

**Final Watershed Plan – Final Environmental Impact Statement
for the
Dunloup Creek Watershed**

**Fayette and Raleigh Counties, West Virginia
West Virginia Third Congressional District**



**Prepared by:
WEST VIRGINIA STATE CONSERVATION COMMITTEE
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**With Assistance by:
UNITED STATES DEPARTMENT OF AGRICULTURE
NATURAL RESOURCES CONSERVATION SERVICE**



May 2007

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Fly Sheet

Document Status: Final Watershed Plan – Final Environmental Impact Statement
(Plan–EIS)

Title of Proposed Action: Voluntary Floodplain Buyout

Location: Fayette and Raleigh Counties, West Virginia,
Third Congressional District

Sponsoring Agencies: Southern Conservation District
West Virginia State Conservation Committee

Abstract: Residents along Dunloup Creek are subjected to repetitive flooding because of concentrated development in the floodplains along the stream. Approximately 298 properties, with associated yards, gardens, and outbuildings are subjected to flooding. Almost all of the properties are residential homes. The watershed is distressed, with low per capita income and very low housing values. Structural measures evaluated were ineffective in addressing the flooding problem. The recommended solution is a voluntary floodplain buyout.

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1.0 INTRODUCTION & OVERVIEW

Summary

Residents along Dunloup Creek are subjected to repetitive flooding because of concentrated development in the floodplains. Approximately 298 properties, with associated yards, gardens, garages, automobiles, and outbuildings are subjected to flooding. Almost all of the properties are residential homes. The watershed is distressed, with low per capita income and very low housing values. Evaluated structural measures were ineffective in addressing the flooding problem. The recommended alternative is a *voluntary floodplain buyout*.

Sponsors and Supporting Entities

The *Southern Conservation District* and the *West Virginia State Conservation Committee* (referred to herein as the Sponsors) are the local Sponsors for this project. The Dunloup Creek Watershed Association, New River Gorge National Park Service, Fayette and Raleigh County Commissions, and the Fayette County Office of Emergency Services have greatly assisted in the development of this watershed plan (also referred to as Plan-EIS).

Project Authorization

The Dunloup Creek Watershed Project is planned for implementation under the authority of Public Law 83-566, Watershed Protection and Flood Prevention Act (16 U.S.C. 1001-1008). The responsibility for administration of the Watershed Protection and Flood Prevention Act, as amended, has been assigned by the Secretary of Agriculture to the Natural Resources Conservation Service (NRCS).

Project Location

The project location encompasses properties along Dunloup Creek within the 100-year floodplain as defined by the NRCS through hydrology and hydraulic analyses. The project boundary (*buyout area*) includes all properties with land or lot elevations at or below the 100-year floodplain elevation, even properties with portions of their elevations at this level. In other words, even if one corner of a backyard is at or above the 100-year floodplain elevation, the entire property is included in the “100-year voluntary buyout area”. The Dunloup Creek Watershed is located in Raleigh and Fayette Counties of West Virginia. Portions of the following communities are located in the project area: Kilsyth, Mt. Hope, Glen Jean, Red Star, and Harvey. The “100-year floodplain” is an estimated elevation for the floodwaters from a 100-year storm; some agencies also refer to this as the “base flood elevation”.

Recommended Alternative

The recommended or preferred alternative is a voluntary floodplain buyout.

Purpose and Need for Action

The purposes of the project are to reduce flood-related damage to property within the 100-year floodplain of Dunloup Creek and to protect the health and safety of people. The existing situation exposes residents

and property to the unnecessary hazards of repeated flood conditions. In addition to the risk to life and health, the existing developments in the floodplain increase the requirements for rescue and relief efforts; require emergency responders to be placed in harms way; and hinder the natural functions of the floodplain.

Watershed problems consist of repetitive flooding to homes, businesses, churches, yards, outbuildings, roads, utilities, and other property located in the floodplain of Dunloup Creek. Human health and safety are compromised during flood events. Property values are diminished due to flooding. Opportunities exist to reduce flood damages, enhance personal safety, and improve the standard of living for residents who live in the floodplain. There are also opportunities for gradual, long-term positive environmental benefits associated with the removal of flood prone properties from the floodplain.

Description of the Recommended Alternative

The recommended alternative consists of a *voluntary floodplain buyout* for an estimated 238 properties in the floodplain. Properties in the program would be demolished and the floodplain would be returned to natural floodplain conditions. While non-residential properties exist in the floodplain and will be eligible to apply, the emphasis will be to purchase occupied residential properties. Participating applicants will be encouraged to relocate to residences that are decent, safe, and sanitary, and outside of any floodplain.

Resource Information

- Hydrologic Unit Number 05050004070
- Humid, continental climate
- Watershed size – 31,510 acres
- Land uses
 - 6% grassland
 - 84% forestland
 - 8% residential area
 - 2% mine land
- Watershed demographics from 2000 Census Tract 205, which most closely matches watershed
 - Estimated watershed population 3,000
 - 78% White; 22% Other Races
 - Per Capita Income (1999) \$13,809
 - 2006 Fayette County Unemployment Rate 5.6%
 - Census Tract 205 Poverty Rate 35%
 - Age 60 and Over: 21%
 - Percent of population with a disability: 34.3%
- Resource Concerns – flood damage and health and safety are the primary resource concerns
- Alternative Plans Considered in detail and components of each plan
 - Alternative 1 – No Action
 - Alternative 2 – Voluntary Floodplain Buyout
- An historic structures inventory will be considered mitigation for adverse effects to historic structures
- No environmental mitigation measures are anticipated for this project
- Land ownership - 85% private, 11% state/local, 4% federal (estimated)
- Number of farms – 0, there are no farms in the project area
- Average farm size – there are no farms in the project area

- Number of minority farmers – 0, there are no farms in the project area
- Number of limited resource farmers – 0, there are no farms in the project area
- Wetlands, 0 acres; Flood plain, 203 acres; highly erodible cropland, 0 acres
- Endangered species – none identified
- Cultural resources – potential historic structures

Project Costs

The following estimated costs are in 2006 dollars assuming 80% of the 298 eligible properties will be acquired via this project, or 238 properties. Numbers are rounded to the nearest one hundred dollars.

**Tabulation 1 - Summary of Project Costs
Dunloup Creek Watershed
Fayette and Raleigh Counties, WV**

Item	PL 566 Funds		Other Funds		Total	
	Dollars	%	Dollars	%	Dollars	%
Acquisition Costs	9,323,600	100%	0	0%	9,323,600	100%
Demolition/Site Restoration	2,695,700	73%	997,000	27%	3,692,700	100%
Technical/Engineering	369,000	81%	86,600	19%	455,600	100%
Project Administration	136,700	30%	318,900	70%	455,600	100%
Project Totals	\$12,525,000	90%	\$1,402,500	10%	\$13,927,500	100%

Acquisition Costs include a lump sum payment to property owners based on the fair market value of property, appraisal, closing costs (title search, recording, map fees, prorated property taxes, closing fees, etc.), surveys (if required), and other related costs. A *relocation benefit* will be included to help homeowners afford a comparable residence and to assist with relocation expenses. Tenants of participating landlords will also receive a *relocation benefit* (one per rental unit) to assist with their relocation expenses. The *relocation benefits* will not apply to vacant buildings, commercial properties, recreational-use property, or vacant land. Based on US Census data, limited real estate listings, and knowledge of the watershed, assumptions were made regarding the market value of properties in the *buyout area* to use for the cost estimate.

Demolition/Site Restoration Costs include demolition and disposal of structures, permits, erosion & sediment control, asbestos surveys, proper removal of asbestos materials, decommissioning wells, septic tank removal, removal of underground fuel tanks, disconnecting utilities, demolition of driveways, removal of miscellaneous site structures, grading, seeding, mulching, fertilization, and some tree planting.

Technical/Engineering Costs include public information/education activities, development of ranking criteria, eligibility determinations, application ranking determinations, landowner negotiations, cultural resource mitigation assistance, development of technical standards for site demolition/restoration, technical oversight of contractor performance, site inspection, etc.

Project Administration Costs include processing applications, landowner notifications, travel & transportation costs, salvage sales (if any), processing of closing documents, overhead costs, etc.

Project Benefits

Project benefits include removal of flood damaged buildings within the 100-year floodplain. Human health and safety will be greatly improved for residents who relocate from the floodplain. Risks to life and property associated with flooding will be removed for participating individuals. There will be reduced need for emergency services and rescue operations as residents relocate to non flood prone areas. Personal equity and financial well-being will be enhanced in a distressed community.

Aesthetic values of the floodplain will be restored. Natural floodplain functions will be restored as homestead areas are returned to riparian stream habitat and natural floodplain vegetation. Water quality will be improved with the removal of homes with failing or non-existent septic systems. Stream bank erosion will be reduced as areas along the stream are converted from mowed yards to natural streambank vegetation.

Net Beneficial Effects

The Dunloup Creek Watershed meets the criteria for a disadvantaged community, as per the National Watershed Manual. As such, the project is eligible for an exception to the National Economic Development (NED) Plan. However, this exception is not required because the net benefits of the project are positive. **Alternative 2 is the NED Plan.** It is in the best interest of the nation to proceed with a *voluntary floodplain buyout* to give individuals an opportunity to move from the floodplain. Nonmonetary benefits that are not reflected in the benefit to cost ratio are substantial. There are incalculable benefits to reducing risk to life and property, improving the quality of life to a distressed community, and restoring environmental integrity to the natural floodplain of Dunloup Creek.

Period of Analysis

This project was evaluated at 2006 prices at a project interest rate of 4.875%. Benefits and costs were evaluated for 100 years, although the benefits for relocation of floodplain properties will extend into perpetuity.

Environmental Impacts

There are no identified adverse environmental impacts associated with Alternative 2.

Major Conclusions

Alternative 2 is the recommended alternative.

Areas of Controversy

None identified during the planning process

Issues to be Resolved

None identified during the planning process

2.0 PURPOSE & NEED FOR ACTION

The purpose of the project is flood prevention with the goal of reducing the flood related damages to property within the 100-year floodplain of Dunloup Creek. At the request of the Southern Conservation District, on behalf of the Dunloup Creek Watershed Association, the USDA Natural Resources Conservation Service (NRCS) conducted a study of flooding and other natural resource problems and opportunities in the Dunloup Creek watershed. This study resulted in the preparation of this FINAL WATERSHED PLAN- FINAL ENVIRONMENTAL IMPACT STATEMENT (Final Plan-FEIS) for the Dunloup Creek watershed.

Flooding problems in the Dunloup Creek watershed are well known and extensively documented. Floodwater damage and critical area erosion in the Dunloup Creek watershed were the initial impetus for a study in 1965 when local Sponsors applied for federal assistance under Public Law 566 – The Watershed Protection and Flood Prevention Act. Several years of study resulted in the preparation of a Watershed Plan - Environmental Impact Statement in 1976, which included proposed land treatment measures in the watershed and channel work along two sections of Dunloup Creek, in the Mt. Hope and Glen Jean areas. However, the project was de-authorized in 1984 by mutual agreement between the project Sponsors and NRCS and documented by letter between the Soil Conservation Service (now NRCS), the Fayette County Commission, and the Southern Soil Conservation District (now the Southern Conservation District). Reasons cited for the de-authorization include construction of a sanitary sewer in the project limits and other land use changes since the original project was planned.

Following nearly every flood event since November 1987, there have been meetings between NRCS, the Fayette County Commission, the *National Park Service* (NPS), local and state legislators, the *West Virginia Conservation Agency* (WVCA), the Dunloup Creek Watershed Association, and other federal, state, and local agencies involved in flood issues. In 1996, due to recurring flooding in the watershed, a new application for assistance was submitted by the Sponsors and NRCS re-initiated planning assistance.

This renewed planning effort culminated in the preparation of a *Local Implementation Plan* in December 1998. This plan provided alternatives for local implementation without PL566 cost-sharing assistance and without full analysis of the hydraulic, environmental, economic, and cultural concerns associated with alternatives. No further action was taken on the part of local Sponsors or governmental agencies with regard to implementing the *Local Implementation Plan*.

In August 2001, following flood events of July 8 and July 26, 2001, local Sponsors requested additional planning assistance for the Dunloup Creek watershed under PL-566. The NRCS and other agencies addressed site-specific situations on White Oak Creek with the Emergency Watershed Protection (EWP) Program funds due to the July 2001 flood. During the same period, NRCS and other cooperating agencies developed the *West Virginia Regional Flood Protection Plan* in October 2002. This report identified the need for regional flood warning systems and enforcement of floodplain management strategies on a widespread basis in several southern West Virginia counties. This report acknowledged the need for local flood prevention projects in areas such as Dunloup Creek. In 2004, NRCS began re-assessing the alternatives for Dunloup Creek.

The purpose of this document is to present information regarding alternatives that have been evaluated to reduce flooding along Dunloup Creek. The need for a cost-effective solution is evident in the

communities' continued interest in addressing the flooding. The need for effective flood damage reduction will be further described through out the rest of this document.

3.0 DESCRIPTION OF THE STUDY AREA

Physical Data

Dunloup Creek watershed is located in Fayette and Raleigh Counties in south central West Virginia as shown in Figure 1 – Watershed Location Map. It contains an area of 31,510 acres (49.2 square miles) of primarily forest land with sparsely populated communities scattered along the floodplain. Of the watershed's total area, 25,477 acres are in Fayette County and 6,033 are in Raleigh County. The watershed is situated about 61 miles south east of Charleston, West Virginia's State Capitol, and about 7 miles north of Beckley, one of the major population centers in southern West Virginia.

Dunloup Creek originates near Batoff Mountain in Raleigh County, about 4 miles north of Beckley. The stream is about 16 miles in total length and flows through about 5.6 miles of urbanized area in several small communities before it joins the New River at Thurmond. Major tributaries to Dunloup Creek are Mill Creek, White Oak Creek, and Meadow Fork. The hydrologic unit number for the study area is 05050004070.

Dunloup Creek is in the Appalachian Plateau Physiographic Area. Topography is typical of a partially dissected plateau. The streams are entrenched in deep V-shaped valleys and have very narrow floodplains. Ridge tops are wide and relatively flat. Total relief is about 1,500 feet.

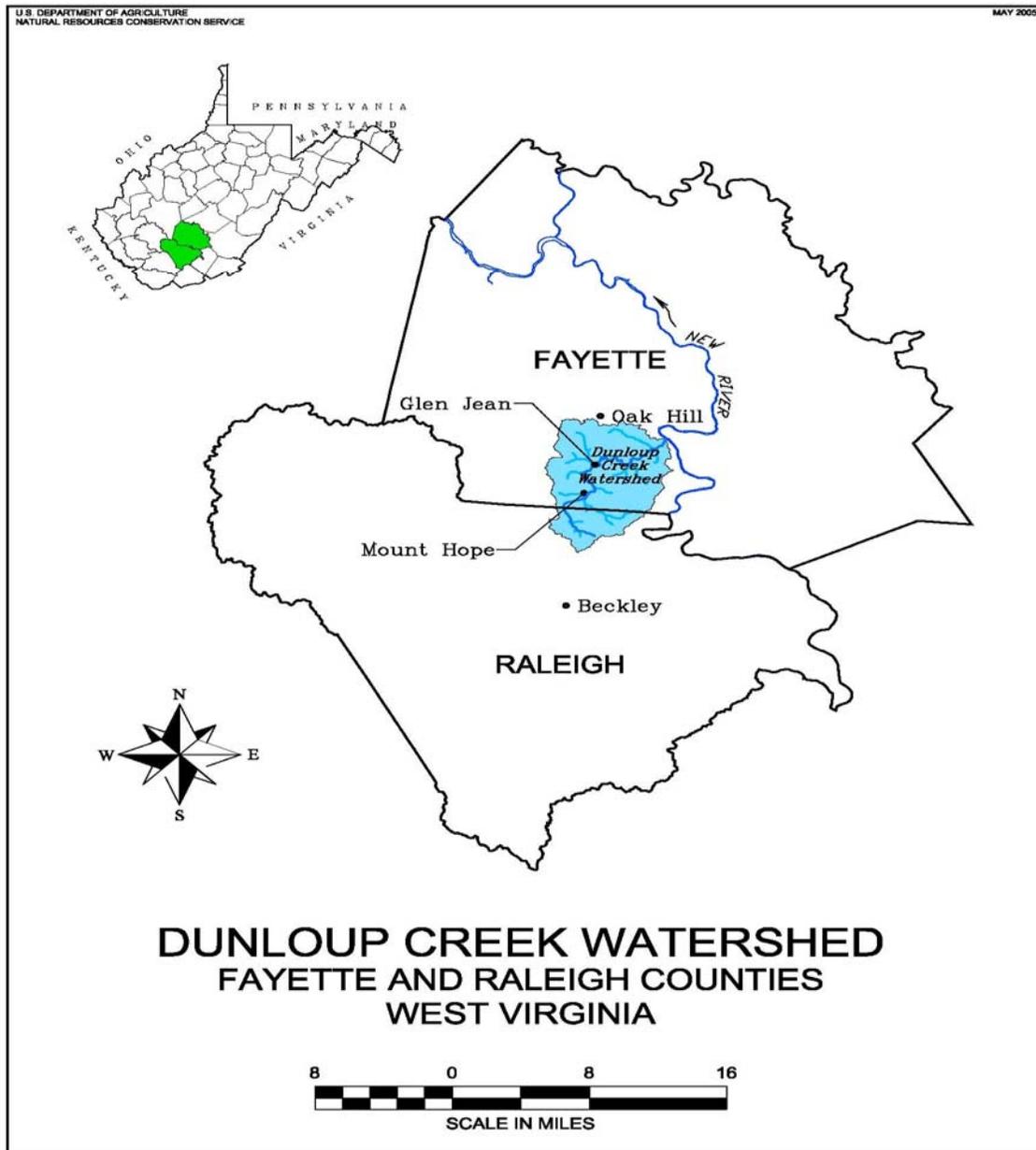
The humid, continental type of climate is characterized by sharp temperature contrasts, both seasonal and, frequently, day to day. Average seasonal snowfall totals nearly 40 inches over most of the area. Precipitation averages 45 inches per year with the most rain occurring in March, May, June, and July. Temperatures range from an average daily high of 82° Fahrenheit in July to an average daily low of 23° Fahrenheit in January. The growing season averages 141 days.

Land use in the watershed is dominated by forests (84 percent) and miscellaneous land uses (16 percent) such as roads, communities, mine and industrial sites, and residential areas. The Dunloup Creek watershed is partially encompassed in the area designated as a National River by the NPS. The National River designation occurred in 1978 and significantly influences activities in the watershed. Farming is not a significant land use activity in the watershed. The steep hillsides restrict land use to forests while the narrow floodplain along the stream is developed. Roads, utilities, homes, and commercial activities are concentrated in narrow valleys along the stream and are subject to flooding. There are no identified land treatment needs in the watershed. Scattered abandoned mine lands exist in the Dunloup Creek drainage, but they do not significantly contribute to flooding.

Surface rocks in the area are principally confined to the New River Group of the Pottsville Series of Pennsylvania Age. The New River Group is composed of sandstone, shale, coal, and impure fire clay. Sandstone is predominant, making up 65 to 75 percent of the strata. These sandstones are generally massive, hard, and siliceous and form prominent cliffs that influence the topography. There is a gentle regional dip to the northwest at about 100 feet per mile.

The principal mineral resource is coal. Mining began on a large scale around 1900 and has continued, with boom and bust cycles, to the present. Sewell coal, also known as Nuttal, New River Smokeless, or Davy, outcrops at several locations along Dunloup Creek and underlies most of the watershed. It usually ranges in thickness from 30 to 60 inches and has an excellent reputation as a steam, domestic, or coking coal. It has been mined extensively and few unmined areas remain. Fire Creek coal is minable in the

Figure 1 – Watershed Location Map



extreme eastern part of the watershed but thins rapidly to the west. Beckley coal is not minable in the Dunloup Creek watershed.

Moderately deep, well drained, silty Gilpin soils and loamy Dekalb soils cover at least 75 percent of the area. These soils are inclined to be stable and are not highly susceptible to erosion if properly managed. Deep, moderately well drained, clayey Wharton soils and deep moderately well drained, silty Ernest soils occupy about 10 percent of the area. Deep, well drained Pope soils, moderately well drained Philo soils, and poorly drained Atkins soils are on the floodplains. These floodplain soils constitute approximately 5 percent of the area. The remaining 10 percent are comprised of other soil types.

Social and Economic Data

Communities in the Dunloup Creek Watershed include Price Hill, Harvey, Redstar, Glen Jean, Macdonald, Mt. Hope, Whipple, Scarbro, and Kilsyth in Fayette County and Bradley in Raleigh County. Mt. Hope (2000 Census population 1,487), the largest town in the watershed, has declined in population by about 6 percent between 1990 and 2000, whereas statewide West Virginia had a stable or slightly increasing population. The population residing in the Dunloup Creek watershed is estimated to be about 3,000. The 100 year floodplain population is estimated to be 800 people.

Economic and social characteristics of the area indicate a distressed community. The following statistics show the conditions in the watershed relative to the state and national situation.

**Tabulation 2 - Demographic Characteristics
 Dunloup Creek Watershed
 Fayette and Raleigh Counties, WV**

Item	United States	West Virginia	Fayette County
Per Capita Income (2003)	\$21,587	\$16,477	\$13,809
Unemployment Rate (February 2006)	4.8 %	5.3 %	5.6 %
Poverty Rate (2000 Census)	12.4%	17.9%	21.7%
Population with Bachelor’s Degree or Higher	24.4%	14.8%	10.7%

Employment in the watershed has historically been dominated by the coal industry and subject to the boom-bust cycles of this industry. In recent years, employment has concentrated in wholesale and retail trade, services, and government. Workers generally travel out of the watershed to Beckley or to locations along U.S. Route 19 for employment. Tourism is also a significant employer in the area.

Housing values in the Dunloup Creek Watershed are below county, state, and national average values. Within Fayette County, Census tract #205 most closely matches the geographic boundaries of the Dunloup Creek Watershed. The following tabulation shows the relative value of housing in the area of study:

**Tabulation 3 - Housing Values
 Dunloup Creek Watershed
 Fayette and Raleigh Counties, WV**

	United States	West Virginia	Fayette County	Census Tract 205 in Fayette County
Median Value of Homes	\$119,600	\$72,800	\$50,800	\$35,200
Median Value of Mobile Homes	\$31,200	\$22,800	\$23,500	\$20,700

Although economic and social data indicates a disadvantaged area, there are strong cultural and social reasons why people remain in the area. Residents remain along Dunloup Creek because of their strong community pride, family ties, and their preference for a rural lifestyle. Residents also remain in the floodplain because, for many, their homes represent their biggest investment and opportunities to recover that investment by selling the property are difficult.

Recreation

The Dunloup Creek watershed is located adjacent to the New River Gorge National River Area (NRG NRA). The NRG NRA encompasses over 70,000 acres of land along the New River between the towns of Hinton and Fayetteville. The national designation was established in 1978 as a means to conserve and protect 53 miles of the New River as a free-flowing waterway. The NRG NRA Headquarters is located at Glen Jean, along the banks of Dunloup Creek. Recreation is the most important industry in the area, providing employment and income directly and indirectly to residents. Thousands of whitewater rafters and hiking enthusiasts travel through the communities along Dunloup Creek on their way to access sites on the New River.

In its present state, Dunloup Creek has limited recreation potential due to high bacterial contamination and limited public access in the study area. The stream is currently stocked with trout and there is recreational fishing, primarily below the community of Harvey. Improving the water quality will increase the recreational fishing potential of the stream. Dunloup Creek is not presently suitable for any water-contact recreational activity due to stream pollution. There are no recreational lakes in the watershed.

4.0 WATER RESOURCE PROBLEMS

Flooding of residential homes and associated property has been a long-term, recurring problem in the Dunloup Creek Watershed. The most significant damages occur in the communities of Kilsyth, Mount Hope, Glen Jean, Redstar, and Harvey. These areas experience some degree of flooding nearly every year. Most damage occurs to homes, businesses, roads, and utilities located in the floodplain. In July 2001, two severe floods occurred in the watershed, resulting in an estimated \$29.5 million dollars in damage to the area (source: Fayette County Office of Emergency Services Pre-Disaster Mitigation Risk Assessment Report). The following table lists significant floods in the watershed in recent years:

**Tabulation 4 – Flooding History
 Dunloup Creek Watershed
 Fayette and Raleigh Counties, WV**

September 19, 2004	July 8, 26, & 29, 2001 (Disaster #1378)
July 22-26, 2004 (Disaster #1536)	January 19th, 1996
May 28, 2004 (Disaster #1522)	Mid-Spring 1995
November 12 & 19, 2003 (Disaster #1500)	March 4, 1993
March 2003 (Disaster #1455)	May 1987
May 2002 (Disaster #1410)	Spring 1986

The NRCS completed a flood damage assessment of the properties in the 500 year floodplain. An inventory of 357 residential, commercial, and public properties was compiled with information such as first floor elevation, elevation that flood damage begins, estimated building value, estimated content value, type of building construction, and relative location of the property in relation to the stream. First floor flooding was the benchmark for determining the extent of the flooding problem and the effectiveness of alternative solutions.

Residential homes account for most building types in the floodplain. The remaining properties evaluated for flood damages consist of churches, post offices, small businesses, machine shops and warehouses, *National Park Service* properties, and other structures. First floor flooding was also used as the benchmark condition for non-residential properties.

Storms were evaluated based on their statistical chance for occurrence in any given year. Tabulation 5 shows the number of properties affected and the relative building and content damage that would result from storms of various magnitudes:

**Tabulation 5 - Buildings Flooded and Damages Incurred by Storm Event
 Dunloup Creek Watershed
 Fayette and Raleigh Counties, WV
 (2005 dollars)**

Storm Occurrence	Buildings Flooded	Total Damages
1 percent chance in any year (100 year storm)	298	\$14,629,820
2 percent chance in any year (50 year storm)	277	\$10,326,021
4 percent chance in any year (25 year storm)	255	\$6,407,164
10 percent chance in any year (10 year storm)	176	\$2,417,019
20 percent chance in any year (5 year storm)	97	\$801,978

5.0 SCOPE OF THIS ENVIRONMENTAL IMPACT STATEMENT (EIS)

This section documents the range of issues and impacts considered in developing this document. The concerns identified during the project scoping are summarized in Tabulation 6. The degree of concern and relevance to the *proposed action* were determined by the consensus of the technical specialists involved in the development of this Watershed Plan – Environmental Impact Statement.

**Tabulation 6 - Summary of Scoping
Dunloup Creek Watershed
Fayette and Raleigh Counties, WV**

Resource Concern	Relevant to the Proposed Action?		Rationale
	Yes	No	
Sponsors, Public, Agencies			
Flood Damages	X		Primary Resource Concern
Soil Erosion and Sedimentation		X	Not Identified as a Resource Concern
Agricultural Productivity		X	Insignificant Land Use in Watershed
Water Supply		X	Not Identified as a Resource Concern
Recreation	X		New River National River designation
Water Quality	X		Secondary Resource Concern
NRCS Requirements			
Air Quality		X	Project not in air quality non-attainment area
Ecologically Critical Areas		X	None present in area of project impact
Endangered and Threatened Species	X		No federally listed species likely to be affected; fulfilled consultation with <i>US Fish & Wildlife Service</i>
Environmental Justice	X		Beneficiaries are rural, limited resource residents
Essential Fish Habitat		X	Dunloup Creek is not an essential fish habitat
Floodplain Management	X		Resource Concern
Historic, Scientific, and Cultural Resources	X		Resource Concern
National Economic Development Account	X		Refer to Standard Tables and Summary for NED account information
Natural Areas		X	No adverse affects
Parklands		X	No adverse affects
Prime & Unique Farmland		X	None Identified in project area
Public Health & Safety	X		Resource Concern
Riparian Areas	X		Potential to improve riparian habitat along 5.6 miles of stream in project area
Scenic Beauty		X	See discussion under Wild & Scenic River
Waters of the US	X		No adverse affects
Wetlands	X		Limited potential for wetland re-establishment on Philo soils
Wild & Scenic Rivers	X		National River Status – Dunloup Creek is tributary to the New River, which is a national river
Fish & Wildlife Resources	X		Opportunity to improve fishery habitat in lower 12 miles of creek and wildlife habitation on up to 203 acres of floodplain

AFFECTED ENVIRONMENT

The affected environment is the floodplain of Dunloup Creek in the residential areas of Kilsyth, Mt. Hope, Glen Jean, Red Star, and Harvey. The floodplain is developed in densely compacted communities, separated by short, undeveloped stream segments. The area is subject to repetitive flooding. Human health and safety are threatened when floodwaters rise rapidly. Natural floodplain characteristics are limited because of floodplain development.

Off-site impacts will include water quality improvements to the New River. Dunloup Creek is a tributary to the New River, and as such, contributes sewage directly to this National River by way of dysfunctional septic systems and straight pipes from homes along Dunloup Creek. Dunloup Creek enters the New River at Thurmond, just downstream of where rafters embark on river trips. Reducing the number of homes in the floodplain will reduce the sewage contributions to the stream and enhance water quality in Dunloup Creek and downstream in the New River.

6.0 ALTERNATIVES ANALYSIS

Several alternatives for reducing flood-related problems were evaluated for the Dunloup Creek watershed, including dams, channel modifications, dikes, clearing and snagging, relocation, flood-proofing, voluntary floodplain buyouts, and combinations of structural measures.

Alternative 1 – No Action (Future without Project Action)

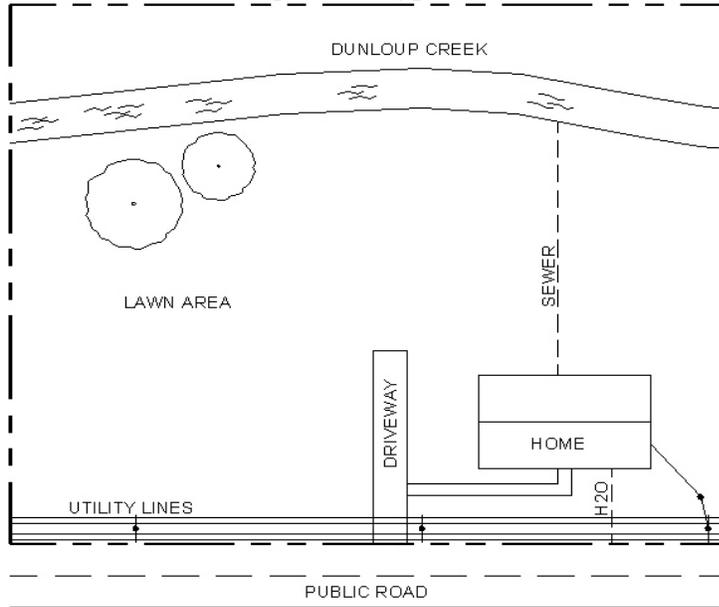
This alternative involves taking no action and allowing the existing conditions to remain. Properties will continue to experience periodic flooding along with the resulting damage. No improvements to the water quality of Dunloup Creek will be made. People living in the floodplain areas will continue to be exposed to the potential dangers and risks from floodwaters.

Alternative 2 – Voluntary Floodplain Buyout (Recommended Alternative)

This alternative was determined to be the most effective way to reduce flood-related problems in the watershed study area. The acquisition of flood prone properties from the floodplain is a permanent mitigation solution that eliminates the flood-damage cycle and reduces risk to human life. The benefits of this alternative can be realized within a relatively short time. Therefore, floodplain acquisition (or the *voluntary floodplain buyout*) is the recommended planned project action. A voluntary buyout plan for threatened properties within the 100-year floodplain would be implemented. Buildings and other facilities would be removed from each acquired site to restore the floodplain to more natural conditions. The property would be maintained in perpetuity as natural floodplain. The Example Lot Plan in Figure 2 shows some of the elements representing existing conditions. Restoration of the floodplain would include the following work: demolition of structures; removal of walks, driveways, and other impervious surfaces; disconnection of utilities; removal of septic tanks and other identified underground tanks; filling basements or re-grading crawl space areas; removal of any remaining trash or waste; capping of private water wells; and seeding and mulching. This alternative includes active floodplain management to restrict future construction projects within the 100-year floodplain. Similar programs have been and continue to be successful in numerous states, including Alabama, Alaska, Arizona, California, Florida, Louisiana, and

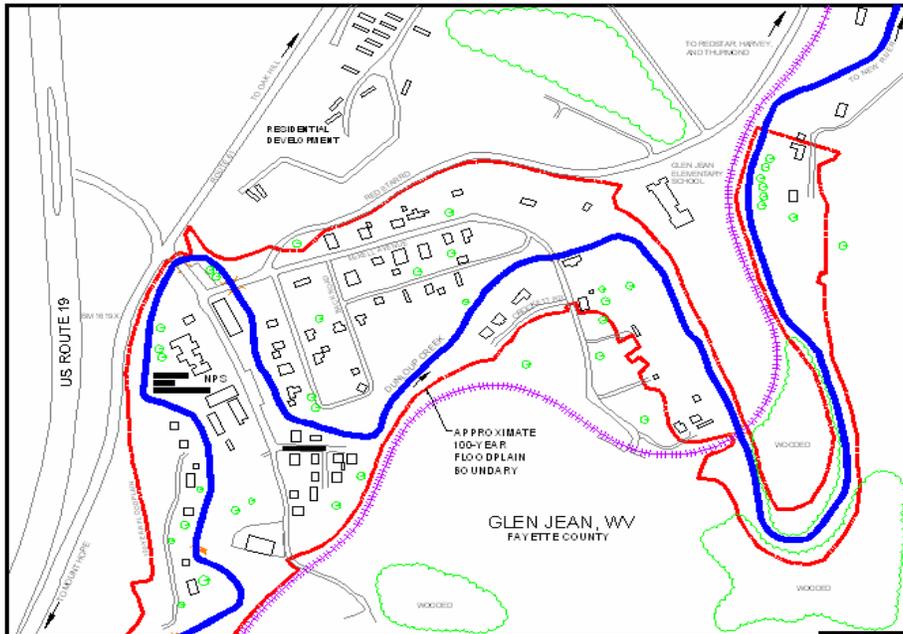
Oklahoma. A similar program in Arizona is referred to as the *Flood prone Properties Acquisition Program*.

Figure 2 – Typical Lot Plan



In Glen Jean, the floodplain is wide in the most heavily developed areas of the community (See Figure 3). In this setting, residents are at risk due to flooding and the natural stream channel is constricted by manmade streambank protection. If this area is restored to a natural floodplain, the stream will be free to meander and naturally adjust its course as required to carry its sediment load. The restored floodplain can be used for other beneficial uses, such as parks, greenways, picnic areas, hiking trails, wildlife viewing, etc.

Figure 3 - Glen Jean Map



For additional details, see Section “15.0 Provisions of the Recommended Alternative” of this document.

Alternatives Considered But Dismissed

A number of alternatives were considered to address flood related problems in this watershed. On April 15, 1957, the *US Army Corps of Engineers* (COE) evaluated the possibility of making channel improvements and concluded at that time that the cost of the improvements would exceed the value of the properties being protected. The origins of some of these alternatives date back to 1966, or earlier, when the Soil Conservation Service (now NRCS) started evaluating possible ways to reduce or eliminate flooding along Dunloup Creek. In 1963, documentation shows that 98 landowners along Dunloup Creek reported \$48,000 worth of flood-related damages. Flood depths up to 6-feet on first floors were reported. Since the 1960s, structural solutions for flood control have increased in cost and complexity.

There are limited opportunities for flood control dams in the Dunloup Creek Watershed due to extensive residential development along tributaries and Dunloup Creek. Map studies and field reconnaissance identified two potential sites for flood control dams, which are included in the alternatives.

The following structural and non-structural alternatives were considered, but dismissed for the reasons stated.

Flood Control Dam at Site #1 (Kilsyth Hollow)

A single-purpose flood control dam, Site #1, was evaluated as an alternative to reduce flooding. This site is located in Kilsyth Hollow (see Figure 4), on the headwaters of Dunloup Creek. Site #1 was evaluated as a roller-compacted concrete structure, 72 feet tall, and 400 feet long, which would be the most feasible type of dam for this site because of the limited availability of suitable on-site fill material for an earthen structure. The permanent pool behind the dam would cover approximately 16 acres. The flood pool would expand to 31 acres. Site 1 would control 2,580 acres of drainage area, or 8 % of the watershed.

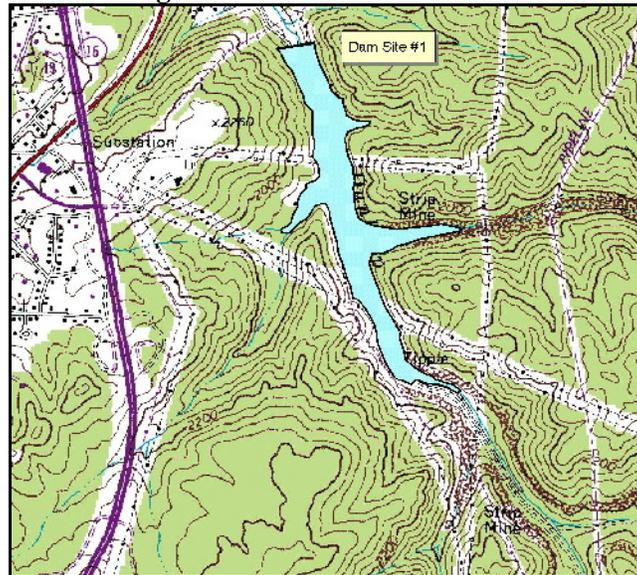
Construction of this dam would require the removal of three homes and result in the inundation of some private land. Local Sponsors would be responsible for all landrights acquisition associated with Site #1. Topographic maps indicate that 4,593 feet of railroad right-of-way, 5,891 feet of road, and associated utilities would be impacted by Site #1.

There are significant geological concerns associated with this potential dam site. At this location, the Sewell coal is at an elevation of 1790 feet. That places the Sewell coal 30 feet below the streambed at the dam site. However, the Sewell coal rises in elevation as you move upstream from Site #1. At the upstream end of the impoundment, the Sewell coal is present at the level of the valley bottom. In Shepherd Spring Branch, which flows into Dunloup Creek just upstream of the evaluated impoundment, the Sewell coal was surface mined. The USGS 7.5' topographic map shows a mining disturbance about 800 feet downstream from the mouth of Shepherd Spring Branch of Dunloup Creek and 1,650 feet upstream from the evaluated impoundment. That point corresponds to an area on the mine maps where the mine works appear to intersect Dunloup Creek. From that point downstream to the site of the evaluated dam, the mine works on the east side of Dunloup Creek are always less than 200 feet horizontally from the stream. At Site #1, the first concern would be the proximity of Sewell coal mine works within 200 feet horizontally of the dam. Additional structural measures would be needed to ensure the structural integrity of the dam. The second concern would be the proximity of the Sewell coal mine works to the impounded water.

Structural measures would be required to ensure that water does not seep excessively into or catastrophically break into the adjacent mine works.

It would cost an estimated \$12 million to build a roller-compacted concrete dam at Site #1, not including costs for property rights, utility relocations, or a reservoir liner to prevent seepage. The effectiveness of Site #1 was evaluated based on the number of first floor flooding reduced downstream and the reduction in flood levels at locations throughout the watershed. Site #1 would only control a small portion of the watershed drainage area, thereby limiting its effectiveness. Based on the results of economic and hydrology/hydraulic analyses, Site #1 is not cost-effective. This alternative was eliminated as a viable solution.

Figure 4 - Dam Site #1 Location



Flood Control Dam at Site #2 (Mill Creek)

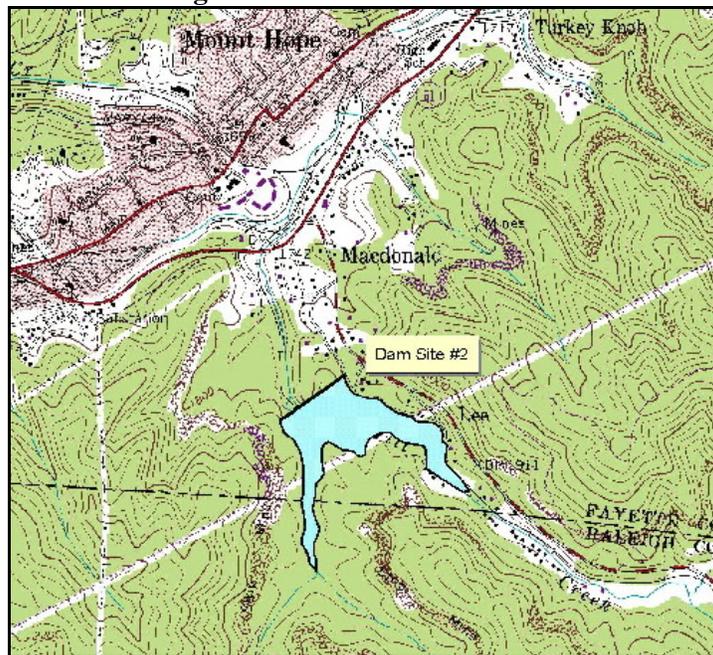
A single-purpose flood control dam, Site #2, was evaluated as an alternative to reduce flooding. This site is located on Mill Creek, (see Figure 5 - Dam Site #2 Location) a tributary to Dunloup Creek that enters the floodplain between Mt. Hope and Glen Jean. At Site #2, the Sewell coal is at an elevation of 1880 feet. That puts the Sewell coal 40 feet above the top of dam at the proposed site. The Sewell coal rises in elevation as you move upstream from the impoundment. Therefore, even though the Sewell coal has been extensively mined in the immediate area, it would not be a factor in the design of Site #2.

Site #2 was evaluated using two construction methods, roller-compacted concrete and earth and rock fill. The topography of the valley where Site #2 would be located is not ideal for dam construction, but it was still considered as one of the few possible dam sites available. Substantial cutting and filling would be required, increasing the cost for this site. A dam at this site would be about 107 feet tall and 1,010 feet long. The permanent pool behind the dam would cover approximately 13 acres. The flood pool would expand to 33 acres. About 4,930 acres of drainage area, or 16%, of the watershed would be controlled by Site #2. Construction of this site would require the removal of 11 homes and the inundation of many acres of private land. Sponsors would be responsible for the acquisition of all landrights. Topographic maps

indicate that 2,530 feet of railroad right-of-way, 742 feet of road, and associated utilities would be impacted by Site #2.

It would cost an estimated \$22 million to build an earth and rock fill dam at Site #2, not including costs for property rights, utility relocations, or disposal of excess excavated material. The cost of constructing a roller-compacted concrete (RCC) dam at this location would be 3-to-4 times the cost of an earth dam, which would make an RCC dam economically infeasible. The effectiveness of Site #2 was evaluated based on the number of first floor flooding reduced downstream and the reduction in flood levels at locations throughout the watershed. Site #2 controls a relatively large drainage area, but it is below the damaged areas of Kilsyth and Mt. Hope, thereby limiting its effectiveness. Based on the results of economic and hydrology/hydraulic analyses, Site #2 is not cost-effective. This alternative was eliminated from further consideration.

Figure 5 - Dam Site #2 Location



Flood Control Dams at Sites 1 and 2

This alternative consists of constructing dams at both Sites 1 and 2. The construction specifics and costs for these sites were previously described. Approximately 7,510 acres of drainage area, or 24%, of the watershed would be controlled if both sites were built. The combined cost for both sites is estimated at \$34 million, not including costs for property rights, utility relocations, disposal of excess excavation materials, and other incidental costs. The effectiveness of this alternative was based on the number of first floor flooding reduced downstream and the reduction in flood levels at locations throughout the watershed. Based on the results of economic and hydrology/hydraulic analyses, this alternative is not cost-effective. This alternative was eliminated from further consideration.

Channel Construction (2.0 Miles)

Even though there are many reasons that make large channel projects impractical, channel modification was evaluated as an alternative for reducing flood damages. Traditionally engineered channels are only used in high-density urban environments where options are limited. Even without considering the economics of this alternative, this type of channel project at this location would probably not be approved due to the aesthetics and environmental impacts. A fifty-foot wide, 10,683 feet long, concrete-lined channel extending from the bridge at Harvey to the railroad bridge downstream of the Glen Jean Post Office was analyzed (see Figure 6 - Example Channel Cross-Section). As depicted by the example cross-section, even a rectangular channel would be wide and very deep in some reaches. Construction of this channel would require the removal of homes and structures, modification of bridges and culverts, and modification of sewer line crossings and other impacted utilities. The local Sponsors would be responsible for acquisition of all landrights associated with the channel alternative and associated modifications to utilities, bridges, and culverts.

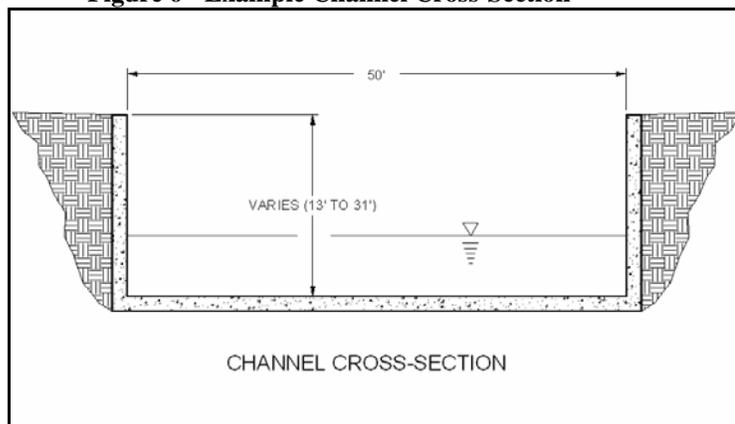
Due to the impractical nature of constructing a large channel of this type and the lack of flood control benefits, this alternative was considered, but not developed in detail. The estimated construction cost and technical assistance cost for this alternative would be \$68 million, without considering other associated costs, such as utility modifications, real property rights, construction access roads, etc. The cost of constructing a trapezoidal rock riprap-lined channel would be less expensive, but would require additional right-of-way and would probably still require concrete lining in some reaches to handle high velocities. Operation and maintenance costs for any viable channel solutions would be ongoing and expensive. The effectiveness of this alternative was based on the number of first floor flooding reduced downstream and the reduction in flood levels at locations throughout the watershed. Based on the results of economic and hydrology/hydraulic analyses, this alternative is not cost-effective. This alternative was eliminated from further consideration.

Channel Construction (2.3 Miles)

For reasons cited for the channel in alternative 4, this alternative was also considered, but not developed in detail. This alternative considers a more extensive channel modification of 12,215 feet. A fifty-foot wide, concrete-lined channel extending from the bridge at Harvey to the railroad bridge upstream of the Glen Jean Post Office was analyzed (see Figure 6). Construction of this channel would require the removal of homes, modification of bridges and culverts, and re-routing of sewer lines and other affected utilities. The local Sponsors would be responsible for acquisition of all landrights associated with the channel alternative and associated modifications to utilities, bridges, culverts, and other utilities.

The estimated construction cost and technical assistance cost for this alternative would be \$78 million, without considering other associated costs, such as utility modifications, real property rights, construction access roads, etc. The effectiveness of this alternative was based on the number of first floor flooding reduced downstream and the reduction in flood levels at locations throughout the watershed. Based on the results of economic and hydrology/hydraulic analyses, this alternative is not cost-effective. This alternative was eliminated from further consideration.

Figure 6 - Example Channel Cross-Section



Dikes

Flood control dikes were briefly considered, but quickly dismissed for reasons similar to those mentioned for the channel construction options and for reasons discussed below. The construction of dikes would be cost-prohibitive and would still expose residents to flooding dangers if a larger than expected storm occurs. Under special circumstances in specific locations, dikes are sometimes the only option available – typically in densely populated urban areas. In addition to the initial high construction costs, dikes are also environmentally obtrusive, require land acquisition, affect the wildlife habitat, require ongoing maintenance, and would have limited flood-reduction benefits. Runoff collecting behind the dikes would require pumps to discharge the stormwater over the dikes into the stream to maintain the integrity of the dikes.

Dike alternatives were evaluated in more detail as documented in the 1975 Plan and Environmental Impact Statement by the *Soil Conservation Service*. One dike alternative for the Kilsyth-Mount Hope area was considered as 21,700 linear feet of earth and concrete dike with an average height of six feet. This alternative would only provide protection for a 20-year frequency flood and would cost in excess of \$12 million to construct. The right-of-way for this dike would require the removal of 40 homes and other buildings. Another dike was considered for the Glen Jean to Redstar area consisting of 11,000 linear feet of earth dike with rock riprap lining at an average height of 10-feet. This dike would provide 100-year protection, but would also require the removal of 24 houses and commercial buildings. The cost to construct the Glen Jean dike would be in excess of \$8 million. More analysis would be required to determine the feasibility of protecting the Kilsyth-Mount Hope area from a 100-year flood using dikes. It can be assumed this would be an expensive solution requiring the relocation of many buildings it would be designed to protect. The required rights-of-way for these dikes would be 100-feet minimum and would destroy the riparian habitat along the stream where they were constructed. The Kilsyth-Mount Hope dike would require three pumping plants requiring perpetual operations and maintenance. Additionally, the construction of the dikes would require relocation of many of the residences that they would be designed to protect, which would reduce the economic benefits of this alternative and would have limited flood-reduction benefits. For these reasons, this alternative was eliminated.

Clearing and Snagging

Even though clearing and snagging is a channel maintenance function, it was included as an alternative to address public concern for this option. Since this alternative would have little or no impact on flooding, it was not developed in detail. About 13,100 feet of existing channel would be cleared of debris and vegetation that might be growing in the channel or along the banks. This option would not involve making the channel wider, deeper, or straighter. The clearing and snagging option would not require the removal of any homes. There would be no modification of bridges, culverts, or utilities. The local Sponsors would be responsible for maintaining the stream conditions after the initial clearing and snagging, which would require annual stream maintenance. The cost for the initial clearing and snagging is estimated at \$200,000. This alternative was eliminated from further consideration.

Flood-proofing Buildings

Although flood-proofing buildings can be accomplished, it would not be an effective way to protect life and property in this watershed. Flood-proofing was dismissed for numerous reasons. Even if the structure is enhanced to be flood-resistant, there are still serious risks to any occupants remaining in these structures during and after flooding. During a flood it is impossible to predict what types of objects will be carried downstream by swiftly moving floodwaters – these objects may strike people or the buildings they are stranded in. Examples of floating debris include campers, cars, mobile homes, recreational vehicles, propane tanks, and logs. Other health risks would remain, including occupants being stranded and possibly left without food, water and medicines; emergency vehicles would be unable to reach people if needed; and exposure to possibly contaminated mud and debris following the flood would pose health risks. Many of the people stranded in their flood-proofed homes would require evacuation by emergency personnel, which places more people in harm's way and is costly. This alternative would require all of the homes with a first floor below the base flood elevation to be elevated to one foot above the base flood elevation, which would be expensive and time consuming. Elevating homes and other buildings would make them harder to access, especially for elderly and disabled persons. In the event of a larger storm event, the buildings would still be damaged and occupants could be stranded. The *preferred alternative* permanently removes residents from the floodplain thereby eliminating the hazard from a 100-year or larger storm. The following are just a few of the modifications required to make a building more flood-resistant:

- Anchoring building to foundation
- Electrical modifications for safety
- Securing fuel tanks to resist flotation/overturning
- Raising buildings above flood levels
- Relocation of hot water heaters and furnaces to floors above flood levels
- Other necessary improvements to make homes decent, safe, and sanitary.
- Extension of pipes and wiring to raised floor levels
- Adding or extending stairways
- Providing ramps for accessibility
- Proper venting of crawl space areas
- All utilities would be elevated above flood levels. Basements would not be used as storage or living space.

In many cases the cost of flood-proofing a building would exceed the market value of the property. It would not make economic sense to possibly spend up to \$75,000 to flood-proof a home with a lower market value. Adding to the aforementioned disadvantages of this alternative would be the cost of making these homes “decent, safe, and sanitary”, which most likely would require compliance with the International Building Code and making homes accessible for the occupants.

Because this alternative does not meet the purpose of this project, a detailed cost estimate was not developed. A rough, preliminary cost estimate for this alternative indicates a cost of about \$19 million. The execution of this type of project would take years to accomplish, require specialized construction services, and involve temporary displacement of occupants during the construction. Even after the expenditure of these funds, there would still be damage and health risks caused by floating debris impacts; scouring around the structures; trash and debris left after the water subsides; contamination from sewer overflows and hazardous materials; damage from excessive moisture and mold; damage to public utilities; etc. This alternative was eliminated from further consideration.

Building Relocation

This alternative was considered, but not developed in detail. It is possible to move structures from one location to another, but for the watershed as a whole, this is not a cost-effective solution. Typically, this is not a desirable alternative unless there are some other overriding factors involved, such as historical significance of a structure or other special characteristics making the home worth the effort to move it. In many cases, the cost to prepare a new building site (with utilities and foundation) would exceed the fair market value of the building being moved. Due to the age and condition of many of the homes, it would not be possible to move them without damaging them, or they would require extensive structural reinforcing before they could be moved. Some homes would be required to meet building code requirements at their new location. In some cases, the existing homes wouldn't meet the requirements of being decent, safe, and sanitary without renovation work. This alternative would probably have a lower participation rate because some homes couldn't feasibly be moved; some couldn't physically be moved; some owners would not be interested in moving their homes; and it would be a more difficult process for the homeowner to endure. Homeowners interested in this option would need to pursue this on their own. Additional information is available from the *Federal Emergency Management Agency* (FEMA) at www.fema.gov. A detailed cost estimate was not developed for this alternative, but a rough cost for this alternative was estimated at \$33 million using an average cost of \$137,400 per home moved and assuming the same number of participants as with the buyout alternative.

Mandatory Floodplain Relocation

Mandatory floodplain relocation was considered but not developed in detail as a viable alternative. There is an existing voluntary floodplain buyout program in Fayette County under the administration of the FEMA. This program has a waiting list for residents who want to move voluntarily. The community acceptance of the FEMA program indicates a likelihood of success with a voluntary approach under the PL-566 program. The Sponsors also expressed a strong desire to allow residents to have a choice. Given these considerations, a mandatory floodplain evacuation alternative was not developed. Community support would be jeopardized by the threat of eminent domain, potentially causing the entire project to falter.

Flood Warning System

The installation of a flood warning system was considered but not considered a workable solution. A flood warning system may provide time for some residents to escape flood waters, but it would not directly protect them from flood hazards. Additionally, a flood warning system would not protect property from flooding, nor would it restore the floodplain function. Flood warning systems depend on having adequate time for an advanced warning and evacuation by the residents. They are more reliable in areas where the water levels rise slowly or when the residents are located a sufficient distance downstream to allow time for warning and reaction. In the Dunloup Creek Watershed flash flooding occurs, which would

not allow enough time for warnings to be issued and people to react. The community of Kilsyth is high in the watershed and subject to rapid rising water conditions. Even with a flood warning system, most of the residents in the watershed would not be able to react quickly enough to reach safety. Many residents are elderly, live alone, or would otherwise require assistance to get out quickly. Removing residents from the floodplain is the best solution to reducing unnecessary loss of life because it is simple, reliable, low-maintenance, and works for the long-term.

The state of West Virginia has done extensive work and research on flood warning systems. The Statewide Flood Protection Plan contains detailed information about existing and future plans for flood warning systems throughout the state. The statewide plan also identifies shortfalls and needs for completion of flood warning systems. The complete 365 page document is available in PDF format from the following website: <http://www.wvca.us/flood>. The existing emergency broadcast system for flooding relies heavily on radio and television communications, which some residents do not have or may not have turned on during a flood. There are no sirens to alert residents. Currently, there are no rain or stream gages in the Dunloup Creek Watershed, but the WV Division of Homeland Security and Emergency Management intends to install some within the next five years.

Major concerns documented in the statewide plan are that flood warnings are not understood by many people, and the warnings are not considered reliable and many times are not timely. Flood warning systems are complex requiring many interdependencies, including reliable technology, rain gages, compatible software, and human interpretation. A flood warning system is also subject to vandalism and requires ongoing maintenance. Funding for rain gage maintenance is always a concern.

The state is encouraged to continue its work for a flood warning system in this watershed. Even if everyone participates in the *voluntary floodplain buyout*, the following needs for a flood warning system will remain: visitors in floodprone areas need warned; motorists using roads in the watershed; recreational users in the area; and for floods exceeding the estimated 100-year level.

**Tabulation 7 - Summary and Comparison of Candidate Plans
Dunloup Creek Watershed
Fayette and Raleigh Counties, WV**

Effects	Alternative 1	Alternative 2
Measures	No Action	Voluntary Floodplain Buyout
Project Investment	\$0	\$13,927,500
National Economic Development Account		
Beneficial annual	\$0	\$1,029,000
Adverse annual	\$0	\$684,800
Net beneficial	\$0	\$344,200
Environmental Quality Account		
Endangered & Threatened Species	No adverse effects	Adverse effects unlikely
Riparian Areas	Riparian areas will continue to be compromised by urban development	Riparian areas will gradually be restored as properties are acquired and natural vegetation is restored along up to 5.6 miles of stream in the project area

Effects	Alternative 1	Alternative 2
Waters of the US	Waters of the US will continue to be compromised by sewage and trash contamination	Waters of the US will be improved as homes with non-functioning septic systems and straight pipes are removed from the floodplain
Wetlands	Wetlands that have been converted to developed property will continue to be compromised	Slight improvement is anticipated as potential wetlands on Philo soils are restored to natural floodplain conditions
Wild & Scenic Rivers	Dunloup Creek will not be improved, thereby not improving the New River National River	There will be a positive effect on the riparian areas, water quality, and floodplain functions of Dunloup Creek with the removal of residential homes from flood prone areas. This will, in turn, improve the New River.
Fish & Wildlife Resources	Fish & wildlife resources will continue to be compromised without riparian areas, wetlands, and other floodplain characteristics that are negatively impacted by development	Fish & wildlife resources will gradually improve on up to 203 acres as development in the floodplain is removed and natural conditions are restored. Fishery habitat will be improved along the lower 12 miles of Dunloup Creek.
Other Social Effects Account		
Flood Damage Reduction	There will be no reduction in flood damages	Flood damages to residential property will be reduced by 100% for participating homeowners
Public Health & Safety	Public health & safety are at risk with continued flooding	Public health & safety are improved as floodplain residents relocate out of harm's way
Recreation	There will continue to be a diminished overall recreational experience for tourists who travel to the New River along Dunloup Creek	The overall recreational experience of the New River National River Area will improve as flood prone properties are removed and the floodplain function is restored.

Effects	Alternative 1	Alternative 2
Water Quality	Water quality will not improve	There will be slight measurable improvements to water quality with a decrease in sewage and trash from the floodplain
Environmental Justice	No effect	Disadvantaged communities will benefit from project action
Floodplain Management	floodplain management will continue to be regulated at the county government level	Buildings will be removed from up to 203 acres of the floodplain through voluntary buyouts. Obstructions to flow will be reduced.
Historic, Scientific, and Cultural Resources	No effect	Avoidance, mitigation, and minimization of effects will be considered for all properties eligible for the National Register of Historic Places.
Regional Economic Development Account		
<i>Average Annual Beneficial Effect (Benefits)</i>		
Region	\$0	\$1,029,000
Rest of Nation	\$0	\$0
<i>Average Annual Adverse Effect (Costs)</i>		
Region	\$0	\$0
Rest of Nation	\$0	\$864,800

7.0 Environmental Consequences

Affects of Alternative Plans

The two remaining alternatives must be evaluated and assessed for the various economic, ecological, and other affects. This information will be used to make a decision on the best alternative. The *No Action Alternative* is the same as the Future without Project condition. In this section the affects of Alternative 2 (voluntary floodplain buyout) are compared to the *No Action Alternative*. The structural alternatives considered for this watershed would not be effective at solving the flooding problem, and are not included in this comparison.

Flood Damage

Existing Conditions - Flooding cause's major urban damage and is an on-going problem in the Dunloup Creek Watershed. The most significant damages occur in the communities of Kilsyth, Mount Hope, Glen Jean, Redstar, and Harvey.

The NRCS completed a flood damage assessment of the properties in the 100 year floodplain. An inventory of 357 residential, commercial, and public properties was compiled with information such as first floor elevation, elevation that damage begins, estimated building value, estimated content value, type of building construction, and relative location of the property in relation to the stream. Of the total properties inventoried, 298 properties experience some degree of flood damage with the 1% chance (100 year) flood. Property damages were estimated based on the use of depth-damage coefficient tables. Average annual building and content flood damages total \$980,741. Additional damages occur to transportation routes, public utilities, and other infrastructure in the floodplain.

Alternative 1 - No Action (Future without Project) – The *No Action Alternative* will have no affect on reducing flood damages in the floodplain.

Alternative 2 – Voluntary Floodplain Buyout – Flood damages will be reduced by 100% for those property owners that participate in the voluntary buyout and relocate outside of the floodplain. These benefits will extend into perpetuity, resulting in a permanent reduction in flood damages. There will be immeasurable benefits to peace of mind and human health and safety for those residents who move from flood prone areas. There will also be reduced costs for debris removal, rescue operations, and emergency services that must be provided to residents in the floodplain when a flood occurs. There will be reduced need for federal, state, and local government assistance to residents who are no longer exposed to flooding.

Recreation

Existing Conditions - The only aquatic resource in the watershed possessing recreation potential is Dunloup Creek. However, water quality of Dunloup Creek is poor due to bacterial contamination, which limits the recreational use of the stream. Improvement of the water quality would improve the potential of Dunloup Creek as a recreational fishery resource. Dunloup Creek is not suitable for any water-contact recreational activity due to high fecal coliform in the stream. Also, stream access is limited, with no designated parking or access areas along the stream. There are currently no lakes in the watershed with recreation potential.

Alternative 1 - No Action (Future without Project) - The *No Action Alternative* will have no affect on recreation in the watershed.

Alternative 2 – Voluntary Floodplain Buyout - The slight improvements in water quality resulting from reduced fecal coliform levels and the eventual habitat improvements resulting from improved riparian vegetation may slightly increase the potential for water-based recreation. This alternative should not influence the *West Virginia Division of Natural Resource's* (WVDNR's) trout stocking program in the lower reaches of Dunloup Creek. Fishing in the upper reaches of the watershed is limited by the small size of the stream. Boating opportunities are also limited by the small size of Dunloup Creek. Properties vacated by this alternative may provide the opportunity for the creation of trails and linear park areas in the floodplain adjacent to the creek.

Water Quality

Existing Conditions - Dunloup Creek was listed on the 1998 303(d) primary stream list for water quality limited waters. According to this list, 9.2 miles of Dunloup Creek from the headwaters to Glen Jean, have water quality impaired aquatic life, caused by aluminum contamination. The source of the aluminum is undetermined. The 1998 303(d) list also listed 4.0 miles of Meadow Fork, a tributary of Dunloup Creek,

as impaired for pH and metals. The source of the pH and metals was mine drainage. In response to these listings, the *US Environmental Protection Agency* (US EPA) developed and subsequently finalized metals, pH, and fecal coliform Total Maximum Daily Loads (TMDLs) for the Dunloup Creek watershed in September 2002. A TMDL is a plan of action to clean up polluted waters.

In June of 2003, the 2002 303(d) list was approved by the US EPA. That document listed Dunloup Creek as impaired for fecal coliform, aluminum, and iron. It also listed Meadow Fork as impaired for aluminum, iron, manganese, and pH. The 2002 303(d) list added Mill Creek of Dunloup Creek. Mill Creek was listed as biologically impaired. The source or cause of the biological impairment in Mill Creek was listed as unknown.

In December of 2004, the 2004 303(d) list was approved by the US EPA. The 2004 document continued to list Dunloup Creek as impaired for fecal coliform and iron. Also, Meadow Fork was listed as impaired for iron, manganese, and pH. However, both Dunloup Creek and Meadow Fork were de-listed for aluminum due to the change in the state's water quality criteria for aluminum. In the period between the approval of the 2002 303(d) list and the approval of the 2004 303(d) list, the aluminum water-quality criteria changed from total aluminum to dissolved aluminum. Since the state did not have sufficient data to make a determination if dissolved aluminum levels in Dunloup Creek and Meadow Fork were above criteria, aluminum was removed as a parameter not meeting water quality criteria. The 2004 303(d) list continued to list Mill Creek as biologically impaired from unknown causes. The TMDL for Dunloup Creek for fecal coliform covered the Mill Creek watershed. However, if further research determines that the biological impairment in Mill Creek is caused by iron and/or pH, a TMDL for those parameters will be completed by December 2007.

Water samples from Dunloup Creek were collected and analyzed monthly by the *United States Geological Survey* (USGS), under contract with NRCS, from October 1994 through September 1995. The sampling station was located at Harvey, approximately 5 ½ miles above the mouth of Dunloup Creek. Eight of the 12 samples exceeded the West Virginia State water quality standard for fecal coliform of 200 colonies/100 ml. Water quality monitoring of Dunloup Creek more recently by the *National Park Service* confirmed routine and continuous bacterial contamination.

The 2002 TMDL Report for Dunloup Creek states that failing septic systems are an important source of fecal coliform bacteria. This report cites personal communication with the *West Virginia Department of Environmental Protection* (WVDEP) indicating that because of the steep terrain and soils in the watershed, septic systems are not considered an efficient means of wastewater treatment. Data from the 1990 Census estimates that 44 percent of the households in Fayette and Raleigh Counties have septic or other similar wastewater systems.

Straight pipes (direct drainage of wastewater to the creek) are another important source of coliform bacteria contamination. A facilities plan for the City of Mount Hope indicates there are about 150 homes in the Kilsyth and Price Hill communities using straight pipes. An additional 200 homes in the Mount Hope vicinity do not have proper sewer systems or public sewer service.

Alternative 1 - No Action (Future without Project) - The *No Action Alternative* will have no affect on the existing surface water quality.

Alternative 2 – Voluntary Floodplain Buyout - Benefits to water quality will result from the elimination of homes with failing or no sewage treatment systems. The removal of homes, buildings and their associated impervious surfaces will reduce storm runoff and increase water infiltration into the ground.

Contaminants, including fertilizers, pesticides and other household wastes, that are carried to the Creek with surface runoff will be reduced by removing residences from the floodplain. Flood debris and trash in the watershed will be reduced by removing frequently flooded residences. Improved riparian vegetation on vacated lots will reduce streambank erosion and improve shade to the stream resulting in slightly cooler water temperatures and improved water quality.

Endangered and Threatened Species

Existing Conditions - No federally listed threatened or endangered species of plants or animals are known to exist in the Dunloup Creek Watershed.

Alternative 1 - No Action (Future without Project) - The *No Action Alternative* will have no affect on threatened or endangered species.

Alternative 2 – Voluntary Floodplain Buyout – According to the USFWS letter of September 27, 2006 “It is unlikely the proposed buyout and removal of flood prone dwellings and businesses will adversely affect any threatened or endangered species.”

Environmental Justice

Existing Conditions - Agencies are required to identify and correct programs, policies, and activities that have disproportionately high and adverse human health or environmental effects on minority and low income populations. Socioeconomic and demographic data were gathered to determine the existing demographic characteristics of the population potentially impacted by the alternatives. Key demographic information is summarized in Tabulation 8.

**Tabulation 8 - Demographic Information
Dunloup Creek Watershed
Fayette and Raleigh Counties, WV**

	Mount Hope (largest town in watershed)	Fayette County	West Virginia
Total Population	1,487	47,579	1,808,344
White	1,097	44,125	1,718,777
African American	332	2,650	57,232
American Indian/Alaska Native	5	130	3,606
Asian	1	144	9,434
Of Hispanic or Latino Origin	21	325	12,279
Other Race	31	205	7,016
Total Minority	390	3,454	89,567
Median Household Income	\$18,375	\$24,788	\$29,696
Families Below Poverty Level	153	2,410	70,448
Individuals Below Poverty Level	531	9,878	315,794

Alternative 1 - No Action (Future without Project) - There will be no adverse or beneficial impacts to low income or minority populations with the *No Action Alternative*. Flooding will continue to negatively affect all residents in the floodplain, regardless of their socio-economic status.

Alternative 2 – Voluntary Floodplain Buyout – All potential participants, including minority and low-income residents, will be given the opportunity to participate in Alternative 2. There are no known adverse affects of Alternative 2 to any group of individuals.

Floodplain Management

Existing Conditions -

The 100-year floodplain designates the area inundated during a flood that has a one percent chance of occurring in any given year. Many agencies also recognize a 500-year floodplain, which designates the area inundated during a flood that has a 0.2 percent chance of occurring in any given year. Executive Order (EO) 11988 directs federal agencies to take action to minimize occupancy of and modification to floodplains. Specifically, EO 11988 prohibits the NRCS from funding construction in the floodplain unless there are no practicable alternatives.

Continued enforcement of the statewide flood plan, County floodplain ordinances, and local floodplain ordinances is required. Fayette County actively manages floodplain areas through their comprehensive plan and ordinances. The County also has a building permit program that allows them to monitor activities in the floodplain and to require applicants to meet special construction requirements for buildings in floodplains. The following language is included in Fayette County's Comprehensive Plan (December 2001):

The Future Land Use Map therefore designates land areas along all tributary streams of the County as the Resource Conservation District. These areas include wetlands that are adjacent to tributary streams as well as floodplains, stream valleys, steep slopes, and soils with development constraints. In most cases, only passive recreation use and low density residential development is appropriate in the Resource Conservation District provided the development design is protective of environmentally sensitive features. The qualities of Fayette County's natural resources are an important component of the County's heritage and a major factor influencing the County's continued economic and environmental well being.

The project area for this watershed plan is listed as a “flood prone area” by Fayette County.

Alternative 1 - No Action (Future without Project) - Under the *No Action Alternative*, the voluntary floodplain buyout would not occur, but County floodplain management would continue. County and local officials could encourage homeowners to make improvements to make their homes more flood-resistant.

Alternative 2 – Voluntary Floodplain Buyout - Under Alternative 2, land acquired during the buyout would be restored to a natural state or only be used for approved floodplain uses. Sponsors will be required to preserve these areas as open spaces or other functions compatible with the floodplain. In addition to the county's efforts to enforce proper floodplain management, all properties purchased under this buyout will have deed restrictions placed on the properties as described in the following paragraphs.

Through deed restrictions, the Sponsors shall ensure that properties purchased under this buyout have the following requirements in perpetuity. The Property shall be used only for purposes compatible with open space, recreational, conservation purposes, or wetlands management practices; in general, such uses include parks for outdoor recreational activities, nature reserves, unimproved permeable parking lots and other uses where land remains uninhabited. No new structures or improvements shall be erected on the Property other than:

- A public facility that is open on all sides and functionally related to the open space use, such as a covered picnic area for day use as part of a public park;

- Trails for pedestrians, horse riding, and cycling and related improvements such as pedestrian bridges, boardwalks, historical or educational markers, bicycle racks, and benches;
- Soccer, softball, baseball, and football fields are acceptable provided they do not include bleachers, dugouts, permanent concession stands, or other major permanent structures;
- A public rest room; or
- A structure that is compatible with the uses described above;
- Any structures built on the Property according to this paragraph shall be floodproofed or elevated to the Base Flood Elevation (or 100-year flood level) plus one foot of freeboard.

Acceptable conservation purposes include 1) the preservation of land areas for outdoor recreation by the general public, 2) the protection of the natural ecosystem, 3) the preservation of open space (or woodlands) for the scenic enjoyment of the public, 4) the preservation of a historically important land area, and 5) perpetual conservation easements to restore, and enhance the natural capability of wetlands and floodplains to retain excessive floodwaters, improve water quality and quantity, and provide fish and wildlife habitat.

Lands purchased under this *voluntary buyout* will not be eligible for disaster assistance from any federal source for any purpose related to the property.

If or when the owning Sponsor transfers the property, the Grantor may only convey an interest in the Property to another public entity (federal, state, county, or city) for uses as described above and as allowed by the deed restrictions.

If title to the Property is transferred to a public entity other than a qualified state or federal agency with a conservation mission, it must be conveyed subject to a Conservation Easement that shall be recorded with the deed and shall incorporate all terms and conditions set forth herein, including the easement holder's responsibility to enforce the easement. This shall be accomplished by one of the following means:

- i. The Grantor shall convey, according to above requirements, a conservation easement to someone other than the title holder, or
- ii. At the time of title transfer, the Grantor shall retain such conservation easement, and record it with the deed.

For additional resources and information regarding floodplain management:

To view a copy of the statewide flood plan, visit the *West Virginia Conservation Agency's* website at: <http://www.wvca.us/flood>.

For the full text of EO 11988, visit the following website at the National Archives: <http://www.archives.gov/federal-register/codification/executive-order/11988.html>.

For County information regarding acceptable floodplain uses, contact the Fayette County zoning office at 304-574-4273. Regardless of the county's acceptable floodplain uses, land acquired under this buyout will be restricted to the uses described above under Floodplain Management. In the event of a conflict with requirements, the most stringent requirement will apply.

Historic, Scientific, and Cultural Resources

Existing Conditions - The project area encompasses the coal mining communities of Kilsyth, Mt. Hope, Glen Jean, Redstar, and Harvey. Most of the housing in these areas is associated with coal camps from the early 20th Century. There is currently one archaeological site within the floodplain, but away from the project area. It is expected that all work related to the project will be above the ground surface, and thus will not impact any unknown archaeological sites that may be present. There are two National Register sites listed in or near the immediate project area and neither one of these will be impacted. It is expected that approximately 225 houses are over the age of 50 years. NRCS will consider avoidance and mitigation as a way to minimize the effects for properties eligible for the National Register of Historic Places. The WV NRCS Cultural Resources Specialist is currently in direct consultation with the *West Virginia State Historic Preservation Office* (WV SHPO). A Programmatic Agreement is being drafted that will expedite the process of recordation of any historic properties. The Advisory Council on Historic Preservation (ACHP) has been notified in writing and has declined to participate in the Programmatic Agreement. It is expected that a consultant will be hired to conduct a Historic Structures Inventory and associated historic content report.

Alternative 1 - No Action (Future without Project) – Without future project action, any cultural or historic resources in the Dunloup Creek floodplain will remain subject to flooding.

Alternative 2 – Voluntary Floodplain Buyout – The voluntary floodplain buyout will afford an opportunity to recognize and document any cultural or historic properties that may participate in the program.

Public Health & Safety

Existing Conditions - Public health and safety issues considered in this analysis include the health and safety issues of the area residents and the public at-large, and the protection of personnel involved in activities related to the implementation of the *proposed action*. Public health and safety are in peril as long as residents live in flood prone areas. The elderly, disabled, and young are at particular risk during flooding. Flash flooding is the primary concern in the watershed, when waters rise very quickly and with little advanced warning. The topography of the watershed lends itself to rapid runoff and streams that quickly fill and overflow their banks, resulting in hazards to public health and safety. Residents of Kilsyth have attested to the lightning-fast speed that waters rise in their community. The water rises so fast that even able-bodied residents can become surrounded by water before they have time to safely leave. Adding to this danger is the fact that the primary escape routes, the local roads, also flood to depths making it impossible or dangerous for vehicle travel.

Alternative 1 - No Action (Future without Project) - Under the *No Action Alternative*, the potential for future flooding and related hazards will remain as they exist. Residents would also be susceptible to injury or negative health affects due to unsanitary conditions following flooding, including the potential for exposure to contaminated waters caused by flooded septic and sewer systems. Other safety considerations include the danger of electrical shock from the exposure of electrical wiring to water, compromised access of emergency vehicles due to flooding and damaged roadways following flooding, and other potentially life-threatening risks.

Alternative 2 – Voluntary Floodplain Buyout - Under Alternative 2, the project participants would no longer reside in the most dangerous floodplain areas, which would eliminate safety risks to them. Safety risks for others caught in the project area during a flood event would remain. Construction-related safety risks to the workers implementing the plan would be present for temporary periods. To minimize risks to

safety and human health, all project activities would be performed using qualified personnel trained in the proper use of the appropriate equipment, including safety precautions. In addition, all activities would be conducted according to Occupational Safety and Health Administration (OSHA) regulations.

Public Services and Utilities

Existing Conditions – The presence of public services and utilities varies throughout the communities addressed in this plan. Most of the properties have electrical and telephone service. Only a few buildings within the study area have connections to public sewer services. Public water service is available to most buildings. Many of the buildings have sewer drain pipes extending straight into Dunloup Creek, which degrades the water quality of the stream and poses a public health risk. The City of Mount Hope provides water and sewer services for its customers, but sewer service is not available in the Kilsyth area. The White Oak Public Service District provides services for the communities of Glen Jean, Red Star, Harvey, and other areas not in the proposed *buyout area*. Other utility services available in the *buyout area* include telephone, power, natural gas, cable television, trash collection, and satellite television. The companies providing these utility services have large customer bases with extensive service areas. For example, Appalachian Power’s service area includes most of southern West Virginia.

Alternative 1 - No Action (Future without Project) - Under the *No Action Alternative*, existing conditions will remain as they are. Local communities are encouraged to expand public sewer systems to connect as many residences as practical to reduce the number of direct sewer drains to the stream. Water quality in Dunloup Creek will be improved by reducing the number of direct sewer drains to the stream. However, local communities should not encourage new development in the floodplain by providing sewer connections to existing vacant lots.

Alternative 2 – Voluntary Floodplain Buyout - Under Alternative 2, the removal of buildings from the floodplain would result in fewer utility connections and a reduced demand for services. Utility connections to demolished structures will be properly disconnected or capped in coordination with the proper utility service provider. Water meters and connections would be properly disconnected according to the requirements of the utility service. Water wells will be properly abandoned and sealed according to state wellhead-protection requirements. Plans for extension of public sewer systems would still be encouraged to include buildings outside of the floodplain and to provide service to those choosing not to participate. It is anticipated that there will be enough non-participants to still go forward with the extension of public utilities, and those remaining in the floodplain should be encouraged to connect to any future utilities made available. But, those remaining in the floodplain should be aware of the safety risks associated with flooding hazards.

Riparian Areas

Existing Conditions – Stream riparian areas are maintained as lawns and gardens in community areas. Streambanks in communities have generally light to moderate vegetation, with the quality of riparian habitat improving downstream of Harvey because of the absence of floodplain development. There is limited riparian habitat from Mt. Hope to Kilsyth due to extensive urban encroachment along both sides of the stream.

Alternative 1 - No Action (Future without Project) - The maintenance of lawns, gardens and home sites adjacent to Dunloup Creek would continue with the *No Action Alternative*. The quality of riparian habitat would remain low as the result of mowing and the removal of woody vegetation from streambanks that are near home sites. Riparian corridors would remain fragmented and non-existent in most areas.

Alternative 2 – Voluntary Floodplain Buyout – Approximately 5.6 miles of Dunloup Creek flows through the project area. Properties where homes and businesses are relocated would be vacated and re-vegetated. Riparian and floodplain vegetation and forest communities would be re-established by artificial plantings and through natural vegetative succession. Riparian areas would improve by the gradual restoration of the floodplain to a natural state. Over time, native trees, shrubs, and grasses will become established helping to create a riparian buffer zone. If several people with adjacent lots participate in the project, then the riparian habitat will be less fragmented and a more naturally sustainable riparian corridor will be able to establish. Mowing and the control of woody vegetation along streambanks by participating landowners would be discontinued and riparian vegetation would become re-established. Healthy riparian areas would provide improved habitat for fish and wildlife and would improve the stability of streambanks

Waters of the US

Existing Conditions – Dunloup Creek empties into the New River at Thurmond, and is considered part of the Waters of the US. Development in the floodplain of Dunloup Creek diminishes the quality of the stream and degrades the habitat of the stream.

Alternative 1 - No Action (Future without Project) – Dunloup Creek will continue to be compromised as long as there is development in the floodplain that is not compatible with natural floodplain functions. Alterations to streambanks and channel morphology would continue as residents continue to address streambank erosion and the removal of sediment and debris deposits.

Alternative 2 – Voluntary Floodplain Buyout – There will be a positive effect on Dunloup Creek and downstream Waters of the US with the removal of flood prone residential properties from the floodplain. Streambank clearing and armoring activities would be diminished and morphological features within the stream channel would not be subjected to periodic disturbance or removal.

Wetlands

Existing Conditions - The existence of wetlands historically is not well documented in the Dunloup Creek watershed. Most wetlands that may have existed along Dunloup Creek have been converted to urban and residential uses or obliterated as the result of floodplain fills associated with mining and industrial activities in the area. The Soil Survey of Fayette and Raleigh Counties, West Virginia (Gorman and Espy, 1975) shows four predominant mapping units in the area under consideration for the voluntary buyout alternative. These include the Philo silt loam, Chavies fine sandy loam and made land. A large area downstream of Kilsyth, including much of the Mt. Hope community, is mapped as “Unsurveyed Area.”

The soil description for Philo silt loam states that this soil may have a seasonally high water table within one to two feet of the surface and may contain small areas of poorly drained soils. This soil type is subject to flooding. Philo soil mapping units are found downstream of Mt. Hope and in the Glen Jean and Harvey areas. The description for Chavies soils does not suggest that this soil type has a tendency for high water tables or poor drainage. This soil type is found mainly in the Glen Jean area.

Made land in this region is primarily associated with coal mining areas where mine waste material has been spread on low ground or used to fill bottom lands in narrow valleys along small streams. Because of the coarse nature of this fill, made land areas are not conducive to wetlands. Made land mapping units are found downstream of Harvey and may comprise much of the unsurveyed areas of Kilsyth and Mt. Hope.

Alternative 1 – No Action (Future without Project) – The *No Action Alternative* would not result in the removal of homes or other buildings from the floodplain areas along Dunloup Creek. There would be no potential for the re-establishment of wetland areas, particularly on the Philo soils, because of the removal of flood prone buildings. Areas where wetlands may have been converted would continue to have fill or subsurface drainage maintained and non-wetland uses would continue.

Alternative 2 – Voluntary Floodplain Buyout – By removing flood prone homes and businesses, floodplain areas would be vacated. In addition to riparian and floodplain vegetation becoming re-established in these vacated areas, there is potential for wetland areas to become restored in the Philo soils areas along Dunloup Creek. This potential is improved by restoring the floodplain function on these soils and the removal of artificial drainage that may impede wetland formation. Areas comprised of Chavies soils do not have tendencies for wetlands like the Philo soils; however, inclusions of other soil types with potential for poor drainage may occur in these soils. Made land mapping units and the unsurveyed areas near Kilsyth and Mt. Hope have received fill and the floodplains were altered. These areas do not have soils likely for wetlands to reform.

Wild and Scenic Rivers

Existing Conditions - The New River Gorge National River was designated in 1978 and is administered by the *National Park Service*. The national river area includes 53 miles of the New River from Hawks Nest to Hinton. While Dunloup Creek is not a part of the national river, the lower approximately three miles of the creek lies within the New River Gorge National Park Service designated area. In its present condition, Dunloup Creek contributes sewage to the New River.

Alternative 1 - No Action (Future without Project) - Under the *No Action Alternative*, no effects to the New River National River segment are anticipated. Contamination resulting from sewage and sediment sources would continue unabated.

Alternative 2 – Voluntary Floodplain Buyout - The removal of homes and businesses will reduce the amounts of sewage and other contaminants associated with residential land use into Dunloup Creek. The volume of water and the amounts of contaminants introduced to the New River from Dunloup Creek are comparatively small. Because Dunloup Creek is a tributary to the New River within the national river segment, changes within the watershed that may affect water quality may also affect the water quality of the New River. An improvement of water quality and a reduced sediment load in Dunloup Creek may be negligible to the New River; however, the result of implementing this alternative would be a positive effect upon the New River resource.

Fish and Wildlife Resources

Existing Conditions – A sport fishery in Dunloup Creek is limited to the lower reaches, below Harvey, where the *West Virginia Division of Natural Resources* (WVDNR) stocks trout on a put-and-take basis. Two thousand brown trout (*Salmo trutta*) fingerlings were stocked throughout Dunloup Creek on July 1, 1998.

A fishery survey was conducted by WVDNR on August 6, 1998, at three locations between Harvey and the New River using electro-fishing methods. These sampling locations were 1, 3.25, and 4.25 miles above the mouth of Dunloup Creek at Thurmond. Based on these samples, a total standing crop of fish per acre (in pounds) was 22 lb/ac, 53.2 lb/ac and 64.1 lb/ac, respectively. The standing crops of brown trout were 29.2 lb/ac and 26.8 lb/ac at the two upstream sampling stations. Other game fish collected in these samples were smallmouth bass (*Micropterus dolomeiu*), spotted bass (*Micropterus punctulatus*),

and rainbow trout (*Oncorhynchus mykiss*). Non-game species collected included northern hogsuckers (*Hypentelium nigricans*), rosyside dace (*Clinostomus funduloides*), eastern blacknosed dace (*Rhinichthys atratulus*), and creek chubs (*Semotilus atromaculatus*).

The upper reaches of Dunloup Creek support mainly minnow species and rough fish. A significant fishery is absent above Glen Jean due to the small size of the stream, coal refuse in the stream and impaired water quality.

A diverse population of upland game and non-game wildlife species inhabit the watershed. Species utilizing wetland and riparian areas have been diminished because of the reduction of riparian vegetation and wetland areas because of mining, industrial and residential land uses along Dunloup Creek. No endangered or threatened species or habitats critical to their existence are known to exist within the study area.

Alternative 1 – No Action (Future without Project) – Under the *No Action Alternative*, there will be no adverse or beneficial affects to fish and wildlife in Dunloup Creek and adjacent floodplains.

Alternative 2 – Voluntary Floodplain Buyout - The removal of homes and businesses will improve the fish and wildlife resources associated with Dunloup Creek. Wetlands and natural floodplain attributes will be gradually restored as properties are removed. Stream banks will revert to natural riparian habitat over time, increasing shade and providing natural stream bank stabilization. Sediment and erosion will be reduced over time as urban activities diminish in the floodplain. Runoff from driveways and lawns, and solid waste and trash should diminish, resulting in improved fish and wildlife habitat. Encroachment on the stream will be reduced as human activity in the floodplain diminishes. In-stream habitat improvements may occur directly to the 5.6 miles of Dunloup Creek flowing through the project area. Habitat improvements may be realized indirectly on the approximately 6.5 miles of Dunloup Creek between Harvey and Thurmond (downstream of project area). Up to 203 acres of floodplain habitat may improve following project implementation.

8.0 Adverse Effects Which Cannot be Avoided

It is anticipated that a very small number of houses will be eligible for the National Register of Historic Places, thus creating an adverse effect. All structures eligible for the National Register of Historic Places will be mitigated by submitting photographs and a West Virginia Historic Property Inventory Form for each eligible property.

There are no anticipated adverse environmental effects associated with Alternative 2. Adverse affects to the social structure of the community will occur as neighborhoods experience out-migration of residents from the floodplain. However, these effects are likely to be offset with positive social impacts from reduced flooding and improved human health and safety.

9.0 The Relationship between Short-Term Use and Long-Term Productivity

In the short-term, there will be construction impacts associated with Alternative 2. During demolition and floodplain restoration, there will be short-term increases in noise, dust, sediment, erosion, and traffic. These impacts will be minimized by the use of best management practices. In the floodplain, land use will change from urban to natural floodplain. The long-term productivity of Dunloup Creek as a fishery and natural resource asset will be enhanced with Alternative 2.

10.0 Irreversible and Irretrievable Commitments of Resources

Land that is purchased through the voluntary buyout will be converted from private land to public land. Presently, this land is in residential and urban land use. Funds and labor required to administer the buyout will be irretrievably committed. Funds, labor, and energy expended to demolish the purchased properties and restore the floodplain will also be irretrievably committed.

11.0 Possible Conflicts with Land Use Plans, Policies, and Controls for the Area

This Plan-EIS supports other land use plans and policies in existence in Fayette and Raleigh Counties. Floodplain management will be improved with the removal of homes and buildings from the floodplains of Dunloup Creek.

12.0 Risk and Uncertainty

Estimating project costs and benefits involves a certain degree of risk and uncertainty. Assumptions made during the planning process are based on the best available technology and information at the time of planning. Extended delays between planning and implementation increase the degree of risk and uncertainty. Estimated project costs are based on computed work quantities multiplied by the appropriate unit cost for that type of work. Unit costs are based on historical data from similar projects, indexed to current price levels. Costs can be influenced by several economic factors that cannot be predicted with certainty during the planning process. Fuel shortages, unforeseen labor and materials shortages, natural disasters, and international incidents can adversely affect costs.

Economic benefits are based on material values of floodplain property and infrastructure. Such values may not fully capture sentimental worth or social investment on behalf of residents. There is some degree of uncertainty associated with using secondary information such as census data, planning documents, tax records and other information when such data is applied to a very small geographic area. It is probable that some monetary and non-monetary benefits have not been fully captured. Finally, there is inherent uncertainty in forecasting the social and environmental costs and benefits associated with the *preferred alternative*.

There is risk and uncertainty associated with the choice that residents may make with regard to their replacement housing. Participants will be strongly encouraged to relocate in flood-free areas so that the full intent of this buyout, to reduce flood damages and to improve human health and safety, will be realized.

There will be impacts to the social fabric of the community, but the nature of those impacts is unpredictable. Whether the impacts are positive or negative depends on individual perceptions.

13.0 Cumulative Impact

Cumulative impacts are those effects on the environment that result from the incremental effect of the action when added to past, present, and reasonably foreseeable future actions regardless of what agency (federal or non-federal) or person undertakes such other actions. Cumulative effects can result from individually minor, but collectively significant, actions taking place over a period.

Cumulatively, the proposed *voluntary floodplain buyout* would have positive effects on the overall health of the watershed by reducing flood-related property damage and risk to human life. Restoring the floodplain to a more natural state would also improve the wildlife habitat and water quality. Dunloup Creek would be able to re-establish natural meander patterns for the most effective conveyance of water and sediment. In addition, the proposed project will improve the natural habitat, resulting in better recreational opportunities for local residents and tourists. There are no known cumulative adverse impacts associated with the *preferred alternative*, i.e., the *floodplain buyout*.

14.0 Public and Agency Involvement

Monthly public meetings have been held by the Dunloup Creek Watershed Association for the purpose of keeping citizens informed and providing a forum for agency personnel to share information. Meetings have been widely attended, with more than 150 residents at several meetings. Meetings were moved from the *National Park Service* conference room facility to the National Guard Armory to accommodate the large crowds. There has been extensive newspaper coverage along with newsletter mailings. Public comments and questions have been solicited throughout the planning phase. A multi-agency workgroup was formed to develop the ranking and application form for the Recommended Plan.

A public scoping workshop was held on September 20, 2006 at Fayette County Armory to provide interested individuals and agencies an opportunity to give input into the development of the EIS. Seventy-four people attended the workshop, including 10 from federal and state agencies.

Comments were taken at the workshop and after the workshop for a period of 15 days. Two written comments were received. One comment consisted of positive feedback on the format of the workshop and the information provided. The other comment expressed concern about the sludge ponds located upstream of Kilsyth. These ponds are monitored by *West Virginia Department of Environmental Protection* (WVDEP) and the comment will be forwarded to them for their consideration. There were also general questions and concerns expressed at the workshop regarding the timetable for project implementation, the application process, individual concerns about pending home improvements, and other issues.

Letters received on the DRAFT Watershed Plan – DEIS are included in this Final Watershed Plan – Final Environmental Impact Statement. Where appropriate, responses to specific questions are included.

December 6, 2006

Mr. Louis E. Aspey, II
Assistant State Conservationist
Natural Resources Conservation Service
U.S. Department of Agriculture
75 High Street, Room 301
Morgantown, WV 26505

Mr. Louis Aspey,

Dunloup Creek Watershed Association has completed its review of the "Draft" Watershed Plan and "Draft" Environmental Impact Statement dated October 2006. The attached comments represent the Officers and Board Members of our association and the 443 petitioners who penned their signatures in August 2004 seeking relief from the devastation associated with flooding to their homes and properties.

We accept the premise that the "Voluntary Floodplain Buyout" is the best option available to provide our friends and neighbors in the communities of Kilsyth, Mount Hope, Glen Jean, Red Star, and Harvey with an opportunity to evaluate a buyout offer for the purpose removing themselves from future flooding events.

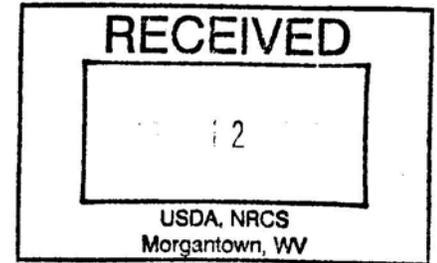
The flooding along the Dunloup Creek watershed during the past ten years have continued to devalue the homes and property of our members. The cost to the different agencies for recovery from the two July 2001 floods alone exceeded \$29.5 million dollars, not to mention the anguish and quality of life issues for our families.

We thank your staff for their tireless effort in getting to this point in the process and look forward to "Final" Watershed Plan. We request that the final document be available by February 2007 or sooner. We stand ready to clarify any of our comments to the draft document and look forward to the approval of the final plan by the USDA.



Mr. James M. Shumate
Board Member
Dunloup Creek Watershed Association

1. **Project Costs** – the acquisition dollars for home and property buyouts have been reduced by approximately 46% over previous 2006 NRCS fact sheets. DCWA is concerned that growing momentum for the voluntary buyout program will exceed the amount documented on page 9 – Tab 1. If the buyouts do exceed the \$13.9M documented in the draft plan, how will NRCS handle this situation. Starting this process over to get the additional funds would not be an acceptable approach. DCWA has concerns about the set aside amount for demolition costs. If this amount deems to be high in execution, could these unused funds be applied toward buyouts. Would it be possible to get a lump sum amount for this program in the 2008 budget cycle? This would insure momentum toward the voluntary buyout program. If the funds have to be spread over multiple budget years (page 45 – Tab 8), would it be possible to go for three years vice five. The obvious concerns for multiple years is the continued property damage to homes and the risk of the 100 year flood scenario which would have devastating effects upon lives and property.
2. **Purpose & Need for Action** – would it be beneficial to outline the flood damage costs (page 11) associated with the two Dunloup Creek floods in year 2001. The amount is detailed in the Fayette County Office of Emergency Services Pre-Disaster Mitigation Risk Assessment report. The Dunloup Creek floods recorded on the 8th and 26th of July 2001 alone costs the federal, state, and county agencies \$29.5M. It could also be beneficial to outline the many flood events over the past ten years which were provided to NRCS in an email dated 15 August 2006. This information was obtained from the Fayette County OES, Director, Stephen M. Cruikshank. Based upon the estimated project costs for this voluntary buyout program, one flood event of the 2001 magnitude would more than pay for this program. The recovery costs associated with a 100 year storm cannot be calculated in life or value of property and infrastructure.
3. **Distribution List** – its requested that DCWA be advised of the agencies or individuals which provided comments to this Draft Watershed Plan as outlined on page 47 and 48.
4. **Appendix B – Comments and Questions** – it appears that question 6 should identify the one local sponsor as West Virginia Conservation Agency vice committee.



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Joe Manchin III
Governor

Frank Jezioro
Director

December 5, 2006

Mr. Ron Hilliard
State Conservationist
Natural Resource Conservation Service
75 High Street, Room 301
Morgantown, WV 26505

Re: Draft Watershed Plan-Draft Environmental Impact Statement (DEIS),
Dunloup Creek, Fayette and Raleigh Counties, West Virginia.

Dear Mr. Hilliard:

Thank you for the opportunity to comment on the proposed DEIS for the Dunloup Creek watershed. We understand that this is a distressed watershed due to concentrated development in the floodplain. This has led to repetitive flooding and water quality problems associated with human interaction.

The preferred option of the DEIS is a Voluntary Floodplain Buyout. We concur with your assessment that this is the only viable option and is the least environmentally damaging. In fact, water quality and riparian zones will improve with the implementation of this plan. As we expect no long-term adverse environmental affects from this action, we fully support its approval.

Sincerely,

A handwritten signature in cursive script that reads "Frank Jezioro".



UNITED STATES ENVIRONMENTAL PROTECTION AGENCY
REGION III
1650 Arch Street
Philadelphia, Pennsylvania 19103-2029

December 5, 2006

Ronald Hillard, State Conservationist
Natural Resources Conservation Service
United States Department of Agriculture
75 High Street, Room 301
Morgantown, WV 26505

RE: Draft Environmental Impact Statement – Draft Watershed Plan for the Voluntary Floodplain Buyout of the Dunloup Creek Watershed. CEQ# 20060437

Dear Mr. Hillard:

In accordance with the National Environmental Protection Act (NEPA) and Section 309 of the Clean Air Act, the U.S. Environmental Protection Agency (EPA) has reviewed the above mentioned DEIS. The DEIS was prepared to meet the requirements of NEPA and to assess the potential environmental harm that may result from the proposed activity. The purposes of the project are to reduce flood-related damage to property within the 100 year floodplain of Dunloup Creek and to protect the health and safety of people.

The DEIS evaluated the Buyout Alternative and a No Action scenario in detail. The preferred alternative for the DEIS is to voluntarily buyout 292 residential properties in the Dunloup Creek watershed. Human health and safety will improve as residents relocate from the floodplain. Natural floodplain functions will be restored as the homestead areas are returned to riparian stream habitat and natural floodplain vegetation. Water quality will improve with the removal of homes with failing or non-existent septic systems. Stream bank erosion will be reduced as areas along the stream are converted from mowed yards to natural stream banks

EPA is rating the preferred alternative as Lack of Objection (LO). For more information on our rating guidelines please go to: www.epa.gov/compliance/nepa/comments/ratings.html. EPA agrees with the identified preferred alternative to voluntarily buyout residential properties in the watershed and allow the watershed to return to a natural state.

Should you have any question regarding this matter please feel free to contact Jamie



**SOUTHERN
CONSERVATION DISTRICT**

463 RAGLAND ROAD
BECKLEY, WEST VIRGINIA 25801

PHONE: (304) 253-0261

FAX: (304) 253-0238

November 30, 2006

Xavier Montoya
USDA-NRCS
Acting State Conservationist
75 High Street, Room 301
Morgantown, WV 26505

Dear Mr. Montoya,

The Southern Conservation District is a sponsor of the Dunloup Creek Watershed Plan. The SCD supports the alternative, voluntary floodplain buyout that has been recommended as the best solution for the residents of Dunloup Creek Watershed. Together with the West Virginia Conservation Agency, Dunloup Creek Watershed Association, and other organizations we have worked together to try and help find a solution to the flooding problems in the effected communities. The SCD feels that the voluntary floodplain buyout plan will help to resolve the flooding issues that the property owners have dealt with for the past many years and will improve the quality of water in the watershed area.

We appreciate the support and assistance we have had from NRCS and look forward to working with you on this much needed project. Thank you for your time and assistance.

Sincerely,

C. W. Blankenship
C. W. Blankenship
SCD Chairman



West Virginia Conservation Agency



Governor
Joe Manchin III

Chairman
Gus R. Douglass

Executive Director
Truman R. Wolfe

December 1, 2006

Xavier Montoya
USDA-NRCS
Acting State Conservationist
75 High Street, Room 301
Morgantown, WV 26505

Dear Mr. Montoya,

The West Virginia Conservation Agency is a sponsor of the Dunloup Creek Watershed Plan. The WVCA supports the recommended alternative, a voluntary floodplain buyout, as the best solution for residents in the watershed. We have worked diligently with the Southern Conservation District, the Dunloup Creek Watershed Association, and other interested parties to bring about a solution to the flooding problems that have long plagued the communities along Dunloup Creek. This project will reduce flood related damage and improve the quality of life for property owners along Dunloup Creek as well as restore the floodplain and improve water quality.

Sincerely,

A handwritten signature in black ink that reads "Truman R. Wolfe".

Truman R. Wolfe



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EEO/AA Employer

November 27, 2006

Mr. Bryan Lee
Archaeologist
USDA
75 High Street, Room 301
Morgantown, WV 26505

RE: Dunloup Creek Watershed Project
FR#: 06-1190-FA

Dear Mr. Lee:

Thank you for the opportunity to review the *Draft EIS For Dunloup Creek Watershed* for the proposed buyout project. As required by Section 106 of the National Historic Preservation Act of 1966, as amended, and its implementing regulations, 36 CFR 800: "Protection of Historic Properties," we offer comments.

It is our understanding the purpose of the project is to reduce flood-related damage to property within the 100-year floodplain of Dunloup Creek. As a part of this project one of the recommendations consist of a voluntary buyout for an estimated 238 properties (resources) in the floodplain. While none residential properties will be eligible to apply the emphasis will be to purchase occupied residential properties. These properties would then be demolished.

Architectural Resources:

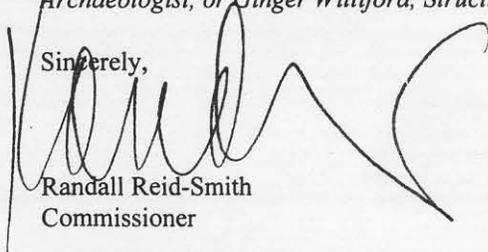
The West Virginia State Historic Preservation Office is currently in the process of preparing a Programmatic Agreement with the United States Department of Agriculture, Natural Resources Conservation Service regarding the Dunloup Creek Watershed Voluntary Floodplain Buyout Program, (PA). The PA will address the effects of the Project on historic resources. However, we would like to suggest that the EIS not limit the mitigation to "An historic structures inventory will be conducted." Not until the architectural survey has been completed and an eligible applicant has been accepted will there be a final mitigation determination. Please revise your comments in Tabulation 6 and Section 8.0 to reflect that the USDA will consider avoidance, mitigation, and minimization of effects as appropriate for resources eligible for the National Register of Historic Places.

Archaeological Resources:

It is our understanding that all work related to the project will be above ground surface, and thus will not impact any unknown archaeological sites that may be present. At this time, we have determined that this project will have no effect to any known archaeological sites listed in or eligible for inclusion in the National Register. If changes are made to project plans such that ground disturbing activities will occur, we request to be notified so that we may provide additional comments.

We appreciate the opportunity to be of service. If you have any questions regarding our comments or the Section 106 process, please do not hesitate to contact Lora A. Lamarre, Senior Archaeologist, or Ginger Williford, Structural Historian, at (304) 558-0240.

Sincerely,


Randall Reid-Smith
Commissioner

RRS/LAL/GW

Responses to questions on Draft Watershed Plan – Draft Environmental Impact Statement:

Dunloup Creek Watershed Association letter of 12/6/06:

Comment: Project Costs – The acquisition dollars for home and property buyouts have been reduced by approximately 46% over previous 2006 NRCS fact sheets. DCWA is concerned that growing momentum for the voluntary buyout program will exceed the amount documented on page 9 – Tab 1. If the buyouts do exceed the \$13.9 M documented in the draft plan, how will NRCS handle this situation. Starting this process over to get additional funds would not be an acceptable approach. DCWA has concerns about the set aside amount for demolition costs. If this amount deems to be high in execution, could these unused funds be applied toward buyouts. Would it be possible to get a lump sum amount for this program in the 2008 budget cycle? This would insure momentum toward the voluntary buyout program. If the funds have to be spread over multiple budget years (page 45 – Tab 8), would it be possible to go for three years vice five. The obvious concerns for multiple years is the continued property damage to homes and the risk of the 100 year flood scenario which would have devastating effects upon lives and property.

Response: Costs were refined during the planning process, resulting in a reduction in the initial cost estimate needed for the project. If actual costs exceed the planning estimate, or if the participation rate is greater than originally estimated, additional funding can be requested through the federal appropriations process. Costs for demolition and property acquisition are based on the best available planning data, but actual costs may vary from the categories displayed in Table 2. The federal appropriations process will determine whether money is available in the 2008 budget cycle and how rapidly the project is implemented. The five year implementation schedule described in the watershed plan can be adjusted depending on the availability of funds.

Comment: Purpose & Need for Action – would it be beneficial to outline the flood damage costs (page 11) associated with the two Dunloup Creek floods in year 2001. The amount is detailed in the Fayette County Office of Emergency Services Pre-Disaster Mitigation Risk Assessment report. The Dunloup Creek floods recorded on the 8th and 26th of July 2001 alone costs the federal, state, and county agencies \$29.5M. It could also be beneficial to outline the many flood events over the past ten years which were provided to NRCS in an email dated 15 August 2006. This information was obtained from the Fayette County OES, Director, Stephen M. Cruikshank. Based upon the estimated project costs for this voluntary buyout program, one flood event of the 2001 magnitude would more than pay for this program. The recovery costs associated with a 100 year storm cannot be calculated in life or value of property and infrastructure.

Response: This information will be added to the plan.

Comment: Distribution List – its requested that DCWA be advised of the agencies or individuals which provided comments to this Draft Watershed Plan as outlined on page 47 and 48.

Response: Comments were received from the WV DNR, US EPA, Southern Conservation District, the WV Conservation Agency, and the WV Division of Culture and History.

Comment: Appendix B – Comments and Questions – it appears that question 6 should identify the one local sponsor as West Virginia Conservation Agency vice committee.

Response: The West Virginia Conservation Committee is the legally recognized entity by the State of West Virginia. The West Virginia Conservation Agency conducts the work of the committee.

15.0 Provisions of the Recommended Alternative

Rationale for Plan Selection

The National Economic Development (NED) Plan is Alternative 2 – the Voluntary Floodplain Buyout Alternative. This plan addresses the Sponsors' needs and provides the best flood-damage reduction option for the community. The voluntary floodplain buyout is the recommended alternative for the following reasons:

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

Measures to be Installed/Executed

The *proposed action* is a *voluntary floodplain buyout* starting with the properties that pose the highest risk to the occupants. This is a non-structural solution, which does not require the construction of traditional flood protection measures. Construction contracts will only be required for building demolition and site restoration of properties that are primarily residential uses. Construction activities at each property will be short-lived with minor disruptions to the surrounding area.

Permits and Compliance

All applicable laws will be complied with during the execution of this project. Under the *proposed action* no work is proposed in the stream or on streambanks. The demolition and site restoration phases of the project will mostly occur in areas with relatively flat topography with minimal problems anticipated due to erosion and sediment. Erosion and sediment control measures will be implemented as needed to meet WVDEP requirements. Construction stormwater National Pollutant Discharge Elimination System (NPDES) permit will be required from the WVDEP, Division of Water and Waste Management. The permit requirements may vary depending on how the demolition contract(s) are packaged. County and local building permits will be obtained as required, for the site demolition and restoration work. Contractors will be required to properly remove and dispose of any hazardous materials that may be encountered during the demolition work, such as asbestos abatement. Water well plugging and septic system removal will be done according to the WV Department of Health requirements.

Costs and Cost Sharing

Project costs include all costs necessary to install the *proposed action*. All estimated project costs are summarized in the tables included in other sections of this Plan-EIS. It is worth mentioning that the cost

of doing business is rising more rapidly now than in the past due to unstable prices. Oil prices affect nearly every sector of the economy, including the cost to administer this project. The following sections address the specific costs involved.

Construction Costs

Construction cost accounts for all material, labor, and equipment necessary for the site demolition and restoration associated with the *proposed action*. These costs were estimated using 2006 prices. Costs were based on an “average” property expected for this watershed. Recent cost information for West Virginia was used as available, including some data from a past buyout project done by Fayette County. Landfills were contacted to obtain current costs for disposing of demolition materials. As previously mentioned, the 2006 price base establishes a minimum cost that is likely to change due to normal annual inflation and oil prices. The planning construction costs are estimated using the best available knowledge about the project without having detailed design information. More detailed estimates of construction costs based on engineering specifications for the work will be prepared before the construction contracts are advertised for bid. Final construction costs will be those costs actually incurred by the contractor performing the work, including the cost of any necessary contract modifications.

Engineering Costs

Engineering services include all costs associated with the technical aspects of the project, including the preparation of required construction specifications and drawings for the site demolition and restoration work. It is assumed that engineering services will be provided by NRCS engineers. Other engineering services may include water well plugging, septic/sewage tank removal, site inspection work, technical oversight of construction contracts, answering technical questions for the Sponsors, assisting with permit applications, preparing construction bid documents, cultural resource mitigation, and other engineering-related services. Engineering costs were taken as a percentage of the project costs based on other similar programs completed by the NRCS.

Project Administration Costs

Project administration costs include processing applications, landowner notifications, travel/transportation costs, processing of closing documents, overhead costs, and other similar costs. Costs for land surveys, title opinions, appraisals, review appraisals, and negotiations are actual contract prices that will be paid for those services. The NRCS will directly assist the Sponsors with the project administration and provide assistance as needed. Project administration costs were taken as a percentage of the project costs based on other similar programs completed by the NRCS.

Real Property Rights

For a voluntary floodplain buyout, watershed program funds are required to pay for real property acquisition as necessary to keep the Sponsors’ total project participation cost below 20%. These costs include the property acquisition and all associated work, including all costs necessary to obtain the land, easements, relocations, utility modifications, and rights-of-way needed for the *proposed action*. Planning level estimates for property values were included in the estimated acquisition costs based on available information about the properties in the watershed and local area real estate values. Appraised property values and a *relocation benefit* will be offered to successful homeowner applicants to provide them with a reasonable opportunity to purchase and move to a location with comparable or improved living conditions. These cost estimates will change as more detailed data becomes available and official

appraisals are conducted during the acquisition process. Acquired properties shall have deed restrictions to ensure that future uses are restricted to only acceptable uses for floodplain lands according to the most stringent of state, county, or local guidelines and ordinances.

Relocation Assistance

A *relocation benefit* will be offered to the successful homeowner applicants for the voluntary floodplain buyout. Successful applicants will be offered one lump sum amount to compensate them for the assessed property value and to assist with moving/relocation expenses. It is the sole responsibility of the participant to use this lump sum payment for all costs related to finding a comparable place to live or to re-establish the existing property use in a different location. This payment is intended to enable relocated families to obtain comparable housing without undue financial hardship. For rental properties, the tenants of successful landlord applicants will be provided with a *relocation benefit* (one payment per rental unit) to assist with their relocation expenses. The *relocation benefit* for tenants will only be provided to one person per rental unit and only one time – tenants will only be eligible to receive benefits once, i.e., a tenant cannot relocate within the *buyout area*, then re-apply. Participants are encouraged to find safe, decent, and sanitary housing that is not in a floodplain. Some consideration may be given to businesses and other types of buildings, but the emphasis of this project is to remove permanent residents from the floodplain. Guidance for the rental-unit payment formula was taken from FEMA's *Procedures for Developing Scopes of Work for the Acquisition and Relocation of Flood Prone Structures*, January 2005. Since this is a voluntary program, the uniform relocation assistance portion of the "Uniform Relocation Assistance and Real Property Acquisition Act of 1970, as amended" does not apply.

Operation and Maintenance (O&M) Costs

The Sponsors will be responsible for any operation and maintenance costs associated with the *proposed action* indefinitely or until acquired lands are conveyed to another eligible entity. Since the voluntary floodplain buyout will effectively restore the floodplain to a natural condition, no long-term O&M costs are anticipated. The newly vacant land will be similar to vacant land in rural areas or natural parklands. It is anticipated that most of the eligible applicants will participate, which will effectively transform urban areas into rural use areas. For additional information, see the section on "Operation, Maintenance, and Replacement."

Installation and Financing

The administration and execution of the project is funded by the NRCS and the Sponsors. Technical assistance will be provided by the NRCS. The work required by the recommended alternative (*proposed action*) is planned for implementation over several years as shown by Tabulation 9. The actual implementation period is contingent upon the availability of federal funds. The availability of funds may also require adjustments to the funding amounts shown for each year. Properties will generally be acquired in priority order as specified in the ranking criteria and by the provisions of this Plan-EIS.

Tabulation 9 - Schedule of Obligations^{1/}
Dunloup Creek Watershed
Fayette and Raleigh Counties, WV

Year	PL 83-566	Local	Total
1	\$2,505,000	\$280,500	\$2,785,500
2	\$2,505,000	\$280,500	\$2,785,500
3	\$2,505,000	\$280,500	\$2,785,500
4	\$2,505,000	\$280,500	\$2,785,500
5	\$2,505,000	\$280,500	\$2,785,500
TOTAL	\$12,525,000	\$1,402,500	\$13,927,500

^{1/} 2006 dollars

Operation, Maintenance, and Replacement

As stated in the section regarding O&M costs, operations and maintenance of the restored floodplain lands is not anticipated. Sponsors may choose to provide some minimal maintenance for vacated lots located between other occupied lots on a temporary basis, but this is not a requirement of this plan. As required with any watershed program project, Sponsors are responsible for O&M. Since the *proposed action* is a non-structural solution, the “replacement” consideration doesn’t apply. There is no need to plan for or budget for a replacement structure.

One concern with regard to the *proposed action* is that vacant properties will become trash dumps. If this occurs, it should be reported to the WVDEP. The WVDEP operates the Pollution Prevention and Open Dumps (PPOD) program. The PPOD program derives its authority from WV Code Section 22-15-11(h)(3), which states that no one may "create, contribute to, or operate an open dump." Up to a \$50,000 fine and up to three years in prison are the possible CRIMINAL punishments. CIVIL penalties can fine up to \$5,000/incident. The program reclaims, cleans up, and remediates open dump sites while minimizing or eliminating damage to the environment. For more information on this program, access the following website: www.dep.state.wv.us (search for “pollution prevention”). This program has reclaimed 208 acres in Fayette County.

16.0 List of Preparers

Even though information was gathered from many different sources, the following NRCS employees were primarily responsible for preparing this document.

NAME	PRESENT TITLE/ OTHER EXPERIENCE (Years in Job)	EDUCATION Degree(s) Continuing Education Subjects	OTHER (Licenses, etc.)
Pam Yost	Economist (16)	BS Resource Management MS Agricultural Economics	
Ron Wigal	Resource Conservationist (18)	BS Wildlife Management MS Wildlife Management	
TJ Burr	Civil Engineer (19)	BS Civil Engineering	Registered Professional Engineer
Bryan Lee	Cultural Resources Specialist (5) Archaeologist (10)	BA Anthropology MA Anthropology	
Timothy Ridley	Hydraulic Engineer (18) Consulting Engineer (8)	BS Civil Engineering	Registered Professional Engineer Professional Surveyor
Thomas Tamasco	Civil Engineer (2) Dam Safety Engineer (7)	BS Civil Engineering Technology	Registered Professional Engineer
Jeff McClure	Geologist (2) WV DEP Geologist (10)	BS Geology BA Biology	

17.0 Distribution List

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Additional individuals who attended a Dunloup Creek Watershed meeting, the project scoping meeting, or are included on the watershed newsletter mailing list were notified by postcard of the availability of the Draft Plan-Draft EIS. The Draft Plan-DEIS was also available at the following website: <http://www.wv.nrcs.usda.gov/programs/watershed/dunloup/dunloup.html>.

18.0 Literature cited

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20. WVDEP. 2002. West Virginia 2002 Section 303(d) List. WVDEP, Charleston, WV.
21. **Merriam-Webster Online Dictionary** at www.m-w.com.
22. SITES dam design software, USDA NRCS, 2005.

19.0 Investigation and Analysis

Economics

Homes in the inventory have an average value of \$34,873 each. There are approximately 17 mobile homes along Dunloup Creek, each valued at \$25,000 for evaluation purposes. Home values were based on visual inspection and comparison of homes and the 2000 Census of Population home values for Census Tract 205 in Fayette County, West Virginia. Median home values in the census tract are only 48% of the statewide value and 29% of the national value. Based on these comparatively low structural values, there is justification for valuing the contents of homes at a higher rate than established by *Principles and Guidelines*. The contents of homes were valued at 100% of the structural value for homes valued at \$25,000 or less. Homes valued at more than \$25,000 were determined to have contents valued at 75% of the home value. Depth-damage coefficient tables were used to estimate building damages from flooding.

Values for commercial properties were assigned based on values in similar watersheds and field inspection of properties. For each commercial or public property, a unique depth-damage coefficient table was developed to estimate damages. The URB1 computer program was used to evaluate flood damages. NRCS Technical Notes, methods and procedures outlined in the *National Watershed Manual*, and *Water Resources Principles and Guidelines* were used to determine other associated benefits from implementation of a voluntary floodplain buyout.

Hydrology and Hydraulics

Hydrologic and hydraulic investigations consisted of an analysis of rainfall runoff relationships using computer models of the watershed. Rainfall data was obtained from National Weather Service Technical Paper Number 40 (TP-40). Soils data was obtained from the NRCS Soil Survey of Fayette and Raleigh Counties, West Virginia (1975). Land use information was coordinated with local NRCS field office personnel. Hydrologic soil-cover complexes and runoff curve numbers were computed using the procedures in the NRCS National Engineering Handbook, Section 4. Stormwater runoff was estimated using the runoff-curve number method.

Cross section data were obtained from field surveys. Cross section locations were selected to reflect the flood stages at points of damage, restriction, and grade control. All bridges and culverts were field surveyed to obtain structural geometry in order to compute the backwater effects of those structures. Elevations for the mapping and surveying were referenced to the National Geodetic Vertical Datum of 1929 (NGVD 29).

Channel and floodplain geometry and roughness factors (Manning's "n") for the watershed were assigned based on field inspection of the streams and their adjacent areas. Flood routings were performed using procedures in NRCS Technical Release No. 20 (TR-20). Various frequency one-day storms were routed to establish discharge-frequency relationships. Water surface elevations were computed using the NRCS WSP-2 computer program as described in Technical Release No. 61. Flood profiles were drawn showing computed water surface elevations for the selected recurrence intervals.

Mapping was developed for the damage areas from aerial photography taken March 14, 1995. Line drawn topographic maps (scale: 1" = 100') and photo contour maps (1" = 200') were used to delineate the floodplain and for estimation of construction quantities.

Engineering and Geology

Since the *preferred alternative* involves a non-structural solution, there is no investigation or analysis for engineering and geology. However, planning-level investigations were done for the alternatives considered. Preliminary engineering analysis was only done in enough detail to prepare planning-level cost estimates. Therefore, this section briefly covers some of the investigation and analysis done for the considered alternatives.

From the first evidence of flooding problems in this watershed, it was apparent that structural solutions would cost more than the value of the properties they would be designed to protect. This was stated in a letter from the *US Army Corps of Engineers* from April 15, 1957. Since then, flooding continued and non-structural solutions were not well-supported. During the late 1960s the Soil Conservation Service evaluated structural solutions and investigated possible sites for flood protection dams. Engineers and planners made several site visits to the area gathering data to assess the feasible engineering options. Flood damages were assessed for numerous properties in a document dated March 11, 1963. In 1968 a draft watershed plan was prepared, but the proposed measures failed to provide 100-year flood protection for the first floors of many homes in the Kilsyth and Mount Hope communities. There is a history of problems associated with finding adequate engineering solutions and justifying the economics for those solutions. Even though a watershed plan was successfully completed (but never implemented) in 1975, flooding problems in the watershed persist along with a desperate need to help those residents who are most at risk.

Aerial photographs from 2003 and USGS topographic maps were used for mapping sources. Numerous cross-sections were surveyed to perform the flood routings in Dunloup Creek from Kilsyth downstream to the community of Harvey. Field reconnaissance by NRCS personnel was also used in the analysis.

Building upon the NRCS/SCS history with the Dunloup Creek Watershed, the most feasible structural flood-protection measures were once again evaluated using planning-level engineering analysis. Evaluating the two potential dam sites, dams were proportioned using the NRCS SITES Program (dam design software). SITES routed the estimated design-storm runoff from the contributing watershed through the dams. The principal spillway, auxiliary spillway, and top of dam routings were completed to determine the crest elevation of the principal spillways and auxiliary spillways and the elevation of the top of dams. This information provided enough data to make planning level construction cost estimates and to evaluate the impact the structures would have on downstream flooding.

Additional geology information may be found in some of the sections in the *Alternatives Analysis*.

The engineered channel alternatives were analyzed by considering a concrete-lined channel fifty feet wide with varying depths as required to carry the 100-year storm flow. Two channel lengths were evaluated with each of them starting in Glen Jean. This was estimated to be the best location to provide flood-protection benefits from a channel. The analysis was only taken far enough to obtain enough information to calculate a planning level cost estimate. The average channel depth used for the analysis was 18-feet as determined from an average of several hydraulic cross-sections modeled using the 50-foot wide rectangular template. Using this information combined with engineering assumptions regarding the construction of the proposed channels, preliminary cost estimates were prepared to use in the overall evaluation of considered alternatives.

Dike alternatives were dismissed without an engineering analysis on the basis that they would be impractical and very expensive to construct along the same order of magnitude as the channel alternatives. A dike alternative was considered in more detail during a Plan-EIS done by the SCS in 1975, but was not recommended as the selected plan. One of the negative affects of using channels or dikes is that the required construction limits would require relocating some of the buildings that they would protect, which raises the construction costs while reducing the economic benefits. In the 1975 analysis, the dike alternative would have required the relocation of at least 64 buildings and would not have provided 100-year flood protection in the Kilsyth-Mount Hope area.

Environmental

Effects of the Recommended Plan on Resources of National Recognition

Types of Resources	Principal Sources of National Recognition	Measurement of Effects
Air Quality	Clean Air Act, as amended (42 U.S.C. 7401 et seq.)	Watershed not within a clean air non-attainment area.
Areas of Particular concern within the coastal zone	Coastal Zone Management Act of 1972, as amended (16 U.S.C. 1451 et seq.)	Not present in planning area
Endangered & threatened species critical habitat	Endangered Species Act of 1973, as amended (16 U.S.C. 1531 et seq.)	Adverse affects are unlikely. <i>US Fish & Wildlife Service</i> letter of September 27, 2006 (Included in Appendix E – Environmental)
Fish & wildlife habitat	Fish & Wildlife Coordination Act, (16 U.S.C. Sec. 661 et seq.)	Potential for improvement to 203 acres of floodplain habitat and approximately 12 miles of fish habitat.
Flood plains	Executive Order 11988, Flood Plain Management	Up to 203 acres of floodplain will have homes and other buildings removed.
Historical & cultural properties	National Historic Preservation Act of 1966, as amended (16 U.S.C. 470 et seq.)	Historic structures inventory
Prime & unique farmland	CEQ Memorandum of August 1, 1980: Analysis of Impacts on Prime or Unique Agricultural Lands in Implementing the National Environmental Policy Act, the Farmland Protection Policy Act of 1981	Not present in planning area
Water quality	Clean Water Act of 1977 (33 U.S.C. 1251 et seq.)	Improved water quality on approximately 12 miles of Dunloup Creek.
Wetlands	Executive Order 11990, Protection of Wetlands; Clean Water Act of 1977 (33 U.S.C. 1251 et seq.); Food Security Act of 1985	Limited potential for wetland re-establishment on Philo soils.
Wild & Scenic Rivers	Wild & Scenic Rivers Act, as amended (16 U.S.C. 1271 et seq)	No adverse affect.

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Appendix A - Required Tables

**Table 1 - Estimated Installation Costs
 Dunloup Creek Watershed
 Fayette and Raleigh Counties, WV
 (Dollars)^{1/}**

Installation Cost Item ^{2/}	Unit	Estimated Cost		Total
		Public Law 83-566 Funds	Non-federal Funds	
Voluntary Floodplain Buyout	238	\$12,525,000	\$1,402,500	\$13,927,500

October 2006

^{1/}2006 Dollars, rounded to the nearest one hundred dollars

^{2/} There is no land treatment associated with this project

**Table 2 - Estimated Cost Distribution – Structural and Nonstructural Measures
Dunloup Creek Watershed
Fayette and Raleigh Counties, WV
(Dollars)^{1/}**

Nonstructural Measure	Installation Cost - Public Law 83-566						Installation Cost - Other Funds						Total Installation Cost
	Constr ^{2/}	Engr ^{3/}	Real Property Rights ^{4/}	Relocation Payments	Project Admin	Total PL 566	Constr.	Engr.	Real Property Rights	Relocation Payments	Project Admin	Total Other	
Floodplain Acquisition	\$2,695,700	\$369,000	\$9,323,600	0	\$136,700	\$12,525,000	997,000	\$86,600	0	0	\$318,900	\$1,402,500	\$13,927,500
Grand Total	\$2,695,700	\$369,000	\$9,323,600	0	\$136,700	\$12,525,000	997,000	\$86,600	0	0	\$318,900	\$1,402,500	\$13,927,500

October 2006

1/ Price Base 2006. rounded to the nearest one hundred dollars

2/ Consists of demolition and site restoration costs.

3/ Includes costs for preparing technical specifications, contract administration, construction inspection, etc.

4/ Includes all costs associated with obtaining real property, including a *relocation benefit* to assist participant with moving/relocation expenses.

Table 3 - Structural Data – does not apply to this project

**Table 4 - Estimated Average Annual NED Costs
Dunloup Creek Watershed
Fayette and Raleigh Counties, WV
(Dollars)^{1/}**

Evaluation Unit ^{2/}	Project Outlays		Other Direct Costs	Total
	Amortization of Installation Cost	Operation, Maintenance, and Replacement Cost ^{3/}		
Voluntary Floodplain Buyout	\$684,800	0	0	\$684,800

October 2006

^{1/}Price base 2006, amortized for 100 years at a discount rate of 4.875 percent

^{2/}There is no land treatment associated with this project

^{3/}There is no operation, maintenance, and replacement cost with this project

**Table 5 - Estimated Average Annual Flood Damage Reduction Benefits
Dunloup Creek Watershed
Fayette and Raleigh Counties, WV
(Dollars)^{1/}**

Item	Agricultural-Related Estimated Average Annual Damage ^{2/}		Damage Reduction Benefit
	Without Project	With Project	
Residential & Commercial Floodwater Damage	\$980,700	\$196,100	\$784,600
Indirect	\$98,100	\$19,600	\$78,500
Total	\$1,078,800	\$215,700	\$863,100

October 2006

^{1/}Price base 2006, amortized for 100 years at a discount rate of 4.875 percent

^{2/} Agricultural-related damage includes damage to rural communities

**Table 6 - Comparison of NED Benefits and Costs
 Dunloup Creek Watershed
 Fayette and Raleigh Counties, WV
 (Dollars)^{1/}**

Evaluation Unit	Flood Damage Reduction Benefit	Savings in Flood Insurance policies	Incidental Water Quality Benefit	Total Project Benefits	Average Annual Cost	Benefit Cost Ratio
Voluntary Floodplain Buyout	\$863,100	\$94,000	\$71,900	\$1,029,000	\$684,800	1.5:1.0

October 2006

^{1/}Price base 2006

Appendix B - Comments and Questions

Questions and comments from public meetings are included in this section along with questions to help clarify the provisions within this document.

1. **Would there be money made available for restoration or as they called it Beautification?** After the structures are removed from the floodplain, the area will be restored to natural floodplain conditions. The *voluntary floodplain buyout* does not include money for floodplain plantings (other than seeding of areas disturbed by structural demolition) or development of parks or trails along the stream. Certain restricted uses would be permissible in the future, but the funding would have to come from other sources.
2. **How often are we going to meet as a committee?** [Note to reader: A committee was formed to develop the ranking and eligibility rules for the program, with representatives from the SCD, WVCA, NPS, Fayette County OES, and NRCS. Three meetings were held by that committee as of the date of this document.] There is no set schedule for the number of meetings that may be required for this project, however, agency representatives will be available to attend monthly watershed meetings, and to meet with local Sponsors, County Commissions, and other interested parties as needed. At least one widely advertised public meeting was held to explain the contents of the Draft Watershed Plan – Draft Environmental Impact Statement.
3. **Has a buyout option ever been suggested in the past as in the 1964 study or 1986 study, etc?** Yes, it was discussed in the 1998 *Local Implementation Plan*. A 1975 Watershed Plan and Environmental Impact Statement by the Soil Conservation Service considered a floodplain purchase as an alternative. At the time, 277 buildings were identified as being in the floodplain.
4. **Will the buyout plan be in the plan?** Yes
5. **Does the final plan need to have a public hearing or a meeting for discussion?** No
6. **If you buy 20 homes throughout the floodplain who will be responsible for those pieces of land?** The local Sponsors, either the West Virginia Conservation Committee or the Southern Conservation District, will hold the titles to any land/properties acquired through this program.
7. **7. Will they continue to stock fish in the bacteria infested waters?** The WVDNR determines their stocking schedule based on their own criteria. The voluntary floodplain buyout will result in eventual improved water quality and improved fish and wildlife habitat along Dunloup Creek, improving the recreational potential of the stream.
8. **Will the homes that have been burned out be considered and cleared away?** Yes, the owner's of these properties will be eligible to apply for the program.
9. **Churches - what will happen to them and if their neighborhoods are bought out what can they expect to happen to their congregation?** Any property that is located within the *buyout area* is eligible to apply for the program, including churches. A ranking procedure will be used for each application, which will determine what properties are funded first, second, etc. However, the emphasis for this program is to relocate residents from the *buyout area* so they will have precedence over all non-residential properties.

10. **If you don't sell will the agencies still provide assistance, such as FEMA?** Participation (or non-participation) in this program does not prevent you from seeking assistance from other governmental agencies. However, your chances of securing other assistance may be reduced.
11. **Is the sewer system still going into Kilsyth if the buyout option is given?** The NRCS encourages local entities to continue their pursuit of adequate sewer services, but they should consider the possible impacts of this project in their planning and design. Some properties in the potential service areas will remain since some will be outside the *buyout area* and some property owners may not participate.
12. **Is the Mill Creek area going to be included in the buyout option?** No. Please refer to the maps included in Appendix B for the eligible area. This program is focused on properties in the 100 year *buyout area* along Dunloup Creek.
13. **Will empty lots be included in the option?** Yes, if they are inside the *buyout area*, empty lots are eligible to apply and will be ranked with the other applications. However, the emphasis for this program is to relocate residents from the *buyout area* so they will have precedence over all non-residential properties.
14. **What organizations could be involved in helping to clean up the creek?** Dunloup Creek Watershed Association is very active and could be the lead on this sort of activity. There are many opportunities to improve the aesthetics, water quality, recreation, and public access to the stream. This project does not limit other organizations from making stream improvements as long as such improvements are compatible with this project.
15. **Are there any other organizations that have options other than buyout?** Not that we are aware of. Even back in 1957, the *US Army Corps of Engineers* determined that the cost to protect the properties exceeded the value of the properties. The buyout appears to be the best option.
16. **Has the Corps of Engineers been asked about funding a project in the area and would it be a buyout option only or would there be other options?** Yes, the *US Army Corps of Engineers* has looked at flooding problems in this area. No options have been offered by any other agencies. Also see the response to question 15.
17. **Who is the final plan submitted to and on what level?** After NRCS has completed the draft plan and sent it to the NRCS National Water Management Center for agency technical review, there will be a Notice of Availability published in the *Federal Register* and the draft plan will be widely distributed to the public and to interested federal, state, and local agencies. Once comments on the Draft are addressed, a Final Watershed Plan – Final Environmental Impact Statement is produced.
18. **How will you determine the value?** Properties will be appraised by a certified appraiser.
19. **Will you have to have your estimates on amount to offer each homeowner before asking for appropriations of that money?** Appropriations for the project will be based on the costs in the Final Watershed Plan – Environmental Impact Statement.
20. **What is the approximate time needed to get approval for funding?** There is a 45-60 day public comment period on the Draft Watershed Plan – Environmental Impact Statement once availability is announced in the *Federal Register*. NRCS will address comments and concerns on the Draft and then issue a Notice of Availability of the Final Watershed Plan – Environmental Impact Statement. There is no

set period for this step, but it typically takes about 4-6 weeks to produce the final plan. After the notice of availability is issued for the Final Watershed Plan – Environmental Impact Statement, there is a 30-day administrative review period. Then a Record of Decision (ROD) is issued by the WV State Conservationist. After the ROD, the plan is sent to NHQ with a request for authorization for funding. If the Chief authorizes the plan, it may be sent to OMB.

21. **Will relocation funds be available?** A lump sum payment will be offered to the successful property owners that will include a *relocation benefit* to help the homeowner afford a comparable residence and afford reasonable relocation expenses. A separate relocation payment or benefit will not be made, except for tenants of participating landlords.

22. **Will physical help be available to help the elderly and disabled to move?** Any additional assistance that an applicant may need will have to be arranged and paid for by the applicant.

23. **Can I come back into the program if I at first refuse?** This is also explained on the application. If an applicant does not accept the offer, the application will be placed at the end of the ranking and placed in inactive status. Once all the other applications have been processed, there may be a review of the inactive applications if funding remains.

24. **Will mobile homes be included in the buyout?** Yes, see the application form for more information. Mobile homes will be appraised in the same way as permanent housing.

25. **What will happen to empty lots and uninhabited houses?** The owners of any type of property that is within the *buyout area* may apply. The ranking form includes all property uses. However, the emphasis for this program is to relocate residents from the *buyout area* so they will have precedence over all non-residential properties.

26. **What would the value of my property be if my neighbors are bought out?** Your property value will still be based on the value of your house and any improvements you've made to it and the value of your land. You will still be in the floodplain, so that will continue to be reflected in the value of your property.

27. **Who will do the appraisals? Can we hire our own appraiser?** The Southern Conservation District (SCD) will contract with a certified appraiser to do the work. The initial appraisal must be done by the SCD. See the application form for more information.

28. **How will this buyout offer differ from the FEMA ones?** This buyout program does not have to be dependent on a disaster declaration. Some of the eligibility criteria may also be different.

29. **If we've invested thousands of dollars in our homes since the last flood, can we expect consideration of that in the appraisal process?** Yes, the appraisal will take into account the value of your land and your house. However, there are no guarantees that the appraised value will equate to the same amount you have invested in your property.

30. **If my house is currently for sale, how will this program affect it?** As the property owner, you need to determine if it is best to sell your property on the market or to participate in this buyout program. You can still apply for this program and get an appraisal. If the government buyout offer is acceptable, you have the option to take it at that time. The property can remain on the market during your participation in this program. If the property should sell, you can withdraw your application.

31. **What if I have a mortgage or home equity loan on my property?** Any debts against the property will be settled during the closing process. The SCD must receive a clear, lien free, title to the property upon closing. In rare cases, the amount of the lump sum offer may not be enough to payoff the total debt against the property. If this is the case, the eligible property owner will be responsible for paying the extra amount to cover the debt. As mentioned previously, this program will only offer one lump sum payment to cover the value of the property and to assist with related relocation expenses.

32. **If the lump sum offer from the Sponsors is not acceptable to me, do I have to take the offer?** No. This is a voluntary program, and you are not obligated until after you accept the offer.

33. **If my property is eligible and an offer is made to me, do I have to use the money to purchase another home?** No. After you accept the offer and receive the money, it is your money to spend however you need to. You may decide to rent a place to live and use the money to help you pay rent. You may decide to put the money in your bank account and live with relatives. If you are not comfortable making your own financial decisions, you are encouraged to get advice from a trusted financial advisor. It is very important to remember that the lump sum offer you receive (if you choose to accept the offer), will be the only money you get to help you with relocation and a future place to live.

34. **How will the voluntary floodplain buyout improve the natural environment along Dunloup Creek?** Restoring the natural floodplain will provide some minor benefits to the natural environment, for example: water quality in the creek should be improved by removing some contamination sources such as sewer, lawn runoff (possibly containing fertilizers and pesticides), and an improved buffer for runoff flowing into the stream. Natural vegetation will eventually return, which may improve the fish habitat by providing shaded areas. The stream will be allowed to meander more naturally without the worry of eroding into the yards of homeowners.

35. **If I own rental property in the buyout area, why would I want to participate in the buyout since I would lose a source of rental income?** The buyout would give you an opportunity to relocate your investment in a safer location without fear of losing your rental property to a flood. You could also remove your tenants from the risks of living in an area subject to frequent flooding.

36. **If I currently live in a rental unit in the buyout area and my landlord sells his property by this program, will I receive any assistance for relocating?** Yes, you will receive a *relocation benefit* (one per rental unit) to assist you with reasonable moving expenses. This amount may not cover all of your actual moving expenses since personal situations vary.

37. **What if my landlord doesn't volunteer to participate, but I still want to move?** If you voluntarily move, you would be responsible for your own relocation expenses. You can only receive the *relocation benefit* if your landlord accepts an offer for his property under this program.

38. **I'm confused with the terms 100-year floodplain, base flood elevation, and 100-year buyout area. Please clarify.** The 100-year floodplain refers to the elevation of the water level during a 100-year storm as calculated by engineers with the NRCS. Some agencies also refer to this water level elevation as a base flood elevation. The 100-year *buyout area* includes properties with portions of land or building at or below the 100-year floodplain elevation. Even if one corner of the property receives flooding, the boundary of the *buyout area* encompasses the entire property. Therefore, the *buyout area* boundary is not exactly the same as the boundary showing the 100-year floodplain elevation.

Appendix C – 100 Year Buyout Area

Appendix D – Application and Ranking Criteria

----- Insert Southern Conservation District letterhead here -----

APPLICATION TO VOLUNTARILY SELL FLOODPLAIN PROPERTY
Dunloup Creek Voluntary Floodplain Buyout Project, Fayette County, West Virginia

This application is an expression of interest in the program. It is not a financial commitment.

All owners listed on the property deed must be included on this application. Submit one application for each deeded parcel. If you have any questions, call the *Southern Conservation District* at 304-253-0261.

IMPORTANT – Application Checklist

- Complete this form. **All owners must sign** where required, **and initial & date each page** as indicated.
- Attach a copy of the **current tax year ticket**
- Attach a copy of the **tax map**
- Attach a copy of the **current property deed**
- Mail or deliver completed form and attachments to:

Attn: Voluntary Buyout Program
 Southern Conservation District
 463 Ragland Road
 Beckley, WV 25801

1a. Applicant Name, Address:	1b. Applicant Name, Address:
Name: _____	Name: _____
Address: _____	Address: _____
City: _____,	City: _____,
State: _____	State: _____
Zip Code: _____	Zip Code: _____
Home Phone:	Home Phone:
Alternate Phone:	Alternate Phone:

Note: Attach additional pages if necessary

Initial and Date _____

Initial and Date _____

2. What is the primary use of this property (*Circle One*):

- a. Primary residence, that is at least one of the applicants lives on property
- b. Rental property
- c. Business property
- d. Vacant residence For how long? _____ Why has house been vacant? _____
- e. Church, Community Building, or Other Non-profit Use
- f. County or City owned property
- g. State owned property
- h. Condemned property
- i. Vacant lot
- j. Vacant lot, adjacent to home, business, or other building
- i. Other, Please Describe: _____

3. I (We) hereby apply for consideration for participation in the Dunloup Creek Voluntary Floodplain Buyout Project to offer the above described property for sale to the local Sponsors at the appraised market value. The local Sponsors are identified in the Dunloup Creek Watershed Plan – Environmental Impact Statement. The appraised market value will be determined by a state certified real estate appraiser contracted by the local Sponsors. I (We) also understand that I (We) will be offered a *relocation benefit* to assist with moving and relocation expenses, if we are currently living in a residential unit in the *buyout area*. Vacant lots, abandoned buildings, and other non-residential properties may be purchased at the appraised market value, with no *relocation benefit*. I (We) understand that this application does not obligate us in any way, but is a formal expression of interest to be considered for participation in the voluntary program. I (We) further understand that all applications received will be evaluated for eligibility and ranked. Formal offers to buy real property will be extended to the highest ranked applicants relative to the available funds. Ranking may require access to the property on one or more occasions by local Sponsors or their agents. All reasonable efforts will be made to arrange appointments for access. Failure to permit access to the property or to allow access within a specified period will result in the withdrawal of the application from further consideration. I (We) hereby attest that the name(s) listed above in Item 1 own and have complete control of the property described in Item 2. I (We) understand that this application will remain active until the project is terminated, unless I (We) withdraw the application by written notice to the SCD.

Signature lines for all applicants listed in Box 1.

SIGNATURE:	SIGNATURE:
PRINT NAME:	PRINT NAME:

Note: Attach additional pages if necessary

PRIVACY ACT STATEMENT

The above statements are made in accordance with the Privacy Act of 1974 (5 U.S.C. 522a). Furnishing this information is voluntary; however, failure to furnish correct, complete information will result in the withholding or withdrawal of such technical or financial assistance. The information may be furnished to other USDA agencies, the Internal Revenue Service, the Department of Justice, or other State or Federal law enforcement agencies, or in response to orders of a court, magistrate, or administrative tribunal.

Initial and Date _____

Initial and Date _____

NONDISCRIMINATION STATEMENT

The U.S. Department of Agriculture (USDA) prohibits discrimination in all its programs and activities on the basis of race, color, national origin, age, disability, and where applicable, sex, marital status, familial status, parental status, religion, sexual orientation, genetic information, political beliefs, reprisal, or because all or a part of an individual's income is derived from any public assistance program. (Not all prohibited bases apply to all programs.) Persons with disabilities who require alternative means for communication of program information (Braille, large print, audiotape, etc.) should contact USDA's TARGET Center at (202) 720-2600 (voice and TDD). To file a complaint of discrimination write to USDA, Director, Office of Civil Rights, 1400 Independence Avenue, S.W., Washington, DC 20250-9410 or call 1-800-795-3272 (voice) or (202) 720-6382 (TDD). USDA is an equal opportunity provider and employer.

INSTRUCTIONS FOR COMPLETING APPLICATION

There will be one application period for this program. The application period will last 90 days. If you wish to participate, it is important that you submit your application promptly. Equally ranked properties will be taken in the order the applications were received.

GENERAL ELIGIBILITY

The program will be open to any landowner that; 1) has at least a portion of their property within the 100 year floodplain of Dunloup Creek as defined by NRCS mapping (*see buyout area map*) and, 2) owned the property on or before the date of January 1, 2006. Exceptions to this date may be granted for extenuating circumstances such as inheritance. The USDA-NRCS reserves the right to grant exceptions to the "GENERAL ELIGIBILITY" requirements. Participation or non-participation in this program does not affect an individual's ability to participate in other flood mitigation programs.

RANKING CRITERIA

Property will be acquired from interested landowners on a priority basis as funds become available. A ranking procedure will be used to determine the order in which properties receive the buyout offer. Applications will be ranked based on the depth of flooding and primary use of property. The date and time the application is received will be used as a "tie-breaker" for equally ranked properties. Properties used as primary residences with the deepest floodwater depths above the first floor will have the highest priority.

ADMINISTRATION OF THE BUYOUT

The SCD (or its agents) will be responsible for taking applications. The local Sponsors and NRCS will rank applicants. Applicants will be offered buyouts according to a ranking system. The availability of funds will determine how many applicants can be offered a buyout. The program will be funded in phases as described in the Watershed Plan – Environmental Impact Statement. Once funds are depleted, applications will be held until additional funding becomes available. In the event that a property appraisal is conducted, but funds are not available to complete the buyout offer, the appraisal will be held by the local Sponsors until future funding becomes available. If a significant amount of time passes, the Sponsors may update the appraisal.

Program funds will be administered through the NRCS and local Sponsors as they become available.

Initial and Date _____

Initial and Date _____

The local Sponsors will pay for a certified real estate appraisal and a review appraisal, according to the procedures set forth in the Real Property Acquisitions Act. In the event that a flood occurs during the administration of this project, all appraisals will be based on the pre-flood fair market value of the property. Once the appraisal is completed, an offer will be made to the applicant(s). The offer will be made by certified letter from the SCD to all applicants in Box 1 of the application. The owner(s) has 30 days from the certified letter return receipt-date to accept or reject the offer. All applicants must complete the acceptance form included in the offer and return it to the SCD for the acceptance to be valid. Failure to return a signed acceptance form within 30 days will be considered a rejection of the offer. It is the responsibility of the applicants to ensure that they have met the conditions set forth for acceptance of the offer.

If applicant rejects the offer based on dissatisfaction with the property appraisal, they may, at their own expense, have an additional appraisal done. This must be completed within 60 days of receiving the buyout offer. The local Sponsors and the NRCS will evaluate the two appraisals and make an offer based on the additional information. The applicant will have 30 days from the date of the second offer to accept. If the applicant does not accept, the application will be placed at the end of the ranking and given an “inactive” status. Once all other applications have been serviced, inactive applications may circulate back through the appraisal process. The local Sponsors and NRCS will continue to offer buyouts as long as funds are available.

NRCS reserves the right to modify the timeframes as described in this application for extenuating circumstances.

No additional relocation funds or relocation services will be provided. Owners are responsible for their own moving expenses, real estate services, and any other expenses associated with movement from the purchased property.

For rental properties, the tenants of successful applicants will be provided a payment to assist with their relocation expenses. Only one payment per rental unit will be made, not one for every tenant in an individual rental unit.

Residents who accept a buyout offer must vacate their property prior to the closing date. Anything the owners wish to remove from the property must be removed by the closing date.

Mobile and modular homes will be assessed in the same manner as permanent housing.

The local Sponsors will hold all properties in fee simple title. Once purchased, all structures will be removed from the property and the land will be returned to a natural floodplain to the greatest extent possible. The property will remain in perpetuity as undeveloped floodplain. The local Sponsors may enter into agreements with other entities to allow uses that are compatible with natural floodplain functions. The local Sponsors and NRCS will be responsible for removal of all structures from the property, and restoring the property to a natural floodplain. Properties will be subject to applicable state and local laws regarding dumping.

If you are interested in this program, you should apply as soon as possible to improve your chances of being selected.

AGENCY OVERSIGHT

The USDA-NRCS reserves the right to review and reject any applications that do not fulfill the intent of the program. Agency oversight is required to ensure that participants do not unduly profit from this program.

Initial and Date _____

Initial and Date _____

This page is for AGENCY USE ONLY. Applicant should not write anything on this page other than initial and date to indicate it's been read. This is included for your information only.

Ranking Criteria (to be filled in by agency)
<p>Is the property in the 100 year floodplain as defined by NRCS mapping? Yes or No If Yes, continue with ranking. If No, applicant is not eligible.</p> <p>What is the depth of water from a 100 year storm on the first floor as defined by NRCS floodplain mapping? _____</p> <p>For Official Use Only - Date & Time of Receipt: _____</p> <p>Application received by: _____ (name of SCD employee)</p>

Ranking Criteria (to be completed by agency)	Point Value	Points Assigned
100-Year Flood Depth on First Floor		
5.0 Feet or deeper	5	
3.0 to 4.9 Feet	4	
1.0 to 2.9 Feet	3	
0.0 to 0.9 Feet	2	
Floodwater on Property, But Below First Floor or Doesn't Reach Structure	1	
Primary Use of Property		
Primary Residence for Applicant	5	
Rental Property	4	
Vacant Residence – Due to Flooding Related Problems	3	
Vacant Residence – For Reasons Other Than Flooding	2	
Condemned Property	2	
Business Property	1	
Church, Community, or Other Non-Profit Building	1	
Vacant Lot	0	
County or City Owned Property	0	
State-Owned Property	0	
TOTAL POINTS (Ranking)		

Highest ranked applications will receive the highest priority for purchase with the available funding. In the event that there are several applications equally ranked, but not enough funding for all of them, those applications will be processed in the order received based on the date and time of receipt.

Initial and Date _____

Initial and Date _____

Appendix E – Environmental Documents
