

Memorandum

To: Carrie McCool, Interim Community Development Director

From: Michael J. Erion, P.E. 

CC: Brandy Reitter, Bryon McGinnis, Deron Dircksen, Mary Elizabeth Geiger, Esq

File: 161-9.23

Date: June 4, 2019

Re: Town of Eagle – Red Mountain Ranch – Technical Review of Water Submittal

At the request of the Town of Eagle, Resource Engineering, Inc. (RESOURCE) reviewed the water related documents in the Annexation and Planned Unit Development (PUD) submittal for the proposed Red Mountain Ranch project. The water documents include April 9, 2019 and May 22, 2019 memoranda prepared by SGM, a November 7, 2018 memorandum prepared by Wilson Water Group and a November 11, 2018 memorandum from Balcomb and Green. RESOURCE met with SGM and RESOURCE's technical review comments are presented below.

RAW WATER SUPPLY AND DELIVERY SYSTEM

The proposed concept is to develop a raw water well or infiltration gallery near the Eagle River. Each planning area may have its own system. The location of the proposed points of diversion will need to be identified by the Applicant as soon as possible so that the Water Court case can be filed to change the point of diversion of the senior irrigation water rights.

The attached May 22, 2019 SGM memorandum indicates that a total of 4.7 acres of raw water irrigation are proposed for the project including 1.31 acres for parks and 3.39 acres for lawn and landscaping.

EQR ANALYSIS

The Town's EQR schedule is set forth in the Section 12.16.050 of the Town Municipal Code, as was amended by Ordinance No. 18, Series 2018. RESOURCE agrees with the SGM estimate of 113.1 EQR for the proposed development concept outlined on Table 1 of the SGM May 22, 2019 memorandum. The EQR calculation, plant investment fees, and water rights dedication are discussed below.

EQR Calculation

The EQR calculation for the Red Mountain Ranch concept plan is approximately 113.1 EQR **EQR**. The Town Code allows for a reduction of 0.25 EQR per 2500 square feet of irrigation if raw water irrigation is

provided. The project proposes 3.39 acres of raw water irrigation which would result in a reduction of 14.76 EQR that could be allowed for the project. The net EQR total for the project is estimated at **98.34 EQR** (113.1 – 14.76), which is the value for plant investment fees and potable system water rights dedication.

Plant Investment Fees

The Plant Investment Fee should be calculated based on the Town's EQR schedule, less a credit toward the water PIF based on the Town Code credit for raw water irrigation. The payment of PIF would be based on actual development and shall occur at building permit.

Water Rights Dedication

According to the Town Code, the Red Mountain Ranch project water rights dedication requirement is based on the EQR calculation of 98.34 EQR outlined above, plus the rights for the raw water irrigation. RESOURCE agrees with the SGM calculation that 93.42 AF of historic consumptive use (HCU) credit is required for the potable water system.

Red Mountain Ranch will dedicate 48.2 AF of HCU and the associated senior water rights in the Wilkinson Ditch and 45.65 AF of HCU and the associated senior water rights in the Warren Ditch for the potable water service. The 4.7 acres of raw water irrigation will require an additional dedication of 8.13 AF of HCU and the associated senior water rights in the Wilkinson Ditch.

As mentioned above, the Town would need to change the point of diversion for the Wilkinson Ditch water rights to be conveyed to the Town for raw water irrigation to a well or pump station on the Eagle River and change the Warren Ditch and Wilkinson Ditch water rights dedicated for potable service to municipal use at the Town's Lower Basin Water Treatment Plant.



MEMORANDUM

TO: Scott Grosscup, Balcomb & Green, P.C.

FROM: Brendon Langenhuizen, PE

DATE: April 9, 2018 **Revised May 22, 2019**

RE: **Red Mountain Ranch Planning Areas 1 through 6 EQR Assessment**

This memo addresses the Red Mountain Ranch (RMR) Equivalent Residential Unit (EQR) assessment and dedication for Planning Areas 1 through 6. This memo is also in response to comments provided by the Town of Eagle following review of the November 7, 2018 Wilson Water Group memo (WWG Memo) titled "Red Mountain Ranch EQR Assessment and Preliminary HCU Analysis of Parcels 1 & 2".

Specific development plans are not yet finalized for Planning Areas 1 through 6 and remain conceptual at this time. For the purposes of inclusion into the Town, assumptions about EQRs and non-potable irrigated lands are presented as a possible development scenario in this memo. RMR is seeking development for a total maximum of 153 dwelling units throughout the six planning areas. Approximate densities of each planning area were presented to the Town on a PUD Zoning Plan developed on May 20, 2019, see Exhibit A. The development scenario of Planning Areas 1 & 2 presented in the WWG Memo are slightly modified to match the most recent development scenario. Planning Areas 3 through 6 density and dwelling types are still in an early planning phase and specific densities or dwelling types are unknown at this time and should be viewed as simply a possible development scenario.

EQR ANALYSIS AND POTABLE WATER RIGHT DEDICATION

RMR will extend potable water and sewer lines for each of the planning areas as it is developed. The revised EQR assessment shown in Table 1 includes Planning Areas 3 through 6 water demands. The EQR assessment is based on the Town's EQR Schedule dated May 2018.

Table 1. RMR Conceptual Scenario Development Plan EQR Assessment

Dwelling Type	EQR per Unit	Planning Areas 1-2			Planning Areas 3-6			Combined EQR
		Dwelling Units	Commercial Units	Total EQR	Dwelling Units	Commercial Units	Total EQR	
Studio Multi-Family Unit	0.4	6		2.4	6		2.4	4.80
2 Bedroom MF Units (1.5 bath)	0.6	58		34.8	30		18.0	52.80
3 Bed MF Units	0.95	0		0			0.0	0
Duplex	0.9	10		9			0.0	8.10
Single Family Homes	1	9		9	34		34.0	43.00
Commercial (5,000 sq.ft.)	2.5		1	3			0.0	2.50
Restaurant (5,000 sq.ft.)	3.5		1	4			0.0	
Nature Center (10,000 sq.ft.) <i>Four toilets, mop sink & drinking fountain</i>	1.0			0		1	1.0	1.00
Total		83	2	61.2	70	1	56.0	113.10

*Notes:

- Dwelling units will be limited to 153 units on Planning Areas 1 through 6. This limit does not include commercial units.
- Presented scenario is a conceptual plan of dwelling unit types. Maximum allowed dwelling units per planning area is clarified in Exhibit A.

OUTDOOR IRRIGATION AND EQR CREDIT ANALYSIS

All outdoor irrigation for Planning Areas 1 through 6 will be from onsite raw water sourced from RMR owned rights in the Wilkinson Ditch, as originally reported in the WWG Memo. Conceptual plans for Planning Areas 1 & 2 have approximately 2.51 acres of irrigation, consisting of a 1.31-acre park and 1.20 acres of landscaping. Conceptual plans for Planning Areas 3 through 6 have at least 2.19 acres of landscaping irrigation, all by non-potable water supplies. The proposed total EQR Credits from non-potable irrigation does not exceed the 25% credit maximum identified in the Town's EQR Schedule.

Table 2. RMR Conceptual Scenario for Non-Potable Irrigation Credits

Dwelling Type	EQR Credit per 2,500 sq.ft.	Planning Areas 1 & 2	Planning Areas 3-6	Total EQR
		Acres	Acres	
Irrigated Parks	no credit	1.31	0	0
Irrigated Landscaping	0.25	1.20	2.19	14.76
Total		2.51	2.19	14.76

Notes:

- Based on Town's EQR Schedule which states, "0.25 EQR per 2,500 sq.ft. permanently irrigated landscaped area, not to exceed 25% of total EQR".
- No credit is received from the non-potable park irrigation.

REQUIRED WATER DEDICATION

RMR conceptual scenario presented herein identifies a proposed development of 113.10 EQRs (Table 1) and non-potable irrigation credits of 14.76 EQRs (Table 2) for a difference of 98.34 EQRs required for dedication to the Town. The Town code states a

water rights dedication ratio of 0.95 acre-feet (AF) per EQR. Therefore, a total of 93.42 AF is required to be dedicated to the Town for potable water serve of Planning Areas 1 through 6.

Wilkinson Ditch rights will serve the raw water landscape and park irrigation of 4.70 acres on Planning Areas 1 through 6. Case No. 84CW659 identified landscaping irrigation demand at 1.73 AF per acre for a dedication of 8.13 AF will be dedicated to the Town for raw water irrigation at Planning Areas 1 through 6.

A total dedication of 101.55 AF of senior water rights is required for the annexation and development of Planning Areas 1 through 6 as described herein.

WATER RIGHT OWNERSHIP FOR DEDICATION

As detailed in the WWG Memo, RMR currently owns 340.12 AF of the quantified consumptive use in the Warren Ditch and 33.30 AF in the Wilkinson Ditch¹. The WWG Memo also calculated 14.90 AF of additional historical consumptive use credits owned by RMR associated with the dry-up of the Nogal Parcel under Planning Areas 1 & 2.

To meet the Town's required potable and raw water service dedication requirement, RMR will dedicate all 48.20 AF in the Wilkinson Ditch and the remaining 45.65 AF out of the Warren Ditch. Warren Ditch historically irrigated approximately 9.83 acres within Planning Areas 1 through 6 providing approximately 17.01 AF. The remaining 36.34 AF (21.01 acres) of dedication will come from previously quantified historical use credits from lands removed from irrigation on an adjacent parcel, most likely at a parcel conveyed by RMR to the Eagle County School District RE-50 where RMR retained ownership of the associated water rights.

SUMMARY

The maximum requested dwelling units for RMR in Planning Areas 1 through 6 is 153 units (not including commercial units). Under the presented scenario, 113.10 EQRs are needed to serve the potable residential and commercial water needs. Non-potable irrigation of 3.39 acres for landscaping will provide a 14.76 EQR credit. Therefore, the difference of 98.34 EQRs are required to be dedicated to the Town, with a water rights dedication requirement of 93.42 AF. RMR will dedicate 93.42 AF of their ownership in the Wilkinson Ditch and Warren Ditch to meet the potable water service dedication requirement. RMR will also dedicate 4.70 acres (8.13 AF) of landscape and park irrigation under the Wilkinson Ditch senior rights on Planning Areas 1 through 6.

A total dedication of 101.55 AF of previously quantified historical use credits from senior water rights is required for the annexation and development of Planning Areas 1 through 6 as described herein. RMR will dedicate the appropriate amount of water rights as outlined in this memo upon annexation approval by the Town.

Exhibits:

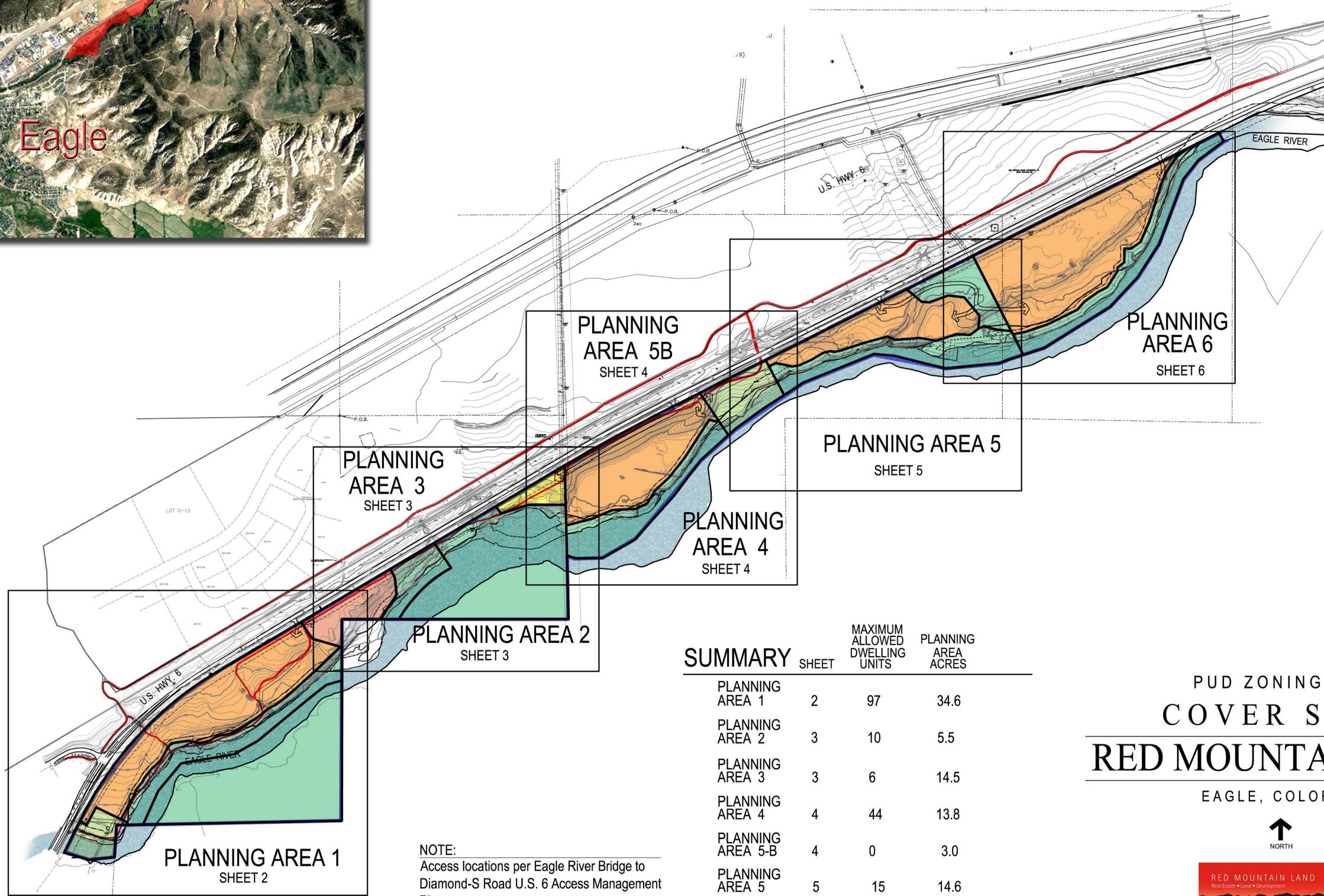
A – PUD Zoning Plan 2019-05-20

\\sgmfile1\projects\2019\2019-107-RedMtnRanch\001\E-Reports\SGM\SGM-Memo-RMREQRAssessmentParcels1-6_20190522-Final.doc

¹ Water Court Case Nos. 84CW659 and 84CW310



Eagle



NOTE:
 Access locations per Eagle River Bridge to Diamond-S Road U.S. 6 Access Management Plan.
 Area measurements may vary by actual field survey at Development Permit.

SUMMARY	SHEET	MAXIMUM ALLOWED DWELLING UNITS	PLANNING AREA ACRES
PLANNING AREA 1	2	97	34.6
PLANNING AREA 2	3	10	5.5
PLANNING AREA 3	3	6	14.5
PLANNING AREA 4	4	44	13.8
PLANNING AREA 5-B	4	0	3.0
PLANNING AREA 5	5	15	14.6
PLANNING AREA 6	6	25	20.0
TOTALS		*	106.0

*TOTAL D.U. NOT TO EXCEED 153

PUD ZONING PLAN
 COVER SHEET
RED MOUNTAIN RANCH

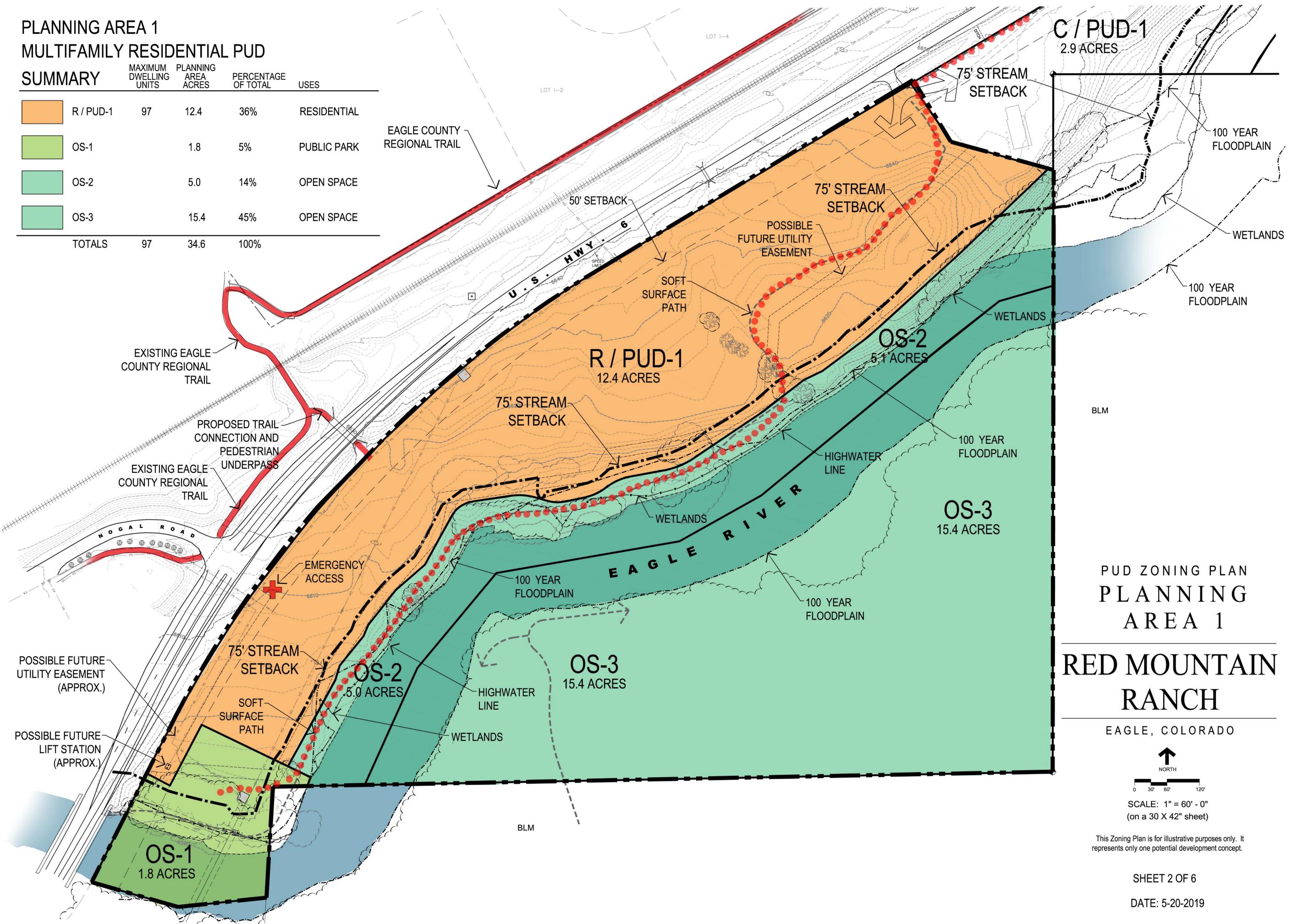
EAGLE, COLORADO



This Zoning Plan is for illustrative purposes only. It represents only one potential development concept.

**PLANNING AREA 1
MULTIFAMILY RESIDENTIAL PUD**

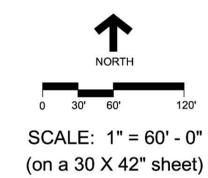
SUMMARY		MAXIMUM DWELLING UNITS	PLANNING AREA ACRES	PERCENTAGE OF TOTAL	USES
	R / PUD-1	97	12.4	36%	RESIDENTIAL
	OS-1		1.8	5%	PUBLIC PARK
	OS-2		5.0	14%	OPEN SPACE
	OS-3		15.4	45%	OPEN SPACE
TOTALS		97	34.6	100%	



C / PUD-1
2.9 ACRES

PUD ZONING PLAN
PLANNING AREA 1
RED MOUNTAIN RANCH

EAGLE, COLORADO



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SHEET 2 OF 6

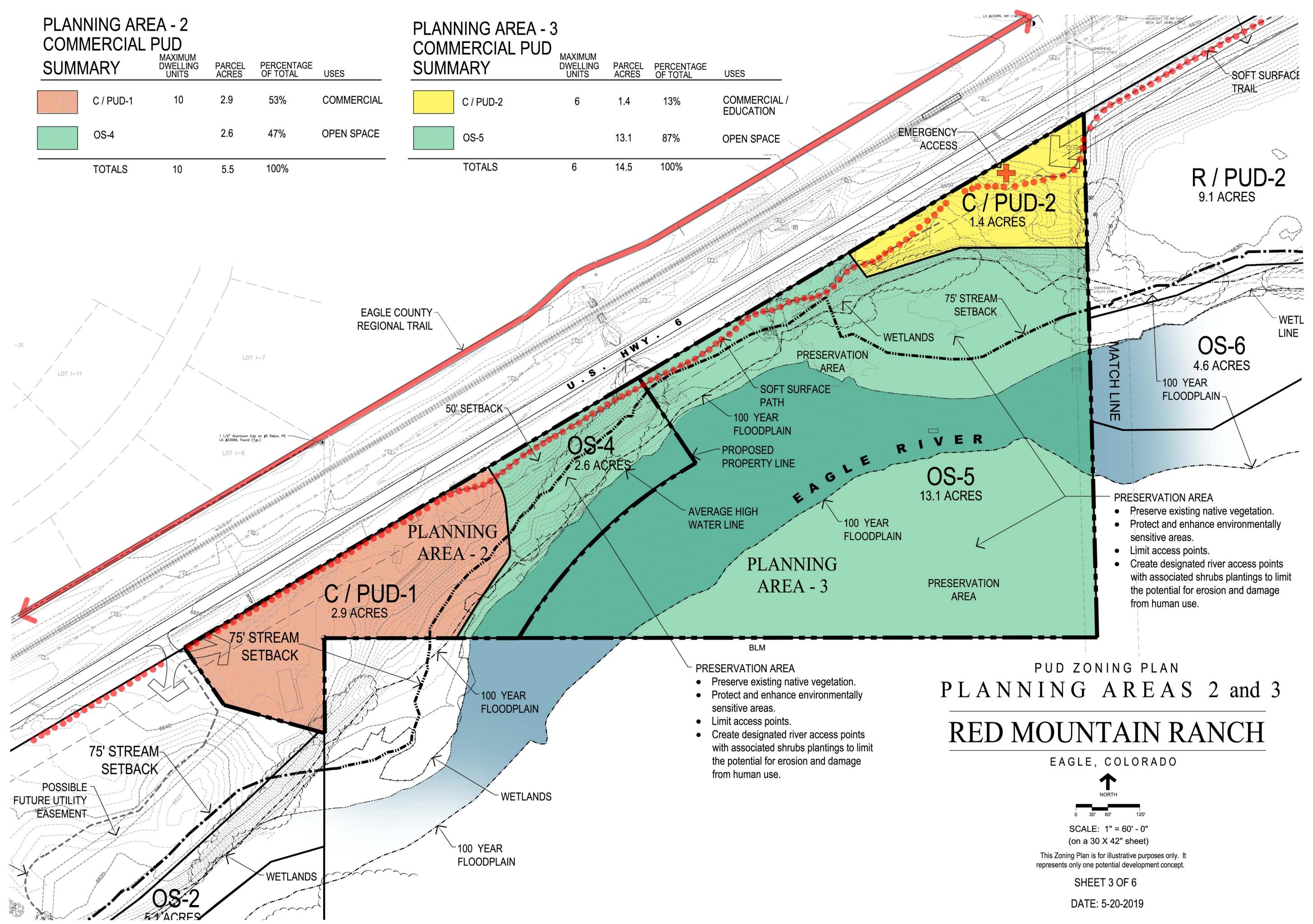
DATE: 5-20-2019

**PLANNING AREA - 2
COMMERCIAL PUD
SUMMARY**

	MAXIMUM DWELLING UNITS	PARCEL ACRES	PERCENTAGE OF TOTAL	USES
	C / PUD-1	10	53%	COMMERCIAL
	OS-4	2.6	47%	OPEN SPACE
TOTALS		10	5.5	100%

**PLANNING AREA - 3
COMMERCIAL PUD
SUMMARY**

	MAXIMUM DWELLING UNITS	PARCEL ACRES	PERCENTAGE OF TOTAL	USES
	C / PUD-2	6	13%	COMMERCIAL / EDUCATION
	OS-5	13.1	87%	OPEN SPACE
TOTALS		6	14.5	100%

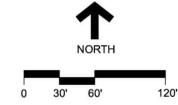


- PRESERVATION AREA**
- Preserve existing native vegetation.
 - Protect and enhance environmentally sensitive areas.
 - Limit access points.
 - Create designated river access points with associated shrubs plantings to limit the potential for erosion and damage from human use.

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 - Protect and enhance environmentally sensitive areas.
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**PUD ZONING PLAN
PLANNING AREAS 2 and 3
RED MOUNTAIN RANCH**

EAGLE, COLORADO



SCALE: 1" = 60' - 0"
(on a 30 X 42" sheet)

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SHEET 3 OF 6

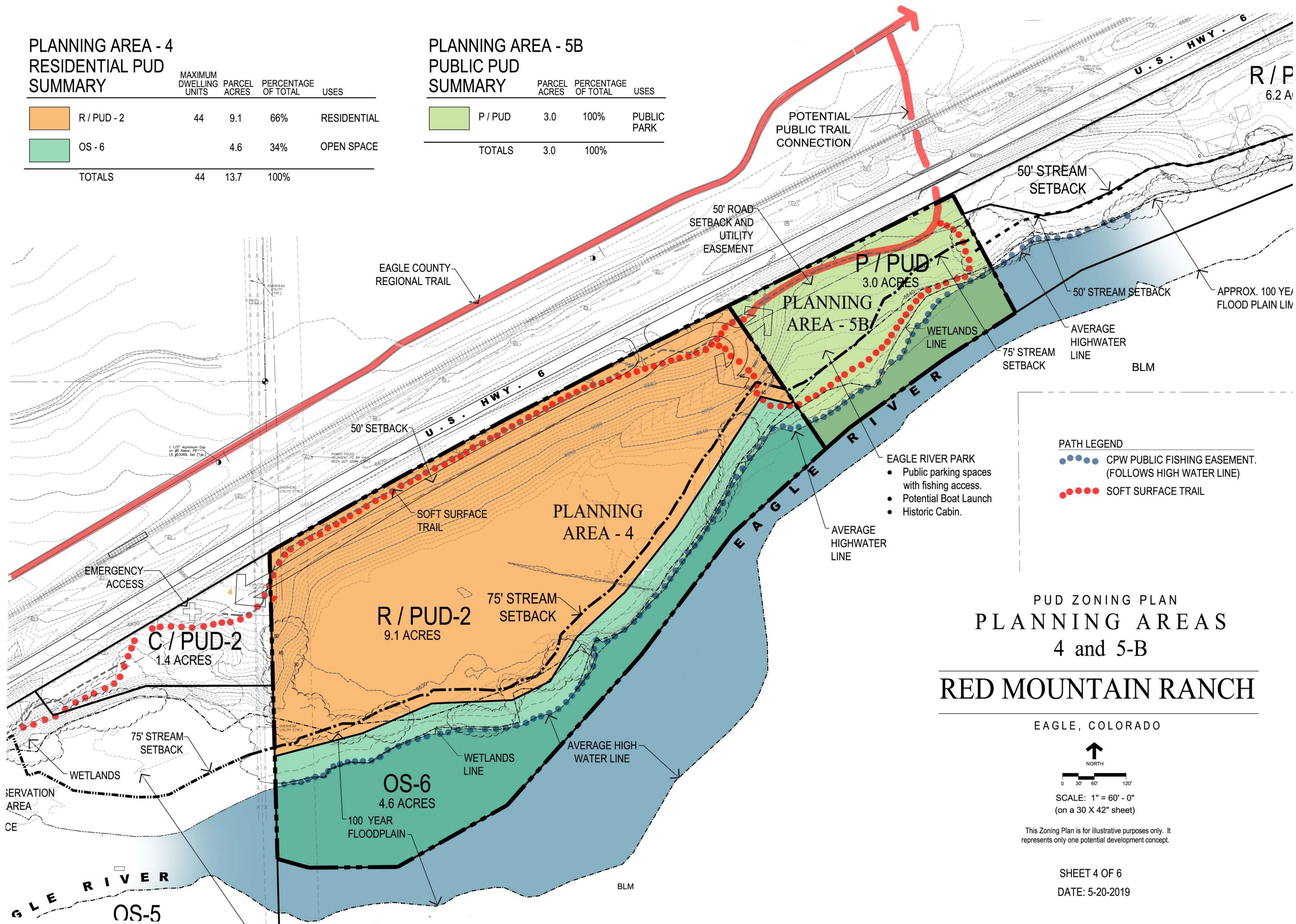
DATE: 5-20-2019

**PLANNING AREA - 4
RESIDENTIAL PUD
SUMMARY**

	MAXIMUM DWELLING UNITS	PARCEL ACRES	PERCENTAGE OF TOTAL	USES
	R / PUD - 2	44	9.1	66% RESIDENTIAL
	OS - 6		4.6	34% OPEN SPACE
TOTALS		44	13.7	100%

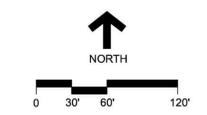
**PLANNING AREA - 5B
PUBLIC PUD
SUMMARY**

	PARCEL ACRES	PERCENTAGE OF TOTAL	USES
	P / PUD	3.0	100% PUBLIC PARK
TOTALS		3.0	100%



**PUD ZONING PLAN
PLANNING AREAS
4 and 5-B
RED MOUNTAIN RANCH**

EAGLE, COLORADO



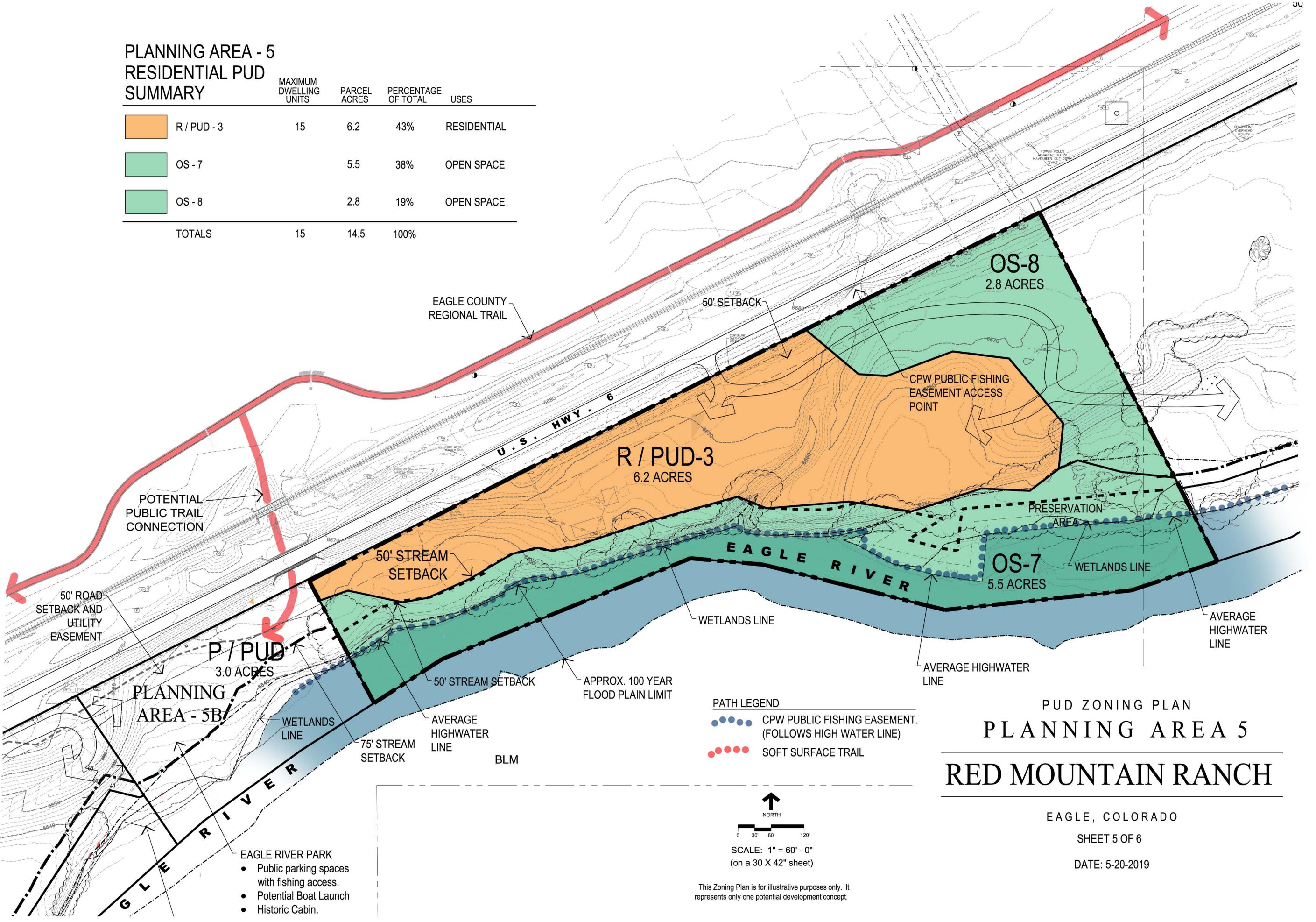
SCALE: 1" = 60' - 0"
(on a 30 X 42" sheet)

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SHEET 4 OF 6
DATE: 5-20-2019

**PLANNING AREA - 5
RESIDENTIAL PUD
SUMMARY**

	MAXIMUM DWELLING UNITS	PARCEL ACRES	PERCENTAGE OF TOTAL	USES	
	R / PUD - 3	15	6.2	43%	RESIDENTIAL
	OS - 7		5.5	38%	OPEN SPACE
	OS - 8		2.8	19%	OPEN SPACE
TOTALS		15	14.5	100%	



P / PUD
3.0 ACRES
PLANNING AREA - 5B

- EAGLE RIVER PARK**
- Public parking spaces with fishing access.
 - Potential Boat Launch
 - Historic Cabin.

PATH LEGEND

-  CPW PUBLIC FISHING EASEMENT. (FOLLOWS HIGH WATER LINE)
-  SOFT SURFACE TRAIL

NORTH



0 30' 60' 120'

SCALE: 1" = 60' - 0"
(on a 30 X 42" sheet)

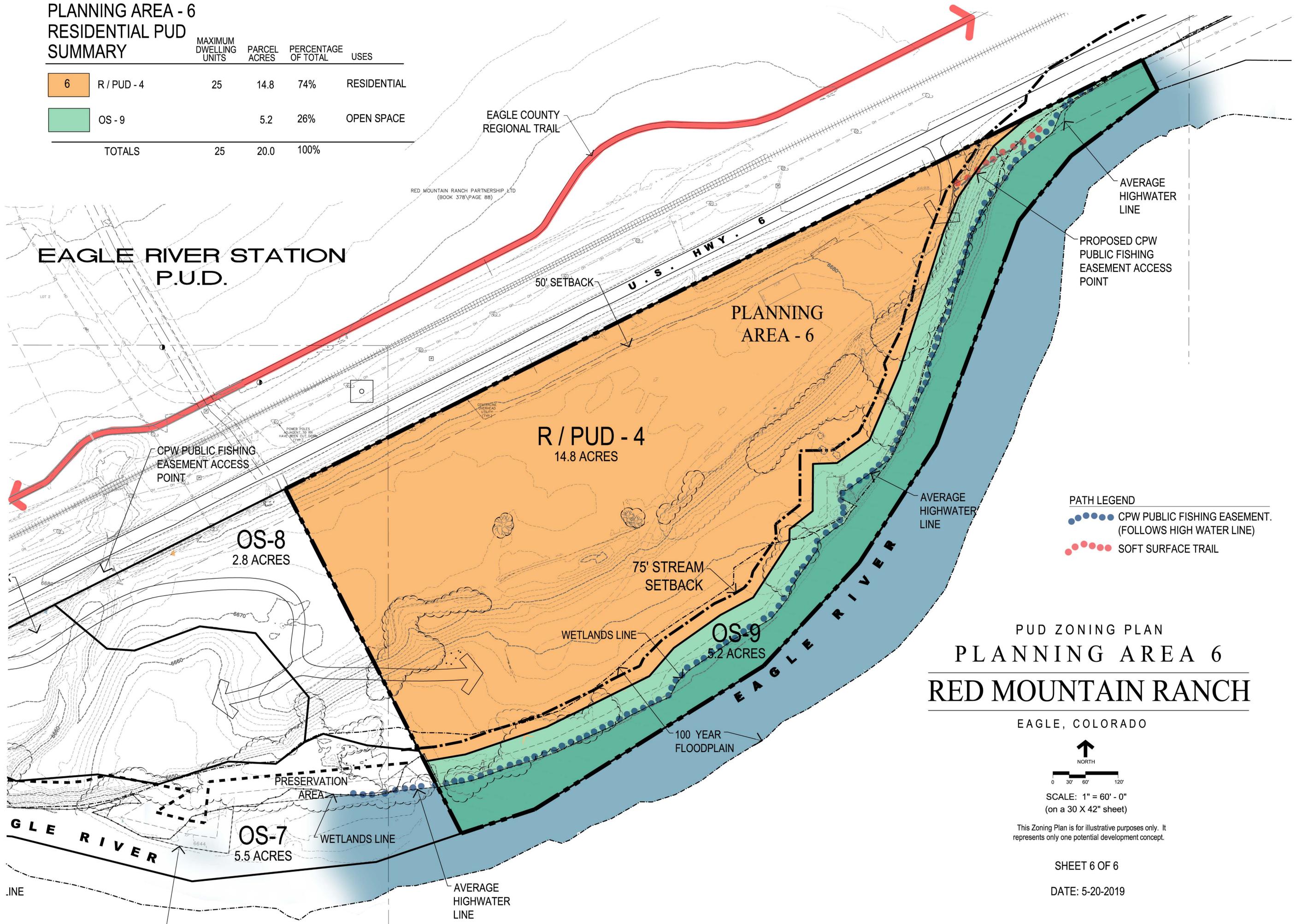
This Zoning Plan is for illustrative purposes only. It represents only one potential development concept.

PUD ZONING PLAN
PLANNING AREA 5
RED MOUNTAIN RANCH

EAGLE, COLORADO
SHEET 5 OF 6
DATE: 5-20-2019

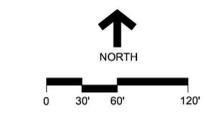
**PLANNING AREA - 6
RESIDENTIAL PUD
SUMMARY**

		MAXIMUM DWELLING UNITS	PARCEL ACRES	PERCENTAGE OF TOTAL	USES
6	R / PUD - 4	25	14.8	74%	RESIDENTIAL
	OS - 9		5.2	26%	OPEN SPACE
TOTALS		25	20.0	100%	



**PUD ZONING PLAN
PLANNING AREA 6
RED MOUNTAIN RANCH**

EAGLE, COLORADO



SCALE: 1" = 60' - 0"
(on a 30 X 42" sheet)

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SHEET 6 OF 6

DATE: 5-20-2019

- PATH LEGEND**
- CPW PUBLIC FISHING EASEMENT. (FOLLOWS HIGH WATER LINE)
 - SOFT SURFACE TRAIL

RED MOUNTAIN RANCH PARTNERSHIP LTD
(BOOK 378\PAGE 88)

R / PUD - 4
14.8 ACRES

OS-8
2.8 ACRES

OS-9
5.2 ACRES

OS-7
5.5 ACRES

EAGLE COUNTY REGIONAL TRAIL

50' SETBACK

U.S. HWY. 6

PLANNING AREA - 6

75' STREAM SETBACK

WETLANDS LINE

100 YEAR FLOODPLAIN

PRESERVATION AREA

WETLANDS LINE

AVERAGE HIGHWATER LINE

AVERAGE HIGHWATER LINE

PROPOSED CPW PUBLIC FISHING EASEMENT ACCESS POINT

AVERAGE HIGHWATER LINE

CPW PUBLIC FISHING EASEMENT ACCESS POINT

EAGLE RIVER STATION P.U.D.

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