MME

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Infrastructure Funding Trends in Michigan

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UMBAUGH
It's all about experience

Prein&Newhof

Introductions

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Today's Talk

1. What's SAW?
2. What's the AMP process?
3. Fun facts!
4. What will it cost?
5. What are communities doing?
6. Trends and the future of Michigan infrastructure funding
7. Public Involvement

Infrastructure

What do infrastructure and opossums have in common?

They both get no respect.

Why are we here?

Why are we here?

- Love the feeling of power you get from telling a Council what to do
- Enjoy listening to people explain problems to you so you can finally understand how the world works
- Prefer working all day AND attending evening meetings because you have nothing else you want to do

Why are we here?

- Because we like to help people and help our communities prosper

- How do we do that?
  - By helping them understand what needs to be done so they can help themselves and each other
  - We are the drivers of their cars.

Design Life Cycles

- Sanitary 75 years
- Water 80 years
- Streets 25 years
- Storm 75 years
- Sidewalks 20 years
- Pathways 20 years
- Facilities
  - Buildings
  - Parks
  - Structures

Better cover you assets

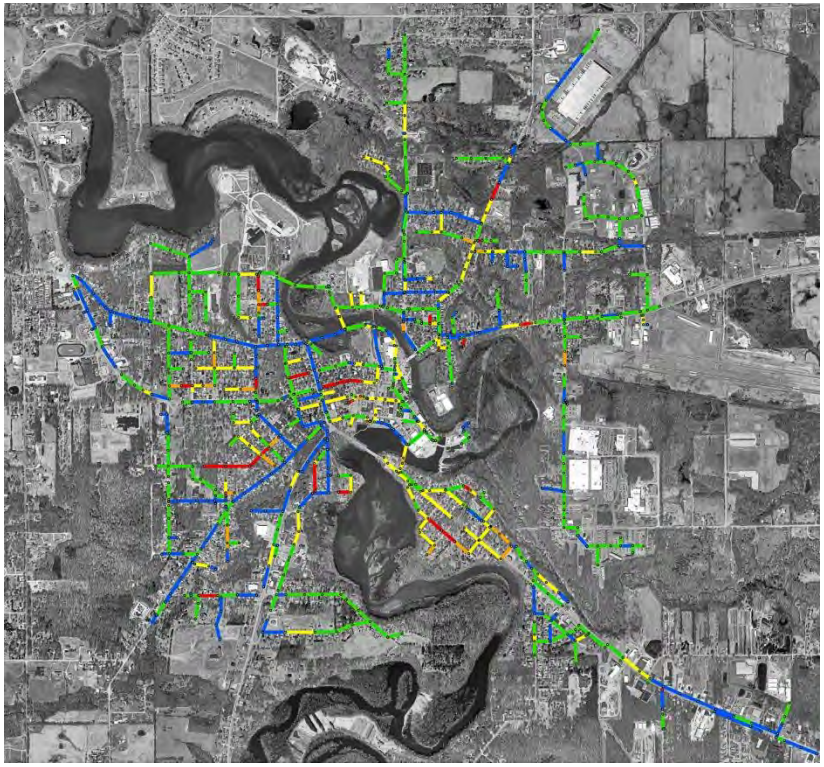
- Do you have a full inventory of what you own and what it's worth?
- Do you know what your total O&M and replacement costs will likely be for the next 5-10 years?

What's SAW?

- WW and SW AMPs
- $2 Million Cap Per Community
- 686 Applicants
- $546 Million Requested
- Lottery Over 5 'Rounds'
- $ 451,589,273 Awarded Over 5 Rounds

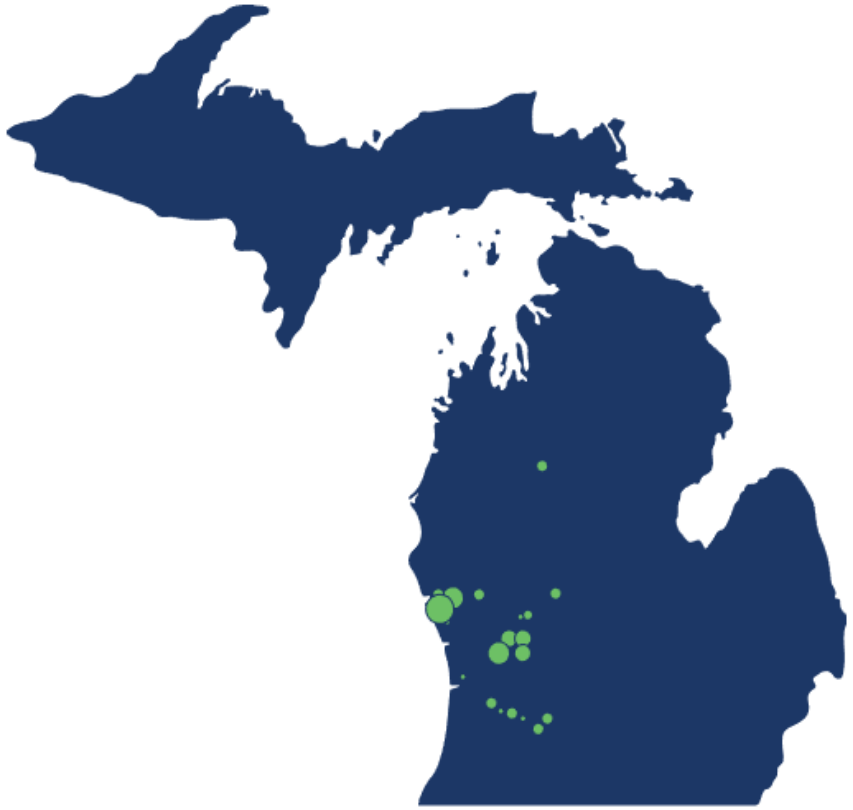
What's the AMP Process?

- Inventory & Map
- Assess Condition & Failure Risk, Consequences
- Define Level of Service
- Develop AMP and CIP
- Fund it



Data Universe

- Based on data from 22 communities
  - 14 Stormwater systems
  - 21 Wastewater systems
- Total population 250,000
- From 1,400 to 40,000 in size
- 402 miles of storm sewers
- 978 miles of sanitary sewers
- 2.3 million data points

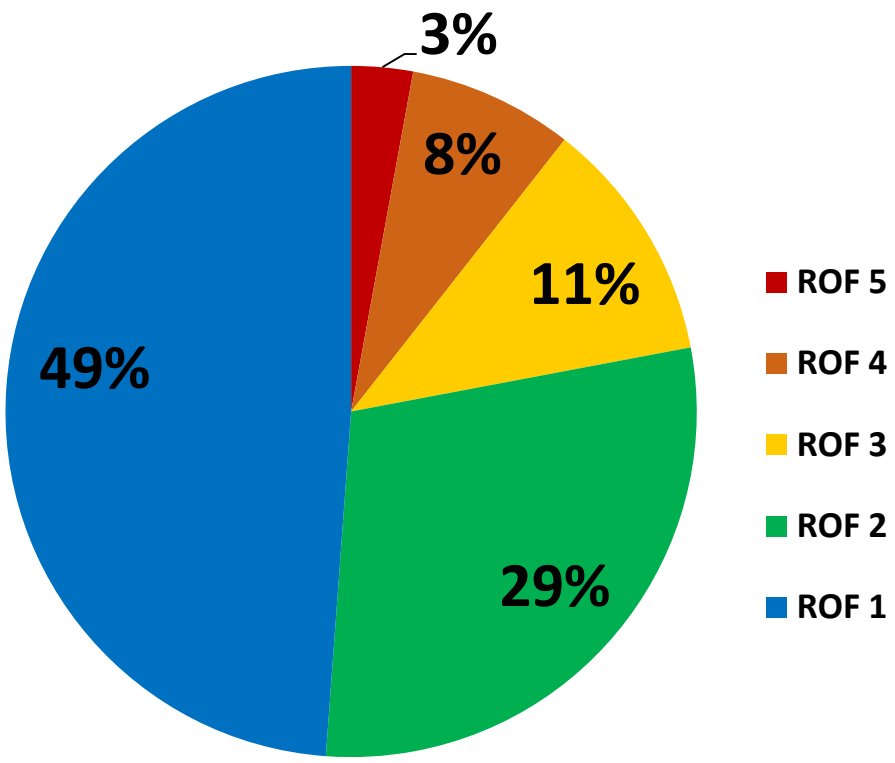


Risk of Failure 1 to 5

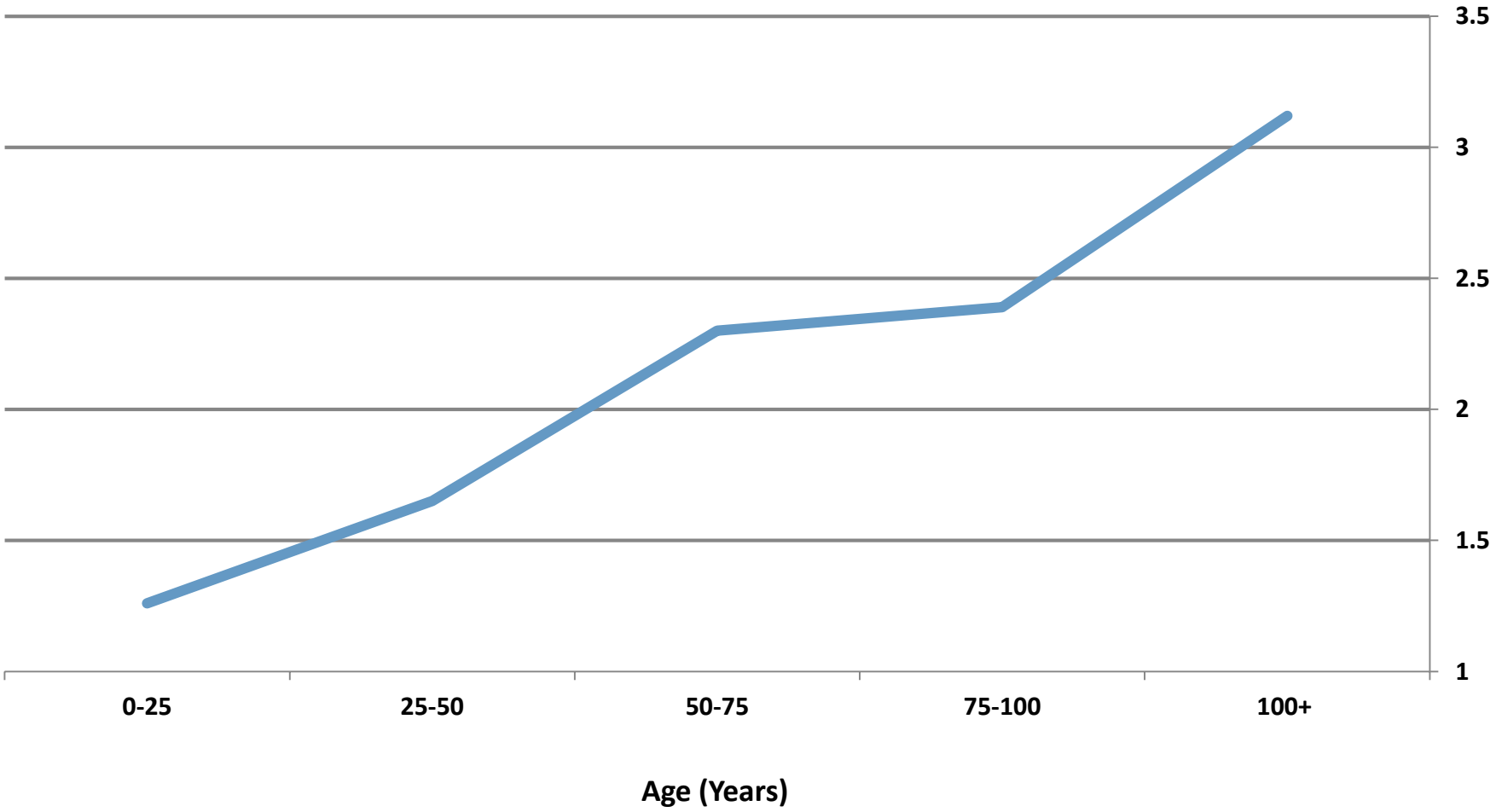
Sanitary Sewers

- 978 miles
- 4” to 54”
- Average size: 10.2”
- Average ROF: 1.76 (1 to 5 scale)
- Average Criticality: 5.3 (1 to 25 scale)
- Average age: 43.9 years
- Oldest installed in 1889!

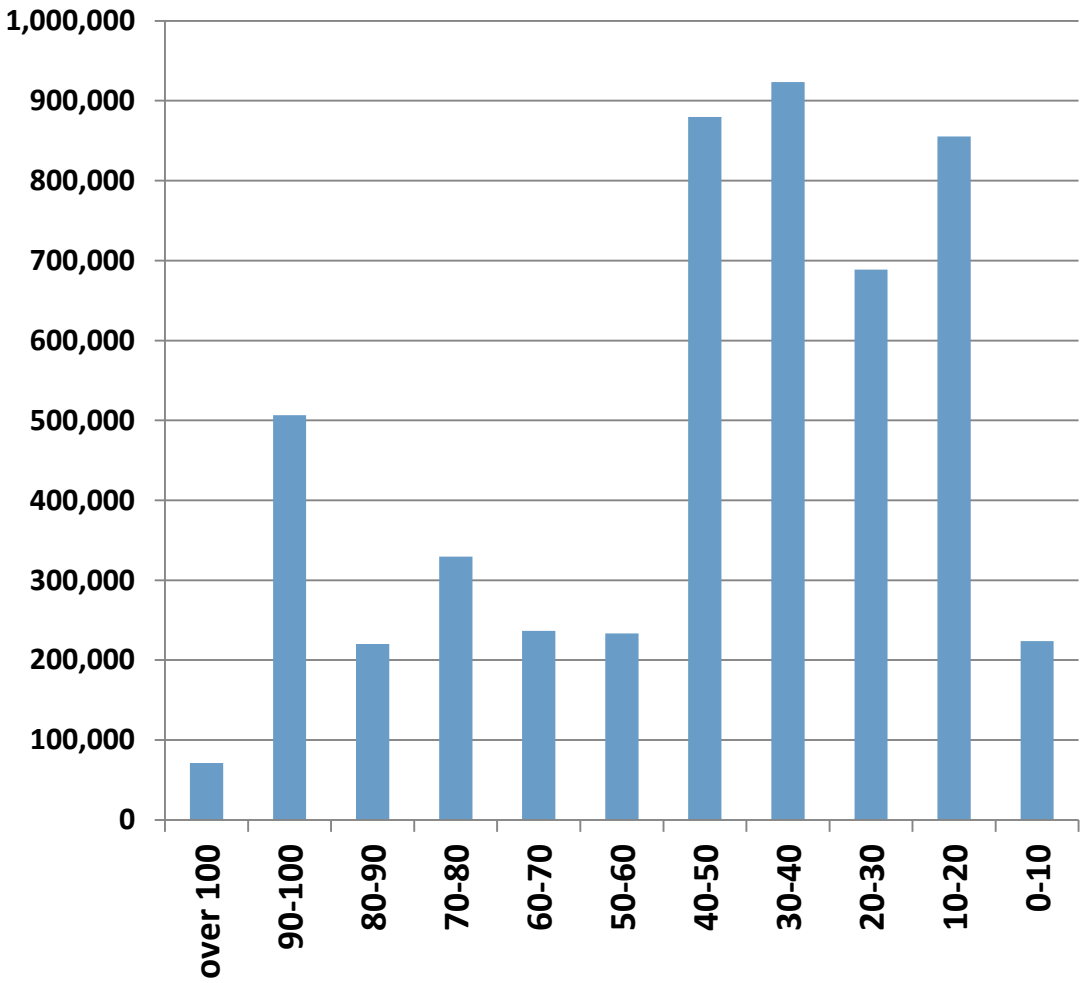
Sanitary ROFs



Average Sanitary ROF by Pipe Age

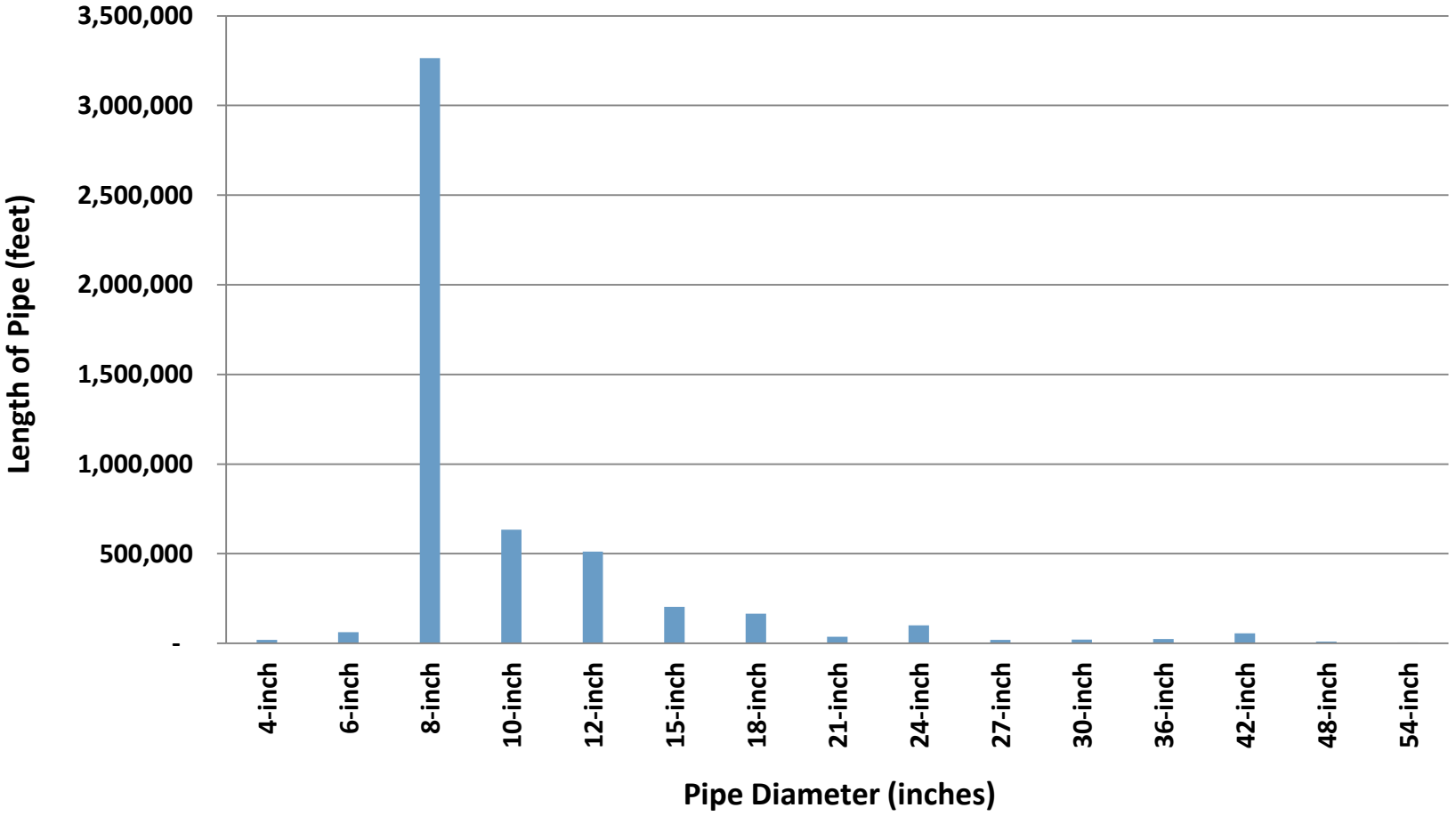


Length (feet) of Sanitary Sewer by Age

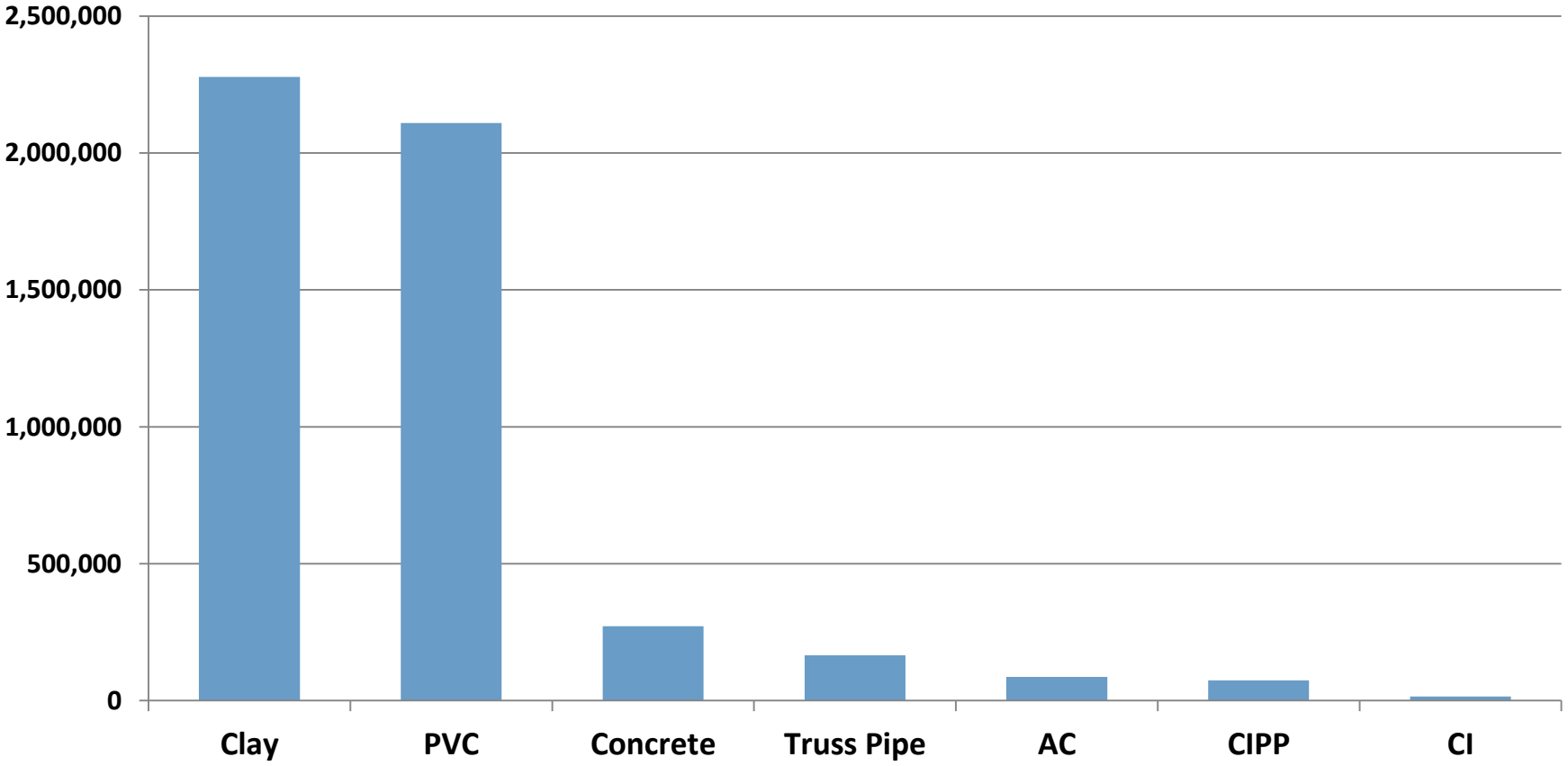


Age	Ft	Miles
over 100	71,181.4	13.5
90-100	506,541.1	95.9
80-90	220,285.5	41.7
70-80	329,596.5	62.4
60-70	236,678.4	44.8
50-60	233,311.6	44.2
40-50	879,627.6	166.6
30-40	923,227.2	174.9
20-30	688,733.0	130.4
10-20	855,437.7	162.0
0-10	223,696.8	42.4

Total Sanitary Lengths by Diameter



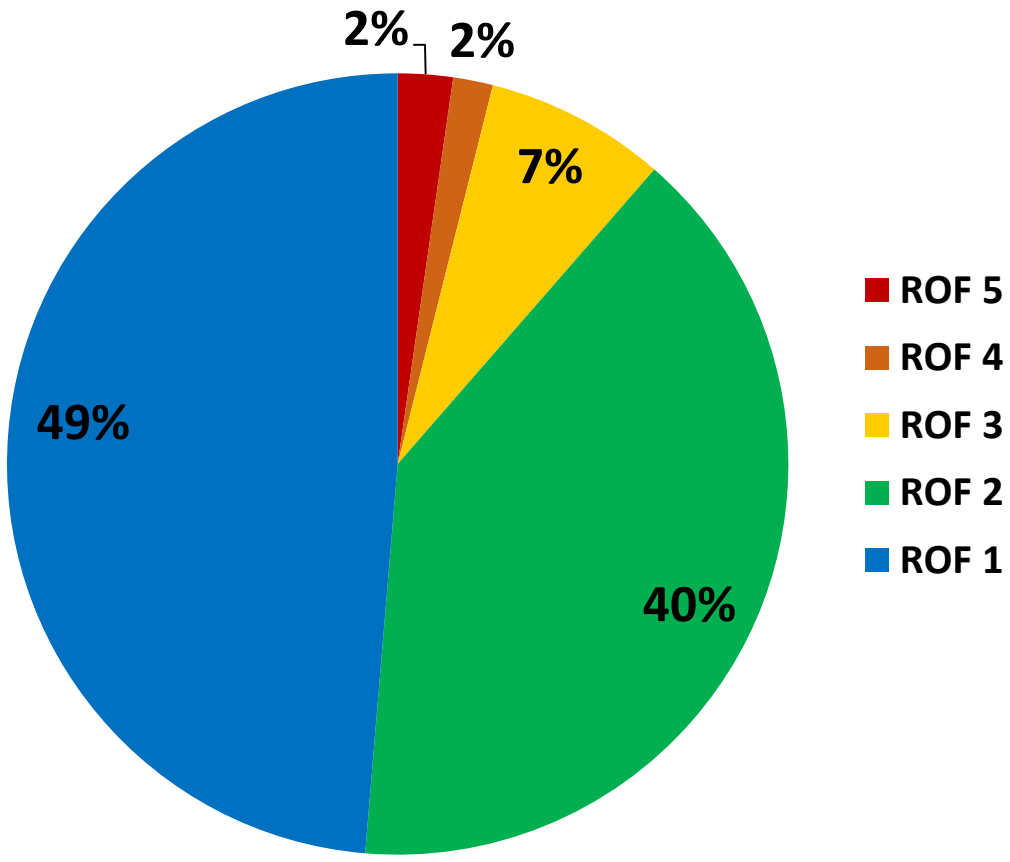
Total Sanitary Lengths by Type



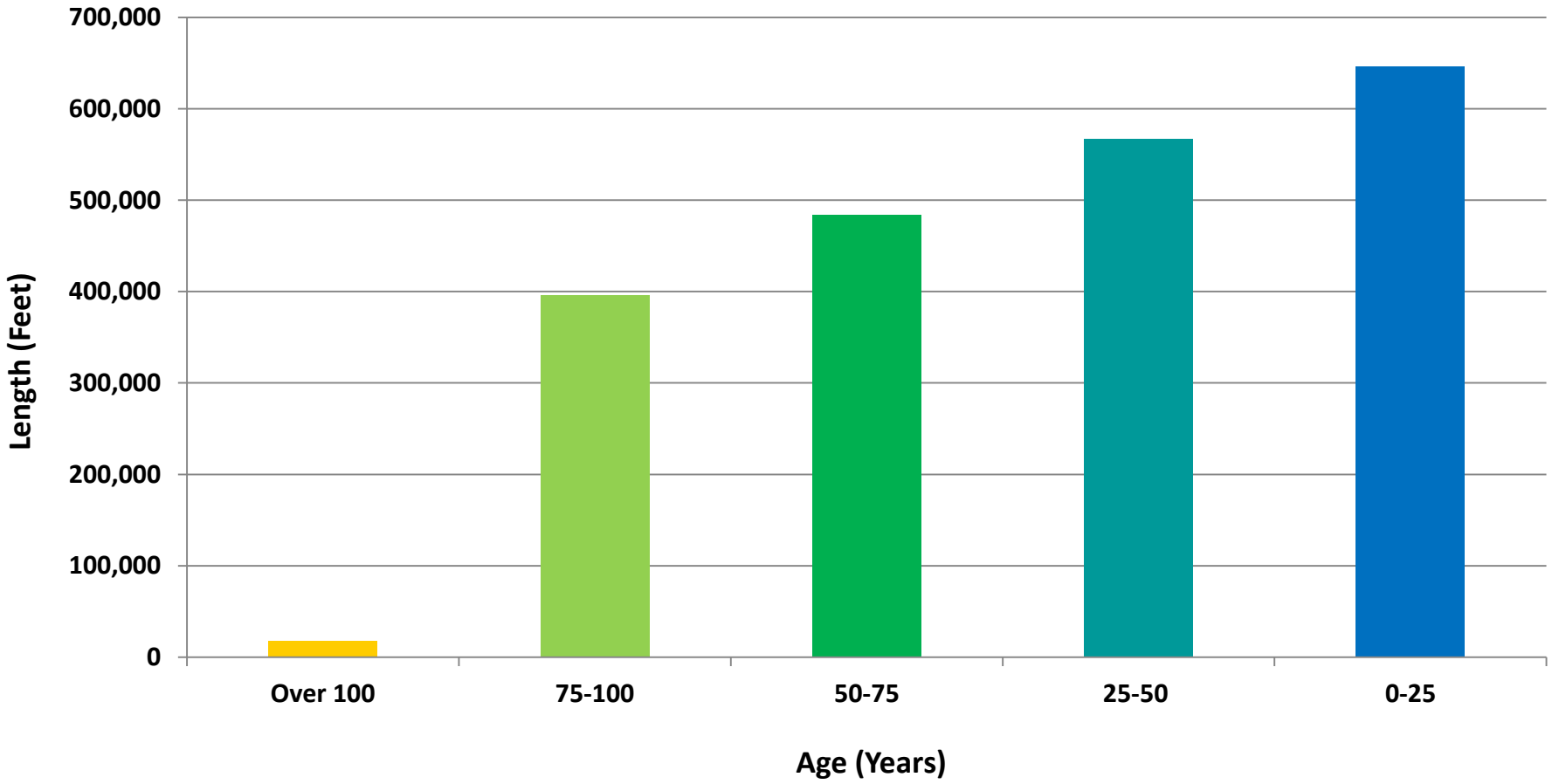
Storm Sewers

- 402 miles
- 4” – 60” in diameter
- Average Size: 16.9” in diameter
- Average ROF: 1.59 (1 to 5 scale)
- Average Criticality: 4.8 (1 to 25 scale)
- Average Age: 43 years
- Oldest installed in 1902

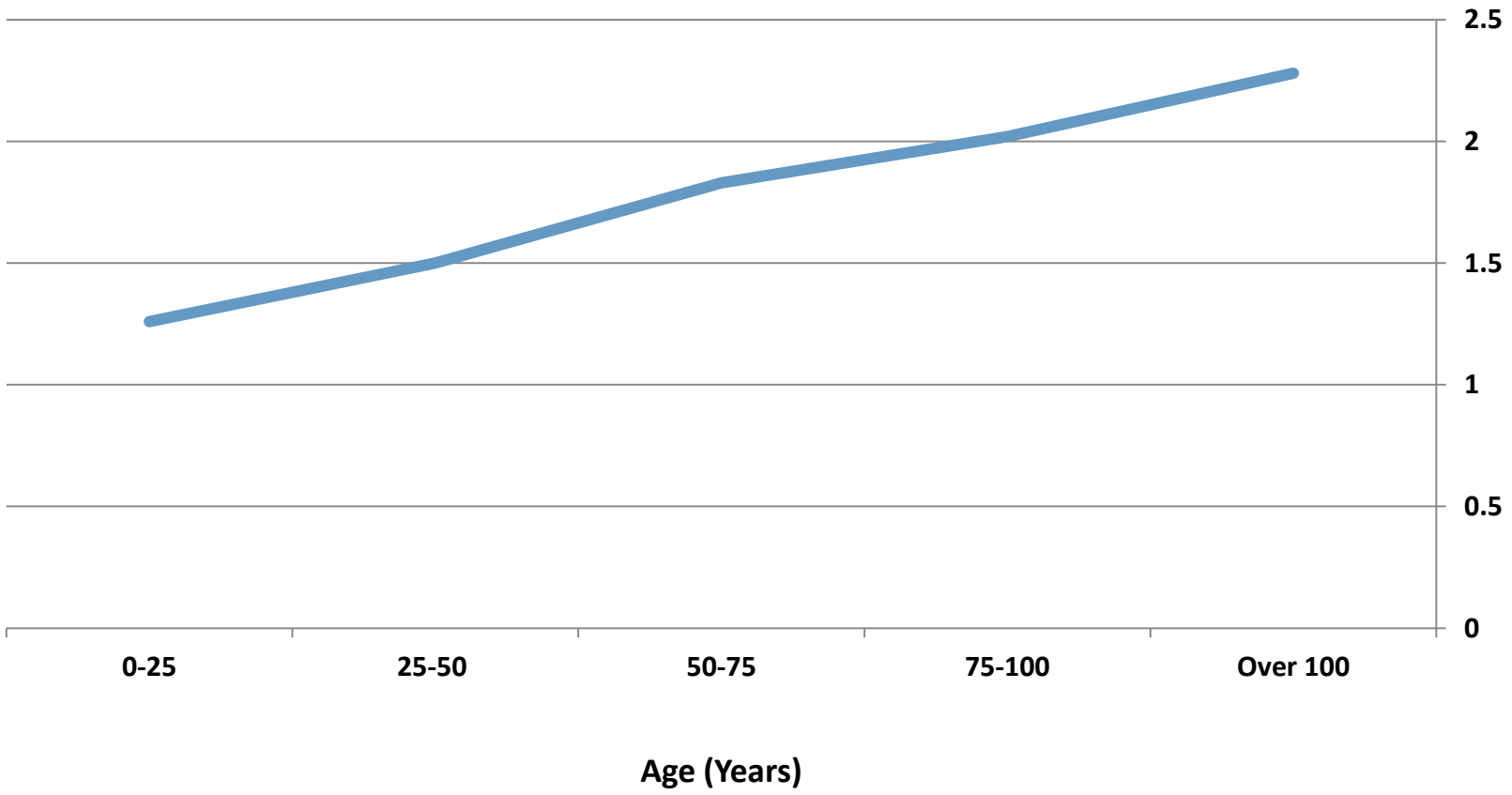
Storm Sewer ROFs



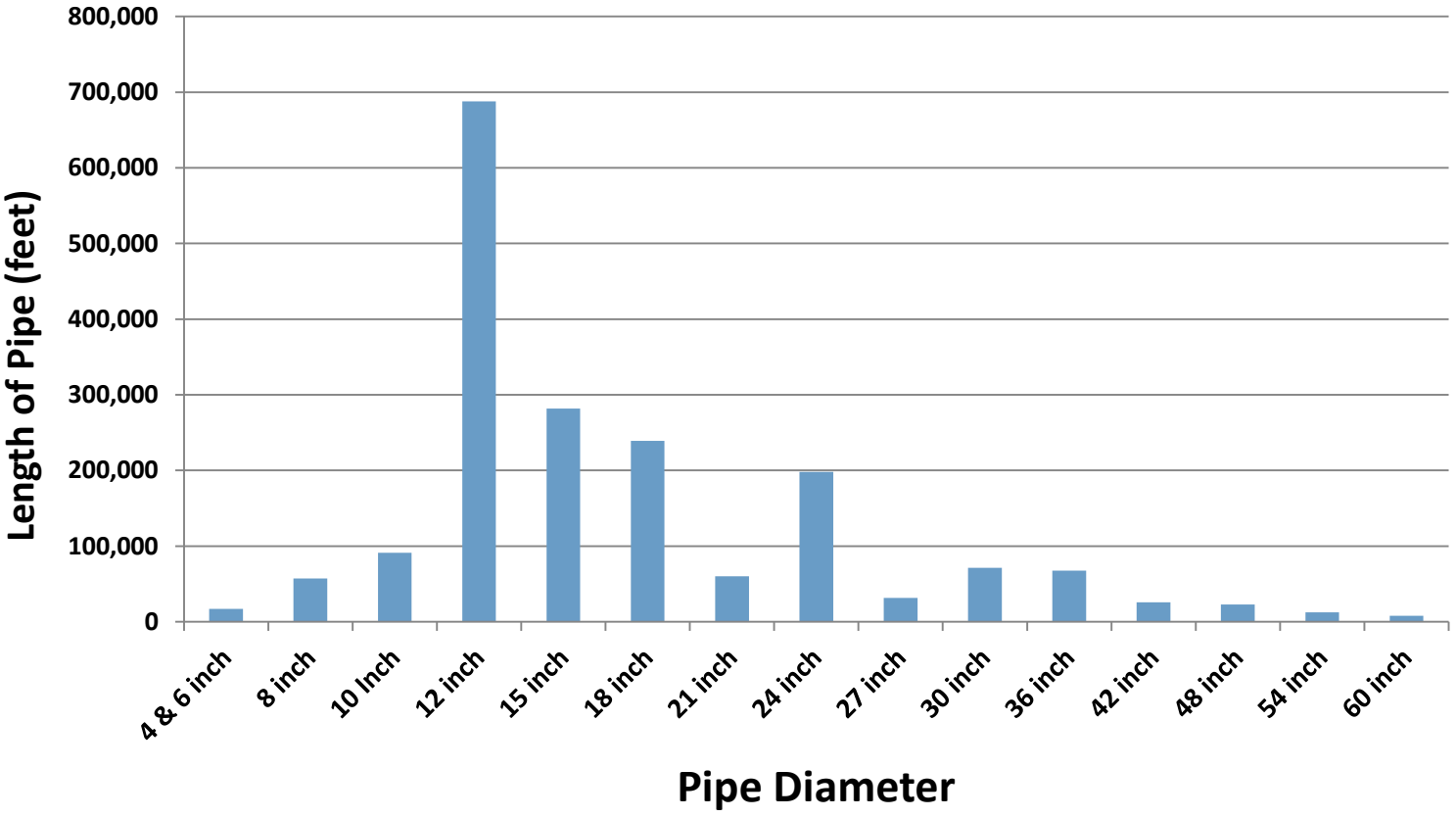
Storm Sewer Lengths by Age



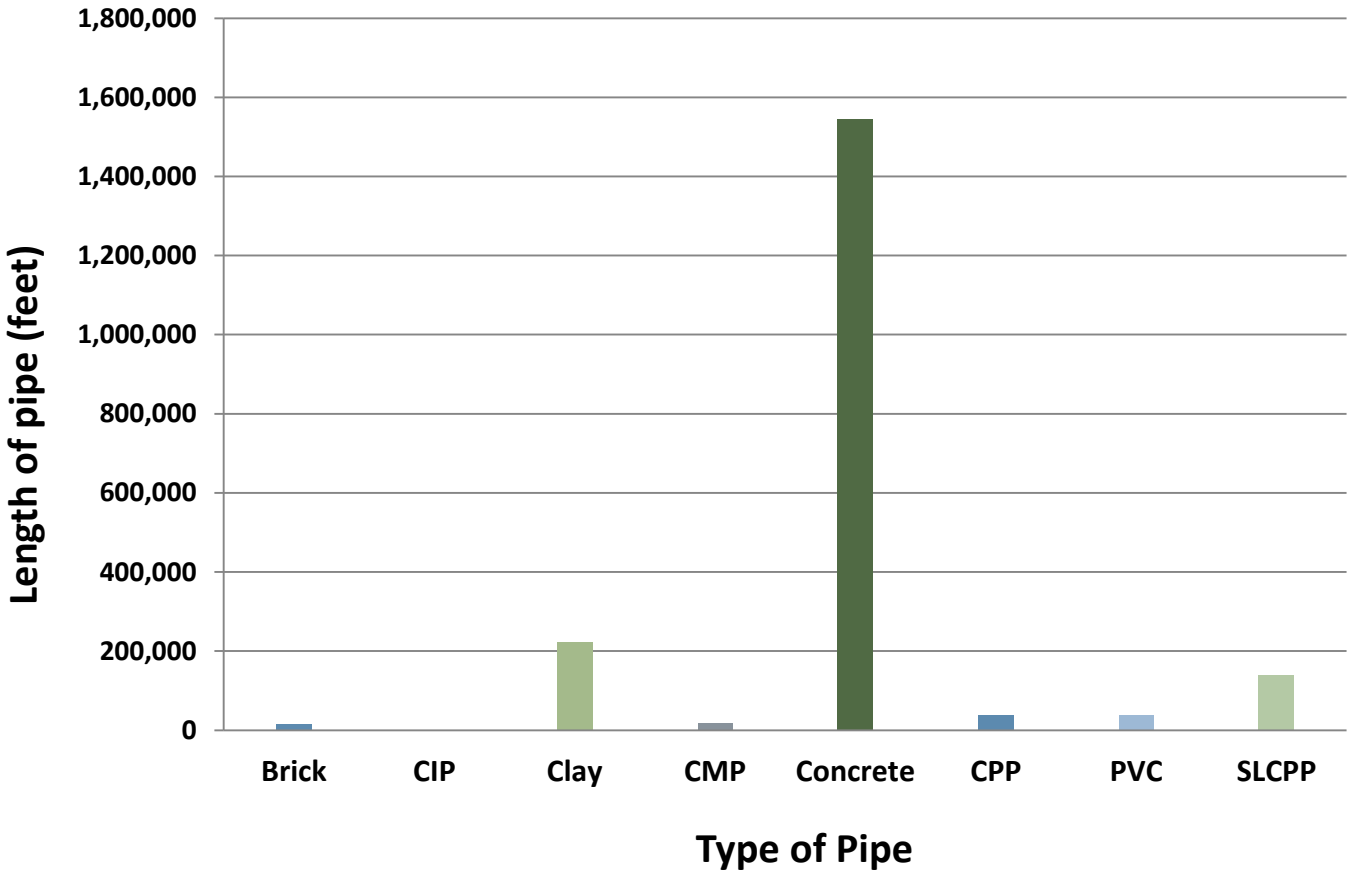
Storm ROFs by Pipe Age



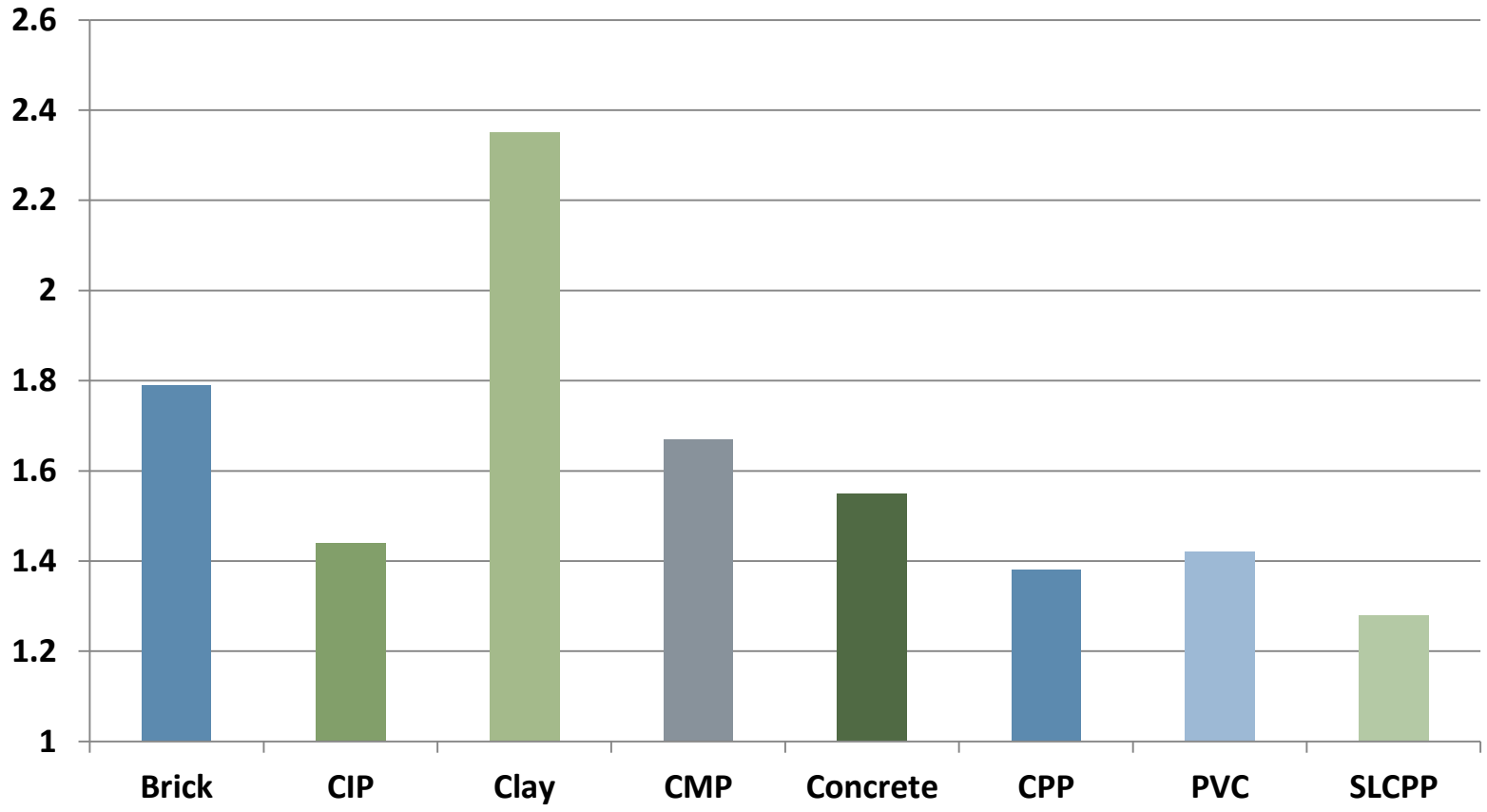
Storm Sewers by Size



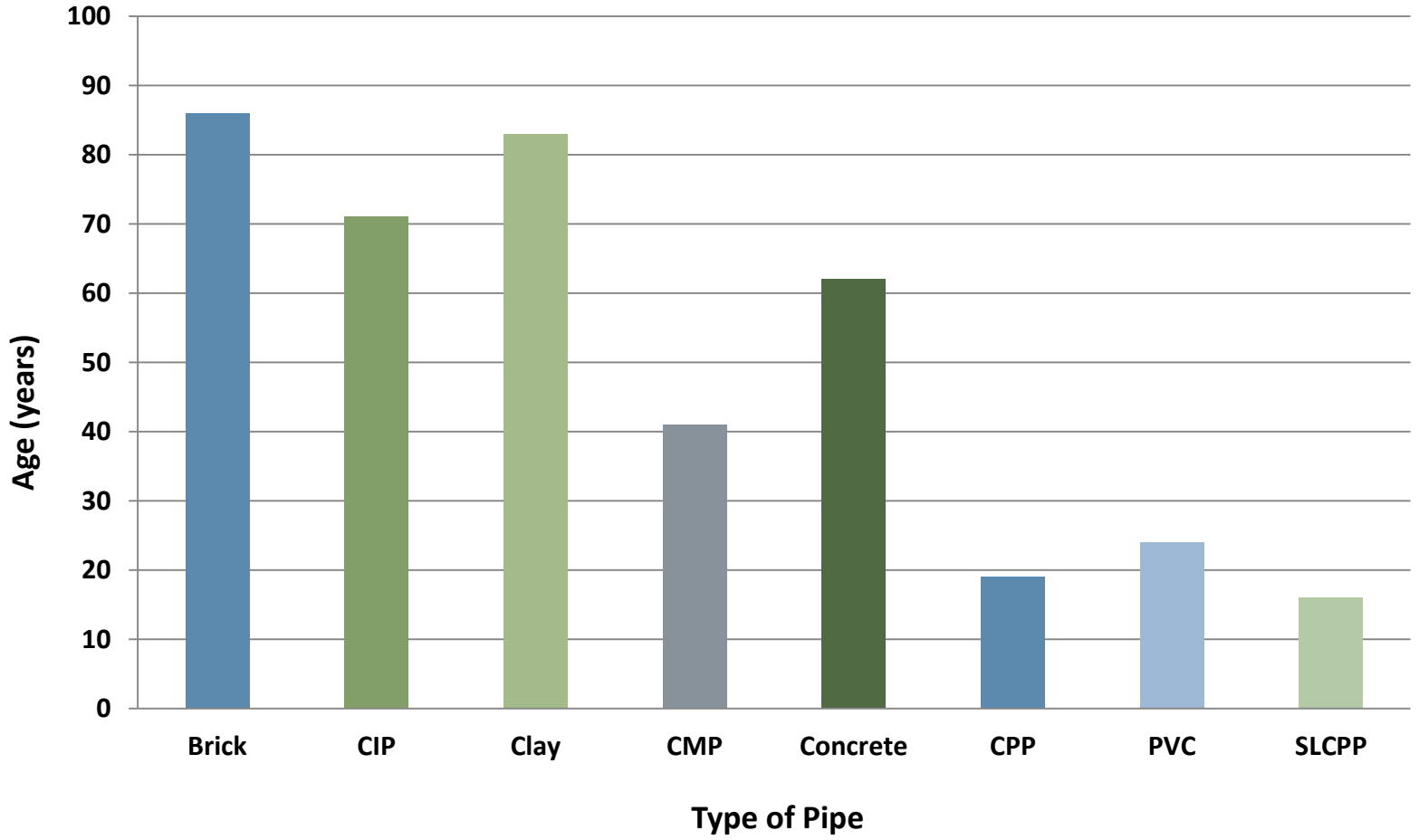
Storm Sewers by Pipe Type



Storm Sewer Avg ROF by Pipe Type



Storm Sewer by Avg Age



Pipe Footprint

8.4 Feet Storm Sewer

20.6 Feet Sanitary Sewer

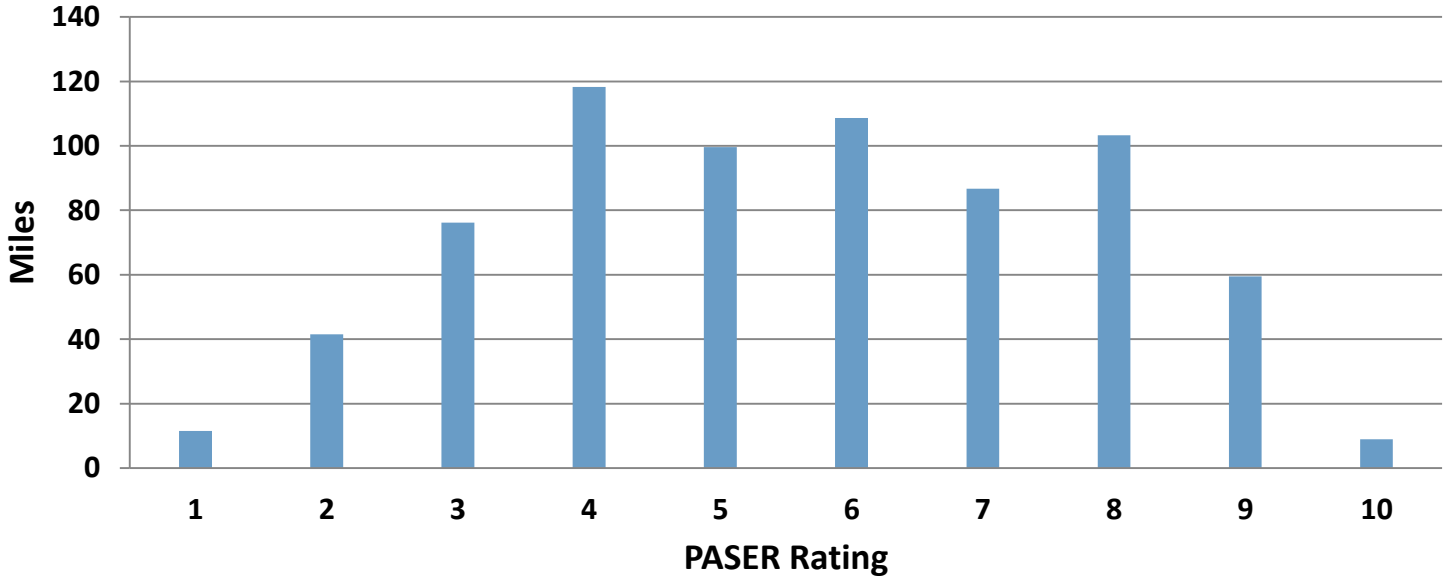
Our pipe footprint:

For every person in our study area, there is **8.4** feet of storm sewer pipe and **20.6** feet of sanitary sewer pipe.

Road PASERs

10 (new) to 1 (failed)

Avg. PASER: 5.10



PASER Ratings

- **18.7%** of total pavement has **8-10** PASER Ratings.
- **24.0%** of total pavement has **1-3** PASER Ratings.
- **1.3%** of all **8, 9, & 10** pavement has pipe underneath with ROF of **4 & 5** (poor and failing).

What Will It Cost?

At a minimum, communities should be expecting

- $500/year per household for sanitary sewer
- $300/year per household for storm sewer
- $500/year per household for water
- $500/year per household for roads

What are Communities Doing?

- Some are changing their rates based on sound and thorough Asset Management Plans (approximately 90%)
- Some are sticking their heads in the sand and holding the political status quo of no rate changes (8%)
- Some are splitting the difference (2%)
- Long term community stability/viability is at stake

SAW, Part Deux. Can we do more?

- 32 SAW Applicants unfunded after Round 5 as of 11/2017
- 132 communities with WW did not apply!
- 21 CIR, SAW, WAMPs
- Legislative support

Financial Advisors

- Important to take into account all assets when reviewing financial liabilities
  - Utilities
  - Roads
  - Buildings
  - Properties (parks, parking lots, other facilities)
- Debt limits are critical when determining what to secure funds with (not the same as funding sources)

Incorporating Asset Management into Rates:

Have Communities' Approach to Rates Changed?

Answer: “I hope so or Asset Management Plans will fail.”

Two Observations:

[1] Asset Management Planning is an excellent and very successful public policy tool.

[2] Ongoing AMP may have a very high failure rate.

Lets look at the process…

- Asset inventory and assessment
- Development of long-term capital investment
- Financial forecasting

The elements of financial forecasting…

- Rates
- Operating expenses
- Capital investment
- Cash balance

What has been the experience to date?

SUCCESS!!!

Unquestionably, AMP is an excellent public policy tool for communities in that they are able to see how they can financially manage the needs of the system.

Specifically, why has it been so successful?

- Long-term rate management is far more effective than short-term adjustments.

Can we stop here on a high note?

No!

We say that an AMP is “a living document”, but what does that mean as a practical process over time?

First of all, it must be recognized that the critical focal point is the

ANNUAL BUDGET

This is the most likely point of AMP failure.

Without Annual Budget support, created by user rate adjustment, the capital investment will not occur.

So why is the Annual Budget a problem … just update the CIP and the cash flow forecast, right?

Ideally, yes.

Practically speaking, no.

The AMP takes a lot of effort and time to develop. There are meetings with policy makers to educate them such that they recognize the need and understand the financial responsibility.

- Will this take place every year?
- Will there be a policy maker turnover?
- Will it become part of the budget process?
- Will a rate adjustment be adopted to support the budget?

AMP Financial Management

How can we avoid failure?

Institute a procedure to stand in the place of completely going through the AMP process…

[1] Update the cash flow forecast every year as part of the budget process. This should be done internally so that the cash flow forecast is an integral part of the budget.

[2] The CIP portion should be updated as needed.

[3] The rate track should be updated as needed.

What is the difference?

The AMP process is initiated by the engineer.

The AMP *update* process is initiated by the budget process.

Questions?

GIVING THEM THE NEWS

Public Meetings: What to expect and how to mediate

FIVE STAGES OF GRIEF – A HUMAN PROCESS

Actually an accurate summary of what the brain goes through when facing any loss.

1. *Denial*
2. *Anger*
3. *Bargaining*
4. *Depression*
5. *Acceptance*

DENIAL

YOU MAY HEAR:

"These numbers can't be right."

"You're making this up, or got it wrong somehow."

RESPOND WITH:

Gentle re-assertion of the facts. Objective information helps people move through denial.

ANGER

YOU MAY HEAR:

"This is your fault – you didn't do your job. How could anyone let it get this bad?"

RESPOND WITH:

This situation is a result of not investing enough in the maintenance of our infrastructure – we weren't proactive enough (no one wanted to pay more at the time)

STUCK IN ANGER?

Often people get stuck in the anger phase.

That's why the five stages are important to understand, even for the audience. If people can recognize that they're stuck in the anger phase, they can move forward and encourage others to move forward as well.

Understand what the anger's about – is it about the infrastructure or are they using this time as an outlet for something else?

People will stay angry until they feel heard.

- **Write down comments to prevent reiteration of the same points/concerns (large whiteboard or giant post-it – the comments need to be physically visible to everyone at the meeting)**

BARGAINING

YOU MAY HEAR:

"Can't we do something other than what you're proposing?"

"There's got to be another way. Find us a grant. Win the lottery."

RESPOND WITH:

- **This can be the hardest stage to move people through, because everyone thinks they are the "problem-solving expert."**
- **From the outset, it is CRITICAL to identify *only* the realistic options for moving forward. This can help them stay focused on their realistic choices.**

DEPRESSION

YOU MAY HEAR:

I guess there's no other way. This is reality, and we don't like it.

RESPOND WITH:

- **Provide realistic and attainable solutions**
- **Give realistic HOPE: Explain how the next actions will begin to solve this problem and create a better future.**

ACCEPTANCE

YOU MAY HEAR:

"We don't like it, but now we know, and we can take action to make the situation better."

RESPOND WITH:

GUIDANCE: Start explaining what the next actions are and give specific outcomes and timetables.