

The Cost of Clean & Safe Water Sustaining Our Water Infrastructure

Denise Springborg, P.E.

April 9, 2007

New Hampshire Water Conference



New England Interstate Water
Pollution Control Commission

Overview

- 💧 2006 NEIWPCC Report
 - 💧 *Cost of Clean & Safe Water*
- 💧 NEIWPCC, NE, NY & EPA Region I
- 💧 Identify household costs:
 - 💧 Drinking Water
 - 💧 Wastewater

- 💧 Present NH & regional data today
- 💧 DW SRF infrastructure needs data

2006 Report

- 💧 **Current & 20 yr max household rates (2006 dollars/yr)**
- 💧 **Rates as percentage of median household income (MHI)**
- 💧 **Comparison of 1995 & 2005 results**
- 💧 **Snapshot of “typical costs”**
- 💧 **No conclusions regarding affordability**

Survey

Over 300 surveys mailed – 204 returned

State	Number of Participants		
	Drinking Water Systems	Wastewater Systems	Communities*
Connecticut	9	16	21
Maine	9	26	31
Massachusetts	17	10	17
New Hampshire	29	26	31
New York	0	15	15
Rhode Island	3	5	6
Vermont	19	20	23
Total	92	118	144

*Some communities provided financial information for both systems.

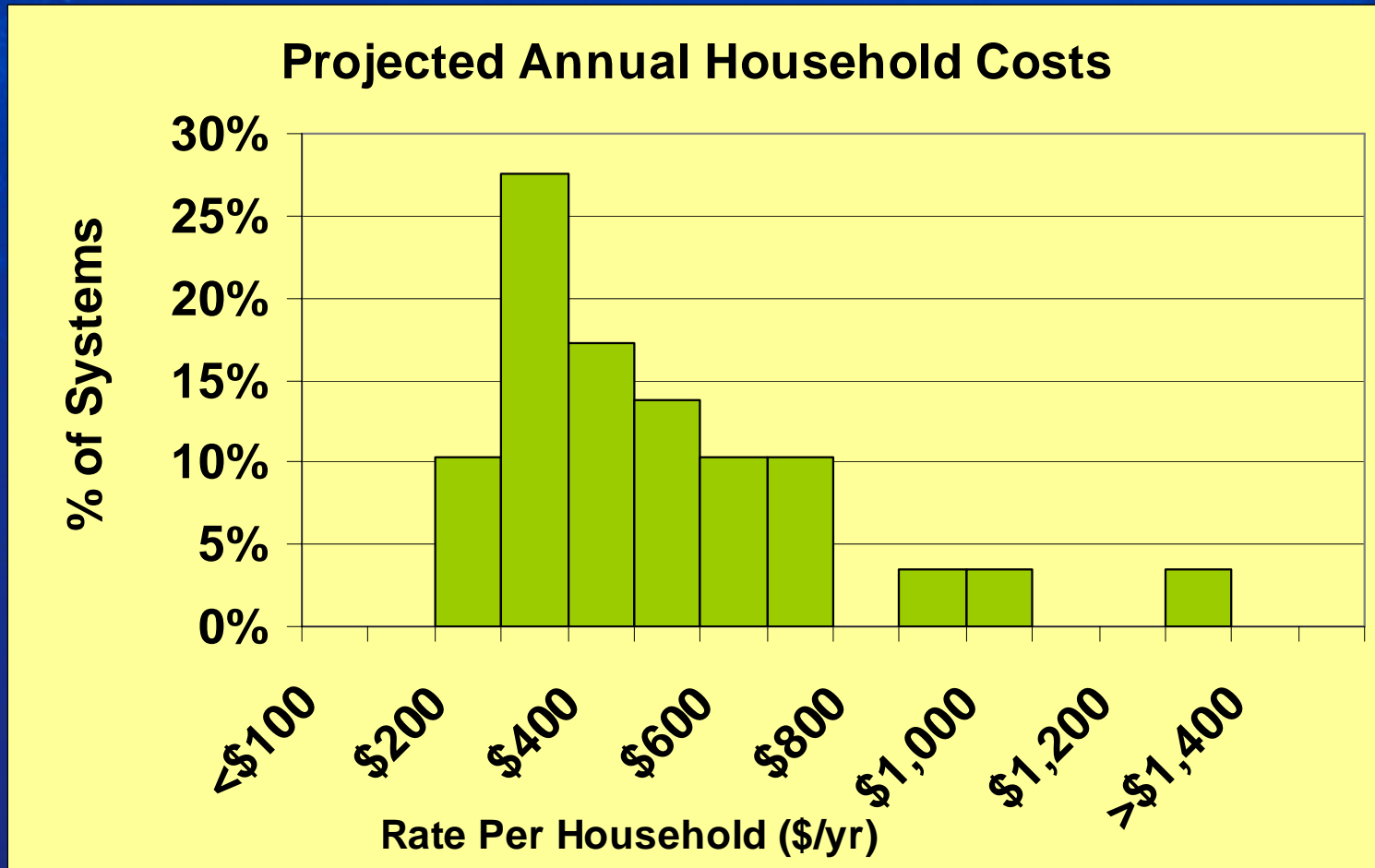
Model Input

- 💧 **Annual budget (capital, O&M)**
- 💧 **Annual revenue (taxes, etc.)**
- 💧 **Number of households served**
- 💧 **% residential share of budget**
- 💧 **Median household income**
- 💧 **Annual user charge**
- 💧 **Future capital expenses**
- 💧 **Future new annual O&M**
- 💧 **Current annual debt service**

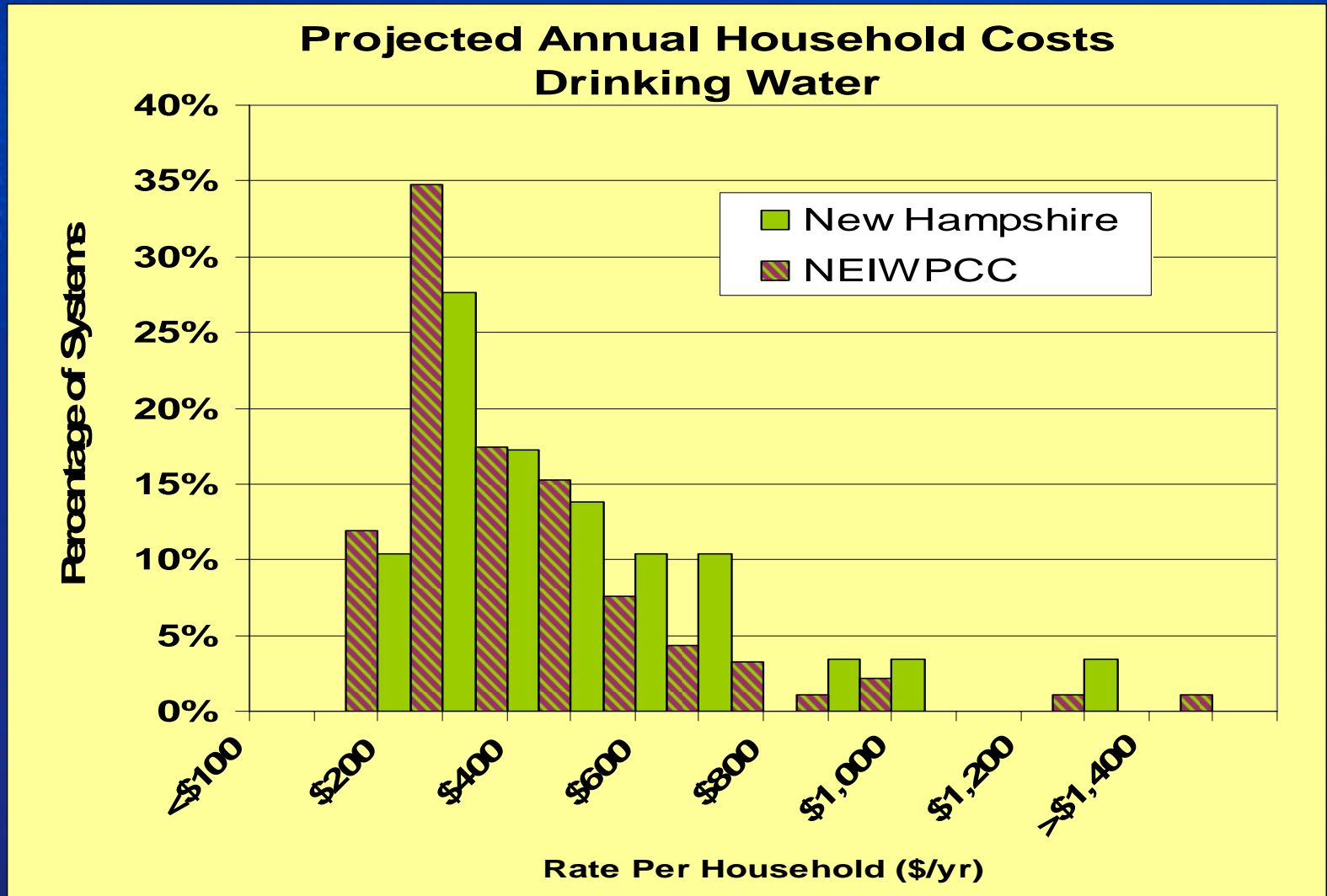
Drinking Water Results

NH – Drinking Water Projections

60% of NH rates: \$300-\$500/yr



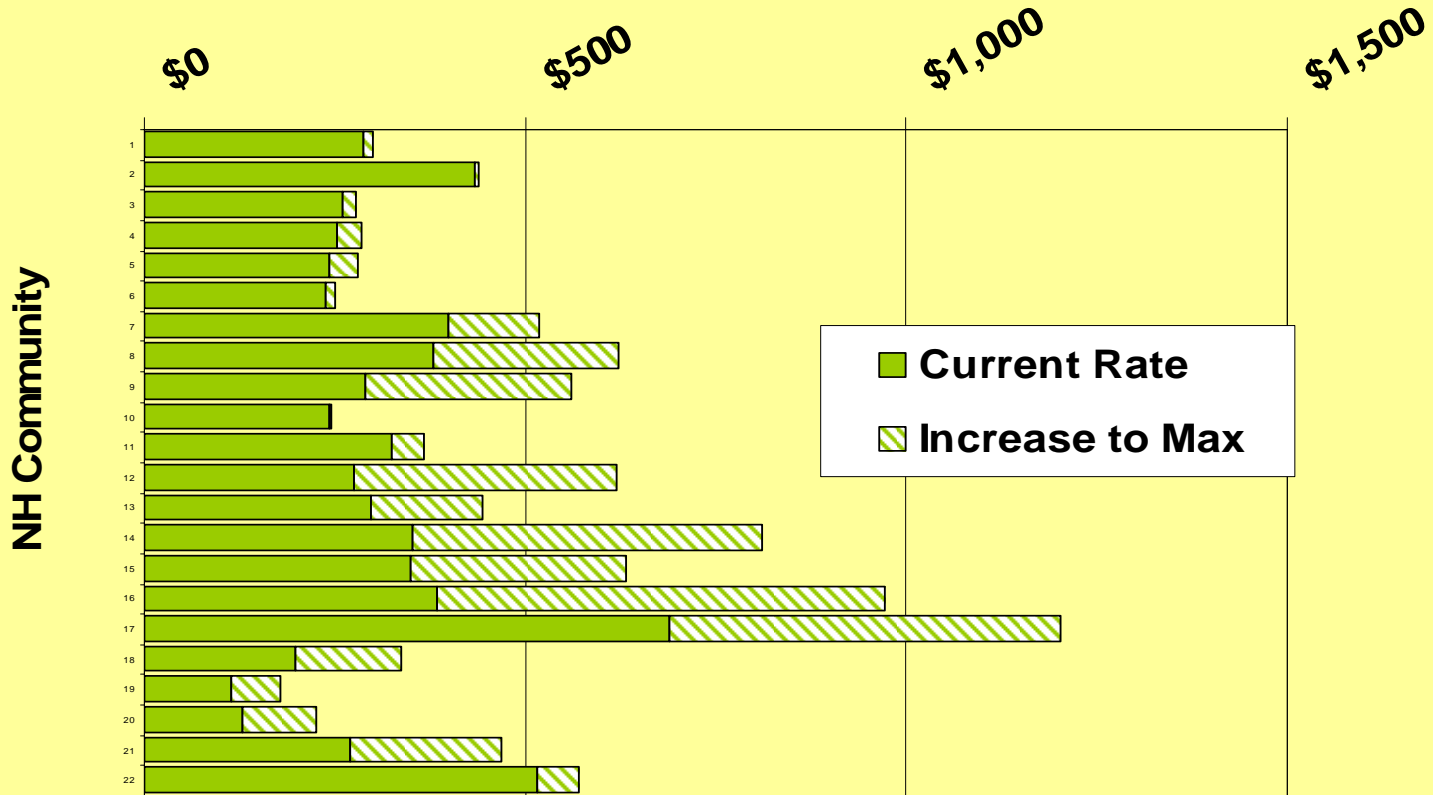
40% of study rates: \$300-\$500/yr



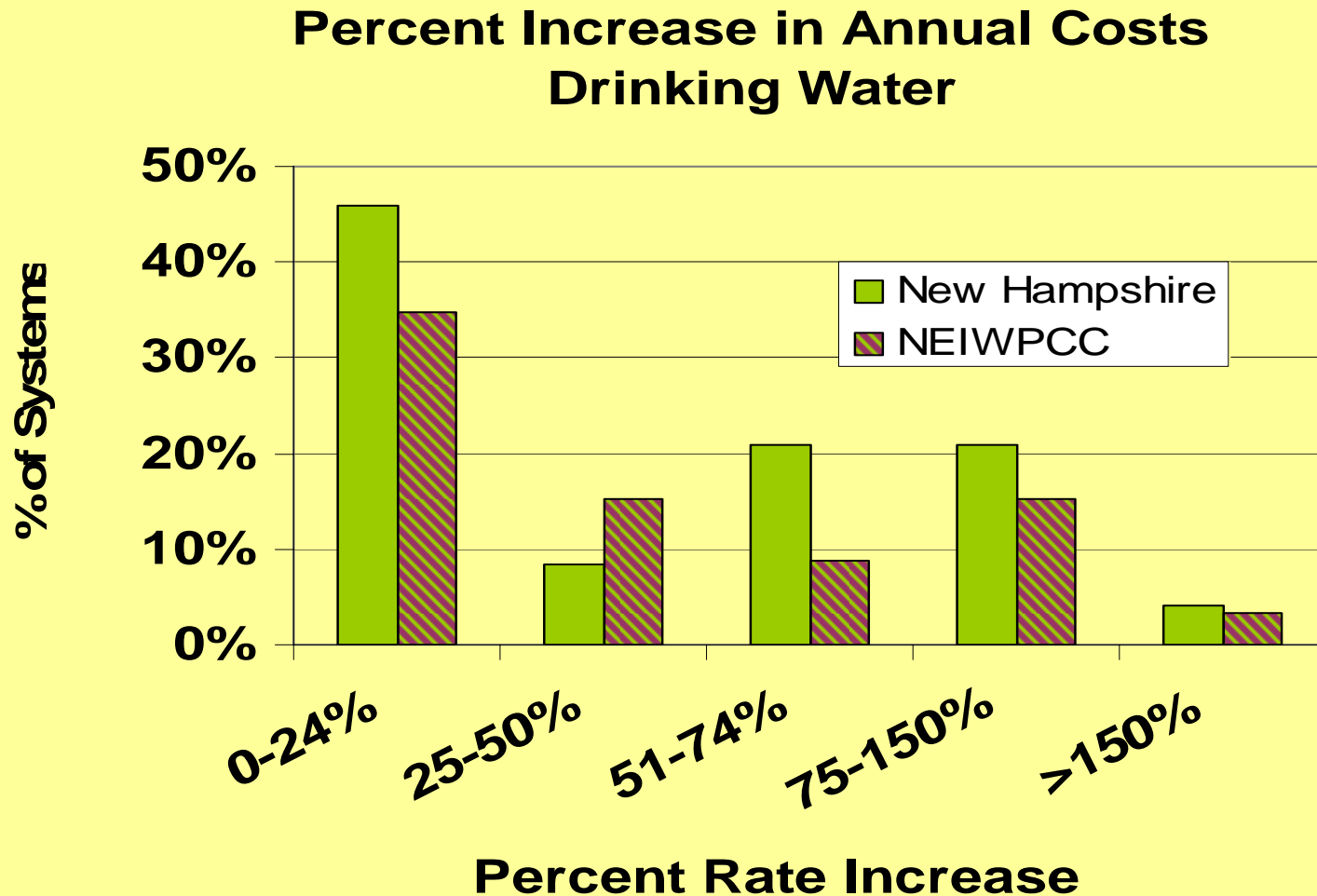
NH – Drinking Water

> 50% of NH rates: increase by 33%+

Current and Projected Annual Household Costs
Drinking Water- New Hampshire
Rate per Household (\$/yr)



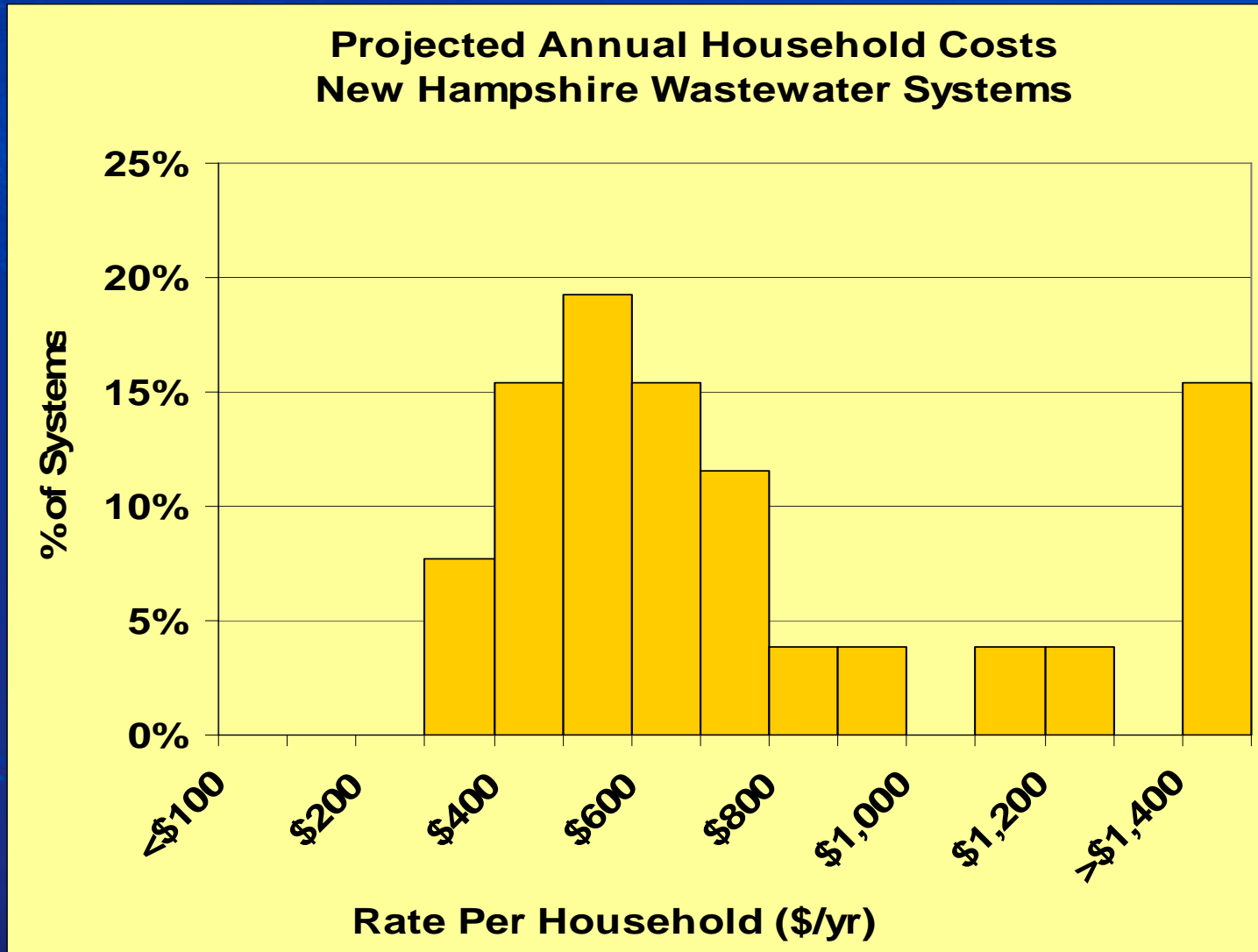
Increase from current to projected rate



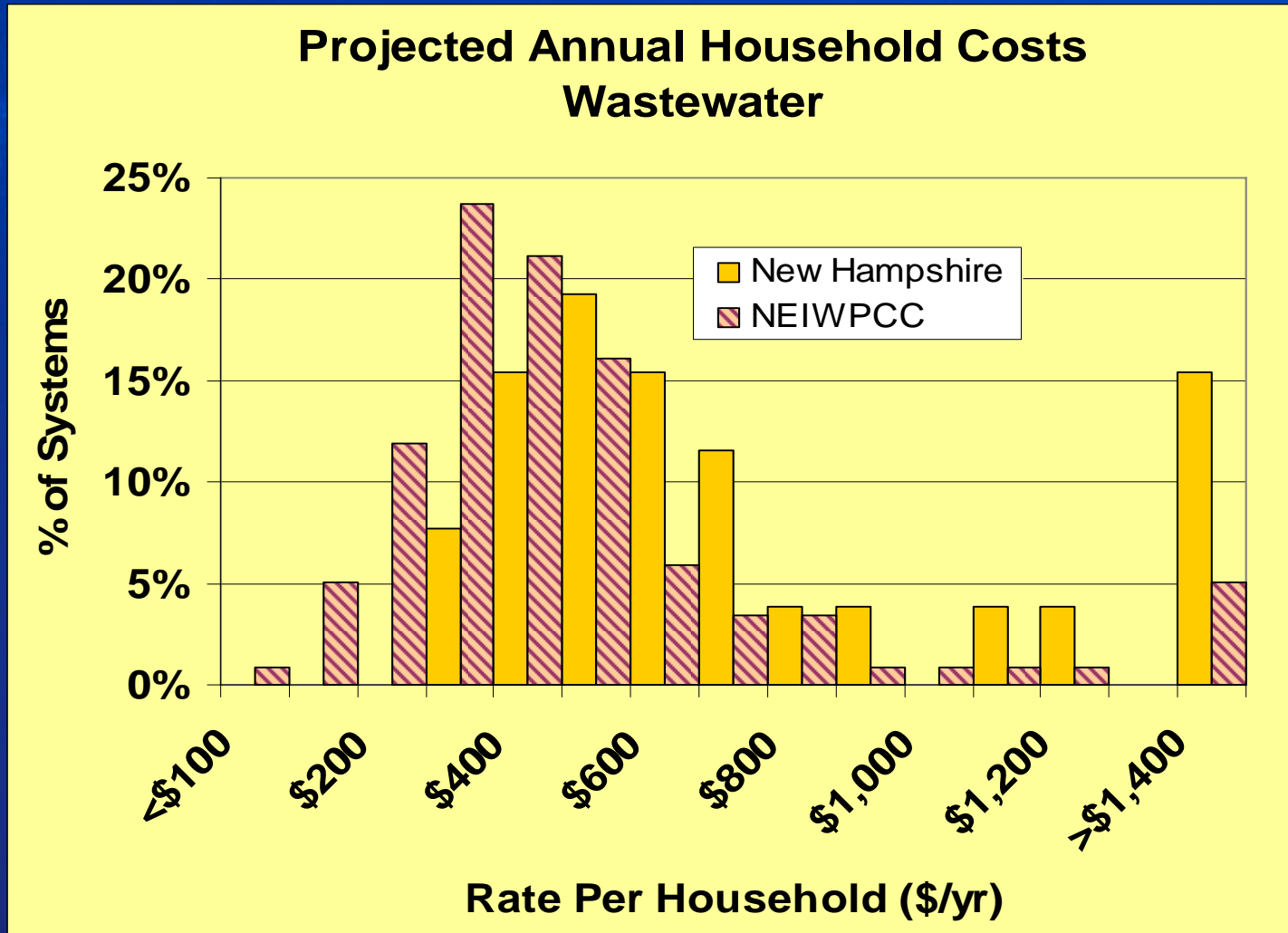
Wastewater Results

NH Wastewater

50% of rates at \$400-\$600/yr

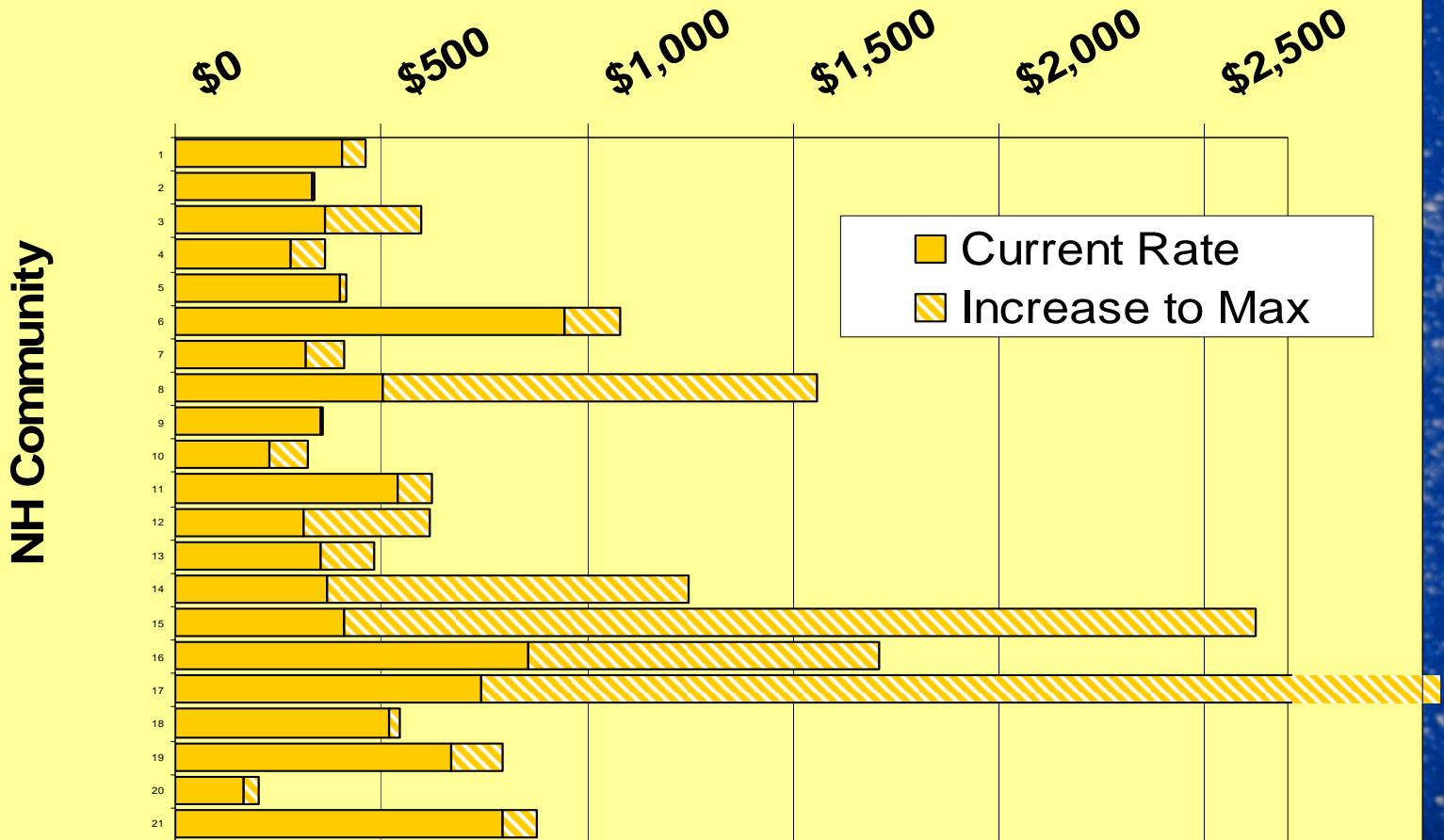


60% of study rates at \$300-\$500/yr

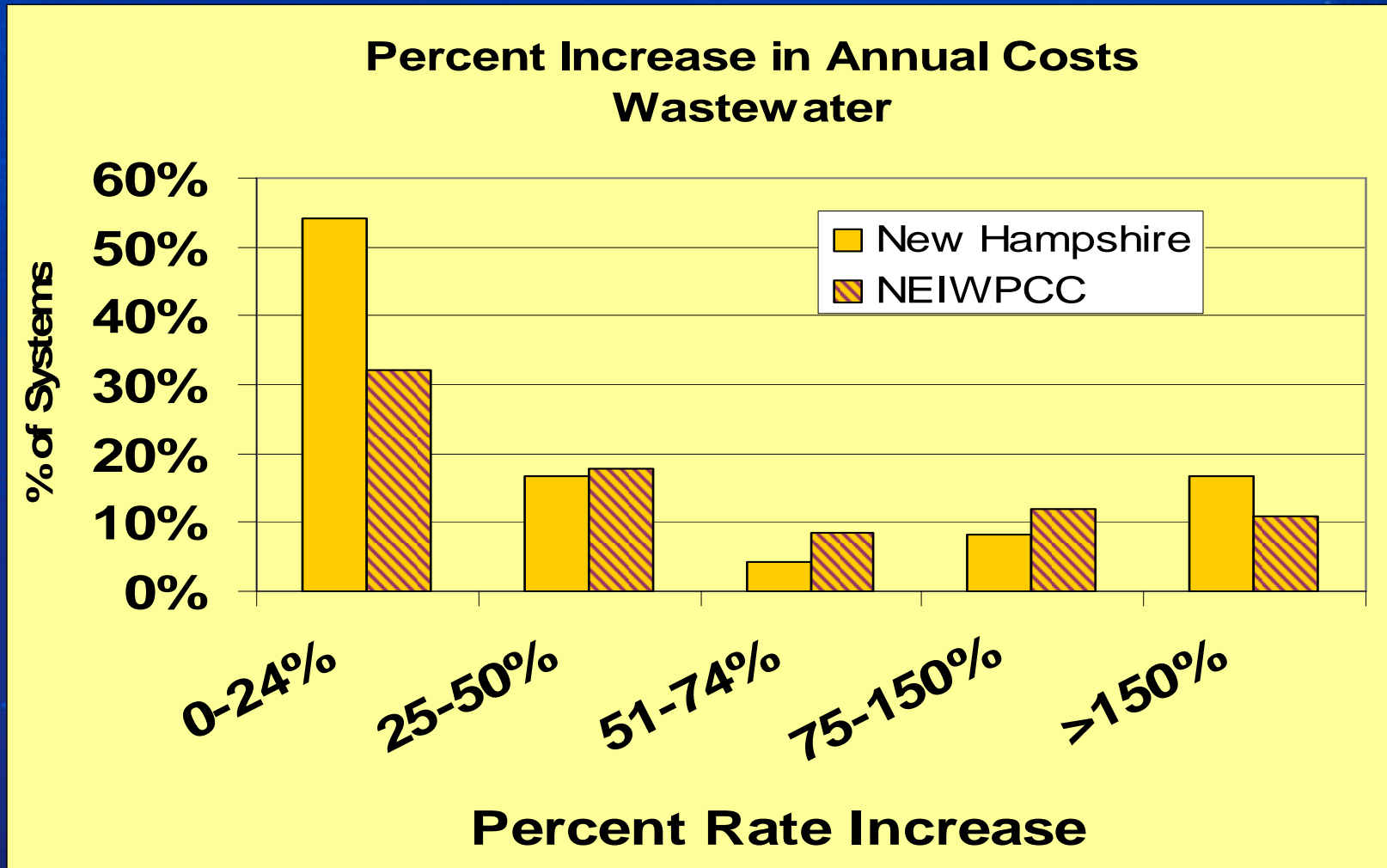


Minimal increases for most Large increases for some

**Current and Projected Annual Household Costs
Wastewater - New Hampshire
Rate per Household (\$/yr)**



Increase from current to projected rate



Summary

Results

92 Drinking Water & 118 Wastewater Systems

New Hampshire - 29 & 26 Systems

Max \$/yr	DW		WW	
	NH	NEI	NH	NEI
Min	157	149	203	82
Median	337	310	567	443
Mean	431	388	880	550
Max	1,203	1,449	4,776	4,776

Observations

- 💧 **Cost projections vary widely for both DW & WW systems**
- 💧 **Large & small communities are faced with disproportionately high costs**
- 💧 **Half the households will incur up to 50% increases in annual user rate over the next 20 yrs - some significantly higher**

Drinking Water Infrastructure Needs Survey - 2003

- 💧 Report released in 2005
- 💧 11 NH systems participated
 - 💧 9 - serving 3,301 – 40,000
 - 💧 2 – serving >40,000
- 💧 Total need for NH systems estimated
 - 💧 Type
 - 💧 Size

Results – Project Type

Project Type	20-yr Need (Millions)
Transmission & Distribution	321
Treatment	109
Storage	114
Source	47
Other	3
Total	596

Results – System Size/Type

System	20-yr Need (Millions)
Large CWS	22
Medium CWS	121
Small CWS	370
NPNCWS	52
Arsenic	30
Total	596

National EPA Initiative Sustainable Water Infrastructure

- 💧 **CW & DW Infrastructure Gap Analysis**
 - 💧 **At current level of investment infrastructure needs could exceed \$500 billion by 2020**
- 💧 **Initiative is based on four priority areas:**
 - 💧 **Better Management**
 - 💧 **Full Cost Pricing**
 - 💧 **Water Efficiency**
 - 💧 **Watershed Approach**

Regional Infrastructure Forum

💧 **April 30 – May 1, 2007**

💧 **Groton, CT**

💧 **Sponsored by Regions 1, 2, & NEIWPCC**

💧 **For more information:**

💧 **www.epa.gov/water/infrastructure**

Final Comments

- ⚡ **Extremely difficult to obtain data**
- ⚡ **Lack of resources prevents adequate planning and budgeting**
- ⚡ **Projections are grossly underestimated**
- ⚡ **Full cost pricing needed**
- ⚡ **Willingness to pay must exist**

Questions?

💧 **Denise Springborg**

💧 **dspringborg@neiwpc.org**

💧 **978-323-7929, ext. 233**

💧 **Download *The Cost of Clean & Safe Water:***

💧 **<http://www.neiwpc.org/publications.asp>**