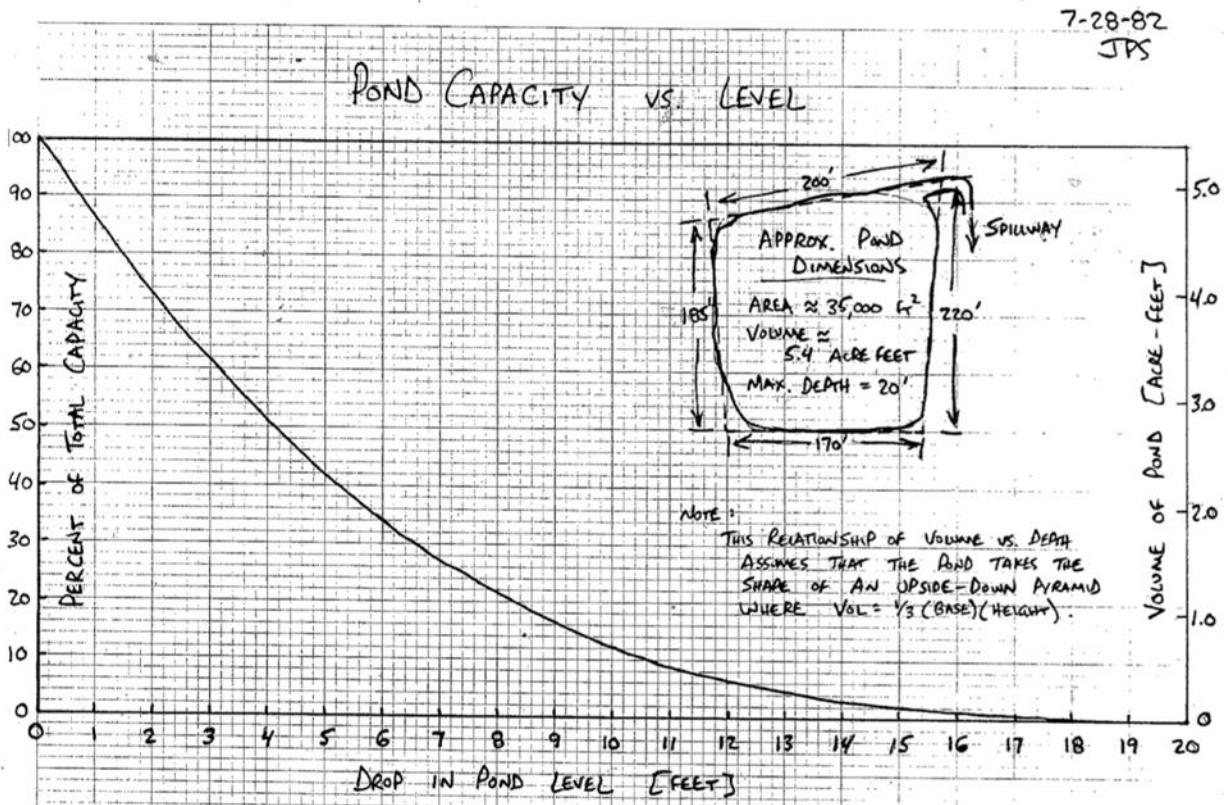


Pond Water Status as of 6/4/21

- Capacity of pond: **about 1,760,000 gallons (5.4 acre-feet)**
- Depth of pond at center: **about 20 ft.**
- Current volume of water in pond: **about 968,000 gallons (55% of capacity)**
- Volume that would need to be retained to not go below 15% capacity (11' from pond bottom): **264,000 gallons**
- Volume lost to evapotranspiration in 2019 from June through October: 293,000 gallons
- Volume we have available to use from now until the end of October (retaining 15%): **411,000 gallons**
- Average amount from last three years that we have used in the five months of June through October: **625,761 gallons**
- Average amount by which we need to cut volume by all pond water usages if we are to make it until the end of October with 15% remaining in pond: **34% or about one-third**
- Average daily use over the last three years (2018-2020):
 - April **1,731 gallons** (high of 3,784)
 - May **3,671 gallons** (high of 4,580)
 - June **4,755 gallons** (high of 5,889)
 - July **5,529 gallons** (high of 6,478)
 - August **5,315 gallons** (high of 6,108)
 - September **4,967 gallons** (high of 5,196)
 - October **3,836 gallons** (high of 4,858)
 - November **1,146 gallons** (high of 1,705)
- Average usage last month (May 2021): **3,980 gallons/day**



Estimated Water Use Calculations per Week, Jun 2021

Calculations based off of:

- Overhead sprinkler output: 3-3.5 gal/min (covering ~25-30ft at a time)
- Drip output:
 - o 12", ¼ or ½ tubing, 15psi: 0.5 gal/hr/ft = ~0.008gal/min/ft
 - o 6", ¼ tubing, 15psi: 1 gal/hr/ft = ~0.017gal/min/ft

Annual Growing Beds

- reduced number of beds being cultivated by ~40% in 2021
- several beds already on drip, and everything else being converted to drip irrigation
- planting more drought-tolerant annuals and plants adapted to local conditions
- planting more perennials, which usually need less water once established
- changing growing schedule to adapt to changing garden micro-climate (not growing plants that bolt easily or need more water in the summertime to be productive or survive)
- watering less

North Garden

294gal/week drip (12 beds) + 3600gal/week overhead (28 beds)
 = **~3900gal/week (40 beds)**

South Garden

255 gal/week drip (12 beds) + 1260 gal/week overhead (4 beds)
 = **1515 gals/week (16 beds)**

**In the South, drip irrigation uses 7% of water compared to overhead! (of course dependent on what watering, location and microclimate of each bed, etc., but gave a good reference)*

Section	Zone	Bed	Day	Time	Start Times	Notes
1	1-1	X			15 9am	Overhead water perennials
	1-2	X			15 9 130	Overhead water perennials
	1-3	X	X		15 9 15	Overhead water perennials
	1-4	X			15 9 15	Overhead water perennials
2	2-1	X			15 9	Overhead water perennials
	2-2	X			15 9 15	Overhead water perennials
	2-3	X			15 9 30	off sun
3	3-1	X				off
	3-2	X				off
	3-3	X			15 9	off
	3-4	X				Overhead water perennials
4	4-1	X			20 9	Overhead water
	4-2	X	X		4 7:10/110	Overhead water
	4-3	X	X		4 7:11	off sun
	4-4	X				Overhead water
5	5-1	X	X		4 7:10/120	Overhead water
	5-2	X	X		4 7:30/130	off sun
	5-3	X			20 9	Overhead water
6	6-1	X	X			Overhead water
	6-2	X	X			Overhead water
	6-3	X				Overhead water
7	7-1	X				Overhead water
8	8-1					Overhead water
	8-2					Overhead water
Perennial Pathway	1					Overhead water perennials
	2					Overhead water perennials

~5400gal/week use for both North and South gardens

Overhead watering of 32 beds currently using = ~4860 gal/week OR 19,440gal/month
 Meaning, will save ~9,720–15,552gal/month if convert these beds to drip (50-80% reduction)

Pond Water Status as of 8/16/21

- Current volume of water in pond (approximate): **633,600 gallons (36% of capacity)**
- Volume that would need to be retained to not go below 20% capacity (11' from pond bottom): **352,000 gallons**
- Volume lost to evapotranspiration in 2019 from August 16th through end of October (approximate): **146,000 gallons**
- Volume we have available to use from now until the end of October (retaining 15%): **136,000 gallons**
- Average amount from last three years that we have used in the period from August 16th through end of October (approximate): **350,000 gallons**
- Average amount by which we need to keep volume reduced (from 2018-2020 average) by all pond water usages if we are to make it until the end of October with 20% remaining in pond: **62%**
- Average daily use last week (8/9-8/16): **1,752 gallons/day**
- Percentage below historical July average: **67%**
- Previous week's volume below historical July average: **62%**

August 16, 2021 - We continue to be fortunate to have cool days with a persistent marine layer that eases the irrigation pressures on our gardens. While we are on track to get through the rest of the season without running out of pond water for our irrigation needs, we still do not have much margin for error.