Public Information Meeting
January 13, 2026

Addressing PFAS Contamination in the Greenfields Water System

Dutchess County Water and Wastewater Authority

Jonathan Churins, Executive Director

Vanessa Kichline, Project Facilitator

Jason Teed, PE, Project Manager

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What We Have Heard from the Community

Concerns About Rising Costs

Frustration About Water Quality

Long History of Problems

Confusion About Who Pays For What

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Our Goals Tonight

Introduce

Introduce DCWWA staff directly involved in improving drinking water in your area

Inform

Explain how the DCWWA operates, the current project status, and estimated costs

Listen

Hear your thoughts and concerns

Plan

Work together to determine the next steps that best serve the Greenfields community

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About DCWWA

- Not-for-profit public benefit corporation, not a private company
- Independent public authority governed by our own Board, partnered with Dutchess County Government for certain administrative services
- Operates under NYS procurement law: all major contracts awarded through competitive bidding
- Subject to annual independent financial audits to ensure transparency and accountability
- Committed to providing safe, reliable drinking water and effective, responsible wastewater treatment
- A dedicated team of professionals delivering full-service solutions for water and wastewater systems

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How DCWWA Funds Its Systems

DCWWA owns and operates many **financially independent** water and wastewater systems.

- Every system has its own:
  - Customers
  - Operating budget
  - Rates and benefit assessments
  - Capital improvement plan
- Funds collected for one system are only used for that system.
- Each community pays only for the infrastructure and services that serve that community.
- No system's customers subsidize another system's local projects.

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How DCWWA Funds Its Systems

System-Specific Costs

Each system is responsible for its own:

- Daily operations
- Local infrastructure
- Regulatory compliance and testing
- Capital improvements
- Professional services: engineering, legal, etc.

The condition of the system drives its cost

- Systems requiring more treatment, testing, and repairs cost more to operate
- Most operating costs are fixed, so fewer customers means higher cost per customer

Shared Services

Certain services are shared across all systems because it is less expensive for everyone

- Utility billing and customer service systems
- Compliance tracking and reporting software
- Office facilities and administrative support
- Operator training and certification
- Financial and professional oversight

Shared costs are allocated proportionally based on system size

- A large system like Hyde Park Regional carries a larger share than a small system like Greenfields

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The Greenfields Water System

Background

- 1965: System Constructed
- 1977: Transferred from developer to Town
- 2015: Transferred from Town to DCWWA
- 2021: PFAS contamination first documented
- 281 residential customers and 118 vacant parcels
- Aging treatment and distribution infrastructure

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The Greenfields Water System

Challenges

Well	Initial GPM	Current GPM	Capacity lost
9	90	30	66%
10	75	20	73%
12	50	36	28%

Declining Well Production

- Long-term reduction in groundwater yield
- Existing well field has lost 60% of its original production capacity
- 9 of 12 wells taken offline due to quality or quantity limitations
- Fewer active wells must meet the same community demand

Ongoing Water Quality Issues

- Naturally occurring manganese and iron
- PFAS contamination requiring advanced treatment or new source water
- Increased treatment complexity and regulatory oversight

Increasing Operating Costs

- Rising costs across the entire water industry
- Higher chemical usage to manage water quality
- Increased operator time and monitoring
- More frequent maintenance and repairs

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Manganese in the Greenfields Water System

What it is

- A naturally occurring mineral found in local groundwater

What it does

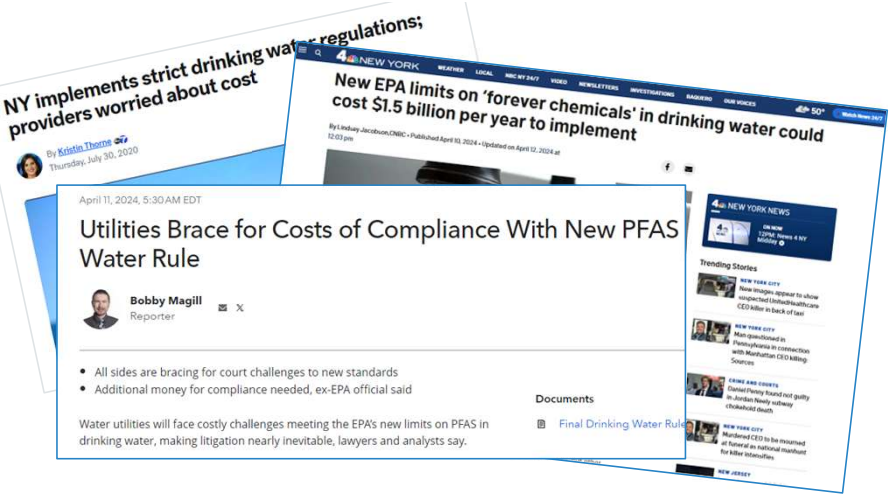
- Causes brown or black discoloration, especially when water is chlorinated for disinfection
- Accumulates in pipes and restricts flow and pressure

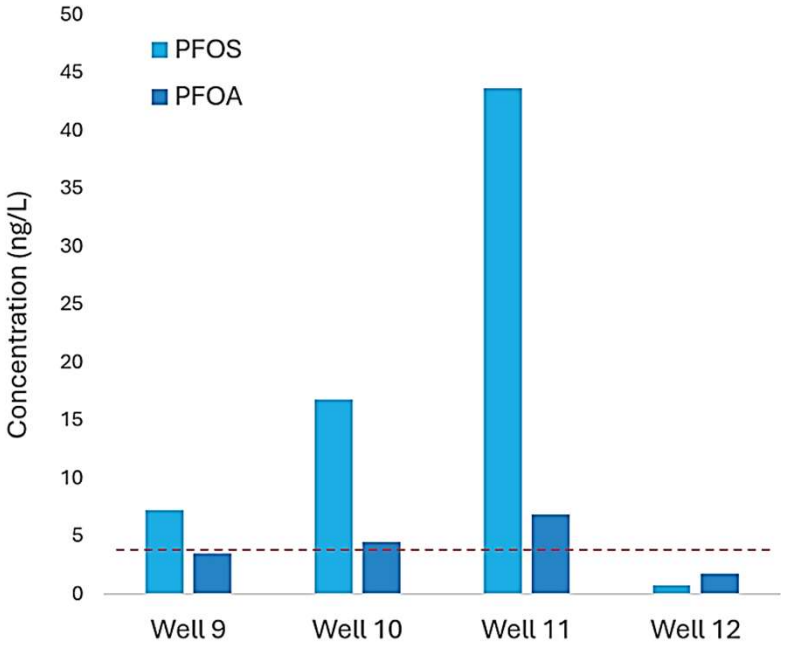
Why it is a persistent problem

- High levels present in source water
- Not removed by the existing treatment process

Regulatory context

- Levels are high in raw wells and at the system entry point, but **compliant at customer taps**
- Classified as a secondary contaminant
- Considered an aesthetic concern, not a health violation





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PFAS in the Greenfields Water System

What it is

- Manmade "forever chemicals" used in many common household products

What it does

- No smell, color, or taste
- New research suggests long-term health risks

Why it is a persistent problem

- Highly persistent in the environment and human body
- Requires advanced treatment systems or access to an unpolluted water source

Regulatory context

- Strict State and Federal compliance standards
- Costly testing requirements for routine monitoring
- Greenfields is in violation and requires a permanent solution

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Alternative 1: Onsite Treatment

1. Demolish existing facilities
2. Drill new wells to meet demand
3. Construct new, upsized treatment building
4. Install new greensand filters to remove manganese
5. Install new cartridge filters to remove sediment
6. Install new granular activated carbon filters to remove PFAS
7. Install new backwash systems to maintain filters
8. Install new chemical dosing for greensand filtration
9. Install new chemical dosing system for disinfection
10. Install new finished water atmospheric storage tank
11. Install new finished water pressure tank
12. Obtain DEC permit to discharge backwash water to WWTP

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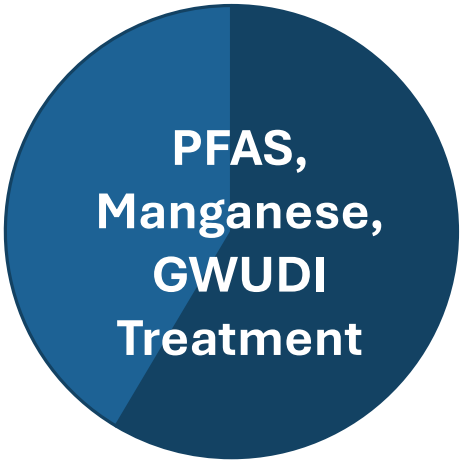
Alternative 1: Onsite Treatment



$12,056,000 Estimated Project Cost
-$5,000,000 Grant[1]

$7,056,000 Net Estimated Project Cost

[1] Assumption: this project alternative scores high enough to receive a grant award

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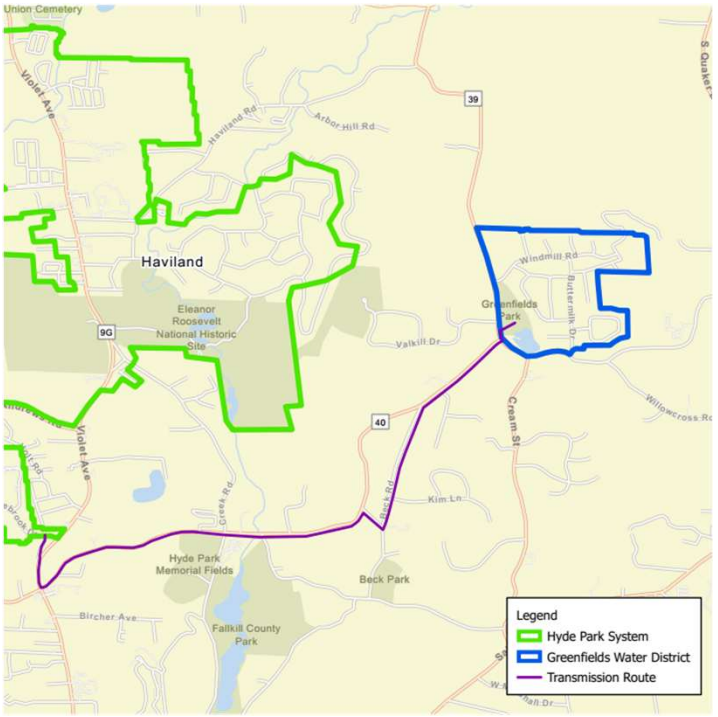
Alternative 2: Interconnection with HPRWS

Part A: Greenfields Connection

1. Construct new booster station to regulate pressure
2. Install approximately 19,500 feet of new water main
3. Install new finished water storage tank
4. Abandon existing facilities

Part B: Hyde Park Treatment Plant Improvements

1. Perform pilot testing to update filter capacity rating
2. Install new solids handling equipment
3. Engineer best-value process improvements



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Alternative 2: Interconnection with HPRWS

$7,180,443
-$5,000,000 Grant

$6,437,179

$13,617,622
-$5,000,000 Grant
$8,617,622
Total Cost to Finance

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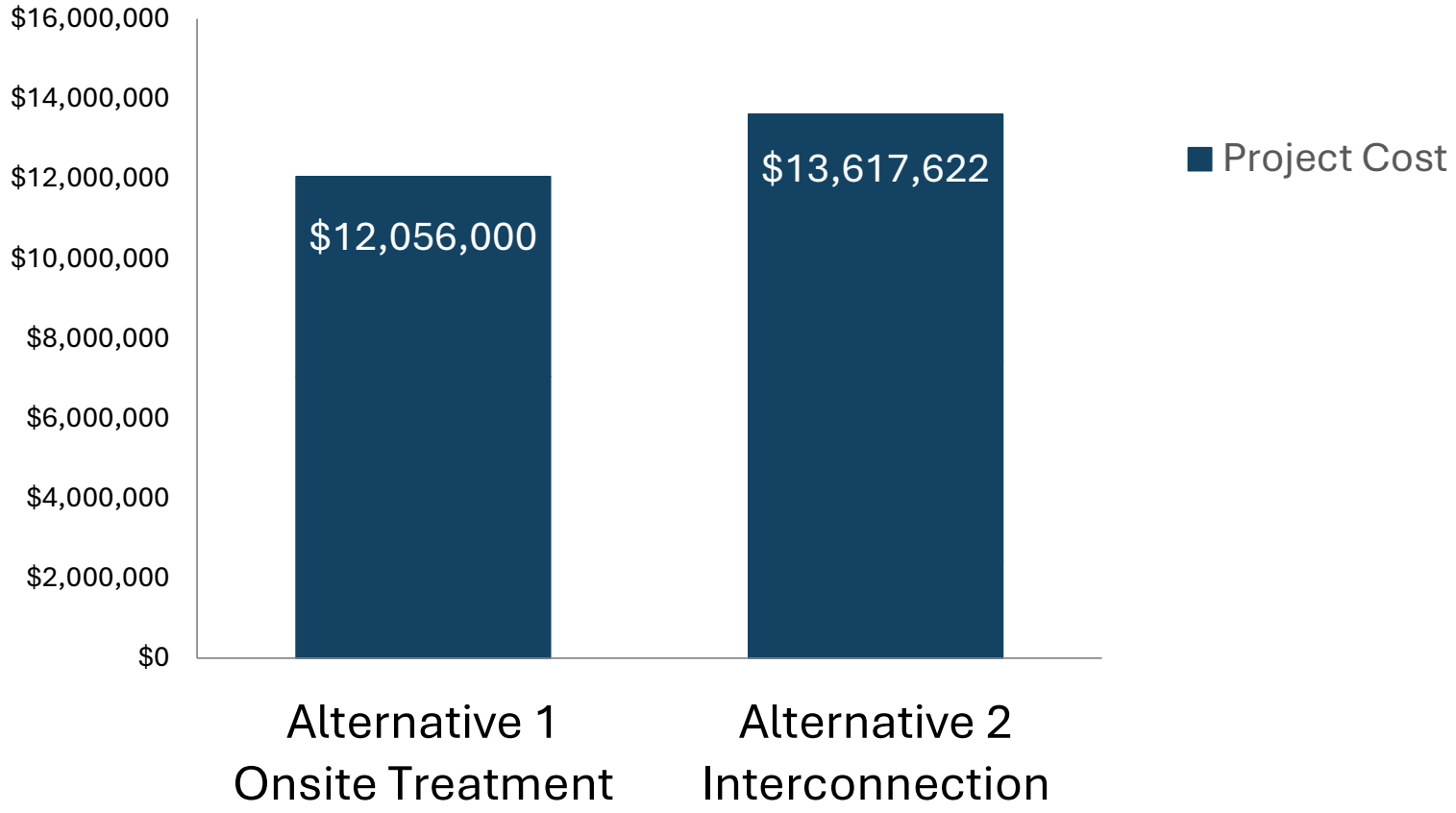
Cost Comparison
Onsite Treatment vs. Interconnection



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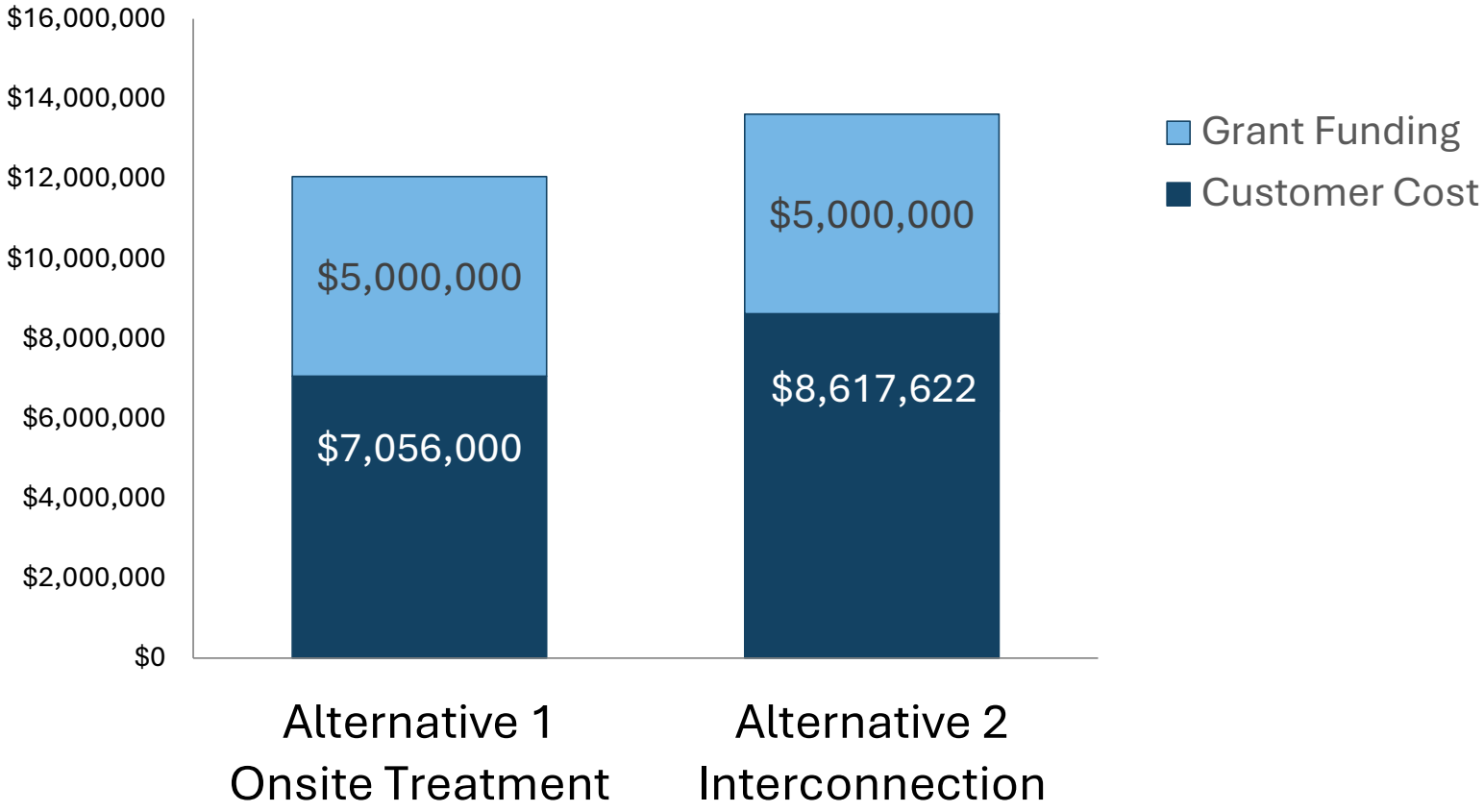
Cost Comparison
Onsite Treatment vs. Interconnection



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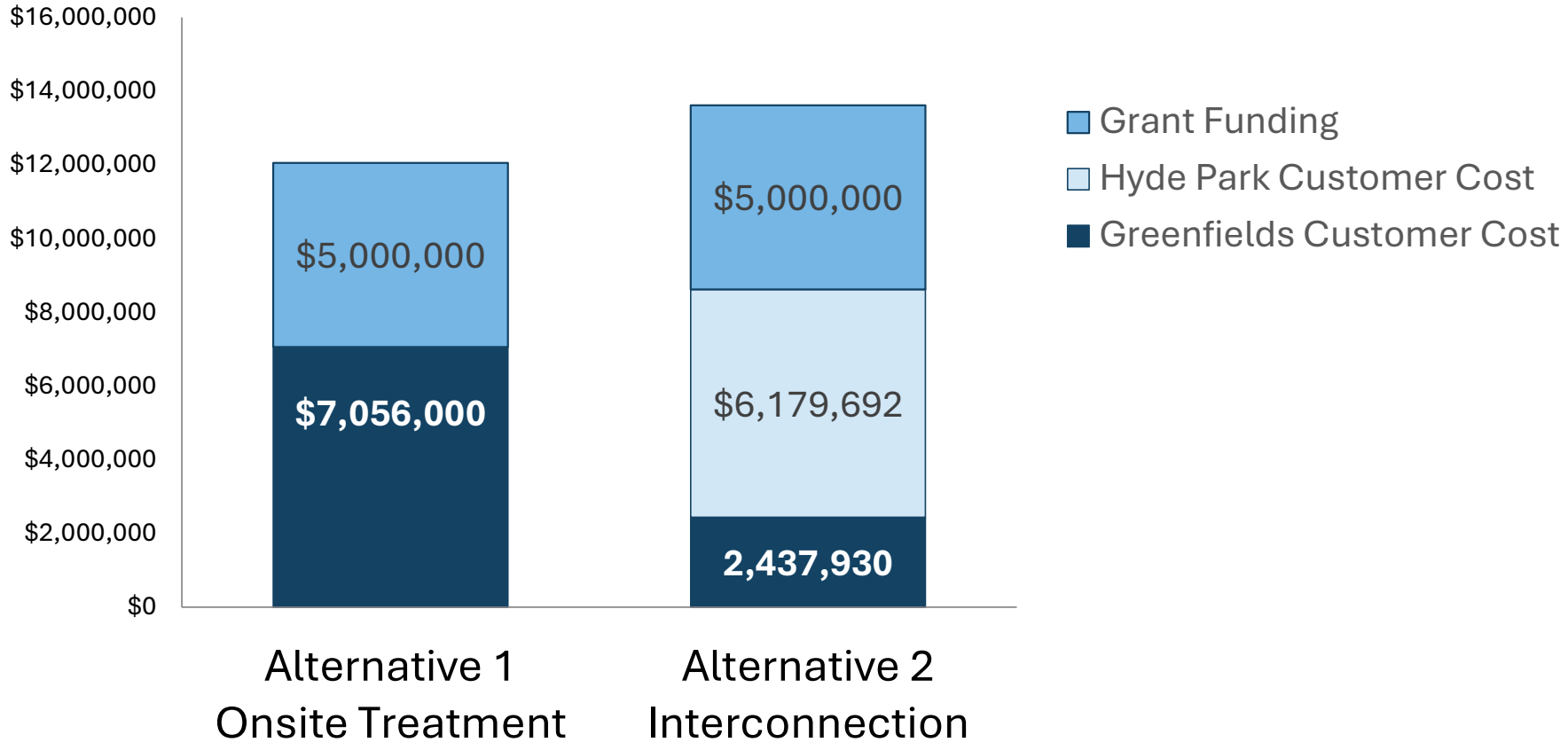
Cost Comparison
Onsite Treatment vs. Interconnection



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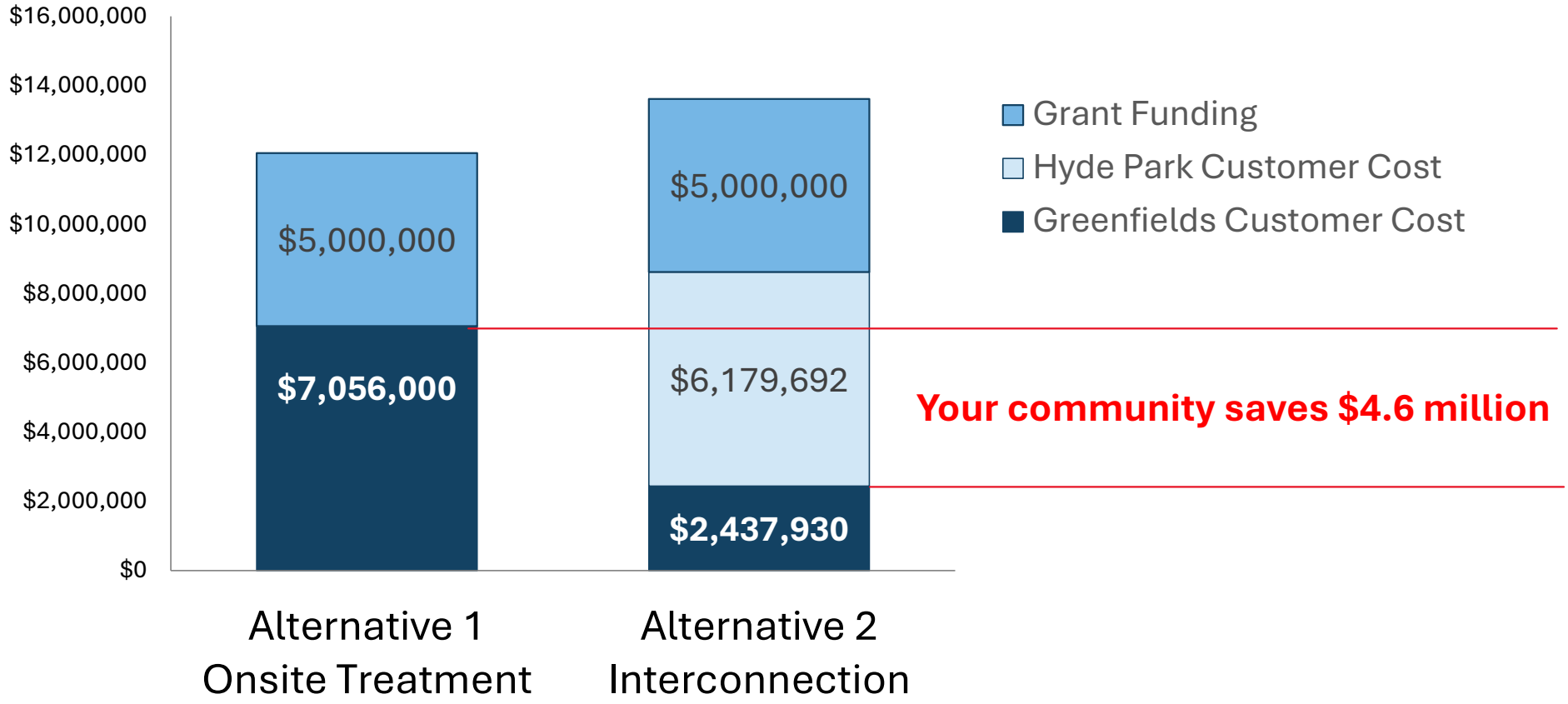
Cost Comparison
Onsite Treatment vs. Interconnection



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Why DCWWA Selected Interconnection

Best Financial Outcome for the Community

- Lowest long-term cost for Greenfields customers
- Shares major treatment and storage costs regionally
- Avoids repeated, costly rebuilds of a small, standalone system

Independent Expert Review

- Multiple independent engineering firms evaluated the options
- The New York State Environmental Facilities Corporation reviewed and approved the project and awarded $5 million in grant funding
- New York State Department of Health reviewed and approved the project approach
- All reached the same conclusion: **Interconnection provides the most reliable and cost-effective long-term solution**

Alignment with State and Federal Priorities

- Interconnections and regionalization are top priorities at the State and Federal level
- Strengthens funding eligibility and long-term regulatory compliance

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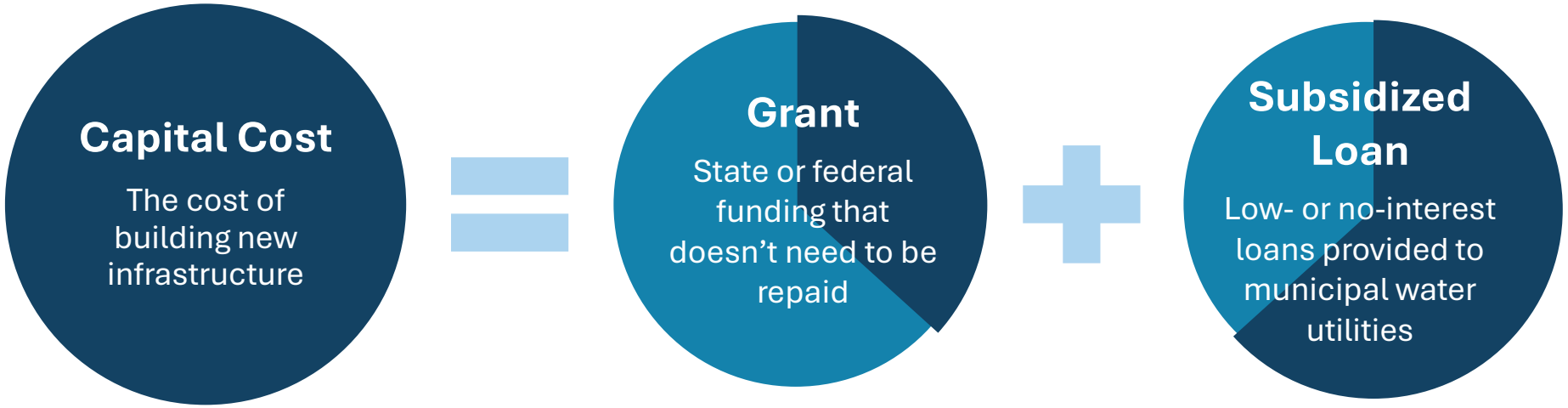
How DCWWA Funds Infrastructure Projects



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How DCWWA is Funding this Infrastructure Project

Secured Funding

- State WIIA Grant: **$4,550,086**
- Federal BIL Grant: **$449,914**
- PFAS Class Action: **$85,966**

- NYSEFC subsidized interest loan

Potential Funding

- PFAS Class Action Phase 2
- CERCLA claim against polluters
- Congressionally Directed Spending
- County funding allocation
- System fund balance

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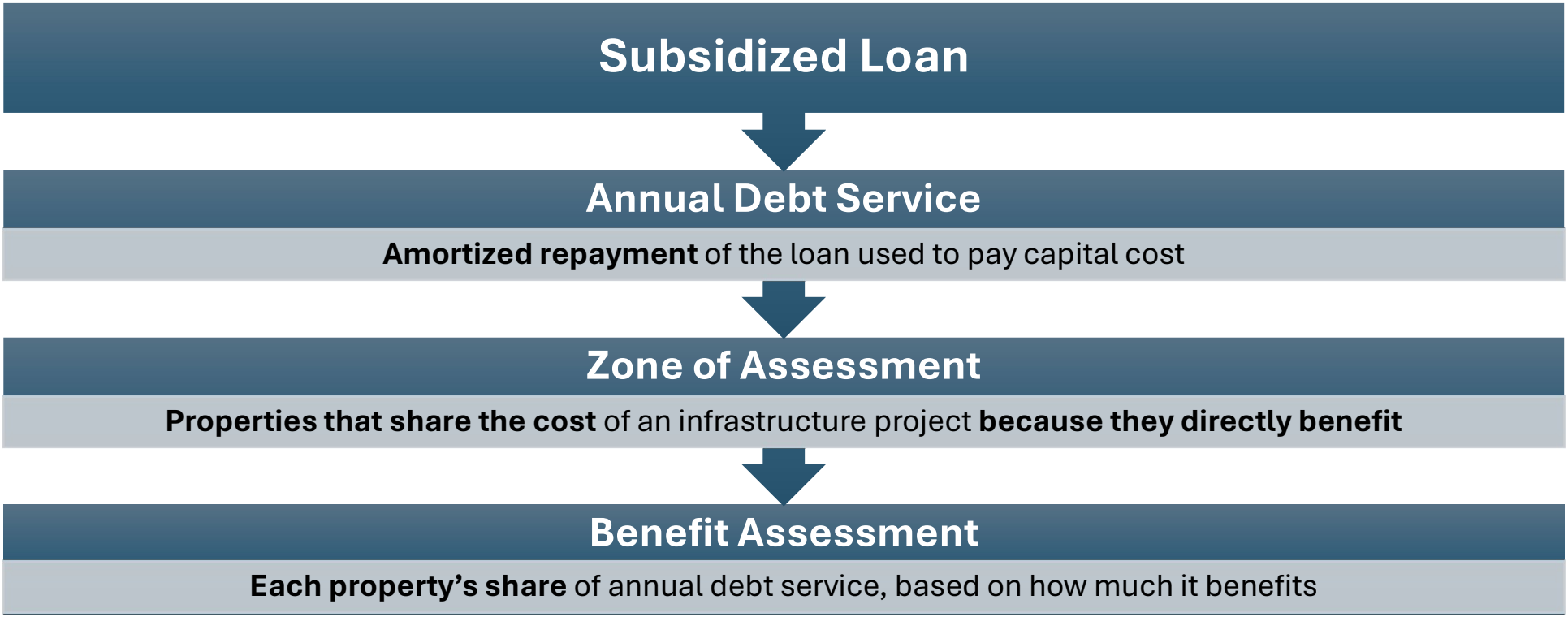

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Capital Cost per Household
Your Annual Tax Assessment

	New Project Debt Service	Existing Debt Service	Total Annual Debt Service	Cost Impact
Existing Greenfields Treatment Plant	$0	$0	$0	N/A
Onsite Treatment	$1,333	$0	$1,333	**+ $1,333**
System Interconnection	$470	$147	$617	**+ $617**

Note: Values shown are estimates and will be updated once final construction bids are awarded.

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Operating Cost per Household

Your Quarterly Water Bill (2026 rates)

	Service Fee (applied monthly)	Usage Price (per 1,000 gallons)	Total Annual Water Bill	Cost Impact
Existing Greenfields Treatment Plant	$19.84	$15.96	$1,196	N/A
Onsite Treatment	$25.72	$25.65	$1,848	**+ $652**
System Interconnection	$25.72	$9.12	$856	**- $340**

Note: Values shown reflect estimated average annual operation and maintenance costs, billed quarterly. Calculations are based on an average household use of 165 gallons per day.

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Total Cost per Household

Your Total Annual Cost Estimate

	Total Annual Water Bill	Annual Tax Assessment	Total Annual Cost	Cost Impact
Existing Greenfields Treatment Plant	$1,196	$0	$1,196	N/A
Onsite Treatment	$1,848	$1,333	$3,181	**+ $1,985**
System Interconnection	$856	$617	$1,473	**+ $277**

Note: Estimates reflect annual O&M costs billed quarterly and average use of 165 gallons per day. Capital cost estimates are preliminary and will be updated after construction bidding.

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What does this additional $277 per year buy for Greenfields customers?

Stable, Reliable Water

- Hudson River supply is far less vulnerable
- Supported by advanced treatment
- **Reliable service**

Stronger Fire Protection

- Nearly **500,000 gallons** of elevated storage
- Fire protection capacity improves significantly
- **Greater public safety**

Lower Long-Term Costs

- Future treatment upgrades shared regionally
- Greenfields avoids the full cost of future plant replacements
- **More affordable over time**

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What about our Asbestos-Cement pipe?

Tested and safe

- Greenfields has been testing for asbestos in the distribution system for 40 years
- **Asbestos has never been detected in your water**
- Monitoring continues regularly under State requirements

Replacement Cost

- Estimated replacement cost is about $5,000,000
- Entire cost would be paid by Greenfields customers
- This would cost each homeowner about **$960 per year** for the next 30 years

Bottom Line

- The asbestos levels in your drinking water are safe
- Replacing your asbestos-cement pipe would add major cost with no benefit to your health

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Public Water Infrastructure Projects in Hyde Park

And How They Are Funded

Project	Total Cost	Outside Funding	Who Pays (Based on Who Benefits)	Annual Cost to Greenfields
Greenfields Water Main Extension	**$7.18M**	$5.0M	Greenfields (and future expansion area)	**$419**
Hyde Park Water Treatment Plant Improvements	**$6.44M**	N/A	All 2,000+ properties within the HPRWS service area	**$51***
West Dorsey Water Main Extension*	**$928K**	$302K	Properties served by new main	**$0**
Quaker Hill Water Main Extension*	**$21.88M**	$15.31M	Properties served by new main	**$0**
Madison-Holt Water Connection*	**$1.45M**	$1.02M	Properties served by existing main	**$0**
Peach Road Water Main Extension	**$2.7M**	N/A	Dutchess BOCES, Dutchess County Vehicle Maintenance Facility	**$0**

* Once connected, these properties help pay for treatment plant improvements, which **lowers annual costs for everyone**

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Path Forward

- Design Phase (underway)
- Bidding/Construction Phase (Late 2026)
- Commissioning Phase (Summer 2028)
- Transitional Water Phase (Summer 2029)

All time frames are subject to supply chain and material sourcing

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This slide was revised after the presentation to correct an error in the Bidding and Construction Phase date.

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You asked: Questions from the Community

Q: ***Are 281 Greenfield residents supplementing the proposed hookup with Bellefields?***

A: **No.** Bellefield is *already connected to the water system*, and **no new public infrastructure is being built to serve that property**.

The existing infrastructure that serves Bellefield was **built between the 1970s and 1990s, and was paid for by Zone B customers**. Greenfields residents in Zone S are *not contributing to those costs*.

Bellefield's developers, like **all private property owners, pay for any infrastructure they build on their own property**.

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You asked: Questions from the Community

Q: ***Quality of the water and the water bill costs***

A: Detailed rate information and Annual Water Quality Reports are available on our website.

In 2026, Greenfields customers will pay a $19.84 monthly service fee and $15.96 per 1,000 gallons used.

Hyde Park customers will pay a $25.72 monthly service fee and $9.12 per 1,000 gallons used.

In terms of water quality, **Hyde Park's water meets all current state and federal drinking water standards**.

Greenfields' current water supply exceeds standards for manganese and PFAS, which are two of the primary water quality concerns that this project is designed to address.

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You asked: Questions from the Community

Q: ***How much of the interconnect is grant funded. How much will fall on Greenfields properties. Will greenfields property owners be financially responsible for properties outside our neighborhood? How will the funds be taken from the properties.***

A: The project has been **awarded $5 million in grant funding so far**, and DCWWA continues to actively pursue additional funding.

Based on current estimates, the average Greenfields customer's net cost increase is approximately $277 per year. This reflects:

- An estimated **$617 annual property tax increase**, partially offset by
- An estimated **$340 annual decrease in water bills**

DCWWA allocates project costs based on **which properties benefit** from the project, so *you will never be responsible for infrastructure built to serve another community*.

Project costs assigned to Greenfields will be collected through Benefit Assessment (an annual property tax levy).

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You asked: Questions from the Community

Q: ***Why is my water brown and so expensive?***

A: Greenfields' water appears brown because the source water contains **high levels of naturally occurring iron and manganese**.

To protect against harmful pathogens, the system uses a chlorine compound for disinfection. **Chlorine is an oxidizer**. When it reacts with iron, it forms iron oxide, commonly known as rust, which causes reddish-brown water. When it reacts with manganese, it forms manganese oxide, which causes brownish-black water.

As a result, **the same iron and manganese levels can appear completely clear in untreated water but look brown after proper disinfection**.

The water is expensive because **Greenfields is a very small system with high treatment and regulatory costs** that are shared across a limited number of customers. DCWWA receives no outside operating subsidies, meaning **every dollar of Greenfields' operating cost is paid by the customers it serves**.

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You asked: Questions from the Community

Q: ***Will the pipeline costs be by businesses which may be connected during or after completion of the project? A community member is claiming that Heritage development and quaker businesses are going to connect but Greenfields or Hyde Park District will be responsible for costs.***

A: This project proposes a regional water main extension to connect Greenfields to the Hyde Park Regional Water System (HPRWS), with new main beginning at Pinebrook Drive, following East Dorsey Lane and Dutchess Hill Road, and terminating in the Greenfields community. **This new main is being constructed solely to serve existing Greenfields customers.**

DCWWA manages many infrastructure projects across the county at the same time. Even when projects occur simultaneously, **each project is funded independently and there is no pooling of project funds between communities.**

The Hudson Heritage Development is in the Poughkeepsie Townwide Water District, which is not owned, operated, or overseen by DCWWA. Its water infrastructure is **in no way physically or financially connected to either the HPRWS or Greenfields**.

When people refer to "Quaker businesses," they may be referring to a separate project that will extend HPRWS service to the Quaker Hill Estates community, which is an independent DCWWA-owned water system. **That water main will be funded by Quaker Hill and the properties along that route, not by Greenfields.**

If properties adjacent to the Greenfields interconnection main choose to connect in the future, they will be required to share proportionately in the project cost, so **existing Greenfields and Hyde Park customers are never left paying for infrastructure that serves other communities or businesses**.

Any property or development seeking water service is responsible for its own connection and capacity costs.

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Audience Questions

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Zones of Assessment – Greenfields Water

- GFW currently contains two Zones of Assessment (Zone S and Zone T)
- HPR contains many Zones of Assessment (Zones A, B, C, D, I, G, L, R)
  - All Zones share in the cost of water treatment and storage
  - Each Zone funds its own public water distribution infrastructure
- Each property within a Zone is entitled to connect to the public distribution main and receive water service.
- Each property within a Zone funds its own private water infrastructure.

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