



**Flood Mitigation Plan**  
**Unincorporated Areas of**  
**Kanawha County, West Virginia**

Draft Adopted By the  
Kanawha County Planning Commission  
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## **SECTION I - Purpose**

*The purpose of this plan is to identify flooding risk in the unincorporated areas of Kanawha County and propose cost-effective, technically feasible alternatives to repetitive flooding.*

## **SECTION II - Introduction**

*Kanawha County received \$1.6 million dollars in 1997 in response to the Presidentially declared flooding disaster of March 1997. These same areas were hit again with flooding 15 months later in June 1998, however funding has not been forthcoming. Intensive effort is being applied by the County Commission to procure funding to assist victims, however competition is fierce.*

*The 1997 matching funds are made possible by section 404 of the Robert T. Stafford Emergency Assistance and Disaster Relief Act. These matching funds were provided by the Federal Emergency Management Agency (FEMA) and State West Virginia. The funds are being used in the Clendenin area along the Big Sandy Creek at the Confluence of Doctor's Creek on Spencer Road (Doctor's Creek Project) and are being used to acquire and raze floodway and floodplain structures.*

*The 1997 Housing and Urban Development (HUD) Disaster Recovery Initiative Funds are being used in Sissonville (Old Mill Road Project) to acquire and raze floodway structures.*

## **SECTION III - History of Kanawha County**

Kanawha County was formed from parts of Greenbrier and Montgomery Counties (Virginia) in 1788 by an Act of the Virginia Legislature. Its name "Kanawha" comes from an Indian name

“Cohnowas” the original inhabitants of the area, meaning, “place of white stone”-no doubt for the salt deposits once found in the area.

Salt, coincidentally was the area's first industry, however since that time leading industries and agricultural products have included chemicals, coal, glass and glassware, petroleum, natural gas, tool and die, electric power, lumber and mine machinery and equipment.

The county seat is Charleston, which is also home of the State Capital. Charleston was originally proposed by George Clendenin who intended for two east-west streets and six north-south streets. Having laid out the "Town at the Mouth of the Elk" as it was first called, Mr. Clendenin petitioned the Virginia legislature for a charter in the name of Charles Town. This name was in honor of his father, Charles Clendenin, who was the first reported death of the new settlement.

#### **SECTION IV - Demographics**

Kanawha County is located in the south central West Virginia region and encompasses 913 square miles totaling a population of 207,619<sup>i</sup>. Over 140,000+ (71%) of these residents live in urban areas and with the remainder 60,000+ (29%) living in rural areas of the county. Most of the urban population are distributed in the following areas: Charleston (57,287), Belle (1,421), Cedar Grove (1,213), Chesapeake (1,896), Clendenin (1,203), Dunbar (8,697), East Bank (892), Glasgow (906), Handley (334), Marmet (1,879), Montgomery, Nitro (6,851), Pratt (640), Saint Albans (11,194), Jefferson and South Charleston (13,645)<sup>ii</sup>.

Kanawha County leads the state in many statistics and for the most part sets the example for the rest of the state in new procedures, technologies and progress in development [See Appendix A].

Kanawha County is certainly the best-informed population in the state, with four major higher learning institutions, eleven major libraries (one government depository), five television stations, sixteen radio stations, two major statewide newspapers, seven local newspapers and five periodical magazines.

Kanawha's population is predominately white (92.5%). Blacks, the largest minority group in Kanawha County, comprise 6.6 percent. The remainder of our population is American Indian, Asian and Pacific Islander and is less than one-percent<sup>iii</sup>.

Kanawha County average income range is one percent (1%) below the national average for per capita personal income. The median household income is \$23,999, which is the highest in the state, but still forty-percent (40%) below the national average. Over fifty-percent (50%) of Kanawha Counties households exist at or below the established poverty levels of less than \$24,000 per household (these figures are based upon income and family composition).

Kanawha County is the state's business center. There are 5,586 business establishments in Kanawha County. The seven counties surrounding Kanawha are included in these figures due to the fact that over seven percent of county residents travel to find work outside the county.

## **SECTION V - Government**

Kanawha County is represented in the State Legislature by the eight senatorial district (one seat) and the thirtieth through the thirty-second delegate districts (twelve seats).

Kanawha County is governed by a three-member county commission. Commissioners are elected to a six-year term by the voters at large. Annually, the members choose one of their number as president. The County Commission has the primary budgetary and administrative responsibility for the operation of county government.

Kanawha County, as well as other larger municipalities, has a fifteen-member planning commission to guide development. These members are appointed by the County Commission. Their primary role is to administer subdivision regulations, mobile home regulations, floodplain management ordinance and the salvage yard permit ordinance for the unincorporated areas of the county.

The planning commission serves in an advisory capacity to the Kanawha County Commission in matters of street closing, location and expansions of landfills, petitions for annexations to municipalities, consolidation of public service districts, studies on solid waste collection and recycling, impact studies on the placement of new or expanding recreational, industrial and business facilities.

Currently Kanawha County's ongoing mitigation projects total over \$1.6 million dollars. Kanawha County has also done substantial work towards the development of a comprehensive land use plan. This plan will regulate development of floodplains,

subdivision development and ensure compliance with the National Flood Insurance Program regulations.

In addition, at this time Kanawha County is in the process of identifying condemnable structures. Some of these structures are located in the flood fringe and are, in some cases, in their bad condition due to flooding damages. Kanawha County's flood ordinance regulates reconstruction in floodway and requires building permit for all new construction. These regulations have made it impossible to rebuild some homes and therefore these structures have been abandoned. To date Kanawha County has identified over 100 structures in the county that require demolition. Funding for this endeavor is, at this time, a big problem.

## **SECTION VI - Flooding Risk**

Kanawha County is very susceptible to many types of disasters: flash-flooding, riverine-flooding, chemical releases, winter storms, tornadoes and forest fires. During the past eight years Kanawha county was affected by more than ten Presidential or State Declared disaster events (isolated or county wide).

*“The first recorded flood of Kanawha County was in September 29, 1861. This is referred to as the Great Kanawha River Flood of Record, also effecting tributaries of the Kanawha River, such as the Elk. The river in Charleston rose 3-4 feet per hour and peaked at 46.87 feet. This stage has not been exceeded since. It is said that the Ohio River flowed upstream some 30 miles*

*because of the discharge of the Kanawha. See Appendix B for a chart of known flooding events.”*

Other events that have plagued Kanawha County and caused significant damages have been winter storms and high winds. These however, do not come close to the expenditures for flooding disasters.

Due to the phenotypical region in which Kanawha County is located, riverine flooding is our greatest concern. In most of these areas floodwaters inundate structures and return its bank within several days.

Due to the extremely mountainous terrain with quick elevation changes, flash flooding is also a primary concern. Most riverine flooding occurs along the Pocatlico and Elk Rivers and their tributaries, which results in the water quickly entering and exiting structures-typically these waters are only in a structure for less than 24-hours.

Through the County Flooding ordinance consideration is made for further flood hazard analysis for mitigating losses because of flash flooding and/or riverine flooding in unmapped areas.

The Kanawha County Commission acknowledges the current Flood Insurance Rate Maps (FIRMs) are best used for planning. Actual data on elevations should be gathered and presented by a registered professional.

The Flood Insurance Study (FIS) data are not being tracked with sufficient accuracy to manage development. This would encompass the facilitation of the expanding floodplain areas

because of infrastructure development and encroachment. Also noting that there is a need for undeveloped land (Buffer) within the counties established flood plain.

Furthermore, any earth disturbing or exposing activities such as forest fire, logging, excavation or mining activities contributes to the problem and therefore cannot be solved as long as civilization continues to develop natural floodplain areas.

## **SECTION VII - Public Involvement**

The Kanawha County Planning and Community Development office has been addressing the concerns of affected Kanawha County residents by enforcing floodplain regulations to ensure continued participation in the National Flood Insurance Program. Also, by preparing grants and working with Federal and State Agencies to ensure our continued eligibility and participation in future mitigation activities, Kanawha County is able to further accomplish its mitigation goals.

The topic of mitigation has been broached at public meetings, news media and talk radio for years. It has been discussed in County Commission meetings and Planning Commission meetings repeatedly and outraged victims and concerned residents have requested inclusion in any mitigation activity that may be available.

Starting with the 1997 Floods in Kanawha County residents and government officials started working together to develop a strategy for dealing with the large number of structures located in the 100-year floodplain.

Public Meetings were held at Herbert Hoover High School (Clendenin, WV), Hurricane City Hall (Hurricane, WV), Clay County Commission Room (Clay, WV), Sissonville High School (Sissonville, WV) Elkview Middle School (Elkview, WV).

The first formal public meeting discussing the overall County Mitigation Plan was held on December 29, 1999. At that public meeting, plans to eliminate potential flooding damages as identified by Flood Insurance Rate Maps, Surveys of floodplains or because of actual damages in the past were discussed.

However, the minutes from every public meeting held in the course of 1997 and 1998 grant preparation was reviewed and strategies were developed.

**PUBLIC NOTICES:**

December 14, 1999                      Daily Mail & Gazette

**PUBLIC HEARINGS:**

May 20, 1999                      Sissonville High School

December 9, 1997                  Clay County Courthouse

December 11, 1997                Elkview Middle School

**CITIZEN COMMENT:**

The Kanawha County Planning and Community Development office has been addressing the concerns of the affected residents of the county in regards to possible solutions actively since November 1999. The topic of mitigation was on the agenda in November & December 1997, every month's commission meeting in 1998 and 1999.

The first public meetings discussing the overall plan for mitigating damages was held on December 29, 1999. At that public meeting, plans to eliminate potential flooding damages as identified by Flood Insurance Rate Maps, Surveys of floodplains or because of actual damages in the past were discussed.

## **SECTION VIII - Priorities**

Due to the competitiveness of federal grant applications, it has become necessary to develop a plan that will allow a jurisdiction to make long-term, technically feasible, cost effective mitigation plans for flooding reduction.

This plan should be clear, concise, attainable and be directed toward the accomplishment of a measurable goal. Kanawha County intends to reduce repetitive flood loss, reduce the number of substantially damaged structures and reduce the number of floodway structures.

The Kanawha Country Commission intends to accomplish this goal by prioritizing the applicants using various statistical data. For instance, the number of floods and severity, actual damage records, base flood elevation data (FFE/BFE), year of construction or placement, and total family income. This data will be compiled and grouped by tax district and map location for potential project development. List of potential applicants is located in Appendix C herein.

The checklist has been compiled from suggestions and requirement from various Federal and State Agencies and is comprehensive. Compliance with the guidance herein, will greatly enhance the probability project funding.

Kanawha County is using a simple methodical approach to identifying potential mitigation projects. With consideration for the above-mentioned problem locations, an easy to understand chart has been created (see Appendix A) for use in determining selection priority. Due to the fact that these types of mitigation project typically are competitive and funds are finite and must meet a positive benefit cost ratio. A list of flood plain structures will be maintained at all times by the Planning Commission and incorporation onto that list requires the Director of the Planning Division to authorization.

Kanawha County favors acquisition or relocation over elevation activities for the fact that only acquisition or relocation activities are permanent solutions to our repetitive flooding problem. Relocation activities are typically reserved for mobile homes or manufactured homes due to the ease of movement, although special considerations are made if situation permits.

This guidance is intended only for homes that are located in the Special Flood Hazard Area or were constructed before 1985 (a.k.a. Pre-Firm<sup>iv</sup>).

It is intended for fee simple acquisitions only with clear transfer of title to the county in compliance with 44 CFR §206.434 (d) (1).

Furthermore, it is a priority to deal with problem structures first. Homes located in the SFHA that do not have demonstrated damages will receive less consideration. Typically older structures or substantially damaged structures are able to meet favorable benefit cost ratio and therefore receive higher consideration. In

addition, contiguous tracks of land suitable for future development are given higher consideration.

Homes that were built after the County Ordinance was enacted as hereinafter referred to as Post-Firm Structures are not given consideration unless part of a greater project area.

No compliant structures constructed or placed after March 18, 1985 may be eligible for participation, unless said property is part of a larger parcel or contiguous project area.

Non-compliant (NFIP) structures constructed or placed after March 18, 1985 are ineligible for participation

No secondary properties will be acquired, unless said property is part of a larger parcel or contiguous project area.

FLOODWAY STRUCTURES-Any floodway structure may be acquired by the county. Further stated, any development or redevelopment in this area must be restricted in accordance with National Flood Insurance Policy and The County Flood Regulations.

REPETITIVE LOSSES-Directives from the National Flood Insurance Program, Federal Emergency Management Agency and the State Office of Emergency Services have directed all counties to reduce the number of repetitively damaged structures. Several Programs exist solely for the purposes of reducing the number of repetitively damaged structure (some programs require coverage for participation)

PLAN - Alleviate property damages by removing structure from the hazard.

REDEVELOPMENT - Post-Project Land Use plans are being developed and are intended to be compliant with requirements in Title 44 Code of Federal Regulations.

Contiguous Tracts (Project Areas) - Several project locations have been investigated and proposals, maps, figures and project summaries can be found in the Appendix (See Table of Contents).

"Patchwork" Tracts - Until or unless a suitable parcel of land is acquired, all lands will be returned to arboretum or maintained by adjoining property owners. If suitable lands are acquired and a community need can be fulfilled, the

## **SECTION IX - Construction Methods**

For guidance, refer to § 6.0 CONSTRUCTION METHODS, Kanawha County Floodplain Management Ordinance.

It is the intention of the Planning and Community Development Office to implement new techniques and improve the standards and quality of floodplain Development. These improved standards coupled with increased awareness will reduce flooding damages allow for greater survivability in floodplain development.

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<sup>i</sup> "West Virginia Economic Summary-August 1990.

<sup>ii</sup> U.S. Department of Commerce, Bureau of the Census, 1990.

<sup>iii</sup> "Economic Summary-August 1999", West Virginia Bureau of Employment Programs.

<sup>iv</sup> Pre-Firm homes built before 1985.