

RESULTS

Water Clarity

Mean Secchi disc readings taken through July and August in Moon Bay showed a consistent increase from 1989/90 to 2009. The mean readings from the northern portion of the main basin and Little Lake increased from 1989 to 2005 but then decreased marginally from 2005 to 2009. The most dramatic changes were seen on the southern portion of the main basin. Mean readings in this area showed an increase from 1989/90 to 2005 but then decreased to below 1989/90 levels in 2009 (Table 1).

During 1989/90, observed maximum rooting depths (Table 2) were shallower than predicted from Secchi disc readings (Table 3) in all areas. In 2005 and 2009, all areas showed actual maximum rooting depth that exceeded predicted rooting depths. There were increases in actual rooting depths in all areas from 1989/90 to 2005 and from 2005 to 2009.

Table 1. Mean Secchi Disc Readings (ft)

	1989/90	2005 (n= 9)	2009 (n= 8)
North Main Basin	3.19	3.97	3.88
South Main Basin	3.51	4.89	2.88
Moon Bay	2.99	3.09	3.88
Little Lake	3.51	4.53	4.19

Table 2. Actual Maximum Rooting Depth (ft)

	1989/90	2005	2009
North Main Basin	5	19	19
South Main Basin	7	19	19
Moon Bay	5	15	18
Little Lake	7	13	18

Table 3. Predicted Maximum Rooting Depths (ft)

	1989/90	2005	2009
North Main Basin	9.57	11.91	11.62
South Main Basin	10.53	14.67	8.62
Moon Bay	8.97	9.27	11.62
Little Lake	10.53	13.59	12.56

Shoreline Land Use

Wooded cover was the dominant shoreline cover type in both 2005 and 2009 studies. Herbaceous cover and cultivated lawns were the next most prevalent types of cover. There was an increase in the mean coverage of natural types of shoreline and a decrease in disturbed shoreline between the two years (Table 4). There was an increase in the frequency of occurrence of both natural and disturbed shoreline from 2005 to 2009.

Table 4. Shoreline Land Use

Cover Type	Mean coverage		Frequency of occurrence	
	2005	2009	2005	2009
Wooded	48%	49%	76%	96%
Native Herbaceous	13%	14%	38%	65%
Shrub	5%	4%	16%	20%
Rock	1%	2%	11%	13%
Natural Shoreline Total	67%	70%	90%	98%
Hard Structure	7%	8%	37%	50%
Cultivated Lawn	18%	13%	35%	33%
Rip-rap	3%	5%	19%	38%
Erosion	2%	2%	12%	9%
Other	3%	3%	12%	21%
Disturbed Shoreline Total	33%	30%	75%	79%