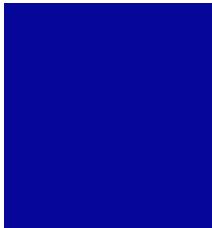


APRA

Association of Professional Reserve Analysts



Roundtable
Discussions



Professional
Learning

Networking



2016
APRA
Symposium



April 22-23, 2016



Hilton
San
Jose

Expert
Presenters



The Association of Professional Reserve Analysts is pleased to host the 2016 APRA Symposium in its continued commitment to serving the reserve study professional industry.

The 2016 APRA Symposium will provide cutting edge reserve study education from industry experts, insightful round table discussions and networking with peers from across the United States and Canada. Plan to join us in lovely San Jose!



Registration Deadline:
April 8, 2016



Special Non-Member Promotion*
Non-members who join APRA & attend the Symposium will receive a \$50 credit applied to their Symposium registration fee.

2016 Symposium Schedule

Friday, April 22, 2016

12:30 PM	Registration & Networking
1:00 PM	Welcome, Introductions & Opening Remarks
1:15 PM	Hidden Damage & Building Safety , <i>Tyler Berding, Attorney, Berding Weil, will discuss what hidden damage is and how it can be dealt with in the typical reserve study, including how the reserve professional can avoid liability.</i>
2:45 PM	Break
3:00 PM	Fire Protection/Life Safety Components of a Reserve Study , <i>Michael Stewart, PRA PE, Regenesis, Inc. will outline the major components of fire protection and life safety, specifically the components reserve study providers should look for.</i>
4:45 PM	Concluding Remarks
5:30 PM	No Host Happy Hour – Affinity Bar (hotel lobby)
7:00 PM	No Host Dinner – SP2 San Jose Communal Bar + Restaurant

Saturday, April 23, 2016

8:00 AM	Breakfast & Networking
9:00 AM	Art & Science of Tree Care , <i>Dale Carlon, Dale Carlon Consulting, will discuss the difficulties trees face in the urban environment, how modern technology exists to help property managers maintain the forest, and how reserve studies can benefit from these programs as well.</i>
10:30 AM	Break
10:45 AM	Stuck on Stucco , <i>Jeff Bowlsby, CCS, CCCA, Simpson Gumpertz & Heger, Inc., will focus on stucco systems, how to maintain them, and red flags to look for in failing systems.</i>
12:15 PM	Lunch
1:15 PM	Is Percent Funded DOA? , <i>Michael McDermott PRA, Browning Reserve Group, will explore percent funded (PF) theory and its application.</i>
2:15 PM	5 Topics in 50 Minutes, <ul style="list-style-type: none">• Tech Talk, TBA• Standardizing the Reserve Study Report, <i>Mike McDermott PRA, Browning Reserve Group</i>• Cost & Useful Life Resources, TBA• Getting Timely & Correct Information from Boards & Managers, <i>Charlie Sheppard PRA, Community Advisors</i>• Ideal Funding Plan, <i>Al Ruth PRA, CS Consulting Service</i>
3:30 PM	Break
3:45 PM	APRA Annual Meeting (Members Only)
5:00 PM	Adjournment

Hidden Damage and Building Safety— Limiting Liability of Reserve Professionals

By Tyler Berding

Berding & Weil LLP

2175 N. California Boulevard, Suite 500

Walnut Creek, CA 94596

925.838-2090

tberding@berding-weil.com

Tyler Berding has represented the commercial and residential real estate industry since 1974. Mr. Berding has litigated numerous building product and construction failures. The firm has resolved over 700 complex construction-defect claims in California, Florida, Arizona and Hawaii. His special expertise has been in water intrusion, soil issues, failed building systems, and building-product failures.

Mr. Berding founded the law firm of Berding & Weil LLP, with his partner Steven Weil in 1988. He has participated in the drafting of legislation affecting both commercial and residential real estate disputes. He has frequently testified before legislative committees and served as a member of the California Department of Real Estate's Task Force on Common Interest Developments.

Mr. Berding is a member of the American Bar Association Forum on the Construction Industry, the State Bar of California and the Common Interest Development Subsection of the State Bar's Real Property Section, the Foundation for Community Association Research (FCAR), and Consumer Attorneys of California. He is a member of, and frequently speaks before, such community association organizations as the Educational Community of Homeowners (ECHO), Community Associations Institute (CAI) and the California Association of Community Managers (CACM.) He served as a member of both the Board of Directors of ECHO and its Legal Resource Panel. He was chair of ECHO's Legislative Committee for nine years and served as President for five years.

Education and Recognition

- B.A. in Political Science, 1966, California State University, East Bay
- M.A. in Government Administration, 1969, Claremont Graduate School
- Ph.D. in Government, 1971, Claremont Graduate School
- J.D., 1974, University of California, Davis
- Rated "AV Preeminent" by Martindale Hubble for 27 years.

Hidden Damage and Building Safety— Limiting Liability of Reserve Professionals

1. What is "Hidden Damage" and how is it dealt with in the typical Reserve Study?
2. What does "Hidden Damage" look like?
3. The Berkeley Balcony and Folsom Staircase Collapses
4. How the Reserve Professional can avoid liability
5. Proposed statute to deal with hidden damage
6. Conclusions

Fire Protection/Life Safety Components of a Reserve Study

By Michael Stewart, PE PRA
Regenesis, Inc.
PO Box 19605
Portland, OR 97280
503.977.7974
michael@regenesis.net

Michael Stewart, PE, PRA is a fire protection engineer and professional reserve analyst. He designs fire suppression systems, provides fire protection code consulting, assesses hazards, reviews construction documents for clients and has a broad knowledge of building components and mechanical principals.

In the area of fire protection, he has prepared fire sprinkler system designs for new and existing facilities in wide range of commercial, industrial, and high-challenge properties including high-rises and stadiums, has conducted hydrant/water supply flow tests in conjunction with fire sprinkler hydraulic calculations for new and existing facilities, and has worked with local AHJ's, contractors, architects and other mechanical trades to identify and resolve fire protection issues. In addition, he has prepared technical reports for AHJ on hazardous and flammable liquid storage applications and coordinated mechanical, electrical, and plumbing (MEP) trades to execute building information modeling (BIM) using AutoCAD and Navisworks to develop cohesive and integrated designs prior to installation. He has also designed and analyzed the egress and smoke control systems utilizing NIST developed Fluid Dynamics Simulation (FDS) and Advances Movement Simulation (Pathfinder) software and prepared reports, appeals, AM&Ms and engineering judgments for approval by jurisdictions.

Fire Protection/Life Safety Components of a Reserve Study

1. What is fire protection?
 - The development of passive and active systems to protect people and/or property from fire and smoke.
2. What are the major components of fire protection and life safety?

In order of importance:

 - a. Passive components such as construction type, accessibility, and egress
 - b. Detection & notification (alarm) such as smoke detectors, heat detector, horns and strobes.
 - c. Suppression/active system such as a fire sprinkler system and smoke control
 - d. Institutional controls such as administrative, legal and personnel controls put in place.
3. Why are the components of a fire protection system important to a reserve analyst and the association?
 - Failure to properly maintain, repair and replace components of these systems can result in loss of life or catastrophic loss of property.
 - Fire life safety components can be very costly.
 - Deferring repair/replacement due to insufficient funds is not an option unlike some other components.
4. What are the most common types of fire life safety/fire protection components observed in an inspection?
 - Wet systems, dry systems, anti-freeze system
 - Sprinkler heads (wet and dry barrel)
 - Valves, gages, pipe, and fittings
 - Air compressors
 - Smoke detectors, heat detector, beam detectors
 - Strobes & speakers
 - Control panel(s)
 - Pumps
 - Tanks
 - Fire Department connection (FDC)
 - Fire hydrants
 - Fire escape
 - Heat tape
5. What conditions are you looking for during your inspection
 - Paint on sprinkler heads. Sprinkler heads often times get painted by the painter and this can compromise the thermal element and corresponding activation time.
 - Rust or damaged sprinkler heads and pipe.

- Housekeeping. Particularly as it pertains to pump and sprinkler valve rooms, these rooms often times become storage units for construction debris and other miscellaneous material. Condition of housekeeping is often indicative of the care being done on the system. Poor condition may warrant a reduced useful life for some of the components.
6. How to respond and report when you observe something that appears to be out of compliance. Life safety is a BIG deal!! So....
- If client representative is onsite disclose your finding to them during or at the end of the inspection, before you leave.
 - Make note of the observation in your report even if advised that the problem will be resolved. Title the note with "LIFE SAFETY" so it stands out.
 - Depending on the severity of the hazard or risk, a documented email or letter may be warranted.
7. What are the best resources for determining the needs of fire protection components?
- NFPA 25 (National Fire Protection Agency) - *standard for inspection testing and maintenance of water based fire protection systems.*
 - Local sprinkler or alarm contractor servicing the association.
 - Inspection reports
8. What should I look for in an inspection/test report from a fire alarm or fire sprinkler contractor?
- Look at the date! Often times the ware bouts of current inspection reports are unknown and old reports, thought to suffice, are sent in their place.
 - Reports will normally disclose recommended repairs and replacement needed, or that were completed at the time of service.
 - Make note of historical replacement/repairs from current and past reports as there may be warrant to establish a line item in the reserve study for future repair/replacement, in lieu of the "band aid" approach.
9. Are inspections of fire protection systems required and at what intervals?
- Yes, the frequency of inspection and testing vary depending on the component, exposure and location. NFPA 25 is an excellent resource for determining these.
10. What is the difference between a wet system and a dry system?
- Pipes in a wet system are continuously filled with pressurized water. Upon activation (thermal bulb break) at a sprinkler head, water is delivered immediately out of the sprinkler head/orifice.
 - Pipes in a dry system are filled with pressurized air. Upon activation (thermal bulb break) at a sprinkler head, air purges from the pipe through the orifice. Once the air pressure in the piping system is reduced to a certain point, a valve located at the beginning of the system opens and allows water to fill the piping network and eventually flow out of the open sprinkler head.

11. What is a dry sprinkler head?

- A dry **head** (not to be confused with a dry **system**) is a sprinkler head affixed to a short length of pipe filled with air that extends to a wet pipe system in a conditioned/heated space.
- Typical applications of these are found in cold climate where protection is needed at an exterior balcony or covered area.

12. Does Fire sprinkler pipe fail within 30 years?

- In recent years there has been a widespread concern regarding "MIC" (Microbiologically Influenced Corrosion) which causes rapid development of pinhole-sized leaks and biological pipe growths on the inside walls. The results of which have shown to reduce the useful life of steel pipe down to 5 - 20 years. If there is any mention of slime or scaling, a "MIC" test should be conducted to determine a remaining useful life and if the problem is widespread.

13. Should I speak with a fire protection engineer or the fire alarm/sprinkler contractor?

- The service contractor is your best resource for details as they pertain to establishing appropriate costs and useful life of components.

14. What is the difference between a code and a standard?

- A **code** is *what you need to do* and is in general, adopted into law (legally enforceable) such as Fire Code and Building Code.
- A **standard** is *how to do it*, and tends be a more detailed elaboration, the nuts and bolts of meeting a code

Art & Science of Tree Care

Dale Carlon Consulting LLC

5246 Canyon Crest Court

Sparks, NV 89436

775.287.1732

dalecarlon@yahoo.com

www.dalecarlonconsulting.com

Dale Carlon is the owner/operator of Dale Carlon Consulting and has been an International Society of Arboriculture Certified Arborist for 30 years. The main function of Dale's company is to perform tree inventories using the latest computer technology and GIS software. The company has inventoried all of the city owned trees in Reno, Sparks and Carson City as well more than a dozen large and small HOAs in Nevada and California.

Dale started the Urban Forestry Department for the City of Sparks, and ran that for ten years before leaving for the private sector, to teach at Truckee Meadows Community College, where he taught for 21 years. His classes included Urban Tree Care, Landscape Management, Soils and Fundamentals of Horticulture. Dale is a member of Community Associations Institute.

Dale is the consulting arborist for Truckee Meadows Water Authority and helped form the Truckee Meadows Community Forestry Coalition. The Coalition brings entities throughout Truckee Meadows together to deal with tree issues and constructed a website that provides valuable information to the public. Water authority customers can have Dale come to their homes, free of charge, to perform consultations and provide reports and recommendations for the health of their trees.

Art & Science of Tree Care

1. **Urban Forestry???** An oxymoron is defined as a combination of contradictory terms. Like military intelligence, exact estimate, resident alien, and yes, even Microsoft works! Yet there is a science to selecting the right trees for a site and then them so as to benefit the property and not be a nuisance.
2. **Commercial Properties.** In the commercial and industrial areas conditions are harsh. Trees are planted in tiny planters in the middle of parking lots. Trees have to be severely pruned or even butchered to allow for traffic access, pedestrian access and even so signage is clearly visible. They are surrounded by asphalt that subjects them to radical changes in temperature at the trunk, if irrigation systems are not working properly the hot summer temperatures can be deadly.
3. **Multi-Family Properties.** Multi-family residential presents its own unique problems. Often, these sites are overplanted to give them curb appeal. Now 15 years later, the trees are too big for the sites they were planted in, the drip system is outdated and they are in need of proper pruning.

Yet the trees are what give the property its appeal, instead of feeling like living in a group of sterile boxes a property with well-maintained mature trees give a pleasant park like feel.

4. **Single Family Residential.** Single family residential takes up a great deal of the local tree population and most of the largest trees live here. The trees have to be kept from blocking streets, traffic signals, power lines and even satellite dishes.

Fortunately, most of these trees are irrigated in turf areas and over time get very large, requiring specialized crews and equipment to perform the pruning.

5. **Developing Rural Areas.** Today, what were once rural areas are being developed. Using species that can naturally thrive here insures the success of new plantings. Owners can create wind breaks with evergreens to make yards more habitable. They can reduce cooling costs in the summer and passive heat in the winter by planting large deciduous trees.
6. **A Tree Space in a Condo Project.** The architect thought that providing a small cut out for tree planting by the patio would be a good thing by

providing natural shade. The problem is not in the design, but in the execution. Installing a large Silver Maple with an invasive root system has now created real problem for both the property owner and the community manager. The cost for removal of the tree and the repair of the concrete takes big bites out of landscape budgets.

7. **Small Commercial Properties.** Small commercial properties are normally heavily planted for initial curb appeal. Ten years later, trees have been butchered to fit the space. The poor placement also causes damage to the building increasing maintenance costs. Often, the landscaping plan is approved and then planting areas shrink from the demand for more parking.
8. **Trees in Parking Lots.** Sometimes commercial concerns outweigh common sense. When asphalt is applied right up to the trunk of a tree and I get the call to do a diagnosis I am amazed that a seeming well educated individual looks at me and asks "what is wrong with this tree?" With a little thought at the conception of the project it would have been easy to accommodate the trees.
9. **Trees Overgrowing their Sites.** The urban environment is difficult and growing space is a common problem, yet somehow trees find a way. This Sycamore was a poor choice for the site, there is just not enough room. However, notice in the background, two purple leaf plums thriving in a narrow planting strip.
10. **Old City Trees.** Old city trees make huge contributions to the community but require special consideration. In many cases, city officials will approve narrowing of the sidewalk to maintain the tree. Sometimes, steel plates are installed to bridge over the roots.
11. **Trees and Sidewalks.** Communities have to maintain safe sidewalks. To facilitate the repair, large portions of the root system had to be removed. Instead of cutting the tree down root can be cleanly cut and a barrier material can be installed that will prevent further breakage.
12. **Trees and Power Lines.** Keeping the power lines clear is important but there are a number of problems that result from the type of pruning we see under the lines. Although the tree is still alive at what point does the liability factor outweigh the sentimental factor? And what of the future? No doubt in 5 years this tree will be gone.

- 13. Poor Practices.** At planting the tree wasn't planted deep enough and began to lean as a result of wind. 15 years later, although attempting to right itself via a property called "geotropism" the enormous weight is now pulling it in the direction of the house and the owner can see the base actually lifting in large winds.
- 14. Property Damage.** In mature neighborhoods with large trees a failure to address and correct tree problems can result in damage to property or injury to people. These areas require more attention than areas with immature trees.
- 15. Trees and People.** An example of how trees can affect how people treat each other. The lady closest to us is the new owner of the tan house and the large Incense Cedar in the back yard. The elderly lady staring up at the tree in convinced that the tree is going to fall on her house and kill her and reminds the owner daily. The owner paid about \$3,000 to have it removed to maintain peace with her neighbor. The tree was perfectly healthy and posed no threat to the neighbor.
- 16. A Good Example.** A great study in how trees, when properly sited and given room to grow, will make this a better property. Note how much room is given them in the front yard and how the canopies don't have to be misshapen to keep them from damaging the building. The energy savings these trees generate in summer is significant.
- 17. Using Technology to Help Trees.** Computer programs exist today that enable us to place each tree on a map with a detailed description of all of its attributes. Also, the program can project the annual benefits of the forest based on factors like: energy conservation, storm water filtration and air quality improvement.
- 18. The Value of Trees.** A program known as ITree, developed by the USDA is often used by Urban Forestry Departments to show how forests contribute to the city. It took years of research to compile this data in cities all over the country. It is accepted as accurate and has proven very useful in helping fund Urban Forestry Departments. Notice how large the figure is for Aesthetic value.
- 19. Site Details.** Details about the site are gathered as well. Two of the most useful to managers are sidewalk damage and irrigation. Heaved sidewalks can be a hot button issue in HOA's and identifying the problem is the first step to resolution. Irrigation needs to be addressed as well, normally when new trees

are installed only two one gallon per hour emitters are installed at the base of the tree. Years later the drip need to be upgraded to four two gallon per hour emitters set at the drip line of the tree.

20. **Sorting and Filtering.** Here we can sort trees by how much the roots are lifting the sidewalk. Those sidewalks that are over 1 ½" are the first priority and usually require removing the old concrete panel, trimming the roots and installing root barrier so it won't happen again, the re-pouring the sidewalk. This information can be made accessible to residents so they can see what is going on in their neighborhood.
21. We can also identify what species of tree is causing the problem and see if there is a pattern. As you can see in the lower left, an entire street has lifted sidewalks and the majority of the trees are Little Leaf Linden that were planted 6 years ago. We can search by species in other sections of the community, find the Linden trees and do some preventative work to not only save the sidewalk work but lessen the impact of root pruning on the trees.
22. Switching to the hybrid mode you can see each tree on the street. These are Google images from 2016 and can also be used by contractors to find the exact tree they are looking for with their smartphones.
23. By selecting the "view all details" tab we can see the particulars on the tree in question. Notice in the comments section there is a broken branch over the street. Also notice the "add photo" box in the upper left corner. Because this inventory was conducted in ITree and bulk uploaded to Open Tree Map, photos of each tree were not taken at the time of the inventory. When inventories are done in Open Tree Map it is an easy step to take a photo of the tree as you detail its information.
24. Then you can click to the street view tab and actually see the tree. Notice to the right we can see which panel is lifting. Also you can see the fresh cut where the broken branch was removed.
25. We can track by using the advanced search feature and asking to see all the trees that have been crown cleaned for Jan 5th to March 29th.
26. Two trees come up in the search and are highlighted. Again, we can provide the community manager and board members access. The folks doing the work can have access as well.

- 27.** You can see that Contractor A completed the crown cleaning on 2-16-2106. The worker made the changes to the inventory at the time he completed the work and could make any additional observations about the tree at the time.
- 28.** It is wonderful that as we develop open spec to residential that we acknowledge the importance of trees by planting so many of them. What can frustrating from the Arborists point of view is the lack of consideration later on in the trees life. By utilizing the technology available today we can better care for this valuable resource and insure that the tree become what the community mangers and the developers envisioned.

Stuck on Stucco

Jeff Bowlsby, Architect, CCS, CCCA

Simpson Gumpertz and Heger Inc.

100 Pine St

San Francisco, CA 94111

415-652-4518

jabowlsby@sgh.com

StuccoMetrics.com

Jeff is an Architect and Staff Consultant with Simpson Gumpertz and Heger in San Francisco, CA, as a specialized exterior wall and stucco consultant to architects, contractors, developers and property owners. His nationwide practice includes new building construction and rehabilitation projects as well as performing property condition assessments and forensic evaluations. He founded and leads the national ASTM C11 Stucco Work Group that develops all ASTM stucco-related Industry Standards referenced in building codes and construction contracts. Jeff has completed performance testing of stucco assemblies and components, written several well-regarded stucco-related technical articles published in national industry professional journals, is the author of the stucco information resource StuccoMetrics.com, and is a frequent industry presenter on stucco wall claddings. With over 30 years of architecture and construction industry experience, he is highly-skilled in building science issues and the integration of all building enclosure systems and components, including roofing, wall assemblies, fenestration, plaza deck and below-grade waterproofing. He can be reached at jabowlsby@sgh.com or through the StuccoMetrics.com website.

1. The Building Enclosure and Exterior Wall Claddings – 10 min

- Weather impacts and building enclosure requirements
- Building enclosure components and their primary functions
 - a. Structural support
 - b. Water protection
 - c. Energy conservation
 - d. Fire protection - passive
 - e. Sound attenuation
 - f. Physical durability/life cycle cost
- Major wall cladding choices, their history, advantages/limitations
 - a. Wood based
 - b. Vinyl
 - c. Metal
 - d. Brick/stone
 - e. Stucco

2. What are the 3 most common stucco cladding types and how to recognize them – 10 min

- Stucco 101 - main components
 - a. US stucco marketshare
 - b. Layer cake – each layer has a purpose
 - c. Drainage wall or barrier wall
 - d. Advantages/Limitations
- Mandatory stucco cladding components
 - a. Weep screed at base of wall and above paving such as balconies
 - b. Control joints
 - c. Perimeter sealants
- Traditional stucco
 - a. Lath and accessories or direct-applied
 - b. Scratch/Brown coats
- Proprietary stucco
 - a. Components and assembly
- Direct applied stucco
 - a. Components and assembly
- Not stucco
 - a. EIFS
 - b. Textured paint/coatings
 - c. Textured panels
 - d. Thin brick/manufactured stone/tile

3. Stucco conditions an informed Professional Reserve Analyst should look for – 25 min

- Inspection conditions
 - a. Time of day, ambient temperature, rain
 - b. Critical light
- Problematic installations for stucco
 - a. Stucco roofs
 - b. Stucco buckets
 - c. Exposed trims
- Dirt/organic growth accumulations
- Evaluating cracks
 - a. Crack patterns
 - b. Acceptable/Not acceptable cracks – Crack gauges
- Water intrusion
 - a. Efflorescence
 - b. Metal corrosion
- Stud ghosting

- Finish coat/sealant issues
 - a. Tenting, blistering, cracking
 - b. Discoloring, fading
 - Stud ghosting
4. Stucco maintenance, repairs and unit costs – 10 min.
 - Stucco durability and serviceability expectations
 - Stucco maintenance requirements
 - Stucco issues and their repairs
5. What are unit costs for maintenance and repairs? – 10 min
 - Cleaning/SF
 - Crack repairs – corner to corner
 - a. Below 30 mils threshold – painting/SF
 - b. Above 30 mils threshold – base/mesh/finish coat/SF
 - Sealant/LF-replacement
 - Ancillary costs
 - a. Scheduling for occupied buildings/permits
 - b. Scaffolding
 - c. Design/inspection
 - d. Landscaping
6. Questions/discussion? - 10 min

References:

1. American Concrete Institute (ACI) *524R-04 Guide to Portland Cement-Based Plaster*
2. Portland Cement Association (PCA) *EB049.05 Stucco Manual Fifth Edition*
3. StuccoMetrics.com

Misc.

- A. Pass around various stucco samples
- B. Provide crack gauges for all attendees

Is Percent Funded DOA?

By Mike McDermott
Operations Manager
Browning Reserve Group
3435 Mission Avenue
Carmichael, CA 95608
Mike@BrowningRG.com

Mike McDermott, PRA, is the Operations Manager with the Browning Reserve Group (BRG) and has provided software consultation to BRG since its 1999 inception. In 2005, he became a full time BRG employee responsible for reserve studies, new hire training, quality control and software development. He has provided reserve study training to homeowners and professional managers.

Mike is registered as Reserve Study Specialist (RSS) in Nevada and holds Community Associations Institute (CAI) Reserve Specialist (RS) and Association of Professional Reserve Analysts (APRA) Professional Reserve Analyst (PRA) designations.

Mike earned an Electrical and Electronic Engineering degree from California State University, Sacramento. In addition, he is the current APRA Vice President and member of several APRA committees. Previously he was a 23 year Sprint finance department Software Engineer following a 6 year US Navy Electronics Technician enlistment.

Is Percent Funded DOA?

This presentation addresses Percent Funded (PF) theory and its application. Full Funding is not the subject of this presentation.

A brief survey precedes the main presentation, and full audience participation is appreciated.

Simple Calculations

$$\text{Fully Funded Balance} = \text{Age} * \text{Cost} / \text{Useful Life}$$

$$\text{Percent Funded} = 100\% * \text{Reserve Balance} / \text{total Fully Funded Balance}$$

Topic Origins

- Gut feelings, ongoing debate, experience, and analysis.
- Dinner conversation with 15 HOA CPAs.

Perceived Problems

- Poorly implemented, inconsistent, and fatally broken.
- Overreliance, counterintuitive, misguiding, legislated, and balance centric.
- Rejected by some practitioners.
- Lacking cautionary warnings.

Erroneous Conclusions

- Contribution direction
- Funding status comparison
- PF level

Imperfect Implementation

- Rounding
- Estimation error & error propagation
- Replacement day
- Beginning versus Ending fund balance
- 0 versus 1 based Remaining Life
- Interest versus non-Interest equations
- Full or 0 Remaining Life for current year replacement

Components are not Liabilities

- Onetime only
- Delayed start
- Existing versus Future
- Negative Remaining Life
- Remaining Life > 30 years
- Duplication
- Presentation

Extraordinary

- Loans, construction defects, insurance recoveries, and warranty repairs.

Possible PF Alternative

Base fund status on reserve contribution percentage increase growth rate necessary to reach