely owned by corporate entities for the purposes of coal, mineral, and timber extraction. Corporate land is held as a long-term investment, typically irrespective of current market conditions for coal or timber. As a result, land outside the floodplain is generally unavailable to local residents, preventing new home construction elsewhere in the Upper Guyandotte Watershed. Existing housing is subject to repeated flooding and remains so, with few options to move to flood-free areas. The lack of access to developable land is a concern for local sponsors and an impediment to comprehensive community planning.

Census reports show a precipitous decline in population in Wyoming County. Many social and economic factors are at play in this trend, including the decline of the coal industry; lack of diversification in the local economy; high unemployment; dwindling tax base and, consequently, reduced basic local services; and repeated natural disasters in the form of flooding. All aspects of the community are affected by population loss. Public service districts and schools are experiencing decline as residents move from the area. Property tax revenues and local retail sales

continue to decline. Community cohesion continues to erode as churches, civic organizations, volunteer fire departments, and other organizations decrease in membership. Opportunities such as a floodplain buyout are of concern to local sponsors to the extent they may accelerate outmigration.

### **3.11 Additional Background Information**

#### ***Wyoming County Information***

Wyoming County, in the southwestern portion of the state, is one of the most mountainous counties in southern West Virginia<sup>67</sup> and is 502 square miles in size.<sup>68</sup> All of the land in Wyoming County is within the Upper Guyandotte Watershed.<sup>69</sup>

There are thirty-four unincorporated and three incorporated communities in the Upper Guyandotte Watershed in Wyoming County. Communities in the watershed are concentrated in narrow valley bottoms along the Upper Guyandotte. Incorporated communities in the Upper Guyandotte Watershed include:

- Mullens
- Oceana
- Pineville

The lowest elevation in Wyoming County is approximately 910 feet above sea level at the confluence of Little Huff Creek and the Guyandotte River.<sup>70</sup> The highest elevation is about 3,581 feet at the fire tower on Ivy Knob.<sup>71</sup>

#### ***Climate***

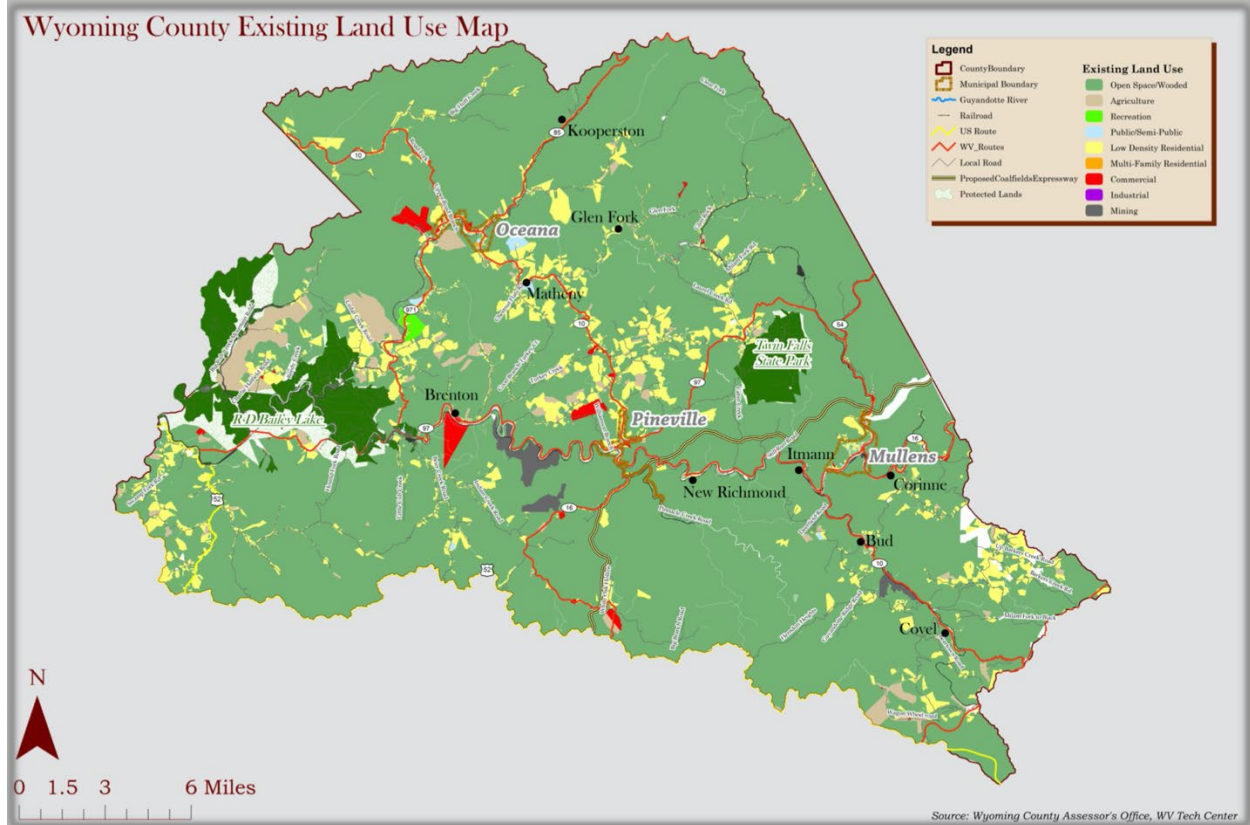
Although there is no climate data available for Wyoming County, the humid, continental-type climate found in the region is characterized by sharp temperature contrasts, both seasonal and, frequently, day-to-day. In nearby Pineville, West Virginia, the average snowfall is nearly 21 inches per year, while total precipitation averages 46 inches per year, with the highest rainfall totals found in the late spring and early summer. Temperatures range from an average daily high of 83 degrees Fahrenheit in July and August to an average daily low of 23 degrees Fahrenheit in January. The average annual temperature is 53.3 degrees Fahrenheit.

#### ***Land Use***

The Upper Guyandotte Watershed is comprised of approximately 231,516 acres (362 square miles),<sup>72</sup> of which 201,419 acres (315 square miles) is primarily forestland, and is otherwise comprised of the following: 87% forest, 6% grassland, mining disturbance 5%, development 1%, pasture <1%, open water <1%, wetlands <1%, agriculture <1% within the watershed.<sup>72a</sup>



**Figure 3.6: Land Use/Land Cover for the Upper Guyandotte River Watershed**



Existing land use in Wyoming County consists of mostly forest or open space on mountainous terrain. There are three incorporated municipalities within the county: Pineville, Oceana, and Mullens. Most of the development is concentrated in the three municipalities and other villages scattered throughout the county. Due to the mountainous terrain and soil conditions, there is very little land classified as agriculture in Wyoming County. There is also very little land classified as multi-family and commercial due to the lack of flat, developable land in the county. Flat land is mostly located in the floodplain. Another constraint to development is that over 87 percent of land in the county is owned by three private land companies. Typically, these companies will allow development on their land only through long-term leases.

Farming is not prevalent in the watershed due to the topography; however, during the county's comprehensive planning process, participants indicated a desire for more small-scale agriculture in the county.

According to the 2013 report, "Who Owns West Virginia?" published by the West Virginia Center on Budget & Policy and the American Friends Service Committee, the top 10 landowners in Wyoming County owned 75.8% of the county's private land, the highest percentage in the state.<sup>73</sup> Two companies in particular, Heartwood Forestland Company and Norfolk Southern, owned more than 50% of the private land in the county.<sup>74</sup> In 2013, the total surface acreage in Wyoming County held by the top 10 largest landowners was 231,199 out of a total 321,237 acres.<sup>75</sup>

Land use within the county is primarily forestland. Agricultural production is scarce due to steep slopes. The terrain severely limits development to floodplains and restricts access within and outside the region. The floodplains along narrow streams provide the least challenging building sites, so most of the population is crowded into these valleys. Development patterns were established in the late 1800s and early 1900s, centralized around coal mining operations. For more information on mining, see sections below on geological attributes and soils.

### ***Geological Attributes***

The Upper Guyandotte Watershed is in the Appalachian Plateau physiographic area. The topography is typical of a partially dissected plateau.

Geologic units in Wyoming County include the New River Formation, Kanawha Formation, Pocahontas Formation, and Allegheny Formation. The New River Formation covers 56% of the county and consists of mainly sandstone, with some shale, siltstone, and coal. The Kanawha Formation covers 36% of the county and is also primarily sandstone, with shale, siltstone, and coal. The Pocahontas Formation covers 8% of the county and is primarily sandstone, with some shale, siltstone, and coal. The Allegheny Formation comprises less than 1% of the county and includes cyclic sequences of sandstone, siltstone, shale, limestone, and coal.<sup>76</sup>

Natural resource extraction was the biggest economic driver in Wyoming County. Large scale timbering began in the late 1880's. The completion of the railroad in the early 1900's allowed the transport of coal to ports on the Atlantic Ocean. There are two coalfields within the Upper Guyandotte Watershed. The western portion of Wyoming County is in a coal field with medium and high volatile bituminous coal. The eastern portion of the county is in a coal field with low volatile bituminous coal (Source: James Trumbull's "Coal Fields of the United States, Conterminous United States" (1960) via the West Virginia GIS Technical Center). Wyoming County is located within West Virginia's oil and gas field. Drilling of commercial gas began in the early 1900's. Coal-bed methane production in Wyoming County was one of the main sources of natural gas in the state.<sup>77</sup>

Wyoming County is not located in karst terrain. Karst is underlain by limestone or dolomite and may be characterized by sinkholes, sinking streams, depressions, and caves. While there is no subsidence due to karst, there is a concern of mine subsidence as much of Wyoming County has been mined in the past by underground mining methods.<sup>78</sup>

### ***Soils***

According to the NRCS Soil Survey, the most common soils found in Wyoming County are the following:

#### **Pineville-Berks found in 66% of the county**

Soils in the Berks-Pineville association are characterized as very steep and very stony. Soils in this series are underlain by siltstone bedrock and are dissected by numerous drainageways. Slope ranges from 35% to 80% and stones cover 3% to 15% of the surface.

#### **Dekalb-Pineville-Guyandotte found in 18% of the county**

This association is very steep and very stony and consists of soils on mountains. The soils are in

areas dominated by sandstone bedrock and that are dissected by numerous drainageways. Slope ranges from 35% to 80%. In most areas, stones cover 3% to 15% of the surface. Most areas of these soils are woodland. A number of areas have been surface-mined. A few small areas of the Pineville soils on foot slopes are used for pasture. These soils generally are not suited to cultivated crops and to hay and pasture because of slope, stones on the surface, and the erosion hazard. The soils are suited to deciduous and coniferous trees.

#### Gilpin and Lily found in 4% of the county

This association is characterized by moderately steep and steep soils on ridgetops. Most areas of these soils are wooded. Some areas have been cleared and are used for gardens and for hay and pasture. A few small areas are used as homesites. These soils are not suited to cultivate crops or hay. They are poorly suited to pasture. Erosion is a severe or very severe hazard in unprotected areas. In pasture management, proper stocking rates, rotation grazing, and, during dry seasons, deferred grazing help to maintain desirable grasses and legumes.

### ***Recreation***

There are many recreational opportunities in Wyoming County. Each municipality has a community park. A list of facilities at each park can be found in Table 3.4: Recreational Resources.<sup>79</sup>

The Guyandotte Outdoor Roadside Environmental Educational River Park is located on Route 10 and includes a loop trail, trail to the river, fishing hole, and canoe and boat launch area. The Mullens Opportunity Center provides handicap river access and camping for residents and visitors.<sup>80</sup>

<b>Table 3.4: Recreational Resources<sup>83</sup></b>		
<b>Municipality</b>	<b>Park</b>	<b>Facilities Available</b>
Town of Pineville	Palisades Park	Pool, basketball court, tennis courts, playground
Town of Oceana	Gilliland Park	Pool and water slide, baby pool, playground equipment, basketball court, swing set, picnic shelters, tennis courts, fishing platform, athletic field, skate park, picnic tables, benches, bathrooms, amphitheater, restrooms; received a grant to construct a new ADA-compliant walkway, parking areas and picnic shelter floors and tables
Town of Mullens	Community Park	Pool, basketball court, picnic shelter (3), playground (3), tennis courts

The Guyandotte River provides numerous recreational opportunities for residents and visitors. The Guyandotte Water Trail is a recreational water trail for non-motorized boats and fisherman. The water trail travels from Wyoming County to Cabell County. Access points in Wyoming County are located in Pineville and Mullens. The Guyandotte Scenic Drive highlights the natural beauty and recreational opportunities in Wyoming County. The scenic drive has been officially designated by the West Virginia Division of Highways.<sup>81</sup>

Horse Creek Lake Wildlife Management Area is approximately 48 acres that is leased by the West Virginia Department of Natural Resources. Hunting and fishing are allowed within the wildlife management area. Horse Creek Lake is approximately five acres. Electric motorboats are allowed. A trail around the lake provides bank fishing access. Fish species found in the lake include largemouth bass, bluegill, and channel catfish. Trout are stocked in the lake.<sup>82</sup>

R.D. Bailey Lake Dam is located on the Guyandotte River in Mingo and Wyoming Counties. The lake provides recreational facilities and wildlife management. Facilities include a campground, boat rentals, picnic facilities, and a visitor center. Boating and fishing are popular activities at the lake.<sup>84</sup>

Other recreational facilities in the county include the Hatfield-McCoy Trail System, Twin Falls State Park, and Clear Fork Valley Golf Course. A trailhead for the Hatfield-McCoy Trail is located in Pineville. There is a connector trail near the City of Mullens to the Pinnacle Trail system of the Hatfield-McCoy Trail System. A 3.5-mile connector trail and parking lot are under construction and will connect Twin Falls State Park to Mullens. Also, plans are in place to connect the trail to Oceana.<sup>85</sup>

Twin Falls State Park includes many recreational opportunities for residents and visitors. The park includes a restaurant, lodge, cottages, and camping sites. Recreational facilities include a golf course, hiking and biking trails, picnicking, indoor pool (guests only), outdoor pool (public), guest fitness room, basketball court, game field, playgrounds, tennis courts, nature center, and historic pioneer farm. Clear Fork Valley is a public, 18-hole golf course located near Oceana.<sup>86</sup>

## 4.0 ALTERNATIVES

Alternatives and impacts were evaluated using the procedures outlined in the *National Watershed Program Manual*; Title 390, Part 501; the *National Planning Procedures Handbook, Principles, Requirements, and Guidelines* (PR&G); the National Environmental Policy Act (NEPA); and other watershed planning policies and procedures.

Alternatives were developed based on NRCS planning requirements and the ability of the alternatives to address the purpose and needs of the project. Alternatives were considered for completeness, effectiveness, efficiency, and acceptability. Alternatives that advanced to a detailed level of analysis were compared to the Future Without Project Condition (No Action) for environmental, social, and economic impacts. Alternatives analysis was an iterative process where all reasonable alternatives were considered then revisited and refined as additional information became known about the cost, feasibility, and effectiveness of the alternative.

#### **4.1 No-action Alternative, Alternative 1, No Action – Future Without Project Condition (FWOP)**

This alternative involves taking no action and allowing the existing conditions to remain. Under this alternative, properties will continue to experience chronic flooding. Financial, social, and environmental impacts of flooding will continue. According to the National Oceanic Atmospheric Agency National Centers for Environmental Information State Climate Summary for West Virginia, “Annual precipitation is projected to increase for West Virginia over this century with the largest increases occurring during winter and spring. The number and intensity of extreme precipitation events are also projected to increase. These events will likely lead to greater flood risk.”<sup>1</sup> People living in the floodplain will continue to be exposed to the potential dangers of flooding. There will be no improvements to Upper Guyandotte water quality achieved through likely remediation of straight-pipes from streamside homes. Natural floodplain functions will not be restored. There will be no improvement to stream access and no enhancement to the recreational potential of Upper Guyandotte River. Individual and community resilience will not be improved as areas continue the cycle of flooding and recovery. Federal, state, and local agencies will continue to spend money and resources on recovery, diverting funds from more sustainable opportunities. No adaptation to climate change will occur. Health and mental welfare will not be improved as residents experience continued flooding and fear of flooding. Economic and social stress due to flooding will not be reduced.

#### **4.2 Agency Preferred Alternative, Alternative 2, Voluntary Floodplain Buyout**

A voluntary floodplain buyout was studied in detail, based on the successful outcomes of other voluntary buyouts in West Virginia. Preliminary costs and benefits were based on the Dunloup Creek Watershed Project and a limited number of buyouts through the NRCS EWP program. All other alternatives were ruled out based on cost, logistics, existing technology, and environmental reasons. This alternative maximizes public benefits, while appropriately considering cost. This alternative best meets the criteria for efficiency, effectiveness, completeness, and acceptability.

An assessment of the flood damage per structure, the value of the structure, the acquisition cost per structure, and the potential for this alternative to achieve completeness, effectiveness, efficiency, and acceptability indicate this option should be considered in detail. GIS mapping and the West Virginia Flood Tool were used to identify the highest priority areas for buyouts.

Information on the number and characteristics of buildings in the FEMA regulatory floodway and Special Flood Hazard Areas was obtained from the West Virginia Flood Tool.<sup>2</sup> Additional details were considered, such as the concentration of residential housing in priority areas, presence or absence of water and sewer service, municipal impacts, evacuation and fatality history, local leaders’ input, and other factors. Refer to Appendix D: Investigations and Analysis Report for more information about priority areas.

In order to identify the high priority properties for buyout, the West Virginia Flood Tool’s GIS mapping was used to identify areas with homes located in the regulatory floodway and the 100-year floodplain. This tool was also used to analyze flood depths during 100-year flood events. Information on the number and characteristics of buildings in the FEMA regulatory floodway and

Special Flood Hazard Areas was also obtained from the West Virginia Flood Tool.

Additional mapping was developed to show water and sewer service areas and identify which properties lacked these services. Supplemental maps that identified economic and industrial centers, recreational assets, development zones, municipal boundaries, and impaired streams were used to further identify the highest priority areas.

In order to identify high priority areas for buyout, local stakeholders were consulted to determine where efforts to address repetitive flooding could be best focused. From these discussions, priority was given to non-municipal areas as well as those areas not currently serviced by water and sewer infrastructure. Mapping was developed to highlight these water and sewer service areas. Additional mapping was developed to identify economic and industrial centers, recreational assets, development zones, municipal boundaries, and impaired streams.

From there, the West Virginia Flood Tool's GIS mapping was used to identify areas with structures located in the regulatory floodway and the 100-year floodplain. These tools were used to analyze flood depths during 100-year flood events. Information on the number and characteristics of buildings in the Regulatory Floodway and Special Flood Hazard Areas was obtained from the West Virginia Flood Tool. Additional details regarding the analysis involved and the data collected are set forth in Appendix D: Investigations and Analysis Report.

Costs were estimated based on data from the West Virginia Flood Tool, the West Virginia GIS Technical Center, the NRCS Dunloup Creek Voluntary Floodplain Buyout, property tax records, and other sources. Estimated damages avoided with the buyout and acquisition costs indicated a favorable benefit-to-cost ratio could be attained for this alternative.

Detailed study determined this option to be the most effective way to reduce flood damage along Upper Guyandotte River. The acquisition of flood-prone properties from the floodplain is a permanent solution that eliminates the flood damage and home repair cycle and reduces risk to human life. Therefore, a voluntary floodplain buyout of flood-prone properties is the *preferred alternative*. Homes and other structures will be removed from each acquired site to eliminate future flood damage and to restore the floodplain to more natural conditions that are more resilient to frequent flooding. Local sponsors will own the land; enforce deed restrictions, restrictive covenants, or similar measures; and perform operation and maintenance. Restoration of the floodplain will include purchase and removal of homes; perpetual deed restrictions on each parcel of land; removal of debris; removal of walks, driveways, and other impervious surfaces; disconnection of utilities; elimination of potential sewage straight-pipes; minimal regrading of the site to original floodplain contour; capping of private water wells; and seeding and mulching. Following acquisition of the sites and elimination of the structures on each acquired parcel, the Wyoming County Commission, a co-sponsor of the plan, will hold title to the properties. The deeds conveying ownership to the Wyoming County Commission will contain restrictions, in perpetuity, that will prevent or restrict any activities that may occur on the acquired parcels. These restrictions would prevent the rebuilding of any residential dwellings on parcels in the regulatory floodway and Special Flood Hazard Areas. The Wyoming County Commission will also be responsible for leading the monitoring of said properties such that all deed restrictions, restrictive covenants, or similar measures are followed.

The project was purposely designed as a small project to minimize social impacts and increase the

potential for the project to actually be carried out. It is noteworthy that USACE projects in the area received a congressional waiver for economic justification, indicating the extraordinary challenges present in this area.

To minimize the potential adverse social and economic impacts, the project has been scaled to an expected total buyout of approximately 30 residential properties, comprising approximately 45% of the *proposed project site*. Flood damage was determined for 68 likely residential properties, and damage reduction benefits were based on acquisition of approximately 30 of those properties. Nonresidential properties, such as churches, public buildings, and businesses, were not included to minimize social and economic impacts. These properties, although they sustain flood damage, do not have overnight occupancy and pose less threat to human health and safety. The goal in limiting participating properties to approximately 30 is to give residents ample opportunity to participate in the buyout while limiting the potential adverse effects to the local communities. For example, during scoping and the planning process, one of the concerns voiced by local stakeholders was the potential for Wyoming County to lose real property taxes from bought-out properties, particularly where participants do not relocate within Wyoming County. An additional concern was the lack of flood-free alternative housing. Efforts are underway to address the housing dilemma, which will be challenging even with only 30 voluntary buyouts. A larger project would exacerbate this problem.

### **4.3 Alternatives Considered but Eliminated from Detailed Study**

The Upper Guyandotte River Watershed: TMDL Report evaluates the Total Maximum Daily Loads for 257 impaired streams in the Upper Guyandotte River watershed. It also gives an evaluation of the watershed as a whole.<sup>3</sup> The Upper Guyandotte is dammed above the town of Justice in Wyoming County making R.D. Bailey Lake.<sup>4</sup>

The West Virginia Watershed Assessment Pilot Project: Upper Guyandotte River Watershed Assessment assessed the conditions and functions of the Upper Guyandotte River Watershed. It found that the Upper Guyandotte River Watershed has been impacted by development, and most of the streams are impaired. The main indices used to determine condition and function are water quality, habitat connectivity, and biodiversity.<sup>5</sup> The use of dams in the watershed has had negative effects on these indices. No viable structural measures, or combination of structural measures, were cost effective in Upper Guyandotte River. High construction costs, low property values, unacceptable environmental and social impacts, and distressed local economies that limit local sponsors' financial resources were factors in evaluating dams, channels, dikes, floodwalls, and levees. The following alternatives were considered during planning but were eliminated from detailed study for the reasons stated.

#### ***Watershed Dams***

Upper Guyandotte Watershed is extensively mined (active and abandoned), which dramatically increases the cost of dams and reduces the available locations for dams.<sup>6</sup> Mined areas require extensive geological work, foundation support, and grouting, and pose other construction challenges. Abandoned mine works have unknown risks. The Upper Guyandotte was used for transportation of mining supplies and products. Many mining companies built their own dams made of mine waste impoundments.<sup>7</sup> In 1972, the Buffalo Mining Company built several dams, the highest of which failed due to the volume of water, materials and mode of construction.<sup>8</sup> This

dam failure destroyed 17 small communities, killed 125 people and left 4,000 homeless.<sup>9</sup> The current existing dam located above the town of Justice created R.D. Bailey lake and has alleviated some flooding in the area.

The Streams Hydrologic Connectivity (SHC) index attempted to evaluate the aquatic connectivity of the watershed in terms of network complexity and overall system integrity, with accompanying metrics such as miles of headwater streams, the mean local integrity of the planning unit, and total wetland area.<sup>10</sup> Metrics generated for this purpose included the number of any potential structural impediments, such as dams, roads/railroads in the riparian area (a surrogate for culverts and bridges), and conditions that may cause temperature changes that would affect passage of organisms (such as power plants with discharges that may raise overall stream temperatures or forested riparian area where the canopy may help maintain cooler temperatures).<sup>11</sup> The SHC index scores are “good” across the watershed, but the four watershed areas with only a “fair” score have a higher density of dams.<sup>9</sup> Hydrologic connectivity is important for the watershed as a whole, and the construction of dams would fragment the watershed and inhibit fish passage. The environmental impacts to channelizing Upper Guyandotte would be detrimental to the threatened Big Sandy crayfish, potentially complicating permit approval. This alternative was ruled out based on costs, logistics, and environmental impacts.

The current dam in the watershed, R.D. Bailey Dam, cost \$180 million to construct from 1964 to 1980. The dam was constructed by the Corps of Engineers by a Congressional act through the federal Flood Control Act of 1962. The \$180 million in costs went toward relocations, planning and engineering, purchase of real estate, and construction. If this project were to propose a dam, relocation and real estate purchase costs would be pushed onto the community. This is not feasible considering the current economic struggles of the communities in this *project area*.

Upper Guyandotte Watershed has a trellis drainage pattern, typically requiring several upstream dams to reduce tributary flows into mainstem Upper Guyandotte River. Initial map studies and cost estimates indicate that a network of upstream flood control dams would exceed \$520 million. Further, watershed dams would be logistically impractical due to the transportation impacts to active railroads and highways. From an economic perspective, considering the average residential property value in Wyoming County is \$60,400,<sup>12</sup> this alternative is not efficient or economically viable. As such, watershed dams were eliminated from further consideration.

### ***Channel Modification***

The extent to which the Upper Guyandotte River could be widened, deepened, and straightened is restricted by topography and highly developed floodplains. Map studies and field reviews confirm that the floodplain is so restrictive that increasing the width of the channel would require removal of most properties, thereby eliminating the benefits.

The typical valley in the Upper Guyandotte River contains a state road, an active railroad, the stream, and at least one row of buildings. Buildings are located adjacent to the stream, usually below the elevation of the railroad tracks. Channelization would necessitate removal of the buildings, thereby eliminating the properties that are intended to benefit from the measures.

The estimated cost for channel modification is \$47 million per mile based on engineering studies for similar West Virginia watersheds, excluding the impacts to the railroads. Cost is exorbitant due to need to armour channel to withstand velocities, remove development in the floodplain to make



room for channelization, numerous bridge replacements, and high mitigation requirements for stream modifications. Channelizing would be logistically impractical due to the transportation impacts to utilities, highways, bridges, and railroads. From an economic perspective, considering the average residential property value in Wyoming County is \$60,400, this alternative is not efficient or economically viable. This alternative was ruled out based on costs and logistics.

### ***Dikes, Floodwalls, and Levees***

Dikes, floodwalls, and levees were considered but dismissed for reasons similar to those cited for the channel modification alternative. The construction of dikes, floodwalls, and levees would be cost-prohibitive and would still expose residents to flooding dangers if a larger-than-expected storm occurs. Although USACE constructed floodwalls at Matewan and Williamson in response to the 1977 flood, these measures were exempt from economic justification based on Congressional authorization.<sup>15</sup> An exemption does not apply to this project.

In addition to the initial high construction cost, these measures are environmentally obtrusive, require extensive land acquisition, affect the wildlife and aquatic habitat, require ongoing maintenance, and may still overtop during extreme weather events. Furthermore, complex pumping systems are necessary behind the floodwalls, dikes, and levees to collect stormwater and pump it over the structures into the stream to maintain the integrity of the structures.

Floodwalls are currently being planned by another federal agency for Marlinton, West Virginia (population 994), and Milton, West Virginia (population 2,612). At current prices, the Marlinton floodwall is estimated to cost \$52 million per mile. The estimated cost for the Milton floodwall is \$98 million per mile.<sup>15a</sup> From an economic perspective, considering the average residential property value in Wyoming County is \$60,400, this alternative is not efficient or economically viable. The environmental impacts from construction would be detrimental to the threatened Big Sandy crayfish, potentially complicating permitting approval. This alternative was ruled out based on costs, logistics, and environmental impacts. Table 4.1 Flood Profile Information at Priority Area Cross Sections shows the range of ground elevations in priority areas from West Virginia Flood Tool, and the FEMA flood profile for a ten-year storm elevation.

**Table 4.1: Flood Profile Information at Priority Area Cross Sections**

Priority Area	Range of Ground Elevations in Priority Areas from WV Flood Tool	FEMA Flood Profile Cross Section Identifier	FEMA Flood Profile Ten Year Storm Elevation
Matheny	1328-1334	AI-AU	1335 - 1349

### ***Dredging, Clearing, and Snagging***

Dredging is the practice of removing sediment, debris, and other substrate from the bottom of streams and along the banks. Clearing and snagging remove trees and riparian vegetation from the stream and its banks. This measure does not alter the stream shape or remove buildings from the streambanks. There would be no modification of bridges, culverts, or utilities. The local sponsors would be responsible for annual stream maintenance after the initial clearing and snagging.

Although this measure is most often requested by the public, it would have only a minor and temporary effect. Negative environmental impacts from dredging include removal of the riparian vegetation, removal of aquatic habitat in the streambed, increased water temperatures, and destabilization of streambanks.<sup>16</sup> Negative impacts may also occur with the disposal of dredged material if material is contaminated. The West Virginia Statewide Flood Protection Plan cites the negative effects and limited effectiveness of dredging. In response to public interest in this alternative, NRCS produced a white paper discouraging this alternative.<sup>17</sup> For these reasons, this alternative was not developed in detail and was eliminated from further consideration.

### ***Flood-proofing Homes***

Flood-proofing homes was considered but dismissed for several reasons. Housing in the area generally lacks the structural integrity to allow for flood-proofing when considering the age of homes and construction characteristics. Census housing information shows that more than 54% of the existing housing is over 40 years old. Single Family homes make up 69% of the housing stock. Approximately 67% of owner-occupied housing units with a mortgage are worth less than \$99,999.

Flood-proofing may prevent flooding to the elevated floors, but damages still will occur to the ground floor, cars, landscaping, utilities, driveways, and other property improvements and infrastructure. Foundations may be compromised by swift moving flood water, jeopardizing the structural soundness of the building. Although residents are discouraged from using the area under an elevated house, the area often transitions into use over time. It is common to have washers, dryers, freezers, water heaters, furnaces, air conditioners, generators, and other valuable items located in this area, unprotected from flooding. Considerable floating debris is created during high-water events and accumulates against house foundations, further weakening the structures and putting occupants at risk.

Elevated homes are harder to access, especially for elderly and disabled persons. From a safety perspective, flood-proofing encourages residents to stay in place during flooding, increasing the risk of injury and death during flash flooding. Flood-proofed homes are still at risk from floatable debris swept downstream at high velocity, such as trees, logs, campers, mobile homes, and automobiles. Further, there is risk that the severity of flooding will be underestimated and that flood-proofing will not be sufficient. At the peak of flooding, residents often want to be rescued, placing emergency personnel at risk and increasing evacuation costs. Deaths have occurred in this watershed due to flooding.<sup>18</sup>

The average cost to flood-proof a home is \$93,900, based on engineering estimates for a similar West Virginia watershed.<sup>19</sup> This cost does not include extension of sewer lines, which would be necessary to achieve decent, safe, and sanitary conditions. It also does not include displacement costs for residents during construction. For these reasons, this alternative was eliminated from further consideration.

### ***Building Relocation***

This alternative was considered, but not developed in detail. Due to the age and condition of many of the homes, it would not be possible to move homes without causing damage; homes would likely require extensive structural reinforcing before being moved. Relocated homes would require renovation work to bring the homes up to decent, safe, and sanitary conditions at their new

location. Many structures have sustained prior flood damage, resulting in mold and structural damage that cannot be fully mitigated with the relocation option. Engineering estimates indicate that building relocation costs would amount, on average, to 1.5 times the value of the structure. This alternative is not cost effective and was eliminated from further consideration.

### ***Mandatory Floodplain Relocation***

Mandatory floodplain relocation was considered. This alternative would require all residents in a designated area to relocate, eliminating the opportunity for personal choice. Mandatory government relocation would include additional costs for eminent domain actions, legal services, project administration, court challenges, and delays in project implementation. The Uniform Relocation Assistance Act would be invoked, adding additional costs for all participants. These costs primarily would be nonfederal costs, placing a greater burden on local sponsors with limited resources. In 2009, NRCS offered a voluntary buyout in the Dunloup Creek Watershed and there was an overwhelmingly positive response. Over 200 applicants applied, demonstrating the public's willingness to voluntarily relocate.<sup>20</sup> Voluntary participation avoids the costs associated with the use of eminent domain, thereby reducing the acquisition cost per structure. A voluntary approach is more socially acceptable, reducing conflicts between residents, local sponsors, public officials, and the implementing agency. The risk of social upheaval resulting from forced relocation is high, increasing the likelihood that such an alternative would fail to be implemented. Given these considerations, a mandatory floodplain relocation alternative was not developed in detail. This alternative was eliminated from further consideration.

### ***Flood Warning System***

The effectiveness of a flood warning system was evaluated as an alternative. In 1978, the National Weather Service created the National Flash Flood Program Development Plan, and the Integrated Flood Observing and Warning System (IFLOWS) was initiated as a pilot project in the twelve-county area along the borders of Virginia, West Virginia, and Kentucky. This area of Appalachia was selected because of its susceptibility to flash flooding and the lack of existing flood warning systems in the region. In 1985, Congress expanded the program to 29 counties in West Virginia and added additional counties in Virginia and Pennsylvania as a result of the deadly November 1985 flood. Since that time, IFLOWS technology has spread beyond the original pilot *project area* and evolved into the Automated Flood Warning System network that connects numerous local flood-warning systems and integrates and shares information from 1,700 sensors in 12 states. Although some IFLOWS gauges transmit data over an Automatic Local Evaluation in Real-Time (ALERT) communication system, very few do so. Instead, it may take anywhere from four hours to four days to obtain data from gauges that are not part of the ALERT communication system. Delays in receiving information or geographic gaps in the system can delay identification of conditions that contribute to flooding. Currently, 12 IFLOWS gauges are located in Wyoming County, and none of them lie within the Upper Guyandotte Watershed. There is no information as to whether these gauges transmit data to the ALERT system.<sup>21</sup>

Aside from the IFLOWS gauges established by the NWS, the USGS has stream gauges that monitor daily streamflow conditions, water stages, and water quality in West Virginia. The USGS collects this information throughout time, making it possible to view historical water data. The three USGS stream gauges in the Upper Guyandotte Watershed in Wyoming County are “Guyandotte River near Baileysville, WV,”<sup>22</sup> “Guyandotte River at Pineville, WV,”<sup>23</sup> and “Guyandotte River below R.D. Bailey Dam.”<sup>24</sup> There are two USGS gauges in Logan County in the northwest portion of the Upper Guyandotte Watershed on the Guyandotte River which are “Guyandotte River at Logan, WV”<sup>25</sup> and “Guyandotte River at Man, WV.”<sup>26</sup> Further north from the Upper Guyandotte River Watershed, there is a USGS gauge along the Guyandotte River called

“Guyandotte River at Branchland, WV.”<sup>27</sup>

Data from these gauges are easily accessible on the USGS website, and website users have the option to sign up for a program called “WaterAlert,” which sends a text or email alert to warn residents when the water reaches a dangerous threshold.<sup>28</sup> However, in this mountainous watershed, cell phone reception and internet service are sparse and unreliable.

A flood warning system may provide time for some residents to escape rising water, but in mountainous watersheds with rapid runoff, flood warning systems have limitations. Flood warning systems depend on having adequate time for advanced warning and evacuation by the residents. These systems are more reliable in areas where the water levels rise slowly or where residents are located enough distance downstream to allow time for the warning to be issued and citizens to react. According to the West Virginia Statewide Flood Protection Plan, flood warning systems have limited effectiveness in West Virginia: “Flood warnings are transmitted in a manner that is not understandable by many people; the warnings are not considered to be reliable and many times are not timely.”<sup>29</sup> Demographics for this watershed show a high percentage of elderly and disabled residents who would require assistance to get out quickly. Additionally, a flood warning system would not protect property from flooding, nor would it restore the floodplain function.

The West Virginia Statewide Flood Protection Plan contains detailed information about existing systems and potential locations for future systems. The statewide plan also identifies shortfalls and needs for completing existing flood warning systems. The existing emergency broadcast system for flooding relies on radio and television alerts that may not reach residents during a flood when power outages are occurring simultaneously with flooding. The Upper Guyandotte Watershed does not have a siren system or any other type of broadcast system. As such, this alternative was eliminated from further consideration.

### ***Reliance on NRCS Emergency Watershed Protection Program***

In the absence of a long-term flood solution, the NRCS Emergency Watershed Protection Program (EWP) has been used to restore streambanks to pre-flood conditions in the Upper Guyandotte Watershed. From 2005 to 2011, West Virginia NRCS spent an average of \$2.5 million dollars per year, every year, in the Big Sandy River Basin for emergency watershed protection of homes.<sup>30</sup> This program has been effective in stabilizing an area and has been used extensively in the Upper Guyandotte Watershed to install riprap and gabion baskets along Upper Guyandotte and its tributaries. Although these measures restore the sites to pre-flood conditions, they do not provide relief from future flooding. EWP is reactive and temporary rather than preventative; it does not address chronic flooding. Repeated use of EWP indicates an area is high risk and illustrates the need for a more cost-effective, sustainable solution.

### ***Rain Barrels***

In response to a comment during scoping, rain barrels were evaluated as an option to reduce flooding. Rain barrels are typically used to supplement other water sources in times of drought. Rain barrels only capture precipitation from rooftops, which represents a miniscule percentage of the surface area of the watershed. Specifically, a standard 50-gallon rain barrel fills in a matter of minutes during heavy rains and cannot provide storage once full, limiting its ability to store floodwater. A single roof that measures 30 feet by 60 feet produces 5,625 gallons of runoff during

a 5-inch rain event, the equivalent of 112.5 rain barrels. This alternative is not practical and was eliminated from further consideration.

#### **4.4 NED Alternative or Most Cost-effective Alternative Summary and Comparison of Alternative Plans Table and NED Account**

**Table 4.2: Summary and Comparison of Alternative Plans**

	<b>Item of Concern</b>	<b>Alternative 1 No Action - FWOP</b>	<b>Alternative 2 Voluntary Floodplain Buyout</b>
<b>Measure to Address</b>	Flooding	There will be no action taken to address flooding. The FWOP will not improve. Flood damage will continue. There will be no reduction in risk to human health and safety. The cycle of flood recovery and disaster relief will continue. Point sources of raw sewage will continue to degrade water quality. Streambanks will continue to degrade. Improper floodplain uses will continue to exacerbate flooding.	A voluntary floodplain buyout will remove vulnerable homes from the floodplain. Flood damage will be reduced by \$119,000 annually. Savings will be realized in reduced need for flood insurance, saving \$10,200 annually. Flood debris will be reduced, saving \$1,900 per year. Human health & safety will improve as residents move from flood-prone areas, reducing the need for rescue operations. Water quality will improve.
<b>Installation Cost</b>	NRCS Contribution	\$0	\$4,050,000
	SLO Contribution	\$0	\$13,000
	Total Cost	\$0	\$4,063,000
<b>NED* Account</b>	Average Annual Benefits	No benefits will be realized.	\$151,000
	Average Annual Cost	No costs will be expended.	\$103,500
	Annual Net Benefits	None	\$47,500
	Benefit-to-cost Ratio **	Not applicable	1.5:1
	Annual Operation & Maintenance Cost	None	\$1,000 Monitoring will be required to ensure deed restrictions, restrictive covenants, or similar measures are not violated.

	<b>Item of Concern</b>	<b>Alternative 1 No Action - FWOP</b>	<b>Alternative 2 Voluntary Floodplain Buyout</b>
<b>Environmental Quality (EQ) Account</b>	Water Quality	No improvement in surface water quality will occur, as likely straight-piped sewage will continue, thereby degrading water quality, harming human health, preventing designated stream uses, and impairing aquatic life. No reduction in flood debris will occur.	Streams will likely improve with the likely removal of residential sewage straight-pipes and causes of flood debris. Water quality will likely improve to support recreation, aquatic life, and other designated stream uses. Human health will likely be improved as direct contact with raw sewage and fecal coliform is likely reduced.
	Floodplain Management	Floodplain management will not be improved, resulting in continued degradation of the watershed.	Floodplains will be restored to natural conditions, supporting floodplain uses and improving watershed resiliency.
	Wetlands, Waters of the United States	There will be no opportunity for wetlands to re-establish in floodplains. Waters of the United States will continue to be degraded by likely present straight-pipes.	Floodplains will be restored to natural conditions, allowing wetlands to reform where possible. Waters of the United States will be positively impacted as potential sources of fecal coliform (straight-pipes) are removed. Shade will be restored, reducing water temperature and benefiting aquatic life.
	Riparian Areas	Use and occupancy of riparian areas will result in continued flood impacts to homes. Such areas will remain impaired to the extent occupancy results in cleared streambanks.	There will be opportunities to restore streambanks and riparian areas once buildings are removed. Riparian areas will be more naturally resilient. Straight-pipes will likely be removed, and urban encroachment will be reduced. Natural vegetation will return, providing shade and wildlife habitat. Travel corridors for wildlife will be restored.

	<b>Item of Concern</b>	<b>Alternative 1 No Action - FWOP</b>	<b>Alternative 2 Voluntary Floodplain Buyout</b>
	Fish and Wildlife Habitat	No improvement in habitat will occur; untreated wastewater will continue to impair natural habitat. Occupied properties will continue to pollute and contribute to erosion and impose other impediments to habitat.	Fish and aquatic habitat will improve with removal of streambank development and floodplain restoration; shade will be restored to denuded streambanks; erosion will be reduced; stream crossings and access points will be improved. Water quality should improve with the reduction of fecal coliform.
	Cultural Resources	There will be no opportunities to recognize, document, restore, or preserve historic or cultural resources from continued flooding.	Consultation continues with the WVSHPO office with regard to both tribal consultation and preservation of historic properties. Historic property inventories and photographs will be compiled for properties of potential significance. If there are any impacts to such properties, mitigation will be performed. All nonresidential properties are avoided, thereby reducing potential impacts.
<b>Other Social Effects Account</b>	Public Health & Safety	Health and safety risks will continue as usual, and residents will face compounding issues with repeated flood events.	Residents who participate will be moved from the problematic floodplain and its attendant risk to health and safety.
	Environmental Justice	Environmental injustices will continue. There will be no improvement in social and economic indicators that are linked to environmental injustice. The watershed will continue to be underserved due to physical, economic, and social limitations.	Voluntary relocation will allow residents to move out of vulnerable locations, improving conditions for both those relocated and those remaining. Residents who live in flood-free areas will realize better economic, social, and environmental circumstances. Conditions will improve as a historically underserved area is provided an alternative to reduce the impacts of flooding.



	Item of Concern	Alternative 1 No Action - FWOP	Alternative 2 Voluntary Floodplain Buyout
	Social and Economic Conditions	There will be no opportunity to engage corporate landowners to make flood-free land available for local economic and social benefit. Participants will not have a willing buyer for flooded properties, allowing them to reinvest resources in flood-free housing. No additional funds will flow into the local economy. Owners of flooded homes will continue to experience an erosion of home assets as they decrease in value and habitability with repeat flooding.	Participants will be able to sell their floodplain properties to the government and will be given the opportunity to reinvest in flood-free housing. Financial incentives and land availability, which may complement this project and reduce outmigration, are being pursued at the request of local sponsors. The impacts on utilities, county property tax revenues, and neighborhood configurations have been considered and quantified where possible.
<b>Regional Economic Development (RED) Account</b>	Local Jobs	No local jobs will be created.	There will be a temporary increase in regional employment and wages during project implementation. Real estate services and construction services, including both skilled and unskilled workers, will be needed during the three-year implementation phase. An estimated 15 jobs will be created during the implementation phase, resulting in \$1,195,700 in local income.
	Regional Adverse Annual Effect (non-federal cost of project to local sponsors)	None	\$13,300
	Local Taxes	There will be no change in local personal property, real estate, or sales tax. Property will continue to degrade due to flooding, further diminishing its value.	There is a potential to offset any regional decline in the tax base due to the buyout if residents relocate to higher quality, flood-free housing within Wyoming County.

	Item of Concern	Alternative 1 No Action - FWOP	Alternative 2 Voluntary Floodplain Buyout
	Local Utility Customer Base	There will be no change to the local customer base. Damages will continue to occur to residential utility connections that are susceptible to chronic flooding. Utilities will continue to lose their customer base as population naturally declines in the area.	There is a potential to avoid regional decline in the customer utility base due to the buyout if residents relocate to flood-free areas within Wyoming County. There is also a potential for customers to obtain water and sewer services that are not available where they currently live, as well as for residents to move outside of the watershed area.

\* The National Economic Development plan is the alternative that reasonably maximizes net national economic development benefits. Net benefits are the difference between total benefits and total costs. Identification and selection of the NED Plan are required in NRCS watershed plans unless a waiver is granted. Principals and Guidelines, which governs water resources planning methodology for federal agencies, further explains the National Economic Development Plan.

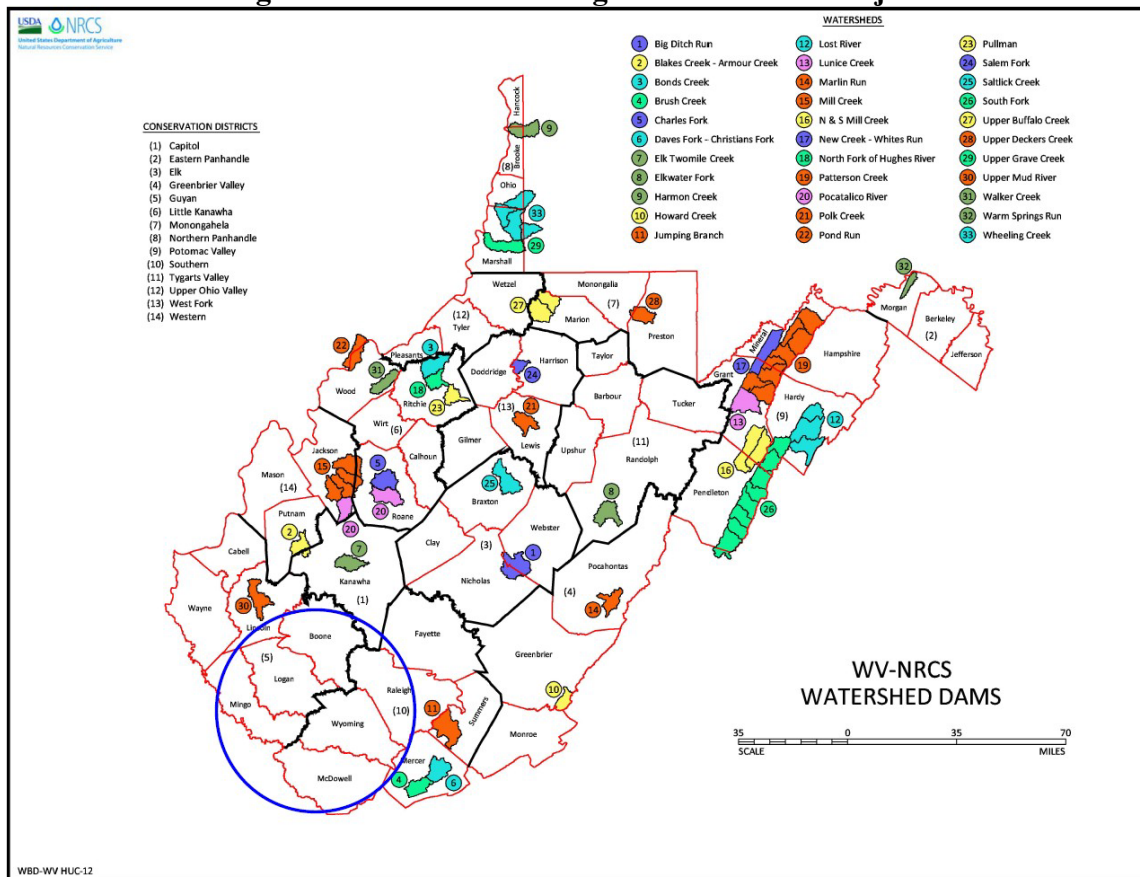
\*\*The benefit cost ratio compares the benefits generated by the alternative to the implementation costs of that alternative. Both numbers are averaged and annualized so the monetary amounts can be compared. Watershed projects should have a benefit to cost ratio of at least 1:1 to warrant federal investment.'

## **4.5 Relevant Issues and Concerns Identified through Scoping**

NRCS and USACE have built hundreds of dams in West Virginia to reduce flooding and provide downstream benefits to towns and cities. These dams generate millions of dollars each year in benefits by protecting property and improving public safety. Upper Guyandotte Watershed and the southern coalfields region of West Virginia are highly susceptible to flooding, but the area is also the most limited for cost-effective, feasible engineering solutions. There have been substantial investments in planning, as was noted with disappointment by local leaders, but very little progress has occurred in implementing solutions. Planning studies include the following:

- National Coal Heritage Area Management Action Plan, 2002, National Park Service
- West Virginia Statewide Flood Protection Plan, 2002, WV Flood Protection Task Force
- Southern West Virginia Flood Recovery Plan, 2004, Parsons, Brinckerhoff, Quade, Douglas, Inc.
- Appalachian Regional Commission Strategic Plan, revolving plans, ARC
- Region One Comprehensive Economic Development Strategy, revolving plans, Region 1 Planning and Development Council

**Figure 4.1 NRCS West Virginia Watershed Projects**



No PL83-566 watershed projects exist in the southern coalfields region, as indicated in Figure 4.1. It is difficult to overcome the physical, economic, and social challenges of the watershed when evaluating solutions. This is evidenced by Congressional action after the 1977 flood to waive the economic justification for USACE projects in Williamson and Matewan (Mingo County) and R.D. Baily Lake (Wyoming County).

## 5.0 ENVIRONMENTAL CONSEQUENCES

### 5.1 Direct, Indirect, and Cumulative Impacts and an Assessment of the Significance of the Impacts

This section describes the anticipated environmental, economic, and social effects for the two remaining alternatives in terms of direct and indirect impact. This section also considers cumulative impacts. Cumulative impacts are effects from incremental or combined activities regardless of what agency (federal or non-federal) or person undertakes such action. Cumulative effects can result from individually minor but collectively significant actions taking place over time. Cumulative impacts may be environmental, economic, or social.

Two alternatives are considered and evaluated in detail in the rest of this document. Alternatives considered include:

1. Alternative 1, No Action – Future Without Project Condition (FWOP)
2. Alternative 2, Voluntary Floodplain Buyout

### ***Flooding***

#### **No Action (FWOP)**

This alternative would have no effect on reducing flood damage to real and personal property in the area and would have no effect on relocating residents out of harm's way.

#### **Voluntary Floodplain Buyout**

There are several direct benefits of a voluntary floodplain buyout. For those residents who participate in a voluntary floodplain buyout and relocate outside of the floodplain, risk to health and property is eliminated. The need for emergency services, flood insurance, public and private funds to address repetitive loss structures, and flood debris removal services is reduced.

There are no known negative cumulative environmental impacts from this project that would increase flooding. There may be positive cumulative environmental effects if contiguous parcels of the floodplain are returned to natural conditions. It is likely that participants in this buyout may be located near or contiguous to parcels that were acquired through other federal buyout projects, further reducing impacts from flooding.

### ***Public Health and Safety***

#### **No Action (FWOP)**

This alternative results in continued adverse impacts to public health and safety. Residents would continue to live in hazardous conditions, including within the regulatory floodway. In particular, the elderly, disabled, and young are most at risk, especially with flash flooding. Flash flooding—quickly rising waters with little warning—is of concern in this watershed. The watershed's topography, with steep hillsides and narrow streams, makes the area susceptible to flash floods. Furthermore, during a flood event of any sort, primary escape routes also may flood, thus making vehicle travel or other travel dangerous, and perhaps impossible for both residents and first responders. Additionally, residents in the area may be impacted by unsanitary conditions resulting from and remaining after floods, such as contamination from flooded septic or sewer systems.

#### **Voluntary Floodplain Buyout**

Residents participating in a voluntary buyout will move out of harm's way. Relocation will reduce direct risks to residents and first responders. Any project activities undertaken as a result of this alternative will be performed by qualified, properly trained personnel in compliance with applicable health and safety regulations.

An indirect benefit to health and safety is improvement of water quality. Water quality will likely improve with removal of fecal coliform sources from failing or nonexistent septic systems associated with floodplain properties in an area where the practice of "straight-piping" is common. Improved sanitation and access to water and wastewater treatment will benefit the public health of residents.

There are no known negative cumulative environmental impacts from this project that would impact public health and safety.

### ***Water Quality***

#### **No Action (FWOP)**

Without a voluntary floodplain buyout, there would be no effect on the existing surface water quality. Degradation of water quality from potential straight-piping would continue.

#### **Voluntary Floodplain Buyout**

A buyout of homes and other impervious structures will reduce runoff and its associated water quality impacts. Other pollutants from households will be reduced with a buyout, as will flood debris. Specifically, there is likely to be a reduction in fecal coliform, as many of the homes in the *project area* are likely straight-piping. There is a potential for improvement in dissolved oxygen levels from a reduction in biological oxygen demand. Indirect benefits include an opportunity for riparian rehabilitation, including revegetation, to reduce erosion of streambanks, and removal of invasive species. With a buyout of homes lacking adequate sewage treatment, water quality will improve. Acreage of the area to be revegetated will be confirmed after the application and selection phase. Best management practices and standard recommended seed mixes will be used according to NRCS Conservation Practice Standards and Specifications under the Critical Area Conservation Practice Standard.<sup>1</sup>

There are no known negative cumulative environmental impacts from this project that would impact water quality.

### ***Floodplain Management***

#### **No Action (FWOP)**

Without a voluntary floodplain buyout, the watershed would continue to experience the deleterious impacts related to existing development in the floodplain. Other floodplain management efforts via the county or other local governments may continue or be further developed.

#### **Voluntary Floodplain Buyout**

With a voluntary floodplain buyout, homes and related structures will be removed from land subject to the buyout. Along with local governments' efforts to encourage proper floodplain activity, the properties that are part of a floodplain buyout will be subject to deed restrictions, restrictive covenants, or similar measures as part of the buyout. These provisions will operate to further ensure that the properties are utilized in a manner consistent with the goals of the buyout.

Additionally, it is anticipated that such restrictions or covenants will have indirect benefits in allowing for compatible uses, such as appropriate agricultural or recreational uses, or other endeavors. For example, while ameliorating impacts to residents from floods, the buyout of such properties could result in tracts that would be useful for small urban agriculture and recreation. In general, the properties will be managed in a natural state or for limited, approved uses compatible with location in a floodplain.

There are no known cumulative negative impacts to floodplain management.

## ***Wetlands, Waters of the US***

### **No Action (FWOP)**

Without a voluntary floodplain buyout, the watershed would continue to experience negative impacts from existing development in the floodplain that is incompatible with stream and floodplain functions. Streambank erosion, debris accumulation, and sediment removal and deposits would continue unabated. As for wetlands, a “no action” alternative would leave little or no potential to establish or re-establish wetlands on such properties. Properties on which wetlands may have once existed would continue to support non-wetland uses, and the same drainage patterns would continue.

### **Voluntary Floodplain Buyout**

With a buyout of properties susceptible to flood impacts, there will be several indirect benefits for Upper Guyandotte River, and downstream waters of the United States. Harmful forms of streambank clearing and related activities would diminish, lessening the harmful interference to morphological characteristics and features of the stream and stream channel. As for wetlands impacts, with floodplain areas vacated, there is increased potential to establish or re-establish wetlands, starting with vegetation or revegetation of riparian areas and other areas in the floodplain. There also would be increased potential to remove, for example, artificial drainage and unneeded impervious surfaces to encourage wetlands formation or reformation.

There are no known negative cumulative environmental impacts from this project that would impact wetlands or waters of the United States.

## ***Riparian Areas***

### **No Action (FWOP)**

The maintenance of riparian areas in their various states of vegetation (or lack thereof) would continue without a voluntary floodplain buyout. Where such riparian areas are near or associated with residences, riparian habitat quality would remain impaired to the extent mowing and removal of helpful vegetation from streambanks continues. With existing patterns of human habitation in the watershed, the riparian corridors would remain fragmented and perhaps nonexistent in some places.

### **Voluntary Floodplain Buyout**

As to the area within the Upper Guyandotte Watershed where the buyout occurs, the associated riparian areas will be vacated of permanent residents. Mowing and other vegetation control along streambanks will cease (or diminish for properties where limited, permissible uses occur). The riparian area thus will be revegetated via proactive, purposeful revegetation and via passive, natural vegetative succession.

Indirect benefits include improved streambank stability and improved habitat for fish and other wildlife. The quality of stream habitat and riparian areas will improve once structures are removed and the areas are restored to more natural, resilient conditions. Acreage of the area to be revegetated will be confirmed after the application and selection phase. Best management practices and standard recommended seed mixes will be used.<sup>2</sup>

There are no known negative cumulative environmental impacts from this project that would impact riparian areas. The benefits to riparian areas will compound and be enhanced if contiguous properties

participate in the voluntary buyout.

### ***Fish and Wildlife Habitat***

#### **No Action (FWOP)**

Without a voluntary floodplain buyout, existing properties would continue polluting waters. Within a majority of the *project area*, there are no known efforts to otherwise provide wastewater collection and treatment, indicating that the pollution from these residences would continue unabated for the foreseeable future.

#### **Voluntary Floodplain Buyout**

With a voluntary buyout, sediment and erosion from residential occupation will decline. Runoff from driveways, lawns, and the like will diminish, and solid waste and trash will diminish. Straight-piping, where present, will be eliminated, improving habitat health. Although there is potential for increased access to the stream for public recreational use once housing is removed, any human use of the properties will be restricted to prohibit such pollution.

Indirect benefits include gradual restoration of natural floodplain functions as properties are taken out of residential use. Streambanks will transition to natural riparian habitat, increasing shade for species that benefit from it and providing streambank stabilization.

There are potential risks to fish and wildlife habitats from accidental fuel spills from demolition equipment, from demolition debris, or from noise generated from demolition equipment and activities. Best management practices and mitigation measures—such as to prevent erosion into the stream channel—will be employed to minimize or prevent impacts on fish and wildlife.

There are no known negative cumulative environmental impacts from this project that will impact fish or wildlife habitat. There may be positive cumulative environmental effects if contiguous parcels of the floodplain are returned to natural conditions. It is likely that participants in this buyout are located near or contiguous to parcels that were acquired through other federal buyout projects. As more extensive areas of the floodplain are restored to natural functions, wildlife corridors will be created and aquatic habitat will benefit.

### ***Cultural and Historic Resources***

#### **No Action (FWOP)**

Without action under this plan, any cultural and historic resources in the floodplain will remain subject to repeat flooding with the potential to damage or destroy cultural historic resources.

#### **Voluntary Floodplain Buyout**

Little to no impacts to subsurface cultural resources are anticipated, as there will be minimal ground disturbance in the *project area*, as advised by WVSHPO. There are no known negative cumulative environmental impacts from this project that will impact cultural and historic resources.

Because this project is taking a tiered approach to completing NEPA review of site-specific environmental impacts, as those impacts are not ready for review with buyout properties having not yet been identified, the site-specific review of cultural resources impacts will similarly need to take a phased approach. A phased approach is appropriate when, for example, the location of historic

properties and their significance and character cannot be fully determined.

To effectuate the phased approach, a project programmatic agreement will be developed between WVSHPO and NRCS to delay review of site-specific cultural resources until such sites have been identified. Site-specific review will be conducted through Environmental Evaluations, using Form CPA-52, and if mitigation measures are required, agreement as to those mitigation measures will be entered through a Memorandum of Agreement per each site.

During the application phase of the project, there will be an opportunity to recognize and document—and avoid or mitigate if necessary—any notable cultural properties. Consultation with WVSHPO will continue through the design and implementation phases of the project.

### ***Environmental Justice***

As discussed in Section 3: Affected Environment, the affected community in the *project area* is considered an environmental justice community due to the severe poverty level.

#### No Action (FWOP)

Neither adverse nor beneficial impacts to any segment of the population, including low-income and minority populations, will occur under a “no action” alternative. Regardless of residents’ socioeconomic status, flooding will continue to impact all residents in the floodplain. Residents, especially those with less economic or social means, will likely remain unable to move to safer, flood-free housing.

#### Voluntary Floodplain Buyout

In terms of environmental justice, additional indirect benefits include economic benefits from increased tourism that could improve socioeconomic status and increased public health benefits for local populations. There are no known negative cumulative environmental impacts from this project that would impact environmental justice communities.

### ***Local Economic and Social Conditions***

#### No Action (FWOP)

Under a “no action” plan, there would be no opportunity to engage corporate landowners to make flood-free land available for local economic and social benefit. Willing buyers for flooded properties are unlikely. No additional funds would flow into the local economy as would-be participants remain unable to invest in flood-free housing. Owners of flooded homes would continue to experience an erosion of home assets as they decrease in value and habitability with repeat flooding.

#### Voluntary Floodplain Buyout

Participants of the buyout will be able to sell flooded properties to the government and will be given the opportunity to reinvest in flood-free housing. Synergies are being created by this project to engage with other professionals that can identify and facilitate acquisition of decent, safe, and sanitary housing in the local area. For example, planners are working with affordable housing agencies and other providers of social services. Fifteen temporary jobs will be created when the properties are acquired and demolished (Appendix D). Impacts to Appalachian Power, which has a customer base of approximately 5 million, will be negligible as participants will re-establish service at alternative



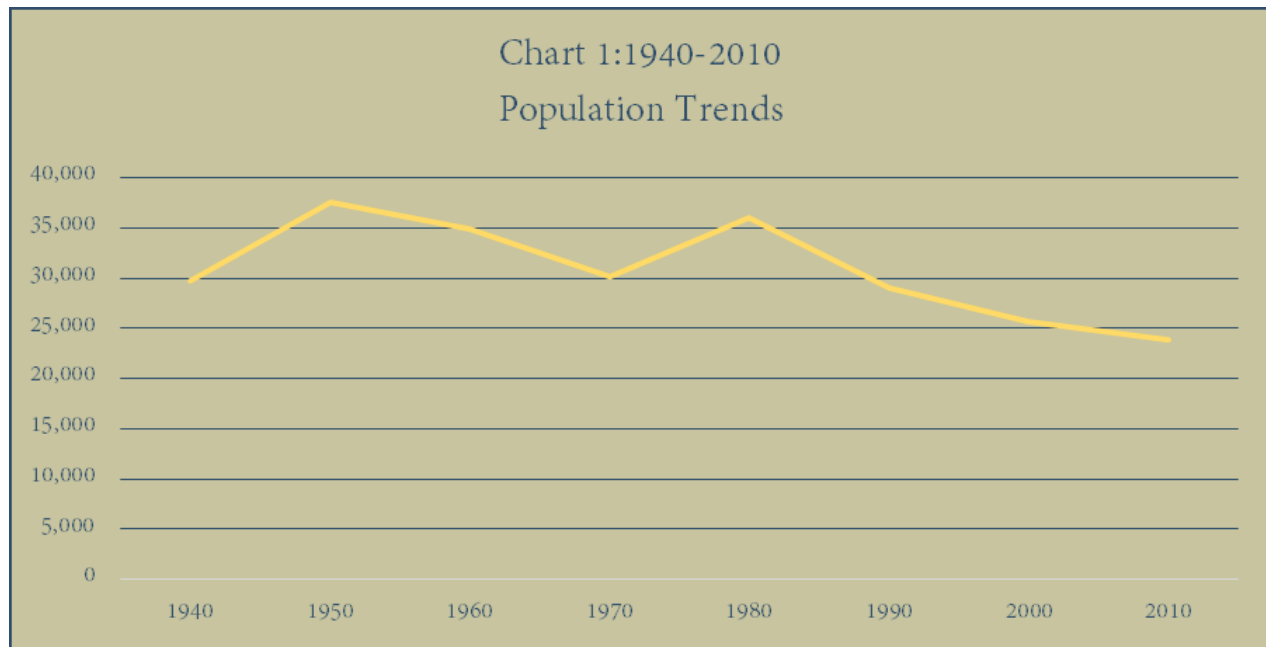
housing. Impacts to local water and sewer providers were analyzed through Region 1 mapping (Appendix C) and also factored into the decision to limit the buyouts to approximately 30 residences. It was also a consideration in identifying priority areas that are unserved by one or both utilities. Impacts on utilities, county property tax revenues, and neighborhood configurations have been considered and quantified where possible.

Potential adverse health impacts to construction workers from the emissions and noise generated from the demolition equipment, fugitive dust emissions, and asbestos removal will be minimized through the use of personal protective equipment. Asbestos removal will be done by certified professionals approved by WVDEP. An inspector will be present at all times during the demolition phase to monitor and enforce safety regulations.

Given the distressed economic status of the area, planners considered cumulative social and economic impacts from reduced developable land and from population loss. The Upper Guyandotte Watershed has limited flat land available for development due to natural topography and land ownership patterns, as previously described. In addition, prior federal floodplain buyout projects have resulted in development restrictions on mitigated properties. Such restrictions have the positive effect of reducing flood damage and risk to human health and safety, but restrictions may also limit availability of affordable housing and other development opportunities. During scoping for this Plan-EA, planners evaluated other community mitigation projects that sought a balance between compatible floodplain uses and property restrictions. The effort to meet both needs, thereby minimizing the cumulative impact of property restrictions, will continue through the implementation phase.

Potential population loss caused by the floodplain buyout program is a concern of stakeholders. Impacts include change to community character, loss of property tax revenue to local governments, and loss of revenue from water and sewer ratepayers to struggling public service districts.

The 2018 American Community Survey estimates a total of 21,711 people reside in Wyoming County. According to the US Census, the population in 2010 was 23,796 people. As Chart 1: Population Trends illustrates below, the population of the county has dropped continuously since 1980. In 1980, there were almost 36,000 people, the county's peak population. The loss of coal mining jobs in the past several years has most likely been a contributing factor to the decrease in population.



There is risk and uncertainty associated with the choice that residents may make regarding replacement housing. Participants will be strongly encouraged to relocate in flood-free areas so that the full intent of this buyout—to reduce flood damage and to improve human health and safety—will be realized. At the same time, every effort will be made to encourage participants to relocate within the watershed to minimize adverse local economic and social impacts described elsewhere in this document. There will be impacts to the social fabric of the community, but the nature of those impacts is unpredictable. Whether the impacts are positive or negative depends primarily on individual perceptions.

## **5.2 Compliance with Federal, State, and Local Laws**

Project planning and development of this EA took full consideration of federal, state, and local law. See Section 7.5: Permits and Compliance for a description of compliance with federal, state, and local law.

## **5.3 Possible Conflicts with Land Use Plans, Regional Water Resource Management Plans, Policies, and Controls for the Area**

There are no known conflicts between this Plan-EA and other plans, policies, or controls for the area. This Plan-EA supports other land use plans and policies in existence in Wyoming County. Floodplain management will be improved with the removal of homes and buildings from the floodplains.

This Plan-EA is consistent with the goals of the Wyoming County comprehensive plan. There are no additional land use regulations or controls. All of the *proposed project site* lies outside of municipal boundaries, and Wyoming County currently has no zoning ordinances.

## **5.4 Risk and Uncertainty**

Estimating project costs and benefits involves a certain degree of risk and uncertainty. Assumptions

made during the planning process are based on the best available technology and information at the time of planning. Extended delays between planning and implementation increase the degree of risk and uncertainty. Estimated project costs are based on actual expenses from the NRCS watershed project in Fayette County, West Virginia: “Dunloup Creek Voluntary Floodplain Buyout” conducted from 2010 through 2016. Costs were indexed to 2020 prices.

Costs can be influenced by several economic factors that cannot be predicted with certainty during the planning process. Fuel shortages, unforeseen labor and materials shortages, natural disasters, and international incidents can adversely affect costs.

Economic benefits are based on material values of floodplain property and infrastructure. Such values may not fully capture sentimental worth or social investment on behalf of residents. There is risk that **positive** impacts, beyond what is necessary to support the benefit cost ratio, are underestimated.

There is some degree of uncertainty associated with using secondary information, such as census data, planning documents, tax records, and other information, when such data is applied to a very small geographic area. It is probable that some monetary and non-monetary costs and benefits have not been fully captured. Finally, there is inherent uncertainty in forecasting the social and environmental costs and benefits associated with the *preferred alternative*.

## **5.5 The Relationship Between Short-term Use and Long-term Productivity**

In the short term, there will be construction impacts associated with the *preferred alternative*. During demolition and floodplain restoration, there will be short-term increases in noise, dust, sediment, erosion, and traffic. These impacts will be minimized with best management practices, such as installing silt fencing, watering down debris, and providing traffic control. Demolition activities will only occur during normal business hours, avoiding noise and disruption in evenings and weekends. Neighbors will be notified of the demolition schedule in advance. In the floodplain, land use will change from residential development to natural floodplain. The long-term productivity of Upper Guyandotte River will be enhanced with the *preferred alternative* as the floodplain is restored to more natural conditions that support the ecosystem services inherent to floodplains. Riparian areas will shade water, lowering water temperatures and improving aquatic habitat. Water infiltration and filtering will be improved, and aesthetic attributes of Upper Guyandotte Watershed will improve over time.

## **5.6 Adverse Effects that Cannot be Avoided**

There are no anticipated permanent, long-term adverse environmental effects associated with the *preferred alternative*, Alternative 2, Voluntary Floodplain Buyout, as long as best management practices are used. Minimal temporary, short-term adverse impacts could occur during demolition as described in Section 6.1. Consultation with environmental and regulatory agencies during scoping and throughout the planning process have not revealed any known adverse environmental impacts from the implementation of a voluntary floodplain buyout. By contrast, the removal of homes and other structures, related impervious surfaces, and debris from the floodplain should enhance floodplain function and reduce or eliminate the harm of future flooding. Moreover, the implementation of a voluntary floodplain buyout will likely result in the removal of some homes that use “straight-pipes” to discharge raw sewage into adjacent waterways, thus improving water quality in the watershed.<sup>3</sup>

Positive effects in floodplain function, reduced flooding, reduced hazardous debris from flooding, improved water quality, improved fish and wildlife habitat, improved riparian conditions, and other incidental environmental benefits will also be realized by the implementation of the *preferred alternative*. Table 5.1 Proposed Project Site shows the 2021 tax year payments due for 30 properties with highest real property taxes and corresponding percent of 2021 Wyoming County budget.

**Table 5.1: Proposed Project Site**

<b>Project Area</b>	<b>Matheny</b>
Total 2021 tax year payments due for 30 properties with highest real property taxes	\$11,694.46
Percentage of 2021 Wyoming County budget realized by payment of property taxes represented by figure above.	0.3128980%

Adverse social and economic effects may occur if residents participating in the *preferred alternative* leave the watershed post-buyout. Although population in the area has been declining for several decades, the buyout may hasten the exodus. There may be diminished tax base, reduction in retail customer base, and reduction in public school system enrollment.

Community cohesion, civic organization participation, volunteerism, and church membership may also be adversely impacted if participants in the voluntary floodplain buyout choose to relocate to other jurisdictions.

To minimize the potential adverse social and economic impacts considered in the planning phase, the project has been scaled to an expected total buyout of approximately 30 residential properties. Nonresidential properties, such as churches, public buildings, and businesses, were not included as an effort to minimize social and economic impacts. These properties, although they sustain flood damage, likely do not have overnight occupancy and therefore pose less threat to human health and safety.

The planners' goal in limiting participating properties to this number is to give ample opportunity to participate in the buyout while limiting the potential adverse effects to the local communities. For example, during scoping and the planning process, one of the concerns voiced by local stakeholders was the potential for Wyoming County to lose real property taxes from bought-out properties, particularly where participants do not relocate within Wyoming County.

In order to evaluate the potential loss of real property tax revenues, the following is a breakdown of the top 30 properties within the *project area*. The information provided is derived from 2021 real property tax payments due to Wyoming County and indicates the potential impact to the Wyoming County budget from the loss of those revenues.

Thus, at worst, in terms of potential loss of real property tax revenue to Wyoming County, the successful implementation of the *preferred alternative* should limit the impact to approximately 0.31% of the total budget realized from the payment of property taxes, based on 2021 numbers.

Moreover, to address or mitigate other potential social and economic adverse effects, discussed above, synergies are being created during the planning process with potential partners and other professionals

that may be able to help identify and facilitate the acquisition of decent, safe, and sanitary housing in the local area. Synergies include partnerships with nonprofits and state agencies. These efforts are intentional and aim to minimize the potential negative impacts of outmigration. Further, the development of certain financial incentives, which may complement this project and reduce outmigration, are being pursued at the request of local sponsors.

### **5.7 Precedent for Future Actions with Significant Impacts**

The proposed action would not set a precedent for future actions with significant effects or represent a decision in principle about a future consideration.

### **5.8 Areas of Controversy**

[Section reserved until public comment period ends.]

### **5.9 Irreversible or Irretrievable Commitments of Resources**

Land that is purchased through the voluntary floodplain buyout will be converted from private land to public land. Presently, this land is privately owned and used for residential purposes.

Funds and labor required to administer the buyout will be irretrievably committed. Funds, labor, and energy expended to demolish the purchased properties and restore the floodplain will also be irretrievably committed.

For each property that is removed through the voluntary floodplain buyout, there will be a permanent elimination of the financial, emotional, and physical resources that would have been required to repair the property after repeat flooding, as the participating properties will be held by a public entity and subject to permanent development restrictions.

### **5.10 Energy and Natural or Depletable Resource Requirements**

The energy requirements for implementing this Plan-EA are equivalent to standard municipal maintenance of buildings due to code enforcement. Resource requirements will include use of heavy machinery during the implementation phase.

### **5.11 Urban Quality, the Design of the Built Environment**

As described in Section 6.1, the *project area* is a rural area. The *project area* currently lacks zoning or subdivision regulation. The plan considers cultural and historic resources, also described in Section 6.1.

## **6.0 CONSULTATION, COORDINATION, AND PUBLIC PARTICIPATION**

Beginning in August 2018, planners organized or attended numerous meetings aimed at informing or gathering input from local leaders, public and private agencies, and other stakeholders in the *project area*. The following is a summary of those meetings.

First, an introductory meeting was held with Wyoming County local leaders on August 15, 2018, at

the Wyoming County Commission. At that meeting, planners explained the desire to plan a project aimed at addressing harm and damage caused by flooding in the *project area*. Planners explained that all alternatives will be considered, as required by NEPA. Planners addressed the obstacles associated with constructing dams, channels, and other structural measures within the *project area*. Planners then worked to gauge local support for a potential voluntary floodplain buyout project. Feedback from the local mayors in attendance and the Wyoming County Commission was positive. Attendees expressed interest in prioritizing work in areas outside municipal boundaries and in areas currently not served by public water or sewer where possible.

Thereafter, the public scoping meeting was held on October 16, 2018, at Twin Falls State Park. The scoping meeting invitation and the notice of intent were printed in the Beckley Register Herald, the Bluefield Daily Telegraph, and the Welch Daily News prior to the meeting. Fifteen people attended the scoping meeting, some of whom represented local, state, and federal agencies. Individuals and agencies gave input into the development of the Plan-EA. Most comments at the scoping meeting were about sharing data that would benefit the planning process. For example, the FEMA Interagency Recovery Coordination Lead and the West Virginia State Resiliency Office representatives offered to request repetitive loss data and other information to benefit the project, and the WVDEP offered to share TMDL information specific to the *project area*. Beyond the discussion of sharing data, other input included (1) USACE requesting that planners consider mitigation work in the watershed and (2) USEPA, though unable to attend the scoping meeting, offering comments by phone and email, specifically suggesting that rain barrels be considered. WVSHPO was unable to attend but provided a letter of interest requesting additional information when more details become available.

Following these two initial meetings, planners met periodically with certain entities and individuals to provide information regarding the planned project, gather input as plans progressed, and share updates as planners gathered data and worked through the planning phases of the project.

More specifically, on January 23, 2019, planners met with (1) WVSHPO to outline the project's goals and to discuss necessary procedures to verify the historic nature of structures within the *project area* as planning progressed, (2) the State National Floodplain Insurance Program (NFIP) Coordinator, and (3) a representative from USACE to provide a project overview and summarize input received from local leaders and other stakeholders in early meetings.

On April 26, 2019, planners met with Region 1 Planning and Development Council of West Virginia to discuss detailed mapping needed for the planning phase of the project. Planners sought Region 1's assistance in developing maps of the *project area* that would depict the regulatory floodway, Special Flood Hazard Areas, existing water and sewer infrastructure, planned projects related to water and sewer infrastructure, economic development zones, tourism initiatives, and municipal boundaries. Based on the input received during those meetings that occurred during the early stages of the planning process, stakeholders clearly wanted detailed information and mapping related to these topics to inform decision-making in examining specific potential project sites.

On May 28, 2019, planners met with the Wyoming County Floodplain Administrator. In this meeting, planners (1) discussed what areas in Wyoming County present the greatest flood risk and (2) solicited feedback on initial data and floodplain mapping received from Region 1. Following this meeting, planners toured the *project area*, and visited potential project sites.

On August 30, 2019, planners met with representatives from FEMA and USHUD. Planners provided these representatives an update on the planning process that included an overview of feedback and

information received from local leaders, public agencies, and other stakeholders, as well as an update on the progress made in working toward identifying potential project sites through both the mapping from Region 1 and the West Virginia Flood Tool. Additionally, planners presented information on the topic of incentives in buyout projects. The information focused on incentives used in other buyout projects across the country and how those incentives may be a helpful piece for this project.

Planners returned to the *project area* on September 24, 2019. During that visit, planners met with the Wyoming County Acting Floodplain Manager as well as one member of the Wyoming County Commission. Planners shared mapping with the Acting Floodplain Manager and discussed any historical knowledge regarding flooding in the areas depicted on the maps, information regarding the most recent flood events in the *project area* and how those areas were impacted, and any knowledge as to how receptive members of those communities may be to a voluntary floodplain buyout. Thereafter, planners met with two members of the Wyoming County Commission. The goal of the meeting with those commissioners was to inform them as to the status of the project and to discuss the previous challenges from flooding, identify areas subject to repeated flooding challenges and damage, and determine communities most vulnerable to continued flooding harm. The meeting with the commissioners was wholly educational and informational. The commissioner was not asked to make any decisions regarding the project or the planning. Following those meetings, planners toured various potential project sites within the *project area*.

On October 9, 2019, NRCS met with USDA Rural Development to provide an update on the project. NRCS shared Region 1's mapping and outputs from the flood tool. At that time, there were no Rural Development housing projects or other infrastructure projects in conflict with this project. Rural Development may want to collaborate on housing at a future phase of the project.

On October 10, 2019, planners participated in a conference call with WVSHPO. Planners reported to WVSHPO that potential project sites had been identified and requested guidance as to what specific information WVSHPO would need regarding the potential project sites. WVSHPO pointed planners to the Section 106 checklist and indicated that planners would need to provide the information set forth on that checklist for each parcel or structure within the potential project sites.

Planners were invited to participate in a December 12, 2019, meeting at the WVU GIS Tech Center. In addition to WVU GIS Tech Center staff, also in attendance were representatives from FEMA and USACE. At this meeting, planners explained how the West Virginia Flood Tool and the data associated with it were instrumental in informing planners as to potential project sites in the *project area* and how this tool and its accompanying data could be used to inform future projects aimed at responding to harms and damage resulting from flooding.

On December 17, 2019, planners met with all three members of the Wyoming County Commission, the Wyoming County Floodplain Manager, and Region 1 for another educational and informational session. More specifically, planners (1) presented detailed information about potential project sites, (2) provided information as to what it would mean to be a project planner during the implementation phase of the project, and (3) discussed what ownership and use may look like after any proposed buyout. Again, this session was wholly educational. The Wyoming County Commission was not asked to deliberate or otherwise consider or make any decisions regarding the project.

On February 11, 2020, NRCS met with WVSHPO to continue consultation and seek additional guidance. WVSHPO staff advised NRCS to complete the state checklist for potential project sites and provide a spreadsheet with location and image information for each structure that could potentially be

acquired. Additionally, WVSHPO indicated that Historic Properties Inventory Forms and more detailed photography should be completed for any structures over 45 years of age. There was discussion about the extent of ground disturbance with building demolition and whether a Phase 1 archeology investigation would be needed. More consultation will be required as the project moves forward. It is not yet known if mitigation will be needed.

In addition to the in-person meetings listed above, there were several additional teleconferences with state and federal agencies, including the West Virginia Infrastructure Jobs and Development Council, FEMA, USHUD, USACE, WVDEP, and WVDNR. The focus of these phone calls was to request data, inform about the progress of the planning phase of the project, and otherwise seek input. Also, planning updates were provided at each quarterly meeting of the State Technical Committee of the West Virginia State Office of Natural Resources Conservation Service beginning in July 2018.

Comments on the Draft Watershed Plan-EA will be included in the Final Watershed Plan-EA. The Plan-EA will be revised, where appropriate, in response to public suggestions.

In-person public meetings did not occur from March 2020 to September 2021 due to travel restrictions and precautions related to the COVID-19 pandemic. Since March 2020, all formal communication between sponsors occurred by phone or electronic media. Other than informal updates, there was no formal communication with local stakeholders in 2020 as partners worked on the draft Environmental Assessment.

On May 23, 2022, the planning team requested that NRCS send official correspondence to twenty federally recognized American Indian Tribes seeking to initiate official Tribal Ancestral Lands Consultation (TALC). Listening sessions and initial watershed program discussions will be held as soon as practicable. NRCS will continue efforts to contact additional tribes for open consultation for the Upper Guyandotte River Watershed project.

## **7.0 THE PREFERRED ALTERNATIVE**

### **7.1 Rationale for Plan Selection**

The National Economic Development (NED) Plan is Alternative 2, the Voluntary Floodplain Buyout Alternative. This plan addresses sponsors' needs and provides the best flood damage reduction option for the community. The voluntary floodplain buyout is the *preferred alternative* for all of the following reasons:

1. It best meets the opportunities and needs of local sponsors.
2. It completely removes the floodplain risks to life and property for the participants.
3. It can be accomplished in a short period of time, quickly reducing future exposure to flood-related hazards.
4. It restores the floodplain function and will improve floodplain and riparian habitat.
5. There will be a minor reduction in post-storm runoff since impervious surfaces will be removed and replaced with vegetation.
6. It reduces the economic burden to federal, state, and local governments by providing a solution that does not require perpetual operation and maintenance (O&M).
7. It is an environmentally friendly solution.
8. It maximizes the net benefits to the nation.



## **7.2 Eligible Areas**

The threat of flooding is widespread in the watershed, with nearly all of the developed land located in the floodplain. It is necessary to prioritize within the *project area* in order to remove the most vulnerable properties first. One area was identified as the most vulnerable based on the concentration of housing in the floodplain, depth of flooding, population at risk, and accessibility during flooding: Matheny. An area within Matheny is the *proposed project site*.

Maps showing the geographic limits of the area are included in Appendix C. Within the *proposed project site*, properties will be prioritized according to risk and acquired in that order.

## **7.3 Measures to Be Installed**

The *preferred alternative* is a voluntary floodplain buyout. No measures will be installed; rather, homes in the floodplain will be purchased and removed. Before purchase and removal, in the design phase of this project, an objective ranking system will be developed to inform buyout participation applications and prioritize the 68 properties to best reduce flood damage. Applications will be made available to all of the owners of the 68 properties. These applications will be evaluated according to objective criteria to prioritize the 30 properties that ultimately will be purchased and removed. Once identified, the approximately 30 properties will each undergo site-specific NEPA review through an Environmental Evaluation, using form CPA-52, tiered to this Plan-EA.

Moving to the implementation phase, construction activities will include asbestos testing of each structure, disconnection and capping of utilities, and demolition and proper disposal of debris at an approved landfill. Straight-pipes that convey raw sewage into Upper Guyandotte will be removed and these discharges will be eliminated with the removal of houses. There will be minimal earth disturbance with minor grading of residential lots. No excavation is expected. Sites will be reseeded with a seed mix that is compatible with floodplain vegetation.

## **7.4 Mitigation**

The *preferred alternative* will have minimal adverse impacts. As parcels are acquired and demolished, the need for mitigation will be more strategically evaluated through the tiered NEPA approach. Contingency funding in the amount of \$50,000 is included to address the potential need to mitigate.

## **7.5 Permits and Compliance**

All applicable laws will be complied with during the execution of this project. The demolition and site restoration phase of the project will occur in areas with relatively flat topography with minimal problems anticipated due to erosion and sediment. Erosion and sediment control measures will be implemented as needed to meet WVDEP requirements. County and local building permits will be obtained as required for the site demolition and restoration work.

Contractors will be required to properly remove waste and dispose of any hazardous materials that may be encountered during the demolition work, such as asbestos. Water well plugging and septic system removal will be done according to the West Virginia Department of Health requirements. Additional consultation with WVSHPO will occur for the duration of the project.

## **7.6 Costs and Cost-sharing**

Project costs include all costs necessary to conduct the buyout and are based on actual costs from approximately 200 West Virginia voluntary acquisitions, indexed to 2020 prices. Costs are narratively described in this section and shown in the six standard tables, Tables 7.2 to 7.7 of this Plan-EA. The construction cost category includes demolition, restoration, and mitigation costs. The real property rights category includes acquisition, appraisals, surveys, legal services, title insurance, asbestos testing and other costs necessary to acquire the property (100% PL 83-566 funds as per 390-NWPM, Part 500, Subpart E, Section 500.42C(3)). The real relocation payment category includes incentive payments of \$22,500 as per NWPM 500.42.C.(1-3). The engineering cost category includes engineering services, such as contract administration and inspection during demolition and site restoration (100% PL 83-566 funds). Project administration costs include project management, outreach, reporting, overhead, and other similar costs.

Sponsors may use cash, in-kind contributions, or a combination thereof, to meet their cost-share requirement as per 390-NPWM, Part 504.11.

## **7.7 Relocation Payment**

Relocation payments will be provided for each eligible property under the Uniform Relocation and Assistance Act. These funds are necessary to close the gap between the appraised value of floodplain property and the ability of applicants to purchase decent, safe, and sanitary housing in safe, flood-free areas. Per-capita income, poverty levels, and other disadvantaged population indicators support the justification for a relocation payment.

## **7.8 Operation and Maintenance**

Alternative 2, Voluntary Floodplain Buyout will effectively restore the floodplain to a natural condition that will require minimal operation and maintenance. Monitoring will be necessary to ensure that no prohibited uses are occurring on parcels after buyouts are complete. Monitoring will be incorporated into existing floodplain management responsibilities, resulting in a negligible cost to sponsors.

## **7.9 Installation and Financing**

This project is administered by NRCS in conjunction with local sponsors, with shared responsibilities for financing and implementing the project. Technical assistance will be provided by NRCS. The *preferred alternative*, Alternative 2, Voluntary Floodplain Buyout will be administered through local contracts managed by sponsors and assisted by NRCS over a five-year period:

**Table 7.1: Project Schedule**

<b>Year</b>	<b>Activity</b>
1	Establish project office; conduct outreach; take applications; contract for services (title work, surveys, appraisals, etc.)
2, 3	Property acquisition phase
4	Demolition phase (disconnect utilities, asbestos testing, prepare site restoration designs, inspect demolition work)
5	Financial and project closeout

**Table 7.2: Estimated Installation Cost**  
 NWPM Standard Table 1  
 Upper Guyandotte River Watershed, West Virginia  
 (Dollars)<sup>1</sup>

Works of Improvement	Number				Estimated Cost (Dollars) <sup>1</sup>						
					Public Law 83-566 Funds			Other Funds			Total
	Unit	Federal Land	Non-Federal Land	Total	Federal Land NRCS	Non-Federal land NRCS	Total	Federal Land	Non-Federal Land	Total	
Voluntary Floodplain Acquisitions	30	0	30	30	\$0	\$4,050,000	\$4,050,000	\$0	\$13,300	\$13,300	\$4,063,300
Total Project	30	0	30	30	\$0	\$4,050,000	\$4,050,000	\$0	\$13,300	\$13,300	\$4,063,300

Prepared: February 2022

Footnotes:

<sup>1</sup> Price base 2022.

**Table 7.3: Estimated Cost Distribution–Nonstructural Measures**

NWPM Standard Table 2

Upper Guyandotte River Watershed, West Virginia

(Dollars)<sup>1</sup>

	Installation Cost – Public Law 83-566						Installation Cost – Other Funds						Total Installation Cost
Works of Improvement	Construction <sup>2</sup>	Engineering <sup>3</sup>	Real Property Rights <sup>4</sup>	Relocation Payments <sup>5</sup>	Project Administration <sup>6</sup>	Total PL83-566 Cost	Construction <sup>2</sup>	Engineering <sup>3</sup>	Real Property Rights <sup>4</sup>	Relocation Payments <sup>5</sup>	Project Administration <sup>6</sup>	Total Other Cost	
Voluntary Floodplain Acquisitions	\$800,000	\$132,500	\$2,310,000	\$675,000	\$132,500	\$4,050,000	\$0	\$0	\$0	\$0	\$13,300	\$13,300	\$4,063,300
Total	\$800,000	\$132,500	\$2,310,000	\$675,000	\$132,500	\$4,050,000	\$0	\$0	\$0	\$0	\$13,300	\$13,300	\$4,063,300

Prepared: February 2022

## Footnotes:

<sup>1</sup> Price Base 2022.<sup>2</sup> Demolition, site restoration, and mitigation costs.<sup>3</sup> Includes costs for preparing technical specifications, contract administration, construction inspection, etc.<sup>4</sup> Includes all other associated costs for property acquisition as per NWPM 500.42.C (1-3).<sup>5</sup> Relocation payment of \$22,500 per property as per NWPM 500.42.C.(1-3).<sup>6</sup> Project Administration 3.5% of construction, not cost-shared.

**Table 7.4: Structural Data**

NWPM Standard Table 3

Not applicable to this project.

**Table 7.5: Estimated Average Annual NED Costs**

NWPM Standard Table 4

Upper Guyandotte River Watershed, West Virginia

(Dollars)<sup>1</sup>

<b>Works of Improvement</b>	<b>Project Outlays Amortization of Installation Cost</b>	<b>Project Outlays Operation, Maintenance, and Replacement Cost <sup>2</sup></b>	<b>Other Direct Costs</b>	<b>Total</b>
Voluntary Floodplain Acquisitions	\$102,500	\$1,000	\$0	\$103,500
Total	\$102,500	\$1,000	\$0	\$103,500

Prepared: February 2022

Footnotes:

<sup>1</sup> Price Base 2022, costs amortized for 100 years at 2.25% water resources project discount rate.

<sup>2</sup> Mitigated parcels require monitoring.

**Table 7.6: Estimated Average Annual Flood Damage Reduction Benefits**

NWPM Standard Table 5

Upper Guyandotte River Watershed, West Virginia

(Dollars)<sup>1</sup>

Item	Estimated Average Annual Damage				Damage Reduction Benefit	
Floodwater	Without Project		With Project			
	Agriculture Related <sup>2</sup>	Nonagriculture Related	Agriculture Related <sup>2</sup>	Nonagriculture Related	Agriculture Related <sup>2</sup>	Nonagriculture Related
Crop & Pasture	\$0	\$0	\$0	\$0	\$0	\$0
Residential	\$179,900	\$0	\$50,300	\$0	\$129,600	\$0
Commercial	\$0	\$0	\$0	\$0	\$0	\$0
Transportation	\$0	\$0	\$0	\$0	\$0	\$0
Utilities	\$0	\$0	\$0	\$0	\$0	\$0
Subtotal	\$179,900	\$0	\$50,300	\$0	\$129,600	\$0
Indirect	\$18,000	\$0	\$5,000	\$0	\$13,000	\$0
Total	\$197,900	\$0	\$55,300	\$0	\$142,600	\$0

Prepared: February 2022

## Footnotes:

<sup>1</sup> Price Base 2022, costs amortized for 100 years at 2.25% water resources project discount rate.<sup>2</sup> Agriculture-related damage includes damage to rural communities.<sup>3</sup> Transportation damages were not determined; recommended plan has no effect on transportation.

**Table 7.7: Comparison of NED Benefits and Costs**  
 NWPM Standard Table 6  
 Upper Guyandotte River Watershed, West Virginia (Dollars)<sup>1</sup>

Works of Improvement	Average Annual Benefits					
	Flood Damage Reduction Benefits	Savings in Debris Removal	Flood Insurance Savings	Total	Average Annual Cost	Benefit/Cost Ratio
Voluntary Floodplain Acquisitions	\$142,600	\$2,400	\$6,000	\$151,000	\$103,500	1.5
Total	\$142,600	\$2,400	\$6,000	\$151,000	\$103,500	1.5

Prepared: February 2022

<sup>1</sup> Price Base 2022, costs amortized for 100 years at 2.25% water resources project discount rate.

## 8.0 LIST OF PREPARERS

Name	Present Title/ Other Experience	Education/ Continuing Education
Katherine Garvey	Director, Land Use and Sustainable Development Law Clinic, West Virginia University College of Law	B.A. Business Management Juris Doctorate LL.M. Environmental Law
Jason Walls	Managing Attorney, Land Use and Sustainable Development Law Clinic, West Virginia University College of Law	B.S. Geology Juris Doctorate
Staci Thornsby	Staff Attorney, Land Use and Sustainable Development Law Clinic, West Virginia University College of Law	B.A. Political Science Juris Doctorate
Nathan Fetty	Former Managing Attorney, Land Use and Sustainable Development Law Clinic, West Virginia University College of Law	B.A. English Juris Doctorate
Christy DeMuth	Land Use Planner, Land Use and Sustainable Development Law Clinic, West Virginia University College of Law	B.S. Environmental Resources Management M.S. Geography
Whitney Morgan	Land Use Clinician, Land Use and Sustainable Development Law Clinic, West Virginia University College of Law	B.A. Ancient History Juris Doctorate
Sydney White	Environmental Specialist, USDA NRCS	B.S. Wildlife and Fisheries Resources M.S. Energy Environments
Pam Yost	Economist (29), USDA NRCS	B.S. Resource Management M.S. Agricultural Economics
Michele Belcher	Watershed Planner, USDA NRCS	B.S. Recreation, Parks, and Tourism Resources B.S. Wildlife and Fisheries Resources M.S. Agriculture, Natural Resources, and Design
<i>The watershed plan and environmental assessment were reviewed and concurred in by state staff specialists having responsibility for their respective disciplines. This review was followed by review of the document by the NWMC.</i>		



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## 9.0 DISTRIBUTION LIST

US EPA 1650 Arch St Philadelphia, PA 19103 R3_RA@epa.gov	USDA Rural Development 1550 Earl Core Rd Suite 101 Morgantown, WV 26505 kris.warner@usda.gov lisa.sharp@usda.gov	Ohio River Valley Water Sanitation Commission 5735 Kellogg Ave Cincinnati, OH 45230
WV Conservation Agency 1900 Kanawha Blvd E Charleston, WV 25305 bfarkas@wvca.us	WV Division of Natural Resources 324 Fourth Ave South Charleston, WV 25303 dnr.parks@wv.gov danny.a.bennett@wv.gov bob.l.knight@wv.gov	WV Development Office 1900 Kanawha Blvd E Charleston, WV 25305 amy.s.pauley@wv.gov
US Fish and Wildlife Service 694 Beverly Pike Elkins, WV 26241 nicholas_millett@fws.gov	Wyoming County Commission 24 Cedar Ave, Pineville, WV 24874	WV Housing Development Fund 5710 MacCorkle Ave SW Charleston, WV 25304
WV DEP 601 57th St SE Charleston, WV 25304 teresa.m.koon@wv.gov mindy.s.neil@wv.gov jefferson.e.brady@wv.gov jennifer.d.liddle@wv.gov	Southern Conservation District 463 Ragland Rd Beckley, WV 25801 bfloyd@wvca.us	US Army Corps of Engineers Huntington District 502 8th St Huntington, WV 25701 jason.a.evers@usace.army.mil jami.l.buchanane@usace.army.mil lauren.a.pritt@usace.army.mil
Appalachian Regional Commission 1666 Connecticut Ave NW Suite 700 Washington, DC 20009-1068 choard@arc.gov james.e.bush@wv.gov	Wyoming County Office of Emergency Services 1022 River Road Pineville, West Virginia 24874	National Coal Heritage Area P.O. Box 15 Oak Hill, WV 25901 cbailey@coalheritage.org
Wyoming County Administrator 24 Cedar Ave, Pineville, WV 24874	WV GIS Tech Center WVU Dept. of Geology & Geography 330 Brooks Hall P.O. Box 6300 Morgantown, WV 26506 kurt.donaldson@mail.wvu.edu	Trout Unlimited P.O. Box 239 Davis, WV 26260 dwichterman@tu.org
Wyoming County Administrator 24 Cedar Ave, Pineville, WV 24874	WV Division of Culture and History The Cultural Center 1900 Kanawha Blvd E Charleston, WV 25305-0300 susan.m.pierce@wv.gov	USACE WV Silver Jackets 502 Eighth St Huntington, WV 25701 stephen.d.oleary@usace.army.mil
WV DHHR One Davis Square, Suite 100 E Charleston, WV 25301 DHHRSecretary@wv.gov	US Housing and Urban Development 414 Summers St Suite 110 Charleston, WV 25301 wv_webmanager@hud.gov	WV Department of Agriculture East State Capitol Room E-28 1900 Kanawha Blvd E Charleston, WV 25305 kleonhardt@wvda.us nbailey@wvda.us jhatton@wvda.us

Downstream Strategies 10624 Appalachian Highway Davis, WV 26260 jnewland@downstreamstrategies.com	FEMA Interagency Recovery Coordinator james.young@fema.dhs.gov	Wyoming County Schools 155 Park St, Pineville, WV 24874
Region One Planning & Development Council 1439 E. Main Street Suite #5 Princeton, WV 24740 jasonroberts@regiononepdc.org	WV Division of Homeland Security and Emergency Management Capitol Complex Building 1 Room EB-80 1900 Kanawha Blvd E Charleston, WV 25305	Coalfield Development P.O. Box 1133 Wayne, WV 25570 info@coalfield-development.org
Refresh Appalachia P.O. Box 1133 Wayne, WV 25570 ahudson@refreshappalachia.com	Northeastern Regional Office National Fish and Wildlife Foundation 1133 Fifteenth St NW Suite 1000 Washington, DC 2005 amanda.bassow@nfwf.org	R.D. Bailey Lake US Army Corps of Engineers 110 Visitor Center Rd Hanover, WV 24850 brian.c.morgan@usace.army.mil

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# Appendix A

## Consultations, Comments, and Responses

This appendix describes substantive comment submissions received concerning the Draft Environmental Assessment (EA) during the 45-day comment period between November 14, 2023, and January 15, 2024, and the responses to those comments.

The only comment received during the comment period was from Matthew Willson, NEPA Specialist- Environmental Assessment Branch at the Office of Communities, Tribes, and Environmental Assessment in EPA Region 3 Philadelphia, PA. The comment was received on Friday, January 12, 2024, at 1:11 PM via e-mail to Christi Hicks, Assistant State Conservationist -Water Resources, at the USDA Natural Resources Conservation Service in West Virginia, and reprinted here:

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“Dear Ms. Hicks,

Thank you for providing notice to the U.S. Environmental Protection Agency (EPA) that an Environmental Assessment (EA) has been prepared for Natural Resources Conservation Service’s (NRCS) Voluntary Floodplain Buyout Along Upper Guyandotte River Plan (Project). The proposed action consists of a voluntary floodplain buyout to remove houses from the floodplain to reduce repetitive flood damage to properties in the Upper Guyandotte Watershed.

The need to address flood damage in flood prone areas is clear, especially considering the expected increase in the number and intensity of extreme precipitation events in WV (see <https://statesummaries.ncics.org/downloads/WestVirginia-stateClimateSummary2022.pdf>). EPA supports the development of an environmentally responsible approach to mitigating this risk while also addressing the needs of the community.

Discussion of the impacts of climate change on flood risk in the Upper Guyandotte Watershed and its impacts on the various aspects of the project are absent. We recommend including discussions of such impacts in the EA. In particular, we recommend the No Action alternative take into account the expected increase in number and intensity of extreme precipitation events. At a minimum, the document should explain what assumptions were used in its analysis regarding climate change.

The EA discusses the removal of residences and associated structures, and the steps NRCS is planning to take to restore the land to a natural state, including seeding the land with standard seed mixes compatible with floodplain vegetation. We recommend considering seed mixes and

other revegetation efforts that utilize exclusively native species that support pollinator and ecosystem health while still achieving structural objectives such as erosions control.

There are several opportunities in the EA to improve the reader's understanding of the project and its impacts. Please consider the following comments to improve the document's clarity:

- The title of section 4.3 on page 34 reads "Alternatives Considered by Eliminated from Detailed Study", it appears that this is a typo, and it should instead read "Alternatives Considered but Eliminated from Detailed Study". Please review and revise as appropriate.
- The relevance of Tables 3.1, 4.1, and 5.1 are not discussed in the text. We recommend including a brief discussion of the tables and their relevance.
- The ALERT acronym is not defined in the document. We recommend spelling the acronym out. In addition, the website for citation 28 on the list of citations for section 4.0 on page 744 is defunct. We recommend revising the citation.
- The National Economic Development (NED) is referenced throughout the document but is never explained. We recommend adding an explanation of NED and how it is used in the analysis.
- The benefit-to-cost ratio of 1.5 to 1 is cited several times through the document. We recommend including an explanation of this figure and how it was derived.

If you have any questions regarding these comments, please feel to contact me."

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The comment includes two substantive recommendations and several recommendations to improve document clarity.

In response to the first recommendation, "We recommend including discussions of such impacts in the EA. In particular, we recommend the No Action alternative take into account the expected increase in number and intensity of extreme precipitation events. At a minimum, the document should explain what assumptions were used in its analysis regarding climate change" this comment is noted. As described in Appendix D, assumptions regarding future flood risk including calculations of benefits from reduction in flood damage are described. Appendix D, includes a spreadsheet summary of the data setting forth threshold criteria for participation, "Utilizing this information, the Land Use Clinic was able to identify several pockets of residential structures on relatively small, contiguous parcels lying within the Regulatory

Floodway or Special Flood Hazard Areas with a flood history that presented a repetitive risk to human health and safety from future flooding across the project area.” In addition the following sentence was added, “ According to the National Oceanic Atmospheric Agency National Centers for Environmental Information State Climate Summary for West Virginia, “Annual precipitation is projected to increase for West Virginia over this century with the largest increases occurring during winter and spring. The number and intensity of extreme precipitation events are also projected to increase. These events will likely lead to greater flood risk.”<sup>1</sup>

In response to the second recommendation, “We recommend considering seed mixes and other revegetation efforts that exclusively utilize native species that support pollinator and ecosystem health while still achieving structural objectives such as erosion control.” This comment is noted. As described in Section 5.1, page 48, “The riparian area thus will be revegetated via proactive, purposeful revegetation and via passive, natural vegetative succession.” In addition, “[a]creage of the area to be revegetated will be confirmed after the application and selection phase. Best management practices and standard recommended seed mixes will be used.” As described in Section 7.3, page 59 “Sites will be reseeded with a seed mix that is compatible with floodplain vegetation.” In addition, the following sentence was added, “Best management practices and standard recommended seed mixes will be used according to NRCS Conservation Practice Standards and Specifications under the Critical Area Conservation Practice Standard.”<sup>1</sup>

All five clarifying recommendations will be incorporated.

1. The title of section 4.3 on page 34 reads “Alternatives Considered by Eliminated from Detailed Study”, will be changed to “Alternatives Considered but Eliminated from Detailed Study”.
2. Tables 3.1, 4.1, and 5.1 will be described.
3. The ALERT acronym will be defined in the document and the website for citation 28 on the list of citation for section 4.0 on page 744 will be updated.
4. The National Economic Development (NED) and the use of NED in the analysis will be explained.
5. The benefit-to-cost ratio of 1.5 to 1 will be explained.



# Appendix B

## Watershed Project Map

## Appendix C

### Support Maps

## Appendix D

### Investigation and Analysis Report

To determine the *proposed project site* within the *project area*, planners (1) gathered input from local stakeholders; (2) solicited input from the regulatory community; (3) created maps through the Region 1 Planning and Development Council (Region 1) to understand overlays of project data; (4) analyzed project mapping from Region 1 against mapping from the WV Flood Tool; (5) gathered and analyzed flood and real property-related data available through the WV Flood Tool; and (6) calculated potential flood damage reduction benefits for each structure.

## **Local Stakeholder Input**

The first step taken to determine the *proposed project site* within the *project area* boundary was to gather input from Wyoming County local leaders. More specifically, planners invited local leaders, including mayors from all incorporated municipalities in Wyoming County; members of the Wyoming County Commission; the directors of the Wyoming County Economic Development Authority; the director of Region 1 Planning and Development Council; West Virginia State senators and House of Delegates members representing the area; and county floodplain managers to an introductory meeting.

Planners explained the desire to plan a project aimed at addressing harm and damage caused by flooding in the *project area* and reducing the threat of potential future flooding. Planners explained that all alternatives would be considered and addressed obstacles associated with constructing dams, channels, and other structural measures within the *project area*. At that meeting, planners then worked to gauge local support for a potential voluntary floodplain buyout project and offered the local leaders in attendance an opportunity to discuss local priorities in the context of such a project. In addition to expressing general concerns about flooding, participants identified (1) minimizing impacts to existing and future water and sewer infrastructure; (2) working outside of municipal boundaries; (3) avoiding existing and future economic development areas; and (4) addressing dilapidated buildings as issues to prioritize, if possible, during the planning process.

This group of local leaders also identified additional stakeholders to interview during the planning process, including the West Virginia Bureau for Public Health, the West Virginia Department of Environmental Protection (WVDEP), the West Virginia Department of Highways (WVDOT), the Wyoming County Public Service District, the Planning Division of the Federal Emergency Management Administration (FEMA), the West Virginia National Guard, the Upper Guyandotte Watershed Association, Twin Rivers Conservation Club, the Solid Waste Authority, the West Virginia State Development Office, and the Appalachian Regional Commission. Planners had the opportunity to interview these identified stakeholders during the initial scoping meetings, at visits to potential project sites, and during individual meetings. Feedback from additional stakeholders was consistent with priorities identified by local leaders.

## **Regulatory Community Input**

Next, planners conducted a public scoping meeting with the regulatory community. All known federal and state agencies working in the *project area* were invited to the scoping meeting. The scoping meeting included participation from the following regulatory agencies: WVDEP, USACE-Planning Division, USACE-Regulatory Division, the West Virginia Development Office, the West Virginia Department of Natural Resources (WVDNR), Region 1 Planning and Development Council, the Coal Heritage Highway Authority, and West Virginia State Parks. In addition to these regulatory agencies, representatives from Trout Unlimited and Downstream Strategies attended the scoping meeting. Most

of the comments at the scoping meeting were about sharing data that would benefit the planning process. Additional information about public feedback is available in Section 6.

## **Region 1 Maps and Understanding Overlays of Project Data**

Following these scoping meetings, the Land Use Clinic contracted with Region 1 to collect and analyze data for mapping purposes to highlight the local priorities identified during conversations with local leaders, regulatory agencies, and other stakeholders. As a result, West Virginia Region 1 Planning and Development Council developed mapping resources displaying the Regulatory Floodway, Special Flood Hazard Areas, existing and planned buyouts (e.g., buyout programs currently or previously implemented through USACE and FEMA), existing and planned water and wastewater infrastructure, municipal boundaries, economic development corridors and development projects, railroads, existing and proposed tourism projects, public fishing areas, stocked trout streams, wildlife management areas, state parks, recreational trails, river stream access and infrastructure, water quality, mining permit boundaries, mining valley fills, TMDLs, and wetlands in the *project area* boundary (hereinafter referred to as “overlay maps”). These overlay maps are detailed in and attached hereto as Appendix C.

## **Region 1 Maps in Comparison to WV Flood Tool Mapping**

The Land Use Clinic then used the overlay maps to identify areas within the watershed that best reflected local priorities and that were at greatest risk of flood impact. The Land Use Clinic also considered whether areas (1) are serviced by water and sewer infrastructure or will be in the future, (2) are situated outside any municipal boundaries, (3) involve any existing or future economic development plans or tourism projects, and (4) are located in the Regulatory Floodway or Special Flood Hazard Areas. Once areas were identified on the overlay maps, the WV Flood Tool was used to gather and analyze additional data to assist with identifying the *proposed project site*.

As background, the WV Flood Tool is an interactive web application that was designed by the West Virginia GIS Technical Center with funding from the West Virginia Division of Homeland Security and Emergency Management and FEMA to provide, through its online mapping and other data, an effective means by which to make informed decisions about the degree of flood risk for a specific area, property, or parcel. The WV Flood Tool uses interactive data layers to provide detailed mapping and other information about area-specific flood risks, mitigation programs, potential damage assessment, and planning. It also includes parcel-specific data, including tax assessment, appraisal, sales history, and replacement cost figures. More information about the WV Flood Tool is available at [www.mapwv.gov/flood](http://www.mapwv.gov/flood) and later in this appendix at page 9.

## **WV Flood Tool Data**

The WV Flood Tool has three customized interactive map views: Public MAP View, Expert MAP View, and Risk MAP View. The Public MAP View displays only flood hazard zones, including the Regulatory Floodway and Special Flood Hazard Areas, and is intended for general reference. The Risk MAP View displays information used by communities to reduce flood risk. As data is developed, the Risk MAP View is intended to aggregate local data for the purposes of flood risk assessment and mitigation planning. The Expert MAP View is intended for more advanced users who are familiar with FEMA’s official flood maps and flood mitigation programs for risk mapping, assessment, and planning. The Land Use Clinic primarily relied on mapping and data available through the Expert

MAP View to analyze the *project area*.

Utilizing the interactive Expert MAP View allowed the Land Use Clinic to gather data and other information related to (1) overlay of the Regulatory Floodway or Special Flood Hazard Areas on each potential project site; (2) identification of what types of structures (e.g. commercial vs. residential vs. outbuildings), if any, were on the parcels within the *project area*; (3) potential flood impacts in terms of water depth at the 100-year flood frequency and related damage; and (4) real property assessment and appraisal values, potential replacement costs, and sales history of structures within potential project sites.

The Expert MAP View of the WV Flood Tool expands upon the flood hazard mapping and related data with various other categories of data which allowed the Land Use Clinic to gain a parcel-by-parcel perspective for the *project area*. More specifically, the WV Flood Tool has additional data layers that are divided into three major categories: (1) base map or background layers, (2) overlay reference layers, and (3) flood hazard layers. The base map or background layers allow users to customize their view of the interactive mapping so as to highlight roads, imagery, and topography. The imagery layers were especially helpful. These layers allowed for the Land Use Clinic to better understand the lay of the land in the *project area* and to identify where structures and other infrastructure were located at the time of the creation of that imagery.

Next, the Land Use Clinic evaluated the various flood layers to identify those areas with structures that are situated wholly or partially within the Regulatory Floodway or Special Flood Hazard Areas. The Land Use Clinic also utilized water depth information to understand the relative severity of inundation for specific areas at the 100-year flood interval. Also examined as part of the flood layers in the Expert Map View was the existence of parcels that are already mitigated and thus potentially subject to certain land use restrictions.

Building upon what was viewed through the imagery and flood layers, the Land Use Clinic used the overlay reference layers to gather additional data related to the structures located in the Regulatory Floodway or Special Flood Hazard Areas. Analysis of this data allowed the Land Use Clinic to associate structures viewed on the base map or background layers with ownership information, tax classification, specific addresses, and tax map and parcel designations. Using this data to evaluate the potential project sites, the Land Use Clinic worked to (1) identify the number of residential versus commercial structures; (2) analyze whether those structures identified as residential were dwellings as opposed to outbuildings, garages, or other non-occupied structures; and (3) determine if dwellings were likely vacant or likely occupied.

The following is a sample spreadsheet that was developed to compile data regarding individual parcels within the *proposed project site*. Specifically, data was collected from (1) the current tax assessment for each parcel, which includes the tax ticket address, assessment description, and vesting document information; (2) WV Real Estate Assessment Data from the WV Flood Tool, which sets out real estate values, property class, dates of construction, and replacement values; and (3) WV Flood Tool mapping, which includes parcel locations in the regulatory floodway and other floodplains and flood depths at the 100-year floodplain. The spreadsheet summary of the data sets forth threshold criteria to assist in the identification of parcels eligible to make application to participate in the proposed floodplain buyout.

**Table D.1: Sample Spreadsheet of Property Attributes**

Tax ID		27.11.11.11	27.11.11.12	27.11.11.13	27.11.11.14
Physical Address		123 Main Street, Anytown, WV 99999	124, Main Street, Anytown, WV 99999	Mitigated Property	125, Main Street, Anytown, WV 99999
Tax Ticket Address		John Doe, PO Box 123, Anytown, WV 99999	Jane Doe, PO Box 124, Anytown, WV 99999		Sam Smith, PO Box 125, Anytown, WV 99999
Description		L01 ANYTOWN	L03 ANYTOWN		L05 ANYTOWN
Vesting Document		DB 606/PG 72	DB 590/PG 600		DB 570/PG 642
Structure(s) on Parcel?		Yes, in regulatory floodway	No		Yes, partially in regulatory floodway and partially in 100- yr floodplain
Parcel in Regulatory Floodway or SFHA?		Yes, partially in regulatory floodway and partially in 100-yr floodplain	Yes, partially in regulatory floodway and partially in 100- yr floodplain		Yes, partially in regulatory floodway and partially in 100- yr floodplain
3D Flood Depth		10.0 ft	9.0 ft		9.0 ft
Year Built		2000	1986		1972
Property Class		Residential, single- family	Residential, vacant		Commercial
Cost Value*	Dwelling Value	27,600	0		235,000
	Other Bldg Values	0	0		40,000
Total Appraised Value*	Land Appraisal	200	200		35,000
	Bldg Appraisal	27,600	0		235,000
	Total Appraisal	27,800	200		270,000
Assessment**	Land	120	200		35,000
	Building	16,560	0		195,000
	Total	16,680	200		230,000
Replacement Cost	Replace- ment Cost	19,980	N/A		N/A

	<b>Adjusted Replace-ment Cost</b>	18,900	N/A		N/A
<b>Most Recent Sale</b>	<b>Amount</b>	28,000	N/A		N/A
	<b>Year</b>	2005	N/A		N/A
<b>Comments</b>		1-story, 1,355 sq ft conventional dwelling with aluminum walls and no basement; 16x20 outbuilding and carport		acquired by Any County, County Commission through FEMA buyout	Smith's Auto Repair
*Cost Value derived from West Virginia Real Estate Assessment Data using West Virginia Flood Tool					
**Assessment derived from current available county tax ticket					

Utilizing this information, the Land Use Clinic was able to identify several pockets of residential structures on relatively small, contiguous parcels lying within the Regulatory Floodway or Special Flood Hazard Areas with a flood history that presented a repetitive risk to human health and safety from future flooding across the *project area*. Secondary considerations when analyzing these areas of interest were as follows: potential impacts to existing water and sewer service from a voluntary floodplain buyout, whether the areas were incorporated, the potential environmental benefits of re-establishing segments of the natural floodplain, likely removal of structures “straight-piping” into waterways, and county land use planning implications. Also considered was the danger posed by flooding events in making routes of vehicular ingress and egress to several areas of interest impassable, creating difficulty for residents and emergency services to access the area in the event of a flood. Weighing this information, one area was identified as a *proposed project site*: (1) Matheny.

## **Potential Flood Damage Reduction Benefits and Related Costs**

### ***Flood Damage Reduction Benefit Calculated***

Flood damage was then determined for residential properties within the *proposed project site*. The WVGIS Tech Center extracted information from the WV Flood Tool for each priority area and provided detailed risk assessment information for each structure. The median home value (\$71,500, 2019 price base) for Wyoming County, which is well below the West Virginia and national benchmark, was used as the base for all flood damage calculations. Due to the low median home value relative to the state and national median values, household contents were equated at 75% of the house value for all occupied housing and 50% of the value for vacant houses. OBERS was not applied as regional growth is not occurring in the area.<sup>1</sup> Properties in the watershed have numerous storage buildings, gardens, garages and other amenities that represent a third category of flood damage not captured in building or content damages. Property improvements were valued at \$6,000 per property and assumed a total loss for a 1% storm event for all properties within the Regulatory Floodway and Special Flood Hazard Areas.<sup>2</sup>



Flood damage reduction benefits were based on acquisition of the 30 homes across the *project area* with the greatest flood damage. Flood damage was determined by the WV Flood Tool based on building type for the 1% storm event only. These benefits are shown in the Plan-EA Tables 7.2 to 7.7 and comprise the benefit-to-cost ratio for this project.

Additionally, a comparative damage estimate was generated using ratios of 1% storm damages relative to all storms based on NRCS URB1 modeling. Analysis concluded that the 1% storm represents about one-fourth of the damages that floodplain properties endure. Amortized values of total damages are within 97% of the average annual damages from URB1, confirming that amortization of 1% flood damage will yield a similar result as URB1 modeling.

#### ***Cost Savings in Flood Debris Avoided***

Flood debris will be avoided if homes are proactively removed from the floodplain. The WV Flood Tool estimates the debris load for the top 30 most impacted houses at 693 tons for the 1% flood event. The cost per ton of debris removal, \$136.57 per ton, was based on the cost per ton from the demolition phase of the Dunloup Creek project, indexed to current prices. Costs would be similar as the demolition contractor and disposal site are in the same region.

#### ***Savings in Flood Insurance Policy Costs***

Savings in flood insurance policy administrative costs will be realized when 30 houses are proactively removed from the floodplain. The benefit was calculated per P&G 2.4.12(b), which allows reductions in the administrative costs associated with the NFIP to be claimed as NED benefits in alternatives that effectively remove properties from the 100-year floodplain. The annual cost savings per policy is \$200.60.

#### ***Incidental Water Quality Benefit for Removal of Straight-piped Sewage***

Water quality will improve as sources of raw sewage (straight-pipes from houses) are eliminated. The annual cost for residents' willingness to pay for sewer service is used as a proxy measure of society's environmental benefit for wastewater collection. Although the reduction in fecal coliform will be minimal, positive incremental improvements are noteworthy given the magnitude and complexity of the resource problem.

#### ***Regional Job Development***

An estimated fifteen jobs will be temporarily created during the implementation phase. Workforce WV wage rates were referenced for five construction laborers, two truck drivers, two inspectors, one heavy equipment operator, one property surveyor, one property appraiser, one lawyer, one real estate agent, and one project manager.

As part of the investigation and analysis for the planning of this project, planners consulted with and utilized data incorporated by the WV GIS Technical Center into the West Virginia Flood Tool. While the development and publication of this data was incredibly helpful to the efforts of the planners, the WV GIS Technical Center developed and published said data as part of a separate ongoing project. Accordingly, to give further context to the data relied on by the planners of this EA, what follows is a discussion of the methodology of the WV GIS Technical Center regarding its separate project involving flood and risk assessment data in WV and its application through the WV Flood Tool. This separate project is specific to the data available through the Risk MAP view of the WV Flood Tool. As such, the discussion from the WV GIS Tech Center included below does not speak to all data and uses of the WV Flood Tool that planners relied upon during investigation and analysis.

## WV GIS Technical Center

### METHODOLOGY

Funded by a FEMA Hazard Mitigation Grant Program (HMGP) and the State Hazard Mitigation Office, building-level flood risk assessments are being completed statewide for a 1% annual chance flood (100-year) event in support of local and state hazard mitigation plans. The building-level flood risk assessments utilize FEMA's Flood Assessment Structure Tool (FAST), a GIS-based, open source utility designed by FEMA's Hazus Program for estimating potential building losses from flood disasters. FAST was built from the ArcGIS Python script developed by Oregon's Department of Geology and Mineral Industries (DOGAMI). A Hazus Level 2 advanced analysis increases the accuracy and precision of an analysis by incorporating user-supplied data relevant to the hazard. The flood model results support local hazard mitigation plans and other flood reduction efforts.

The Hazus utility employs a standardized methodology in which building and water depth inputs utilize Depth Damage Functions (DDFs) to calculate economic damage loss estimates. The proper Depth Damage Function (DDF) is assigned based on the Occupancy Type, Foundation Type, and Number of Stories of each structure. The First Floor Flood Height for each structure point is subtracted from the Water Depth to calculate the Depth-in-Structure flood depth, in feet above ground level.

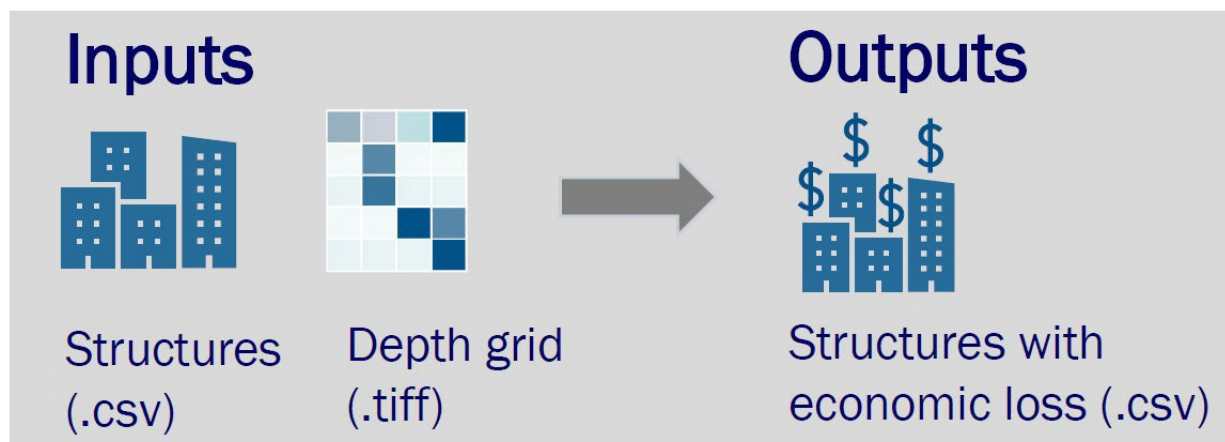


Figure 1. Hazus Building-Level Flood Loss Estimates. Source: FEMA.

FAST performs a Hazus Flood Model analysis, using the most accurate 100-year depth grid available. It generates damage loss estimates for building, content, and inventory, building debris, and building repair/replacement times. Population displacement estimates are computed from the Residential

Occupancy Types and census average household size. All building-level risk assessments are output to tabular reports, geodatabase, and the RiskMAP View of the WV Flood Tool.

The Hazus Program designed FAST to make flood risk assessments quicker, simpler, and more cost effective. FAST provides planners, analysts, and policymakers with a free and user-friendly tool to characterize flood risk in their communities using completely open methods and technology.

## **BUILDING INVENTORY**

Detailed building inventories are developed by pinpointing all primary structures in the Special Flood Hazard Area or 100-year floodplain. Historical and community assets (e.g. government buildings, churches) are also inventoried. Essential facilities are inventoried to the 0.2-percent (500-year) annual chance flood event. Required building characteristics are Occupancy Class, Foundation Type, First Floor Height, Number of Stories, Area, and Replacement Cost. Default values are populated from the most current State Parcel Assessment Database, which is updated annually and then modified where necessary with user-defined values that override the Assessment Database values. User-defined values can be entered for the building address, parcel geometry and assessment identifiers, essential building characteristics, and base flood water depth. Building pictures can be linked to the risk assessment using the unique building identifier.

GIS Specialists use desktop mapping software to pinpoint the building location to the most restrictive flood zone, identify insurable primary structures, match building points to the correct building assessment records, complete missing building attributes, and modify default assessment building values with user-supplied values. The following GIS Reference Layers are used to improve the location accuracy and building attributes: E-911 Addresses, Parcels/Attributes, Aerial Imagery, Building Footprints, Street View Pictures, Elevation Certificates, and other building reference databases. All the building points in the Special Flood Hazard Area and High-Risk Advisory Zones are manually captured, processed, and then quality checked using nine-square-mile grids. Data error flags are recorded for missing assessment values, parcel misalignments, missing E-911 address numbers, etc. User-supplied values that override the default assessment values are recorded as red text in the building inventory tables. A unique building identifier is formed from concatenating the Parcel ID and Building Address Number.

## **WATER DEPTH GRIDS**

The Water Depth Grid communicates information about the flood depth for a 1-percent (100-year) annual chance flood. Flood Depth Grids illustrate the flood depth, in feet above the ground surface, to demonstrate the variability of flood depths in flood prone areas. Officials can use depth grids to help individuals visualize the depth of flooding their home might experience; an easier concept than understanding a base flood elevation. The depth grid, combined with an inventory of the built environment, is used by the Hazus Flood Model to determine flood loss potential, by applying the appropriate depth-damage curves. For the Flood Model Analysis, Model-backed Depth Grids created from engineering software like HEC-RAS are preferred over the less-accurate Hazus Depth Grids. In the WV Flood Tool, the Water Depth Grid is displayed in the (1) Flood Results Query Panel, (2) Flood Risk Layers Menu, and (3) 3D Flood Visualization.

## **FLOOD ASSESSMENT PRODUCTS**

Flood risk assessment products are presented at the building and community levels for each county. Primary products include a Flood Risk Report, Flood Risk Map, Flood Risk Database, Flood Risk Tables, Flood Risk Grids (Water Depth, Water Surface Elevation), Flood Zone Changes resulting

from active or future flood map studies, and Building-Level Flood Risk Assessments. Building Exposure information like structure values, occupancy type, owner occupancy, and household population are tabulated per structure. The Hazus Flood Model calculates per structure Building Damage Loss Estimates, Debris Removal, and Restoration Time for a 1% annual chance flood event. The Population Displacement is computed per residential structure from the building inventory and census average household size, both of which provide inputs for Short-term Shelter Models. Other data layers and products that support floodplain management and risk assessments include dams, levees, landslides, high-water marks, LOMA verified points, elevation certificates, assessment reports, CRS program variables, and 3D flood visualizations. Building Flood Risk is viewable in both tabular and graphical formats. Building-level risk assessments are aggregated to the community level and can be summarized at the regional and state levels. Risk assessment reports can also be generated at the stream and watershed levels.

Although the Flood Risk Reports and data are organized primarily at the community and building levels, users can access the detailed risk assessments of each structure by viewing the Flood Risk Tables or WV Flood Tool. Mitigation layers (e.g., buyout properties, open space preservation) provide information for communities to identify flood reduction activities. FEMA's Community Engagement Prioritization Tool (CEP-Tool) will be used to rank communities by risk indicators and prioritize for engagement.

## **COMMUNITY EXPOSURE AND RISK**

There are 287 communities (232 municipalities and 55 unincorporated counties), 11 planning regions, and 55 counties.

- ☐ Demographic/Social Vulnerability
  - Population Growth
  - Population in SFHA
  - Social Vulnerability (SoVI)
  - Ownership
  - Income
  - Age
- ☐ Land Use/Impervious Surfaces
- ☐ Historical Flooding
  - Presidential-declared Disasters
  - Date of Last Disaster
  - High Water Marks
- ☐ Insurance Claims
- ☐ Insurance Policies
- ☐ Flood Zones
  - Stream Miles
  - Regulatory Floodway
  - High-risk Advisory Zones (Advisory A, Updated AE, Preliminary NFHL)
  - Area in SFHA
- ☐ Structures Summary
  - Buildings in SFHA (counts, values, occupancy class, etc.)
  - Facilities (Essential, Community, Government)
  - Historical
  - Repetitive Loss Structures
  - Dams and Levees
  - Transportation Infrastructure (Roads/Bridges)
- ☐ Flood Risk Assessment Summary
  - Building Damage

- Debris Removal
- Population Displaced
  - Short-term Sheltering
  - Companion Pets

### ***Building-Level Exposure***

The data variables below identify flood exposure to buildings and communities:

#### Flood Zones

- ☐ Regulatory/Non-Regulatory/Floodway
- ☐ High-risk Advisory Zones/Future Map Conditions
  - Mapped-in SFHA
  - Mapped-out SFHA
  - No Change SFHA
  - Floodway
- ☐ LOMA (Positional Accuracy Verified)
  - Structure Removal
  - Structure Non-removal
  - Structure Out as Shown
- ☐ Flooding Source by Stream Name/Watershed
- ☐ Population in SFHA

#### Water Depth

- ☐ Water Depth
- ☐ Water Depth-in-Structure
- ☐ Water Surface Elevation

#### Structures

- ☐ Building Exposure
- ☐ Building Exposure Cost
- ☐ Building Occupancy Class (Residential/Commercial/Other)
- ☐ Building Owner Occupied/Rental
- ☐ Basement/Foundation Type
- ☐ First-floor Height/Lowest Floor
- ☐ Building Year/Construction/New Development (Pre-FIRM, Post-FIRM)
- ☐ Essential Facilities/Community Assets
- ☐ Historical Structure
- ☐ Riparian Zone Structure

### ***Building-Level Flood Risk Assessment***

Site-specific flood assessments are conducted for a 1% annual chance flood (100-year flood) event. FEMA's Open Hazus Flood Assessment Structure Tool is employed for the Flood Analysis Model.

- ☐ Building Damage Percent (Hazus)
- ☐ Building Damage Loss U.S. Dollars (Hazus)
- ☐ Content and Inventory Loss (Hazus)
- ☐ Debris Removal (Hazus)
- ☐ Restoration Time (Hazus)
- ☐ Population Displacement

### ***Mitigation Opportunities***

Factors to identify flood reduction measures and areas of mitigation interest:

- ☐ Open Space Preservation/Restore Floodplain to Natural Functions
  - ☐ Buyout Properties (deed restrictions, restrictive covenants, or similar measures)
  - ☐ Public Lands
  - ☐ Private Lands
  - ☐ Riparian Zones
- ☐ Natural Flood Zone Functions
  - ☐ Riparian Zones
  - ☐ Wetlands
  - ☐ Habitat
  - ☐ Permeable Surfaces
- ☐ Repetitive Loss Structures
- ☐ Community Rating System (CRS) Class
- ☐ Adoption of Higher Standards/Building Code Standards
- ☐ CAV/CAC Compliance of Last Visit
- ☐ Active or Mapping Studies
- ☐ Risk Communications

## COMMUNITY ENGAGEMENT AND FIELD OF VERIFICATION

Field verification and outreach are an important component of the flood risk assessments in support of local hazard mitigation plans. Local officials, planners, emergency managers, or floodplain managers are the primary target audience for community engagement. The Flood Risk Products (Report, Map, Tables, Database) will be provided to each community to verify the risk assessment findings and identify potential mitigation actions. Reports will also be provided to the Regional Planning and Development Councils, which are responsible for coordinating local hazard mitigation plans.

The Flood Risk Report will provide links to FEMA and State Resource Guides that may include:

- ☐ *Reducing Damage from Localized Flooding: A Guide for Communities*
- ☐ *Community Rating System Coordinators Manual*
- ☐ *WV Floodplain Management Quick Guide*

Communities will be provided with a form or survey to provide feedback on the Flood Risk Report, Maps, and Tables. Important variables for the communities to validate include structure type (e.g., primary, accessory, seasonal, dilapidated), foundation type, and first floor height of elevated structures. It would be beneficial if communities can provide Finished Construction Elevation Certificates, especially of elevated structures, to verify the first-floor heights, lowest floor elevation, and water depth-in-structure. The Building Inventory follows a cyclic workflow in that new structure-level flood risk assessments can be generated fairly quickly from edits to the building stock or flood depth grids, and then published to the RiskMAP View of the WV Flood Tool. Communities do not need mapping software since the Building-level Flood-risk Assessments can be viewed in a Spreadsheet Table with web links to the WV Flood Tool. Areas of Mitigation Interest should be identified by the communities and submitted to the state via the form or survey. The Areas of Mitigation Interest (AoMI) dataset should capture the mitigation interests of the community and provide targets for future mitigation action.

# Appendix E

## Other Supporting Information

Memorandum of Understanding from USACE

Tribal Concurrence Letters

Programmatic Agreement with SHPO

**MEMORANDUM OF UNDERSTANDING**  
**BETWEEN THE**  
**US ARMY CORPS OF ENGINEERS**  
**AND THE**  
**UNITED STATES DEPARTMENT OF AGRICULTURE**  
**NATURAL RESOURCES CONSERVATION SERVICE**

**I. PURPOSE**

The purpose of this Memorandum of Understanding (MOU) is to establish a framework for the Natural Resources Conservation Service (NRCS) and the US Army Corps of Engineers (USACE) to cooperate in the planning and development of the Upper Guyandotte Watershed. By NRCS invitation, the USACE has agreed to become a cooperating agency in the development of an Environmental Assessment for this watershed. This MOU will specify the respective roles of each agency during planning.

**II. BACKGROUND AND MUTUAL BENEFITS AND INTERESTS**

Funding was approved for the Upper Guyandotte Watershed under the authority of the Watershed Protection and Flood Prevention Act (Section 14 of PL-83-566, as amended). NRCS seeks to establish a cooperating relationship with the USACE in accordance with the Council on Environmental Quality regulations regarding the implementation of the National Environmental Policy Act (NEPA) at 40 CFR Part 1501.6. Such a relationship recognizes the special expertise and jurisdiction of the USACE with respect to small watershed projects. The West Virginia University Land Use and Sustainable Development Law Clinic and the NRCS are collaborating on this planning effort.

Such a relationship will be mutually beneficial because both agencies have NEPA compliance responsibilities. Cooperating during the planning and implementation of this project will assist both agencies in fulfilling their respective environmental review requirements and will reduce the duplication and delay between agencies.

**III. TERMS AND CONDITIONS**

The NRCS will be the lead federal agency for project planning and implementation. NRCS seeks two specific outcomes as a result of this cooperating effort 1) assistance in the determination of resource impacts once the recommended measures are identified



and, 2) fulfillment of all planning analysis that is necessary for the Sponsors to acquire any Department of the Army permits that may be required to implement the project.

NRCS or the Local Sponsor will initiate meetings, provide right of access to the project area, and engage agency specialists where appropriate. The WV State Conservationist will be the Responsible Federal Official and as such, will issue the Record of Decision or Finding of No Significant Impact, whichever is appropriate. NRCS will bear responsibility for the public participation aspects of NEPA, including public meetings and the distribution of environmental documents for review and comment.

NRCS and Local Sponsors will bear the cost for the planning and implementation of the project. No funds will be provided to the USACE to support their cooperation in this project. NRCS will maintain open lines of communication with the USACE throughout the planning process, which is anticipated to take 12-18 months.

#### **IV. PROVISIONS**

1. This MOU takes effect upon the date of last signature by the Parties and remains valid for five years.
2. This MOU may be cancelled, renegotiated, amended, or modified by a written amendment through an exchange of correspondence between authorized officials of the signatory Parties.
3. Either Party may terminate this MOU by written notice to the other Party at 30 least days before the effective date of the termination.
4. This MOU is not intended to, and does not create any right, benefit, or trust responsibility, substantive or procedural, enforceable at law or equity, by any Party against the United States, its agencies, its officers, or any person.
5. As a condition of this MOU, all signatory Parties assure and certify that this MOU, and any agreements written pursuant to this MOU, will comply with the nondiscrimination provision contained in Title VI and VII of the Civil Rights Act of 1964, as amended; the Civil Rights Restoration Act of 1987 (Public Law 100-259); and other nondiscriminatory statutes. They also will be in accordance with regulations of the Secretary of Agriculture (7 CFR 15, Subpart A and B), which provides that no person in the United States shall, on the grounds of race, national origin, age, sex, religion, marital status, or disability be excluded from participating in, be denied the benefits of, or be otherwise subjected to discrimination under any program or activity receiving Federal financial assistance from the U. S. Department of Agriculture, or any agency thereof.
6. All activities conducted under this MOU shall be in compliance with the Drug-Free Workplace Act of 1988 (Public Law 100-690, Title V, Subtitle D).

7. Employees of NRCS shall participate in efforts under this agreement solely as representatives of the United States NRCS. To this end, they shall not participate as directors, officers, employees, or otherwise serve or hold themselves out as representatives of USACE or any member of USACE. They also shall not assist USACE or any member of USACE with efforts to lobby Congress, or to raise money through fundraising efforts. Further, NRCS employees shall report to their immediate supervisor any negotiations with USACE or any member of USACE, concerning future employment and shall refrain from participation in efforts regarding such party until approved by the Agency.

## **V. TECHNICAL AND ADMINISTRATIVE CONTACTS**

### **USACE Contacts:**

Name: Michael Hatten  
Chief, Regulatory Division  
Address: U.S. Army Corps of Engineers, Huntington District  
502 Eighth Street  
Huntington, WV 25701-2070  
Telephone: 304-399-5710  
Email: [Michael.E.Hatten@usace.army.mil](mailto:Michael.E.Hatten@usace.army.mil)

Name: Rebecca Rutherford  
Chief, Environmental Analysis Section  
Planning Branch  
U.S. Army Corps of Engineers, Huntington District  
502 Eighth Street  
Huntington, WV 25701-2070  
Telephone: 304-399-5924  
Email: [Rebecca.A.Rutherford@usace.army.mil](mailto:Rebecca.A.Rutherford@usace.army.mil)

### **NRCS Contacts:**

Name: Laura Smith, Assistant State Conservationist – Programs  
Address: 1550 Earl Core Road, Suite 200  
Morgantown WV 26505  
Telephone: (304) 284-7543  
Email: [Laura.Smith@wv.usda.gov](mailto:Laura.Smith@wv.usda.gov)

Name: Pamela Yost, Watershed Economist  
Address: 1550 Earl Core Road, Suite 200  
Morgantown WV 26505  
Telephone: (304) 284-7572  
Email: [Pamela.Yost@wv.usda.gov](mailto:Pamela.Yost@wv.usda.gov)

ACCEPTED BY:

LOUIS ASPEY

Digitally signed by LOUIS

ASPEY

Date: 2019.03.11 09:28:43

-04'00'

Louis Aspey

State Conservationist, Natural Resources Conservation Service

United States Department of Agriculture

DATE

HATTEN.MICHAEL.E.12301  
46140

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DN: c=US, o=U.S. Government, ou=DoD, ou=PKI,

ou=USA, cn=HATTEN.MICHAEL.E.1230146140

Date: 2019.03.07 13:35:51 -05'00'

Michael Hatten

Chief, Regulatory Division

US Army Corps of Engineers

DATE

RUTHERFORD.REBECCA.A.12  
29728969

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DN: c=US, o=U.S. Government, ou=DoD, ou=PKI, ou=USA,

cn=RUTHERFORD.REBECCA.A.1229728969

Date: 2019.02.25 09:23:40 -05'00'

Rebecca Rutherford

Chief, Environmental Analysis Section

US Army Corps of Engineers

DATE



**United States Department of Agriculture**  
Natural Resources Conservation Service  
1550 Earl Core Road, Suite 200  
Morgantown, WV 26505

Phone: (304) 284-7540  
Fax: (855) 857-6448

May 18, 2023

Seneca Cayuga Nation  
Chief Charles Diebold  
23701 South 655 Road  
Grove, OK 74344

**RE: Upper Guyandotte River Flood Mitigation  
Watershed Plan & Environmental Assessment**  
Wyoming County, West Virginia

Dear Chief Diebold,

The United States Department of Agriculture, Natural Resources Conservation Service (NRCS), in coordination with the Wyoming County Commission, as the project sponsor, is proposing a flood mitigation project in the Upper Guyandotte River Basin in Wyoming County West Virginia, under authority of the Watershed Protection and Flood Prevention Act (Public Law [PL] 83-566).

Flood mitigation is being proposed for the Upper Guyandotte River Basin to 1) provide prevention of flood damages, and improve public safety, 2) provide for increased public utilization of the land and water, and 3) improve wildlife and fishery habitat.

In cooperation with the Wyoming County Commission, NRCS is in the planning stages of preparing an Environmental Assessment (EA) under the National Environmental Policy Act (NEPA) to consider and analyze potential impacts from the action. Therefore, in accordance with NEPA and 54USC§306108 of the National Historic Preservation Act, and 36CFR§800.3 (c), NRCS seeks your participation in the planning process.

If you have any questions, comments, or concerns please contact Donald Lee Dodd, State Water Resources Planning Specialist at 304-640-4519, or email [donny.dodd@usda.gov](mailto:donny.dodd@usda.gov). We look forward to working with your government and continuing the consultation process.

Sincerely,

Jon Bourdon  
State Conservationist

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United States Department of Agriculture  
Natural Resources Conservation Service  
1550 Earl Core Road, Suite 200  
Morgantown, WV 26505

Phone: (304) 284-7540  
Fax: (855) 857-6448

May 18, 2023

The Osage Nation  
Chief Geoffrey Standing Bear  
627 Grandview Avenue  
Pawhuska, OK 74056

RE: **Upper Guyandotte River Flood Mitigation  
Watershed Plan & Environmental Assessment**  
Wyoming County, West Virginia

Dear Chief Standing Bear,

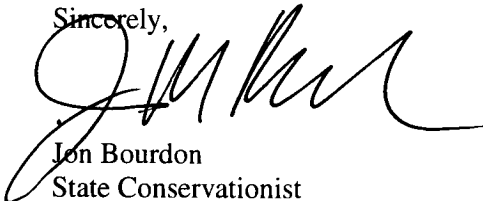
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Natural Resources Conservation Service  
1550 Earl Core Road, Suite 200  
Morgantown, WV 26505

Phone: (304) 284-7540  
Fax: (855) 857-6448

May 18, 2023

Monacan Indian Nation  
Chief Kenneth Branham  
111 Highview Drive  
Madison Heights, VA 24572

RE: **Upper Guyandotte River Flood Mitigation  
Watershed Plan & Environmental Assessment**  
Wyoming County, West Virginia

Dear Chief Branham,

The United States Department of Agriculture, Natural Resources Conservation Service (NRCS), in coordination with the Wyoming County Commission, as the project sponsor, is proposing a flood mitigation project in the Upper Guyandotte River Basin in Wyoming County West Virginia, under authority of the Watershed Protection and Flood Prevention Act (Public Law [PL] 83-566).

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Sincerely,



Jon Bourdon  
State Conservationist

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**United States Department of Agriculture**  
Natural Resources Conservation Service  
1550 Earl Core Road, Suite 200  
Morgantown, WV 26505

Phone: (304) 284-7540  
Fax: (855) 857-6448

May 18, 2023

The Eastern Shawnee Tribe of Oklahoma  
Chief Glenna Wallace  
P.O. Box 350  
Seneca, MO 64865

**RE: Upper Guyandotte River Flood Mitigation  
Watershed Plan & Environmental Assessment**  
Wyoming County, West Virginia

Dear Chief Wallace,


The United States Department of Agriculture, Natural Resources Conservation Service (NRCS), in coordination with the Wyoming County Commission, as the project sponsor, is proposing a flood mitigation project in the Upper Guyandotte River Basin in Wyoming County West Virginia, under authority of the Watershed Protection and Flood Prevention Act (Public Law [PL] 83-566).

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Sincerely,



Jon Bourdon  
State Conservationist

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**United States Department of Agriculture**  
Natural Resources Conservation Service  
1550 Earl Core Road, Suite 200  
Morgantown, WV 26505

Phone: (304) 284-7540  
Fax: (855) 857-6448

May 18, 2023

The Eastern Band of Cherokee Indians  
Chief Richard Sneed  
88 Council House Loop Road  
Cherokee, NC 28719

**RE: Upper Guyandotte River Flood Mitigation  
Watershed Plan & Environmental Assessment**  
Wyoming County, West Virginia

Dear Chief Sneed,

The United States Department of Agriculture, Natural Resources Conservation Service (NRCS), in coordination with the Wyoming County Commission, as the project sponsor, is proposing a flood mitigation project in the Upper Guyandotte River Basin in Wyoming County West Virginia, under authority of the Watershed Protection and Flood Prevention Act (Public Law [PL] 83-566).

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Jon Bourdon  
State Conservationist

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**United States Department of Agriculture**  
Natural Resources Conservation Service  
1550 Earl Core Road, Suite 200  
Morgantown, WV 26505

Phone: (304) 284-7540  
Fax: (855) 857-6448

May 18, 2023

The Delaware Nation  
Chief Deborah Dotson  
Highway 281 Main Office Bldg 100  
Anadarko, OK 73005

**RE: Upper Guyandotte River Flood Mitigation  
Watershed Plan & Environmental Assessment**  
Wyoming County, West Virginia

Dear Chief Dotson,

The United States Department of Agriculture, Natural Resources Conservation Service (NRCS), in coordination with the Wyoming County Commission, as the project sponsor, is proposing a flood mitigation project in the Upper Guyandotte River Basin in Wyoming County West Virginia, under authority of the Watershed Protection and Flood Prevention Act (Public Law [PL] 83-566).

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Sincerely,



Jon Bourdon  
State Conservationist

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Natural Resources Conservation Service  
1550 Earl Core Road, Suite 200  
Morgantown, WV 26505

Phone: (304) 284-7540  
Fax: (855) 857-6448

May 18, 2023

The Cherokee Nation  
Chief Chuck Hoskin  
17675 South Muskogee Avenue  
Tahlequah, OK 74464

RE: **Upper Guyandotte River Flood Mitigation  
Watershed Plan & Environmental Assessment**  
Wyoming County, West Virginia

Dear Chief Hoskin,

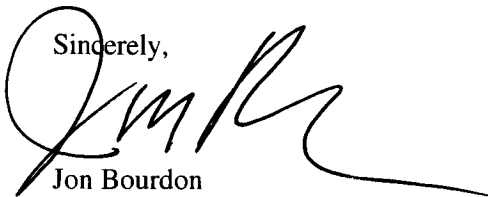
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Sincerely,



Jon Bourdon  
State Conservationist

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Natural Resources Conservation Service  
1550 Earl Core Road, Suite 200  
Morgantown, WV 26505

Phone: (304) 284-7540  
Fax: (855) 857-6448

May 18, 2023

The Catawba Nation  
Chief Bill Harris  
966 Avenue of Nations  
Rock Hill, SC 29730

RE: **Upper Guyandotte River Flood Mitigation  
Watershed Plan & Environmental Assessment**  
Wyoming County, West Virginia

Dear Chief Harris,

The United States Department of Agriculture, Natural Resources Conservation Service (NRCS), in coordination with the Wyoming County Commission, as the project sponsor, is proposing a flood mitigation project in the Upper Guyandotte River Basin in Wyoming County West Virginia, under authority of the Watershed Protection and Flood Prevention Act (Public Law [PL] 83-566).

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Sincerely,

Jon Bourdon  
State Conservationist

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**United States Department of Agriculture**  
Natural Resources Conservation Service  
1550 Earl Core Road, Suite 200  
Morgantown, WV 26505

Phone: (304) 284-7540  
Fax: (855) 857-6448

---

May 18, 2023

Tuscarora Nation  
Chief Tom Jonathan  
5226 Walmore Rd  
Lewiston, NY 14092

**RE: Upper Guyandotte River Flood Mitigation  
Watershed Plan & Environmental Assessment**  
Wyoming County, West Virginia

Dear Chief Jonathan,

The United States Department of Agriculture, Natural Resources Conservation Service (NRCS), in coordination with the Wyoming County Commission, as the project sponsor, is proposing a flood mitigation project in the Upper Guyandotte River Basin in Wyoming County West Virginia, under authority of the Watershed Protection and Flood Prevention Act (Public Law [PL] 83-566).

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If you have any questions, comments, or concerns please contact Donald Lee Dodd, State Water Resources Planning Specialist at 304-640-4519, or email [donny.dodd@usda.gov](mailto:donny.dodd@usda.gov). We look forward to working with your government and continuing the consultation process.

Sincerely,

Jon Bourdon  
State Conservationist

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United States Department of Agriculture

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Natural Resources  
Conservation Service

West Virginia State  
Office

1550 Earl L Core Rd.  
Suite 200  
Morgantown, WV 26505

Ph: 304-284-7540  
Fax: 855-857-6448  
[www.wv.nrcs.usda.gov](http://www.wv.nrcs.usda.gov)

October 24, 2023

The Catawba Nation  
Chief Bill Harris  
966 Avenue of Nations  
Rock Hill, SC 29730

Reference: Programmatic Agreement in Support of the Proposed Upper Guyandotte River Voluntary Floodplain Buyout, Wyoming County, West Virginia

Dear Chief Bill Harris,

The United States Department of Agriculture, West Virginia Natural Resources Conservation Service (NRCS), in coordination with the Wyoming County Commission and the Southern Conservation District of West Virginia as the project sponsors, is proposing a flood mitigation project in the Upper Guyandotte River Basin in Wyoming County West Virginia, under authority of the Watershed Protection and Flood Prevention Act (Public Law 83-566, as amended; 16 U.S.C. 1001-1012).

In support of this proposed project, West Virginia NRCS is preparing an Environmental Assessment (EA) under the National Environmental Policy Act (NEPA) to consider and analyze potential impacts from the proposed flood mitigation. Specifically, NRCS seeks to identify methods to address repetitive flooding within the community of Matheny resulting from concentrated development in the floodplain, and the preferred alternative is a voluntary floodplain buyout of thirty (30) currently unidentified residential structures along the Laurel Fork, a tributary of the Clear Fork of the Guyandotte River.

The focus of flood mitigation has been narrowed to specifically within the community of Matheny in order to 1) provide prevention of flood damages, and improve public safety, 2) provide for increased public utilization of the land and water, and 3) improve wildlife and fishery habitat. A total of sixty-eight residential properties within Matheny along the Laurel Fork, a tributary of the Clear Fork of the Guyandotte River, have been identified as qualified to participate in the voluntary floodplain buyout program. These structures are mostly modern, but some structures may be historic ranging in date of original construction from between 1943 to 2011. Of these sixty-eight properties, thirty will ultimately be selected to be part of the voluntary floodplain buyout.

In compliance with National Historic Preservation Act (NHPA), 36 CFR Part 800.4(b)(2) and 36 CFR Part 800.5(a)(3), respectively, it is the intention of NRCS West Virginia to develop a Programmatic Agreement (PA) that will employ a phased approach to identify historic properties that may be located within the project area and define mitigation measures to resolve adverse effects to these properties. The PA will be developed through consultation between NRCS West Virginia, the West Virginia

SHPO, the Wyoming County Commission, and the Southern Conservation District of West Virginia.

Consultation will also occur with representatives of the Seneca Cayuga Nation, The Osage Nation, Monacan Indian Nation, The Eastern Shawnee Tribe of Oklahoma, The Eastern Band of Cherokee Indians, The Delaware Nation, The Cherokee Nation, The Catawba Nation Tuscarora Nation, Northern Appalachian Coal Mining Heritage Association, the National Coal Heritage Area Authority, the Preservation Alliance of West Virginia, and the Wyoming County Historical Museum. The Advisory Council for Historic Preservation (ACHP) will be invited to participate in the consultation process as well. Once the PA and measures to minimize and mitigate the adverse effects are agreed upon by the consulting parties, the PA will be executed and implemented pursuant to compliance with Section 106 of the National Historic Preservation Act.

In accordance with 36 CFR Part 800.3, NRCS West Virginia invites your participation in consultation and the development of the PA. If you have any questions, comments, or concerns please contact Christi Hicks, Assistant State Conservationist for Water Resources at 304-276-5636, or email [Christi.Hicks@usda.gov](mailto:Christi.Hicks@usda.gov). We look forward to working with you and continuing the consultation process.

Sincerely,

**STEVEN BAKER** Digitally signed by STEVEN BAKER  
Date: 2023.10.25 06:27:30 -04'00'

STEVEN BAKER  
Acting State Conservationist

cc:

Christi Hicks, Assistant State Conservationist–Water Resources, NRCS, West Virginia  
Hannah Thacker, Soil Conservationist, NRCS, West Virginia  
Pamela Yost, Economist, NRCS, West Virginia  
Becky Jeffries, Management Analyst, NRCS, West Virginia



United States Department of Agriculture

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Natural Resources  
Conservation Service

West Virginia State  
Office

1550 Earl L Core Rd.  
Suite 200  
Morgantown, WV 26505

Ph: 304-284-7540  
Fax: 855-857-6448  
[www.wv.nrcs.usda.gov](http://www.wv.nrcs.usda.gov)

October 24, 2023

The Cherokee Nation  
Chief Chuck Hoskin  
17675 South Muskogee Avenue  
Tahlequah, OK 74464

Reference: Programmatic Agreement in Support of the Proposed Upper Guyandotte River Voluntary Floodplain Buyout, Wyoming County, West Virginia

Dear Chief Chuck Hoskin,

The United States Department of Agriculture, West Virginia Natural Resources Conservation Service (NRCS), in coordination with the Wyoming County Commission and the Southern Conservation District of West Virginia as the project sponsors, is proposing a flood mitigation project in the Upper Guyandotte River Basin in Wyoming County West Virginia, under authority of the Watershed Protection and Flood Prevention Act (Public Law 83-566, as amended; 16 U.S.C. 1001-1012).

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Sincerely,

**STEVEN BAKER** Digitally signed by STEVEN BAKER  
Date: 2023.10.25 06:28:39 -04'00'

STEVEN BAKER  
Acting State Conservationist

cc:

Christi Hicks, Assistant State Conservationist–Water Resources, NRCS, West Virginia  
Hannah Thacker, Soil Conservationist, NRCS, West Virginia  
Pamela Yost, Economist, NRCS, West Virginia  
Becky Jeffries, Management Analyst, NRCS, West Virginia





United States Department of Agriculture

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Natural Resources  
Conservation Service

West Virginia State  
Office

1550 Earl L Core Rd.  
Suite 200  
Morgantown, WV 26505

Ph: 304-284-7540  
Fax: 855-857-6448  
[www.wv.nrcs.usda.gov](http://www.wv.nrcs.usda.gov)

October 24, 2023

Northern Appalachian Coal Mining Heritage Association  
22 Coal Country Lane  
Fairmont, WV 26554

Reference: Programmatic Agreement in Support of the Proposed Upper Guyandotte River Voluntary Floodplain Buyout, Wyoming County, West Virginia

To Whom it May Concern:

The United States Department of Agriculture, West Virginia Natural Resources Conservation Service (NRCS), in coordination with the Wyoming County Commission and the Southern Conservation District of West Virginia as the project sponsors, is proposing a flood mitigation project in the Upper Guyandotte River Basin in Wyoming County West Virginia, under authority of the Watershed Protection and Flood Prevention Act (Public Law 83-566, as amended; 16 U.S.C. 1001-1012).

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Consultation will also occur with representatives of the Seneca Cayuga Nation, The Osage Nation, Monacan Indian Nation, The Eastern Shawnee Tribe of Oklahoma, The Eastern Band of Cherokee Indians, The Delaware Nation, The Cherokee Nation, The Catawba Nation Tuscarora Nation, Northern Appalachian Coal Mining Heritage Association, the National Coal Heritage Area Authority, the Preservation Alliance of West Virginia, and the Wyoming County Historical Museum. The Advisory Council for Historic Preservation (ACHP) will be invited to participate in the consultation process as well. Once the PA and measures to minimize and mitigate the adverse effects are agreed upon by the consulting parties, the PA will be executed and implemented pursuant to compliance with Section 106 of the National Historic Preservation Act.

In accordance with 36 CFR Part 800.3, NRCS West Virginia invites your participation in consultation and the development of the PA. If you have any questions, comments, or concerns please contact Christi Hicks, Assistant State Conservationist for Water Resources at 304-276-5636, or email [Christi.Hicks@usda.gov](mailto:Christi.Hicks@usda.gov). We look forward to working with you and continuing the consultation process.

Sincerely,

**STEVEN BAKER**

Digitally signed by STEVEN  
BAKER  
Date: 2023.10.25 06:30:03  
-04'00'

STEVEN BAKER  
Acting State Conservationist

cc:

Christi Hicks, Assistant State Conservationist–Water Resources, NRCS, West Virginia  
Hannah Thacker, Soil Conservationist, NRCS, West Virginia  
Pamela Yost, Economist, NRCS, West Virginia  
Becky Jeffries, Management Analyst, NRCS, West Virginia



United States Department of Agriculture

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Natural Resources  
Conservation Service  
  
West Virginia State  
Office  
  
1550 Earl L Core Rd.  
Suite 200  
Morgantown, WV 26505  
  
Ph: 304-284-7540  
Fax: 855-857-6448  
[www.wv.nrcs.usda.gov](http://www.wv.nrcs.usda.gov)

October 24, 2023

Coal Heritage Highway Authority/National Coal Heritage Area  
PO Box 15  
100 Kelly Avenue  
Oak Hill, WV 25901

Reference: Programmatic Agreement in Support of the Proposed Upper Guyandotte River Voluntary Floodplain Buyout, Wyoming County, West Virginia

To Whom it May Concern:

The United States Department of Agriculture, West Virginia Natural Resources Conservation Service (NRCS), in coordination with the Wyoming County Commission and the Southern Conservation District of West Virginia as the project sponsors, is proposing a flood mitigation project in the Upper Guyandotte River Basin in Wyoming County West Virginia, under authority of the Watershed Protection and Flood Prevention Act (Public Law 83-566, as amended; 16 U.S.C. 1001-1012).

In support of this proposed project, West Virginia NRCS is preparing an Environmental Assessment (EA) under the National Environmental Policy Act (NEPA) to consider and analyze potential impacts from the proposed flood mitigation. Specifically, NRCS seeks to identify methods to address repetitive flooding within the community of Matheny resulting from concentrated development in the floodplain, and the preferred alternative is a voluntary floodplain buyout of thirty (30) currently unidentified residential structures along the Laurel Fork, a tributary of the Clear Fork of the Guyandotte River.

The focus of flood mitigation has been narrowed to specifically within the community of Matheny in order to 1) provide prevention of flood damages, and improve public safety, 2) provide for increased public utilization of the land and water, and 3) improve wildlife and fishery habitat. A total of sixty-eight residential properties within Matheny along the Laurel Fork, a tributary of the Clear Fork of the Guyandotte River, have been identified as qualified to participate in the voluntary floodplain buyout program. These structures are mostly modern, but some structures may be historic ranging in date of original construction from between 1943 to 2011. Of these sixty-eight properties, thirty will ultimately be selected to be part of the voluntary floodplain buyout.

In compliance with National Historic Preservation Act (NHPA), 36 CFR Part 800.4(b)(2) and 36 CFR Part 800.5(a)(3), respectively, it is the intention of NRCS West Virginia to develop a Programmatic Agreement (PA) that will employ a phased approach to identify historic properties that may be located within the project area and define mitigation measures to resolve adverse effects to these properties. The PA will be developed through consultation between NRCS West Virginia, the West Virginia

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Sincerely,

**STEVEN BAKER** Digitally signed by STEVEN BAKER  
Date: 2023.10.25 06:31:09 -04'00'

STEVEN BAKER  
Acting State Conservationist

cc:

Christi Hicks, Assistant State Conservationist–Water Resources, NRCS, West Virginia  
Hannah Thacker, Soil Conservationist, NRCS, West Virginia  
Pamela Yost, Economist, NRCS, West Virginia  
Becky Jeffries, Management Analyst, NRCS West Virginia



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West Virginia State  
Office  
  
1550 Earl L Core Rd.  
Suite 200  
Morgantown, WV 26505  
  
Ph: 304-284-7540  
Fax: 855-857-6448  
www.wv.nrcs.usda.gov

October 24, 2023

The Delaware Nation  
Chief Deborah Dotson  
Highway 281 Main Office Bldg 100  
Anadarko, OK 73005

Reference: Programmatic Agreement in Support of the Proposed Upper Guyandotte River Voluntary Floodplain Buyout, Wyoming County, West Virginia

Dear Chief Deborah Dotson,

The United States Department of Agriculture, West Virginia Natural Resources Conservation Service (NRCS), in coordination with the Wyoming County Commission and the Southern Conservation District of West Virginia as the project sponsors, is proposing a flood mitigation project in the Upper Guyandotte River Basin in Wyoming County West Virginia, under authority of the Watershed Protection and Flood Prevention Act (Public Law 83-566, as amended; 16 U.S.C. 1001-1012).

In support of this proposed project, West Virginia NRCS is preparing an Environmental Assessment (EA) under the National Environmental Policy Act (NEPA) to consider and analyze potential impacts from the proposed flood mitigation. Specifically, NRCS seeks to identify methods to address repetitive flooding within the community of Matheny resulting from concentrated development in the floodplain, and the preferred alternative is a voluntary floodplain buyout of thirty (30) currently unidentified residential structures along the Laurel Fork, a tributary of the Clear Fork of the Guyandotte River.

The focus of flood mitigation has been narrowed to specifically within the community of Matheny in order to 1) provide prevention of flood damages, and improve public safety, 2) provide for increased public utilization of the land and water, and 3) improve wildlife and fishery habitat. A total of sixty-eight residential properties within Matheny along the Laurel Fork, a tributary of the Clear Fork of the Guyandotte River, have been identified as qualified to participate in the voluntary floodplain buyout program. These structures are mostly modern, but some structures may be historic ranging in date of original construction from between 1943 to 2011. Of these sixty-eight properties, thirty will ultimately be selected to be part of the voluntary floodplain buyout.

In compliance with National Historic Preservation Act (NHPA), 36 CFR Part 800.4(b)(2) and 36 CFR Part 800.5(a)(3), respectively, it is the intention of NRCS West Virginia to develop a Programmatic Agreement (PA) that will employ a phased approach to identify historic properties that may be located within the project area and define mitigation measures to resolve adverse effects to these properties. The PA will be developed through consultation between NRCS West Virginia, the West Virginia

SHPO, the Wyoming County Commission, and the Southern Conservation District of West Virginia.

Consultation will also occur with representatives of the Seneca Cayuga Nation, The Osage Nation, Monacan Indian Nation, The Eastern Shawnee Tribe of Oklahoma, The Eastern Band of Cherokee Indians, The Delaware Nation, The Cherokee Nation, The Catawba Nation Tuscarora Nation, Northern Appalachian Coal Mining Heritage Association, the National Coal Heritage Area Authority, the Preservation Alliance of West Virginia, and the Wyoming County Historical Museum. The Advisory Council for Historic Preservation (ACHP) will be invited to participate in the consultation process as well. Once the PA and measures to minimize and mitigate the adverse effects are agreed upon by the consulting parties, the PA will be executed and implemented pursuant to compliance with Section 106 of the National Historic Preservation Act.

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Sincerely,

**STEVEN BAKER**

Digitally signed by STEVEN  
BAKER

Date: 2023.10.25 06:32:08 -04'00'

STEVEN BAKER  
Acting State Conservationist

cc:

Christi Hicks, Assistant State Conservationist–Water Resources, NRCS, West Virginia  
Hannah Thacker, Soil Conservationist, NRCS, West Virginia  
Pamela Yost, Economist, NRCS, West Virginia  
Becky Jeffries, Management Analyst, NRCS, West Virginia



United States Department of Agriculture

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Office

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Suite 200  
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Ph: 304-284-7540  
Fax: 855-857-6448  
[www.wv.nrcs.usda.gov](http://www.wv.nrcs.usda.gov)

October 24, 2023

The Eastern Band of Cherokee Indians  
Chief Richard Sneed  
88 Council House Loop Road  
Cherokee, NC 28719

Reference: Programmatic Agreement in Support of the Proposed Upper Guyandotte River Voluntary Floodplain Buyout, Wyoming County, West Virginia

Dear Chief Richard Sneed,

The United States Department of Agriculture, West Virginia Natural Resources Conservation Service (NRCS), in coordination with the Wyoming County Commission and the Southern Conservation District of West Virginia as the project sponsors, is proposing a flood mitigation project in the Upper Guyandotte River Basin in Wyoming County West Virginia, under authority of the Watershed Protection and Flood Prevention Act (Public Law 83-566, as amended; 16 U.S.C. 1001-1012).

In support of this proposed project, West Virginia NRCS is preparing an Environmental Assessment (EA) under the National Environmental Policy Act (NEPA) to consider and analyze potential impacts from the proposed flood mitigation. Specifically, NRCS seeks to identify methods to address repetitive flooding within the community of Matheny resulting from concentrated development in the floodplain, and the preferred alternative is a voluntary floodplain buyout of thirty (30) currently unidentified residential structures along the Laurel Fork, a tributary of the Clear Fork of the Guyandotte River.

The focus of flood mitigation has been narrowed to specifically within the community of Matheny in order to 1) provide prevention of flood damages, and improve public safety, 2) provide for increased public utilization of the land and water, and 3) improve wildlife and fishery habitat. A total of sixty-eight residential properties within Matheny along the Laurel Fork, a tributary of the Clear Fork of the Guyandotte River, have been identified as qualified to participate in the voluntary floodplain buyout program. These structures are mostly modern, but some structures may be historic ranging in date of original construction from between 1943 to 2011. Of these sixty-eight properties, thirty will ultimately be selected to be part of the voluntary floodplain buyout.

In compliance with National Historic Preservation Act (NHPA), 36 CFR Part 800.4(b)(2) and 36 CFR Part 800.5(a)(3), respectively, it is the intention of NRCS West Virginia to develop a Programmatic Agreement (PA) that will employ a phased approach to identify historic properties that may be located within the project area and define mitigation measures to resolve adverse effects to these properties. The PA will be developed through consultation between NRCS West Virginia, the West Virginia



SHPO, the Wyoming County Commission, and the Southern Conservation District of West Virginia.

Consultation will also occur with representatives of the Seneca Cayuga Nation, The Osage Nation, Monacan Indian Nation, The Eastern Shawnee Tribe of Oklahoma, The Eastern Band of Cherokee Indians, The Delaware Nation, The Cherokee Nation, The Catawba Nation Tuscarora Nation, Northern Appalachian Coal Mining Heritage Association, the National Coal Heritage Area Authority, the Preservation Alliance of West Virginia, and the Wyoming County Historical Museum. The Advisory Council for Historic Preservation (ACHP) will be invited to participate in the consultation process as well. Once the PA and measures to minimize and mitigate the adverse effects are agreed upon by the consulting parties, the PA will be executed and implemented pursuant to compliance with Section 106 of the National Historic Preservation Act.

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Sincerely,

**STEVEN BAKER**

Digitally signed by STEVEN

BAKER

Date: 2023.10.25 06:33:29 -04'00'

STEVEN BAKER

Acting State Conservationist

cc:

Christi Hicks, Assistant State Conservationist–Water Resources, NRCS, West Virginia

Hannah Thacker, Soil Conservationist, NRCS, West Virginia

Pamela Yost, Economist, NRCS, West Virginia

Becky Jeffries, Management Analyst, NRCS, West Virginia





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Conservation Service  
  
West Virginia State  
Office  
  
1550 Earl L Core Rd.  
Suite 200  
Morgantown, WV 26505  
  
Ph: 304-284-7540  
Fax: 855-857-6448  
[www.wv.nrcs.usda.gov](http://www.wv.nrcs.usda.gov)

October 24, 2023

Monacan Indian Nation  
Chief Kenneth Branham  
111 Highview Drive  
Madison Heights, VA 24572

Reference: Programmatic Agreement in Support of the Proposed Upper Guyandotte River Voluntary Floodplain Buyout, Wyoming County, West Virginia

Dear Chief Kenneth Branham,

The United States Department of Agriculture, West Virginia Natural Resources Conservation Service (NRCS), in coordination with the Wyoming County Commission and the Southern Conservation District of West Virginia as the project sponsors, is proposing a flood mitigation project in the Upper Guyandotte River Basin in Wyoming County West Virginia, under authority of the Watershed Protection and Flood Prevention Act (Public Law 83-566, as amended; 16 U.S.C. 1001-1012).

In support of this proposed project, West Virginia NRCS is preparing an Environmental Assessment (EA) under the National Environmental Policy Act (NEPA) to consider and analyze potential impacts from the proposed flood mitigation. Specifically, NRCS seeks to identify methods to address repetitive flooding within the community of Matheny resulting from concentrated development in the floodplain, and the preferred alternative is a voluntary floodplain buyout of thirty (30) currently unidentified residential structures along the Laurel Fork, a tributary of the Clear Fork of the Guyandotte River.

The focus of flood mitigation has been narrowed to specifically within the community of Matheny in order to 1) provide prevention of flood damages, and improve public safety, 2) provide for increased public utilization of the land and water, and 3) improve wildlife and fishery habitat. A total of sixty-eight residential properties within Matheny along the Laurel Fork, a tributary of the Clear Fork of the Guyandotte River, have been identified as qualified to participate in the voluntary floodplain buyout program. These structures are mostly modern, but some structures may be historic ranging in date of original construction from between 1943 to 2011. Of these sixty-eight properties, thirty will ultimately be selected to be part of the voluntary floodplain buyout.

In compliance with National Historic Preservation Act (NHPA), 36 CFR Part 800.4(b)(2) and 36 CFR Part 800.5(a)(3), respectively, it is the intention of NRCS West Virginia to develop a Programmatic Agreement (PA) that will employ a phased approach to identify historic properties that may be located within the project area and define mitigation measures to resolve adverse effects to these properties. The PA will be developed through consultation between NRCS West Virginia, the West Virginia

SHPO, the Wyoming County Commission, and the Southern Conservation District of West Virginia.

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Sincerely,

**STEVEN BAKER** Digitally signed by STEVEN  
BAKER  
Date: 2023.10.25 06:34:48 -04'00'

STEVEN BAKER  
Acting State Conservationist

cc:

Christi Hicks, Assistant State Conservationist–Water Resources, NRCS, West Virginia  
Donald Lee Dodd, State Water Resources Planning Specialist, NRCS, West Virginia  
Pamela Yost, Economist, NRCS, West Virginia  
Becky Jeffries, Management Analyst, NRCS, West Virginia



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Natural Resources  
Conservation Service

West Virginia State  
Office

1550 Earl L Core Rd.  
Suite 200  
Morgantown, WV 26505

Ph: 304-284-7540  
Fax: 855-857-6448  
[www.wv.nrcs.usda.gov](http://www.wv.nrcs.usda.gov)

October 24, 2023

The Osage Nation  
Chief Geoffrey Standing Bear  
627 Grandview Avenue  
Pawhuska, OK 74056

Reference: Programmatic Agreement in Support of the Proposed Upper Guyandotte River Voluntary Floodplain Buyout, Wyoming County, West Virginia

Dear Chief Geoffrey Standing Bear,

The United States Department of Agriculture, West Virginia Natural Resources Conservation Service (NRCS), in coordination with the Wyoming County Commission and the Southern Conservation District of West Virginia as the project sponsors, is proposing a flood mitigation project in the Upper Guyandotte River Basin in Wyoming County West Virginia, under authority of the Watershed Protection and Flood Prevention Act (Public Law 83-566, as amended; 16 U.S.C. 1001-1012).

In support of this proposed project, West Virginia NRCS is preparing an Environmental Assessment (EA) under the National Environmental Policy Act (NEPA) to consider and analyze potential impacts from the proposed flood mitigation. Specifically, NRCS seeks to identify methods to address repetitive flooding within the community of Matheny resulting from concentrated development in the floodplain, and the preferred alternative is a voluntary floodplain buyout of thirty (30) currently unidentified residential structures along the Laurel Fork, a tributary of the Clear Fork of the Guyandotte River.

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In compliance with National Historic Preservation Act (NHPA), 36 CFR Part 800.4(b)(2) and 36 CFR Part 800.5(a)(3), respectively, it is the intention of NRCS West Virginia to develop a Programmatic Agreement (PA) that will employ a phased approach to identify historic properties that may be located within the project area and define mitigation measures to resolve adverse effects to these properties. The PA will be developed through consultation between NRCS West Virginia, the West Virginia

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Sincerely,

**STEVEN BAKER**

Digitally signed by STEVEN  
BAKER  
Date: 2023.10.25 06:36:07 -04'00'

STEVEN BAKER  
Acting State Conservationist

cc:

Christi Hicks, Assistant State Conservationist–Water Resources, NRCS, West Virginia  
Hannah Thacker, Soil Conservationist, NRCS, West Virginia  
Pamela Yost, Economist, NRCS, West Virginia  
Becky Jeffries, Management Analyst, NRCS, West Virginia



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Fax: 855-857-6448  
[www.wv.nrcs.usda.gov](http://www.wv.nrcs.usda.gov)

October 24, 2023

Preservation Alliance of West Virginia  
421 Davis Avenue, #4  
Elkins, WV 26241

Reference: Programmatic Agreement in Support of the Proposed Upper Guyandotte River Voluntary Floodplain Buyout, Wyoming County, West Virginia

To Whom it May Concern:

The United States Department of Agriculture, West Virginia Natural Resources Conservation Service (NRCS), in coordination with the Wyoming County Commission and the Southern Conservation District of West Virginia as the project sponsors, is proposing a flood mitigation project in the Upper Guyandotte River Basin in Wyoming County West Virginia, under authority of the Watershed Protection and Flood Prevention Act (Public Law 83-566, as amended; 16 U.S.C. 1001-1012).

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Sincerely,

**STEVEN BAKER**

Digitally signed by STEVEN

BAKER

Date: 2023.10.25 06:43:42 -04'00'

STEVEN BAKER

Acting State Conservationist

cc:

Christi Hicks, Assistant State Conservationist–Water Resources, NRCS, West Virginia

Hannah Thacker, Soil Conservationist, NRCS, West Virginia

Pamela Yost, Economist, NRCS, West Virginia

Becky Jeffries, Management Analyst, NRCS, West Virginia



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[www.wv.nrcs.usda.gov](http://www.wv.nrcs.usda.gov)

October 24, 2023

Seneca Cayuga Nation  
Chief Charles Diebold  
23701 South 655 Road  
Grove, OK 74344

Reference: Programmatic Agreement in Support of the Proposed Upper Guyandotte River Voluntary Floodplain Buyout, Wyoming County, West Virginia

Dear Chief Diebold,

The United States Department of Agriculture, West Virginia Natural Resources Conservation Service (NRCS), in coordination with the Wyoming County Commission and the Southern Conservation District of West Virginia as the project sponsors, is proposing a flood mitigation project in the Upper Guyandotte River Basin in Wyoming County West Virginia, under authority of the Watershed Protection and Flood Prevention Act (Public Law 83-566, as amended; 16 U.S.C. 1001-1012).

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Sincerely,

**STEVEN BAKER** Digitally signed by STEVEN BAKER  
Date: 2023.10.25 06:45:14 -04'00'

STEVEN BAKER  
Acting State Conservationist

cc:

Christi Hicks, Assistant State Conservationist–Water Resources, NRCS, West Virginia  
Hannah Thacker, Soil Conservationist, NRCS, West Virginia  
Pamela Yost, Economist, NRCS, West Virginia  
Becky Jeffries, Management Analyst, NRCS, West Virginia





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[www.wv.nrcs.usda.gov](http://www.wv.nrcs.usda.gov)

October 24, 2023

The Eastern Shawnee Tribe of Oklahoma  
Chief Glenna Wallace  
P.O. Box 350  
Seneca, MO 64865

Reference: Programmatic Agreement in Support of the Proposed Upper Guyandotte River Voluntary Floodplain Buyout, Wyoming County, West Virginia

Dear Chief Glenna Wallace,

The United States Department of Agriculture, West Virginia Natural Resources Conservation Service (NRCS), in coordination with the Wyoming County Commission and the Southern Conservation District of West Virginia as the project sponsors, is proposing a flood mitigation project in the Upper Guyandotte River Basin in Wyoming County West Virginia, under authority of the Watershed Protection and Flood Prevention Act (Public Law 83-566, as amended; 16 U.S.C. 1001-1012).

In support of this proposed project, West Virginia NRCS is preparing an Environmental Assessment (EA) under the National Environmental Policy Act (NEPA) to consider and analyze potential impacts from the proposed flood mitigation. Specifically, NRCS seeks to identify methods to address repetitive flooding within the community of Matheny resulting from concentrated development in the floodplain, and the preferred alternative is a voluntary floodplain buyout of thirty (30) currently unidentified residential structures along the Laurel Fork, a tributary of the Clear Fork of the Guyandotte River.

The focus of flood mitigation has been narrowed to specifically within the community of Matheny in order to 1) provide prevention of flood damages, and improve public safety, 2) provide for increased public utilization of the land and water, and 3) improve wildlife and fishery habitat. A total of sixty-eight residential properties within Matheny along the Laurel Fork, a tributary of the Clear Fork of the Guyandotte River, have been identified as qualified to participate in the voluntary floodplain buyout program. These structures are mostly modern, but some structures may be historic ranging in date of original construction from between 1943 to 2011. Of these sixty-eight properties, thirty will ultimately be selected to be part of the voluntary floodplain buyout.

In compliance with National Historic Preservation Act (NHPA), 36 CFR Part 800.4(b)(2) and 36 CFR Part 800.5(a)(3), respectively, it is the intention of NRCS West Virginia to develop a Programmatic Agreement (PA) that will employ a phased approach to identify historic properties that may be located within the project area and define mitigation measures to resolve adverse effects to these properties. The PA will be developed through consultation between NRCS West Virginia, the West Virginia

SHPO, the Wyoming County Commission, and the Southern Conservation District of West Virginia.

Consultation will also occur with representatives of the Seneca Cayuga Nation, The Osage Nation, Monacan Indian Nation, The Eastern Shawnee Tribe of Oklahoma, The Eastern Band of Cherokee Indians, The Delaware Nation, The Cherokee Nation, The Catawba Nation Tuscarora Nation, Northern Appalachian Coal Mining Heritage Association, the National Coal Heritage Area Authority, the Preservation Alliance of West Virginia, and the Wyoming County Historical Museum. The Advisory Council for Historic Preservation (ACHP) will be invited to participate in the consultation process as well. Once the PA and measures to minimize and mitigate the adverse effects are agreed upon by the consulting parties, the PA will be executed and implemented pursuant to compliance with Section 106 of the National Historic Preservation Act.

In accordance with 36 CFR Part 800.3, NRCS West Virginia invites your participation in consultation and the development of the PA. If you have any questions, comments, or concerns please contact Christi Hicks, Assistant State Conservationist for Water Resources at 304-276-5636, or email Christi.Hicks@usda.gov. We look forward to working with you and continuing the consultation process.

Sincerely,

**STEVEN BAKER**

Digitally signed by STEVEN  
BAKER  
Date: 2023.10.25 06:46:24  
-04'00'

STEVEN BAKER  
Acting State Conservationist

cc:

Christi Hicks, Assistant State Conservationist–Water Resources, NRCS, West Virginia  
Hannah Thacker, Soil Conservationist, NRCS, West Virginia  
Pamela Yost, Economist, NRCS, West Virginia  
Becky Jeffries, Management Analyst, NRCS, West Virginia



United States Department of Agriculture

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Natural Resources  
Conservation Service

West Virginia State  
Office

1550 Earl L Core Rd.  
Suite 200  
Morgantown, WV 26505

Ph: 304-284-7540  
Fax: 855-857-6448  
[www.wv.nrcs.usda.gov](http://www.wv.nrcs.usda.gov)

October 24, 2023

Tuscarora Nation  
Chief Tom Jonathan  
5226 Walmore Rd  
Lewiston, NY 14092

Reference: Programmatic Agreement in Support of the Proposed Upper Guyandotte River Voluntary Floodplain Buyout, Wyoming County, West Virginia

Dear Chief Tom Jonathan,

The United States Department of Agriculture, West Virginia Natural Resources Conservation Service (NRCS), in coordination with the Wyoming County Commission and the Southern Conservation District of West Virginia as the project sponsors, is proposing a flood mitigation project in the Upper Guyandotte River Basin in Wyoming County West Virginia, under authority of the Watershed Protection and Flood Prevention Act (Public Law 83-566, as amended; 16 U.S.C. 1001-1012).

In support of this proposed project, West Virginia NRCS is preparing an Environmental Assessment (EA) under the National Environmental Policy Act (NEPA) to consider and analyze potential impacts from the proposed flood mitigation. Specifically, NRCS seeks to identify methods to address repetitive flooding within the community of Matheny resulting from concentrated development in the floodplain, and the preferred alternative is a voluntary floodplain buyout of thirty (30) currently unidentified residential structures along the Laurel Fork, a tributary of the Clear Fork of the Guyandotte River.

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SHPO, the Wyoming County Commission, and the Southern Conservation District of West Virginia.

Consultation will also occur with representatives of the Seneca Cayuga Nation, The Osage Nation, Monacan Indian Nation, The Eastern Shawnee Tribe of Oklahoma, The Eastern Band of Cherokee Indians, The Delaware Nation, The Cherokee Nation, The Catawba Nation Tuscarora Nation, Northern Appalachian Coal Mining Heritage Association, the National Coal Heritage Area Authority, the Preservation Alliance of West Virginia, and the Wyoming County Historical Museum. The Advisory Council for Historic Preservation (ACHP) will be invited to participate in the consultation process as well. Once the PA and measures to minimize and mitigate the adverse effects are agreed upon by the consulting parties, the PA will be executed and implemented pursuant to compliance with Section 106 of the National Historic Preservation Act.

In accordance with 36 CFR Part 800.3, NRCS West Virginia invites your participation in consultation and the development of the PA. If you have any questions, comments, or concerns please contact Christi Hicks, Assistant State Conservationist for Water Resources at 304-276-5636, or email [Christi.Hicks@usda.gov](mailto:Christi.Hicks@usda.gov). We look forward to working with you and continuing the consultation process.

Sincerely,

**STEVEN BAKER**

Digitally signed by STEVEN  
BAKER  
Date: 2023.10.25 06:47:17 -04'00'

STEVEN BAKER  
Acting State Conservationist

cc:

Christi Hicks, Assistant State Conservationist–Water Resources, NRCS, West Virginia  
Hannah Thacker, Soil Conservationist, NRCS, West Virginia  
Pamela Yost, Economist, NRCS, West Virginia  
Becky Jeffries, Management Analyst, NRCS, West Virginia



United States Department of Agriculture

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Natural Resources  
Conservation Service

West Virginia State  
Office

1550 Earl L Core Rd.  
Suite 200  
Morgantown, WV 26505

Ph: 304-284-7540  
Fax: 855-857-6448  
[www.wv.nrcs.usda.gov](http://www.wv.nrcs.usda.gov)

October 24, 2023

Susan Pierce  
Deputy Historic Preservation Officer  
West Virginia State Historic Preservation Office  
WV Dept. of Arts, Culture and History  
1900 Kanawha Blvd. East  
Charleston, WV 25305

Reference: Programmatic Agreement in Support of the Proposed Upper Guyandotte River Voluntary Floodplain Buyout, Wyoming County, West Virginia

Dear Susan Pierce,

The United States Department of Agriculture, West Virginia Natural Resources Conservation Service (NRCS), in coordination with the Wyoming County Commission and the Southern Conservation District of West Virginia as the project sponsors, is proposing a flood mitigation project in the Upper Guyandotte River Basin in Wyoming County West Virginia, under authority of the Watershed Protection and Flood Prevention Act (Public Law 83-566, as amended; 16 U.S.C. 1001-1012).

In support of this proposed project, West Virginia NRCS is preparing an Environmental Assessment (EA) under the National Environmental Policy Act (NEPA) to consider and analyze potential impacts from the proposed flood mitigation. Specifically, NRCS seeks to identify methods to address repetitive flooding within the community of Matheny resulting from concentrated development in the floodplain, and the preferred alternative is a voluntary floodplain buyout of thirty (30) currently unidentified residential structures along the Laurel Fork, a tributary of the Clear Fork of the Guyandotte River.

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be developed through consultation between NRCS West Virginia, the West Virginia SHPO, the Wyoming County Commission, and the Southern Conservation District of West Virginia.

Consultation will also occur with representatives of the Seneca Cayuga Nation, The Osage Nation, Monacan Indian Nation, The Eastern Shawnee Tribe of Oklahoma, The Eastern Band of Cherokee Indians, The Delaware Nation, The Cherokee Nation, The Catawba Nation Tuscarora Nation, Northern Appalachian Coal Mining Heritage Association, the National Coal Heritage Area Authority, the Preservation Alliance of West Virginia, and the Wyoming County Historical Museum. The Advisory Council for Historic Preservation (ACHP) will be invited to participate in the consultation process as well. Once the PA and measures to minimize and mitigate the adverse effects are agreed upon by the consulting parties, the PA will be executed and implemented pursuant to compliance with Section 106 of the National Historic Preservation Act.

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Sincerely,

**STEVEN BAKER** Digitally signed by STEVEN  
BAKER  
Date: 2023.10.25 06:48:17 -04'00'

STEVEN BAKER  
Acting State Conservationist

cc:

Christi Hicks, Assistant State Conservationist–Water Resources, NRCS, West Virginia  
Hannah Thacker, Soil Conservationist, NRCS, West Virginia  
Pamela Yost, Economist, NRCS, West Virginia  
Becky Jeffries, Management Analyst, NRCS, West Virginia



United States Department of Agriculture

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Natural Resources  
Conservation Service

West Virginia State  
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1550 Earl L Core Rd.  
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Morgantown, WV 26505

Ph: 304-284-7540  
Fax: 855-857-6448  
[www.wv.nrcs.usda.gov](http://www.wv.nrcs.usda.gov)

October 24, 2023

Wyoming County Historical Museum  
1325 Cooke Parkway  
Oceana, West Virginia 24870

Reference: Programmatic Agreement in Support of the Proposed Upper Guyandotte River Voluntary Floodplain Buyout, Wyoming County, West Virginia

To Whom it May Concern:

The United States Department of Agriculture, West Virginia Natural Resources Conservation Service (NRCS), in coordination with the Wyoming County Commission and the Southern Conservation District of West Virginia as the project sponsors, is proposing a flood mitigation project in the Upper Guyandotte River Basin in Wyoming County West Virginia, under authority of the Watershed Protection and Flood Prevention Act (Public Law 83-566, as amended; 16 U.S.C. 1001-1012).

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In accordance with 36 CFR Part 800.3, NRCS West Virginia invites your participation in consultation and the development of the PA. If you have any questions, comments, or concerns please contact Christi Hicks, Assistant State Conservationist for Water Resources at 304-276-5636, or email [Christi.Hicks@usda.gov](mailto:Christi.Hicks@usda.gov). We look forward to working with you and continuing the consultation process.

Sincerely,

**STEVEN BAKER** Digitally signed by STEVEN BAKER  
Date: 2023.10.25 06:49:47 -04'00'

STEVEN BAKER  
Acting State Conservationist

cc:

Christi Hicks, Assistant State Conservationist–Water Resources, NRCS, West Virginia  
Hannah Thacker, Soil Conservationist, NRCS, West Virginia  
Pamela Yost, Economist, NRCS, West Virginia  
Becky Jeffries, Management Analyst, NRCS, West Virginia





**United States Department of Agriculture**  
Natural Resources Conservation Service  
1550 Earl Core Road, Suite 200  
Morgantown, WV 26505

Phone: (304) 284-7540  
Fax: (855) 857-6448

---

November 16, 2023

The Catawba Nation  
Chief Bill Harris  
966 Avenue of Nations  
Rock Hill, SC 29730

Reference: Draft Watershed Plan - Environmental Assessment for the Upper Guyandotte River  
Voluntary Floodplain Buyout, Wyoming County, West Virginia

Dear Chief Harris,

The United States Department of Agriculture, West Virginia Natural Resources Conservation Service (NRCS), in coordination with the Wyoming County Commission and the Southern Conservation District of West Virginia as the project sponsors, is proposing a flood mitigation project in the Upper Guyandotte River Watershed in Wyoming County, West Virginia, under authority of the Watershed Protection and Flood Prevention Act (Public Law 83-566, as amended; 16 U.S.C. 1001-1012).

In support of this proposed project, West Virginia NRCS is preparing an Environmental Assessment (EA) under the National Environmental Policy Act (NEPA) to consider and analyze potential impacts from the proposed flood mitigation. Specifically, NRCS seeks to identify methods to address repetitive flooding in the community of Matheny resulting from concentrated development in the floodplain, and the preferred alternative is a voluntary floodplain buyout of thirty (30) currently unidentified residential structures along Laurel Fork, a tributary of the Clear Fork of the Guyandotte River.

Therefore, in accordance with NEPA and 54USC§306108 of the National Historic Preservation Act, and 36CFR§800.3 (c), NRCS is seeking public comment on the Draft Watershed Plan – EA. The document can be accessed from the NRCS website [West Virginia Upper Guyandotte | Natural Resources Conservation Service \(usda.gov\)](#). Paper copies of the document can be mailed to you upon request. The comment period ends January 15, 2024. A public meeting will be held December 6, 2023 from 4:00 to 7:00 pm at Berlin McKinney Elementary in Oceana, West Virginia.

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If you have any questions, comments, or concerns please contact Christi Hicks, Assistant State Conservationist for Water Resources at 304-276-5636, or email Christi.Hicks@usda.gov. We look forward to working with you and continuing the consultation process.

Sincerely,

**STEVEN BAKER** Digitally signed by STEVEN  
BAKER  
Date: 2023.11.28 17:43:52 -05'00'

Steve Baker  
Acting State Conservationist

cc:

Christi Hicks, Assistant State Conservationist – Water Resources, NRCS, West Virginia  
Hannah Thacker, Soil Conservationist, NRCS, West Virginia  
Pamela Yost, Economist, NRCS, West Virginia  
Becky Jeffries, Management Analyst, NRCS, West Virginia

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Natural Resources Conservation Service  
1550 Earl Core Road, Suite 200  
Morgantown, WV 26505

Phone: (304) 284-7540  
Fax: (855) 857-6448

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November 16, 2023

The Cherokee Nation  
Chief Chuck Hoskin  
17675 South Muskogee Avenue  
Tahlequah, OK 74464

Reference: Draft Watershed Plan - Environmental Assessment for the Upper Guyandotte River  
Voluntary Floodplain Buyout, Wyoming County, West Virginia

Dear Chief Hoskin,

The United States Department of Agriculture, West Virginia Natural Resources Conservation Service (NRCS), in coordination with the Wyoming County Commission and the Southern Conservation District of West Virginia as the project sponsors, is proposing a flood mitigation project in the Upper Guyandotte River Watershed in Wyoming County, West Virginia, under authority of the Watershed Protection and Flood Prevention Act (Public Law 83-566, as amended; 16 U.S.C. 1001-1012).

In support of this proposed project, West Virginia NRCS is preparing an Environmental Assessment (EA) under the National Environmental Policy Act (NEPA) to consider and analyze potential impacts from the proposed flood mitigation. Specifically, NRCS seeks to identify methods to address repetitive flooding in the community of Matheny resulting from concentrated development in the floodplain, and the preferred alternative is a voluntary floodplain buyout of thirty (30) currently unidentified residential structures along Laurel Fork, a tributary of the Clear Fork of the Guyandotte River.

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Sincerely,

**STEVEN BAKER**

Digitally signed by STEVEN

BAKER

Date: 2023.11.28 17:44:49 -05'00'

Steve Baker  
Acting State Conservationist

cc:

Christi Hicks, Assistant State Conservationist – Water Resources, NRCS, West Virginia  
Hannah Thacker, Soil Conservationist, NRCS, West Virginia  
Pamela Yost, Economist, NRCS, West Virginia  
Becky Jeffries, Management Analyst, NRCS, West Virginia

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Natural Resources Conservation Service  
1550 Earl Core Road, Suite 200  
Morgantown, WV 26505

Phone: (304) 284-7540  
Fax: (855) 857-6448

---

November 16, 2023

Northern Appalachian Coal Mining Heritage Association  
22 Coal Country Lane  
Fairmont, WV 26554

Reference: Draft Watershed Plan - Environmental Assessment for the Upper Guyandotte River  
Voluntary Floodplain Buyout, Wyoming County, West Virginia

To Whom it May Concern,

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If you have any questions, comments, or concerns please contact Christi Hicks, Assistant State Conservationist for Water Resources at 304-276-5636, or email Christi.Hicks@usda.gov. We look forward to working with you and continuing the consultation process.

Sincerely,

**STEVEN BAKER** Digitally signed by STEVEN BAKER  
Date: 2023.11.28 17:45:29 -05'00'

Steve Baker  
Acting State Conservationist

cc:

Christi Hicks, Assistant State Conservationist – Water Resources, NRCS, West Virginia  
Hannah Thacker, Soil Conservationist, NRCS, West Virginia  
Pamela Yost, Economist, NRCS, West Virginia  
Becky Jeffries, Management Analyst, NRCS, West Virginia

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Natural Resources Conservation Service  
1550 Earl Core Road, Suite 200  
Morgantown, WV 26505

Phone: (304) 284-7540  
Fax: (855) 857-6448

---

November 16, 2023

Coal Heritage Highway Authority/National Coal Heritage Area  
PO Box 15  
100 Kelly Avenue  
Oak Hill, WV 25901

Reference: Draft Watershed Plan - Environmental Assessment for the Upper Guyandotte River  
Voluntary Floodplain Buyout, Wyoming County, West Virginia

To Whom it May Concern,

The United States Department of Agriculture, West Virginia Natural Resources Conservation Service (NRCS), in coordination with the Wyoming County Commission and the Southern Conservation District of West Virginia as the project sponsors, is proposing a flood mitigation project in the Upper Guyandotte River Watershed in Wyoming County, West Virginia, under authority of the Watershed Protection and Flood Prevention Act (Public Law 83-566, as amended; 16 U.S.C. 1001-1012).

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Sincerely,

**STEVEN BAKER**

Digitally signed by STEVEN  
BAKER  
Date: 2023.11.28 17:46:12 -05'00'

Steve Baker  
Acting State Conservationist

cc:

Christi Hicks, Assistant State Conservationist – Water Resources, NRCS, West Virginia  
Hannah Thacker, Soil Conservationist, NRCS, West Virginia  
Pamela Yost, Economist, NRCS, West Virginia  
Becky Jeffries, Management Analyst, NRCS, West Virginia

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Natural Resources Conservation Service  
1550 Earl Core Road, Suite 200  
Morgantown, WV 26505

Phone: (304) 284-7540  
Fax: (855) 857-6448

---

November 16, 2023

The Delaware Nation  
Chief Deborah Dotson  
Highway 281 Main Office Bldg 100  
Anadarko, OK 73005

Reference: Draft Watershed Plan - Environmental Assessment for the Upper Guyandotte River  
Voluntary Floodplain Buyout, Wyoming County, West Virginia

To Chief Deborah Dotson,

The United States Department of Agriculture, West Virginia Natural Resources Conservation Service (NRCS), in coordination with the Wyoming County Commission and the Southern Conservation District of West Virginia as the project sponsors, is proposing a flood mitigation project in the Upper Guyandotte River Watershed in Wyoming County, West Virginia, under authority of the Watershed Protection and Flood Prevention Act (Public Law 83-566, as amended; 16 U.S.C. 1001-1012).

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Sincerely,

**STEVEN BAKER** Digitally signed by STEVEN BAKER  
Date: 2023.11.28 17:46:55 -05'00'

Steve Baker  
Acting State Conservationist

cc:

Christi Hicks, Assistant State Conservationist – Water Resources, NRCS, West Virginia  
Hannah Thacker, Soil Conservationist, NRCS, West Virginia  
Pamela Yost, Economist, NRCS, West Virginia  
Becky Jeffries, Management Analyst, NRCS, West Virginia

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Natural Resources Conservation Service  
1550 Earl Core Road, Suite 200  
Morgantown, WV 26505

Phone: (304) 284-7540  
Fax: (855) 857-6448

---

November 16, 2023

The Eastern Band of Cherokee Indians  
Chief Richard Sneed  
88 Council House Loop Road  
Cherokee, NC 28719

Reference: Draft Watershed Plan - Environmental Assessment for the Upper Guyandotte River  
Voluntary Floodplain Buyout, Wyoming County, West Virginia

To Chief Richard Sneed,

The United States Department of Agriculture, West Virginia Natural Resources Conservation Service (NRCS), in coordination with the Wyoming County Commission and the Southern Conservation District of West Virginia as the project sponsors, is proposing a flood mitigation project in the Upper Guyandotte River Watershed in Wyoming County, West Virginia, under authority of the Watershed Protection and Flood Prevention Act (Public Law 83-566, as amended; 16 U.S.C. 1001-1012).

In support of this proposed project, West Virginia NRCS is preparing an Environmental Assessment (EA) under the National Environmental Policy Act (NEPA) to consider and analyze potential impacts from the proposed flood mitigation. Specifically, NRCS seeks to identify methods to address repetitive flooding in the community of Matheny resulting from concentrated development in the floodplain, and the preferred alternative is a voluntary floodplain buyout of thirty (30) currently unidentified residential structures along Laurel Fork, a tributary of the Clear Fork of the Guyandotte River.

Therefore, in accordance with NEPA and 54USC§306108 of the National Historic Preservation Act, and 36CFR§800.3 (c), NRCS is seeking public comment on the Draft Watershed Plan – EA. The document can be accessed from the NRCS website [West Virginia Upper Guyandotte | Natural Resources Conservation Service \(usda.gov\)](https://www.nrcs.usda.gov/watershed/upper-guyandotte-natural-resources-conservation-service). Paper copies of the document can be mailed to you upon request. The comment period ends January 15, 2024. A public meeting will be held December 6, 2023 from 4:00 to 7:00 pm at Berlin McKinney Elementary in Oceana, West Virginia.

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If you have any questions, comments, or concerns please contact Christi Hicks, Assistant State Conservationist for Water Resources at 304-276-5636, or email Christi.Hicks@usda.gov. We look forward to working with you and continuing the consultation process.

Sincerely,

**STEVEN BAKER** Digitally signed by STEVEN BAKER  
Date: 2023.11.28 17:47:36 -05'00'

Steve Baker  
Acting State Conservationist

cc:

Christi Hicks, Assistant State Conservationist – Water Resources, NRCS, West Virginia  
Hannah Thacker, Soil Conservationist, NRCS, West Virginia  
Pamela Yost, Economist, NRCS, West Virginia  
Becky Jeffries, Management Analyst, NRCS, West Virginia

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**United States Department of Agriculture**  
Natural Resources Conservation Service  
1550 Earl Core Road, Suite 200  
Morgantown, WV 26505

Phone: (304) 284-7540  
Fax: (855) 857-6448

---

November 16, 2023

Wyoming County Historical Museum  
1325 Cooke Parkway  
Oceana, West Virginia 24870

Reference: Draft Watershed Plan - Environmental Assessment for the Upper Guyandotte River  
Voluntary Floodplain Buyout, Wyoming County, West Virginia

To Whom it May Concern,

The United States Department of Agriculture, West Virginia Natural Resources Conservation Service (NRCS), in coordination with the Wyoming County Commission and the Southern Conservation District of West Virginia as the project sponsors, is proposing a flood mitigation project in the Upper Guyandotte River Watershed in Wyoming County, West Virginia, under authority of the Watershed Protection and Flood Prevention Act (Public Law 83-566, as amended; 16 U.S.C. 1001-1012).

In support of this proposed project, West Virginia NRCS is preparing an Environmental Assessment (EA) under the National Environmental Policy Act (NEPA) to consider and analyze potential impacts from the proposed flood mitigation. Specifically, NRCS seeks to identify methods to address repetitive flooding in the community of Matheny resulting from concentrated development in the floodplain, and the preferred alternative is a voluntary floodplain buyout of thirty (30) currently unidentified residential structures along Laurel Fork, a tributary of the Clear Fork of the Guyandotte River.

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Sincerely,

**STEVEN BAKER** Digitally signed by STEVEN BAKER  
Date: 2023.11.28 17:48:23 -05'00'

Steve Baker  
Acting State Conservationist

cc:

Christi Hicks, Assistant State Conservationist – Water Resources, NRCS, West Virginia  
Hannah Thacker, Soil Conservationist, NRCS, West Virginia  
Pamela Yost, Economist, NRCS, West Virginia  
Becky Jeffries, Management Analyst, NRCS, West Virginia

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Natural Resources Conservation Service  
1550 Earl Core Road, Suite 200  
Morgantown, WV 26505

Phone: (304) 284-7540  
Fax: (855) 857-6448

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November 16, 2023

Monacan Indian Nation  
Chief Kenneth Branham  
111 Highview Drive  
Madison Heights, VA 24572

Reference: Draft Watershed Plan - Environmental Assessment for the Upper Guyandotte River  
Voluntary Floodplain Buyout, Wyoming County, West Virginia

To Chief Kenneth Branham,

The United States Department of Agriculture, West Virginia Natural Resources Conservation Service (NRCS), in coordination with the Wyoming County Commission and the Southern Conservation District of West Virginia as the project sponsors, is proposing a flood mitigation project in the Upper Guyandotte River Watershed in Wyoming County, West Virginia, under authority of the Watershed Protection and Flood Prevention Act (Public Law 83-566, as amended; 16 U.S.C. 1001-1012).

In support of this proposed project, West Virginia NRCS is preparing an Environmental Assessment (EA) under the National Environmental Policy Act (NEPA) to consider and analyze potential impacts from the proposed flood mitigation. Specifically, NRCS seeks to identify methods to address repetitive flooding in the community of Matheny resulting from concentrated development in the floodplain, and the preferred alternative is a voluntary floodplain buyout of thirty (30) currently unidentified residential structures along Laurel Fork, a tributary of the Clear Fork of the Guyandotte River.

Therefore, in accordance with NEPA and 54USC§306108 of the National Historic Preservation Act, and 36CFR§800.3 (c), NRCS is seeking public comment on the Draft Watershed Plan – EA. The document can be accessed from the NRCS website [West Virginia Upper Guyandotte | Natural Resources Conservation Service \(usda.gov\)](#). Paper copies of the document can be mailed to you upon request. The comment period ends January 15, 2024. A public meeting will be held December 6, 2023 from 4:00 to 7:00 pm at Berlin McKinney Elementary in Oceana, West Virginia.

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If you have any questions, comments, or concerns please contact Christi Hicks, Assistant State Conservationist for Water Resources at 304-276-5636, or email Christi.Hicks@usda.gov. We look forward to working with you and continuing the consultation process.

Sincerely,

**STEVEN BAKER**

Digitally signed by STEVEN

BAKER

Date: 2023.11.28 17:49:15 -05'00'

Steve Baker  
Acting State Conservationist

cc:

Christi Hicks, Assistant State Conservationist – Water Resources, NRCS, West Virginia  
Hannah Thacker, Soil Conservationist, NRCS, West Virginia  
Pamela Yost, Economist, NRCS, West Virginia  
Becky Jeffries, Management Analyst, NRCS, West Virginia

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Natural Resources Conservation Service  
1550 Earl Core Road, Suite 200  
Morgantown, WV 26505

Phone: (304) 284-7540  
Fax: (855) 857-6448

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November 16, 2023

The Osage Nation  
Chief Geoffrey Standing Bear  
627 Grandview Avenue  
Pawhuska, OK 74056

Reference: Draft Watershed Plan - Environmental Assessment for the Upper Guyandotte River  
Voluntary Floodplain Buyout, Wyoming County, West Virginia

To Chief Geoffrey Standing Bear,

The United States Department of Agriculture, West Virginia Natural Resources Conservation Service (NRCS), in coordination with the Wyoming County Commission and the Southern Conservation District of West Virginia as the project sponsors, is proposing a flood mitigation project in the Upper Guyandotte River Watershed in Wyoming County, West Virginia, under authority of the Watershed Protection and Flood Prevention Act (Public Law 83-566, as amended; 16 U.S.C. 1001-1012).

In support of this proposed project, West Virginia NRCS is preparing an Environmental Assessment (EA) under the National Environmental Policy Act (NEPA) to consider and analyze potential impacts from the proposed flood mitigation. Specifically, NRCS seeks to identify methods to address repetitive flooding in the community of Matheny resulting from concentrated development in the floodplain, and the preferred alternative is a voluntary floodplain buyout of thirty (30) currently unidentified residential structures along Laurel Fork, a tributary of the Clear Fork of the Guyandotte River.

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If you have any questions, comments, or concerns please contact Christi Hicks, Assistant State Conservationist for Water Resources at 304-276-5636, or email Christi.Hicks@usda.gov. We look forward to working with you and continuing the consultation process.

Sincerely,

**STEVEN BAKER**

Digitally signed by STEVEN  
BAKER  
Date: 2023.11.28 17:50:01 -05'00'

Steve Baker  
Acting State Conservationist

cc:

Christi Hicks, Assistant State Conservationist – Water Resources, NRCS, West Virginia  
Hannah Thacker, Soil Conservationist, NRCS, West Virginia  
Pamela Yost, Economist, NRCS, West Virginia  
Becky Jeffries, Management Analyst, NRCS, West Virginia

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Natural Resources Conservation Service  
1550 Earl Core Road, Suite 200  
Morgantown, WV 26505

Phone: (304) 284-7540  
Fax: (855) 857-6448

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November 16, 2023

Preservation Alliance of West Virginia  
421 Davis Avenue, #4  
Elkins, WV 26241

Reference: Draft Watershed Plan - Environmental Assessment for the Upper Guyandotte River  
Voluntary Floodplain Buyout, Wyoming County, West Virginia

To Whom it May Concern,

The United States Department of Agriculture, West Virginia Natural Resources Conservation Service (NRCS), in coordination with the Wyoming County Commission and the Southern Conservation District of West Virginia as the project sponsors, is proposing a flood mitigation project in the Upper Guyandotte River Watershed in Wyoming County, West Virginia, under authority of the Watershed Protection and Flood Prevention Act (Public Law 83-566, as amended; 16 U.S.C. 1001-1012).

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If you have any questions, comments, or concerns please contact Christi Hicks, Assistant State Conservationist for Water Resources at 304-276-5636, or email Christi.Hicks@usda.gov. We look forward to working with you and continuing the consultation process.

Sincerely,

**STEVEN BAKER** Digitally signed by STEVEN  
BAKER  
Date: 2023.11.28 17:50:49 -05'00'

Steve Baker  
Acting State Conservationist

cc:

Christi Hicks, Assistant State Conservationist – Water Resources, NRCS, West Virginia  
Hannah Thacker, Soil Conservationist, NRCS, West Virginia  
Pamela Yost, Economist, NRCS, West Virginia  
Becky Jeffries, Management Analyst, NRCS, West Virginia

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Natural Resources Conservation Service  
1550 Earl Core Road, Suite 200  
Morgantown, WV 26505

Phone: (304) 284-7540  
Fax: (855) 857-6448

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November 16, 2023

Seneca Cayuga Nation  
Chief Charles Diebold  
23701 South 655 Road  
Grove, OK 74344

Reference: Draft Watershed Plan - Environmental Assessment for the Upper Guyandotte River  
Voluntary Floodplain Buyout, Wyoming County, West Virginia

Dear Chief Charles Diebold,

The United States Department of Agriculture, West Virginia Natural Resources Conservation Service (NRCS), in coordination with the Wyoming County Commission and the Southern Conservation District of West Virginia as the project sponsors, is proposing a flood mitigation project in the Upper Guyandotte River Watershed in Wyoming County, West Virginia, under authority of the Watershed Protection and Flood Prevention Act (Public Law 83-566, as amended; 16 U.S.C. 1001-1012).

In support of this proposed project, West Virginia NRCS is preparing an Environmental Assessment (EA) under the National Environmental Policy Act (NEPA) to consider and analyze potential impacts from the proposed flood mitigation. Specifically, NRCS seeks to identify methods to address repetitive flooding in the community of Matheny resulting from concentrated development in the floodplain, and the preferred alternative is a voluntary floodplain buyout of thirty (30) currently unidentified residential structures along Laurel Fork, a tributary of the Clear Fork of the Guyandotte River.

Therefore, in accordance with NEPA and 54USC§306108 of the National Historic Preservation Act, and 36CFR§800.3 (c), NRCS is seeking public comment on the Draft Watershed Plan – EA. The document can be accessed from the NRCS website [West Virginia Upper Guyandotte | Natural Resources Conservation Service \(usda.gov\)](#). Paper copies of the document can be mailed to you upon request. The comment period ends January 15, 2024. A public meeting will be held December 6, 2023 from 4:00 to 7:00 pm at Berlin McKinney Elementary in Oceana, West Virginia.

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If you have any questions, comments, or concerns please contact Christi Hicks, Assistant State Conservationist for Water Resources at 304-276-5636, or email Christi.Hicks@usda.gov. We look forward to working with you and continuing the consultation process.

Sincerely,

**STEVEN BAKER** Digitally signed by STEVEN BAKER  
Date: 2023.11.28 17:51:31 -05'00'

Steve Baker  
Acting State Conservationist

cc:

Christi Hicks, Assistant State Conservationist – Water Resources, NRCS, West Virginia  
Hannah Thacker, Soil Conservationist, NRCS, West Virginia  
Pamela Yost, Economist, NRCS, West Virginia  
Becky Jeffries, Management Analyst, NRCS, West Virginia

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Natural Resources Conservation Service  
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Morgantown, WV 26505

Phone: (304) 284-7540  
Fax: (855) 857-6448

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November 16, 2023

The Eastern Shawnee Tribe of Oklahoma  
Chief Glenna Wallace  
P.O. Box 350  
Seneca, MO 64865

Reference: Draft Watershed Plan - Environmental Assessment for the Upper Guyandotte River  
Voluntary Floodplain Buyout, Wyoming County, West Virginia

Dear Chief Glenna Wallace,

The United States Department of Agriculture, West Virginia Natural Resources Conservation Service (NRCS), in coordination with the Wyoming County Commission and the Southern Conservation District of West Virginia as the project sponsors, is proposing a flood mitigation project in the Upper Guyandotte River Watershed in Wyoming County, West Virginia, under authority of the Watershed Protection and Flood Prevention Act (Public Law 83-566, as amended; 16 U.S.C. 1001-1012).

In support of this proposed project, West Virginia NRCS is preparing an Environmental Assessment (EA) under the National Environmental Policy Act (NEPA) to consider and analyze potential impacts from the proposed flood mitigation. Specifically, NRCS seeks to identify methods to address repetitive flooding in the community of Matheny resulting from concentrated development in the floodplain, and the preferred alternative is a voluntary floodplain buyout of thirty (30) currently unidentified residential structures along Laurel Fork, a tributary of the Clear Fork of the Guyandotte River.

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If you have any questions, comments, or concerns please contact Christi Hicks, Assistant State Conservationist for Water Resources at 304-276-5636, or email Christi.Hicks@usda.gov. We look forward to working with you and continuing the consultation process.

Sincerely,

**STEVEN BAKER** Digitally signed by STEVEN BAKER  
Date: 2023.11.28 17:52:14 -05'00'

Steve Baker  
Acting State Conservationist

cc:

Christi Hicks, Assistant State Conservationist – Water Resources, NRCS, West Virginia  
Hannah Thacker, Soil Conservationist, NRCS, West Virginia  
Pamela Yost, Economist, NRCS, West Virginia  
Becky Jeffries, Management Analyst, NRCS, West Virginia

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Natural Resources Conservation Service  
1550 Earl Core Road, Suite 200  
Morgantown, WV 26505

Phone: (304) 284-7540  
Fax: (855) 857-6448

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November 16, 2023

Tuscarora Nation  
Chief Tom Jonathan  
5226 Walmore Rd  
Lewiston, NY 14092

Reference: Draft Watershed Plan - Environmental Assessment for the Upper Guyandotte River  
Voluntary Floodplain Buyout, Wyoming County, West Virginia

Dear Chief Tom Jonathan,

The United States Department of Agriculture, West Virginia Natural Resources Conservation Service (NRCS), in coordination with the Wyoming County Commission and the Southern Conservation District of West Virginia as the project sponsors, is proposing a flood mitigation project in the Upper Guyandotte River Watershed in Wyoming County, West Virginia, under authority of the Watershed Protection and Flood Prevention Act (Public Law 83-566, as amended; 16 U.S.C. 1001-1012).

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Sincerely,

**STEVEN BAKER** Digitally signed by STEVEN  
BAKER  
Date: 2023.11.28 17:53:01 -05'00'

Steve Baker  
Acting State Conservationist

cc:

Christi Hicks, Assistant State Conservationist – Water Resources, NRCS, West Virginia  
Hannah Thacker, Soil Conservationist, NRCS, West Virginia  
Pamela Yost, Economist, NRCS, West Virginia  
Becky Jeffries, Management Analyst, NRCS, West Virginia





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Natural Resources Conservation Service  
1550 Earl Core Road, Suite 200  
Morgantown, WV 26505

Phone: (304) 284-7540  
Fax: (855) 857-6448

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November 16, 2023

Susan Pierce  
Deputy Historic Preservation Officer  
West Virginia State Historic Preservation Office  
WV Dept. of Arts, Culture and History  
1900 Kanawha Blvd. East  
Charleston, WV 25305

Reference: Draft Watershed Plan - Environmental Assessment for the Upper Guyandotte River  
Voluntary Floodplain Buyout, Wyoming County, West Virginia

Dear Susan Pierce,

The United States Department of Agriculture, West Virginia Natural Resources Conservation Service (NRCS), in coordination with the Wyoming County Commission and the Southern Conservation District of West Virginia as the project sponsors, is proposing a flood mitigation project in the Upper Guyandotte River Watershed in Wyoming County, West Virginia, under authority of the Watershed Protection and Flood Prevention Act (Public Law 83-566, as amended; 16 U.S.C. 1001-1012).

In support of this proposed project, West Virginia NRCS is preparing an Environmental Assessment (EA) under the National Environmental Policy Act (NEPA) to consider and analyze potential impacts from the proposed flood mitigation. Specifically, NRCS seeks to identify methods to address repetitive flooding in the community of Matheny resulting from concentrated development in the floodplain, and the preferred alternative is a voluntary floodplain buyout of thirty (30) currently unidentified residential structures along Laurel Fork, a tributary of the Clear Fork of the Guyandotte River.

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Sincerely,

**STEVEN BAKER** Digitally signed by STEVEN BAKER  
Date: 2023.11.28 17:53:45 -05'00'

Steve Baker  
Acting State Conservationist

cc:

Christi Hicks, Assistant State Conservationist – Water Resources, NRCS, West Virginia  
Hannah Thacker, Soil Conservationist, NRCS, West Virginia  
Pamela Yost, Economist, NRCS, West Virginia  
Becky Jeffries, Management Analyst, NRCS, West Virginia



**PROGRAMMATIC AGREEMENT  
AMONG THE  
UNITED STATES DEPARTMENT OF AGRICULTURE,  
NATURAL RESOURCES CONSERVATION SERVICE  
AND  
WEST VIRGINIA STATE HISTORIC PRESERVATION OFFICE  
REGARDING  
THE VOLUNTARY FLOODPLAIN BUYOUT ALONG  
THE UPPER GUYANDOTTE RIVER,  
WYOMING COUNTY, WEST VIRGINIA**

**WHEREAS**, the United States Department of Agriculture (USDA) Natural Resources Conservation Service (NRCS) administers numerous voluntary assistance programs, special initiatives, and grant and emergency response programs for soil, water, and related resource conservation activities available to eligible private producers, States, commonwealths, Federally Recognized Tribal governments, other government entities, and other applicants for conservation assistance, pursuant to the Agricultural Act of 2018 (2018 Farm Bill, Public Law 113-79); the Flood Control Act of 1944 (Public Law 78-534, as amended); the Watershed Protection and Flood Prevention Act (Public Law 83-566, as amended, 16 U.S.C. §1001-1012); the Flood Control Act of 1936 (Public Law 74-738); and executive and secretarial orders, implementing regulations and related authorities; and

**WHEREAS**, NRCS West Virginia, as authorized by the Watershed Protection and Flood Prevention Act (Public Law 83-566, as amended; 16 U.S.C. 1001-1012), is providing technical and financial assistance to the Wyoming County Commission and the Southern Conservation District of West Virginia to develop a watershed plan to identify methods to address repetitive flooding within the community of Matheny resulting from concentrated development in the floodplain.

**WHEREAS**, NRCS West Virginia is phasing identification and evaluation of historic properties and application of the criteria of adverse effects in accordance with 36 CFR Part 800.4(b)(2) and 36 CFR Part 800.5(a)(3), respectively. The current program funding level will permit this plan to involve identification of up to thirty (30) currently unidentified residential structures out of sixty-eight (68) known structures (Appendix X) along the Laurel Fork, a tributary of the Clear Fork of the Guyandotte River for a voluntary floodplain buyout project area (hereafter referred to as the “Project”). If subsequent funding permits more than 30 residential structures within the project area to be considered for acquisition, additional consultation will be initiated. Additional consultation would never exceed the sixty-eight (68) known structures that have been identified within the program project area.  
and

**WHEREAS**, the Project may have adverse effects on historic resources as yet to be inventoried, particularly on any structures or properties that may be demolished or adversely impacted as a result of the Project and Section 106 will be conducted as participation is determined.

**WHEREAS**, the Wyoming County Commission and the Southern Conservation District of West Virginia are the Sponsoring Local Organizations (Sponsors) for the Project and have been invited by NRCS to be concurring parties to this Programmatic Agreement (Agreement); and

**WHEREAS**, NRCS West Virginia has determined that the Project activities constitute an undertaking, as defined in 36 C.F.R. § 800.16(y), and therefore is subject to Section 106 of the National Historic Preservation Act of 1966, 54 U.S.C. §300101, *et seq.* ((formerly 16 U.S.C. §470, *et seq*) hereafter referred to as NHPA; and

**WHEREAS**, this Agreement shall establish the process NRCS West Virginia shall follow for compliance with 54 U.S.C. § 306108 (formerly 16 U.S.C. § 470f, referred to hereinafter as “Section 106”); and

**WHEREAS**, NRCS West Virginia, in consultation with the West Virginia State Historic Preservation Officer (WV SHPO) and Tribes, has agreed to comply with Section 106 of the NHPA for the Project through the execution and implementation of this Agreement because NRCS West Virginia cannot fully determine the effects of the Project on historic properties, (36 C.F.R. §800.14(b)(1)(ii)), before the Project will be approved and funded; and

**WHEREAS**, in accordance with 36 C.F.R. §§800.2(c)(2)(ii)(A), 800.3(f)(2), and 800.14(b)(2)(i) NRCS West Virginia has consulted with the Absentee Shawnee Tribe, Catawba Indian Nation, Cayuga Nation, Chickahominy Indian Tribe, Delaware Nation, Eastern Band of Cherokee Indians, Eastern Chickahominy, Eastern Shawnee Tribe of Oklahoma, Monacan Nation, Osage Nation, Pamunkey Indian Tribe, Rappahannock Tribe, Seneca Nation of Indians, Seneca-Cayuga Nation, Shawnee Tribe, Saint Regis Mohawk Tribe, Tonawanda Band of Seneca, Tuscarora Nation of New York, United Keetoowah Band of Cherokee Indians, and Upper Mattaponi Indian Tribe to invite them to consult on this Project and invited them to participate in the development of this Agreement and received no response. NRCS West Virginia will continue to consult with the above-mentioned Tribes throughout the implementation of this Agreement; and

**WHEREAS**, all proposed Project improvements will be constructed on publicly-owned property (to be acquired by Wyoming County) outside the external boundaries of federal Indian reservations and other Indian lands. The Wyoming County Commission will hold ownership on the properties with deed restrictions

**WHEREAS**, in accordance with 36 C.F.R. §800.2(c)(5), NRCS West Virginia has consulted with the Northern Appalachian Coal Mining Heritage Association, the National Coal Heritage Area Authority, the Preservation Alliance of West Virginia, and the Wyoming County Historical Museum and invited them to participate in the development of this Agreement and received no response; and

**WHEREAS**, in accordance with 36 CFR § 800.6(a)(1), NRCS West Virginia has notified the Advisory Council on Historic Preservation (ACHP) of its phased approach to the Section 106

process and the potential for adverse effect determinations, and the ACHP, in a letter dated November 8, 2023, has chosen not to participate in the consultation pursuant to 36 CFR § 800.6(a)(1)(iii); and

**WHEREAS**, NRCS West Virginia has coordinated public participation and comment on this project through the process set forth in the National Environmental Policy Act (NEPA); and

**WHEREAS**, the definitions set forth in 36 C.F.R. §800.16 are incorporated herein by reference and apply throughout this Agreement; and

**NOW, THEREFORE**, the Signatories agree that upon the decision of NRCS West Virginia to proceed with the Project, NRCS West Virginia shall ensure that the following stipulations are implemented in order to take into account the effects of the undertaking on historic properties and complete the Section 106 review process.

## **STIPULATIONS**

NRCS West Virginia shall ensure that the following stipulations are met and carried out:

### **I. Professional Qualification Standards**

- a. All technical review required for historic preservation activities implemented pursuant to this Agreement shall be carried out by or under the direct supervision of a person or persons meeting, at a minimum, the “Secretary of Interior’s Professional Qualifications Standards” for archeology and architectural history or historic architecture, as appropriate.
- b. “Technical review” is defined as all efforts to inventory, evaluate, and perform subsequent treatment, such as Historic American Building Surveys, data recovery excavation or recordation, analysis of potential adverse effects to historic properties as required under this Agreement.

### **II. Defining the Area of Potential Effects (APE)**

- a. The anticipated APE includes all eligible 68 properties, but also surrounding areas that could be potentially affected, as shown in the attached Appendix A. The final APE will be determined in consultation with the consulting parties as the final floodplain buyout properties are selected.
- b. In accordance with 36 CFR 800.16(d), the APE will be determined in consultation with the consulting parties as the final floodplain buyout properties are selected. The APE includes all areas that may be affected by construction or demolition in the watershed, including staging areas, access roads, borrow areas, and other related infrastructure for this Project.

- c. Upon determination of potential buyout properties, NRCS West Virginia will submit a map or maps of the site-specific APE to the consulting parties for review prior to completing cultural resources inventories. Upon receipt, consulting parties will have thirty (30) calendar days to review and provide comments to NRCS West Virginia. NRCS West Virginia will take into account any comments on the APE and finalize the APE based on comments received. Failure of any party to comment within thirty (30) days shall not preclude NRCS West Virginia from finalizing the APE.
- d. As the Project progresses, design changes may be necessary. If any such change would necessitate modification of an APE, that has already been agreed to, NRCS West Virginia will submit a modified APE to all parties to this Agreement for a thirty (30)-day review and comment period. The APE may be changed as described herein without requiring amendment to this Agreement.

### **III. Inventory and Evaluation of Historic Properties.**

- a. A Class I literature review and a Phase I investigation of the individual properties' APE (estimated to be 30, but no more than 68) will be designed in consultation with consulting parties. A class I literature review and a Phase I investigation of the APE will be conducted, as appropriate and according to consultation proceedings. This investigation and resulting standard technical report shall follow the *West Virginia SHPO's Guidelines for Phase I, II, and III Archaeological Investigations and Technical Report Preparation* and shall include a combined summary of background research and fieldwork. Above ground structures will be documented following the *West Virginia National Register and Architecture/History Survey Manual*.
- b. Each structure over forty-five (45) years old from the date of the agreement execution shall be documented on a West Virginia Historic Property Inventory (HPI) Form and shall be photographed with digital photos following National Register of Historic Places (NRHP) and National Historic Landmark standards. The structure shall be indicated on a USGS topographic Quad Map. HPI forms and photographs shall be completed and obtained by NRCS West Virginia prior to demolition of the structure. Copies of the documentation shall be provided to consulting parties. Demolition will not occur until NRCS has accepted all deliverables and all consulting parties have been provided the opportunity to concur with these recommendations. Full evaluation will be described in a Statement of Work, but includes, at minimum, the following:
  - i. Historic Context: an explanation of the relationship of the resource to its setting and historic use. Include dates within which the property was in use;



- ii. Property Records Search: identification of the date of construction and property ownership;
  - iii. Brief Description: information regarding the appearance of the structure and materials used in its construction;
  - iv. Statement of Significance: in relation to NRHP Criteria.
- c. If determinations of NRHP eligibility cannot be made during the Phase I investigation, additional Phase I investigation consisting of a combination of background research and fieldwork, designed to identify resources and define site boundaries within an APE, will be conducted. During the Phase I investigation, the entirety of the project area must be studied. Research and consultation with consulting parties, may be recommended. No demolition will occur until National Register eligibility is confirmed and concurred with all consulting parties and NRCS.

#### **IV. Reports and Technical Review**

- a. The results of field investigations may be documented in stand-alone documents or in combined archaeological, architectural, and/or ethnographic technical reports. As inventory efforts may be nonconcurrent, based on project phase, access to land, and availability of funding, multiple technical inventory reports may be produced.
- a. All documents related to Section 106, including, but not limited to draft technical reports and HPI forms, shall be provided to NRCS West Virginia's SOI qualified CRS for review and approval. A minimum of one electronic and one hard copy shall be provided. The CRS may provide comments on the report that must be addressed prior to any dissemination to consulting parties.
- b. When the SOI qualified CRS finds the survey report acceptable, NRCS will submit the final report and proposed agency finding to consulting parties for review. The consulting parties shall have thirty (30) calendar days to review from date of receipt. At the end of the consulting parties review, all parties shall then have an additional 30 calendar days to respond to the determinations. If no objections to the determinations are received from the consulting parties, then the project can move forward to the next step in the Section 106 review process.

No project implementation, including construction and/or demolition work, may proceed until the NRCS's SOI qualified CRS has concluded Section 106 and NRCS West Virginia has issued a notice to proceed to the sponsors, and all consulting parties have also agreed that the project can proceed.

## **V. Assessment of Effects**

- a. In accordance with 36 C.F.R. §800.5, NRCS West Virginia shall apply the criteria of adverse effects to all historic properties located within the APE in consultation with the consulting parties. NRCS West Virginia remains responsible for all determinations of effect.
- b. Mitigation of adverse effects to historic properties shall occur in accordance with Stipulation VI of this Agreement.

## **VI. Treatment/Mitigation Plan**

- a. Before Project implementation begins, NRCS West Virginia, in consultation with the consulting parties that attaches religious or cultural significance to identified historic properties, will adhere to the steps outlined in this Agreement to resolve adverse effects to properties eligible for the NRHP. NRCS West Virginia will consider any views concerning such effects which have been provided by consulting parties, Tribes, and the public.
- b. NRCS will consult with consulting parties to develop an appendix of appropriate mitigation measures and determine when those measures would apply as the resolution of adverse effects. The appendix will be updated as necessary and follow the amendment process of this PA. NRCS may transmit their determination and recommendation of which mitigation measure to apply to all consulting parties via letter. If no objection is received within 30 calendar days, NRCS will move forward with resolving adverse effects using the determined mitigation measure.

## **VII. Unanticipated/Inadvertent Discovery Plan; Emergencies**

- a. In the event of an inadvertent discovery during construction, all demolition work involving disturbance shall be halted in the area of the resource finding and surrounding area where further cultural resources can reasonably be expected to occur. The NRCS West Virginia CRS or SOI-qualified individual approved by them shall inspect the work site to determine the nature of the affected resources. If the resource is determined to meet NRHP eligibility Criteria (36 C.F.R. §800.4(c)(1)) by NRCS West Virginia, work in the affected area shall not proceed until the development and implementation of appropriate data recovery or other recommended mitigation procedures.
- b. If unmarked human remains are encountered during construction activities, all activities within a 100-foot buffer of the human remains will stop and the person making the discovery shall call Emergency 911 immediately. The person making the discovery will make a reasonable effort to protect the area from further disturbance by flagging or fencing the 100-foot buffer area and shall also notify

the county sheriff within forty-eight hours of the discovery and its location (West Virginia Code §29-1-8A).

- c. Additionally, the contractor shall notify the NRCS Project Manager and assigned NRCS Cultural Resource Specialist. The NRCS Cultural Resource Specialist will ensure that NRCS presence remains on site until dismissed by competent authority. NRCS will adhere to regulations found in 36 CFR 800.
- d. No photographs, or discussion of the site outside of with the NRCS Project Manager, NRCS Cultural Resource Specialist, NRCS State Conservationist, or Law Enforcement shall occur until the NRCS State Conservationist provides clearance through the appropriate Public Affairs Officer.
- e. Upon Law Enforcement's determination that the site is not an active crime scene, NRCS Cultural Resource Specialist will notify Required and Concurring Signatories, as well as the appropriate federally recognized Tribes, of the finding.
- f. If it is determined by competent authority that the remains are not Native American, a reasonable effort will be made to determine the identity or next of kin of the deceased. If the construction activities cannot be moved, the State Conservationist will direct the property owner to find another location for the remains and to seek a court order to have the remains removed to that location.
  - i. Competent authority is defined as law enforcement, coroner, or medical examiner, who has assumed custody and control of the human remains, or State Conservationist, or NRCS staff member possessing the delegated authority of the State Conservationist.
- g. If it is determined that the remains are Native American, the Cultural Resource Specialist shall contact the appropriate federally recognized tribes to consult on the disposition of the remains, funerary goods, and/or objects of cultural patrimony, if applicable.
- h. The NRCS shall follow all applicable federal, and state burial laws and ordinances, including the Native American Graves Protection and Repatriation Act, related human rights, and health statutes where appropriate.
- i. Should an emergency occur which represents an imminent threat to public health or safety or creates a hazardous condition, the procedures outlined in 36 C.F.R. §800.12 shall be followed.

## **VIII. Duration**

This Agreement will expire if its terms are not carried out within ten (10) years from the date of its execution. Prior to such time, NRCS West Virginia may consult with the other Signatories to reconsider the terms of the Agreement and amend it in accordance with Stipulation X below.

## **IX. Dispute Resolution**

Should any signatory to this Agreement object at any time to any actions proposed or the manner in which the terms of this Agreement are implemented, NRCS West Virginia, including their

SOI qualified CRS, shall consult with such party to resolve the objection. If NRCS West Virginia determines that such objection cannot be resolved, NRCS West Virginia will:

- a. Forward all documentation relevant to the dispute, including NRCS West Virginia's proposed resolution, to the ACHP. The ACHP shall provide NRCS West Virginia with its advice on the resolution of the objection within thirty (30) days of receiving adequate documentation. Prior to reaching a final decision on the dispute, NRCS West Virginia shall prepare a written response that takes into account any timely advice or comments regarding the dispute from the ACHP, signatories and concurring parties, and provide them with a copy of this written response. NRCS West Virginia will then proceed according to its final decision.
- b. If the ACHP does not provide its advice regarding the dispute within the thirty (30) day time period, NRCS West Virginia may make a final decision on the dispute and proceed accordingly. Prior to reaching such a final decision, NRCS West Virginia shall prepare a written response that takes into account any timely comments regarding the dispute from the signatories and concurring parties to the Agreement, and provide them and the ACHP with a copy of such written response.
- c. NRCS West Virginia's responsibility to carry out all other actions subject to the terms of this Agreement that are not the subject of the dispute remain unchanged. NRCS West Virginia shall notify all parties and the ACHP of its decision in writing before implementing that portion of the Project subject to dispute under this stipulation. NRCS West Virginia's decision shall be final.

## **X. Amendments**

This Agreement may be amended when such an amendment is agreed to in writing by all Required or Invited Signatories. Concurring Parties do not have the authority to amend or terminate the agreement. The amendment will be effective on the date a copy signed by all of the signatories is filed with the ACHP.

The addition of developing and updating any appendix referenced in this document can be incorporated once a 30 calendar day window of review from all consulting parties occurs. The addition of appendices can be accomplished via letter to consulting parties.

Any addition of properties requiring review beyond the initial thirty (but not to exceed 68), will be listed as part of an appendix to this agreement. All other stipulations regarding Section 106 adherence for the additional properties shall be adhered to.

## **XI. Termination**

- a. If the terms of this Agreement have not been implemented by September 30, 2034 then this Agreement shall be considered null and void. In such an event, NRCS West Virginia shall so notify the Signatories and, if it chooses to continue with

the Project, then it shall reinitiate review of and consultation on the Project in accordance with 36 C.F.R. 800.3 through 800.7.

- b. In the event that NRCS West Virginia does not carry out the terms of this Agreement, the Signatories shall consult to seek amendment to the Agreement and proceed in accordance with 36 C.F.R. 800.6(c)(8).
- c. Only Required or Invited signatories to the Agreement (USDA NRCS and SHPO) may terminate this Agreement by providing thirty (30) day notice to the other parties, provided that the parties shall consult during the period prior to termination to seek agreement on amendments or other actions that would avoid termination. In the event of termination, NRCS West Virginia shall proceed in accordance with 36 C.F.R. 800.6(c)(8), execute a new agreement in accordance with 800.6(c)(1) or request comments of the ACHP under 800.7(a)

## **XII. Execution in Counterpart**

This PA may be executed in counterparts with a separate page for each signatory. NRCS will ensure that each signatory, invited signatory, and concurring party is provided with a copy of the fully executed PA.

Execution of this Agreement by the NRCS West Virginia and the signatories and implementation of its terms evidence that the NRCS has taken into account the effects of this undertaking on historic properties and afforded the ACHP an opportunity to comment.

**REQUIRED SIGNATORY PAGE**

**PROGRAMMATIC AGREEMENT  
AMONG THE  
UNITED STATES DEPARTMENT OF AGRICULTURE,  
NATURAL RESOURCES CONSERVATION SERVICE,  
THE  
WEST VIRGINIA STATE HISTORIC PRESERVATION OFFICER,  
  
THE WYOMING COUNTY COMMISSION, AND  
THE SOUTHERN CONSERVATION DISTRICT OF WEST VIRGINIA**

**REGARDING  
THE VOLUNTARY FLOODPLAIN BUYOUT ALONG  
THE UPPER GUYANDOTTE RIVER,  
WYOMING COUNTY, WEST VIRGINIA**

UNITED STATES DEPARTMENT OF AGRICULTURE, NATURAL RESOURCES  
CONSERVATION SERVICE

**JON BOURDON**



Digitally signed by JON BOURDON

Date: 2024.06.24 10:58:56 -04'00'

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Jon Bourdon, State Conservationist

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Date

**REQUIRED SIGNATORY PAGE**  
**PROGRAMMATIC AGREEMENT**  
**AMONG THE**  
**UNITED STATES DEPARTMENT OF AGRICULTURE,**  
**NATURAL RESOURCES CONSERVATION SERVICE,**  
**THE**  
**WEST VIRGINIA STATE HISTORIC PRESERVATION OFFICER,**  
**THE WYOMING COUNTY COMMISSION, AND**  
**THE SOUTHERN CONSERVATION DISTRICT OF WEST VIRGINIA**  
**REGARDING**  
**THE VOLUNTARY FLOODPLAIN BUYOUT ALONG**  
**THE UPPER GUYANDOTTE RIVER,**  
**WYOMING COUNTY, WEST VIRGINIA**

WEST VIRGINIA STATE HISTORIC PRESERVATION OFFICER

  
\_\_\_\_\_  
Randall Reid-Smith, Secretary

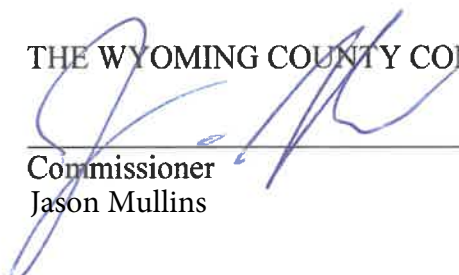
  
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Date

**CONCURRING PARTY SIGNATORY PAGE**

**PROGRAMMATIC AGREEMENT  
AMONG THE  
UNITED STATES DEPARTMENT OF AGRICULTURE,  
NATURAL RESOURCES CONSERVATION SERVICE,  
THE  
WEST VIRGINIA STATE HISTORIC PRESERVATION OFFICER,  
  
THE WYOMING COUNTY COMMISSION, AND  
THE SOUTHERN CONSERVATION DISTRICT OF WEST VIRGINIA**

**REGARDING  
THE VOLUNTARY FLOODPLAIN BUYOUT ALONG  
THE UPPER GUYANDOTTE RIVER,  
WYOMING COUNTY, WEST VIRGINIA**

THE WYOMING COUNTY COMMISSION

  
\_\_\_\_\_  
Commissioner  
Jason Mullins

6-18-24  
Date



**CONCURRING PARTY SIGNATORY PAGE**

**PROGRAMMATIC AGREEMENT  
AMONG THE  
UNITED STATES DEPARTMENT OF AGRICULTURE,  
NATURAL RESOURCES CONSERVATION SERVICE,  
THE  
WEST VIRGINIA STATE HISTORIC PRESERVATION OFFICER,  
  
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REGARDING  
THE VOLUNTARY FLOODPLAIN BUYOUT ALONG  
THE UPPER GUYANDOTTE RIVER,  
WYOMING COUNTY, WEST VIRGINIA**

THE SOUTHERN CONSERVATION DISTRICT OF WEST VIRGINIA



Board Member  
Randall Patton

6-13-24

Date

# **Appendix A**

## **Maps and Location Data**

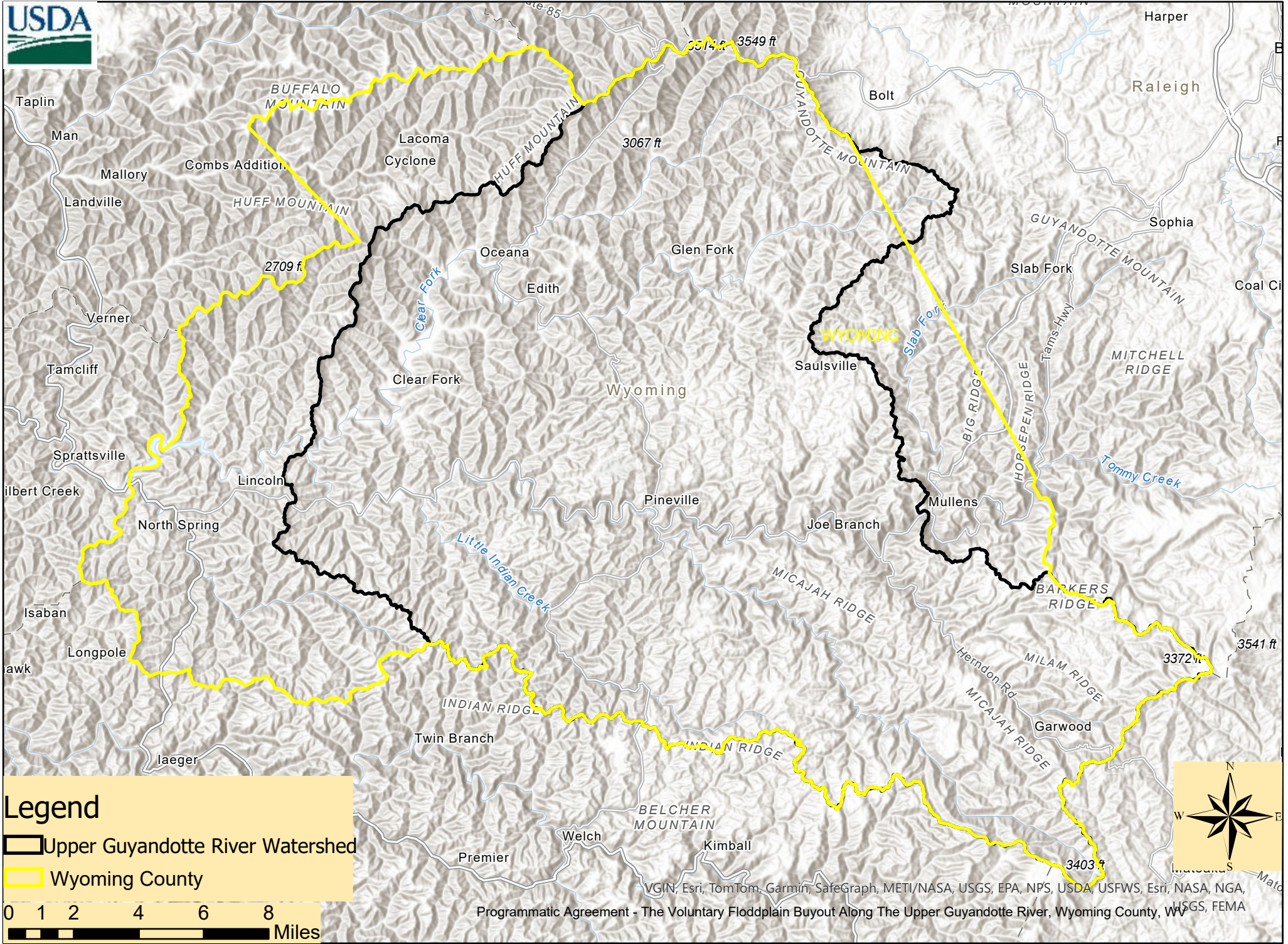


# Upper Guyandotte River Watershed



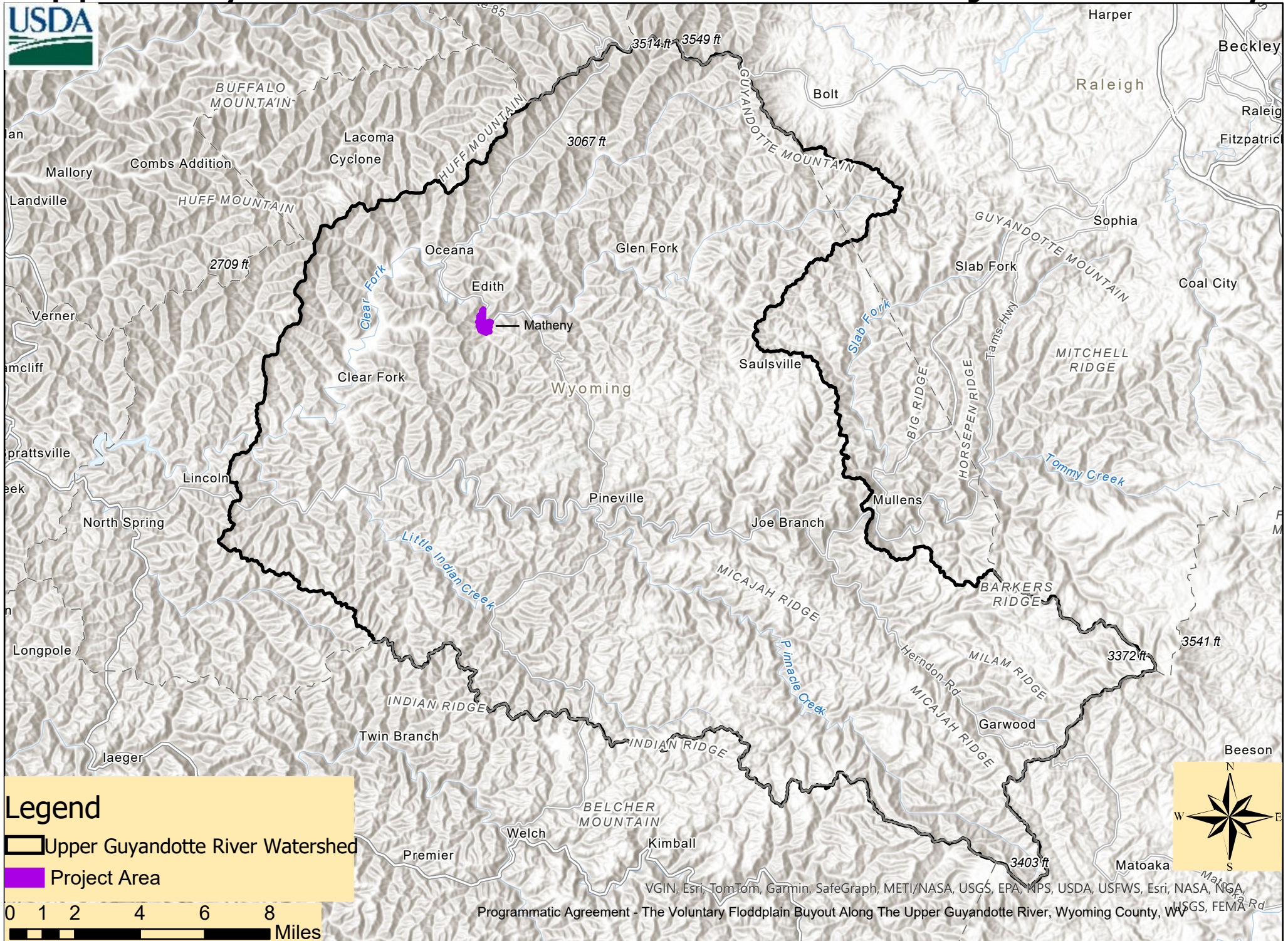


# Upper Guyandotte River Watershed within Wyoming County





# Upper Guyandotte River Watershed with Project Boundary





# Cultural Resources Anticipated Area of Potential Effect



APE outline includes the location of the properties eligible for the buyout, the access and staging areas, the possible borrow areas, and a 200' buffer for visual and other effects of the proposed undertaking.



## Legend

- Creeks
- Matheny
- Anticipated Area of Potential Effect

0 0.04 0.07 0.14 0.21 0.28  
Miles

## Appendix F

### Acronyms

All-terrain vehicle (ATV)  
Best management practices (BMP)  
Baseline Resilience Indicator (BRIC)  
Bureau of Economic Analysis Regional Economic Projections (OBERS)  
Codified Federal Rule (CFR)  
Environmental Assessment (EA)  
Environmental Quality (EQ)  
Emergency Watershed Protection (EWP)  
Federal Emergency Management Agency (FEMA)  
Future Without Project Condition (FWOP)  
Geographic Information Systems (GIS)  
Hatfield McCoy Trail (HMT)  
Housing and Urban Development (HUD)  
Hydrologic Unit, Hydrologic Unit Code (HUC)  
Integrated Flood Observing and Warning System (IFLOWS)  
National Economic Development (NED)  
National Environmental Policy Act (NEPA)  
National Flood Insurance Program (NFIP)  
National Oceanic and Atmospheric Administration (NOAA)  
National Watershed Program Manual (NPWM)  
National Resource Conservation Service (NRCS)  
Operation and Maintenance (O&M)  
Principles, Requirements, and Guidelines (PRG)  
Public Service District (PSD)  
Regional Economic Development (RED)  
Social Vulnerability to Environmental Hazards score (SVI score)  
Social Vulnerability Analysis (SVA)  
Social Vulnerability Index (SoVI)  
Soil Conservation Service (SCS)  
Spatial Hazard Events and Losses Database for the US (SHELDUS)  
Special Flood Hazard Area (SFHA)  
Total Maximum Daily Load (TMDL)  
Urban Floodwater Damage Economic Evaluation Computer Application Program (URB1)  
US Army Corps of Engineers (USACE)  
US Department of Agriculture (USDA)  
US Environmental Protection Agency (USEPA)  
US Fish and Wildlife Service (USFWS)  
West Virginia Department of Environmental Protection (WVDEP)  
West Virginia Department of Natural Resources (WVDNR)  
West Virginia Flood Tool (WV Flood Tool)  
West Virginia State Historic Preservation Office (WVSHPO)  
Wildlife Management Area (WMA)