



## 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: Suzanne Shulda 10/16/18

Deputy County Administrator Signature/Date: [Signature] 10/17/18

County Administrator Signature/Date: C. DeLalbey 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




An aerial photograph of a rural property. A red outline highlights a specific area in the center of the image. Inside this outlined area, there are several buildings, including a large, light-colored rectangular structure, and some smaller structures. A red arrow points from the 'Subject Property' label to one of the buildings within the outlined area. The surrounding landscape is dry and hilly, with sparse vegetation and some dirt roads.

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







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

sheet 1 of 4

☐ Design Review  
☐ Construction Documents  
☒ Agency Submittal  
☐ Construction Set  
☒ Not for Construction





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

Scale: 1" = 100'

0' 50' 100' 200' 300'

North



**GRS**  
LANDSCAPE ARCHITECTS PLLC

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

Date: 9/28/18  
Drawn by: LMW  
Checked by: GRS

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

SITE CONSTRUCTION PERMIT #P17SC00039

### TREE ANALYSIS

### Spirit Dog Ranch

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

LANDSCAPE PLAN  
(Selective Plant Preservation Method)

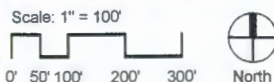
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MITIGATION PLAN - 2018 Aerial



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

#### PREVIOUSLY APPROVED CALCULATIONS (6-29-08)

Important Riparian Area Underlying Class B Xeroriparian Habitat

- Zoning = RH
- Gross Site Area = 30.74 acres
- Area Calculations:
  - Gross site area = 30.74 ac
  - Total Regulated Riparian Habitat on site = 23.12 ac
  - Total IRA = 23.12 ac
  - Underlying Class Xeroriparian C
  - Total Area of Disturbed Regulated Riparian Habitat = 3.41 ac
  - Per 7/01/08 Approved Plan
  - Area of Pre-Existing Disturbance 7/01/08 = 0.28 ac
  - Total Area of Disturbance 7/01/08 = 3.24 ac
  - (Disturbed Habitat - Pre-Existing Disturbance)
  - Previously Approved Mitigation Area 7/01/08 = 4.37 ac
  - Previously Approved Number of Trees required 7/01/08 = 14 trees
  - Previously Approved Number of Shrubs required 7/01/08 = 171 shrubs

#### PREVIOUSLY APPROVED CALCULATIONS (11-5-14)

Important Riparian Area Underlying Class B Xeroriparian Habitat

- Zoning = RH
- Gross Site Area = 30.74 acres
- Area Calculations:
  - Gross site area = 30.74 ac
  - Total Regulated Riparian Habitat on site = 23.12 ac
  - Total IRA = 23.12 ac
  - Underlying Class Xeroriparian B
  - Total Area of Disturbance Requiring Mitigation (Previously Mitigated Disturbance) = 8.55 ac
  - Area of Proposed Disturbance Requiring Mitigation = 5.31 ac
  - Area of Partial Disturbance (Shrubs, Ground Plane only) = 2.54 ac
  - Area of Full Disturbance (Trees, Shrubs, Ground Plane) = 2.77 ac

#### NEW CALCULATIONS (9-24-18)

Important Riparian Area Underlying Class B Xeroriparian Habitat

- Zoning = RH
- Gross Site Area = 30.74 acres
- Area Calculations:
  - Gross site area = 30.74 ac
  - Total Regulated Riparian Habitat on site = 22.60 ac
  - Total IRA = 22.60 ac
  - Underlying Class Xeroriparian B
  - Total Area of Disturbance Requiring Mitigation (Previously Mitigated Disturbance) = 8.55 ac
  - Area of Proposed Disturbance Requiring Mitigation = 0.70 ac
  - Area of Partial Disturbance (Shrubs, Ground Plane only) = 0.78 ac
  - Area of Full Disturbance (Trees, Shrubs, Ground Plane) = -0.08 ac<sup>1</sup>

<sup>1</sup> Negative number results from modification to the riparian limit line.

#### IN-LIEU FEE CALCULATION

Spirit Dog Ranch  
13750 N. Deane Rd.  
Tucson, AZ

This document provides an in-lieu fee calculation for additional potential disturbance of \$1,851.97.

REQUIREMENT	QUANTITY	UNITS	UNIT COST	TOTAL COST
(-7) Trees	-4	Each	\$60.00	(\$240.00)
5 Gal. Trees	-3	Each	\$38.06	(\$114.18)
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	30775 SF		\$0.07	\$2,103.25
Hydroseeding <sup>2</sup>	1 Lump Sum		\$100.00	\$100.00
Water <sup>3</sup>	5 Yearly Cost		\$0.00	\$0.00
<b>TOTAL IN LIEU MITIGATION COST</b>				<b>\$1,851.97</b>

- Cost Reflects Available Labor and Owned Equipment on the Ranch
- Cost Includes Fertilizer, Poly Urea and Spagnum Moss Cost at \$5.00 per 1000 lbs. and 5 lbs. per 10 gal. Tree
- Includes cost of Water and Connection to Existing System
- Property is on well water



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Date: 9/28/18  
Drawn by: LMW  
Checked by: GRS

- ☐ Design Review
- ☐ Construction Inspections
- ☐ Agency Submittal
- ☐ Construction Set
- ☐ Not for Construction

CALCULATIONS:		11/5/2014
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 Regulated 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 Calcs (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 Calcs (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

<sup>1</sup>44 Shrubs/Acre was the approved shrub density based on the 7-08 Mitigation Plan

CALCULATIONS:		9/24/2018
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>		(8.55 acres)
Total Area of New Disturbed Regulated 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 Calcs (Full Disturbance)	(-0.08) 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 Calcs (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 2008 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).

<sup>5</sup> 44 Shrubs/Acre was the approved shrub density based on the 7-08 Mitigation Plan.

PLANT INVENTORY	
ID NO	DESCRIPTION
1	Prosopis juliflora - Native Mesquite
2	Chilopsis linearis - Desert Willow
3	Prosopis juliflora - Native Mesquite
4	Prosopis juliflora - Native Mesquite
5	Prosopis juliflora - Native Mesquite
6	Cercidium floridanum - Blue Palo Verde
7	Chilopsis linearis - Desert Willow
8	Celtis pallida - Hackberry
9	Prosopis juliflora - Native Mesquite
10	Prosopis juliflora - Native Mesquite
11	Prosopis juliflora - Native Mesquite
12	Chilopsis linearis - Desert Willow
13	Chilopsis linearis - 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 juliflora - Native Mesquite
28	Prosopis juliflora - Native Mesquite
29	Prosopis juliflora - 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	Fraxinus velutina - Ash
37	Cercidium floridanum - Blue Palo Verde
38	Fraxinus velutina - Ash
39	Prosopis juliflora - Native Mesquite
40	Prosopis juliflora - Native Mesquite
41	Celtis pallida - Hackberry
42	Chilopsis linearis - Desert Willow
43	Prosopis juliflora - Native Mesquite
44	Cercidium floridanum - Blue Palo Verde
45	Prosopis juliflora - Native Mesquite
46	Cercidium floridanum - Blue Palo Verde
47	Fraxinus velutina - Ash
48	Acacia greggii - Catclaw Acacia
49	Acacia greggii - Catclaw Acacia
50	Condalia globosa - Bitter Condalia
51	Zizophora obtusiloba - Gray Thorn
52	Acacia greggii - Catclaw Acacia
53	Acacia corniculata - Western Acacia
54	Acacia corniculata - Western Acacia
55	Chilopsis linearis - Desert Willow
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	Cercidium microphyllum - 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 1/4 of the Southwest 1/4 of Section 22, T-11-S, R-14-E, G&SRM, Pima County, AZ

LANDSCAPE PLAN  
(Selective Plant Preservation Method)

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PHOTO POINTS -- 2016 AERIAL



PHOTO #1



PHOTO #2



PHOTO #3



PHOTO #4



PHOTO #5

Scale: 1" = 100'



**LEGEND:**

- ② Photo Point  
Location and Direction



**GRS**  
LANDSCAPE ARCHITECTS, LLC

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

Date: 9/28/18  
Drawn by: LMW  
Checked by: GRS

- ☐ Design Review  
☐ Construction Instruments  
☒ Agency Submittal  
☐ Construction Set  
☒ Not for Construction

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**PHOTO POINTS**

**Spirit Dog Ranch**

A Portion of the West 1/4 of the Southwest 1/4 of  
Section 22, T-11-S, R-14-E, G&SRM, Pima County, AZ

**LANDSCAPE PLAN**  
(Selective Plant Preservation Method)

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