



## BOARD OF SUPERVISORS AGENDA ITEM REPORT

Requested Board Meeting Date: 9/21/2021

\*= Mandatory, information must be provided

Click or tap the boxes to enter text. If not applicable, indicate "N/A".

**\*Title:**

Approval of a Riparian Habitat Mitigation In-Lieu Fee Proposal for Placement of Four Single Family Residences at the Whetstone Shadows Subdivision Lots 40-43, Located within Regulated Riparian Habitat (District 4)

**\*Introduction/Background:**

Chapter 16.30 of the Pima County Floodplain Management Ordinance No. 2010-FC5 (Ordinance) requires mitigation when cumulative disturbance of more than 1/3 acre of mapped riparian habitat occurs. If a project site contains suitable area(s) for mitigation, restoration, or enhancement, then on-site mitigation is required in accordance with the adopted Regulated Riparian Habitat Mitigation Standards and Implementation Guidelines. The Ordinance contains a provision for mitigation banking when on-site mitigation is not feasible. All off-site mitigation proposals require Flood Control District Board of Directors (Board) review and approval.

**\*Discussion:**

Michael Burton with Burton and Associates has applied for four floodplain use permits to construct single family residences on 4 lots located in the Whetstone Shadows Subdivision. The property is mapped within Regulated Riparian Habitat (RRH). The subdivision plat requires mitigation for any on lot disturbance of RRH. The total amount of RRH disturbed from the proposed construction is 0.65 acres. Mr. Burton hired Karen Cesare with Novak Environmental to prepare for each lot a Riparian Habitat Mitigation In-Lieu Fee (ILF) Proposal. The ILF total amount is \$4532.25 for the proposed RRH disturbance in lieu of onsite mitigation.

**\*Conclusion:**

Acceptance of mitigation banking funds in-lieu of on-site mitigation is allowed under the Ordinance. Contributions to the mitigation bank for disturbance of this habitat will provide funds to be used toward purchase of high value resources or towards restoration of degraded riparian habitat within Pima County

**\*Recommendation:**

The ILF proposal presented conforms with the Ordinance and, as such, the District recommends approval.

**\*Fiscal Impact:**

\$4532.25

**\*Board of Supervisor District:**

☐ 1 ☐ 2 ☐ 3 ☒ 4 ☐ 5 ☐ All

Department: Regional Flood Control District

Telephone: 724-4600

Contact: Patricia Gilbert

Telephone: 724-4606

Department Director Signature: \_\_\_\_\_

Date: \_\_\_\_\_

Deputy County Administrator Signature: \_\_\_\_\_

Date: \_\_\_\_\_

County Administrator Signature: \_\_\_\_\_

Date: \_\_\_\_\_

**DATE:** August 24, 2021

**TO:** Flood Control District Board of Directors

**FROM:** Suzanne Shields, P.E.  
Director

**SUBJECT:** Approval of a Riparian Habitat Mitigation In-Lieu Fee Proposal for Placement of Four Single Family Residences at the Whetstone Shadows Subdivision Lots 40-43, Located within Regulated Riparian Habitat (District 4)

### Background

Chapter 16.30 of the Pima County Floodplain Management Ordinance No. 2010-FC5 (Ordinance) requires mitigation for mapped riparian habitat disturbances greater than 1/3 acre. If a project site contains suitable area(s) for riparian restoration, enhancement, or establishment, onsite mitigation occurs in accordance with the adopted *Regulated Riparian Habitat Mitigation Standards and Implementation Guidelines*. The Ordinance contains a provision for mitigation banking, when on-site mitigation is not feasible. All offsite mitigation proposals require Flood Control District Board of Directors (Board) review and approval.

### Report

The applicant, Michael Burton with Burton and Associates has applied for four floodplain use permits to construct single family residences on 4 lots located in the Whetstone Shadows Subdivision. The properties are located at 1158, 1168, 1178, 1188 N. Slot Canyon Place (Exhibit A). Most of the property is mapped within Regulated Riparian Habitat (RRH) and is classified as Important Riparian Area with Underlying Xeroriparian Class C and Xeroriparian Class C (Exhibit B). The subdivision plat requires mitigation for an on lot disturbance of RRH. The total amount of RRH disturbed from the proposed construction is 0.65 acres. The property is densely vegetated with healthy mature trees therefore has no suitable place for onsite mitigation. As a result, Mr. Burton hired Karen Cesare with Novak Environmental to prepare for each lot a Riparian Habitat Mitigation In-Lieu Fee (ILF) Proposal (Exhibit C). The ILF total amount is \$4532.25 for the proposed RRH disturbance in lieu of onsite mitigation, based on the Flat Fee Table provided in the *Pima County Regulated Riparian Habitat Off-Site Mitigation Guidelines*.

	XA	XB	XC	XD	IRA/H, H	IRA/XA	IRA/XB	IRA/XC	IRA/XD
Cost per Acre	\$8,500	\$7,500	\$6,500	\$5,000	\$17,000	\$12,500	\$11,000	\$9,500	\$8,000
Single Lot									

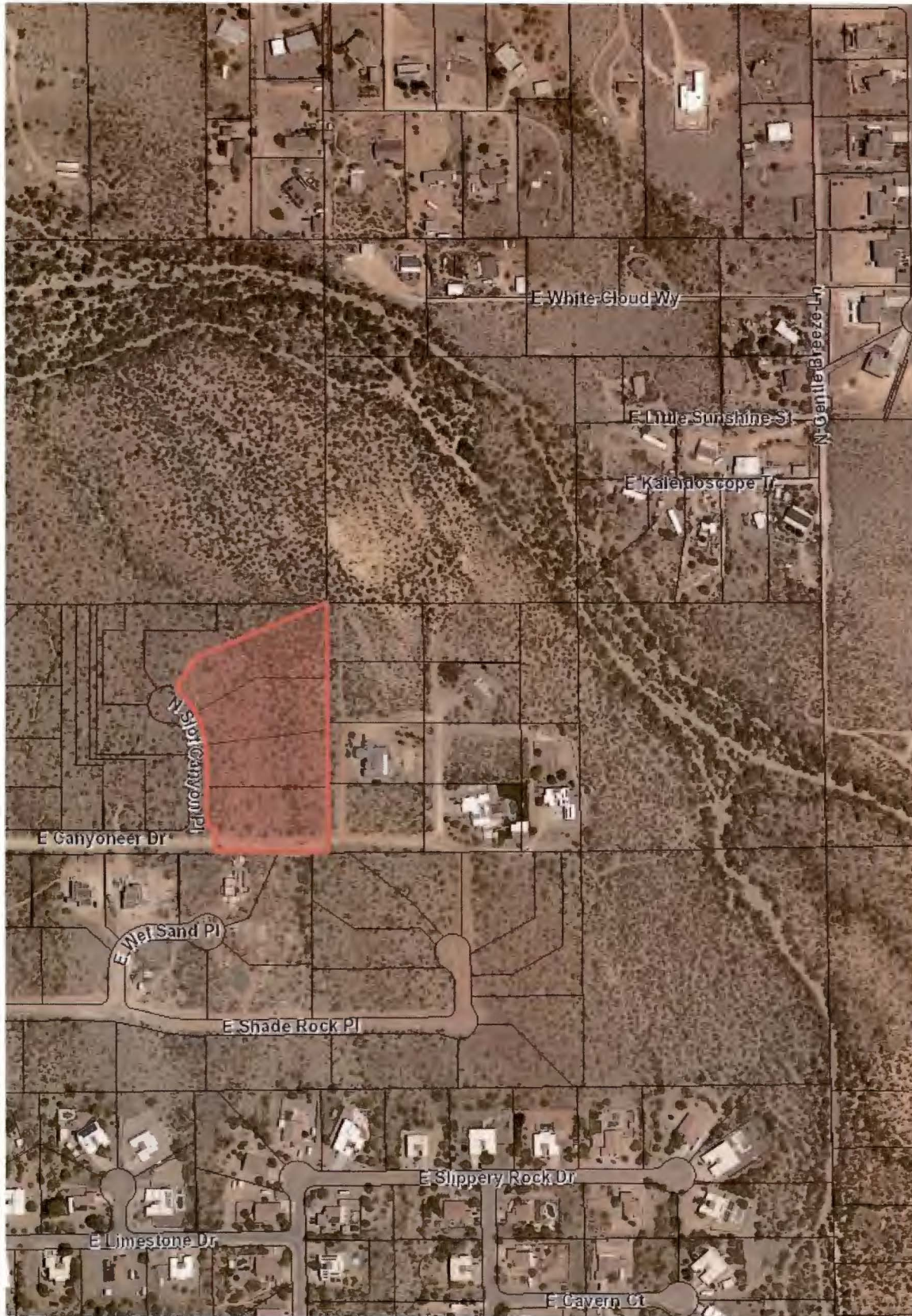
### Recommendation

Acceptance of mitigation banking funds in-lieu of onsite mitigation is allowed under the Ordinance. Contributions to the mitigation bank for disturbance of this habitat will provide funds to be used toward purchase of high value resources or towards restoration of degraded riparian habitat within Pima County

**Attachments:** Exhibit A – Project Location  
Exhibit B – Project Site – Riparian Classification Map  
Exhibit C – Mitigation Banking In-lieu Fee Proposal



# Exhibit A



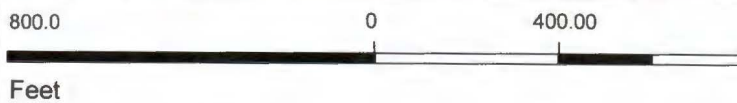
## Legend

☐ Parcels



Notes: Notes: Whetstone  
Shadows; Lots 40-43

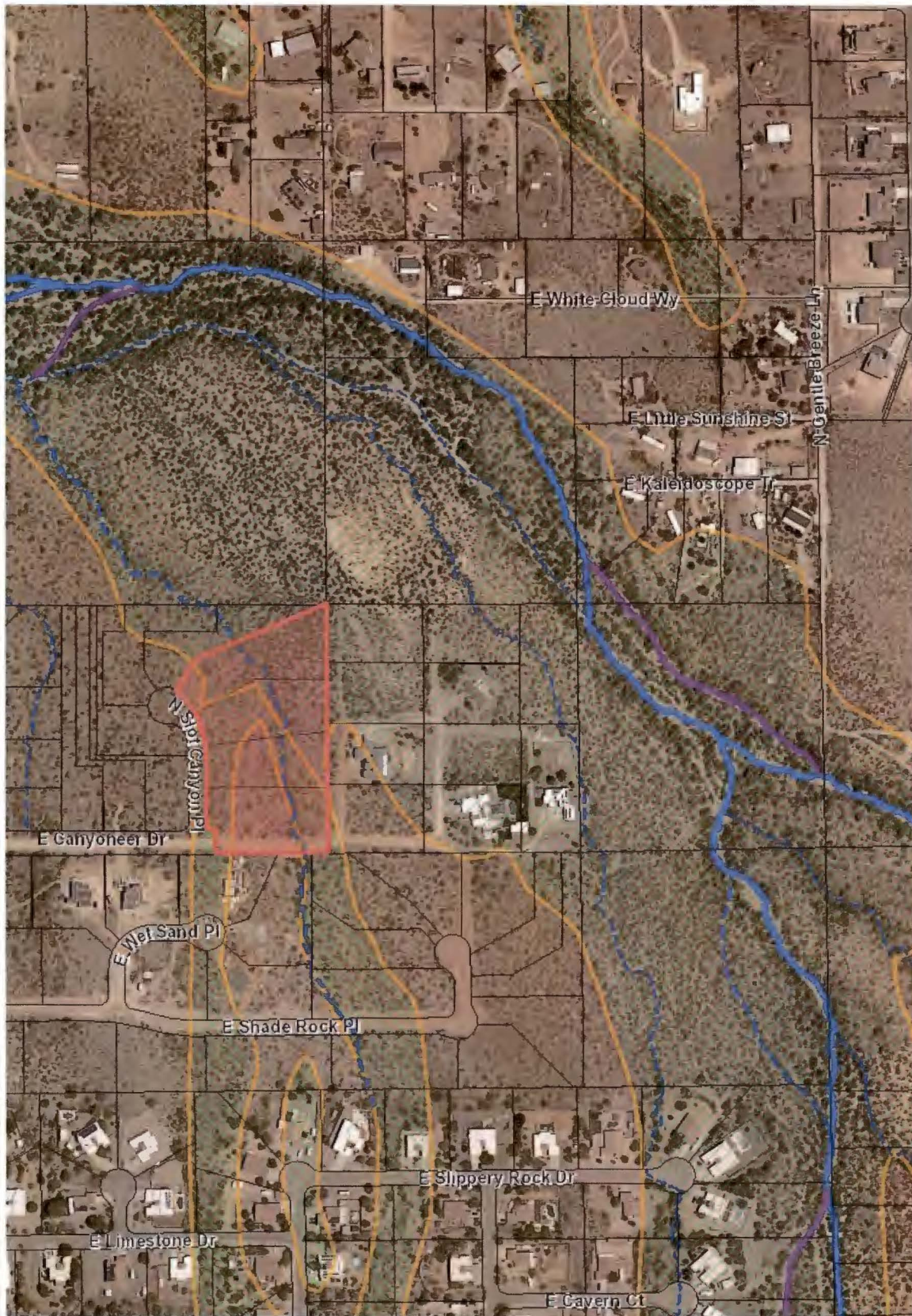
8/24/2021



This map is static output from an internet mapping site and no warranty is expressed or implied as to the accuracy, reliability, currency or completeness of the data, and is for reference only



# Exhibit B



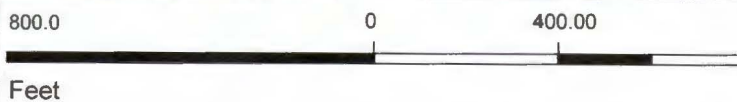
## Legend

- ☐ Parcels
- Washes - All
  - Unknown Discharge
  - 100-500 CFS
  - 500-1000 CFS
  - 1000-2000 CFS
  - 2000-5000 CFS
  - 5000-10000 CFS
  - Over 10000 CFS
- Riparian Habitat - Pima Effective 10/20/2005
  - Xeroriparian A
  - Xeroriparian B
  - Xeroriparian C
  - Xeroriparian D
  - Hydromesoriparian or Me
  - IRA - Xeroriparian A
  - IRA - Xeroriparian B
  - IRA - Xeroriparian C
  - IRA - Xeroriparian D
  - IRA - H
  - Important Riparian Areas



Notes: Notes: Whetstone Shadows; Lots 40-43

8/24/2021







This map is static output from an internet mapping site and no warranty is expressed or implied as to the accuracy, reliability, currency or completeness of the data, and is for reference only



## Exhibit C

NATIVE PLANT PRESERVATION AND  
RIPARIAN HABITAT KEY

- PROPERTY LIMITS
- INVENTORIED NATIVE PLANT NUMBER
- PRESERVED IN PLACE NATIVE PLANT
- ▽ REMOVE FROM SITE NATIVE PLANT
- ◇ TRANSPLANT ON SITE NATIVE PLANT

- |   |  |
|---|--|
|  | Regulated Riparian Habitat--<br>RA Xeroriparian C.<br>Undisturbed Area |
|  | Regulated Riparian Habitat--<br>Xeroriparian C.<br>Undisturbed Area    |
|  | Regulated Riparian Habitat--<br>IRA Xeroriparian C.<br>Disturbed Area  |
|  | Regulated Riparian Habitat--<br>Xeroriparian C.<br>Disturbed Area      |

### PLANT KEY

Scientific Name	Common Name	Quantity	Size
<i>Prosopea volutaria</i>	Velvet Mosquito	2	120 @ 1.5 gal
			(1) 5 gal and 2 1/2 quart
<i>Toxotes jacula</i>	Spotnose Toxotea	1	1 quart

## NATIVE PLANT INVENTORY

U.S.	Botanical Name	Common Name	Caliper Inches	Shut Trough	Height Feet	Inside Velocity	Throughput Holes	Notes	Ref.	YOG	Alt.
253	Yucca elata stricta	Sequoia Yucca	0 H		2 H		H		PP		
254	Fernandina villosoa	Flowers Band Cores	0 H		1 H		H		PP		
255	Phymos villosoa	Sequoia	12 Y		7 H		H		PP		
272	Yucca elata stricta	Sequoia Yucca	0 H		4 H		H			TOG	
273	Yucca elata stricta	Yucca	0 Y		4 H		H	cluster of 30 PP			

## NATIVE PLANT INVENTORY TOTALS

[illegible]

### P.J.P Credit Calculations

	Age	Sex	Height	Weight	Temp	Pulse	Respirations	Blood Pressure	Other
1	10	M	5' 0"	120	98.6	72	18	110/70	None
2	10	F	4' 8"	110	98.4	68	16	100/60	None
3	10	M	5' 2"	130	98.8	74	19	112/72	None
4	10	F	4' 6"	105	98.2	66	15	98/58	None
5	10	M	5' 1"	125	98.5	70	17	105/65	None
6	10	F	4' 9"	115	98.3	69	16	102/62	None
7	10	M	5' 3"	135	98.7	75	20	115/75	None
8	10	F	4' 7"	108	98.1	67	15	99/59	None
9	10	M	5' 4"	140	98.9	76	21	118/78	None
10	10	F	4' 10"	120	98.6	71	18	108/68	None
11	10	M	5' 5"	145	99.0	77	22	120/80	None
12	10	F	4' 11"	125	98.7	72	19	110/70	None
13	10	M	5' 6"	150	99.1	78	23	122/82	None
14	10	F	4' 12"	130	98.8	73	20	112/72	None
15	10	M	5' 7"	155	99.2	79	24	125/85	None
16	10	F	4' 13"	135	98.9	74	21	115/75	None
17	10	M	5' 8"	160	99.3	80	25	128/88	None
18	10	F	4' 14"	140	99.0	75	22	118/78	None
19	10	M	5' 9"	165	99.4	81	26	130/90	None
20	10	F	4' 15"	145	99.1	76	23	120/80	None
21	10	M	5' 10"	170	99.5	82	27	132/92	None
22	10	F	4' 16"	150	99.2	77	24	122/82	None
23	10	M	5' 11"	175	99.6	83	28	135/95	None
24	10	F	4' 17"	155	99.3	78	25	125/85	None
25	10	M	6' 0"	180	99.7	84	29	138/98	None
26	10	F	4' 18"	160	99.4	79	26	128/88	None
27	10	M	6' 1"	185	99.8	85	30	140/100	None
28	10	F	4' 19"	165	99.5	80	27	130/90	None
29	10	M	6' 2"	190	99.9	86	31	142/102	None
30	10	F	4' 20"	170	99.6	81	28	132/92	None
31	10	M	6' 3"	195	100.0	87	32	145/105	None
32	10	F	4' 21"	175	99.7	82	29	135/95	None
33	10	M	6' 4"	200	100.1	88	33	148/108	None
34	10	F	4' 22"	180	99.8	83	30	140/100	None
35	10	M	6' 5"	205	100.2	89	34	150/110	None
36	10	F	4' 23"	185	99.9	84	31	142/102	None
37	10	M	6' 6"	210	100.3	90	35	152/112	None
38	10	F	4' 24"	190	100.0	85	32	142/102	None
39	10	M	6' 7"	215	100.4	91	36	155/115	None
40	10	F	4' 25"	195	100.1	86	33	145/105	None
41	10	M	6' 8"	220	100.5	92	37	158/118	None
42	10	F	4' 26"	200	100.2	87	34	148/108	None
43	10	M	6' 9"	225	100.6	93	38	160/120	None
44	10	F	4' 27"	205	100.3	88	35	150/110	None
45	10	M	6' 10"	230	100.7	94	40	162/122	None
46	10	F	4' 28"	210	100.4	89	36	152/112	None
47	10	M	6' 11"	235	100.8	95	42	165/125	None
48	10	F	4' 29"	215	100.5	90	37	155/115	None
49	10	M	7' 0"	240	100.9	96	45	168/128	None
50	10	F	4' 30"	220	100.6	91	38	158/118	None
51	10	M	7' 1"	245	101.0	97	48	170/130	None
52	10	F	4' 31"	225	100.7	92	39	160/120	None
53	10	M	7' 2"	250	101.1	98	50	172/132	None
54	10	F	4' 32"	230	100.8	93	40	162/122	None
55	10	M	7' 3"	255	101.2	99	52	175/135	None
56	10	F	4' 33"	235	100.9	94	41	165/125	None
57	10	M	7' 4"	260	101.3	100	55	178/138	None
58	10	F	4' 34"	240	101.0	95	42	168/128	None
59	10	M	7' 5"	265	101.4	101	58	180/140	None
60	10	F	4' 35"	245	101.1	96	43	170/130	None
61	10	M	7' 6"	270	101.5	102	60	182/142	None
62	10	F	4' 36"	250	101.2	97	44	172/132	None
63	10	M	7' 7"	275	101.6	103	62	185/145	None
64	10	F	4' 37"	255	101.3	98	45	175/135	None
65	10	M	7' 8"	280	101.7	104	65	188/148	None
66	10	F	4' 38"	260	101.4	99	46	178/138	None
67	10	M	7' 9"	285	101.8	105	68	190/150	None
68	10	F	4' 39"	265	101.5	100	47	180/140	None
69	10	M	7' 10"	290	101.9	106	70	192/152	None
70	10	F	4' 40"	270	101.6	101	48	182/142	None
71	10	M	7' 11"	295	102.0	107	72	195/155	None
72	10	F	4' 41"	275	101.7	102	49	185/145	None
73	10	M	7' 12"	300	102.1	108	75	198/158	None
74	10	F	4' 42"	280	101.8	103	50	188/148	None
75	10	M	7' 13"	305	102.2	109	78	200/160	None
76	10	F	4' 43"	285	101.9	104	51	190/150	None
77	10	M	7' 14"	310	102.3	110	80	202/162	None
78	10	F	4' 44"	290	102.0	105	52	192/152	None
79	10	M	7' 15"	315	102.4	111	82	205/165	None
80	10	F	4' 45"	295	102.1	106	53	195/155	None
81	10	M	7' 16"	320	102.5	112	85	208/168	None
82	10	F	4' 46"	300	102.2	107	54	198/158	None
83	10	M	7' 17"	325	102.6	113	88	210/170	None
84	10	F	4' 47"	305	102.3	108	55	200/160	None
85	10	M	7' 18"	330	102.7	114	90	212/172	None
86	10	F	4' 48"	310	102.4	109	56	202/162	None
87	10	M	7' 19"	335	102.8	115	92	215/175	None
88	10	F	4' 49"	315	102.5	110	57	205/165	None
89	10	M	7' 20"	340	102.9	116	95	218/178	None
90	10	F	4' 50"	320	102.6	111	58	208/168	None
91	10	M	7' 21"	345	103.0	117	98	220/180	None
92	10	F	4' 51"	325	102.7	112	59	210/170	None
93	10	M	7' 22"	350	103.1	118	100	222/182	None
94	10	F	4' 52"	330	102.8	113	60	212/172	None
95	10	M	7' 23"	355	103.2	119	102	225/185	None
96	10	F	4' 53"	335	102.9	114	61	215/175	None
97	10	M	7' 24"	360	103.3	120	105	228/188	None
98	10	F	4' 54"	340	103.0	115	62	218/178	None
99	10	M	7' 25"	365	103.4	121	108	230/190	None
100	10	F	4' 55"	345	103.1	116	63	220/180	None

### Mitigation Calculations

[illegible]

## NATIVE PLANT SUMMARY OF REQUIREMENTS

1. This Native Plant Preservation Plan is for the disturbance for Lot 40 and roadway for entire project. These disturbance areas include areas where native plants can be preserved in place.
2. Transplant on Site (TOS) from lot: (2) Yucca elata.
3. Plant nursery grown native mitigation plants from lot: NO MITIGATION REQUIRED.
4. Plant nursery grown native mitigation plants from lot: NO MITIGATION REQUIRED.
5. Plant nursery grown native mitigation plants from roadway: (2) Prosopis juliflora @ 15 oal, and (1) Yucca elata @ 5 oal.

NATIVE PLANT ROADWAY MITIGATION REQUIREMENTS LOT BY LOT  
FROM WHETSTONES SHADOWS LOTS 27-43 SUBDIVISION P19TP0009

All TOS trees to be provided on lot 27										All TOS cacti and succulents to be provided on lots 34-37									
	Lot 27	Lot 28	Lot 29	Lot 30	Lot 31	Lot 32	Lot 33	Lot 34	Lot 35	Lot 36	Lot 37	Lot 38	Lot 39	Lot 40	Lot 41	Lot 42	Lot 43		
Transplant on Site	Pereskia florida	9																	
	Prosopis juliflora	3																	
	Pereskia velutina							4	2	3	9								
	Fouquieria splendens																		
	Yucca elata							3	1	2	5								
	Yucca elata							3	1	1	1								
Native	Pereskia florida @15 gal	1	1	1	1			1	1										
reinstalling plants	Prosopis juliflora @15 gal	3	3	3	3	1	1	1	1	1	2	2	2	2	2	2	2		
	Prosopis juliflora @24" box	1	1	1	1	1	1	1											
	Yucca elata @5 gal	1	1	1	1	1	1	1	1	1	2	2	1	1	1	1	1		
Lot Total		18	6	6	5	3	3	11	7	8	18	4	4	3	3	3	3		

NOTE: The mitigation plants will be planted on lots 27-43 at the time of their development.

ADDRESS: 1188 N SLOT CANYON PL

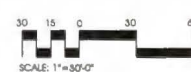


**NE** Novak Environmental, Inc.  
4524 North First Avenue #100 • Tucson, AZ  
Phone 520.398.0091 Fax 520.882.3000

**NATIVE PLANT PRESERVATION PLAN AND RIPARIAN  
HABITAT MITIGATION IN-LIEU FEE PROPOSAL  
WHETSTONES SHADOWS LOT 40**

LOCATED IN THE SW 1/4 OF  
SEC. 3, T. 12 S., R. 16 E., GADSDEN, PIMA COUNTY, ARIZONA

DESIGNER	DATE	DRAWN	CHECKED	SHEET
JG/SS		JG/SS	KC	RYM-1
DATE	PROJECT NO.	SCALE		
AUG/SEP 2001	200113	SEE PLAN	1 of	



NO.	REVISION	DATE

LOCATED IN THE SW 1/4 OF SEC. 3, T 17 S, R 16 E, G&SRM, PIMA COUNTY, ARIZONA			
DESIGNED	DRAWN	CHECKED	SHEET
JG/SS	JG/SS	KC	RYM-
DATE	PROJECT NO.	SCALE	
AUGUST 2001	20013	OFF DIAM	1 of





-  PROPERTY LIMITS  
 INVENTORIED NATIVE PLANT NUMBER  
 PRESERVED IN PLACE NATIVE PLANT  
  
 Regulated Riparian Habitat--  
 RIA Xeroriparian C.  
 Undisturbed Area  
  
 Regulated Riparian Habitat--  
 Xeroriparian C.  
 Undisturbed Area  
  
 Regulated Riparian Habitat--  
 Xeroriparian C.  
 Disturbed Area

Scientific Name	Common Name	Quantity	File
<i>Prosopis juliflora</i>	Velvet Mesquite	2	(2) @ 15 gal
<i>Yucca elata</i>	Spiny Yucca	1	(1) @ gal

1. This Native Plant Preservation Plan is for the disturbance for Lot 41 and roadway for entire project. These disturbance areas include areas where native plants can be preserved in place.

2. Transplant on Site (TOS) from lot: NO TOS REQUIRED
3. Plant nursery grown native mitigation plants from lot: NO MITIGATION REQUIRED
4. Plant nursery grown native mitigation plants from lot: NO MITIGATION REQUIRED
5. Plant nursery grown native mitigation plants from roadway: (2)  
Prosopis juliflora @ 15 gal, and (1) Yucca eleo @ 5 gal.

[illegible]

	Qty Inventory	Total Volume	P.F.P.	T.O.S.	YOF	SL	Completed P.F. or T.O.S.	Percent P.F. or T.O.S.
Years								
1950-1951	1	1	1	0	0	0	1	100%
1951-1952	1	1	1	0	0	0	1	100%
1952-1953	1	1	1	0	0	0	1	100%
1953-1954	1	1	1	0	0	0	1	100%
1954-1955	1	1	1	0	0	0	1	100%
1955-1956	1	1	1	0	0	0	1	100%
1956-1957	1	1	1	0	0	0	1	100%
1957-1958	1	1	1	0	0	0	1	100%
1958-1959	1	1	1	0	0	0	1	100%
1959-1960	1	1	1	0	0	0	1	100%
1960-1961	1	1	1	0	0	0	1	100%
1961-1962	1	1	1	0	0	0	1	100%
1962-1963	1	1	1	0	0	0	1	100%
1963-1964	1	1	1	0	0	0	1	100%
1964-1965	1	1	1	0	0	0	1	100%
1965-1966	1	1	1	0	0	0	1	100%
1966-1967	1	1	1	0	0	0	1	100%
1967-1968	1	1	1	0	0	0	1	100%
1968-1969	1	1	1	0	0	0	1	100%
1969-1970	1	1	1	0	0	0	1	100%
1970-1971	1	1	1	0	0	0	1	100%
1971-1972	1	1	1	0	0	0	1	100%
1972-1973	1	1	1	0	0	0	1	100%
1973-1974	1	1	1	0	0	0	1	100%
1974-1975	1	1	1	0	0	0	1	100%
1975-1976	1	1	1	0	0	0	1	100%
1976-1977	1	1	1	0	0	0	1	100%
1977-1978	1	1	1	0	0	0	1	100%
1978-1979	1	1	1	0	0	0	1	100%
1979-1980	1	1	1	0	0	0	1	100%
1980-1981	1	1	1	0	0	0	1	100%
1981-1982	1	1	1	0	0	0	1	100%
1982-1983	1	1	1	0	0	0	1	100%
1983-1984	1	1	1	0	0	0	1	100%
1984-1985	1	1	1	0	0	0	1	100%
1985-1986	1	1	1	0	0	0	1	100%
1986-1987	1	1	1	0	0	0	1	100%
1987-1988	1	1	1	0	0	0	1	100%
1988-1989	1	1	1	0	0	0	1	100%
1989-1990	1	1	1	0	0	0	1	100%
1990-1991	1	1	1	0	0	0	1	100%
1991-1992	1	1	1	0	0	0	1	100%
1992-1993	1	1	1	0	0	0	1	100%
1993-1994	1	1	1	0	0	0	1	100%
1994-1995	1	1	1	0	0	0	1	100%
1995-1996	1	1	1	0	0	0	1	100%
1996-1997	1	1	1	0	0	0	1	100%
1997-1998	1	1	1	0	0	0	1	100%
1998-1999	1	1	1	0	0	0	1	100%
1999-2000	1	1	1	0	0	0	1	100%
2000-2001	1	1	1	0	0	0	1	100%
2001-2002	1	1	1	0	0	0	1	100%
2002-2003	1	1	1	0	0	0	1	100%
2003-2004	1	1	1	0	0	0	1	100%
2004-2005	1	1	1	0	0	0	1	100%
2005-2006	1	1	1	0	0	0	1	100%
2006-2007	1	1	1	0				

[illegible]

	T.O.S.	Expenses	Utilities	Payments	P/P	Net Utilities	Diff
		(1998)		(1998)	Costs		
Taxes							
Utilities							
Cash		47 Payments 147 Payments					
Accounts							

1. **METHODOLOGY:** This Native Plant Preservation Plan utilizes the Selective Plant Preservation Methodology.

2. **GRADING:** All Salvage work shall be done prior to grading and clearing of that portion (and construction phase) of the site.

3. **TRANSPLANTING AND WATERING:** A licensed contractor shall perform all salvage and transplanting. Transplanting will be performed by hand.

4. **INJURED PLANTS:** Any plants that do not survive the project construction process shall be replaced on a one-to-one basis (same size and species).

5. **FLAGGING AND TAGGING:** All viable protected native plants are tagged with flagging, bearing the inventory number. Tagging must also be done in place for the duration of construction. Tagging and tagging will be maintained in place until final inspection.

6. **MONITORING:** The developer will provide on-site monitoring to be performed per guidelines set forth by Pima County. The assigned monitor for this project is: Karen Gease, RLA, Novak Environmental, Inc., 520-206-0591.

7. **DANGERED SPECIES ACT:** The preservation plan shall also be in conformance with the Federal Endangered Species Act and Arizona Antiquities Act. The project area contains several species of Arizona Endangered Plants present within the project limits.

8. **FENCING:** Existing plants to be preserved in place and areas designated to remain undisturbed shall be fenced prior to construction. The area to be fenced shall be beyond the drip-line of the vegetation and generally as designated on the project plans. For saguaro and ocotil, the area to be fenced shall be equal to the distance of one-half (1/2) the height of the plant. The preservation of a substantial portion of the root system for either undisturbed natural desert areas of Protected Native Plants or individual Protected native Plants requires a fence. The fence shall be constructed of a minimum 4' high white fence with 10' spacing of their associated plant community. No plants shall be salvaged from within fenced areas. The fencing shall be a highly visible fence with high visibility orange colored plastic netting minimum 4' high with steel T fenceposts at a 10' minimum spacing. Protective fencing shall be removed after project is completely finished.

9. **LOSS PLANTS:** Indicate plants in excess of the required number of "TOS" that are used to meet the required supplements for transplanted plants. "TOS" designation ensures that these plants remain on site and are not inadvertently removed or destroyed as on "RFS" plant.

1. This project site contains Regulated Riparian Habitat (RRH). The site contains habitat mapped as Xeroriparian C and RIA with underlying Xeroriparian C. Riparian Habitat disturbance is for home construction. Avoidance of this habitat is not possible.
2. The Xeroriparian C area totals .85 acres (28,202.6 SF). The disturbance will be mitigated with on-lin-lin trees.
3. The RIA Xeroriparian C area totals .05 (2170.3 SF). There is no disturbance.
4. Total site area is 1.23 acres.
5. Total area of disturbed Xeroriparian C is .25 acres.
6. Total area of disturbed RIA Xeroriparian C is 0 acres.

House pad grading will be done with a limited footprint. The disturbance cannot be avoided due to the lot configuration.

KERORIPARIAN C MITIGATION--		
Total Site Area	1.23	acres
Total Area Xeroriparian C	.85	acres
Total Disturbed Area Xeroriparian C	.25	acres
IRA KERORIPARIAN C MITIGATION--		
Total Site Area	1.23	acres
Total Area IRA Xeroriparian C	.05	acres
Total Disturbed Area IRA Xeroriparian C	0.00	acres

1. The riparian habitat network is from Pima County MapGuide.
2. The air photo shown on this plan is the 2017 photo from Pima Maps and shows the current condition of the site.

All 105 trees to be provided on lot 27												All 105 cacti and succulents to be provided on lots 34-37											
	Lot 27	Lot 28	Lot 29	Lot 30	Lot 31	Lot 32	Lot 33	Lot 34	Lot 35	Lot 36	Lot 37	Lot 38	Lot 39	Lot 40	Lot 41	Lot 42	Lot 43						
Transplant on site																							
Parkinsonia florida	3																						
Prosopis juliflora																							
Prosopis juliflora								4	7	3	8												
Prosopis juliflora																							
Yucca arborescens								3	1	2	5												
Yucca elata								1	1	1	1												
Native																							
Parkinsonia florida @10 gal	1	1	1	1				1															
Prosopis juliflora @10 gal	3	3	3	3	1	1	1	1	1	7	2	2	2	2	2	2	2						
Prosopis juliflora @20" Ben	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1						
Yucca elata @10 gal	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1						
Lot Total	15	4	4	4	3	3	3	7	7	6	16	4	4	4	4	4	4						

NOTE: The mitigation plants will be planted on lots 27-43 at the time of their development.

ADDRESS: 1178 N SLOT CANYON PL



**Novak Environmental, Inc.**  
4574 North First Avenue #700 • Tucson, AZ 85710  
Phone 520.208.0501 Fax 520.982.8006

NATIVE PLANT PRESERVATION PLAN AND RIPARIAN

NATIVE PLANT PRESERVATION PLAN AND RIPARIAN  
HABITAT MITIGATION IN-LIEU FEE PROPOSAL  
WHETSTONES SHADOWS LOT 41

LOCATED IN THE SW 1/4 OF  
SEC. 3, T 17 S, R 16 E, GILSON, PIMA COUNTY, ARIZONA

DESIGNED	JG/SS	CHECKED	KC	DATE	NP-1
DATE	AUGUST 2021	PROJECT NO.	20013	SCALE	1 of 1





[illegible]



