

## **VII. Policy Development**

### **A. Goals and Objectives**

Policies were developed to assure that the stormwater management program would proceed in an organized and professional fashion. The policies are a starting point for the City to implement the Stormwater Management Plan. The policies have been developed with flexibility to accommodate the changing needs of the City. To assure that the policies would address as many of the perceived needs as possible, the recommendations received internal review from the City staff and Black & Veatch, public review from the Stormwater Committee, and management review from the City Commission.

### **B. General Policy**

This section provides guidelines for planning and management of the stormwater conveyance system. The City Commission has reviewed the policies finalized by the Citizen's Stormwater Committee, which were developed from Stormwater Questionnaire responses, legal advice, and input from the City staff and the public. The guidelines supplement the Storm Drainage Design Manual. A Subdivision Planning Manual also has been developed for later adoption as part of this study.

#### Drainage System Issues

The following items were resolved by the Citizen's Stormwater Committee and reviewed by the City Commission.

- The City of Leavenworth shall maintain roadside ditches and driveway tubes in a more consistent manner as part of an overall plan for stormwater management.
- Curb and gutter streets shall be required in all new developments.
- Property owners with property along open channels and creeks must leave natural drainageways undeveloped to allow for storm runoff from future development upstream.
- The City shall not pursue acquisition of easements or ownerships along open channels unless necessary for a specific project or as part of a new development.
- The City shall not assume maintenance of open channels. The City should consider using the existing "nuisance" ordinances to enforce maintenance needs on open channels.

- The City shall follow federal guidelines for stormwater quality issues without additional City requirements.
- To complete the stormwater model, it is necessary to select a design storm for the sizing of improvements. After discussing the current practice, the extent of known problems areas, and the design standards of surrounding area, the Committee recommends the criteria in Table VII-1:

<b>Table VII-1 Recommended Design Storm</b>	
Residential Street Systems:	10-Year Storm
Arterial/Collector Systems:	50-Year Storm
Arterial/Collector Creek Crossings:	50-Year Storm
Flood Plain/High Value Commercial Property:	100-Year Storm

Legal Issues

- By Kansas law, a municipality has no legal obligation to provide drainage systems on private property. A City has the authority to construct them, but not an obligation. A City does have liability to maintain the improvements it has constructed.
- The City is responsible for drainage systems, both drainage swales and piped systems on easements, if the City installed the system. Also, if the City has agreed to maintain a system that was installed by others, it has responsibility.
- There is precedent that drainage should follow natural drainage patterns. Any changes in flow patterns may create liabilities.
- The courts have also established that a City is not responsible for upgrading systems and increasing their capacity to keep up with urban growth. In other words, if a City installs a pipe to convey design peak flow rates based on current development conditions, it is not responsible for upgrading the pipe in the future to meet increases in peak flow rates from urban growth.
- A City may create an ordinance prohibiting a property owner from making changes to his property which would cause drainage problems for his neighbor. If an ordinance is in place, then the City can enforce the ordinance by levying fines or other measures, but the City is not responsible for correcting the problem.

- If the City forms a drainage utility, it may acquire existing drainage facilities through eminent domain proceedings, but must compensate the owner. The facilities may also be donated to the City.
- If there is an applicable ordinance, the City can require individual property owners to maintain the drainage systems on their property. Drainage may fall under the broad category of "nuisance," for which there is a City ordinance.
- On private property, the City has no power to prevent someone from building a structure over a storm drainage pipeline that is not in a right-of-way or an easement. Through the building permit process the City can discourage this, but has no authority to prevent it.
- With the consent of the Owner, the City can legally perform maintenance on drainage facilities located on private property.
- A legitimate storm drainage operation/utility plan is to do nothing on private property. If it can be proven that the City has accepted responsibility by giving advice to citizens regarding problems on private property, then a legal responsibility exists.
- The courts have established no standard of care for drainage facilities. The standard of care, i.e., the capacity to convey the five-year storm versus the 10-year storm, etc., is a political and economic decision, not a legal one.

#### Stormwater Management Issues

- Stormwater management guidelines have been included in this report for alleviating problems associated with stormwater runoff, including flooding, erosion, and water quality deterioration. The guidelines present methods beyond the conventional procedures of increasing conveyance capacity and providing detention storage, such as best management practices, erosion and sediment control, and conveyance system maintenance. Although the capital improvements program projects will most likely not address all of the issues presented in this document, these guidelines should be considered where possible and followed during the design, and particularly during the construction phase of the project. Storm drainage system and flood plain management are discussed in Chapter VIII, Section D, and water quality issues are covered in Chapter XII, Section E.

- The stormwater conveyance system is a part of the City's infrastructure. The planning of these systems must, therefore, be an integral part of the urbanization process. Provisions for adequate drainage promote the general health, welfare, and economic well-being of an urban area. Stormwater conveyance systems consist of two parts--the local drainage system and the major drainage system. The local drainage system collects and conveys the runoff from individual sites, drainage areas, and subwatersheds to the major drainage system. Examples of local drainage systems are catch basins, drains, pumps, curbs and gutters, swales, storm sewers, and small open channels. Although the local drainage system is sized to eliminate flooding caused by design events, the overall intent of the system is to convey stormwater runoff away from the area and to eliminate long-term ponding. For rainfall events greater than the design storm, provisions must be included to assure that stormwater flow in excess of the capacity of local conveyance systems has a general path to follow without producing widespread flooding and ponding. Design issues are covered in the Storm Drainage Design Manual.
- Detention storage is required in developing areas if the peak flows resulting from the design storm would be larger than those provided for in the master plan. When an area is developed, large portions of vegetation and pervious areas are replaced with pavement and buildings. The increase in impervious areas causes higher runoff rates for a given design storm, which can cause or increase flood damage. The detention storage must be sized to store the higher runoff rate and limit peak discharge to the amount projected for that portion of the system in the master plan. This requirement helps to limit the amount of flood damage at particular locations as development continues. The construction of the detention basins, however, must be coordinated to assure that they complement one another and that they do not create worse conditions further downstream.

### **C. Procedure Manuals**

City-wide ordinances, codes, standards, specifications, and details for streets, parks, subdivisions, zoning, and commercial developments were reviewed for consistency with storm drainage management needs. Other cities' and agencies' design criteria were also reviewed. The City and the Citizen's Stormwater Committee helped define alternative design criteria, specifications, and details. The desired storm drainage design goals and needs for future development were determined, and the alternative design information was evaluated on the basis of construction cost impact, maintenance requirements, and overall

effectiveness. The final criteria were included in the Storm Drainage Design Manual bound separately as Appendix A. These criteria should be followed for the design of storm drainage system components, whether they are part of a capital improvement project or a new development.

The procedures in the Subdivision Planning Manual should be observed by developers before and during construction of new developments. The Subdivision Planning Manual was compiled from a list of plan review policies and procedures, and reviewed by the City. This manual is bound separately as Appendix B.