

## **CHAPTER 10: Development Limitations**

This chapter discusses the major physical constraints on future development in Buffalo. These physical constraints include the natural environmental constraints of floodplains, steep slopes and problem soils. Other constraints discussed here relate to man-made facilities, namely the city water and sewage systems. These constraints are important considerations with regard to the growth and development of the city. Other important constraints, including transportation facilities and current land use, are discussed in separate chapters.

### **Natural Resources and Constraints**

#### **Flood Plains**

Buffalo's 100-year floodplain is illustrated on the Development Limitations Map. Floodplains have been mapped in the city as part of the National Flood Insurance Program. Significant portions of the older parts of Buffalo are in the floodplain, including most of the area bounded by Main, Fetterman, and Benteen Streets and Clear Creek.

No floodplain mapping is available for areas outside the city limits. Unmapped floodplains exist along Bull Creek, French Creek, Rock Creek and portions of Clear Creek lying outside the city limits. None of the Buffalo area floodplains are particularly large. However, new development should avoid these areas if possible.

The City of Buffalo participates in the National Flood Insurance Program. The program makes reduced-cost flood insurance available for properties in Buffalo provided the City adopts and enforces a local floodplain management program that meets federal guidelines. Buffalo's program applies to new buildings or substantial modifications of existing buildings located within the mapped floodplain. Any such construction project must be "flood proofed" using specific construction techniques or be elevated to minimize the potential for flood damage.

#### **Steep Slopes**

There are significant areas of steep slopes in and around Buffalo, as shown on the Development Limitations Map. The slopes in this map are characterized as low, moderate or steep based on percent of slope. Low slope is 12.5% or less; moderate is more than 12.5% but less than 25%; and steep slope is over 25%.

These slope categories relate to development potential. Low slopes (12.5% or less) are the best suited for development. Moderate slopes can present significant problems for construction of roads and larger building foundations. Steep slopes (over 25%) are even more difficult to develop and many communities restrict development on these slopes or require special mitigation measures.

**MAP 2 INSERTED HERE**  
**DEVELOPMENT LIMITATIONS**

## **Problem Soils**

Soil mapping for the Buffalo area is in progress. Soil maps are not available at this time; however, new soil maps and associated data will be available in the near future. Soil maps and soil data typically provide important information concerning soil suitability for a variety of land development activities such as constructing local streets and building homes with and without foundations. Since there are a number of problem soil conditions in the Buffalo area, including high water tables and high shrink-swell soils, soil evaluations should be part of the development review process. Presently, Johnson County refers all subdivision applications to the local conservation district for non-binding recommendations concerning soil issues. It would be advisable for the City of Buffalo adopt a similar policy and refer all subdivision applications to the Lake DeSmet Conservation District for advice on soil issues.”

## **Water and Sewage Systems**

Future urban development in Buffalo will need to be serviced by the City’s drinking water system. The Development Limitations Map, maps the approximate service limits of the present city water system. The service limit is based on the elevation of the City’s highest water storage tank (4,954 feet above sea level). Areas of higher elevation would be comparatively difficult and expensive to add to the water service area.

Future urban development in Buffalo will also need to be serviced by the City’s sewage system. The conveyance of sewage through the system is largely accomplished by gravity flow. This generally means that sites located within the Clear Creek drainage basin and uphill from the sewage treatment plant east of town can potentially be served by the system.