

Storm Water Storage/Flood Mitigation

Coyote Run Golf Course is built on 140 acres. Slightly more than fifteen of those acres are devoted to lakes and the surrounding lake banks. The lakes are designed to retain storm water from the golf course property and also from about 40 acres of residential area to south and west of the course. Storm water enters the lakes rapidly but is discharged slowly through the use of restricting devices where the water leaves the property. The golf course lakes are designed to retain 13,685,760 gallons of storm water, (42 acre/feet), and release the water 39% slower than prior to the construction of the golf course, reducing potential flooding downstream. One inch of rain over one acre of ground is equivalent 27,154 gallons of water. Since the course consists of 140 acres, an inch of rain over the entire property results in 3,801,560 gallons. Therefore our lakes will retain about a 3.6" rainfall. This figure does not account for the water coming on to the course from the surrounding community or the water that would naturally soak into the soil.

The golf course also contains a constructed wetland along the 14th hole. The wetland filters water leaving the course and eliminates a long term flooding problem that had plagued our neighbors to the north.



Pond Management

Protecting water quality both on and off the golf course is a high priority. Coyote Run Golf Course has five ponds and is built on a property with four watersheds. Water leaves the property in all four directions; north south east and west. All of the Coyote Run ponds are designed with vegetative buffers. A vegetative buffer is the un-mowed area on the slopes directly adjacent to the ponds. Coyote Run's buffers consist of deep rooted un-mowed grasses, flowering plants, a few shrubs and aquatic plants. The primary purposes of vegetative buffer are to:

- Reduce runoff by increasing water infiltration into the soil. Less runoff means that less nutrients and other pollution enter the water. Excess nutrients are the primary cause of algal blooms and choking aquatic plant growth.
- Reduce erosion into the ponds by stabilizing soil on the pond banks with plant roots and vegetation
- Reduce shoreline-edge erosion due to wave action
- Improve fish and wildlife habitat by providing food, shelter and shade
- Purify water by filtering out nutrients and pesticides. Aquatic vegetation helps improve water quality. We have

no control over the quality and nutrient load of water coming into the golf course ponds from neighboring communities. Occasionally after heavy rain, the golf course ponds experience an increase in algae.

No aquatic pesticides are used at Coyote Run. We tolerate and embrace the healthy and natural condition of ponds with some algae and submerged plants. Sterile grass carp, a non-native, vegetation eating species of fish that have been sterilized to preclude reproduction, are used to keep algae and submerged plants under reasonable control.