

## Herons Glen Survey Summary

Our lake bank survey of all the lakes at Herons Glen that are on or close to the golf course has shown us that there has been quite a bit of erosion of the banks since the course was built.

Erosion of lakes occurs almost every day from wave and wind action, but our large summer rain events, along with an occasional hurricane cause a tremendous amount of wear and tear on our lake banks.

The least expensive way to solve the problem is with plant materials. Quite a few native plants are not affected by the large variation in our water levels. Each different specie of plant has a water level that it has adapted to. Some of the grass plants tend to like drier conditions and are better located near the high water level. These plants are the most critical to controlling the surface erosion. Some of rushes, such as bull rush, are more suited to high water conditions and can live in water that is 3 or 4 feet deep. The deep water plants are not as important in maintaining the lake banks, but they do their part.

Other lake bank solutions include walls, rip-rap, and similar solutions. Problems with these solutions are that the county and water management limit the amount we can have on each lake, and they are expensive.

There are a few lakes that have a rock layer that occurs at or near high water level (this is the elevation where most of the erosion occurs) and several lakes that have banks that are out of play or far away from cart paths, roads, or houses. Examples of these lakes are on #1, #2, #4, #7, #10, #13, #14, #17, and #18.

The lakes that are the most critical and in most need of work in the next few years, so that we don't lose a cart path or, even worse, someone's lanai include lakes on #2, #3, #4, #15, #18, and the practice range. Probably our biggest problem is what to do with the lake bank on the aqua-range. How do we protect these banks and still pick up range balls? I think we need to consider a combination of solutions. In the areas where the balls tend to congregate, we should use a tight, rock rip-rap and in the other areas use plants with a ball barrier. The other lakes in this group can be fixed with some form of the solution we used last year.

All the other lakes fit somewhere in the middle and will need repairing in about 3 to 8 years.

Residential lake banks have even more problems than the banks on the golf course side. The water exiting the roof gutters has a huge concentrated gallonage of rainwater rushing a very fast velocity. The best solution where gutters exist (I think this is about every house) is to pipe the gutters directly into the lakes. It is imperative that these pipes extend past low water and have some form of erosion control at the discharge point as the erosion will eat back into the bank.

The ultimate solution will be expensive, but with a consistent replacement of dead plants and minor repairs from time to time. Herons Glen will have beautiful, healthy lakes that will resist erosion and encourage our native fish, birds, and other wildlife to embrace our attractive neighborhood.

Thank you for allowing me to continue working on Herons Glen!

Cordially,

  
Gordon G. Lewis  
GGL/tja

Hérons Glen Lake Bank Analysis and Prioritization - Rating 1 to 10 (1 needs fixing within a few years, 10 means we can probably wait for about 10 years)

Rating 1

#4 - south and east banks, I think this should be one of the first lakes we do as it is so visible to everyone.

Rating 2

#2 - golf side, north, eroded bank is within 5' to 8' of cart path so it should be fixed within the next couple of years.

#3 - green, right, at entrance, part of the cart path is about 8' from the lake bank, work on this bank should be completed within the next several years.

#16 - 2nd dogleg right, 6 houses are affected with the nearest lanai being about 12' from the eroded lake bank, should be fixed within the next year or so.

Practice Range/#18 - view from clubhouse, pick up practice balls, erosion of bank within 4' of the cart path, the nearest lanai is about 25' from the bank, this lake will need some work within the next year or so.

Rating 3

West of Clubhouse - 11' to asphalt and 17' to lanai, because of visibility this lake bank probably needs to be worked on within 3 or 4 years.

#13/#14 - residential side, nearest lanai is about 17' to the eroded lake bank, regrading of this lake bank should probably be completed in 2013.

#16 - tee to 1st dogleg, left, affects about 20 houses and a couple of porches are about 17' from the eroded lanai, need to be regraded and bank planted in about 3 years or so.

#16 - 1st to 2nd dogleg, left, there is one lanai within 15' for the lake bank and another one about 17' to the erosion line, should be fixed in about 3 or 4 years.

Rating 4

#9 - I'm rating this to be fixed in 4 or 5 years, because the bank is within 12' of one lanai and 20' of another, but it may not need to be regraded for awhile as the slope has not eroded very badly as it is very rocky.

#11 - tee to 2nd dogleg, right, lots of good plantings, one lanai is within 16' of the bank and another is about 33', could do part of lake within the next 4 years or so.

#12 - dogleg to green, right, nearest lanai is about 20' from the eroded lake bank, another one is 30' from the bank, work will need to be done on this lake about 2014.

hgr - 1

Rating 5

#1 - south (residential side), dogleg to green, will need to be fixed within the next 5 years or so, there are about average bank erosion problems, the bank has eroded to within 20' to 30' of some of the porches.

#1 - east (golf), from tee around to chipping green, we can probably wait about 5 years to fix this as the eroded bank is about 17' to 20' from the cart path and is not affecting the chipping green at this point.

#6 - dogleg to green, in a few areas the lake bank has eroded to within 20' of porches, doesn't require any work for about 5 or 6 years.

#12 - tee to dogleg, left, golf side fairly well planted, residential side has several porches 25' to 37' from eroded lake bank.

#15 - behind green and to the East (left), road view, pump, new area for proposed holding pond, road side has good plantings, affects 6 homes, closest is about 17' from bank to lanai, another is 23', a third is 40', and the green is about 34' to the eroded lake bank, we should probably be working on this lake about the year 2015.

Rating 6

#3 - tee, right, the bank has eroded to within 20' of a lanai or two, should fix by about 2015 or 2016.

Rating 7

#10 - bank is within 40' of green and more than 50' from the road, this lake may not need to be resloped for more than 10 years, but I rated higher because it is visible from the road.

Rating 8

#2 - green, right, the golf course side bank doesn't need work for a long time as it is not eroding badly and the cart path is on the other side, the residential side should be fixed within 5 to 8 years as there is one lanai within 17' of the eroded bank and the next close is about 37' from a lanai.

#16 - behind the tee, closest lanai is 15' from the bank, but most of the porches are more than 25' away from any erosion, the existing littoral plantings are fairly good and the lake bank should not erode much more, so work on this lake will not need to be done for quite awhile.

Rating 9

#13/#14 - golf side, it's about 27' from the edge of the green to the lake bank, this side of this lake doesn't need to be done for a decade unless the erosion process speeds up.

Main Road between #16 green and #17 tee - 17' from cart path to eroded lake bank, view from road, 20' from top of lake bank to sidewalk, 25' from one house to the lake bank, a lot of nice littoral plantings are existing, may not need to work on the lake for a long time except if we want the view from the road to be better.

#18 - tee, this lake is in real good shape, we probably don't need to work on it for about a decade.

hgr - 2

**Rating 10**

**Left of Clubhouse Entry - new lake, good plantings, if we add more and replace dead ones we may never need to regrade this lake bank.**

**#1 - north (golf side), completed last year, won't need any major work for over 10 years, but needs some plantings replaces, especially the ones along the top of the bank (cord grass - THESE ARE THE MOST IMPORTANT PLANTS AS THEY ARE ONES THAT KEEP THE TOP OF THE LAKE BAND FROM WORKING ITS WAY INTO THE COURSE OR INTO THE YARDS AND SLOWS DOWN THE WATER ENTERING THE LAKE).**

**#4 - west and north banks, we can wait a long time on these banks.**

**#7 - good littoral plantings already, long way to the cart path, 42' to the road, and over 50' to the nearest lanai, this can be the last lake to be fixed and may never need reshaping if we add more plants and replace any that die, the top of the bank plants are the most important to replace and add (cord grass or a similar plant).**

**#17 - no affect on golf, houses, or road, just need to make sure erosion doesn't affect play or the cart path, probably won't need to work on this lake until 2020.**

**hgr - 3**