

RAINWATER COLLECTION SYSTEM – PATSY GLENN BIRD REFUGE

FORMULA FOR RAINWATER COLLECTION: 1 INCH OF RAIN YIELDS 600 GALLONS FOR EVERY 1000 SQUARE FEET OF HORIZONTAL ROOF SURFACE.

USING A **16'X20' ROOF AREA**, AN INCH OF RAINFALL WILL YEILD: 16'X20' DIVIDED BY 1000 TIMES 600 GALLONS EQUALS **192 GALLONS (FOR EVERY INCH OF RAINFALL)**.

With the PGR rainwater collection system installed in October 2017 and collection beginning at that time, it is assumed that the tanks will be full in April 2018 when watering will begin at the Refuge. Below are calculations demonstrating the ability of the system to produce 800 gallons per month through the dry summer season.

MONTH	RAINFALL (inches)	YIELD (gallons)	WATER STORED	WATER USED	MONTH END
APRIL	2.2"	418	1500	800	1118
MAY	4.13"	793	1118	800	1111
JUNE	5.04"	968	1111	800	1279
JULY	2.09"	401	1279	800	880
AUGUST	1.77"	340	880	800	420
SEPTEMBER	3.07"	589	420	800	209
OCTOBER	4.09"	<u>785</u>	209	<u>800</u>	194
TOTALS		4294 gallons		5600 gallons	

RAINFALL NEEDED TO FILL TANKS: 1500 GALLONS DIVIDED BY 192 GALLONS PER INCH EQUALS 16.3 INCHES