

## CHAPTER 7 – DRAINAGE AND FLOODING

### **INTRODUCTION**

The potential for flooding and other drainage problems are a significant factor that must be addressed within any developing area. Failure to properly assess the impacts of development on the natural environment can lead to significant losses due to building failures or property damage from storm water.

Marion County has experienced significant flooding problems in the past and it is important this plan address the flood hazards and develop mitigation plans to minimize flood damage potential in the future. In addition, this element will review other issues to be addressed by the county and identify the means to improve the standards for new development in order to maintain property values and enhance the quality of life within the community.

### **DRAINAGE SYSTEM**

The bulk of Marion County lies in the greater Neosho River drainage basin, as seen by the map of that basin. A predominant feature within Marion County is the Cottonwood River and its several tributaries, which cover most of the area noted above.

A small portion of the southern part of Marion County drains into the Walnut River drainage basin; while a small portion of the southwest corner of Marion County drains into the Little Arkansas River drainage basin. A small portion of northern Marion County is in the Smoky Hill-Saline River drainage basin.

An extensive plan for the Neosho River Basin has been prepared by the Kansas Water Office. This plan provides significant information regarding all the issues to which Marion County should remain knowledgeable and use as decisions are made regarding the future uses within Marion County. By adoption of this Comprehensive Plan, Marion County incorporates the Water Plan from the Kansas Water Office as an official part hereof and will use said document, and its amendments in the future, to aide in deliberations on matters placed before the County.

### **WATERSHED DISTRICTS**

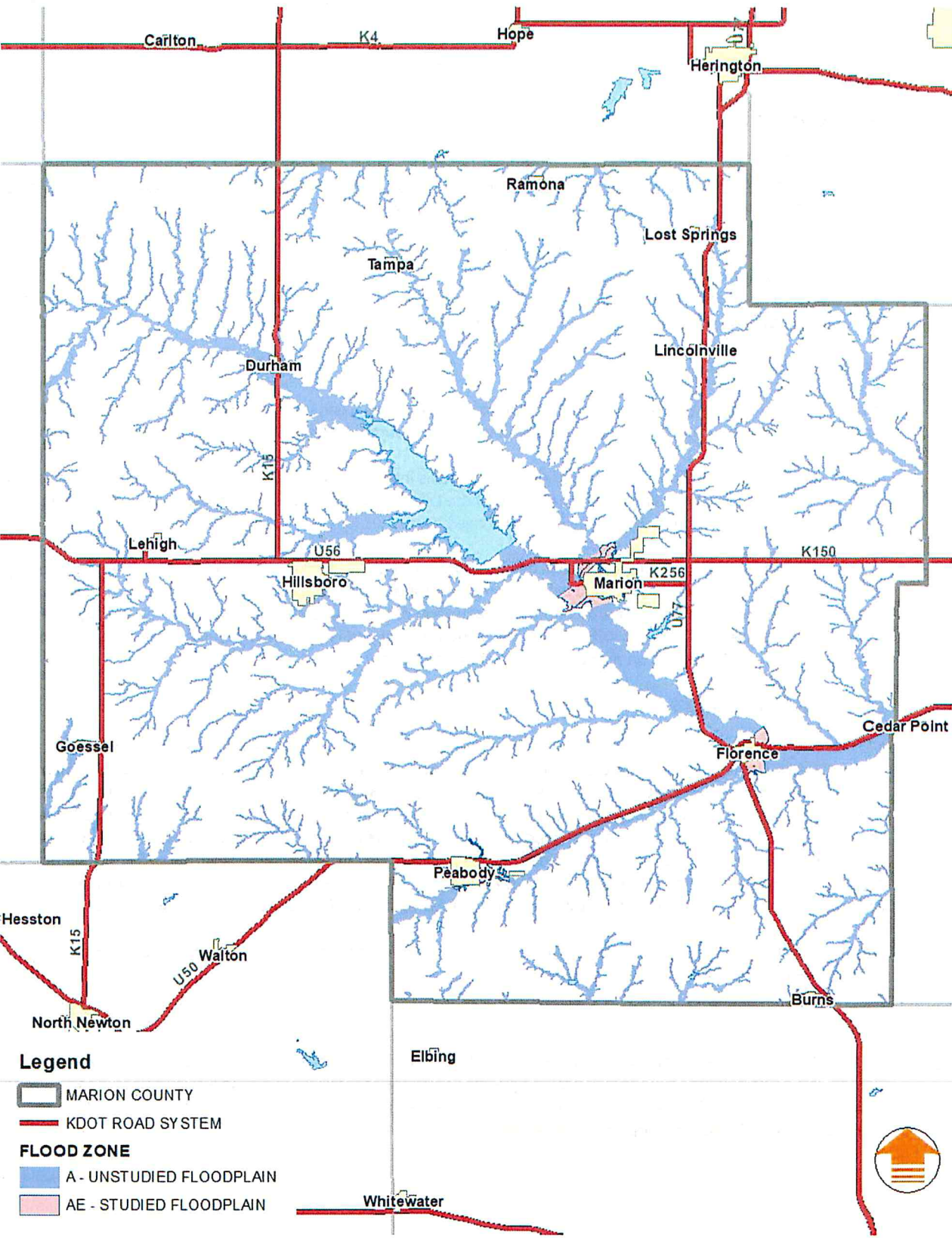
Marion County has part of six organized Watershed Districts within its borders. Each of these Watershed Districts are separate taxing units that are empowered under state statutes to raise monies and oversee the construction of “watershed lakes” on rural properties. The purpose of these districts is to empower the landowners within that district to enhance the usage of the surface waters within the drainage basins to provide surface water structures for agricultural uses and to lessen the soil erosion impacts from periodic flooding. Additional benefits accrue by also lessening the flood impacts to improved properties downstream. The county should remain very supportive of the landowners within each of the drainage basins organizing and establishing these districts. This is considered a critical need in mitigating flooding exposure to the rural areas and is a very effective and beneficial means of addressing a part of the problem at the local level.

The areas included within the Watershed Districts, and corresponding names of each District, are shown on the Watershed District Map for the State that is shown herein.

### **FLOODPLAIN PATTERNS**

The rural areas of Marion County had the Floodplain Maps recently updated. These maps are digital and were developed using detailed data, which can assist in providing better decisions regarding flood exposure and flood depths. Marion County participates in the National Flood Insurance Program and its floodplain administrator continues to maintain certification as a Certified Floodplain Manager, which is beneficial to the County.

FIGURE 13: MARION COUNTY FLOODPLAIN MAP





## **FLOOD HAZARD ISSUES AND MITIGATION**

One of the special efforts that must continue to be made is to identify the flood hazards within the county and to address the means to better manage future changes in order to reduce and/or eliminate the exposure of people and property to flood hazards. The major flooding events within the past have focused many peoples attention on this problem and the need to do more to prevent future problems is recognized as the most cost-effective approach to managing the rural developments to come. Other county's experience with buy-outs following flood events such as happened in 1993 shows that better decisions in considering proposed developments would be much more effective than to have to deal with the emotions and traumas associated with a buy-out effort. While it may not be a "popular" decision at the time, it is always cheaper and better to prevent the problem than it is to cure it.

Flood hazards were a special topic identified in the stakeholder meetings held at the beginning of the planning process. While not topical at this moment in time because there have been no recent flooding events, the need to remain diligent to the flood exposure to existing improved properties, and the impacts of new development within the County regardless of whether such development is in the mapped floodplain or not, remains of high importance. The stakeholders felt all new development should be closely scrutinized for its impact on all existing properties in order to provide assurances that the flood hazards are not getting worse over time.

Another concern which the County must remain aware deals with the maintenance of the streambeds within the drainage basins. The question always is who has responsibility for keeping the streambeds free from debris. A lot of confusion exists about whether private landowners can deal with these problems or whether there are limitations on taking aggressive actions because of other laws and regulations. In particular, concerns exist about the potential of habitat destruction for any endangered species resident to the area. Subsequent review with state and federal officials shows that the only limitations on maintenance is to not destroy live or standing trees along the streams. Any trees or other debris that have fallen into the streambed and causing problems with storm water flows can be removed without violating any laws. However, it is the landowner that is responsible for such work. The public has no legal authority to do that work, except as it affects bridges and culverts along the public roads. The county needs to do more in educating the public on this matter.

## **STRUCTURES AT RISK OF FLOODING**

Marion County should use its GIS resources to regularly inventory and map all the structures within its designated flood plain areas that are at risk of flooding. Even though there are floodplains along many streams within rural Marion County, it is not anticipated there are as many structures at risk in those areas because there has not been the amount of construction in those parts of the county. Such a detailed inventory of flood-prone properties for all of the rural areas will be beneficial in evaluating all future development proposals. Marion County can work with the officials in the Division of Water Resources at the State and FEMA officials to identify any such properties on record within the rural portion of Marion County.

## **EVALUATION OF MITIGATION ACTIONS**

As noted previously, several specific flooding issues have been identified as issues requiring attention by Marion County officials. In particular, concerns about the impact from new development, the need for better stream maintenance, the need for more flood control structures within the drainage basins, and the overall need for better information on actual flood hazard areas.

Given the above results, and taking into account the overall ability of Marion County to initiate specific actions identified herein the actions concerning floodplain management, reduction of economic impacts from flooding, improving the regulatory management and oversight of new development, and the on-going coordination of the flood mitigation program are specifically adopted. It should be noted that Marion County does not have the ability to engage in a more detailed Storm water Utility program similar to what some cities presently have adopted, but can improve its program of development review to better address the drainage and flood impacts of new development.

## **PRESENT REGULATORY ACTIONS**

Marion County has implemented the Flood Insurance Program county-wide and provides information to its citizens in the rural areas about the flood potential as new development occurs. Most of the larger cities are presently active in the floodplain management programs, but the degree of oversight varies. However all the jurisdictions, including Marion

County, need to enhance and improve their regulatory programs in order to reduce the citizens and their property from flood hazards. Some efforts have begun, but more needs to be done.

### **PLANNING IMPLICATIONS**

The planning implications are very large for Marion County. In short, it needs to take significant steps to improve the management of the Flood Insurance Program county-wide, and to update its development regulations to assure appropriate rules are in place to properly evaluate all proposed new developments in the rural areas for impacts on the floodplains and the overall drainage systems within the county. The planning officials expressed concerns that this issue was not fully understood by all parties involved in the development approval process and the need exists to give greater emphasis on the importance of this area. As such, Marion County needs to coordinate its flood management efforts with all the cities within the county and undertake an educational program to inform the public on the goals and objectives for flood hazard mitigation and the responsibilities of the citizenry to help address these problems.

### **GOALS AND OBJECTIVES**

**DF-1 GOAL: PROMOTE THE PROPER MANAGEMENT OF THE DRAINAGE SYSTEMS WITHIN MARION COUNTY, ESPECIALLY IN RECOGNIZED FLOODPLAINS.**

**DFO-A OBJECTIVE:** Identify areas subject to drainage problems and in the floodplain within the county that should be protected from encroachment of new developments consistent with the floodplain regulations.

**TIMEFRAME:** On-going.

**RESPONSIBLE PARTIES:** Marion County, all cities, appropriate state agencies, realty companies, lenders, builders and developers.

**DFO-B OBJECTIVE:** Work with the Watershed Districts within the county to identify and protect breach impact areas below watershed structures once constructed.

**TIMEFRAME:** On-going.

**RESPONSIBLE PARTIES:** Marion County, Watershed Districts, Conservation District, rural landowners.

**DFO-C OBJECTIVE:** Promote "best management practices" in new developments to protect from erosion and sedimentation pollution in surface waters within the county.

**TIMEFRAME:** On-going.

**RESPONSIBLE PARTIES:** Marion County, farming groups, realty companies, lenders, builders and developers.

### **RECOMMENDATIONS**

In order to properly manage drainage and flooding potential within Marion County, the following recommendations are given.

1. The county should amend its development regulations to assure that all development proposals are evaluated for impact on the drainage basin. This is more than just checking for proposed construction in the floodplain, but should also address the changes to the surface drainage patterns and rates of runoff from those developments. The amendments should establish acceptable standards for such developments so all involved in the design and approval process understand the objectives to be met.
2. The county should undertake an educational program in concert with the cities within the county to inform the citizenry on the flood hazards existing within the county and the steps and measures being taken to protect the public from harm from flood events. In particular, support for improved flood hazards maps and clarification on the "maintenance" responsibilities of the private landowners should be key elements of this effort.