



Irrigation Water Budget Assessment of Manually-Watered City of Spokane Parks

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SITE INFORMATION

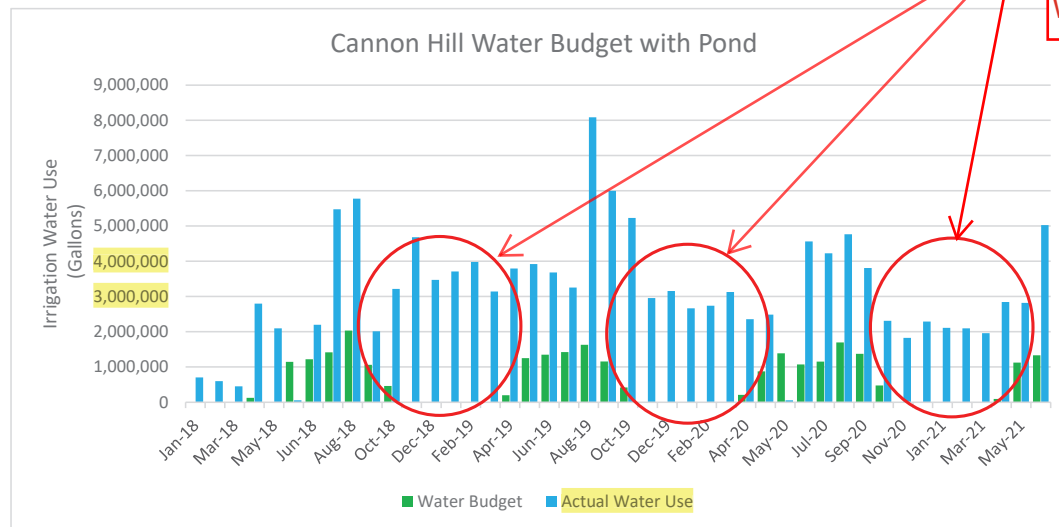
Site:	Cannon Hill	Irrigated Area (acre): (includes pond area)	10.03	Meters:	31955244, 70069914, 31590648, 70204552
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IRRIGATION WATER BUDGET REVIEW

The graph shows the expected water use (green line) based on the actual weather and landscape area compared to actual water use (blue line) provided by utility billing records.

Notes:

- > Acreage provided by Nick Hamad.
- > Flow rate measured at 80 gallons/minute on 7/2/2021 by Annikki Chamberlain and Kristen Zimmer.
- > The meter that supplies water to the pond also supplies irrigation. The surface area of pond is included in landscape area and water budget.
- > Winter water use provides an estimated volume of pond water use (red circles)
- > Estimated pond volume is 1.7 MG (1.7 acres area x 3 ft depth). See Appendix.



Pond Water Demand Is Averaging 3.4m Gallons of Water per Month.

ANALYSIS

- > This location uses approximately 500% of expected water use in summer months, likely due to the Cannon Hill pond.
- > The pond water uses between 2 to 4 million gallons (MG) per month, even during the winter months.
- > The pond is draining its entire volume every 12-24 days. It is impossible for this volume of water to be lost to evaporation.
- > It is almost certain there is a major leak in the pond infrastructure.
- > Pond water use appears to have declined since 2018 but is still excessive.
- > A subsurface leak of this magnitude could result in significant cost and damage to surrounding infrastructure.
- > The leak in Cannon Hill Pond is wasting between 20 MG and 40 MG per year!

NEXT STEPS

- > Prioritize efforts to locate and address leak in pond, possibly by lining pond.
- > A subsurface leak of this magnitude could result in significant cost and damage to surrounding infrastructure.
- > Meet with Water Dept to discuss collaborative opportunities to reduce water loss from the pond.