



Clean Watersheds Needs Survey (CWNS)



Presenter:

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March 10, 2015



What's the Needs Survey?

- Needs Survey or the Clean Watersheds Needs Survey (CWNS) assesses the capital investment necessary for the nation's wastewater pipes and treatment facilities and municipal stormwater management projects to meet CWA water quality objectives.
- Every four years, the USEPA, in partnership with states, territories and the District of Columbia, conducts the Needs Survey in compliance with Clean Water Act (CWA) section 516(b)(1)(B).
- The result of this survey is published in a ***Report to Congress***. The Report provides Congress, as well as state legislatures, with information to assist their budgeting efforts.



CWNS History & Fundamentals

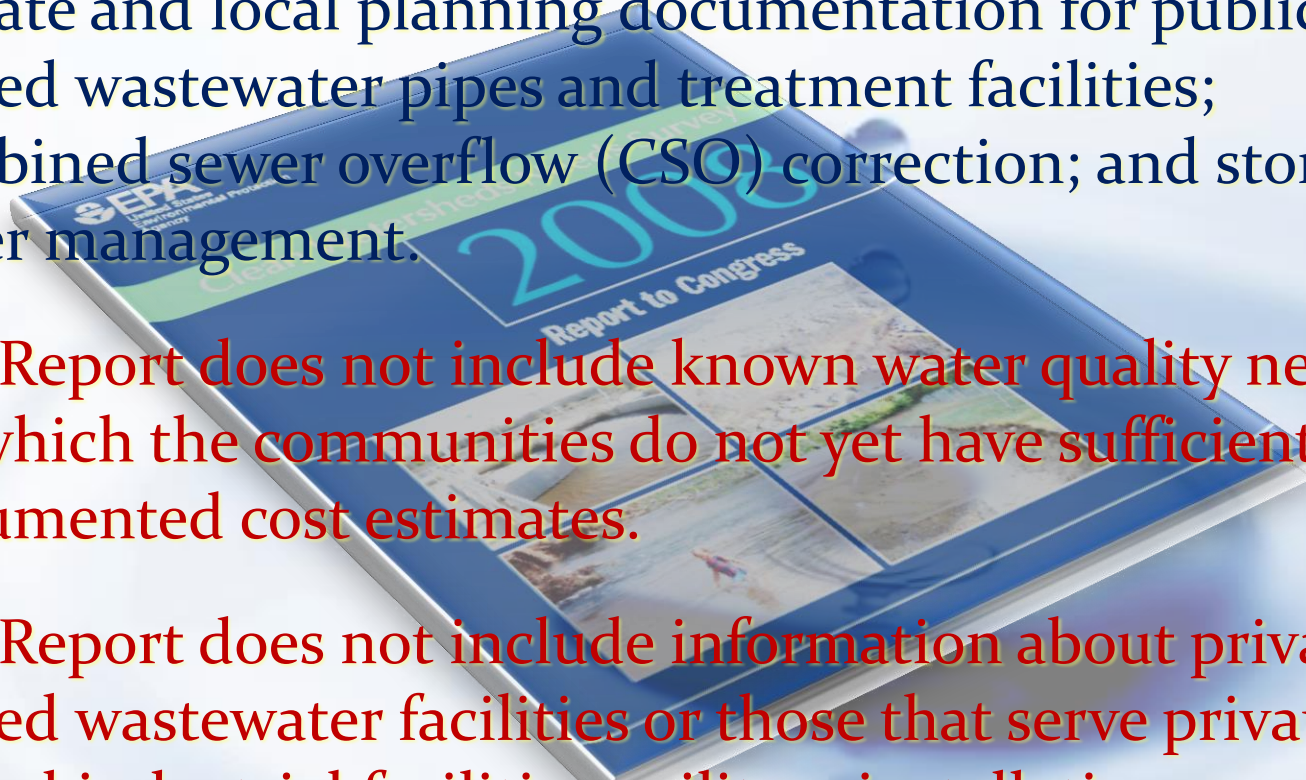
- CWNS is started in 1972 as required by Clean Water Act (CWA) Sec. 516.
- Conducted every 2 years since 1972 to 1992
- From 1992, CWNS is conducted every 4 years.
- Next CWNS – CWNS 2016 data entry period will start from January 2016 and will end on October 2016.
- CWA Sec. 516 excerpt
“The EPA Administrator, in cooperation with the States, ...shall make (a) a detailed estimate of the cost of carrying out the provisions of this Act”; (b) a detailed estimate...of the cost of construction of all needed publicly owned treatment works in all of the States...”

The Report to Congress (RtC)

Include & do not include



- The Report includes documented capital needs reflected in state and local planning documentation for publicly owned wastewater pipes and treatment facilities; combined sewer overflow (CSO) correction; and storm water management.
- The Report does not include known water quality needs for which the communities do not yet have sufficiently documented cost estimates.
- The Report does not include information about privately owned wastewater facilities or those that serve privately owned industrial facilities, military installations, national parks, or other federal facilities.



The Report to Congress (RtC)

Include & do not include



- Operation & maintenance (O&M) costs are also not included.
- Decentralized Wastewater Treatment (category XII) needs that met CWNS documentation requirements but are not defined in CWA section 516(b) (1)(B) are summarized in Appendix A.
- **Nonpoint Source (NPS) Pollution Control (category VII) needs were not reviewed for CWNS 2012 and will not be included in the Report (CWNS 2012 RtC).**
- In addition, the Report does not include data for American Indian and native villages or referred to as Tribal needs.



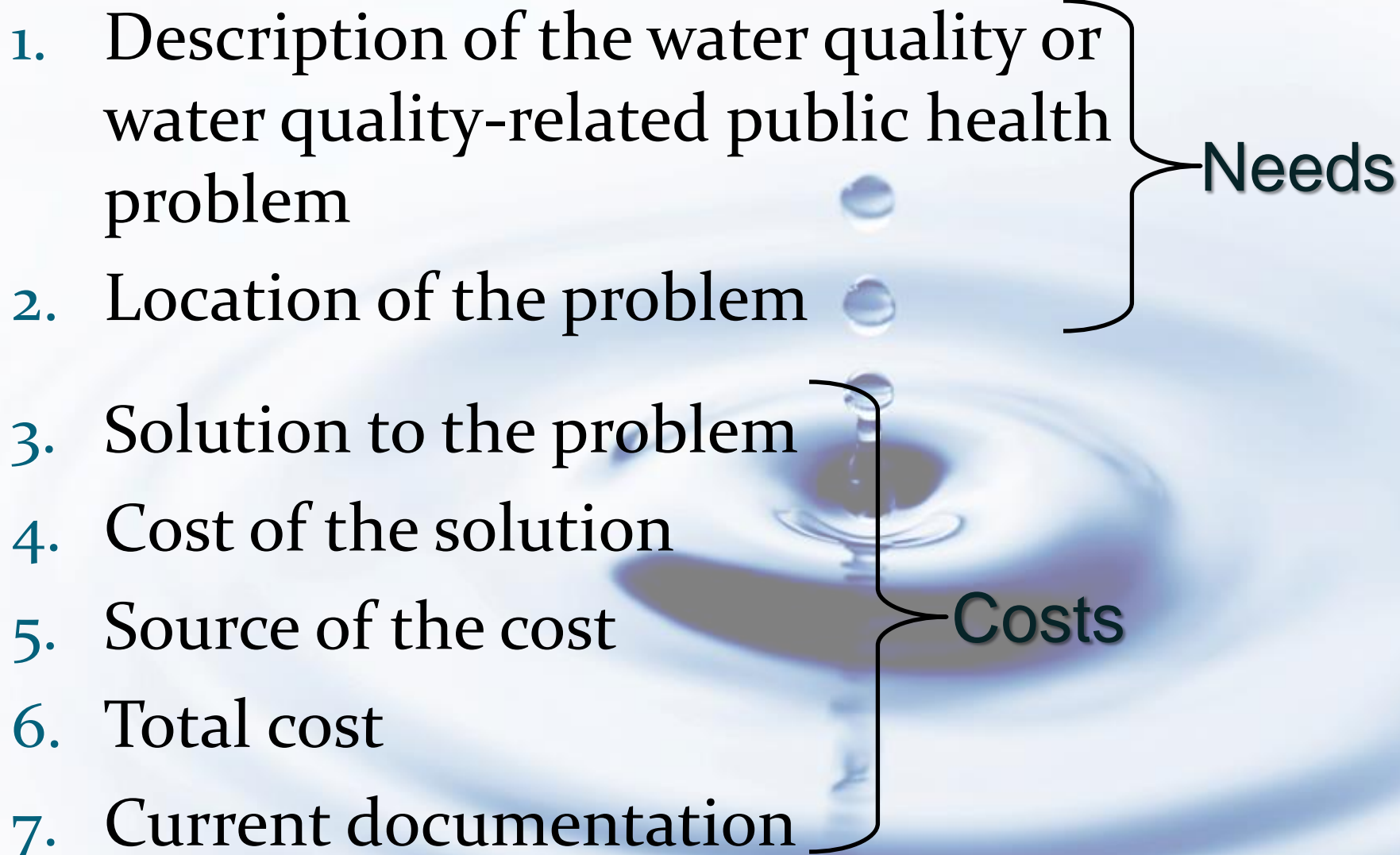
Type of facilities/projects entered in the CWNS

- Treatment Plant
- Collection System (Combined & Separate)
- Pump Station
- Combined Sewer Overflow (CSO) Control Project
- Recycled Water Distribution Facility
- Storm Water Management Project
- Green Infrastructure, Water Efficiency or Energy Efficiency Project
- Decentralized wastewater treatment project
- Non-point source pollution control project
(*optional & not reviewed by EPA*)

Needs Definitions

- ❖ **Needs:** (*for CWNS 2016*)
The **unfunded** capital costs of projects as of **January 1, 2016** that addresses an existing or projected (within next 20 years) water quality or a water quality-related public health problem
- ❖ **“Official” Needs:**
The subset of documented needs that are publicly owned treatment works as noted in Clean Water Act Section 516(b)(1)(B)
- ❖ **“Documented” Needs:**
Meet CWNS documentation criteria and fall within CWNS Need Categories

Seven Documentation Criteria:

- 
- The background of the slide is a close-up, artistic photograph of a water droplet falling into a pool of water, creating ripples. The image is in shades of blue and white, with a soft focus on the droplet and its immediate impact.
1. Description of the water quality or water quality-related public health problem
 2. Location of the problem
 3. Solution to the problem
 4. Cost of the solution
 5. Source of the cost
 6. Total cost
 7. Current documentation
- Needs**
- Costs**



Current Documentation

- Current documentation for CWNS 2012 / **2016**:
 - Needs >\$20 Million: More recent than January 1, 2006 / **January 1, 2010**
 - Needs <\$20 Million: More recent than January 1, 2002 / **January 1, 2006**



CWNS 2012 Need Categories

Needs from the following categories is termed as “**Official Needs**” and included in the main body of the Report to Congress:

- I: Secondary Wastewater Treatment
- II: Advanced Wastewater Treatment
- III-A: Infiltration/Inflow Correction
- III-B: Sewer Replacement/Rehabilitation
- IV-A: New Collector Sewers Appurtenances
- IV-B: New Interceptor Sewers and Appurtenances
- V-A*: Combined Sewer Overflow Correction – Traditional Infrastructure
- V-B*: Combined Sewer Overflow Correction – Green Infrastructure
- VI-A: Stormwater Conveyance Infrastructure
- VI-B: Stormwater Treatment Systems
- VI-C: Green Infrastructure
- VI-D: General Stormwater Management
- X: Recycled Water Distribution

* *New in CWNS 2012*

CWNS 2012 Need Categories



Needs from the following categories that are not defined in CWA section 516(b)(1)(B) are termed as “**Other Documented Needs**” and included in the appendices of the Report to Congress:

➤ Category VII – Nonpoint Source Pollution Control

VII-A: Agriculture (cropland)

VII-B: Agriculture (animals)

VII-C: Silviculture

VII-E: Ground Water Protection

VII-F: Marinas

VII-G: Resource Extraction

VII-H: Brownfields

VII-I: Storage Tanks

VII-J: Sanitary Landfills

VII-K: Hydromodification

VII-M: Other Estuary Management Activities

➤ Category XII - Decentralized wastewater treatment systems



Innovative Needs & Cost Documentation

From the 2008 survey EPA made a provision that state can use innovative needs & cost documents in case if there is a lack of the standard needs documentation as long as:

- State get pre-approval from EPA of the proposed methodology for documenting needs and cost.
- CWNS Coordinator should provide the proposed methodology for documenting needs & costs in a specific category in written to EPA-HQ. Proposal should include:
 - ◆ Category of need
 - ◆ Whether the proposed methodology will be used for documenting needs and/or costs
 - ◆ Description of proposed methodology (1-2 pages). Attach sample surveys, spreadsheets, documentation, etc. when appropriate. Describe any external data sets that you plan to use (e.g., land cover).

Document (05):

“Cost of Previous Comparable Construction”



- In case when an estimated project cost is not available (e.g. Innovative needs document), this document can be used to justify costs but **not needs**.
- This document approach must be **pre-approved by EPA-HQ** before entering the information into the system.
- This estimate of cost must be based on at least three (3) projects that:
 - 💧 Were bid or completed within the last two years.
 - 💧 Are similar in size, scope, and geographic area (e.g. county, watershed). The size of the project (e.g. population served, pipe lengths, flow treated) must be within $\pm 25\%$ of the size of the sample.
 - 💧 Have detailed construction cost data are available.



CWNS Process

CWNS 2012 Workgroup & Subcommittees

State and Regions work with EPA HQ to plan for Next CWNS



Survey

Official data entry period begins ~ January 2016 and will end in October 2016



Data Review & Audits

EPA's Contractor Review team reviews data consistency with requirements and document criteria.
CWSRF Audits and Footnotable Documentation Audits (will end in November 2016)



Report to Congress

EPA uses survey to complete Report to Congress. (OMB takes longer time in review before publishing) Congress uses report to inform policy and SRF allocations.



Survey data becomes publicly available

Anticipated time of availability is approximately one year after the RtC publishes
(<http://www.epa.gov/cwns>)

Information collected includes:

- ❖ Estimated needs (costs)
- ❖ Documentation outlining needs & costs
- ❖ Location and contact information
- ❖ Permit information
- ❖ Treatment plant population served, flow, effluent, and discharge data
- ❖ Decentralized and collection system population served
- ❖ Unit Process and Best Management Practices

CWNS - Data Entry Portal



Welcome to the EPA Portal
Clean Watersheds Needs Survey (CWNS)

Ketan Patel
NJ State User

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Review Status
Exclude ☐ Federal Accepted
Federal Interim Accepted
Federal Review In Progress

Facility/Project Name

Facility Type
Agriculture - Animals
Agriculture - Cropland
Biosolids Handling Facility

Overall Type
Decentralized Wastewater Treatment
Nonpoint Source
Plan Development

Cost Categories
I: Secondary Treatment
II: Advanced Treatment
III-A: Infiltrate/Inflow Correction

Authority

System Name

County Name

Watershed

Document Type

Total Needs (\$, Official, Adjusted)

Document Published Date

Present Population

Present Flow

Facility/Project Last Changed

Facility/Project List [Help](#)

All Facilities

Sort column Facility/Project Name by Ascending order

Select	CWNS Number	Facility/Project Name	Review Status	County	Feedback Status	Authority	Total Official Needs (\$)
<input type="checkbox"/>	34101813131	3M Industrial Mineral Div.	State Assigned	Somerset		3M Industrial Mineral Product Division	
<input type="checkbox"/>	34002064021	ABERDEEN TOWNSHIP NPS	State Assigned	Monmouth		ABERDEEN TWP UTIL DEPT	
<input type="checkbox"/>	34002064011	Aberdeen Twp Stormwater Fac	State Assigned	Monmouth		Aberdeen Township	2,939,326
<input type="checkbox"/>	34002064001	ABERDEEN TWP- CS/SEPTIC	State Assigned	Monmouth		ABERDEEN TWP UTIL DEPT	11,385,963
<input type="checkbox"/>	34030233101	ABEX CORPORATION LF	State Assigned	Sussex		TOWNSHIP OF MAHWAH	
<input type="checkbox"/>	34004120001	Absecon City CS/Septics	State Assigned	Atlantic		Atlantic County Division of Public Health	36,953
<input type="checkbox"/>	34004120021	Absecon City NPS	State Assigned	Atlantic		ABSECON CITY	
<input type="checkbox"/>	34004120011	Absecon City Stormwater Fac	State Assigned	Atlantic		Absecon City.	120,342
<input type="checkbox"/>	34008507021	Alexandria Township - NPS	State Assigned	Hunterdon		TWP OF ALEXANDRIA	
<input type="checkbox"/>	34008507001	ALEXANDRIA TWP SEPTICS	State Assigned	Hunterdon		TWP OF ALEXANDRIA	
<input type="checkbox"/>	34008507002	Alexandria Twp Septics/Cluster Sys	State Assigned	Sussex		Alexandria Township	1,837,625
<input type="checkbox"/>	34008507011	Alexandria Twp Stormwater Fac	State Assigned	Hunterdon		Alexandria Township	63,498
<input type="checkbox"/>	34111001101	Alexandria Twp- Pastore SLF	State Assigned	Hunterdon		TWP OF ALEXANDRIA	
<input type="checkbox"/>	34008121021	Allamuchy Twp - NPS-Septic	State Assigned	Warren		ALLAMUCHY TOWNSHIP	802,812
<input type="checkbox"/>	34012101101	Allamuchy Twp LF	State Assigned	Sussex		ALLAMUCHY TOWNSHIP	
<input type="checkbox"/>	34008121002	ALLAMUCHY TWP MUA	State Assigned	Warren		ALLAMUCHY TOWNSHIP	
<input type="checkbox"/>	34008121001	Allamuchy Twp Septics (Deleted)	Deleted	Warren		ALLAMUCHY TOWNSHIP	
<input type="checkbox"/>	34008121012	Allamuchy Twp Stormwater Fac	State Assigned	Warren		Allamuchy Township.	47,520
<input type="checkbox"/>	34001122001	Allendale Boro CS-Septics	State Assigned	Bergen		BOROUGH OF ALLENDALE	49,034
<input type="checkbox"/>	34001122011	Allendale Boro Stormwater Fac	State Assigned	Bergen		Allendale Borough	216,745

[Select All](#) | [Clear All](#) | [Import](#) | [Export](#) | [Print Small Community Feedback Form](#) | [Print Facility Factsheets](#)

<< | Prev | 1 - 20 of 2168 | Next | >>

[Federal Review Requested](#) | [Local Assigned](#) | [Deleted](#) |

[Preference](#)

Facility/Project Name starts with:

Announcements

Date	Message
02-Nov-11 12:17 PM	CWNS Data Entry Portal (DEP) is re-open for interim data entry beginning November 1, 2011. (Note: The ability to open and annotate uploaded documents is not currently available).
02-Nov-11 12:17 PM	State Coordinators are granted access to the DEP upon completing User Management training.

NJ CWNS Survey Results – 2008 & 2012



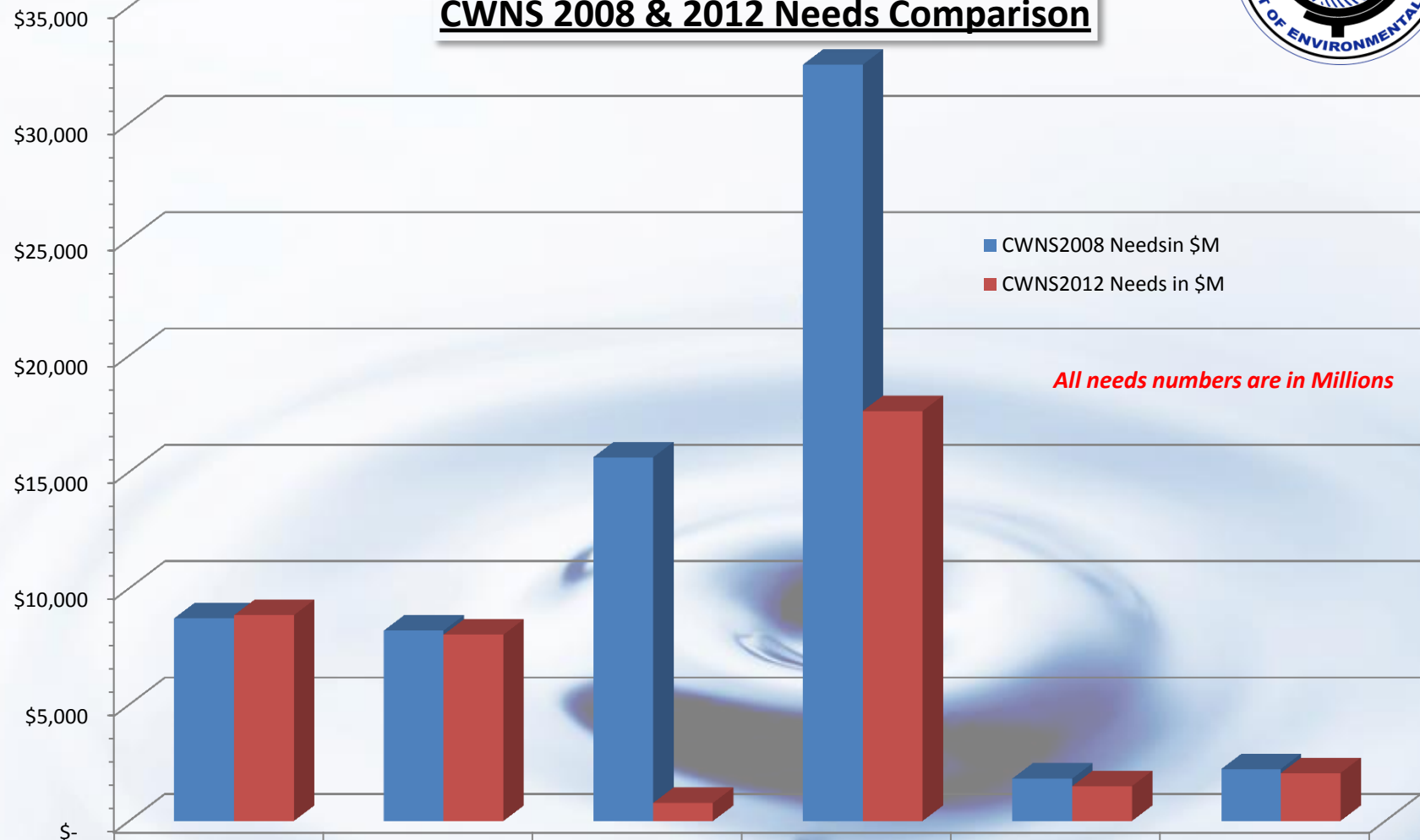
Need Category	Category Name	CWNS2008 Needs	CWNS2012 Needs
I	Secondary Treatment	\$ 1,829,078,709	\$ 1,655,073,091
II	Advanced Treatment	\$ 4,470,333,596	\$ 5,065,631,672
III-A	Infiltrate/Inflow Correction	\$ 313,517,936	\$ 304,997,423
III-B	Replace/Rehab of Sewers	\$ 948,657,579	\$ 881,426,625
IV-A	New Collector Sewers	\$ 821,884,214	\$ 606,603,865
IV-B	New Interceptor Sewers	\$ 223,232,913	\$ 277,366,103
Total I-IV Total Wastewater Treatment & Conveyance Needs =		\$ 8,606,704,947	\$ 8,791,098,779
V-A	CSO - Traditional Infrastructure	\$ 8,176,220,641	\$ 7,997,000,644
V-B	CSO - Green Infrastructure	\$ -	\$ 6,371,212
Total V Total Combined Sewer Overflow (CSO) Needs =		\$ 8,176,220,641	\$ 8,003,371,856
X	Recycled Water Distribution	\$ 99,365,510	\$ 48,795,493
TOTAL WASTEWATER NEEDS (Cat. I-V & X) =		\$ 16,882,291,098	\$ 16,843,266,128
VI-Pre08	Storm Water Management Program (pre-2008 needs or	\$ 234,469	
VI-A	Stormwater Conveyance Infrastructure	\$ 482,935,149	\$ 456,341,490
VI-B	Stormwater Treatment Systems	\$ 107,003,010	\$ 61,042,532
VI-C	Green Infrastructure	\$ 14,927,948,447	\$ 208,050,151
VI-D	General Stormwater Management	\$ 108,018,259	\$ 49,657,730
Total VI TOTAL STORMWATER NEEDS =		\$ 15,626,139,334	\$ 775,091,903
Total CWNS 2012 Official Needs (Cat. I-VI & X) =		\$ 32,508,430,432	\$ 17,618,358,031
VII-A	NPS-Agriculture (cropland)	\$ 75,568,050	\$ 1,158,800
VII-B	NPS-Agriculture (animals)	\$ 4,411,214	\$ 284,636
VII-C	NPS-Silviculture	\$ -	\$ -
VII-E	NPS-Ground Water - Unknown Source	\$ 547,070,182	\$ 403,793,418
VII-F	NPS-Marinas	\$ 109,324	\$ 14,663,144
VII-G	NPS-Resource Extraction	\$ 378,661	\$ -
VII-H	NPS-Brownfields	\$ 827,740,687	\$ 645,182,378
VII-I	NPS-Storage Tanks	\$ 2,978,966	\$ 348,510
VII-J	NPS-Sanitary Landfills	\$ 276,379,578	\$ 331,664,290
VII-K	NPS-Hydromodification	\$ 81,667,205	\$ 98,628,802
VII-M	NPS-Other Estuary Management Activities	\$ 4,492,236	\$ -
Total VII TOTAL NON-POINT SOURCE (NPS) NEEDS =		\$ 1,820,796,103	\$1,495,723,978**
XII	Decentralized Wastewater Treatment Systems	\$ 2,231,715,104	\$ 2,058,024,183
Total CWNS 2012 Other Needs (Cat. VII & XII) =		\$ 4,052,511,207	\$ 3,553,748,161
TOTAL CWNS 2012 (Official & Other) NEEDS =		\$ 36,560,941,639	\$ 21,172,106,192

The CWNS 2012 numbers shown here are "DRAFT" and not "FINAL" since the Final CWNS 2012 Report-to-Congress is yet to be published by USEPA.

NJ CWNS Survey Results – 2008 & 2012



CWNS 2008 & 2012 Needs Comparison

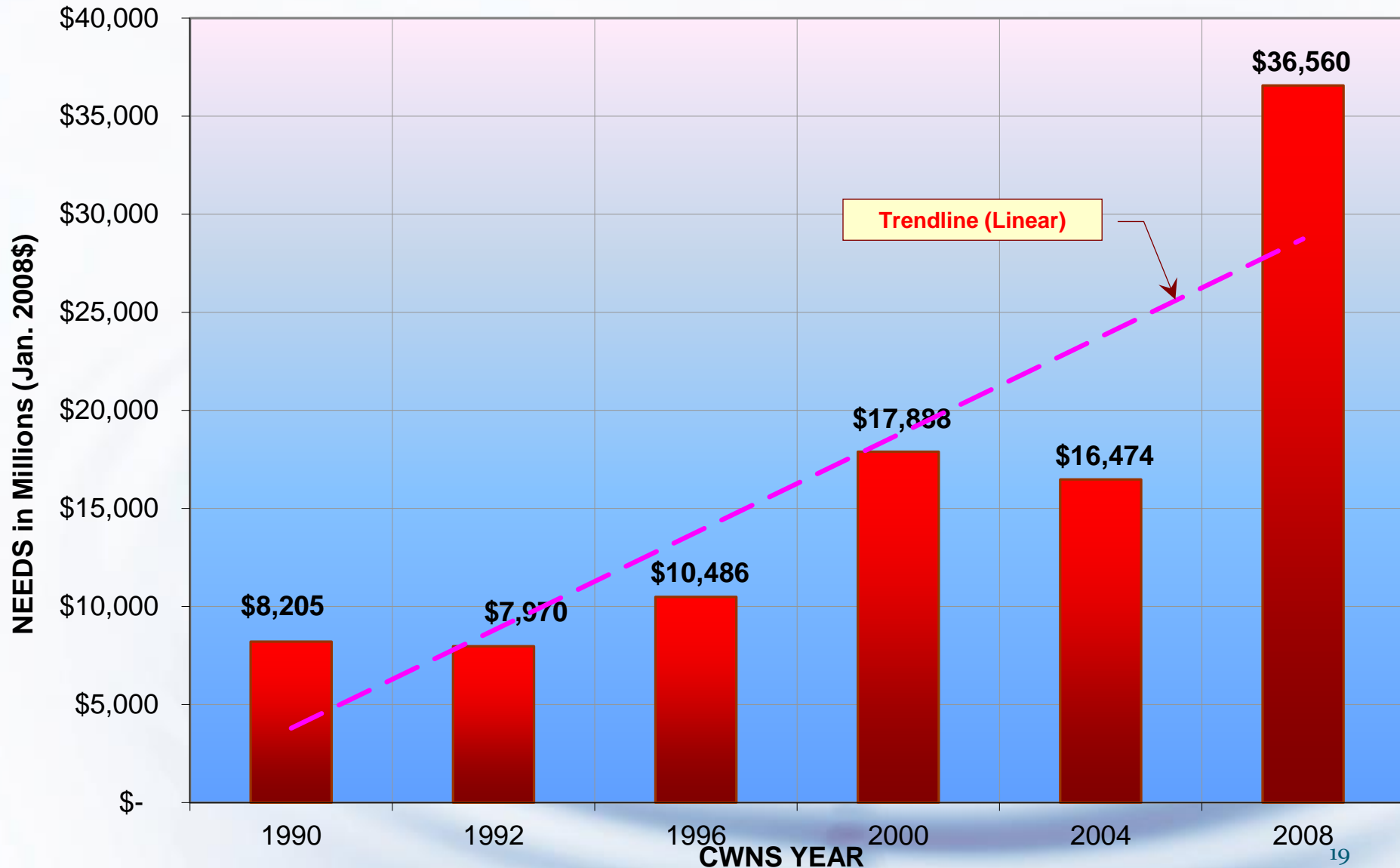


	Wastewater (Cat. I-IV & X)	Combined Sewer Overflow (CSO - Cat. V-A&B)	Stormwater (Cat. VI-A thru D)	TOTAL OFFICIAL NEED	Non-Point Source (NPS, Cat. VII-A-C & E-M)	Decentralized/Septic Sys (Cat. XII)
CWNS2008 Needs in \$M	\$8,706	\$8,176	\$15,626	\$32,508	\$1,821	\$2,232
CWNS2012 Needs in \$M	\$8,840	\$8,003	\$775	\$17,618	\$1,496	\$2,058

NJ CWNS Past Survey Results



In January 2008 Dollars, In Millions





CWNS Data Uses

- ❖ Allotment of Clean Water State Revolving Funds (CWSRF) *As per the amendments suggested in WRRDA – EPA is currently in the process of updating the CWSRF allotment formula based on the recent survey of needs (CWNS).*
 - ❖ Provides information to Congress and state legislatures for budget and policy purposes
 - ❖ Informs the public and contributes to academic research
- Additionally,
- ❖ Assists with program implementation such as: Loading analyses; GAP analysis; NPDES permit writing; SRF Project Prioritization
 - ❖ Informs programmatic planning at the state and national level

CWNS & CWSRF Allotment Formula



- According to CWA Sec. 205(a) excerpt
“Allotments...shall be made only in accordance with a revised cost estimate made and submitted to Congress in accordance with Sec. 516 of this Act and only after such revised cost estimate shall have been approved by law specifically enacted hereafter.”
- Capitalization grants for clean water SRFs are allotted according to a state-by-state formula that based on the 1987 amendments to the Clean Water Act. It is a complex formulation consisting basically of two elements, state population and capital needs for wastewater projects.
- Because the allocation formula has not been revised since 1987, yet needs (CWNS 1988, 1992, 1996, 2000, 2004 & 2008) and population (Census 1990 & 2000) have changed, none of this more recent information is reflected in the currently applicable distribution formula.

CWSRF CAP Grant Allocations




State	State	Allotments 1983-1985	Allotments 1996
New York	NY	11.3097%	11.1632%
California	CA	7.2901%	7.2333%
Ohio	OH	5.7383%	5.6936%
Texas	TX	3.8726%	4.6226%
Illinois	IL	4.6101%	4.5741%
Michigan	MI	4.3829%	4.3487%
New Jersey	NJ	4.1654%	4.1329%
Pennsylvania	PA	4.0377%	4.0062%
Massachusetts	MA	3.4603%	3.4338%
Florida	FL	3.4407%	3.4139%
Missouri	MO	2.8257%	2.8037%
Wisconsin	WI	2.7557%	2.7342%
Maryland	MD	2.4653%	2.4461%
Indiana	IN	2.4566%	2.4374%



CWNS & CWSRF Allotment Formula

- Also since 1987, Congress has on several occasions considered CWA reauthorization legislation that would have modified that formula.
- Last in 2009, the Congress and the Senate proposed two bills:
 - ❖ ***H.R. 1262, Water Quality Investment Act of 2009***
 - 💧 Amounts that do not exceed \$1.35 billion would be allotted under current allotment formula
 - 💧 Amounts that exceed \$1.35 billion shall be allotted in accordance with the formula developed by EPA
 - ❖ ***S. 1005, Water Infrastructure Financing Act***
 - 💧 *Allocates to each State a proportional share of the amounts based on the total needs of the State for municipal combined sewer overflow controls and sanitary sewer overflow controls, as identified in the most recent survey.*
- Neither bill received further action.

CWNS & CWSRF CAP Grant Allocations



State	Current CWSRF %	Proposed S. 1005 %	CWNS08 % (w/ categories VII & XII)	CWNS08 % (w/out categories VII & XII)
Michigan	4.3829	3.35	2.04	1.08
Mississippi	0.9184	0.91	0.97	0.46
Missouri	2.8257	2.8	1.9	1.74
Nebraska	0.5214	0.8	1.33	0.93
Nevada	0.4965	0.75	0.9	0.84
New Hampshire	1.0186	0.75	0.36	0.36
New Jersey	4.1329	4.61	10.6	10.08
New Mexico	0.4965	0.75	0.03	0.03
New York	11.1632	10.35	10.28	8.67
North Carolina	1.8253	1.9	1.97	1.9
Ohio	5.6936	5.47	4.49	4.49
Oklahoma	0.8235	0.82	0.38	0.38
Oregon	1.1515	1.25	1.42	1.1
Pennsylvania	4.0377	4.15	5.29	5.2
Puerto Rico	1.3291	0.5	1.38	1.38
Rhode Island	0.6791	0.75	0	0
South Carolina	1.0442	0.75	0.16	0.16



WRRDA Section 5005

Report on the Allotment of Fund

The WRRDA includes the following provisions:

- (a) Review.—The Administrator of the Environmental Protection Agency shall conduct a review of the allotment formula in effect on the date of enactment of this Act for allocation of funds authorized under title VI of the Federal Water Pollution Control Act (33 U.S.C. 1381 et seq.) to determine whether that formula adequately addresses the water quality needs of eligible States, territories, and Indian tribes, based on—
 - (1) the most recent survey of needs developed by the Administrator under section 516(b) of that Act (33 U.S.C. 1375(b)); and
 - (2) any other information the Administrator considers appropriate.
- (b) Report.—Not later than 18 months after the date of enactment of this Act, the Administrator shall submit to the Committee on Environment and Public Works of the Senate and the Committee on Transportation and Infrastructure of the House of Representatives and make publicly available a report on the results of the review under subsection (a), including any recommendations for changing the allotment formula.

A review of the CWSRF allotment formula will begin in FY 2015.



Resources

- New Jersey State Clean Watersheds Needs Survey
 - <http://www.state.nj.us/dep/dwq/cwns.htm>
- US EPA Clean Watersheds Needs Survey Overview
 - <http://water.epa.gov/scitech/datait/databases/cwns/>
- CWNS 2008 Report to Congress
 - <http://water.epa.gov/scitech/datait/databases/cwns/2008reportdata.cfm>
- CWNS 2008 – NJ State Fact Sheet
 - <http://water.epa.gov/scitech/datait/databases/cwns/upload/njo8.pdf>

Questions?

