

WMOAC August 25th Meeting

2020 Reuse Program Updates

Background

- CCWMO Ordinance Update in 2016
 - Water Quality is 1 inch
 - Volume reduction is equal to up to 0.5 inches of Water Quality Treatment
 - Volume reduction is equal to 1 inch
 - Unless the site is constrained, then 0.5 inches
- Stormwater Reuse as an option to meet volume reduction.

Background

- Stormwater reuse systems harvest rainwater captured on site for irrigation
- Reuse partially treats stormwater by allowing it to filter through the soil

Reasons to choose reuse:



Reduces BMP Footprint



Reduces demands for potable water



Saves money

How we permit reuse systems

Limited inputs for credits

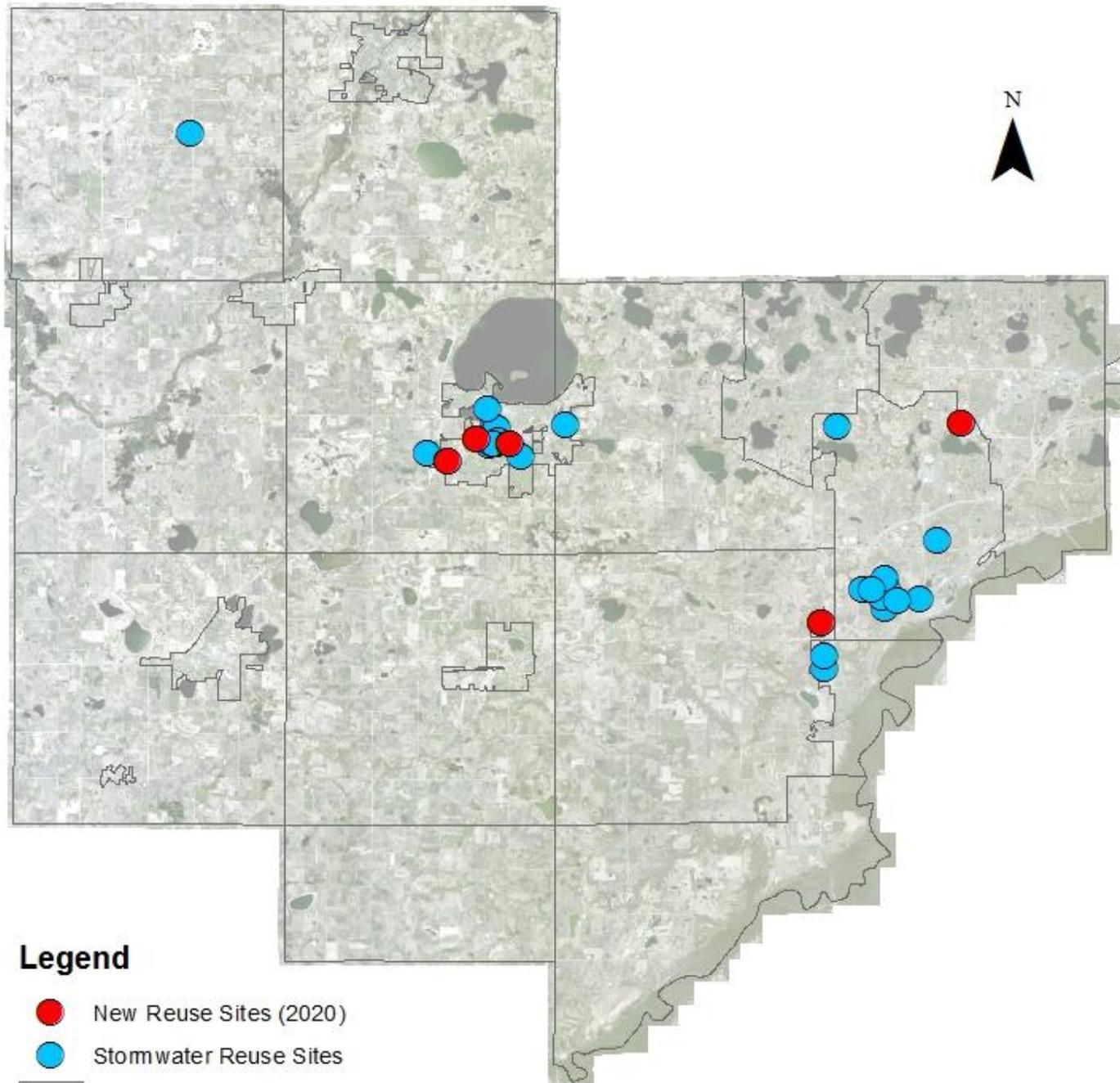
- 4 factors compared to 33 factors in other calculator
 - Storage
 - Irrigation Area
 - Impervious Surface
 - Irrigation rate
- Credits relate to the volume requirement for each system

Requested Info

- Irrigation plan
- Landscape plan
- Operation plan
- Secondary Source

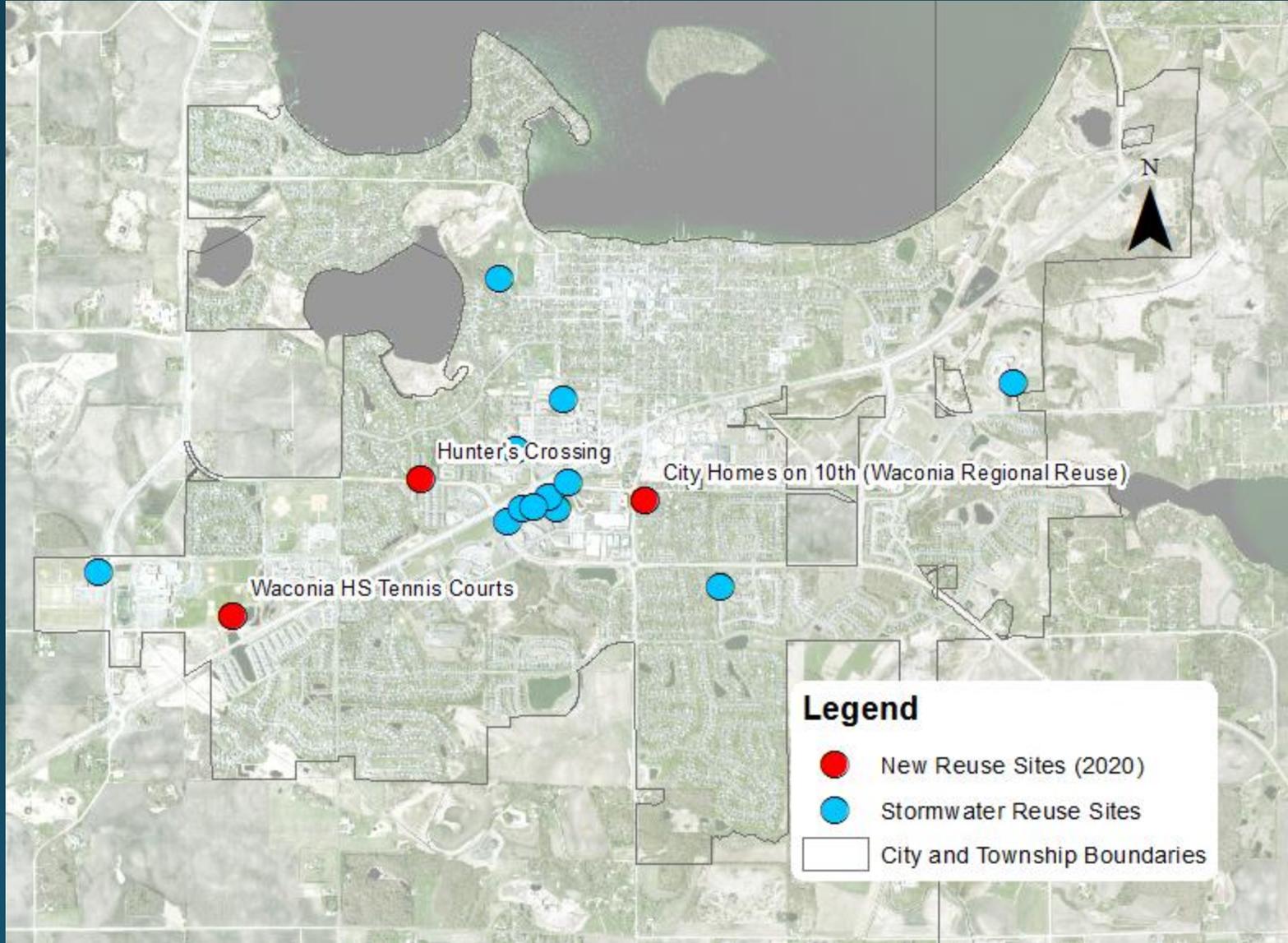
Required Items

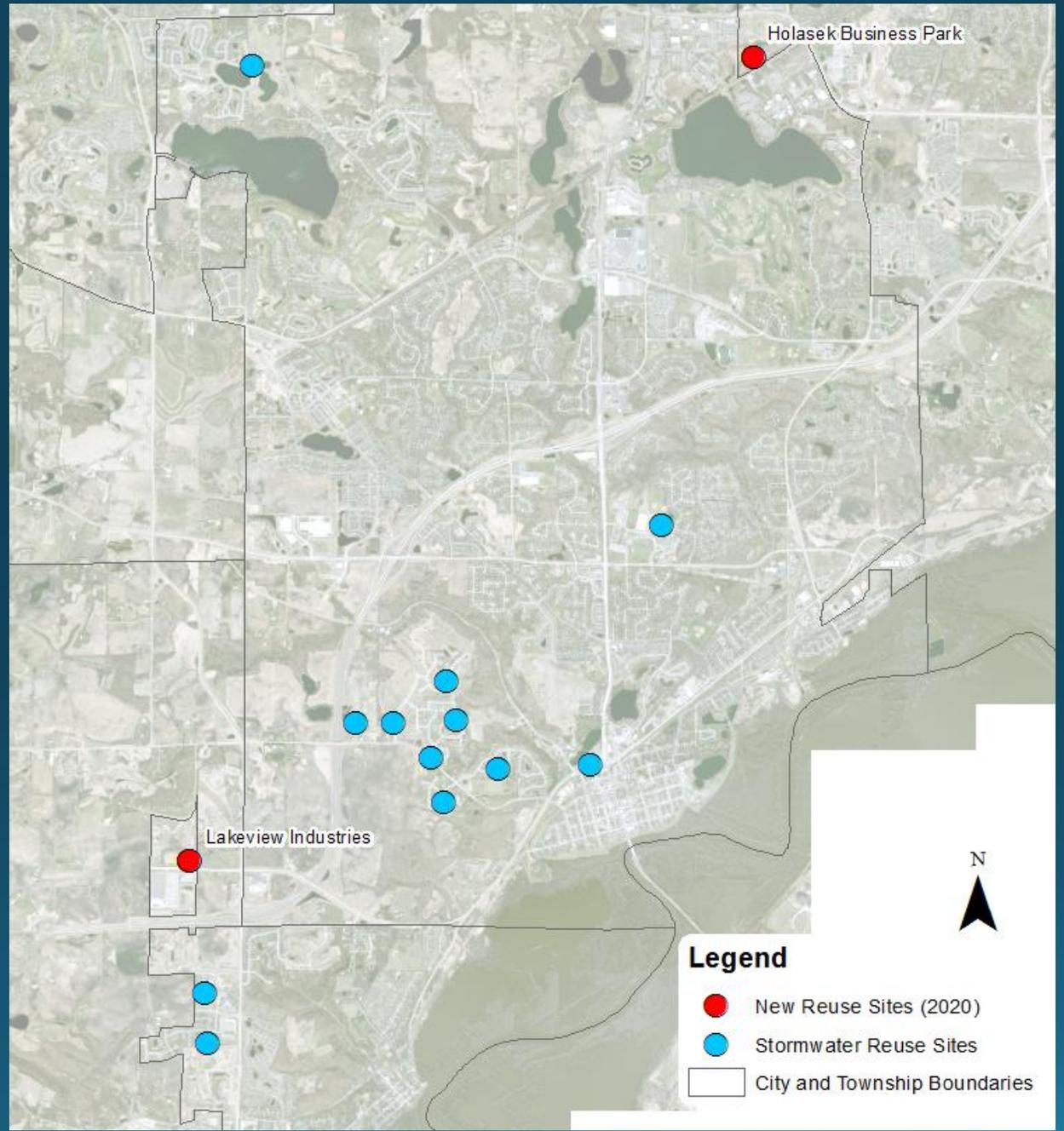
- Meters
- Floats
- Operation & Maintenance Plans



Legend

- New Reuse Sites (2020)
- Stormwater Reuse Sites
- City and Township Boundaries





2019 and 2020 Recap

	 Active Sites	 Proposed Sites	 Part of Waconia Regional Reuse
2019	16	5	10
2020	17	4	10

Recap

2020

 21.4 Million
gallons used for reuse

 \$79,250
savings from water bills

2019

 22.4 Million
gallons used for reuse

 \$90,380
savings from water bills

Recap

2020

 41.74 lbs
phosphorus removed

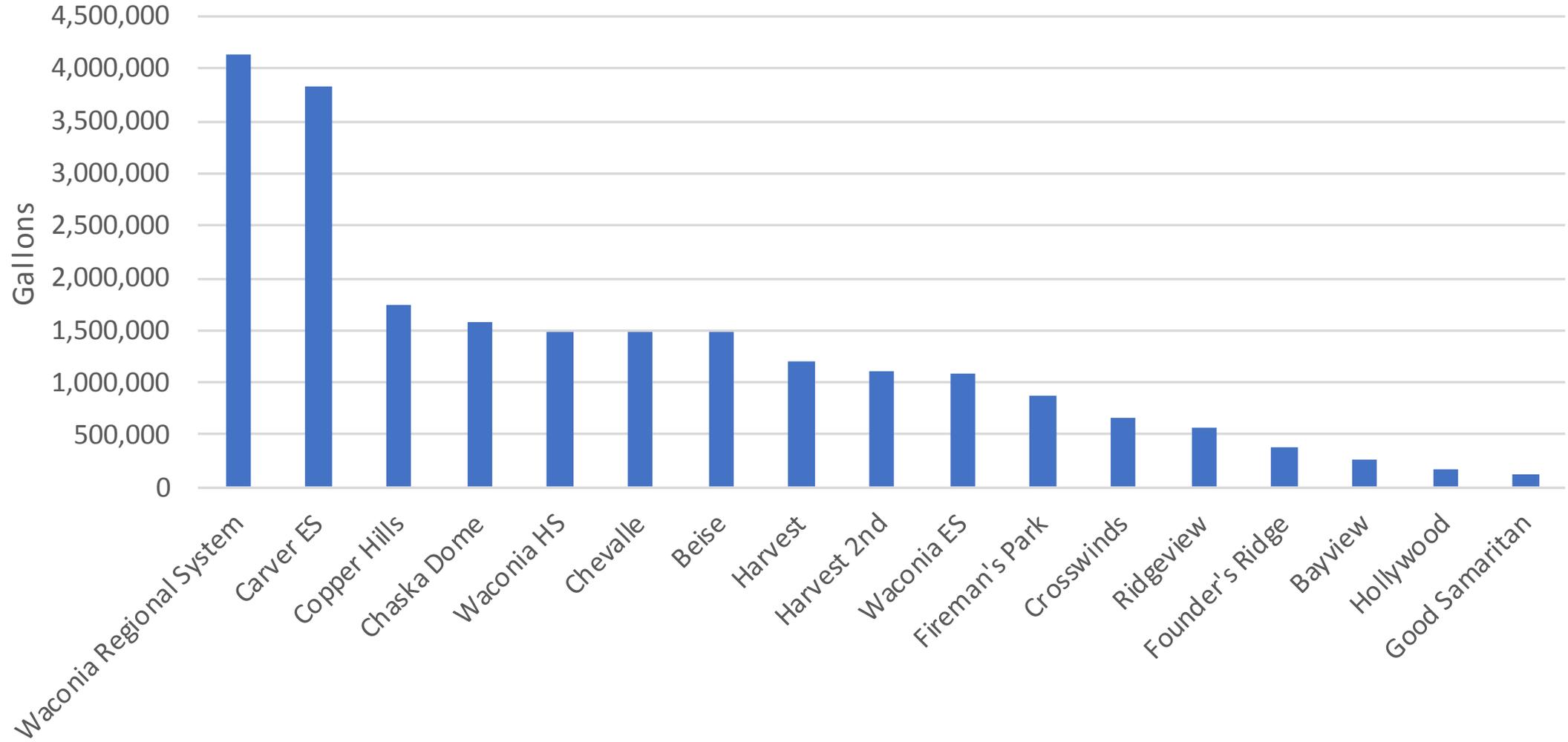
 12,354 lbs
sediment removed

2019

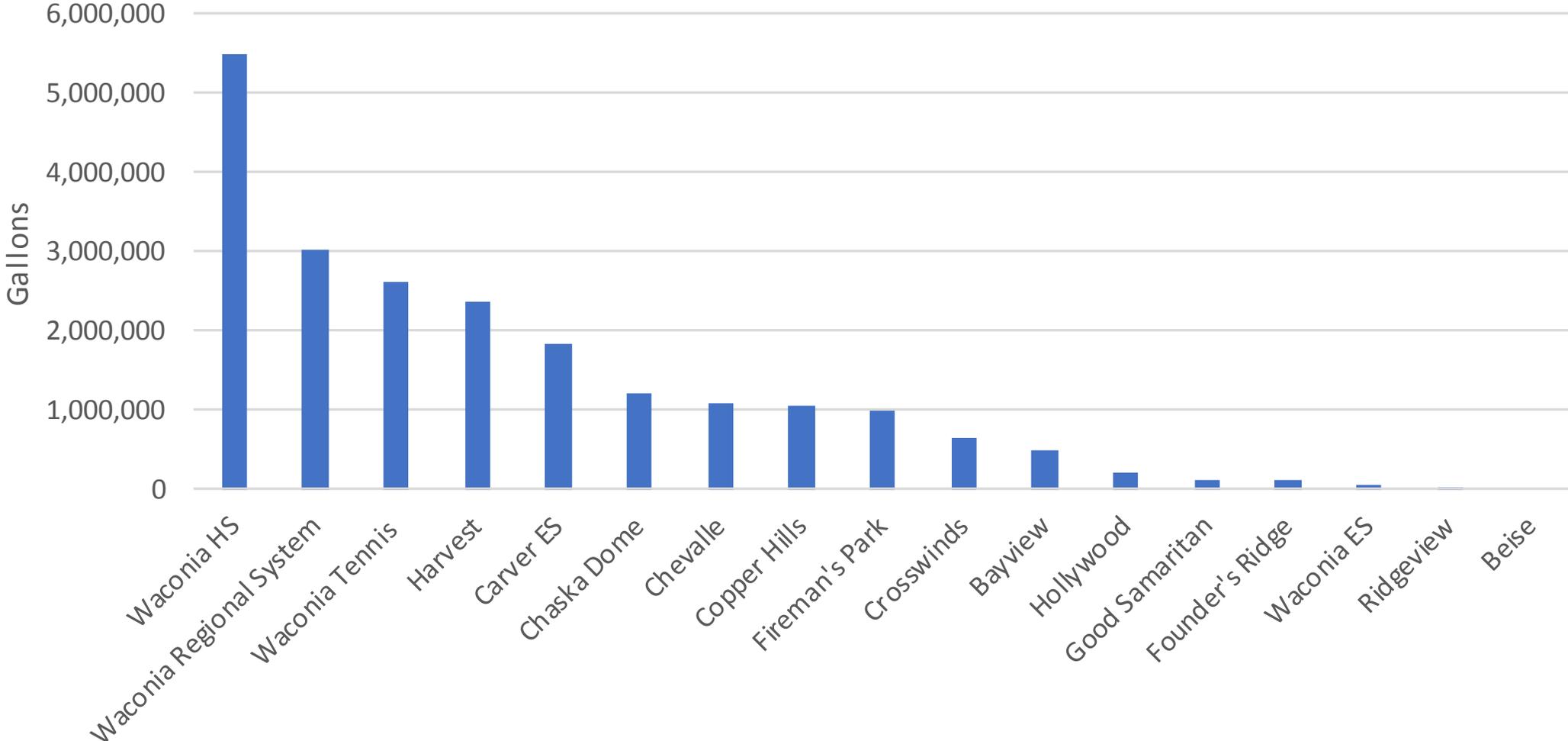
 43.64 lbs
phosphorus removed

 15,009 lbs
sediment removed

2019 Total Volume Used



2020 Total Volume Used



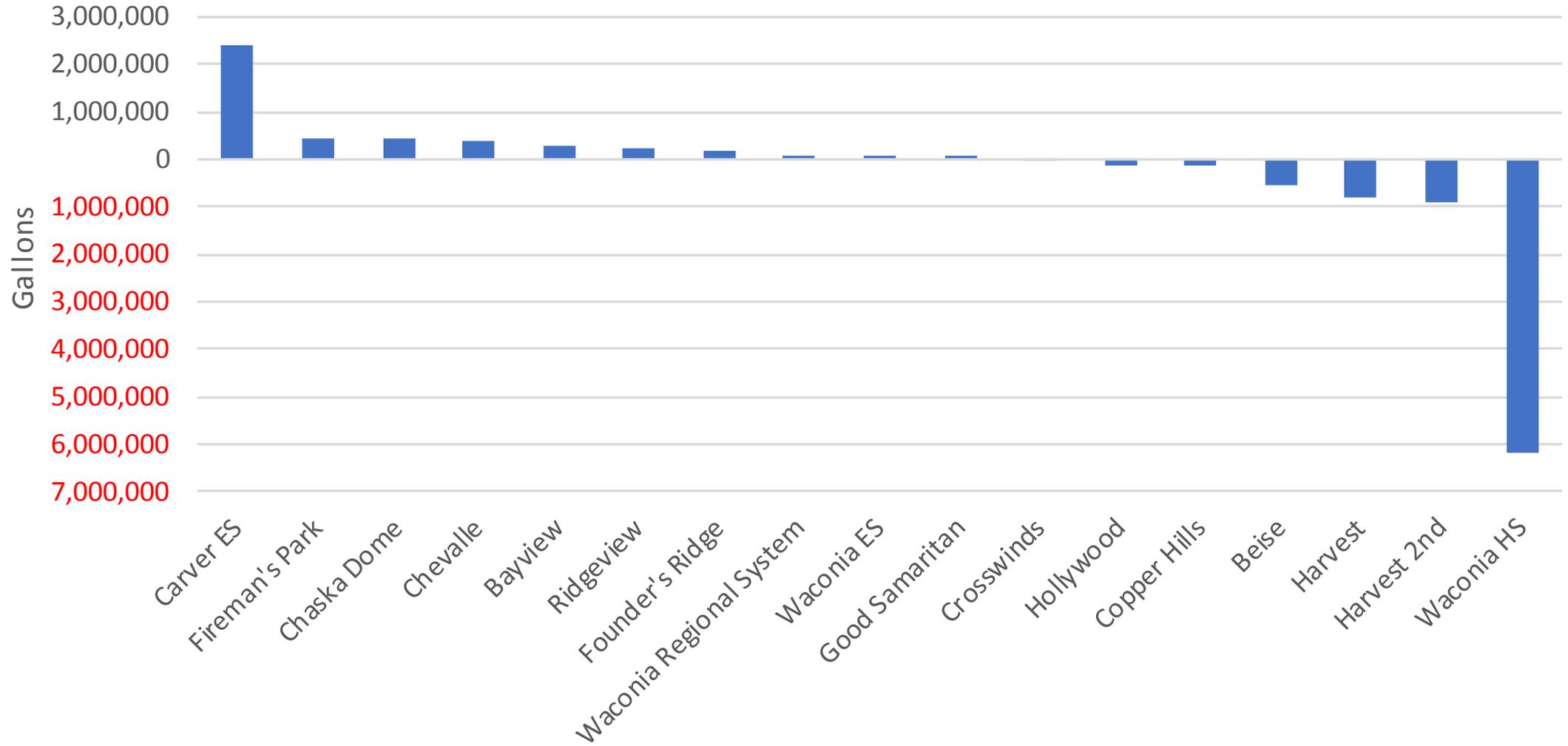
2019 in Review

- Due to issues at various sites, still short of permitted levels by 4,258,814 gallons.
- Used 12% of all volume generated from impervious surfaces draining to storage ponds
- Treating 246 acres of impervious surfaces
- Irrigating 3.3 million sq ft of turf grass

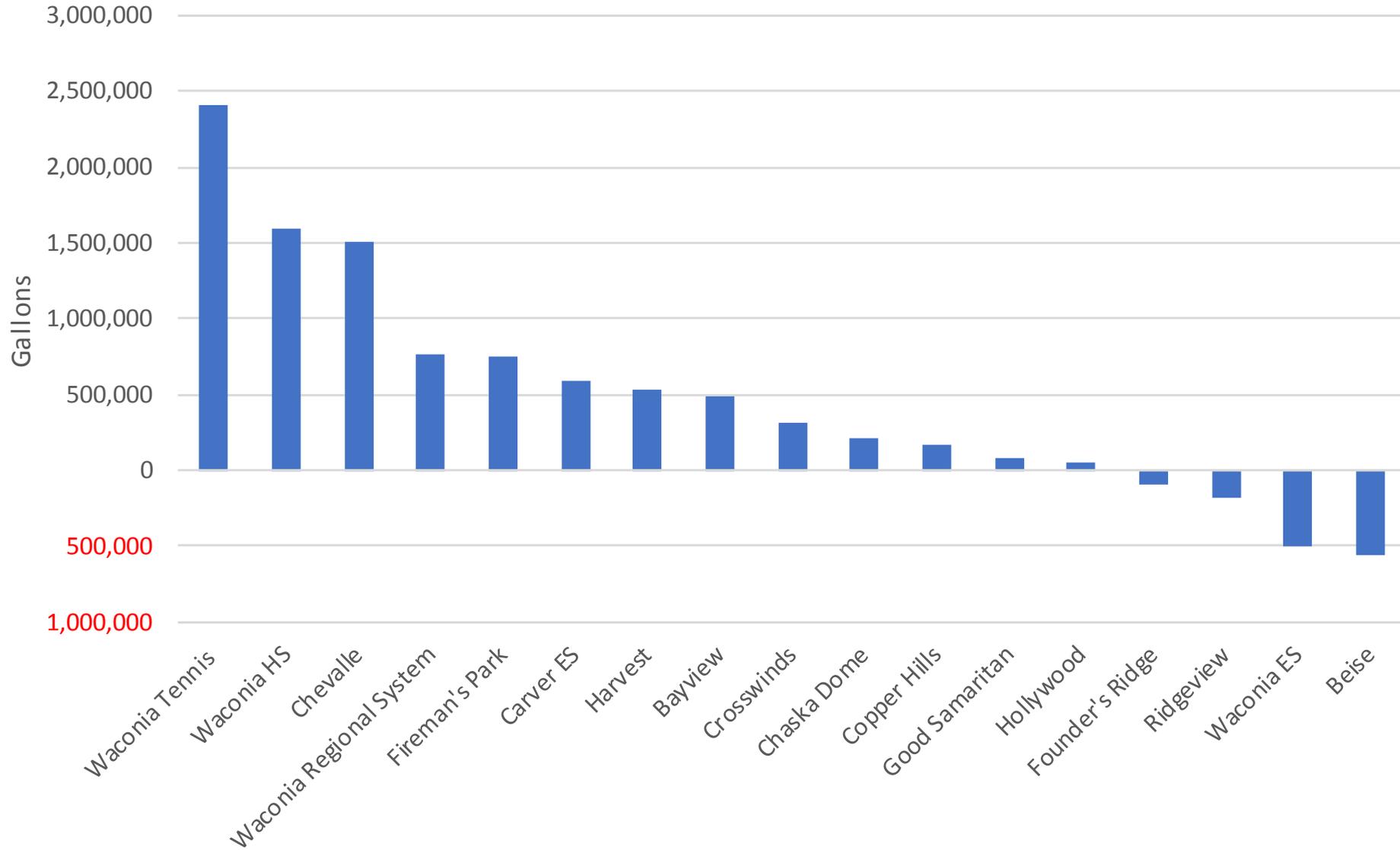
2020 Mid Year Review

- Currently roughly 8 million gallons ahead of permitted levels
 - One new site, Waconia Tennis Courts, has used 2.6 million gallons
 - Two existing sites are up 4.1 million gallons
- Used 29% of all volume generated from impervious surfaces
- Within 1 million gallons of water used compared to all of last year
- Potentially use over 35 million gallons of stormwater this year.

2019 Difference of Use and Required



2020 Difference of Use and Required



Rule Updates

Proposing a change in stormwater treatment requirements:

Current:

Treatment Volume = 1.0" x (new + 10% fully reconstructed impervious)

Proposed:

Treatment Volume = 1.0" x (new + fully reconstructed impervious)

Volume reduction requirement may increase for reconstruction projects.
May mean more reuse systems or greater reuse volume needed.

What's New?: Outreach

Stormwater Reuse Storymap

Stormwater Reuse Systems

Carver County Water Management Organization | June 1, 2020

Did you know? We save 10 million gallons of drinking water every year through stormwater reuse!

By capturing rain water and reusing it for irrigating green spaces, we are able to conserve our limited supply of drinking water while preventing pollutants from washing into nearby waterbodies. Keep scrolling to learn more about how Carver County residents are saving money on their water bills and protecting our lakes and streams at the same time.

What's New?: Monitoring

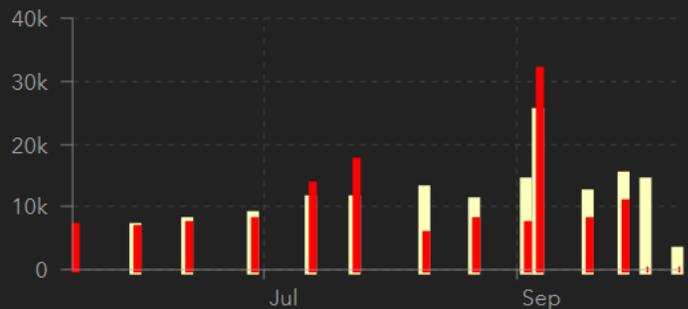
Dashboards for site owners/operators

Home ▾  Copper Hills dash + ▾  ▾  ... ▾  Jessica ▾

Last Meter Reading

10/10/2019, 12:00:00 AM
7,388,000
Error: high temp

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Volume used vs Required (red) (gal/day)

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Combined two-week precipitation (in)

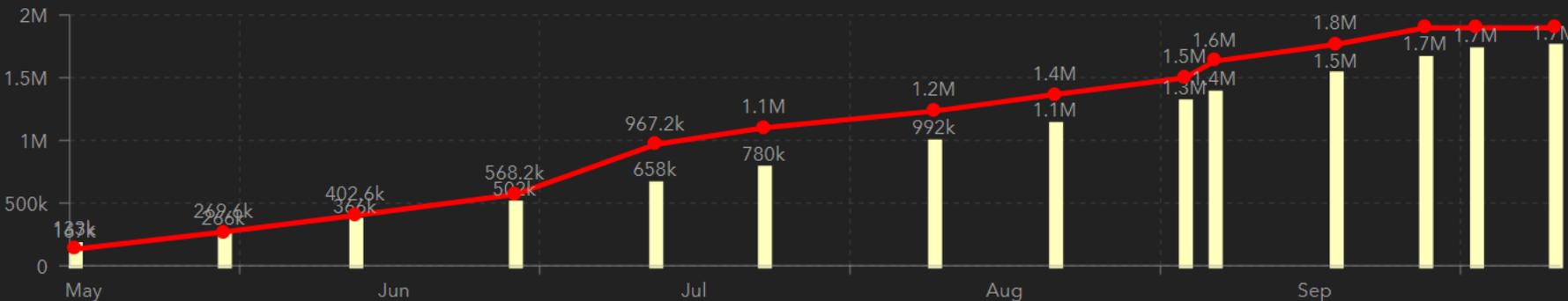
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Weeks (+/-)

-1.152

Estimated weeks ahead or behind usage goals. Positive number indicates ahead of usage goals, negative

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Usage (bar) vs. Required volume (line)

If the bars meet or exceed the value on the line, requirements to-date are met

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To-date usage compared to estimated ending requirement



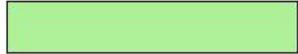
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Questions?

LEGEND



PROPERTIES WITH IRRIGATION SERVICE AND TREATMENT CREDIT



PROPERTIES WITH IRRIGATION SERVICE ONLY



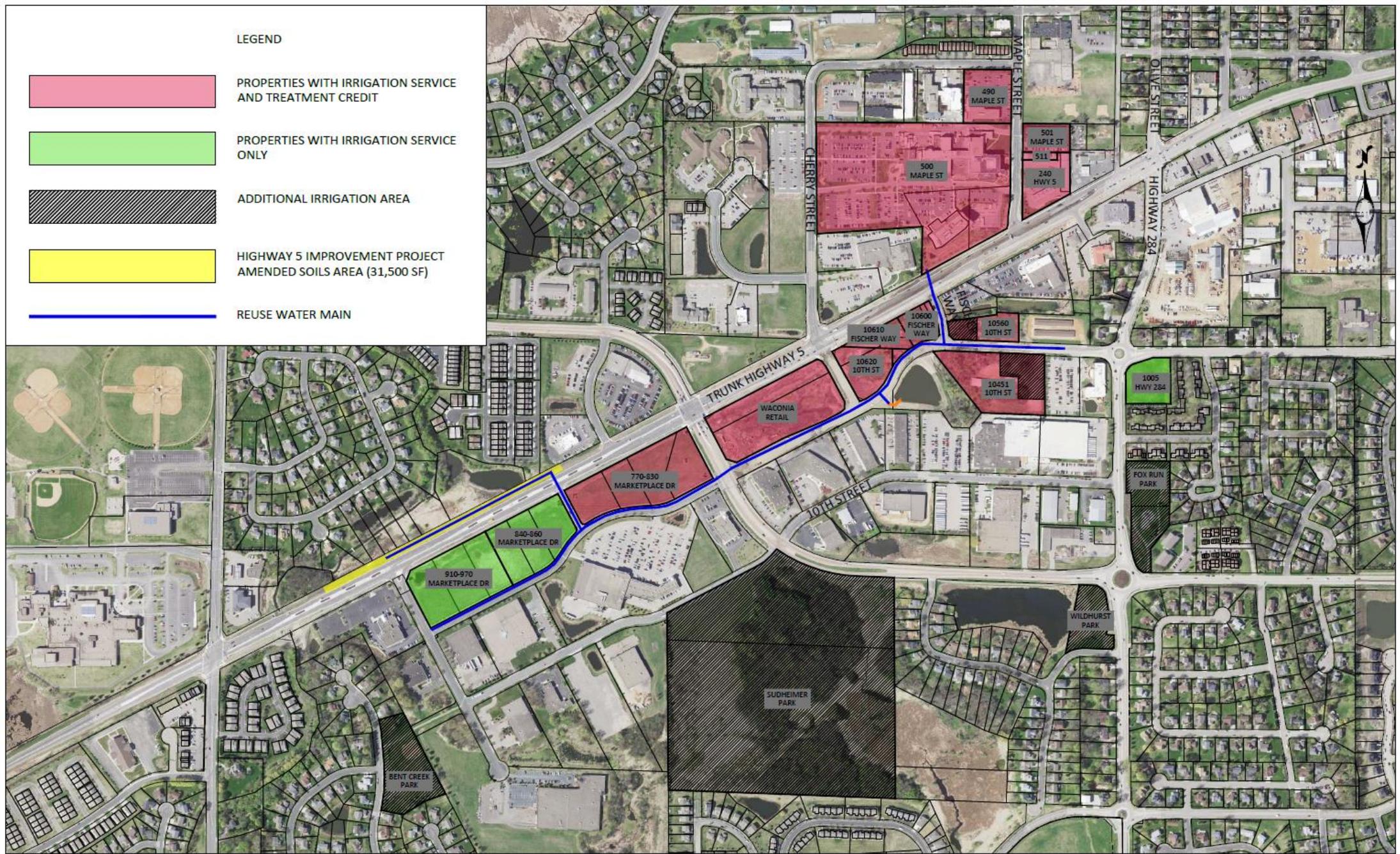
ADDITIONAL IRRIGATION AREA



HIGHWAY 5 IMPROVEMENT PROJECT AMENDED SOILS AREA (31,500 SF)



REUSE WATER MAIN



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