



BOARD OF SUPERVISORS AGENDA ITEM REPORT

Requested Board Meeting Date: August 15, 2016

Title: Approval of a Riparian Habitat Mitigation In-Lieu Fee Proposal for 13620 West Manville Road, Located within an Important Riparian Area with Underlying Xeroriparian Class D Riparian Habitat (District 3)

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:

The property owner, Mrs. Holyan, has a violation from 2008 on her property located at 13620 West Manville Road, for grading without a permit (Exhibit A). The property is adjacent to the East Branch of the Brawley Wash and is located within Regulated Riparian Habitat (Exhibit B). When the grading occurred the activity disturbed 3 acres of mapped habitat on the owner's property and 0.43 acres of habitat on the adjacent Pima County Regional Flood Control District parcel to the west. The combined disturbance, 148,975 square feet (3.43 acres), will need to be mitigated, therefore a Riparian Habitat Mitigation Plan (RHMP) is required. The owner hired Greg Shinn, with GRS Landscape Architects, LLC, to prepare the Riparian Habitat Mitigation Plan (Exhibit C) and is proposing to contribute \$7,549.47 in lieu of onsite mitigation based on the ILF Cost Estimate prepared by Mr. Shinn. The fee shall be paid prior to closing the violation case.

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:

\$7,549.47

Board of Supervisor District:

1 2 3 4 5 All

Department: Regional Flood Control District Telephone: 724-4600

Department Director Signature/Date: *E. Shields* 7/27/16

Deputy County Administrator Signature/Date: *John W. Ford* 7/28/16

County Administrator Signature/Date: *C. Pullock* 7/28/16

DATE: July 27, 2016

TO: Flood Control District Board of Directors
Director

FROM: Suzanne Shields, P.E.



SUBJECT: **Approval of a Riparian Habitat Mitigation In-Lieu Fee Proposal for Compliance of a Violation Located at 13620 West Manville Road, Located within Important Riparian Area with Xeroriparian D Habitat as the Underlying Classification (District 3)**

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 property owner, Mrs. Holyan, has a violation from 2008 on her property located at 13620 West Manville Road, for grading without a permit (Exhibit A). The property is adjacent to the East Branch of the Brawley Wash and is located within Regulated Riparian Habitat (Exhibit B). The habitat is mapped as Important Riparian Area with Xeroriparian D (XD) Habitat as the Underlying Classification. When the grading occurred this activity disturbed 3 acres of mapped habitat on the owner's property and 0.43 acres of habitat on an adjacent Pima County Regional Flood Control District parcel to the west. The combined disturbance, 148,975 square feet (3.43 acres), will need to be mitigated, therefore a Riparian Habitat Mitigation Plan (RHMP) is required.

The owner hired Greg Shinn, with GRS Landscape Architects, LLC, to prepare the RHMP (Exhibit C) and is proposing to contribute a fee in lieu of onsite mitigation based on the ILF Cost Estimate prepared by Mr. Shinn. Mr. Shinn conducted an actual count of the vegetation on the owner's property based a 2000 aerial of the property. The ILF calculated for the property equates to \$4,109.47. The ILF for the county's property was derived from the Flat Fee Table and equates to \$3,440. The total for both fees is \$7,549.47. The fee shall be paid prior to closing the violation case.

Off Site Disturbance: 0.43 acres to be mitigated by the Flat Fee Table

Flat fee table for Single Lot Development projects

	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

Flood Control District Board of Directors

Approval of a Riparian Habitat Mitigation In-Lieu Fee Proposal for Compliance of a Violation Located at 13620 West Manville Road, Located within Important Riparian Area with Xeroriparian D Habitat as the Underlying Classification (District 3)

July 27, 2016

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Recommendation

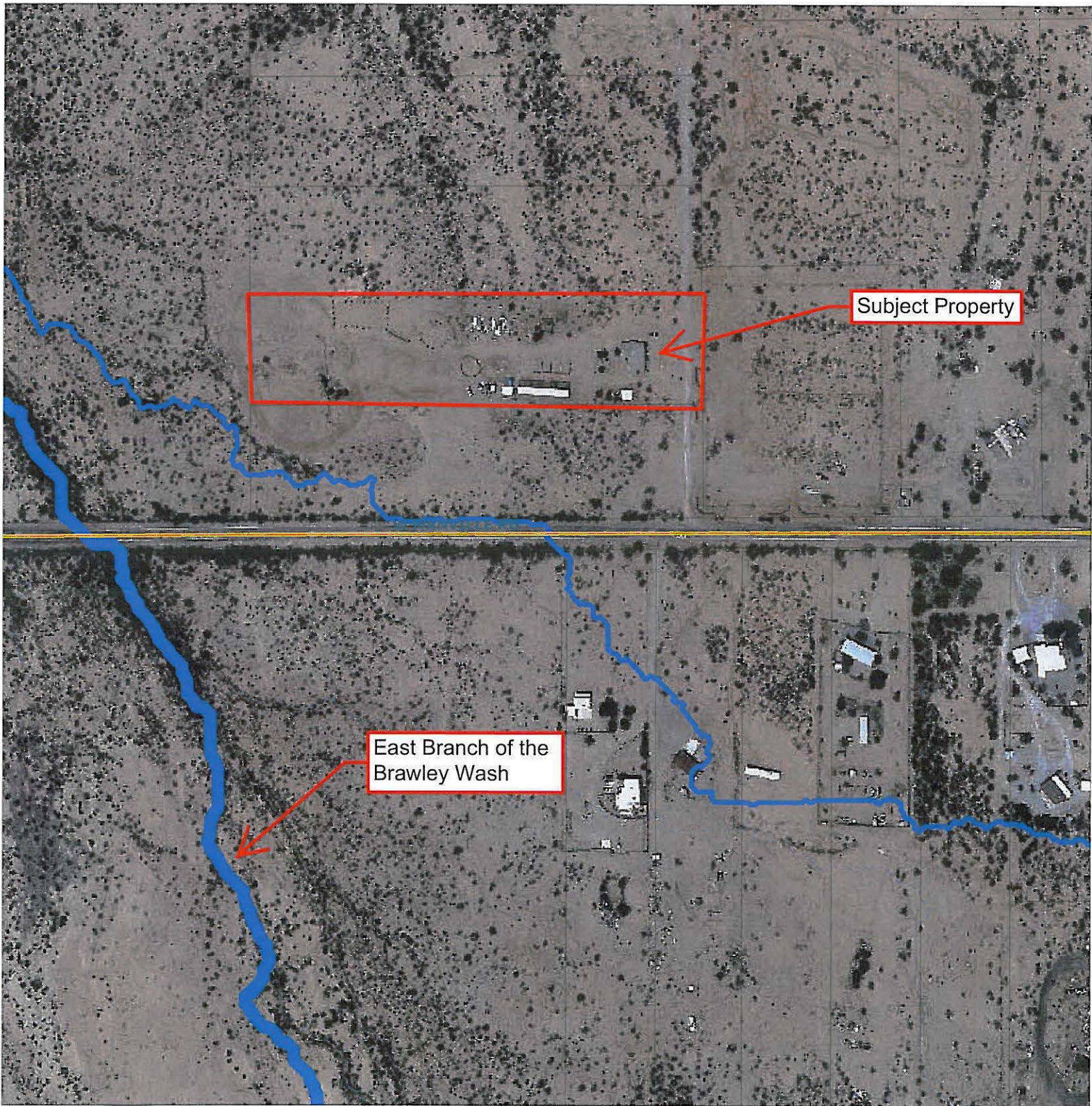
Acceptance of mitigation banking funds in-lieu of onsite mitigation is allowed under the Ordinance. Contributions to the mitigation bank for disturbance of this habitat will provide funds to be used toward purchase of high value resources or towards restoration of degraded riparian habitat within Pima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

Exhibit A – Project Location

Exhibit B – Project Site – Riparian Classification Map

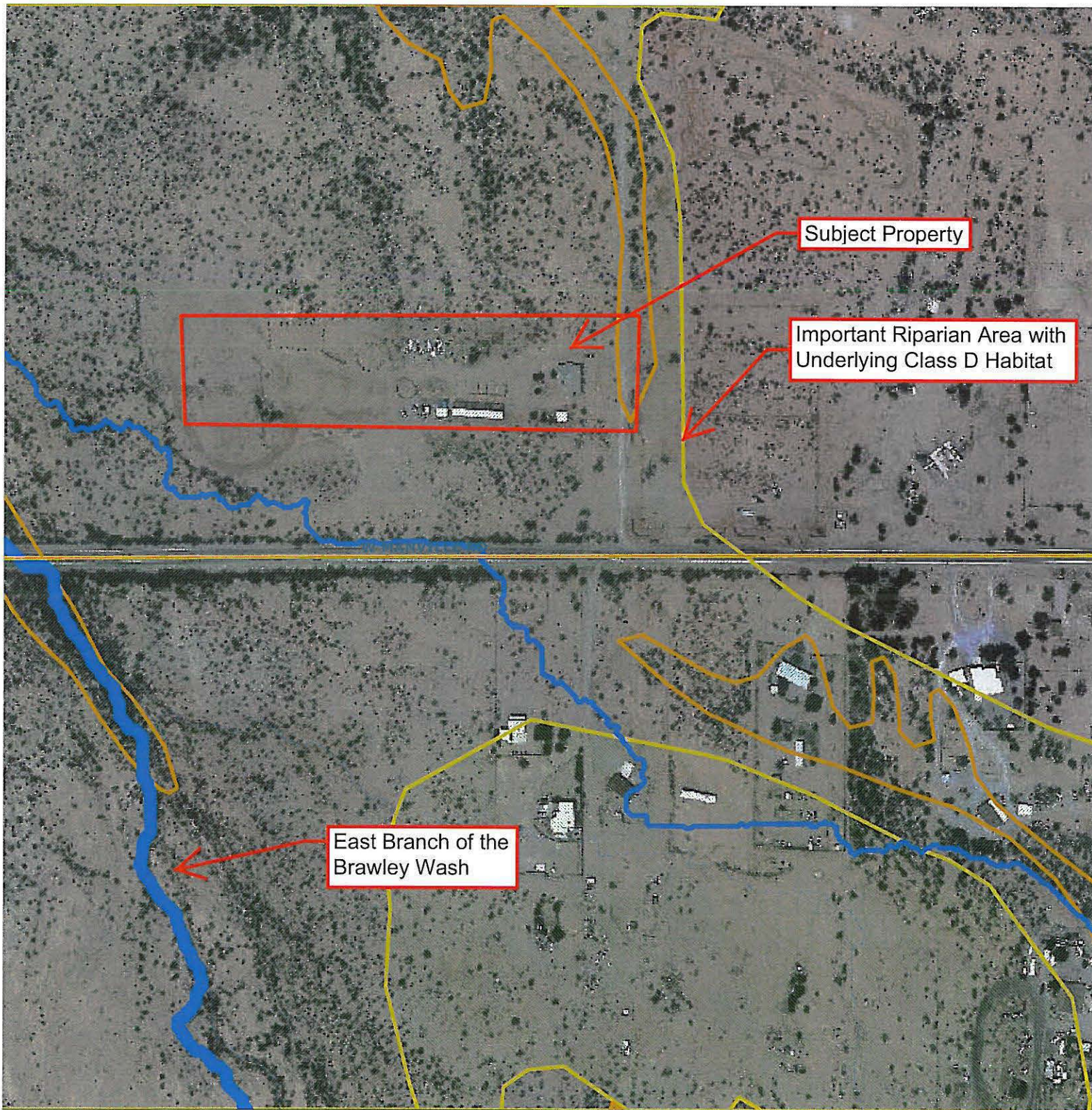
Exhibit C – Mitigation Banking In-lieu Fee Proposal

Exhibit A

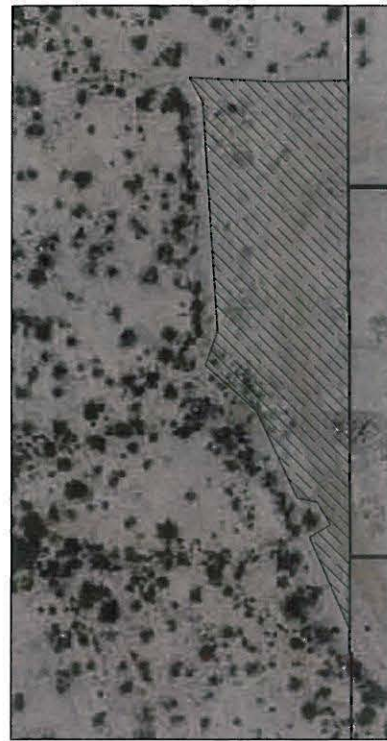


Holyan Residence
13620 West Manville Road
BOS Meeting scheduled for 8.15.16

Exhibit B



Holyan Residence
13620 West Manville Road
BOS Meeting scheduled for 8.15.16



OFF SITE DISTURBANCE - BASED ON 2011 AERIAL

CALCULATIONS (Off Site Disturbance):	
This area contains Important Riparian Area (IRA) with underlying Xeroriparian "D" Habitat	
Total Regulated IRA Habitat Off-Site	18,739 sf (0.43 acre)
Total Area of Disturbed Riparian Habitat	18,739 sf (0.43 acre)
Less Pre-Ordinance Disturbance Area	0.00 sf (0.00 acre)
Total Current Disturbance of Riparian Habitat	18,739 sf (0.43 acre)
Total Area of Disturbed Riparian Habitat	18,739 sf (0.43 acre)

RIPARIAN NOTES -- ON SITE

- Zoning = RH
- Site Area = 4.18 acres
- Land Use = Residential
- Area Calculations:

a. Total Project Area	4.18 acres
b. Total Riparian Area On Site (Important Riparian Area with Xeroriparian D Habitat)	4.18 acres (Entire Site)
c. Total Natural Open Space	0
b. Total Riparian Habitat Disturbance (Pre-Ordinance and Current)	181,988 sf (4.18 acres)
c. Total Disturbance Pre-Ordinance	47,867 sf (1.10 acres)
d. Total Disturbance Post-Ordinance	134,121 sf (3.08 acres)
e. Total Ground Plane Dist (2015)	77,788 sf (1.79 acres)
f. Less Total Ground Plane Dist (2000)	47,867 sf (1.10 acres)
g. Total Current Ground Plane Disturbance	29,921 sf (0.69 acres)
h. Mitigation will be per in-lieu fees.	

RIPARIAN LEGEND

- Important Riparian Area with Underlying Class "D" Xeroriparian Habitat (Entire Property)
- Pre-Ordinance Disturbance
- Disturbance (Off Site)
- Current Ground Plane (Seed) Disturbance

OVERVIEW NOTES

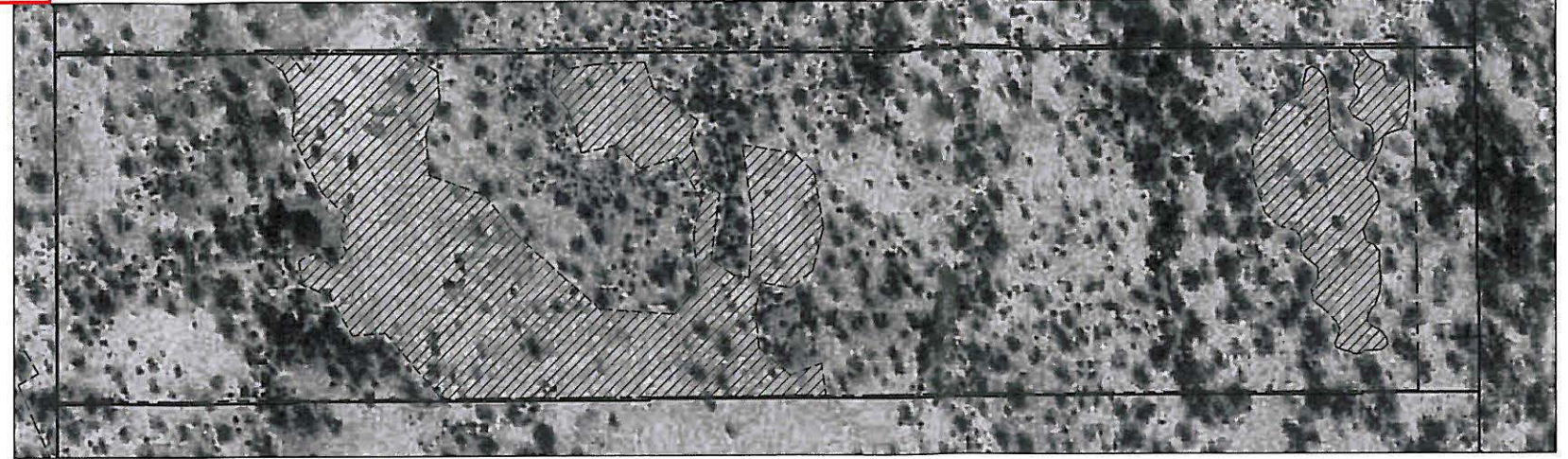
- This Riparian Habitat Mitigation Plan calculates both on site and off site disturbance of the mapped Riparian Habitat.
- The 2000 PAG Greyscale Orthophoto shows previous clearing on the site. There is a road to the site from the Northwest that accesses the clearing and from substantial clearing to the east and south of the property. This clearing is also substantiated by the 2005/05 PAG Color Ortho Photo Imagery (not provided, but available online).
- The 2011 Aerial shows complete clearing of the property and additional clearing offsite.
- Subsequent to the onsite clearing, substantial vegetation has re-grown on the site. This includes Creosote Bush, Triangle Leaf Bursage, Mesquite, Whitehorn Acacia, Saguaro and Prickly Pear. This vegetation was field inventoried and GPS'd onto the site.
- Riparian "D" mitigation requires 30 trees per acre and "like density" of shrubs. Adjacent shrub counts vary widely from 2 shrubs within 10,000 SF to 16 shrubs within 10,000 SF. We suggest a value of 45 shrubs per acre as an average "like density."
- The Owner wishes to provide the missing mitigation with an in-lieu fee. A calculation of that fee is provided under separate cover.
- Offsite disturbance of Pima County land is calculated on the 2011 Aerial.
- An in-lieu fee for the offsite disturbance is provided utilizing the Flat Fee Table of the In Lieu Fee Options.

RIPARIAN MITIGATION NOTES

- The Property Owner shall be responsible for maintenance of the required landscape and irrigation system in perpetuity.
- Mitigated area will be hydroseeded with a minimum of 12 species from the approved Xeroriparian plant list found in Appendix B of the "Regulated Riparian Habitat Mitigation Standards and Implementation Guidelines." If plant species listed on the Mitigation Plan are unavailable, replacement species from the approved plant list may be selected based upon availability. Of the 12 species, 4 shall be shrubs, 4 shall be annuals/perennials/vines, and 4 shall be grasses.
- Mitigation plantings to be irrigated using an automatic drip irrigation system.
- A monitoring plan, in accordance with the Guidelines, will be submitted annually for a period of five (5) years following implementation of the Riparian Habitat Mitigation Plan (RHMP). Any changes from the approved RHMP shall be noted on the monitoring plan submittal.

Monitoring plan shall be submitted to the RFCD at:
Pima County Regional Flood Control District
ATTN: Floodplain Management Division Staff
201 N. Stone Ave., 9th Floor
Tucson, Arizona 85701

Place the FPUP number on the envelope and monitoring plan submittal.
- The Project Owner, and/or the Owner's successors, agree to preserve and protect the Mitigation Area for the duration of the project. Further, the project owner and/or their successors agree to actively maintain the mitigated area for a period of not less than five years. Maintenance activities shall include, but not be limited to, the regular operation of the irrigation system, the replacement of dead trees, and the removal of noxious and/or invasive plant species.
- Mitigation area(s) to be left in a natural state. No disturbance shall occur within the mitigation area(s) without RFCD review and approval. Such disturbance includes but is not limited to secondary impacts such as the presence of livestock, fencing, intensive landscaping, outdoor play areas, etc.
- Materials within the sight visibility triangles shall be placed so as not to interfere with a visibility plane described by two horizontal lines located 30 inches and 72 inches above finished grade of the roadway surface.



PRE-ORDINANCE DISTURBANCE BASED ON 2000 AERIAL



POST-ORDINANCE DISTURBANCE BASED ON 2011 AERIAL (ENTIRE SITE)

CALCULATION OF IN-LIEU FEE

On Site Mitigation Calculation

Missing Plant Material

- 20 - 5 gal. Trees
- 19 - 5 gal. Shrubs
- 20 - 1 gal. Shrubs
- 29921 - SF Native Seed

Cost Calculation

20 - 5 gal. Trees - \$ 35.00 ¹	700.00
19 - 5 gal. Shrubs - \$ 35.00 ¹	665.00
20 - 1 gal. Shrubs - \$ 10.00 ²	200.00
29921 - SF Native Seed - \$ 0.07	2,094.47

Maintenance Cost - \$ 0.00 ³	0.00
Irrigation Cost - \$ 450.00 ³	450.00
Water Cost ⁴	0.00

Total On Site In-Lieu Fee \$ 4,109.47

Off Site Mitigation Calculation

0.43 Acres of Disturbance @ \$ 8,000.00 per Acre = \$ 3,440.00

TOTAL IN-LIEU FEE \$ 7,549.47

Notes

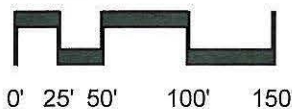
- These are "wet" costs that include the cost of spaghetti tubing and emitters.
- Owner's monthly maintenance costs do not change with the elimination/addition of these plants.
- Irrigation structure (meter, backflow, irrigation controller, mainline, poly line, valve and pressure regulators) are not affected by the addition of this plant material. Mainline extension and 1 additional valve will be required to irrigation additional plant material.
- Property is served by a well and does not pay commodity charges for water.

CALCULATIONS (On Site Disturbance):

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Total # of Trees Required =	1.5 x 30 x 3.08 =	139 Trees
Total Trees Provided on Site		119 Trees
Total Trees Needed		20 Trees
Total # of Shrubs Required =	1.5 x 45 x 3.08 =	208 Shrubs
Total Shrubs Provided on Site		169 Shrubs
Total Shrubs Needed		39 Shrubs
Total Area of Disturbed Seed Area (2015 Aerial)	77,788 sf (1.79 acre)	
Less Previous Area of Dist Seed Area (2000 Aerial)	47,867 sf (1.10 acre)	
Total Area of Current Seed Disturbance	29,921 sf (0.69 acre)	
Total Area of Seed Required =	1.5 x 0.69 x 0.70 =	31,417 sf (0.72 acre)

Scale: 1" = 50'



North



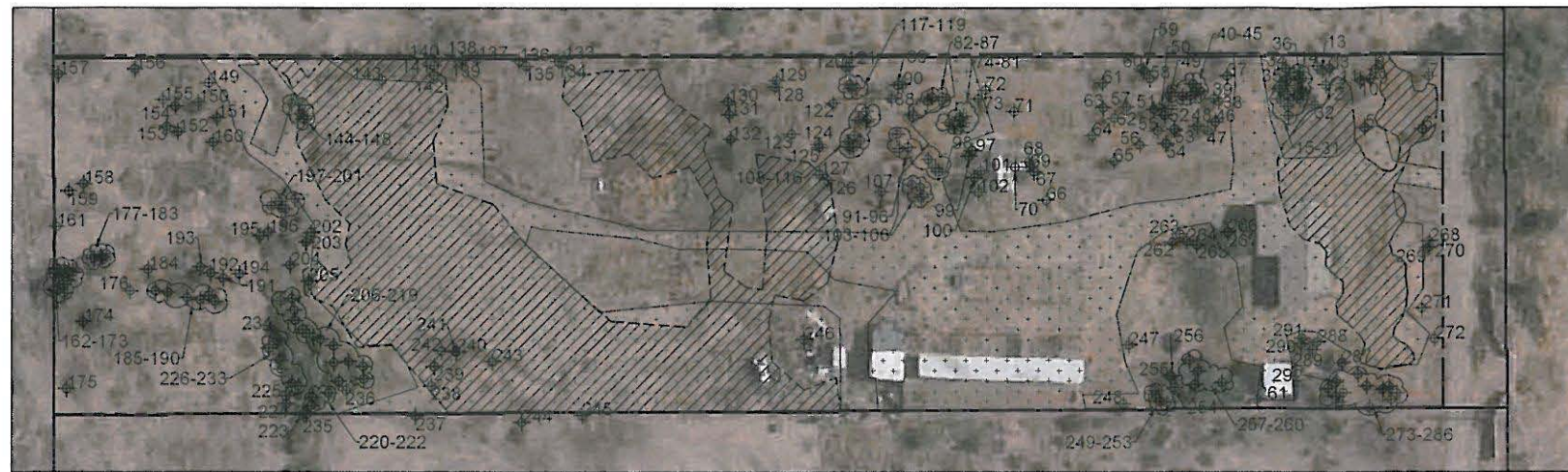
11047 N. Cloud View Place
Tucson, AZ 85737
(520) 877-8037

Date: 7/21/16
Drawn by: LMW
Checked by: GRS

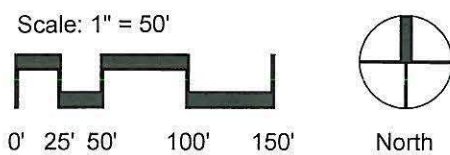
- Design Review
- Construction Documents
- Agency Submittal
- Construction Set
- Not for Construction

HOLYAN RESIDENCE

Parcel No. 213-27-018L
13620 West Manville Road, Avra Valley, AZ 85743
SW ¼, SE ¼ of Section 18, T-13-S, R-11-E, G&SRM, Pima County, AZ
RIPARIAN HABITAT MITIGATION PLAN
Floodplain Use Permit number: P16FC00340



2015 PIMA COUNTY MAPGUIDE AERIAL



RIPARIAN LEGEND

	Important Riparian Area with Underlying Class "D" Xeroriparian Habitat (Entire Property)
	Pre-Ordinance Disturbance
	Disturbance (Off Site)
	Current Ground Plane (Seed) Disturbance

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EXISTING PLANT MATERIAL QUANTITY

Tree Inventory	
SPECIES	QUANTITY
Acacia constricta - White thorn Acacia	76
Prosopis velutina - Native Mesquite	42
Oneya tesota - Desert Ironwood	1

Cactus and Shrub Inventory	
SPECIES	QUANTITY
Ambrosia deltoidea - Triangleleaf Bursage	58
Larrea tridentata - Creosote Bush	92
Carnegiea gigantea - Saguaro	11
Ferocactus sp. - Barrel Cactus	7
Opuntia sp. - Prickly Pear	1

TREE INVENTORY

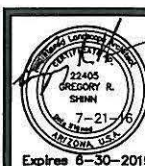
ID NO.	DESCRIPTION
5	Prosopis velutina - Native Mesquite
6	Oneya tesota - Desert Ironwood
8	Prosopis velutina - Native Mesquite
9	Prosopis velutina - Native Mesquite
10	Prosopis velutina - Native Mesquite
33	Prosopis velutina - Native Mesquite
34	Prosopis velutina - Native Mesquite
35	Acacia constricta - White thorn Acacia
36	Acacia constricta - White thorn Acacia
37	Prosopis velutina - Native Mesquite
40	Prosopis velutina - Native Mesquite
41	Prosopis velutina - Native Mesquite
42	Acacia constricta - White thorn Acacia
43	Acacia constricta - White thorn Acacia
44	Acacia constricta - White thorn Acacia
45	Prosopis velutina - Native Mesquite
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53	Acacia constricta - White thorn Acacia
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59	Prosopis velutina - Native Mesquite
63	Acacia constricta - White thorn Acacia
67	Prosopis velutina - Native Mesquite
64	Prosopis velutina - Native Mesquite
69	Prosopis velutina - Native Mesquite
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151	Acacia constricta - White thorn Acacia
152	Acacia constricta - White thorn Acacia
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158	Acacia constricta - White thorn Acacia
159	Prosopis velutina - Native Mesquite
160	Prosopis velutina - Native Mesquite
162	Acacia constricta - White thorn Acacia
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174	Prosopis velutina - Native Mesquite
175	Acacia constricta - White thorn Acacia
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196	Acacia constricta - White thorn Acacia
202	Prosopis velutina - Native Mesquite
203	Acacia constricta - White thorn Acacia
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233	Acacia constricta - White thorn Acacia
234	Prosopis velutina - Native Mesquite
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246	Prosopis velutina - Native Mesquite
256	Prosopis velutina - Native Mesquite
257	Prosopis velutina - Native Mesquite
258	Prosopis velutina - Native Mesquite
259	Acacia constricta - White thorn Acacia
260	Prosopis velutina - Native Mesquite
265	Prosopis velutina - Native Mesquite
266	Prosopis velutina - Native Mesquite
274	Prosopis velutina - Native Mesquite
279	Prosopis velutina - Native Mesquite
280	Acacia constricta - White thorn Acacia
286	Prosopis velutina - Native Mesquite
287	Prosopis velutina - Native Mesquite
292	Prosopis velutina - Native Mesquite

CACTUS and SHRUB INVENTORY

ID NO.	DESCRIPTION
7	Larrea tridentata - Creosote Bush
11	Ambrosia deltoidea - Triangleleaf Bursage
12	Ambrosia deltoidea - Triangleleaf Bursage
13	Ambrosia deltoidea - Triangleleaf Bursage
14	Ambrosia deltoidea - Triangleleaf Bursage
15	Ambrosia deltoidea - Triangleleaf Bursage
16	Ambrosia deltoidea - Triangleleaf Bursage
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29	Ambrosia deltoidea - Triangleleaf Bursage
30	Ambrosia deltoidea - Triangleleaf Bursage
31	Ambrosia deltoidea - Triangleleaf Bursage
32	Larrea tridentata - Creosote Bush
38	Larrea tridentata - Creosote Bush
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78	Larrea tridentata - Creosote Bush
79	Larrea tridentata - Creosote Bush
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83	Larrea tridentata - Creosote Bush
85	Larrea tridentata - Creosote Bush
86	Larrea tridentata - Creosote Bush
87	Carnegiea gigantea - Saguaro
88	Carnegiea gigantea - Saguaro
90	Larrea tridentata - Creosote Bush
91	Larrea tridentata - Creosote Bush
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110	Larrea tridentata - Creosote Bush
111	Larrea tridentata - Creosote Bush
112	Carnegiea gigantea - Saguaro
113	Larrea tridentata - Creosote Bush
114	Larrea tridentata - Creosote Bush
115	Larrea tridentata - Creosote Bush
116	Larrea tridentata - Creosote Bush

117	Larrea tridentata - Creosote Bush
118	Larrea tridentata - Creosote Bush
119	Larrea tridentata - Creosote Bush
120	Larrea tridentata - Creosote Bush
121	Larrea tridentata - Creosote Bush
122	Ambrosia deltoidea - Triangleleaf Bursage
123	Ambrosia deltoidea - Triangleleaf Bursage
124	Ambrosia deltoidea - Triangleleaf Bursage
125	Larrea tridentata - Creosote Bush
126	Larrea tridentata - Creosote Bush
127	Ambrosia deltoidea - Triangleleaf Bursage
128	Larrea tridentata - Creosote Bush
129	Larrea tridentata - Creosote Bush
133	Ambrosia deltoidea - Triangleleaf Bursage
134	Ambrosia deltoidea - Triangleleaf Bursage
135	Ambrosia deltoidea - Triangleleaf Bursage
136	Ambrosia deltoidea - Triangleleaf Bursage
137	Ambrosia deltoidea - Triangleleaf Bursage
138	Ambrosia deltoidea - Triangleleaf Bursage
139	Larrea tridentata - Creosote Bush
140	Ambrosia deltoidea - Triangleleaf Bursage
141	Ambrosia deltoidea - Triangleleaf Bursage
142	Ambrosia deltoidea - Triangleleaf Bursage
143	Larrea tridentata - Creosote Bush
144	Ambrosia deltoidea - Triangleleaf Bursage
145	Ambrosia deltoidea - Triangleleaf Bursage
146	Ambrosia deltoidea - Triangleleaf Bursage
147	Ambrosia deltoidea - Triangleleaf Bursage
148	Ambrosia deltoidea - Triangleleaf Bursage
149	Ambrosia deltoidea - Triangleleaf Bursage
150	Ambrosia deltoidea - Triangleleaf Bursage
155	Ambrosia deltoidea - Triangleleaf Bursage
161	Ambrosia deltoidea - Triangleleaf Bursage
176	Ambrosia deltoidea - Triangleleaf Bursage
177	Larrea tridentata - Creosote Bush
178	Larrea tridentata - Creosote Bush
179	Larrea tridentata - Creosote Bush
181	Carnegiea gigantea - Saguaro
182	Carnegiea gigantea - Saguaro
183	Carnegiea gigantea - Saguaro
197	Ambrosia deltoidea - Triangleleaf Bursage
198	Ambrosia deltoidea - Triangleleaf Bursage
199	Ambrosia deltoidea - Triangleleaf Bursage
200	Ambrosia deltoidea - Triangleleaf Bursage
201	Ambrosia deltoidea - Triangleleaf Bursage
208	Larrea tridentata - Creosote Bush
228	Ambrosia deltoidea - Triangleleaf Bursage
236	Ambrosia deltoidea - Triangleleaf Bursage
238	Ambrosia deltoidea - Triangleleaf Bursage
241	Ambrosia deltoidea - Triangleleaf Bursage
242	Ambrosia deltoidea - Triangleleaf Bursage
245	Larrea tridentata - Creosote Bush
247	Ambrosia deltoidea - Triangleleaf Bursage
248	Larrea tridentata - Creosote Bush
249	Larrea tridentata - Creosote Bush
250	Larrea tridentata - Creosote Bush
251	Larrea tridentata - Creosote Bush
252	Larrea tridentata - Creosote Bush
253	Carnegiea gigantea - Saguaro
254	Ambrosia deltoidea - Triangleleaf Bursage
255	Ambrosia deltoidea - Triangleleaf Bursage
261	Ferocactus sp. - Barrel Cactus
262	Carnegiea gigantea - Saguaro
263	Larrea tridentata - Creosote Bush
264	Larrea tridentata - Creosote Bush
267	Carnegiea gigantea - Saguaro
268	Ferocactus sp. - Barrel Cactus
269	Ferocactus sp. - Barrel Cactus
270	Larrea tridentata - Creosote Bush
271	Carnegiea gigantea - Saguaro
272	Ferocactus sp. - Barrel Cactus
273	Ferocactus sp. - Barrel Cactus
275	Larrea tridentata - Creosote Bush
276	Larrea tridentata - Creosote Bush
277	Larrea tridentata - Creosote Bush
278	Ferocactus sp. - Barrel Cactus
281	Larrea tridentata - Creosote Bush
282	Larrea tridentata - Creosote Bush
283	Larrea tridentata - Creosote Bush
284	Opuntia sp. - Prickly Pear
285	Carnegiea gigantea - Saguaro
288	Larrea tridentata - Creosote Bush
289	Larrea tridentata - Creosote Bush
290	Larrea tridentata - Creosote Bush
291	Larrea tridentata - Creosote Bush



11047 N. Cloud View Place
Tucson, AZ 85737
(520) 877-8037

Date: 7/21/16
Drawn by: LMW
Checked by: GRS

- Design Review
- Construction Documents
- Agency Submittal
- Construction Set
- Not for Construction

HOLYAN RESIDENCE

Parcel No. 213-27-018L

13620 West Manville Road, Avra Valley, AZ 85743

SW ¼, SE ¼ of Section 18, T-13-S, R-11-E, G&SRM, Pima County, AZ

RIPARIAN HABITAT MITIGATION PLAN

Floodplain Use Permit number: P16FC00340



PHOTO # 1 - Onsite Photo



PHOTO # 2 - Onsite Photo



PHOTO # 3 - Onsite Photo



PHOTO # 4 - Onsite Photo



PHOTO # 5 - Onsite Photo



PHOTO # 6 - Looking Offsite to the South



PHOTO # 7 - Looking Offsite to the North



PHOTO # 8 - Looking Offsite to the West



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HOLYAN RESIDENCE

Parcel No. 213-27-018L
13620 West Manville Road, Avra Valley, AZ 85743
SW 1/4, SE 1/4 of Section 18, T-13-S, R-11-E, G&SRM, Pima County, AZ

RIPARIAN HABITAT MITIGATION PLAN

Floodplain Use Permit number: P16FC00340