Water Infrastructure: Asset Management Is Happening!

Daniel J. Van Abs, PhD, PP/AICP

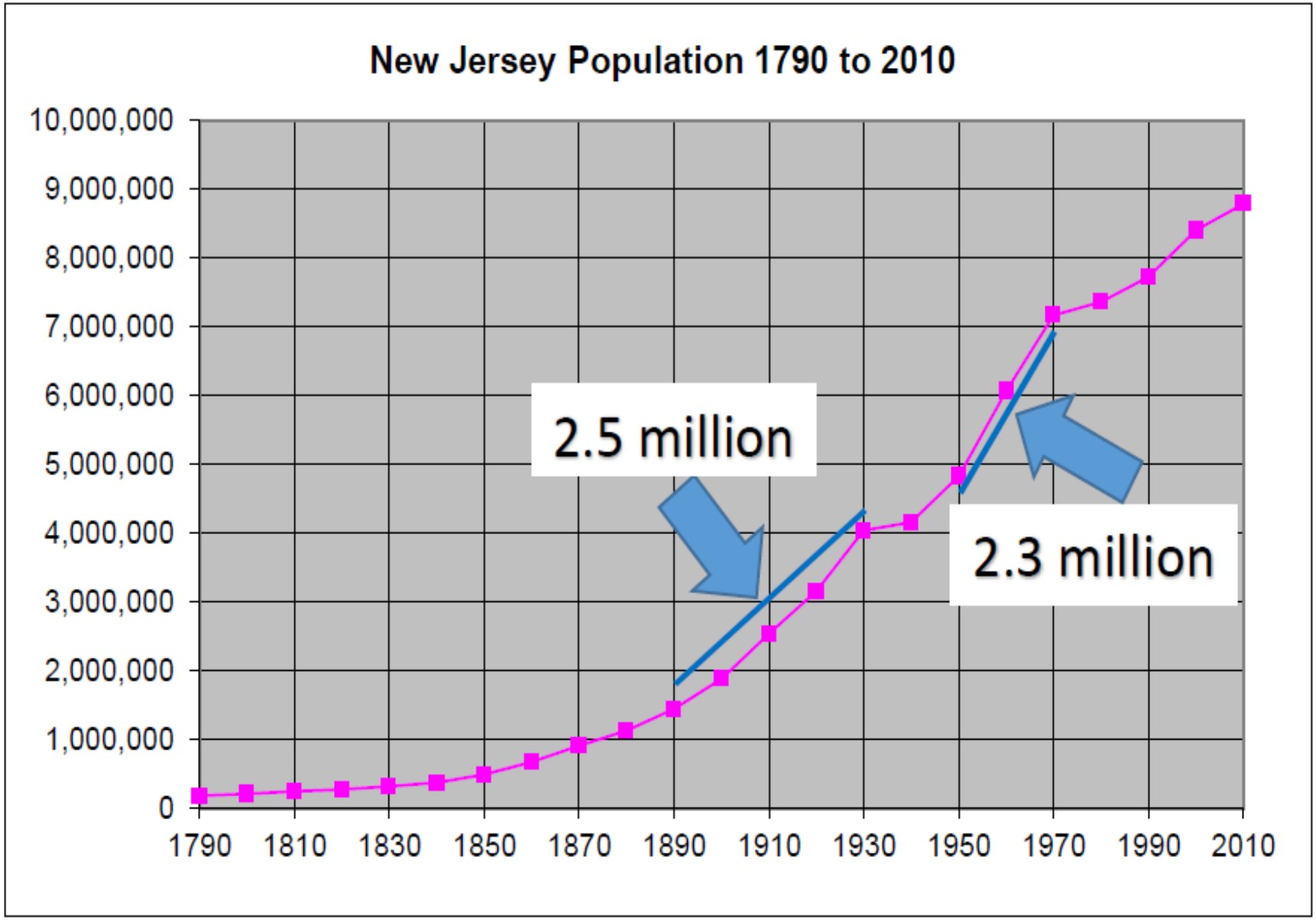
Associate Professor of Practice for Water, Society and Environment

Department of Human Ecology

SEBS-Rutgers

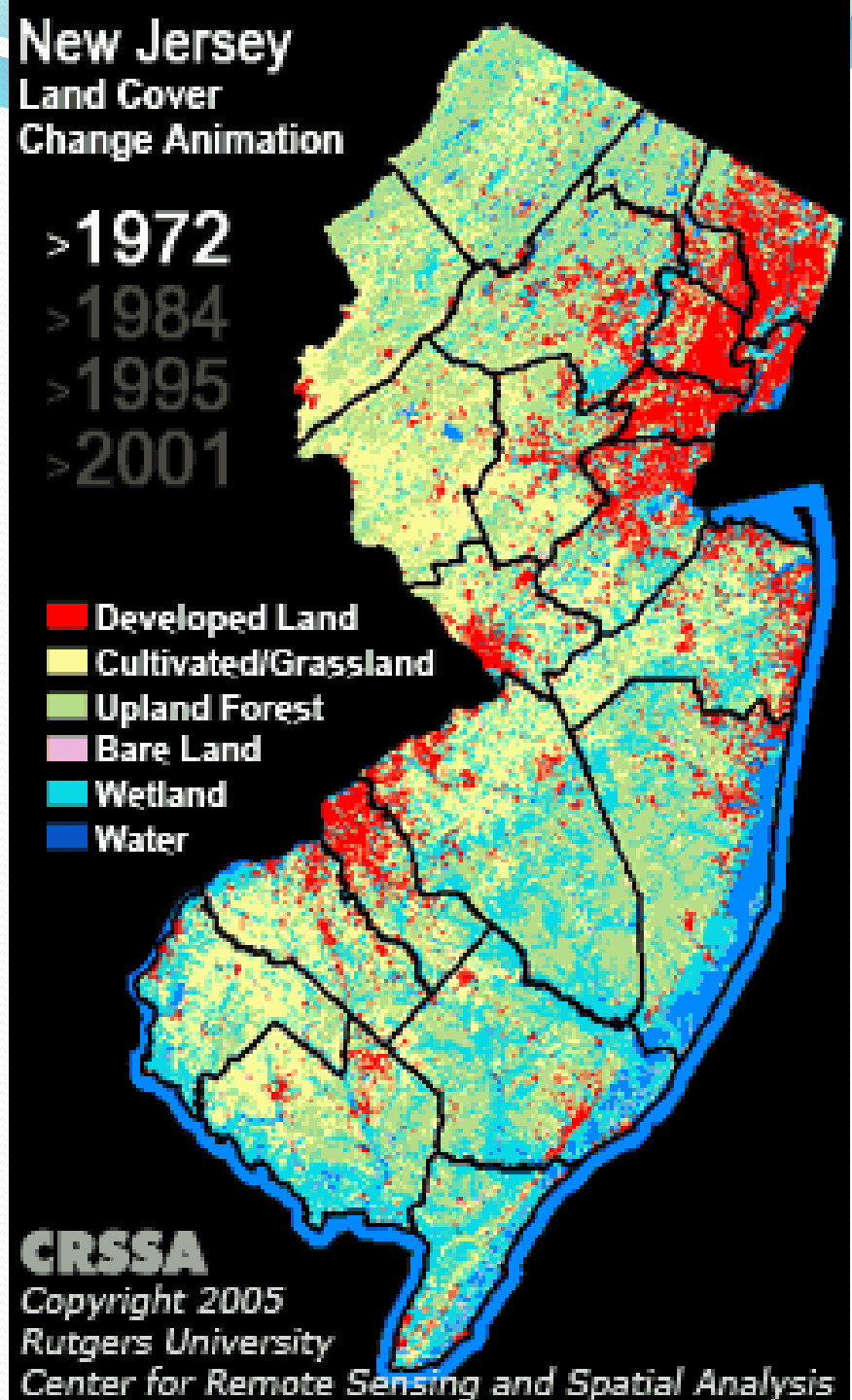
If we don’t pay attention, it is still a problem

Beever sidewalk art


New Jersey Population 1790 to 2010
10,000,000
9,000,000
8,000,000
7,000,000
6,000,000
5,000,000
4,000,000
3,000,000
2,000,000
1,000,000
0
1790
1810
1830
1850
1870
1890
1910
1930
1950
1970
1990
2010
2.5 million
2.3 million

Infrastructure

- Key Growth Periods
- Aging Distribution and Conveyance Systems
- Wastewater Treatment Plants
- Water Supply Treatment Plants



The Inevitable Future of Stuff

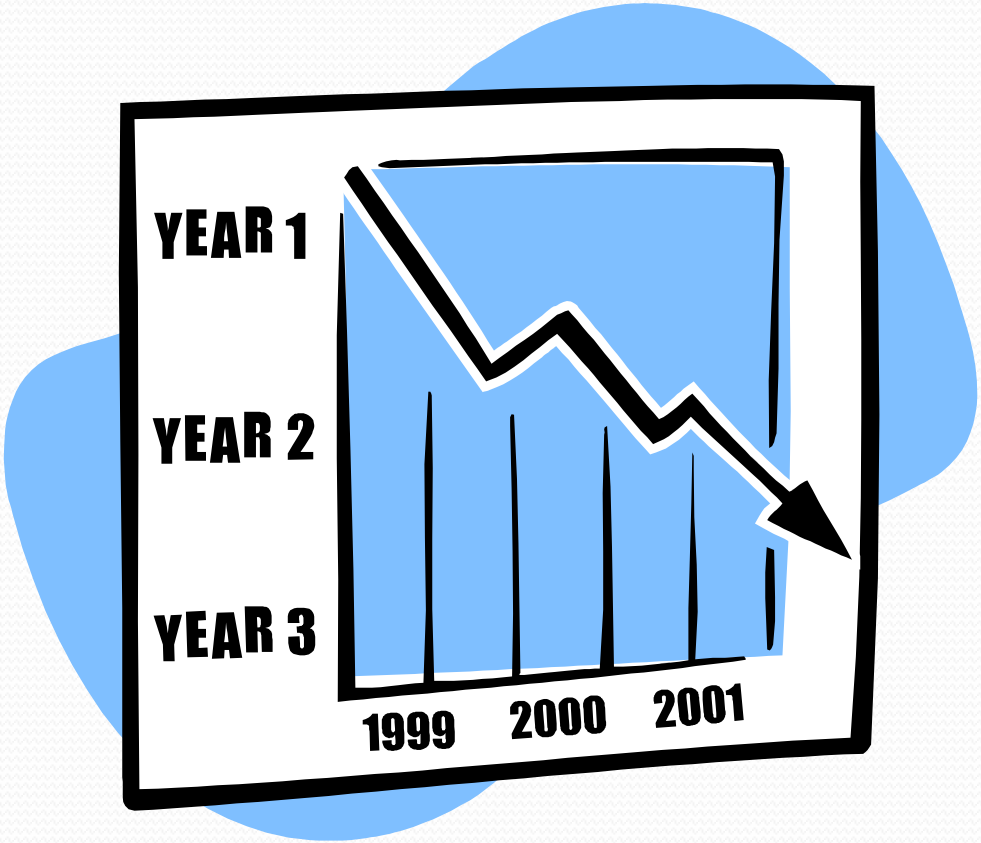
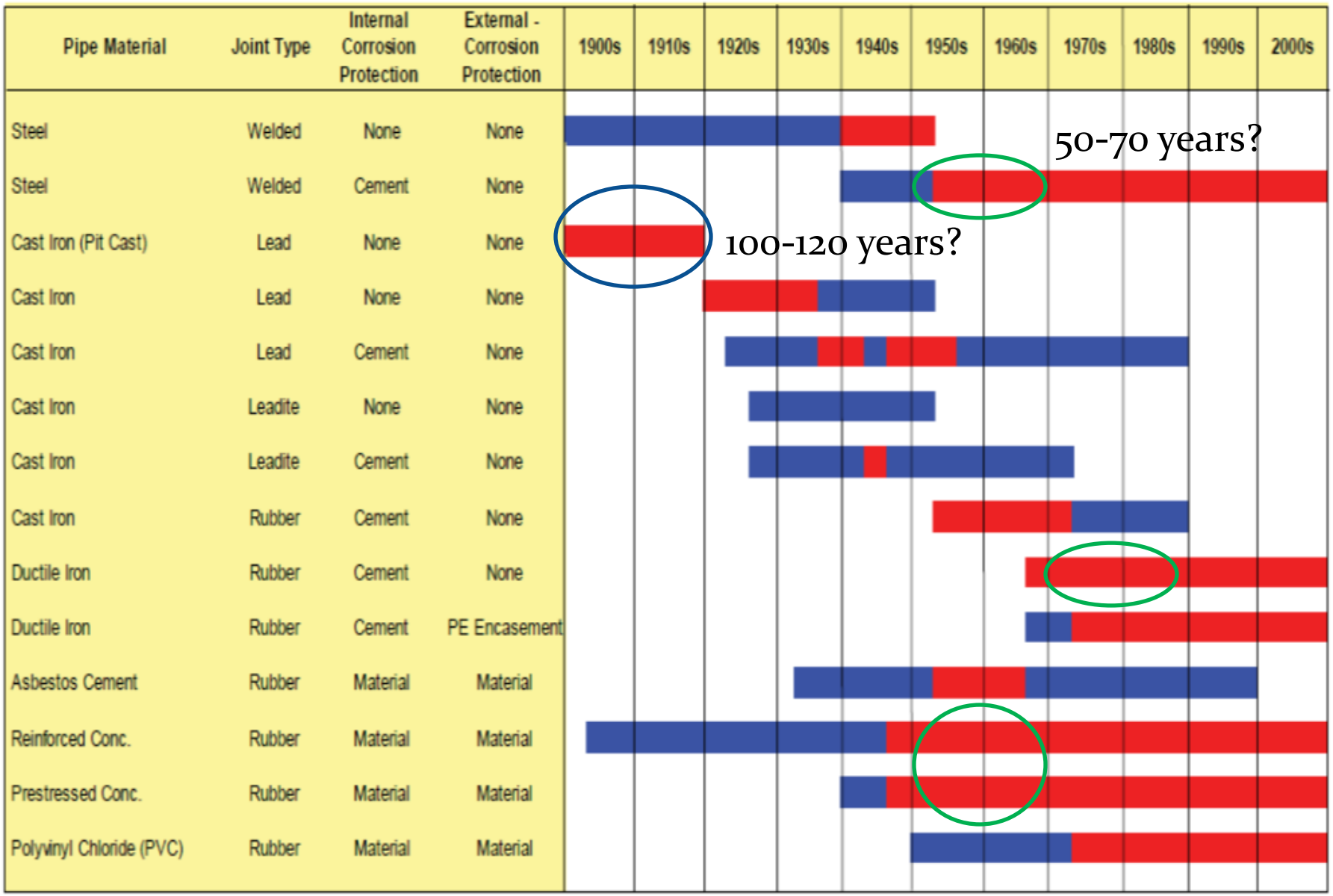


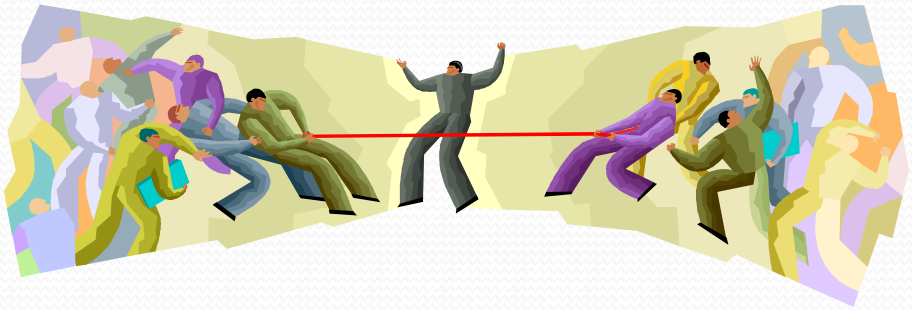
Figure 4: Historic Production and Use of Water Pipe by Material



AWWA. 2012. Buried No Longer

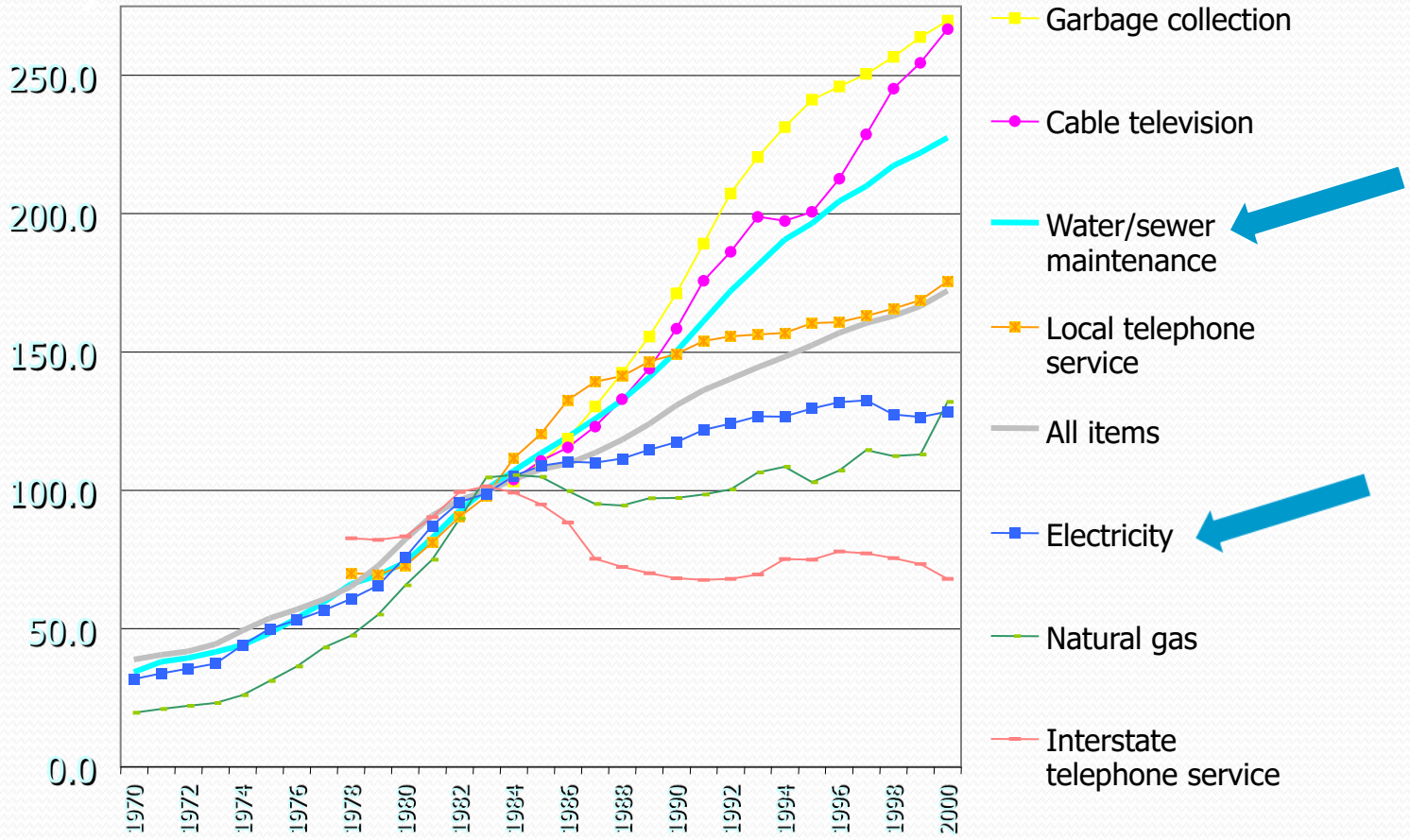
The Infrastructure Dilemma

- Public demands high quality services and environmental protection



- Public often (but not always) opposes rate increases
- Most water infrastructure not visible – no potholes!
- Result – system disinvestment and decay
- Result – catastrophic failures (e.g., sinkholes, geysers)
- Result – higher costs due to emergency repairs
- Result – higher energy costs due to old technology
- **Lesson** – Pay now, or pay later, but pay we will!

Utility Costs v Inflation



Source: USEPA

We are faced with insurmountable opportunities

Pogo

(the cartoon character)

Jersey Water Works

A **Collaborative** –
not an organization

- Community groups
- Environmental groups
- Planning groups
- Water utilities
- Governments from local to federal
- Other interests

NJDEP Asset Management

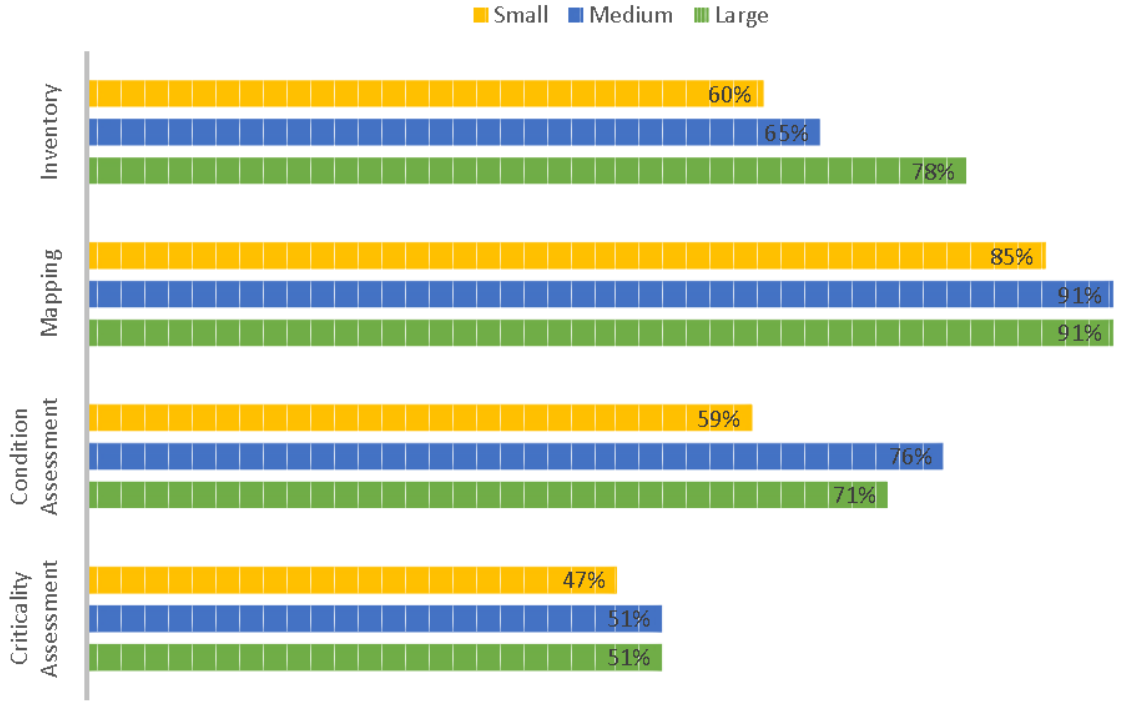
- **Guidance**: Asset management program guidance, WWTP O&M guidance, etc.
- **Survey**: 440 systems responded, of 580. Far more completion of AM planning steps than anticipated, but relatively few are complete.
- **Requirements**: CSO permits, new NJEIFP financing, problematic systems, future permits
- **Funding**: a critical issue. Proposed Intended Use Plan provides grants for small system asset management programs, and increases CSO and GI funding.
- **Ratepayers**: Will cover most costs, so cost efficiencies are a critical component of AM. Optimization.

Asset Management Steps

1. Performing an **inventory and condition assessment** of the assets (entire utility or for high-priority components)
2. **Defining level of service goals**, based on community goals
3. **Identifying critical assets** – those that have a high risk of failure and/or major consequences if they do fail.
4. **Establishing life-cycle costs**, including operations and maintenance, personnel and capital expenses.
5. **Developing an implementation strategy**, including funding, staffing, a schedule of prioritized short- and long-term actions, public communications, and responsible parties.

New Jersey Environmental Infrastructure Trust

Percentage of responding drinking water (DW) systems that have completed an aspect of the following AM components



Total DW Surveys Received By Size of System:

Small = 120

Medium = 99

Large = 224

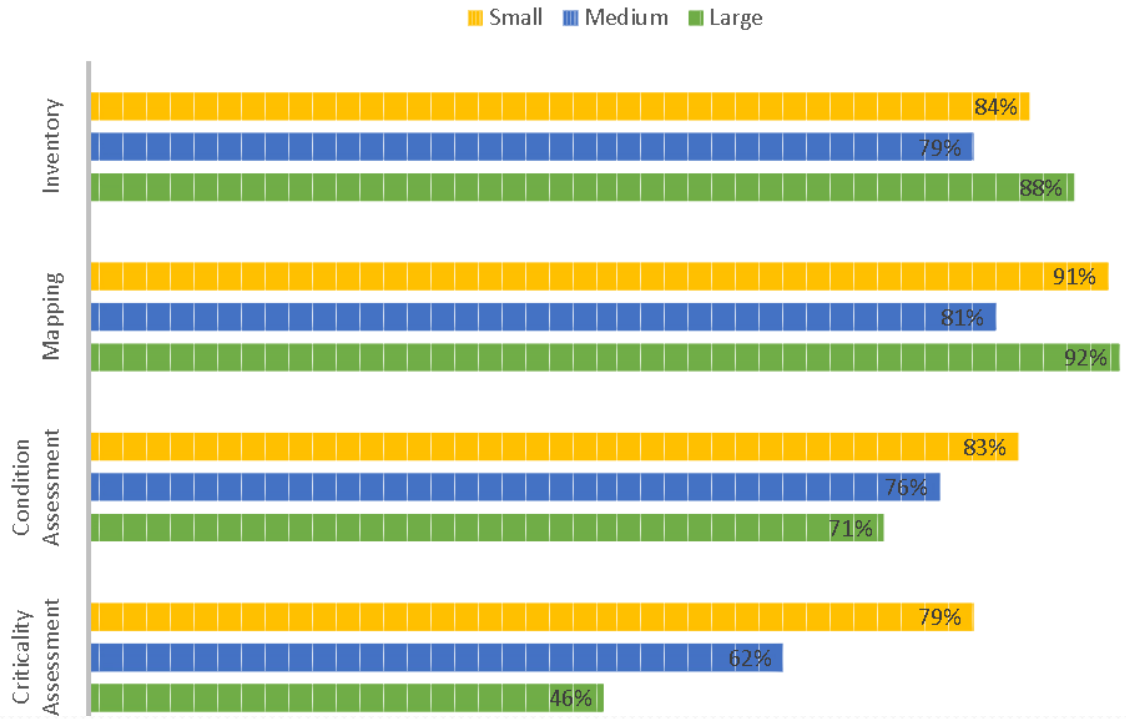
TOTAL = 443 Respondents

Note: The size of the DW Systems are based on the population served by that system:

- *Small = 501-3,300 people served*
- *Medium = 3,301-10,000*
- *Large = 10,001 or more*

New Jersey Environmental Infrastructure Trust

Percentage of responding wastewater (WW) systems that have completed an aspect of the following AM components



Total WW Surveys Received By Size of System:

Small = 70

Medium = 58

Large = 154

TOTAL = 282 Respondents

Note: The size of the WW Systems is determined by the average daily flow handled in million gallons per day (MGD) by the processing plant:

- *Small = Less than 0.1 MGD*
- *Medium = Greater than or equal to 0.1 MGD and less than 1.0 MGD*
- *Large = Greater than 1.0 MGD*

NJDEP Asset Management Guidance

See: www.nj.gov/dep/assetmanagement/index.html

AM and Sustainable Jersey

- Jersey Water Works will propose new actions that help municipalities be part of asset management
- Possible actions:
  - Municipal goals for asset management, regarding municipal utilities and MUAs
  - Training for municipal officials and staff
  - Engage public in Level of Service and other AM issues
  - Publishing and communicating AM results and trends
  - Incorporating key AM issues in the utility elements of municipal master plans

The Utility Role

- "Public utilities" need to be public – educate municipal officials, customers, etc. You are valuable, and unseen.
- Incorporate asset management into broader utility management efforts, such as system optimization
- Don't just be competent – show it!
- Help people understand the connection between utility services, public health and economic vitality
- Help municipalities engage in Sustainable Jersey

Contact Information

Daniel J. Van Abs, PhD, PP/AICP
Associate Professor of Practice for Water, Society & Environment
Department of Human Ecology
School of Environmental & Biological Sciences
Rutgers-The State University of New Jersey
55 Dudley Road, New Brunswick, NJ 08903
vanabs@sebs.rutgers.edu
www.danvanabs.com

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