

RESERVE STUDY

FOR

HUNNINGDON LAKES

PROPERTY OWNERS ASSOCIATION

CHESAPEAKE, VA



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June 9, 2012

PROJECT NO. 06-006/11-034

Hunningdon Lakes Reserve Study

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INTRODUCTION

DLM Architects is pleased to present this reserve study update for *Hunningdon Lakes Property Owners Association*. Hunningdon Lakes is a 385-unit homeowners association located in Chesapeake, VA. DLM Architects has been requested by the Association Manager, David Doney with Associa Community Group to prepare this Reserve Study. The study aids the Association in determining the annual funding required for the capital reserve fund. This study is limited to the reservable items of common ownership. These reservable items are defined by the Declaration and agreed upon in the proposal by DLM Architects initiated on December 9, 2011, and signed by Nancy McPherson, President. The common area elements covered by this study are identified on page two of this report. This Reserve Study replaces the previous study performed by DLM Architects, dated May 5, 2006.

The conditions presented in this study are as accurate as possible at the time this study was prepared. The conditions are assumed to be fairly accurate for one year. It must be noted that these conditions will change and conditions discovered in the future may be considerably different from those reported herein. Furthermore, rates of inflation and interest will change in the future which will affect the future financial projections of this study. It is our recommendation that the information contained in this study must continue to be reviewed, and updated accordingly, once a year.

REQUIREMENT FOR THE RESERVE FUND

A Reserve Fund and Reserve Study are advantageous for the long term security of the homeowners and for accounting purposes. The Reserve Study is also an essential tool in determining the items and values to be included in the Reserve Fund for compliance with requirements of federal tax laws and restrictions. Furthermore, CHAPTER 459 of the Code of Virginia § 55-514.1. requires the following: "*Reserves for capital components. Except to the extent otherwise provided in the declaration and unless the declaration imposes more stringent requirements, the board of directors shall: Conduct at least once every five years a study to determine the necessity and amount of reserves required to repair, replace and restore the capital components.*" Finally, many mortgage lenders require a Reserve Study to estimate whether the Association is adequately funded before a resale to their borrower.

Without a Reserve Study, one alternative for accumulating funds is to have the Association guess at what people are willing to pay without objections and charge them that amount. This method would please the unit owners, because monthly fees may be somewhat lower. However, the community may run the risk of deterioration, if the appropriate funds are not available to cover necessary repairs or replacement to the common elements when the need arises.

The other alternative for accumulating funds is to have the Association levy a special assessment. The unit owners will be required to pay the cost of necessary repairs or replacement of deteriorated common elements as they occur. While this might raise the exact amount of money for the repair or replacement, it would inequitably assess future unit owners for costs associated with current depreciation of the common elements. Practically, a special assessment would depress resale values ahead of the assessment. This could be a financial burden on some unit owners, since it would have to be paid over a short period of time.

The proper method to obtain funds for a Replacement Reserve Fund is to estimate the costs to replace or repair materials and annually set aside funds in advance to cover these costs. That is exactly the purpose of this Reserve Study. If the recommendations of the Reserve Study are followed, then this method estimates everyone's contribution into the Reserve Fund, which means that adequate funds will be available when repair or replacement of items is necessary. This method also ensures that those who are using the facilities are responsible for the depreciation of those facilities while they are being used.

DETERMINATION OF RESERVABLE ITEMS

DLM Architects conducted a visual survey of the buildings, grounds and related components, examined documents and spoke with David Doney, Association Manager. We estimated conditions, quantities and ages of the various common elements included in this study. Various consultants and contractors were contacted to confirm some of our conclusions as to the age and condition of the major items.

The common elements are as defined by the Declaration and, therefore, must have the appropriate funds reserved to cover the expense of replacing or repairing them in the future. The number of common elements included in this study are as follows:

SITE AREA	COMMON BUILDING AREA	DWELLING UNIT BUILDINGS
Retention Lakes (3)	Not Applicable	Not Applicable
Concrete Sidewalk		
Monument Sign		
Community Signage		
Entrance Lights (26)		
Cluster Mailbox Shelter		
Entrance Brick Masonry Pointing		
Common Site Furniture (5 areas)		
Landscape Irrigation System		

ANNUAL FUNDING REQUIREMENT

It would seem that the annual funding required for a particular reservable item could be established by determining the cost to replace the component and dividing it by the remaining useful life of the component. This over simplifies the formula, so it is important to know that several factors can affect the accuracy of the annual funding requirement.

To estimate the cost of various components, we begin by determining the quantities of each component. This can be accomplished by quantity take-offs from field measurements obtained by DLM Architects. After the quantities are ascertained, costs can be updated through the extensive database that DLM Architects has available to them. Some of these costs are then verified with local contractors and with similar projects that were recently completed. They are also modified based on the project size, location, schedule and the difficulty of work. However, it should be noted that these costs are estimated and actual price quotations will vary.

Costs of replacement can also vary greatly due to fluctuation in the cost of materials, availability of replacement materials, status of the labor market, status of the economy as a whole and cost of contractor overhead, and insurance costs at the time the replacement work is done. All costs estimated in this Study are based on our recommendation that the Association contract directly with a contractor who specializes in the appropriate trade of the work to be done. In other words, we have not included any costs for the overhead and profit of a general contractor to oversee and coordinate the work of different trades because it is our assumption that each item of replacement work will be accomplished non-simultaneously with other items of replacement work.

According to information provided in the previous reserve study, construction began in 1988 and continued through 1992/1993. We have used an average of **twenty-three (23)** years for the present age of all building materials unless otherwise noted.

The anticipated life of a building component is more difficult to estimate. To estimate what its performance should be, we have to rely on historical experiences with similar products used in the same way. Additional factors that affect the performance of a component include the proper detailing of the materials, the quality of the workmanship with which it was installed, and the kind of exposure to the surrounding environment. The other big determining factor on the remaining life of a component is the quality and frequency of maintenance it receives. Better and more frequent maintenance can greatly extend the remaining life of a component. Regular painting, cleaning of lake edges, arresting erosion and landscape replacement are important to extending the component's remaining life as well as keeping the community looking good.

In some sections of this study, the current condition of the component is described using terms based upon the USACERL Condition Rating System. An explanation of that system follows:

USACERL CONDITION DESCRIPTION (per sample unit)				
Condition Rating	Category	Amount of Distress	Functionality	Type of Maintenance & Repair
86 – 100	Excellent	Minimal deterioration	Not Impaired	Preventive or minor maintenance or minor repair
71 – 85	Very Good	Minor deterioration	Slightly Impaired	Preventive or minor maintenance or minor repair
56 – 70	Good	Moderate deterioration	Somewhat Impaired	Moderate maintenance or minor repair
41 – 55	Fair	Significant deterioration	Seriously impaired	Significant maintenance or minor repair
26 – 40	Poor	Severe deterioration over a small portion of the sample unit	Critically Impaired	Major repair with short term return on investment
11 – 25	Very Poor	Severe deterioration over a moderate portion of the sample unit	Barely exists	Major restoration with no return on investment
0 - 10	Failed	Severe deterioration over a large portion of the sample unit	Lost	Total replacement

The quantity, anticipated service life and existing condition of the common elements that comprise the reserveable components at *Hunningdon Lakes* are indicated on the following pages.

RESERVABLE ITEM: RETENTION LAKES

TOTAL QUANTITY: 1,754,000 S.F. % OF REPLACEMENT: 10%

PRESENT AGE: 23 YRS. REMAINING LIFE: INDEFINITE

EXISTING CONDITIONS:

There are three lakes located within the subdivision which have a total of 1,754,000 S.F. of surface area, as indicated below. The lakes appear to be in variably good (56-70) condition. The Association owns the bulk of the lake areas, but the banks are generally on individual lots. The normal water level is at an elevation that would typically be several feet inside the individual lot lines, depending on the exact water level, lot grading and erosion. In addition, the City of Chesapeake owns impoundment easements which extend over the entirety of the lakes and onto the surrounding lots 20 feet or 32.5 feet from the rear lot lines. Where individual lot owners have fenced the rear of their lots, the fences appear to be at the impoundment easement boundary. Within the impoundment easements, property owners must maintain side slopes of 5:1 from the boundary of the impoundment easement to the design low water elevation. No alteration whatsoever of the lake and its bank side slopes within the limits of the impoundment easement is permitted without the approval of the Chesapeake Department of Public Works. City maintenance shall be limited to that required for adequate flow of storm water.

Lake Number	Area (S.F.)	Shoreline (L.F.)	POA Shoreline (L.F.)
Lake 1	313,000	3,300	180
Lake 2	209,000	2,700	220
Lake 3	1,232,000	8,000	360
Totals	1,754,000	14,000	760

On the portions of the lake shorelines owned by the Association, the banks have been stabilized with rip-rap stone over erosion control cloth. These areas are generally in variably good (56-65) condition; however, some erosion has occurred and the banks have a vertical edge generally less than one foot at the normal water level. This represents the natural condition for the type of soil in this area and probably satisfies the impoundment easement requirements. There are no indications of major subsidence or erosion.

The Association extended the rip-rap seven (7) years ago so that there is now 760 L.F. of lake edge to be maintained by the Association. We have included money in the reserve fund to maintain the artificially stabilized lake edges. The quantity has been corrected from the previous reserve study because of a math error in the total.

The retention lakes' primary function is to provide storm water retention for the streets located in the community. The lakes are connected to the storm drains through about fifty (50) drain inlets located throughout the Association. It was not possible to determine the exact water depth, but it appears to range from one (1) foot to approximately twelve (12) feet. Without head walls the outfall of these pipes will continue to cause erosion of the adjacent lake edges. Several of the drain pipes have separated which could lead to even more erosion.

It is estimated that the lakes will require periodic dredging in order to maintain water depth. It is very difficult to ascertain the frequency of dredging the retention lakes will require. This depends on many variables, such as weather, cleanliness of the parking areas and streets, rainfall and stability of the lake edges. At this point we have used an average period based on our experience with similar facilities in the area. We believe the lakes will function for approximately an additional 20 years before they will need dredging. Based on their current condition, a reserve of 10% of the cost of creating new lakes has been established to cover the costs of the dredging. We understand that the City of Chesapeake Public Works Department will perform maintenance dredging on these lakes, and at such time as that is confirmed this reserve item can be discontinued. The Association is responsible for the preventive maintenance program to repair any erosion funded through the operating budget. Particular emphasis should be placed on continuing a landscaping program for the banks which will improve the erosion control.

Not all the lakes' banks have been allowed to naturalize and thus there is a poor barrier to erosion. There is some erosion on the banks due to the lack of landscaping. The waters' condition was cloudy and the bottoms were not completely visible. Native water-related plants, such as reeds and native grasses and water-loving trees, such as willows, should be planted or allowed to naturalize.

One of the most significant contributors to water quality problems in a lake is the mass loading of that lake with nutrients that flow with storm water runoff from yards, sidewalks, driveways, streets, roofs and other impervious surfaces within a community. This is probably due to rainfall runoff from yards and grass areas containing bird droppings, particularly from the geese sighted in the area, and feces from dogs and other pets. Residents should be encouraged to pick up after their pets, even in their own yards, and feeding the geese and other waterfowl should be discouraged. Most people tend to rely very heavily on fertilizers for lawns and shrubs during the fall. Improper or over application of these products can have very damaging

effects on the waters to which they flow. Residents within the watershed should pay very close attention to label directions and make sure that a minimal amount of fertilizer is applied each year.

Additionally, research has been done over recent years to develop beneficial microbes that are effective in the breakdown of nutrients and buildup in lakes, even during cooler weather. These products work very well in conjunction with aeration to rid lakes and ponds of excess nutrient and organic buildup, bringing them back into an ecological balance and helping to prevent many potential water quality problems.

Finally, the prevention of sunlight penetration into the water column through the application of dye will help to insure that any unwanted vegetation that sits dormant during the winter will be unable to come out of that winter dormancy in the spring. Most important of all, attention must be paid to the lakes and the environmental practices that surround and affect them. The flow of contaminants into the lakes does not stop just because the weather gets cold. Responsible lake management is a year-round endeavor.

Virginia Stormwater Management Handbook provided the source of our reserve study recommendations:

Vegetation Management:

Vegetative cover serves several purposes in BMPs: slows the velocity of the runoff; filters sediment from runoff as it is collected in the BMP; and prevents erosion of the banks and bottom of the facility. Grass is generally used around retention basins, infiltration trenches and in and around dry detention basins. It must be mowed and maintained. Mowing requirements can be tailored to the specific needs of a site and the neighboring properties. The grass in a BMP may be hardiest if maintained as an upland meadow, cutting no shorter than 6-8 inches. Maintaining a more manicured expanse of grass decreases the effectiveness of the BMP, as well as increasing its maintenance costs. Wetland plants may also be used along the fringe of the BMP in areas where conditions are favorable. Some of these types of plants may inhabit the area naturally. Plants along the edges of BMPs filter pollutants.

The Virginia Stormwater Management Handbook provides even more detail:

MINIMUM STANDARD 3.05 CHAPTER 3

Plant selection should be based on the planting zones within the BMP. Various zones exist within a stormwater impoundment and each represents a different inundation frequency and soil moisture condition. The planting zones can be classified as follows:

Zone 1: Deep Water Areas: This zone is submerged beneath 18 inches to 6 feet of water. It supports submerged aquatic vegetation such as pondweed, coontail, wild celery, etc., and floating vegetation such as duckweed. Plants can actively remove metals from the water and provide food and habitat for

invertebrates at the bottom of the food cycle. This zone may be present in retention basins, constructed wetlands, and in sediment forebays and micro-pools of extended-detention and enhanced extended-detention basins.

Zone 2: Shallow Water Area: This zone is 0 to 18 inches in normal depth and is the primary area for the establishment of emergent wetland plants. It may be present in retention basins, constructed wetlands, and enhanced extended-detention basins. This zone is divided into low-marsh and highmarsh sub-zones.

The low-marsh extends from 6 to 18 inches in depth below the normal water surface. The high-marsh ranges from 6 inches below the normal water surface and up to the normal water surface. Vegetation in this zone can serve the following purposes:

1. enhances nutrient uptake,
2. reduces flow velocities to increase the rate of sediment deposition,
3. reduces resuspension of bottom sediments,
4. provides food and cover for wildlife,
5. provides habitat for predatory insects and to serve as a check for mosquitoes,
6. reduces shoreline erosion, and
7. improves aesthetics.

Suggested plants for this zone include common three-square, soft-stem bulrush, pickerelweed, arrow arrum, sedges, and others.

Zone 3: Shoreline Fringe: This zone is regularly inundated during runoff-producing storm events and may remain saturated due to the proximity of the permanent pool; however, plants must be tolerant of periodic drying, especially during the summer months. This zone extends from the normal water surface to about 1 foot above the normal water surface for retention basins and constructed wetlands. It also continues up to the maximum extended-detention volume elevation for extended detention and enhanced extended-detention basins. The vegetation in this zone may serve the following purposes:

1. stabilizes the shoreline,
2. improves aesthetics,
3. limits shoreline access by people and animals (geese),
4. provides food, cover, and nesting for wildlife, and
5. provides shade.

Recommended species for this zone include herbaceous vegetation such as soft-stem bulrush, pickerelweed, rice cutgrass, sedges, and others. It also includes trees such as black willow and river birch and shrubs such as chokeberry.

Zone 4: Riparian Fringe Area: This zone is only briefly inundated during storms. It generally includes the upper storage areas of extended-detention basins (above the water quality or channel erosion control volume) and the lower basin areas of dry detention basins. It experiences both wet and dry soil conditions and periodic inundation. The vegetation in this zone may serve the following purposes:

1. reduce resuspension of newly deposited sediments,
2. prevent erosion, and
3. provide habitat and food for wildlife.

A variety of trees, shrubs, and ground covers can be used in this zone, including black willow, river birch, red chokeberry, green ash, sweetgum and others.

There have been no significant improvements to the lakes since the time of the last reserve study.

RESERVABLE ITEM:	CONCRETE SIDEWALKS
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TOTAL QUANTITY:	43 S.Y.	% OF REPLACEMENT:	10%
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PRESENT AGE:	23 YRS.	REMAINING LIFE:	INDEFINITE
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EXISTING CONDITIONS:

The walks are located at the cluster mailboxes in the townhouse area in a curbed island in an open throat cul-du-sac in a public street. These walks have an exposed aggregate finish. The sidewalks extend through and around the cluster mailboxes and in two directions to the curb at each side of the mailboxes. Nine (9) individual exposed aggregate paving blocks extend from the mailbox area to the curb in the other two directions. The existing concrete walks are in variably good (56-70) condition.

There is some minor cracking of the sidewalks that appear to be from impact or subsidence, but no areas of major deterioration. There was no displacement noted that would constitute a trip hazard at this time although several areas are beginning to heave. If displacement occurs, the area may hold water and can freeze during the winter months, creating an additional hazard. Any displaced areas that occur that constitute a tripping hazard will need to be leveled. This can be accomplished by raising the existing slabs or by removing and re-pouring the concrete.

Minor cracks can be filled with a polysulfide sealant. Sidewalks with significant spalling or displacement need to be repaired as soon as possible to prevent future damage and to reduce any tripping hazard. Existing cracks should be repaired before winter freeze-thaw cycles compound the damage. These areas should be cut on a reverse angle and filled with an appropriate concrete mixture.

The "2001 Housing Facts, Figures and Trends", published by the National Association of Home Builders (NAHB), lists the anticipated service life of concrete as 50 years. The American Concrete Institute states in several publications that concrete should exceed the anticipated service life of the structures.

Severely broken or cracked sections should be replaced when damage occurs. It is estimated that over a thirty-year period, normally ten percent (10%) of the sidewalks will need replacement in this manner. Minor repairs, such as cracks, should be included in the preventive maintenance program and funded from the regular operating budget as routine repair.

The mailbox area does not currently meet handicapped accessibility standards which may be in violation of the Fair Housing Act. Consultation with an attorney is advised. There have been no significant changes in the sidewalks since the time of the last reserve study.

RESERVABLE ITEM: MONUMENT SIGN

TOTAL QUANTITY: 1 EA. % OF REPLACEMENT: 100%

PRESENT AGE: 23 YRS. REMAINING LIFE: 4 YRS.

EXISTING CONDITIONS:

There is one (1) community identification sign located at the entrance to the community along Kempsville Road. The community identification sign consists of a brick wall with an inset for the sign. The brick wall is included in the masonry category. The sculptured wood sign is two feet (2') by five feet (5'). The sign is in variably good condition (56-70), but there is some checking in the wood and some rust stains from the mounting bolts.

The sign board is constructed of 2" thick laminated, painted wood. It is approximately 10 S.F. in area. There are no signs of delaminating of the wood strata. The surface is showing signs of weathering, but does not appear to need to be repainted at his time. We recommended that the top edge of the wood sign be capped with a prefabricated copper or aluminum cap to prevent any water damage from moisture entering the exposed upper edge of the sign.

There are also seven (7) signs located at each of the parcels and lots belonging to the Association. These signs identify the parcels for the use of Association members, and include a notice to not feed the ducks, geese or seagulls. These signs are in variably good condition (56-70) with 4"x4" posts and wood framing. Due to the low cost of replacing these signs, no reserve is required for them.

There was some damage to the posts of the signs that are mounted in lawn areas. Care should be taken to avoid damaging these posts with string trimmers and other yard maintenance equipment. String trimmers are especially a problem as they can cut into the poles, damaging them and exposing damaged areas to rot and insects. Instead of using string trimmers, we recommend an herbicidal control be sparingly applied by the lawn maintenance crews for grass and weed control at the posts to extend the remaining life of the posts. Otherwise the association needs to immediately install painted aluminum collars around the base of the sign posts to prevent further damage from string trimmers.

There have been no significant changes in the signage since the time of the last reserve study.

RESERVABLE ITEM:	ENTRANCE LIGHTS
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TOTAL QUANTITY:	28 EA.	% OF REPLACEMENT:	100%
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PRESENT AGE:	7 YRS.	REMAINING LIFE:	8 YRS.
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EXISTING CONDITIONS:

There are two (2) pole-mounted light fixtures located at the cluster mailboxes and a third light at the intersection of Hunningdon Lakes Blvd. and Copper Stone Circle. These lights belong to Dominion Power and are not included in this Reserve Study.

There is a two-tube fluorescent light fixture located in the mailbox structure, served by a separate electrical service and a panel with a single 20-amp breaker and controlled by motion detectors at each entrance to the structure. It appears to be in poor condition (26-40) and should be replaced in the near future.

There are twenty-six (26) grade mounted light fixtures located in the area of the entrance sign and fencing. Three groups of four are arranged in front of each section of the fence to illuminate the community identification sign and the landscaping in front of each section of fencing. Fourteen (14) are located behind the sign in the landscaped island at the entrance to the community to illuminate the landscaping and trees in the island. The lights are supplied from an electrical panel mounted on the brick fence on the south side of the entrance road. The panel is discussed below in the irrigation section. There is no indication of electrical or mechanical problems such as breakage or shorting. The lights are photo-cell and timer activated. None of the lights were on during daylight, indicating that the photo cells do not need to be adjusted or replaced.

There has been no significant corrosion or clouding of these light fixtures. These lights appear to be in generally variably good condition (56-65).

Eventually, the lights will need to be replaced due to corrosion, clouding of the lenses and the development of more-efficient lighting standards. Routine cleaning and replacement of bulbs and ballasts should be handled as part of a preventive maintenance program. The Capital Repair/Replacement Summary includes total replacement at eight (8) years due to aging fixtures and newer, more-efficient luminaires becoming available.

There have been no significant changes in the lighting since the time of the last reserve study.

RESERVABLE ITEM:	CLUSTER MAILBOX SHELTER
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TOTAL QUANTITY:	125 S.F.	% OF REPLACEMENT:	100%
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PRESENT AGE:	23 YRS.	REMAINING LIFE:	17 YRS.
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EXISTING CONDITIONS:

An existing mailbox cluster is located in the townhouse area. The mailbox cluster consists of seven 16-box units, one 8-box unit, and two 2-box parcel units. The units are mounted on 6" x 6" wooden beams spanning between and set into 25" square brick columns. There are four brick columns forming a structure approximately 14' -7" inches long and 8' -7" inches wide, with half the units on each of the long sides. The structure has a hip roof framed by 6" x 6" beams, 2"x 6" rafters and plywood roof sheathing with a single ply of roofing felt and asphalt shingles. The roof edges are trimmed with 1"x 6" fascia boards butting against the edge of the plywood. The shingles are in variably good condition (65-70) and are well adhered. The roof was reported to have been replaced about six (6) years ago with 30-year shingles. The overall condition is variably good (56-70).

The side of the structure with the 8-box unit is 12" shorter than the other side, resulting in an offset at each end of the structure. At one end the 6"x 6" beam is supported by another short section of 6"x 6" beam. Anchorage of the beams to the masonry was not visible, but newly added hurricane clips were observed as recommended in the previous reserve study.

Access to the mailboxes is from the interior of the structure for the residents and from the outside for the mail delivery. The original metal rainwater diverters were removed from the outside edge and were replaced with gutters above where mail delivery is made to keep rainwater from falling on the mail delivery personnel. This will also increase the life-span of the shingles. The plywood roof deck is not marked as exterior grade and is not painted. As in the previous reserve study, we recommend painting the underside and edges of the plywood. As previously recommended, a drip edge has been installed to protect the edge of the plywood and support the edges of the shingles.

In addition, the following was noted in the previous reserve study:

The 6"x 6" beams were in good condition with checking normally expected in structural timber. The ends of the beams set onto the brick columns may be subject to rot. As recommended in the previous reserve study anchor straps have been installed intended to secure the corners of the roof structure to the top of the brick masonry columns to prevent uplifting wind forces from dislodging the roof structure.

It is anticipated that the damaged, replacement parts for the mailboxes, as well as any cosmetic maintenance required, will be provided by the US Postal Service and, therefore, these items are not included in the reserve.

RESERVABLE ITEM:	BRICK MASONRY
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TOTAL QUANTITY:	1,291 S.F.	% OF REPLACEMENT:	10%
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PRESENT AGE:	23 YRS.	REMAINING LIFE:	INDEFINITE
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EXISTING CONDITIONS:

The brick masonry includes the columns at the mailbox structure and the entrance wall. The entrance wall is located on both sides of the entrance and in the median at the intersection of Hunningdon Lakes Blvd. and Kempsville Road. It consists of double-sided standard brick masonry, 44" high, with 20" square corbeled pilasters, 66" inches high at each end and in the middle of the fences on the two sides of Hunningdon Drive and two pilasters framing an offset middle section of the fence in the median. The offset central section contains the community identification sign. The face of the wall toward Kempsville Road has bricks set in relief to outline decorative panels. The top course of the wall is also corbeled with a soldier course on top.

There is no indication of any displacement of the wall. There are a few indications of moisture intrusion. While minor at this time, this condition may eventually result in cracks occurring in the wall. The normal movement in the wall from freezing and thawing may also cause cracks in both sections of the wall due to the expansion of the bricks and the lack of any control joints in the wall. The wall should immediately receive a chemical cleaning and an application of a masonry water repellent* to prevent moisture intrusion into the wall where it can expand and weaken the brick in freezing weather.

The wall is in variably very good condition (71-75). The replacement of the wall, if and when it becomes necessary, will be due to minor settlement and movement from expanding tree roots. Because the expected life greatly exceeds thirty (30) years, it is not included in the Reserve Summary; however, we have included 10% of the total cost to cover replacement of any limited repairs or failure of the wall and repointing of the mortar joints.

There have been no significant changes in the masonry wall since the time of the last reserve study.

* ProSoCo Sure Klean® Weather Seal Siloxane PD is a good choice.

RESERVABLE ITEM: COMMON SITE FURNITURE

TOTAL QUANTITY: 15 EA. % OF REPLACEMENT: 100%

PRESENT AGE: SEE BELOW REMAINING LIFE: SEE BELOW

EXISTING CONDITIONS:

Quantity	Item	Present Age	Remaining Life
3	Wood picnic tables	18 Yrs.	2 Yrs.
3	Metal trash cans	5 Yrs.	10 Yrs.
1	Wood bench	18 Yrs.	2 Yrs.
8	PVC benches	5 Yrs.	10 Yrs.
15	TOTAL		

There are three (3) wood picnic tables, three (3) metal trash cans, one (1) wood bench and eight (8) PVC benches. The wood picnic tables are located in the park area near the front entrance and are constructed of treated wood structural components and 2" x 6" boards; they are in poor repair (26-40) and are heavily weathered with minor warping and sagging. The wood bench located at the end of Lake 3 is in similar condition. These items should be periodically cleaned with a strong detergent and mildewcide, prior to being sanded and sealed on the upper surfaces to extend the life of the wood components. Sealing may prolong the estimated remaining life if done promptly. Otherwise, the remaining life is based upon their anticipated lack of maintenance.

The PVC benches are located in the entrance park and at various points along the lakes. They are constructed of a heavy-grade PVC and are in variably good condition (56-70). They will have an anticipated service life greater than 15 years if properly maintained.

The trash cans are located at various points along the lakes. The trash cans are of metal construction and anchored on a metal frame and pipe structure. They are in variably good repair (56-70). They will have an anticipated service life greater than 15 years if properly maintained.

RESERVABLE ITEM:	LANDSCAPE IRRIGATION SYSTEM		
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TOTAL QUANTITY:	1,200 L.F.	% OF REPLACEMENT:	60%
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PRESENT AGE:	8 YRS.	REMAINING LIFE:	7 YRS.
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EXISTING CONDITIONS:

Irrigation systems were not active and plans were not available at the time of our inspection. Control units were locked for security reasons. The quantity was estimated based on the number of heads reported to be in each of the three systems. Each of the three systems has an electrical service with a meter, a single panel box and an irrigation controller. The two systems adjacent to the lakes also had pump controllers with submersible pumps located in the lakes reported to each be ¼ horsepower based upon the previous study.

The panel boxes were provided with locks to prevent a potential source for vandalism or accidental shock hazards for inquisitive children. As these panel boxes are mounted near ground level, they must remain locked because they are particularly accessible to small children.

As noted in the previous reserve study, the front entrance irrigation system is reported to consist of 32 heads and is fed by City water. There is an electrical meter and a 220-volt, one-phase panel with 100-amp main breakers. There are five (5) 20-amp circuits serving the lighting systems, lighting timer and the irrigation controller. There is also a 15-amp GFI circuit serving three (3) duplex receptacles, one mounted on each section of the brick fence. The controller is a Hunter unit with a Toro electric control valve located at the end of the same brick fence and an electric control valve located in a handhole in the median.

As noted in the previous reserve study, the system located on Copper Stone Circle adjacent to Lake 1 is reported to have 14 heads and is fed by a submersible pump in the lake. The panel had a meter and a 220-volt, one-phase panel with 40-amp main breakers. There is a 20-amp, 220-volt, one-phase circuit to the pump and a Hydrotek 1000 pump starter relay control box. There is also a 15-amp, 120-volt breaker for the Irritrol control box. Piping and wiring to the pump were not visible.

As noted in the previous reserve study, the system located on Copper Stone Circle adjacent to Lake 3 is also reported to have 14 heads and is fed by a submersible pump in the lake. The panel has a meter and a 220-volt, one-phase panel with 40-amp main breakers. There is a 20-amp, 220-volt circuit to a Kraley pump starting relay box and a 15-amp, 120-volt circuit to a Hunter irrigation control unit. A PVC pipe, electrical conduit and steel wire rope were visible at the shoreline running out to the pump. This also represents a potential source of vandalism and shock hazard to children.

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The electrical circuits appear to be oversized for ¼ horsepower pumps, despite the small number of sprinkler heads. Therefore, the reserve amount is based on one (1) horsepower pumps, and on placing piping and electrical conductors underground or otherwise protecting them at the shoreline.

The major causes of damage to this type of system are heads broken by yard maintenance equipment and freezing. The life of the system should be indefinite since these items normally would be repaired from the operating budget; however, considering the current operating condition of the systems, and the use of submersible pumps in the lakes, a reserve of 60% of the total cost of replacement for the pumps and controllers needs to be created.

A preventive maintenance program of regular inspection, head replacement and periodic flushing of the system should be funded from the regular operating budget. There have been no significant changes in the irrigation systems since the time of the last reserve study.

All other components indicated as common elements have a life span coincident with the life span of the structures, and should not need replacement or repair unless subjected to catastrophic conditions (fire, lightning, hail, hurricanes, earthquakes, etc.), which should be covered under an adequate property insurance policy. It should be noted that any problems that may arise and are not addressed by the Association maintenance program and repaired in a timely manner, may cause further deterioration.

CONCLUSION

The Association is facing several large projects (retention lakes, landscape pumps and controllers and brick masonry) in the future. Construction costs will continue to escalate in the next five (5) years, but the association has a slight excess amount of funds in their reserve account. As a result, the recommended annual contribution to the reserve fund has declined slightly from the \$27,463.00 contained in the previous reserve study to \$24,500.00, now if the Association continues to be responsible for dredging. If the dredging is now the responsibility of the City then the recommended annual contribution to the reserve fund is now \$4,000.00. Furthermore, in order to have sufficient funds on hand for future projects, we recommend increasing the annual contribution by 2% per year for each year thereafter.

These projections are illustrated in the graph at the end of this reserve study update. It must be noted that unplanned expenses for items outside the scope of a reserve study (landscape replacement, painting, insurance deductibles, property upgrades, etc.) can be major expenses and without an adequate operating reserve established for these items, a special assessment may be required to fund these kinds of expenses.

INFLATION

Other factors must be considered when allocating funds for projects of this nature. One of the biggest factors and possibly the most difficult to predict is inflation and the interest rate on invested capital reserve funds. We have allowed for a **3% annual inflation rate** in our calculations. Given the economic patterns over the past decade, we feel this is a conservative figure and will ensure that the return on the fund keeps pace with inflation on an annual basis. Please note that construction cost inflation rates differ from the Consumer Price Index (CPI) and can be obtained from the F. W. Dodge division of McGraw-Hill. Because the fund is receiving interest on the current balance on the reserve fund and not on the entire cost of the project, it is further necessary to update the replacement cost and therefore the annual contributions based on inflation of construction cost once a year. This assures the Association over the life of the project that the necessary funds are available as the particular items conclude their useful life. See the table on the next page for a comparison of a hypothetical \$100,000 project cost inflated over five years to a non-adjusted reserve contribution and an inflation adjusted contribution to the reserve fund.

COMPARATIVE EXAMPLE FOR A HYPOTHETICAL RESERVE FUND

	COLUMN 1	COLUMN 2	COLUMN 3
YEAR	RESERVE REQUIRED FOR A \$100,000 PROJECT AT 7% ANNUAL <u>INFLATION</u> OF THE <u>CONSTRUCTION COST</u>	BALANCE OF RESERVE BASED ON <u>THE ANNUAL CONTRIBUTION AS A CONSTANT AMOUNT*</u> PLUS A 7% INTEREST RETURN	BALANCE OF RESERVE BASED ON AN <u>INFLATION ADJUSTED ANNUAL CONTRIBUTION**</u> PLUS A 7% INTEREST RETURN
1	\$100,000	\$21,420	\$21,400
2	\$107,000	\$44,298	\$45,796
3	\$114,490	\$68,799	\$73,503
4	\$122,504	\$95,015	\$104,864
5	\$131,080	\$123,066	\$140,255

* The Annual Contribution as a Constant Amount uses the first year's construction cost divided by the 5 year life of this hypothetical item plus a 7% return on each years' contributions. This approach does not consider the inflation of the construction costs. As a result, in the fifth year, the accumulated funds are approximately \$8,000 short of the amount required in column 1.

** Inflation adjusted annual contribution uses the result of the current year's inflation adjusted construction cost divided by the 5 year life of the item. This allows the reserve fund to keep pace with inflation.

Column 3 clearly shows that inflating the current year's annual contribution by the previous year's inflation rate provides the financial resources available to keep pace with the inflation rate of the construction cost shown in column 1.

VIRGINIA STATUTORY REQUIREMENTS FOR RESERVES

As of July 1, 2002, CHAPTER 459 of the Code of Virginia § 55-514.1. require the following: Reserves for capital components.

A. Except to the extent otherwise provided in the declaration and unless the declaration imposes more stringent requirements, the board of directors shall:

1. Conduct at least once every five years a study to determine the necessity and amount of reserves required to repair, replace and restore the capital components;
2. Review the results of that study at least annually to determine if reserves are sufficient; and
3. Make any adjustments the board of directors deems necessary to maintain reserves, as appropriate.

B. To the extent that the reserve study conducted in accordance with this section indicates a need to budget for reserves, the association budget shall include, without limitation:

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1. The current estimated replacement cost, estimated remaining life and estimated useful life of the capital components;
2. As of the beginning of the fiscal year for which the budget is prepared, the current amount of accumulated cash reserves set aside, to repair, replace or restore capital components and the amount of the expected contribution to the reserve fund for that year; and
3. A general statement describing the procedures used for the estimation and accumulation of cash reserves pursuant to this section and the extent to which the association is funding its reserve obligations consistent with the study currently in effect.

PREVIOUSLY ACCUMULATED FUNDS

According to information supplied by the Community President, David Doney, there are currently accumulated funds in the Replacement Reserve Fund for a total of \$141,557.24 as of May 31, 2012. This value is used in the Capital Repair and Replacement Reserve Summary as "TOTAL PRIOR ACCUMULATION." The funds are in First Associations Bank earning various rates of return. Based on the account statement furnished by the manager, we have used a combined interest rate of 0.55% in the calculation to estimate the hypothetical accumulated Reserve Fund balance at year thirty (30) which follows at the end of this study.

EXCLUSIONS

Because the IRS does not allow routine maintenance items to be included in a Replacement Reserve Fund, we have not included them in this report. However, it should be noted that these items such as painting, termite treatment and repair, power washing, wood preservative treatment, reserve study fees and landscape replacement have the possibility of being major expenses and the Association should plan for them accordingly in their operating budget. This comes from IRS rulings and audit filings which state that these are "maintenance" items and not "contributions to capital." Note that these are IRS definitions, and these are only issues if the association is filing Federal Tax Form 1120 (Corporation Tax Return) rather than form 1120-H (Homeowners Association Tax Form). Therefore, by IRS definitions the assessments collected for these types of future expenses aren't deductible from taxable income under the "contributions to capital" definition. Even if the association chooses to file Form 1120, there are ways that your accountant can adjust for these tax differences. It is not uncommon to have differences between generally accepted accounting principles and tax laws. With regards to non-capital reserves, your accountant should suggest that the cash set aside be segregated from other accounts.

The Reserve Study is predicated on replacing each item in kind. As a result, there are not enough monies anticipated to 'upgrade' the common element to a better grade or product. While a better grade or different product may last significantly longer than the existing product, the Reserve Study cannot plan

for that upgrade since it would be the decision of the Board to make that change at the time of replacement. Should the Association choose to upgrade, then the proper funding method is through the Association's operating reserve. Throughout this study we have made notations of items that could be enhanced at the time of replacement which in our opinion would not constitute an 'upgrade'.

The financial analysis portion of the Reserve Study is at the end of this report and is broken down into two sections; Capital Repair/Replacement Reserve Summary (on a Component Basis), Capital Repair/Replacement Reserve Schedule (on a Cash Flow Basis) followed by a graph of the future projected reserve fund balances. Cash Flow and Component Basis are the two most common funding objectives. Funding on a Component Basis is typically the most conservative funding objective because the calculations for the Reserve Fund contribution include a contingency. Cash Flow Basis means establishing an objective of keeping the Reserve Fund balance above zero, with no contingency for unanticipated expenses. Unfortunately, due to having little or no "margin for error" this funding objective exposes the association to the risk of special assessments should the future predictions vary from actual performance or cost. Threshold Basis is an alternate funding objective which keeps the Reserve Fund above a predetermined dollar or Percent Funded amount (a kind of "middle ground" objective). Statutory Basis (setting the specific minimum amount of Reserves required by state statutes) is one specific form of Threshold Basis, where the threshold is set to that required by a state statute. This is not desirable because it gives the Association little say over their funding objectives and therefore Virginia doesn't have a threshold statute.

Because Reserve income and expenses never occur exactly as projected, decide in advance your risk strategy, and your tolerance for special assessments before determining an appropriate Reserve Funding Objective for your association. An explanation of how to read each section follows.

EXPLANATION OF CAPITAL REPAIR/REPLACEMENT RESERVE SUMMARY

The remaining lives of the reservable items and the cost to replace them have been estimated and their values are found in the two columns entitled REMAINING LIFE and COST OF REPLACEMENT, respectively. From these two values, the total annual contribution that is required to provide for repair and replacement of the reservable items is estimated.

1. The TOTAL COST OF PROJECTS in current dollars is the sum of the values in the column titled COST OF REPLACEMENT.
2. The column titled PRIOR ACCUMULATION is the share of the current balance in the Association's reserve account allocated by the components' proportionate share of the COST OF

REPLACEMENT. The FUTURE REQUIREMENT is the balance of the COST OF REPLACEMENT less the PRIOR ACCUMULATION.

3. The column titled ANNUAL CONTRIBUTION is the result of dividing the value in the column titled FUTURE REQUIREMENT by the value in the column titled REMAINING LIFE. The resulting value is the amount of money required to be accumulated the first year for each item. These values must be changed each subsequent year by the amount of the prior year's construction inflation rate as previously discussed.
4. The ANNUAL CONTRIBUTION (COMPONENT BASIS) is the resulting value required to maintain a contingency of 100% of the value of the most expensive reservable item. This does not factor in the effects of inflation and interest on the funds as indicated in the RESERVE SCHEDULE. When the interest rate exceeds the inflation rate, the accumulated balance will grow at a faster rate than the cost of replacement creating a surplus of funds. The ANNUAL CONTRIBUTION (CASH FLOW BASIS) is the resulting value that allows the accumulated funds to periodically dip to zero (\$0) at the conclusion of a major project yet still satisfies the requirements of the RESERVE SCHEDULE. The two different means of calculating the ANNUAL CONTRIBUTION are the result of the level of risk each of them represents. Carrying a contingency (COMPONENT BASIS) in the Reserve Fund allows the Association to use the reserves to pay for those unexpected items should they occur. Such an a requirement to aerate the lakes for example. The CASH FLOW BASIS assumes unexpected items would be paid by a special assessment or a temporary increase in the ANNUAL CONTRIBUTION. The Board of Directors must decide which level of risk is correct for their Association.

EXPLANATION OF THE CAPITAL REPAIR / REPLACEMENT RESERVE SCHEDULE ON A CASH FLOW BASIS - SHEET 1, SHEET 2 AND SHEET 3

This is a RESERVE SCHEDULE which tracks the project costs annually for a period of the next thirty (30) years on a cash flow basis. The non-inflated cost of each project is displayed under the column headed by the year in which that project is projected to occur. The sum of all projects is displayed at the bottom of each yearly column. Below this number at the bottom of the page is the sum of the project costs increased by the inflation rate mentioned in the left-hand column.

The annual amount contributed by the average unit is listed on the line titled "CONTRIBUTION PER UNIT" which is the following line divided by the total number of units in the Association. The following line titled "TOTAL ANNUAL CONTRIBUTION ADJUSTED @ _% ANNUALLY" represents the number from the lower right-hand corner of the "CAPITAL REPAIR / REPLACEMENT RESERVE

SUMMARY" adjusted annually at a rate which is high enough to keep the Reserve Fund from having a negative balance in a future year where some very large project costs occur. The annual rate of adjustment is displayed in the title for this line. In cases where the Association is severely under-funded due to the large cost of a pending project, it may not be acceptable to annually adjust the annual contribution enough to prevent a negative balance in the Reserve Fund. In cases such as these, a special assessment may be the only way of curing a projected deficit. The Reserve Graph at the back of this section will illustrate the size and duration of any deficit. The line titled "TOTAL ACCUMULATED BALANCE" is the total of the previous annual contributions minus the inflated cost of the previous projects, without any interest on the accumulated funds. To find the balance of the Reserve Fund with interest you need to refer to the last line titled "ACCUMULATED BALANCE WITH INTEREST @ _INTEREST RATE." The interest rate used for the calculation is the rate of interest currently being paid to the Association as presented in the statement furnished by the Association Manager.

SHEET 4

This sheet illustrates the devastating impact that changes in the inflation rate or interest rate have on the accumulated balance with interest of the Reserve Fund in year thirty (30). This matrix is based on the projected accumulated balance of your Reserve Fund thirty (30) years from now and you can read your projected fund balance directly from this matrix by selecting an interest rate from the left-hand column and reading across until you are under your selected rate of inflation. Read more about this on Sheet 4.

EXPLANATION OF THE CASH FLOW GRAPH

This graph plots the ACCUMULATED BALANCE WITH INTEREST, TOTAL ACCUMULATED BALANCE and the ADJUSTED ANNUAL CONTRIBUTION and graphically shows their balances throughout the thirty (30) year projection. Any negative balances in the ACCUMULATED BALANCE WITH INTEREST can be eliminated by increasing the rate of adjustment of the annual contribution or by a special assessment in the years where the negative balance occurs.

**CAPITAL REPAIR/REPLACEMENT RESERVE SCHEDULE FOR:
HUNNINGDON LAKES PROPERTY OWNERS ASSOC'N**

**SHEET 2
CASH FLOW BASIS**

ITEM	2022 YEAR 11	2023 YEAR 12	2024 YEAR 13	2025 YEAR 14	2026 YEAR 15	2027 YEAR 16	2028 YEAR 17	2029 YEAR 18	2030 YEAR 19	2031 YEAR 20
RETENTION LAKES (Shoreline)										
RETENTION LAKES (Dredging)								\$340,000		
CONCRETE SIDEWALKS										
MONUMENT SIGN										
ENTRANCE LIGHTS										
CLUSTER MAILBOX SHELTER ROOF								\$1,813		
BRICK MASONRY (Repointing)										
COMMON SITE FURNITURE (Older)										
COMMON SITE FURNITURE (Newer)	\$4,400									
LANDSCAPE IRRIGATION SYSTEM										
TOTAL COST IN 2012 DOLLARS	\$4,400							\$341,813		
TOTAL COST IN INFLATION ADJUSTED \$ @ 3.0% INFL RATE	\$5,913							\$564,964		
CONTRIBUTION PER UNIT	\$78	\$79	\$81	\$82	\$84	\$86	\$87	\$89	\$91	\$93
TOTAL ANNUAL CONTRIBUTION ADJUSTED @ 2.0% ANNUALLY	\$29,865	\$30,463	\$31,072	\$31,693	\$32,327	\$32,974	\$33,633	\$34,306	\$34,992	\$35,692
TOTAL ACCUMULATED BALANCE	\$393,450	\$423,912	\$454,984	\$486,678	\$519,005	\$551,979	\$585,612	\$54,954	\$89,946	\$125,638
ACCUM. BALANCE W/INTEREST AT 0.6% INTEREST RATE	\$410,973	\$443,863	\$477,547	\$512,042	\$547,363	\$583,528	\$620,556	\$90,392	\$126,074	\$162,656

**CAPITAL REPAIR/REPLACEMENT RESERVE SCHEDULE FOR:
HUNNINGDON LAKES PROPERTY OWNERS ASSOC'N**

SHEET 3

CASH FLOW BASIS

ITEM	2032 YEAR 21	2033 YEAR 22	2034 YEAR 23	2035 YEAR 24	2036 YEAR 25	2037 YEAR 26	2038 YEAR 27	2039 YEAR 28	2040 YEAR 29	2041 YEAR 30
RETENTION LAKES (Shoreline)										
RETENTION LAKES (Dredging)										
CONCRETE SIDEWALKS										
MONUMENT SIGN										
ENTRANCE LIGHTS				\$7,700						
CLUSTER MAILBOX SHELTER ROOF										
BRICK MASONRY (Repointing)										
COMMON SITE FURNITURE (Older)			\$1,400							
COMMON SITE FURNITURE (Newer)						\$4,400				
LANDSCAPE IRRIGATION SYSTEM			\$13,750							
TOTAL COST IN 2012 DOLLARS			\$15,150	\$7,700		\$4,400				
TOTAL COST IN INFLATION ADJUSTED @ 3.0% INFL RATE			\$29,029	\$15,197		\$9,213				
CONTRIBUTION PER UNIT	\$95	\$96	\$98	\$100	\$102	\$104	\$106	\$109	\$111	\$113
TOTAL ANNUAL CONTRIBUTION ADJUSTED @ 2.0% ANNUALLY	\$36,406	\$37,134	\$37,877	\$38,634	\$39,407	\$40,195	\$40,999	\$41,819	\$42,655	\$43,508
TOTAL ACCUMULATED BALANCE	\$162,043	\$199,177	\$208,025	\$231,462	\$270,869	\$301,851	\$342,850	\$384,669	\$427,324	\$470,832
ACCUM. BALANCE W/INTEREST AT 0.6% INTEREST RATE	\$200,156	\$238,595	\$248,804	\$273,738	\$314,867	\$347,752	\$390,889	\$435,087	\$480,370	\$526,759

IMPACT OF INFLATION/INTEREST ON ACCUMULATED BALANCE W/INTEREST FOR:

HUNNINGDON LAKES PROPERTY OWNERS ASSOC'N

ASSUMES ADJUSTMENT IN THE ANNUAL CONTRIBUTION = 2.0%

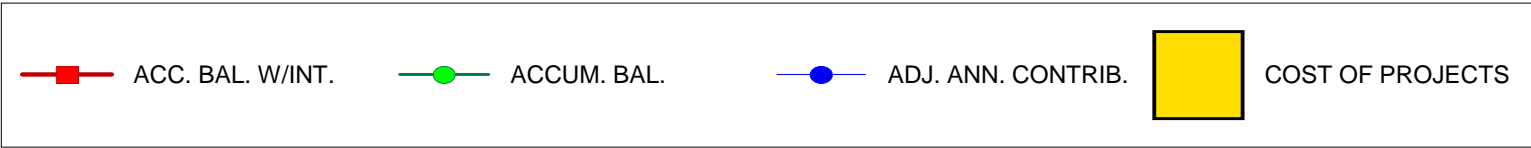
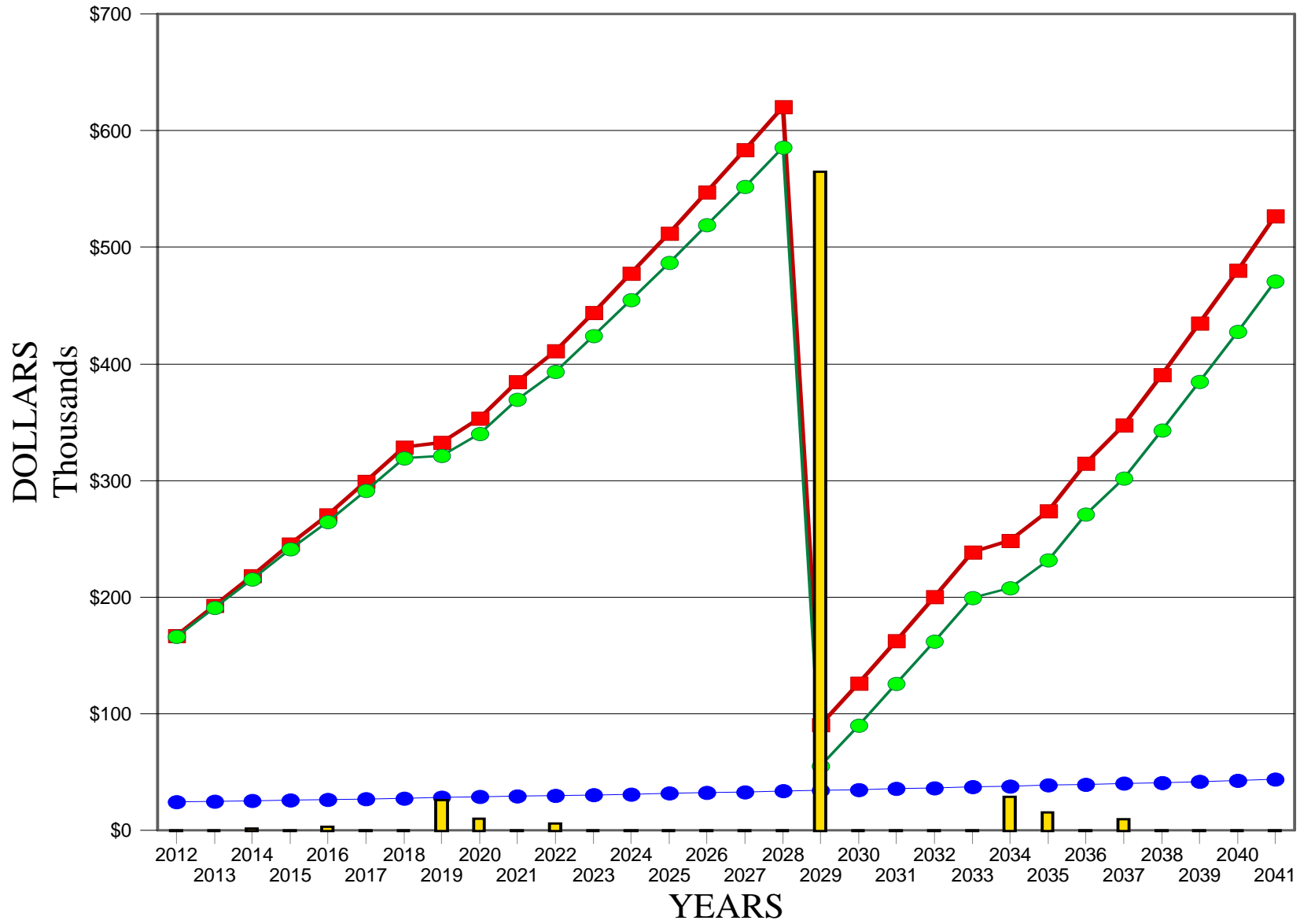
****		INFLATION RATE - percent										
		0	1	2	3	4	5	6	7	8	9	10
INTEREST RATE percent	1	\$872,525	\$789,930	\$693,004	\$579,363	\$446,248	\$290,463	\$108,316	(\$104,463)	(\$352,802)	(\$642,387)	(\$979,773)
	2	\$1,055,328	\$961,534	\$851,539	\$722,661	\$571,792	\$395,341	\$189,153	(\$51,567)	(\$332,353)	(\$659,586)	(\$1,040,616)
	3	\$1,288,551	\$1,182,096	\$1,057,342	\$911,268	\$740,379	\$540,637	\$307,374	\$35,206	(\$282,078)	(\$651,635)	(\$1,081,705)
	4	\$1,586,374	\$1,465,614	\$1,324,197	\$1,158,725	\$965,269	\$739,292	\$475,553	\$168,007	(\$190,311)	(\$607,424)	(\$1,092,565)
	5	\$1,966,871	\$1,829,952	\$1,669,728	\$1,482,381	\$1,263,498	\$1,007,983	\$709,953	\$362,630	(\$41,797)	(\$512,317)	(\$1,059,268)
	6	\$2,453,037	\$2,297,868	\$2,116,424	\$1,904,418	\$1,656,895	\$1,368,134	\$1,031,540	\$639,512	\$183,298	(\$347,169)	(\$963,460)
	7	\$3,074,086	\$2,898,309	\$2,692,929	\$2,453,132	\$2,173,360	\$1,847,196	\$1,467,247	\$1,024,996	\$510,644	(\$87,079)	(\$781,119)
	8	\$3,867,078	\$3,668,032	\$3,435,656	\$3,164,547	\$2,848,471	\$2,480,239	\$2,051,567	\$1,552,917	\$973,321	\$300,174	(\$481,001)
	9	\$4,878,950	\$4,653,635	\$4,390,814	\$4,084,431	\$3,727,499	\$3,311,964	\$2,828,551	\$2,266,588	\$1,613,804	\$856,106	(\$22,684)
	10	\$6,169,063	\$5,914,093	\$5,616,942	\$5,270,826	\$4,867,919	\$4,399,207	\$3,854,311	\$3,221,293	\$2,486,437	\$1,633,991	\$645,888

() = NEGATIVE NUMBER

IT IS VERY IMPORTANT TO NOTE THE IMPACT THAT THE INFLATION RATE HAS ON THE AMOUNT OF INVESTED FUNDS AVAILABLE FOR FUTURE PROJECTS. THE TABLE ABOVE GRAPHICALLY DISPLAYS THE INFLATION RATE FOR A GIVEN RATE OF INTEREST ON THE ADJUSTED ANNUAL CONTRIBUTION. TO USE THIS TABLE, SELECT AN INTEREST RATE FOR YOUR INVESTED FUNDS IN THE LEFT-HAND COLUMN AND READ ACROSS TO THE RIGHT TO SEE HOW THE "ACCUMULATED BALANCE W/INTEREST " IN YEAR 30*, DECREASES WITH THE INCREASE IN THE INFLATION RATE. FOR EXAMPLE: IF THE ASSOCIATION WERE TO INVEST THE ANNUAL CONTRIBUTIONS IN AN INTEREST BEARING ACCOUNT AT 4% INTEREST, THE RESERVE FUND WOULD HAVE AN ACCUMULATED BALANCE W/ INTEREST OF \$965269 IN YEAR 30 IF THE INFLATION RATE STAYED A CONSTANT 4%. HOWEVER, THAT BALANCE OF \$965269 WOULD BECOME A BALANCE OF \$475553 IF THE INFLATION RATE CLIMBS JUST 2%. THIS IS WHY RESERVE STUDIES PREPARED BY DLM ARCHITECTS RECOMMEND INCREASING THE ANNUAL CONTRIBUTION BY THE CURRENT DIFFERENCE BETWEEN THE INFLATION RATE AND THE INTEREST RATE TO PROVIDE ADEQUATE FUNDS FOR FUTURE PROJECTS.

* THIS IS THE VALUE IN THE LOWER RIGHT OF SHEET 3

HUNNINGDON LAKES PROPERTY OWNERS ASSOC



**ANTICIPATED RESERVE CALENDAR FOR:
HUNNINGDON LAKES PROPERTY OWNERS ASSOC'N**

2012	2013	2014	2015	2016	2017
		COMMON SITE FURNITURE (Older),		MONUMENT SIGN,	
2018	2019	2020	2021	2022	2023
	RETENTION LAKES (Shoreline), CONCRETE SIDEWALKS, BRICK MASONRY (Repainting), LANDSCAPE IRRIGATION SYSTEM,	ENTRANCE LIGHTS,		COMMON SITE FURNITURE (Newer),	
2024	2025	2026	2027	2028	2029
					RETENTION LAKES (Dredging), CLUSTER MAILBOX SHELTER ROOF,
2030	2031	2032	2033	2034	2035
				COMMON SITE FURNITURE (Older), LANDSCAPE IRRIGATION SYSTEM,	ENTRANCE LIGHTS,
2036	2037	2038	2039	2040	2041
	COMMON SITE FURNITURE (Newer),				

ARCHITECTURAL RESERVE STUDY NOTE

The existence of any environmental hazard such as the presence of hazardous wastes, toxic substances, radon gas, lead based paint, asbestos-containing materials, ureaformaldehyde insulation, etc. which may or may not be present in or on the subject community or any site within the vicinity of the community, was not observed by the architect and the architect has no knowledge of any such environmental hazard. The architect is not qualified to detect such substances. No responsibility is assumed for any such conditions, or for any expertise or engineering knowledge required to discover them.

The architect performed no testing of the treated wood products found in this community to confirm the presence of chromated copper arsenate (CCA), since testing is outside the scope of the reserve study. Given the age of the community and the prevalence of CCA used as a wood preservative, it is the architect's opinion that CCA treated wood may be present at this community.

The presence of such substances may affect the value of the reserve in the future. The reserve estimate is predicated on the assumption that there is no such material on or in the community and the regulations governing the possession of these substance remains unchanged.

The architect has not taken into consideration, since an Environmental Impact Study or Environmental Site Assessment was not provided, any consequence that the Clean Water Act of 1990 and/or the Chesapeake Bay Preservation Act may have on the community.

The Association may wish to retain an expert in these fields to make an accurate determination concerning the existence of such hazardous materials and their impact due to possible existence of environmentally protected property.

The existence of polybutylene pipe was not reviewed because it is not a common element. The reserve estimate is predicated on the assumption that there is no such material on or in the community.

The architect has not taken into consideration, any consequence that the Fair Housing Act of 1991 may have on the community, because the buildings are exempt from the Act's design and construction requirements due to its first occupancy occurring before March 13, 1991.