So-Called "Package Plant" Training

Sullivan County Government Center, 100 North Street, Monticello, NY

Tuesday, January 27, 2026 | 5:30 PM to 7:30 PM

Presented by:

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Agenda

- What is a “package plant” and what are the issues?
- Decentralized Infrastructure 101
- Existing Structures of Governance
- FAQ’s Regarding Decentralized Infrastructure (“Package Plants”)
- What can local governments do to ensure quality and sustainability of such systems?
- Take-aways

What is a “Package Plant” and What are the Issues?

You tell me…

Package Plants and Their Potential Issues

Package Plant: A pre-manufactured, modular, compact water or wastewater treatment system assembled in a factory and transported to a site commonly used for small communities, residential subdivisions and in rural areas.

Potential Issues:

- Quality and ability to meet regulatory requirements
- Maintenance and proper operations
- Flow variability sensitivity
- Limited capacity and flexibility
- Poorly located
- Noise and odor
- Disinvestment/abandonment by owner
- Poorly constructed/installed

Are all “Package Plants” Bad?

No. **So-called “package plants” can offer high quality treatment systems at relatively low cost and can be environmentally sound.**

It’s not the technology that’s the problem.
It’s the way they are sometimes used:

- Mismatch between technology and treatment demand
- “Cheap” solution that is not sustainable or durable
- Set it and forget it attitude of owners
- Employed in unfavorable locations for a variety of reasons
- “Black Box” without flexibility to address variable demands

New Term:
Decentralized Infrastructure

Package Plants, more broadly referred to as Decentralized Infrastructure refers to a specific suite of technologies that are used in an approach to providing utility services:

- Systems that are built and operated by distributed participants rather than a single, central entity.
- Such systems are located near the point of demand for water or generation of sewage.
- In water and sewer, generally, privately-owned infrastructure that provide water supply or wastewater collection and treatment

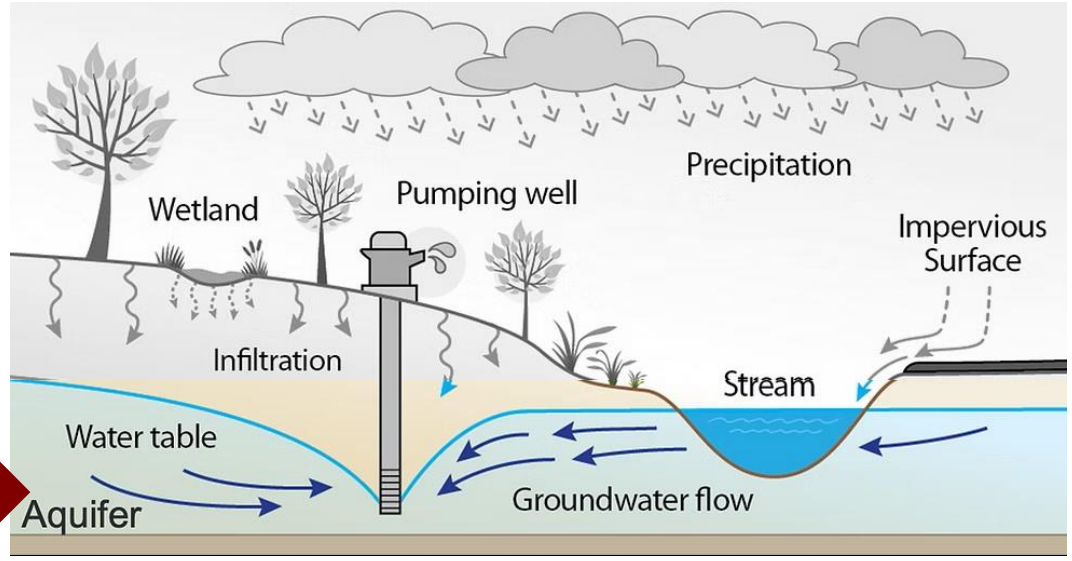
Package Plant is to Decentralized Infrastructure as Kleenex is to Tissue

Decentralized Infrastructure 101: Water

Water System Components:

Ground Water Source

- One or more groundwater sources
- Treatment, storage and distribution
  - which may include booster pumps as well as service connections and may include meters to a defined service area



Surface Water Sources

- Require additional treatment
- Can be used along with ground water sources

Decentralized Infrastructure 101 : Water

U.S. Environmental Protection Agency (EPA) / N.Y.S Department of Health (NYDOH) Regulated Public Water Systems (PWS):

Types of Regulated Public Water Systems		
Community Water	**Non-Transient Community**	**Transient Non-Community**
Regularly serves at least 25 year-round residents for at least 60 days per year* OR Serves at least 5* service connections used by year-round residents	Serves 25 or more of the same people for at least six months but not year-round (e.g. a school, etc.)	Serves 25 or more people But not the same people for at least 60 days per year* (e.g. camp ground, service station, etc.)

Shared Characteristics of all Regulated Public Water Systems

- Can be publicly or privately owned
- Have a defined service area
- Operators must be certified, Annual Water Quality Reports are required to be published**

**USEPA is 15 service connections and does not consider the number of days served*

***NYSDOH guidance provides that services <1,000 connections must only provide water quality reports to bill-paying customers and make good faith efforts to make available to non-bill paying customers.*

Decentralized Infrastructure 101: Wastewater

- **Wastewater System Components**
  (excluding individual septic systems)

  Wastewater treatment facility, **collection system** which may include **gravity sewers** or **pump stations,** and **forcemains** or a combination thereof, as well as **lateral connections** with **backflow prevention** to structures generating wastewater, which may include **grinder pumps**

- **Individual On-site Septic System Components**

  Generally, **a lateral connection with backflow prevention** to the structure generating **wastewater directing flow to a septic tank** which **separates solids** (which must be removed periodically) from liquids with flow from the septic tank directed to a **distribution box** then to **a leach field** consisting of a network of **perforate subsurface laterals (pipes)** to allow waste to flow into a **subsurface treatment bed** slowly to facilitate **aerobic biological activity** to consume organic content in the wastewater before entering the water table

Decentralized Infrastructure 101: Wastewater

Wastewater Permitting	
Actions Subject to Permitting in NYS	**Actions NOT Subject to Permitting in NYS**
• Constructing or using any outlet or discharge pipe to direct wastewater into surface or groundwater • Constructing or operating a disposal system such as a sewage treatment plant • Modifying, transferring or otherwise changing any of the above	• Any facility whose treatment system has a design flow of less than 1,000 gpd of sewage-wastewater containing no industrial or non-sewage wastes; however, these discharges may require approval from others (e.g. septic systems may require local code and/or NYSDOH approval)

While there are different types of permits for public and private infrastructure, they are essentially regulated in the same manner.

Existing Structures of Governance

Regulatory Agencies

US Environmental Protection Agency (USEPA)

- Plants over 1 MGD
- Industrial Plants

NYS Department of Environmental Conservation (NYSDEC)

- Taking water from the environment
- Discharging water to the environment

NYS and County Departments of Health (NYSDOH)

- Supplying potable water
- Camps, food service establishments, etc.

Delaware River Basin Commission (DRBC)

- Multi-state compact regulating taking and discharging water in coordination with DEC

NYC Department of Environmental Protection (NYSDEP)

- Discharging water to the environment in coordination with DEC

NYS Building and Property Maintenance Code

- Requires adequate utility service for occupancy and property maintenance

Existing Structures of Governance

What is the role of state and regional regulatory review of decentralized systems?

- Compliance with state/federal regulations only
- Exclusive of review of financial conditions
- Expectation of quality of construction

What is the involvement of state and regional regulatory agencies in construction and operations?

- These agencies are not involved in construction
- They rely on self-certification of supervising engineer
- They conduct annual inspections and review operating reports

Local governing bodies cannot assume that securing permits from state and regional agencies will ensure construction quality, proper operations, or financial sustainability of this infrastructure.

Existing Structures of Governance

NYS Transportation Corporations Law (TCP)

A Transcorp is a type of business corporation involved in the provision of a public service :

- **Water-works**
- **Sewage-works**
- Gas
- Electric
- Telegraph or telephone
- Ferry
- Pipe-line
- Freight terminal
- District steam

TCP – Article 4
Water-Works Corporations

Water-Works Corporations

Corporation organized to supply water by mains or pipes to communities or inhabitants

- **Municipal consent to form is required**
  - Engineering details required
  - NYSDEC/DOH endorsement required before municipal consent
- **May supply municipalities by contract**
- **Powers include**
  - Lay and maintain distribution infrastructure in public ROW
  - Enter property to assess waterworks locations
  - Acquire land by condemnation as necessary to meet its duty to supply water
  - Potentially merge with other water-works corporations

TCP – Article 10
Sewage-Works Corporations

Sewage-Works Corporations

Organized to provide a sewer system for the disposal of sewage through pipes and treatment plants which erects, operates and maintains such facilities for sewer areas within communities

- **Municipal consent to form a Sewage-Works Corp is required**
  - Engineering details required
  - NYSDEC/DOH endorsement required before municipal consent
- **Municipality <u>shall</u> Hire an Engineer** (paid for by the sewer-works corp) to:
  - Review and recommend improvements to initial plans
  - Periodically inspect the infrastructure during and after construction
  - Report to the municipality on the cost of construction after review of documentation
  - Report to the municipality on the completion of construction and conformity to approved plans

TCP – Article 10
Sewage-Works Corporations

Continued

- The municipality **shall** require posting of a performance bond for the completion of construction and may require other security for labor and materials and for the cost of retained engineering services
- **Shall** require a reasonable guarantee for five years of operations and maintenance
- The stock of the corporation **shall** be placed in escrow and title thereto shall pass to the local governing body in the event of failure to complete construction or abandonment or discontinuation of operations and maintenance
- In the event of abandonment or discontinuation of operations and maintenance, the local governing body **shall** have the right to operate and maintain the system at the expense of the users at the established rates until a permanent solution is executed

TCP – Article 10
Sewage-Works Corporations

Continued

- The local governing body **may,** at the time of granting consent to incorporate, require an option to purchase the system at any time or acquire it by condemnation.
- Rates of the Sewage-Works corporation **shall** be reviewable at intervals of not more than five years or at any time by petition of the corporation or motion of the board to ensure rates are fair, reasonable and adequate.
- The municipality **may** contract with the sewage-works corp for services
- Powers include to lay and maintain infrastructure in public ROW, enter property to assess sewer system locations, and acquire land by condemnation as necessary to meet its duty to supply sewage handling.

NYS Public Service Commission (PSC)

Regulates the sale, furnishing and distribution of water for domestic, commercial and public purposes, not including bottled water, by Water-Works Corporations

- **Provides oversight** to ensure safe, adequate, just and reasonable charges, unjust discrimination, unreasonable preference and protection of privacy
- **Powers to review** the ownership, operation, maintenance, compliance, finances, rates, customer treatment, etc. for water-works
- **PSC must approve** service territory, construction, cost thereof, rates, issue of stocks and bonds, transfers of franchises, complaint resolution - essentially the entire water-works operation

Summary: Transcorps *generally…*

- **NYSDEC issues permits** to municipalities, institutions, individuals or transportation corporations when there is more than one customer**.**
- **NYSDOH and NYSPSC approval of all activities** associated with water-works corps is required.
- **PSC is NOT involved with sewer-works corps;** regulatory powers lie with DEC and the local community



FAQ's Regarding Decentralized Infrastructure

Can a municipality ban these?

No, because municipalities do not have jurisdiction over these systems/activities

What happens when private systems are abandoned?

It depends on how these systems were created and approved initially

- *Water works – no backstops built into law, but could be in local approvals*
- *Sewer works – backstops in law, but were they followed?*
- *Functionally, regardless of the legal framework, from a practical perspective, the municipality generally ends up taking these on*

Who pays for this?

In all cases, it has to be those users that are benefitted, but it can be complicated depending on how these systems were created and approved

Can the County take over?

Initially probably no, but depending on circumstances, maybe – lots to be done to make that happen

FAQ's Regarding Decentralized Infrastructure

Can a municipality oversee or otherwise intervene, e.g., if/when constituents complain about system problems, operational issues, disinvestment, etc.?

Generally, no: These are run by private entities and regulated by other authorities. If local approvals provide site plan or special use permit requirements, these can be enforced, and building code enforcement is an additional mechanism. Finally, for sewage works corps, a municipal is provided additional oversight power under NYS law.

Can transcorps make a profit.

Transcorps are permitted to make profit, but water are regulated by PSC similar to other public utilities, including their rates. Sewer corps are subject to review by towns.

Can't a homeowners association (HOA) step in?

If the transcorp and HOA share leadership, the power lies in the same people making decisions. Otherwise, the HOA's involvement would be similar to any other member of the public, which is to say, the HOA would have limited ability to directly influence the transcorp.

Can a municipality defer to NYSDEC/NYSDOH review – won't these agencies make sure the public health and welfare are protected and ensure proper design, construction, and operation?

As noted, adherence to design standards and regulations is the focus. And local governing bodies cannot assume that securing permits from state and regional agencies will ensure construction quality, proper operations, or financial sustainability of this infrastructure.

To ensure the quality and sustainability of Decentralized Infrastructure locally, you CAN:

✓Treat water and sewer systems as land uses in your zoning code

Define and add these as Uses to your use table, consider making them Special Permit uses, and include dimensional and performance requirements

- Separate lot
- Setbacks
- Lot coverage
- Enclosure of offensive components with odor control
- Siting criteria (e.g. 100’ from nearest house, closest stream, floodplain, etc.)
- Require demonstration of durability of materials of construction
- Require operations plans (seasonal, high/low flow, etc.)

Review your code for district regulations that support or encourage decentralized infrastructure in locations where it is not welcome

- Density bonus, conservation subdivision, etc.

To ensure the quality and sustainability of Decentralized Infrastructure locally, you CAN:

- ✓ **Require applicants to create special districts overlaying the service areas** *(e.g. water or sewer districts)*
  - In the event of abandonment, the municipality has a ready way to assess costs
- ✓ **Use the governing authority in Transportation Corporations Law**
  - For sewer-works corps, make sure all the **shall** requirements happen
  - Also, require an irrevocable offer of cession (it's a **may** in the law)
  - Adopt local law that mirrors the sewer-works **shall** requirements for water-works
- ✓ **Always consider any private infrastructure proposed as future public infrastructure and hold applicants to the standards expected for public infrastructure**

Take-aways

- **So-called “Package Plants” are not bad; however, they have been deployed in a problematic way.**
- **Municipalities CANNOT ban “Package Plants” or Decentralized Infrastructure**
- **Municipalities CAN do a lot to ensure that when Decentralized Infrastructure is proposed, it is held to a high standard that is protective of human health, community character and the environment**
  - Consider these land uses and treat them as such in your zoning code
  - Review your code for districts where these may be encouraged but not welcome
  - Require the creation of special districts to facilitate future public ownership
  - Use the power of the Transportation Corporations Law and adopt local laws to extend and bolster that authority

Questions?

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