

6.2 RETROFITTING EXISTING DETENTION BASINS

Modifying existing detention basins may be one of the most cost-effective approaches to enhance water quality treatment. Detention is a common flood prevention requirement for new developments in many areas of the Texas coastal zone. One example is the subdivision in Chambers County, shown in Figure 6-5, which has three detention areas. By modifying the design of these detention basins to include wet pond or wetland characteristics, significant aesthetic and water quality improvements may be achieved.



Figure 6-5: Layout of a high-density single-family residential development. Includes three detention ponds.

Wet ponds can be designed as neighborhood amenities, attracting birds, and allowing opportunities for fishing and canoeing. These visual elements and recreational opportunities, as shown in Figure 6-6 through Figure 6-8 enhance the value of the development. The first two figures illustrate detention incorporated in single family residential developments. In areas with dry detention basins, residents typically install privacy fences because stormwater basins are viewed as unsightly liabilities. On the other hand, residents that back up to a wet pond frequently chose fencing materials that provide a view of the facility, indicating that it is viewed positively, and increases the value of those lots. Figure 6-8 shows a wet pond located at an apartment complex. It is evident that having an open water component makes the detention basin an asset to the development, allowing for higher rents to be charged to apartments that have a view of the pond.

If the use of a wet pond for recreational activities is not desired, the developer may choose to install a wetland detention area instead. Wet ponds include open water in the middle and vegetation around the edges while wetlands detention areas are generally shallow enough to have vegetation throughout. Both of these enhanced detention options are well suited to locations with a high-water table and high average annual rainfall.



Figure 6-6: Enhanced detention wet pond is an amenity (in a subdivision in Chambers County, Texas).



Figure 6-7: Chambers County neighborhood uses wet pond with a fountain for water circulation as a prominent feature in the subdivision.



Figure 6-8: Constructed wet pond provides water quality benefits and an attractive place to recreate for nearby multi-family housing.