DRAFT Watershed Plan and Environmental Assessment for the Cottonwood Creek Flood Prevention Project

Idaho County, Idaho

Sponsoring Local Organizations:
City of Cottonwood
Cottonwood Highway District
Idaho Transportation Department

Lead Federal Agency:
U.S. Department of Agriculture
Natural Resources Conservation Service

Cooperating Agency:
Idaho County Soil and Water Conservation District

April 2026

Title and Document Status: Draft Cottonwood Creek Watershed Plan and Environmental Assessment for the Cottonwood Creek Flood Prevention Project

State/County: Idaho; Idaho County

Lead Agency: United States Department of Agriculture Natural Resources Conservation Service (USDA-NRCS)

Cooperating Agency: Idaho County Soil and Water Conservation District

Sponsoring Local Organizations: City of Cottonwood; Cottonwood Highway District and Idaho Transportation Department (ITD) as co-sponsors

Authority: This Draft Plan-EA has been prepared under authority of the Watershed Protection and Flood Prevention Act of 1954 (public Law 83-566) as amended (16 U.S.C. Section 1001 et. Seq.) 1954.

Abstract: This Draft Plan-EA was developed to assess the impacts of the proposed Cottonwood Creek Flood Prevention Project (Proposed Project). The purpose of the Proposed Project is to provide flood damage reduction for the City of Cottonwood and surrounding communities. The Proposed Project is needed to improve community resilience by protecting residential, commercial, and public infrastructure from flood-related damage. By upgrading floodwater conveyance systems, the project will reduce the frequency and severity of flood events and associated economic and social impacts. The total estimated cost of project installation in $15,288,502 (2022 dollars), with approximately $13,590,467 anticipated to be funded through USDA-NRCS Public Law 83-566.

Comments and Inquiries: Comments and inquiries must be received by July 2, 2026. Submit comments and inquiries to: NRCS Idaho State Office, 9173 W. Barnes Drive, Suite C, Boise, ID 83709, Attention: Daniel Murdock, NRCS—Acting State Conservation Engineer or email to daniel.murdock@usda.gov.

addressed to USDA and provide in the letter all 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.

Ancestral Land Acknowledgement: NRCS, through the review of the National Park Service Native American Graves Protection and Repatriation Act Native American Consultation Database (NACD), the U.S. Department of Housing and Urban Development Tribal Directory Assessment Tool (TDAT), the Bureau of Indian Affairs (BIA) website, and the Utah Division of Indian Affairs (UDIA) website, and previous NEPA & National Historic Preservation Act (NHPA) consultations, identified three Federally Recognized Tribes. The Nez Perce Tribe, the Confederated Tribes of the Colville Reservation, and the Confedered Tribes of the Umatilla Indian Reservation may have ancestral land, traditional use, and/ or traditional cultural property claims within the Project Area and the immediate vicinities. Consultation with these three entities will continue throughout this plan's development; refer to Appendix A for correspondence.

COTTONWOOD CREEK WATERSHED, IDAHO

WATERSHED AGREEMENT

between

City of Cottonwood, Cottonwood Highway District, and Idaho Transportation Department

(Referred to herein as sponsors)
and the
Natural Resources Conservation Service,
U.S. Department of Agriculture
(Referred to herein as NRCS)

Whereas, application has heretofore been made to the Secretary of Agriculture by the sponsors for assistance in preparing a plan for works of improvement for the Cottonwood Creek Watershed, State of Idaho under the authority of the Watershed Protection and Flood Prevention Act, as amended (16 U.S.C. Sections 1001 to 1008, 1010, and 1012); and

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

Whereas, there has been developed through the cooperative efforts of the sponsors and NRCS a watershed project plan and environmental assessment for works of improvement for the Cottonwood Creek Watershed, State of Idaho, hereinafter referred to as the watershed project plan or plan, which plan 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 on this watershed project plan and that the works of improvement for this project will be installed, operated, and maintained in accordance with the terms, conditions, and stipulations provided for in this plan and including the following:

1. **Term.** The term of this agreement is for the installation period and evaluated life of the project (103 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.** Table 1- Cottonwood Creek Watershed Agreement Cost-Share Percentages and Amounts shows the estimated cost-share percentages and amounts for Watershed Project Plan implementation.

Table 1. Cottonwood Creek Watershed Agreement- Cost-Share Percentage and Amounts

Watershed Works of Improvement	NRCS Cost	%	Sponsors Cost	%	Total Cost
Cost-Sharable Items					
Flood Prevention [1/]	$11,530,414	88%	$1,631,036	12%	$13,161,449
Relocation [2/]	-	-	-	-	-
Subtotal: Cost-Sharable Costs	**$11,530,414**		**$1,631,036**		**$13,161,449**
Non-Cost-Sharable Items [3/]					
NRCS Technical Assistance/Engineering	$1,604,231	88%	$226,927	12%	$1,831,158
Project - Construction Administration	$228,895	98%	$4,000	2%	$232,895
Permits			$10,000	100%	$10,000
Land Acquisition			$53,000	100%	$388,000
Subtotal: Non-Cost-Sharable Costs	**$1,833,126**		**$293,927**		**$2,127,053**
Grand Total:	**$13,363,540**		**$1,924,963**		**$15,288,502**

1 - The cost-share rate is the percentage of the average cost of installing the practice in the selected plan for the evaluation unit. During project implementation, the actual cost-share rate must not exceed the rate of assistance for similar practices and measures under existing national programs.

2 - Investigation of the watershed project area indicates that no displacements will be involved under present conditions. However, in the event that displacement becomes necessary at a later date, the cost of relocation assistance and payments will be cost-shared in accordance with the percentages shown.

3 - If actual Non-Cost-Sharable item expenditures vary from these figures, the responsible party will bear the change.

6. **Land Treatment Agreements.** The sponsors will obtain agreements from owners of not less than 50 percent of the land above each multiple-purpose and floodwater-retarding structure. These agreements must provide that the owners will carry out farm or ranch conservation plans on their land. The sponsors will ensure that 50 percent of the land upstream of any retention reservoir site is adequately protected before construction of the dam. The sponsors will aid landowners and operators to ensure the installation of the land treatment measures shown in the Watershed Project Plan. The sponsors will encourage landowners and operators to continue to operate and maintain the land treatment measures after the long-term contracts expire, for the protection and improvement of the watershed.

7. **Floodplain Management.** Before construction of any project for flood prevention, the sponsors must agree to participate in and comply with applicable Federal floodplain management and flood insurance programs. The community of Cottonwood, Idaho participates in the flood insurance program and is currently in good standing.

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.

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 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 of 100 years and a 103-year analysis period. Although the sponsor's 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.** Prior to construction, the sponsors must prepare an Emergency Action Plan (EAP) for each dam or similar structure where failure may cause loss of life or as required by state and local regulations. The EAP must meet the minimum content specified in NRCS Title 180, National Operation and Maintenance Manual (NOMM), Part 500, Subpart F, Section 500.52, and meet applicable State agency dam safety requirements. The NRCS will determine that an EAP is prepared prior to the execution of fund obligating documents for construction of the structure. EAPs must be reviewed and updated by the sponsors annually.

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, 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 (https://www.usda.gov/about-usda/general-informatiiton/staff-offices/office-assistant-secretary-civil-rights/how-to-file-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.

By signing this agreement, the recipient assures the USDA 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 sub-recipients or sub-contractors 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; and
  (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 five 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 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 must keep the original of all disclosure reports in the official files of the agency.

18. Certification Regarding Lobbying (7 CFR Part 3018) (for projects > $100,000)

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 sub-awards at all tiers (including subcontracts, sub- grants, and contracts under grants, loans, and cooperative agreements) and that all sub-recipients 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

B. 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.

C. Where the primary sponsors are unable to certify 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 sponsors signatory to this agreement certify as follows:
(1) Any facility to be utilized in the performance of this proposed agreement is ( ), is not (X) 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 sub-agreement.

B. The project sponsor signatory to this agreement agrees 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 sub- agreement.

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 (E.O.) 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 sub- agreement. 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 a 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 retains 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

Sponsor: City of Cottonwood
By:
Title:
Date:
Address: Zip Code:
The signing of this plan was authorized by a resolution of the governing body of the City of Cottonwood. A*dopted at a meeting held on:* Secretary [or other Title]:_____ Date*:* _____

Sponsor: Cottonwood Highway District
By:
Title:
Date:
Address: Zip Code:
The signing of this plan was authorized by a resolution of the governing body of the Cottonwood Highway District. A*dopted at a meeting held on:* Secretary [or other Title]:_____ Date*:* _____

Sponsor: Idaho Transportation Department
By:
Title:
Date:
Address: Zip Code:
The signing of this plan was authorized by a resolution of the governing body of the Idaho Transportation Department. A*dopted at a meeting held on:* Secretary [or other Title]:_____ Date*:* _____

USDA United States Department of Agriculture Natural Resources Conservation Service
Approved By: _____ **Jerome Faulkner**
Title: NRCS Acting State Conservationist
Date:

Table of Contents

List of Tables

Appendices

Acronyms

Acronym, Abbreviation or Short Form	Meaning
ac-ft	acre-feet
ACHP	Advisory Council on Historic Preservation
ACS	American Community Survey
AMSL	Above mean sea level
APE	Area of potential effect
ARD	Aquatic resources delineation
ARH	ARH Archaeology and Architectural History, LLC
BAR	Biological Analysis Report
BCR	benefit-cost ratio
BGEPA	Bald and Golden Eagle Protection Act of 1940

Acronym, Abbreviation or Short Form	Meaning
BLM	U.S. Bureau of Land Management
BMPs	Best management practices
CAA	Clean Air Act
CCS	Center for Climate Strategies
CEDA	Clearwater Economic Development Association
Census	U.S. Census Bureau
CH_4	Methane
CFR	Code of Federal Regulations
CO	Carbon monoxide
CO_2	Carbon dioxide
CSWGP	Construction Storm Water General Permit
CWA	Clean Water Act
Draft Plan-EA	Draft Watershed Plan and Environmental Assessment
E.O.	Executive Order
EAP	Emergency Action Plan
EFH	Essential Fish Habitat
EIS	Environmental Impact Statement
EPA	U.S. Environmental Protection Agency
ESA	Endangered Species Act
EQIP	Environmental Quality Incentive Program
FEMA	Federal Emergency Management Agency
FIP	Federal Implementation Plan
FIRM	Flood Insurance Rate Map
FONSI	Finding of No Significant Impact
FPPA	Farmland Protection Policy Act
ft	feet
FWFI	Future With Federal Investment
FWOFI	Future Without Federal Investment
GHG	Greenhouse gas
HFC	Hydrofluorocarbon
HUC	Hydrologic unit code
IDEQ	Idaho Department of Environmental Quality
IDFG	Idaho Fish and Game
IDWR	Idaho Department of Water Resources
IFWIS	Idaho Fish and Wildlife Information System
IGS	Idaho Geological Survey
IPaC	Information for Planning and Consultation
IPDES	Idaho Pollutant Discharge Elimination System
ITD	Idaho Transportation Department
J-U-B	J-U-B ENGINEERS, Inc.
LF	linear feet
LUST	Leaking underground storage tank
MBTA	Migratory Bird Treaty Act
MOU	Memorandum of Understanding
MSAT	Mobile Source Air Toxics
N_2O	Nitrous Oxide
NAAQS	National Ambient Air Quality Standards
NASS	National Agricultural Statistics Service
NBNR	Noted but not recorded
NEE	National Economic Efficiency
NEPA	National Environmental Policy Act
NFIP	National Flood Insurance Program

Acronym, Abbreviation or Short Form	Meaning
NHD	National Hydrography Dataset
NHPA	National Historic Preservation Act
NISC	National Invasive Species Council
NMFS	National Marine Fisheries Service
NO_2	Nitrogen Dioxide
NOAA	National Oceanic and Atmospheric Administration
NPDES	National Pollutant Discharge Elimination System
NPS	National Park Service
NRCS	Natural Resources Conservation Service
NRHP	National Register of Historic Places
NWI	National Wetlands Inventory
NWPH	National Watershed Program Handbook
NWPM	National Watershed Program Manual
NWQI	National Water Quality Initiative
O&M	Operations and Maintenance
OM&R	Operations, maintenance, and repair
O_3	Ozone
P&G	Principles and Guidelines
P&R	Principles and Requirements
Pb	Lead
PFC	Perfluorocarbon
PFYC	Potential Fossil Yield Classification
PL	Public Law
PM	Particulate matter
PR&G	Principles, Requirements and Guidelines
Proposed Project	Cottonwood Creek Flood Prevention Project
RCRA	Resource Conservation and Recovery Act
RAIL	Rapid Avian Information Locator
Reclamation	U.S. Bureau of Reclamation
ROD	Record of Decision
ROW	rights-of-way
SF_6	Sulfur Hexafluoride
SFHA	Special Flood Hazard Area
SHPO	State Historic Preservation Office
SIP	State Implementation Plan
SO_2	Sulfur dioxide
SPCC	Spill Prevention, Control, and Countermeasures
SWAP	State Wildlife Action Plan
SWPPP	Stormwater Pollution Prevention Plan
TESCs	Temporary erosion and sediment controls
THPO	Tribal Historic Preservation Office
TM	Technical Memo
TMDL	Total Maximum Daily Load
USACE	U.S. Army Corps of Engineers
USDA	U.S. Department of Agriculture
USFS	U.S. Forest Service
USFWS	U.S. Fish & Wildlife Service
USGS	U.S. Geological Survey
UST	Underground storage tank
WBD	Watershed boundary dataset
WFPO	Watershed and Flood Prevention Operations
WOTUS	Waters of the United States

Acronym, Abbreviation or Short Form	Meaning
WPFPA	Watershed Protection and Flood Prevention Act
WWTP	Wastewater Treatment Plant

Summary

(Office of Management and Budget Fact Sheet)

Draft Watershed Plan-Environmental Assessment Document
For
Cottonwood Creek
Idaho County, Idaho
Idaho Congressional District 1

S.1 Authority

Public Law (PL) 83-566 Stat. 666 as amended (16 U.S.C. Section 1001 et. Seq.) 1954

S.2 Sponsoring Local Organization

City of Cottonwood, Idaho; Cottonwood Highway District and Idaho Transportation Department (IDT) as co-sponsors.

S.3 Cooperating Agency

Idaho County Soil and Water Conservation District

S.4 Proposed Action

The City of Cottonwood, Idaho, along with its co-sponsors, would replace, relocate, reconstruct, and enhance the existing storm pipe and storm water conveyance system throughout the city and into unincorporated county areas to prevent future flooding and reduce future flooding damage.

S.5 Purpose and Need for Action

The purpose of the Cottonwood Creek Flood Prevention Project (Proposed Project) is to prevent flooding and reduce flood damage for the City of Cottonwood. The Proposed Project is needed to reduce flooding, sedimentation, and associated damages within the City of Cottonwood to protect people, homes, buildings, and critical infrastructure.

S.6 Description of the Preferred Alternative

Project measures include the replacement and relocation of flood conveyance conduits and structures; installation of culverts and conveyance structures to convey floodwaters; and creek channel enhancements. Culverts that are not part of the closed conduit system are considered “real property” as defined by Section 506 and are therefore excluded from the construction funding request. The Preferred Alternative would cost an estimated $15,288,502.

S.7 Resource Information

Table S-1 lists the relevant resource information for the project area.

Table S-1. Existing Resource Information

Resource	Description
Latitude/Longitude	Cottonwood City Center: 46.048575°, -116.349615°
Hydrologic Unit Number – Hydrologic Unit Code (HUC)	HUC 17060305 (South Fork Clearwater Subbasin): • Upper Cottonwood Creek (HUC 170603050802) 9,505 acres • Stockney Creek (HUC 170603050803) 20,429 acres Total = 29,934 acres

Resource	Description
Climate*	Average high: 79.6°F in August Average low: 23.5°F in January
Topography	Dryland farm ground with range and pastureland surrounded by forested, mountainous areas. The project ranges from 3,340 to 3,720 feet (ft) above mean sea level (AMSL).
Annual Precipitation/Snowfall	24 inches rain / 59 inches snowfall
Watershed Area	29,934 acres
Land Uses (Proposed Project)	Built area: 58% Crops: 39% Rangeland: <1% Water: 2.5%
Land Ownership (Proposed Project)	Private (100%)
Population (Idaho County)**	16,411
Demographics (Idaho County)***	White alone: 93.9% Black or African American alone: 0.1% American Indian or Native Alaskan alone: 4.0% Asian alone: 0.4% Native Hawaiian or Other Pacific Islander alone: 0.0% Some other Race: 0.6% Two or more races: 1.5%
Farms present (Idaho County)***	708
Land in Farms (Idaho County)***	537,428 acres
Average Farm Size (Idaho County)***	759 acres

* Based on 2021 Western Region Climate Center (WRCC) data.
**Based on 2020 U.S. Census Bureau (Census) data.
***Based on 2017 USDA-NRCS Census of Agriculture.

S.8 Alternative Plans Considered

All reasonable alternatives were evaluated in this Draft Plan–EA to determine the locally preferred, environmentally preferred, and the national economic efficiency (NEE) alternatives. While a standalone nonstructural alternative could not be formulated to address the watershed problems while meeting the Sponsor's purpose and need, the Sponsor is committed to incorporating future nonstructural measures into their policies, if and when identified.

Numerous alternatives were considered in the initial array of alternatives evaluated, including revisions in agricultural practices, changes in land use practices, farm conservation easements, three alignment routes, a flow reduction basin, recreational improvements, channel enhancements, and lagoon bank protections. The initial array of alternatives was screened during a qualitative evaluation. From this, five alternatives remained for secondary screening based on the Sponsor's purpose and need. These alternatives included three alignment routes, channel enhancements, and lagoon bank protections. The secondary screening removed two alignment routes, channel enhancements, and lagoon bank protections. The remaining alternatives, which include the No Action Alternative or Future without Federal Investment (FWOFI) and alignment Alternative 2 or Future With Federal Investment (FWFI)/ Preferred Alternative were considered for detailed study in this Plan-EA. Through the screening process, Alternative 2 was determined to be the Preferred Alternative/Future with Federal Investment (FWFI). All alternatives were evaluated against the purpose and need, the Principles, Requirements and Guidelines (PR&G) Guiding Principles, and decision criteria. A description of the two alternatives considered for detailed evaluation follows.

Avoidance and minimization measures, such as Best Management Practices (BMPs) would be implemented to reduce or eliminate adverse effects to resources. Compensatory mitigation is not anticipated for the Preferred Alternative.

- Under the No Action Alternative (FWOFI), the Proposed Project would not be implemented. No flood prevention systems would be built to convey peak flows, and no conduit would be constructed to convey floodwaters. The existing flood control infrastructure would remain the same; flooding would continue to damage businesses, buildings, residences, roads, and public grounds.
- No PL 83-566 funds would be used under this alternative; therefore, the No Action Alternative is the FWOFI. The No Action Alternative would not result in any additional costs to the City of Cottonwood beyond traditional maintenance and repair costs.
- Alternative 2 (Action Alternative/FWFI) includes relocating the flood conveyance system and main Cottonwood Creek channel with the construction of a new closed conduit conveyance system beneath Front and Main Street and installing conduit to convey floodwaters from the north end of the City to Cottonwood Creek conveyance system; improving existing flood area inlet structures to maintain reductions in peak flows and stop debris from entering the system; replacing two culvert bridge crossings near East Road; and enhancing the Cottonwood Creek Channel through selective removal of cottonwood trees, stumps, and flood debris within the channel and restabilizing the bank with vegetation. Armoring the existing lagoon facilities would mitigate erosion of the stream into the facility embankments, reducing potential for discharge into the stream. This alternative would cost approximately $15,288,502 total, with $13,363,540 coming from PL-83-566 funding and $1,924,963 coming from sponsor funds.

Mitigation measures include project design elements and best management practices (BMPs) that would be implemented to protect against sedimentation and erosion during construction and operations; protect water quality; reduce fugitive dust, Mobile Source Air Toxics (MSAT), and Greenhouse Gas (GHG) emissions associated with construction; preserve and protect onsite vegetation and control and prevent the spread of noxious weeds; preserve, protect, and restore wildlife habitat during construction; and reduce noise and manage traffic.

S.9 Project Costs by Purpose and Funding Source

A breakdown of the estimated project costs for the Preferred Alternative is summarized in Table S-2. The estimated installation costs are $1,924,963 from project application participation and $13,363,540 from PL 83-566 federal funds. The City of Cottonwood is responsible for coordinating obligations and financial contributions from various funding sources identified as “Other Funds.”

Table S-2. Estimated Project Costs[1]

Project Component	PL 83-566 Funds[2]		Other Funds[2]		Total	% of Total Project Costs
	Amount	% of Project Component	Amount	% of Project Component		
Construction	$11,530,414	87.7	$1,631,036	12.4	$13,161,449	86.1
Engineering & Design	$1,831,158	100	$0	0	$1,831,158	12
Permits	$0	0	$10,000	100	$10,000	0.1

Project Component	PL 83-566 Funds[2]		Other Funds[2]		Total	% of Total Project Costs
	Amount	% of Project Component	Amount	% of Project Component		
Right of Way/Easements	$0	0	$53,000	100	$53,000	0.3
Project Administration	$228,895	98.3	$4,000	1.7	$232,895	1.5
Total	$13,590,467	88.9	$1,698,036	11.1	$15,288,502	100

[1]Base Price: 2023
[2]All works of improvement will be on non-federal land

S.10 Ecosystem Services Framework

Ecosystem services is a broad term used to describe the benefits humanity receives from ecosystems. The Ecosystem Services Framework used to evaluate benefits and costs for the Proposed Project uses federal water resource project and Natural Resources Conservation Service (NRCS) guidelines, relying primarily on the Principles, Requirements and Guidelines (PR&G) (USDA, 2017), the NRCS Natural Resources Economics Handbook (NRCS, 1998), and the National Watershed Program Manual (NWPM) (NRCS, 2015). The four-category ecosystem framework adopted in the PR&G includes the following service types: provisioning, regulating, cultural, and supporting services.

S.11 Project and Economic Benefits

Benefits occurring from the implementation of the Preferred Alternative, with positive direct effects to all residents and businesses and their customers within the City of Cottonwood, include:

- Mitigating flood damage to the impacted properties during storm events while improving public health and safety and access to emergency services.
- Mitigating sediment damage downstream of Cottonwood Creek through enhanced flood control management.
- Preventing flooding and reducing flood damages would provide a secondary benefit to water quality in Cottonwood Creek as sedimentation and erosion are reduced, causing less sedimentation in Cottonwood Creek. Flood debris washing into the Cottonwood Creek would also be reduced, causing reduced damage to the creek banks, further reducing sedimentation in the creek.

The specific monetary value of damage reduction benefits is described in Table S-3. During a 50-year storm, flood models show approximately 79 structures, 22 roads/minor highways, and over 15.3 acres of agricultural land would experience flooding under existing conditions. In the event of a 50-year storm event, the Preferred Alternative would protect all 79 structures, 22 public roadways/minor highways, and nearly half (7.6 acres) of the agricultural land located within the downstream areas. Flood modeling shows that approximately 80 structures, 23 roads/minor highways, and over 19.1 acres of agricultural land would experience flooding under a 100-year event under existing conditions. In the event of a 100-year storm event, approximately 27 structures would experience flooding under the Preferred Alternative, which is 53 fewer structures than existing conditions. Implementation of the Preferred Alternative, or FWFI would also provide regulating and provisioning ecosystem services. The flood prevention benefits are illustrated in Map B3 in Appendix B.

The estimated annual project economic benefits are summarized in Table S-3 below. The Preferred Alternative will be the NEE alternative per PR&G (USDA, 2017) and consistent with economic requirements per sections 505.2 and 505.35.B(1)(iv) of the NWPM.

The Preferred Alternative's flood control improvements in the watershed would generate economic returns in excess of the upfront installation and ongoing maintenance costs compared to the No Action Alternative. Under the No Action Alternative, average annual economic damages are approximately $528,100. These damages are the result of expenses the community of the watershed face to repair property-related damages and infrastructure. The Preferred Alternative would invest an average annualized amount of $414,800 in built infrastructure and $14,600 in annual operation, maintenance and replacement (OM&R) expenses to avoid $459,100 in structural and content damages. The annualized net benefits generated by the flood control measures amount to $29,700.

In total, the benefit-cost ratio (BCR) of the Preferred Alternative was estimated to be 1.10 (see Table S-3 below).

The estimated annual project economic benefits for the Preferred Alternative are summarized in Table S-3. The Preferred Alternative is also the NEE Alternative for the Proposed Project, per the NWPM. The net economic benefit is $41,400 for the Preferred Alternative.

Table S-3. Estimated Annual Net Economic Benefits[1]

Project Measure	Total Annual Benefits	Total Annual Costs	Benefit-Cost Ratio	Net Economic Benefit
Flood Control	$459,100	$429,400	1.07	$29,700
Total	$459,100	$429,400	1.07	$29,700

[1]Price base: 2023. Calculated using FY 2023 Water Resources Discount Rate (2.5%) and 103-year period of analysis. Prepared September 2023. Totals may not sum due to rounding.

The City of Cottonwood is responsible for coordinating obligations and financial contributions from various funding sources identified as "Other Funds."

S.12 Funding Schedule

Funding Schedule (budget year +3): $15,288,502

- Federal Funds: $13,363,540
- Non-Federal Funds: $1,924,963

S.13 Period of Analysis

The standard period of analysis for all alternatives is 103 years, accounting for a 100-year project life and 3-year installation period.

S.14 Project Life

The life of the Preferred Alternative is estimated for 100 years.

S.15 Environmental Impacts

Table S-4 lists the resources of concern and impacts associated with the Preferred Alternative. Resources that would not be affected by the Proposed Project are not listed in this table. BMPs, such as Temporary Erosion and Sediment Controls (TESCs) would be implemented during and post-construction to minimize impacts from construction activities.

Table S-4. Summary of Resource Concerns and Impacts

Resource of Concern	Summary of Concern	Effects Summary for Preferred Alternative
Soils and Geology		
Erosion and Sedimentation	Preferred Alternative actions would cause soil disturbance from construction activities. The existing flood conveyance system must provide adequate sediment capacity during flood incidents.	The Preferred Alternative would replace or improve the existing flood conveyance system within the city to increase infrastructure size and capacity to handle large storm event runoff. This will help to control the speed and volume of water flow from a storm event, reducing erosion and sedimentation.
Prime and Unique Farmlands	Preferred Alternative actions would cause soil disturbance adjacent to agricultural lands.	The Preferred Alternative would not remove any active farmlands. Approximately 6 acres of land classified as prime farmlands and farmlands of statewide importance would be temporarily disturbed for staging areas. However, these areas are not actively used for agricultural purposes and therefore do not meet the definition of prime and unique farmlands. These areas would be reclaimed for original uses following construction and would not be affected long-term.
Water Resources		
Surface Water Quantity & Quality	Preferred Alternative actions occur within and adjacent to Cottonwood Creek.	The Preferred Alternative may temporarily affect Cottonwood Creek's water quality during construction. A Joint Application for Permits would be submitted to both the U.S. Army Corps of Engineers (USACE) and the Idaho Department of Environmental Quality (IDEQ) for all activities within Cottonwood Creek. Additionally, a Construction Storm Water General Permit (CSWGP) and associated Storm Water Pollution Prevention Plan (SWPPP) and Spill Prevention Control and Countermeasures (SPCC) Plan would be required under Section 402 of the Clean Water Act (CWA) and a 401 certification from IDEQ would be required to meet Section 404 of the CWA. The Preferred Alternative would permanently reduce surface water degradation by reducing flood debris and sedimentation by reducing flooding and improving riparian buffers.
CWA/ Waters of the United States (WOTUS), including Wetlands	Preferred Alternative actions occur within and adjacent to potential jurisdictional waters.	Approximately 0.15 areas of jurisdictional wetland features, and 13,090 linear feet (LF) of stream features (Cottonwood Creek) were identified within the project area; however, impacts to jurisdictional wetlands would not occur. A total of approximately 707 LF of permanent impacts and 2,640 LF of temporary impacts would occur to the Cottonwood Creek channel due to proposed project activities.

Resource of Concern	Summary of Concern	Effects Summary for Preferred Alternative
		The Preferred Alternative would indirectly improve water quality in Cottonwood Creek by permanently reducing flooding, flood debris, and sedimentation in Cottonwood Creek, and enhancing the riparian habitat adjacent to the creek. A Joint Application for Permit, including a stream alteration permit, would be submitted to both the USACE and the Idaho Department of Water Resources (IDWR) for all activities within Cottonwood Creek. Additionally, a CSWGP and associated SWPPP and SPCC Plan would be required under Section 402 of the CWA and a 401 certification from IDEQ would be required to meet Section 404 of the CWA.
Regional Water Management Plans	The Preferred Alternative actions would be investing in water infrastructure.	The Preferred Alternative aligns with the South Fork Clearwater River Basin Plan's key actions to ensure a productive future for water resources.
Floodplain Management	The Preferred Alternative actions would reduce flood risks within the National Flood Insurance Program (NFIP) area (Cottonwood City).	Portions of the Preferred Alternative would occur within the designated 100-year floodplain. The Preferred Alternative would provide flood prevention and flood damage reduction for runoff, erosion, and sediment damage to areas downstream of the project area. No increased flood hazard or other adverse effect to the existing natural and beneficial values of the floodplain or lands adjacent or downstream would occur.
	The Preferred Alternative actions would reduce flood risks within the non-NFIP area (Idaho County).	Portions of the Preferred Alternative would occur within the designated 100-year floodplain. Adequately sized culverts along with debris removal and the selective removal of trees would allow high runoff volumes to pass unobstructed along East Road. The Preferred Alternative would provide flood prevention and flood damage reduction for runoff, erosion, and sediment damage to areas downstream of the project area. No increased flood hazard or other adverse effect to the existing natural and beneficial values of the floodplain or lands adjacent or downstream would occur. Construction funding for floodplain management associated with culverts and channel improvements will be completed independent of PL 83-566.
Air Quality		
Clean Air Act / National Ambient Air Quality Standards (NAAQS)	Temporary air emissions from construction activities.	The Preferred Alternative would cause temporary, localized increases in emissions from construction equipment. With the implementation

Resource of Concern	Summary of Concern	Effects Summary for Preferred Alternative
		of BMPs, construction activities would not violate air quality standards.
Climate and GHG	Temporary air emissions from construction activities.	The short-term increases in emissions during construction of the Preferred Alternative would be minor and localized. Emission rates would not increase in the long-term due to the short-term schedule of construction activities. With the implementation of BMPs, construction activities would not violate air quality standards.
Plants		
Special Status Plant Species	Potential disturbance to federally listed species and habitat.	The Biological Analysis Report (BAR) identified a No Effect determination for Spalding's Catchfly (*Silene spaldingii*). BMPs and conservation measures would be implemented to avoid and minimize impacts to special status plant species and suitable habitat, if identified within or adjacent to the project area.
Noxious Weeds & Invasive Plants	Increased potential for the introduction of noxious weeds and invasive plants.	BMPs would be implemented during and post-construction to minimize and prevent the introduction and establishment of noxious weeds and invasive plant species.
Riparian Areas	Preferred Alternative activities would occur in or near riparian areas.	Approximately 2.35 acres of the Cottonwood Creek riparian area would be temporarily impacted by construction activities associated with the Preferred Alternative. 1.89 acres is of moderate quality and 0.46 acres is of low quality. The Preferred Alternative would selectively remove cottonwood trees with exposed roots and stumps from the channel, which are no longer effectively stabilizing the bank and instead are contributing to its erosion. Their removal, combined with the introduction of new deep-rooted vegetation, will strengthen soil retention, improve water flows, and reduce sedimentation. The Preferred Alternative will enhance water quality, minimize flood risks, and enhance fish and wildlife benefits provided by natural riparian areas in the watershed.
Animals		
Wildlife & Wildlife Habitat	Preferred Alternative activities would impact wildlife and adjacent wildlife habitat in the project area.	The Preferred Alternative would selectively remove trees from the Cottonwood Creek channel as part of the proposed channel improvements. These trees provide habitat for birds and small mammals. Construction practices would temporarily disturb wildlife habitat in the project area. Temporarily disturbed areas would be restored following the completion of construction. An incidental nest

Resource of Concern	Summary of Concern	Effects Summary for Preferred Alternative
		survey would be completed no more than 7 days before vegetation removal. Wildlife may be temporarily impacted during construction due to noise.
Special Status Animals Species	Potential disturbance to federally listed/proposed listed species and habitat.	The BAR identified a No Effect determination for North American wolverine (*Gulo gulo luscus*), monarch butterfly (*Danaus plexippus)*, Suckley's cuckoo bumble bee (*Bombus suckleyi*) and steelhead (*Oncorhynchus mykiss)*. BMPs and conservation measures would be implemented to avoid and minimize impacts to special status animal species and suitable habitat, if identified within or adjacent to the project area.
Migratory Birds, Bald Eagles, and Golden Eagles	Potential disturbance to migratory birds and protected raptors in and adjacent to the project area.	Construction of the Preferred Alternative would selectively remove vegetation from the riparian edge along Cottonwood Creek. An incidental nest survey would be completed no more than 7 days before vegetation removal to help minimize or avoid potential impacts to nesting or breeding birds, if present. If any active bird nests are observed, the NRCS Biologist would be contacted, and construction would pause to determine the appropriate course of action.
Essential Fish Habitat (EFH)	Potential disturbance to EFH in the project area.	EFH for Coho salmon (*Oncorhynchus kisutch*) and Chinook salmon (*O. tshawytscha*) is located downstream of the project area. The Preferred Alternative may have a non-substantive adverse effect to EFH by replacing and relocating the Main Street concrete box conduit, which would permanently, although marginally, decrease the quantity of EFH. However, the Preferred Alternative would have an overall beneficial effect on EFH by upsizing conduits that convey Cottonwood Creek, improving water flows and reducing flood-related sedimentation and erosion. The Preferred Alternative would not impact the long-term function of EFH in Cottonwood Creek.
Human		
Socioeconomics	Socioeconomic impacts to the population in the project area.	The Preferred Alternative would result in an overall $297,400 net annual economic benefit. The Preferred Alternative would have beneficial effects on socioeconomics by preventing flood damage, resulting in approximately $459,100 in net annualized floodwater damage reduction savings, and temporarily creating jobs within the project area during construction.

Resource of Concern	Summary of Concern	Effects Summary for Preferred Alternative
		The Preferred Alternative enhances the water quality provisioning ecosystem services by reducing flood-related sedimentation, erosion, and debris, thereby improving water quality and wildlife habitat. These beneficial ecosystem services provided by the Preferred Alternative ensure the federal investments protect and restore ecosystem functions and values while avoiding irreversible effects, therefore, using project area resources in their highest valued use. Additionally, these ecosystem services' benefits contribute to an increase in the NEE of the Preferred Alternative.
Cultural Resources & Historic Properties	Potential for historic and cultural resources in the Area of Potential Effect (APE).	Section 106 consultation was originally initiated in 2021; however, indirect effects were not assessed during the initial cultural resources survey. NRCS reinitiated Section 106 consultation in 2022 as part of best practices to include an assessment of indirect effects. The NRCS State Conservationist completed consultation with the Idaho State Historic Preservation Office (SHPO), Tribes/Tribal Historic Preservation Offices (THPOs), and other agencies in accordance with Section 106 of the National Historic Preservation Act (NHPA), E.O. 13007, and the American Indian Religious Freedom Act for places of traditional religious and cultural importance. In consultation with Idaho SHPO, Tribes/THPOs, and other agencies, NRCS determined the Proposed Project would have No Adverse Effects to Historic Properties based on a literature review and Class III cultural resources survey per 36 CFR § 800.5(b). The effects determination was submitted to consulting parties, and Idaho SHPO concurred on May 31, 2023, and again on November 26, 2024. No responses have been received from Tribes, and consultation remains ongoing per 36 CFR 800.1(c).
Sacred Sites and Traditional Cultural Properties	Potential for Sacred Sites or Traditional Cultural Properties to be in the project area.	Tribes were initially contacted during the scoping process on December 30, 2020. A Cooperating Agency Letter was submitted to the Nez Perce Tribe in August 2021, as there was a known Nez Perce Battle site nearby. The site is eligible for National Register of Historic Places (NRHP) listing; however, the site is not within the APE. NRCS later consulted with the Nez Perce Tribe, the Confederated Tribes of the Colville Reservation, and the Confederated Tribes of the Umatilla Reservation regarding NHPA,

Resource of Concern	Summary of Concern	Effects Summary for Preferred Alternative
		E.O. 13007, the American Indian Religious Freedom Act, or places of traditional religious and cultural importance. This included identification efforts, the APE, eligibility determinations, and effects findings on December 21, 2022, and again in July and November of 2024. No responses have been received from Tribes. Consultation is ongoing per 36 CFR 800.
Hazardous Materials	Hazardous materials associated with construction (fuel, oil, etc.) would be present in the project area.	The Preferred Alternative would have no effect on hazardous materials in the project area. BMPs, such as a SWPPP and SPCC Plan, would be implemented during construction to prevent the introduction of hazardous materials into the environment.
Public Health & Safety	The Preferred Alternative would improve public health and safety in the project area.	The Preferred Alternative would improve public health and safety in the project area by providing flood prevention and flood damage reduction.
Recreation	The Preferred Alternative would impact access to recreational facilities.	The Preferred Alternative would indirectly enhance nearby recreational opportunities, such as fishing, by minimizing flood risks, therefore improving water quality and enhancing fish and wildlife benefits provided by natural riparian areas in the watershed. Though the Preferred Alternative would temporarily impact informal recreational activities (i.e., walking, running on city streets) during construction, these activities would not be permanently affected.
Land Use	Potential for land use changes in the project area.	The Preferred Alternative would not result in changes to land use as permanent improvements would be located within the City's existing right-of-way (ROW) and easements.
Visual Resources and Scenic Beauty	Potential to cause disturbance from construction equipment in the project area.	The Preferred Alternative would result in temporary, minor effects to visual resources associated with construction disturbance. The Preferred Alternative would selectively remove overgrown vegetation in the Cottonwood Creek channel to reduce debris and assist with flood reduction activities.
Scientific Resources	Potential for paleontological resources in the project area.	Based on geologic records of the area, it is highly unlikely that paleontological resources would be discovered in the area. See Idaho Geological Survey (IGS) concurrence letter in Appendix A.
Transportation & Infrastructure	The Preferred Alternative would improve transportation infrastructure.	The Preferred Alternative would improve flood conveyance infrastructure in the City of Cottonwood and the surrounding area. Temporary, minor effects to city streets would occur during construction activities. Construction of the Preferred Alternative

Resource of Concern	Summary of Concern	Effects Summary for Preferred Alternative
		would require several road crossings. Coordination and associated permits from the IDT would be necessary. Permits from the Cottonwood Highway District may also be required.
Noise	Temporary construction noise impacts.	The Preferred Alternative would result in temporary noise effects associated with construction. BMPs would be implemented to minimize noise effects.

S.16 Major Conclusions

The Action Alternative is considered the Preferred Alternative for the Proposed Project. The Action Alternative would allow the Sponsor to rehabilitate, improve, and construct the necessary infrastructure to protect the public and property at risk. Implementing the Action Alternative would have a substantial effect on the safety and water security of numerous residents and irrigators in the project area. The Action Alternative addresses flood protection and flood reduction concerns.

The No Action Alternative would not meet the purpose and need of the project as identified above. The Action Alternative would meet the purpose and need of the project and would provide the greatest net benefit. Therefore, the Action Alternative was selected as the Preferred Alternative and is also determined to be the NEE Alternative. Refer to the Investigation and Analyses Report in Appendix D for additional information.

The Ecosystem Services Framework used to evaluate benefits and costs for the Proposed Project follows federal water resource project and NRCS guidelines, relying primarily on the PR&G (USDA, 2017), the NRCE Natural Resources Economics Handbook (NRCS, 1998), and the NWPM (NRCS, 2015). The four-category ecosystem framework adopted in the PR&G includes the following service types: provisioning, regulating, cultural, and supporting services.

S.17 Areas of Controversy and Issues to be Resolved

Public Involvement for the Proposed Project is discussed in the Public Involvement Summary (Appendix A1). A virtual agency scoping meeting was held on January 13, 2021, and a public scoping meeting was held on January 14, 2021, at the Cottonwood Community Center. The scoping period was open for a total of 33 days from January 14, 2021, to February 16, 2021. During the public scoping period, 10 comments were received. The primary comments included: impacts to private property and wildlife, flood control, socioeconomic impacts, water quality concerns, design features, and the NEPA process. Although several comments were received, no distinct areas of controversy were identified.

S.18 Evidence of Unusual Congressional or Local Interest

There is no evidence of unusual congressional or local interest for the Proposed Project.

S.19 In Compliance

Is this report in compliance with executive orders, public laws, and other statutes governing the formulation of water resource projects? ___X___ YES _____ NO

Chapter 1 Purpose and Need

1.1 Introduction

The United States Department of Agriculture (USDA) Natural Resources Conservation Service (NRCS) as the lead federal agency, in cooperation with the City of Cottonwood (as the sponsor) and the Cottonwood Highway District and the Idaho Transportation Department (ITD) (as co-sponsors), proposed to use federal funds to implement the Cottonwood Creek Flood Prevention Project (Proposed Project).

The purpose of the Proposed Project is to provide flood prevention and flood damage reduction for the City of Cottonwood. The Proposed Project is needed to reduce flooding, sedimentation, and associated damage within the City of Cottonwood and the surrounding area in order to protect people, homes, buildings, and critical infrastructure.

The floodwater conveyance infrastructure in the City of Cottonwood is aged, failing, and +hydraulically insufficient to handle peak flows. As a result of the undersized system, floodwaters overflow existing flood conveyance systems, flow down streets and public/private properties, and overtop stream channel embankments. The recurrent flooding damages buildings and floodwater conveyance infrastructure in the process.

Under existing conditions, flood models show approximately 79 structures, 22 roads/minor highways, and over 15.3 acres of agricultural land would experience flooding in the event of a 50-year storm. Flood damage would increase to approximately 80 structures, 23 roads/minor highways, and over 19.1 acres of agricultural land in the event of a 100-year storm under existing conditions.

Therefore, there is a need to provide appropriately sized and engineered infrastructure to convey the flows through the project area to protect buildings, property, and community infrastructure from flood-related damages. The Proposed Project will dissipate high velocity flows as they exit the area, as well as reduce downstream blockages, reducing overflowing and overtopping of the system.

Proposed improvements within the Cottonwood Creek Watershed would improve water quality as an additional, indirect benefit by reducing erosion and sedimentation, debris in the Cottonwood Creek channel, and nutrient loads in surface waters caused by ongoing flooding. The proposed activities would address flood prevention and benefit the surrounding community.

This Draft Watershed Plan and Environmental Assessment (Draft Plan-EA) addresses flood prevention deficiencies by evaluating alternatives that would meet current engineering and safety criteria as well as extend the life of existing facilities. The alternatives, as outlined in this Draft Plan-EA, would serve to provide benefits for continued flood prevention while meeting current applicable federal, state, and local regulations. This Draft Plan-EA also addresses direct and indirect effects to environmental resources that may occur by evaluating alternatives that would satisfy the sponsor's flood prevention needs.

1.2 Project Background

The Proposed Project is located within Sections 5, 8, and 9 of Township 31 North Range 1 East of the Boise Meridian, which is in the Nez Perce Prairie Ecoregion, a part of the Columbia Plateau. The project area encompasses less than 40 acres of public, city-managed lands, and includes portions of the City of Cottonwood, the Cottonwood Creek channel that runs through town, and incorporated Idaho County. Most of the proposed flood protection system improvements would be located in previously disturbed areas, including city street rights-of-way (ROWs), residential and commercially

developed areas, and some recreational and agricultural areas. Vegetation in these areas is described in Section 3.4.

According to the U.S. Geological Survey (USGS) Watershed Boundary Dataset (WBD), the project area is within the Pacific Northwest Region, specifically the Cottonwood Creek Watershed (hydrologic unit code [HUC] 1706030508), which includes portions of the Upper Cottonwood Creek Subwatershed (HUC 170603050802; 9,505 acres) and the Stockney Creek Subwatershed (HUC 170603050803; 20,429 acres) (USGS, 2021). The Cottonwood Creek Watershed is spread across Idaho County and encompasses the City of Cottonwood, located 40 miles southeast of Lewiston and 29 miles east of the Idaho-Washington-Oregon border. The watershed and subwatershed boundaries associated with this Draft Plan-EA total approximately 29,934 acres and are shown on Map B1 (Appendix B).

Cottonwood Creek flows through the City of Cottonwood in a series of open channels and underground conduits located beneath, or near, the city's main transportation and business corridors along King and Main Street. In the early 1900s, naturally flowing portions of Cottonwood Creek were diverted to accommodate growth of the downtown business area along Main Street and Front Street, resulting in sections of the creek channel being located immediately adjacent to the foundations of homes and businesses. Portions of the creek were also routed under businesses through a network of conduits. The conduits are made of a mix of concrete and corrugated metal sections; the oldest concrete sections are estimated to be 100 years old, and the oldest metal sections are estimated to be 50 years old. As the City of Cottonwood expanded north of Main Street, a flood protection system was installed, collecting and carrying floodwater down King Street to Cottonwood Creek. Existing flood protection infrastructure within the city does not have the capacity to carry flood flows from 5 and 10-year storms, causing frequent flooding of buildings and property.

Flooding in the city is well documented, with reports dating back to 1908. During peak flow events in spring, water floods the conduits, overtops the Cottonwood Creek banks, and runs down the King and Main Street corridors. High intensity storms and flash floods have caused severe damage to developed areas and roadways on a regular basis, highlighting deficiencies in flood protection infrastructure. The city flooded most recently in 2019 and 2022. Both times, water overtopped the existing conduits and ran down the streets, flooding nearby structures and infrastructure. Floodwaters north of Main Street are conveyed through an undersized system, which joins the already hydraulically deficient Main Street system, adding to the overloading of the conduits and causing additional flooding to nearby residential areas and roads. Historic flooding documentation is provided in Appendix E1. Photographs depicting typical conditions of the existing flood protection system and Cottonwood Creek channel are presented in Appendix E4 through E6.

Over 700 farms are in Idaho County, which encompasses approximately 9.9% of the land in the county (USDA NASS, 2017). Agriculture is important to the local economy of the City of Cottonwood and surrounding unincorporated Idaho County; approximately 55% of the labor force in the City of Cottonwood is directly or indirectly associated with agricultural production activities (Tacke, personal communication, 2020). As flood modeling has shown, a 100-year flood event could inundate over 19 acres of agricultural land, causing crop loss, soil damage, and economic disruption. Given agriculture's importance to the local economy, flood control and flood damage reduction measures would protect these vital resources and strengthen community resilience. The benefited areas of the Proposed Project are shown on the Benefited Areas Map in Appendix B.

Beyond its direct benefits, such as flood protection and infrastructure improvements, the Proposed Project also delivers important indirect benefits to the surrounding area. Cottonwood Creek, which has several designated beneficial uses under the State of Idaho's Water Quality Standards, has long suffered from impairments and exceedances of water quality standards, as documented in 1995 and 1996 (Idaho, 2008). Cottonwood Creek is also listed on the State's Section 303(d) list of impaired waters and has total maximum daily load (TMDLs) for nine pollutants, including sediment, nutrients, and flow. These current conditions are contributing to degraded aquatic and riparian habitat and reduced ecological function within Cottonwood Creek and downstream regions. If maintained, these conditions limit the resilience of native species, reduce biodiversity, and increase vulnerability to future hydrologic disturbances.

Chapter 2 Scope of the Draft Plan-EA

This environmental document was initiated using the 40 CFR 1500-1508 (2020) and 7 CFR 650 regulations. These regulations have recently been rescinded and replaced with USDA regulations found under 7 CFR 1b. However, in a good-faith effort to fulfill NEPA's requirements, including Congressional timeline and considerations of fiscal restraints, the agency decided to continue to use 40 CFR 1500-1508 (2020) and 7 CFR 650. This is permissible per the USDA policy guidance issued in the Interim Final Rule's preamble. The Federal Register notice said: "To ensure an orderly transition without undue impact on the USDA mission, USDA subcomponents have discretion to continue using the versions of USDA and agency-specific NEPA regulations in place before publication of this interim final rule, as well as the 2020 version of the CEQ NEPA regulations, where it makes sense for proposals that are at a certain stage in the applicable NEPA process (categorical exclusion, environmental assessment, or environmental impact statement)." (90 FR 29644 [July 3, 2025]). In the NRCS's expert opinion, it has thoroughly considered the factors mandated by the statute and the regulatory frameworks it used; and that, in the responsible federal official's judgment, the analysis contained herein is adequate to inform and reasonably explain findings regarding the proposed action and selected alternative.

The scope of the Draft Plan-EA is considered to be the range of actions, alternatives, and impacts to be considered in an environmental impact statement (EIS) (40 CFR Section 1508.25). Three types of actions, two alternatives, and three types of impacts will be considered in this EA. The three types of actions include: connected actions, cumulative actions, and similar actions. Specific actions are discussed in Chapter 4. For this EA, the alternatives analyzed include the No Action Alternative and the Action Alternative (Chapter 3). Direct, indirect, and cumulative impacts are discussed in Chapter 5.

Under the Watershed Protection and Flood Prevention Act (WPFPA), the Watershed and Flood Prevention Operations (WFPO) Program facilitates cooperation between the federal government and the states or their political subdivisions to prevent erosion, floodwater and sediment damage, and to promote conservation development in authorized watersheds (NRCS, 2018). An approved watershed plan must be in place before the initiation of any solutions receiving assistance through the WFPO.

The NRCS offers financial and technical assistance to cooperating entities to protect and restore watersheds up to 250,000 acres through this program as authorized through the WPFPA. The NRCS evaluated the Proposed Project and determined it was eligible to receive planning funding under the WFPO Program. This project would be partially funded through the WPFPA (Public Law [PL], 83-566) with matching funding coming from the City of Cottonwood, Cottonwood Highway District, and the ITD.

Given there is currently no watershed plan in place for the project area and the Proposed Project would address flood prevention and flood damage reductions, it was determined a watershed plan and environmental assessment would be necessary for the Proposed Project.

Since the Proposed Project is eligible for support under the WFPO Program, adequate National Environmental Policy Act (NEPA) analysis is required. This Draft Plan-EA adheres to NRCS procedures and formatting requirements in the National Watershed Program Manual (NWPM) Part 501 (NRCS, 2015), and the National Watershed Program Handbook (NWPH) Part 601 (NRCS, 2014), which provide a framework that ensures compliance with the NEPA and its implementing

regulations; the Principles and Requirements (P&R) for Federal Investments in Water Resources (CEQ, 2013), relying primarily on the NRCS intended use of the Guidance for Conducting Analyses Under the Principles, Requirements, and Guidelines (PR&G) for Water and Land Related Resources Implementation Studies and Federal Water Resource Investments as described in USDA DM 9500-13 (USDA, 2017a), Departmental Regulation (DR) 9500-13 (USDA, 2017b), and the corresponding Interagency Guidelines (CEQ, 2014), together referenced as the PR&G; Executive Orders (E.O.); the Code of Federal Regulations (CFR); PL 83-566; and related NRCS planning policy, including National Planning Procedures and National Environmental Compliance Handbooks (NRCS, 2016; NRCS, 2021).

The NRCS must identify the federally assisted alternative with the greatest net public benefits, as applicable under the PR&G guidance. The NRCS must also decide if the selected alternative (Preferred Alternative) would or would not constitute a major federal action significantly affecting the quality of the environment. If NRCS determines that the Preferred Alternative would not significantly affect the quality of the environment, then NRCS would prepare and sign a Finding of No Significant Impact (FONSI), and the Proposed Project may proceed. If NRCS determines that the Preferred Alternative would significantly affect the quality of the environment, then an EIS and Record of Decision (ROD) must be prepared and signed before the Proposed Project can proceed.

To assist in this process, a scoping process was performed to identify relevant resources or environmental concerns to be analyzed in detail and to identify resources that could be eliminated from detailed study. Resource concerns were identified for the Proposed Project based on required scoping concerns outlined in the NWPM Section 501.24B (NRCS, 2015), and from additional concerns identified by the public, the sponsor, and various agencies during the Proposed Project's scoping period and other project planning and public meetings.

An agency scoping meeting was held virtually on January 13, 2021. A public scoping meeting was held virtually on January 14, 2021, and in person at the Cottonwood Community Center in Cottonwood, Idaho. The meeting provided an opportunity for the public, city representatives, and agencies to express questions and concerns relative to the Proposed Project. A total of 22 public attendees, seven project team members from J-U-B ENGINEERS, Inc (J-U-B), two NRCS representatives, and several project sponsor representatives attended the meeting. Ten comments were received during the scoping period (January 14, 2021 – February 16, 2021) for the project. During the scoping process, the primary comment themes included: flood control; impacts to private property; impacts to wildlife; socioeconomic impacts; water quality concerns; design feature questions; and NEPA process questions. A Scoping Report, dated June 2021, was prepared to summarize the scoping process, public comments received, and agency input for the Proposed Project (Appendix A1 – Scoping Report).

A summary of resource concerns and their relevance to the Proposed Project is provided in Table 2-1. Resource areas determined to be relevant to the Proposed Project are described in detail and analyzed regarding the Proposed Project in Chapter 3. Irrelevant resource areas have been eliminated from detailed analysis in this Draft Plan-EA.

Table 2-1. Resource Concerns Summary

Resource/Concern	Relevant to the Proposed Action?		Rationale
	Yes	No	
Soils and Geology			
Erosion and Sedimentation	X		Potential for erosion and sediment transport in the watershed due to flooding. Construction activities may temporarily increase erosion potential in active construction areas.
Prime & Unique Farmlands	X		The Proposed Project could disturb active farmlands adjacent to the project area.
Water Resources			
Surface Water Quality & Quantity	X		Though construction activities may negatively affect surface water quality in Cottonwood Creek downstream of active construction areas temporarily, surface water quality downstream of the Proposed Project would improve due to reduced flood debris following repair and improvement of the flood prevention system. Reduced flooding along Cottonwood Creek could affect hydrology in the project area.
Groundwater Quality & Quantity		X	There are no groundwater recharge areas located in, or adjacent to, the project area. The Proposed Project would have no impact on groundwater resources in the area.
Clean Water Act (CWA) / Waters of the U.S. (WOTUS), including wetlands	X		Cottonwood Creek is a jurisdictional WOTUS. Approximately 15 acres of aquatic resources were identified within the project area. However, only approximately 6 acres of the identified aquatic resources are considered jurisdictional WOTUS due to connectivity. Construction of the Proposed Project would require an Idaho Pollutant Discharge Elimination System (IPDES) permit to comply with regulations set forth in the CWA. The Proposed Project would not result in unanticipated releases in violation of the CWA.
Regional Water Management Plans	X		The project area is managed under Idaho Department of Water Resources (IDWR) Comprehensive Basin Plan, specifically the South Fork Clearwater River Basin Plan.
Coastal Zone Management Areas		X	There are no coastal zone management areas within the project area.
Floodplain Management	X		The purpose of the flood project and enhancements to the Cottonwood Creek channel is to manage floodwaters in the watershed and reduce the risk of current and future flooding for the City of Cottonwood, Idaho County, and Cottonwood Highway District.
Sole Source Aquifers		X	No sole source aquifers occur within or near the project area (U.S. Environmental Protection Agency [EPA], 2019).
Water Rights		X	The Proposed Project would not alter or impact water rights.
Wild & Scenic Rivers		X	No wild or scenic rivers occur within or adjacent to the project area according to National Wild and Scenic Rivers System Map (Wild and Scenic Rivers, 2014). The Middle Fork Clearwater River and Snake River are the closest designated rivers, approximately 22 miles northwest and 23 miles southwest of the project area, respectively.
Air Quality			

Resource/Concern	Relevant to the Proposed Action?		Rationale
	Yes	No	
Clean Air Act (CAA) / National Ambient Air Quality Standards (NAAQS)	X		Construction activities would cause temporary increases in emissions; however, these activities likely would be exempt from air permitting and reporting requirements because of their temporary nature, and they would not violate air quality standards.
Air Quality	X		Temporary, minor increases in localized emissions would occur during construction activities.
Plants			
Special Status Plant Species	X		One Endangered Species Act (ESA)-listed plant species has the potential to occur in the project area: the Spalding's Catchfly (*Silene spaldingii)* (U.S. Fish and Wildlife Service [USFWS], 2025).
Noxious Weeds & Invasive Plants	X		Construction disturbances increase the risk of the introduction and establishment of noxious weeds and invasive plant species.
Riparian Areas	X		Approximately 2.35 acres of riparian area exists within the project area, Cottonwood Creek is a perennial waterway that supports riparian vegetation and habitat. Proposed activities would occur in or near riparian areas.
Forest Resources		X	Forested lands are not located in or near the project area.
Natural Areas		X	No designated natural areas are present in the Proposed Project area.
Animals			
Wildlife & Wildlife Habitat	X		No State Designated Wilderness or wildlife refuge areas occur within the project area. Temporary disturbance to wildlife and wildlife habitat may occur within the project area during construction due to equipment operation.
Special Status Animal Species	X		One ESA-listed animal species and two ESA proposed for listing species have the potential to occur in the project area: North American wolverine (*Gulo gulo luscus*), Monarch butterfly (*Danaus plexippus)*, and Suckley's cuckoo bumble bee (*Bombus suckleyi)*, respectively. Data obtained from StreamNet indicates that steelhead (*Oncorhynchus mykiss)*, an ESA-threatened species, occurs in Cottonwood Creek approximately 18.1 miles downstream of the project area. No critical habitat occurs within or adjacent to the project area.
Migratory Birds & Bald and Golden Eagles	X		Potential for migratory birds and bald and golden eagles to be present in the project area.
Essential Fish Habitat (EFH)	X		EFH for Coho salmon (*O. kisutch*) and Chinook salmon (*O. tshawytscha*) is located downstream of the project area.
Coral Reefs		X	Coral reefs do not occur in or near the project area.

Resource/Concern	Relevant to the Proposed Action?		Rationale
	Yes	No	
Invasive Animal Species		X	Invasive aquatic animal species would not be introduced due to the implementation of best management practices (BMPs), including pressure washing equipment that may carry invasive species before arriving at the project area. Because of BMPS, no potential for the introduction of invasive animal species exists.
Human			
Socioeconomics	X		Project elements would reduce the risk of flood damage for the community and provide economic benefits, including ecosystem services benefits.
Cultural & Historic Resources	X		Cultural and historic resources may be present in the project area.
Sacred Sites and Traditional Cultural Properties	X		Sacred Sites and Traditional Cultural Properties may be present in the project area.
Hazardous Materials	X		Mechanical equipment and associated fuels and lubricants would be stored and used in the project area during construction.
Public Health & Safety	X		The Proposed Project would improve public health and safety in the project area by providing flood prevention, flood damage reduction, and improving water quality.
Recreation	X		The Proposed Project would improve water quality through sediment and debris reduction, thereby enhancing nearby recreational opportunities for the public. No designated recreation areas or trails are in the project area. Several areas, including the Wimer baseball fields, a city park, and the county fairgrounds are located adjacent to the Proposed Project.
Land Use	X		The Proposed Project would be implemented with City-managed lands, mainly in City ROWs and no land use changes are proposed. No property acquisition would be required to implement the Proposed Project. Easements would be required for the new pipeline alignment.
Ecologically Critical Areas		X	No ecologically critical areas are located within the project area.
Visual Resources & Scenic Beauty	X		Temporary visual impacts from construction equipment (active and parked) and ground disturbance in the project area would occur during construction.
National Parks, Monuments, & Historic Sites		X	No National Parks, Monuments, or historical sites are located within the project area based on National Natural Landmarks Map (National Park Service [NPS], 2018) and National Parks Map (NPS, 2019).
Scientific Resources	X		Paleontological resources may be present in the project area.
Transportation & Infrastructure	X		Though temporary effects to existing transportation and area infrastructure would occur during construction, project elements would protect existing transportation and area infrastructure from future flood damage.

Resource/Concern	Relevant to the Proposed Action?		Rationale
	Yes	No	
Noise	X		Temporary construction noise may impact residential and commercial areas. The Proposed Project would comply with all applicable noise ordinance laws.
Energy			
Energy		X	No energy generation is included in the Proposed Project.

The NRCS eliminated the following resource categories from further analysis because the Proposed Project would result in negligible or no impacts to these resources. Other than the information contained in Table 2-1, this Draft Plan-EA provides no additional analysis for the resources eliminated from detailed consideration, which are listed below:

- Groundwater Quality & Quantity
- Coastal Zone Management Areas
- Sole Source Aquifers
- Water Rights
- Wild & Scenic Rivers
- Forest Resources
- Natural Areas
- Coral Reefs
- Invasive Animal Species
- Ecologically Critical Areas
- National Parks, Monuments, & Historic Sites
- Energy

2.1 Stepwise Planning Process

This Plan is the product of three inter-related planning and evaluation processes, each with its own specific goals and requirements: 1) NRCS planning process; 2) the PR&G for Federal Investments in Water Resources; and 3) evaluation of alternatives and impacts under NEPA. The process also incorporates Clean Water Act (CWA), Endangered Species Act (ESA), and the National Historic Preservation Act (NHPA) requirements, among others.

The NRCS planning process consists of nine steps to develop and implement plans that protect, conserve, and enhance natural resources from a social and economic perspective (see NRCS planning policy, including National Planning Procedures and NECHs [NRCS 2016 and NRCS 2021]). PR&G watershed planning is an eight-step process analogous to that of the NRCS which ensures that formulation, evaluation, and implementation of agency activities incorporates the Federal Objective, Guiding Principles, and General Requirements within the context of an ecosystem services framework. Ecosystem services analysis is an analysis approach which traces the pathways of natural ecosystem processes to the benefits they grant to society in monetary and non-monetary terms. NEPA evaluation ensures that potential Federal actions consider reasonable alternatives, fairly evaluate the effect of those alternatives upon the human environment, and comply with applicable local, State, and Federal regulations.

Watershed planning, NEPA, and CWA permitting all require that the NRCS follows the Section 106 process as outlined in the NHPA of 1966 and 36 CFR 800. The Section 106 process requires early consultation with the SHPO and Federally Recognized Tribes in the determination of the APEs, identification of historic properties, assessment of effects, and mitigation of adverse effects. This process is separate from NEPA but informs the effects analysis.

For this Plan, the NRCS, the Sponsor, in coordination with the public, Tribes, and other agencies, followed a stepwise but iterative planning approach that identified and refined problems and opportunities, study scope, management measures, and alternatives; evaluated alternatives; and selected a recommended plan. This document presents that process and findings.

2.2 Ecosystem Services and Guiding Principles

The Ecosystem Services Framework used to evaluate benefits and costs for the Proposed Project uses federal water resource project and NRCS guidelines for the evaluation of benefit and costs of the no action and action alternatives, relying primarily on the PR&G (USDA, 2017), the NRCS Natural Resources Economics Handbook (NRCS, 1998), and the NWPM (NRCS, 2015).

The PR&G requires benefits and costs to be evaluated in an ecosystem service framework. An ecosystem is a natural unit of living and non-living things that function together to create goods and services valued by people (Olander et al., 2016). Ecosystem services is a broad term used to describe the benefits humanity receives from ecosystems as a byproduct of their functioning.

By prioritizing nature, ecosystem service frameworks ensure that economic, social, and environmental cost and benefits receive equal consideration in decision-making. This approach supports the federal objective of maximizing NEE by guiding federal investments to protect and restore ecosystem functions and values while avoiding irreversible impacts (USDA, 2017). Economic efficiency requires that resources are used to their highest valued use. Projects that create more benefits than costs use resources more efficiently than baseline conditions and therefore increase NEE. The four-category ecosystem system framework adopted in PR&G, and used in this report, is shown in Table 2-2.

Table 2-2. Ecosystem Services Framework Used to Evaluate Benefits and Costs

Service Type	Examples
Provisioning	The supply of food, fuel, fiber, water, timber, and genetic resources Resources: • Prime & Unique Farmlands • Forest Resources • Energy • Water Rights • Surface Water Quality & Quantity • Groundwater Quality & Quantity • Sole Source Aquifers • Essential Fish Habitat (EFH)
Regulating	The regulation of air, climate, natural hazards, water quality, pests, and disease Resources: • Erosion and Sedimentation • Floodplain Management • Clean Water Act (CWA) / Waters of the U.S. (WOTUS), including wetlands • Regional Water Management Plans • Coastal Zone Management Areas • Wild & Scenic Rivers • Clean Air Act (CAA) / National Ambient Air Quality Standards (NAAQS) • Air Quality • Riparian Areas • Noxious Weeds & Invasive Plants • Invasive Animal Species
Cultural	Services that enhance cultural values, like aesthetics, recreation, tourism, and spiritual or religious values Resources: • Cultural & Historic Resources • Sacred Sites and Traditional Cultural Properties • Recreation • Visual Resources & Scenic Beauty

Service Type	Examples
	• National Parks, Monuments, & Historic Sites • Scientific Resources • Socioeconomics • Land Use
Supporting	Nutrient cycling, soil formation, and primary production Resources: • Natural Areas • Wildlife & Wildlife Habitat • Special Status Plant Species • Special Status Animal Species • Migratory Birds & Bald and Golden Eagles • Ecologically Critical Areas • Transportation & Infrastructure • Noise • Hazardous Materials • Public Health & Safety

Source: USDA, 2017

The rationale and evaluation metrics used in the ecosystem services considered in this Plan-EA are shown in Table 2-3.

Table 2-3. Ecosystem Services to Be Considered in the Cottonwood Creek Watershed Plan-EA

Ecosystem Services	Rationale and Description	Evaluation Metric
Provisioning Services		
N/A	N/A	N/A
Regulating Services		
Flood Prevention	Exposure to floods	Reduced property damage
Flood Prevention	Exposure to floods	Reduced road and infrastructure damage
Water Quality	Instream flows	Reduced erosion and sedimentation
Cultural Services		
NA	NA	NA
Supporting Services		
NA	NA	NA

In addition to requiring projects to be evaluated using an ecosystem service framework, the PR&G also seeks to promote projects that fulfill guiding principles related to federal investments in water resources. These include:

- Healthy and Resilient Ecosystems—Federal investments in water resources should protect and restore functions of ecosystems and mitigate any unavoidable damage to these natural systems.
- Sustainable Economic Development—Federal investments in water resources should encourage sustainable economic development that improve the economic well-being of the Nation for present and future generations through the sustainable use and management of water resources.

- Floodplains—Federal investments in water resources should avoid the unwise use of flood-prone areas and avoid and minimize adverse impacts and vulnerabilities in any case in which a flood-prone area must be used. Federal investments should seek to reduce the Nation's vulnerability to floods and storms.
- Public Safety—Federal investments in water resources should avoid, reduce, or mitigate risks to people, including both loss of life and injury, from natural events.
- Watershed Approach—Federal investments in water resources should use a watershed approach that frames and evaluates problems at a systems level. This method identifies root causes and interconnectedness of watershed problems and enables the design of solutions that consider the benefits of water resources for a wide range of stakeholders within and around the watershed.

The Draft Plan-EA considered these principles in the characterization of flood risks and water management challenges faced by stakeholders in the watershed and the formulation of solutions as defined in the Action Alternative.

2.3 NRCS National Planning Procedures

This Plan-EA adheres to the planning procedures identified in the NRCS National Planning Procedures Handbook (NPPH). Specifically, Section 600.50 in the NPPH has been considered in the development of this Plan-EA.

Watershed Plans are voluntary, comprehensive plans for a watershed of other large geographic areas. NRCS areawide conservation planning policy requires consideration of all natural resources within a planning area, as well as social and economic considerations. Watershed Plans are developed through a voluntary locally led effort to achieve the following:

- Assess natural resource conditions and needs
- Set goals
- Identify programs
- Alternative actions and other resources to solve those needs
- Develop proposals and recommendations to solve those needs
- Implement solutions
- Measure success.

The NRCS planning process consists of nine steps, divided into three phases, which cover development, implementation, and evaluation of an Areawide Conservation Plan. The three phases and nine steps are identified below:

Phase 1 – Collection and Analysis
- Step 1 – Identify problems and opportunities
- Step 2 – Determine objectives
- Step 3 – Inventory resources
- Step 4 – Analyze resource data

Phase 2 – Decision Support
- Step 5 – Formulate alternatives
- Step 6 – Evaluate alternatives
- Step 7 – Make decisions

Phase 3 – Application and Evaluation
- Step 8 – Implement the plan

Step 9 – Monitor the plan

The nine step NRCS planning process for Watershed Plans is considered and incorporated into this Plan-EA as follows:

Planning Step	NEPA Requirement	Chapter in Plan-EA
Identify Problems and Opportunities	Purpose and Need	Chapter 1.2 Purpose and Need
Determine Objectives	Purpose and Need	Chapter 1.2 Purpose and Need
Inventory Resources	Affected Environment	Chapter 3 Affected Environment
Analyze Resource Data	Affected Environment	Chapter 3 Affected Environment
Formulate Alternatives	Alternatives	Chapter 4 Alternatives
Evaluate Alternatives	Environmental Consequences	Chapter 5 Environmental Consequences
Make Decisions	Preferred Alternative & Decision Document	Chapter 7 Preferred Alternative
Implement Plan	Mitigation & Monitoring	Chapter 7.4 Mitigation and Appendix E
Monitor Plan	Supplemental Plan-EA (Adaptive Management)	N/A

2.4 Document Organization

This Draft Plan-EA has been organized into the following chapters:

- Summary (Office of Management and Budget Fact Sheet)—This chapter presents a summary of the entire document and the Proposed Project.
- Chapter 1: Purpose and Need—This chapter provides background information and describes the purpose and need for the Proposed Project.
- Chapter 2: Scope of the Draft Plan-EA—This chapter describes the scope of the Draft Plan-EA, summarizes resource concerns, describes the ecosystem services framework used to evaluate benefits and costs for the Proposed Project, and details the document's organization.
- Chapter 3: Affected Environment—This chapter contains the past and current conditions of the project area and describes relevant environmental resources that would be affected by the alternatives.
- Chapter 4: Alternatives—This chapter provides a summary of the alternatives considered for detailed study as well as alternatives considered for the Proposed Project that were eliminated from detailed study. It also describes the Proposed Project activities and provides a resource impact comparison of alternatives considered.
- Chapter 5: Environmental Consequences—This chapter describes the analysis of effects to resources from each of the alternatives considered for detailed study. These effects include direct, indirect, and cumulative effects.
- Chapter 6: Consultation, Coordination, and Public Participation—This chapter summarizes steps taken to involve agencies, tribes, and the public in the Proposed Project. It also summarizes the anticipated permits and approvals required before the start of construction that should be obtained outside of the NEPA process.
- Chapter 7: Preferred Alternative—This chapter describes the Preferred Alternative for the Proposed Project and presents the economic evaluation.
- Chapter 8: References—This chapter lists the references used in support of the information presented in this document.

- Chapter 9: List of Preparers—This chapter contains a list of the document preparers, their respective agency or company, and their associated qualifications.
- Chapter 10: Distribution List—This chapter lists the government entities that received the local notice of availability for this document and were invited to provide comments.

Chapter 3 Affected Environment

The purpose of this section is to describe the environmental resources, including ecological, social, aesthetic, and economic, that could be affected by the proposed alternatives, and the magnitude of those effects should the Proposed Project be implemented. The purpose of describing the affected environment is to define the context in which the effects may occur. The environmental analysis process has been conducted in compliance with applicable federal, state, and local regulations.

The project area is identified on Map B2 in Appendix B as well as the Project Overview Figure in Appendix C1-1. The Proposed Project is located within the Cottonwood Creek Subwatershed and encompasses approximately 29,934 acres. Table 3-1 summarizes the physical setting of the project area.

Table 3-1. Physical Setting Summary

Physical Setting Information		Data Source
Location		
• The flood conveyance system is located along Front, Main, and King Streets. • The conveyance system components are located throughout the City of Cottonwood. • The bridge culvert[1] crossings are located on East Road and Airport Road. • Cottonwood Creek channel enhancements are located adjacent to East Road north of the local airport.		N/A
Topography		
Project Area Elevation Range	Approximately 3,340 to 3,720 above mean sea level (AMSL) (NAVD88)	U.S. Geologic Survey (USGS, 2021)
Geology		
Project Area	See Section 3.1	Idaho Geologic Survey (IGS), 2022
Soil Characteristics		
Soil Type	See Section 3.1	Web Soil Survey (NRCS, 2024)
Description		
Land Information		
Land Ownership	City of Cottonwood; private	Appendix C3.1-3
Land Use	Undeveloped; residential; agricultural	

3.1 Soils and Geology

The geology within the watershed is complex and varied, from fossils to minerals, mountains to basins, igneous to sedimentary rocks, glacial features, folds and faults, and numerous outcrops. The project area sits in the Columbia River Basalt Group, and the area to the west and north of the project area is made up of the Seven Devils Group and Quartz diorite (IGS, 2022). The dominant lithology of the Columbia River Basalt is tholeiitic basalt (IGS, 2022). A geotechnical report was completed for the Proposed Project and is provided in Appendix E3. According to the geotechnical report, there are no active faults that traverse through or are immediately adjacent to the site, and

[1] Culverts that are not integral to the closed conduit system are considered "real property" as defined by Section 506, Subpart E, section 506.50.K.12.v and are not included as part of the construction funding request.

the site is not located within local fault study zones. The nearest mapped fault system is the Salmon River Fault System located about 12 miles south of the site (Allwest, 2021) (see Geotechnical Report in Appendix E3—Geotechnical Report).

Soils information presented in this section have been summarized from the NRCS Web Soil Survey data (NRCS, 2024). Table 3-2 summarizes the soil types for the project area.

Table 3-2. Soil Classification Summary

Soil Unit Name (Map Unit Symbol)	Landform	Slope (%)	T Erosion Factor[1]	Prime / Unique Farmlands
Ferdinand-Riggins complex (46)	Hillslopes	7 to 40	2 (moderate)	Not prime farmland
Meland silt loam (78)	Hillslopes	7 to 25	2 (moderate)	Farmland of statewide importance
Nez Perce silt loam (83)	Hillslopes	2 to 7	4 (low-moderate)	Prime farmland if drained
Nez Perce silt loam (84)	Hillslopes	7 to 12	4 (low-moderate)	Farmland of statewide importance, if drained
Uhlorn silt loam (120)	Hillslopes	2 to 7	5 (Low)	Farmland of statewide importance
Uhlorn silt loam (122)	Hillslopes	12 to 25	5 (Low)	Not prime farmland
Westlake silt loam (129)	Floodplains and drainageways	0 to 3	5 (Low)	Prime farmland if drained and either protected from flooding or not frequently flooded during the growing season

[1] Soil loss estimates (tons/acre/year) of the maximum average annual soil erosion by wind and/or water that can occur without affecting crop productivity over a sustained period (NRCS, 2024).

According to the National Agricultural Statistics Service (NASS), over 700 farms are located in Idaho County, which encompasses approximately 9% of the land in the county (USDA NASS, 2017). The principal crops are barley, oats, canola, hay, chickpeas, and wheat. Idaho County also contains numerous cattle, hog, sheep, and chicken operations (USDA, 2017). Approximately 55% of the labor force in the City of Cottonwood is directly or indirectly associated with agricultural production activities (Tacke, personal communication, 2020).

3.1.1 Erosion and Sedimentation

Soil erosion is a natural process where water, wind, or gravity cause the breakdown and detachment of soil particles. Sedimentation is the process of transporting and redistributing eroded soil particles. Although erosion and sedimentation are natural processes, human activities such as ground disturbance (e.g., construction activities), vegetation removal, unsustainable agricultural practices (e.g., overgrazing, deep plowing, lack of crop rotation, monocropping, or chemical applications), and streambank alteration (e.g., channelization, confinement or realignment, or riparian vegetation removal), play a role in accelerating erosion and sedimentation. Potential implications of soil erosion include degradation of water, air, and soil quality, impacts to biological processes, and reduced crop productivity.

Soil in the project area consists of both coarse and fine-grained formations that are highly erodible. According to the Cottonwood Creek TMDL Implementation Plan, “Reducing coarse sediment delivery to Cottonwood Creek… through BMPs will help improve the water quality of Cottonwood Creek” (Idaho, 2008). The TMDL Implementation Plan suggests that agricultural practices and runoff, livestock grazing, timber harvest activities, urban runoff, and land

development activities provide the primary sources of pollutants to Cottonwood Creek. Land use activities like flood prevention and have the potential to indirectly impact sediment levels in Cottonwood Creek.

Existing flood protection infrastructure within the city does not have the capacity to carry flood flows from 5 and 10-year storms which causes frequent flooding and contributes to erosion and sedimentation in the project area. The existing concrete box culverts on East Road east of Highway 95 do not have the capacity to carry flood events, leading to periodic flooding, bank erosion, and damage to the existing roadway. Furthermore, the Cottonwood Creek channel between these road crossings is overgrown with cottonwood trees and large woody debris, which impedes flow and forces the channel to erode the creek banks causing increased sedimentation that impacts area water quality.

3.1.2 Prime and Unique Farmland

The Federal Farmland Protection Policy Act (FPPA) [Subtitled I of Title XV, Section 1539-1549 of the Agricultural and Food Action of 1981 (PL 97-98] requires federal agencies to "minimize the extent to which federal programs contribute to the unnecessary and irreversible conversion of farmland to nonagricultural uses and ensures that federal programs are administered in a manner compatible with state, local, and private programs and policies to protect farmland". Farmland for the FPPA includes prime farmland, unique farmland, and land of statewide or local importance. Farmlands of statewide importance are defined by the NRCS as "Land that is of statewide importance for the production of food, feed, fiber, forage, and oilseed crops. It has the soil quality, growing season, and moisture supply needed to economically produce sustained yields of crops when treated and managed…farmland of statewide importance is land that is available for farming, but could currently be cropland, pastureland, rangeland, forestland, or other land, but not urban built-up land or water" (NRCS, 2020).

Approximately 31.5 acres of land in the project area are designated as prime farmlands and farmlands of statewide importance, as shown on Table 3-2. These areas have been previously disturbed by development or are not actively used as agricultural land.

3.2 Water Resources

The project area is located hydrologically within the Pacific Northwest Region (17) of the U.S. The Pacific Northwest Region is categorized into subregions, accounting units (e.g., basins), catalog units (e.g., subbasins), watersheds, and subwatersheds. The project area is situated in the Lower Snake River subregion, which encompasses approximately 22,428,328 acres (90,764 square kilometers) and occurs within central Idaho, southeastern Washington and northeastern Oregon. Specifically, the project area is within the Clearwater Basin (HUC 170603), located almost entirely within the State of Idaho. The watershed limits evaluated in this Plan-EA have been defined as portions of the Cottonwood Creek Watershed, which encompasses 124,515 acres. The Cottonwood Creek Watershed is made up of the Upper Cottonwood Creek Subwatershed (HUC 170603050802; 9,505 acres) and the Stockney Creek Subwatershed (HUC 170603050803; 20,429 acres), totaling approximately 29,934 acres. The project area, including staging areas, is completely contained within these two subwatersheds and encompasses less than 40 acres.

The main water resources in the area include Cottonwood Creek, Stockney Creek, Shebang Creek, and the South Fork Clearwater River. Stockney Creek is located just north of the project area, and Shebang Creek is located south of the project area. Both Stockney Creek and Shebang Creek drain

into Cottonwood Creek downstream of the project. Cottonwood Creek flows west to east following natural drainages through the nearby Nez Perce Reservation and eventually discharges to the South Fork Clearwater River approximately 18 miles east of the City of Cottonwood near Stites, Idaho. The South Fork Clearwater River runs north-south into Idaho County, generally following State Road 13 until it's split with State Road 14. The South Fork Clearwater River then follows State Road 14 west-east all the way to Elk City, Idaho.

3.2.1 Surface Water Quality and Quantity

In Idaho, surface water is managed by the Idaho Department of Environmental Quality (IDEQ) Water Quality Division, and the EPA to ensure the state's surface water, groundwater, and drinking water meet federal and state water quality standards. Water quality standards are designed to provide water quality for the protection of fish, shellfish, wildlife, and recreation in and on the water, where attainable; and to consider the use and value of state waters for public water supplies, propagation of fish and wildlife, recreation, agricultural, industrial purposes, and navigation.

The primary pollutant sources in the Cottonwood Creek watershed are agricultural practices and runoff, livestock grazing, timber harvesting, urban runoff, and land development activities (IDEQ, 2000). Under NRCS's Environmental Quality Incentive program (EQIP)-National Water Quality Initiative (NWQI), the Idaho Soil and Water Conservation District developed a Watershed Assessment Plan to address the water quality resource concerns in the Cottonwood Watershed. Implementation of conservation practices under EQIP-NWQI began in 2024.

3.2.1.1 Surface Water Quantity

Surface flow in Cottonwood Creek is generally limited to spring runoff conditions and during stormwater events. Portions of the creek can be dry during late summer. During non-runoff conditions, water from higher elevations infiltrates into the ground as it reaches Cottonwood Creek and becomes unavailable as surface flow. Surface water features including Cottonwood Creek and open channel drainages are present throughout the city. Portions of Cottonwood Creek have been channelized.

3.2.1.2 Surface Water Quality

Surface Water Quality standards are established by federal and state standards. The EPA and IDEQ establish maximum pollutant levels and manage maximum pollutant loading of both point and non-point sources pursuant to the CWA.

In 1994, 1996, and 1998, Cottonwood Creek was classified as a high priority water quality limited segment under Section 303(d) of the CWA (IDEQ, 2002). Pursuant to Section 303(d) of the CWA and the EPA Water Quality Planning and Management Regulations (40 CFR 130), the Cottonwood Creek TMDL was prepared to quantify water quality in Cottonwood Creek and its tributaries for nine pollutants, including sediment, nutrients, and flow (IDEQ, 2002). All six stream segments of Cottonwood Creek, as well as all five of its tributaries, are listed in the TMDL, which make up the entirety of the Cottonwood Creek channel, including the portion running through the project area.

3.2.2 Clean Water Act / Waters of the U.S., including Wetlands

An Aquatic Resources Delineation (ARD) was conducted on August 11 and 12, and September 29, 2021, by J-U-B for the Proposed Project and the surrounding area (Appendix E4). A total of approximately 1,099 acres were surveyed. The ARD was prepared in accordance with the 1987 U.S. Army Corps of Engineers (USACE) *Wetland Delineation Manual* and the *Arid West Region*

Supplement (version 2.0). The project area was assessed based on topography, presence or absence of dominant hydrophytic vegetation, and/or surface hydrology. Where vegetation indicated any potential for hydric soils, soil pit sampling was conducted, and the results were documented in accordance with the USACE *Arid West Region Supplement.*

As part of the ARD, the USFWS National Wetlands Inventory (NWI) identified 10 features: five freshwater emergent wetlands, three freshwater ponds, one freshwater forested/shrub wetland, and one riverine wetland (R4SBCx) as potentially occurring within the survey area (USFWS, 2020). The National Hydrography Dataset (NHD) and topographic map depicted 16 features as occurring within the survey area. Of these 16 features, three are associated with Cottonwood Creek, and 13 are associated with unnamed features, which appear predominantly to be irrigation ditches.

Although the survey area encompassed approximately 1,099 acres, the project area consists of less than 40 acres. One wetland (0.15 acres), one stream (Cottonwood Creek) (3.94 acres/13,090 linear feet [LF]), and one ditch (0.09 acres/584LF) were identified during the field survey as occurring within the project area itself. Cottonwood Creek is a tributary to the South Fork Clearwater River, which is a jurisdictional WOTUS. As such, Cottonwood Creek is a WOTUS. Wetland 1 is adjacent to Cottonwood Creek and therefore considered a jurisdictional WOTUS. Ditch 1 is non-jurisdictional as it lacks a connection to WOTUS. The remainder of the identified features occur outside the project area.

Impacts to jurisdictional waters would require a Section 404 permit from USACE and a Section 401 permit from the IDEQ (Water Quality Certification). It should be noted that the final authority regarding jurisdictional determination and wetland delineations rests with the appropriate regulatory agency.

3.2.3 Regional Water Management Plan

The IDWR is responsible for comprehensive water planning in Idaho. Between 1972 and 2012, the IDWR prepared a series of eight comprehensive water planning documents entitled the “Idaho State Water Plan”. These documents discussed water supply and use estimates in the state, as well as potential uses for Idaho’s unused water supplies. The State Water Plan is a comprehensive water planning document that provides a statewide resource inventory, as well as guiding principles to water planning in Idaho. To address the changing needs of water planning in Idaho, the guiding principles are evaluated and revised as part of State Water Plan updates (IDWR, 2012).

In addition to the State Water Plan, subsequent plans were prepared for the state’s 10 water basins. The project area falls within the limits of the South Fork Clearwater River Basin Plan. The most recent Basin Plan was published in 2005, with the purpose of describing the current status of water resources in the basin, estimating future water demands, identifying ways to manage and enhance current supplies as well as developing new water supplies for future needs. The Basin Plan aims to assist water managers in the development of water management strategies and policies (IDWR, 2012).

3.2.4 Floodplain Management

Under E.O. 11988, federal agencies must avoid adversely impacting floodplains, directly or indirectly. Floodplains are “lowland and relatively flat areas adjoining inland and coastal waters including flood prone area of offshore islands, including at a minimum, that area subject to a 1-percent or greater chance of flooding in any given year” (E.O. 11988 Section 6(c)). The Federal Emergency Management Agency (FEMA) is responsible for identifying and categorizing flood

hazard areas throughout the county. Often flood hazard areas are discussed in relation to special flood hazard areas (SFHA), which have a 1-percent annual chance of flooding. If not properly mitigated, the 1-percent annual floodplain can threaten human safety and property. Floodplain protection is essential to ensure the flood carrying capacity is sufficient, and that flooding does not extend beyond the designated flood hazard areas. Activities in the 100-year floodplain can also threaten human safety and property, if not properly mitigated.

FEMA develops Flood Insurance Rate Maps (FIRMs) which illustrate the various flood hazard areas in a location. Examples of some SFHAs are Zone A, Zone V, Zone VE, and Zones V1-V30. Areas that have a 0.2-percent annual chance of flooding are referred to as the 500-year floodplain. Areas that have a 0.1-percent annual chance of flooding are referred to as the 100-year floodplain. Moderate hazard areas are the areas between the 100-year floodplain boundary and the 500-year floodplain boundary (Zone B and Zone X—shaded). If an area is outside the 100-year flood and above the 500-year flood elevation, there is a minimal flood hazard risk (Zone C or Zone X—unshaded).

The entire boundary of the City of Cottonwood is shown on FEMA FIRM Panel #1600670005B, which indicates that the Cottonwood Creek and adjacent portions of the project area occur in Flood Zone A, which is defined as an area with 0.1-percent chance of annual flood, or 100-year flood zones (FEMA, 1985; Appendix C4: Floodplain Maps). The remainder of the project components within the City of Cottonwood city boundary are located within Flood Zone C, which is an area of minimal flood hazard (FEMA, 1985; Appendix C4: Floodplain Maps). Portions of the project area located within unincorporated areas of Idaho County are shown on FEMA FIRM Panel 1602130625B, which indicates the proposed improvements, including two of the proposed culvert improvements and the proposed channel improvements, are also located within Flood Zone A or the 100-year flood zone (FEMA, 1991; Appendix C4: Floodplain Maps). The City of Cottonwood is a participating member of the National Flood Insurance Program (NFIP) by Ordinance #254. Idaho County is not a participating member, which affects designated flood hazard areas in the county outside of city limits and makes those areas ineligible for PL-566 project funding.

3.3 Air Quality

In Idaho, air quality is managed by the IDEQ, which has authority from EPA to enforce air quality regulations and guidelines, as outlined in the CAA. Idaho uses its State Implementation Plan (SIP), which has been approved by the EPA, to implement, maintain, and enforce the EPA's NAAQS and other requirements of the CAA. Additionally, the EPA will implement a Federal Implementation Plan (FIP) if a state fails to fully comply with any of the NAAQS-related regulations.

3.3.1 Clean Air Act / National Ambient Air Quality Standards

Pursuant to requirements of the CAA (42 U.S.C. 7401 et seq), the EPA has established health-based NAAQS for six pollutants considered harmful to public health and the environment, known as criteria pollutants. These include carbon monoxide (CO), nitrogen dioxide (NO_2), ozone (O_3), particulate matter (PM), sulfur dioxide (SO_2), and lead (Pb). Monitoring criteria pollutants in Idaho is delegated to the IDEQ by the EPA. IDEQ has a network of over 30 ambient air monitoring stations throughout Idaho used to monitor air quality. The nearest air quality monitoring station is located in the City of Cottonwood; the station is a seasonal monitor for PM. The nearest 4-season station is located in Grangeville, approximately 13.5 miles southeast of the project area, where PM and meteorological data is obtained. The closest station which monitors the full suite of pollutants is in Boise, approximately 168 miles south of the project area. Idaho County is not listed as a

NAAQS nonattainment or maintenance area, and the project area complies with NAAQS standards (EPA, 2021b). There are no FIPs for the project area.

3.3.2 Air Quality

Air quality is impacted by emissions of carbon dioxide (CO_2), methane (CH_4), nitrous oxide (N_2O), and fluorinated gases such as hydrofluorocarbons (HFC), perfluorocarbons (PFC), and sulfur hexafluoride (SF_6). These are introduced into the atmosphere by a variety of sources including energy production, private and commercial transportation, industrial practices, commercial and residential practices, and agricultural practices. The Center for Climate Strategies (CCS) prepared a report for IDEQ to present emissions inventory and forecast for 1990 through 2020 (CCS, 2010). The purpose of the report was to provide a comprehensive understanding of Idaho's current and future emissions as a baseline for informing policy. Agriculture (29%); transportation (26%); and residential, commercial, and industrial fossil fuel uses (19%) are the principal GHG emission sources in the state (CCS, 2010). Fossil fuel combustions for electrical generation only account for 13% of the total emissions (CCS, 2010).

3.4 Plants

Field investigations of the project area and surroundings areas were conducted on August 11 and 12, 2021 and September 29, 2021, and June 23, 2025, by J-U-B. The survey area encompassed approximately 1,099 acres. Within the survey area, vegetation in downtown Cottonwood and along city roads consisted of mowed lawn grasses, ornamental shrubs and trees, and upland and weedy vegetation. Vegetation along Cottonwood Creek was dominated by reed canary grass (*Phalaris arundinacea*), while agricultural lands within the survey area primarily contained agricultural species such as alfalfa (*Medicago sativa*). A balsam poplar (*Populus balsamifera*) reuse site is situated in the survey area near the existing City of Cottonwood wastewater facilities. During the field investigation, dominant plant species were identified and included the following species:

- Reed canary grass (*Phalaris arundinacea*)
- Rush skeleton weed (*Chondrilla juncea*)
- Cheatgrass (*Bromus tectorum*)
- Serviceberry (*Amelanchier alnifolia*)
- Scouring rush (*Equisetum hyemale*)
- Balsam poplar (*Populus balsamifera*)
- Alfalfa (*Medicago sativa*)
- Wheat (*Triticum sp.*)
- Squirrel tail (*Elymus elymoides*)
- Canada thistle (*Cirsium arvense*)

3.4.1 Special Status Plant Species

The ESA was established in 1973 with the intention of protecting and conserving endangered and threatened species and their habitat. Federal agencies must comply with the regulations set forth in the ESA. A field survey was conducted on August 11 and 12, and September 29, 2021, and June 23, 2025. A subsequent Biological Analysis Report (BAR) was completed by J-U-B to assess the degree to which the Proposed Project may affect federally threatened or endangered species, or species proposed for listing; designated and proposed critical habitat; state sensitive species; and those species managed under conservation agreements. See Appendix E5—BAR.

To identify special status plant species within the project area, an official species list for the project area was obtained from the USFWS Information for Planning and Consultation (IPaC) online database to determine if federally protected species or their potential habitats may occur within the project area. An updated species list dated June 16, 2025, identified one ESA-listed plant species as having the potential to occur in the project area: the Spalding's catchfly (*Silene spaldingii)*.

Spalding's catchfly, sometimes called Spalding's silene, is listed as threatened under the ESA. Critical habitat has been proposed for this species but is not federally designated. Due to the soils and elevation in the project area, general geographic location of the project, and lack of any nearby surveys, a Spalding's catchfly survey was deemed necessary to evaluate habitat suitability for the species. The project area falls within the occupied habitat area along the Palouse Grasslands, which is the closest known population of Spalding's catchfly identified by USFWS, and the Idaho Fish and Wildlife Information System (IFWIS), and lies near Lawyer Creek and Craigmont, Idaho, approximately 10 miles to the northwest of the Project Area.

A rare plant survey was conducted by Autumn Foushee Davies, a qualified botanist, on August 11 and 12, 2021 to determine if the Proposed Action would impact the species or any suitable habitat (see Appendix E5—BAR). The surveys determined there was no suitable habitat present. A commonly occurring plant of the same genus, *Silene latifolia* was identified, which has different habitat requirements than *S. spaldingii*.

3.4.2 Noxious Weeds and Invasive Plants

E.O. 13112 states "a federal agency shall not authorize, fund, or carry out actions that it believes are likely to cause or promote the introduction and spread of invasive species in the U.S. or elsewhere". The Idaho Invasive Species Act of 2008 has designated 54 terrestrial weed species within four categories, assigning an eradication priority to species depending on presence in the state and level of impact each species may pose to other resources (Invasive, 2021). Three state designated noxious weeds: cheatgrass, Canada thistle, and rush skeleton weed were identified as occurring within the project area during field surveys. Within Idaho, counties are given the responsibility to oversee noxious weed management programs on state and county property. Three other noxious weed species, including orange hawkweed (*Hieracium aurantiacum*), purple loosestrife (*Lythrum salicaria*), and spotted knapweed (*Centaurea stoebe*) have previously been identified within Idaho County, according to the Idaho Department of Agriculture's Noxious Weed Distribution Map (IDA, 2023). None of these species were identified during the field survey.

3.4.3 Riparian Areas

Riparian areas are located adjacent to water bodies and can be described as a transitional zone between wet environments and dry upland environments. Riparian plant communities are distinct from upland plant communities due to improved soil conditions and increased water availability, compared to that of upland areas. Riparian plant communities play an important role in bank stabilization, flood water dispersion, maintaining groundwater levels, trapping sediment, and maintaining biological diversity.

Riparian habitat of varying quality exists within the project area, specifically along Cottonwood Creek. Riparian vegetation along Cottonwood Creek is supported by flows in the creek, surface flows from storm events, and irrigation runoff, including irrigation ditches. The field survey identified approximately 2.35 acres of riparian habitat present within the 1,099-acre survey area (see ARD in Appendix E4). Of the riparian areas, 1.89 acres is of moderate quality and 0.46 acres is of low quality. Coyote willow (*Salix exigua*) is the dominant riparian plant along Cottonwood Creek. Reed canary grass *(Phalaris arundinacea),* cattail (*Typha latifolia*), sedge (*Carex* sp.), and Baltic rush (*Juncus balticus*) also occur along Cottonwood Creek.

3.5 Animals

3.5.1 Wildlife and Wildlife Habitat

Given the commercial, residential, and agricultural land uses within and surrounding the project area, wildlife species in the vicinity include a range of native and non-native migratory birds, resident birds, small mammals, deer, and reptiles. Wildlife populations of the highest concern are those listed for protection under the ESA, State Sensitive Species, and are managed by Idaho Fish and Game (IDFG) as game or furbearing animals. No Wildlife Management Areas occur within the project area (IDFG, 2021).

3.5.2 Special Status Animal Species

A BAR was prepared in February 2022 and updated in July 2025 by J-U-B to identify species characteristics, habitat requirements, and potential impacts that may occur to special status animal species from implementing the Proposed Project (Appendix E5—BAR). The USFWS IPaC report, dated June 16, 2025, identified the ESA threatened North American wolverine (*Gulo gulo luscus*), proposed threatened monarch butterfly (*Danaus plexippus*), and proposed endangered Suckley's cuckoo bumble bee (*Bombus Suckleyi*) as having the potential to occur within the project area. No critical habitat occurs within the project area.

The North American wolverine requires a minimum snowpack depth of 60 inches lasting until April-May for successful denning.

The monarch butterfly depends on milkweed (*Asclepias speciosa*) as part of its lifecycle. Milkweed was not identified within the project area.

The Suckley's cuckoo bumble bee requires below-ground micro-sites for overwintering and nesting. Potential habitat occurs in the project area due to the presence of nectarous plant species.

Steelhead is listed as a threatened species under the ESA but are not known to occur within the Cottonwood Creek reach located in the project area. While steelhead historically occur in portions of Cottonwood Creek, the nearest identified steelhead area is approximately 18.1 miles downstream of the project area (StreamNet, 2019). Likewise, the nearest designated critical habitat for steelhead occurs approximately 9.6 miles downstream of the project area.

The National Oceanic and Atmospheric Administration (NOAA) National Marine Fisheries Service (NMFS) was initially contacted on October 21, 2021, regarding potential listed fish species and EFH in the project area. The project team held several phone calls with Jim Mital with NMFS based in the Moscow field office, throughout the planning process and discussed that the project is not anticipated to result in adverse effects to aquatic species both in the project area and downstream of the project area, specifically to anadromous fish. NMFS indicated they would review the plan and provide their input. The project team sent the project description, the draft Plan-EA, and project maps to NMFS on December 6, 2024, and followed up on April 21, 2025, and have gotten no response. Coordination with the NOAA NMFS is ongoing.

3.5.3 Migratory Birds, and Bald and Golden Eagles

Under the Migratory Bird Treaty Act (MBTA) (16 U.S.C 703-712), it is considered "illegal to take, possess, import, export, transport, sell, purchase, barter, or offer for sale, purchase, or barter, any migratory bird, or the parts, nest, or eggs of such a bird except under the terms of a valid permit issued pursuant to Federal regulations". The Bald and Golden Eagle Protection Act of 1940

(BGEPA) forbids anyone form taking bald eagles, including their parts, nests, or eggs; take is defined as "pursue, shoot, shoot at, poison, would, kill, capture, collect, molest, or disturb" (USFWS, 2016).

The USFWS IPaC report identified fifteen migratory bird species with the potential to occupy the project area, as shown in Table 3-3.

Table 3-3. Migratory Bird Species in IPaC

Common Name	Scientific Name	Breeding Period
American Avocet	*Recurviostra americana*	April 21–August 10
American White Pelican	*Pelecanus erythrorhynchos*	April 1–August 31
Black Tern	*Chlidonias niger*	May 15–August 20
California Gull	*Larus californicus*	March 1–July 31
Calliope Hummingbird	*Selasphorus calliope*	May1–August 15
Cassin's Finch	*Carpodacus cassinii*	May 15–July 15
Evening Grosbeak	*Coccthraustes vespertinus*	May 15–August 10
Forester's Tern	*Sterna forsteri*	March 1–August 15
Franklin's Gull	*Leucophaeus pipixcan*	May 1–July 31
Golden Eagle	*Aquila chrysaetos*	January 1–August 31
Lesser Yellowlegs	*Tringa flavipes*	Breeds Elsewhere
Northern Harrier	*Circus hudsonius*	April 1–September 15
Pectoral Sandpiper	*Calidris melanotos*	Breeds Elsewhere
Rufous Hummingbird	*Selasphorus rufus*	April 15–July 15
Western Grebe	*Aechmophorus occidentalis*	June 1–August 31

The IFWIS also identified records of occurrence of bald eagle (*Haliaeetus leucocephalus*) and golden eagle (*Aquila chrysaetos*) within Idaho County. The Rapid Avian Information Locator (RAIL) data queried on May 29, 2025, identified 152 MBTA species as potentially occurring in the project area (AKN 2025). No nests (recent or historical) were observed in the project area during the field survey, but red-tailed hawks (*Buteo jamaicensis*) were observed in the project area.

3.5.4 Essential Fish Habitat

EFH, as defined in the Magnuson-Stevens Act, for Coho and Chinook salmon is present within the South Fork Clearwater Subbasin (NOAA, 2021). Data indicates that Coho and spring/fall Chinook salmon occur in the South Fork of the Clearwater River downstream of the project area (StreamNet, 2019). Data also indicates that Snake River Basin steelhead occurs in Cottonwood Creek approximately 18.1 miles downstream of the project area, to the northeast (StreamNet, 2019) and critical habitat for steelhead occurs approximately 9.6 miles downstream of the project area in Cottonwood Creek, as discussed in Section 3.5.2 (NOAA, 2021) (StreamNet, 2019).

3.6 Human

3.6.1 Socioeconomic

The Proposed Project is situated within the City of Cottonwood as well as unincorporated portions of Idaho County. The following sections describe the current socioeconomic conditions present for the State of Idaho, Idaho County, and the City of Cottonwood. The following sections and tables describe the current demographic, employment, income, and economic conditions that have the potential to be affected by the Proposed Project. Idaho County is the largest county in the state by area but the twentieth most populous county in the State of Idaho.

3.6.1.1 Population and Demographics

Population and demographic estimates for the City of Cottonwood, Idaho County, and the State of Idaho are described in Table 3-4. Percentages for gender, age, and race in the City of Cottonwood are generally consistent with County and State percentages. Overall, Caucasian individuals represent the largest portion of the population in each of the areas considered.

Table 3-4. Demographic Profile for the City of Cottonwood, Idaho County, and Idaho

Socioeconomic Criteria		City of Cottonwood	%*	Idaho County	%*	Idaho State	%*
Total Population		977	100	16,411	100	1,717,750	100
Gender	Female	509	52.1	7,782	47.4	856,725	49.9
	Male	468	47.9	8,629	52.6	861,025	50.1
Age	Under 18	280	28.7	3,217	19.6	441,147	25.7
	18 & over	697	71.3	13,194	80.4	1,276,603	74.3
Race	White	923	94.5	15,319	93.3	1,545,409	90.0
	African American	2	0.2	23	0.1	11,918	0.7
	American Indian or Alaskan Native	19	1.9	649	4.0	23,136	1.3
	Asian	11	1.1	66	0.4	24,287	1.4
	Native Hawaiian or Other Pacific Islander	0	0.0	3	0.0	2,755	0.2
	Some other Race	0	0.0	98	0.6	59,676	3.5
	Two or More Races	22	2.3	253	1.5	58,700	3.3
Ethnicity	Hispanic or Latino	30	3.6	611	3.7	239,407	13.0
	Not Hispanic or Latino	792	96.4	15,930	96.3	1,599,699	87.0

*Percentages may not add up to 100 due to rounding
Source: U.S. Census Bureau [Census], 2019a, 2019b, 2019c, 2020a, 2020b, and 2020c

Past, current, and future population estimates for the City of Cottonwood, Idaho County, and the State of Idaho are summarized in Table 3-5.

Table 3-5. Population for the City of Cottonwood, Idaho County, and Idaho

Population Year	City of Cottonwood	Idaho County	State of Idaho	U.S.
Total Population 1990	822	13,783	1,006,749	248,709,873
Total Population 2000	944	15,511	1,293,953	281,421,906
Total Population 2010	900	16,267	1,567,582	308,745,538
Total Population 2019*	977	16,411	1,787,065	324,697,795

*2020 data not available
Source: U.S. Census Bureau.

Discussions with staff at the Idaho Department of Labor (Tacke, 2020) indicate that the Department of Labor believes census estimates are skewed in the area due to a relatively small sample set used in the 2010 Census and was not fully representative of resident populations. Staff at the Department of Labor recommended population estimates published by the State are more accurate than those published by the census. Population growth, based on the Idaho Department of Labor data collected between 1940 and 2020 for the City of Cottonwood, indicates that although the community experienced variable population growth from the 1940s through 2000, population growth stabilized and has remained relatively flat over the last 20 years (Appendix C, Figure C3.3-3). In comparison, Idaho County's population grew approximately 0.17% annually during the period from 2010–2020, according to the Idaho Department of Labor. The design alternatives were based on a conservative projected growth rate of 0.5%. Minor residential growth with negligible impact on commerce and industry may occur throughout the planning period.

3.6.1.2 Employment and Income

The 2019 American Community Survey (ACS) estimates for employment and income status in the City of Cottonwood, Idaho County, and the State of Idaho are provided in Table 3-6. The poverty threshold for a family (2 or more-person family) was based on the annual statistical poverty thresholds from the Census' Current Population Reports, Series P-60 on Income and Poverty. While a greater percentage of individuals are unemployed in the County than in the State, the City of Cottonwood has a lower percentage of unemployed individuals than either the county or state average.

Table 3-6. Employment Statistics Summary

Characteristics	City of Cottonwood	Idaho County	State of Idaho
Population 16 Years and Older	715	13,535	1,386,665
Civilian Labor Force	477	6,563	877,350
Employed	472	6,214	848,223
Unemployed	5	349	29,127
Percent Unemployed	0.7%	2.6%	2.1%
Median Household Income	$49,145	$41,516	$60,999
Mean Household Income	$61,151	$54,281	$78,975
Percent of Families Below Poverty Level	13.0%	17.6%	7.9%

Source: Census, 2019a; Census, 2019b; Census 2019c.

Approximately 13.0% of households in the City of Cottonwood are below the poverty line. Compared to Idaho County, the household percentage below the poverty line in the City of Cottonwood is lower than the County (13.0% compared to 17.6%).

3.6.1.3 Ecosystem Services

Ecosystem services were prioritized based on their expected contribution to the project's primary purpose of providing flood prevention and preventing flood damage. As a result, the ecosystem services analysis prioritized the regulating services provided by flood prevention activities, and the provisioning services resulting from water quality improvements due to reduced sedimentation and erosion from flood prevention activities.

3.6.2 Cultural Resources and Historic Properties

The project activities were evaluated for potential effects to cultural and historic resources in accordance with Section 106 of the National Historic Preservation Act (NHPA). Any potential impacts to cultural and historic resources are described as effects under 36 Code of Federal Regulations (CFR) 800. The NRCS, in consultation with the Idaho State Historic Preservation Officer (SHPO), Tribes/Tribal Historic Preservation Offices (THPOs), and other consulting parties, determined that the Proposed Project would result in No Adverse Effect to Historic Properties based on a literature review and Class III cultural resource survey per 36 CFR § 800.5(b). Because no adverse effects were identified, there is no need to resolve impacts or develop mitigation measures under 36 CFR 800.6. Consultation remains ongoing to address any inadvertent discoveries and ensure compliance with applicable cultural resource protection requirements.

Regulatory Overview

Several federal statutes and E.O.s direct the protection and consideration of cultural and historic resources, namely NEPA and the NHPA (36 CFR 800.2). Under 40 CFR 1501.3(d)(2)(v) of NEPA, federal agencies must consider the effect of federal actions upon historical, archaeological, and paleontological resources. In addition, Section 106 of the NHPA (36 CFR 800.3-11) requires federal agencies to consider the effects of their actions on historic properties. Pursuant to Section 106 of the National Register of Historic Places (NRHP), NRCS shall involve the consulting parties described in 36 CFR 800.2(c) in findings and determinations made during the Section 106 process.

The NHPA defines a historic property as “any prehistoric or historic district, site, building, structure, or object included in, or eligible for inclusion in the NRHP maintained by the Secretary of the Interior (36 CFR 800.16). This term includes artifacts, records, and remains related to and located within such properties. The term also includes properties of traditional religious and cultural importance to an Indian tribe or Native Hawaiian organization and that meet the National Register criteria (36 CFR 800.16[I]).

NRHP Evaluation Criteria

The cultural resources inventory was developed in accordance with the requirements of Section 106 of the NHPA. The inventory is sufficiently detailed to determine the significance of the project’s impact on historic properties eligible for the NRHP and to demonstrate compliance with applicable historic preservation laws. Eligibility determinations were made following the criteria codified under 36 CFR 60.4(a–d) and the guidance provided in 36 CFR 800.4(c), which outlines the process for identifying historic properties. In addition, NRCS referenced the Advisory Council on Historic Preservation (ACHP) regulations at 36 CFR 800 and National Register Bulletin No. 15, *How to Apply the National Register Criteria for Evaluation*, which provides detailed guidance for applying the NRHP criteria. Federal regulations define ‘eligible for inclusion in the National Register’ to include both properties formally determined as such by the Secretary of the Interior and all other properties that meet the National Register listing criteria (36 CFR 800.2[e]). Based on ACHP guidelines, any cultural resource included in or eligible for inclusion in the National Register is considered a historic property. The inventory and evaluation process ensured that all cultural resources within the Area of Potential Effects (APE) were assessed using these standards, Subsequent to the identification of relevant historical themes and related research questions, four

criteria for eligibility are applied. The quality of significance in American history, architecture, archeology, engineering, and culture is present in districts, sites, buildings, structures, and objects that possess integrity of location, design, setting, material, workmanship, feeling, and association and:

> Criterion A: that are associated with events that have made a significant contribution to the broad patterns of our history; or
>
> Criterion B: that are association with the lives of persons significant in our past; or
>
> Criterion C: that embody the distinctive characteristics of a type, period, or method of construction, or that represent the work of a master, or that possess high artistic values, or that represent a significant and distinguishable entity whose components may lack individual distinction; or
>
> Criterion D: that has yielded, or may be likely to yield, information important in prehistory or history.

The principal objective is to determine whether a cultural resource possesses the potential to contribute to one or more of the above-defined criteria. Adequate information regarding site function, context, and chronological placement from both archeological and, if appropriate, historical perspectives is essential for cultural resources investigations. Because research questions vary as a result of geography, temporal period, and project design, determination of site context and chronological placement of cultural resources is a particularly important objective during the inventory and evaluation processes. Criteria A, B, and C typically reflect association with historic-age resources, rarely with prehistoric sites. Criterion D is generally associated with prehistoric, but also historic-age, archeological sites. The objective of the current project is to locate and define both the horizontal and vertical extents of any cultural resources, document and describe those resources, and, when adequate data are present, evaluate each for NRHP eligibility.

Tribal Consultation

For the Proposed Project in accordance with CFR 800.2(c), the NRCS consulted with SHPO and three federal recognized Tribes (Nez Perce Tribe, the Confederated Tribes of the Colville Reservation, and the Confederated Tribes of the Umatilla Indian Reservation) for identification efforts, APE, eligibility determinations, and effects findings.

The Nez Perce Tribe was initially identified by NRCS as potentially interested in the Proposed Project due to the location of a known protected battle site in the vicinity. As such, the Nez Perce Tribe was contacted during the scoping process on December 30, 2020, and a Cooperating Agency Letter was submitted to the Nez Perce Tribe on August 31, 2021. The Notification of the Cultural Report and Eligibility Determination was submitted to the Nez Perce Tribe for review and comment on December 21, 2022, in compliance with Section 106 requirements. The Confederated Tribes of the Colville Reservation and the Confederated Tribes of the Umatilla Indian Reservation were identified as an additional potentially interested federally recognized Tribes and initially contacted via letter on November 16, 2022. At that time, no response was received from any of the tribes.

The NRCS State Conservationist reinitiated the Section 106 consultation process in July 2024 and included the Nez Perce Tribe, the Confederated Tribes of the Colville Reservation, and the Confederated Tribes of the Umatilla Indian Reservation. At this time, all three tribes were

contacted to remind them of the project, to provide them an opportunity to comment or raise concerns regarding the project, and to allow them to provide any information of historic properties, sacred sites, or places of traditional religious and cultural importance near the proposed area that should be considered during the resources analysis. A follow-up letter was sent to consulting parties in November 2024 with NRCS's determination of eligibility and the revised cultural resources report, allowing for additional comments or concerns to be raised. No response was received from any of the Tribes. Details of the tribal consultation for the Proposed Project are located in Section 6.1.2 and Table 6-1 through 6-2. Copies of the Tribal consultation letters and request for comment letters are located in Appendix A.

Public Involvement Summary

A public scoping meeting was held on January 14, 2021 at the Cottonwood Community Center. The public scoping period was open from January 14, 2021 through February 16, 2021 and ten public comments were received, as discussed in Section 6.4. A copy of the Scoping Report is included in Appendix A1.

In accordance with 36 CFR 800.2(d) and NRCS policy (390 NWPM 500.4(H)(3), 501.2(A)), NRCS will provide public notice of the Section 106 finding of No Adverse Effect to Historic Properties and an opportunity for public comment prior to finalizing the Environmental Assessment as part of the reinitiation of the Section 106 of consultation. Documentation of this public involvement will be included in Appendix A to satisfy 36 CFR 800.11 requirements.

Area of Potential Effects (APE)

The APE is defined as "the geographic area or areas within which an undertaking may directly or indirectly cause alterations in the character or use of historic properties, if any such properties exist" (36 CFR 800.16(d)). The APE for the cultural survey covers 737.24 acres, including the entire Proposed Project footprint and other areas adjacent to or near the project area (see APE/Cultural Resource Survey Area Map (Map B4) in Appendix B). This included 12,387 feet of potential pipelines and sidewalks, staging areas (19 acres), floodwater detention basins (2 acres), and a 709-acre area of environmental study. Proposed areas of stormwater pipe improvements were considered temporary impacts and were subject to a reconnaissance survey. All other areas were intensively inventoried. The direct APE was based on the physical footprint of ground-disturbing activities, including pipeline installation and staging areas. The visual APE was evaluated to determine whether temporary construction activities would introduce visual elements that could affect historic properties; because these impacts were temporary and reversible with the site reclaimed post construction, the visual APE was determined to be the same as the direct APE. Therefore, the visual APE was evaluated for temporary visual effects from construction equipment, staging, and activity. These visual impacts are short-term and reversible; no permanent structures or long-term visual intrusions remain after reclamation.

For this project, two APEs have been identified: a direct APE, which includes all areas subject to ground disturbance or physical alteration under each alternative, and a visual APE, which includes areas where new structures or features may introduce visual changes affecting the setting or feeling of historic properties. The scale and nature of these APEs vary by alternative. Alternatives limited to operational changes or improvements within previously disturbed areas or only include temporary impacts with site reclamation have a smaller direct and visual APE, while alternatives involving new construction or vertical elements expand the direct APE and broaden the visual APE to include surrounding landscapes with potential line-of-sight to the proposed improvements.

However, since all alternatives include only temporary visual impacts, there are no alternatives where the visual APE would be expanded beyond the direct APE.

The APE was developed after an initial scoping with potentially interested Federal agencies, federally recognized Tribes, and other stakeholders to include all potential alternative components. These potential alternative components included a water quality and agricultural management component and water quality benefit area (709-acre area), located to the southeast of the City of Cottonwood, which are not included in the final Proposed Project footprint. These components were removed from the final Proposed Project design as they were determined not eligible for federal funding. Thus, the APE presented in this document is much larger than the final Proposed Project footprint as it encompasses all initial design components that were surveyed.

Cultural Resources Investigation Results and Management Recommendations

A literature review and an intensive level cultural resource survey were completed for the Proposed Project's APE in September 2021 and March 2022 by ARH Archaeology and Architectural History, LLC (ARH) (Hauer et al., 2022) (Appendix E6). The survey included a records search of a 1-mile buffer around the APE as well as an intensive pedestrian survey with transects no greater than 30 meters. Findings were documented using the Idaho Archaeological Survey of Idaho Site Inventory Form, the Idaho Historic Site Inventory Form, the Archaeological Survey of Idaho Isolated Find Inventory Form, mapped with a Trimble Juno 38 GPS, and photographed with a digital camera.

Within the APE, ARH recorded one previously known site, 58 newly recorded sites, including seven fully recorded and 51 minimally recorded sites, and five isolated finds, as detailed in Table 3-7. The new minimally recorded sites were identified during literature review and reconnaissance survey; however, they were not fully recorded during the inventory due to their location outside of the APE.

The previously recorded site, Camas Prairie Railroad (101H2775/49-17964), is considered eligible for listing in the NRHP under Criteria A and C. However, the segment of the site documented during the current survey is only eligible under Criterion A, as it is associated with the railroad route between Grangeville and Lewiston. This segment cannot be associated with any local, regional, or nationally important person and is non-contributing under Criterion B. The segment consists of the berm, a culvert, and signal which are not unique, nor excellent examples of berms which makes this segment considered non-contributing under Criterion C. No other cultural material was identified. This segment does not possess any attributes that can provide further research potential within the region and is therefore considered non-contributing under Criterion D. As this segment of the Camas Prairie Railroad has been largely obliterated and does not contribute to the linear site's overall eligibility due to a lack of integrity, there will be No Adverse Effect to this resource from the Proposed Project.

Of the newly recorded sites, only one site (ACH-005) is located within the Proposed Project footprint. ACH-005 consists of a culvert on Cottonwood Creek. NRCS found the site to be ineligible for listing in the NRHP under any criteria due to the lack of temporal and functionally diagnostic artifacts or features and cannot be associated with nationality, regionally, or locally important events or people. The features are not unique resources, nor are they exceptional examples of culverts. This site exhibits a lack of diversity and limited potential for buried deposits and, therefore, lacks any further data potential. The other six newly recorded sites and five isolated sites are not within the Proposed Project footprint and will not be impacted.

NRCS submitted letters to the Tribes asking for review of the cultural resources report and NRCS's determination of eligibility and comments on December 21, 2022 (Appendix A). No comments or responses from the Tribes were received. NRCS submitted their determination of eligibility and formal findings to SHPO on May 4, 2023, and again on November 12, 2024, and SHPO concurred with their findings on May 31, 2023, and November 26, 2024(Appendix A).

In summary, consultation was first initiated on August 31, 2021, with an invitation to the Nez Perce Tribe to be a cooperating agency and November 16, 2022, with the Confederated Tribes of the Colville Reservation request for comments letter. Consultation was reinitiated on July 2 and 3, 2024 with the Nez Perce Tribe, Confederated Tribes of the Colville Reservation, and Confederated Tribes of the Umatilla Indian Reservation. A follow-up was sent to the tribes on November 9, 2024.

Table 3-7. Cultural Resources Identified within and adjacent to the Proposed Project Area[1]

Site Name/Number	Site Description	Distance from Proposed Project Area	NRHP Eligibility
Previously Recorded Sites			
Camas Prairie Railroad (101H2775/49-17964)	Historic Railroad berm and culvert	Within ½ mile north of the Proposed Project footprint	Eligible: site is eligible under Criterion A but segment is not contributing to the site's overall eligibility.
Newly Recorded Sites			
ACH-001	Unassociated Historic Debris Scatter	Within 2 miles south of the Proposed Project footprint	Not eligible
ACH-002	Cottonwood Gun Club (shooting range and club house)	Within ½ mile south of the Proposed Project footprint	Not eligible
ACH-004	Historic Farmstead	Within ½ mile east of the Proposed Project footprint	Not eligible
ACH-005	Culvert remnant and artifacts	Located within Proposed Project footprint	Not eligible
ACH-006	Historic Farmstead	Within ½ mile south of the Proposed Project footprint	Not eligible
JRH-001	Idaho County Fair Grounds Structures	Within ½ mile south of staging areas and located adjacent to the Proposed Project footprint	Not eligible
JRH-002	Ranch Style House converted to funeral home	Within ½ mile west of the Proposed Project footprint	Not eligible
Minimally Recorded Sites			
NBNR-004	Railroad Trestle	Outside APE	-
NBNR-005	Residence	Outside APE	-
NBNR-008	Church Building	Within temporary easement	-
NBNR-009	Residence	Within temporary easement	-
NBNR-010	Residence	Outside APE	-
NBNR-011	Residence	Outside APE	-
NBNR-014	Residence	Outside APE	-

Site Name/Number	Site Description	Distance from Proposed Project Area	NRHP Eligibility
NBNR-016	Residence	Outside APE	-
NBNR-017	Residence	Outside APE	-
NBNR-020	Residence	Within temporary easement	-
NBNR-021	Residence	Outside APE	-
NBNR-022	Residence	Outside APE	-
NBNR-023	Residence	Outside APE	-
NBNR-025	Commercial building	Outside APE	-
NBNR-026	Commercial building	Outside APE	-
NBNR-027	Commercial building	Outside APE	-
NBNR-028	Commercial building	Outside APE	-
NBNR-029	Commercial building	Outside APE	-
NBNR-030	Commercial building	Outside APE	-
NBNR-031	Government building	Outside APE	-
NBNR-032	Residence	Outside APE	-
NBNR-033	Residence	Outside APE	-
NBNR-034	Residence	Outside APE	-
NBNR-035	Residence	Outside APE	-
NBNR-036	Residence	Outside APE	-
NBNR-038	Residence	Outside APE	-
NBNR-039	Residence	Outside APE	-
NBNR-040	Residence	Outside APE	-
NBNR-041	Residence	Outside APE	-
NBNR-042	Residence	Outside APE	-
NBNR-043	Residence	Outside APE	-
NBNR-044	Residence	Outside APE	-
NBNR-047	Residence	Outside APE	-
NBNR-049	Residence	Outside APE	-
NBNR-058	Residence	Within temporary easement	-
NBNR-059	Residence	Outside APE	-
NBNR-062	Commercial building	Outside APE	-
NBNR-069	Commercial building	Outside APE	-
NBNR-070	Commercial building	Outside APE	-
NBNR-071	Commercial building	Outside APE	-
NBNR-073	Commercial building	Outside APE	-

Site Name/Number	Site Description	Distance from Proposed Project Area	NRHP Eligibility
NBNR-075	Commercial building	Outside APE	-
NBNR-076	Commercial building	Outside APE	-
NBNR-079	Commercial building	Outside APE	-
NBNR-080	Commercial building	Outside APE	-
NBNR-083	Commercial building	Outside APE	-
NBNR-084	Residence	Outside APE	-
NBNR-085	Residence	Within temporary easement	-
NBNR-086	Residence	Within temporary easement	-
NBNR-087	Residence	Within temporary easement	-
NBNR-088	Residence and shed	Within temporary easement	-
Isolated Sites			
ISO-ACH-001	Two white ceramic fragments	Within ½ mile south of the Proposed Project footprint	Not eligible
ISO-ACH-002	Single white ceramic fragment	Within ½ mile southeast of the Proposed Project footprint	Not eligible
ISO-ACH-003	Cut metal disk	Within ½ mile southeast of the Proposed Project footprint	Not eligible
ISO-ACH-004	Metal weathervane	Within ½ mile east of the Proposed Project footprint	Not eligible
ISO-ACH-005	Complete brown glass screw-top bottle	Within ½ mile east of the Proposed Project footprint	Not eligible

[1] A total of 6 additional noted but not recorded (NBNR) sites were also identified. The list of NBNR sites can be found in Table 7 of the cultural report, located in Appendix E6.

An additional six structures located within and adjacent to the APE were NBNR, which includes sites, buildings or structures, and architectural resources that line portions of King, Lewiston, Main, Maple, Oak, and Washington Streets. These resources are generally not historic and/or inherently not eligible for the NRHP.

Based on the cultural resources survey results and identified cultural resources, NRCS recommended the Proposed Project would have No Adverse Effect to historic properties (36 CFR Part 800.16 (l)(1)). The Idaho SHPO concurred with this determination of *No Adverse Effect* on November 26, 2024. Copies of the SHPO determination letter for the Proposed Project are located in Appendix A.

3.6.3 Sacred Sites and Traditional Cultural Properties

This section discusses sacred sites as defined by E.O. 13007 and the potential of the Proposed Project to affect sacred sites as well as the Memorandum of Understanding (MOU) signed by the Advisory Council on Historic Preservation (ACHP) and numerous participating federal agencies which further identifies federal agency responsibilities to identify and protect Indian Sacred Sites. Sacred sites are defined by E.O. 13007 as "specific, discrete, narrowly delineated locations on federally owned land that is identified by an Indian individual or Tribe determined to be an identified and appropriate representative of an Indian religion, as sacred by virtue of its established

religious importance to, or ceremonial use by, an Indian religion." As a part of E.O. 13007 and the MOU between ACHP and multiple federal agencies, federal agencies must accommodate access to and ceremonial use of all Indian Sacred Sites by Indian religious practitioners and avoid any adverse effects to the physical integrity of sacred sites. In addition to this, federal agencies must also make a good faith effort to improve the protection to tribal access and Indian Sacred Sites through enhanced and improved interdepartmental coordination and collaboration.

The Nez Perce Tribe's tribal representatives were notified of the project through a scoping letter on December 30, 2020. Subsequently, the Nez Perce Tribal Executive Committee was invited to be a cooperating agency for the Proposed Project on August 31, 2021. Additionally, the completed cultural resources survey results were sent to the Nez Perce Tribe's tribal representatives on December 21, 2022, requesting comments. Consultation and a request for comments was initiated with the Confederated Tribes of the Colville Reservation and the Confederated Tribes of the Umatilla Indian Reservation on November 16, 2022. Section 106 consultation was reinitiated by NRCS in July 2024 and included the Nez Perce Tribe, the Confederated Tribes of the Colville Reservation, and the Confederated Tribes of the Umatilla Indian Reservation. At this time, all three tribes were contacted to remind them or inform them of the project, to provide them an opportunity to provide comments or raise concerns regarding the project, and to allow them to provide any information of historic properties, sacred sites, or places of traditional religious and cultural importance near the proposed area that should be considered during the resources analysis. Details of the tribal communication for the Proposed Project is located in Section 6.1.2 and Table 6-1 through 6-2; copies of the Tribal letters are located in Appendix A.

No specific Indian Sacred Sites or traditional cultural properties were identified within the project area. However, certain physical and natural features, including mountains, foothills, buttes, springs, lakes, rivers, and rock shelters, among others, could be located near the project area. Additionally, specific cultural sites regarded as sacred to Tribes such as: altars; vision quest sites; water resources, springs, and headwaters; burial sites; historical places, for example, battlegrounds, rendezvous sites, sites where ceremonies occurred, and routes traveled by important persons; and others, may also be located in the area.

3.6.4 Hazardous Materials

The Resource Conservation and Recovery Act (RCRA) is the primary statute established with the purpose of providing a structure for hazardous waste management. For a substance to be considered a hazardous waste, it must first be classified as a solid waste under RCRA. Any material that is abandoned, inherently waste-like, discarded military munition, or recycled in certain ways is considered a solid waste and is subject to RCRA. Hazardous waste is defined as liquid, solid, gas, or sludge that poses a hazard to human health or the environment because of its quantity, concentration, or physical or chemical characteristics. A review of the EPA's Envirofacts database and IDEQ's GIS facility mapper (via Terradex) was conducted to determine if there are reported facilities within 0.5 miles of the project area that generate, handle, or dispose of hazardous waste, or if any environmental incidents involving hazardous materials have been reported in the area. Results of the search are located in Appendix C5: Hazmat Report.

Using IDEQ's facility mapper, a 0.5-mile radius was applied around the project area; this search encompassed all components of the Proposed Project. The database identified 15 active or former sites associated with one or more of the following categories: RCRA Waste Site, underground storage tank (USTs), leaking underground storage tank (LUST), brownfields site, solid waste

facilities, or a general remediation site. Table 3-8**Error! Reference source not found.** summarizes the site/facility information available (IDEQ, 2024a; EPA, 2021a).

Table 3-8. IDEQ Sites/Facilities in or Near the Project Area

DERR/Facility ID	Category	Responsible Party
2011BAZ5860	RCRA Hazardous Waste Site	Seubert Excavators, Inc.
2011BAZ923	RCRA Hazardous Waste Site	Buds Saw Service
2011BAZ7097	RCRA Hazardous Waste Site	US West Communications Cottonwood
2011BAZ3589	RCRA Hazardous Waste Site	Hometown Auto & AG
2011BAZ2314	RCRA Hazardous Waste Site	Fred's Body Shop
2011BAZ1563	RCRA Hazardous Waste Site	Cottonwood Chronicle
2011BAZ349	RCRA Hazardous Waste Site	Archies Cleaners
2011BAZ6147	RCRA Hazardous Waste Site, USTs	St. Mary's Hospital
2011BAZ1564	UST	Cottonwood Texaco
2011BAZ6344	UST	Tacke Oil Co
2011BAZ4838	LUST	Tire Guy (The)
2011BAZ4464	LUST	Coyotes
2013BAZ298	Brownfields	Cottonwood Elementary School
2012BAZ374	Solid Waste	Railroad Material Salvage Open Dump
2013BAZ342	General Remediation	John Jenny

3.6.5 Public Health and Safety

Flooding in the city is well documented, with reports dating back to 1908. During the peak flow events in spring, water floods the conveyance system and overtops the Cottonwood Creek banks, running down the King and Main Street corridors. High intensity storms and flash floods have caused severe damage to developed areas and roadways on a regular basis, highlighting deficiencies in flood protection infrastructure. The city has been flooded twice in 2019 and 2022. Both times water overtopped the existing conveyance systems and ran down the streets, flooding nearby structures and infrastructure. Floodwaters north of Main Street are conveyed through an undersized system, which joins the already hydraulically deficient Main Street system, adding to the overloading of the conduits and causing additional flooding to nearby residential areas and roads. The Historic Flooding Documentation is provided in Appendix E1—Historic Flooding Documentation.

Based on flood modeling, approximately 79 structures, 22 roads/minor highways, and over 15.3 acres of agricultural land would experience flooding under a 50-year storm event under existing conditions. Flood modeling shows approximately 80 structures, 23 roads/minor highways, and over 19.1 acres of agricultural land would experience flooding under a 100-year event under existing conditions.

3.6.6 Recreation

Within the City of Cottonwood, there are two city designated parks with ballfields. Wimer ballfields, an athletic ballfield complex, is found in the western portion of the City of Cottonwood and is surrounded by residential areas. Additionally, there is a city park and Idaho County Fairgrounds adjacent to portions of the project area within city boundaries.

The South Fork Clearwater Subbasin contains public lands that offer dispersed recreational opportunities, such as hiking, camping, biking, and fishing. Within the watershed, numerous

recreational opportunities exist, which are managed by various state and federal agencies. There are no known designated recreational opportunities within the project area.

3.6.7 Land Use

The project area contains a variety of land uses, including residential, commercial, agricultural, grazing, transportation, undeveloped, and public uses. A land use map is provided in Appendix C3 (Figure C3.1-3). Areas within city limits are zoned as industrial, commercial, residential A or residential B. All lands in unincorporated Idaho County are zoned multi-use and generally consist of agricultural or grazed properties. A copy of the city's hand drawn Zoning Map is located in Appendix C6.

The project components would generally be constructed within the city's existing ROW, which scans across both public and private property. These areas have been heavily disturbed by human activity. No land acquisition is necessary for the Proposed Project, and no land use changes are proposed. However, approximately 1.8 acres of permanent easement and 3.6 acres of temporary construction easement will need to be acquired. Any additional permanent easements necessary for the existing flood areas will be developed as needed.

3.6.8 Visual Resources and Scenic Beauty

Visual resources and scenic beauty are closely related to each other. Visual resources are characterized by four elements present in every landscape: landform, water, vegetation, and structures. All landscapes are composed of a combination of these four visual elements. Scenic beauty is defined as the "viewer's perceived value of the visual resources in a landscape based on their quality, distinctiveness, and uniqueness" (NRCS, 2016). The more viewers experience or use visual resources, particularly those that are distinctive or unique, the greater the need to protect scenic beauty.

The landscape in the project area is mostly composed of residential, agricultural, and transportation infrastructure. The surrounding landscape is natural hills with forested mountains, pastures, and farmlands. The Proposed Project meanders through residential and agricultural areas.

3.6.9 Scientific Resources

Scientific Resources include paleontological resources (fossils) that could be located within the project area. Paleontological resources are protected by the Paleontological Resources Preservation Act of 2009, which requires the USDA to manage and protect paleontological resources using scientific principles. The Proposed Project is located within the Columbia River Basalt Group, which includes large-volume lava flows of tholeiitic basalt, basaltic andesite, and subordinate andesite (IGS, 2022). Geologic units are assigned to a class using the Potential Fossil Yield Classification (PFYC) system, which allows an initial assessment to be made in order to analyze potential impacts under NEPA. These classes are based on a known abundance of scientifically important paleontological resources and sensitivity to adverse impacts. Classes range from Class 1 – Very Low to Class 5 – Very High, with a U for unknown or unstudied/poorly studied areas. The U.S. Bureau of Land Management (BLM) maintains a Rapid Assessment Tool for Paleontology that provides classifications for geologic formations. According to this tool, the Proposed Project is classified as U- unknown (BLM, 2022a). This classification generally means either the geological units in the area have not been studied in detail or that scientific literature available for the area does not verify the presence of paleontological resources (BLM, 2022b). Until such time as a

provisional classification is made, areas classified as unknown are recommended to be treated as having a medium to high possibility of yielding paleontological resources (BLM, 2022b).

The Idaho Geological Survey (IGS) was contacted regarding the presence of paleontological resources in the project area. According to the IGS, the project area is comprised mainly of basalt from the Grande Ronde Formation of the Columbia River Basalt Group and is unlikely to contain paleontological resources (see IGS concurrence letter in Appendix A).

3.6.10 Transportation and Infrastructure

Existing infrastructure in the project area includes linear transportation facilities, commercial and residential structures, and service utilities including flood control conduits, water, sewer, and telecommunications. Service utilities are aging, and operations and maintenance (O&M) costs continue to rise.

Portions of the project area can be accessed from roads in the City of Cottonwood and unincorporated portions of Idaho County such as: East Road, Airport Road, Highway 95, Main Street, King Street, Front Street, Lewiston Street, and Cottonwood Butte Road.

The existing concrete box culverts on East Road east of Highway 95 do not have the capacity to carry flood events, which have led to periodic flooding, bank erosion, and damage to the existing roadway. Furthermore, the Cottonwood Creek channel between these road crossings is overgrown with cottonwood trees and large woody debris, which impedes flow and forces the channel to erode the creek banks. A portion of the southern bank within the project area lies adjacent to the city's existing treatment lagoons. Erosion of the creek bank at this location creates concerns with potential breach of the lagoon embankment and discharge of untreated wastewater to Cottonwood Creek.

3.6.11 Noise

Various factors influence the perception of noise, such as volume, frequency, atmospheric conditions, background noise, and the nature of the activity generating the noise. Background noise (ambient noise) is associated with road traffic and the use of agricultural equipment. When discussing noise, special consideration must be given to noise sensitive areas and noise sensitive receptors within and adjacent to the Proposed Project. In these quiet areas, noise impacts are viewed as more substantial. Numerous noise sensitive receptors (i.e., local parks, schools, and residential areas) are adjacent to the project area.

3.7 Forecast Future Conditions

The No Action condition is the most likely future condition or set of conditions if no effort is made to resolve existing project area problems and maximize opportunities or address project objectives and eliminate constraints. It includes any changes expected to result directly, indirectly, or cumulatively from all reasonably foreseeable circumstances without alternative actions.

Chapter 4 Alternatives

This section describes the rationale of the Draft Plan-EA formulation for the development and comparison of alternatives and describes the alternatives, including those eliminated from detailed study.

4.1 Formulation Process

Early in the Proposed Project development, comments were requested and received from the public, Tribes, and local, state, and federal agencies. Information from the scoping process was used to define watershed problems, objectives, and resource concerns to consider in the alternative development process. The public scoping process is described in Chapter 2 and additional information on the scoping process is included in the Scoping Report in Appendix A.

The project team, composed of environmental and engineering professionals, sponsor representatives, and agencies, developed the Proposed Project alternatives. Several alternatives were formulated to address the purpose and need of the project, the project objectives, and the Federal Objective as identified in the P&R (CEQ, 2013). Additionally, alternatives were formulated with consideration to four criteria: 1) completeness, 2) effectiveness, 3) efficiency, and 4) acceptability. Individual and combinations of project measures were selected with regard to achieving the purpose and need, balancing engineering complexity and feasibility, minimizing economic and environmental impacts, and adhering to budgetary constraints, while adhering to NRCS procedures in the National Planning Procedures Handbook (NRCS, 2021), the NWPM (NRCS, 2015) Parts 500 through 505, the NWPH (NRCS, 2014), and additional NRCS watershed planning policy, relying primarily on the NRCS PR&G as described in USDA DM 9500-13 (USDA, 2017a).

4.2 Identification and Evaluation of Initial Measures Considered

The following initial array of project measures were formulated for flood prevention and flood damage reduction. Each project measure was screened for its ability to meet the purpose and need of the project. Table 4-1 displays if each project measure was excluded from incorporation into a proposed alternative and the reasoning behind its exclusion.

4.2.1 Revise Agricultural Practices Upstream

Alternatives considered for flood prevention included a change in land use practices to reduce flood volumes upstream of the city, three conveyance alignment alternatives, and a flow reduction basin construction alternative.

4.2.1.1 Change in Land Use Practices Alternative

An alternative to revise agricultural practices upstream of the project area was considered to improve rainfall absorption, which could result in reduced runoff to Cottonwood Creek and a resulting reduction of the size of required flood piping. As flooding is a function of both conveyance systems (peak flows) and flood volume, this alternative was designed to reduce flood volumes. As shown in Appendix C, Figure C3.1-3, predominant land uses upstream of the city including agricultural and forested acreages.

An example of revised agricultural practices is the use of direct seed and minimum or no till seeding, which can increase the soil's infiltration and water holding capacities. Approximately 55% of contributing land upstream of the City of Cottonwood is used for agriculture, and direct

seed practices are sporadically used based on operator preferences. This alternative would require numerous farm producers to voluntarily implement these farming practices with potential support of federal programs through the NRCS. Program durations are usually limited to five years, so there would be uncertainty in long term benefits.

Soil groups were studied to further consider the impacts of modified practices to reduce surface water runoff. As shown in Appendix C, Figure C3.1-2, roughly 85% of the soil surrounding the City of Cottonwood is NRCS Hydrologic Soils Group C and D, which both have high runoff potential, regardless of agricultural practices. The soil groups inherently limit the effectiveness of any revised agricultural practices upstream.

4.2.1.2 Farm Conservation Easements Alternative

For this alternative, the City of Cottonwood would work with landowners to obtain farm conservation easements, allowing the City of Cottonwood to control farming practices. Similar to the above alternative, identified soil groups surrounding the City of Cottonwood have high runoff potential, regardless of agricultural practices used and inherently limit the effectiveness of any revised agricultural practices to limit stormwater runoff from those lands.

4.2.2 Alignment Alternatives

4.2.2.1 Alternative 1

Alternative 1 would align Cottonwood Creek along Main Street with the King Street drainage using the existing connection point to Cottonwood Creek. This alternative would use smaller pipe along the Cottonwood Creek alignment and the existing natural channel to pass King Street flow. The systems then converge at the open channel section of Cottonwood Creek west of Highway 95 and Main Street. Map C1-3 in Appendix C illustrates Alternative 1.

4.2.2.2 Alternative 2

Alternative 2 would consist of a new alignment along Main Street and King Street. The King Street drainage connects to the Cottonwood Creek alignment near the intersection of Main Street and King Street. The new Main Street alignment would start east of the railroad trestle conveying flows from the natural channel to the east along the north side of Front Street to the intersection of Main Street. The alignment would then continue beneath Main Street's right of way and outlet into the existing stream channel west of Highway 95. This route would reduce the need to resize existing undersized conduits in that area and protects the businesses from flood water. This alternative eliminates under building conveyance piping and open channels near building foundations. Without utilizing the existing flood areas, the King Street flows combined with the Main Street flows and caused conduit sizes after the junction to be larger than when the flooded areas are utilized. Map C1-3 in Appendix C illustrates Alternative 2.

4.2.2.3 Alternative 3

Alternative 3 would align Cottonwood Creek along Front and Junction Streets. The King Street drainage would connect to Cottonwood Creek near the intersection of Front and Junction Street. Alternative 3 removes the flow from the natural channel between King and Idaho Street. The flow is then returned to the existing system toward the downstream end of Idaho Street. This alternative reduces the number of conduits that need to be replaced. Map C1-3 in Appendix C illustrates Alternative 3.

4.2.3 Flow Reduction Basin Construction Alternative

This alternative would construct flow reduction basins upstream of Cottonwood in two locations to reduce the peak flow the flood protection system would otherwise convey during a flood event. The basins would detain the peak flow for the 50-year flood event and release the flow at a 25-year flow to reduce the size of the conduit and flood control structures through the city. The basins would pass flows lower than the 25-year storm and, by definition, would statistically be used once every 25 years. When higher flow rates occur, the basin would fill up to reduce the peak runoff downstream. The size of the basins would require careful monitoring and maintenance, as a failure could result in catastrophic damage to downtown Cottonwood during peak storm events.

Flood conveyance systems would be sized to handle peak flows, even if they are only fully utilized during relatively short periods of time during extreme conditions. In concept, flow reduction basins collect peak flows and meter them downstream over time. An equivalent flood volume is passed through the system, and by leveraging storage within the basins to increase the timeframe associated with peak flows, associated infrastructure to pass them can be minimized.

The required size of the flow reduction basins to achieve the design criteria of this alternative would be approximately 31 acre-feet (ac-ft), resulting in an estimated reduction in the size of the conduits through Main Street by approximately one foot in width.

Property owners in these areas were contacted regarding this alternative, and they provided an unfavorable response to this alternative. Preliminary cost estimates were calculated to evaluate the cost of the flow reduction basins, compared to the benefit of decreased sizes of conduits in the conveyance system. The cost of constructing the basins was similar to the cost reduction in the smaller conveyance system, resulting in no substantial cost benefit to incorporate flow reduction basins into the project.

4.2.4 Recreation Alternative

The goal of a recreational project component would be to improve access to recreational facilities within the city. One recreational alternative was considered – sidewalk construction. This alternative would construct a 6-foot-wide sidewalk that starts at the intersection of Lewiston Street and A Street and proceeds to run west on the south side of Front Street until the intersection of Maple Street. The sidewalk would continue south down the east side of Maple Street and end at the Washington Avenue intersection across the street from the ballfields. The average slope of this alternative would be 4.5%. This alternative is depicted in Appendix C, Figure C1-8. This alternative would provide a direct route from Lewiston Street and Main Street pedestrian corridors to Wimer Fields. This alternative was considered because the path would improve recreational access to the city ballfields located west of the City of Cottonwood. The ballfields currently lack connectivity to facilitate access from the residential and downtown areas, and this alternative would improve site access and safety for residents using the areas.

4.2.5 Channel Enhancements

This alternative would selectively remove Cottonwood trees, stumps, and other flood debris within the Cottonwood Creek channel in an effort to improve safety and access during high water events. Currently, this flood debris causes issues with build-up in the creek channel during high flow events, causing flooding and infrastructure damage. Once removed, the channel would be cleared of this dangerous debris. This alternative would also add desirable vegetation along the

Cottonwood Creek channel to restabilize the bank and indirectly improve fish and wildlife habitat in the creek channel.

4.2.6 Lagoon Bank Protections

This alternative would armor the existing lagoon treatment facilities located southeast of the City of Cottonwood to mitigate erosion of the stream into the facility embankments, reducing potential for discharge of raw sewage into the Cottonwood Creek stream channel.

Table 4-1. Initial Approaches and Management Measures

Initial Approaches and Management Measures	Initial Qualitative Evaluation	Carried Forward
Revise Agricultural Practices Upstream	This alternative would require numerous farm producers to voluntarily implement these farming practices with or without the potential support of ongoing or future federal programs. Additionally, identified soil groups in the Project Area limit the effectiveness of revised agricultural practices. Therefore, this alternative likely would not meet the purpose and need of the Proposed Project.	No
Farm Conservation Easements	This alternative would require numerous landowners to agree to conservation easements with the City of Cottonwood and agree to restricted farming practices. Additionally, identified soil groups in the Project Area limit the effectiveness of revised agricultural practices. Therefore, this alternative likely would not meet the purpose and need of the Proposed Project.	No
Alternative 1 – Front and Junction Streets	Alternative 1 would utilize portions of the existing infrastructure and facilitate the use of smaller piping along portions of the system. Alternative was carried forward.	Yes
Alternative 2 – Main and King Streets	Alternative 2 would reduce the need to resize existing conduits and eliminate under-building conveyance piping and open channels near buildings foundations. Alternative was carried forward.	Yes
Alternative 3 – Front, Junction, and King Streets	Alternative 3 would remove flow of portions of the natural channel and reduce the number of conduits that would need to be replaced. Alternative was carried forward.	Yes
Flow Reduction Basin	This alternative would not meet the purpose and need due to the relatively minor effect that the basins would have on the flood conveyance structures throughout the city, combined with property owner objections, lack of economic benefit, and potential risks.	No
Sidewalk Construction	While adding sidewalks to portions of the City of Cottonwood would improve safety and facilitate access to residents, this alternative was eliminated because it was determined to be ineligible for federal funding under the PL-566 program due to its lack of connectivity to the proposed flood prevention components.	No

Initial Approaches and Management Measures	Initial Qualitative Evaluation	Carried Forward
Cottonwood Creek Channel Enhancements	This alternative would improve safety and access to the channel during high water events as well as stabilize the existing channel bank against sedimentation and indirectly improve fish and wildlife habitat downstream.	Yes
Lagoon Bank Protections	This alternative would add armor to the banks of the lagoon treatment facilities, stopping erosion of those banks and reducing the potential for discharges of raw sewage into the Cottonwood Creek stream channel.	Yes
Nonstructural Measures		
Nonstructural measures include changing building codes, developing land-use planning laws and their enforcement, conducting research and assessment, and providing information resources and public awareness programs to change the way that people interact with irrigation water.	These nonstructural measures were outside the scope of this project, but were discussed with Sponsors and involved entities, and are incorporating them into their policies.	No
Green Infrastructure		
Green infrastructure includes measures that use plant or soil systems, permeable pavement or other permeable surfaces or substrates, or landscaping to store, infiltrate, or evapotranspire stormwater and reduce flows to sewer systems or to surface waters.	While no green infrastructure measures were identified for the Proposed Project, the Sponsors remained committed to looking for opportunities to integrate green infrastructure in the project design, but did not consider green infrastructure as a standalone measure or alternative.	No

The measures that the project team carried forward were then compared to determine which were mutually exclusive or unnecessarily redundant and which could be combined into alternatives. Table 4-2 illustrates this pairwise compatibility for the management measures and how they were carried forward into alternatives' development. The project team again evaluated the combinations qualitatively to inform the formulation of the initial array of alternative plans detailed in the next section.

Table 4-2. Measures Included in Each Alternative

Management Measures	Alternative 1	Alternative 2	Alternative 3	Channel Enhancements	Lagoon Bank Protections
Alternative 1 – Front and Junction Streets	Yes	No	No	Yes	Yes
Alternative 2 – Main and King Streets	No	Yes	Yes	Yes	Yes

Management Measures	Alternative 1	Alternative 2	Alternative 3	Channel Enhancements	Lagoon Bank Protections
Alternative 3 – Front, Junction, and King Streets	Partially	Partially	Partially	Yes	Yes
Channel Enhancements	Yes	Yes	Yes	Yes	Yes
Lagoon Bank Protections	Yes	Yes	Yes	Yes	Yes

4.2.7 Risk and Uncertainty

The economic analysis required by NEPA involves both risk and uncertainty. The environmental evaluation required the use of best available science, technology, and information to make well-informed assumptions and predictions. However, existing conditions may change, the public's opinion of a project could evolve, or unexpected circumstances with construction, funding, or design may arise. Each of these differences could alter predictions of environmental consequences. The quantitative analysis of the alternatives on ecosystem flows and values is a "conservative" estimate of the potential benefits from the alternatives for several reasons. The types of activities associated with the action alternatives are common and standard procedures and not considered highly uncertain or involving unique or unknown risks and would not set a precedent for future actions, nor are any of the activities in the action alternatives representing a decision in principle about a future consideration. The Action Alternative details the specific activities involved with the decision (Section 7.2).

4.3 Secondary Array of Alternatives Considered

NWPH 601.37B requires alternatives for watershed plans to consist of either land treatment, nonstructural, or structural measures, or combinations thereof that will help accomplish the authorized project purpose. Additionally, as outlined in DM 9500-013, PR&G requires the evaluation of specific alternatives in the initial alternative identification and evaluation, including a nonstructural alternative, an environmentally preferred alternative, and a locally preferred alternative. This section identifies:

- The required No Action Alternative;
- The remaining alternatives that the team developed from the initial array of measures detailed above; and
- Other common alternatives, as noted in DM 9500-013.

4.3.1 No Action Alternative

The No Action Alternative, also known as the Future Without Federal Investment (FWOFI) or the Future Without Project (FWOP), are the same alternative known by different names under NEPA, PR&G, and other guidance documents. The No Action Alternative (FWOFI) is a projection of future conditions and serves as a baseline for the evaluation and comparison of effects of the action alternatives. In this Watershed Plan-EA, the No Action Alternative (FWOFI) is the projection of future conditions with current operations, maintenance, and replacement (OM&R), and independent of the Proposed Project. This alternative serves as a baseline for the evaluation and comparison of effects of action alternatives. This alternative entails no federal investment in the

Project Area. This alternative has been carried through to the final array and is not covered in the evaluation of initial alternatives.

4.3.2 Remaining Array of Alternatives

Three action alternatives were formulated that addressed the purpose and need for the project, the project objectives, and the Federal Objective as listed in USDA DR-9500-13 (USDA, 2017b). Additionally, alternatives were formulated with consideration to four criteria: 1) completeness, 2) effectiveness, 3) efficiency, and 4) acceptability. Individual and combinations of project measures were selected with regard to achieving the purpose and need, balancing engineering complexity and feasibility, minimizing economic and environmental effects, and adhering to budgetary constraints. The following initial array of alternatives was formulated using the combination of management measures, as identified above.

4.3.2.1 Alternative 1

Alternative 1 would align Cottonwood Creek along Main Street with the King Street drainage using the existing connection point to Cottonwood Creek. This alternative would use smaller pipe along the Cottonwood Creek alignment and the existing natural channel to pass King Street flow. The systems then converge at the open channel section of Cottonwood Creek west of Highway 95 and Main Street. Map C1-3 in Appendix C illustrates Alternative 1.

4.3.2.2 Alternative 2

Alternative 2 would consist of a new alignment along Main Street and King Street. The King Street drainage connects to the Cottonwood Creek alignment near the intersection of Main Street and King Street. The new Main Street alignment would start east of the railroad trestle conveying flows from the natural channel to the east along the north side of Front Street to the intersection of Main Street. The alignment would then continue beneath Main Street's right of way and outlet into the existing stream channel west of Highway 95. This route would reduce the need to resize existing undersized conduits in that area and protects the businesses from flood water. This alternative eliminates under building conveyance piping and open channels near building foundations. Without utilizing the existing flood areas, the King Street flows combined with the Main Street flows and caused conduit sizes after the junction to be larger than when the flooded areas are utilized. Map C1-3 in Appendix C illustrates Alternative 2.

4.3.2.3 Alternative 3

Alternative 3 would align Cottonwood Creek along Front and Junction Streets. The King Street drainage would connect to Cottonwood Creek near the intersection of Front and Junction Street. Alternative 3 removes the flow from the natural channel between King and Idaho Street. The flow is then returned to the existing system toward the downstream end of Idaho Street. This alternative reduces the number of conduits that need to be replaced. Map C1-3 in Appendix C illustrates Alternative 3.

4.3.3 Channel Enhancements

This alternative would selectively remove Cottonwood trees, stumps, and other flood debris within the Cottonwood Creek channel in an effort to improve safety and access during high water events. Currently, this flood debris causes issues with build-up in the creek channel during high flow events, causing flooding and infrastructure damage. Once removed, the channel would be cleared of this dangerous debris. This alternative would also add desirable vegetation along the

Cottonwood Creek channel to restabilize the bank and indirectly improve fish and wildlife habitat in the creek channel. The location of proposed channel enhancements are shown on the Preferred Alternative Map in Appendix C.

4.3.4 Lagoon Bank Protections

This alternative would armor the existing lagoon treatment facilities located southeast of the City of Cottonwood to mitigate erosion of the stream into the facility embankments, reducing potential for discharge of raw sewage into the Cottonwood Creek stream channel.

4.3.4.1 Other Common Alternatives

4.3.4.1.1 Nonstructural Alternatives

No standalone nonstructural alternative was identified that would address the sponsor's concerns while meeting the Sponsor's purpose and need. Other nonstructural measures to change building codes, develop land-use planning laws and their enforcement, conduct research and assessment, and provide information resources and public awareness programs to change the way that people interact with the irrigation water were considered, but were outside the scope of this project. These measures were not carried forward, but were discussed with Sponsors and involved entities, and they are incorporating them into their policies.

4.3.4.1.2 Locally Preferred Alternative

"In cooperation with local interests that have oversight or implementation authorities and responsibilities, agencies may identify a 'locally preferred' alternative" (DM-9500-013, Section 6(b)(4)(b)(3); USDA, 2017a). This alternative may emerge from the collaborative process during agency and public scoping. Alternative 2 was created, modified, and supported through a public and local stakeholder process per PR&G. As part of this process, the public and other stakeholders were invited to provide comments and input on the proposed design and evaluation of alternatives. As a result of this input, the flood prevention and flood damage reduction infrastructure improvements from Alternative 2 would provide the greatest benefit to the community and addressed the public comments received during the scoping period while addressing project needs. Alternative 2, subsequently, is the locally preferred alternative.

4.3.4.1.3 Agency Preferred Alternative

The "agency preferred alternative" in the WFPO Program under PL 83-566 refers to the option or plan that the NRCS identifies as the most suitable solution to address the specific watershed issues being considered. This alternative is selected based on a comprehensive evaluation of various factors, including environmental effects, economic benefits, technical feasibility, and public input. Alternative 2 is the agency preferred alternative.

4.3.4.1.4 Environmentally Preferred Alternative

The NEPA Environmentally Preferred Alternative is not a formulation, but rather it is identified through the comparison of alternatives. Based on analysis documented in Chapter 5, Alternative 2 was determined to be the environmentally preferred alternative.

4.3.4.1.5 National Economic Efficiency Alternative

The NEE Alternative is the alternative or combination of alternatives that reasonably maximizes the net benefit of the project while protecting sensitive environmental resources. The net economic

benefit is the benefit minus the cost of the project. The term NEE is being used in this Plan to identify the most economically efficient alternative. It fits within the "Additional Alternatives" category described in Section 6b(4)(b)5 of DM 9500-013 (USDA, 2017a).

With the federal law passage of the 2007 Water Resources Development Act, Congress directed the federal government to update and consolidate its past guidance on evaluating the costs and benefits of federal investments. The original Principles and Guidelines (P&G) was replaced by PR&G as of April 2019. The PR&G allow for:

…maximizing public benefits (of all types) relative to costs, the use of quantified and unquantified information in the tradeoff analysis, flexibility in decision making to promote localized solutions, ability to rely on the best available science and objectivity, and advance transparency for Federal investments in water resources.

The PR&G further state:

Federal investments in water resources as a whole should strive to maximize public benefits, with appropriate consideration of costs. Public benefits encompass environmental, economic, and social goals; include monetary and non-monetary effects; and allow for the consideration of both quantified and unquantified measures.

Although the NEE Alternative terminology does not exist in the PR&G nor NWPM policy, DM 9500-013 refers to NEE in the context of beneficial effects resulting from a water resources investment. Efficiency is the extent to which an alternative alleviates the specified problems and realizes the specified opportunities at least cost. The PR&G and ecosystem services analysis allow for selecting an alternative that may not be the most economically efficient based on consideration of other economic, social, and environmental tradeoffs. Based on analysis documented in Chapter 5, Alternative 2 was determined to be the alternative that increases NEE.

4.4 Alternatives Considered but Eliminated from Detailed Study

In accordance with NEPA and NRCS planning, multiple alternatives were examined to address the sponsor's concerns. The initial array of alternatives was screened against the project's stated purpose and need, as well as economic considerations to arrive at the final array of alternative plans. The purpose and need are identified in Chapter 1. Each of the remaining alternatives was screened to determine if it met the project's stated purpose and need as shown in

Table 4-3.

Table 4-3. First Screening Based on Purpose and Need

Criteria	Alternative 1	Alternative 2	Alternative 3	Channel Enhancements	Lagoon Bank Protections
Purpose: Flood prevention and flood damage reduction for the City of Cottonwood	Yes-New alignment would provide flood prevention and flood damage reduction to Project Area	Yes-New alignment would provide flood prevention and flood damage reduction to Project Area	Yes-New alignment would provide flood prevention and flood damage reduction to Project Area	Yes-Alternative would provide additional flood prevention and flood reduction measures by removing debris from channel.	Partially – provides additional protections to the Lagoon to prevent damage during high flow events. When combined with other alternatives, provides flood damage reduction for the City of Cottonwood.
Need: Provide appropriately sized and engineered infrastructure to convey the flows through the project area to protect buildings, property, and community infrastructure from flood-related damages	Yes-Alternative facilitates use of smaller piping along the Cottonwood Creek alignment and the existing natural channel to pass King Street flow	Yes-Alternative reduces the need to resize several conduits and protects businesses from flood water. This alternative eliminates concerning under-building conveyance piping and open channels near building foundations.	Yes-Alternative reduces the number of conduits that need to be replaced.	Yes- cleared channels will allow higher flows to be conveyed without overtopping	Partially – Alternative would provide additional protections to property form flood related damages. Alternative would also indirectly protect water quality from future potential damages.
Alternative Carried Forward?	**No**-Alternative does not provide significant project benefits due to staggered peak event timings.	**Yes-** Alternative provides the best protection of property, simplifies the routing, and provides a low maintenance system	**No**-Utility relocates would likely make this alternative costly	**Yes-** Alternative provides flood prevention and flood damage reduction measures.	**Yes-** Alternative provides flood damage reduction measures.

Alternative 1 – Alternative 1 was eliminated from detailed study due to the lack of significant project benefits. Analysis shows that the timing of peak events from the King Street and Cottonwood Creek drainage (which is generally higher in elevation) are staggered such that the construction of parallel conduits along the creek section do not provide significant project benefits. The peak flow of King Street occurs prior to the peak flow of Cottonwood Creek while the Main Street alignment has additional capacity.

Alternative 3 – Alternative 3 was eliminated from detailed study due to higher costs associated with utility relocations. Junction Street has a narrow right of way and multiple existing utilities,

including water, sewer, and major communication lines, requiring higher relocation costs relative to the other alternatives.

4.5 Alternatives Considered for Detailed Study

Alternatives considered for the Proposed Project that were carried forward to study in greater detail as part of this Draft Plan-EA include the No Action Alternative (FWOFI) and the Action Alternative (Alternative 2/FWFI). A description of these alternatives is presented below.

4.5.1 No Action Alternative (Future Without Federal Investment)

This alternative entails no federal investment in the Project Area. Under the No Action Alternative, the sponsor would not replace and relocate any of the failing flood conveyance systems. If the No Action Alternative were implemented, the existing infrastructure would remain the same, and flooding would continue to damage homes, historic buildings, roads, and public grounds. The No Action Alternative would continue to reduce the market values of commercial and residential buildings, impacting the local economy. Capital investment or alternative funding would be required to address floodwater risk, floodwater damage, and public access and safety.

4.5.2 Action Alternative (Alternative 2/Future With Federal Investment)

- Under the Action Alternative, the sponsor would improve the following existing infrastructure in the City of Cottonwood: Main Street Alignment—Realign the main channel beneath Main Street. Work would include a new reinforced concrete box conduit and new inlet structures. The new alignment would re-route the main channel flow from the west end of the city to the existing Cottonwood Creek channel near U.S. Highway 95.
- King Street Improvements—Upgrade flood conveyance to pass floodwaters from the northwest boundary of the city through the fairgrounds and along King Street to Cottonwood Creek.
- Creek Crossings and Channel Enhancement—Replace two culverts at creek crossings and conduct creek improvements along East Road between the crossings. The Highway District has observed flooding in these areas and channel enhancement would improve safety and access during high water events. Replace one culvert at Maple Street, where flooding has been observed upstream of this culvert due to inadequate capacity.
- Channel Enhancements—Remove select Cottonwood trees, stumps, and flood debris within the Cottonwood Creek channel along East Road to improve safety and access during high water events. Add vegetation along the Cottonwood Creek channel to restabilize the bank and improve fish and wildlife habitat.
- Lagoon Protection—Armor existing lagoon treatment facilities to mitigate erosion of the stream into the facility embankments, reducing potential for discharge of raw sewage into the stream.

The Main Street and King Street Alignment is the preferred route for the Action Alternative and is displayed as Alternative 2 in Figure C1-3 (Appendix C). Technical Memos (TM) 001, TM 002 and TM 003 (Appendix E7) discuss the project design components in detail.

The Action Alternative would replace and relocate the existing Cottonwood Creek channel to a reinforced concrete box conduit constructed beneath Main Street and Front Street. This alternative would shift the existing flood protection infrastructure from beneath existing structures to a location within the city ROW. The Main Street corridor would include the use of trash racks, inlet structures, catch basins, weirs, and conduits. The Main/Front Street corridor would convey

floodwater entering the west side of the city in the natural stream channel to the east side of the city where it would be returned to the natural stream channel. The new Main/Front Street reinforced concrete box conduit alignment would start east of the railroad trestle, conveying flows from the natural channel to the east along the north side of Front Street until the intersection of Main Street. The alignment then continues beneath the Main Street in the Right of Way and reemerges into the existing stream channel west of U.S. Highway 95. This route reduces the need to resize existing undersized culverts at Idaho Street and Goldstone Street in that area and reduces flood damage. This alternative eliminates under-building conveyance conduits and an open channel near building foundations. A low-flow diversion would be placed in the system at the Main and Idaho Street intersection to direct low flows to the existing channel at Idaho and Junction Street for water quality purposes.

The Action Alternative would also install adequately sized conduits along the King Street corridor, replacing the undersized conduits which currently convey floodwaters from the northwest boundary of the city. The King Street drainage connects to the Cottonwood Creek alignment near the intersection of Main Street and King Street. The King Street corridor would also include trash racks, inlet structures, catch basins, weirs, and conduits, and would maintain current flows as they enter city limits in the northwest area of the city. In addition, the Action Alternative replaces two undersized road crossing culverts on East Road and improves Cottonwood Creek channel flows between the two structures.

The Project Map is shown on Map B2 in Appendix B. An aerial survey and limited topographic survey, as described in Appendix E2, were completed for the project area. Concept level project plan sheets showing general conduit alignments were prepared utilizing the survey data and are located in Appendix C2.

4.5.2.1 Site Access

Access to the project area can be achieved at numerous places using public roads. Map B2 in Appendix B illustrates the project area, including staging areas. See Section 3.6.10 for specific roads that provide access to the project.

4.5.2.2 Construction Schedule

The construction schedule is dependent on project funding. Based on funding acquisition in the fall of 2024 through spring of 2025, project design would take place during 2025 and would include the development of engineering design documents. Due to project costs greater than $200,000, the provisions of Idaho Code require the project sponsor to publicly bid and award the project to the lowest responsible and responsive bidder. Bidding is anticipated in early 2026 to position the city for construction during the 2026 and 2027 construction seasons. Permits would be obtained prior to construction and document development would include a Stormwater Pollution Prevention Plan (SWPPP), a Spill Prevention, Control, and Countermeasures (SPCC) Plan, seeding plan, and other documentation as required by permit applications.

4.6 Summary and Comparison of Alternative Plans

The No Action Alternative and the Action Alternative have been compared to discern the merits and disadvantages of each alternative. A summary of this evaluation is presented in **Error! Reference source not found.**. Mitigation measures and BMPs would be implemented during and post-construction to minimize impacts, as detailed in Section 7.4 and Appendix E. The benefited areas associated with this Draft Plan-EA are shown on the Benefited Areas Map in Appendix B.

Chapter 5 Environmental Consequences

Under the NEPA, the NRCS is required to identify and address environmental and human health effects that may occur from implementation of the No Action Alternative and the Action Alternative. The purpose of this chapter is to describe the potential impacts of each alternative on the environmental and human health resource categories defined in Chapter 2. Unless otherwise noted, the area of analysis for each resource is the Project Area as described and depicted in Section 1.2. The effects analysis of the Proposed Project includes temporary (0–3 years), short-term (3–10 years), and long-term (10+ years) affect time frames. Effects are categorized as follows:

- Not Applicable (N/A)
- No Effect
- Negligible Effect (unmeasurable; any duration)
- Minor Effect (temporary [0-3 years])
- Minor Effect (short-term [3-10 years])
- Minor Effect (long-term [10+ years])
- Major Effect (any duration)

Three types of effects may occur and are used in this chapter.

- Direct Effect: Effects from a proposed action that occur at the same time and same place.
- Indirect Effect: Effects from a proposed action that occur later in time, at some distance from the project, and are changes due to cause and effect relationships.
- Cumulative Effect: Past, present, and reasonably foreseeable/probable effects from the proposed action, or other activities regardless of agency (DM 9500-13 Section 4.b.(2)(m) [USDA, 2017a]).

Section 5.7.1 identifies the known ongoing and reasonably foreseeable projects that could potentially contribute interactive or cumulative effects with the Proposed Project.

The No Action Alternative/FWOFI and the Action Alternative/FWFI (Alternative 2) have been compared against each other to identify tradeoffs between economic, environmental, and social goals for each of the alternatives (USDA, 2017a). Table 5-1 presents a summary of this evaluation and detailed information follows. BMPs would be implemented on site during and post-construction to minimize and avoid effects to environmental resources. BMPs and mitigation measures are discussed in Section 7.3 and Appendix E. Permits and other compliance actions are discussed in Section 7.4. The benefited areas associated with this Draft Plan-EA are shown on the Benefited Areas Map in Appendix B.

Table 5-1. Summary of Alternatives

Resource Concern/Item	No Action	Action Alternative
Soils and Geology		
Erosion and Sedimentation	Continued bank erosion and sedimentation during flood events.	The Action Alternative would replace or improve the existing flood conveyance system within the city to increase infrastructure size and capacity to handle large storm event runoff. The Action Alternative would also remove the overgrown cottonwood trees and stumps within the Cottonwood Creek channel, clear flood debris from the channel, and armor the existing lagoon treatment facilities, thereby reducing the amount of sediment and erosion they contribute to Cottonwood Creek during flooding events.
Prime & Unique Farmlands	Continued flooding could cause increased soil disturbance and flood damage to agricultural lands.	The Action Alternative would not permanently convert any actively used land classified as prime and unique farmlands. Temporary disturbance would occur to approximately 6 acres of land classified as prime farmlands and prime farmlands, if drained for staging areas. An additional approximately 25.5 acres of land classified as farmlands of statewide importance, farmlands of statewide importance, if drained, prime farmland, if drained, or prime farmland if drained and protected from flooding, would be temporarily disturbed for the construction and installation of the proposed conduits and channel improvements. However, these lands have been previously disturbed to accommodate city infrastructure or development and are not actively used for agricultural purposes and therefore, do not meet the definition of prime and unique farmland. All areas would be reclaimed following construction and would not be impacted long-term.
Water Resources		
Surface Water Quality & Quantity	Existing water quality issues due to erosion and sedimentation during flood events would persist.	The Action Alternative would temporarily affect surface water quality during construction. However, the Action Alternative would permanently reduce surface water degradation by reducing flood debris and sedimentation from reduced flooding and improved riparian buffers. The Action Alternative would provide an annual net benefit of $29,700 in built infrastructure and decreased OM&R costs. A Joint Application for Permits would be submitted to both the USACE and the IDEQ for all activities within Cottonwood Creek. Additionally, a Construction Storm Water General Permit (CSWGP) and associated SWPPP and SPCC Plan would be required under Section 402 of the CWA and a 401 certification from IDEQ would be required to meet Section 404 of the CWA.
CWA / WOTUS, including Wetlands	Continued water quality issues due to erosion and sedimentation during flood events.	The Action Alternative would permanently reduce jurisdictional surface water degradation by reducing flooding, thereby reducing flood debris and sedimentation and improving water quality and riparian habitat in Cottonwood Creek. Approximately 0.15 acres of jurisdictional wetland features and 13,090 LF of stream features (Cottonwood Creek) with a jurisdictional connection have been identified within the project area. A

Resource Concern/Item	No Action	Action Alternative
		total of approximately 707 LF of permanent impacts and 2,640 LF of temporary impacts would occur to the Cottonwood Creek channel due to proposed project activities. No jurisdictional wetland impacts would occur. A Joint Application for Permit would be submitted to both the USACE and the IDWR for all activities within Cottonwood Creek. Additionally, a CSWGP and associated SWPPP and SPCC Plan would be required under Section 402 of the CWA and a 401 certification from IDEQ would be required to meet Section 404 of the CWA.
Regional Water Management Plan	No effect. No investment in water infrastructure.	The Action Alternative aligns with the South Fork Clearwater River Basin's key actions to ensure a productive future for water resources.
Floodplain Management	Continued risk of flood hazards and property damage.	The Action Alternative would reduce flood risks within the NFIP area in Cottonwood City. The Action Alternative would also reduce flood risks within the non-NFIP area of Idaho County where adequately sized culverts along with debris removal and the selective removal of trees would allow high runoff volumes to pass unobstructed along East Road. For both the NFIP and the non-NFIP areas, the Action Alternative would provide flood prevention and flood damage reduction from runoff, erosion, and sediment damage to areas downstream of the Proposed Project. No increased flood hazard or other adverse effects to the existing natural and beneficial values of the floodplain or lands adjacent or downstream would occur.
Air Quality		
CAA / NAAQS	No effect.	The Action Alternative would cause temporary, minor, and localized increases in emissions from construction equipment. With the implementation of BMPs, construction activities would not violate air quality standards. Emission rates would not increase in the long term.
Air Quality	No effect.	The Action Alternative would cause temporary, minor, and localized increases in emissions during construction. Emission rates would not increase in the long term due to the short-term schedule of construction activities. With the implementation of BMPs, construction activities would not violate air quality standards.
Plants		
Special State Plant Species	No effect.	The IPaC identified Spalding's catchfly, a listed threatened species under the ESA, to potentially be present within the project area. The field survey did not identify suitable habitat for Spalding's catchfly in the project area and no individuals were observed; therefore, the Action Alternative would have No Effect on Special Status Plant Species, and a pre-construction survey would not be necessary. BMPs, including the use of temporary erosion and sediment controls (TESC), and the restoration of disturbed areas with an agency approved and recommended native seed mix would reduce impacts to

Resource Concern/Item	No Action	Action Alternative
		potential habitat for Special Status Plant Species during construction. See Section 7.4 for a complete list of BMPs applicable to Special Status Plant Species. Additionally, see Sections 3.4.1 and 5.4.1 and the BAR in Appendix E5 for more information.
Noxious Weeds & Invasive Plants	No effect.	Disturbed areas would be reseeded to encourage the establishment of native vegetation. BMPs would be implemented to control and prevent the introduction and establishment of any invasive species of noxious weeds. See Section 7.4 for a complete description of mitigation measures to prevent the spread of noxious weeds and invasive plants.
Riparian Areas	Continued impacts to riparian areas due to erosion and sedimentation during flood events.	Approximately 2.35 acres of riparian area in the project area would be temporarily impacted during construction. 1.89 acres are of moderate quality and 0.46 acres are of low quality. Following construction, disturbed areas would be revegetated. Though approximately 60 trees would be permanently removed from the channel, these trees are contributing to erosion of the banks, and overall, the Action Alternative would improve water quality and water flows, minimize erosion and sedimentation, and enhance fish and wildlife habitat provided by natural riparian areas. A Joint Application for Permits would be submitted to both the USACE and the IDWR for all activities within Cottonwood Creek. Additionally, a CSWGP and associated SWPPP and SPCC Plan would be required under Section 402 of the CWA and a 401 certification from IDEQ would be required to meet Section 404 of the CWA.
Animals		
Wildlife & Wildlife Habitat	Continued impacts to wildlife habitat due to erosion and sedimentation during flood events.	The Action Alternative would selectively remove trees from the Cottonwood Creek channel as part of the proposed channel improvements. These trees could provide habitat for birds and small mammals. An incidental nest survey would occur no more than 7 days before vegetation removal to help minimize or avoid potential impacts to nesting or breeding birds, if present. If any active bird nests are observed, the NRCS Biologist would be contacted, and construction would pause to determine the appropriate course of action. Construction practices would temporarily disturb wildlife habitat in the project area. Temporarily disturbed areas would be reseeded to encourage the establishment of native vegetation. Wildlife may be temporarily impacted during construction due to construction noise. The team coordinated with IDFG and determined there would be temporary, minor impacts from construction and collaborated on mitigation measures that have been incorporated into Section 7.4. IDFG agreed with the findings that there would be no long-term adverse effects to fish and wildlife from the Action Alternative.
Special Status Animal Species	No effect.	The IPaC identified the threatened North American wolverine, proposed threatened monarch butterfly, and proposed endangered Suckley's cuckoo bumble bee as having the potential to occur within the project area. The IFWIS identified 15 SGCN animal species

Resource Concern/Item	No Action	Action Alternative
		occurring within 2 miles of the project area (see BAR in Appendix E). Steelhead have historically occurred in portions of Cottonwood Creek, approximately 18.1 miles downstream of the project area (StreamNet, 2019). Field surveys did not identify suitable habitat in the project area. Therefore, the Action Alternative would have No Effect for any federally listed and state sensitive animal species as identified in the BAR (Appendix E). BMPs and conservation measures would be implemented to avoid and minimize effects to Special Status Animal Species. See Section 7.4 for a complete list of BMPs applicable to Special Status Animal Species. Additionally, see Sections 3.5.2 and 5.5.2 and the BAR in Appendix E5 for more information.
Migratory Birds / Bald and Golden Eagles	No effect.	Construction of the Action Alternative would selectively remove vegetation from the riparian edge along Cottonwood Creek. Vegetation removal would occur in winter or during other parts of the year when it is feasible to avoid migratory birds' nesting and breeding season. In addition, an incidental nest survey would be completed no more than 7 days prior to vegetation removal to minimize or avoid potential effects. If any active nests are observed during the survey, an NRCS Biologist would be contacted to determine the appropriate course of action. Therefore, the project would not affect migratory birds or bald and golden eagles.
Essential Fish Habitat	Continued water quality issues due to erosion and sedimentation during flood events.	EFH for Coho and Chinook salmon is located within the South Fork Clearwater Subbasin. The Action Alternative may have a non-substantive, permanent, adverse effects to EFH by replacing and relocating the Main Street reinforced concrete box conduit, which would permanently, although marginally, decrease the quantity of EFH. Though the Action Alternative would temporarily affect EFH during construction and would relocate the main channel of Cottonwood Creek along Main Street, the Action Alternative would have an overall beneficial effect on fish habitat (i.e., upsizing conduits that convey Cottonwood Creek, reducing erosion and sedimentation and improving flow and water quality) and would not permanently affect the long-term function of EFH in Cottonwood Creek.
Human		
Socioeconomic	Capital and labor requirements would increase due to flooding and continued deterioration of the existing system.	The Action Alternative would yield a net annual economic benefit of $41,400, positively impacting socioeconomics by preventing flood damage, generating approximately $474,700 in net floodwater damage reduction savings, and temporarily creating jobs within the project area during construction. With a project cost of $433,300, the Action Alternative would positively contribute to the regulating and quality provisioning ecosystem services by mitigating flood-related costs, reducing flood-related sedimentation and debris, and improving water quality and wildlife habitat. These beneficial ecosystem services provided by the Action Alternative ensure the federal investments protect and

Resource Concern/Item	No Action	Action Alternative
		restore ecosystem functions and values while avoiding irreversible impacts, therefore, using project area resources in their highest valued use. Additionally, these ecosystem services' benefits contribute to an increase in the NEE of the Action Alternative.
Cultural Resources & Historic Properties	Potential for damage to cultural and historic resources due to continued flooding issues.	Based on the completed cultural resource survey, the NRCS determined one NRHP eligible site is present in the APE. The Action Alternative would have No Adverse Effect on this site. 7 non-eligible newly identified sites and 5 non-eligible isolated finds are located within the APE. 51 newly identified (minimally recorded) sites and 6 NBNR resources are located outside of the APE. A finding of No Historic Properties Affected applies to these resources from the Action Alternative. Section 106 consultation is ongoing for the Proposed Project. Idaho SHPO concurred with the eligibility and effect determinations on May 31, 2023 and November 26, 2024 as described in the Cultural Resource Report (Appendix A2). In July 2024, NRCS reinitiated consultation with consulting parties in compliance with Section 106 requirements as part of best practices to include a visual APE that was not included during the initial Section 106 consultation process. In November 2024, a revised copy of the cultural resource report with the additional evaluation of the visual APE and a determination of effects was submitted to consulting parties, including SHPO and Tribes. To date, the Nez Perce Tribe, Confederated Tribes of the Colville Reservation, and Confederated Tribes of the Colville Reservation have not responded to the requests consultation which is ongoing per 36 CFR 800.Tribal consultation letters are included in Appendix A3. The public involvement potion of the Section 106 process in ongoing.
Sacred Sites and Traditional Cultural Properties	Potential for damage to sacred sites and traditional cultural properties due to continued flooding issues.	The Tribes were initially contacted during the scoping process on December 30, 2020. A Cooperating Agency Letter was submitted to the Nez Perce Tribe in August 2021. In July 2024, NRCS reinitiated consultation with consulting parties in compliance with Section 106 requirements. In November 2024, a revised copy of the cultural resource report and a determination of effects was submitted to consulting parties, including SHPO and the aforementioned Native American Tribes. To date, the Nez Perce Tribe, Confederated Tribes of the Colville Reservation, and Confederated Tribes of the Umatilla Indian Reservation have not responded to the request for consultation. Consultation is ongoing per 36 CFR 800. Tribal consultation letters are included in Appendix A3.
Hazardous Materials	No effect.	The Action Alternative would have no impact on hazardous materials in the project area. BMPs, such as a SWPPP and a SPCC plan would be implemented during construction to prevent the introduction of hazardous materials into the environment.

Resource Concern/Item	No Action	Action Alternative
Public Health & Safety	The risk and safety concerns associated with continued flooding will remain.	The Action Alternative would improve public health and safety in the project area by providing flood prevention and flood damage reduction.
Recreation	The risk and property damage concerns associated with continued flooding will remain.	The Action Alternative would improve water quality in the area by reducing erosion, sedimentation and debris in nearby surface waters caused by flooding, thereby enhancing nearby recreational opportunities, such as fishing. The Action Alternative would temporarily impact informal recreational activities such as walking, running, etc. on city streets during construction of the conduits, structures, and culvert bridges. City streets would not be permanently impacted.
Land Use	No effect.	The project would not result in changes to land use as improvements would be located within the City's existing ROW and easements.
Visual Resources & Scenic Beauty	No effect.	The Action Alternative would result in temporary impacts to visual resources associated with construction disturbance. The Action Alternative would selectively remove overgrown vegetation in the Cottonwood Creek channel to reduce debris and assist with flood reduction activities.
Scientific Resources	Potential damage to paleontological resources due to continued flooding issues.	Based on geologic records of the area, it is highly unlikely that paleontological resources would be discovered in the area. See the IGS concurrence letter in Appendix A.
Transportation & Infrastructure	Under existing conditions, the surrounding roadways could be damaged and/or closed during a large storm event.	The Action Alternative would improve infrastructure for flood prevention in the City of Cottonwood and the surrounding area. Temporary impacts on city streets would occur during construction activities. Construction of the Action Alternative would require several road crossings. Coordination and associated permits from the ITD would be necessary. Permits from the Cottonwood Highway District may also be required.
Noise	No effect.	The Action Alternative would result in temporary increases in noise associated with construction equipment. BMPs would be implemented to minimize noise impacts.
National Economic Efficiency		
Construction Cost	$0	$13,161,449
Project Environmental, Engineering, and Administrative Costs	$0	$2,127,053
Total Project Cost (Installation Cost)	$0	$15,288,502
Cost Sharing (NRCS)	$0	$13,363,540

Resource Concern/Item	No Action	Action Alternative
Cost Sharing (Sponsor)	$0	$1,924,963
Annual Installation Cost	$0	$414,800
Annual O&M Cost	$33,200	$14,600
Annual Sum Cost	$33,200	$429,200
Annual Net Benefit	$0	$29,700

5.1 Soils and Geology

5.1.1 Erosion and Sedimentation

5.1.1.1 No Action Alternative

The current erosion and sedimentation caused by flood events would continue if the No Action Alternative were implemented. Ongoing flooding has been well documented (see Section 1.4 and Appendix E1) and would continue to cause extensive damage to the City of Cottonwood and adjacent roadways.

5.1.1.2 Action Alternative

Under the Action Alternative, erosion and sedimentation would be reduced by: improving flooded area structures to decrease peak flows and debris entering the system, relocating the existing stream channel to a reinforced concrete box conduit beneath Main Street, installing floodwater conveyance conduits to convey floodwaters, replacing culverts outside of the city, removing cottonwood trees and stumps within the Cottonwood Creek channel, clearing flood debris from the channel, and armoring the existing lagoon treatment facilities. The flood prevention system would not be connected to any water detention basins. As part of the flood prevention improvements, the two culvert bridge crossings on East Road near Airport Road would be replaced with larger structures of sufficient capacity to pass a 50-year storm event with one foot of free board and the 100-year storm event without topping the roadway. The improvements to the culvert bridge crossings and Cottonwood Creek channel would address flooding and erosion of East Road.

Construction activities may temporarily increase erosion rates due to equipment operation and ground disturbance activities. However, BMPs such as the installation of TESCs, including straw wattles, silt fences, and applicable soil management practices, would be in place to minimize erosion. Disturbed areas would be reseeded to encourage the establishment of native vegetation and to avoid and minimize construction related erosion and sedimentation. BMPs installed during and after construction activities will be outlined in a SWPPP, and this plan will be available on site during all construction activities.

5.1.2 Prime and Unique Farmlands

5.1.2.1 No Action Alternative

Under the No Action Alternative, no disturbances to prime or unique farmlands would occur since no construction would be completed.

5.1.2.2 Action Alternative

The FPPA (Subtitled I of Title XV, Section 1539-1549 of the Agricultural and Food Act of 1981 [PL 97-98)]) requires federal agencies to “minimize the extent to which federal programs contribute to the unnecessary and irreversible conversion of farmland to nonagricultural uses, and to assure that federal programs are administered in a manner that to the extent practicable, will be compatible with state, unit of local government, and private programs and policies to protect farmland”. Approximately 31.5 acres of land classified as prime and unique farmlands are located within the project area. Under the Action Alternative, approximately 6 acres of lands classified as farmlands of statewide importance or farmlands of statewide importance, if drained would be temporarily disturbed by staging areas. However, these lands are currently used as county fairgrounds or undeveloped lands and are not used for agricultural purposes and, therefore, do not meet the

definition of prime and unique farmlands. All staging areas will be reclaimed post construction. Approximately 25.5 acres of lands classified as farmlands of statewide importance, farmlands of statewide importance if drained, prime farmland if drained, or Prime Farmland if drained and protected from flooding, would be temporarily disturbed for the construction and installation of the proposed conduits and channel improvements. However, these areas have already been disturbed to accommodate city infrastructure or development and are not actively used for farming. No active farmlands would be permanently converted as a result of this project.

Construction BMPs would be implemented according to a SWPPP developed for the project. The installation of BMPs, such as TESCs, applicable soil management practices, and spill prevention and cleanup practices, would be in place to avoid and minimize construction related damages to farmlands.

5.2 Water Resources

5.2.1 Surface Water Quality and Quantity

5.2.1.1 No Action Alternative

Sediment, as well as nutrients, pathogens, pesticides, and other pollutants transported to surface waters from flooding, would remain the same due to continued flooding.

5.2.1.2 Action Alternative

The Action Alternative would indirectly improve water quality and reduce degradation of surface waters (i.e., Cottonwood Creek) by reducing flood debris as well as associated erosion and sedimentation. The Action Alternative would also indirectly assist the state in meeting the requirements of the existing TMDL for sedimentation by reducing the amount of sediment and erosion within Cottonwood Creek, benefiting overall water quality in Cottonwood Creek. There are no impacts to groundwater quality and quantity from the Action Alternative.

Portions of the Action Alternative's construction activities would occur within the active creek channel for Cottonwood Creek; therefore, the Action Alternative may temporarily impact surface water quality during construction. Construction BMPs would be implemented to protect water quality and to prevent water pollution from runoff, spills, leaks, and leaching. A CSWGP, administered by the IPDES under the National Pollutant Discharge Elimination System (NPDES), would be required prior to construction for the Action Alternative. A CSWGP, and associated SWPPP and SPCC Plan, are required for construction activities that disturb more than 1 acre.

Storage of petroleum hydrocarbon fuels, lubricants, and other hazardous or environmentally deleterious materials would occur within approved staging areas within the project area. Furthermore, the Action Alternative would comply with state and federal water quality standards and toxic effluent standards to minimize any potential adverse impacts from discharges to WOTUS. No construction materials would be stored, stockpiled, or deposited in or near any surface water bodies.

5.2.2 Clean Water Act / Waters of the U.S., including Wetlands

5.2.2.1 No Action Alternative

The No Action Alternative would have no direct impact on resources protected under the CWA, including WOTUS and wetlands. However, if the No Action Alternative were implemented, Cottonwood Creek would continue to experience degraded water quality and riparian habitat within

the project area would experience periodic impacts due to erosion and sediment resulting from flooding.

5.2.2.2 Action Alternative

One wetland (0.15 acres), one stream (Cottonwood Creek) (3.94 acres/13,090 LF), and one ditch (0.09 acres/584 LF) were identified during the field survey as occurring in the project area (see ARD in Appendix E4). Cottonwood Creek is a tributary to the South Fork Clearwater River (a jurisdictional WOTUS). As such, Cottonwood Creek is considered a jurisdictional WOTUS. The wetland (approximately 0.15 acres) would be considered WOTUS due to its proximity to Cottonwood Creek. The ditch identified in the project area would not be considered jurisdictional as it lacks a continuous surface connection to a WOTUS.

The Action Alternative would cause both temporary and permanent direct effects to Cottonwood Creek due to increased sedimentation as a result of construction activities on the existing culverts, conduit installation, and enhancement of the Cottonwood Creek within the creek channel prism. Replacement of the culverts on Cottonwood Creek would permanently disturb approximately 259 LF of channel due to larger culvert size and temporarily disturb an additional approximately 200 LF of channel for construction activities. Installation of the proposed concrete conduit would permanently disturb approximately 448 LF of channel for the permanent conduit and temporarily disturb an additional approximately 40 LF of channel for construction activities. Additionally, the Cottonwood Creek Channel Enhancements would temporarily disturb approximately 2,400 LF of creek channel along East Road southeast of the city to accommodate tree stump and flood debris removal. During construction activities, the potential for erosion would increase because of the presence of disturbed soils and vegetation removal where construction is occurring. However, construction BMPs will be implemented during and post-construction according to a SWPPP developed for the project. The installation of BMPs, applicable soil management practices, and reseeding of all temporarily disturbed areas from construction would minimize construction related effects to WOTUS and avoid effects to nearby wetland areas. Although one jurisdictional wetland was identified in the project area, the wetland would be avoided during construction and would not be impacted by the Proposed Project. Ultimately, the Action Alternative would improve water quality in Cottonwood Creek by reducing flooding and associated sedimentation and erosion in the project area long-term.

All proposed work within 30 ft of the Cottonwood Creek channel would require a Joint Application for Permit for submittal to USACE (Section 404 permit), IDWR (Stream Channel Alteration Permit), and IDEQ (Water Quality Certification), which would be obtained prior to beginning any work within the creek channel prism.

5.2.3 Regional Water Management Plan

5.2.3.1 No Action Alternative

The No Action Alternative would have no direct effect on regional water management plans. Under this alternative, however, flood prevention improvements would not be implemented, and no investment in water infrastructure would occur.

5.2.3.2 Action Alternative

The Action Alternative would improve provide flood prevention, as well as improve water quality as a secondary benefit of flood prevention, which aligns with the South Fork Clearwater River Basin Water Management Plan and ensures a productive future for the basin.

.

5.2.4 Floodplain Management

5.2.4.1 No Action Alternative

The No Action Alternative would have no direct effects on floodplain management. If the No Action Alternative were implemented, the project area would continue to be at risk for flooding in the event of a major storm (see Appendix C, Figures C3.2-1 through C3.2-4). Under the No Action Alternative, flood modeling shows that 79 structures (residential homes, commercial structures, other structures), 22 roadways, and 15.3 acres of agricultural land would experience flooding under a 50-year storm event. Flood modeling shows that 99 structures (residential homes, commercial structures, other structures), 23 roadways, and 19.1 acres of agricultural land would experience flooding under a 100-year storm event under existing conditions.

5.2.4.2 Action Alternative

Construction activities within or adjacent to Cottonwood Creek would occur within the 100-year floodplain of Cottonwood Creek (FEMA, 1991; Appendix C4: Floodplain Maps). Although the Action Alternative would require construction within the 100-year floodplain, the purpose of the Action Alternative is to provide flood prevention (flood damage reduction) for runoff, erosion, and sediment damage to areas downstream of the Cottonwood Creek subwatershed.

Under the Action Alternative, the existing floodwater conveyance system would be repaired and improved to provide better flood protection in the project area. Given the lack of appropriately sized flood conveyance measures in place within the subwatershed and history of damaging floods, the Action Alternative would benefit floodplain management in the project area. Temporary disturbance to the 100-year floodplain would be caused by vegetation removal and ground disturbing activities required for the trenching and burying of conduit components proposed by the Action Alternative. BMPs, such as the installation of TESCs, applicable soil management practices, and spill prevention and cleanup practices, would be in place to minimize damage to disturbed areas. Disturbed areas would be reseeded to encourage the establishment of vegetation and to avoid and minimize construction-related impacts.

Under the Action Alternative, flood modeling shows many structures, roads, and agricultural lands in downstream inundation areas would be protected from a 50-year storm event. Under a 50-year storm event, the Action Alternative would protect 79 structures (residential homes, commercial structures, other structures), 22 roads, and 7.62 acres of surrounding agricultural lands (See Appendix C, Figures C3.2-5 through C3.2-8) that currently flood during a 50-year event. In addition, the Action Alternative also reduces flood damage for the 100-year and 500-year events.

The intention of the Action Alternative is to address recurrent flooding issues in the project area. No increased flood hazard or other adverse effects to the existing natural and beneficial values of the floodplain or lands adjacent or downstream would occur from the implementation of the Action Alternative. Floodplain Development Permit Applications would be required by local jurisdictions for any construction within the floodplain.

In addition to reduction of flood concerns within the project area, the Action Alternative would address water quality concerns associated within Cottonwood Creek by reducing erosion and sedimentation of the creek banks.

5.3 Air Quality

5.3.1 Clean Air Act / National Ambient Air Quality Standards

5.3.1.1 No Action Alternative

The No Action Alternative would have no impact on CAA or NAAQS in the project area.

5.3.1.2 Action Alternative

Idaho County is in attainment for all criteria pollutants and annually complies with all NAAQS requirements. Construction activities would cause short-term increases in emissions during construction from equipment. Construction would also temporarily generate dust from land disturbance. These emissions and dust generation would be minor and localized and would not interfere with the area achieving NAAQS. BMPs would be implemented to minimize air quality impacts, as outlined in Section 7.4 and Appendix E.

BMPs would be implemented to minimize air quality impacts, as described in Section 7.4 and Appendix E. Emission rates are not expected to increase in the project area in the long term .

5.4 Plants

5.4.1 Special Status Plant Species

5.4.1.1 No Action Alternative

The current practices and conditions in the project area do not have an impact on special status plant species; therefore, the No Action Alternative would have no effect on special status plant species in the project area.

5.4.1.2 Action Alternative

The IPaC Report identified Spalding's catchfly, a threatened species, as potentially occurring within the project area. No proposed or final critical habitat is contained within the project area. Section 7(a)(2) of the ESA requires all federal agencies to ensure their project actions do not jeopardize the continued existence of any threatened or endangered plant species or result in the destruction or adverse modification of their designated or proposed critical habitats. A protocol-level plant survey was completed for four areas of potentially suitable habitat within the project area, and a BAR was prepared to assess the degree to which the Proposed Project may affect the species (Appendix E5 – BAR).

Although soils and elevation in the project area are suitable for the species, the four areas surveyed specifically for Spalding's catchfly were not north-facing and the vegetative assemblage was not conducive to the species' presence. In general, vegetation within these areas was dominated by aggressive species, agricultural species, or upland and weedy species, including reed canary grass (*Phalaris arundinacea*), alfalfa (*Medicago sativa*), wheat (*Triticum* sp.), squirrel tail (*Elymus elymoides*), rush skeleton weed (*Chondrilla juncea*), and cheatgrass (*Bromus tectorum*). The aspects of the four sites were roughly east, west, and south-facing. One area was north-facing, but vegetation was dominated by reed canary grass. The elevation of the project area was within the upper end of the elevation range typical of Spalding's catchfly habitat. No evidence of Spalding's

catchfly occurrence in any stage class (rosette of basal leaves, non-flowering stem, or flowering stem) was observed during the plant survey. Given the lack of suitable habitat in the project area, and lack of observed individuals, the Action Alternative would have no effect on Spalding's catchfly or its habitat.

5.4.2 Noxious Weeds and Invasive Plants

5.4.2.1 No Action Alternative

The City of Cottonwood maintains existing weed management practices through periodic mowing and use of broadleaf spray to manage thistles and noxious weeds. The No Action Alternative would not alter current invasive species and noxious weed control practices while performing maintenance activities on the existing system; therefore, the No Action Alternative would have no effect on noxious weeds and invasive plants.

5.4.2.2 Action Alternative

Vegetation removal and ground disturbing activities required for the various components proposed by the Action Alternative would temporarily increase the risk of noxious weed introduction and distribution over the area. To limit the introduction and spread of noxious weeds and invasive plants, equipment would be washed off site before arriving at the project area. Current practices to control and prevent the introduction and establishment of noxious weeds and invasive species, as discussed above, would continue to occur. Construction activities would comply with E.O. 13112, which established the National Invasive Species Council (NISC) to "prevent the introduction of invasive species and provide for their control and to minimize the economic, ecological, and human health impacts that invasive species cause."

In addition to the existing general weed control practices used by the City of Cottonwood during their ongoing maintenance activities, additional construction BMPs would be implemented to control and prevent the introduction and spread of any invasive species or noxious weeds during all construction related activities, as outlined in Section 7.4 and Appendix E.

5.4.3 Riparian Areas

5.4.3.1 No Action Alternative

Basin and stream conditions may continue to degrade water quality and wildlife benefits over time due to erosion, debris damage, and sedimentation from flood events.

5.4.3.2 Action Alternative

Within the project area, there are 2.35 acres of riparian habitat. Of the riparian habitat, 1.89 acres is of moderate quality and 0.46 acres is of low quality. The Action Alternative would selectively remove approximately 60 trees and various shrubs from the riparian area along Cottonwood Creek and the channel within the creek, which may alter the light regime in the riparian area by reducing shade and protective canopy coverage. The change in light regime may indirectly influence the vegetative assemblage in the project area. Disturbances to the understory of the riparian edge along Cottonwood Creek may also decrease vegetative diversity in the project area. The Action Alternative would cause temporary impacts to riparian areas within the project area due to equipment operations and human activity associated with the proposed creek channel enhancement activities. These impacts would be minimal due to the low quality of the riparian habitat and the high amount of previously disturbed areas nearby. All disturbances to the creek channel riparian

areas would be reclaimed post-construction. Direct impacts to riparian areas would be minimized to the extent practicable by implementing BMPs during and post-construction, as outlined in Section 7.4 and Appendix E.

The Action Alternative would indirectly improve water quality and water flows, minimize erosion, and enhance fish and wildlife benefits provided by the riparian area by reducing flood impacts and erosion and sediment loading to downstream areas.

5.5 Animals

5.5.1 Wildlife and Wildlife Habitat

5.5.1.1 No Action Alternative

The No Action Alternative would allow current stream conditions to continue, which would likely continue to degrade water quality and wildlife habitat over time due to erosion, debris damage, and sedimentation from flood events.

5.5.1.2 Action Alternative

Under the Action Alternative, temporary disturbance to wildlife and adjacent wildlife habitat would occur during construction. Construction activities include selectively removing vegetation within the project area that wildlife, such as small mammals, waterfowl, and avian species may use for forage, shelter, and travel routes. Wildlife may be temporarily impacted during construction due to general disturbance, construction noise, vibration, and dust from project-related activities, heavy equipment operation, and human activity. Construction would be limited to daylight hours, which would reduce impacts to nocturnal wildlife species. Impacts would be minor and temporary and would cease following construction completion. BMPs would be implemented along the entire alignment to minimize impacts to wildlife species and habitat surrounding the project area. In project locations situated next to potential wildlife habitat or identified special status plant and animal species, BMPs would be implemented to reduce impacts to wildlife and wildlife habitat in the area, as outlined in Section 7.4 and Appendix E.

The construction and implementation of the Action Alternative would result in the loss of wildlife habitat associated with the selective removal of cottonwood trees from the channel and banks of Cottonwood Creek. These areas would be reseeded with native vegetation to restabilize the bank, provide shading, and enhance fish and wildlife habitat. The Proposed Project would improve water flow and water quality in Cottonwood Creek, by reducing erosion, sedimentation, and debris accumulation in the creek, which would improve wildlife and riparian habitat in the area long-term.

Indirectly, the Preferred Alternative would enhance water quality and enhance fish and wildlife habitat areas in the watershed as a secondary benefit to reducing flood impacts and erosion and sediment loading to downstream areas.

IDFG reviewed the information and agreed there would be no effects to fish and wildlife from the Proposed Project. They additionally stated that anadromous fish in Cottonwood Creek are not found that high up in the system in the project area and State Wildlife Action Plan (SWAP) species listed are unlikely to be present in the project area. IDFG also provided recommendations for revegetation to be included in the revegetation plan. See pollinating species information attached to the BAR in Appendix E5.

5.5.2 Special Status Animal Species

5.5.2.1 No Action Alternative

The No Action Alternative would have no effect on special status animal species in the project area.

5.5.2.2 Action Alternative

The IPaC Report identified the threatened North American wolverine, proposed-threatened monarch butterfly, and proposed-endangered Suckley's cuckoo bumble bee, as potentially occurring in the project area. StreamNet was used to determine fish presence in Cottonwood Creek within the project area. Data from StreamNet indicates steelhead inhabits Cottonwood Creek approximately 19.1 miles downstream of the project area. No proposed or designated critical habitat occurs in the project area. However, critical habitat for steelhead occurs approximately 9.6 miles downstream of the project area in Cottonwood Creek.

The Proposed Project would not affect the North American wolverine, due to the lack of suitable denning habitat present in the project area. The monarch butterfly, a proposed-threatened species, is not anticipated to be affected by the Action Alternative, as milkweed was not identified within the project area and disturbed areas would be revegetated with native plants including milkweed. Additionally, the project is not anticipated to affect the Suckley's cuckoo bumble bee, due to site revegetation. Steelhead are not known to occur in the reach of Cottonwood Creek within the Action Alternative. Implementation of avoidance and minimization measures, SWPPP protocols, and BMPs would avoid and/or minimize the potential for native vegetation impacts and the release of and exposure to contaminants and sediment. The Action Alternative would not result in a substantial loss of habitat (riparian areas, wetlands, creek bed, channel, or bank) and would benefit fish habitat, water quality, and stream flow by upsizing the conduits that convey Cottonwood Creek. Therefore, the Action Alternative would have no effect on North American wolverine, monarch butterfly, Suckley's cuckoo bumble bee or steelhead.

In project locations situated next to potential wildlife habitat or identified special status plant and animal species, BMPs would be implemented to reduce impacts to the area, as outlined in Section 7.4 and Appendix E.

5.5.3 Migratory Birds, Bald and Golden Eagles

5.5.3.1 No Action Alternative

The No Action Alternative would have no effect on migratory birds, or bald and golden eagles.

5.5.3.2 Action Alternative

Field investigations found no active nests belonging to raptors or migratory bird species, but red-tailed hawks (*Buteo jamaicensis*) were observed in the project area in the poplar tree stands. The project would remove poplar trees and cottonwood trees along Cottonwood Creek. These trees could provide habitat for protected avian species, and implementation of the project has the potential to affect these species. However, the project is designed to ensure the protection of these species. For example, the project area would be surveyed for any migratory bird or eagle nests 7 days prior to the removal of any trees or construction. If a nest is identified within the project area, the NRCS Biologist and/or USFWS would be notified immediately to discuss the appropriate course of action. The above language regarding migratory bird clearance would be incorporated into contractor specifications. Additionally, BMPs would be implemented to reduce impacts to the

area, as outlined in Section 7.4 and Appendix E. Therefore, though potential avian habitat would be lost, the project would have no direct effect on migratory birds, or bald and golden eagles.

5.5.4 Essential Fish Habitat

5.5.4.1 No Action Alternative

The No Action Alternative would maintain current conditions, likely leading to ongoing water quality and EFH degradation over time due to discharge of effluent into Cottonwood Creek, as well as erosion, debris damage, and sedimentation from flood events.

5.5.4.2 Action Alternative

EFH for both the Coho and Chinook salmon are present within the South Fork Clearwater Subbasin, in which the project occurs. The project would permanently affect EFH in Cottonwood Creek by relocating Cottonwood Creek to the Main Street reinforced concrete box conduit; however, the relocation of the conveyance system would marginally decrease the quantity of EFH. As such, the project could have a non-substantive adverse effect on EFH, but no long-term adverse effects would occur. The Action Alternative would have a long-term beneficial effect on EFH and would not permanently impact the long-term function of EFH in Cottonwood Creek. No significant changes to water quality, stream morphology, or stream vegetation would result from the Proposed Project.

Construction activities in and adjacent to the Cottonwood Creek would temporarily impact EFH habitat within Cottonwood Creek downstream of the project area due to temporary degradation of water quality during installation of conduit and structures, as well as from potential contaminants and sedimentation associated with in-stream and near-stream work. BMPs would be implemented along the entire alignment to minimize impacts to EFH, as outlined in Section 7.4 and Appendix E. The project would also reduce overall erosion, debris, and sedimentation in Cottonwood Creek, and have a long-term beneficial impact on water quality and EFH within and downstream of the project area.

5.6 Human Environment

5.6.1 Socioeconomics

5.6.1.1 No Action Alternative

Under the No Action Alternative, the project area would continue to experience recurrent flooding with the associated damage and would incur additional economic impacts due to system failures. The No Action Alternative would result in an estimated $528,091 in annual floodwater damage to residential and commercial property, as well as crops and pasture. No additional ecosystem services would be provided. If the No Action Alternative were implemented, capital and labor requirements would continue to increase due to flooding.

5.6.1.2 Action Alternative

Several direct and indirect effects to socioeconomics in the project area would result from the implementation of the Action Alternative. Direct impacts of the Action Alternative include the use of $1,924,963 in local/other funds to construct the Proposed Project. In addition, the Action Alternative would temporarily create approximately 20 to 30 jobs (i.e., full-time employees, plus a job superintendent and office support) within the project area during the estimated two-year

construction period. Implementation of the Action Alternative would reduce operation and maintenance costs by $18,600 annually.

The Action Alternative would result in $30,450 in annual floodwater damages, compared to $528,091 under the No Action Alternative, resulting in flood reduction savings of approximately $497,641 annually. A comparison of anticipated flood reduction benefits is illustrated in Chapter 7 (Table 7-8).

The Action Alternative would replace existing conduit structures, install conduits to convey flood waters, and clear flood debris and vegetation from the creek channel to minimize flood damage potential, improving water quality and wildlife habitat.

The Action Alternative would positively contribute to regulating ecosystem services by reducing potential floodwater damage by $497,641. The Action Alternative would also improve the water quality provisioning ecosystem service by reducing erosion and sedimentation caused by ongoing flooding, improving water quality and wildlife habitat. These beneficial ecosystem services provided by the Action Alternative ensure the federal investments protect and restore ecosystem functions and values while avoiding irreversible impacts, therefore, using project area resources in their highest valued use. Additionally, these ecosystem services' benefits contribute to an increase in the NEE of the Action Alternative.

5.6.2 Cultural Resources and Historic Properties

5.6.2.1 No Action Alternative

The No Action Alternative would have no direct effect on cultural and historic resources in the area. However, continued flooding and flooding damage may indirectly adversely affect cultural and historic resources in the area, which would not align with the NHPA.

5.6.2.2 Action Alternative

Based on the results of the cultural resource survey, five isolated resources, one previously recorded site, and seven newly recorded sites were documented within the APE. However, only one ineligible, newly-recorded site (ACH-005) is within the Proposed Project footprint after several project components were removed due to lack of eligibility for federal funding (discussed in Section 3.6.2 in further detail). None of the newly identified sites are eligible for the NRHP. The single previously recorded site, the Camas Prairie Railroad (101H2775/49-17964), is eligible for listing in the NRHP under Criterion A; however, it intersects the Project where there is only a proposed circular conduit, so it will not be impacted. An additional 51 minimally recorded sites and six NBNR resources located adjacent to the project's APE were identified. These sites would not be directly impacted as they are located outside the construction area. Proposed actions visible to these sites will be temporary and will not change the character or diminish the integrity of the properties. Additionally, due to the temporary nature of the ground disturbances, and since the Proposed Project measures will be installed underground, no permanent viewshed impacts are anticipated for the Action Alternative. Therefore, these structures will not be affected by the Proposed Project. Overall, the Project will not directly or indirectly impact identified cultural resources, resulting in a No Adverse Effect determination to Historic Properties from this proposed plan. Therefore, the Proposed Project aligns with the goals of the NHPA and the Idaho County Historic Preservation Plan.

SHPO concurred with NRCS's eligibility and determination of effects on May 31, 2023 (Appendix A2). In July 2024, NRCS reinitiated the Section 106 process via consultation letters to the Nez Perce Tribe, Confederated Tribes of the Colville Reservation, and the Confederated Tribes of the Umatilla Indian Reservation. NRCS's determination of eligibility and the revised cultural resources survey, due to a reduction of the project scope after consultation was completed with a No Adverse Effect finding, was submitted to the Tribes and SHPO for consultation and concurrence in November 2024. SHPO concurrence was received on November 26, 2024. Details on the record of consultation documentation are found in Tables 6-1 through 6-2 and Appendix A.

If construction activities uncover any materials of cultural or historic significance (i.e., bone fragments, pottery, stone tools, burial features, etc.) or human remains, including funerary objects, construction would halt immediately and NRCS coordination with SHPO, Tribes, and the local Sheriff's office would occur as directed in Section 601.29 of NRCS's National Cultural Resources Procedures Handbook. Construction would not resume at the discovery location or locations until the stakeholders and the consulting parties listed above agree on how to proceed.

5.6.3 Sacred Sites and Traditional Cultural Properties

5.6.3.1 No Action Alternative

The No Action Alternative would have no change to sacred sites or traditional cultural properties. No sacred sites or traditional cultural properties were identified during the initial scoping process with the Tribes. Land use conditions would not change with the No Action Alternative.

5.6.3.2 Action Alternative

The NRCS has submitted requests for information on Sacred Sites and Traditional Cultural Properties to the Nez Perce Tribe, the Confederated Tribes on the Colville Reservation, and the Confederated Tribes of the Umatilla Indian Reservation in 2022. NRCS reinitiated consultation in July 2024. NRCS's determination of eligibility and the revised cultural resources survey was submitted to the Tribes and SHPO for consultation and concurrence in November 2024. Details of the Tribal consultation documentation are in Tables 6-1 through 6-2 and Appendix A. If any specific Indian Sacred Sites or traditional cultural properties are identified during construction, those areas would be avoided and impacts from the project would be mitigated as necessary.

5.6.4 Hazardous Materials

5.6.4.1 No Action Alternative

The No Action Alternative would have no impact on hazardous materials in the project area.

5.6.4.2 Action Alternative

General construction activities related to land disturbing activities under the Action Alternative have the potential to encounter contaminated soil and/or groundwater; however, the likelihood of encountering contaminated soil or groundwater within the project area is minimal due to the locations where the Action Alternative would disturb land. Several sites identified in the IDEQ database may be within proximity to the locations of proposed disturbance, especially in the City of Cottonwood. However, construction activities in these areas would be confined to the smallest extent possible would not be anticipated to encounter hazardous materials.

The Action Alternative would not cause long-term effects from hazardous materials impacting the project area. Fuels, oils, lubricants, and other potentially environmentally deleterious materials may

be stored and used on-site during construction activities; however, storage, use, and disposal of these materials would be subject to all applicable local, state, and federal regulations. Construction-generated waste, including hazardous waste, would be disposed at an approved off-site location. BMPs would be implemented prior to construction activities, as outlined in Section 7.4 and Appendix E. The contractor would be required to apply for all appropriate permits prior to construction commencement. The contractor would also be required to follow approved SWPPP and SPCC plans. Spill response procedures, including spill kits and emergency response personnel, would be maintained near active construction areas. In the event of an unintended release, clean up procedures would be conducted according to state and federal regulations. Unintended releases of hazardous materials would be contained, and the appropriate regulatory agencies would be notified.

5.6.5 Public Health and Safety

5.6.5.1 No Action Alternative

Without adequately sized piping to convey flood waters from the area, the risk and safety concerns associated with continued flooding would remain the same under the No Action Alternative.

5.6.5.2 Action Alternative

The purpose of the Action Alternative is to: provide flood prevention and flood damage reduction from runoff, erosion, and sediment deposition to areas within and adjacent to the project area, protect public safety by decreasing peak flows entering the system, and, as a secondary benefit, improve water quality and riparian habitat. Given the existing inadequate and failing system and lack of proper flood protection measures in place, the Action Alternative would improve public health and safety in the project area. Flood modeling shows more than 79 structures (homes, commercial buildings, schools, civic buildings, or businesses), 22 public roadways/minor highways, and 15.3 acres of agricultural land located within the downstream areas, are flooded and damaged by a 50-year storm event. Flood modeling also shows that under the Action Alternative in the event of a 50-year storm, no structures would experience flooding, which is 79 fewer structures than under the No Action Alternative.

The public may experience temporary, minor effects on accessibility within the project area during construction due to the presence of construction equipment. These temporary, minor effects would cease after construction activities have ended. The public would be allowed to access the area during construction. Flaggers would be used, where necessary, to control construction traffic along roadways during construction activities.

The Action Alternative would reduce flooding risks, eliminate public safety risks, and improve public health and safety in the project area. Although the construction of dams could cause potential public health and safety risks, mitigation measures will be put into place to reduce these impacts.

5.6.6 Recreation

5.6.6.1 No Action Alternative

Under the No Action Alternative, no impacts to nearby recreational opportunities would occur.

5.6.6.2 Action Alternative

The Action Alternative would indirectly improve water quality in the area by reducing sedimentation and erosion caused by ongoing flooding, thereby enhancing nearby recreational opportunities, such as fishing. The Action Alternative may temporarily affect informal recreational

activities such as walking, running, etc. on city streets during construction of the conduits, structures, and culverts. City streets would not be permanently impacted, and all street disturbances would be returned to their pre-construction condition.

5.6.7 Land Use

5.6.7.1 No Action Alternative

Per Idaho County Ordinance 67, all lands in unincorporated Idaho County are zoned as multi-use and have very little restrictions on land use allowance. The land in unincorporated Idaho County is generally used for agricultural, grazing, and residential use.

Within the City of Cottonwood, the project area consists of lands zoned for commercial, industrial, and residential use.

The No Action Alternative would have no impact on land use designations in the project area.

5.6.7.2 Action Alternative

The Flood Control Project would use existing flood areas, open channels, and closed conduits. The project components will be constructed across public and private property, generally located within the city's existing ROW. The design maximizes the use of public ROW, where economically feasible, to mitigate impacts on private property and facilitate long-term maintenance of the flood conveyance system. Assuming a permanent easement width of 20 feet (ft), approximately 1.3 acres of easements with approximately 35 landowners will be required. An additional 0.5 acres of easements with the County and Cottonwood Highway District will be required to secure property for the Proposed Project. Additional construction easements will be required to facilitate construction, totaling approximately 2.6 acres on private property and 1.0 acres on public property. Permanent easements for existing flood areas will be developed. Initial contact has been made to initiate easements with several impacted property owners who are receptive to the Action Alternative.

5.6.8 Visual Resources and Scenic Beauty

5.6.8.1 No Action Alternative

The No Action Alternative would have no impact on visual resources and scenic beauty in the project area.

5.6.8.2 Action Alternative

The Action Alternative would have a direct effect on visual resources in the project area by removing cottonwood and poplar trees, as well as disturbing grasses on the riparian edge of Cottonwood Creek. All disturbed areas would be reseeded with a native seed mix to encourage the establishment of native vegetation. There would be short-term, minor impacts to visual resources from the presence of construction equipment and construction crews in the project area. BMPs would be implemented during construction activities, as outlined in Section 7.4 and Appendix E.

5.6.9 Scientific Resources

5.6.9.1 No Action Alternative

The No Action Alternative would have no impact on scientific resources in the project area.

5.6.9.2 Action Alternative

The Action Alternative is not anticipated to uncover significant fossils. The project area is comprised mainly of basalt from the Grande Ronde Formation of the Columbia River Basalt Group and is unlikely to contain paleontological resources (see IGS concurrence letter in Appendix A). Unless fossils are discovered as a result of construction activities, the Action Alternative would have no impact on paleontological resources.

5.6.10 Transportation and Infrastructure

5.6.10.1 No Action Alternative

Existing infrastructure in the project area includes linear transportation facilities, commercial and residential structures, and service utilities including flood control conduits, water, sewer, and telecommunications. If the No Action Alternative were implemented, the existing infrastructure system would not be improved, and the flood risk and potential future flood damages would remain the same. The potential flood zone downstream for the Proposed Project area includes multiple improved roads. If the existing conditions were maintained under the No Action Alternative, road infrastructure and residential development roads could be damaged and/or closed during a large storm event.

5.6.10.2 Action Alternative

The Action Alternative would improve the existing infrastructure by replacing and relocating the stream channel to a reinforced concrete box conduit along Main Street, improving flood conveyance along King Street, replacing two culvert crossings at East Road and clearing vegetation and flood debris from the creek channel. Proposed modifications to existing flood control facilities would protect existing transportation facilities and infrastructure within inundation areas.

Implementation of the Action Alternative would require several road crossings (i.e., excavation within the roadway prism). The public may experience temporary, minor effects on accessibility within the project area during construction due to the presence of construction equipment. These temporary, minor effects would cease after construction activities have ended. The public would be allowed to access the area during construction. The project sponsor would work with ITD and Idaho County to obtain all necessary permits to establish easements, work within the designated State and local ROW, and implement appropriate traffic control measures during construction to minimize disturbances and reduce impacts to local traffic.

The Action Alternative may have temporary negative effects on transportation in the project area from construction activities. However, the Action Alternative would have a net positive cumulative impact on transportation and infrastructure in the project area by protecting existing transportation facilities and infrastructure from flooding.

5.6.11 Noise

5.6.11.1 No Action Alternative

The project area contains agricultural, residential, and commercial land uses. Numerous noise sensitive receptors are present within and surrounding the project area. Frequently traveled roadways intersect the project area as well. Background noise levels are associated with existing traffic and agricultural noise. The No Action Alternative would have no impact on noise levels in the project area.

5.6.11.2 Action Alternative

Temporary increases in noise related to the use of construction equipment and vehicles would result from the implementation of the Action Alternative. Backhoes, excavators, haul trucks, and other smaller construction vehicles and equipment would be used to complete the Action Alternative. Noise mitigation measures, such as established daytime working hours and the use of properly functioning equipment mufflers may be implemented during construction to minimize temporary noise impacts. After completion of the Action Alternative, noise levels would return to background levels. No permanent noise impacts are expected from the Action Alternative.

5.7 Reasonably Foreseeable and Cumulative Effects

Federal agencies should analyze the reasonably foreseeable effects of the proposed action consistent with Section 102 of NEPA, which does not employ the term "cumulative effects;" NEPA instead requires consideration of "reasonably foreseeable" effects, regardless of whether or not those effects might be characterized as "cumulative" (42 U.S.C. 4332(2)(C)(i)).

The NRCS current PR&G direction requires consideration of cumulative effects as part of the evaluation process for Proposed Projects (DM 9500 4.b.(2)(m) [USDA, 2017a]).

5.7.1 Reasonably Foreseeable Future Actions Considered in the Analysis

Numerous factors have contributed to the current conditions of the watershed, including various past activities, such as previous infrastructure improvements conducted by the City of Cottonwood, previous IDT infrastructure improvement and water management activities, and previous city growth.

The current conditions of the Cottonwood Creek Watershed are described in Chapter 3—Affected Environment and Chapter 5 analyzes the potential direct and indirect environmental effects to those existing resources. The effects of past actions have already captured under each resource's Affected Environment section, given that past actions and their effects have contributed to the current condition of each resource. Present actions have also been incorporated into the Affected Environment for each resource, as is appropriate. No past or present projects were identified that may contribute to cumulative effects. Two reasonably foreseeable projects have been identified, including:

- ITD Business Loop Project - ITD maintains the pavement on the U.S. Highway 95 Business Loop through Cottonwood, primarily along King Street and Main Street. The business loop is identified in Appendix C1, Figure C1-2. As part of a coordinated effort to optimize value and participate in the project, ITD plans to complete a plant mix pavement overlay along the Highway 95 Business Loop, which includes areas inside and outside of the project area for the Proposed Project. The plant mix overlay would be completed on the existing pavement along the Business Loop and would extend from U.S. Highway 95 to the limits of the flood protection project component. In addition to the plant mix overlay, a section of the existing guardrail would be replaced. Within the project area for the Proposed Project, the ITD Business Loop project would include a plant mix overlay after the piping trenches along the route are backfilled and paved. This work is included in the cost estimate for the Proposed Project. ITD is coordinating efforts to complete this work in the same construction timeframe as the Proposed Project. ITD plans to enter into a state/local agreement with the city and give their programmed money to the city to implement this work as part of the flood conveyance project. This money may be leveraged as part of the city's local match.

Paving and guardrail work outside of the project limits is not included in the Proposed Project costs, and is not eligible for the city's match, but the city would need to complete this work as part of their agreement.

- Cottonwood Wastewater Improvements Project. The City of Cottonwood is developing a Wastewater Facilities Plan (Technical Review Draft, April 2022) with the intention of upgrading and completing modifications to its existing Wastewater Treatment Plant (WWTP). The Plan is required in accordance with Section 58.01.16 – Wastewater Rules of the Idaho Administrative Procedures Act (IDAPA) and by funding agencies to assess a system's needs prior to construction, with the intent to identify, prioritize, and fund the most viable options to address system issues. The Plan includes a capital improvement plan and analysis of wastewater improvement recommendations that are not fundable under the NRCS PL-83-566 funding package. These efforts include:
    - Headworks Facilities: The city lacks headworks to prevent deposition of inorganic materials in the existing treatment lagoons. The deposition of inorganics within the lagoons creates a costly operation and maintenance concern, as it negatively impacts the treatment capacity of the treatment cells and is difficult and costly to remove.
    - Headworks facilities have been scoped to remove inorganics such as rags and other debris prior to deposition within the treatment cells.
    - Lagoon Modifications: The city's existing treatment cells are too shallow and lack adequate treatment volume to provide treatment of influent flows. Lagoon modifications include a reconfiguration of cells under a similar footprint to increase treatment depth and volume, together with aeration to enhance treatment.

  The City of Cottonwood intends to pursue multiple funding sources for these efforts, including use of city reserves, loan/grant funding through Rural Development, loan/grant funding through the IDEQ Idaho Community Development Block Grant, USACE 595 Grants, and associated bond funding required by the state to incur debt. This project would improve the water quality of any potential water stored at the city's existing WWTP.

5.7.2 Reasonably Foreseeable Effects by Resource

The geographic extent of reasonably foreseeable and cumulative effects varies by the type of resource and effect. The timeframes, or temporal boundaries, for those effects for each resource are temporary (0 3 years); short term (3 10 years); and long term (15+ years).

The No Action Alternative outlines the reasonably foreseeable environmental trends within the project area, with the associated effects detailed in Chapter 3. Under this alternative, existing environmental trends in the Project Area are expected to persist as described in Chapter 3.

5.7.2.1 Soils and Geology

For Soils and Geology, reasonably foreseeable and cumulative effects were evaluated within the Project Area. Combined with planned infrastructure improvements, the Action Alternative and other reasonably foreseeable projects would result in temporary minor effects to erosion and sedimentation in the project area. These temporary effects for the Action Alternative would be mitigated through required permits, inspections, and BMPs. No cumulative effects are anticipated to occur from implementation of the Action Alternative and identified reasonably foreseeable projects.

5.7.2.2 Water Resources

For Water Resources, reasonably foreseeable and cumulative effects were evaluated within the Project Area. When combining the Action Alternative with other projects, several reasonably foreseeable effects on water resources would occur. Minor, temporary adverse effects to water quantity and quality would occur, which would be mitigated through required permits, inspections, and the implementation of BMPs. The integration of these projects is poised to create permanent benefits to water quality within the region, including downstream areas of Cottonwood Creek.

Reasonably foreseeable and cumulative effects are not anticipated to WOTUS, wetlands, regional water management, or floodplain management.

5.7.2.3 Air Quality

For Air Quality, reasonably foreseeable and cumulative effects were evaluated within the Project Area. When combining the Action Alternative with other projects, minor temporary effects to air quality in the project area would be expected. Emission rates are not expected to increase long-term in the project area. Anticipated effects would be mitigated through required permits and BMPs during construction.

5.7.2.4 Plants

For Plants, reasonably foreseeable and cumulative effects were evaluated within the Project Area. When combining the Action Alternative with other projects, the introduction of noxious weeds and invasive plants may occur temporarily during construction activities. Minor effects to riparian areas may also occur. Anticipated effects would be mitigated through BMPs, permits, required plans, and inspections during construction. Because the Action Alternative would not affect Spalding's catchfly because no suitable habitat occurs in the project areas and a lack of observed individuals, no reasonably foreseeable or cumulative effects to special status plant species would occur.

5.7.2.5 Animals

For Animals, reasonably foreseeable and cumulative effects were evaluated within the Project Area. When combining the Action Alternative with other projects, temporary habitat disturbances and species displacement of migratory birds, or bald and golden eagles are expected during construction. BMPs would be implemented to reduce effects to migratory birds, or bald and golden eagles.

Because the Action Alternative would not affect proposed threatened, threatened, or endangered animal species or their habitat within the Project Area, because no suitable habitat occurs in the Project Area and individuals were not observed during surveys, and because no EFH habitat occurs within the Project Area, no reasonably foreseeable or cumulative effects to these special status animal species, would occur to wildlife and wildlife habitat, special status animal species, or EFH.

5.7.2.6 Human Environment

For the Human Environment, reasonably foreseeable and cumulative effects were evaluated within the Project Area. The Action Alternative would result in beneficial economic and socioeconomic effects when combined with other reasonably foreseeable projects. These projects would result in capital expenditures and would directly benefit local labor firms. Contractor expenditures for supplies and labor would increase demand for these goods and services and indirectly benefit

suppliers. Local retail and restaurants would experience temporarily increased demand from construction workers in the vicinity of construction sites.

Combined with other reasonably foreseeable projects, the Action Alternative would not result in a cumulative effect to cultural resources because the value of the cultural resources identified in the Project Area would be conserved.

Combined with planned infrastructure improvements, the Action Alternative and other reasonably foreseeable projects would result in temporary minor effects to transportation and infrastructure and noise in the project area. These temporary effects for the Action Alternative would be mitigated through required permits, inspections, and BMPs. However, the integration of these projects is poised to create permanent benefits to transportation and infrastructure within the region.

Reasonably foreseeable and cumulative effects are not anticipated to hazardous materials, recreation, land use, visual resources and scenic beauty, or scientific resources.

Because the action alternatives would reduce flooding risks, eliminate public safety risks, and improve public health and safety in the project area, the Action Alternative would benefit public health and safety.

5.8 Risk and Uncertainty

The cost-benefit analysis required by NEPA involves both risk and uncertainty. Conducting an environmental evaluation requires using the best available science, technology, and information to make well-informed assumptions or predictions. However, existing conditions may change, the public's opinion of a project could evolve, or unanticipated circumstances with construction, funding, or design may arise. Each of these differences could alter predictions of environmental consequences.

5.9 Irreversible and Irretrievable Resource Commitments

Pursuant to the requirements of NEPA, environmental analysis must identify "any irreversible and irretrievable commitments of resources, which could be involved in the Proposed Project, should it be implemented." Irreversible can be described as a loss of future options; irreversible resource commitments involve the use of natural and human-made resources like metals, building materials, water, fossil fuels, electricity, etc. that cannot be recovered, or take a long time to regenerate. Irretrievable resource commitments generally refer to the alteration or destruction of resources that cannot be restored, such as the extinction of a protected species. Irreversible and irretrievable resource commitments are not mutually exclusive.

5.9.1 No Action Alternative

Under the No Action Alternative, the existing flood conveyance infrastructure would continue to deteriorate and require continued maintenance. This consistent maintenance and ultimate replacement would require a range of natural, physical, capital, and labor resource commitments. The subwatershed and downstream areas would continue to be at risk of flooding in the event of a major storm. With no action, flood damage would persist, capital and labor requirements would increase, and public health and safety would suffer.

5.9.2 Action Alternative

Implementing the Action Alternative would require the immediate and irreversible commitment of natural, physical, capital, and labor resources. Fossil fuels, financial and human resources, and

construction materials would be consumed to complete the implementation of the Action Alternative. Generally, such resources are not considered “reversible.” Proceeding with the Action Alternative would benefit the City of Cottonwood and the greater Idaho County area by enhancing deteriorating infrastructures, which would improve public health and safety, as well as improve water quality and wildlife habitat. The benefits of implementing the Action Alternative exceed the value of preserving the irreversible resources it requires.

Chapter 6 Consultation, Coordination, and Public Participation

This chapter describes the public and agency coordination efforts for the Proposed Project. The intent of the Proposed Project is to implement a solution that would provide flood prevention and flood control for the project area. A Scoping Report has been developed to document the steps taken throughout the project to involve interested agencies and the public. The Scoping Report is included in Appendix A1.

6.1 Consultation

6.1.1 Idaho State Historic Preservation Office and Federally Recognized Tribes

In accordance with E.O. 13175, NRCS is responsible for assessing the impacts of activities, considering tribal interests, and assuring tribal interests are considered in conjunction with federal activities and undertakings. NRCS recognizes tribal governments are sovereign nations located within the United States. NRCS has the responsibility to help fulfill the U.S. government's responsibilities toward tribes when considering actions that may affect tribal rights, resources, and assets.

In summary, and in accordance with 36 CFR 800.3-800.5 and Section 106 of the NHPA, SHPOs, Tribal Historic Preservation Offices (THPO) and federally recognized Tribes must be consulted at all steps of the process.

Per 36 CFR 800.3 the project team identified the SHPO, THPO, and federally recognized Tribes for the project. The project team also prepared a public participation plan to include Tribes, the public, and other stakeholders in the process.

Per 36 CFR 800.4, the NRCS State Conservationist initiated consultation. The project team provided opportunities for comment and participation in developing the scope of the Draft Plan-EA in coordination and in consultation with tribes, the public, and other stakeholders.

The project team identified historic properties. A literature review and Class III cultural resources survey were completed for the APE by ARH in September 2021 and March 2022 (see the cultural resource report in Appendix E). NRCS determined the project would have No Adverse Effect on cultural resources and historic properties. The Idaho SHPO concurred with this determination on May 31, 2023.

NRCS reinitiated Section 106 consultation with federally recognized Tribes in July 2024 in anticipation of a revised cultural resource report. NRCS's No Adverse Effect determination and the revised cultural resource report were resubmitted to the Tribes and the Idaho SHPO in November 2024. SHPO concurrence was received on November 26, 2024. The Tribes have not responded to NRCS's requests for comments. All correspondence and communication with consulting parties are documented in Table 6-1 and Table 6-2, and letters and responses are provided in Appendix A.

Table 6-1. NRCS Record of Tribal Consultation, 2020-2022

Project/Reason for Initiating Section 106 Consultation: Cottonwood Creek Flood Prevention Project Watershed Plan-EA (NEPA)									
Program: NRCS WFPO Program									
Tribe Information	**Cons Initiated[1]**	**Cultural Resource Report Consultation Package[2]**			**Consultation Follow Up[2]**				**Tribe Cons Completed (Date)**
Federally Recognized Tribe		**NRCS Mailed to Tribe[2]**	**Received by Tribe[3]**	**Tribe Response**	**Follow Up #1 Type (Date)**	**Response #1 Type (Date)**	**Follow Up #2 Type (Date)**	**Response #2 Type (Date)**	
Nez Perce Tribe	8/31/2021	-	-	-	Cooperating Agency Letter (08/31/2021)	-	-	-	See Table 6-2
Confederated Tribes of the Colville Reservation	11/16/2022	-	-	-	-	-	-	-	See Table 6-2

Notes: Cons = Consultation, THPO = Tribal Historic Preservation Officer
1 – Tribe consultation was initiated as part of the Scoping process and is documented in the Scoping Report included in Appendix A1.
2 – Documentation is included in Appendix A3.
3 – Date of receipt of mail delivery to Tribe.

Table 6-2. NRCS Record of Tribal Consultation, 2024

Project/Reason for Initiating Section 106 Consultation: Cottonwood Creek Flood Prevention Project Watershed Plan-EA (NEPA)									
Program: NRCS WFPO Program									
Tribe Information	**Cons Initiated[1]**	**Cultural Resource Report Consultation Package[2]**			**Consultation Follow Up[2]**				**Tribe Cons Completed (Date)**
Federally Recognized Tribe		**NRCS Mailed to Tribe[2]**	**Received by Tribe[3]**	**Tribe Response**	**Follow Up #1 Type (Date)**	**Response #1 Type (Date)**	**Follow Up #2 Type (Date)**	**Response #2 Type (Date)**	
Nez Perce Tribe	7/3/2024	7/3/2024	7/3/2024	-	11/9/2024	-			
Confederated Tribes of the Colville Reservation	7/2/2024	7/2/2024	7/2/2024	-	11/9/2024	-			
Confederated Tribes of the Umatilla Indian Reservation	7/2/2024	7/2/2024	7/2/2024	-	11/9/2024	-			

Notes: Cons = Consultation, THPO = Tribal Historic Preservation Officer
1 – Tribe consultation was initiated as part of the Scoping process and is documented in the Scoping Report included in Appendix A1.
2 – Documentation is included in Appendix A3.
3 – Date of receipt of mail delivery to Tribe.

6.2 Coordination

6.2.1 U.S. Fish and Wildlife Service

A BAR was completed for the Proposed Project by J-U-B in February 2022. The BAR determined the Proposed Project would have No Effect on any listed plant and animal species. The Proposed Project would temporarily impact EFH for coho and chinook salmon during construction, and the Proposed Project could have a non-substantive adverse effect on EFH, but no long-term adverse impacts to EFH would occur. Due to the lack of suitable habitat and implementation of BMPs during and post-construction to minimize impacts to these species, the BAR determined the Proposed Project would have no effect on Spalding's catchfly, the North American wolverine, the monarch butterfly, the Suckley's bumble bee, or Steelhead and therefore is in compliance with Section 7 of the ESA (Appendix E). Given the no effect determination, consultation with the USFWS was not necessary for compliance with Section 7 of the ESA.

NRCS requested the USFWS be a cooperating agency on October 15, 2020. No response was received. A copy of the Cooperating Agency Letter is located in Appendix A4.

6.2.2 U.S. Army Corps of Engineers

The USACE has jurisdiction over work in jurisdictional WOTUS under Section 404 of the CWA. Cottonwood Creek is a tributary to the South Fork Clearwater River, which is a jurisdictional WOTUS. As such, Cottonwood Creek is considered a jurisdictional WOTUS. Under current guidance from USACE, one wetland within the project area is also a jurisdictional WOTUS.

Proposed Project implementation would result in both temporary and permanent impacts to federal and/or state jurisdictional WOTUS identified in the project area. Impacts to jurisdictional waters would require preparation of a Joint Application for Permit for submittal to USACE (Section 404 permit), IDWR (Stream Channel Alteration Permit), and IDEQ (Section 401Water Quality Certification) to obtain necessary permits. No impacts to wetlands are anticipated as a result of implementing the Proposed Project.

NRCS requested the USACE be a cooperating agency on October 15, 2020. No response was received. A copy of the Cooperating Agency Letter is located in Appendix A4.

6.2.3 National Marine Fisheries Service

The NMFS was contacted during the preparation of the BAR. The BAR determined there would be no impact to steelhead from the implementation of the Proposed Project. The project team held several phone calls with Jim Mital with the NMFS based in the Moscow field office, throughout the planning process and discussed that the project is not anticipated to result in adverse effects to aquatic species both in the project area and downstream of the project area, specifically to anadromous fish. NMFS indicated they would review the plan and provide their input. The project team sent the project description, the Plan-EA, and project maps to NMFS on December 6, 2024, and followed up on April 21, 2025, and have gotten no response. The project is not anticipated to result in adverse effects to aquatic species because the preferred alternative would result in long-term improvements to water quality by managing floodwaters during high flow events, keeping water in the system, removing sediment, stabilizing the banks of the Cottonwood Creek channel, and replacing aging portions of the piped system.

6.2.4 Environmental Protection Agency

NRCS requested the EPA be a cooperating agency on October 15, 2020. No response was received. A copy of the Cooperating Agency Letter is located in Appendix A4.

6.2.5 U.S. Forest Service

NRCS requested the U.S. Forest Service (USFS) be a cooperating agency on October 15, 2020. No response was received. A copy of the Cooperating Agency Letter is located in Appendix A4.

6.2.6 Idaho Fish and Game

The IDFG was invited to comment on the project during the scoping period. A state sensitive species list was obtained as part of the biological resource analysis and the BAR determined that there would be no impact to state sensitive species or species of greatest conservation need from the implementation of the Proposed Project. IDFG reviewed the information and agreed with the findings that there would be no effects to fish and wildlife from the Proposed Project. They stated that anadromous fish in Cottonwood Creek are not found that high up in the system in the project area and listed SWAP species are unlikely to be present in the project area. IDFG also provided recommendations for revegetation that will be included in the revegetation plan related to pollinating species. See pollinating species information attached to the BAR in Appendix E5.

6.3 Project Scoping

The scoping procedure for the formulation of the Draft Plan-EA followed the general procedures outlines in the NRCS NWPH (NRCS, 2014) and the NRCS NWPM (NRCS, 2015). NRCS procedures and NEPA regulations (40 CFR 1500-1508) require the NRCS to use a scoping process early in the planning process to identify issues, concerns, and potential impacts that require analysis.

Directed by NRCS, J-U-B coordinated with local, state, and Federal agencies regarding subjects pertinent to their jurisdiction, authority, and expertise. Agency coordination occurred via telephone, email, and written letters. Prior to initial scoping, the NRCS approved a scoping letter and project map developed by J-U-B. The purpose of the scoping letter was to inform agencies of the Draft Plan-EA and to request preliminary comments on the proposal. Formal coordination and consultation with tribes and SHPO was completed by NRCS.

6.4 Public Participation

Early in the Proposed Project development, comments were requested and received from the public, as well as local, state, and federal government agencies. A scoping letter was mailed to federal, state, tribal, and local agencies on December 30, 2020, to inform the agencies of the project and request comments. An agency scoping meeting was held on January 13, 2021. A public open house scoping meeting was held on January 14, 2021, to engage the public in the planning of the Proposed Project and to request feedback. Comments were accepted orally at the public meeting and via written submittal. Ten comments were received during the public scoping period, which lasted from January 14, 2021, through February 16, 2021. A detailed description of the public scoping process is included in Section 2.1 and in the Scoping Report (Appendix A1).

The main goal of public participation is to involve diverse groups of public and government agency representatives to solicit input and provide relevant and timely information throughout

the NEPA review process. It is meant to engage all demographics of the public who may be affected by the proposed action. Outreach methods are described in the following section.

Table 6-3 lists the project's public outreach activities, including future planned outreach activities.

Table 6-3. Public Outreach Activities

Date	Activity	Type
November 10, 2020	Preliminary Kick-off Meeting	Online Meeting
December 31, 2020	Public Notice Published in the Cottonwood Chronicle Newspaper	Newspaper Publication
December 30, 2020	Agency Scoping Letter Mailed	Letter Correspondence
January 4, 2021	Public Scoping Postcards Mailed	Mailing
January 13, 2021	Virtual Agency Scoping Meeting	Virtual Meeting
January 14, 2021	Virtual & In-Person Public Scoping Meeting	Open House held at Cottonwood Community Center; 506 King Street, Cottonwood, ID 83522
January 14, 2021	Public Scoping Comment Period Opened	--
February 16, 2021	Public Scoping Comment Period Closed	--
TBD	Notice of Draft Plan-EA Public Comment Period	Newspaper and Online Notification
TBD	Draft Plan-EA Public Comment Period Opens	Newspaper and Online Notification
TBD	Draft Plan-EA Public Meeting	--
TBD	Draft Plan-EA Public Comment Period Closed	--
TBD	Final Plan-EA	Publication

6.4.1 Agency Involvement

Federal, state, tribal, and local agencies were involved in the project formulation and given the opportunity to comment on the Proposed Project. A project scoping letter was mailed to various agencies on December 30, 2020. The following agencies received a project scoping letter:

Federal

- USACE, Walla Walla District
- USFS, Nez Perce Clearwater
- BLM, Cottonwood Office
- U.S. Bureau of Reclamation (Reclamation)
- USDA- Rural Development
- USFWS
- National Marine Fisheries Service

State

- ITD
- Idaho Ground Water Association
- Idaho Water Users Association
- Idaho SHPO
- Idaho Department of Water Resources, Northern Region

Local

- Idaho County
- Cottonwood Highway District
- Idaho County Soil & Water Conservation District
- Idaho County Fair Board

Tribes

- Nez Perce Tribe

Other

- Southfork Clearwater River Watershed Advisory Group
- Clearwater Economic Development Association (CEDA)

- Idaho Water Resources Board
- Idaho Department of Lands
- Idaho DEQ, Lewiston
- Idaho North Central Health District
- Idaho Fish and Game

A detailed description of the public scoping process is included in the Scoping Report in Appendix A.

6.5 Agency Plan-EA Reviews

NRCS and the cooperating agency reviewed the Preliminary Draft Plan-EA prior to issuing the Draft Plan-EA for public review. Comments on the Draft Plan-EA were addressed before it was issued for public comment.

6.6 Draft Plan-EA Public Comment Period

The Final Plan-EA will document the public comment process, including any comments and responses received during the Draft Plan-EA public review process. All public comment documentation will be included in Appendix A of the Final Plan-EA.

6.7 Final Plan-EA

A Notice of Availability will be published in the paper of local record to notify the public when the Final Plan-EA and FONSI are issued by the NRCS.

Chapter 7 Preferred Alternative

The Action Alternative was determined to be the Preferred Alternative because of its ability to: meet the purpose and need for the project, have the fewest impacts to environmental and social resources, and have the greatest net economic benefits of the available alternatives. The Preferred Alternative watershed is shown on Map B2 of Appendix B.

7.1 Rationale for Preferred Alternative Selection

The Action Alternative is considered the Preferred Alternative and described in detail on Map B2 of Appendix B. The Action Alternative was selected as the Preferred Alternative because it addressed flood protection and prevention measures, as well as water quality as a secondary benefit. Construction of the flood prevention system would add needed flood protection for the residents of both the City of Cottonwood and Idaho County. Flood protection and improvement of water quality are vital. Intense storms have exacerbated flood impacts such as mud, debris, and sedimentation within the project area. The Action Alternative would allow the sponsor to build the necessary flood conveyance systems to offer protection to the public and property at risk, as well as indirectly improve water quality in Cottonwood Creek.

The No Action Alternative would not meet the purpose and need of the project as identified above. The Action Alternative would meet the purpose and need of the project and would provide the greatest net benefit. The Action Alternative was selected as the Preferred Alternative and was also determined to be the NEE Alternative (Table 7-1). Refer to the Investigation and Analyses Report in Appendix D for additional information.

Table 7-1. Summary of Project Alternatives and Associated Ecosystem Services Evaluated as Part of the NEE Benefit-Cost Analysis (2022 $)

Item	Alternatives	
	No Action Alternative (FWOFI)	Action Alternative (FWFI)[1]
Alternatives		
Locally Preferred		X
Non-structural[2]	X	-
National Economic Efficiency		X
Environmentally Preferable		X
Guiding Principles Addressed		
Healthy and Resilient Ecosystems		X
Sustainable Economic Development		X
Watershed Approach		X
Public Safety		X
Floodplains		X
Economics		
Total Project Investment (Annualized Average)[3]	$-	$429,400
Monetized Net Benefits (Annualized Average)	$-	$29,700
Regulating Services (Annualized Average)		
Property-related flooding damages	$487,200	$28,100

Notes: (1) Note all costs and benefits for the Action Alternative are compared to the FWOFI here and elsewhere in this document. Benefits and costs were calculated over a 103-year analysis period using a discount rate of 2.25 percent. All values reported in 2023 dollars.

(2) Non-structural alternatives were eliminated from detailed study because none brought forward would meet the purpose and need of the Project.
(3) Annualized costs for the Action Alternative include design, engineering, administration, permitting, construction, and O&M

The Action Alternative, which used a watershed approach to characterize problems and solutions in the watershed, meets the federal principles for investments in water resources, including the following principles:

- The Action Alternative would restore the sponsor's ability to regulate flood damage impacting the City of Cottonwood, thereby increasing the health and resiliency of the ecosystem.
- By reducing flood damage, the Action Alternative improves sustainable economic development by improving the economic well-being of present and future generations living within the watershed.
- The Action Alternative avoids the unwise use of flood-prone areas by reducing the watershed's vulnerability to future flood events.
- Public safety is enhanced by the Action Alternative because it would result in lower rates of injury and death related to flooding.

In terms of benefits and costs, the Action Alternative's investment in the watershed would generate economic returns more than the upfront installation and ongoing management costs of the flood control structures as compared to the No Action Alternative. Under the No Action Alternative, average annual economic damages are approximately $528,100. These damages are the result of expenses residents of the watershed face to provide municipal water, repair property-related damages, as well as damage to farmland and infrastructure. The Action Alterative would invest an average annual amount of $429,400 in built infrastructure to mitigate damage and expenses and enhance incomes in the watershed. The annual discounted cost of the provisioning benefits generated by the project is 459,100. The benefit of the flood control measures provides a net annual economic benefit of $29,700.

7.2 Measures to be Installed

Under the Action Alternative, the sponsor would improve the existing infrastructure using PL-83-566 funds. The measures proposed for the Preferred Alternative would be designed to NRCS conservation practice and safety standards.

The Proposed Project would provide flood prevention and flood damage reduction and improve water quality for the City of Cottonwood. The Proposed Project is needed to reduce flooding, sedimentation, and associated damages within the City of Cottonwood to protect people, homes, buildings, and critical infrastructure. Flood control would be provided through the following efforts:

- Relocation of the existing Cottonwood Creek flood conveyance system with construction of a new reinforced concrete box conduit flood conveyance system beneath Main Street and Front Street, and installation of conduit to convey floodwaters from the north end of the city to the Cottonwood Creek flood conveyance system.
- Improve existing flood area structures to decrease peak flows and stop debris from entering the system.
- Replace two culvert bridge crossings near East Road

- Enhance the Cottonwood Creek Channel through selective removal of Cottonwood trees, stumps, and flood debris within the Cottonwood Creek channel.
- Armor existing lagoon facilities to mitigate erosion of the stream into the facility embankments, reducing potential for discharge of raw sewage into the stream.

Table 7-2 displays a summary of the Preferred Alternative's works of improvements and general scope.

Table 7-2. Preferred Alternative Summary

Works of Improvement	General Scope
Flood Protection	• Installation of approximately 6,540 LF of conduit on King Street • Installation of approximately 2,500 LF of conduit on Front & Main Street • Installation of street inlets and 3,900 LF of related conduits. • Replacement of two box culverts on East Road • Rehabilitation of creek channel along Cottonwood Creek near the vicinity of East Road
Total Project Cost	**$15,288,502**

7.3 Mitigation

Mitigation measures include project design elements and BMPs to protect against sedimentation and erosion during construction and operations, protect water quality, reduce fugitive dust, Mobile Source Air Toxics (MSAT), and GHG emissions associated with construction, preserve and protect onsite vegetation and control and prevent the spread of noxious weeds, preserve, protect, and restore riparian and wildlife habitat during construction, and reduce noise and manage traffic impacts. A complete list of project design elements and BMPs that would be implemented for the Preferred Alternative is included in Appendix E.

Other than what may be required for permitting before construction, compensatory mitigation would not be required for the Preferred Alternative.

7.4 Permits and Compliance

Table 7-3 displays a summary of the Federal, state, and local permitting requirements for the Preferred Alternative. These permits and authorizations would be obtained prior to beginning construction activities.

Table 7-3. Permits and Authorizations Required for the Preferred Alternative

Agency	Permit/Authorization
Federal	
USACE	An ARD was completed for the project area and determined that the Preferred Alternative would cause both temporary and permanent effects to Cottonwood Creek, a jurisdictional WOTUS (Appendix E4). A Joint Application for Permit would be prepared and submitted to USACE and the IDWR for all effects within the Cottonwood Creek channel prism. BMPs would be implemented during and post-construction to minimize impacts. Impacts would be minor and would not require mitigation.
USFWS	A BAR was completed for the project area and determined that the Proposed Project would have "no effect" on ESA-listed animal or plant species (Appendix E5). Given the no effect determination, consultation with the USFWS was not necessary for compliance with Section 7 of the ESA.
State	
IDT	Encroachment permits allow for temporary construction work within the ITD ROW. An Encroachment Permit would likely be required along the business loop and where work on the Proposed Project intersects state or federal roadways.
IDEQ	Under Section 402 of the CWA, an IPDES CSWGP is required for construction activities that disturb more than 1 acre with potential to discharge pollutants into surface waters. A SWPPP would be developed as part of the CSWGP. Under Section 404 of the CWA, IDEQ would also need to issue a 401 certification.
Idaho Department of Water Resources	To alter a perennial stream channel, a Joint Application for Permit would be submitted to USACE and IDWR to obtain a Stream Channel Alteration Permit. Because Cottonwood Creek is a perennial stream, permitting with IDWR would be needed.
Idaho SHPO	A cultural resources survey was completed and determined there would be No Adverse Effect to historic properties, nor on the historic structures and architectural resources adjacent to the APE. The cultural resource survey and NRCS determination of eligibility and formal findings were submitted to the Idaho SHPO for concurrence. SHPO concurred with the eligibility and effect determinations on May 31, 2023. A revised cultural resource report and determination of effects was resubmitted to SHPO in November 2024 with the determination of No Adverse Effect to historic properties. SHPO concurred with the eligibility and effect determinations on November 26, 2024. If construction activities were to inadvertently discover any materials of cultural or historical significance (i.e., bone fragments, pottery, stone tools, burial features, etc.), construction would halt and NRCS coordination with SHPO, THPO, and Idaho County Sheriff would occur.
Federally Recognized Tribes	A cultural resources survey was completed and determined there would be No Adverse Effect on the identified cultural and historic resources in the APE or the historic structures and architectural resources adjacent to the APE. The NRCS determination of eligibility and cultural resources survey was submitted to the Nez Perce Tribe on December 21, 2022. NRCS reinitiated the Section 106 process in July 2024 with the Nez Perce Tribe, the Confederated Tribes of the Colville Reservation, and the Confederated Tribes of the Umatilla Indian Reservation for review and concurrence in compliance with Section 106 requirements. The NRCS determination of eligibility and the revised cultural resources survey was submitted to the Tribes in November 2024. To date, the Tribes have not responded to the requests consultation is ongoing

	per 36 CFR 800. Details of the NRCS Tribal Consultation efforts are included in Tables 6-1 through 6-2. The Tribal consultation letters are included in Appendix A3. If construction activities were to inadvertently discover any materials of cultural or historical significance (i.e., bone fragments, pottery, stone tools, burial features, etc.), construction would halt and NRCS coordination with the SHPO, THPO, and Idaho County Sheriff would occur.
Local	
Cottonwood Highway District	Right of Way Permit
City of Cottonwood	Floodplain Development Permit

7.5 Installation and Financing

7.5.1 Planned Sequence of Installation

The construction schedule is dependent on project funding. Based on funding acquisition in 2024, project design would take place during 2025. Due to project costs being greater than $200,000, the provisions of Idaho Code require the project sponsor publicly bid and award the project to the lowest responsible and responsive bidder. Bidding is anticipated in early 2026 to position the city for construction during the 2026 and 2027 construction seasons.

7.5.2 Responsibilities

The City of Cottonwood is the sponsor and responsible party for the coordination of the Draft Plan-EA. Partners would coordinate with the County and NRCS as the city designs and constructs the Preferred Alternative. The sponsor and its partners would work in cooperation with other interested agencies to meet environmental, permitting, and public process requirements.

7.5.3 Financing and Contracting

Although flood prevention projects are fully paid for by NRCS and require no cost share, partnering resources are anticipated from ITD, the Cottonwood Highway District, and city labor forces. Cottonwood Highway District is pursuing local or state funds to construct road crossings and channel improvements outside of City Limits, which are not eligible for funding through the PL-83-566 program.

The sponsor in coordination with NRCS would oversee and administer the construction of the Proposed Project.

7.6 Operation and Maintenance

Operation and maintenance of the infrastructure would be the responsibility of the City of Cottonwood. Operation of these facilities would include administration, management, and performance of non-maintenance actions needed to keep the facilities operational and safe. Maintenance includes performance of work, recording instrumentation data, preventing deterioration of structures, and repairing damage or replacement of the structures as needed to prevent failure. Damage to completed structures caused by normal deterioration, droughts, flooding, or vandalism are considered maintenance. O&M costs for the Preferred Alternative are estimated to be $14,600 annually.

7.7 Costs

Table 7-4, Table 7-5, and Table 7-6 describe the estimated project and installation costs of the Preferred Alternative, and how those costs would be shared. Tables with an itemized materials list for flood protection works of improvement are included in Appendix D.

Table 7-4. Estimated Installation Costs (Dollars)[1]

Works of Improvement	Public Law 83-566 Funding[2]	Other Funds[2]	Total
Flood Prevention	$13,363,540	$1,924,963	$15,288,502
Total	$13,363,540	$1,924,963	$15,288,502

[1]Base Price: 2023

[2]All works of improvement will be on non-federal land.

Table 7-5. Estimated Cost Distribution—Water Resource Project Measures (Dollar)[1]

Works of Improvement	Installation Cost – Public Law 83-566							Installation Cost – Other Funds							Total Installation Costs
	Construction	Engineering	Real Property Rights	Water Rights	Permits	Project Admin	Total PPL 83-566	Construction	Engineering	Real Property Rights	Water Rights	Permits	Project Admin	Total Other	
Flood Prevention	$11,530,414	$1,604,231	$0	$0	$0	$228,895	$13,363,540	$1,631,036	$226,927	$53,000	$0	$10,000	$4,000	$1,924,963	$15,288,502
Total	$11,530,414	$1,604,231	$0	$0	$0	$228,895	$13,363,540	$1,631,036	$226,927	$53,000	$0	$10,000	$4,000	$1,924,963	$15,288,502

[1]Price base: 2023

Table 7-6. Cost Allocation and Cost Sharing Summary—Water Resource Project Measures (Dollar)[1]

Site	Item	Cost Allocation		Cost Sharing			
		Purpose		Public Law 83-566		Other	
		Flood Prevention	Total	Flood Prevention	Total	Flood Prevention	Total
Cottonwood Creek Watershed Project	Construction	$13,161,449	$13,161,449	$11,530,414	$11,530,414	$1,631,036	$1,631,036
	Engineering	$1,831,158	$1,831,158	$1,604,231	$1,604,231	$226,927	$226,927
	Permitting	$10,000	$10,000	$0	$0	$10,000	$10,000
	Real Property	$53,000	$53,000	$0	$0	$53,000	$53,000
	Administration	$232,895	$232,895	$228,895	$228,895	$4,000	$4,000
	Total	$15,288,502	$15,288,502	$13,363,540	$13,363,540	$1,924,963	$1,924,963

[1]Price base: 2023

Economic tables have been included to present information relevant to the costs and benefits of the Preferred Alternative (Table 7-7, Table 7-8, and Table 7-9). The City of Cottonwood is responsible to coordinate obligations and financial contributions from various funding sources identified as "Other Funds".

In all cases, the benefits of each proposed improvement of the Action Alternative outweigh their respective costs. The BCR of the Action Alternative is estimated to be 1.10 (see Table 7-9**Error! Reference source not found.** below).

Table 7-7. Estimated Average Annual NEE Costs (Dollars)[1]

Measures	Project Outlays Amortization of Installation Cost	Project Outlays O&M and Replacement Cost	Total
Flood Prevention	$414,800	$14,600	$429,400
Total	$414,800	$14,600	$429,400

[1]Price base: 2023. Calculated using FY 2023 Water Resources Discount Rate (2.5%) and 103-year period of analysis. Prepared October 2025.

Table 7-8. Floodwater Damage Reduction Benefits (Dollars)[1]

Item	Estimated Annual Damage Reduction Benefits[2]		
	Without Project (No Action Alternative)	With Project (Preferred Alternative)	Damage Reduction
Residential	$53,652	$3,232	$50,420
Commercial	$150,869	$18,894	$131,976
Other	$282,647	$5,965	$276,682
Total	$487,168	$28,090	$459,078

[1]Price base: 2023. Calculated using FY 2023 Water Resources Discount Rate (2.5%) and 103-year period of analysis.
[2]All flood damage is agriculture related. Agriculture-related damages include damages to rural communities.

Table 7-9. Comparison of Annual NEE Benefits and Costs (Dollars)[1]

Works of Improvement	Flood Control Damage Reduction Benefit	Total Benefits	Average Annual Cost	Benefit Cost Ratio
Flood Prevention	$459,100	$459,100	$429,400	1.07
Total	$459,100	$459,100	$429,400	1.07

[1]Price base: 2023. Calculated using FY 2023 Water Resources Discount Rate (2.5%) and -year period of analysis. Prepared September 2023. Totals may not sum due to rounding.

Table 7-10. Structural Table 3b – Channel Work – Cottonwood Creek

						CHANNEL DIMENSIONS			
Channel Name (Reach)	**Location**	**Drain Area (mi^2)**	**Year freq design dischg (cfs) (100-yr)**	**Water Surface Depth (ft)**	**Hydraulic Gradient (ft/ft)**	**Gradient (ft/ft)**	**Bottom Width (ft)**	**Elev. (ft/msl)**	**Side Slope (Left/Right)**
Cottonwood Creek	East Road	9.2	380	5.33	1.5/100	1.5%	3.65	3407.4	1.77H:1V/ 3.34H:1V
	n Value		**Velocities**						
Channel Name (Reach)	aged	as built	Aged	as built	Excavation vol (cy)	Type of work		Existing channel type	Present flow cond.
Cottonwood Creek	0.05	0.05	3.7	3.7	None	Vegetation removal and riprap placement on eroded slopes		Natural	Perennial

Chapter 8 References

Allwest. (2021). Geotechnical Evaluation Cottonwood Stormwater and Wastewater System Improvements, Various Streets, Cottonwood, Idaho. Published August 6, 2021.

Avian Knowledge Network (AKN). 2025. Rapid Avian Information Locator (RAIL). Accessed May 29, 2025. https://data.pointblue.org/apps/rail/.

Bureau of Land Management (BLM). 2021.BLM National Data Mapping System. Accessed December 8, 2021. https://blm-egis.maps/arcgis.com/apps/webappviewer.

BLM. 2022a. Paleo Program PFYC Geologic Formation Polygons. Updated 2022. Accessed February 21, 2024. https://gis.test.blm.gov/arcgis/rest/services/geophysical/BLM_Natl_PFYC/MapServer.

BLM. 2022b. *Potential Fossil Yield Classification System*. Accessed February 21, 2024. https://www.blm.gov/sites/default/files/docs/2022-08/PIM2022-009_att1.pdf.

Census (U.S. Census Bureau). 2019a. American Community Survey 5-Year Estimate – Table S0101; Cottonwood City, Idaho. Accessed August 4, 2021. https://data.census.gov/cedsci/profile?g=0500000US1618640

Census (U.S. Census Bureau). 2019b. American Community Survey 5-Year Estimate – Table S0101; Idaho County, Idaho. Accessed August 4, 2021. https://data.census.gov/cedsci/profile?g=0500000US16049

Census (U.S. Census Bureau). 2019c. American Community Survey 5-Year Estimate – Table S0101; State of Idaho. Accessed August 4, 2021. https://data/census.gov/cedsci/profile?p=0500000US16

Census (U.S. Census Bureau). 2020a. Decennial Census – Table P1; Cottonwood City, Idaho. Accessed October 13, 2021. https://data.census.gov/cedsci/table?g=0500000US16049&tid+DECENNIALPL2020.P1&hidePreview=true

Census (U.S. Census Bureau). 2020b. Decennial Census – Table P1; Idaho County, Idaho. Accessed October 13, 2021. https://data.census.gov/cedsci/table?g=0500000US16049&tid=DECENNIALPL2020.P1&hidePreview=true

Census (U.S. Census Bureau). 2020c. Decennial Census – Table P1; Cottonwood City, Idaho. Accessed October 13, 2021. https://data.census.gov/cedsci/table?g=0400000US16&tid=DECENNIALPL2020.P1&hidePreview=true

Center for Climate Strategies. July 2010. Final Idaho Greenhouse Gas Inventory and Reference Case Projections 1990-2025. Accessed August 4, 2021. https://static1.squarespace.com/static/5f97102522cde4167ecca3a8/t/603c62c69485240694f88d9c/1614570183996/ID_GHG_IF_Report_Final_07_2010.pdf

CEQ (Council on Environmental Quality). 2013. Principles and Requirements for Federal Investments in Water Resources. Council on Environmental Quality. Known as the P&R. Pursuant to 42 USC 1962–3: Water Resources Principles and Guidelines. 18 pp. Available at: https://obamawhitehouse.archives.gov/sites/default/files/final_principles_and_requirements_march_2013.pdf

CEQ (Council on Environmental Quality). 2014. Interagency Guidelines. Interagency Guidelines for the updated 1983 Principles and Guidelines for Water and Land Related Resources Implementation Studies (Principles and Guidelines). https://obamawhitehouse.archives.gov/sites/default/files/docs/prg_interagency_guidelines_12_2014.pdf.

EPA (U.S. Environmental Protection Agency). 2017. "WATERS GeoViewer." Accessed August 2, 2021. https://www.epa.gov/waterdata/waters-geoviewer

EPA (U.S. Environmental Protection Agency). 2019. "Sole Source Aquifers for Drinking Water, Interactive Map of SSAs." Accessed August 2, 2021. https://epa.maps.arcgis.com/apps/webappviewer/index.html?id=9ebb047ba3ec41ada1877155fe31356b

EPA (U.S. Environmental Protection Agency). 2020. "EJ 2020 Glossary." Accessed October 12, 2021. https://epa.gov/environmentaljustice/ej-2020-glossary

EPA (U.S. Environmental Protection Agency). 2021a. EnviroMapper. Retrieved from Envirofacts: https://geopub.epa.gov/myem/efmap/index.html?ve=13,46.0477047,-116.349280&pText=Cottonwood,&20Idaho

EPA (U.S. Environmental Protection Agency). 2021b. Idaho Nonattainment/Maintenance Status for Each County by Year for All Criteria Pollutants. Accessed August 4, 2021. https://www3.epa.gov/airquality/greenbook/anayo_id.html.

FEMA (Federal Emergency Management Agency). 1985. National Flood Insurance Program FIRM Flood Insurance Rate Map: City of Cottonwood, Idaho, Idaho County. *Community Panel Number 1600670005B dated May 1, 1985.* Accessed January 8, 2024. https://msc.fema.gov/portal/home.

FEMA (Federal Emergency Management Agency). 1991. National Flood Insurance Program FIRM Flood Insurance Rate Map: Idaho County, Idaho (Unincorporated Areas). *Community Panel Number 1602130625B dated September 27, 1991.* Accessed January 8, 2024. https://msc.fema.gov/portal/home.

Hauer, A. Craig, M.A., and JoEllen Ross-Hauer, M.S. 2022. A Cultural Resources Inventory for the Cottonwood Flood Control Plan and Environmental Compliance Project, Idaho County, Idaho. Prepared for the Natural Resources Conservation Service; May 18, 2022. Redacted.

Idaho Soil & Water Conservation Commission. 2008. Cottonwood Creek Total Maximum Daily Load Implementation Plan. Accessed December 8, 2021. https://swc.idaho.gov/wp-content/uploads/sites/78/2019/08/cottonwood-creek-2008-impplan.pdf

IDA (Idaho Department of Agriculture). 2023. Idaho Noxious Weed Distribution Map. *Idaho County.* Accessed January 8, 2024. https://idaho.maps.arcgis.com/apps/webappviewer/index.html?id=2f4fb680aab24a32b2166db271a0be33.

IDFG (Idaho Fish and Game). 2021. Idaho's Wildlife Management Areas. Accessed August 4, 2021. https://idfg.idaho.gov/wma

IDL (Idaho Department of Labor). 2021a. U.S. Census Population Estimates 1969-2019. Accessed August 4, 2021. https://lmi.idaho.gov/census

IDL (Idaho Department of Labor). 2021b. State Projections 2019 through 2029. Accessed August 4, 2021. https://lmi.idaho.gov/population-projections

IDWR (Idaho Department of Water Resources). 2012. State Water Plan. Accessed April 15, 2022. https://idwr.idaho.gov/iwrb/water-planning/state-water-plan/

IGS (Idaho Geological Survey). 2022. WebMap. Accessed April 15, 2022. https://www.idahogeology.org/WebMap/

Invasive Species of Idaho. 2021. Accessed August 4, 2021. https://invasivespecies.idaho.gov/plants

IDEQ (Idaho Department of Environmental Quality). 2000. Cottonwood Creek Total Maximum Daily Load (TMDL). *Prepared for Cottonwood Creek Watershed Advisory Group, First Revision May 2000.* https://www2.deq.idaho.gov/admin/LEIA/api/document/downlaod/11779

IDEQ (Idaho Department of Environmental Quality). 2024a. Terradex GIS Mapping Database. Accessed January 22, 2024. https://idaho.terradex.com

IDEQ (Idaho Department of Environmental Quality). 2002. Clearwater River (South Fork) Subbasin. Accessed February 24, 2022. https:www.deq.idaho.gov/water-quality/surface-water/total-maximum-daily-loads/clearwater-river-south-fork-subbasin/.

IDEQ (Idaho Department of Environmental Quality), Nez Perce Tribe, and Environmental Protection Agency. 2000. Cottonwood Creek Total Maximum Daily Load (TMDL). Accessed March 2, 2021. https://nptwaterresources.org/wp-content/uploads/2014/01/454034-_water_data_reports_surface_water_tmdls_cottonwood_creek_cottonwood_creek_entire.pdf

Nez Perce Tribe. 2014. "Nez Perce Reservation" Map. Accessed October 12, 2021. www.nezpercegis.org/PDF/IdahoReservation.pdf

NOAA (National Oceanic and Atmospheric Administration). 2021. "Understanding Essential Fish Habitat." Accessed August 2, 2021. https://www.fisheries.noaa.gov/insight/understanding-essential-fish-habitat

NPS (National Park Service). 2018. "National Natural Landmarks." Accessed August 2, 2021. https://www.nps.gov/subjects/nnlandmarks/nation.htm

NPS (National Park Service). 2019. "Find A Park by State." Accessed August 2, 2021. https://www.nps.gov/state/id/index.htm

NRCS (USDA Natural Resources Conservation Service). 1998. NRCS Economic Handbook. Part 611: Water Resources Handbook for Economics. Accessed January 5, 2023. http://directives.sc.egov.usda.gov/OpenNonWebContent.aspx?content=28583.wba.

NRCS (USDA Natural Resources Conservation Service). 2010. General Manual, Title 190 – Ecological Sciences, Part 410 – Compliance with NEPA, August 1979, as amended March 2010.

NRCS (USDA Natural Resources Conservation Service). 2014. *National Watershed Program Handbook* (2nd Edition). April 2014 Parts 600 through 606.

NRCS (USDA Natural Resources Conservation Service). 2015. *National Watershed Program Manual* (4th Edition). April 2014, as amended January 2015, Parts 500-506.

NRCS (USDA Natural Resources Conservation Service). 2016. NRCS Handbook, Title 190 – Ecological Sciences, Part 610- National Environmental Compliance Handbook, 3rd Edition, May 2016. 369 pp. https://directives.sc.egov.usda.gov/OpenNonWebContent.aspx?content=39893.wba.

NRCS (USDA Natural Resources Conservation Service). 2020. Prime & Other Important Farmlands Definitions. https://www.nrcs.usda.gov/wps/portal/nrcs/detail/pr/soils/?cid=nrcs141p2_037285

NRCS (USDA Natural Resources Conservation Service). 2021. National Planning Procedures Handbook (NPPH), Amendment 9. Title 180 National Planning Procedures Handbook. 108 pp. https://directives.sc.egov.usda.gov/OpneNonWebContent.aspx?content=47643.wba.

NRCS (USDA Natural Resources Conservation Service). 2024. Custom Soil Resource Report for Idaho County Area, Idaho, Western Part. *Cottonwood Watershed EA Project.* Accessed January 22, 2024. https://websoilsurvey.sc.egov.usda.gov/App/WebSoilSurvey.aspx.

Olander, Lydia, et al., 2016. Data and Modeling Infrastructure for National Integration of Ecosystem Services into Decision Making: Expert Summaries. NESP WP 16-02. Durham: National Ecosystem Services Partnership.

Preservation Solutions, LLC. 2015. Idaho County, ID Historic Preservation Plan. Prepared for the Idaho County Historic Preservation Commission. Accessed February 21, 2024. https://idahocounty.org/planb/wp-content/uploads/2021/03/REVISED_ID-CO-Preservation-Plan_FINAL_06Dec15.pdf.

StreamNet. 2019. GIS Datasets: Fish Distribution. Accessed January 19, 2022. https://www.streamnet.org/home/data-maps/gis-data-sets/.

Tacke, Kathryn. Personal Communication. April 10, 2020.

USDA (U.S. Department of Agriculture). 1997. "Departmental Regulation 5600-002." December 15, 1997. Accessed October 12, 2021. https://www.ocio.usda.gov/sites/default/files/docs/2012/DR5600-002%5B1%5D.pdf.

USDA (U.S. Department of Agriculture). 2017a. Guidance for Conducting Analyses Under the Principles, Requirements, and Guidelines for Water and Land Related Resources Implementation Studies and Federal Water Resource Investments. Departmental Manual 9500-013. Natural Resources and Environment. https://www.usda.gov/sites/default/files/documents/DM9500-013_final.pdf.

USDA (U.S. Department of Agriculture). 2017b. Conducting Analyses Under the Principles, Requirements, and Guidelines for Water and Land Related Resources Implementation Studies and Federal Water Resource Investments. Departmental Regulation (DR) 9500-013. Natural Resources and Environment. January 5, 2017. Available at: https://www.usda.gov/directives/dr-9500-013.

USDA NASS (U.S. Department of Agriculture National Agricultural Statistics Service). 2017. Census of Agriculture, Volume 1, Chapter 2. County Summary Highlights: 2017 – Idaho. Accessed August 2, 2021. https://www.nass.usda.gov/Publications/AgCensus/2017/Full_report/Volume_1,_Chapter_2_County_Level/Idaho/st16_2_0001_0001.pdf

USFWS (U.S. Fish and Wildlife Service). 2016. "Glossary." Accessed August 2, 2021. https://www.fws.gov/midwest/endangered/glossary/index.html

USFWS. 2020. "Wetlands Mapper." National Wetland Inventory (NWI), Accessed August 2, 2021. https://www.fws.gov/wetlands/data/Mapper.html

USFWS, 2025. Information for Planning and Consultation Official Species List. Accessed June 16, 2025. https://ecos.fws.gov/ipac/.

USGS (U.S. Geologic Service). 2021. Watershed Boundary Dataset. Accessed August 2, 2021. https://apps.nationalmap.gov/viewer/

Whitehead, R.L. 1994. Ground Water Atlas of the United States: Segment 7, Idaho, Oregon, Washington. *Hydrologic Atlas 730-H.* U.S. Geological Survey. https://pubs.er.usgs.gov/publication/ha730H

Wild and Scenic Rivers. 2014. National Wild and Scenic Rivers Story Map. Accessed August 2, 2021. https://rivers.gov/

WRCC (Western Region Climate Center). 2021. *Cooperative Climatological Data Summaries.* Accessed October 15, 2021. https://www.wrcc.dri.edu/climatedata/climsum/

Chapter 9 List of Preparers

Table 9-1 **Error! Reference source not found.**lists the individuals who assisted in preparing this Draft Plan-EA.

Table 9-1. List of Preparers

Name	Title (Years)	Agency/Firm	Education	Professional Licenses or Certifications
V. Bruce Sandoval	State Conservation Engineer (25)	USDA-NRCS	M.S. Engineering; B.S. Agricultural and Irrigation Engineering	Professional Engineer ID #10015
Taylor Schulze	Engineer (2)	USDA-NRCS	B.S. Civil Engineering	-
Maddie Philips	Cultural Resource Specialist (3)	USDA-NRCS	M.A. Anthropology B.A. History	-
Maureen Pepper	State Water Quality Specialist (27)	USDA-NRCS	M.S. Environmental Science and Policy B.A. Environmental Policy & Analysis	-
Jennifer Skeldon	State Biologist (11)	USDA-NRCS	B.S. Forestry B.S. Watershed Science	-
John Watson	Project Manager (27)	J-U-B ENGINEERS, Inc.	B.S. Civil Engineering	P.E. ID # 9612
Amy Uptmor	Project Engineer (18)	J-U-B ENGINEERS, Inc.	B.S. Civil Engineering	P.E. ID # 14054
Garrett Frei	Project Engineer (16)	J-U-B ENGINEERS, Inc.	B.S. Civil Engineering	P.E. ID # 15145
Colt Shelton	Project Engineer (12)	J-U-B ENGINEERS, Inc.	M.S. Civil Engineering	P.E. ID # 16802
Colton Smith	Project Engineer (10)	J-U-B ENGINEERS, Inc.	B.S. Civil Engineering M.S. Civil and Environmental Engineering	P.E. UT # 10393120-2202
Marti Hoge	Senior Environmental Specialist (19)	J-U-B ENGINEERS, Inc.	M.A. Environmental Politics & Policy B.A. Anthropology	-
Autumn Foushee Davies	Senior Biologist (14)	J-U-B ENGINEERS, Inc.	M.A. Botany B.S. Natural Resources Conservation and Management – Forest Ecology B.S. Journalism – Environmental Journalism	-
Derek Moss	Senior Environmental Planner (17)	J-U-B ENGINEERS, Inc.	M.B.A. Strategic Management B.S. Urban Planning	AICP
Kira Coff	Environmental Specialist (18)	J-U-B ENGINEERS, Inc.	M.A.S. Natural Resource Management – Environmental Health and Safety	-

Name	Title (Years)	Agency/Firm	Education	Professional Licenses or Certifications
Lexie Conley	Environmental Planner (6)	J-U-B ENGINEERS, Inc.	M.S. Environmental Studies B.A. Biology and Environmental Studies	-
Tyler Schade	Wetland Specialist/ Biologist	J-U-B ENGINEERS, Inc.	B.S. Environmental Science	-
A. Craig Hauer	Archaeologist (26)	Archaeology & Architectural History	M.A. Archaeology B.A. Anthropology	Register of Professional Archaeologist

Chapter 10 Distribution List

A notice of availability for the Draft Plan-EA will be distributed to the following government agencies/staff and organizations.

10.1 Federal Government

- USACE
- USFS
- BLM
- Reclamation
- USDA Rural Development
- USFWS
- NMFS

10.2 Tribal Government

- Nez Perce Tribe
- Confederated Tribes of the Umatilla Indian Reservation
- Confederated Tribes of the Colville Reservation

10.3 State Government

- Idaho Transportation Department
- Idaho Fish and Game
- Idaho Department of Lands
- Idaho Water Resources Board
- Idaho Department of Water Resources—Northern Region
- Idaho Department of Environmental Quality
- Idaho North Central Health District
- Idaho State Historic Preservation Office

10.4 Local Government

- Idaho County Road & Bridge
- Idaho County
- Idaho County Fair Board
- City of Cottonwood
- Idaho County Soil and Water Conservation District
- Cottonwood Chamber of Commerce
- Cottonwood Highway District
- Idaho County Historic Preservation Commission

10.5 Businesses and Organizations

- Idaho Ground Water Association
- Idaho Water Users Association
- Southfork Clearwater River Watershed Advisory Group
- CEDA

10.6 Private Parties

The names and addresses of private parties who will receive notice of the Draft Plan-EA are not listed in this section for privacy purposes.