



## BOARD OF SUPERVISORS AGENDA ITEM REPORT

Requested Board Meeting Date: November 6, 2018

**Title:** Approval of a Riparian Habitat Mitigation In-Lieu Fee Proposal for Placement of Horse Stables at 13750 North Bowman Road, Located within Regulated Riparian Habitat (District 1)

### **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 owner Kerry Dykes has applied for a floodplain use permit for a hay structure on property located at 13750 North Bowman Road, a commercial horse facility. The property is mapped within Regulated Riparian Habitat (RRH) and is classified as Important Riparian Area with Underlying Xeroriparian Class B Habitat. The owner of this facility has made numerous improvements since 2008 which required mitigation for the disturbance to the RRH. Upon review of the floodplain use permit, staff determined Ms. Dykes constructed horse stables without a floodplain use permit in the Canada Del Oro Floodway and within a previously approved mitigation area that was to remain undisturbed. Since Ms. Dykes disturbed the mitigation area she is required to mitigate for the disturbance. Ms. Dykes hired Greg Shinn with GRS Landscape Architects, LLC to revise the previously approved Riparian Habitat Mitigation Plan. As a result, the applicant is proposing to contribute a fee of \$3,573.33 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:**

\$3,573.33

### **Board of Supervisor District:**

1

2

3

4

5

All

Department: Regional Flood Control District

Telephone: 724-4600

Department Director Signature/Date: Sigayne Shinn 10/16/18

Deputy County Administrator Signature/Date: C. R. Dulalbury 10/17/18

County Administrator Signature/Date: C. R. Dulalbury 10/17/18

**DATE:** October 12, 2018

**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 Horse Stables at 13750 North Bowman Road, Located within Regulated Riparian Habitat (District 1)**

#### **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 owner Kerry Dykes has applied for a floodplain use permit for a hay structure on property located at 13750 North Bowman Road, a commercial horse facility (Exhibit A). The property is mapped within Regulated Riparian Habitat (RRH) and is classified as Important Riparian Area with Underlying Xeroriparian Class B Habitat (Exhibit B). The owner of this facility has made numerous improvements since 2008 which has required mitigation for the disturbance to the RRH. Upon review of the floodplain use permit, staff determined Ms. Dykes constructed horse stables without a floodplain use permit in the Canada Del Oro Floodway and within a previously approved mitigation area that was to remain undisturbed. Since Ms. Dykes disturbed the mitigation area she is required to mitigate for the disturbance.

Ms. Dykes hired Greg Shinn with GRS Landscape Architects, LLC to revise the previously approved Riparian Habitat Mitigation Plan (RHMP) (Exhibit C). As a result, the applicant is proposing to contribute a fee of \$3,573.33 in lieu of onsite mitigation, based on Mr. Shinn's plant count from the previously approved RHMP sealed by Mr. Shinn in 2008.

#### **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 – Riparian Habitat Mitigation Plan

Exhibit A

Subject Property

Kerry Dykes  
13750 N Bowman Road  
BOS Meeting 11/6/2018



Exhibit B

Important Riparian Area with  
Underlying Class B Habitat

Subject Property

Kerry Dykes  
13750 N Bowman Road  
BOS Meeting 11/6/2018



## Exhibit C



Scale: 1" = 100'  
0' 50' 100' 200' 300'  
North

### NOTE:

The disturbance of riparian habitat is required to achieve the allowable use under the zoning code. The amount of disturbance (and preservation) has been discussed and approved by DRC decision. Disturbance is necessary for accessory buildings, pasture, exercise and other essential activities for horses.

Mitigation to be handled by the in-lieu fee option.

## LEGEND

	Acres
Pre-Existing Riparian Disturbance Per 7/01/08 Approved Plan	0.28
Disturbance Shown on the Previously Approved Plan, dated 7/01/08	3.24
Mitigation Area - NOS Per 7/01/08 Approved Plan	4.37
Total Disturbance Mitigated by Previous Plans (2008 and 2014)	8.55
Current Proposed Partial Disturbance (Disturbance only to Shrub, Ground plane)	0.78
Current Proposed Full Disturbance	-0.08

## BUFFER OVERLAY ZONE INFORMATION:

1. The Buffer Overlay Zone is applicable.
2. This site is considered Class 1 Habitat per the Critical and Sensitive Biological Communities designation. This parcel is important Riparian Habitat which extends from a public preserve.
3. All plant materials used within landscape and mitigation areas are native species only.

## PERMITTING NOTES:

1. This project is impacted by regulated riparian habitat as defined on this plan and subject to the Riparian Classification Maps adopted under Ordinance No. 2005-FC2, Title 16 of the Pima County Code. The disturbance of this habitat has been mitigated for during the development review process. Any additional disturbance within the regulated riparian habitat will require Flood Control District review and approval prior to the issuance of any permit.
2. Riparian mitigation areas, as noted on page L2 of 7 of the Development Plan, is to be preserved (as habitat) in perpetuity. No permits or grading are allowed. Mitigation areas shall be maintained by the Owner and/or the Owner's successors for a period of not less than five years, from the time of planting, in accordance with the approved mitigation plan.
3. This Development Plan is subject to an onsite riparian habitat mitigation (RHMP) approved by Pima County Board of Supervisors on July 1, 2008. The RHMP was implemented in June, 2009, was monitored for five years and completed the required monitoring period. Owner is responsible for ongoing maintenance in accordance with Pima County regulations. No further monitoring reports are required.

## METHODOLOGY NOTES:

1. Pima County Regional Flood Control District found that additional disturbance was created at the NW corner of the property. Additionally, PCRFCD found that existing trees, protected under the previously-approved plan have declined due to the horses.
2. The previously approved Riparian Habitat Mitigation Plan has been amended to show this additional, partial disturbance. The changes have been clouded and noted. The new partial disturbance will be mitigated through an in lieu fee.
3. On page 2, an analysis of trees shown on the approved plan (2008) are compared to the current (2016) trees on the site. There is a deficiency of 66 trees.
4. During the period between the previous approval and now, 66 trees have been planted on site, outside of the horse enclosures. These trees have been located with a GPS device and listed on page 3 of this submittal.
5. On 9-18-18 it was agreed with Pima County that the Floodplain Line would serve as the limit of IRA with underlying Xeroparian B. The Pima County Mapguide has been modified to reflect this agreement.

SITE CONSTRUCTION PERMIT #P175C00039

## RIPARIAN HABITAT MITIGATION PLAN

### Spirit Dog Ranch

A Portion of the West  $\frac{1}{2}$  of the Southwest  $\frac{1}{4}$  of Section 22, T-11-S, R-14-E, G&SRM, Pima County, AZ

### LANDSCAPE PLAN

(Selective Plant Preservation Method)

P1209-026 Co20-08-11

sheet 1 of 4



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

Date:	9/28/18	<input type="checkbox"/> Design Review
Drawn by:	LMW	<input type="checkbox"/> Construction Documents
Agency Submitted:		<input type="checkbox"/> Agency Submitted
Construction Set:		<input type="checkbox"/> Construction Set
Checked by:	GRS	<input type="checkbox"/> Not for Construction



2008 AERIAL FROM APPROVED PLANS  
Trees on Original Aerial = 458

Scale: 1" = 100'  
0' 50' 100' 200' 300'  
North



2016 AERIAL  
Trees on 2016 Aerial = 392

MITIGATION CALCULATIONS	
Number of Trees per Original:	458
Number of Trees per 2016:	392
Difference:	66
Number of New Trees Planted:	66

SITE CONSTRUCTION PERMIT #P17SC00039

#### TREE ANALYSIS

##### Spirit Dog Ranch

A Portion of the West  $\frac{1}{2}$  of the Southwest  $\frac{1}{4}$  of  
Section 22, T-11-S, R-14-E, G&SRM, Pima County, AZ

#### LANDSCAPE PLAN

(Selective Plant Preservation Method)

P1209-026 Co20-08-11

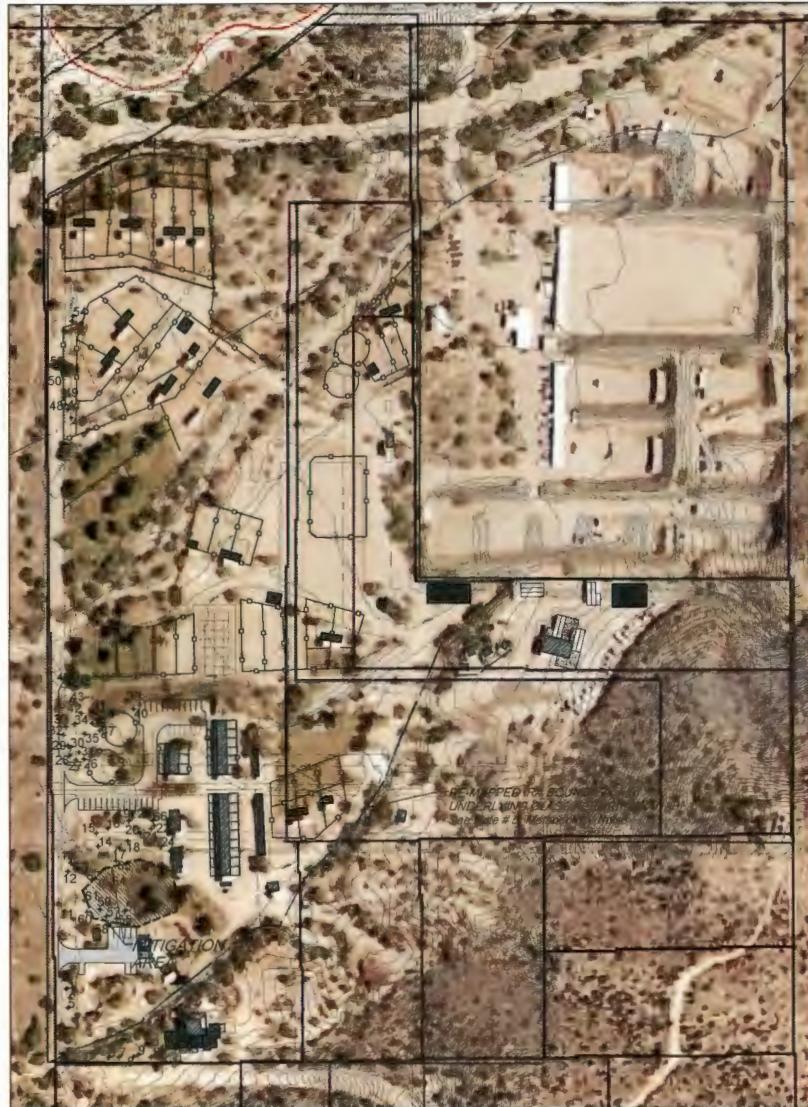
sheet 2 of 4



**GRS**  
LANDSCAPE ARCHITECTURAL

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

Date: 9/28/18  
Drawn by: LMW  
Checked by: GRS  
 Design Review  
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 Agency Submittal  
 Construction Set  
 Not for Construction



MITIGATION PLAN – 2018 Aerial

Scale: 1" = 100'



PLANT SCHEDULE		
TREES	QTY	SIZE
Desert Willow	4	15 Gal
Chilopsis linearis	4	5 Gal
Foothills Palo Verde	3	15 Gal
Cercidium microphyllum	2	5 Gal

**PREVIOUSLY APPROVED CALCULATIONS (6-28-08)**  
Important Riparian Area Underlying Class B Xeroriparian Habitat

1. Zoning = RH  
2. Gross Site Area = 30.74 acres  
3. Area Calculations:  
Gross site area =  
Total Regulated Riparian Habitat on site  
Total IRA  
Underlying Class Xeroriparian C  
Total Area of Disturbed Regulated Riparian Habitat  
Per 7/01/08 Approved Plan  
Area of Pre-Existing Disturbance 7/01/08  
Total Area of Disturbance 7/01/08  
(Disturbed Habitat - Pre-Existing Disturbance)  
Previously Approved Mitigation Area 7/01/08  
Previously Approved Number of Trees required 7/01/08  
Previously Approved Number of Shrubs required 7/01/08

**PREVIOUSLY APPROVED CALCULATIONS (11-5-14)**  
Important Riparian Area Underlying Class B Xeroriparian Habitat

1. Zoning = RH  
2. Gross Site Area = 30.74 acres  
3. Area Calculations:  
Gross site area =  
Total Regulated Riparian Habitat on site  
Total IRA  
Underlying Class Xeroriparian B  
Total Area of Disturbance Requiring Mitigation  
(Previously Mitigated Disturbance)  
Area of Proposed Disturbance Requiring Mitigation  
Area of Partial Disturbance (Shrubs, Ground Plane only)  
Area of Full Disturbance (Trees, Shrubs, Ground Plane)

**NEW CALCULATIONS (9-24-18)**  
Important Riparian Area Underlying Class B Xeroriparian Habitat

1. Zoning = RH  
2. Gross Site Area = 30.74 acres  
3. Area Calculations:  
Gross site area =  
Total Regulated Riparian Habitat on site  
Total IRA  
Underlying Class Xeroriparian B  
Total Area of Disturbance Requiring Mitigation  
(Previously Mitigated Disturbance)  
Area of Proposed Disturbance Requiring Mitigation  
Area of Partial Disturbance (Shrubs, Ground Plane only)  
Area of Full Disturbance (Trees, Shrubs, Ground Plane)

\* Negative number results from modification to the riparian limit line.

**IN-LIEU FEE CALCULATION**

RECOMMENDATION	QUANTITY	UNITS	UNIT COST	TOTAL COST
12 Trees	-4	Each	\$80.00	(\$320.00)
25 Gal. Trees	-3	Each	\$125.00	(\$375.00)
45 Shrubs				
5 Gal. Shrubs <sup>1</sup>	23	Each	\$28.00	\$644.00
1 Gal. Shrubs <sup>1</sup>	23	Each	\$11.00	\$253.00
Seeding				
Hydroseeding	35719 SF		\$0.67	\$2,393.33
Irrigation <sup>2</sup>	1 Lump Sum		\$500.00	\$500.00
Water <sup>3</sup>	5	Yearly Cost	\$0.00	\$0.00
TOTAL IN-LIEU MITIGATION COST				\$3,573.33

**Estimates**  
1 - Cost Reflects Available Labor and Owner Equipment on the Ranch  
2 - Cost Includes Irrigation, Poly Line and Sprinkler Line Cost at \$5.00 per  
3 and 5 gal. and 5 gal./per 13 gal. Tree  
2 - Includes cost of Drilling and Connection to Existing System  
3 - Property is on well water



**GRS**  
LANDSCAPE ARCHITECTURE

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

CALCULATIONS:	
This site contains	Important Riparian Area with Underlying Class B Xeroriparian Area
Total Regulated Riparian Habitat On-Site	23.12 acres
Area of Disturbed Regulated Riparian Habitat	8.55 acres
Previously Mitigated Disturbance	(-3.24 acres)
Total Area of Disturbed Riparian Habitat	5.31 acres
Area of Full Disturbance (Trees, Shrubs, Ground Plane)	2.77 acres
Area of Partial Disturbance (Shrubs, Ground Plane only)	2.54 acres
Area of Mitigation Calc (Full Disturbance)	2.77 x 1.5 = 4.16 acres
Total # of Trees Required	60 x 4.16 = 250 Trees
Total # of Shrubs Required	44 x 4.16 = 183 Shrubs
Area of Mitigation Calc (Part Disturbance)	2.54 x 1.5 = 3.81 acres
Total # of Trees Required	none required 0 Trees
Total # of Shrubs Required	44 x 3.81 = 168 Shrubs
Total Hydroseed Required	4.16 acres

\*44 Shrubs/Acre was the approved shrub density based on the 7-08 Mitigation Plan

CALCULATIONS:	
This site contains	Important Riparian Area with Underlying Class B Xeroriparian Area
Total Regulated Riparian Habitat On-Site	22.60 acres <sup>1</sup>
Area of Disturbed Regulated Riparian Habitat	9.25 acres
Previously Mitigated Disturbance <sup>2</sup>	(-0.55 acres)
Total Area of New Disturbed Riparian Habitat (since 2014)	0.70 acres
Area of Full Disturbance (Trees, Shrubs, Ground Plane)	(-0.08 acres) <sup>3</sup>
Area of Partial Disturbance (Shrubs, Ground Plane only)	0.78 acres <sup>4</sup>
Area of Mitigation Calc (Full Disturbance)	(-0.98) x 1.5 = (-0.12 acres)
Total # of Trees Required	60 x (-0.12) = (-7 Trees)
Total # of Shrubs Required	44 x (-0.12) = (-5 Shrubs)
Area of Mitigation Calc (Part Disturbance)	0.78 x 1.5 = 1.17 acres
Total # of Trees Required	none required 0 Trees
Total # of Shrubs Required	44 x 1.17 = 51 Shrubs
Total Hydroseed Required	0.78 x 1.5 x 70% = 0.82 acres

<sup>1</sup> The amount of total riparian area has gone down by agreement with Pima County, see Methodology Note # 5.

<sup>2</sup> This is the amount of Mitigation Provided by the 2006 Mitigation Plan and the 2014 In-Lieu Fee Paid.

<sup>3</sup> Because of the modification to riparian area per 1 above, the total amount of Full Disturbance has gone down.

<sup>4</sup> Partial Disturbance increased by 0.78 bringing the net disturbance since 2014 to 0.70 (-0.08 + 0.78).

\*44 Shrubs/Acre was the approved shrub density based on the 7-08 Mitigation Plan.

PLANT INVENTORY	
1	NO DESCRIPTION
2	Prosopis velutina - Native Mesquite
3	Chilopsis linearis - Desert Willow
4	Prosopis velutina - Native Mesquite
5	Prosopis velutina - Native Mesquite
6	Cercidium floridanum - Blue Palo Verde
7	Acacia constricta - Desert Willow
8	Celtis pallida - Hackberry
9	Prosopis velutina - Native Mesquite
10	Prosopis velutina - Native Mesquite
11	Prosopis velutina - Native Mesquite
12	Chilopsis linearis - Desert Willow
13	Acacia constricta - Desert Willow
14	Fraxinus velutina - Ash
15	Fraxinus velutina - Ash
16	Fraxinus velutina - Ash
17	Chilopsis linearis - Desert Willow
18	Cercidium floridanum - Blue Palo Verde
19	Cercidium floridanum - Blue Palo Verde
20	Cercidium floridanum - Blue Palo Verde
21	Celtis pallida - Hackberry
22	Celtis pallida - Hackberry
23	Celtis pallida - Hackberry
24	Chilopsis linearis - Desert Willow
25	Chilopsis linearis - Desert Willow
26	Cercidium floridanum - Blue Palo Verde
27	Prosopis velutina - Native Mesquite
28	Prosopis velutina - Native Mesquite
29	Prosopis velutina - Native Mesquite
30	Chilopsis linearis - Desert Willow
31	Chilopsis linearis - Desert Willow
32	Chilopsis linearis - Desert Willow
33	Chilopsis linearis - Desert Willow

34	Chilopsis linearis - Desert Willow
35	Fraxinus velutina - Ash
36	Prosopis velutina - Ash
37	Cercidium floridanum - Blue Palo Verde
38	Fraxinus velutina - Ash
39	Prosopis velutina - Native Mesquite
40	Prosopis velutina - Native Mesquite
41	Celtis pallida - Hackberry
42	Chilopsis linearis - Desert Willow
43	Prosopis velutina - Native Mesquite
44	Cercidium floridanum - Blue Palo Verde
45	Prosopis velutina - Native Mesquite
46	Cercidium floridanum - Blue Palo Verde
47	Fraxinus velutina - Ash
48	Acacia constricta - Desert Willow
49	Acacia greggii - Catclaw Acacia
50	Cordyla africana - Bitter Cordyla
51	Ziziphus obtusifolia - Gray Thorn
52	Acacia greggii - Catclaw Acacia
53	Acacia constricta - Whitebark Acacia
54	Acacia constricta - Whitebark Acacia
55	Celtis pallida - Hackberry
56	Cercidium microphyllum - Palo Verde
57	Cercidium microphyllum - Palo Verde
58	Chilopsis linearis - Desert Willow
59	Cercidium microphyllum - Palo Verde
60	Chilopsis linearis - Desert Willow
61	Prosopis microphylla - Palo Verde
62	Chilopsis linearis - Desert Willow
63	Chilopsis linearis - Desert Willow
64	Chilopsis linearis - Desert Willow
65	Cercidium microphyllum - Palo Verde
66	Chilopsis linearis - Desert Willow

SITE CONSTRUCTION PERMIT #P17SC00039

**MITIGATION PLAN**

**Spirit Dog Ranch**

A Portion of the West ½ of the Southwest ¼ of  
Section 22, T-11-S, R-14-E, G&SRM, Pima County, AZ

**LANDSCAPE PLAN**

(Selective Plant Preservation Method)

P1209-026 Co20-08-11

sheet 3 of 4

Date: 9/28/18  
Drawn by: LMW  
Checked by: GRS  
 Design Review  
 Construction Drawings  
 Agency Submittal  
 Construction Set  
 Not for Construction



Scale: 1" = 100'  
 0' 50' 100' 200' 300'



LEGEND:  
 ② Photo Point  
 Location and Direction



**GRS**  
 LANDSCAPE ARCHITECTURE LLC

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

Date: 9/28/18  
 Drawn by: LMW  
 Checked by: GRS  
 Design, Render  
 Construction Instruments  
 Agency Submittal  
 Construction Set  
 Not for Construction

SITE CONSTRUCTION PERMIT #: P17SC00039  
**PHOTO POINTS**  
**Spirit Dog Ranch**  
 A Portion of the West  $\frac{1}{2}$  of the Southwest  $\frac{1}{4}$  of  
 Section 22, T-11-E, R-14-E, G&SRM, Pima County, AZ  
**LANDSCAPE PLAN**  
*(Selective Plant Preservation Method)*  
 P1209-026 Co20-08-11 sheet 4 of 4

