

RAINWATER HARVESTING MONITORING AND REPORTING NOTES:

1. MONITORING OF WATER USE AND RELATED INFORMATION AT THE SITE SHALL BE THE RESPONSIBILITY OF THE PROPERTY OWNER.
2. POTABLE WATER USE FOR LANDSCAPE IRRIGATION SHALL BE MONITORED AND RECORDED ON A MONTHLY BASIS WITH READINGS FROM EITHER A TUCSON WATER IRRIGATION SERVICE METER, AN EQUIVALENT METER FROM ANOTHER WATER SERVICE PROVIDER, OR A PRIVATE SUB-METER THAT MEETS ACCURACY STANDARDS FOR PRIVATE SUB-METERS.
3. WELL WATER USE FOR LANDSCAPE IRRIGATION (IF APPLICABLE) SHALL BE MONITORED AND RECORDED ON A MONTHLY BASIS WITH READINGS FROM A PRIVATE SUB-METER THAT MEETS ACCURACY STANDARDS FOR PRIVATE SUB-METERS.
4. RECLAIMED WATER USE FOR LANDSCAPE IRRIGATION (IF APPLICABLE) SHALL BE MONITORED AND RECORDED ON A MONTHLY BASIS WITH READINGS FROM A PRIVATE SUB-METER THAT MEETS ACCURACY STANDARDS FOR PRIVATE SUB-METERS.
5. MONTHLY RAINFALL AT THIS SITE SHALL BE MONITORED AND RECORDED USING DATA FROM THE CLOSEST AVAILABLE RAIN GAUGE RECORDED AT WWW.RAINLOG.ORG, OR SHALL BE RECORDED USING AN ON-SITE RAIN GAUGE.
6. MONITORING DATA SHALL BE COMPILED INTO AN ANNUAL REPORT TO BE SUBMITTED TO THE CITY OF TUCSON BY JANUARY 30 OF EACH YEAR. THE ANNUAL REPORT SHALL, AT A MINIMUM, CONTAIN THE FOLLOWING:

A. NAME AND CONTACT INFORMATION FOR SITE AND OWNER.

B. NAME, TITLE, AND CONTACT INFORMATION FOR PERSON WHO PREPARES THE ANNUAL REPORT.

C. SOURCE OF RAINFALL DATA.

D. SOURCES OF METERED IRRIGATION WATER OTHER THAN HARVESTED RAINWATER USED AT THE SITE.

E. MONTHLY AND TOTAL ANNUAL READINGS OF THE FOLLOWING: PROJECTED LANDSCAPE WATER DEMAND SHOWN IN THE APPROVED RAINWATER HARVESTING IMPLEMENTATION PLAN, ACTUAL METERED WATER USE, THE DIFFERENCE BETWEEN THESE TWO AMOUNTS.

F. EXPLANATION FOR ANY EXCEEDENCE OF ANNUAL METERED IRRIGATION WATER USE PROJECTEDIN THE APPROVED RAINWATER HARVESTING PLAN.

G. CHANGES TO THE LANDSCAPE OR IRRIGATION SYSTEM IN THE REPORTING YEAR.
7. IN THE EVENT THE SITE FAILS TO MEET THE PERCENT WATER HARVESTING IN A REPORTING YEAR REQUIRED IN THE APPROVED RAIN WATER HARVESTING IMPLEMENTATION PLAN, TUCSON WATER MAY REQUEST THAT ADDITIONAL INFORMATION OR DOCUMENTATION BE SUBMITTED TO ASSIST IN DETERMINING THE CAUSE OF THE VIOLATION. A SITE VISIT AND A LANDSCAPE IRRIGATION AUDIT MAY BE REQUIRED TO VERIFY THE RAINWATER HARVESTING IMPLEMENTATION PLAN IS BEING ADHERED TO AND ALL COMPONENTS ARE PROPERLY FUNCTIONING.
8. SITES DETERMINED TO BE IN NON-COMPLIANCE MAY BE REQUIRED TO SUBMIT MONITORING REORTS MONTHLY AND MAY BE REQUIRED TO PROVIDE OWNER'S ANNUAL CERTIFICATION OF CONTINUED MAINTENANCE AND PROPER OPERATION OF WATER HARVESTING SYSTEMS AND THE IRRIGATION SYSTEM AND ASSOCIATED CONTROLS.

RAINWATER HARVESTING ENFORCEMENT NOTES:

1. ALL SITE-SCALE GRADING RELATED TO WATER HARVESTING SUBWATERSHEDS AND WATER HARVESTING INFILTRATION AREAS MUST BE INSPECTED AND ACCEPTED BY THE CITY OF TUCSON DEVELOPMENT SERVICES DEPARTMENT PRIOR TO APPLICATION OF ANY SURFACE TREATMENT (E.G. CONCRETE, ASPHALT, ROCK, ETC.) TO VERIFY THAT SLOPES, RECESSED AREAS, OVERFLOWS AND OTHER DESIGN ELEMENTS HAVE BEEN PROPERLY GRADED.
2. ALL LANDSCAPE-SCALE GRADING IN WATER HARVESTING INFILTRATION AREAS WHERE PLANTING WILL BE CONDUCTED MUST BE INSPECTED ABND ACCEPTED BY THE CITY OF TUCSON DEVELOPMENT SERVICES DEPARTMENT PRIOR TO PLANT INSTALLATION AND APPLICATION OF ORGANIC MULCH OR DECORATIVE ROCK TO VERIFY THAT THEY HAVE BEEN PROPERLY GRADED.
3. THE CITY OF TUCSON DEVELOPMENT SERVICES DEPARTMENT WILL INSPECT THE SITE FOR COMPLIANCE WITH THE PROVISIONS OF THE RAIN WATER HARVESTING IMPLEMENTATION PLAN PRIOR TO ISSUANCE OF A FINAL CERTIFICATE OF OCCUPANCY.

RAINWATER HARVESTING DROUGHT CONTINGENCY NOTE:

1. THE FIFTY PERCENT LANDSCAPE BUDGET PROVISION SHALL NOT APPLY IN ANY CALENDAR YEAR IN WHICH THE ANNUAL PRECIPITATION HAS FALLEN BELOW NINE INCHES AT THE SITE, AS REPORTED IN THE SITE'S ANNUAL REPORT.

WATER HARVESTING CALCULATIONS

WHIA #	PLANT WATER DEMAND CATEGORY	MONTH OF MARCH WATER DEMAND BY CATEGORY	TOTAL PLANT CANOPY AREA (SQ. FT.)	WATER DEMAND IN THIS WHIA (GAL.)	IDEAL CATCHMENT AREA TO PLANT CANOPY AREA RATIO BY	CATCHMENT AREA REQ'D. TO MEET IDEAL RATIO (SQ. FT.)	CATCHMENT AREA PROVIDED FOR THIS WHIA (SQ. FT.)	CATCHMENT AREA TO PLANT CANOPY AREA RATIO PROVIDED	PLANT WATER DEMAND MET BY WATER HARVESTING IN THIS WHIA (%)	WHIA AREA (SQ. FT.)	WHIA AVG. DEPTH (FT.)	WHIA CAPACITY (GAL.)
WHIA 1	VERY LOW	0.78	1,960	11,435	1.80	3,528	3,632	1.85	66%	7,792	0.7	40,799
	LOW	1.56	6,497	75,818	3.70	24,041	12,043	1.85	32%			
	MEDIUM	2.70	0	0	6.30	0	0	-	N/A			
WHIA 2	VERY LOW	0.78	8,760	51,109	1.80	15,768	19,184	2.19	78%	12,813	0.7	67,089
	LOW	1.56	13,255	154,665	3.70	49,042	29,028	2.19	38%			
	MEDIUM	2.70	0	0	6.30	0	0	-	N/A			
WHIA 3	VERY LOW	0.78	10,134	59,123	1.80	18,240	22,164	2.19	78%	24,928	0.7	130,523
	LOW	1.56	30,285	353,386	3.70	112,053	66,240	2.19	38%			
	MEDIUM	2.70	0	0	6.30	0	0	-	N/A			
WHIA 4	VERY LOW	0.78	10,179	59,387	1.80	18,322	20,095	1.97	70%	LOCATED IN FLOOD-PLAIN	n/a	n/a
	LOW	1.56	8,906	103,927	3.70	32,954	17,583	1.97	34%			
	MEDIUM	2.70	0	0	6.30	0	0	-	N/A			
GRAND TOTAL PLANT CANOPY AREA:					89,975							
WATER DEMAND FOR SITE:					868,850							
50% OF WATER DEMAND FOR SITE:					434,425							
DEMAND MET BY WATER HARVESTING:					50%							

WATER USE CAT.	BOTANICAL NAME	COMMON NAME	MATURE DIAMETER (FT.)	MATURE CANOPY (SQ. FT.)	WHIA 1 Qty.	60% mature canopy (Sq. Ft.)	WHIA 2 Qty.	60% mature canopy (Sq. Ft.)	WHIA 3 Qty.	60% mature canopy (Sq. Ft.)	WHIA 4 Qty.	60% mature canopy (Sq. Ft.)
1	Acacia constricta	Whitethorn Acacia	20	314.2	8	1508	37	6974	45	8482	54	10179
1	Calliandra eriophylla	Fairy Duster	4	12.6	43	324	171	1289	50	212	0	0
1	Encelia farinosa	Brittlebush	3	7.1	23	98	101	428	51	385	0	0
1	Opuntia spp.	Prickly Pear Hybrid	4	12.6	4	30	9	68	19	143	0	0
1	Parkinsonia microphylla	Foothill Palo Verde	20	314.2	8	1508	37	6974	45	8482	54	10179
Water Use Category 1 canopy subtotal					1960		8760		10134		10179	
2	Acacia aneura	Mulga	18	254.5	5	763	10	1527	0	0	0	0
2	Agave geminiflora-solitary	Twin-flowered Agave	3	7.1	0	0	0	0	50	212	0	0
2	Agave palmeri	Palmer Agave	4	12.6	0	0	0	0	51	385	0	0
2	Dalea greggii	Trailing Indigo Bush	9	63.6	17	649	21	802	0	0	0	0
2	Dasyliirion wheeleri	Desert Spoon	5	19.6	3	35	18	212	0	0	0	0
2	Justicia californica and cultivars (Beloperone)	Chuparosa	4	12.6	15	113	35	264	0	0	0	0
2	Leucophyllum spp. & varieties	Texas Ranger	6	28.3	41	696	91	1544	0	0	0	0
2	Prosopis glandulosa & varieties	Honey Mesquite	30	706.9	7	2969	21	8906	67	28416	0	0
2	Prosopis velutina	Velvet Mesquite	30	706.9	3	1272	0	0	3	1272	21	8906
Water Use Category 2 canopy subtotal					6497		13255		30285		8906	
3	N/A	N/A	0	0.0	0	0	0	0	0	0	0	0
Water Use Category 3 canopy subtotal					0		0		0		0	
PLANT CANOPY TOTAL					8,457		22,014		40,418		19,085	
Category 1 percentage of total canopy					23%		40%		25%		53%	
Category 2 percentage of total canopy					77%		60%		75%		47%	
Category 3 percentage of total canopy					0%		0%		0%		0%	
TOTAL CATCHMENT AREA FOR THIS WHIA					15675		48212		88404		37678	
Catchment area for Category 1 plants					3,632		19,184		22,164		20,095	
Catchment area for Category 2 plants					12,043		29,028		66,240		17,583	
Catchment area for Category 3 plants					0		0		0		0	
					WHIA 1		WHIA 2		WHIA 3		WHIA 4	

APPR DATE

REVISION

DATE

NO. BY

REGISTERED LANDSCAPE ARCHITECT
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LANDSCAPE PLAN
I-10 INTERNATIONAL
4150 EAST LOS REALES ROAD, TUCSON, AZ 85756
A PORTION OF THE NORTHWEST QUARTER OF SECTION 22,
TOWNSHIP 15 SOUTH, RANGE 14 EAST, GILA & SALT RIVER
MERIDIAN, CITY OF TUCSON, PIMA COUNTY, ARIZONA.

DP22-0122
WH-02
HORIZ : N/A
VERT : N/A
SHEET 74 OF 86

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