

SCUDDER'S POND SUBWATERSHED PLAN

TABLE 3.3
PRELIMINARY DESIGN - COST ESTIMATE - DECEMBER 2005

Item	Description	Unit	Qty.	Unit Cost	Total Cost	Notes
1 REDUCE NUTRIENT AND OTHER CONTAMINANT LOADING FROM GOLF COURSE						
a	Continue use of fertilizers and pesticide best management practices (BMPs)	LS	1	\$0	\$0	By the NSCC
b	Continue and expand use of native grasses as receiving areas for stormwater	LS	1	\$0	\$0	By the NSCC
c	Continue bluebird nesting program and consider swallow, martin & bat boxes to reduce reliance on pesticides	LS	1	\$0	\$0	By the NSCC
Subtotal					\$0	\$0
2 REDUCE NUTRIENT AND OTHER CONTAMINANT LOADING TO GROUNDWATER IN CLOSE PROXIMITY TO WETLANDS						
a	Conduct public education for homeowners adjacent to wetlands and waterbodies on benefits of regular septic system maintenance and proper disposal of household chemicals.	LS	1	\$0	\$0	By the Village/NEMO, Phase II SWMP
b	Investigate feasibility of Village or Town ordinance requiring regular septic system maintenance for homeowners adjacent to wetlands and waterbodies.	LS	1	\$0	\$0	By the Village, Phase II SWMP
c	Investigate feasibility of Village requiring replacement of cesspools with septic systems upon property transfer for residences immediately adjacent to Scudder's Pond	LS	1	\$0	\$0	By the Village, Phase II SWMP
Subtotal					\$0	\$0
3 IMPROVE STORMWATER COLLECTION AND TREATMENT						
a	Improve stormwater collection on Downing Avenue with overflow into vacant property. Construct treatment marsh on vacant property with overflow to golf course woodlands. Collect stormwater from Downing Avenue to Glenlawn and Richardson Avenues.	AC	0.4	\$75,000	\$30,000	
b	Install stormwater detention and recharge BMP on isolated flag lots between Gates Way and Golf Course.	AC	0.8	\$75,000	\$60,000	
Subtotal					\$90,000	\$90,000
4 TRAP SEDIMENTS, FLOATABLES, AND CONTAMINANTS						
a	Install swirl separator beneath Littleworth Lane.	EA	1	\$75,000	\$75,000	
Subtotal					\$75,000	\$75,000
5 INCREASE POND CAPACITY AND REDUCE INVASIVE PLANTS						
a	Excavate phragmites and create shallow pond area (3 feet over 0.8 acres).	CY	3,872	\$25	\$96,800	
b	Truck and dispose of material in lined landfill	CY	3,872	\$100	\$387,200	
c	Dredge pond (2 feet over 2.1 acres) and truck and dispose of material in lined landfill	CY	6,776	\$125	\$847,000	
Subtotal					\$1,331,000	\$1,331,000
6 IMPROVE PUBLIC VISIBILITY, REDUCE INVASIVE PLANTS						
a	Replace Phragmites along Shore Road with native species (herbicide treatments, grading, plantings)	AC	0.3	\$75,000	\$22,500	
Subtotal					\$22,500	\$22,500
7 REDUCE UPLAND WATERFOWL ACTIVITY AND RUNOFF TO SCUDDERS POND						
a	Construct low stone-faced concrete wall along southern edge of pond.	LF	400	\$150	\$60,000	
b	Initiate "Geese Peace" control activities on pond.	LS	1	\$0	\$0	By the Village and NSCC, Phase II SWMP
Subtotal					\$60,000	\$60,000
8 INCREASE STORMWATER DETENTION TO REDUCE POLLUTANT LOADING TO HARBOR						
a	Replace existing spillway with two-stage spillway	LS	1	\$75,000	\$75,000	
b	Install UV treatment system at weir to treat pathogens.	LS	1	\$750,000	\$750,000	
Subtotal					\$825,000	\$825,000
9 ELIMINATE DIRECT DISCHARGE TO SCUDDERS POND FROM COTTAGE ACCESS DRIVE						
a	Install catch basin with overflow to leaching pool. No overflow to pond.	EA	1	\$7,500	\$7,500	
Subtotal					\$7,500	\$7,500
10 REDUCE EROSION AND SEDIMENTATION						
a	Reinforce channel banks off Littleworth discharge with stone-faced concrete wall, line channel bed with rock, include safety fence.	LF	200	\$150	\$30,000	
Subtotal					\$30,000	\$30,000
11 MAINTAIN UPPER POND WATER LEVEL, INCREASE STORMWATER DETENTION						
a	Replace deteriorated gabion weir with two stage concrete spillway.	LS	1	\$50,000	\$50,000	
Subtotal					\$50,000	\$50,000
12 INTERCEPT AND TREAT STORMWATER						
a	Convert ponds to vegetated swale and connect to proposed treatment wetland.	AC	0.2	\$100,000	\$20,000	
Subtotal					\$20,000	\$20,000
13 REDUCE NUTRIENT INPUT TO PONDS						
a	Establish unfertilized native grass buffer area between proposed treatment wetland and golf course.	AC	0.2	\$15,000	\$3,000	
Subtotal					\$3,000	\$3,000
14 INTERCEPT AND TREAT STORMWATER						
a	Construct treatment wetland with overflow to Upper Pond.	AC	0.2	\$100,000	\$20,000	
Subtotal					\$20,000	\$20,000
15 IMPROVE WATER QUALITY DISCHARGED TO SCUDDERS POND						
a	Redirect stream channel, reinforce channel and stabilize pond banks, include safety fence	LF	75	\$200	\$15,000	
b	Install overflow wetland	AC	0.20	\$100,000	\$20,000	
Subtotal					\$35,000	\$35,000
16 ELIMINATE DIRECT DISCHARGE TO UPPER POND						
a	Provide BMP for all outfall pipes.	LS	1	\$5,000	\$5,000	
Subtotal					\$5,000	\$5,000
17 IMPLEMENT SCUDDER'S POND MONITORING						
a	Conduct bathymetric survey in Scudder's Pond to determine potential dredge depth.	LS	1	\$2,500	\$2,500	
b	Collect routine water quality samples for dissolved oxygen, nutrients, total suspended solids and volatiles. Coordinate with NC Health Department.	LS	1	\$0	\$0	By HHPC or others
c	Identify source of small dia. pipes on southern bank of Scudders Pond & sample for bacterial levels					By HHPC or others
d	Update Village file records of sanitary systems surrounding Scudder's Pond					By VSC or others
e	Update the NCDPW GIS Drainage maps within the Scudder's Pond Subwatershed					By VSC or others
Subtotal					\$2,500	\$2,500
Construction Subtotal					\$2,576,500	\$2,576,500
Contingencies (20%)					\$515,300	\$515,300
Administration (5%) (bonds, insurance, mobilization)					\$128,825	\$128,825
Permitting and Engineering Design (12% of construction + contingencies)					\$371,016	\$371,016
Construction Inspection (12% of construction + contingencies)					\$371,016	\$371,016
Project Total					\$3,962,657	\$3,962,657

Notes: LF=linear feet; LS=lump sum; AC=acre; EA=each; CY=cubic yards