



RCAP Services to Help with Asset Management!

Training, Technical Assistance and Services

What is RCAP?

Rural Community Assistance Program (RCAP)

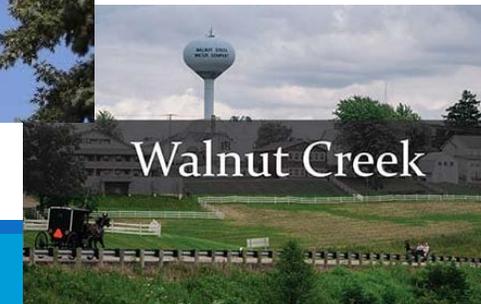
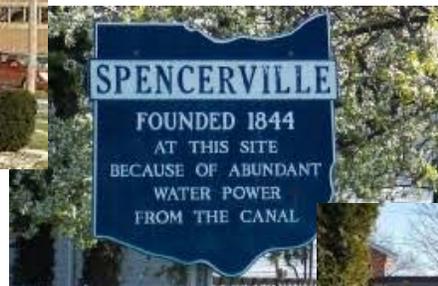
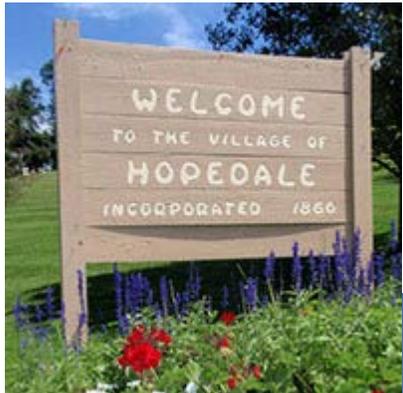
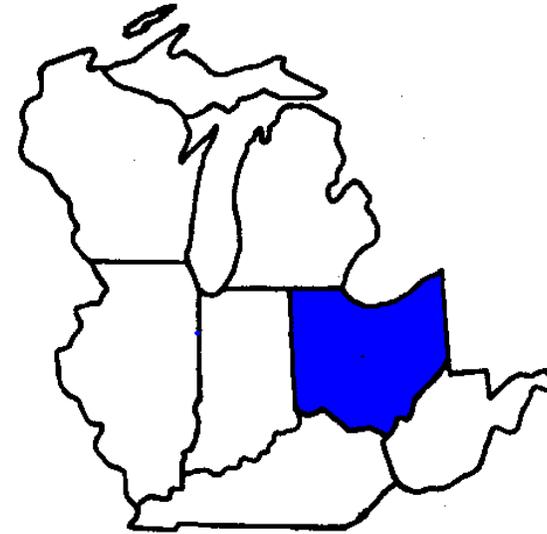
RCAP is operated by a national network of nonprofit organizations working to ensure that rural and small communities throughout the United States have access to safe drinking water, and sanitary wastewater and solid waste disposal.

National Non-Profit
Rural Community
Action Partnerhp

 Great Lakes
COMMUNITY ACTION
PARTNERSHIP
(Administering Agency)

Great Lakes RCAP

Ohio RCAP





RCAP provides technical assistance to communities to build *technical, managerial, and financial capacity* to construct and sustainably operate water and sewer infrastructure. This is the core of our program.

In Ohio, we have expanded to offer many other small utility and community development services in pursuit of this mission.

Our Funders

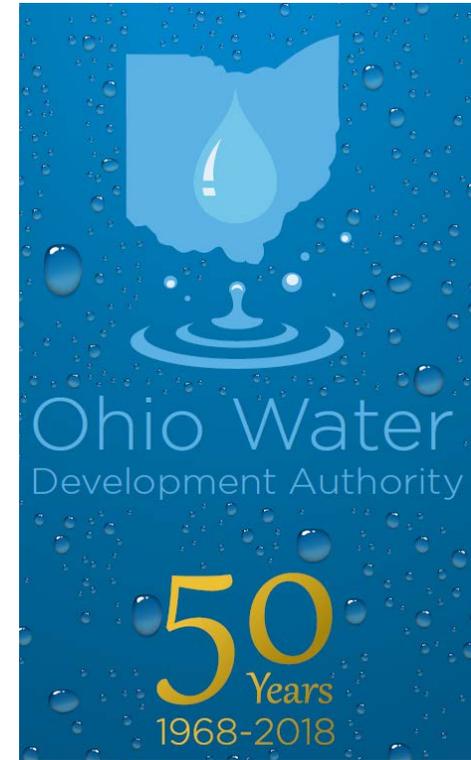


**Division of Drinking
and Groundwaters**



CSBG

COMMUNITY SERVICES BLOCK GRANT PROGRAM



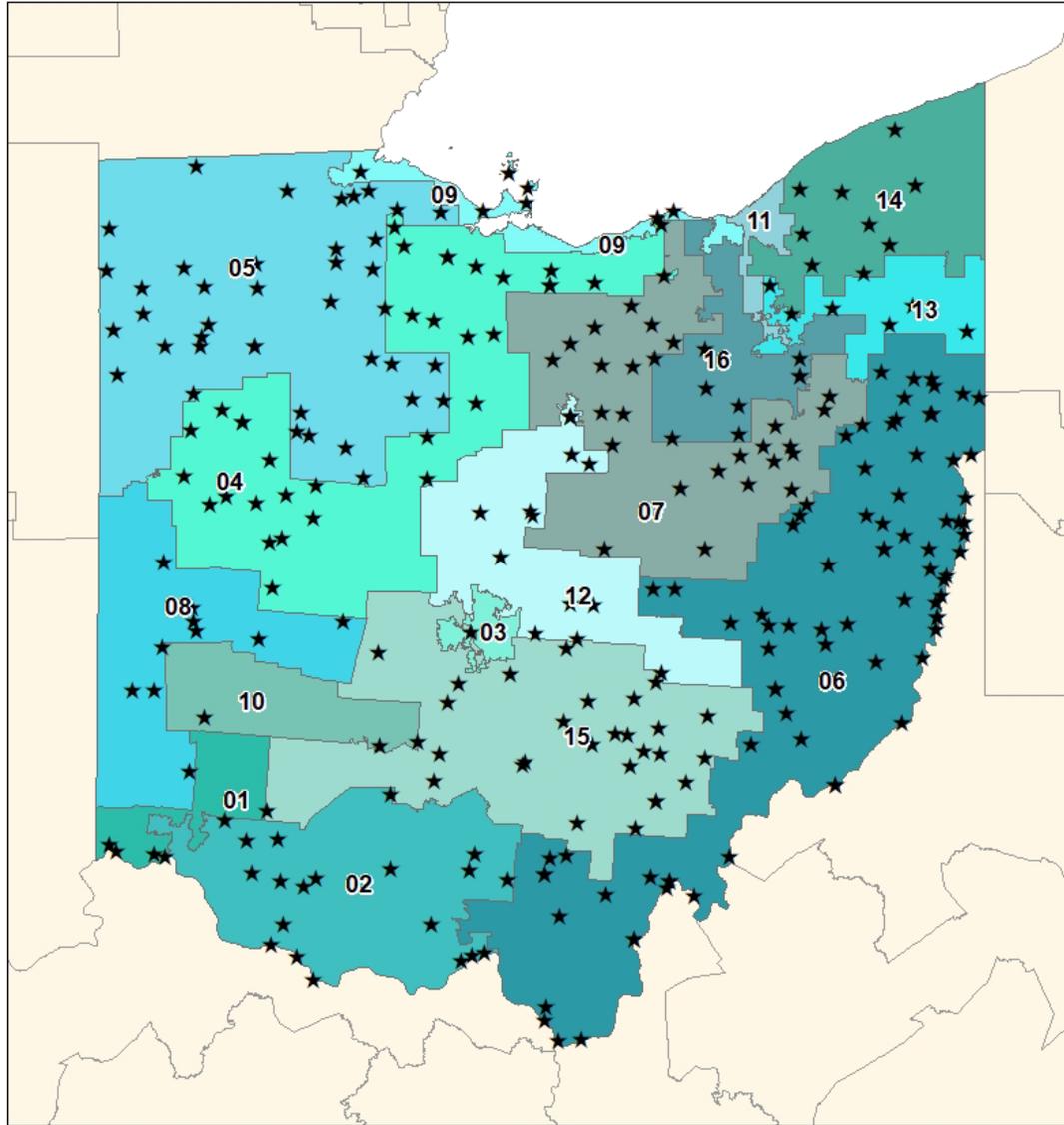


Ohio RCAP provides technical assistance to communities for infrastructure and community development.

Those under 10,000 population can receive free assistance under our grant funded programs. We also provide affordable professional services not covered under our grant programs, and for cities over 10,000.

We assist with project planning, development and funding. Often, we work with communities to evaluate their rate structures and financial capacity. In addition to helping individual communities, we offer several utility management classes each year to local officials and operators.

FY 2018 Communities Served



We helped over 300 communities across Ohio last year.

For many, we worked on more than one project and/or provided multiple services.

We assist well over 100 communities each year with project planning, development and funding, striving to secure the lowest cost loans and maximum grant dollars. Often in the process, we work with communities to evaluate their rate structures and financial capacity.



Cloverdale, Ohio



Coalton, Ohio



Middlefield, Ohio

*Over the past year, we leveraged
over \$45,000,000 in Grants &
over \$95,000,000 in Low-Interest Loans
for over 60 water and sewer projects serving communities
under 10,000 population in Ohio.*





How we help

Foster Vision



Leverage Funds

Achieve Sustainability

Facilitate Compliance

Training

Free classes for elected and appointed officials and operational staff

- Utility Management for Local Officials
- Financial Management for Local Officials
- OWDA Sponsored Short Courses
 - Project Planning
 - Project Design
 - Project Construction
 - Rate Setting
- Controlling your project
- Asset Management
- Budgeting & Rate Setting
- Water Audits
- Best Practices for Valves and Hydrants
- How to write SOP's
- GIS Applications
- Risk Assessment, ERP and Contingency Plans
- CMOM Plans
- Shared Services & Regional Solutions
- Other Special Topics



Ohio RCAP 2020 Training Schedule					
Class	Water, Sewer or Both	Live Classes	Webinar Series*	Contact Hrs	Tentative Dates & Locations
Basics of Utility Management & Oversight Series					
101- Utility Management for Local Officials	Both	-	-	3	Self-Paced, Online Only (360 Water)
201 - Financial Management for Local Officials	Both	-	-	3	Self-Paced, Online Only (360 Water)
Asset Management Awareness for Local Officials	Both	-	-	1	Self-Paced, Online Only (360 Water)
101 Utility Management for Local Officials	Both	1	-	5	TBA in Putnam County, May 28, 2020
Basics of Budgeting for Utilities	Both	-	1	1 expected	10-11 AM January 22, 2020
Basics of Rate Setting	Both	-	1	1.5 expected	10-11:30 AM February 19, 2020
Sustainable Water Infrastructure Series					
Guiding & Funding Your Utility's Future	Both	-	1	1 hr each expected	(3-Part Webinar)
Planning for Your System's Future					10-11:15 AM March 6, 2020
Capital Improvement Plans					10-11:15 AM March 13, 2020
Planning, Lifecycle Cost & Present Worth					10-11:15 AM March 20, 2020
Controlling Capital Projects	Both	-	1	1 hr each expected	(3-Part Webinar)
Know What You Need					10-11:15 AM March 27, 2020
Preliminary Engineering & Design					10-11:15 AM April 3, 2020
Bidding, Contracts & Specifications					10-11:15 AM April 10, 2020
Asset Management Implementation Series					
Writing and Implementing SOP's for Distribution	Water	1	-	3	Feb 26, 2020 in Kenton March 12, 2020 in Chillicothe
RCAP Field Days	Both	2	-	4.5	June 11, 2020 in St. Clairsville August 2020 TBA
Improve & Exercise Your Contingency Plan	Water	2	-	4	October 3, 2019 in Bluffton February 11, 2020 in Canfield
Operational Implementation of an AM Plan for Valves	Water	2	-	4	April 16, 2020 in Nelsonville April 23, 2020 in Milan
Financial Implementation of an AM Plan	Water	-	1	1 hr each expected	(3-Part Webinar)
Financial Components of a Plan					10-11 AM January 24, 2020
CIP & Funding					10-11 AM January 31, 2020
Meeting Revenue Needs					10-11 AM February 7th, 2020
CMOM: Asset Management for Sewers	Sewer	1	-	5 Approved	June 23, 2020 in Yellow Springs
Popular & Emerging Topics					
Preparing for Manganese Compliance	Water	3	-	4	January 14, 2020 Coal Grove January 30, 2020 in Dover Tentative Feb 5, 2020 in Paulding
AWIA Risk Assessments & Emergency Response Plans	Water	2	-	3.5	8:30 AM - 12:15 PM March 31, 2020 in Steubenville 8:30 AM - 12:15 PM April 21, 2020 in New Bremen
Tackling Private Property Pipe Issues	Both	2	-	5	March 25, 2020 in Sheffield April 2, 2020 in Sidney
Shared Services & Regional Solutions Workshop	Both	1	-	4	Tentative April 28, 2020 in Burton
Sustainable Management of Small & Rural Systems	Both	3	-	3	8:30 AM - Noon April 29, 2020 in Caldwell 1 - 4:30 PM June 17, 2020 in Middlefield 1 - 4:30 PM August 11, 2020 in West Alexandria
Geospatial Technologies for Asset Management, Operations and Utility Oversight					
Managing Assets in the Field with Mobile Applications	Both		1	1	10 AM-11 AM on March 11, 2020
Improved Water and Sewer System Oversight with GIS	Both		1	None	10 AM-11 AM on April 1, 2020
GIS for Utility Managers and Administrators	Both	1		None	10:30 AM - 2:30 PM on March 18, 2020 in Fremont
Intro to Geospatial Technologies for Small Systems	Both	1	-	5	TBA in SE Ohio

Coming soon...

Financial Implementation of an Asset Management Plan Webinar Series

“Are you complying with the OEPA’s financial expectations? These three 1-hour instructor led webinars covers the components of an AM plan that should be incorporated into your utility’s budget and reserve fund to ensure its implementation and success. Each webinar is 10-11 AM and approved for one contact hour.

Part 1 – Jan 24th - Mechanics of Financial Asset Management

Part 2 – Jan 31st - Capital Improvement Planning

Part 3 – Feb 7th - Rate Payer Rapport

Basics of Budgeting for Utilities Webinar

1 hour – Jan 22nd from 10 – 11 AM

Basics of Rate Setting Webinar

1.5 hours – Feb 19th from 10 – 11:30 AM

Visit www.ohrcap.org to register.

RCAP FIELD DAYS

For elected and appointed officials and operational staff

**A great day of hands-on training and field demonstrations!
All operational and administrative staff, and decision-makers are invited.**



Operators Earn 4 Contact Hours Sessions Include:

- Valve Exercising
- Hydrant Testing & Unidirectional Flushing SOP's
- Data Management Using GIS
- Manhole Inspections Level I & Level II
- Leak Detection
- Water Audits
- Cathodic Protection
- SL-RAT & Sewer Cleaning
- CCTV & Pipeline Inspection
- Micro-monitoring
- Line Locating
- ..And other timely topics!



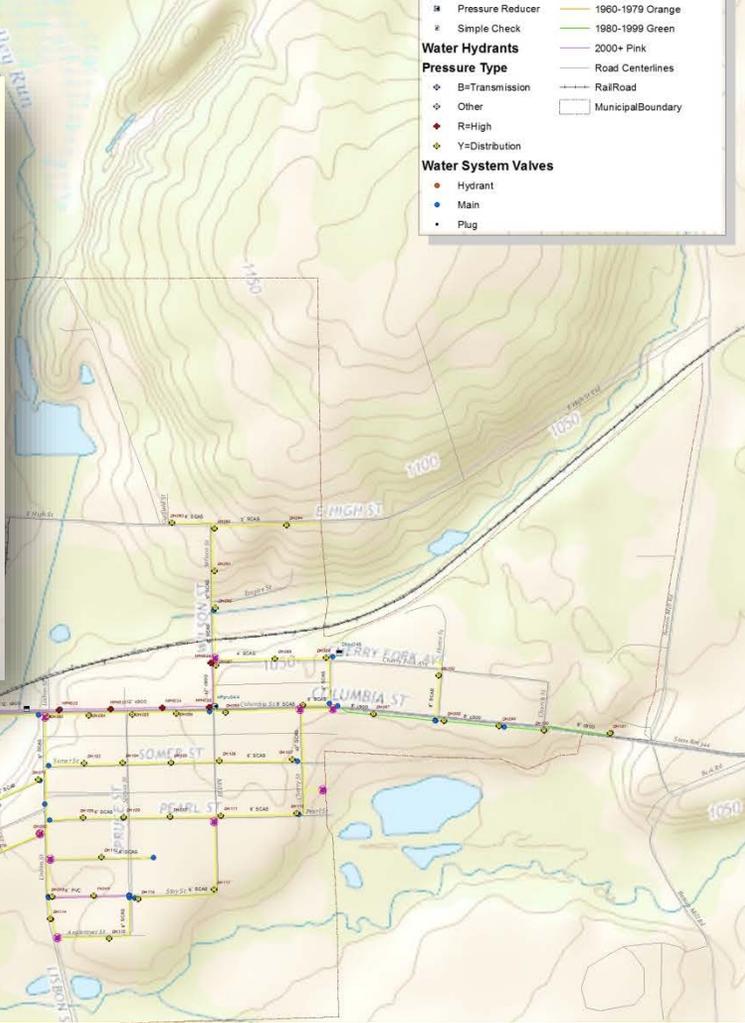
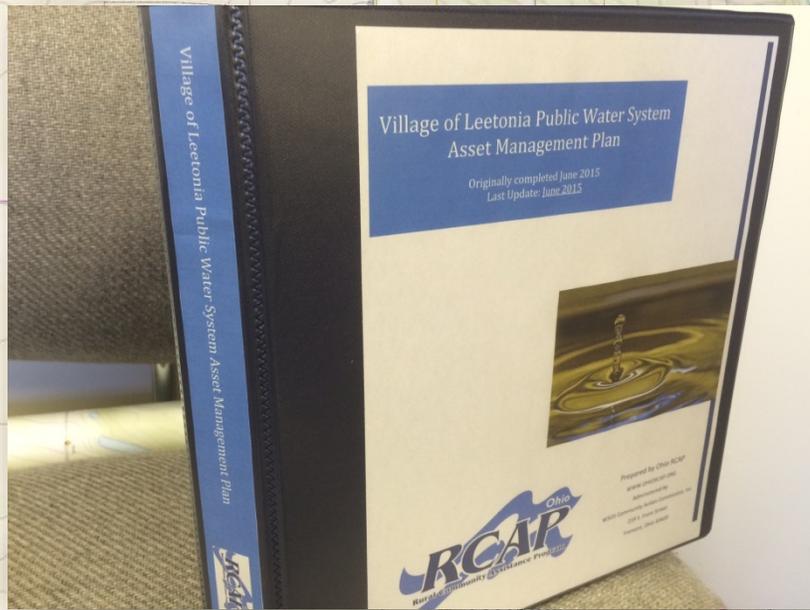
*Join us for the next one scheduled
June 11, 2020 at the Belmont
County Fairgrounds*



Look for our Services & Training Catalog in your mailbox soon.



Visit www.ohrcap.org for our latest training schedule, contact information, and resources.



AM Plan Development

Asset Management Plan Development
For Drinking Water Systems

An Asset Management Plan incorporates many of the standard operation and maintenance activities your drinking water system personnel are already doing.

The process of developing a formal Asset Management Plan helps operational staff and decision makers in a number of ways:

- A plan to shift maintenance activities from 'Reactive' to 'Proactive'
- A method to prioritize assets, tasks and projects
- A schedule of maintenance, inspection, and capital projects
- A plan to pay for these activities and documentation to support reserve funds
- Better informed decisions about how to allocate money and resources
- Peace of mind knowing the current state of the system and having a detailed plan moving forward

The goal of an Asset Management Plan is to improve service, extend the useful life of the system, and save money over time!



Asset Management Plan Development

Technical Assistance for Management & Operations

Develop and Implement BMPs & SOPs



GPS Data Collection & GIS Program Development



Water System Rules, Regs and Policies



Water Audits I&I Reduction Energy Audits



Delinquent accounts reduction



Preparedness & Emergency Response Plans



On-site troubleshooting



Planning, Project Development & Funding

Building Support

- Community Interest Surveys
- Facilitate planning committee meetings
- Conduct appropriate public hearing and meetings

Procuring Services

- Develop scope of services for engineers
- Qualifications Based Selection process to hire an engineer
- Assist in procuring other professional services

Funding Strategy

- Planning loans
- Income surveys
- Determine eligibility for potential funding sources
- Scenario building
- Write grant & loan applications
- Administration of grants* (CDBG, ARC, OPWC, USDA RD, USACE)
- Assist in completing financial reports to funding agencies

Environmental Compliance

- NEPA Environmental Reports (USDA, HUD/CDBG, Ohio EPA, US EPA, US Army Corps of Engineer)
- Prepare Ohio EPA Capacity Assurance Plans

Project Coordination/ Facilitation

- Among community representatives, funders, regulators & consultants



*Download from
Ohiorcap.org*

 FUNDING AGENCY ELIGIBLE APPLICANTS								
Type of Utility	ARC	CDBG	EPA Water	EPA Waste	OPWC	OWDA	USDA	WSOS SWF
Village	X	X	X	X	X	X	X	X
City	X	X	X	X	X	X	X	X
Township	1	2			X			
6103 Water District	X	X	X		4	X	X	X
6117 Sewer District	X	X		X	4	X	X	X
6119 Regional W/S District	X	2	X	X	X	X	X	X
501c3 Not-for-Profit Company	2	2	X		4		X	X
Conservancy District	X	2	X	X		X	X	X
Private-For-Profit System		2	X	3				X

- 1 ODSA will not allow a township to apply for ARC funding if the funding is state ARC funds or state administered but a county can apply on behalf of township.
- 2 County can apply on behalf of entity.
- 3 Non-point source entities only.
- 4 County and/or township can apply on behalf of entity if they own, operate, and maintain the infrastructure.

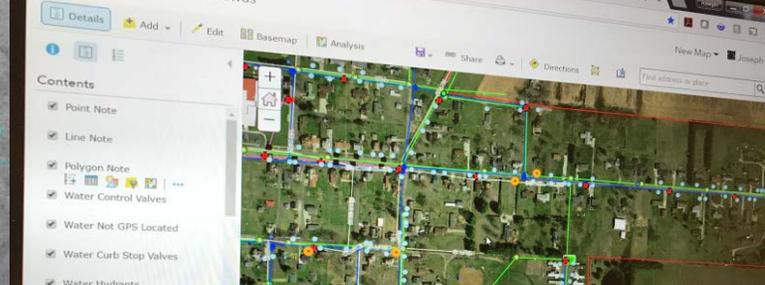
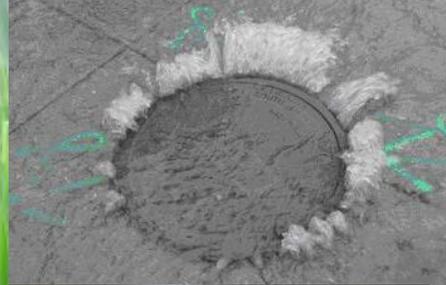
Water and Sewer Rate Studies

The Art and the Science





Capturing a manhole in Tuscarawas County



Since 2008, Ohio RCAP has worked to create a Cooperative GIS Service for communities too small to afford their own in-house full-time GIS professional staff.

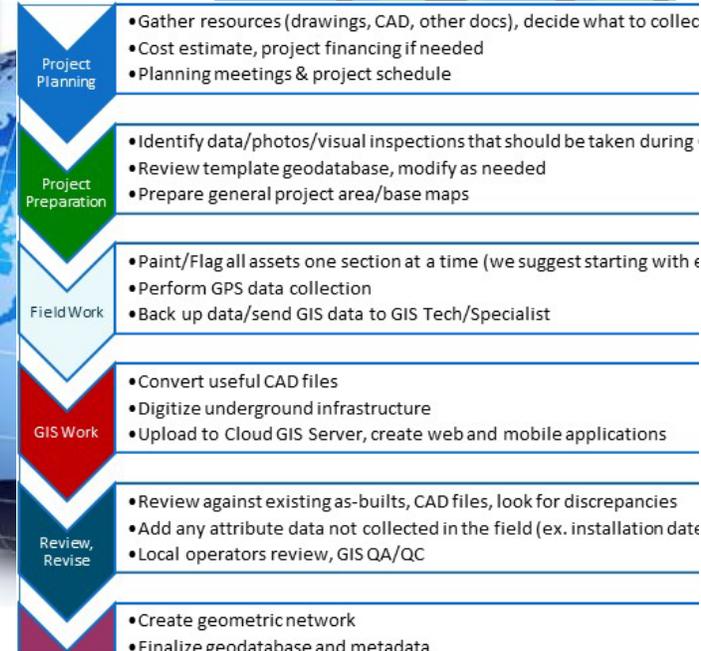
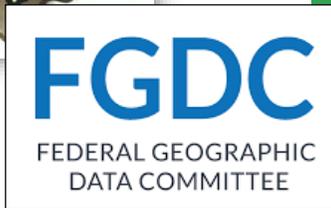
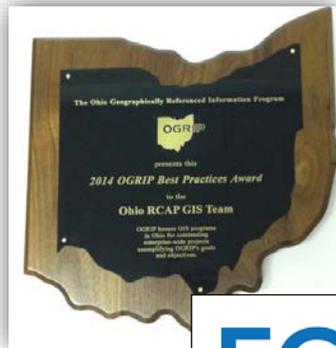
To date, we have assisted over 100 communities in Ohio with inventorying, mapping and geospatial applications using GPS and GIS technology, and currently serve 47 communities with a combined population of 187,000 through our GIS Cooperative.

Implementing GIS Best Practices

Our objective is to produce high quality data sets that will stand the test of time, and make data accessible, usable and sustainable.



Our team includes 7 full time staff all specializing in GIS.



- Create geometric network
- Finalize geodatabase and metadata



Condition Assessment Team Services



How can we help you?



www.ohiorcap.org

www.rcapgis.org





Asset Management & Budgeting for Sustainability:

Technical Assistance, Training and Services for Small Communities

What is Asset Management?



Asset management represents a **change** in utility management philosophy, one from **run to failure**, to one of **actively** managing asset **maintenance** based on performance monitoring of asset **condition**, including **budgeting** for eventual **replacement**.



Reality of Asset Replacement

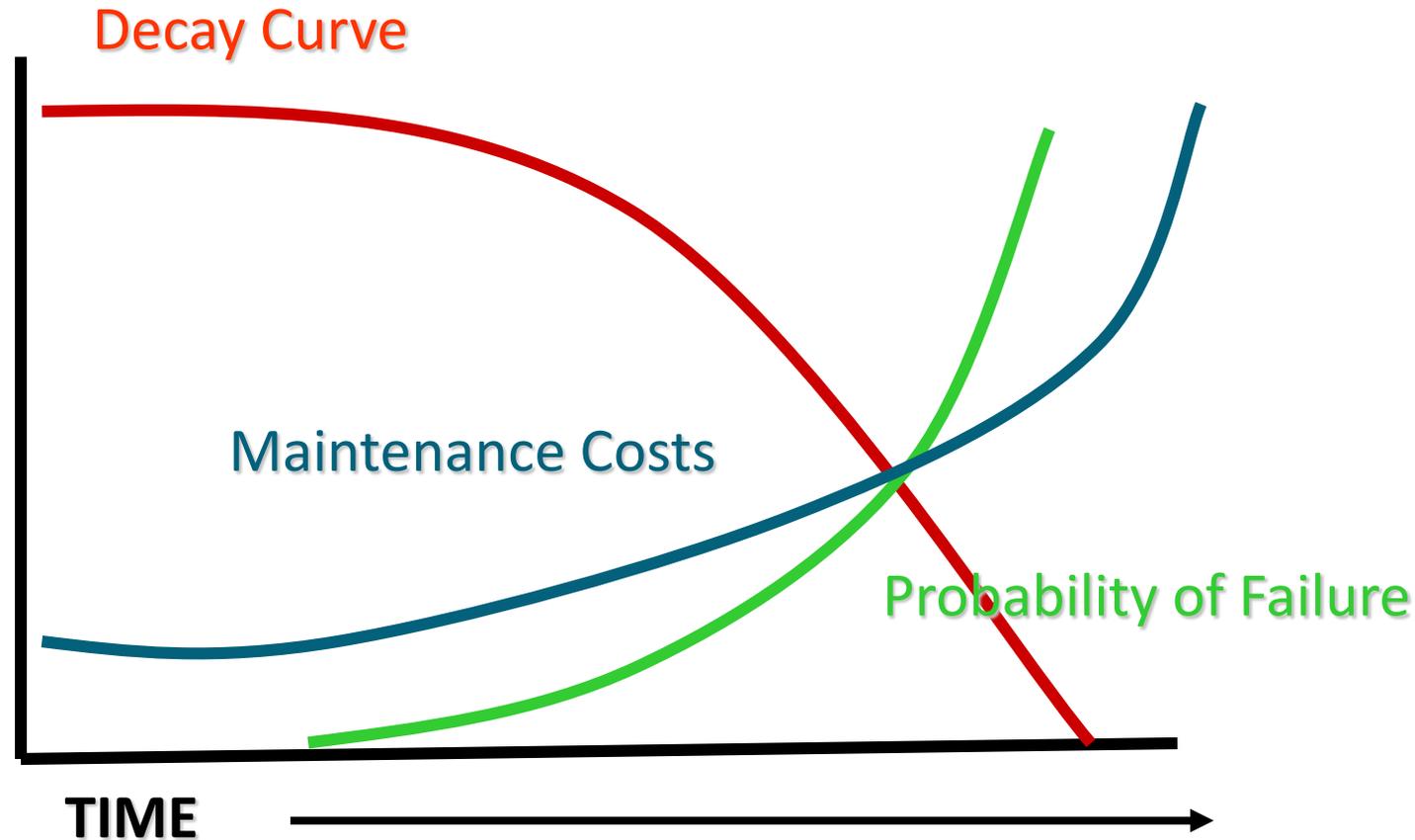
Water distribution costs approximately \$15,000 per customer. Sewer collection costs \$20,000 plus per customer. Treatment will increase the cost by at least \$5,000,000 per utility.

The replacement of water and sewer infrastructure for a community of **600** customers would cost approximately \$30 million dollars.

Financed over 30 yrs. at OWDA market interest rate (currently 2.70%) would result in a customer cost of approximately \$200 per month or \$100 per utility for debt service alone.

The math is clear! Massive asset replacement projects are not economically feasible. Sustainability requires more than forced savings accounts.
We must do a better job of taking care of what we got!

Goal: Minimize Life Cycle Cost



Shape and length of the decay curve is impacted by historical and future maintenance.

The older your infrastructure, the more maintenance it needs!

Maintenance Needs Increase with Age

- 100,000 Mile Warranty Period – Little to no maintenance cost
- Next 400,000 miles – Nickle and dime maintenance needs
- **Final 500,000 miles – Reduced reliability with higher maintenance cost**



**Utility infrastructure in most communities is approaching its half life!
Still functional but in need of a lot more maintenance (TLC).**

Building the Budget for Improved Maintenance & Capital Rehab and Replacement





Your Asset Management Plan defines a best maintenance strategy and determines reserve requirements for the annual budget.

Incorporating (M)-(R) Costs into Rates

1. (M)- Preventive maintenance to extend useful life. (Annual Expense)
2. (R)- Predictive maintenance to replace / renovate short lived components. (Save (Escrow) for Future Expenses)
3. (R)- Plan for long-term capital replacement needs. (Savings / Loans / Grants)

The Asset Management Plan defines a best maintenance strategy and determines reserve requirements for the annual budget.

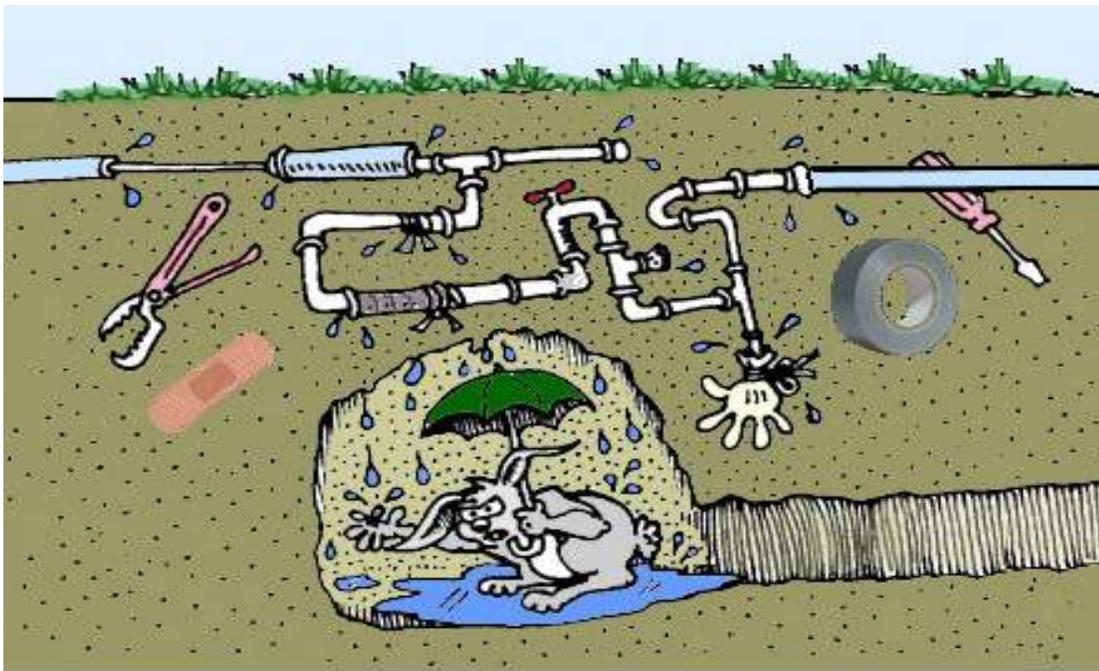
Best Management Practices for Distribution

- Performance Monitoring / Water Audits
- Active Leak Control / Location and Repair
- Valve Exercising & Maintenance
- Hydrant Testing
- Water Line Flushing (Uni-directional)
- Pipeline Condition Assessment
- Pressure Management
- Backflow Prevention
- **Customer Education**



Annual Water Audits

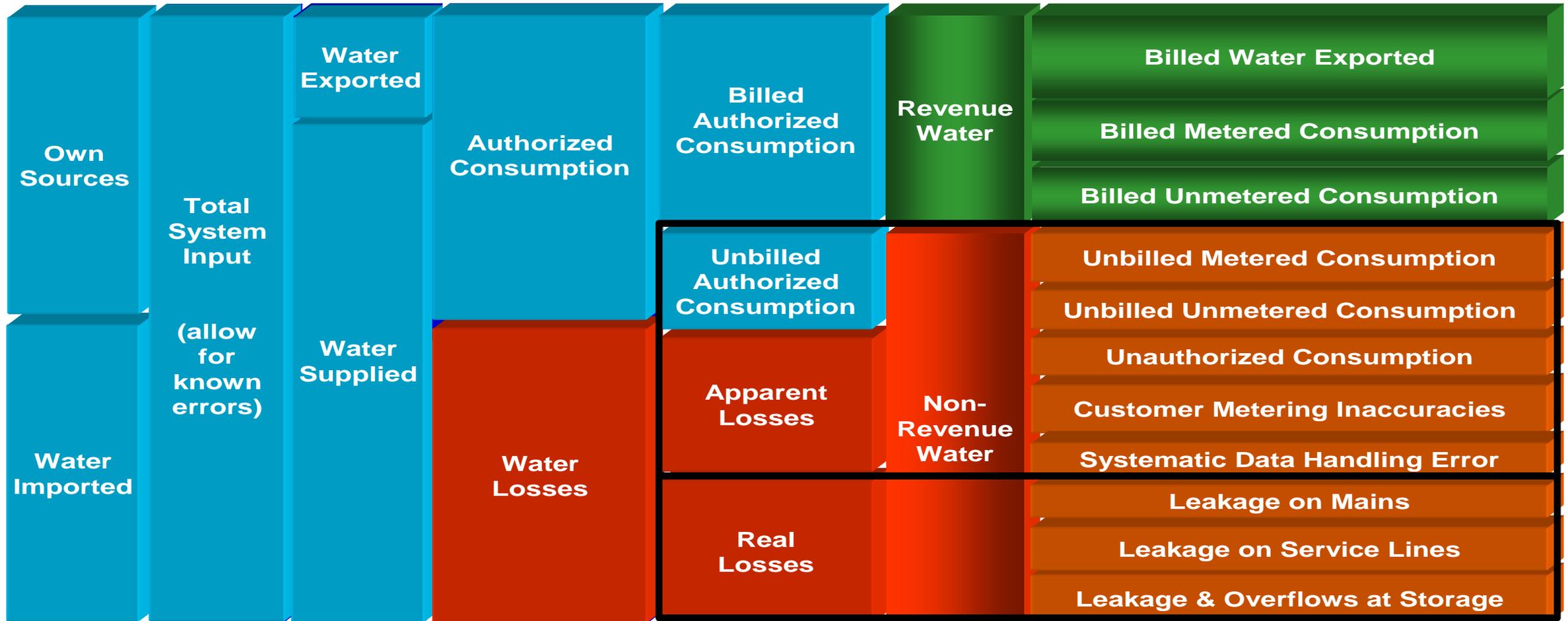
Research has shown that low level leaks cause more water loss than spectacular water main breaks. Most big leaks start as little leaks!



Do the math!

- 1 GPM leak running for 5 years = 2,628,000 gallons.
- 10 GPM leak running 100 days = 1,440,000 gallons.
- 500 GPM leak running 4 hours = 120,000 gallons.

AWWA Water Audit: Component Analysis

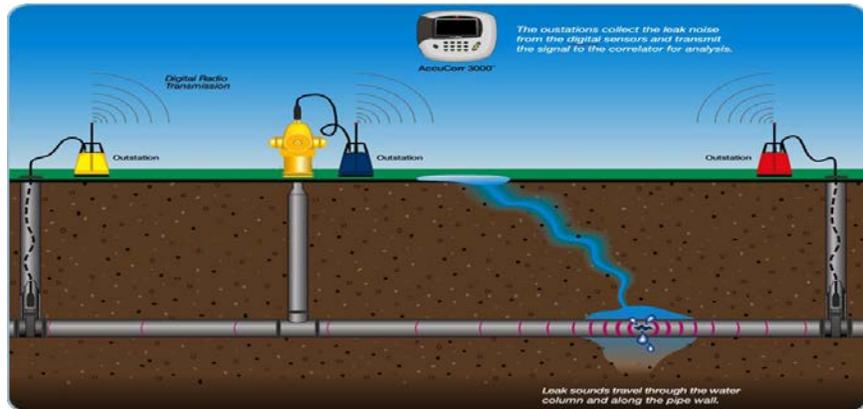


Measure what you know, estimate where you have to and then do the math

Budgeting for Active Leakage Control (ALC)

Active Leakage Control (ALC) is a proactive strategy to reduce water loss by detecting and repairing non-visible leaks by trained technicians using specialized equipment.

Utilities with significant leakage problems should consider developing an Active Leakage Control (ALC) program.



Budgeting for Valve Exercising & Maintenance



<https://www.youtube.com/watch?v=QL1VpC4d9mg> EH Wachs 6 min.

https://www.youtube.com/watch?v=_rv3uRhaL8o BWC Video

Why Exercise Valves?

Critical in ensuring the reliability of distribution system and addressing emergencies

- Main breaks must be isolated
- Speed of shut-off important in limiting damage

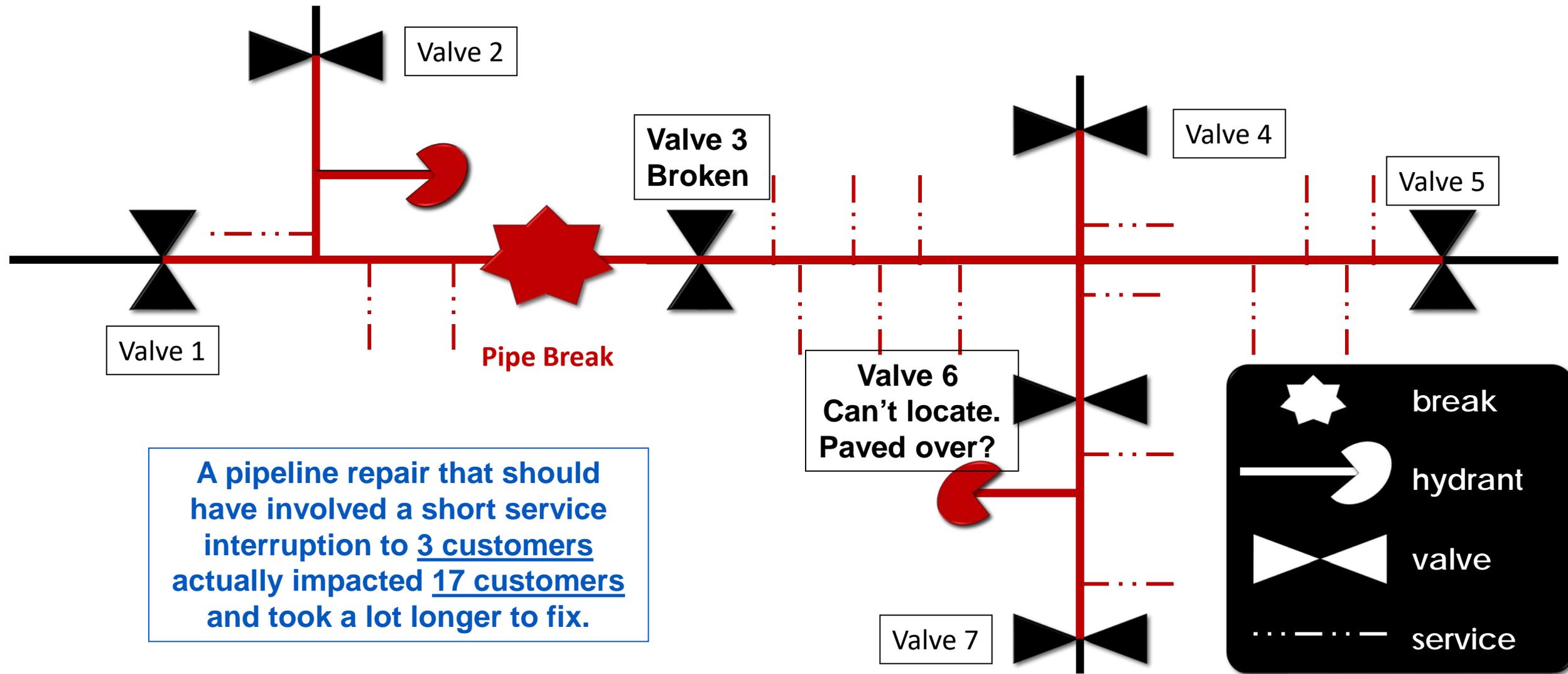
Valves not used will deteriorate.

- Corrosion
- Sediment deposits

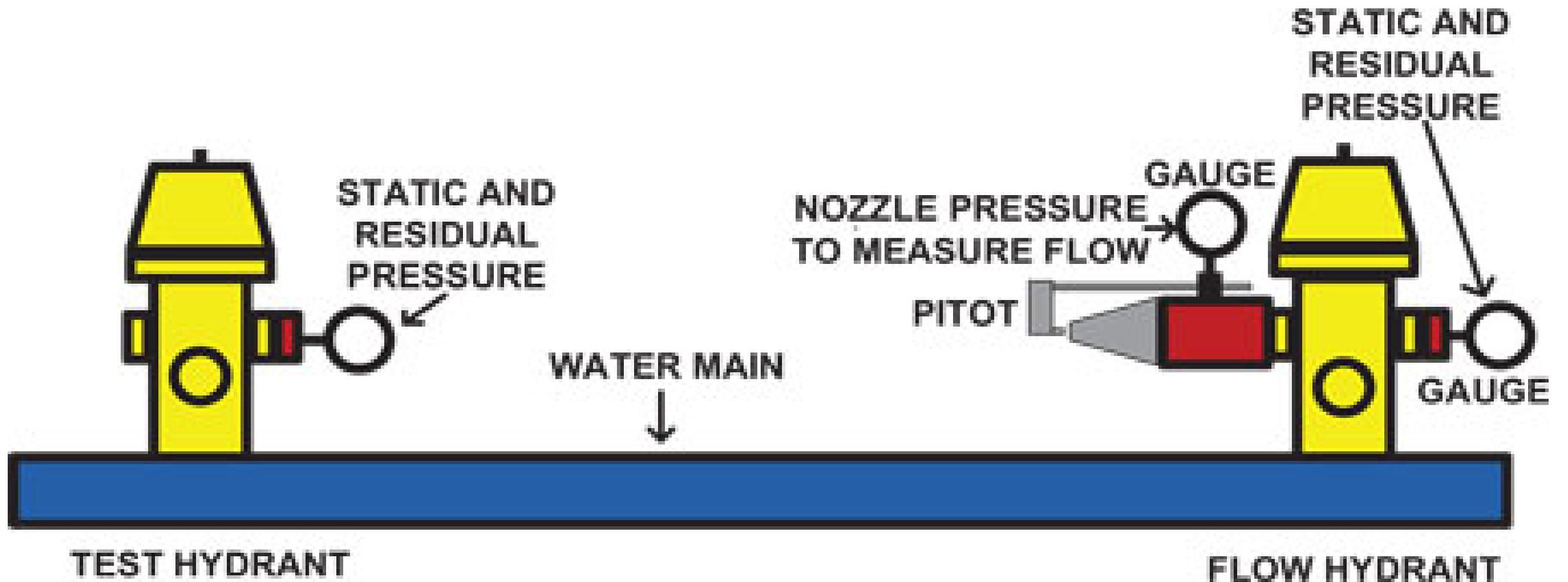
Valves can be lost over time.



“A valve that doesn’t work is just a piece of pipe.”



Budgeting for Hydrant Flushing and Flow Testing



Why “flush” waterlines?

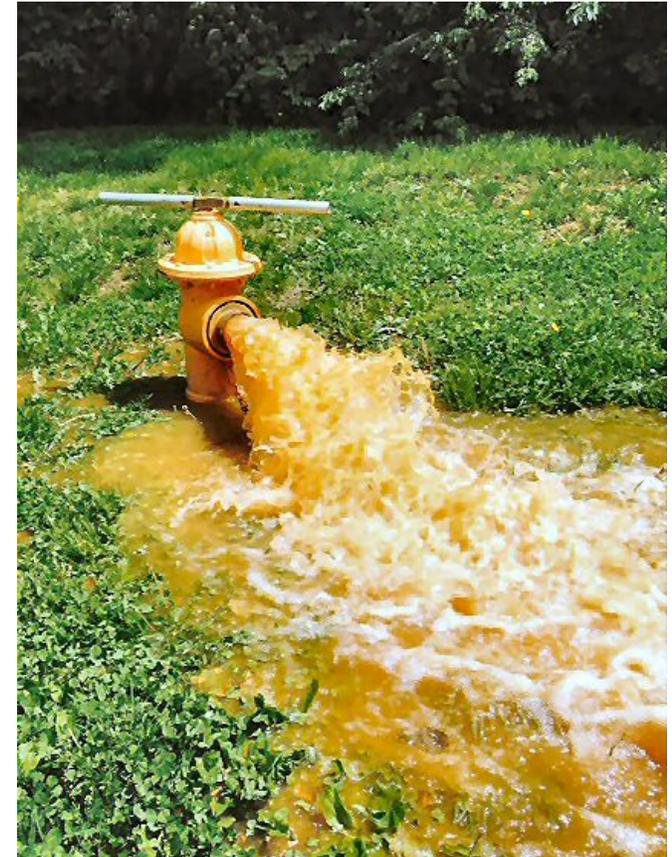
Respond to customer complaints

Expel contaminants from backflow episodes

Decreasing age of water in dead end mains

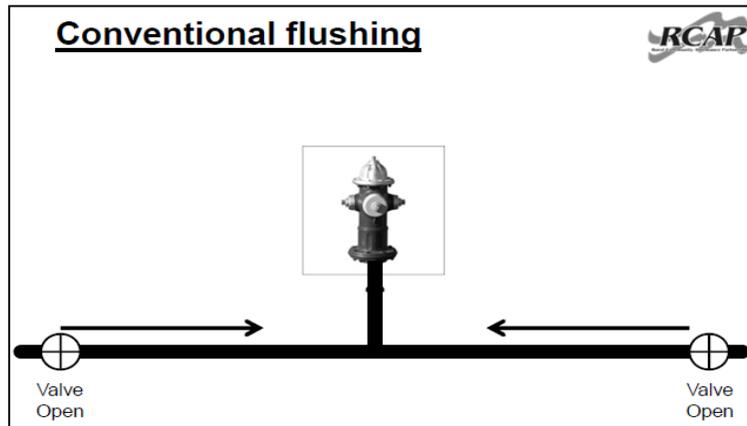
Remove loose deposits and sediment

Scouring (cleaning) water distribution mains



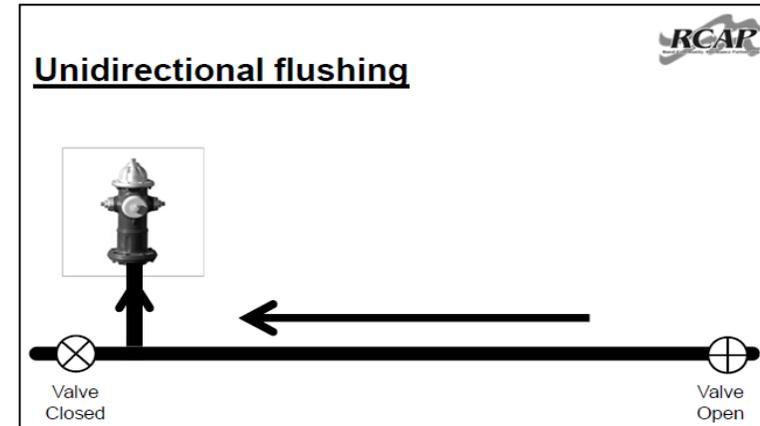
Types of Flushing

CONVENTIONAL – REACTIVE



Expulsion of poor quality water.

UNIDIRECTIONAL – PROACTIVE



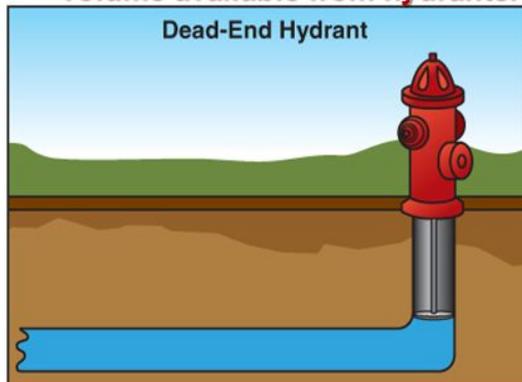
Maximizes scouring velocities

Flushing velocity (cleaning capacity) is maximized by uni-directional flushing.

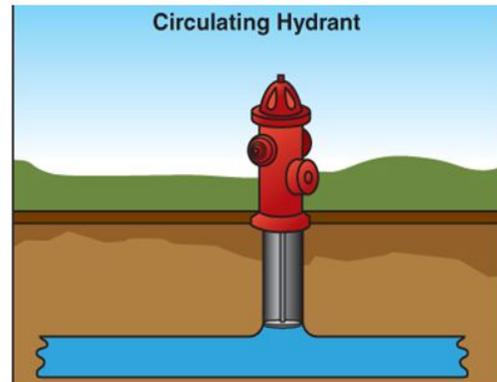
Budgeting to Test Hydrants

Friction loss and locations can affect volume and pressure.

•Friction Loss: May be caused by encrustations of minerals and sediment that accumulate over period of years.Reduces pressure& volume available from hydrants.



•Dead-end hydrant:Hydrant that receives water from only one direction; has limited water supply



•Circulating hydrant: Receives water from more than one direction

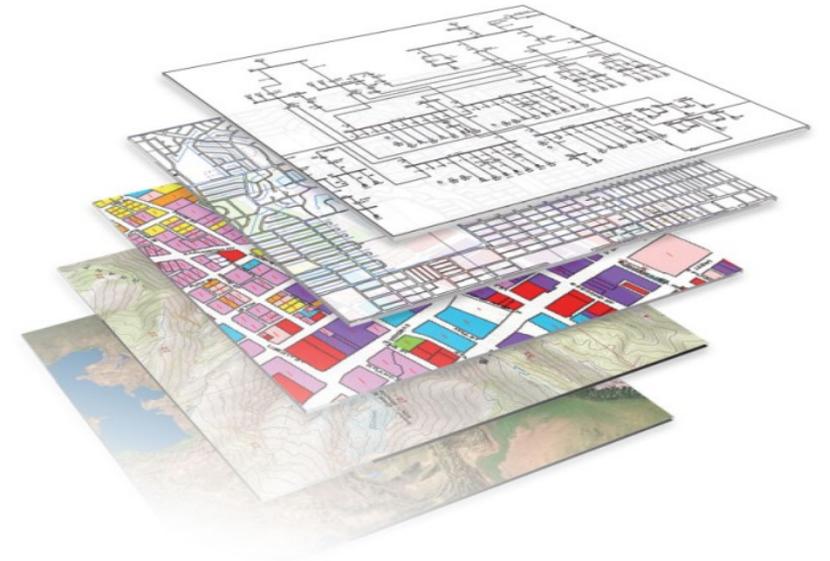


Changes in capacity occur very slowly.

Budget for GIS Mapping and Computerized Maintenance Monitoring Software

Computerized Maintenance Management System and GIS Mapping Software are essential tools to water distribution and sewer collection system maintenance.

Capital upgrades to correct deferred maintenance should address the underlying management problems responsible for asset failure.



“Those who fail to learn from the mistakes of their predecessors are destined to repeat them.”

George Santayana

Benefits of Improved Maintenance Program

Emphasize sustainable solutions over unaffordable capital projects.

Address the REAL cause of asset failure.

Reduce the waste of precious capital resources.



Budgeting for Improved Maintenance



- Develop a list of preventative maintenance tasks based upon the specific needs of your community. (Example: water audits, leak detection, valve exercise program, hydrant testing, etc.)
- List each activity separately so that you can discuss the long-term impact of not performing each activity. (Longevity / Reliability / Regulatory Expectations)
- Budget for the necessary resources. (Manpower, Equipment, Training)

**It is sometimes more cost effective to subcontract difficult tasks.
(Shared Services / Private Sector Contracts)**

Water Improved Preventive Maintenance Budget

<u>Task Name</u>	<u>Description</u>	<u>Notes:</u>	<u>Staff Cost (A)</u>	<u>Materials and Contractor Costs</u>	<u>Total Annual Cost</u>	<u>Additional Cost</u>
General Operation						
System Wide Performance Monitoring	Annual Water Audits / Active Leak Control Program	8 hrs wk.	14,000	2,000	16,000	16,000
GIS Maintenance / GIS Cooperative		4 hrs wk.	7,000	4,650	11,650	11,650
Distribution System						
Valve Exercising Program	Estimated 700 valves	Est. 30 min. / valve	4,712	11,779	16,490	16,490
Directional Flushing Upgrade	Estimated 380 hydrants	Est. 60 min. / hydrant	12,788	4,000	16,788	16,788
Flow and pressure monitoring	Estimated 380 hydrants	Est. 30 min. / hydrant	6,394	1,000	7,394	7,394
Customer Outreach						
Customer Education Program	Improved customer outreach		1,500	1,000	2,500	2,500
			-	-	-	-
Preventative Maintenance Repair			46,394	24,429	70,823	70,823
(A) Understaffing is the greatest impediment to the successful implement of AM. Labor requirements for improved preventive maintenance was estimated at 1/2 FTE.						

This example is a community of 1,700 customers with a distribution only water system.

Predictive Maintenance Escrow

- ❖ Predictive maintenance involves the rehabilitation or replacement of short lived components of long life assets. (Examples include paint, roof, meters, pumps, valves, hydrants, etc.)
- ❖ Also involves maintenance activities that are not annual in nature (well and intake structures inspections and cleaning, tower inspections, cleaning, rehab, media replacement, sludge removal etc.).
- ❖ These activities can be expensive. Annual escrow deposits are needed to accumulate the necessary funds.
- ❖ The asset management goal should be to save **100% of predictive maintenance and replacement cost.**



Predictive Maintenance Escrow (Saving for Future Projects)

<u>Task Name</u>	<u>Description</u>	<u>Total Cost</u>	<u>When (yrs)</u>	<u>Percentage from savings</u>	<u>Estimated Annual Cost</u>	<u>Additional Cost</u>
Wholesale Supply						
Old SR 68 Master Meter	PRV Valves (Meters owned by BCRW)	500	20	100%	25	25
Airport Road Master Meter	PRV Valves (Meters owned by BCRW)	1,500	20	100%	75	75
SR 125 Master Meter (New)	PRV Valves (Meters owned by BCRW)	1,500	20	100%	75	75
Water Storage						
Home Street (South Area)	Clean / Inspectg	12,000	3	100%	4,000	4,000
Home Street (South Area)	Renovation	120,000	15	100%	8,000	8,000
N Stevens Rd (New)	Clean / Inspectg	12,000	3	100%	4,000	4,000
N Stevens Rd (New)	Renovation	100,000	20	100%	5,000	5,000
MAC Tools Tank (North Area)	Clean / Inspectg	12,000	3	100%	4,000	4,000
MAC Tools Tank (North Area)	Renovation	120,000	15	100%	8,000	8,000
Booster Station / PRV						
Hammer Rd (BS with PRV - New)		7,500	20	100%	375	375
Home St. (PRV)		1,500	20	100%	75	75
Distribution						
Hydrant Replacement	380 hydrants and hydrant valve	1,710,000	50	100%	34,200	34,200
Valve Replacement	700 main valves	840,000	40	100%	21,000	21,000

Predictive Maintenance Escrow (Saving for Future Projects)

<u>Task Name</u>	<u>Description</u>	<u>Total Cost</u>	<u>When (yrs)</u>	<u>Percentage from savings</u>	<u>Estimated Annual Cost</u>	<u>Additional Cost</u>
Metering						
Water Meters	1775 - 3/4 inch meters	443,750	20	100%	22,188	22,188
Water Meters	31 - 1 inch meters	10,850	20	100%	543	543
Water Meters	6 - 1 1/2 inch meters	3,000	20	100%	150	150
Water Meters	25 - 2 inch meters	18,750	20	100%	938	938
Water Meters	6 - 3 inch meter	9,000	20	100%	450	450
Water Meters	5 - 4 inch meter	15,000	20	100%	750	750
Water Meters	6 - 6 inch meter	30,000	20	100%	1,500	1,500
AMI Equipment / Misc		100,000	20	100%	5,000	5,000
Service Equipment						
Service Truck	2 - 3/4 Truck	90,000	10	100%	9,000	9,000
Dump Truck		170,000	20	100%	8,500	8,500
Backhoe	1/2 Replace	50,000	25	100%	2,000	2,000
Vac Trailer		35,000	20	100%	1,750	1,750
		-			-	-
Total Predictive Maintenance Escrow		3,913,850			141,593	141,593

Funding Long-term Capital Replacement



Nothing lasts forever. Everything will wear out eventually. Plan for asset replacement!

- A Capital Improvement Escrow should be established to address long-term capital needs of the utility.
- Replacement costs should be identified in your asset inventory.
- Remaining useful life should be adjusted to reflect present asset condition.
- Asset condition and performance will become the basis for renovation and replacement.
- Time is your friend. The longer the time period the more you can save.

Sample Estimated Replacement Reserve

Source	Description	Capital Replacement Reserve
Well #1		\$264,000
Well #3		\$264,000
Well #4 - Under Construction		\$264,000
Well #5 - Under Construction		\$264,000
Subtotal		\$1,056,000
Treatment		
Detention Tank	26,800 gallons	\$175,540
Detention Tank	9,400 gallons	\$61,570
Waste Holding Tank		\$182,843
Main Plant Controls		\$226,000
Clearwell #1		\$100,000
Clearwell #2		\$150,000
Subtotal		\$895,953
Storage		
Above Ground Tank - Standpipe	400,000	\$870,300
Distribution		
16.17 Miles (89,361 linear feet) of 1.5" to 16"	292 Line Segments	\$11,812,115
Total Estimated Replacement Costs		
		\$14,634,368
Annual Escrow 20% over 50 years		
		\$58,537

Replace with Ben's slide

Capital Improvement Planning



A capital renewal / replacement program is necessary to overcome the effects of time.

Better capital decisions will save money with sensible predictive renovations installed before further damage occurs.

Additional savings can be achieved by scheduling asset replacement to avoid unproductive maintenance.

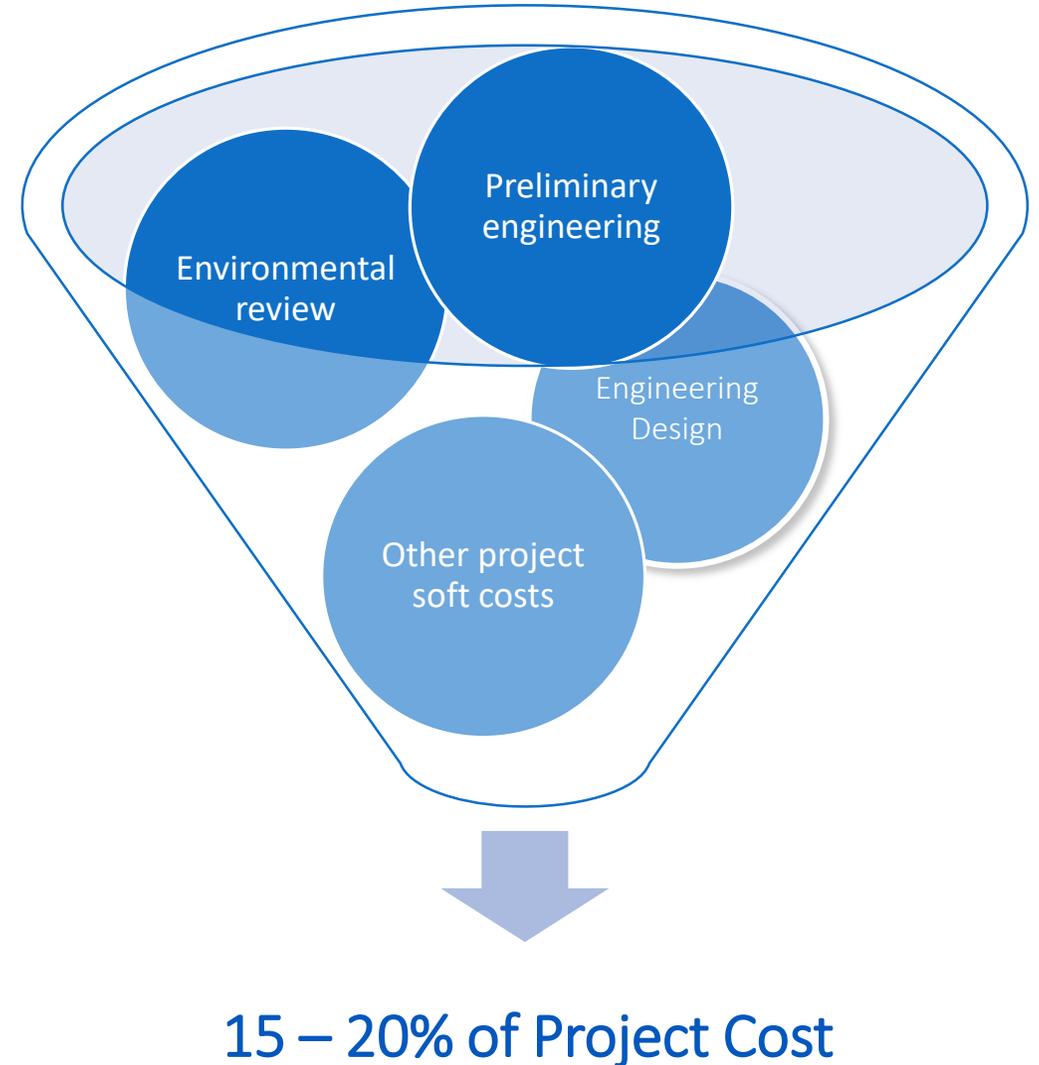
Paying for Asset Replacement

Theory: Save enough to pay for replacement with cash (depreciation)

Practice: Saving enough cash has often been unrealistic, but that is changing.

'Shovel Ready' necessary for Grant & Low Interest Loans

Ohio RCAP recommends saving at least enough to cover project soft cost.



Capital Projects Plan

Project Name/Description	Funding	Total Cost										
			2018	2019	2020	2021	2022	2023	2024	2025	2026	2027
			<i>Planned</i>		<i>Planned</i>							
Line replacement - E Main to Old 32, Coral to Bear Track 8"	\$506K OPWC/\$63K Local	\$63,000	\$63,000									
SCADA For 2 Towers/3 Bulk Water Connections	Local	\$30,000		\$30,000								
Gay Street Line Replacement - Phase 1 - Front to 4th - 440 lf of transite pipe replacement with 8 " pipe	OPWC/\$1.1m TPC/\$511K Local/Third Water	\$170,000		\$170,000								
Gay Street Line Replacement - Phase 2 - 4th to 8th -transite pipe replacement with 8 " pipe	OPWC/\$755K TPC/\$160K Third Water	\$160,000				\$160,000						
Line replacement - Meter pit Old 32 to Williamsburg/Bantan 8", around 4,546 lf	Local/OPWC (local cash 10%, rest 0% loan 30 yrs)	\$650,078						\$650,078				
Line replacement - North on Tollgate to SR 276 8", around 4,385 lf	OEPA WSRLA 2% 30 yrs	\$627,055								\$627,055		
Line replacement 4" to 6" downtown business district and neighborhood, varies segments (around 7,740 lf) and around 1,400 lf (2 blocks original construction) feet of replacement on Main, i.e. excessive breaks.	OEPA WSRLA 2% 30 yrs	\$1,307,020										\$1,307,020
TOTAL		\$3,007,153	\$63,000	\$200,000	\$0	\$160,000	\$0	\$650,078	\$0	\$627,055	\$0	\$1,307,020



Incorporating AM into the Operating Budget

	<u>2014</u>	<u>2015</u>	<u>2016</u>	<u>2017</u>	<u>2018</u>	<u>Methodology</u>	<u>Typical Year</u>
Operating Supplies and Materials	42,888	29,260	29,984	25,321	26,421	Avg 2015 to 2018	27,746
Repairs and Maintenance	-	4,614	940	1,485	3,205	Avg 2015 to 2018	2,561
Improved Preventative Maintenance			-			Asset Management	47,729
Non-typical Expenditures	<u>-</u>	<u>-</u>	<u>-</u>	<u>-</u>	<u>-</u>		<u>-</u>
Total WW Collection Expenses	554,016	513,832	456,966	500,381	514,819		565,687
Water Operating Expenses	678,709	642,465	590,416	648,278	676,293		722,960
Capital Cost							
Debt Service	47,510	47,565	47,549	47,668	53,461	Avg 2015 & 2017	143,357
Other - Capital Outlay	33,000	21,721	20,894	9,221	45,449	Avg 2014 & 2018	26,057
Emergency Fund						Inflationary Adj.	3,100
Debt Service Reserve - Rainy Day Fund						1/10th New Debt	9,570
Predictive Maintenance Escrow Water I&R Fund	12,000	12,000	12,000	12,000	12,000	Asset Management	128,063
Capital Improvement Escrow						Asset Management	49,600
Non-typical Revenues	<u>-</u>	<u>-</u>	<u>-</u>	<u>-</u>	<u>-</u>		<u>-</u>
Total Capital Expenses	92,510	81,286	80,443	68,889	110,909		359,746
Total Expenses	771,218	723,751	670,859	717,167	787,202		1,082,706



Monitoring Financial Health

Show me the Cash?

- ❑ Specific “savings” or reserve accounts should be established to help future decision makers understand the necessity of what seems like large fund balances.
- ❑ Capital improvement reserves must withstand the political storms which will occur during the asset’s lifecycle.
- ❑ Future decision makers should be trained to understand and respect the asset management accomplishment of their predecessors.



Minimum Escrow Levels: 'Rules of Thumb'



Operating Account (Checking Account)	<ul style="list-style-type: none">• <i>12.5% of Operating Expenses, i.e. 45 days of Working Capital</i>
Emergency Fund (Savings Account)	<ul style="list-style-type: none">• <i>12.5% of Operating Expenses, i.e. 45 days of Working Capital</i>• <i>Replenish as soon as possible after use</i>
Debt Service Reserve (Rainy Day Fund)	<ul style="list-style-type: none">• <i>1 year's Debt Service in Escrow</i>• <i>Build Fund at 10% of Annual Debt Service</i>
Predictive Maintenance Escrow (Rehabilitation /Replacement Reserve)	<ul style="list-style-type: none">• <i>2.5% of Annual Revenue for Scheduled Work or</i>• <i>Cash Reserves for 100% of Predictive Maintenance Costs</i>
Capital Improvement Escrow	<ul style="list-style-type: none">• <i>Cash reserves for 10 - 20% of Large Projects Costs: Engineering, Permitting, & Environmental Reports</i>• <i>Build Fund over Several Years Based on CIP</i>

Annual Rate Review

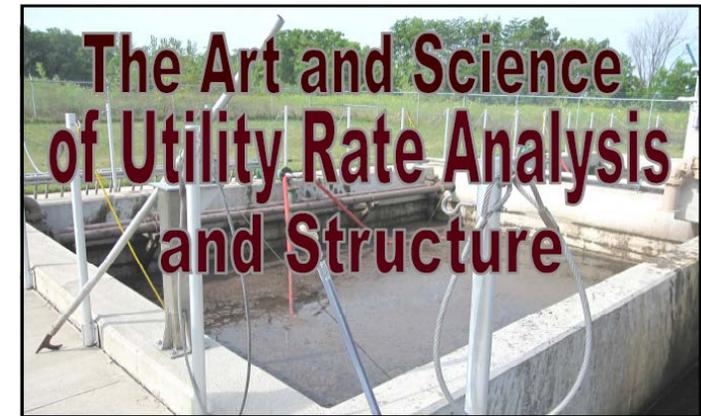


Determining Revenue Sufficiency

- Data Collection
- Analysis of Historical Data
- Documentation of Typical Year Operating Budget
- Recognize the Impact of Inflation
- Addition of \$ for Improved Maintenance
- Include Targets for Predictive Maintenance
- Include Targets for Long-term Capital Replacement
- Include Targets for Capital Projects Plan
- Develop Ten-Year Budget of Expenses FIRST and then model revenue needs, i.e. impacts to rates.



We wrote the book!



Things to consider when reviewing Water Rates

- 📌 The Water Utility Rate is **NOT a tax**; it is a charge for providing a desired service. This service costs money.
- 📌 The Customer is NOT paying for the water;..... **he/she is paying for the water to be: treated, pumped and piped to their home/business.** This process requires steel, iron and electrical processes, which all have a very tough enemy called **“Rust/Corrosion”**.
- 📌 The utility rate is the board’s **NUMBER ONE TOOL** to remain independent, safe, reliable, and free of outside regulatory intervention.





Even if you “cut” expenses in order to maintain a “status quo” utility rate level; inflation will continue to drive your utility’s REQUIRED costs up, while your system’s age increases, and the distribution system becomes older and less reliable.

Your Water Utility rate MUST encompass a “Full Cost Recovery”

- Daily O&M Costs
- Debt
- Salaries and Benefits
- Preventative and Predictive Maintenance
- Replacement of Short Lived Assets
- Financing payments for Capital Improvement Projects
- Emergency Escrow for a TRUE EMERGENCY

Question to AVOID when reviewing Water Rates:

~~What is our rate in comparison to neighboring water systems?~~

Instead Ask:

Are they same size/type/age of system?

Do they have a comparable amount of customers?

What is the Medium Household Income of that Community in comparison to yours?

How much debt do they have and why?

Are they **ACTUALLY** maintaining their system with an Asset Management Philosophy?



Example – Communicating Impacts to Rates, i.e. Revenue Sufficiency Needs

- Utility needs to adjust minimum/usage rates by 15% 2020 - 2022, and then inflationary increases of 3% thereafter.
- In 2020, the above constitutes an increase of around \$3.50 per month if average usage (4,308 per month), \$42 annually. Equates to around 0.67% of MHI.
- 2021, increase around \$4.00 per month, \$48.00 annually and 0.77% of MHI.
2022, increase around \$4.60 per month, \$55.50 annually and 0.89% of MHI.

Around .008 cents per gallon for safe drinking water 24/7!

Affordable Rates

ODOD / CDBG	Single	\$30.00
	Combined	\$60.00
OWDA	Water	1.1% of MHI
	Sewer	1.5% of MHI
	Combined	2.6% of MHI
USDA / RD	Single	1.5% of MHI
	Combined	3.0% of MHI



MHI data has been compiled by US Census Bureau.

Demographic information on your community can be found at <https://factfinder.census.gov/>.

Note on Rate Adjustments

Opposition usually declines if the customer:

- Understands why the rate increase is necessary to operate the system on a financially sound basis. Rates need to be **sufficient** for your system's needs; not your neighbors.
- Has a clear understanding of how the rate change will be implemented. How much and when!
- Believe that each customer group is paying it's fair share of the cost.

Share the calculations with your customers and emphasize the consequences of not enacting necessary rate increases?



Questions?



www.ohiorcap.org

www.rcapgis.org





**Division of Drinking
and Groundwaters**



Please be sure to complete your Evaluation Form