

MC CARVER PONDS

POND #1 SPRING FED, SIZE: 0.42 AC X 12 FT DEEP = 5 ACRE FEET, PROPOSED
POND #2 SPRING FED, SIZE: 0.42 AC X 12 FT DEEP = 5 ACRE FEET, PROPOSED
POND #3 RUNOFF FED, SIZE: 0.30 AC X 12 FT DEEP = 3.6 ACRE FEET, EXISTING
POND #4 SPRING FED, SIZE: 0.40 AC X 10 FT DEEP = 4.0 ACRE FEET, EXISTING
POND #5 SPRING FED, SIZE: 0.20 AC X 12 FT DEEP = 2.4 ACRE FEET, EXISTING
TOTALS 1.74 AC 20 ACRE FEET

EVAPORATION: TOTAL SURFACE ARE = 1.74 AC = 75,794.4 SQFT
= 4725 GPD X 365 DAYS / 325,850 GALLONS PER ACRE FOOT
= 5.3 ACFT

SEEPAGE: WATER FLOWS FROM POND #4 INTO POND #5 AT TIMES, THEREFORE
POND #5 WILL HAVE A SEEPAGE COMPONENT. POND #3 WILL ALSO HAVE A
SEEPAGE COMPONENT SINCE IT CAPTURES RUNOFF WATER. ALL PONDS ARE
CONSTRUCTED OUT OF CLAY MATERIAL.

POND #5: 652 GPD X 365 DAYS / 325,850 GALLONS PER ACRE FOOT = 0.7 ACFT

POND #3: 977 GPD X 365 DAYS / 325,850 GALLONS PER ACRE FOOT = 1.0 AC FT
1.50 TOTAL 1.7 AC FT

STOCKWATER: ~~500~~ MIXED HEAD X 12 GPD X 365 DAYS / 325,850 GALLONS PER AF
= ~~6.7~~ ACFT
10.1

0.19	0.2 CFS	DIVERSION TO STORAGE		
	~~0.12~~ CFS	STOCKWATER (500 HEAD OF MIXED STOCK)		
	~~33.7~~ AF	STOCKWATER STORAGE	a.) PONDS SIZE	20 ACFT
	37.1 AF		b.) EVAPORATION	5.3 ACFT
			c.) SEEPAGE	1.7 ACFT
			d.) STOCKWATER	10.1 6.7 ACFT
	10.1		TOTAL	33.7 ACFT
	~~6.7~~ AF	STOCKWATER FROM STORAGE		37.1 AF
	0.12 CFS	RECREATION		
	27 AF	RECREATION STORAGE	a.) POND SIZE	20 ACFT
			b.) EVAPORATION	5.3 ACFT
			c.) SEEPAGE	1.7 ACFT
			TOTAL	27 ACFT
	27 AF	WILDLIFE STORAGE	a.) POND SIZE	20 ACFT
			b.) EVAPORATION	5.3 ACFT
			c.) SEEPAGE	1.7 ACFT
			TOTAL	27 ACFT
	27 AC	FIRE PROTECTION STORAGE	a.) POND SIZE	20 ACFT
			b.) EVAPORATION	5.3 ACFT
			c.) SEEPAGE	1.7 ACFT
			TOTAL	27 ACFT

76990

McCarver Ponds

100

nd #1	Spring fed, size	$0.42 \text{ AC} \times 12' = 5 \text{ AF}$	Proposed
nd #2	Spring fed, size	$0.42 \text{ AC} \times 12' = 5 \text{ AF}$	Proposed
nd #3	Runoff, size	$0.3 \text{ AC} \times 12 = 3.6 \text{ AF}$	existing
nd #4	Spring, size	$0.4 \text{ AC} \times 10' = 4.0 \text{ AF}$	existing
nd #5	Spring, size	$0.2 \text{ AC} \times 12' = 2.4 \text{ AF}$	existing
		<u>1.74 AC</u>	<u>20 AF</u>

Evaporation of ^{Total} Surface area = $1.74 \text{ AC} = 75,794.4 \text{ Ft}^2$

$$= 472.5 \text{ gpd} \times 365 \text{ days} / 325,850 = 5.3 \text{ AF}$$

Stock water of ⁷⁵⁰ ~~500~~ head mixed $\times 12 \text{ gpd} \times 365 \text{ days} / 325,850 = \frac{10.1}{6.7} \text{ AF}$

Stepage of Pond #5 Water flows from Pond #4 to Pond #5 at times.

Pond #3 will also have a stepage component since it captures runoff water.

$$\text{Pond \#5} = 652 \text{ gpd} \times 365 \text{ days} / 325,850 = 0.7 \text{ AF}$$

$$\text{Pond \#3} = 977 \text{ gpd} \times 365 \text{ days} / 325,850 = 1.0 \text{ AF}$$

Total 1.7 AF

0.2 cfs Div. To Storage.

0.12 cfs Stock Water (500 head)

33.7 AF Stock Water Storage a) Pond size 20 AF

b) Evaporation 5.3 AF

c) Stepage 1.7 AF

d) Stock water (500) ^{10.1} ~~6.7~~ AF

27 AF First Prof. Stor.

⁷⁵⁰ 33.7 AF

6.7 AF Stock Water from Storage

37.1

27 AF Wildlife Storage a + b + c

27 AF Rec. Stor., swimming, fishing, boating