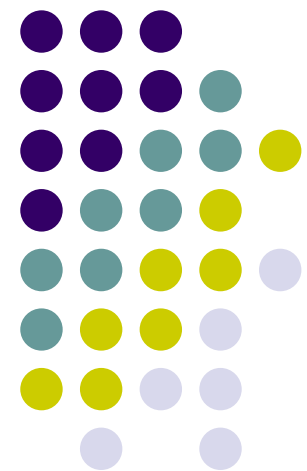
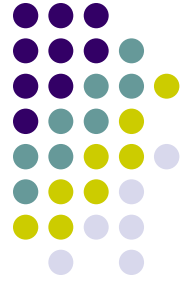


# EPA's Decentralized MOU Partnership Webcast Series:

## Using Green Project Reserve Funds for Decentralized Wastewater Projects

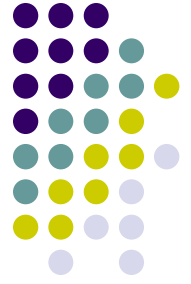
October 21, 2010  
1:30-3:00pm EST





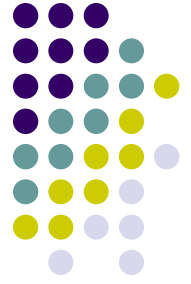
# Today's Speakers

- Rebecca Fuggitt, Ohio Department of Health
  - Bureau of Environmental Health
- Jim Bonk, OhioEPA
  - Division of Financial and Environmental Assistance
- Katherine Hess, U.S. EPA
  - Office of Wastewater Management, State Revolving Fund Branch
- Maureen Tooke, U.S. EPA
  - Office of Wastewater Management, Sustainable Communities Branch



# Overview

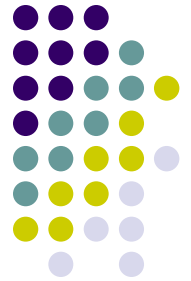
- Why and how Ohio pursued ARRA funding for replacing and repairing decentralized wastewater treatment systems
- Roles and responsibilities of the state agencies and local governments
- Lessons learned
- Other funding mechanisms/opportunities
- National overview
  - Other states doing decentralized projects under the Green Project Reserve

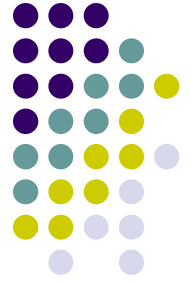


# Background

- American Recovery & Reinvestment Act (ARRA) is passed in 2009
- Green Project Reserve (20% provision)
- Four categories
  - Green Infrastructure
  - Water Efficiency
  - Energy Efficiency
  - Environmentally Innovative
    - Decentralized specifically identified
      - Language remains in 2010 Appropriations

# Ohio's Success Story...





# Using Green Project Reserve Funds for Decentralized Systems – Ohio's Success

Rebecca Fugitt, Program Manager  
Residential Water and Sewage  
Program  
Bureau of Environmental Health  
Ohio Department of Health



## Why did Ohio pursue ARRA funding for replacing or repairing sewage treatment systems?



- Estimated 1,000,000 home sewage systems
- Minimum state rules established in 1974
- No changes to rules since then and legislative authority/rules in flux
- Failure rate of 23%



## Why did Ohio pursue ARRA funding for replacing or repairing sewage treatment systems



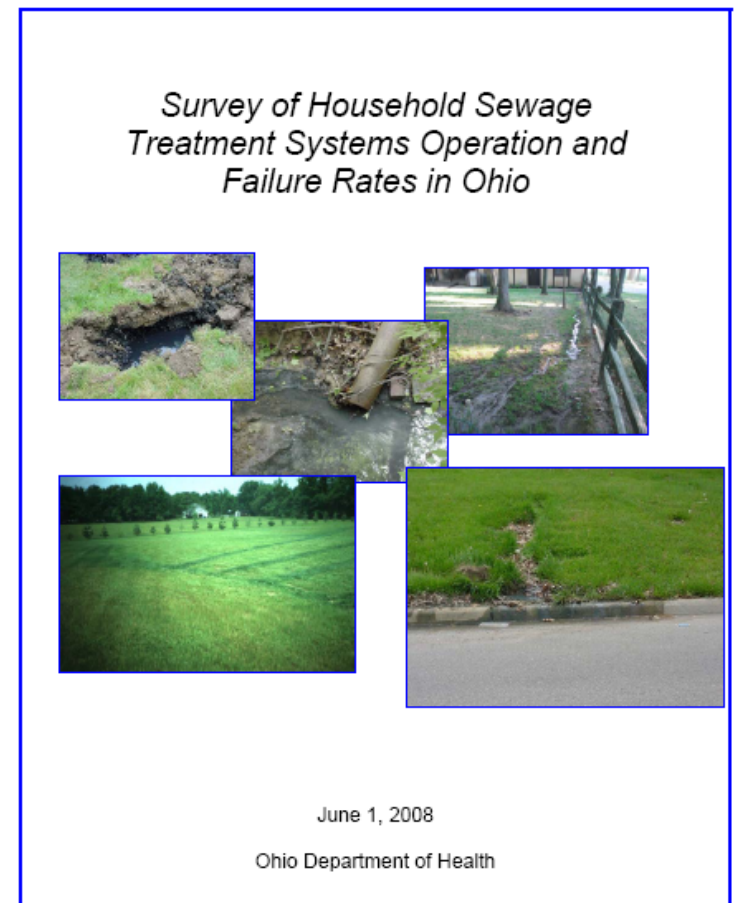
- 2000 Census Data showed 350,000 homes at or below 200% HHS poverty levels in rural areas (not served by sewers)
- At a 25% failure rate, 87,500 households may qualify at or below the 200% HHS poverty level
- Average system replacement cost in Ohio is \$8,100





# Director of Health Report

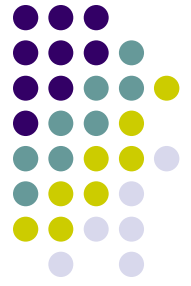
- Report provided to Ohio Legislature - June 1, 2008
  - A survey of boards of health in this state concerning household sewage treatment system operations and the failure rates of those systems



# Operation and Failure Rate Survey



- 2008 Integrated Water Quality Monitoring Report – Ohio EPA (Clean Water Act)
- Total Maximum Daily Load (TMDL) reports
- Ohio EPA enforcement data
- Areawide Planning Agency reports
- Local Health District Survey – focus on this information



# Surface Water Impacts - Total Maximum Daily Load Reports (TMDL)

- Thirty-seven final and draft Total Maximum Daily Load (TMDL) reports for specific watersheds were reviewed, with evaluation of 121 subwatershed units.
  - Of the 121 subwatershed units reviewed, 102 or 84% reported a major source of impairment as bacteria, fecal coliform or pathogens.
  - Of the 121 subwatershed units evaluated, 91 (76%) reported that home sewage systems were a suspected source of impairment.
  - A total numbers of 15,428 failing systems were directly identified for twenty-three (23) subwatersheds.
- **Areas with large numbers of discharging sewage systems.**

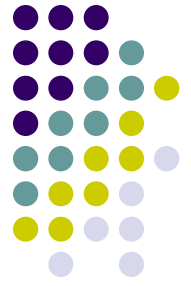
# Ohio EPA Enforcement Actions



- From 1986 through 2007, Ohio EPA has identified 236 communities where failing systems have caused either public health nuisances or environmental degradation and administrative orders to correct have been issued.



# ODH/LHD Permit Data



- Sewage permit data reported to the ODH for permits issued in 2007 showed that 30% of the nearly 7,000 permits issued were obtained for system alteration or replacement.



# Local Health District Survey

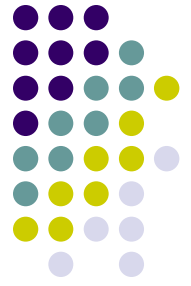
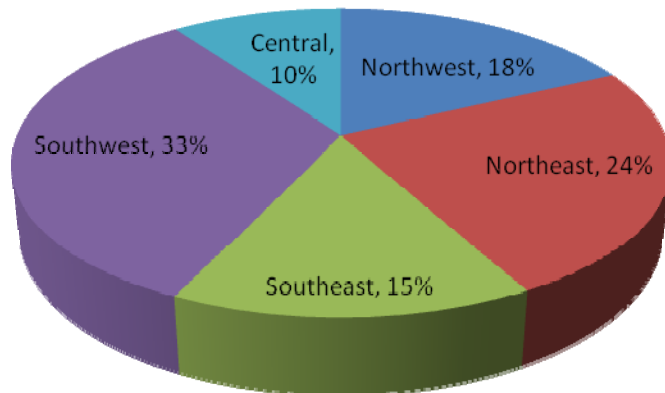


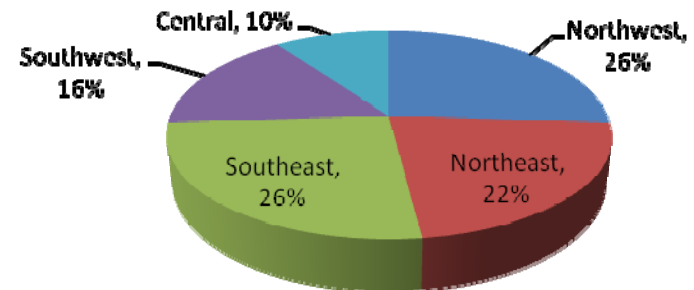
Table 4. Summary of system data collected from the local health district surveys (73 health districts responding).

Region	Northwest	Northeast	Southeast	Southwest	Central	State Total
<b>Existing Systems</b>	98414 (18%)	126984 (24%)	81061 (15%)	174139 (33%)	51517 (10%)	532115
<b>Failing Systems</b>	32944 (26%)	27206 (22%)	32144 (26%)	19707 (16%)	12164 (10%)	124165 (23%)
<b>Future Failing Systems (5 yrs)</b>	8603 (13%)	17958 (27%)	6818 (10%)	18070 (27%)	15406 (23%)	66855 (13%)

**Percentage of Existing Systems by Region**



**Number and Percentage of Failing Systems by Region**





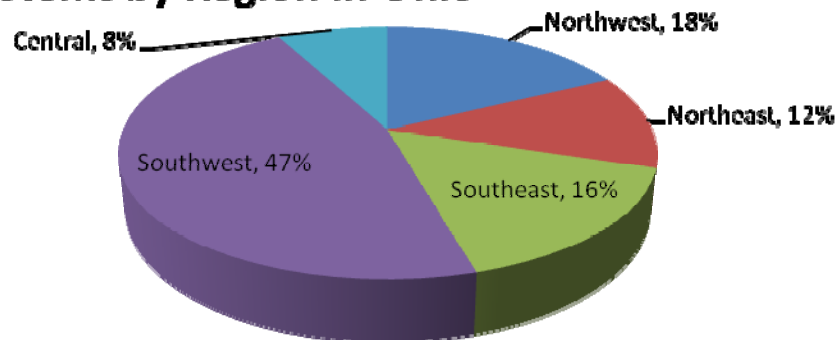
# Local Health District Survey

Table 6. Total of all discharging and on-site systems by region (excludes privies, unknowns, holding tanks and others).

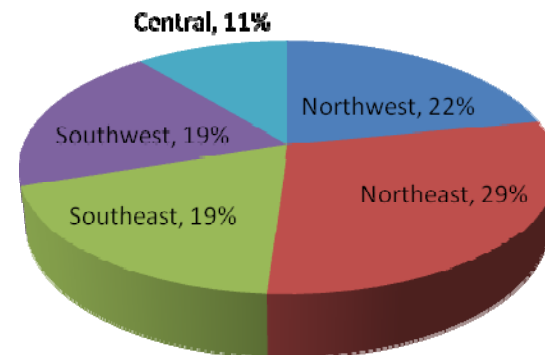
System Type	Northwest	Northeast	Southeast	Southwest	Central	State
Discharging	36787 (22%)	49703 (29%)	32704 (19%)	32251 (19%)	18780 (11%)	170225 (37%)
On site	51492 (18%)	32864 (12%)	45402 (16%)	132490 (46%)	21556 (8%)	283804 (63%)

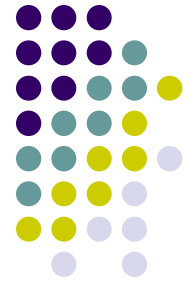
*Assuming a daily discharge of 360 gallons per day for a three bedroom home, then over 61 million gallons of effluent are discharging daily from discharging systems to streams and waterways!*

**Percentage of On-Site Sewage Systems by Region in Ohio**

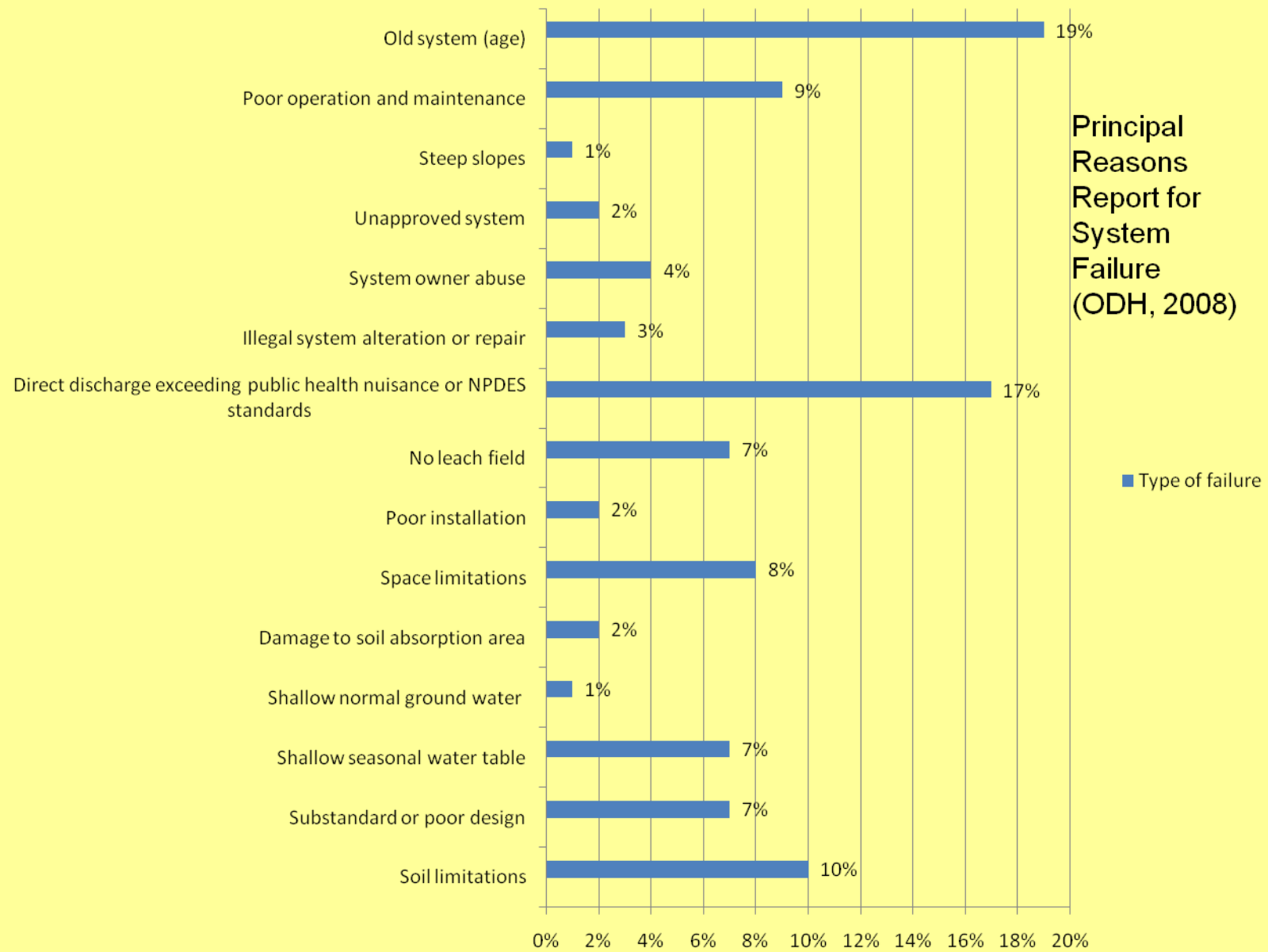


**Percentage of Discharging Sewage Systems by Region in Ohio**



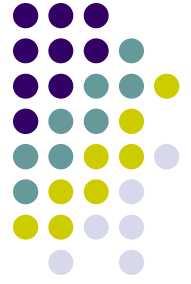


### Principal Reasons Report for System Failure (ODH, 2008)





# ARRA Project – the Beginning.....



- ARRA funding provided to State Revolving Loan Funds for Water/Wastewater - a portion to be set aside in each state for Green Reserve Projects
- Decentralized systems identified as eligible funding under Green Reserve Projects – Innovative Environmental Projects category
- ODH approached Ohio EPA to request funding for repair and replacement of failing home sewage treatment systems



**Contact Information:**

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*(614) 466-4801*



Division of Environmental  
and Financial Assistance



Ohio Water Pollution Control Loan Fund

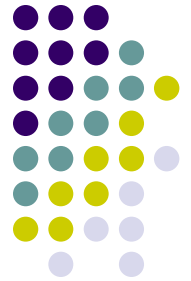
# American Recovery and Reinvestment Act (ARRA) Sewage System Repair and Replacement Project



- Up to \$5 million in funding initially made available
- Administered through the state revolving loan fund (SRF), The Water Pollution Control Loan Fund (WPCLF).

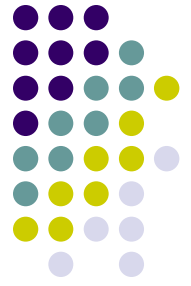


# American Recovery and Reinvestment Act (ARRA) Sewage System Repair and Replacement Project



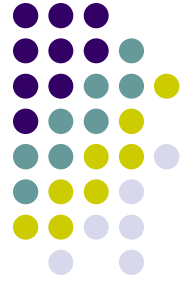
- Identified eligible local government entities:
  - County and municipal governments or water and sewer districts
- Solicited nominations detailing total dollars requested and proposed number of systems to be upgraded

# American Recovery and Reinvestment Act (ARRA) Sewage System Repair and Replacement Project



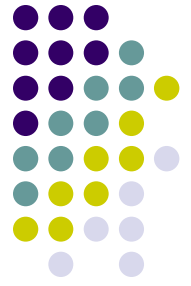
- Eligibility Criteria
  - 75% funding of the eligible cost of a home sewage systems upgrades with 25% system owner match
  - Income limit of 200% Health and Human Services (HHS) 2009 poverty guidelines
  - For family of four this was \$44,100
- Systems had to be in contract by Nov. 1, 2009 with completion of the systems by Spring 2010

## *What types of contributions from homeowners qualify for the 25% matching funds?*



- Direct cash payment or funds obtained from other local, state, or federal programs or charitable organizations.
- Funds spent on site and soil evaluations, or system design work (contracted after 10/1/2008)
- Funds spent on permit fees.

# American Recovery and Reinvestment Act (ARRA) Sewage System Repair and Replacement Project

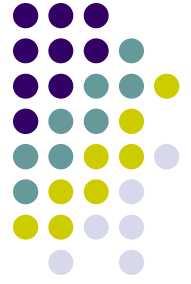


- *The project statistics:*
  - 45 loan recipients
  - Total of \$3,471,000 in upgrades completed
  - Total of 455 systems upgraded



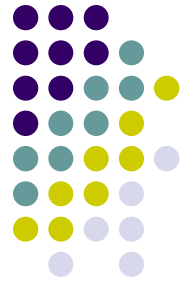


# Roles and Responsibilities – WPCLF Borrower



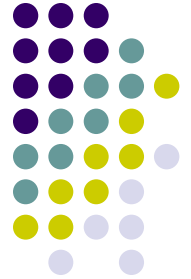
- Enter into a loan agreement with Ohio EPA to obtain the principal forgiveness loans.
- Review applicants; determine eligibility including demonstration of applicant's ability to provide 25% matching funds, verification of eligible income levels, selection of applicants and the award of contracts for installation.

# Roles and Responsibilities – WPCLF Borrower



- Obtain verification from the local health district that the system of the applicant is failing and an upgrade is needed.
- Obtain copy of and verify the completed local health district permit and/or certification from the local health district of the completed system installation and approval.

# Roles and Responsibilities – WPCLF Borrower



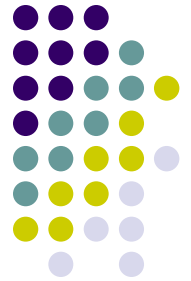
- Submit an invoice to Ohio EPA, DEFA for payment of the system upgrade; including required documentation.
- Process payment to the contractor(s).

# Roles and Responsibilities – System Owner



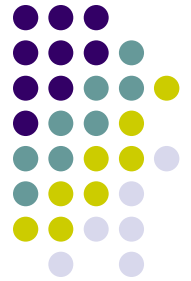
- Provide permission for site access and installation of a system upgrade.
- Obtain an operation permit as required by the local health district.

# Roles and Responsibilities – Local Health Districts



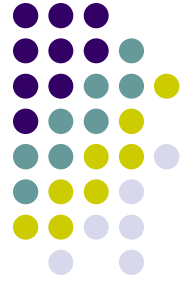
- Assist the borrower with identifying failing systems and provide information to the system owners on the availability of these funds.
- Review the site and soil evaluation, and issue a permit for installation as appropriate. Perform site inspections and final inspections to ensure a successful system installation.

# Roles and Responsibilities – Local Health Districts



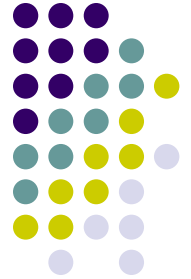
- Certify to the borrower that the system upgrade has been completed.
- Issue an operation permit to the system owner.

# Roles and Responsibilities – Local Health Districts



- Implement an Inspection and Operation Program for system improvements assisted by ARRA funds, at the local health district (if not in existence already), to track these systems and ensure that regular system maintenance is conducted (local health district may establish fee for this purpose).
- Conduct enforcement as necessary to ensure compliance for the life of the system.

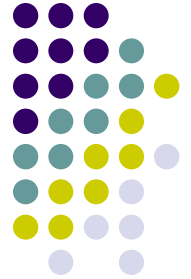
# Roles and Responsibilities – Ohio Department of Health



- ODH assisted borrowers and local health districts with questions regarding the application process, contacting area homeowners, and providing technical support with system evaluations, designs, permitting and inspection.
- This assistance was important – due to relationships between ODH and local health districts
- Frequent communication is critical – regular conference calls were held during the project period. This helps to avoid mistakes and difficulties.



# Roles and Responsibilities – Ohio EPA



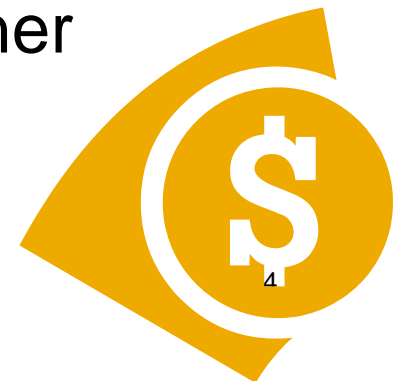
- Reviewed the HSTS project applications and entered into principal forgiveness loan agreements with borrowers.
- Coordinated contractual and reporting requirements, reviewed and approved payment requests and authorized the disbursement of funds to the local government entities.
- Conducted environmental reviews and complied with all other SRF requirements.

# American Recovery and Reinvestment Act (ARRA) Sewage System Repair and Replacement Project

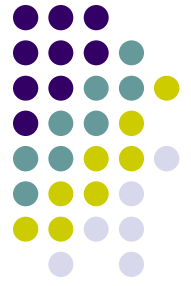


- Challenges

- Meeting ARRA requirements for Davis Bacon (prevailing wage), buy American, contractor bonding, reporting
  - Adapting to the decentralized contract process at state level
  - Monitoring the local bidding process/working with local legal/administrative structure
- Documenting Income level and homeowner match



# Future Funding Program



- For the coming program year – proposing \$5-6 million available for funding system upgrades
- New funding guidelines
  - HHS 2010 poverty guidelines for 1-4 person homes with a maximum income level of \$22,050
  - Homeowners up to 100% of HHS Poverty guidelines will receive 100% funding
  - Homeowners with 100-200% (\$22,050-\$44,100) of HHS Poverty guidelines will receive 85% funding with 15% homeowner match
  - Permits costs will be included in the principal forgiveness loan
- Ohio EPA will require all draft contracts to be submitted to ensure compliance with WPCLF program requirements

# CONTACT INFORMATION



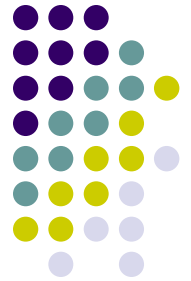
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[jim.bonk@epa.state.oh.us](mailto:jim.bonk@epa.state.oh.us)

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[www.epa.state.oh.us](http://www.epa.state.oh.us)

# National Perspective on the Use of Clean Water State Revolving Funds for Decentralized Projects

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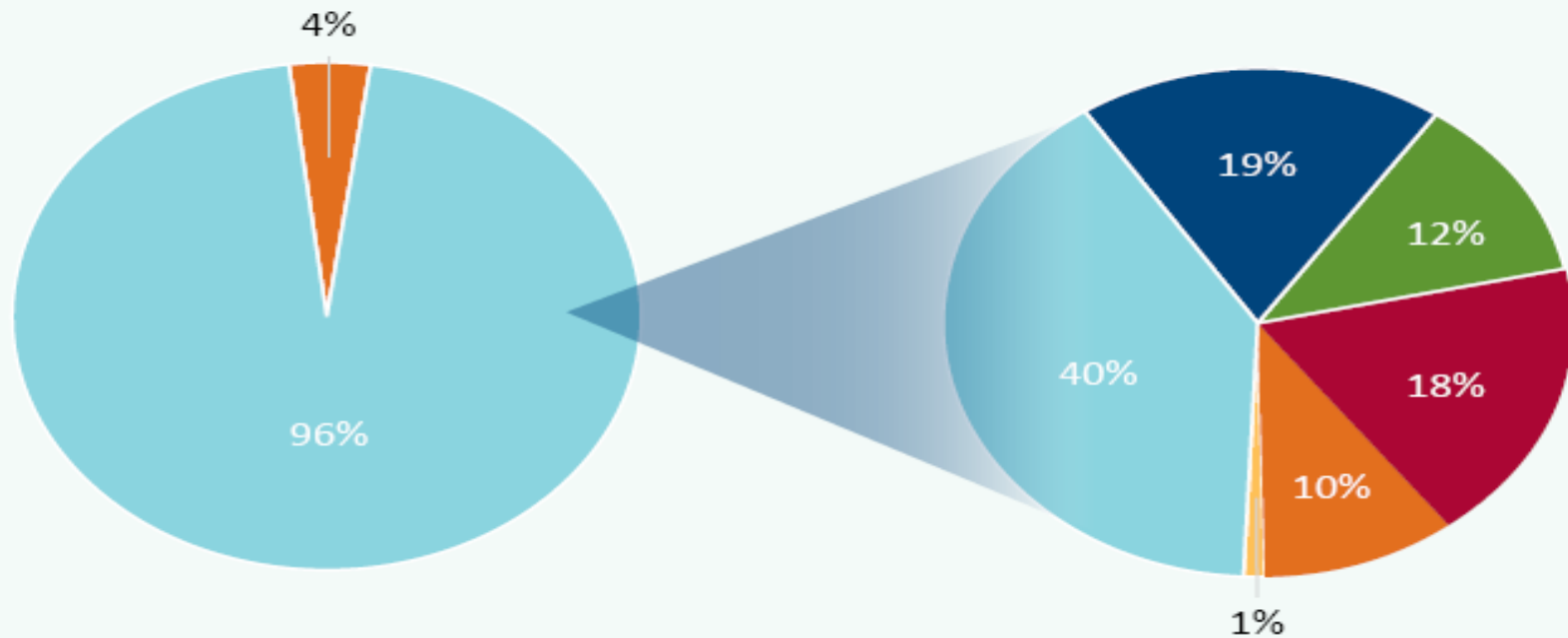
Katie Hess  
Clean Water State Revolving Fund  
U.S. Environmental Protection Agency

# Clean Water State Revolving Fund (CWSRF)





## CWSRFs Have Provided \$84B in Financing



- Nonpoint Source and Estuary
- POTW: Publicly Owned Treatment Works

- Secondary Treatment
- Advanced Treatment
- SSO: Sanitary Sewer Overflow
- New Sewers
- CSO: Combined Sewer Overflow
- Stormwater/Recycled Water

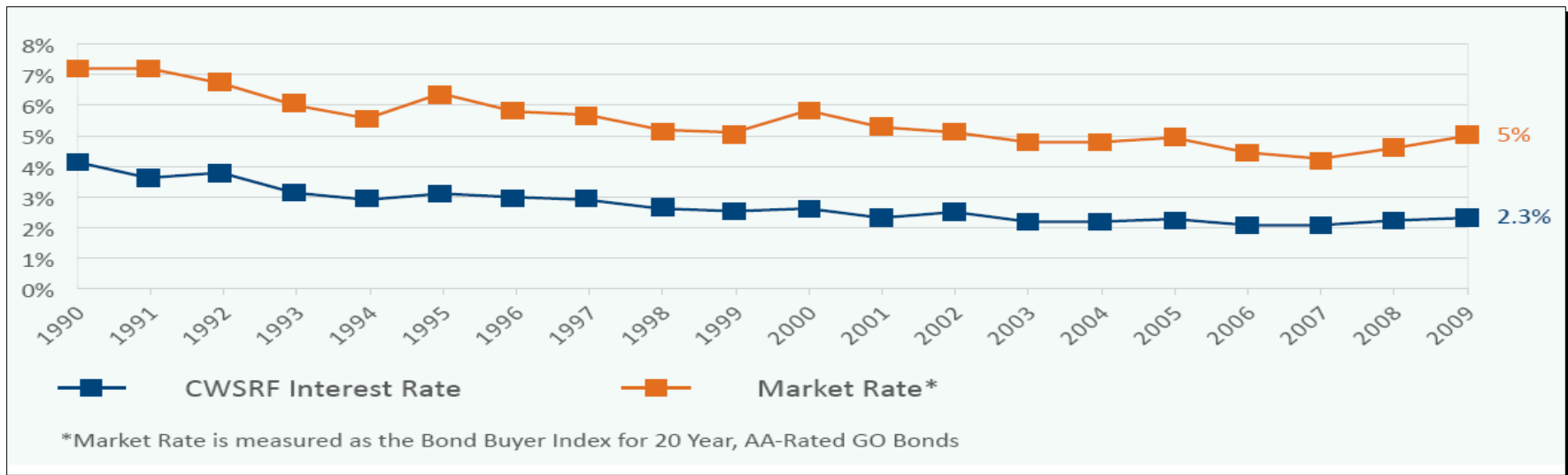
Note: chart on the right represents various POTW categories

# CWSRF Statistical Overview

## FY 1988 – FY 2010



- \$84 billion in cumulative assistance provided<sup>1</sup>
- Fund utilization rate of 100%<sup>1</sup>
- 2.55 times cumulative return on federal investment<sup>1</sup>
- Average savings of 22% of total project costs for a 20-year loan (see figure)<sup>1</sup>
- 69% of assistance goes to projects that protect human health<sup>2</sup>
- Over 130 million people living in more than 2,500 communities have benefited from the CWSRF<sup>2</sup>

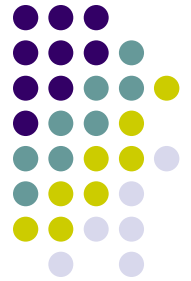


<sup>1</sup> Preliminary data from EPA CWSRF National Information management System

<sup>2</sup> CWSRF Benefits Reporting System

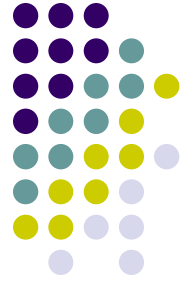


## American Recovery & Reinvestment Act (ARRA)



- Enacted by Congress on February 17, 2009 in response to the recession that began in 2008
- Federal invest in the construction of public infrastructure
  - Designed to stimulate economic growth and job creation
- Special ARRA requirements for the CWSRF:
  1. One-Year Deadline
  2. Creation of a Green Project Reserve (GPR)
  3. Additional Subsidization
  4. Buy American provision
  5. Fair wage provision
- For information on CWSRF's response to ARRA:  
[www.epa.gov/water/eparecovery](http://www.epa.gov/water/eparecovery)

# \$1.13B in GPR Funding

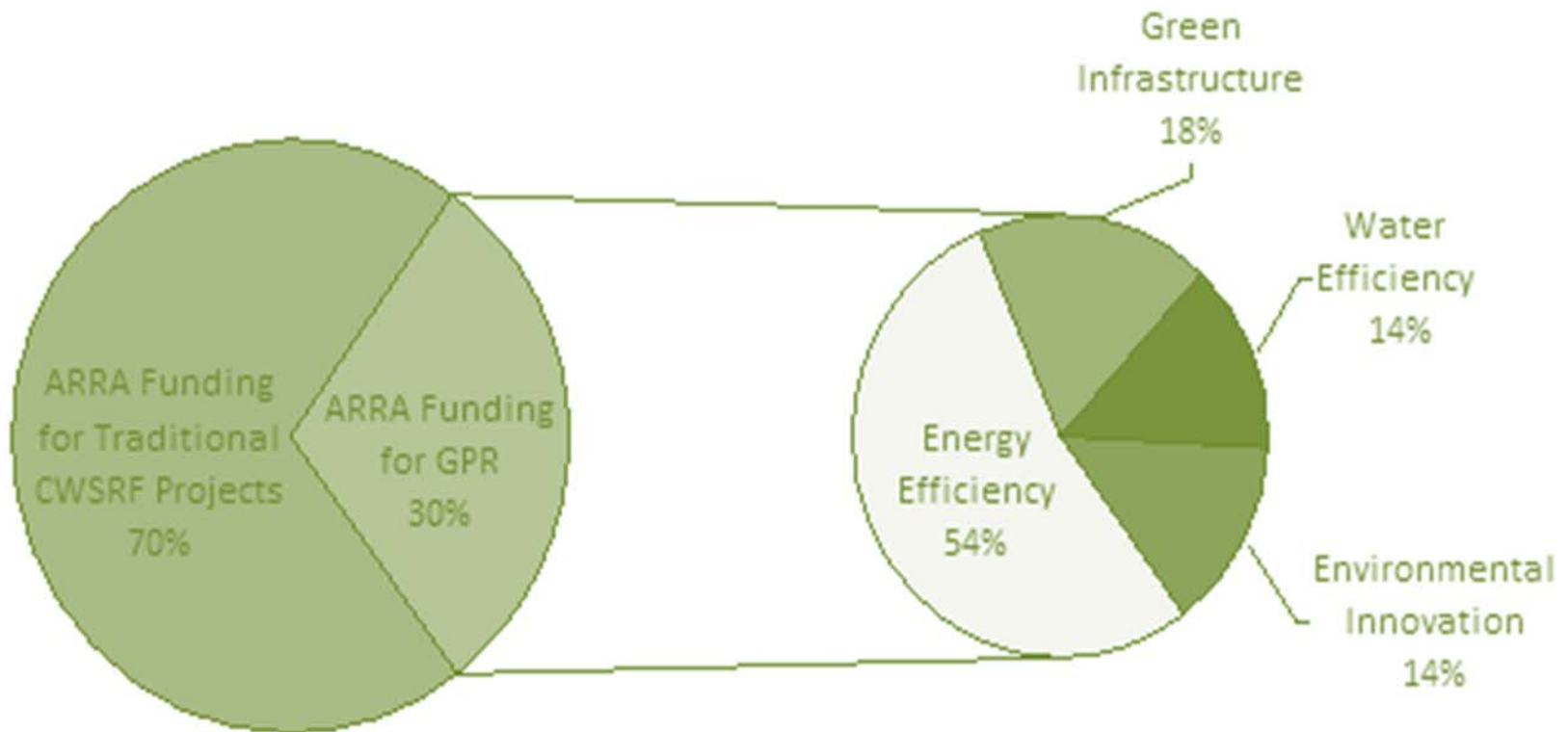


## National GPR Funding Per Category

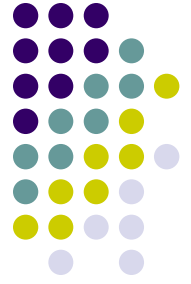
Energy Efficiency – \$608 M  
Green Infrastructure – \$207 M  
Water Efficiency – \$158 M  
Environmental Innovations – \$156 M

## National Average GPR Funding Per Project

Environmental Innovations – \$2.5 M  
Energy Efficiency – \$2.3 M  
Water Efficiency – \$1.4 M  
Green Infrastructure – \$0.8 M



## ARRA Successes



1. One-Year Deadline: All 51 programs certified that their ARRA funds were under contract or construction by February 17, 2010.
2. Green Project Reserve: 30% of ARRA funds were used for green projects, including green infrastructure projects, water efficiency projects, energy efficiency projects, and environmentally innovative projects.
3. Additional Subsidization: 72.6% of ARRA funds were provided as additional subsidization, including grants, principle forgiveness, and negative interest rate loans.
4. Buy American: Inspections are ongoing to ensure that all iron, steel and manufactured goods incorporated into ARRA projects were made in the United States or that a waiver was approved by EPA.
5. Davis Bacon Wage Rates: Inspections are ongoing to ensure that all laborers and mechanics working on projects funded in whole or in part by ARRA are paid prevailing wages as determined by the U.S. Department of Labor.

## FFY2010 and FFY2011 Appropriations



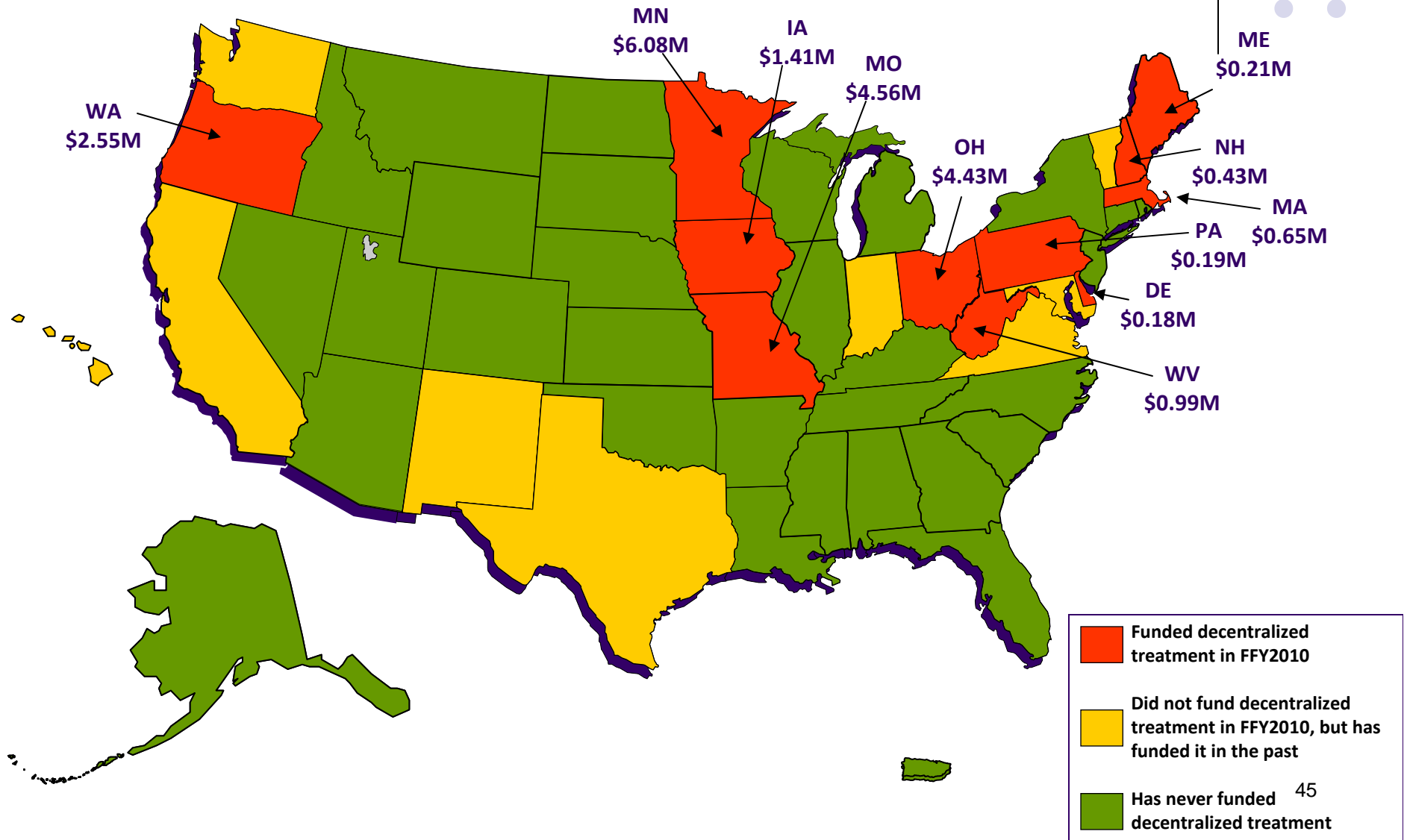
### Appropriation:

- FFY2010 = \$2.1 billion
- FFY2011 (proposed) = \$2.0 billion

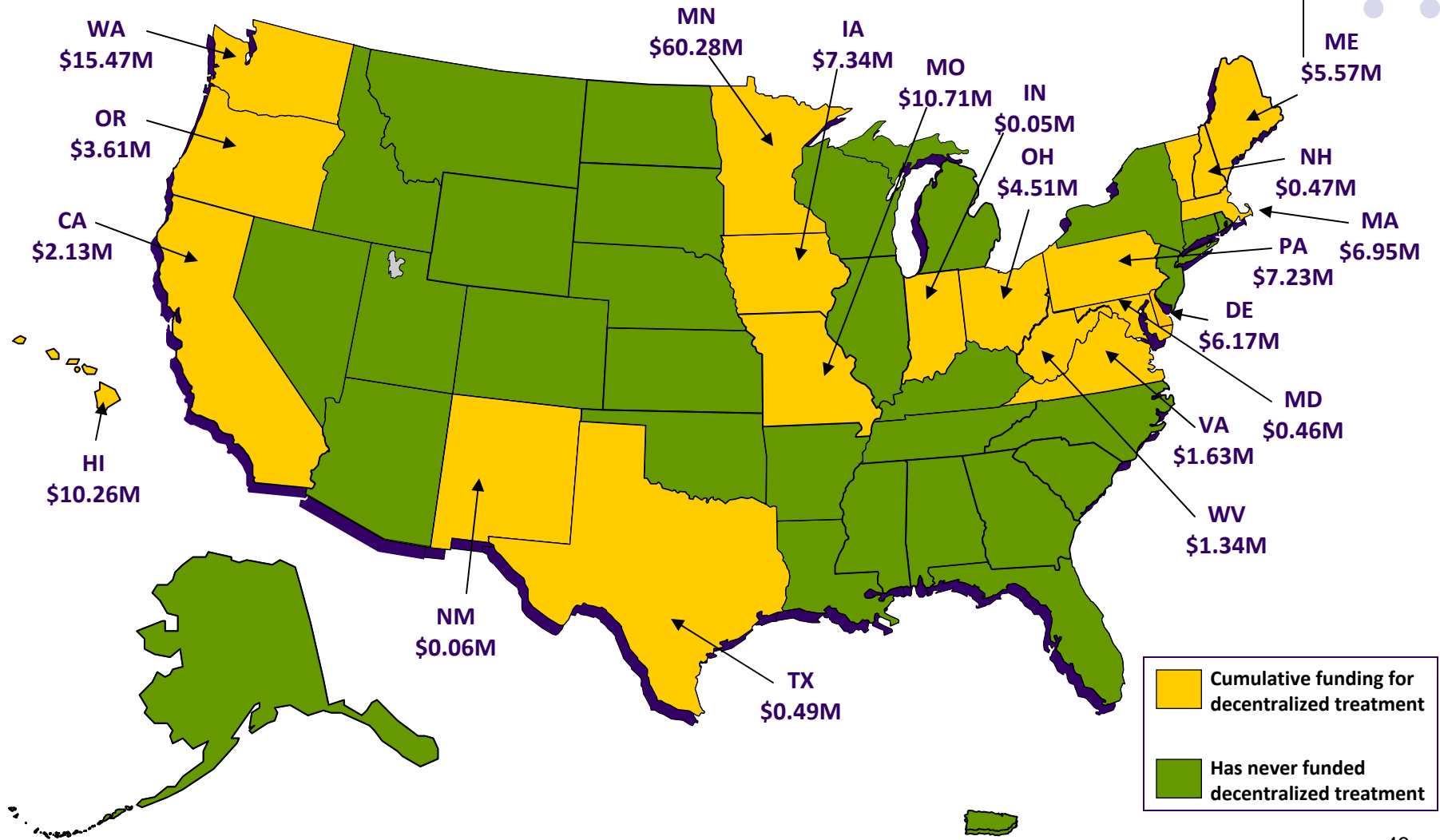
### Requirements:

- Additional Subsidization: Not less than 30% of capitalization grant will be provided as additional subsidization. The additional subsidization applies to fund in excess of \$1 billion. (Not more than 30% proposed for FFY2011).
- Green Project Reserve: 20% set-aside targeting green infrastructure, energy efficiency, water efficiency, and environmentally innovative projects.
- Davis Bacon Wage Rates: Davis Bacon applies to all funds.
- Currently the CWSRFs are under Continuing Resolution.

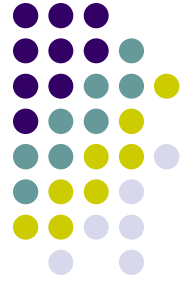
# 2010 CWSRF Assistance for Decentralized Sewage Treatment = \$20.51M



# Cumulative CWSRF Assistance for Decentralized Sewage Treatment = \$142.17M



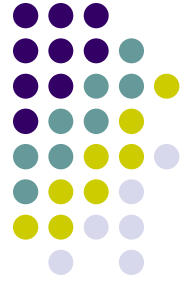
## Minnesota



- In 2006, MN adopted the Clean Water Legacy (CWL) Act, which put a priority on cleaning up impaired waters
- CWL Act included a greater focus on water quality impacts from unsewered communities and failing septic systems
  - MN has 1,025 small “communities” with inadequate wastewater treatment (5 or more homes on lots 1 acre or less)
  - 106 include individual or community straight-pipe discharges
  - Approx 100,000-200,000 non-complying individual sewage treatment systems (ISTS)



## Community Systems vs. Privately Owned Systems

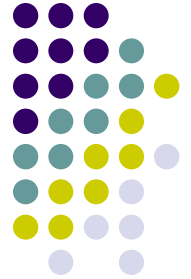


- Key question: Are the existing individual sewage treatment system (ISTS) problems serious enough and/or concentrated enough to require a community solution?
- Preferred option is to get private property owners to fix their systems
- Building a community system means a local government will forever be responsible for operation, maintenance, and eventual replacement of all system components.

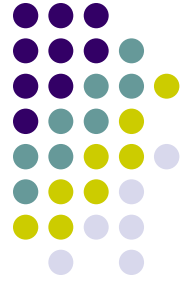




## Funding Options for Private Systems



- MN AgBMP Program (combination CWSRF 319 and state funds)
  - Counties receive annual allocation of funds to implement County Water Plans
  - Loans are made to private homeowners through local banks who can charge up to 3% interest
  - Since 1996, this program has provided \$17.6M in CWSRF assistance to 3,000 ISTS projects
- MN Clean Water Partnership Program (CWSRF 319)
  - State grants to develop watershed restoration plans plus CWSRF loans at 2% for implementation
  - CWSRF loans are then made by county or watershed district to homeowners
  - Since 1996, this program has provided \$30.7M in CWSRF assistance to 4,900 ISTS projects
- MN Housing Finance Agency
  - Various home improvement loan programs



## Funding Options for Community Systems

- Clean Water State Revolving Fund
  - All unsewered communities must analyze alternatives using “Wastewater Treatment Hierarchy”
  - Supplemental assistance thru state Wastewater Infrastructure Fund for high cost projects
- Small Community WW Program (state funded)
  - Designed for very small communities (10-30 homes)
  - Technical assistance grants for planning
  - Loans at 1% for construction, 50% grant if below average median household income
- Regardless of program, all proposed projects must be ranked on state Project Priority List



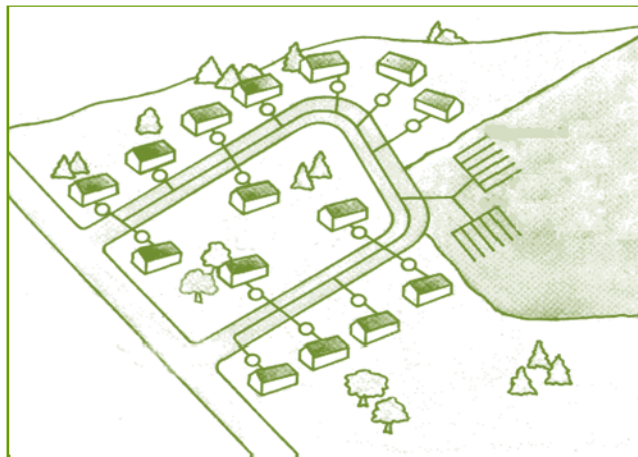
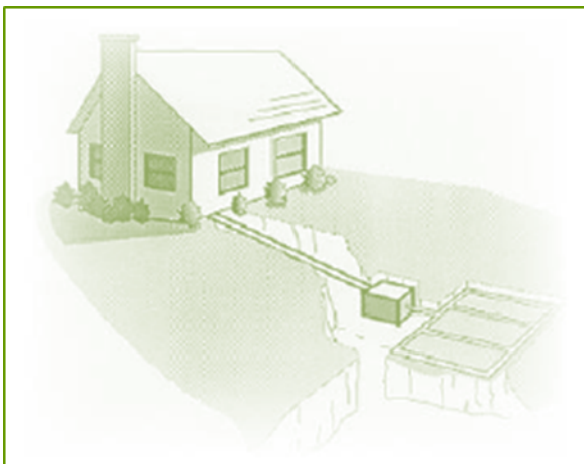
# Minnesota's Hierarchal Approach



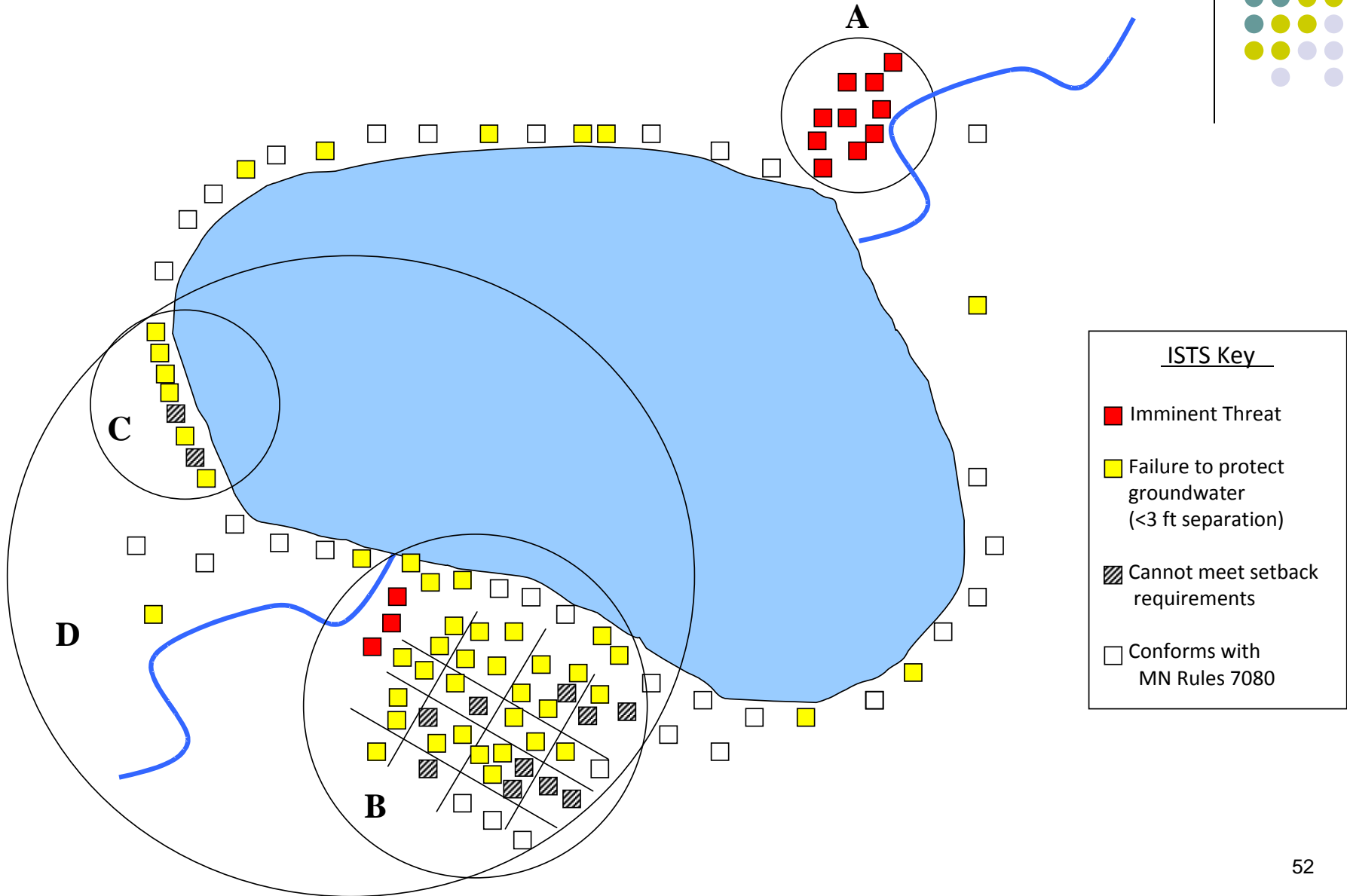
## Analysis of Treatment Alternatives for Unsewered Communities

- 1) Replace failed ISTS with new ISTS
- 2) Decentralized cluster system
- 3) Connect to existing trmt facility
- 4) Connect to an existing trmt facility that would require an expansion
- 5) Construct new collection and centralized treatment facility

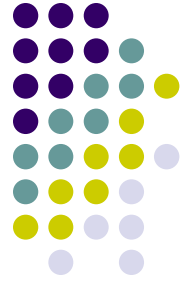
(\*Note: Solution may be a combination of approaches)



# Unsewered Area Project Examples



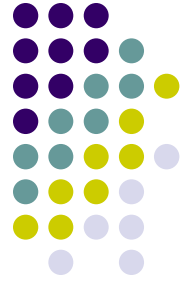
## Minnesota Project Priority List



- Applicants must submit request to MN Pollution Control Agency to have project ranked on Project Priority List (PPL)
- Project ranking based primarily on the condition of the existing ISTS systems
  - three categories of ISTS non-compliance
  - density of systems
- Applicant must be able to legally issue general obligation debt for sewer/wastewater projects (i.e. city, county, township, sanitary district)



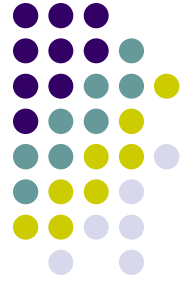
## Benefits of Funding Decentralized Sewage Treatment



- Decentralized systems can be planned and installed quickly
  - Site evaluation conducted
  - Manufacturers have designs already available
  - Homeowner contracts with vendor
- Loans can be directed to homeowner through local governments or non-profits providing wastewater services



# Flexible Financial Assistance with the CWSRF



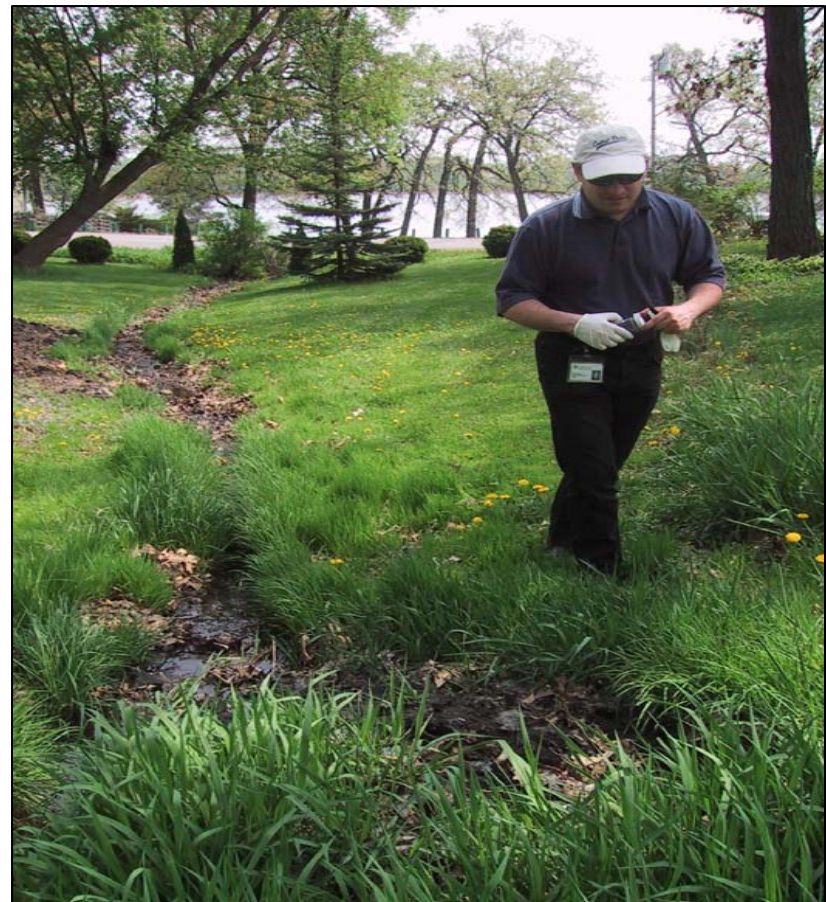
- The CWSRF is a flexible financing option, which can provide many types of assistance to a variety of borrowers. The CWSRF can accept many different income streams for repayment of loans

## Funding Mechanisms:

- Direct loans
- Pass-through loans
- Linked deposit loans
- Sponsorship programs

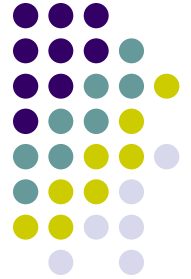
## Additional Subsidization Options:

- Grant
- Loan with principal forgiveness
- Loan with negative interest rate



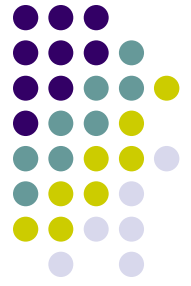
## Eligible CWSRF Assistance Recipients

- Many different types of organizations are eligible for CWSRF financing, including:
  - Municipalities
  - Publicly owned wastewater treatment works
  - Privately owned wastewater treatment works (in national estuary areas)
  - State agencies
  - Nonprofit organizations
  - Homeowners
  - Farmers





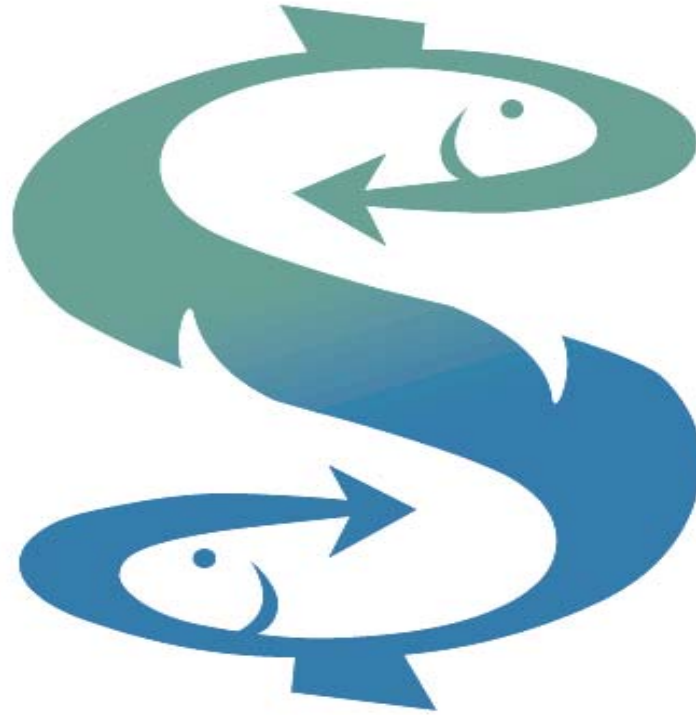
## Eligible CWSRF Repayment Sources



- States have the flexibility to access income from many sources as repayment for assistance, including:
  - Usage based wastewater bill charges
  - Special assessments
  - Home owner association assessments
  - Stormwater district fees
  - Farming revenues
  - Non-profit membership fees
  - Home owner fees
  - Landfill fees
  - For profit company revenue
  - Property tax revenue



(\*NOTE: these repayment sources are not specific to decentralized projects, but to all 319 and 320 CWSRF project loans)



Clean Water State Revolving Fund  
U.S. Environmental Protection Agency  
1200 Pennsylvania Avenue, NW Washington, DC 20460  
Phone: (202) 564-0752  
Fax: (202) 501-2403  
[www.epa.gov/owm/cwfinance/cwsrf](http://www.epa.gov/owm/cwfinance/cwsrf)

CWSRF Fact Sheet on Decentralized Systems  
[http://www.epa.gov/owm/septic/pubs/septic\\_srf\\_fs.pdf](http://www.epa.gov/owm/septic/pubs/septic_srf_fs.pdf)

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