



LAND USE CONSULTING SERVICES
GIS MAPPING SERVICES



Crook County Community Development Department
Attn: Hannah Elliott
300 NE 3rd Street, Room 12
Prineville, Oregon 97754

July 20, 2025

Re: Site Plan Review – Non-farm Dwelling Application – 217-000233-PLNG

Dear Hannah,

For your review this is our response to the Central Oregon Land Watch letter of July 16, 2025.

As founding participants in the Potential Development Density Equation ((PDDE) process we are fully aware of the accepted practices relative to density studies in Crook County. In 2011-2012 we worked with County planning staff and County legal counsel to help establish the methodology for making proper density evaluations. One of the standard practices that has evolved since that time is the exclusion of non-resource lands and subdivisions as mapped by Crook County GIS. To provide some assistance to staff we have included four (4) examples of our approved applications using the same methodology that has been the standard for making such determinations by the local governing body. They are listed below as follows:

1) 2017	VXR LLC	LP-217-000156-PLNG	2 NF Parcels / 1 NF Dwelling
2) 2018	Pearson	217-000307-PLNG	1 NF Dwelling on Existing Parcel
3) 2020	Mason	217-000410-PLNG	1 NF Dwelling on Existing Parcel
4) 2021	Pieratt	217-000612-PLNG	1 NF Dwelling
		217-000614-PLNG	1 NF Dwelling
		217-000611-PLNG	1 NF Partition

We have also included a revised PDDE map exhibit and PDDE Statement that more clearly lists the exclusion of Juniper Acres, a pre-land use subdivision established in 1962. The subject property is not within Juniper Acres and is located to the east of the subdivision.

In addition, we include the following statement as stated in the latter of explanation; "...Duke and Dana Settle wish to place a new dwelling on their 10-acre parcel in a portion of the county where many of the properties consist of unsuitable Class 7 soils." All the potentially eligible parcels in this study area consist of Class 7 soils as does most of the Juniper Acres Subdivision.

Thank you for your consideration in this matter. Best regards,

Craig Kilpatrick,
Land Use Consultant

Settle – Wildlife Density Study
Potential Development Density Equation (PDDE) Statement
Crook County EFU-1 Revised July 20, 2025

The applicant submits the following calculation data to determine the Potential Development Density Equation (PDDE) for existing parcel within a Crook County Wildlife Area (big game habitat).

1. One Mile Study Area – Wildlife Density Map – The Settle application identifies an area measured approximately one mile from the existing single parcel which measures 10-acres in size. The Wildlife Density Map includes lands only within Crook County. The enclosed GIS map indicates a “One Mile Study Area” within Crook County of approximately 4,532.98-acres of which **1,559.12- acres** are listed as resource land and lay within one-mile. The applicant has subtracted a total of approximately 2,973 non-resource acres located in Juniper Acres (JA) zone, the Juniper Acres Subdivision, a committed area leaving the 1,559.12-acres for the purpose of this calculation. The general deer wintering range is the only big game habitat that is germane to this application. All the study area is located within the general deer wintering range. None of the study area is located within the critical deer wintering range. A small portion (13-acres) of the affected area lies with the Elk Winter Range to the southeast. See attached One Mile Study Area Map Exhibit for PDDE.

2. The Density Calculation: The number of potential dwellings for the subject property density study is calculated as follows:

A) The total acreage for calculation in the one-mile study area that is resource land within the general deer wintering range is approximately **1,559-acres** including the subject parcel measuring 10-acres. County policy states that new residences within the general deer wintering range shall not have a density of more than one residence per 80 acres.

1,559 divided by **80** = **19.49** potential dwellings within the general deer wintering range. Rounded down to the nearest whole number equals **19 allowable dwellings**. The proposed dwelling will be in the general winter deer range.

3. The Existing Dwellings Calculations: The next procedure is to determine the number of existing and approved dwellings in the one-mile study area that are located within the deer wintering range.

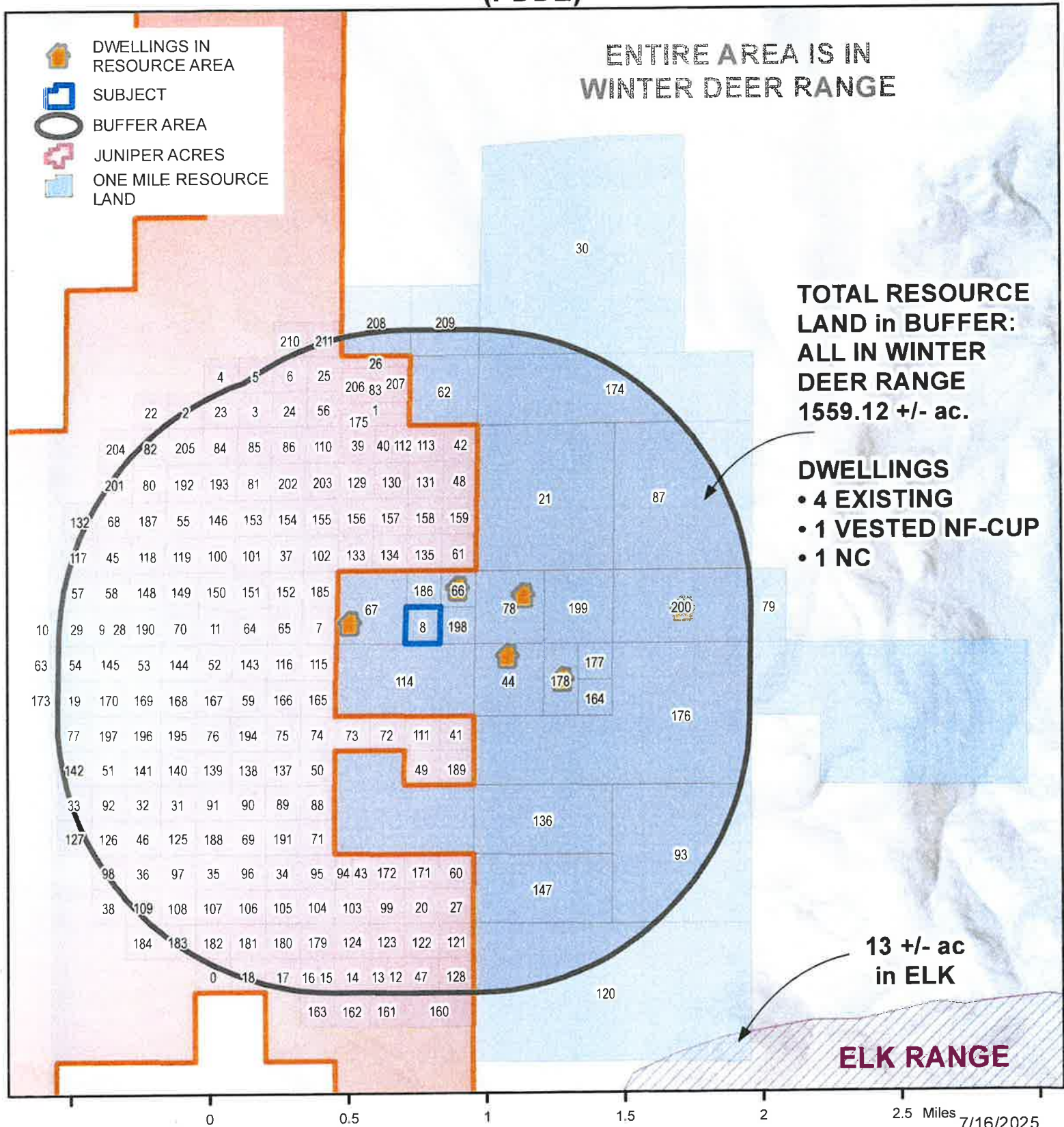
A) Deer Wintering Ranges: A thorough examination of Crook County records/maps show that there are presently a total of 4 dwellings within the General Deer Wintering Range.

The total number of the applicable existing dwellings on resource parcels in the Study Area, General Winter Deer Range:	4
The total number of the applicable existing dwellings on parcels in the Study Area, Elk Range.	0
The total number of approved EFU-1 residences:	0
The total number of approved, vested EFU-1 residences:	1
The total number of proposed non-farm residences, including subject application:	1
Total:	6

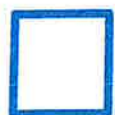
6 total dwellings = 32% of the maximum allowable density of 19 allowable residences.

This result meets the criteria expressed in Crook County Wildlife Policy 2 as determined by these calculations and illustrated by the accompanying map exhibit. Wildlife Policy 3 is not applicable as the subject property is not within the Elk Range.

EXHIBIT F - POTENTIAL DEVELOPMENT DENSITY EQUATION (PDDE)



Note: This information is prepared for reference purposes only and should not be used, and is not intended for, survey or engineering purposes. Kilpatrick Consulting LLC is not responsible for outsourced data accuracy. This exhibit by Kilpatrick Consulting and does not represent any legal opinion.



DUKE & DANA SETTLE
 1816040005300 - 10 acre
 Located east of Juniper Acres in
 Crook County Oregon

Kilpatrick
 CONSULTING, LLC

LAND USE CONSULTING SERVICES
 GIS MAPPING SERVICES

OFFICE:
 541.447.2724

June 19, 2012

Potential Development Density Equation (PDDE) Statement
Used in conjunction with existing non-farm dwelling CUP for proposed parcel.

The applicant submits the following calculation data in order to determine the Potential Development Density Equation (PDDE) for single properties within Crook County Wildlife Zone on a portion of the subject property.

1. Map Exhibit K – Wildlife Density Calculation Map identifies and area measured one mile from the perimeter of the proposed non-farm parcels (combined, because they are separate). The map indicates and area with Crook County of approximately 3,089 acres, a portion of which, approximately 1,015 is located within the General Deer Winter Range. Note: Proposed Parcel # 1 is the remaining “Parent Parcel.”

2. The Density Calculation: The number of dwellings for the Russell application is calculated as follows:

The total acreage for the One Mile Area (Crook County) is 3,088.83 acres including the subject proposed parcels measuring a total of 10 acres.

The total acreage within the One Mile Area (Crook County) that is within the General Winter Deer Range is 1,014.87 acres.

In this part of Crook County the General Winter Deer Range minimum parcel size is 80 acres.

1,014.87 acres including the subject 10 acres = 1,014.87 acres divided by 80 = 12.68 potential dwellings on average.

Rounded down to the nearest number = 12 dwellings.

3. The Existing Dwellings Calculation: The next procedure is to determine the number of existing dwellings in the One Mile Area as measured from the proposed parcel perimeter. The applicant’s “One Mile Study Data” sheets include a complete listing of all parcels within the One Mile Area.

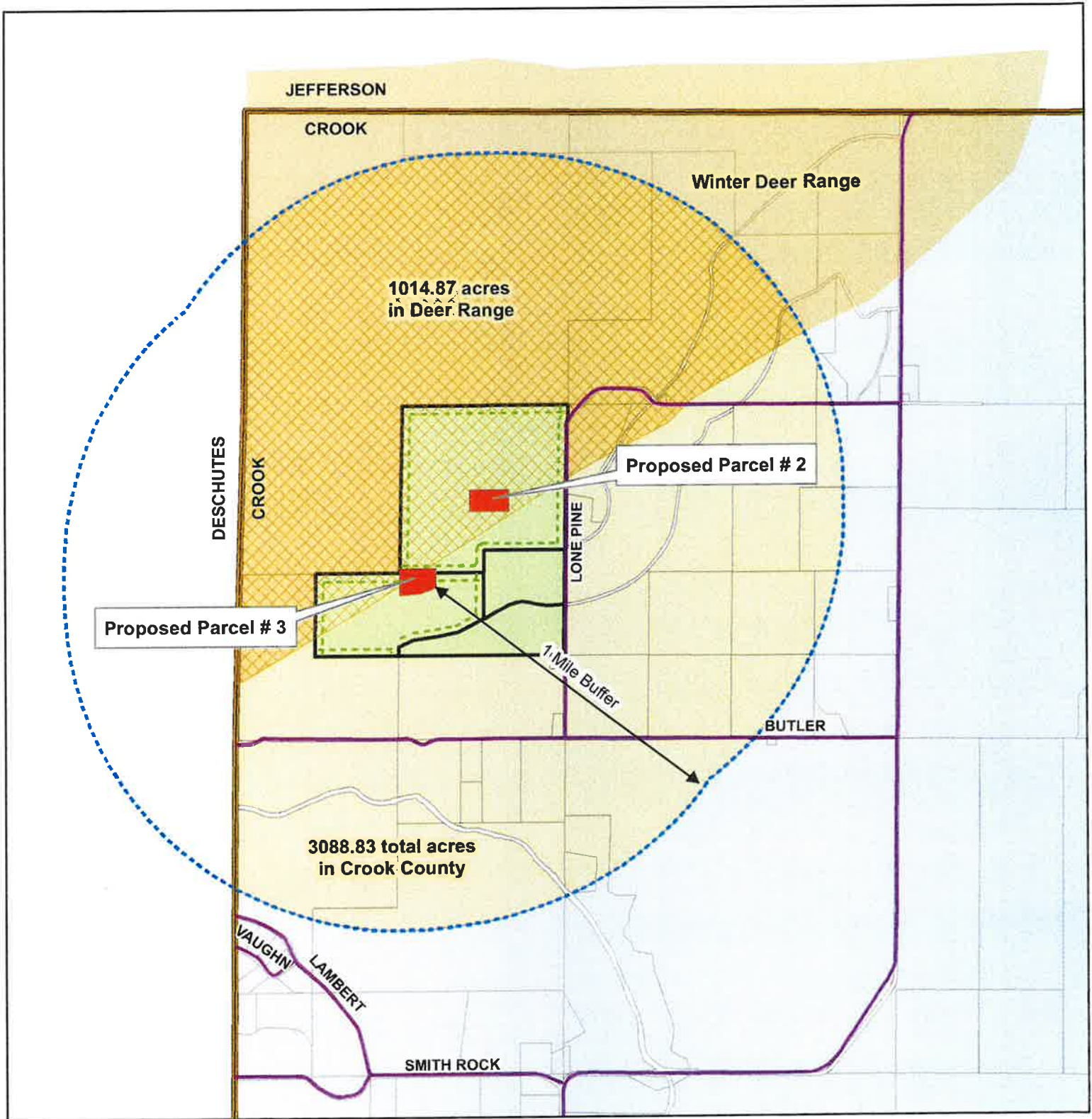
The total number of existing dwellings, including proposed, within deer range	4
The total number of approved non-farm parcels:	<u>0</u>
The total number of dwellings following this approval, remains:	4
or 33.3% of the maximum density of 12 dwellings.	

This calculation and accompanying data meets the criteria expressed in Crook County Wildlife Policy 2.



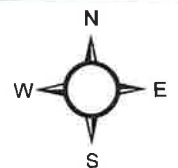
Craig Kilpatrick
Owner’s representative

EXHIBIT K - WILDLIFE RANGE DENSITY CALCULATION MAP



RUSSELL PROPERTY - CROOK COUNTY

T14S, R14E, Sec. 7 TL 100 - 33.03 ac.; TL 101 - 148.19 ac. SUBJECT; ---
 " " TL 102 - 26.57 ac.; TL 200 - 69.64 ac. SUBJECT ---



April 30, 2017
VXR LLC Density Study
Potential Development Density Equation (PDDE) Statement
Crook County EFU -1, West County Area

The applicant submits the following calculation data in order to determine the Potential Development Density Equation (PDDE) for existing parcel within a Crook County Wildlife Area (big game habitat).

1. One Mile Study Area – Wildlife Density Map – VXR LLC application identifies an area measured one mile from the existing single parcel which will include the entire area of both proposed parcels measuring a total of 80.43 acres. The Wildlife Density Map includes lands within Crook County and a smaller area within Deschutes County. The enclosed GIS map indicates a “One Mile Study Area” within Crook County of approximately 3,010 acres and within Deschutes County, an area of approximately 42.0 acres for a total of 3,067 acres. This total includes roads (approximately 15 acres). A portion of the one mile study area measuring approximately 2,368.18 acres is located within the Deer Wintering Area (in Crook County only). The applicant has subtracted a total of 126.04 acres from the study area that is either non-resource (54.18 acres, the RAC zone) or a committed area (71.86 acres in the 1972 Willard Estates Subdivision) leaving an area of **2,242.14 acres** for the purpose of this calculation. The study identifies 293.0 acres that are located within the Antelope area. The deer wintering area is the only area germane to this equation. See attached One Mile Study Area for PDDE.

2. The Density Calculation: The number of potential dwellings for the VXR LLC property Density Study is calculated as follows:

The total acreage for calculation in the one mile study area (only in Crook County) that is within the deer wintering area is approximately 2,242.14 acres including the subject parcel measuring 80.43 acres. County policy states that deer wintering areas located in the West County Area shall not have a density of more than one residence per 80 acres. There is no such requirement for the Antelope Range.

2,242.14 acres divided by 80 = 28.03 potential dwellings within Deer Wintering Area dwellings. Rounded down to the nearest whole number equals **28 potential dwellings**.

3. The Existing Dwellings Calculation: The next procedure is to determine the number of existing dwellings in the one mile study area that are also located within the Deer Wintering Area. A thorough examination of Crook County records/maps show that there are presently a total of 7 dwellings on the Wildlife Density Map located within the Deer Wintering Area.

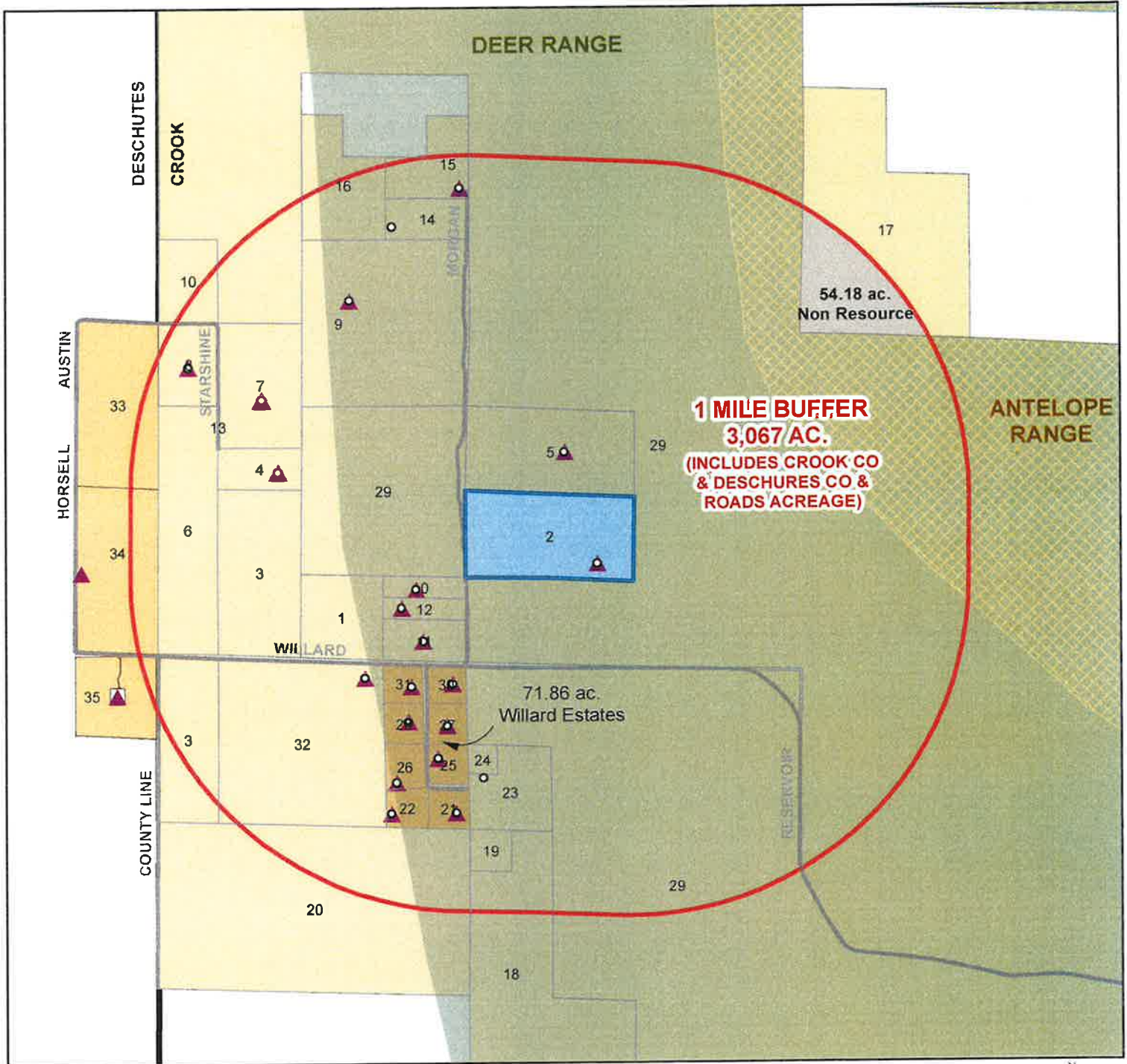
The total number of existing dwellings on parcels in the Study Area /Deer area:	7
The total number of potential non-farm dwellings including the subject:	11
The total number of potential dwellings on existing parcels:	3
The total number of potential dwellings on lots of record:	<u>1</u>
	Total: 22

22 total dwellings = 79% of the maximum allowable density of 28 dwellings.

This calculation and accompanying map exhibit meets the criteria expressed in Crook County Wildlife Policy. Note: There is no likely potential for farm dwellings within the deer range.

One Mile Study Area

Potential Development Density Equation (PDDE)



- VXR, LLC Property
- 1 Mile Study Area
- Crook Tax Lots in 1 mile study area
- Deschutes Tax Lots in 1 mile study area
- Antelope Ranges
- Deer Ranges
- Dwellings

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0 0.125 0.25 0.5 0.75 1 Miles



Date: 5/23/2017

VRX LLC PROPERTY
 17 15 (00) TL1101 - 80.43 ac.
 CROOK COUNTY, OREGON
 LOCATED IN ALFALFA AREA



January 22, 2018
Pearson Density Study
Potential Development Density Equation (PDDE) Statement
Crook County EFU -1

The applicant submits the following calculation data in order to determine the Potential Development Density Equation (PDDE) for existing parcel within a Crook County Wildlife Area (big game habitat).

1. One Mile Study Area – Wildlife Density Map – The Pearson application identifies an area measured one mile from the existing single parcel which will include the entire area proposed for a non-farm dwelling measuring 79.4 acres. The Wildlife Density Map includes lands only within Crook County. The enclosed GIS map indicates a “One Mile Study Area” within Crook County of approximately **3,042.89** acres. The entire one-mile study area is located within the General Deer Wintering Area. The applicant has subtracted a total of **232.94** acres from the study area that are in a committed 1962 subdivision, Juniper Acres leaving an area of **2,810.52** acres for the purpose of this calculation. The general deer wintering range is the only big game habitat area germane to this equation. See attached One Mile Study Area Map Exhibit for PDDE.

2. The Density Calculation: The number of potential dwellings for the Pearson property density study is calculated as follows:

The total acreage for calculation in the one-mile study area that is within the deer wintering area is approximately **2,810.52** acres including the subject parcel measuring 79.4 acres. County policy states that deer wintering areas located in the general deer wintering range shall not have a density of more than one residence per 80 acres.

2,810.52 acres divided by **80** = **35.13** potential dwellings within Deer Wintering Area dwellings. Rounded down to the nearest whole number equals **35 potential dwellings**.

3. The Existing Dwellings Calculation: The next procedure is to determine the number of existing dwellings in the one mile study area that are also located within the Deer Wintering Area. A thorough examination of Crook County records/maps show that there is presently a total of 2 dwellings on the Wildlife Density Map located within the General Deer Wintering Area.

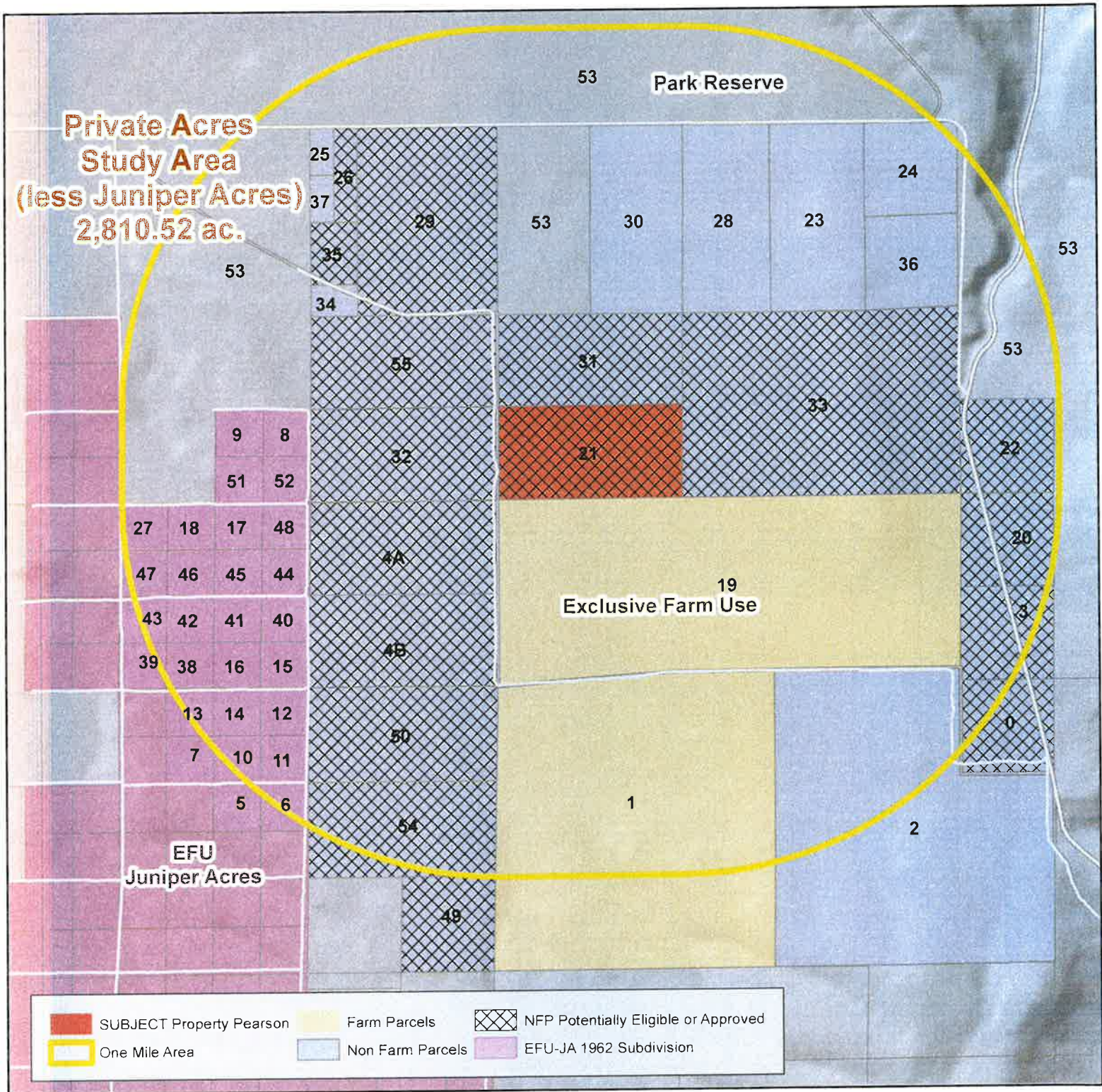
The total number of the applicable existing dwellings on parcels in the Study Area /General Deer Wintering Range, Non-farm Dwellings:	2
The total number of Vacant, Approved Non-Farm Dwellings	4
The total number of potential Non-farm dwellings on existing parcels:	6
The total number of Vested CUP for Non-farm dwellings:	1
The total number of Potential Non-Farm Dwellings on Parcel w Class 7 soils:	3
The total number of existing Farm dwellings:	1
The total number of potential Farm dwellings:	<u>1</u>
	Total: 18

18 total dwellings = 51% of the maximum allowable density of 35 potential dwellings.

This result meets the criteria expressed in Crook County Wildlife Policy 2 as determined by these calculations and illustrated by the accompanying map exhibit.

EXHIBIT F - ONE MILE STUDY AREA

Potential Development Density Equation (PDDE)



0 625 1,250 2,500 3,750 5,000 Feet

Note: This information is prepared for reference purposes only and should not be used, and is not intended for, survey or engineering purposes.



PEARSON PROPERTY

T17S, R16E, Sec (27) Tax Lot 1000 - 79.40 ac.

**Located in the Juniper Acres/Bear Creek area
Crook County, Oregon**

Kilpatrick
CONSULTING, LLC

LAND USE CONSULTING SERVICES
GIS MAPPING SERVICES

541.447.2724 OFFICE

April 20, 2020
Mason Density Study
Potential Development Density Equation (PDDE) Statement
Crook County EFU -1

The applicant submits the following calculation data in order to determine the Potential Development Density Equation (PDDE) for existing parcel within a Crook County Wildlife Area (big game habitat).

1. One Mile Study Area – Wildlife Density Map – The Mason application identifies an area measured one mile from the existing single parcel which will include the entire area proposed for a non-farm dwelling, a parcel measuring 80.0 acres. The Wildlife Density Map includes lands only within Crook County. The enclosed GIS map indicates a “One Mile Study Area” within Crook County of approximately **3,013.42** acres. The entire one-mile study area is located within the General Deer Wintering Area. The applicant has subtracted a total of **208.35** acres from the study area that are in a committed 1962 subdivision, Juniper Acres leaving an area of approximately **2,801.47** acres for the purpose of this calculation. The general deer wintering range is the only big game habitat area germane to this equation. See attached One Mile Study Area Map Exhibit for PDDE.

2. The Density Calculation: The number of potential dwellings for the Mason property density study is calculated as follows:

The total acreage for calculation in the one-mile study area that is within the deer wintering area is approximately **2,801.47** acres including the subject parcel measuring 80 acres. County policy states that deer wintering areas located in the general deer wintering range shall not have a density of more than one residence per 80 acres.

2,801.47 acres divided by **80** = **35.01** potential dwellings within Deer Wintering Area dwellings. Rounded down to the nearest whole number equals **35 allowable dwellings**.

3. The Existing Dwellings Calculation: The next procedure is to determine the number of existing dwellings in the one-mile study area that are also located within the Deer Wintering Area. A thorough examination of Crook County records/maps show that there is presently a total of **11** dwellings on the Wildlife Density Map located within the General Deer Wintering Area.

The total number of the applicable existing dwellings on parcels in the Study Area /General Deer Wintering Range:

The total number of Non-farm Dwellings:	10
The total number of Vacant, Approved Non-Farm Dwellings	0
The total number of potential Non-farm dwellings on existing parcels:	11
The total number of Vested CUP for Non-farm dwellings:	0
The total number of potential Lot of Record dwellings	7
The total number of existing Farm dwellings:	2
The total number of potential Farm dwellings:	1

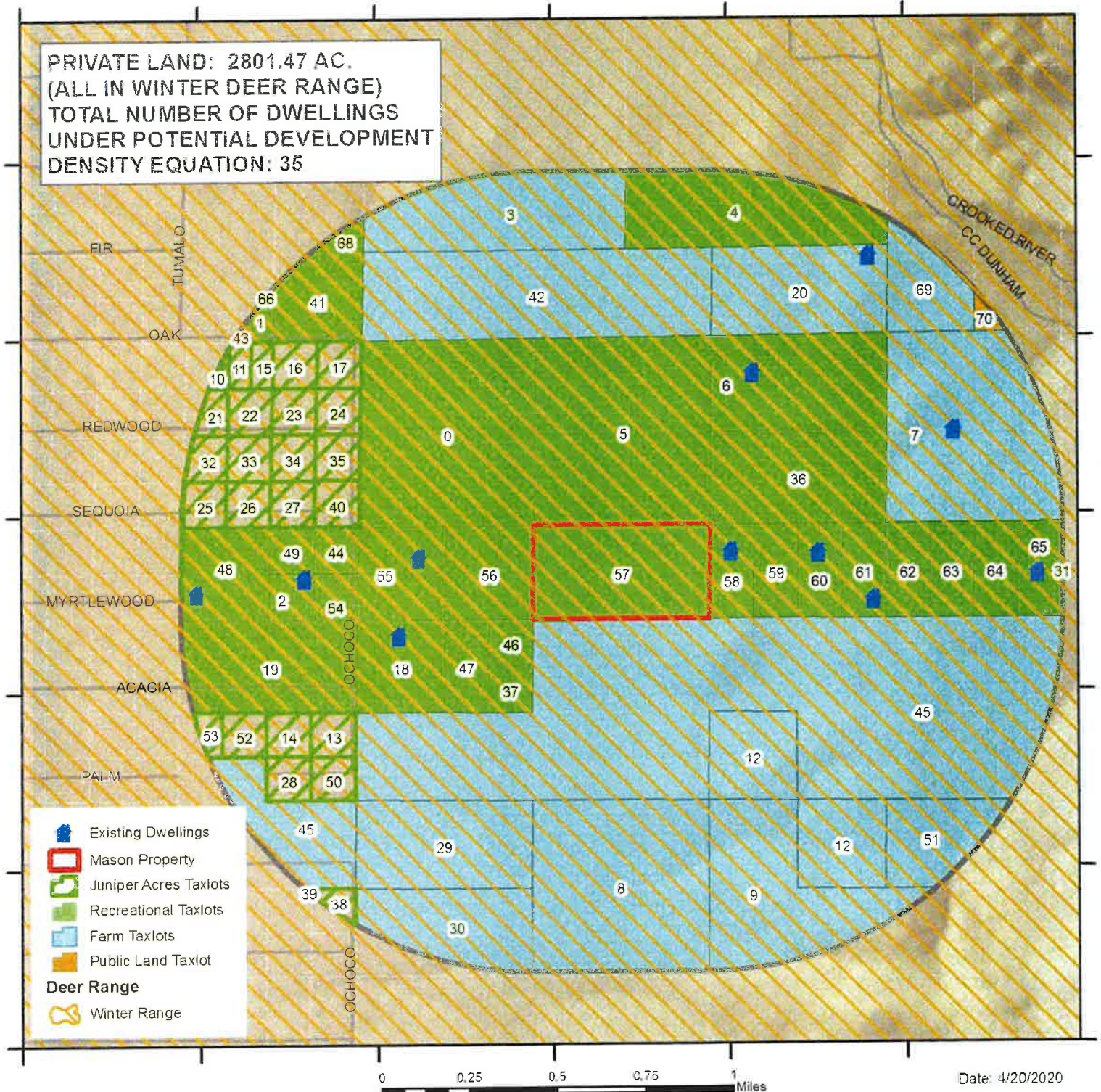
Total: 31

31 total dwellings = 89% of the maximum allowable density of 35 potential dwellings.

This result meets the criteria expressed in Crook County Wildlife Policy 2 as determined by these calculations and illustrated by the accompanying map exhibit.

EXHIBIT F - ONE MILE STUDY AREA

Potential Development Density Equation (PDDE)



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MASON PROPERTY

1816000000403 - 80.00 ac.
Located east of Juniper Acres in EFU 1
Crook County, Oregon

Kilpatrick
CONSULTING, LLC

LAND USE CONSULTING SERVICES
GIS MAPPING SERVICES

OFFICE:
541.447.2724

July 19, 2021
Pieratt Density Study
Potential Development Density Equation (PDDE) Statement
Crook County EFU -1

The applicant submits the following calculation data in order to determine the Potential Development Density Equation (PDDE) for existing parcel within a Crook County Wildlife Area (big game habitat).

1. One Mile Study Area – Wildlife Density Map – The Pieratt application identifies an area measured one mile from the existing single parcel which will include the entire area proposed for two non-farm dwellings, a parcel measuring 640.0 acres. The Wildlife Density Map includes lands only within Crook County. The enclosed GIS map indicates a “One Mile Study Area” within Crook County of approximately 4,870.83 excluding acres in Juniper Acres (JA) zone. The entire one-mile study area is located within the General Deer Wintering Area. The general deer wintering range is the only big game habitat area germane to this equation. There are 906.13 privately owned EFU-1 acres within the one-mile study area. There are 345.51-acres located in the JA – Juniper Acres zone, a non-resource zone, those acres are not counted for the purposes of this study. See attached One Mile Study Area Map Exhibit for PDDE.

2. The Density Calculation: The number of potential dwellings for the Pieratt property density study is calculated as follows:

The total acreage for calculation in the one-mile study area that is within the deer wintering area is approximately **4,870.83** acres including the subject parcel measuring 640 acres. County policy states that deer wintering areas located in the general deer wintering range shall not have a density of more than one residence per 80 acres.

4,870.83 acres divided by **80** = **60.89** potential dwellings within Deer Wintering Area dwellings. Rounded down to the nearest whole number equals **60 allowable dwellings**.

3. The Existing Dwellings Calculation: The next procedure is to determine the number of existing dwellings in the one-mile study area that are also located within the Deer Wintering Area. A thorough examination of Crook County records/maps show that there is presently a total of zero (**3**) dwellings on the Wildlife Density Map located within the General Deer Wintering Area.

The total number of the applicable existing dwellings on parcels in the Study Area /General Deer Wintering Range:

The total number of Non-farm Dwellings:	1
The total number of Vacant, Approved Non-farm Dwellings	0
The total number of potential Non-farm dwellings on existing parcels:	1
The total number of proposed Non-farm dwellings on proposed parcels	2, subject
The total number of Vested CUP for Non-farm dwellings:	0
The total number of potential Lot of Record dwellings	0
The total number of existing Farm dwellings:	2
The total number of potential Farm dwellings:	1
Total:	7

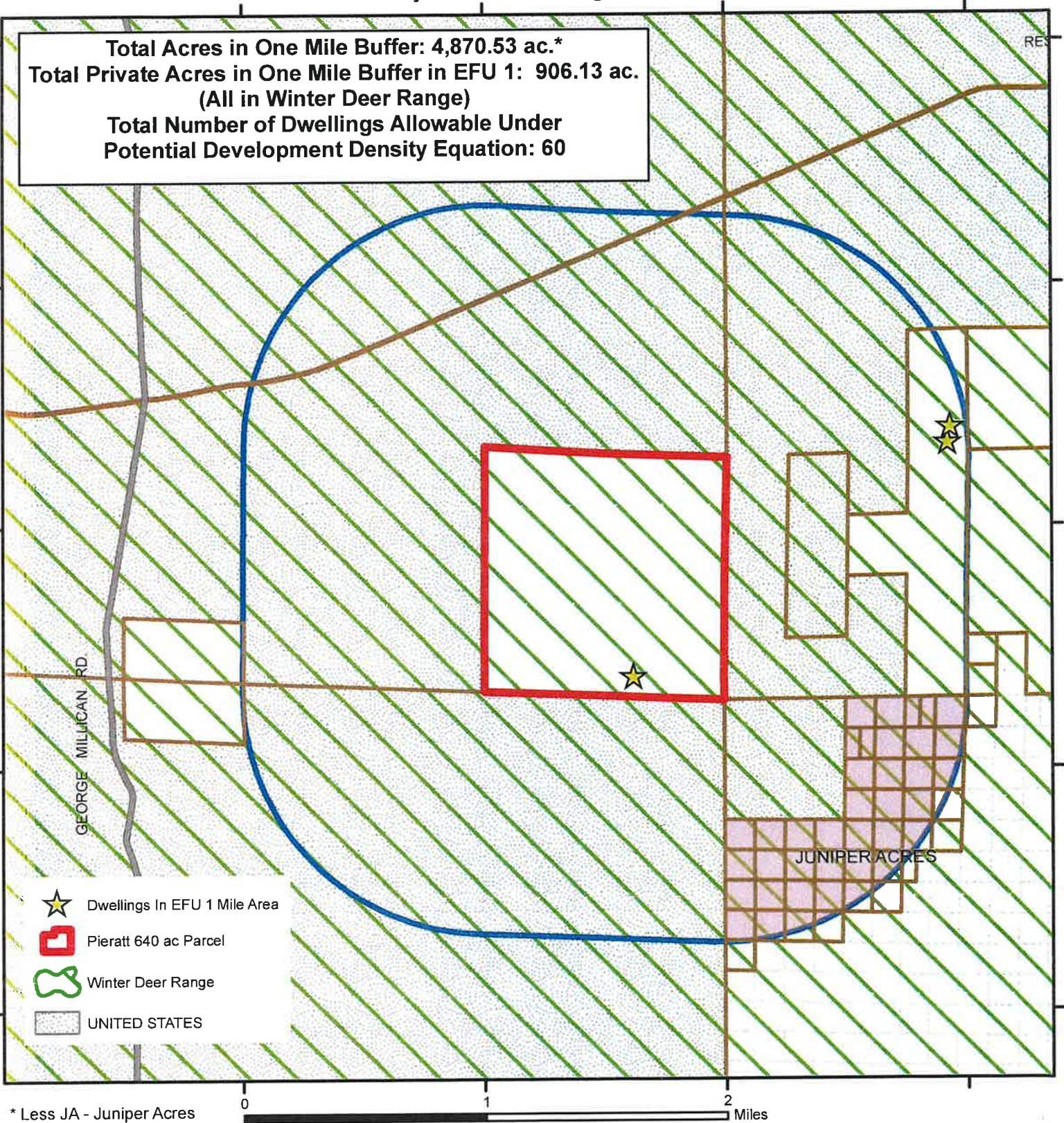
7 total dwellings = 12% of the maximum allowable density of 60 potential dwellings.

This result meets the criteria expressed in Crook County Wildlife Policy 2 as determined by these calculations and illustrated by the accompanying map exhibit.

EXHIBIT G - POTENTIAL DEVELOPMENT DENSITY EQUATION (PDDE)

One Mile Study Area with Existing Dwellings in EFU-1

Total Acres in One Mile Buffer: 4,870.53 ac.*
Total Private Acres in One Mile Buffer in EFU 1: 906.13 ac.
(All in Winter Deer Range)
Total Number of Dwellings Allowable Under
Potential Development Density Equation: 60



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CURT PIERATT
1715000002000 640.00 AC.
2500 SW RESERVIOR RD
PROP CLASS - 809
RECREATIONAL MANUF.

Kilpatrick
CONSULTING, LLC

LAND USE CONSULTING SERVICES
GIS MAPPING SERVICES

OFFICE:
541.447.2724

From: Robin Hayakawa <robin@colw.org>
Sent: Tuesday, July 15, 2025 9:45 AM
To: Plan <plan@crookcountyor.gov>
Subject: Application File No. 217-25-000233-PLNG - Inadequate Wildlife Density Study

Hi Crook County,

Central Oregon LandWatch is concerned that the above-referenced application fails to meet the approval criteria for a nonfarm dwelling in Crook County's General Deer Winter Range. Specifically, the application appears to conflict with Crook County Comprehensive Plan Wildlife Policy 2, which limits residential density within this range to no more than one dwelling per 80 acres.

We note that the Applicant's Wildlife Density Study improperly excludes dozens of properties zoned Exclusive Farm Use - Juniper Acres (EFU-JA). This exclusion is not justified. Wildlife Policy 2 applies to dwellings within the EFU-1 and EFU-JA zones. See CCC 18.112.051 Wildlife Policy Applicability, which states:

"All new nonfarm dwellings on existing parcels within the deer and elk winter ranges must meet the residential density limitations found in Wildlife Policy 2 of the Crook County Comprehensive Plan."

This is significant because numerous EFU-JA parcels within the Applicant's study area are already developed with dwellings. Below are examples of EFU-JA zoned properties containing dwellings that should have been accounted for in the density study.

1. Map/Taxlot 1816040004000
2. Map/Taxlot 1816040004800
3. Map/Taxlot 1816090000600
4. Map/Taxlot 1816040003300
5. Map/Taxlot 1816040004300

This list is far from exhaustive. Overall, the density of dwellings in proximity to the subject property appears to already exceed the limits set by Wildlife Policy 2. Without an accurate and complete density study that includes all EFU-JA properties within one mile of the subject property, this application should be deemed incomplete or denied.

Thank you for considering these comments. Please notify us of any further decisions, hearings, or opportunities to comment on this application. Our address is:

Central Oregon LandWatch
2843 NW Lolo Dr., Suite 200
Bend, OR 97703

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Robin Hayakawa
Associate Staff Attorney
Central Oregon LandWatch
2843 NW Lolo Dr. Ste. 200, Bend, OR 97703
541-647-2930 x807 | robin@colw.org