

# WHAYLAND

Reserve Study

For

Willow Lake Homeowner's Association, Inc.

August 03, 2015



Reserve Study Prepared  
By  
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**Willow Lake Homeowner's Association, Inc.**

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# Important Information

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This reserve analysis study and the parameters under which it has been completed are based upon information provided to us in part by representatives of the client, its contractors, assorted vendors, specialist and independent contractors, and various construction pricing and scheduling manuals including, but not limited to: Marshall & Swift Valuation Service, RS Means Facilities Maintenance & Repair Cost Data, RS Means Repair & Remodeling Cost Data, National Construction Estimator, National Repair & Remodel Estimator, Dodge Cost Manual and McGraw-Hill Professional. Additionally, costs are obtained from numerous vendor catalogues, actual quotations or historical costs, and our own experience in the field of property management and reserve study preparation.

It has been assumed, unless otherwise noted in this report, that all assets have been designed and constructed properly and that each estimated useful life will approximate that of the norm per industry standards and/or manufacturer's specifications. In some cases, estimates may have been used on assets, which have an indeterminable but potential liability to the client. The decision for the inclusion of these as well as all assets considered is left to the client.

We recommend that your reserve study be updated on an annual basis (2 or 3 years for studies of limited scope) due to fluctuating interest rates, inflationary changes, and the unpredictable nature of the lives of many of the assets under consideration. All of the information collected during our observation and computations made subsequently in preparing this reserve analysis study are retained in our computer files. Therefore, annual updates may be completed quickly and inexpensively each year.

The Whayland Group would like to thank you for using our services. We invite you to call us at any time, should you have questions, comments or need assistance. In addition, any of the parameters and estimates used in this study may be changed at your request, after which we will provide a revised study.

This reserve analysis study is provided as an aid for planning purposes and not as an accounting tool. Since it deals with events yet to take place, there is no assurance that the results enumerated within it will, in fact, occur as described.

# Part I

## Introduction

Preparing the annual budget and overseeing finances are among the most important responsibilities of the management team. The annual operating and reserve budgets reflect the planning and goals of the client and set the level and quality of service for all of the client's activities.

## Funding Options

When a major repair or replacement is required, there are essentially three options available to address the expenditure:

The first, and only logical means to ensure its ability to maintain the assets for which it is obligated, is by **setting aside an adequate level reserves** as part of the regular annual budget process. The association is not only comprised of present members, but also future members. Any decision to adopt a calculation method or funding plan, which would disproportionately burden future members in order to make up for past reserve deficits, would be a breach of its fiduciary responsibility to those future members. Unlike individuals determining their own course of action, the trustees are responsible to the association as a whole.

The second option is for the client to **acquire a loan** from a lending institution in order to affect the required repairs. In some cases, banks will lend to a client using "future collections" as collateral for the loan. More often than not, the bank will require real estate collateral or personal guarantees. Regardless, the current trustees are pledging the future assets of the association. They are also incurring the additional expense of interest fees along with the original principal amount. In the case of a \$150,000 roofing replacement, the client may be required to pay back the loan over a three to five year period, with interest.

The third option, too often used, is simply to **defer the required repair or replacement**. This option, which is not recommended, can create an environment of declining property values due to expanding lists of deferred maintenance items and the client's financial inability to keep pace with the normal aging process of the common area components.

## Types of Reserve Studies

Most reserve studies fit into one of three categories:

Full Reserve Study;

Update with site inspection; and

Update without site inspection.

In a **Full Reserve Study**, the reserve provider conducts a component inventory, a condition assessment (based upon on-site visual observations), and life and valuation estimates to determine both a "fund status" and "funding plan".

In an **Update with site inspection**, the reserve provider conducts a component inventory (verification only, not quantification unless new components have been added to the inventory), a condition assessment (based upon on-site visual observations), and life and valuation estimates to determine both the "fund status and "funding plan."

In an **Update without site inspection**, the reserve provider conducts life and valuation estimates to determine the "fund status" and "funding plan."

## The Reserve Study: A Physical and a Financial Analysis

There are two components of a reserve study: a physical analysis and a financial analysis.

### **Physical Analysis**

During the physical analysis, a reserve study provider evaluates information regarding the physical status and repair/replacement cost of the client's major common area components. To do so, the provider conducts a component inventory, a condition assessment, and life and valuation estimates.

### **Developing a Component List**

The budget process begins with full inventory of all the major components for which the client is responsible. The determination of whether an expense should be labeled as operational, reserve, or excluded altogether is sometimes subjective. Since this labeling may have a major impact on the financial plans of the client, subjective determinations should be minimized. We suggest the following considerations when labeling an expense.

## Operational Expenses

Occur at least annually, no matter how large the expense, and can be budgeted for effectively each year. They are characterized as being reasonably predictable, both in terms of frequency and cost. Operational expenses include all minor expenses, which would not otherwise adversely affect an operational budget from one year to the next. Examples of *operational expenses* include:

<b>Utilities:</b>	Bank Service Charges	Accounting
Electricity	Dues & Publications	Reserve Study
Gas	Licenses, Permits & Fees	<b>Repair Expenses:</b>
Water	Insurance(s)	Tile Roof Repairs
Telephone	<b>Services:</b>	Equipment Repairs
Cable TV	Landscaping	Minor Concrete Repairs
<b>Administrative:</b>	Pool Maintenance	Operating Contingency
Supplies	Street Sweeping	

## Reserve Expenses

These are major expenses that occur other than annually, and which must be budgeted for in advance in order to ensure the availability of the necessary funds in time for their use. Reserve expenses are reasonably predictable both in terms of frequency and cost. However, they may include significant assets that have an indeterminable but potential liability that may be demonstrated as a likely occurrence. They are expenses that, when incurred, would have a significant effect on the smooth operation of the budgetary process from one year to the next, if they were not reserved for in advance. Examples of reserve expenses include:

Roof Replacements	Park/Play Equipment
Painting	Pool/Spa Re-plastering
Deck Resurfacing	Pool Equipment Replacement
Fencing Replacement	Pool Furniture Replacement
Asphalt Seal Coating	Tennis Court Resurfacing
Asphalt Repairs	Lighting Replacement
Asphalt Overlays	Insurance(s)
Equipment Replacement	Reserve Study
Interior Furnishings	

## Budgeting is Normally Excluded for:

Repairs or replacements of assets which are deemed to have an estimated useful life equal to or exceeding the estimated useful life of the facility or community itself, or exceeding the legal life of the community as defined in a client's governing documents or policies. Examples include the complete replacement of elevators, tile roofs, wiring and plumbing. Also excluded are insignificant expenses that may be covered either by an operating or reserve contingency, or otherwise in a general maintenance fund. Expenses that are necessitated by acts of nature, accidents or other occurrences that are more properly insured for, rather than reserved for, are also excluded.

## Financial Analysis

The financial analysis assesses the client's reserve balance or "fund status" (measured in cash or as percent fully funded) to determine a recommendation for the appropriate reserve contribution rate in the future, known as the "funding plan".

### **Preparing the Reserve Study**

Once the reserve assets have been identified and quantified, their respective replacement costs, useful lives and remaining lives must be assigned so that a funding schedule can be constructed. Replacement costs and useful lives can be found in published manuals such as construction estimators, appraisal handbooks, and valuation guides. Remaining lives are calculated from the useful lives and ages of assets and adjusted according to conditions such as design, manufactured quality, usage, exposure to the elements and maintenance history.

By following the recommendations of an effective reserve study, the client should avoid any major shortfalls. However, to remain accurate, the report should be updated on an annual basis to reflect such changes as shifts in economic parameters, additions of phases or assets, or expenditures of reserve funds. The client can assist in simplifying the reserve analysis update process by keeping accurate records of these changes throughout the year.

### **Funding Methods**

From the simplest to the most complex, reserve analysis providers use many different computational processes to calculate reserve requirements. However, there are two basic processes identified as industry standards: the cash flow method and the component method.

The cash flow method develops a reserve-funding plan where contributions to the reserve fund are designed to offset the variable annual expenditures from the reserve fund. Different reserve funding plans are tested against the actual anticipated schedule of reserve expenses until the desired funding goal is achieved. This method sets up a "window" in which all future anticipated replacement costs are computed, based upon the individual lives of the components under consideration. The Whayland Group Threshold and The Whayland Group Current Assessment funding models are based upon the cash flow method.

The component method (2017 Fully Funding Model) develops a reserve-funding plan where the total contribution is based upon the sum of contributions for individual components. The component method is the more conservative of the two funding options, and assures that the client will achieve and maintain an ideal level of reserve over time. This method also allows for computations on individual components in the analysis. The Whayland Group 2017 Fully Funding model is based upon the component methodology.



## Funding Strategies

Once a client has established its funding goals, the client can select an appropriate funding plan. There are four basic strategies from which most clients select. It is recommended that clients consult professionals to determine the best strategy or combination of plans that best suit the client's need. Additionally, clients should consult with their financial advisor to determine the tax implications of selecting a particular plan. Further, consultation with the American Institute of Certified Public Accountants (AICPA) for their reporting requirements is advisable. The four funding plans and descriptions of each are detailed below. Clients will have to update their reserve studies more or less frequently depending on the funding strategy they select.

**Full Funding**---Given that the basis of funding for reserves is to distribute the costs of the replacements over the lives of the components in question, it follows that the ideal level of reserves would be proportionately related to those lives and costs. If a client has a component with an expected estimated useful life of ten years, it would set aside approximately one-tenth of the replacement cost each year. At the end of three years, one would expect three-tenths of the replacement cost to have accumulated, and if so, that component would be "fully-funded." This model is important in that it is a measure of the adequacy of a client's reserves at any one point of time, and is independent of any particular method which may have been used for past funding or may be under consideration for future funding. This formula represents a snapshot in time and is based upon current replacement cost, independent of future inflationary or investment factors:

**Fully Funded Reserves = Age divided by Useful Life the results multiplied by Current Replacement Cost**

When a client's total accumulated reserves for all components meet this criterion, its reserves are considered "fully-funded."

The Whayland Group **Threshold Funding Model (Minimum Funding)**. The goal of this funding method is to keep the reserve cash balance above zero. This means that while each individual component may not be fully funded, the reserve balance overall does not drop below zero during the projected period. A client using this funding method must understand that even a minor reduction in a component's remaining useful life can result in a deficit in the reserve cash balance.

The Whayland Group **Threshold Funding Model**. This method is based upon the cash flow funding concept. The minimum reserve cash balance in threshold funding, however, is set at a predetermined dollar amount (other than \$0). **We recommend this model and have included it in the study.**

The Whayland Group **Current Assessment Funding Model**. This method is also based upon the cash flow funding concept. The initial reserve assessment is set at the client's current fiscal year funding level and a 30-year projection is calculated to illustrate the adequacy of the current funding over time. Since there is no current specific reserve funding in place for EUMC at this time, this model is not applicable.

The Whayland Group **Component Funding Model (2017 Fully Funding Model)**. This is a straight-line funding model. It distributes the cash reserves to individual reserve components and then calculates what the reserve assessment and interest contribution (minus taxes) should be, again by each reserve component. The current annual assessment is then determined by summing all the individual component assessments, hence the name "Component Funding Model". This is the most conservative funding model. It leads to or maintains the fully funded reserve position; however, it results in very high reserve balance far in excess of what is needed to adequately fund replacements on an ongoing basis.

## Users' Guide to your Reserve Analysis Study

Part II of your Whayland Group Report contains the reserve analysis study for your client. There are

seven types of reports in the study as described below.

### **Report Summaries**

The Report Summary for all funding models lists all of the parameters that were used in calculating the report as well as the summary of your reserve analysis study.

### **Index Reports**

The **Distribution of Accumulated Reserves** report lists all assets in remaining life order. It also identifies the ideal level of reserves that should have accumulated for the client as well as the actual reserves available. This information is valid only for the “Component Funding Model” calculation.

The **Component Listing/Summary** lists all assets by category (i.e. roofing, painting, lighting, etc.) together with their remaining life, current cost, monthly reserve contribution, and net monthly allocation.

### **Detail Reports**

The Detail Report itemizes each asset and lists all measurements, current and future costs, and calculations for that asset. Provisions for percentage replacements, salvage values, and one-time replacements can also be utilized. These reports can be sorted by category or group.

The numerical listings for each asset are enhanced by extensive narrative detailing factors such as design, manufactured quality, usage, exposure to elements and maintenance history.

The Whayland Group Detail Index is an alphabetical listing of all assets, together with the page number of the asset’s detail report, the projected replacement year, and the asset number.

### **Projections**

Thirty-year projections add to the usefulness of your reserve analysis study.

### **Definitions**

#### **Report I.D.**

Includes the Report Date (example: November 15, 1992), Account Number (example: 9773), and Version (example: 1.0). Please use this information (displayed on the summary page) when referencing your report.

#### **Budget Year Beginning/Ending**

The budgetary year for which the report is prepared. For clients with fiscal years ending December 31<sup>st</sup>, the monthly contribution figures indicated are for the 12-month period beginning 1/1/20xx and ending 12/31/20xx.

#### **Number of Units and/or Phases**

If applicable, the number of units and/or phases included in this version of the report.

#### **Inflation**

This figure is used to approximate the future cost to repair or replace each component in the report. The current cost for each component is compounded on an annual basis by the number of remaining years to replacement, and the total is used in calculating the monthly reserve contribution that will be necessary to accumulate the required funds in time for replacement.

#### **Annual Assessment Increase**

This represents the percentage rate at which the client will increase its assessment to reserves at the end of each year. For example, in order to accumulate \$10,000 in 10 years, you could set aside \$1,000 per year. As an alternative, you could set aside \$795 the first year and increase that amount by 5% each year

until the year of replacement. In either case you arrive at the same amount. The idea is that you start setting aside a lower amount and increase that number each year in accordance with the planned percentage. Ideally this figure should be equal to the rate of inflation.

### **Investment Yield Before Taxes**

The average interest rate anticipated by the client based upon its current investment practices.

### **Taxes on Interest Yield**

The estimated percentage of interest income that will be set aside to pay income taxes on the interest earned.

### **Projected Reserve Balance**

The anticipated reserve balance on the first day of the fiscal year for which this report has been prepared. This is based upon information provided and not audited.

### **Percent Fully Funded**

The ratio, at the beginning of the fiscal year, of the actual (or projected) reserve balance to the calculated fully funded balance, expressed as a percentage.

### **Phase Increment Detail and/or Age**

Comments regarding aging of the components on the basis of construction date or date of acceptance by the client.

### **Monthly (or Quarterly or Annually) Assessment**

The assessment to reserves required by the client each month (or quarter or year).

### **Interest Contribution (After Taxes)**

The interest that should be earned on the reserves, net of taxes, based upon their beginning reserve balance and monthly contributions for one year. This figure is averaged for budgeting purposes.

### **Total Monthly (or Quarterly or Annually) Allocation**

Sum of the monthly (or quarterly or annually assessment / interest contribution figures.

### **Group and Category**

The report may be prepared and sorted either by group (location, building, phase, etc.) or by category (roofing, painting, etc.). The standard report printing format is by category.

### **Percentage of Replacement or Repairs**

In some cases, an asset may not be replaced in its entirety or the cost may be shared with a second party. Examples are budgeting for a percentage of replacement of streets over a period of time, or sharing the expense to replace a common wall with a neighboring party.

### **Placed-In-Service Date**

The month and year that the asset was placed-in-service. This may be the construction date, the first escrow closure date in a given phase, or the date of the last servicing or replacement.

### **Estimated Useful Life**

The estimated useful life of an asset based upon industry standards, manufacturer specifications, visual inspection, location, usage, client standards and prior history. All of these factors are taken into consideration when tailoring the estimated useful life to the particular asset. For example, the carpeting

in a hallway or elevator (a heavy traffic area) will not have the same life as the identical carpeting in a seldom-used meeting room or office.

**Adjustment to Useful Life**

Once the useful life is determined, it may be adjusted, up or down, by this separate figure for the current cycle of replacement. This will allow for a current period adjustment without affecting the estimated replacement cycles for future replacements.

**Estimated Remaining Life**

This calculation is completed internally based upon the report's fiscal year date and the date the asset was placed-in-service.

**Replacement Year**

The year that the asset is scheduled to be replaced. The appropriate funds will be available by the first day of the fiscal year for which replacement is anticipated.

**Annual Fixed Reserves**

An optional figure which, if used, will override the normal process of allocating reserves to each asset.

**Fixed Assessment**

An optional figure which, if used, will override all calculations and set the assessment at this amount. This assessment can be set for monthly, quarterly or annually as necessary.

**Salvage Value**

The salvage value of the asset at the time of replacement, if applicable.

**One-Time Replacement**

Notation if the asset is to be replaced on a one-time basis.

**Current Replacement Cost**

The estimated replacement cost effective at the beginning of the fiscal year for which the report is being prepared

**Future Replacement Cost**

The estimated cost to repair or replace the asset at the end of its estimated useful life based upon the current replacement cost and inflation.

**Component Inventory**

The task of selecting and qualifying reserve components. This task can be accomplished through on-site visual, review of client design and organizational documents, a review of established client precedents, and discussion with appropriate client representative(s).

# A Multi-Purpose Tool

Your Whayland Group Report is an important part of your client's budgetary process. Following its recommendations should ensure the client's smooth budgetary transitions from one fiscal year to the next.

In addition, your Whayland Group reserve study serves a variety of useful purposes:

- A reserve analysis study may be required by your accountant during the preparation of the client's annual audit.
- The Whayland Group reserve study is sometimes requested by lending institutions during the process of loan applications.
- Your Whayland Group Report is also a detailed inventory of the client's major assets and serves as a management tool for scheduling, coordinating and planning future repairs and replacements.
- Your Whayland Group Report is a tool that can assist the client in fulfilling its legal and fiduciary obligations for maintaining the facility in a state of good repair.
- Since the Whayland Group reserve analysis study includes measurements and cost estimates of the client's assets, the detail reports may be used as a guide to evaluate the accuracy and price of contractor bids when assets are due to be repaired or replaced.
- Your Whayland Group Report provides a record of the time, cost, and quantities of past reserve replacements. At times the client's management personnel are transitory which may result in the loss of these important records.

## Executive Summary

This reserve study was prepared for the Willow Lake Home Owner's Association, Inc. in the summer of 2015. Willow Lake is a fee simple single family lot residential subdivision established in 2004 and is a self-managed development with an active home owner's association and elected board who acts on behalf of the association. The board representatives furnished The Whayland Group, LLC with site plans, declaration and amendments, by-laws and amendments, and certain invoices documenting past expenses. The study parameters were established in consultation with board representatives, examination of the documents furnished that enumerate those items that are the association's responsibility, and by field observation. The Whayland Group, LLC would like to express our appreciation to Brad Hudson and Robert Lamontagne for their assistance.

The component list was developed from on-site field observations; on-line quantity surveying and on-site surface observation of condition/remaining life. No invasive, chemical, or other tests were performed. The last field observation was on July 20, 2015. Based on our visual observations, the components appear have been properly installed and wearing in accordance with normal expectations.

The in-service date for all components is set at January 1, 2004. The components were assigned useful lives and values in accordance with industry standards and remaining lives calculated based on the in-service date.

In accordance with industry standards, generally the study does NOT include any items with a remaining life of more than 30 years, except as noted in the component list. For Willow Lake, this includes pond dredging, lining, and reconstruction, none of which is likely to be required in the foreseeable future.

The study includes the three financial models as described in Part I. The Current assessment Funding Model is a cash flow model that illustrates the effect of continuing to contribute the same \$5,000 per year that is currently being contributed to reserves. As you can see on page 2-2, even with the starting balance of \$44,166.00 the study projects a deficit of \$124,767 in 2029 and continues to run at a deficit from that point forward. This is unacceptable in both law and practice.

The Component Funding Model is a very conservative model that seeks to reserve funds on a linear basis on each individual line item with the passage of time, which results in larger annual contributions and very high account balances. Only the most conservative and well-financed associations or those required by law use this model.

Threshold Funding Model (TFM) is a cash flow funding model that calculates the minimum funding level required to be adequately funded at all times. This is the model most frequently followed by our clients. The assumptions are an inflation rate of 3% annually, an interest rate earned on reserve account balances of 0.40% annually, a tax rate of 0%, and an annual increase in contribution of 3% annually to match the rate of inflation. The starting balance of \$44,166.00 was set in consultation with board representatives. We encourage Willow Lake to review these assumptions with its tax preparer or accountant. **It is important to note that the model does not assume any delinquency. Contributions must be made on time in full.**

The TFM indicates an annual contribution starting in 2016 of \$12,614.00. When divided among the 40 unit owners, it represents an annual contribution of \$315.36 per homeowner per year or \$26.28 per homeowner per month. The contribution is programmed to increase 3% each year. Some associations

prefer to not have an annual increase, in which case we suggest averaging the first five years' projections and using that figure as the annual contribution for five years. In this case, the five-year average is \$13,394.00, which is \$334.86 per homeowner per year or \$27.91 per homeowner per month. It is important to note that the TFM is a minimum funding calculation, which does not include a contingency fund; however, we have set the minimum fund balance allowed at \$5,000.00. One or both of these features can be added or changed in the model to whatever level Willow Lake desires.

The Willow Lake board's decision to seek a professional reserve study is forward-thinking service in the best interests of its members. Implementation of the findings will help maintain the value of each property, especially when compared to others that do not have a plan for reserve administration, and will improve the environment for the occupants as they can continue to enjoy the full benefit of living in Willow Lake. Due to the relatively low activity, Whayland recommends a reserve study update be performed every 5 years. The cost of an update is usually about 1/3 the cost of a full reserve study. Whayland stands ready to assist Willow Lake with further consultation on any aspect of the study or its implementation. Please feel free to contact me directly at 302-841-9320.

Respectfully submitted July 30, 2015

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Robert C Wheatley, Principal  
The Whayland Group, LLC

**Willow Lake Homeowner's Association, Inc.**  
 Georgetown, DE  
**TWG Current Assessment Funding Model Summary**

Report Date	August 03, 2015
Account Number	20157
Budget Year Beginning	January 01, 2016
Budget Year Ending	December 31, 2016
Total Units	40

<i>Report Parameters</i>	
Inflation	3.00%
Annual Assessment Increase	0.00%
Interest Rate on Reserve Deposit	0.40%
2016 Beginning Balance	\$44,166.00

<i>Current Assessment Funding Model Summary of Calculations</i>	
Required Annually Contribution	\$5,000.00
<i>\$125.00 per unit annually</i>	
Average Net Annually Interest Earned	<u>\$196.66</u>
Total Annually Allocation to Reserves	\$5,196.66
<i>\$129.92 per unit annually</i>	

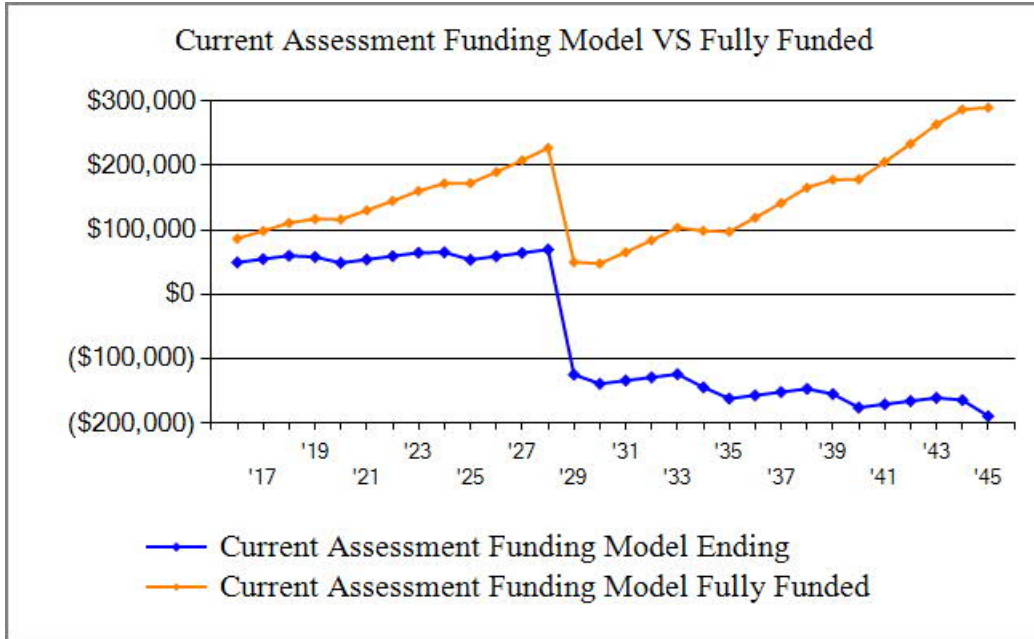


**Willow Lake Homeowner's Association, Inc.**  
**TWG Current Assessment Funding Model Projection**

Beginning Balance: \$44,166

Year	Current Cost	Annual Contribution	Annual Interest	Annual Expenditures	Projected Ending Reserves	Fully Funded Reserves	Percent Funded
2016	167,000	5,000	197		49,363	86,332	57%
2017	172,010	5,000	217		54,580	98,247	55%
2018	177,170	5,000	238		59,818	110,798	53%
2019	182,485	5,000	230	7,212	57,837	116,802	49%
2020	187,960	5,000	194	14,350	48,681	116,144	41%
2021	193,599	5,000	215		53,895	130,123	41%
2022	199,407	5,000	236		59,131	144,836	40%
2023	205,389	5,000	257		64,387	160,314	40%
2024	211,551	5,000	259	4,624	65,023	171,967	37%
2025	217,897	5,000	214	16,636	53,600	172,302	31%
2026	224,434	5,000	234		58,835	189,637	31%
2027	231,167	5,000	255		64,090	207,857	30%
2028	238,102	5,000	276		69,367	226,999	30%
2029	245,245	5,000		199,133	-124,767	49,842	-250%
2030	252,602	5,000		19,286	-139,052	47,673	-291%
2031	260,181	5,000			-134,052	65,193	-205%
2032	267,986	5,000			-129,052	83,722	-154%
2033	276,026	5,000			-124,052	103,303	-120%
2034	284,306	5,000		25,536	-144,589	98,447	-146%
2035	292,836	5,000		22,357	-161,946	97,153	-166%
2036	301,621	5,000			-156,946	118,720	-132%
2037	310,669	5,000			-151,946	141,494	-107%
2038	319,989	5,000			-146,946	165,527	-88%
2039	329,589	5,000		13,026	-154,972	177,850	-87%
2040	339,477	5,000		25,918	-175,890	178,261	-98%
2041	349,661	5,000			-170,890	205,232	-83%
2042	360,151	5,000			-165,890	233,661	-70%
2043	370,955	5,000			-160,890	263,611	-61%
2044	382,084	5,000		8,351	-164,241	286,797	-57%
2045	393,546	5,000		30,046	-189,287	289,693	-65%

**Willow Lake Homeowner's Association, Inc.**  
**TWG Current Funding Model & Fully Funded Comparison Chart**



**The Current Assessment Funding Model** is based on the current annual assessment, parameters, and reserve fund balance. Because it is calculated using the current annual assessment, it will give the accurate projection of how well the association is funded for the next 30 years of planned reserve expenditures.

**Willow Lake Homeowner's Association, Inc.**  
 Georgetown, DE  
**TWG Threshold Funding Model Summary**

Report Date	August 03, 2015
Account Number	20157
Budget Year Beginning	January 01, 2016
Budget Year Ending	December 31, 2016
Total Units	40

<i>Report Parameters</i>	
Inflation	3.00%
Annual Assessment Increase	3.00%
Interest Rate on Reserve Deposit	0.40%
2016 Beginning Balance	\$44,166.00

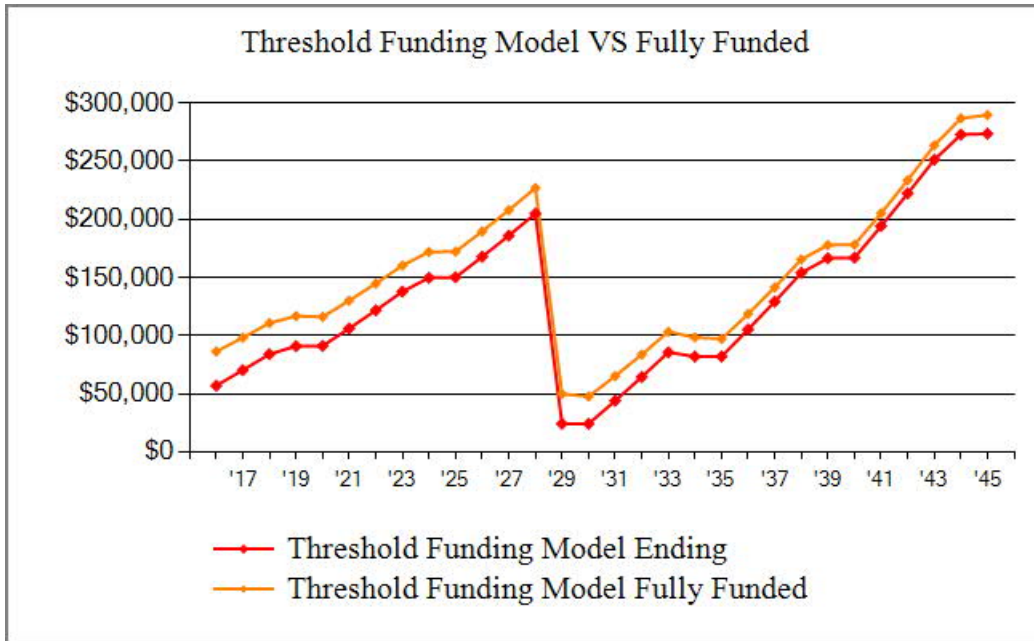
<i>Threshold Funding Model Summary of Calculations</i>	
Required Annually Contribution	\$12,614.39
<i>\$315.36 per unit annually</i>	
Average Net Annually Interest Earned	<u>\$227.12</u>
Total Annually Allocation to Reserves	\$12,841.51
<i>\$321.04 per unit annually</i>	

**Willow Lake Homeowner's Association, Inc.**  
**TWG Threshold Funding Model Projection**

Beginning Balance: \$44,166

Year	Current Cost	Annual Contribution	Annual Interest	Annual Expenditures	Projected Ending Reserves	Fully Funded Reserves	Percent Funded
2016	167,000	12,614	227		57,008	86,332	66%
2017	172,010	12,993	280		70,280	98,247	71%
2018	177,170	13,383	335		83,998	110,798	75%
2019	182,485	13,784	362	7,212	90,932	116,802	77%
2020	187,960	14,198	363	14,350	91,142	116,144	78%
2021	193,599	14,624	423		106,189	130,123	81%
2022	199,407	15,062	485		121,736	144,836	84%
2023	205,389	15,514	549		137,799	160,314	85%
2024	211,551	15,980	597	4,624	149,752	171,967	87%
2025	217,897	16,459	598	16,636	150,173	172,302	87%
2026	224,434	16,953	669		167,794	189,637	88%
2027	231,167	17,461	741		185,997	207,857	89%
2028	238,102	17,985	816		204,798	226,999	90%
2029	245,245	18,525	97	199,133	24,286	49,842	48%
2030	252,602	19,080	96	19,286	24,177	47,673	50%
2031	260,181	19,653	175		44,005	65,193	67%
2032	267,986	20,242	257		64,505	83,722	77%
2033	276,026	20,850	341		85,696	103,303	82%
2034	284,306	21,475	327	25,536	81,961	98,447	83%
2035	292,836	22,119	327	22,357	82,050	97,153	84%
2036	301,621	22,783	419		105,252	118,720	88%
2037	310,669	23,466	515		129,234	141,494	91%
2038	319,989	24,170	614		154,018	165,527	93%
2039	329,589	24,896	664	13,026	166,551	177,850	93%
2040	339,477	25,642	665	25,918	166,941	178,261	93%
2041	349,661	26,412	773		194,126	205,232	94%
2042	360,151	27,204	885		222,215	233,661	95%
2043	370,955	28,020	1,001		251,237	263,611	95%
2044	382,084	28,861	1,087	8,351	272,833	286,797	95%
2045	393,546	29,727	1,090	30,046	273,604	289,693	94%

**Willow Lake Homeowner's Association, Inc.**  
**TWG Threshold Funding Model & Fully Funded Comparison Chart**



The **Threshold Funding Model** calculates the minimum reserve assessments, with the restriction that the reserve balance is not allowed to go below \$0 or other predetermined threshold, during the period of time examined. All funds for planned reserve expenditures will be available on the first day of each fiscal year. The **Threshold Funding Model** allows the client to choose the level of conservative funding they desire by choosing the threshold dollar amount.

**Willow Lake Homeowner's Association, Inc.**  
 Georgetown, DE  
**TWG Component Funding Model Summary**

Report Date	August 03, 2015
Account Number	20157
Budget Year Beginning	January 01, 2016
Budget Year Ending	December 31, 2016
Total Units	40

<i>Report Parameters</i>	
Inflation	3.00%
Interest Rate on Reserve Deposit	0.40%
2016 Beginning Balance	\$44,166.00

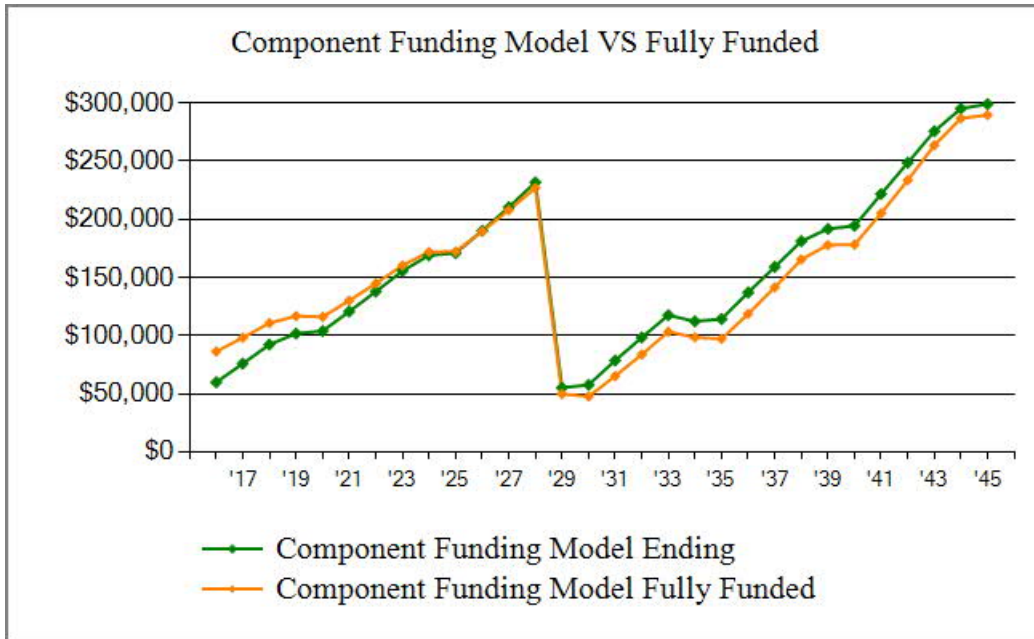
<i>Component Funding Model Summary of Calculations</i>	
Required Annually Contribution	\$15,485.62
<i>\$387.14 per unit annually</i>	
Average Net Annually Interest Earned	<u>\$238.61</u>
Total Annually Allocation to Reserves	\$15,724.22
<i>\$393.11 per unit annually</i>	

**Willow Lake Homeowner's Association, Inc.**  
**TWG Component Funding Model Projection**

Beginning Balance: \$44,166

Year	Current Cost	Annual Contribution	Annual Interest	Annual Expenditures	Projected Ending Reserves	Fully Funded Reserves	Percent Funded
2016	167,000	15,486	239		59,890	86,332	69%
2017	172,010	15,732	302		75,924	98,247	77%
2018	177,170	16,030	368		92,322	110,798	83%
2019	182,485	16,228	405	7,212	101,744	116,802	87%
2020	187,960	16,131	414	14,350	103,939	116,144	89%
2021	193,599	16,326	481		120,745	130,123	92%
2022	199,407	16,554	549		137,849	144,836	95%
2023	205,389	17,029	620		155,497	160,314	96%
2024	211,551	17,579	674	4,624	169,126	171,967	98%
2025	217,897	17,767	681	16,636	170,938	172,302	99%
2026	224,434	18,468	758		190,164	189,637	100%
2027	231,167	19,425	838		210,427	207,857	101%
2028	238,102	20,464	924		231,815	226,999	102%
2029	245,245	22,291	220	199,133	55,192	49,842	110%
2030	252,602	21,560	230	19,286	57,696	47,673	121%
2031	260,181	20,595	313		78,604	65,193	120%
2032	267,986	19,383	392		98,379	83,722	117%
2033	276,026	18,744	468		117,592	103,303	113%
2034	284,306	19,727	447	25,536	112,229	98,447	113%
2035	292,836	23,994	455	22,357	114,321	97,153	117%
2036	301,621	22,214	546		137,081	118,720	115%
2037	310,669	21,375	634		159,089	141,494	112%
2038	319,989	21,409	722		181,221	165,527	109%
2039	329,589	22,807	764	13,026	191,766	177,850	107%
2040	339,477	27,809	775	25,918	194,432	178,261	109%
2041	349,661	26,400	883		221,715	205,232	108%
2042	360,151	25,974	991		248,680	233,661	106%
2043	370,955	25,948	1,099		275,726	263,611	104%
2044	382,084	26,706	1,176	8,351	295,258	286,797	102%
2045	393,546	32,644	1,191	30,046	299,047	289,693	103%

**Willow Lake Homeowner's Association, Inc.**  
**TWG Component Funding Model & Fully Funded Comparison Chart**



The **Component Funding Model's** long-term objective is to provide a plan to a fully funded reserve position over the longest period of time practical. This is the most conservative funding model.



**Willow Lake Homeowner's Association, Inc.  
TWG Annual Expenditure Detail**

Description	Expenditures
<i>No Replacement in 2016</i>	
<i>No Replacement in 2017</i>	
<i>No Replacement in 2018</i>	
<b>Replacement Year 2019</b>	
Grass Carp	7,212
<b>Total for 2019</b>	<u><b>\$7,212</b></u>
<b>Replacement Year 2020</b>	
Asphalt Paving - Seal Coat	14,350
<b>Total for 2020</b>	<u><b>\$14,350</b></u>
<i>No Replacement in 2021</i>	
<i>No Replacement in 2022</i>	
<i>No Replacement in 2023</i>	
<b>Replacement Year 2024</b>	
Entrance Sign	3,167
Entrance Sign lighting	507
Misc. Signs	950
<b>Total for 2024</b>	<u><b>\$4,624</b></u>
<b>Replacement Year 2025</b>	
Asphalt Paving - Seal Coat	16,636
<b>Total for 2025</b>	<u><b>\$16,636</b></u>
<i>No Replacement in 2026</i>	
<i>No Replacement in 2027</i>	
<i>No Replacement in 2028</i>	
<b>Replacement Year 2029</b>	
Asphalt Paving - Overlay	187,238
Flag Pole	2,203
Grass Carp	9,692
<b>Total for 2029</b>	<u><b>\$199,133</b></u>
<b>Replacement Year 2030</b>	
Asphalt Paving - Seal Coat	19,286
<b>Total for 2030</b>	<u><b>\$19,286</b></u>

**Willow Lake Homeowner's Association, Inc.**  
**TWG Annual Expenditure Detail**

Description	Expenditures
<i>No Replacement in 2031</i>	
<i>No Replacement in 2032</i>	
<i>No Replacement in 2033</i>	
<b>Replacement Year 2034</b>	
Storm Water Management Repairs	25,536
<b>Total for 2034</b>	<u><b>\$25,536</b></u>
<b>Replacement Year 2035</b>	
Asphalt Paving - Seal Coat	22,357
<b>Total for 2035</b>	<u><b>\$22,357</b></u>
<i>No Replacement in 2036</i>	
<i>No Replacement in 2037</i>	
<i>No Replacement in 2038</i>	
<b>Replacement Year 2039</b>	
Grass Carp	13,026
<b>Total for 2039</b>	<u><b>\$13,026</b></u>
<b>Replacement Year 2040</b>	
Asphalt Paving - Seal Coat	25,918
<b>Total for 2040</b>	<u><b>\$25,918</b></u>
<i>No Replacement in 2041</i>	
<i>No Replacement in 2042</i>	
<i>No Replacement in 2043</i>	
<b>Replacement Year 2044</b>	
Entrance Sign	5,720
Entrance Sign lighting	915
Misc. Signs	1,716
<b>Total for 2044</b>	<u><b>\$8,351</b></u>
<b>Replacement Year 2045</b>	
Asphalt Paving - Seal Coat	30,046
<b>Total for 2045</b>	<u><b>\$30,046</b></u>

**Willow Lake Homeowner's Association, Inc.**  
**TWG Detail Report by Category**

**Asphalt Paving - Overlay - 2029**

Asset ID	1001	85,000 square feet	@ \$1.50
		Asset Cost	\$127,500.00
		Percent Replacement	100%
Streets/Asphalt		Future Cost	\$187,238.05
Placed in Service	January 2004	Assigned Reserves	\$34,806.00
Useful Life	20		
Adjustment	5	Annually Assessment	\$8,440.33
Replacement Year	2029	Interest Contribution	<u>\$172.99</u>
Remaining Life	13	Reserve Allocation	\$8,613.32



1-1/2" overlay over existing pavement.

**Asphalt Paving - Seal Coat - 2020**

Asset ID	1002	85,000 square feet	@ \$0.15
		Asset Cost	\$12,750.00
		Percent Replacement	100%
Streets/Asphalt		Future Cost	\$14,350.24
Placed in Service	January 2015	Assigned Reserves	\$2,550.00
Useful Life	5		
Replacement Year	2020	Annually Assessment	\$2,181.25
Remaining Life	4	Interest Contribution	<u>\$18.92</u>
		Reserve Allocation	\$2,200.17

**Willow Lake Homeowner's Association, Inc.**  
**TWG Detail Report by Category**

*Asphalt Paving - Seal Coat continued...*



Minor patching, pothole filling, crack repair, and seal coating

<b>Streets/Asphalt - Total Current Cost</b>	<b>\$140,250</b>
<b>Assigned Reserves</b>	<b>\$37,356</b>
<b>Fully Funded Reserves</b>	<b>\$63,750</b>

**Willow Lake Homeowner's Association, Inc.**  
**TWG Detail Report by Category**

**Flag Pole - 2029**

		1 each	@ \$1,500.00
Asset ID	1006	Asset Cost	\$1,500.00
		Percent Replacement	100%
Grounds Components		Future Cost	\$2,202.80
Placed in Service	January 2004	Assigned Reserves	<i>none</i>
Useful Life	25		
Replacement Year	2029	Annually Assessment	\$123.47
Remaining Life	13	Interest Contribution	<u>\$0.49</u>
		Reserve Allocation	\$123.97



Remove existing and replace with new.

**Grass Carp - 2019**

		660 each	@ \$10.00
Asset ID	1008	Asset Cost	\$6,600.00
		Percent Replacement	100%
Grounds Components		Future Cost	\$7,212.00
Placed in Service	January 2009	Assigned Reserves	\$4,620.00
Useful Life	10		
Replacement Year	2019	Annually Assessment	\$628.55
Remaining Life	3	Interest Contribution	<u>\$20.99</u>
		Reserve Allocation	\$649.55

Add fish to pond to control grasses.

**Willow Lake Homeowner's Association, Inc.**  
**TWG Detail Report by Category**

<b>Storm Water Management Repairs - 2034</b>			1 lot	@ \$15,000.00
Asset ID	1007		Asset Cost	\$15,000.00
			Percent Replacement	100%
	Grounds Components		Future Cost	\$25,536.50
Placed in Service	January 2004		Assigned Reserves	<i>none</i>
Useful Life	30			
Replacement Year	2034		Annually Assessment	\$1,023.41
Remaining Life	18		Interest Contribution	<u>\$4.09</u>
			Reserve Allocation	\$1,027.51

This is a general fund category established to pay for any needed repairs to outfall structures, pipes, riprap restoration, and the like.

<b>Grounds Components - Total Current Cost</b>	<b>\$23,100</b>
<b>Assigned Reserves</b>	<b>\$4,620</b>
<b>Fully Funded Reserves</b>	<b>\$11,340</b>

**Willow Lake Homeowner's Association, Inc.  
TWG Detail Report by Category**

**Entrance Sign - 2024**

		1 each	@ \$2,500.00
Asset ID	1003	Asset Cost	\$2,500.00
		Percent Replacement	100%
	Signs	Future Cost	\$3,166.92
Placed in Service	January 2004	Assigned Reserves	\$1,500.00
Useful Life	20		
Replacement Year	2024	Annually Assessment	\$148.89
Remaining Life	8	Interest Contribution	<u>\$6.60</u>
		Reserve Allocation	\$155.48



Repaint base, replace lettering and logo placards.

**Entrance Sign lighting - 2024**

		2 each	@ \$200.00
Asset ID	1004	Asset Cost	\$400.00
		Percent Replacement	100%
	Signs	Future Cost	\$506.71
Placed in Service	January 2004	Assigned Reserves	\$240.00
Useful Life	20		
Replacement Year	2024	Annually Assessment	\$23.82
Remaining Life	8	Interest Contribution	<u>\$1.06</u>
		Reserve Allocation	\$24.88

**Willow Lake Homeowner's Association, Inc.  
TWG Detail Report by Category**

*Entrance Sign lighting continued...*



Replace fixtures.

Misc. Signs - 2024		1 lot	@ \$750.00
Asset ID	1005	Asset Cost	\$750.00
		Percent Replacement	100%
	Signs	Future Cost	\$950.08
Placed in Service	January 2004	Assigned Reserves	\$450.00
Useful Life	20		
Replacement Year	2024	Annually Assessment	\$44.67
Remaining Life	8	Interest Contribution	<u>\$1.98</u>
		Reserve Allocation	\$46.64



Replace signs.

<b>Signs - Total Current Cost</b>	<b>\$3,650</b>
<b>Assigned Reserves</b>	<b>\$2,190</b>
<b>Fully Funded Reserves</b>	<b>\$2,190</b>



**Willow Lake Homeowner's Association, Inc.**  
**TWG Detail Report by Category**

**Detail Report Summary**

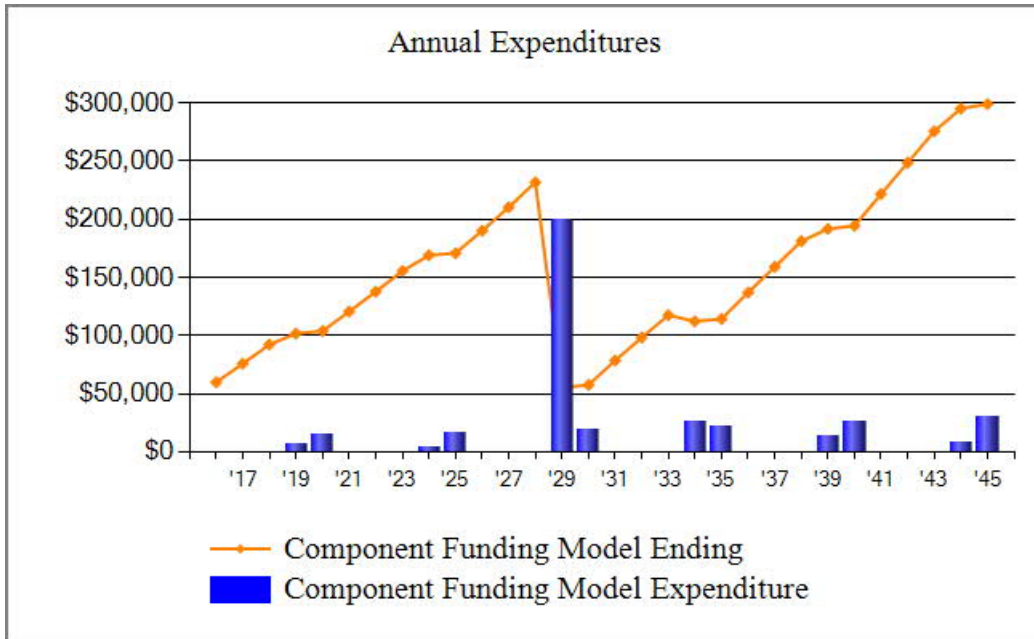
**Grand Total**

Assigned Reserves	\$44,166.00
Annually Contribution	\$12,614.39
Annually Interest	\$227.12
Annually Allocation	\$12,841.51

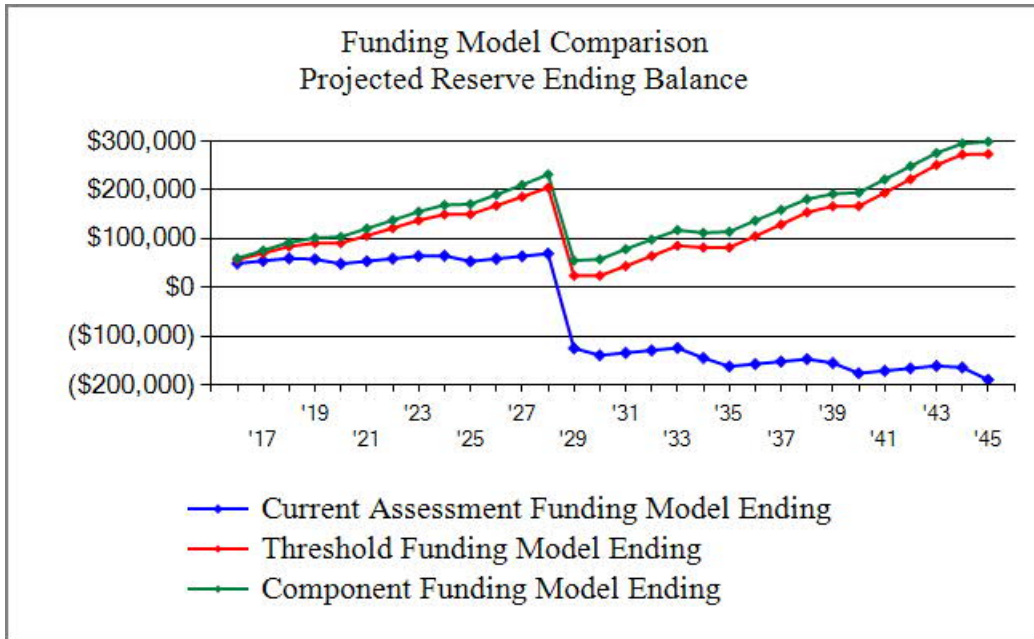
**Willow Lake Homeowner's Association, Inc.**  
**TWG Category Detail Index**

Asset ID	Description	Replacement	Page
1001	Asphalt Paving - Overlay	2029	2-12
1002	Asphalt Paving - Seal Coat	2020	2-12
1003	Entrance Sign	2024	2-16
1004	Entrance Sign lighting	2024	2-16
1006	Flag Pole	2029	2-14
1008	Grass Carp	2019	2-14
1005	Misc. Signs	2024	2-17
1007	Storm Water Management Repairs	2034	2-15
	Total Funded Assets	8	
	Total Unfunded Assets	<u>0</u>	
	Total Assets	8	

**Willow Lake Homeowner's Association, Inc.  
TWG Annual Asset Expenditure Charts**

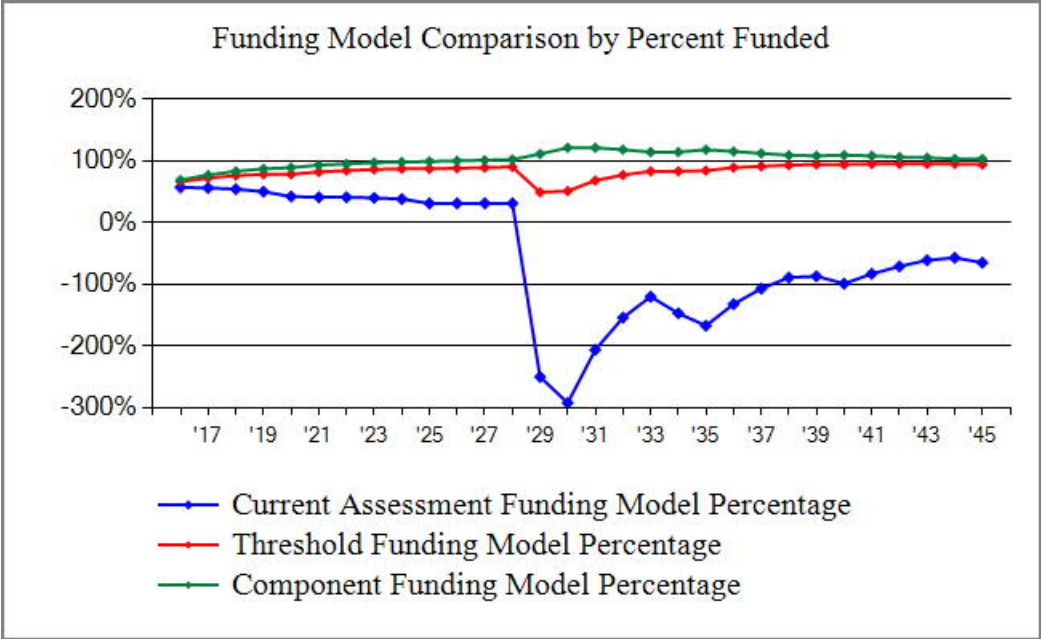


**Willow Lake Homeowner's Association, Inc.**  
**TWG Funding Model Reserve Ending Balance Comparison Chart**



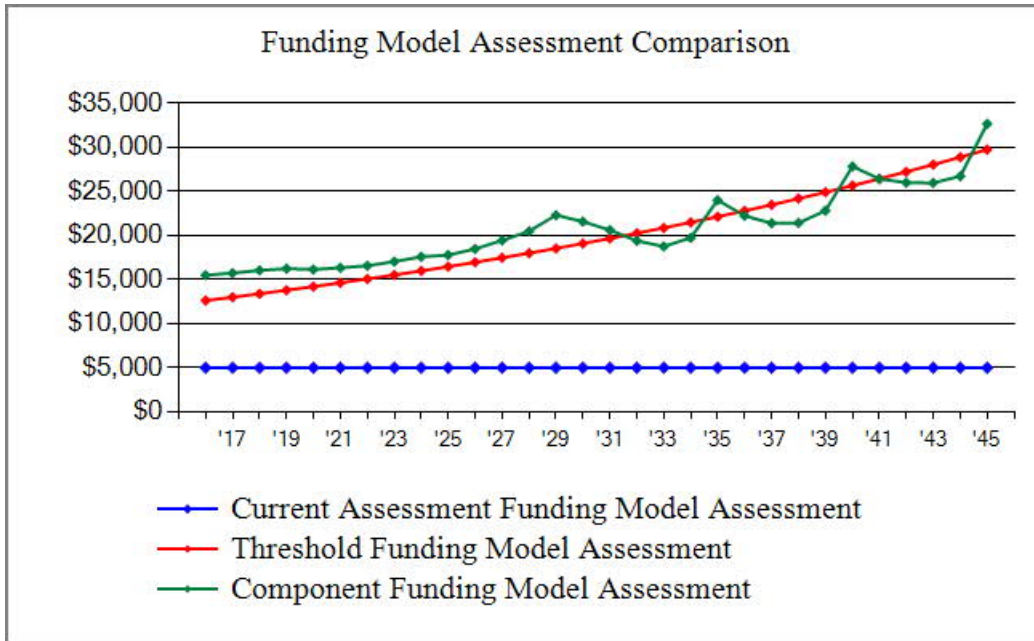
The chart above compares the projected reserve ending balances of the three funding models (Current Assessment Funding Model, Threshold Funding Model and Component Funding Model) over 30 years.

**Willow Lake Homeowner's Association, Inc.  
 TWG Funding Model Comparison By Percent Funded Chart**



The chart above compares the three funding models (Current Assessment Funding Model, Threshold Funding Model and Component Funding Model) by the percentage fully funded over 30 years. This allows your association to view and then choose the funding model that might best fit your community’s needs.

**Willow Lake Homeowner's Association, Inc.**  
**TWG Funding Model Annual Assessment Comparison Chart**



The chart above compares the annual assessment of the three funding models (Current Assessment Funding Model, Threshold Funding Model and Component Funding Model) over 30 years.

**Willow Lake Homeowner's Association, Inc.  
TWG Spread Sheet**

<b>Description</b>	<b>2016</b>	<b>2017</b>	<b>2018</b>	<b>2019</b>	<b>2020</b>	<b>2021</b>	<b>2022</b>	<b>2023</b>	<b>2024</b>	<b>2025</b>
Asphalt Paving - Overlay										
Asphalt Paving - Seal Coat					14,350					16,636
Entrance Sign								3,167		
Entrance Sign lighting								507		
Flag Pole										
Grass Carp				7,212						
Misc. Signs									950	
Storm Water Management Repairs										
<b>Year Total:</b>				<b>7,212</b>	<b>14,350</b>				<b>4,624</b>	<b>16,636</b>

**Willow Lake Homeowner's Association, Inc.  
TWG Spread Sheet**

<b>Description</b>	<b>2026</b>	<b>2027</b>	<b>2028</b>	<b>2029</b>	<b>2030</b>	<b>2031</b>	<b>2032</b>	<b>2033</b>	<b>2034</b>	<b>2035</b>
Asphalt Paving - Overlay				187,238						
Asphalt Paving - Seal Coat					19,286					22,357
Entrance Sign										
Entrance Sign lighting										
Flag Pole				2,203						
Grass Carp				9,692						
Misc. Signs										
Storm Water Management Repairs									25,536	
<b>Year Total:</b>				<b>199,133</b>	<b>19,286</b>				<b>25,536</b>	<b>22,357</b>



**Willow Lake Homeowner's Association, Inc.  
TWG Spread Sheet**

<b>Description</b>	<b>2036</b>	<b>2037</b>	<b>2038</b>	<b>2039</b>	<b>2040</b>	<b>2041</b>	<b>2042</b>	<b>2043</b>	<b>2044</b>	<b>2045</b>
Asphalt Paving - Overlay										
Asphalt Paving - Seal Coat					25,918					30,046
Entrance Sign									5,720	
Entrance Sign lighting									915	
Flag Pole										
Grass Carp				13,026						
Misc. Signs									1,716	
Storm Water Management Repairs										
<b>Year Total:</b>				<b>13,026</b>	<b>25,918</b>				<b>8,351</b>	<b>30,046</b>

**Willow Lake Homeowner's Association, Inc.**  
**TWG Asset Current Cost by Category**

