

Waterfront on a lake or the ocean or the presence of a stream or pond is considered to bring added value to a development, but it also brings concerns. The presence of a surface water feature may be coincidental with a fairly high water table or shallow geological features. Drainage patterns should be carefully observed in the field as well as from the published sources of information. The presence of associated wetlands and floodplains must also be considered and preliminarily located. The location and extent of riparian zones should be noted. The location of water features and other hydrologically linked features of the site should be carefully observed and evaluated.

Springs and seeps are important to locate and identify in the site analysis process. Very often these features are located on USGS maps or the USDA soil surveys, but their analyst should confirm their presence in the field. It may be appropriate to consider local off-site hydrology as well. The analyst should consider storm water drainage including drainage from other sites onto the subject site. Of particular concern are the volume, concentration, and quality of the runoff storm water. Sites located along streams in the lower reaches of a watershed may be concerned with conditions higher in the watershed. The site analysis will also begin to identify storm water management strategies. The drainage pattern of the site and the presence of water features will indicate the likely location of storm water collection facilities.

The site analyst should consider the sensitivity of hydrologic features to development. Erosion and sedimentation during and after construction may represent a serious threat to surface water quality and habitat. If significant measures will be required to protect surface waters, these should be discussed in the site analysis. Many states have programs designating streams and lakes of high quality and providing for special protection measures for these waters. It should be determined if receiving waters are of high quality or restricted and how the status might affect the project.

In addition to sedimentation issues, the advent of the nonpoint source pollution programs of the National Pollution Discharge Elimination System (NPDES) have required municipalities to reevaluate storm water management schemes. The need to establish Total Maximum Daily Loads (TMDLs) for impacted waters may result in more stringent design requirements in the coming years.

Local records and history

Land use planning and development and regulation are generally an issue and a concern for local government. Local governments very often have substantial information about a site. As discussed in preceding sections, aerial photography, mapping, and other physiographic information is often available from local governments.

Zoning. Of all of the local sources of information, zoning regulations are probably the most important. Zoning regulations provide a prescription for how development is to be done in a community. The general conditions of development are described in terms of what development is encouraged and where in the