

HAWAII  
RESERVE STUDY

**GUIDE** FOR  
Board Members  
&  
Property Managers



RESERVE DATA ANALYST

[www.reservedataanalyst.com](http://www.reservedataanalyst.com)

# Introduction

This eBook has been put out together to help bring some clarity to the Board members and Property Managers who have an interest in all things related to Reserve Studies. I have tried to touch on the topics that most often come up without getting too much into the in depth concepts, math or gray areas which can be confusing for those that do not deal with them every day. Please feel free to download and share this eBook, use it as a reference tool or simply as a cheat sheet at the next Board meeting.

This book is easily navigable by utilizing the Table of Contents. You will find **\*\*Reserve Analyst Tips\*\*** throughout this document.

Is there anything additional you would like include or answered? Just let me know and I can add it to this book. This is an evolving project so please help me help you!



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# Hawaii Reserve Study Laws

Numerous laws have been implemented with regards to reserve accounts, reserve funding levels and reserve studies, outlines in the Hawaii Condominium Act 514B-14B (Link: <http://cca.hawaii.gov/pvl/files/2013/08/hrs514B-CPR-0715.pdf> ). These laws were created to protect the membership of common interest communities, such as condominiums, from unnecessary or unexpected special assessments for known and expected common area expenses such as roofing, asphalt, paint, window replacement etc.



## *How often does the Hawaii State Law indicate a reserve study must be conducted?*

While the current law does not state specifically a reserve study must be completed annually it does state that the annual budget must include numerous calculations that can only be determined by having a reserve study completed. Below is the law as is stated under Hawaii 514B-14B. I have highlighted items most relevant to this question:

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[§514B-148] Association fiscal matters; budgets and reserves. (a) The budget required under section 514B-144(a) shall include at least the following:

- (1) The estimated revenues and operating expenses of the association;
- (2) Information as to whether the budget has been prepared on a cash or accrual basis;
- (3) The total replacement reserves of the association as of the date of the budget;
- (4) The estimated replacement reserves the association will require to maintain the property based on a reserve study performed by the association;
- (5) A general explanation of how the estimated replacement reserves are computed;
- (6) The amount the association must collect for the fiscal year to fund the estimated replacement reserves; and
- (7) Information as to whether the amount the association must collect for the fiscal year to fund the estimated replacement reserves was calculated using a per cent funded or cash flow plan. The method or plan shall not circumvent the estimated replacement reserves amount determined by the reserve study pursuant to paragraph (4).

(b) The association shall assess the unit owners to either fund a minimum of fifty per cent of the estimated replacement reserves or fund one hundred per cent of the estimated replacement reserves when using a cash flow plan; provided that a new association need not collect estimated replacement reserves until the fiscal year which begins after the association's first annual meeting. For each fiscal year, the association shall collect the amount assessed to fund the estimated replacement for that fiscal year reserves, as determined by the association's plan.

(c) The association shall compute the estimated replacement reserves by a formula that is based on the estimated life and the estimated capital expenditure or major maintenance required for each part of the property. The estimated replacement reserves shall include:

- (1) Adjustments for revenues which will be received and expenditures which will be made before the beginning of the fiscal year to which the budget relates; and
- (2) Separate, designated reserves for each part of the property for which capital expenditures or major maintenance will exceed \$10,000. Parts of the property for which capital expenditures or major maintenance will not exceed \$10,000 may be aggregated in a single designated reserve.

(d) No association or unit owner, director, officer, managing agent, or employee of an association who makes a good faith effort to calculate the estimated replacement reserves for an association shall be liable if the estimate subsequently proves incorrect.

(e) Except in emergency situations or with the approval of a majority of the unit owners, a board may not exceed its total adopted annual operating budget by more than twenty per cent during the fiscal year to which the budget relates. Before imposing or collecting an assessment under this subsection that has not been approved by a majority of the unit owners, the board shall adopt a resolution containing written findings as to the

necessity of the extraordinary expense involved and why the expense was not or could not have been reasonably foreseen in the budgeting process, and the resolution shall be distributed to the members with the notice of assessment.

(f) The requirements of this section shall override any requirements in an association's declaration, bylaws, or any other association documents relating to preparation of budgets, calculation of reserve requirements, assessment and funding of reserves, and expenditures from reserves with the exception of:

(1) Any requirements in an association's declaration, bylaws, or any other association documents which require the association to collect more than fifty per cent of reserve requirements; or

(2) Any provisions relating to upgrading the common elements, such as additions, improvements, and alterations to the common elements.

(g) Subject to the procedures of section 514B-157 and any rules adopted by the commission, any unit owner whose association board fails to comply with this section may enforce compliance by the board. In any proceeding to enforce compliance, a board that has not prepared an annual operating budget and reserve study shall have the burden of proving it has complied with this section.

(h) As used in this section:

"Capital expenditure" means an expense that results from the purchase or replacement of an asset whose life is greater than one year, or the addition of an asset that extends the life of an existing asset for a period greater than one year.

"Cash flow plan" means a minimum twenty-year projection of an association's future income and expense requirements to fund fully its replacement reserves requirements each year during that twenty-year period, except in an emergency; provided that it does not include a projection of special assessments or loans during that twenty-year period, except in an emergency.

"Emergency situation" means any extraordinary expenses:

(1) Required by an order of a court;

(2) Necessary to repair or maintain any part of the property for which the association is responsible where a threat to personal safety on the property is discovered;

(3) Necessary to repair any part of the property for which the association is responsible that could not have been reasonably foreseen by the board in preparing and distributing the annual operating budget;

(4) Necessary to respond to any legal or administrative proceeding brought against the association that could not have been reasonably foreseen by the board in preparing and distributing the annual operating budget; or

(5) Necessary for the association to obtain adequate insurance for the property which the association must insure. "Major maintenance" means an expenditure for

maintenance or repair that will result in extending the life of an asset for a period greater than one year.

"Replacement reserves" means funds for the upkeep, repair, or replacement of those parts of the property, including but not limited to roofs, walls, decks, paving, and equipment, that the association is obligated to maintain.

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So even though there is no specific law that says some level of reserve study must be completed annually, all of the information that must be disclosed annually in the budget and related to the reserve account can only be appropriately disclosed after a reserve study has been completed. With Level III Updates being so affordable for the typical community there really is no reason why a community should forgo having an update completed. Additionally we do not see how a community would be able to make the legally required annual disclosures to the community without someone completing a reserve study. That being said the law does not state a reserve study cannot be completed in-house. If someone has the expertise, knowledge, tools and understanding of the concepts and formulas to complete one, it can be done. A designated Professional Reserve Analyst have years of experience in these matters.

### *What are the levels of reserve studies?*

- *Level I* - Considered a full reserve study with site inspection, measurement & quantities of components and a full financial analysis with funding plans.
- *Level II* - An update to the Level II which includes a site inspection for condition/useful life assessments but utilizes measurements and quantities of components from a prior Level I or Level II study. A full financial analysis and funding plans are included in this level of study.
- *Level III* - This is an update with no site inspection. Measurements, condition assessments and useful life are taken from the prior Level I or Level II Study. Updates to the projects completed or deferred costs of the components, useful life and financials of the Association are completed.

We have found that every three years most communities will benefit most from an on-site visit as the Reserve Analyst will be able to make appropriate determinations as to whether components are deteriorating in line with the prior study's expectations. If

components are deteriorating faster or slower than what was initially deemed appropriate the component remaining useful life and service life can be adjusted accordingly. It is important to remember that a reserve study is an evolving document that will change as a community ages and components are added or removed. Updates to the reserve study are extremely important for a community to make appropriate reserve allocation budgeting decisions over time and through changing AOA Board and community membership.

### ***What are the items required to be included in a Hawaii Reserve Study?***

- *Component List* – as highlighted above, a separate line item component “for each part of the property for which capital expenditures or major maintenance will exceed \$10,000. Parts of the property for which capital expenditures or major maintenance will not exceed \$10,000 may be aggregated in a single designated reserve”
- *Components* – the following must be included at a minimum as is noted and highlighted above ” Replacement reserves” means funds for the upkeep, repair, or replacement of those parts of the property, including but not limited to roofs, walls, decks, paving, and equipment, that the association is obligated to maintain.”
- *Timescale* – If using a Cashflow Method or Percent Funded method as highlighted above the timeframe is for a minimum twenty-year projection.
- *Funding Methods* – The Hawaii State Statute has two funding methods a community can choose from when calculating a reserve budget that would be in compliance with the Law. The Percent Funded & Cashflow Methods are described in more depth on the next page.

### ***How to calculate a reserve budget which is in compliance with the Hawaii Statute***

Unfortunately there are two very different methods listed in the Hawaii Statute. These result in very different long term projections for a reserve account and have different goals for the reserve account. I will touch on both below:

- *Hawaii Fifty Percent Funding Model* – The goal of this funding method is to keep the reserve account a minimum of 50% Funded for a minimum of 20 years. Essentially this means that the reserve account should have a minimum of 50% of an ideal amount in the reserve account at any point in time in the next 20 years. This ideal amount is determined by calculating a fully funded balance for the reserve account in each of the 20 year period and simply having 50% of this amount in any given year. How to calculate the fully funded balance is touched on in more depth later in this reserve study guidebook.
- *Hawaii Cash Flow Funding Model* – The goal of this funding method is to keep the reserve account cash positive for a minimum of 20 years. Essentially this means that the reserve account balance is kept at a level that the reserve account balance never drops below \$0. This is more commonly referred to as a Baseline Funding method and it carries significant risk over time as it assumes the common area projects will occur exactly when planned (i.e. the roofs will fail at exactly 20 years). While this funding method often carries a lower allocation rate it is much more difficult to implement successfully and carries a much higher risk for reliance on special assessments or unsightly deferred maintenance when some of the components inevitably fail earlier than projected.

While both of the above funding methods comply with the Hawaii Statute neither has a long term goal of elevating the reserve account into a “Good” funding range above 70%. At a Percent funded of 70%-100% reliance on special assessments, deferred maintenance and loans is minimized for predictable project expenses. In our reserve studies we will also include a Recommended Funding Method which will guide a reserve account to a 100% funded level.

**\*\*Reserve Analyst Tip\*\***

Utilize the services of a reserve study company that provides the annual disclosure document with their services and in their fees. This will ensure the numbers match the reserve study findings and compliance with the law is met.

# What is a Reserve Study



A reserve study is a report which outlines the common area components that are an Associations responsibility as well as the expected replacement costs associated with them over a specific period of time; at a minimum of 20 years in Hawaii per the statute.

A reserve study will provide a replacement schedule for these common area components (e.g. roofing, paint, windows) as well as indicate how much an Association will need to set aside now and annually to have enough for these future obligations.

Below is a list of what you will typically find in a reserve study:

- Summary of the funding models and a measure of adequacy of the reserve account (Percent Funded)
- A list of common area components which are the Associations responsibility
- Current and future expected costs related to these component projects
- Useful life and remaining useful life of components
- A timeline of the expected repair & replacement of these components

- Numerous funding plans that meet statutory requirements, client goals and any specific reserve analyst recommendations

# Why is a Reserve Study Important?



A comprehensive reserve study will help guide an Association's Board in their funding and budgeting decisions related to the reserve account and how much is adequate to set allocated to the reserve account to meet the long term obligations of the community. Without a reserve study that provides a clear list of obligations, costs and a timeline of the estimated expenses a Board is left to make guesses as to how much to allocate to a reserve account.

## *Fairness to Community Membership*

A reserve study will provide funding scenarios which fairly distribute the costs amongst all the community members (current and future) so that current members are not underpaying or overpaying their share to the reserve account. This is an extremely important concept and has the additional benefit of reducing the likelihood for reliance on special assessments or loan. If everyone pays their fair share to the reserve account then when the cost occurs there will be a sufficient amount in the reserve account. A reserve study takes into inflation and changes in costs so as time moves on and updates to the reserve study are completed the Board will have a reserve study that can be relied on to continue appropriately and fairly distributing the cost estimates. Remember inflation causes the dollar to lose value over time so future owners will be paying a higher dollar amount but an equal share of the total cost if a funding model is followed

to fairly distribute the project cost. Another way to look at it is that everyone pays for their share of the deterioration of the component, annually.

### ***Fiscal Responsibility***

Boards have a legal and fiscal responsibility to the community membership in common interest communities. According to most community governing documents and legal requirements Boards must strive to maintain and adequately prepare for costs related to common area obligations. Refraining from adequately preparing for or making poor decisions which place in the Association in a poor financial position can open the door to legal liabilities, lawsuits and community membership which loses confidence in the Board. Obtaining the services of a reserve study company shows a community that the Board is serious about the matter and is a first step in following a path of fiscal responsibility.

### ***Community Appeal and Values***

For the long term health of a community, the appeal of the units/homes in the community and to protect property values a long term funding plan which can be utilized over many years and by changing Boards a reserve study is extremely important. A community which relies only on guesswork is also one that will typically rely on special assessments, loans and deferred maintenance issues - all of which negatively impact the appeal and values in a community.

### ***Financing***

As Lenders have become much more knowledgeable about reserve accounts and the process in which the accounts are funded they have become much stricter in their lending guidelines. Fannie Mae, Freddie Mac and FHA all have requirements with regards to how much must of the budget must be budgeted to the reserve account. They have been enforcing these guidelines and often require a copy of a recent (last 12

months) reserve study by an independent professional to verify the guidelines are met. This has come up consistently over the last several year with purchase & sales in communities, refinances of units and for loans to the Association for projects in the community.

# Hiring a Reserve Study Professional



There are many reserve study companies to choose from so to narrow the list down to several that are likely to provide reliable bids and comprehensive studies to the community we recommend following the below steps:

## *Step 1 – Ask your Associates/Board Members*

We have found that the best predictor of future performance is their past performance. A company that has provided accurate bids, shows up on time, treats all parties with professionalism and provides a top quality product is likely to do the same in the future. Other Property Managers or Board Members will be able to provide their experience with different reserve study companies and with different property types. This is a great starting point.

## *Step 2 – Look for Experience*

Companies which have reserve analysts which have years of experience will often be able to provide a more comprehensive reserve study as they will have more experience with various property types and have likely seen a community just like the one you are

managing or live in. This helps to ensure the component list is more accurate and the funding models more appropriate.

### ***Step 3 - Look for a Designation***

There are two designations in the reserve study industry which are widely accepted as helping to elevate the industry standards and professionalism. The Community Associations Institute (CAI) has the Reserve Specialist (RS) designation and the Association of Professional Reserve Analysts (APRA) has the Professional Reserve Analysts (PRA) designation. A designation ensures the reserve analyst is following ethical and industry specific criteria in providing comprehensive and reliable reserve studies to common interest communities. Obtaining these designations require significant amount of work related experience, references, peer review and ongoing educational requirements to keep up on industry trends.

Ensure that the reserve analyst actually completing the study has a designation as some companies hire inexperienced staff to complete the site inspections and write up the report, relying on the more experienced & designated person to review all their work from the office. While this business model is more profitable for the person who owns the reserve study company the final product is usually less accurate than if an experienced reserve analyst completed the work from start to finish. It is just too easy to miss components or specific concerns without being on site. It is an unfortunate and common scenario we find in many reserve studies we see. Remember the component list is the foundation of the rest of the reserve study so if that is not correct the rest of the studies can have significant flaws.

### ***Step 4 - Find Local Professionals***

It has been our experience that in the past there has been many reserve study companies that appear and then disappear never to be seen again. These are usually out

of state reserve study companies which are run by people getting into the field to make ends meet before going back to their usual industry. Often they are contractors, engineers, architects, builders, etc. who are not familiar with many of the concepts of the local statutory requirements or National Reserve Study Standards. We have seen many reports which do not even meet the minimum statutory requirements for reserve studies but which were sold off as comprehensive and done by a professional. Additionally when questions arise or revisions are requested many communities have a difficult time getting answers in a timely manner if at all.

### ***Step 5 – Confirm Turn Times***

Often reserve studies are ordered at the last minute and are needed by specific dates such as a Board Meeting or to comply with the end of year Disclosure requirements. Let the reserve study company know of the date the study will be needed and confirm they will be able to meet the deadline. This ensures you as a Manager or Board member has done your due diligence. Reserve study companies can often get backed up during the summer and fall months so make sure you let them know of the deadline you are needing the report back by.

### ***Step 6 – Confirm the Studies Meet Statutory Requirements***

Even though laws have been passed in Hawaii related to reserve studies we still regularly see reports which do not meet these minimal requirements. A reserve study which does not meet the minimal requirements is likely not going to provide the community with the necessary information to complete the annual disclosure requirements to the community membership. In the end this will be a negative reflection on you as a property manager or Board who they have entrusted to find qualified and professional vendors.

# Document Review



The reserve analyst completing your reserve study will review blueprints, community maps and the community's governing documents to interpret what is listed as an Association's obligation and review the financials with regards to the reserve account to complete a study that is most helpful for the Association.

## *Governing Documents*

Community governing documents will have an explanation of what are considered common areas, limited common areas, limited use areas or limited common elements amongst other labels or definitions of the community area. There will typically be an explanation of what the different common areas are defined as and a maintenance schedule indicating who is required to pay for the maintenance and repair/replacement of them (e.g. Unit Owner or AOA Association).

When reviewing the governing documents of a community such as the Bylaws, Declarations and CC&R's there may be common areas which are left out, not fully explained or are very vague in who's obligation it may be to repair/replace them. When we encounter this scenario we will ask the Board how the Board has historically treated the common area in question and then utilize that prior history as precedent for the

reserve study. Additionally we always suggest the Board utilize the services of an attorney for clarification and interpretation of the Governing Documents in question, if a revision to the reserve study is needed we can do so or incorporate the findings into future reserve studies for the Association. It is not uncommon for changing Boards to also have changing opinions as to what is to be included as an Association responsibility.

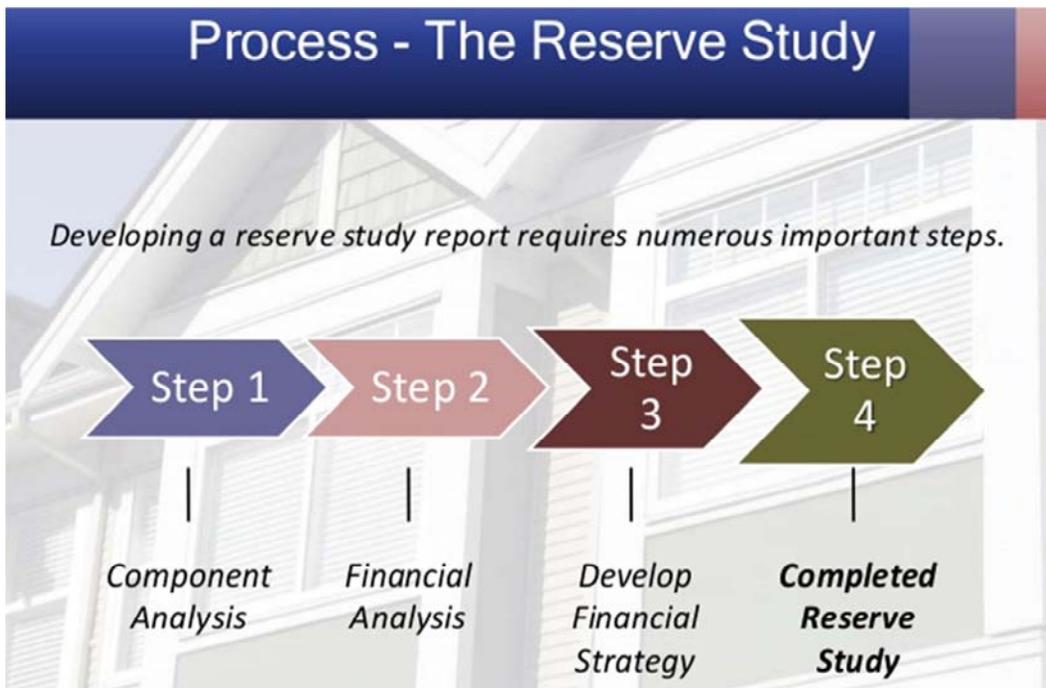
### ***Financials***

The reserve analyst will also need to review financial information regarding the reserve account in order to create a reserve study which is most beneficial to an Association. Typically the Reserve Analyst will at a minimum need to know the reserve account balance, the current and/or expected reserve account allocation rate, and any special assessments or loan which have already been implemented or are planned.

### ***Bids, Invoices, Work Orders***

Additional documents like bids from vendors, invoices for past work performed or work orders are very helpful to the reserve analyst who can incorporate these actual costs into the reserve study. Utilizing actual cost figures will lead to a more accurate and well documented reserve study for the Board to rely on. It's important to remember that without actual costs figures the reserve analyst will be utilizing average costs (from past experience, other bids, cost manuals) which can vary significantly from actual costs to the community for a specific project.

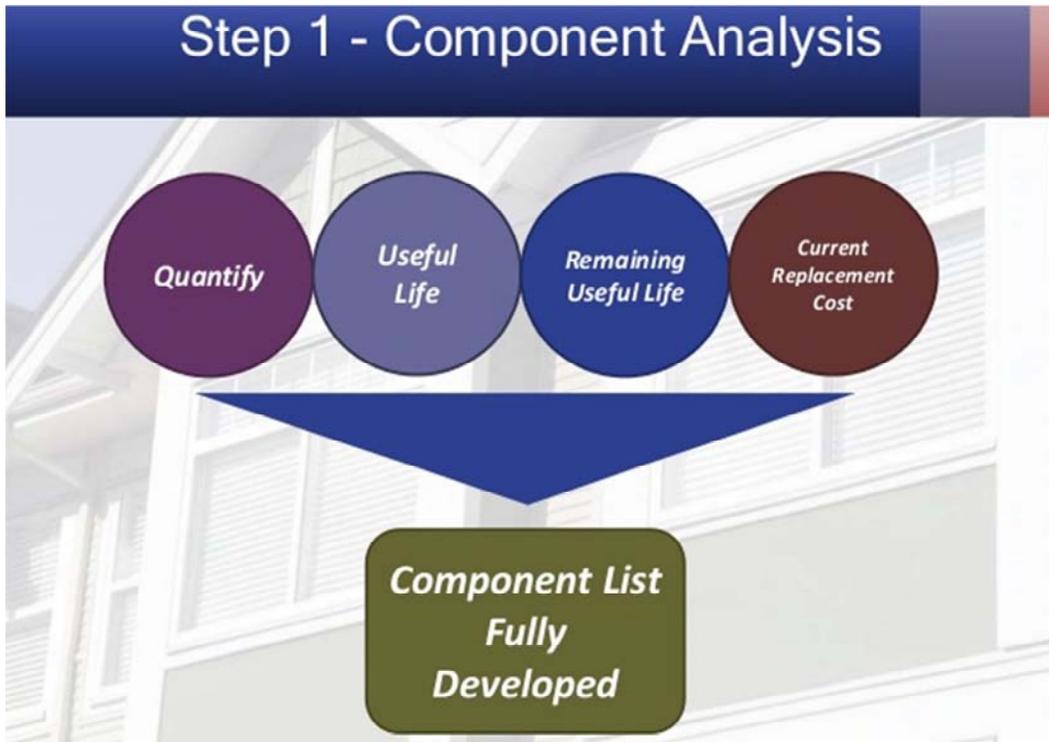
# The Reserve Study Process



A Reserve Study completed by a reserve study professional will be done in numerous steps. Each of these steps is extremely important to end with a comprehensive and catered reserve study report. It is important to remember that a Reserve Analyst will build on their initial site inspection findings & research to come to a complete reserve study with many different aspects to it. At each step the Reserve Analyst will be making assumptions about certain things like inflation, past replacement dates or replacement schedules. This is why is so important to provide as much information to the reserve Analyst as is possible including past component project dates, invoices, bids, past historical replacement cycles (e.g. how often paint has been completed). The more information the Reserve Analyst has the more accurate some of these assumptions will be and the more catered and useful the reserve study will be for your community.

Over the next several pages we will dig a little deeper into each step of the study so a basic understanding of the process can be formed.

# The Component Analysis



The Component Analysis is the first step in the reserve study. This step involves determining what components to include in the study, completing a site inspection, quantifying the components, evaluating the common area components for useful life & remaining useful life and determining the current cost for the common area components.

Because the remainder of the study is based on these findings it is extremely important that the reserve analyst compiles an accurate list of components, accurate cost figures and accurate useful life/remaining useful life of the components. This component list should be reviewed closely by the Manager and/or Board to make sure it's in line with the Association's governing documents and the historical way the components are treated when there are grey areas in the governing documents. A large error in the

component list can have a significant impact on the funding plans developed and for an Association.

We regularly come across reserve studies which are missing significant expenses which may not be apparent to Board Members or Managers. Components that are out of sight can often be excluded from a reserve study without any knowledge to a reader. Some of these out of sight component have an extremely high cost related to them and should be included in the reserve study. Often this includes underground sprinkler piping replacement, sewer/water pipes repairs/replacement, waste & drain line repairs/replacement, asphalt resurfacing, pond liner replacement, lanai refurbishment, etc.

### *What Components to Include*

Determining what components to include in a reserve study is the first step in the Component Analysis. Based on a review of the governing documents, interviews with Board Members, Statutory requirements and applying a four part test outlined in National Reserve Study Standards, the reserve analyst will be able to create a comprehensive reserve study list. The four part test outlined in the CAI's National Reserve Study Standards is listed below:

- The component an obligation of the Association
- The component has a limited useful life expectancy
- The component has a reasonably defined remaining useful life
- The cost of the component is above a minimum expense threshold set by the Association

Typical common area components that will be seen in a reserve study can include:

- Roof Replacement
- Fencing Replacement
- HVAC Equipment Replacement
- Asphalt Overlay / Sealcoat

- Siding Replacement
- Paint
- Pool Re-plastering
- Lighting Replacement

The above four part test covers the vast majority of the components in a community however there are gray areas which will require some additional due diligence by the Reserve Analyst. Gray areas can include components which are not clearly defined or mentioned in the governing documents. In these scenarios we will typically consider how the component(s) have been historically treated by the Association, based on how they have interpreted their governing documents, and then utilized that historical precedent in the reserve study.

### *What Common Area Components to Exclude*

Some common area components may be left out of the study or be included in the component list as an “Unfunded” component and removed from the mathematical models. These components will typically fall into one or more of the categories listed below.

- Below Threshold Costs - Component repair and/or replacement costs that are deemed too small to be considered capital expenses and are typically covered in the operational or maintenance budget of the Association typically are not included in a reserve study. Minimal threshold costs are determined by the Association or by the Reserve Analyst based on the typical minimal threshold costs for similar sized communities.
- Operational Expenses - These occur at least annually and can be effectively budgeted for 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 can include lawn care, pool cleaning janitorial services.

- Very Long or Unpredictable Useful Life Expectancy - Components which, when properly installed & maintained, have a very long useful life and which cannot be accurately predicted, will typically be excluded from a reserve report. These components may require maintenance and upkeep which is typically funded from the operational budget of the association.
- Unit Improvements - Improvements made to the property that fall within the Governing Documents' unit description summary (Unit Owner's responsibility), are not typically considered to be community owned or the responsibility of the association.
- Other Non-Association Owned - Improvements installed on the property but which are owned by other parties such as governmental agencies, utility companies, the US Postal Service, etc., are not included in a reserve study. The replacement and maintenance of these improvements are not typically the responsibility of the Association.

### *Site Inspection*

The site inspection will take from several hours to several days depending on the size of the community and the number of common area components to evaluate and quantify. The Reserve Analyst will be taking lots of pictures, notes and measurements so that an accurate component list and quantities will be included in the reserve study.

The visual inspection of the components is done to quantify, determine an estimated useful life, remaining useful life and complete a basic visual condition assessment. This visual inspection is not a building inspection and there is no deconstructive or invasive testing conducted; issues that are not apparent from a visual inspection will not typically be known. It is important to remember that a reserve study is for cost and budget planning and should not be substituted for an engineering report, building inspection or code compliance inspection which are all well beyond the scope of a reserve study. Anytime there are concerns with a building or grounds component we recommend a qualified professional come out and inspect the component to determine

the scope of the issue and the cost to repair it; this can then be incorporated into a reserve study.

### *Component Cost & Useful Life*

The costs and useful life data of components is the foundation on which the remainder of the reserve study is based as all recommended financial models are directly impacted by the estimated current and future costs for the component repair/replacement projects. Inaccurate data during the component analysis portion of the reserve study will likely lead to inaccurate projections in the future and funding models which may not meet the goals of the community or statutory requirements.

### *Where do the Cost Data and Useful Life Come From?*

Cost data and useful life both have significant impacts on the funding recommendations and long term timeline of projected expenditures in the study. Every effort is made to include a prior replacement schedule or make very educated estimated based on the following:

- *Prior Studies* - The most reliable data we have is a database of thousands of prior reserve studies. Many of these have invoices and bids from vendors which were reviewed and included as actual costs data into these prior studies. Our database is updated regularly to reflect actual costs data from these vendors for all types of building and grounds components. The useful life of components is also listed in these prior studies and are specific to each community as we assign a placed in service data for each component. Example: When a composition shingle roof last about 25 years for the vast majority of buildings we encounter this is a good sign that it will also last approximately 25 years on your building.
- *Cost Manuals* - We also regularly utilize cost manuals such as RS Means and Marshall & Swift both of which are extremely accurate, updated quarterly and specific all the way down to the zip code. These cost manual companies interview thousands of vendors for many thousands of ground and building

components to determine average costs and then provide them in very comprehensive cost manuals. We have found these to be extremely accurate. Architectural, Engineering and to a lesser extent Cost Manuals also supply Useful Life of Components. These are based on interviews with vendors who deal with these materials every day as well as manufactures indicators related to warranties and in house tests for longevity.

- *Client History* - When we complete a reserve study for our Clients we ask for any relevant bids, vendor invoices and known historical expenses so that we can incorporate these into the reserve study. These are generally pretty reliable with the exception of some that did not obtain numerous bids and overpaid or hired a vendor who has provided a bid for work that is less than the recommended standards (e.g. one sealcoat layer versus the recommended two). The reason vendors provide high or low bids are numerous and can include: they do not really want the job (too big or too small), they are too busy, they lack the necessary equipment (e.g. high bid to purchase or lease equipment), not experienced with some aspect of the job, etc. It has been our experience that the most accurate indicator of the Useful Life of a component is the prior history of that component in a specific community. All site characteristics and building designs are different so materials will wear at slightly different rates (e.g. if the roof on a building has been replaced at 20 years twice prior we will likely fund for replacement at 20 years again.) Many variables impact useful life of components including sun exposure, rain, wind, sand/dust, wooded, desert, arid, humid, etc. The more information we have regarding the historical timeline of replacement of components the more accurate and catered the reserve study will be.

### ***How is Remaining Useful Life of Components Determined?***

Remaining Useful life of components is based on the placed in service data (client historical records) as well as the comprehensive onsite visual inspections. Typically an experienced Reserve Analyst will have a good read on the remaining useful life for more typical components such as roofing, siding, fencing, paint, and asphalt as they have seen these thousands of times prior and are familiar with the different condition levels during the life cycle of these more common components. Mechanical equipment can be much

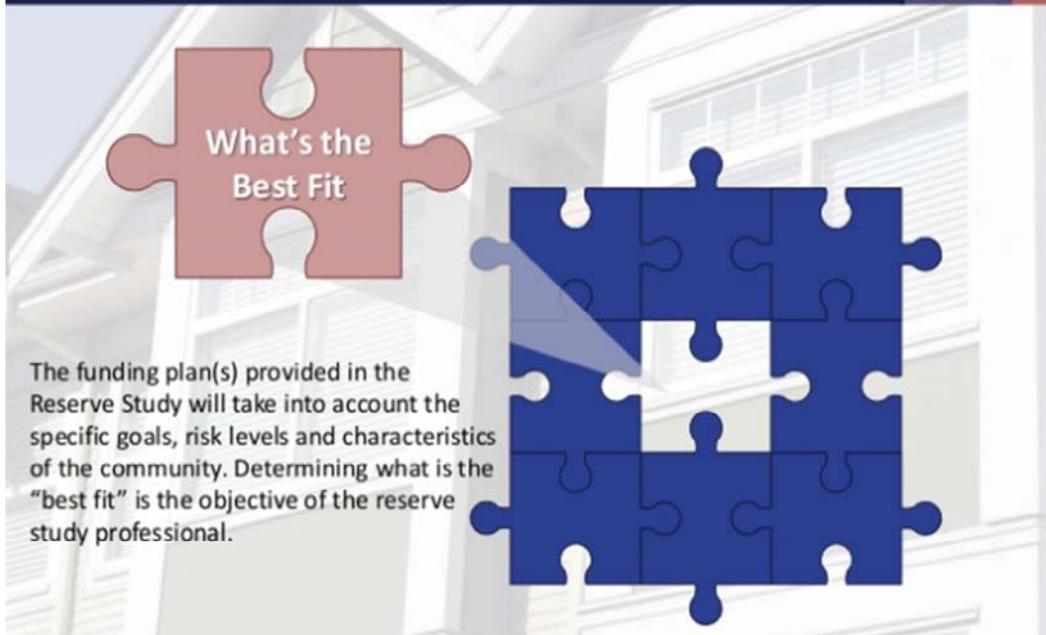
tougher to determine just by looking at it so we will often also rely on serial number data to determine manufacturing dates.

### *Hidden Systems / Components*

Then there are components completing out of view such as plumbing, electrical, drainage systems, etc. These are much more difficult to place a condition assessment on, determine costs and determine a remaining useful life; often the Reserve Analyst must rely only on data provided to them from the Association or Management Company. These types of components are often addressed with a contingency in a reserve study based on the prior history of repair for the component. (e.g. if the community has averaged about \$5,000 every 3 years in plumbing repairs, in recent history, that could be would be a good projection or starting point to budget for the future). Revisions to the costs and remaining useful lives can always be made in updates to the study. If repairs become more costly or the Client has a professional analysis of the systems completed; determining a scope, timeline and costs for large scale replacement of these hidden systems, then the Reserve Analyst can incorporate these finding and recommendations in the reserve study update.

# The Financial Analysis

## Funding Plan Goal - Finding the Best Fit for the Association



The second step in the reserve study is the Financial Analysis which utilizes all the findings and research in the Component Analysis to project out costs and develop funding plans that an Association can follow. Additionally the reserve study will indicate the current adequacy of the level of reserves for an Association versus an ideal reserve account balance based on its future obligations; this is known as Percent Funded and is generally a good indicator of the financial strength of a reserve account. We will dig a little deeper into the financial analysis in the next few pages.

### *Goals of the Reserve Analyst*

In developing funding plans for a community a professional reserve analyst will follow National Reserve Study Standards Principles. These four principles are listed below:

### **1. There are adequate reserves when needed**

The recommended funding plan will take into account that some years will have dramatically higher expenses than others (often referred to as Peak or Threshold Years). The overall financial model should result in a reserve account balance which is large enough to cover expenses in all periods of time. There is little need for a reserve funding model which result in an Associations failure to meet its fiscal responsibility to the membership. Implementing a funding plan developed by a designated Reserve Analyst will likely result in a positive reserve account balance and adequate funding for those common areas covered in the study.

### **2. The budget should remain stable across years of changing membership and boards**

Costs related to common area projects fluctuate wildly from one year to the next, sometimes with minimal expenses for a decade or longer. The Reserve Analyst will develop a strategy that fairly assesses reserve contribution dues while still remaining stable; requiring membership to pay their fair share over time. Often an allocation rate increase that matches the inflation rate is adequate and is considered a “stable” annual increase to the reserve allocation rate. Note that this stable budget concept does not mean there should be no increases to the allocation rate; in fact the exact opposite is true. A *stable* increase of 3% per year follows this concept (typical to offset inflation) whereas wide variances such as 1% one year and 7% the next is not fair to the membership in either year.

### **3. The costs are fairly distributed to the membership**

The cost to replace the common areas should be fairly distributed across years of membership in a community (current and future members). An adequate reserve allocation rate to the reserve account on an annual basis ensures the community members are paying their fair share of the deterioration of the components. The costs may fluctuate wildly over a 30 year period but if the reserve study is updated annually

the Association will be able to assess a fair amount to the membership in any given year and be adequately prepared for the common area replacement expenses when they come up.

#### **4. The financial strategy must allow the Association / Board to be fiscally responsible**

The membership of a community is counting on the Board to make good long term budgeting decisions. A financial strategy which removes reserve funds to pay for a large capital improvement (e.g. construction of a recreation building) is not a fiscally responsible decision and does not follow the concepts in the National Reserve Study Standards. A Reserve Analyst will develop a plan which the Board can rely on and implement; the result is a community which stands on solid financial ground.

# About Percent Funded



Percent funded is a measurement of the financial health of a community with regards to its reserve account balance. Essentially it is the calculation of how much the community has in the reserve account versus how much it ideally should have at one particular point in time. This figure can be helpful for Community Membership, Boards and outside parties such as Lenders / Buyers to grasp the current financial health of the reserve account.

However, percent funded is only part of the entire picture in a reserve study. Additionally there are graphs, charts, projections and a cash flow analysis for all the funding plans provided in a comprehensive study. Just because a community has a high percent funded level today does not mean it will continue that way into the future. Large expenses will often drive down the percent funded level so it's important to review the projections of the expenses and the cash flow analysis in the study to see how a community's reserve account balance is impacted during time periods of large expenses.

Typically one of the goals of the recommended funding plan in a reserve study will be to increase the reserve account balance and the Percent Funded to a high (above 70%) percent funded range within the time frame covered in the report. Hawaii has requirements to include several funding model scenarios to comply with the law.

### *Percent Funded Ranges*

The goal of the reserve study is to guide the Association towards a path of becoming fully funded over the 30 year period covered in this report. The different ranges in levels of funding are explained below.

#### *70-100 % Funded - Good*

At this level, the reserve account is considered to have a good or high level of funding. The risk for reliance on special assessments, loans and deferred maintenance is minimized. While the goal is to reach and remain at the 100% funded mark the actual funding level will likely fluctuate above and below 100% due to changing component expenses in any given period of time covered in the reserve study.

#### *30 – 70 % Funded - Fair*

A fairly funded reserve account is typically one on the right path to a good funded level but one that can also run into trouble if large expenses arise such as unexpected component failures or rapidly rising costs, specifically in years when large expenditures come to fruition. Additionally it's important that the Association is vigilant with their goal to reach a high percent funded level as there is often pressure to reduce dues or utilize money elsewhere when the reserve account balance grows to a level which is perceived to be large. AOA Board's often have difficulties in continuing with the longer term goals in years of economic downturn when much of the community seeks lower dues or a reduced allocation to the reserve account.

#### *0 – 30 % Funded – Poor*

A poor funding level often forces an Association to rely on special assessments and/or loans. With insufficient funds the Association may not be able to meet predictable common area expenditures. At this level of funding many communities choose to ignore condition deficiencies over time and suffer from significant deferred maintenance issues which in turn hurt marketability in the community. It is important to realize that a

reserve account can often stay within a poor funding range for many years or even decades before any apparent negative impact. The reality of the financial position of the reserve account will often become apparent in "peak" expense years when one or several large expense component projects occur (e.g. roofing, asphalt, siding, windows) which will require special assessments to be implemented or loans secured. Communities are often "surprised" by project expenses which may only happen every 20 – 30 years or longer. An experience Reserve Analyst will be able to determine what component project expenses will be coming due and appropriately create funding models to address these costs years in advance of their likely failure.

**\*\*Reserve Analyst Tip\*\***

If your Association has a goal, such as reaching a certain percent funded range within a specific period of time or reaching a percent funded that complies with FHA approval; let the Reserve Analyst know so they can incorporate it as one of their funding models in the reserve study. This could be for lending/financing purposes or just to hit targets set by the Board. The reserve study should be a catered document that takes into account both Client Goals and Statutory Requirements.

# About The Fully Funded Balance

A Fully Funded Balance is a reserve account balance which is equal to the estimated accumulated deterioration of the Association's common area components. As common area components grow older, they deteriorate until they no longer perform their intended function, at which time; the component is fully deteriorated and must be replaced. The fully funded balance is the estimated monetized amount that will match this deterioration to the assets at any specific point in time.

## *Example*

An Association which has a building that needs to be painted in 5 years at a cost of \$5,000 will need to set aside \$1,000 into their reserve account annually to have enough in the reserve account to pay the painter in year 5. If the Association has \$1,000 in the reserve account at the end of year 1 they are on track to pay for this paint job and are considered to be 100% Fully Funded as the paint job has deteriorated by 1/5<sup>th</sup> and the amount in the reserve account is 1/5<sup>th</sup> of the total amount needed. At the end of year two this community would need \$2,000 in the reserve account to remain Fully Funded (ie. 2/5<sup>th</sup> deterioration of the paint and 2/5<sup>th</sup> the total in the reserve account). This would go on each year until year 5 when the building is painted and the process starts over again.

The fully funded balance is simple enough to determine if the community has only one common area component but most communities have many components and a corresponding fully funded balance that ranges from one year to the next as components are repaired/replaced, remaining useful life expectancies are updated over time and the common area component list grows or shrinks over time.

It's important to realize that a fully funded balance is not the total replacement cost of the common area components. A community which has a fully funded balance one year then decides against following recommended increases to offset inflation will very likely fall below a fully funded balance in a very short period of time. This is a common scenario when membership request lower dues and/or the reserve account balance appear to be very large.

# Timeline of Expenses

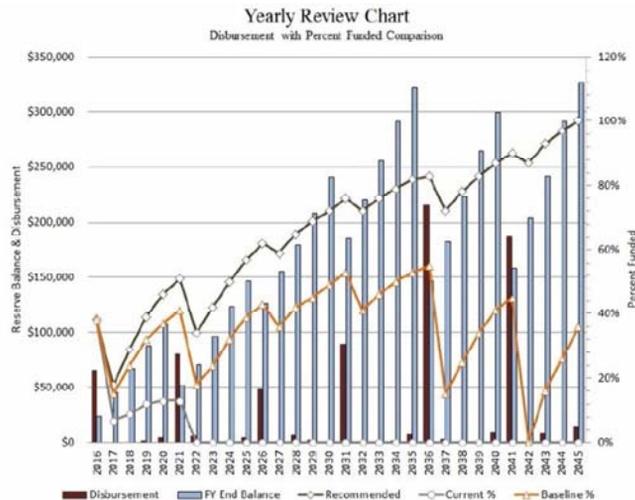
Description	Expenditures
<b>Replacement Year 2020 continued...</b>	
Bathroom- Refurbish	6,556
Elevator- Cab Refurbish	16,391
Entry Access System	3,825
Fencing- Wood- Replace	13,572
Kitchen- Refurbish	6,556
Landscape- 25% Refurbish Contingency	9,400
Mailbox Clusters- Replace	1,661
Retaining Wall-Masonry- 20% Conting.	3,734
<b>Total for 2020</b>	<b>\$63,225</b>
<b>Replacement Year 2021</b>	
Central Vacuum- Replace	1,970
Hot Water Heater/Tank- Replace	2,251
<b>Total for 2021</b>	<b>\$4,221</b>
<b>Replacement Year 2022</b>	
Concrete Surfaces- 3% Repair Contingency	4,039
Paint- Garage Walls/Ceiling	16,727
Paint- Wood Fencing	5,039
Paint/Seal- Ext. Wood Surfaces	7,871
Sump Pump- Garage- Replace	5,796
<b>Total for 2022</b>	<b>\$39,473</b>

The reserve study will include a schedule of expected expenses related to the common area components in the reserve study. This will include the expected year the project will need to be completed as well as the expected costs at that time (inflated costs based on inflation rate). This is one of the most valuable tools in the reserve study should a Board or Property manager decide to utilize it properly. Most of the time "surprises" can be minimized as a review of the expected expenditures will provide a community years of advanced notice. This is especially helpful for large expense projects like roofing or roads which may require a Board to look into funding options ahead of time.

## *Cost Efficiencies*

When the Reserve Analyst creates a timeline of expenses one of the goals is to make sure components are timed appropriately for cost efficiency. An example of this would be to include a siding repair component being timed with the paint cycles of the building.

# About Funding Plans



The reserve analyst will likely be developing numerous funding models for a common interest community as there are several important considerations to take into account.

These include:

- Statutory requirements
- Association goals
- Reserve Analyst recommendations

Additionally there may be "what if" scenarios or funding models that meets certain third party requirements, such as for a Lender's guideline. It's important to notify the Reserve Analyst of special request so these funding models can be taken into consideration during the process of developing the reserve study.

Below are some examples of different funding scenarios on a comparison graph.

## *Funding Strategies*

There are four basic funding strategies most commonly utilized and accepted in the reserve study industry. It is recommended that associations consult professionals to

determine the best strategy or combination of plans that best suit the Association's need. Additionally, associations should consult with their accountant to determine the tax implications of selecting a particular plan. The four funding strategies and descriptions of each are detailed below.

### ***Full Funding Strategy***

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 an association 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 (ignoring interest and inflation for this example). At the end of three years, one would expect that 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 an association'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. The formula is based on current replacement cost, and is a measure in time, independent of future inflationary or investment factors. When an association's total accumulated reserves for all components meet this criteria, its reserves are "fully-funded."

### ***Baseline Funding Strategy***

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. An association using this funding method must understand that this is a higher funding plan as even a minor reduction in a component's remaining useful life can result in a deficit in the reserve cash balance specifically in years when cost are substantial.

### ***Threshold Funding Strategy***

This method is based on the baseline funding concept. The minimum reserve cash balance for threshold funding, however, is set at any predetermined dollar or Percent Funded figure by the Client or Reserve Analyst.

### ***Statutory Funding Strategy***

This method is based on local statutes. Per the Hawaii Condominium Act there are several funding models and calculations that must be included in the reserve study for a community to comply with the appropriate funding requirements. A review of these can be done by going to the Table of Contents of this eBook and going to the page for Hawaii Reserve Study Laws.

# Updating the Reserve Study

It's very important for an Association to update its reserve study annually. The Hawaii Condominium Act requires annual disclosures to the community with a reliance on annual updates to the reserve study mathematical model and calculations.

Many communities will try and update their reserve study in-house by a Board member who may have some experience in the construction industry or in finance. While this may seem like a good idea to save some money this more often than not ends up changing the financial model from what was originally created by a designated Reserve Analyst and to a degree that causes the study to lose credibility. This often includes removing components, adjusting costs to unrealistic levels or utilizing inaccurate mathematical formulas to come to reserve study calculation such as Percent Funded.

Whoever completes the reserve study update will need to be familiar with construction costs, components life expectancies and be familiar with reserve study concepts. The research needed could involve calling vendors, purchasing cost manuals, taking classes and researching reserve study concepts so that the reserve study update will remain credible. The annual disclosure requirements will also need to be completed utilizing the updated figures from the reserve study so it is important that the person updating the reserve study can extrapolate this information from the study accurately and in line with industry / statutory accepted formulas.

## **\*\*Reserve Analyst Tip\*\***

Updates to reserve studies are typically inexpensive for years when a site visit is not required. The amount saved by doing it in house is typically only a few hundred dollars but risk can be significant if the data being updated is not accurate. Our tip, establish a relationship with a reserve study company you trust and have them update annually. This is cost efficient and removes significant risk and liability from the Board.

# Definitions

## *Full Funded Balance (FFB)*

Total Accrued Depreciation. An indicator against which the FY Start Balance can be compared. The balance that is in direct proportion to the fraction of life “used up” of the cost.

## *Funding Goals*

A) *Baseline Funding* - Maintaining a Net Reserve Balance above zero for length of the study.

B) *Full Funding* - Maintaining a Reserve Balance at or near Percent Funded of 100%.

C) *Statutory Funding* - Maintaining a specified Reserve Balance/Percent Funded per statutes.

D) *Threshold Funding* - Establishing and maintaining a set predetermined Reserve Balance or Percent Funded.

## *Funding Method (or Funding Plan)*

An association’s plan to provide income to the reserve fund to offset expected disbursements from that fund. The following represents two (2) basic methodologies used to fund reserves:

A. *Cash Flow Method* - A method of developing a reserve funding plan where allocations to the reserve fund are designed to offset the variable annual expenditures from the reserve fund. Different reserve funding plans are tested against the anticipated schedule of reserve expenses until the desired funding goal is achieved.

B. *Component Method* - The component method develops a reserve-funding plan where the total contribution is based on the sum of contributions for individual components.

The component method is the more conservative (typically higher reserve account balance) of the two funding options, and assures that the association will achieve and maintain an ideal level of reserves over time. This method also allows for computations on individual components in the analysis. However this method has also limitations with respects to variations in actual useful life of components and is much more time intensive to accurately follow this funding strategy.

### ***Percent Funded***

A comparison of the Fully Funded Balance (ideal balance) to the Fiscal Year Actual Start Balance expressed as a percentage, and used to provide a 'general indication' of reserve strength.

### ***Useful Life (UL)***

Total Useful Life or Depreciable Life. The estimated time, in years, that a reserve item can be expected to serve its intended function if properly constructed and maintained in its present application or installation.