

CLEAN WATER COUNCIL MEETING

June 14, 2016

RWBR

What is RWBR?

- Reclaimed Water for Beneficial Reuse
- Treated wastewater that is reused for non-potable applications in place of potable water, diverted surface water or diverted groundwater
- RWBR must meet certain requirements specified in a NJPDES permit that authorizes the water to be reused for a designated use

Why RWBR?

- Reduces demands on valuable water supplies utilized for drinking water including ground and surface waters
- Postpones costly investments for development of new water sources and supplies
- Helps reduce pollutant loadings to New Jersey waterways

Why RWBR?

- Can prevent salt water intrusion into wells in coastal communities by reducing the amount of water withdrawn from ground water aquifers
- Provide savings for industries over potable water use and can provide a continuous source of water even during drought
- Assist farmers during drought periods

RWBR Classifications

- Restricted Access
- Public Access

Restricted Access

- Restricted Access is the classification of reclaimed water for which the possibility of exposure of the general population to the water is minimal and/or the exposure of workers to the water is controlled. Restricted access shall require at least secondary treatment and/or compliance with effluent limitations established in a NJPDES permit.

RESTRICTED ACCESS

- 3 GROUPS:
 - Non-edible crops, irrigation of grass or landscaped areas within a secured perimeter
 - Construction and maintenance, street sweeping, dust control, fire protection, road milling
 - Industrial systems, sewer jetting, plant washdown, non-contact cooling water, boiler make-up water, vehicle washing, composting, use in various processes

Public Access

- Public Access is the classification of reclaimed water for which there is a high possibility that the general population will be exposed to the water, thereby requiring better than the secondary treatment effluent standards specified in N.J.A.C. 7:14A-12.2

PUBLIC ACCESS

- 2 GROUPS:
 - Agricultural as well as non-agricultural activities, golf course irrigation, playground/park irrigation, commercial car washing, toilet flushing
 - Agricultural edible crops, only those that will be peeled, skinned, cooked or thermally processed before consumption.

PUBLIC ACCESS

- NJPDES permit limitations:
 - Total Suspended Solids 5.0 mg/l maximum
 - Fecal Coliform 2.2 colonies/100 ml (7-day avg. and 14 as an instantaneous maximum)
 - Nitrogen 10 mg/l
 - Turbidity 2.0 NT
 - Disinfection standards for both Chlorine and UV

History/Accomplishments of RWBR in NJ

- New Jersey began to develop a reuse program in 1999 as part of addressing the drought emergency that summer.
- The drought of 2002 reinforced the need to further develop the reuse program.

History of RWBR in NJ

- Formation of Task Force
- Development of Technical Manual
- Development of NJPDES permit conditions
- Demonstration Projects (Bond Fund)
- Development of Reuse General Permit
- Adoption of regulations

NJPDES Permit Conditions

- Included as a module in Part IV
- Incorporates requirements for all PA/RA
- Limitations/sampling methods for each type
- Submittal requirements for an Operations Protocol, User/Supplier Agreement and Engineering Report
- Operational Requirements – signage, color coding, setback distances

Types of RWBR

RWBR Category	Specific RWBR Type
PA	Spray Irrigation (Golf Course)
PA	Spray Irrigation (Athletic Fields, Playgrounds)
PA	Spray Irrigation (Residential Lawns)
PA	Vehicle Washing
PA	Hydroseeding/Fertilizing
PA	Decorative Fountains
PA	Toilet Flushing
RA-LA	Sod Irrigation
RA-LA	Spray Irrigation within a fenced perimeter or otherwise restricted area
RA-LA	Spray Irrigation within a fenced perimeter or otherwise restricted area (Without NH3 + NO3)
RA-LA	Spray Irrigation (not fenced or restricted area)
RA-CM	Street Sweeping
RA-CM	Dust Control
RA-CM	Fire Protection
RA-CM	Vehicle Washing (at STP or DPW)
RA-CM	Composting
RA-IS	Sanitary Sewer Jetting
RA-IS	Non-Contact Cooling Water
RA-IS	Boiler/Process Makeup Water
RA-IS	Road Construction Operations
RA-IS	Hydrostatic Testing
RA-IS	Parts Washing
RA-IS	STP Washdown

RWBR in NJPDES PERMITS

- 106 individual NJPDES permits with RWBR conditions
- In 2015 a total of 12.77 billion gallons of water was reused
 - 12.6 billion gallons for restricted access
 - 89.6 million gallons for public access

RWBR DEMO PROJECTS

- In 2004 NJDEP offered \$35 million to reuse treated wastewater
- 55 proposals
- 23 approved for demo projects in 2005
- Only 6 became working projects
- CMCMUA most successful
- Reasons

RWBR Rules (Water Supply)

- 2005 Water Supply Rules (N.J.A.C. 7:19) at N.J.A.C. 77:19-2.14(a)13 mandates that the water supply permit require the permittee to investigate the feasibility of water reuse for any water used for non-potable purposes.

RWBR Rules (WQMP)

- Water Quality Management Planning Rules (N.J.A.C. 7:15) finalized in July 2008

N.J.A.C. 7:15-5.25 (d)3i states that for each proposed new or expanded domestic or industrial treatment works, the applicant shall propose a wastewater treatment disposal alternative in accordance with a hierarchy.

RWBR Rules (NJPDES)

- On January 5, 2009 RWBR rules were adopted (N.J.A.C. 7:14A-2.15)
- Highlights were:
 - Provided for compliance with limits in NJPDES permits
 - Incorporated use of technical manual into rule
 - Listed required information for the NJPDES permit application for RWBR authorization
 - Prohibited expansion of sewer service area or capacity to accept additional wastewater
 - Submittal of Reuse Feasibility Study on a voluntary basis

RWBR Rules (NJAC 7:14D)

- Tax incentive rules readopted May 22, 2015
- Provide tax incentives to industries for beneficial reuse in industrial processes through:

Business Tax Credit (N.J.S.A. 54:10A-5.31) and
Sales Tax Refund (N.J.S.A. 54:32B-8.36)

Reuse Tax Incentives for Industrial Processes

N.J.S.A. 54:10A-5.31

- Provides for corporate business tax credit up to 50% of cost of treatment and/or conveyance equipment purchased and operated solely for the purpose of beneficially reusing wastewater effluent in an industrial process.

Reuse Tax Incentives for Industrial Processes

N.J.S.A. 54:32B-8.36

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IMPEDIMENTS TO RWBR

- Regulatory
 - Minimum passing flow
 - Requirements Burdensome
 - Must be permitted
- Public Perception
 - Safety/quality
- Cost
 - Pipeline, extra treatment

Information and Contact

- Technical Manual for RWBR:

<http://www.state.nj.us/dep/dwq/techmans.htm>

- Contact:

Ben Manhas, Bureau of Surface Water Permitting
(609) 292-4860

Think Green Think Reuse

