LAURELS HOMEOWNERS' ASSOCIATION

P.O. Box 897

Spotsylvania, VA 22551

2014-2018 CAPITAL COMPONENT RESERVE STUDY

LHOA Board Revised Format & Funding Levels: on 1_7_2014

Note: The 2019-2023 CCRS should be developed & approved not later than December 2018

The objective of the 2014-2018 Capital Component Reserve Study is to achieve a fiscally responsible plan to provide attractive amenities to the community through the maintenance, repair or replacement of the existing capital component infrastructure, and to provide the necessary out year funding for required long term capital component support.

REGULATORY AUTHORITY

(VA Code Section 55-514.1 - 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 necessary 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 appropriate; 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:

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 the 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.

(2002, c 459.)

CAPITAL COMPONENT OVERVIEW

COMMON AREA :The Laurels has a community recreation area, e.g. " Commons Area" of approximately four acres, with a one plus acres being open field, and the remaining acreage being wooded It is bordered on the east side by the Community owned lake, accessed by paved road, and connected to a paved parking lot. There is an unimproved gravel road connecting the paved road to a cement boat launch. Two feeder streams transverse the property. The predominant features of the Common Area are: a 5,600 sf parking area, an activity field of approximately .75 acres that includes: a picnic grove with tables, outdoor cast metal cooking grills, a children's play center, swing set; and a full court basket ball court (3150 sf); and a groomed and maintained sandy beach area that is approximately 2,500 square feet.. The beach area is partitioned from the rest of the common area by a short retaining wall installed in 2012. There is a 184 ft split rail fence around a portion of the parking lot.

GATE/ENTRANCE WAYS: A hydraulic actuated gate system was installed at the establishment of the Laurels. The hydraulic system had required continuous maintenance and was custom fabricated. This highly custom gate system had many specially made parts and had poor operational reliability. In 2006, the LHOA gate committee identified the desired gate system features, and solicited proposals from area gate installation providers. Proposed systems, including installation, ranged from $45,400 to $65,400. The current, all electric system is comprised of commercially available components, and is modular in design. The current electrical gate system was installed in 2006 by Central Virginia Doors and continues to operate with far less trouble than the system it replaced.

LAKE & DAM: The lake is approximately 43 acre feet in size at the permanent water surface; 59 acre feet at the spillway water surface. It is fed by both natural springs and 3 major streams draining from a 360 acre watershed area. Impoundment is accomplished by the placement of an earthen dam on the south side of the lake. The dam is 20 feet high and approximately 400 feet in width. Water discharge is controlled by a 72 inch diameter riser, with trash rack, sitting atop a 60 inch diameter inlet pipe. Both are constructed of treated corrugated metal pipe. The Water flow rate is controlled by a screw-type (weir) valve. A 60 inch diameter discharge pipe, constructed of treated corrugated metal pipe, runs 115 feet through the base of the dam and directs water to an existing stream bed. The dam contains an emergency spillway, consisting of earth construction with riprap overlay at the top. The toe side of the spillway consists of a grass covered channel with a riprap spillway. There is an easement for service, repair and maintenance of the dam and dam area. At the time of construction (1989-1990), the dam did not meet size and impoundment criteria of existing state regulations and inspection requirements. In May 2008, the LHOA Board of Directors was informed by the Virginia Department of Conservation and Recreation (DCR) that their regulations would be changing and that the dam at the Laurels would be coming under their authority. The DCR conducted an onsite inspection of the dam in August 2007. In 2010 a civil engineering firm conducted an inspection and assessment of the dam.

ROAD SYSTEM: The Laurels community maintains approximately 2 miles of paved road averaging twenty-two (22) feet in width and improved shoulders averaging four (4) feet in width and (50) ft easement along the road system. There are seventeen(17) drainage pipes located throughout the road system to manage both storm water runoff and watershed streams. The pipes are untreated corrugated galvanized metal, and vary in size from (12) inches to (48) inches. The roads were originally constructed in 1988-1989. The design specifications were completed in accordance with then existing Virginia Department of Transportation regulations for secondary roads, as prescribed by Spotsylvania County ordinance. Given the lack of required inspections during the construction phase, it is not known if the actual construction conformed to design specifications.

2009-2013 CCRS EXPENDITURE & PROJECT SUMMARY

Component/Project	CCRS Yr	Year	$$$	Note
Common Area:				
Rebuild beach retaining wall .	4	2012	9,700.00	$7,308 from dam/lake fund. Repaid $5,893.
Grade/sod path to picnic area	4	2012	8,824.00	
Remove beach wall; grade & seed.	3	2011	3,360.00	
Replaced drainage pipe at picnic area	3	2011	0	Repurposed another pipe to save 750.00.
Gate/Entrance Ways:				
Install security lighting	3	2011	5,162.00	Replace failed lighting & wiring at both gates. Project not included in the 5 year plan - Used $2,662 from the road reserve. Repaid.
Phone and electric at the gates	4	2012	2,206.00	Not included in CCRS.
Repair gate access control	2	2010	2,055.00	Paid from CC fund. Repaid by special assessment.
Dam/Lake				
Bush hog & brush fam area.	n/a	2012	1,900.00	Not included in CCRS.
Dam engineering assessment & studies for state O&M permits.	3/2	2010/11	19,324.00	14,487+4,837 (2011)- Need 6,631.00 to fund $25,955 total cost.
Beaver removal at the lake	3	2011	400.00	

Road System	CCRS Yr	Year	$$$	Note
Slurry Seal - road surface	5	2013	100,961.00	*Projected for 2013 -deferred until culvert pipe repair is completed..*
Culvert pipe replacement	4	2012	108,415.00	Phase One: Pepperidge (2) Isle of Laurels (1) Pembroke).
Snow removal	4	2012	803.00	
Snow removal	3	2011	1,880.00	
Snow removal	2	2010	6,330.00	
Snow removal	1	2009	1,895.00	**(ref: 2011-13 Interim Reports + Treasurer Reports**

2014-2018 NEEDS ASSESSMENTS REVISITED

The 2009-2013 Capital Component Reserve Study conducted an in depth examination and evaluation of the capital components within the Laurels community. The study provided a comprehensive listing of the community's capital components and identified issues that required immediate remediation, as well as intermediate and long term issues that would require out year resource planning to replace or remediate. The Laurels is now entering the 2nd five year cycle for Capital Component planning and includes: carry over projects from the 2009-2013 Capital Component Study that were not completed for any number of reasons including but not limited to: funding was not available to start and/or finish the project; the project was deferred as part of a larger project; or the project required additional study and planning prior to beginning the project.. The 2014-2018 CCRS also contains projects of a recurring nature and must be funded in every CCRS. Lastly all new projects and requirements are included that were identified in the CT2014through 2018 needs assessment. This report encompasses four Capital Component Areas: (1) Common Area, (2) Gate/Entrance Ways Area, (3) Lake & Dam Area and (4) the Road System. CY 2014 is the base year with project cost estimates carried forward from the 2009-2013 CCRS. However, new estimates are provided for the 2014-2018 study period. Projects in the out years (CY2015 through 2018) include a 3.0 % cumulative inflation adjustment. The annual component reserve contribution is also included in this section. **STUDY METHODOLOGY:** Background information and repair/maintenance histories were obtained from Association records. Actual cost estimates were obtained where possible or obtained through independent research. Recurring/annual repair and maintenance costs were initially derived from 5 year cost data contained in the 2009-2013 CCRS and adjusted for inflation. Whenever possible, actual vendor provided cost estimates will be used to update the study. Cost estimates are rounded up to the next highest dollar. A 3% inflation factor is applied to all estimates.

Life Expectancy, Useful Life, Repair& Maintenance History

Common Area	Installed	Life Expectancy	Useful Life -Replacement and/or Maintenance Required	Repair & Maintenance History
Activity Field	1990	n/a	Assess annually	Path sod & graded -2011. Limed, fertilized and over-seed in 1997.
Picnic Grove--pipe	1990	25 years	Assess annually	24" pipe replaced in 2011 by re-purposing another pipe. $750.00 savings.
Picnic Tables	1990	20 years	Needs replacement	Stained and sealed in 1999 and 2004.
Play Center	1990	20 years	Needs replacement	
Swing Set	1990	20 years	Needs replacement	
BBQ Grills - 2	1990	15 years	Needs replacement	
Beach Wall	2012	30 years	Assess annually	Rebuilt in 2012. Assumes 30 yr life cycle with minor maintenance.
Basketball Court	1991		Court needs to be resurfaced with 1.5 in asphalt overlay and sealed. Reseal every 3-4 years.	Poles and nets-1997. Surface re-sealed in 1998 & 2003. Poles, nets and backboards 2003. Poles reset 2004. .

Gate/Entrance Ways	Installed	Life Expectancy	Useful Life -Replacement and/or Maintenance Required	Repair & Maintenance History
Wrought Iron Railings	1991	Indefinite	Repaint Wrought Iron Railings	Cleaned & repainted 2002.
Gate System	2006	20 Years	Probable replacement -2023-2025 if scheduled PM completed. Estimated at $76,313.	Complete gate system replacement was completed in 2005. Gate warranties have expired.
Brickwork	1991	Indefinite	Assess annually	One brick column on the ingress side of Brock Road was rebuilt in2006.
Mega Swing Operator Drive Arm	2006	10 years?	Failure or damage. $250.00 in 2013 dollars	.
LifeMaster Photo Eye	2006	10 years?	Failure or damage. $174.00 in 2013 dollars.	
Power Batteries (2)	2006	3 years	Failure or damage. $30.00 per battery x 2	

			in 2013 dollars	
Electric Motor Bushings(4)	2006	3 years	Failure or damage. $35.00 set per swing operator (4) in 2013 dollars	
Inductive Loop Detector (4)	2006	10 years	Failure or damage. $120.00 2 per gate x 2 gates in 2013 dollars..	
LiftMaster SW001 Control Board (4)\	2006	10 years	Failure or damage. $210.00 per swing operator x 2 in 2013 dollars.	$210.00 per swing operator x 2 in 2013 dollars.
Sentex Infinity M Tel Entry System	2006	10 years	Failure or damage. $1,700.00 in 2013 dollars.	
Mega Swing Operator	2006	10 years	Failure or damage. $1,540.00 in 2013 dollars.	Not-available-. Substitute CSW24V SWO
Lake & Dam				
Earth Dam Structure	1998	50 Years		
Dam Inspection	1989-90	Indefinite	CE inspection due in 2015	CE inspection-1997. (Kniseley & Assoc).
				CE inspection -2001 (Alexcom).
				Board Inspection - 2008
				CE inspection - 2010+ 2011 (Alexcom).
Dam Repair & Maintenance:				.
Dam pipes		20-25 Years	Treated corrugated pipe. Replace outlet pipe in 2019.	
				Repair leaky outlet pipe -2001
				Repair leaky outlet pipe - 2006.
				Repair leaky outlet pipe - 2007
				Repair leaky outlet pipe - 2008
Erosion Control				Application of additional rip rap to control erosion -1997.
				Clear debris from discharge channel and reapply riprap -2001
Grounds Keeping/Bush & Tree Removal			Annually	;annually.
				Bush hog, 1995-1999; Grade & over seed spillway-1997.
				Tree & brush removal from structure 2001.

				Tree & brush removal from structure 2004.
				Bush hog and tree removal and application of herbicide. 2008.
				Bush hogging -tree removal and application of herbicide - 2012
Lake Vegetation Control-			Annually	Introduced grass carp to control aquatic vegetation -1995.
Lake Sediment Control				
Lake - Animal Control			Every 2 years.	Beaver control/trapping. Last completed in 2011

Road System	**Installed**	**Life Expectancy**	**Useful Life -Replacement and/or Maintenance Required**	**Repair & Maintenance History**
Roads	1998-1999	30 years		
Road Base		24 years		Road patching throughout subdivision. - 1998
Road Surface		8 years		Resurface Pepperidge Dr -1999
Road Repair - Potholes & Cracking (Every 4 years)		4 years		Repair and Resurface Gold Leaf Circle-2000
Apply Slurry Seal Surface Coating (4-8 Years).		4-8 years		Installed gravel shoulder protection at both entrance ways.-2001
Hot Mix Asphalt Paving (Every 20-30 years)		20-30 years		Resurfaced Isle of Laurels, Commodore Ct and Pembroke Ct. -2004
Drain Culverts (metal)	1989-1990	~15 years		Culverts on Isle of Laurels required corrective action to properly channel storm runoff - 1995.
				Pipe – Pepperidge Drive - 2009 Phase One: Pepperidge (2) Isle of Laurels (1) Pembroke) - 2012.

Common Area Needs Assessment

The appearance of Common Area presents to residents and visitors a visual statement regarding the quality of life and community pride within the Laurels. The Common Area is intended to be focal point of the community where members and their families may gather for recreation and to share and enjoy various community activities. It is a priority of the CCRS to facilitate the good maintenance and appearance of the Common Area. In 2012 a new beach wall was constructed in the Common Area. Subsequently problems with proper drainage around the beach wall, resulting in erosion have been identified. The contractor has agreed the problem is due to faulty installation of the beach wall and will facilitate repairs as required. The area immediately around the old wood beach wall was limed, fertilized and over seeded in 2011 during the removal of the wall. This area needs to be re-inspected as a board member has recommended the area be reseeded in 2013. The Board of Directors approved funding for the reseeding the entire open area in the 2013. The picnic tables, BBQ grills, play center and swing set have also received board approval for replacement in 2013 with community labor being used to reduce overall costs. The community was able to repurpose an existing pipe to avoid the $750.00 cost of replacing the drainage pipe in the Common Area.

2014-2018 Potential Common Area Expenditures By Calendar Year

Commons Area Potential Expenditure/Project List	2014	2015	2016	2017	2018	Five Year Total
Resurface basketball court	6,000	0	0	0	0	6,000
Apply sealer to basketball court every 3 yrs	1,100	0	0	0	1,292	2,392
Remove trees or brush from picnic grove	479	494	509	524	540	2,546
Replace picnic tables (3)	0	0	0	0	0	0
Replace grills (2)	0	0	0	0	0	0
Replace child play set	0	0	0	0	0	0
Replace swing set	0	0	0	0	0	0
Minor surface Repairs and sealcoat parking lot	1,2000	0	0	0	1,332	2,532
Re-establish /overseed grass in activity field	0	0	0	0	3,478	3,478
Repair & maintain beach wall -5 year repair or maintenance	0	0	0	0	3,000	3,000
Totals	**8,779.**	**494**	**509**	**524**	**9,642**	**19,948**

Gate/Entrance Ways Needs Assessment

Major System Components:

The Laurels gate system uses the 8 iron gate panels from the original hydraulic system. The gate panels are mounted by the bearing hinges to the entrance masonry. Each panel is actuated by a LiftMaster Model MSWDCBB Mega Swing 1/2 HP Commercial Duty Swing Gate Operator. The Drive Arm is a 1-inch aluminum tube designed to collapse with excessive force on the gate panel. This reduces the chance of damage to the Swing Operator in the event of excessive force on the gate panel such as when a vehicle pushes through the gate panel. Each pair of gate panels is actuated by two Swing Operators that are configured as a master-slave system. That is, one Swing Operator (the inner-most units) provides signals from various sensors to control both gate panels. This master-slave configuration allows both gate panels to be operated by common sensors. The Swing Operators use Inductive Loop Detectors and electro-optic Photo Eye sensors to detect the presence of vehicles when in and near the gate. For example, an inductive sensor is in place about 15 feet from an exit gate to detect the exiting vehicle that triggers the opening of the exit gate. Photo Eye sensors prevent the gates from closing when they are open and a vehicle obstructs the sensor beam. Each gate uses a Photo Eye transmitter – receiver pair to detect obstructions when the gates are open and prevent inadvertent closing.

Each gate system is accessed by a Sentex Infinity M Telephone Entry System like that shown in Figure 6. The Entry System allows gate access by push-button code, telephone remote control, and wireless remote control. An Entry System is mounted on the masonry pedestal at the entrance of each gate. Each lot owner is assigned a unique access code that allows them to open a gate from the keypad. Additionally, LiftMaster compatible wireless remotes can be registered in the system for convenient push-button entry. The Entry System has a directory of the residents. A visitor can access this directory and the system can call a residence where the resident can open the gate by pressing the number 9 on a touchtone phone. Each access of the entry gates is recorded in the continuous memory of the Entry System. This access log contains the code used (or attempted), the time of the use, and the "granted" or "denied" response of the system.

The Entry System can be programmed to automatically open or close at prescribed times. Additionally, individual codes can have restricted access, e.g., a resident's maid service code might only allow access from say 7:00 a.m. to 5:00 p.m. on Thursdays.

Recurring Maintenance & Minor Parts Replacement

The off-the-shelf component design of the current gate system can be maintained virtually indefinitely. With exception of changes in technology that may render some of the electronics obsolete, almost all components of the Swing Operator and Entry System are replaceable. The broad commercial use of the operator and entry systems assure the availability of components for many years. However, there are components of these systems that are subject to wear and prone to damage and need to be replaced periodically or when they fail. Table 1 identifies the more common components that need periodic maintenance, replacement or are likely to become damaged.

Current Gate Status:

South Gate (Robert E. Lee Road) Failure of Telephone Access: Need to identify the failure of the telephone control. At this time, gate codes and wireless control is working, but the Entry System is unable to access the telephone service. An initial trouble shooting indicates the telephone service is present at the utility service box. It is likely that the telephone line from the service box to the Entry System has been damaged. The gate committee will assess the failure and either repair or recommend action. Exit Gate Failed Open: The exit gate has failed open and requires trouble shooting to determine the cause. The gate committee will assess the failure and either repair or recommend action. Exit Gate Drive Arm: A temporary aluminum arm has been installed to replace a previously damaged arm. A new arm needs to be ordered.

North Gate (Brock Road)Gate system is fully operational. Other Considerations: the Automated Gate System relies on a telephone service at each gate. From time to time, this service is interrupted due to weather or to telephone utility disturbances. The gates can be controlled, programmed, and logged data retrieved via telephone modem and software. The LHOA has considered in the past contracting for regular gate maintenance. If that should be considered again, the committee recommends using Central Virginia Doors (the installer). There is an advantage to having residents involved in the maintenance of the gate system since they can quickly react to gate needs. However, if there are not willing and knowledgeable homeowners willing to maintain and manage the gates a service contract might be prudent.

Refer to the 2014-2018 Potential Entrance Ways Capital Expenditures By Calendar Year table for specific preventive maintenance, repair and replacement requirements and expenditures. Projects & funds for calendar year 2013 have been approved by the board.

The Maintenance & Beautification Committee:

The Board of Directors has requested the Maintenance & Beautification Committee investigate potential beautification and enhancement changes to the entrances of the community with the specific objective of replacing those areas requiring frequent mowing and other landscaping services with alternatives that will reduce the over-all maintenance requirements of the entrance ways, while preserving an attractive and appealing entrance to the community. Once the Board of Directors reviews and approves the committee's recommendations, the costs to implement and maintain the changes will be incorporated into the 2014-2018 CCRS. and the LHOA Annual Budget. Reference: "Automated Gate Entry System, 2013 Report ". Submitted to the LHOA Board of Directors by Thomas Holland, April 7, 2013

2014-2018 Potential Gate/Entrance Ways Expenditures By Calendar Year

Entrance Ways Potential Expenditure/Project List	2014	2015	2016	2017	2018	Five Year Total
Rewire North & South Gate Systems	5,000	0	0	0	0	5,000
Replace Power Back Up Batteries (2) Every 3 years	0	0	0	542	0	542
Lubricate Hinge Bearing (2x/year)	78	80	82	85	87	412
Replace Motor Brushes (every 3 Years	0	0	307	0	0	307
Major Component Replacement:	0	0	0	0	0	0
Lift Master SW001 Control Board (4)	0	0	0	0	0	0
Sentext Infinity M Telephone Entry System	0	0	0	0	0	0
CSW24V Swing gate Operator	0	0	0	0	0	0
Recurring Maintenance & Minor Parts Replacement:(see note)	0	0	0	0	0	0
Mega Swing Operator Drive Arm	0	0	0	0	0	0
LiftMaster Photo Eye ($174 ea/4 per system)	0	0	0	0	0	0
Inductive Loop Detector ($120/2 per gate)	0	0	0	0	0	0
Unscheduled Maintenance & Repair	1,545	1,592	1,640	0	1,739	6,516
Wrought Iron Gates (scrape, apply rust protector, and paint) see note	0	0	0	0	2,021	2,021
Mortar and point up brick columns	0	0	1,545	0	0	1,545
	0	0	0	0	0	0
Totals	**6,623**	**1,672**	**3,574**	**627**	**3,847**	**16,343**

Note: The line item Unscheduled Maintenance & Repairs is intended to cover the annual costs identified under Recurring Maintenance & Minor Parts Replacement and any other unspecified or unscheduled service call. These costs are unpredictable, and incurred when a part fails or is damaged. The 2014-2018 CCRS includes system preventive maintenance repair and replacement costs based on the April 7, 2013 Automated Gate Entry System Report prepared by Thomas Holland. Complete gate replacement may be needed in 2025-2026. The current replacement cost is $77,000. No unscheduled maintenance costs in 2017.

Lake & Dam Needs Assessment

The dam State Permitting Process, and the Emergency Action Plan (EAP) initiative have been left in suspense for an extended period of time. This has likely caused the expiration of the prior engineering work completed by AlexCom (Joe Alexander). The deadlines for submitting the Operating and Maintenance Permit application to the Commonwealth have not been met and the community needs to identify and plan for possible penalties and fees associated with the failure to meet state requirements. The dam is due for an inspection by a professional engineer in 2015 at an estimated cost of $5,000. The entire pipe system and spillway must be repaired not later than 2019 at an estimated cost of $80,000.

Mark Stone, a Laurels resident and the person most knowledgeable regarding dam and EAP issues has provided the following recommendations and action items requiring short term attention.

Recommendations:

1. Contact AlexCom and schedule a meeting to review the status of the Laurels contracted work items. Given the time delay associated with initiative, the Laurels needs to expand the scope of the discussions to include any new issues and problems that require immediate attention.

2. Request from AlexCom a "clean" electronic copy of the draft EAP which needs to be updated with appropriate facts and figures to facilitate the submission of the Operating and Maintenance Permit application to the Commonwealth.

Action Items:

1. Place staff and rain gages at points along the spillway that can be viewed and monitored from land. These will need to be fabricated using community labor or specifications provided to a contractor for manufacture.

2. Identify point-of-contacts in the community that can be listed by name that can be listed in the EAP as "observers" during heavy rain/storm activity to monitor the gauges.

3. Develop a Communications/Alert Plan for the community; Spotsylvania County Emergency Management System (EMS).

4. Once the EAP is near final draft, the Laurels must meet with the Spotsylvania Emergency Manager to review and approve the plan.

5. Plan and conduct an Annual Exercise of the plan to include an after-action-report with recommendations based on the results of the exercise.

6. Conduct an annual inspection using state guidelines and forms. Retain inspection records in a permanent file.

2014-2018 Potential Lake & Dam Expenditures By Calendar Year

Lake & Dam 5 Year Project List	2014	2015	2016	2017	2018	Five Year Total
Complete repair/overhaul -dam overflow system (outlet pipe & riser)	0	0	0	0	0	0
Engineering consulting/inspections for permit documentation & required periodic inspection	3,000	0	0	3,500	0	6,500
Temporary 2014 epoxy fix of outlet pipe and riser	10,000	0	0	0	0	10,000
Repair spillways -tbd 2024	0	0	0	0	0	0
Repair/replace dam flow control valve	0	0	0	0	0	0
Perform annual PM on flow control valve	0	0	0	0	656	656
Clear trees & brush from dam & spillway areas (3x/yr)	1,350	1,350	1,350	1,350	1,350	6,750
Control lake sediment as needed	0	0	0	0	0	0
Control aquatic grass & weed -annual follow-up	5,9400	5000	5000	5000	5000	25,940
Control Beaver activity as needed	0	0	0	0	0	0
Placeholder	0	0	0	0	0	0
Totals	**20,290**	**6,350**	**6,350**	**9,850**	**7,006**	**49,846**

Note: The estimate for a complete dam repair/overhaul of the entire overflow control system, currently estimated at $80,000 to 120,000, needs to be updated, probably best accomplished during the 2015 professional engineer inspection. Temporary 2014 epoxy repair is estimated at $3-5K, the Difference ($6.5-7K) is set aside for potential additional repairs and the 2015 professional engineer inspection.. Temporary epoxy repairs delays the requirement for a complete overhaul/repair until 2024. The LHOA is committed only thru 2014 for the aquatic control. The 2013 Board approved a two year contract (2013 & 2014) to assess the effectiveness of the treatment. In the Spring of 2015 a determination will be made as to the cost effectiveness of the treatment.. If the treatment is stopped in 2015, the out year funds ($20K) should be deposited in the Long Term Capitol Component Account and held to offset the 2024 costs.

Road System Needs Assessment

The maintenance and repair of the Road System is unquestionably the major cost driver in planning for fully funding Capital Component requirements. Phase I of the Culvert Repair project was completed in 2012 at a cost of $108,000. WC Spratt, Inc provided updated cost estimates to complete Phases II, III and IV of the Culvert Repair project on 15 May 2013. The primary focus is the completion of the Culvert Pipe Replacement Project within the 2014-2018 CCRS per engineering guidance. It is recommended that Phase II be completed in 2013, however this will require the Board of Directors to approve an additional $12,984 above the $50,000 contained in the draft 2013 budget proposal.

2014-2018 Potential Road System Expenditures By Calendar

Road System 5 Year Project List	2014	2015	2016	2017	2018	Five Year Total
Snow removal	2,500	2,500	2,500	2,500	2,500	12,500
Phase II Culvert Pipe Removal & Repair(pipe# 10,11 &12) (completed 2013 -($62,984.00)	0	0	0	0	0	0
Phase III Culvert Pipe Removal & Repair (pipe # 1,2,3,5 & 6)	0	80,485	0	0	0	80,485
Phase IV Culvert Pipe Removal & Repair (pipe # 9,15,16 & 17)	0	0	0	85,100	0	85,100
Road Repair - Potholes & surface cracking	10,000	0	10,932	0	0	20,932
Perform PM on the drainage system clean pipes and PM -Annually	464	478	493	508	524	2,467
Totals	**12,964**	**83,463**	**13,925**	**88,108**	**3,024**	**201,484**

Note: The Culvert Pipe replacement is being considered as a one-time expense (50 yrs life expectancy). The Slurry/resurfacing project at an estimated cost of $228,000 been deferred until the culvert pipe replacement project is completed and adequate reserve funds accumulated. Hot Asphalt Mix required in 2033 (**long term reserve** required at an estimated project cost of $1,265,250. (ref:2009-2013 CCRS)

SUMMARY - CCRS FIVE YEAR SPEND PLAN SUMMARY

Component	2014	2015	2016	2017	2018	FIVE YEAR TOTAL
Common Area	8,779	494	509	524	9,642	19,948
Gates	6,623	1,672	3,574	627	3,847	16,343
Dam & Lake	20,290	6,350	6,350	9,850	7,006	49,846
Road System	12,964	83,463	13,925	88,108	3,024	201,484
TOTALS	**48,656**	**91,979**	**24,358**	**99,109**	**23,519**	**287,621**

SUMMARY - CCRS FIVE YEAR EXPENDITURES VERSUS REVENUE

Funding Element	2014	2015	2016	2017	2018	2014-2018
2013 Balance Forward - Dec2013 Financial Report	26,151.38	36,873.38	4,272.38	39,292.00	(439.00)	Fully funds 2014-2018 CCRS projects. $ 35,420.00 carried forward into the 2019-2023 CCRS. This level of funding does not support known high cost out year capital component projects. See note
Projected Revenue	59,378.00	59,378.00	59,378.00	59,378.00	59,378.00	
Subtotal	**85,529.38**	**96,251.38**	**63,650.38**	**98,670.00**	**58,939.00**	
Planned Expenditures	(48,656.00)	(91,979.00)	(24,358.00)	(99,109.00)	(23,519.00)	
Subtotal	**(48,656.00)**	**(91,979.00)**	**(24,358.00)**	**(99,109.00)**	**(23,519.00)**	
Projected EOY Funds	**36,873.38**	**4,272.38**	**39,292.38**	**(439.00)**	**35,420.00**	

Note: The LHOA is an aging community with future high cost capital component projects. On the horizon: Repair and/or replacement of the over flow riser, oulet pipe and emergency spillways of the dam (2024) at an estimated $80-120K. Replace the gate system electrical, electronic and mechanical components of the North and South gates (2023-2025) at an estimated cost of $60-65K. Overlay the road asphalt on 2.2 miles of roadway (2019-2023) at an estimated $ 228K., which will delay the need to repair the road system with a hot asphalt mix well beyond the 2033 time period indicated in the 2009-2013 CCRS. The cost for this major repair may be as high as $1.3M in t2045-2050. The 2014 Board has approved the establishment of a Long Term Reserve Account with the stated objective of providing funding for out year projects. Together with the completion of the Culvert Replacement project in 2017, the LHOA will be able to significantly increase thee contribution to the account.

LONG TERM OUT YEAR CAPITAL COMPONENT ANNUAL RESERVE REQUIREMENT (2019-2033

High Cost Out Year Projects	Execution Year	Estimated Cost	Years To Save
Replace overflow riser and outlet pipe at dam	2024-2029	100,000	10-15
Replace gate operators	2023-2028	60,000	10-15
Asphalt overlay	2019-2023	228,000	10-15
2018 CCRS Balance Carry Forward		(35,420)	
Target Savings		252,580	

The LHOA Covenants allow a maximum of 25% increase to assessments over the previous years assessment. The 2014 Board has approved a 2014 assessment increase of 25%. The table below shows the assessments for the interior and exterior lot owners. Note that the LHOA Covenants exempt exterior lot owners from contributing to the repair, maintenance or replacement of the road system, which significantly reduces the assessment for exterior lot owners.

2014 CAPITAL COMPONENT ASSESSMENT AND ANNUAL DUES

2014 capital Component Assessment & Dues	Interior Lots	Exterior Lots
2013 Capital Component Assessment (base)	785.00	344.00
2014 Capital Component Assessment (25% increase)	196.25	88.00
2014 Annual Dues (same as 2013)	150.00	150.00
Total 2014 Capital Component & Dues by Lot Type	**$1,131.00**	**$582.00**
Annual assessments are payable in 3 installments if desired. May-Aug-Dec 2014		

Please Note : The 2014-2018 CCRS is based on funding the project list from a study state funding stream for the study years. Unless unforeseen circumstances become present, residents should plan on paying the same assessments for the Capital Component portion of their annual dues through 2018. However, future Boards may determine that more or less revenue is required and adjust as needed.