ECONOMIC OPPORTUNITIES ANALYSES

FOR THE CITIES OF GRASS VALLEY, MORO, RUFUS, AND WASCO IN SHERMAN COUNTY, OREGON

JUNE 2019

Prepared for the
Oregon Department of Land Conservation and Development

ANDERSON PERRY & ASSOCIATES, INC.
La Grande, Redmond, and Hermiston, Oregon
Walla Walla, Washington

and

FCS GROUP
Lake Oswego, Oregon

anderson perry

1901 N. Fir Street, La Grande, Oregon
214 E. Birch Street, Walla Walla, Washington
2659 S.W. 4th Street, Suite 200, Redmond, Oregon

ECONOMIC OPPORTUNITIES ANALYSES

FOR THE CITIES OF GRASS VALLEY, MORO, RUFUS, AND WASCO IN SHERMAN COUNTY, OREGON

JUNE 2019

FINAL DRAFT

ANDERSON PERRY & ASSOCIATES, INC.
La Grande, Redmond, and Hermiston, Oregon
Walla Walla, Washington

and

FCS GROUP
Lake Oswego, Oregon

 Job No. 631-01

Table of Contents

TABLES

FIGURES

APPENDIX

Executive Summary

In 2018, the Oregon Department of Land Conservation and Development (DLCD) received $300,000 from the Oregon Legislature via House Bill (HB) 5201 for economic development planning assistance "for the purpose of providing technical assistance grants to eastern Oregon counties for economic opportunity analyses (EOAs)." The purpose of an EOA is to ensure that a city will have an adequate available land supply to support economic growth. An EOA includes analysis of local and regional economic trends, evaluation of the community's opportunities and barriers to economic growth, and a determination of the types and amounts of land and infrastructure needed to support expected employment. Implementation of HB 5201 by DLCD became known as the Eastern Oregon Economic Development Project. Cities and counties were invited to apply for technical assistance, and in August 2018, Sherman County and the Cities of Grass Valley, Moro, Rufus, and Wasco were selected to receive funding assistance. Locally, the project was referred to as the Sherman County and Cities EOA Project. Because EOAs apply only to areas within cities' urban growth boundaries (UGB), Sherman County served a coordinating role for the cities in this project.

Anderson Perry & Associates, Inc. (AP) was selected as the consultant to provide technical planning assistance for the Sherman County and Cities EOA Project. AP subcontracted with FCS GROUP to prepare the local, regional, state, and national economic trends and site needs analysis portion of the project, which can be found in Section 2.0 of this report and in the Appendix. Based on these trends, FCS GROUP found the following industries offered the cities in Sherman County their best opportunities to target new businesses or to support expansion of existing businesses: value-added agriculture and light manufacturing; renewable energy; tourism and recreation; highway commercial; construction; and home-based businesses. Site needs, or the types and amounts of land needed by each city to accommodate projected growth and expansion of businesses associated with these target industries for the 20-year planning period, from 2019 to 2039, were identified for each city. These site needs became the basis for determining, after a review of the existing supply of vacant buildable and redevelopable employment-type lands within each city's UGB, whether each city is expected to have a sufficient land supply to meet these industry needs as discussed in Section 3.0 of this report.

Based on the information and analyses contained in Sections 2.0 and 3.0 of this report, Section 4.0 sets out to reconcile whether each city is expected to have an adequate buildable land supply within its UGB that can accommodate projected growth and expansion for the target industries. The City of Grass Valley was found to have a shortage of both commercial and industrial land to meet its projected land supply needs. AP found that Moro is expected to have a surplus of commercial land but a shortage of industrial land. Rufus and Wasco are both anticipated to have surpluses of commercial and industrial land within their UGBs during the 20-year planning period. The Cities of Grass Valley and Moro will need to identify and provide additional land supplies to address their deficiencies to comply with Oregon land use planning laws under Oregon Administrative Rules Chapter 660, Division 024.

An assessment of community economic development potential for each city based on community strengths and locational factors in relation to each of the target industries is also contained in Section 4.0. All of the cities in Sherman County discussed in this report have potential to benefit from businesses or industries associated with value-added agriculture and light manufacturing, especially light manufacturing or processing that involves adding value to agricultural products produced in Sherman County and the region. Hemp and hemp-related products may provide especially promising

opportunities for Sherman County and any one or more of its cities. Wind farms remain a strong industry, and solar farms appear to be a growing industry in the County. The challenge for the cities in Sherman County will be determining how to tap into these industries. Construction and maintenance of these facilities will continue to contribute to each of the cities' economies whether directly or indirectly through support activities. Recreational assets in the County and region, such as the Deschutes River, John Day River, Columbia River, Cottonwood Canyon, and Oregon Raceway Park, provide attractions for boating, fishing, camping, windsurfing, racing, sightseeing, and other recreational activities that should provide opportunities for new or existing businesses in the tourism, recreation, and highway commercial industries.

Factors that tend to affect economic development in small cities in eastern Oregon, both positively and negatively, are briefly discussed for each city in Section 4.0 of this report. These factors include environment and topography; location and lot sizes; access and public services; public water, wastewater, and storm drainage system capacities; ownership (of vacant buildable land supply); workforce housing; fiber optic broadband; and climate change. Grass Valley lacks a public wastewater system, which is the City's most limiting factor for economic development. Significant portions of Grass Valley's commercial and industrial lands are located with the flood zone and the City has acknowledged its desire to identify areas outside the flood zone to meet its commercial and industrial land needs. Rufus has had to invest more than anticipated to extend water, sewer, and other utilities to its industrial park due to the topographical constraint of bedrock near the surface. All cities in Sherman County expressed concern that a severe shortage of workforce housing in the region is a limiting factor for new businesses looking to locate in the area. On the bright side, each of the cities and the County have worked to bring high-speed fiber optic cable to the communities, which is vital to attracting new businesses and helping existing businesses to expand.

Throughout the entire planning process, advisory committee and public meetings were held to review information and analyses provided by AP and FCS GROUP. Feedback from these meetings helped ensure that issues important to each community were addressed and assure a reasonable level of accuracy in the information provided to guide policy development.

Amendments to each city's Comprehensive Land Use Plan policies are recommended in Section 5.0 of this report and are intended to help each city implement its economic development plan. Recommended objectives and strategies are also included to help guide specific actions and provide measures for implementation of certain economic development policies.

Section 1.0 - Introduction

1.1 Project Background and Purpose

The economic recovery after the downturn of 2008-09 has not lifted in all regions of Oregon. Portions of eastern Oregon have not experienced the level of growth in jobs and trade seen in many other parts of the state. At the same time, many of the local governments in this region have not had adequate financial and human resources to keep their comprehensive land use plans current, leading to possible missed opportunities because a community was not ready for development.

The Oregon Department of Land Conservation and Development (DLCD) contracted with Anderson Perry & Associates, Inc. (AP) to develop Economic Opportunities Analyses (EOAs) as part of the DLCD's Eastern Oregon Economic Development project. This project provided assistance to update economic development plans for cities in Sherman County, which experienced lagging growth in population and employment. The cities of Grass Valley, Moro, Rufus, and Wasco are hereby provided with updated EOAs in accordance with Oregon Administrative Rules (OAR) 660-009-0015. DLCD staff will work with the leadership of each city to support adoption of the updated analyses and associated policies into each city's and Sherman County's comprehensive plans following completion of this project.

1.2 Organization of Report

This EOA report is divided into five main sections with an Executive Summary. Specifically, the EOA report includes the following:

Section 1 - Introduction provides a brief overview of the background and purpose for the project, organization of the report, and the objectives each EOA is intended to meet.

Section 2 - Emerging Market Trends, prepared by FCS GROUP under contract with AP, identifies major categories of industrial or other employment uses that could reasonably be expected to locate or expand in each planning area based on information about national, state, regional, county, or local economic trends. This review of trends is the principal basis for estimating future industrial and other employment uses. The number of sites by type reasonably expected to be needed to accommodate expected employment growth is projected based on site characteristics typical of expected uses.

Section 3 - Buildable Employment Land Inventories develops inventories of vacant and redevelopable lands within the planning area of each city designated for industrial or other employment use in accordance with OAR 660-009-0015(3).

Section 4 - Economic Opportunities conducts an assessment of Community Economic Development Potential for each city as described in OAR 660-009-0015(4). Draft assessments, summaries of trends, and inventory information were presented to the local advisory committee for review and feedback, and to the communities at a coordinated public meeting. Reviews from these meetings were incorporated into the draft EOAs.

Section 5 - Draft Economic Policy Recommendations provides recommended economic policies, objectives, and strategies for each city to consider adopting to address barriers to economic development and guide city economic development efforts.

1.3 Objectives

The EOAs prepared in this report are intended to meet the following objectives:

1. Develop economic trends analyses upon which to identify target industries. Target industries should offer each city in Sherman County the best opportunities upon which to focus their economic development efforts to attract new businesses and expand existing businesses.
2. Identify site requirement needs for the types of businesses associated with target industries likely to locate in the planning area for each city.
3. Develop a Buildable Employment Lands Inventory for each city to assess whether the current available employment land supply is sufficient to meet the site requirement needs for projected new development during the 20-year planning period.
4. Reconcile projected employment land needs with available land supply. Where land supply is found to be deficient, a city will need to conduct further research and analysis to acquire the additional needed employment land, whether by rezoning land currently in the city's urban growth boundary (UGB) or expanding the UGB.
5. Provide an assessment of community economic development potential based on information from each of the above objectives and from environmental, location, or other development factors that create distinct advantages or disadvantages to economic development efforts.

Section 2.0 - Emerging Market Trends

2.1 Introduction

Information about emerging market trends was prepared by FCS GROUP under contract with Anderson Perry & Associates, Inc. (AP). FCS GROUP identified the major categories of industrial and other employment uses ("target industries") that could reasonably be expected to locate or expand in the planning area for each city based on information about national, state, regional, county, or local trends. FCS GROUP's review of these trends is the principal basis for estimates of future industrial and other employment uses. A use or category of use could reasonably be expected to expand or locate in a city's planning area if the area possesses the appropriate locational factors for the use or category of use. FCS GROUP analyzed trends and established employment projections to determine the percentage of employment growth reasonably expected to be captured within each city's planning area.

Based on FCS GROUP's analysis and discussion with local advisory committee members, the following target industries form the basis from which the top five target industries were attributed to Sherman County and the Cities of Grass Valley, Moro, Rufus, and Wasco:

- Value-added Agriculture/ Light Manufacturing
- Renewable Energy
- Tourism and Recreation
- Highway Commercial
- Home-based Businesses
- Construction

FCS GROUP further identified the number of sites by type reasonably expected to be needed to accommodate employment growth for each city based on the site characteristics typical of projected uses by examining existing firms in the planning areas to identify the types of sites that may be needed for expansion. Industrial or other employment uses with compatible site characteristics may be grouped together into common site categories. FCS GROUP found the projected site types and 20-year land demand for each city in Sherman County as follows:

City of Grass Valley projected site types and 20-year land demand:

- Industrial Site Requirements: Four 2-acre sites
- Commercial Site Requirements: Flex buildings* on 2 acres
- Other Site Requirements: Home-based businesses

City of Moro projected site types and 20-year land demand:

- Industrial Site Requirements: Five 2-acre sites and one 4-acre site
- Commercial Site Requirements: Flex buildings* on 4 acres
- Other Site Requirements: Home-based businesses

City of Rufus projected site types and 20-year land demand:

- Industrial Site Requirements: Four 2-acre sites
- Commercial Site Requirements: Flex buildings* on 2 acres
- Other Site Requirements: Home-based businesses

City of Wasco projected site types and 20-year land demand:

- Industrial Site Requirements: Four 2-acre sites and two 4-acre sites
- Commercial Site Requirements: Flex buildings* on 4 acres
- Other Site Requirements: Home-based businesses

** Flex buildings are existing or new buildings that offer flexibility for businesses to economically reconfigure their interiors for space in ways that best suit their needs. See Section 4.5 under the Summary of Site Requirements for each city.*

The above site types and requirements identified for each city are used together with the current employment land supplies found in Sections 3.1 to 3.4 in reconciling demand for employment land for each city for the 20-year planning period, as determined in Section 4.5. AP led a discussion of each of these findings with the cities at advisory committee meeting No. 2 and at the public meetings.

Please refer to the Appendix of this report for the *Cities of Sherman County, Economic Opportunities Analysis Market Report & Site Requirements,* prepared by FCS GROUP, for a detailed review and analysis of market trends and site requirements for the four cities in Sherman County.

Section 3.0 - Buildable Employment Land Inventories

3.1 Introduction

This section presents data and information pertaining to each of Grass Valley's, Moro's, Rufus's, and Wasco's employment land supply based on current comprehensive plan and zoning designations within the planning area for each city. Employment lands consist of those properties included in each city's commercial and industrial zones. For each city, the planning area is defined as all land with the city limits and urban growth boundary (UGB). Maps of employment lands created using Esri's ArcGIS are presented showing each city's vacant, developed, and redevelopable commercial and industrial land supplies, along with tables identifying individual tax lots included in the Buildable Land Inventories (BLIs).

3.2 Purpose of Buildable Land Supply

The purpose of the BLI for employment lands for the cities in Sherman County is to identify the types, sizes, and total amount of vacant and redevelopable industrial, commercial, or other employment-type land within each city's UGB. This information is used in Section 4, along with the employment land needs identified in Section 2, to reconcile whether reasonably sufficient land is available in each city to accommodate projected economic expansion and growth over the designated 20-year planning period, from 2019 to 2039.

3.3 Oregon Regulatory Requirements for Buildable Employment Land Inventories

The requirement to include an inventory of vacant and redevelopable industrial and other employment lands when conducting an Economic Opportunities Analysis is contained under Oregon Administrative Rules (OAR) 660-009-0015(3). An inventory is required to include a description of the site characteristics of vacant or developed sites within each industrial, commercial, or other zoning district that provide significant employment opportunities. While OAR 660-009-0015(3)(a) indicates "vacant and developed" sites, the definition of "developed land" under OAR 660-009-0005 clearly refers to non-vacant industrial and employment-type lands that are likely to be *redeveloped* within the 20-year planning period. The term "redevelopable" is used, therefore, to refer to such lands to minimize the potential for confusion. Non-vacant employment lands *not* likely to be redeveloped within the 20-year planning period are discussed herein as "developed" along with "vacant" and "redevelopable" employment lands to provide a more wholistic view of each city's employment land supply. The BLIs further take into account lands that have one or more "development constraints" associated with them, as that term is defined under OAR 660-009-0005(2).

3.4 Employment Lands Mapping Methodology

Using ArcGIS, Anderson Perry & Associates, Inc. (AP) created a tax lot-based GIS map of employment-type lands within each city's UGB from GIS shapefiles with associated assessor's data obtained from the Sherman County Assessor's Office. Each city in Sherman County adopted its current Comprehensive Plan Map/Zoning Map in 2007 and these were used as the starting points for identifying all properties with zoning intended to accommodate economic development. The 2007 Comprehensive Plan Map/Zoning

Map for each city shows that their respective UGBs are coterminous with their city limits. Each city maintains a single Commercial zone and a single Industrial zone. No other employment-type zoning designations were identified for any of the cities.[1] Zoning designations for each city in Sherman County are the same as their Comprehensive Plan Map designations.

AP then incorporated known plan amendment/zone changes approved by each city since adoption of their respective Comprehensive Plan Map/Zoning Map to reflect the most up-to-date GIS employment lands maps possible. Road areas contained within the employment-type zones were then removed from the GIS data layer to reflect a more accurate land supply within each zone.

3.4.1 Determination of Developed, Vacant, and Redevelopable Employment Lands

Once the tax lot-based GIS maps were determined to be accurate by each city, AP analyzed the County Assessor's data associated with each tax lot.[2] Using the County Assessor's data, AP used the standard assessment model comparing real market improvement value (RMIV) to real market land value (RMLV) for each tax lot as a first step in determining whether each tax lot was vacant, developed, or redevelopable. Where the RMIV was shown as zero dollars compared to the RMLV, the tax lots were considered vacant. Where the RMIV was shown as greater than the RMLV, the property was considered to be developed. In those cases where the RMIV was greater than zero but less than the RMLV, the tax lot was considered redevelopable. In a few cases where lots were developed but still contained significant vacant area suitable for new development, the vacant area was added to the vacant lands inventory. If a tax lot was developed but still contained significant vacant area suitable for new development, the vacant area was added to the vacant lands inventory.

In a few cases, the RMIV was low (generally less than $15,000) and only slightly more than the RMLV. In these cases, additional consideration was given to the nature of the existing use and whether the use seemed likely to be redeveloped during the 20-year planning period. As an example, a few existing dwellings, primarily older mobile homes, on commercially zoned lots fit this description. If the tax lot appeared to be greatly underdeveloped compared to the commercial or industrial uses permitted in the zone, then the tax lot was classified as redevelopable rather than developed.

Draft iterations of the BLI maps were reviewed by a local advisory committee through a series of meetings, and by the public through a public meeting held on March 20, 2019. The final BLI maps reflect changes from these meetings.

[1] The Task 2 Economic Trends Analysis identified home-based businesses as a potential economic strategy. Home occupations tend to be permitted as conditional uses in residential zones; however, residential zones are not considered employment-type zones. Some consideration should be given to each city's policies and home occupation standards for how best to address home-based businesses.

[2] It should be noted that tax lot sizes reflected in the County Assessor's GIS shapefiles tend to differ from those shown on County Assessor paper maps.

3.5 City of Grass Valley Buildable Employment Land Inventory

Figure 3-1 shows all of the Commercial and Industrial lands within Grass Valley as developed, redevelopable, or vacant.

Based on the lot size values contained in the GIS data layer for the BLI map, the total area for each of Grass Valley's employment lands is as follows:

- Commercial (C) Zone - 4.89 acres
- Commercial-Industrial (C-I) Zone - 19.08 acres

From the final draft BLI map, an inventory and total acres of only the vacant and redevelopable employment lands by individual tax lot was created in an Excel table for further analysis of lot sizes and "development constraints," as that term is defined in OAR 660-009-0050(2),[3] such as flood zones, wetlands, steep slopes, or other environmental or topographical factors. As shown on Table 3-1, each tax lot was reviewed based on these factors to assess its suitability for meeting projected employment land needs for the 20-year planning period. Like the final draft BLI map for Grass Valley, Table 3-1 incorporates changes from the local advisory committee and public meetings.

TABLE 3-1
GRASS VALLEY COMMERCIAL AND INDUSTRIAL BUILDABLE LANDS INVENTORY BY TAX LOT

GRASS VALLEY COMMERCIAL LANDS INVENTORY									
Map (T-R-S)	Tax Lot	Zone	Category	Gross Vacant Acres	Environmental or Physical Development Constraint	Minus Constrained Vacant Area	Net Buildable Vacant Acres	Plus Redevelop-able Acres	Total Buildable Acres
02S1626CD	4000	C	Redevelopable					0.14	0.14
02S1626CD	3700	C	Partially Vacant	0.50	Flood Zone A		0.50		0.50
02S1626CD	1000	C	Vacant	0.28			0.28		0.28
02S1626CD	2700	C	Vacant	0.20			0.20		0.20
02S1626CD	3000	C	Constrained	0.06	Flood Zone A	0.06			
02S1626CD	3100	C	Constrained	0.06	Flood Zone A	0.06			
02S1626CD	3200	C	Constrained	0.07	Flood Zone A	0.07			
02S1626CD	3300	C	Constrained	0.07	Flood Zone A	0.07			
02S1626CD	3400	C	Constrained	0.07	Flood Zone A	0.07			
Total Commercial Acres				**1.31**		**0.33**	**0.98**	**0.14**	**1.12**

[3] Under OAR 660-009-0005(2) vacant land that is constrained has one or more factors associated that temporarily or permanently limit or prevent use of the land for economic development. Development constraints include, but are not limited to, wetlands, environmentally sensitive areas such as habitat, environmental contamination, slope, topography, cultural and archeological resources, infrastructure deficiencies, parcel fragmentation, or natural hazard areas.

GRASS VALLEY INDUSTRIAL LANDS INVENTORY									
Map (T-R-S)	Tax Lot	Zone	Category	Gross Vacant Acres	Environmental or Physical Development Constraint	Minus Constrained Vacant Area	Net Buildable Vacant Acres	Plus Redevelop-able Acres	Total Buildable Acres
02S1635BB	3600	C-I	Redevelopable		Residence			0.96	0.96
02S1635BC	1300	C-I	Redevelopable		Residence			1.43	1.43
02S1635BC	2900	C-I	Redevelopable					0.57	0.57
02S1635BC	3000	C-I	Redevelopable					0.90	0.90
02S1635BC	3100	C-I	Redevelopable					0.31	0.31
02S1635BB	2200	C-I	Vacant	0.35			0.35		0.35
02S1635BC	500	C-I	Vacant	0.35			0.35		0.35
02S1635BC	2000	C-I	Vacant	1.57			1.57		1.57
02S1635BC	2200	C-I	Vacant	0.44			0.44		0.44
02S1635BB	2800	C-I	Constrained	0.30	Flood Zone A	0.30			
02S1635BB	2901	C-I	Constrained	0.62	Flood Zone A	0.62			
02S1635BC	600	C-I	Constrained	0.71	Flood Zone A	0.71			
02S1635BC	700	C-I	Constrained	0.72	Flood Zone A	0.72			
Total Commercial-Industrial Acres				**5.07**		**2.05**	**2.72**	**4.17**	**6.89**

T-R-S = Township-Range-Section

Table compiled from information provided by Sherman County.

As shown on Table 3-1, Grass Valley has 1.31 acres in the Commercial zone that are vacant, 0.33 acre that is constrained for development, and 0.14 acre that is redevelopable, leaving Grass Valley with a total of 1.12 buildable acres in its Commercial zone.

Table 3-1 shows Grass Valley with 5.07 vacant acres in its Commercial-Industrial zone, 2.05 acres that are constrained for development, and 4.17 acres that are redevelopable, leaving Grass Valley with a total of 6.89 buildable acres in the Commercial-Industrial zone. At a city council meeting on April 1, 2019, the Grass Valley City Council discussed the effect of the flood zone on vacant employment lands and decided that commercial and industrial lands in a flood zone should be removed from the BLI.

3.6 City of Moro Buildable Employment Land Inventory

Figure 3-2 shows all of the Commercial and Industrial lands within Moro as developed, redevelopable, or vacant.

Based on the lot size values contained in the GIS data layer for the BLI map, the total area for each of Moro's employment lands is as follows:

- Commercial (C) Zone - 28.57 acres
- Industrial (M) Zone - 29.06 acres

From the final draft BLI map, an inventory and total acres of only the vacant and redevelopable employment lands by individual tax lot was created for further analysis of lot sizes and "development constraints," as that term is defined in OAR 660-009-0050(2), [4] such as flood zones, wetlands, steep

[4] Under OAR 660-009-0005(2) vacant land that is constrained has one or more factors associated that temporarily or permanently limit or prevent use of the land for economic development. Development constraints include, but

slopes, or other environmental or topographical factors. As shown on Table 3-2 below, each tax lot was reviewed based on these factors to assess its suitability for meeting projected employment land needs for the 20-year planning period. It is important to note that the City of Moro does not have a mapped floodplain by the Federal Emergency Management Agency, so no constraint assessment could be made with regard to potential flooding. Like the final draft BLI map for Moro, Table 3-2 incorporates changes from the local advisory committee and public meetings.

TABLE 3-2
MORO COMMERCIAL AND INDUSTRIAL BUILDABLE LANDS INVENTORY BY TAX LOT

MORO COMMERCIAL LANDS INVENTORY

Map (T-R-S)	Tax Lot	Zone	Category	Gross Vacant Acres	Environmental or Physical Development Constraint	Minus Constrained Vacant Area	Net Buildable Vacant Acres	Plus Redevelop-able Acres	Total Buildable Acres
01S1717BC	1400	C	Redevelopable		Single-wide Manufactured Home			0.27	0.27
01S1717BC	1501	C	Redevelopable					0.55	0.55
01S1718AD	7300	C	Redevelopable					0.15	0.15
01S1718AD	7400	C	Redevelopable					0.23	0.23
01S1718AD	8400	C	Redevelopable					0.57	0.57
01S1718AD	9000	C	Redevelopable					0.20	0.20
01S1718AD	9200	C	Redevelopable					0.12	0.12
01S1717BC	1500	C	Vacant	6.00			6.00		6.00
01S1718AD	6500	C	Vacant	0.06			0.06		0.06
01S1718AD	8100	C	Vacant	0.23			0.23		0.23
01S1718AD	8501	C	Vacant	0.56			0.56		0.56
01S1718AD	9100	C	Vacant	0.12			0.12		0.12
01S1718AD	9101	C	Vacant	0.11			0.11		0.11
01S1718AD	9400	C	Vacant	0.13			0.13		0.13
01S1718AD	9600	C	Vacant	0.46			0.46		0.46
01S1718AD	10602	C	Vacant	0.15			0.15		0.15
01S1718DB	500	C	Vacant	1.29			1.29		1.29
01S1718DB	500	C	Vacant	5.29			5.29		5.29
01S1718DA	701	C	Constrained	0.06	Lot Across Intersection	0.06			
Total Commercial Acres				**14.46**		**0.06**	**14.40**	**2.09**	**16.49**

MORO INDUSTRIAL LANDS INVENTORY

Map (T-R-S)	Tax Lot	Zone	Category	Gross Vacant Acres	Environmental or Physical Development Constraint	Minus Constrained Vacant Area	Net Buildable Vacant Acres	Plus Redevelop-able Acres	Total Buildable Acres
01S171800	400	M	Vacant	12.59			12.59		12.59
01S1718AB	301	M	Vacant	0.56	Mis-zoned?	0.56			
Total Industrial Acres				**13.15**		**0.56**	**12.59**		**12.59**

Table compiled from information provided by Sherman County.

are not limited to, wetlands, environmentally sensitive areas such as habitat, environmental contamination, slope, topography, cultural and archeological resources, infrastructure deficiencies, parcel fragmentation, or natural hazard areas.

As shown on Table 3-2, Moro has 14.46 acres in the Commercial zone that are vacant, 0.06 acre that is constrained for development, and 2.09 acres that are redevelopable, leaving Moro with a total of 16.49 buildable acres in its Commercial zone.

Table 3-2 shows Moro with 13.15 vacant acres in the Industrial zone, 0.56 acre that is constrained for development, and no acres that are redevelopable, leaving Moro with a total of 12.59 buildable acres in the Industrial zone.

3.7 City of Rufus Buildable Employment Land Inventory

Figure 3-3 shows all of the Commercial and Industrial lands within Rufus as developed, redevelopable, or vacant.

Based on the lot size values contained in the GIS data layer for the BLI map, the total area for each of Rufus's employment lands is as follows:

- Commercial (C) Zone - 18.62 acres
- Industrial (I) Zone - 59.40 acres

From the final draft BLI map, an inventory and total acres of only the vacant and redevelopable employment lands by individual tax lot was created for further analysis of lot sizes and "development constraints," as that term is defined in OAR 660-009-0050(2), [5] such as flood zones, wetlands, steep slopes, or other environmental or topographical factors. As shown in Table 3-3, each tax lot was reviewed based on these factors to assess its suitability for meeting projected employment land needs for the 20-year planning period. Like the final draft BLI map for Rufus, Table 3-3 incorporates changes from the local advisory committee and public meetings.

TABLE 3-3
RUFUS COMMERCIAL AND INDUSTRIAL BUILDABLE LANDS INVENTORY BY TAX LOT

RUFUS COMMERCIAL LANDS INVENTORY									
Map (T-R-S)	Tax Lot	Zone	Category	Gross Vacant Acres	Environmental or Physical Development Constraint	Minus Constrained Vacant Area	Net Buildable Vacant Acres	Plus Redevelop-able Acres	Total Buildable Acres
03N1731DA	400	C	Redevelopable					0.89	0.89
03N1731DC	300	C	Redevelopable		Residence			0.07	0.07
03N1731DC	500	C	Redevelopable		Residence			0.73	0.73
03N1731DC	3300	C	Redevelopable					0.11	0.11
03N1731DC	3400	C	Redevelopable					0.11	0.11
03N1731DC	3600	C	Redevelopable		Residence			0.11	0.11
03N1731DD	800	C	Redevelopable	0.39	Flood Zone A	0.39		0.75	0.75
03N1731DD	1501	C	Redevelopable		Residence			0.23	0.23
03N1731CD	100	C	Vacant	1.06	Triangle Shape		1.06		1.06
03N1731DA	300	C	Vacant	1.45	Long Triangle Shape		1.45		1.45

[5] Under OAR 660-009-0005(2) vacant land that is constrained has one or more factors associated that temporarily or permanently limit or prevent use of the land for economic development. Development constraints include, but are not limited to, wetlands, environmentally sensitive areas such as habitat, environmental contamination, slope, topography, cultural and archeological resources, infrastructure deficiencies, parcel fragmentation, or natural hazard areas.

RUFUS COMMERCIAL LANDS INVENTORY									
Map (T-R-S)	Tax Lot	Zone	Category	Gross Vacant Acres	Environmental or Physical Development Constraint	Minus Constrained Vacant Area	Net Buildable Vacant Acres	Plus Redevelop-able Acres	Total Buildable Acres
03N1731DC	600	C	Vacant	0.05	Small Lot; Location		0.05		0.05
03N1731DC	800	C	Vacant	0.29			0.29		0.29
03N1731DC	900	C	Vacant	1.03			1.03		1.03
03N1731DC	901	C	Vacant	1.04			1.04		1.04
03N1731DC	3500	C	Vacant	0.11			0.11		0.11
03N1731DC	3900	C	Vacant	0.11			0.11		0.11
03N1731DD	100	C	Vacant	0.72	Flood Zone A		0.72		0.72
03N1731DD	200	C	Vacant	0.32	Flood Zone A		0.32		0.32
03N1731DD	300	C	Vacant	0.25	Flood Zone A		0.25		0.25
03N1731DD	900	C	Vacant	0.49			0.49		0.49
03N1731DD	1000	C	Vacant	0.38			0.38		0.38
03N1731DD	1103	C	Vacant	0.84			0.84		0.84
03N1731DD	1400	C	Vacant	0.25			0.25		0.25
03N1731DD	1700	C	Vacant	0.06			0.06		0.06
03N1731DC	200	C	Partially Buildable	1.13	Flood Zone A	0.61	0.52		0.52
03N1731DA	200	C	Constrained	0.01	Small Lot	0.01			
03N1731DC	100	C	Constrained	0.69	Flood Zone A	0.69			
03N1731DC	1400	C	Constrained	0.03	Flood Zone A; Small Lot	0.03			
03N1731DC	1500	C	Constrained	0.05	Flood Zone A; Small Lot	0.05			
03N1731DD	1106	C	Constrained	0.27	Creek Bed/ Floodway	0.27			
Total Commercial Acres				**11.02**		**2.05**	**8.97**	**3.00**	**11.97**

RUFUS INDUSTRIAL LANDS INVENTORY									
Map (T-R-S)	Tax Lot	Zone	Category	Gross Vacant (Acres)	Environmental or Physical Development Constraint	Constrained Vacant Area	Net Buildable Vacant Acres	Plus Redevelop-able Acres	Total Buildable Acres
02N170600	2200	I	Vacant	1.04			1.04		1.04
02N170600	2400	I	Vacant	3.21			3.21		3.21
02N170600	2401	I	Vacant	3.12			3.12		3.12
02N170600	2402	I	Vacant	8.35			8.35		8.35
02N170600	2403	I	Vacant	6.26			6.26		6.26
02N170600	2404	I	Vacant	16.67			16.67		16.67
02N170600	2405	I	Vacant	3.76			3.76		3.76
02N170600	2406	I	Vacant	3.26			3.26		3.26
Total Industrial Acres				**45.67**			**45.67**		**45.67**

Table compiled from information provided by Sherman County.

As shown on Table 3-3, Rufus has 11.02 acres in the Commercial zone that are vacant, 2.05 acres that are constrained for development, and 3.00 acres that are redevelopable, leaving Rufus with a total of 11.97 buildable acres in its Commercial zone.

Table 3-3 shows Rufus with 45.67 vacant acres in the Industrial zone, no acres that are constrained for development, and no acres that are redevelopable, leaving Rufus with a total of 45.67 buildable acres in the Industrial zone.

3.8 City of Wasco Buildable Land Inventory

Figure 3-4 shows all of the Commercial and Industrial lands within Wasco as developed, redevelopable, or vacant.

Based on the lot size values contained in the GIS data layer for the BLI map, the total area for each of Wasco's employment lands is as follows:

- Commercial (C-1) Zone - 35.51 acres
- Industrial (M-1) Zone - 38.02 acres

From the final draft BLI map, an inventory and total acres of only vacant and redevelopable employment lands by individual tax lot was created for further analysis of lot sizes and "development constraints," as that term is defined in OAR 660-009-0050(2), [6] such as flood zones, wetlands, steep slopes, or other environmental or topographical factors. As shown on Table 3-4 below, each tax lot was reviewed based on these factors to assess its suitability for meeting projected employment land needs for the 20-year planning period. Like the final draft BLI map for Wasco, Table 3-4 incorporates changes from the local advisory committee and public meetings.

TABLE 3-4
WASCO COMMERCIAL AND INDUSTRIAL BUILDABLE LANDS INVENTORY BY TAX LOT

WASCO COMMERCIAL LANDS INVENTORY									
Map (T-R-S)	Tax Lot	Zone	Category	Gross Vacant Acres	Environmental or Physical Development Constraint	Minus Constrained Vacant Acres	Net Buildable Vacant Acres	Plus Redevelop-able Acres	Total Buildable Acres
01N1704CD	6600	C-1	Partially Vacant	0.15	East Half of Duplex		0.15		0.15
01N1704CD	7100	C-1	Partially Vacant	0.19			0.19		0.19
01N170900	200	C-1	Partially Vacant	1.20			1.20		1.20
01N1704CD	6200	C-1	Redevelopable					0.36	0.36
01N1709AB	6300	C-1	Redevelopable		2 Single-wide Manufactured Homes			0.23	0.23
01N1709BA	100	C-1	Redevelopable					0.08	0.08
01N1709BA	1100	C-1	Redevelopable		Old Single-wide Manufactured Home			0.17	0.17
01N1709BA	1400	C-1	Redevelopable		2 Older Single-wide Manufactured Homes			0.25	0.25
01N1709BA	3800	C-1	Redevelopable		Old Service Station			0.26	0.26
01N1709BA	4400	C-1	Redevelopable					0.25	0.25
01N1709BA	4600	C-1	Redevelopable		Older Residence			0.39	0.39

[6] Under OAR 660-009-0005(2) vacant land that is constrained has one or more factors associated that temporarily or permanently limit or prevent use of the land for economic development. Development constraints include, but are not limited to, wetlands, environmentally sensitive areas such as habitat, environmental contamination, slope, topography, cultural and archeological resources, infrastructure deficiencies, parcel fragmentation, or natural hazard areas.

WASCO COMMERCIAL LANDS INVENTORY

Map (T-R-S)	Tax Lot	Zone	Category	Gross Vacant Acres	Environmental or Physical Development Constraint	Minus Constrained Vacant Acres	Net Buildable Vacant Acres	Plus Redevelop-able Acres	Total Buildable Acres
01N1709BA	4601	C-1	Redevelopable		Older Residence			0.12	0.12
01N170000	2200	C-1	Vacant	1.52			1.52		1.52
01N1704CD	6700	C-1	Vacant	0.17			0.17		0.17
01N1704CD	6800	C-1	Vacant	0.18			0.18		0.18
01N1704CD	7200	C-1	Vacant	0.11			0.11		0.11
01N1704CD	7400	C-1	Vacant	0.20			0.20		0.20
01N1704CD	7500	C-1	Vacant	0.23			0.23		0.23
01N1704CD	7600	C-1	Vacant	0.12			0.12		0.12
01N1704DC	1300	C-1	Vacant	0.23			0.23		0.23
01N1704DC	2300	C-1	Vacant	0.11	AV is Fence		0.11		0.11
01N1704DC	2400	C-1	Vacant	0.12			0.12		0.12
01N170900		C-1	Vacant	1.35	Rail Bed, No Rails; No Owner		1.35		1.35
01N170900	100	C-1	Vacant	1.77	Stored Vehicles		1.77		1.77
01N170900	300	C-1	Vacant	0.50			0.50		0.50
01N1709AB	1200	C-1	Vacant	0.68			0.68		0.68
01N1709AB	1700	C-1	Vacant	0.22			0.22		0.22
01N1709AB	1800	C-1	Vacant	0.10			0.10		0.10
01N1709AB	4800	C-1	Vacant	0.35			0.35		0.35
01N1709AB	4900	C-1	Vacant	0.35			0.35		0.35
01N1709AB	5000	C-1	Vacant	0.34			0.34		0.34
01N1709AB	5900	C-1	Vacant	0.16			0.16		0.16
01N1709AB	7100	C-1	Vacant	0.24			0.24		0.24
01N1709AB	7200	C-1	Vacant	0.30			0.30		0.30
01N1709BA	200	C-1	Vacant	0.06			0.06		0.06
01N1709BA	300	C-1	Vacant	0.07			0.07		0.07
01N1709BA	900	C-1	Vacant	0.11			0.11		0.11
01N1709BA	1000	C-1	Vacant	0.31			0.31		0.31
01N1709BA	1200	C-1	Vacant	0.14			0.14		0.14
01N1709BA	3500	C-1	Vacant	0.27			0.27		0.27
01N1709BA	3600	C-1	Vacant	0.07			0.07		0.07
01N1709BA	3900	C-1	Vacant	0.23			0.23		0.23
01N1709BA	4101	C-1	Vacant	0.15			0.15		0.15
01N1709BA	4200	C-1	Vacant	0.10			0.10		0.10
01N170900	500	C-1	Constrained	2.26	Flood Zone AE	2.26			
01N170900	600	C-1	Constrained	0.51	Flood Zone AE	0.51			
01N1709AB	2900	C-1	Constrained	0.01		0.01			
01N1709AB	6000	C-1	Constrained	0.15	Flood Zone AE	0.15			
01N1709AB	6100	C-1	Constrained	0.57	Flood Zone AE	0.57			
01N1709AB	6901	C-1	Constrained	0.91	Flood Zone AE	0.91			
01N1709BA	1500	C-1	Constrained	0.12	Flood Zone AE	0.12			
01N1709BA	1700	C-1	Constrained	0.03	Part of Alley?	0.03			
01N1709BA	3400	C-1	Constrained	0.11	Flood Zone AE	0.11			
01N1709BA	4000	C-1	Constrained	0.23	Flood Zone AE	0.23			
01N1709BA	4100	C-1	Constrained	0.16	Flood Zone AE	0.16			
Total Commercial Acres				**17.46**		**5.06**	**12.40**	**2.11**	**14.51**

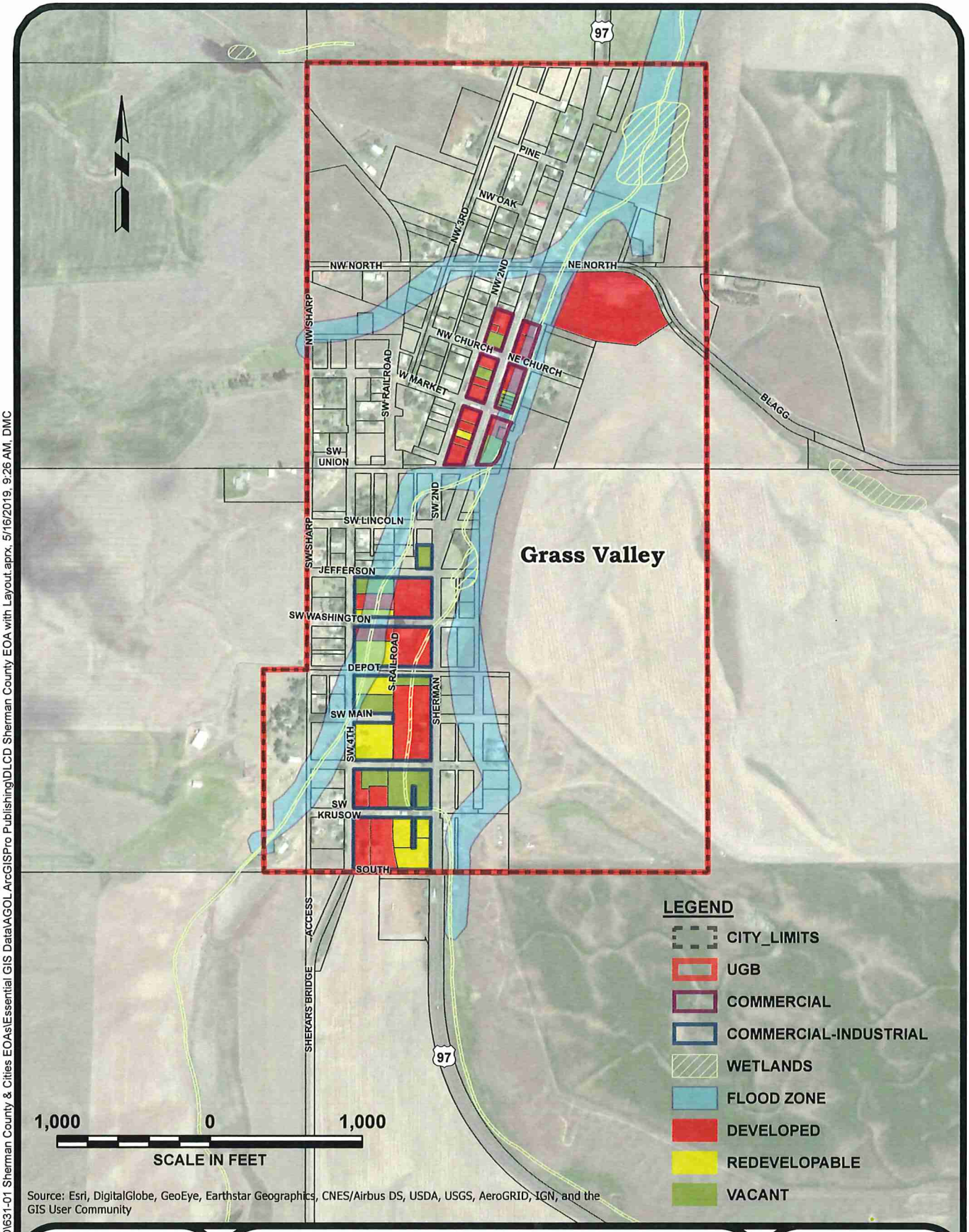
WASCO INDUSTRIAL LANDS INVENTORY									
Map (T-R-S)	**Tax Lot**	**Zone**	**Category**	**Gross Vacant Acres**	**Environmental or Physical Development Constraint**	**Minus Constrained Vacant Acres**	**Net Buildable Vacant Acres**	**Plus Redevelop-able Acres**	**Total Buildable Acres**
01N170000	2700	M-1	Vacant	38.02	Airport Flight Zones?		38.02		38.02
Total Industrial Acres				**38.02**			**38.02**		**38.02**

AV = assessed value

Table compiled from information provided by Sherman County.

As shown on Table 3-4, Wasco has 17.46 acres in the Commercial zone that are vacant, 5.06 acres that are constrained for development, and 2.11 acres that are redevelopable, leaving Wasco with a total of 14.51 buildable acres in its Commercial zone.

Table 3-4 shows Wasco with 38.02 vacant acres in the Industrial zone, no acres that are constrained for development, and no acres that are redevelopable, leaving Wasco with a total of 38.02 buildable acres in the Industrial zone.



\\LGSVR6\gisprojects\DLCD\631-01 Sherman County & Cities EOAs\Essential GIS Data\AGOL ArcGISPro Publishing\DLCD Sherman County EOA with Layout.aprx, 5/16/2019, 9:26 AM, DMC

anderson perry & associates, inc.

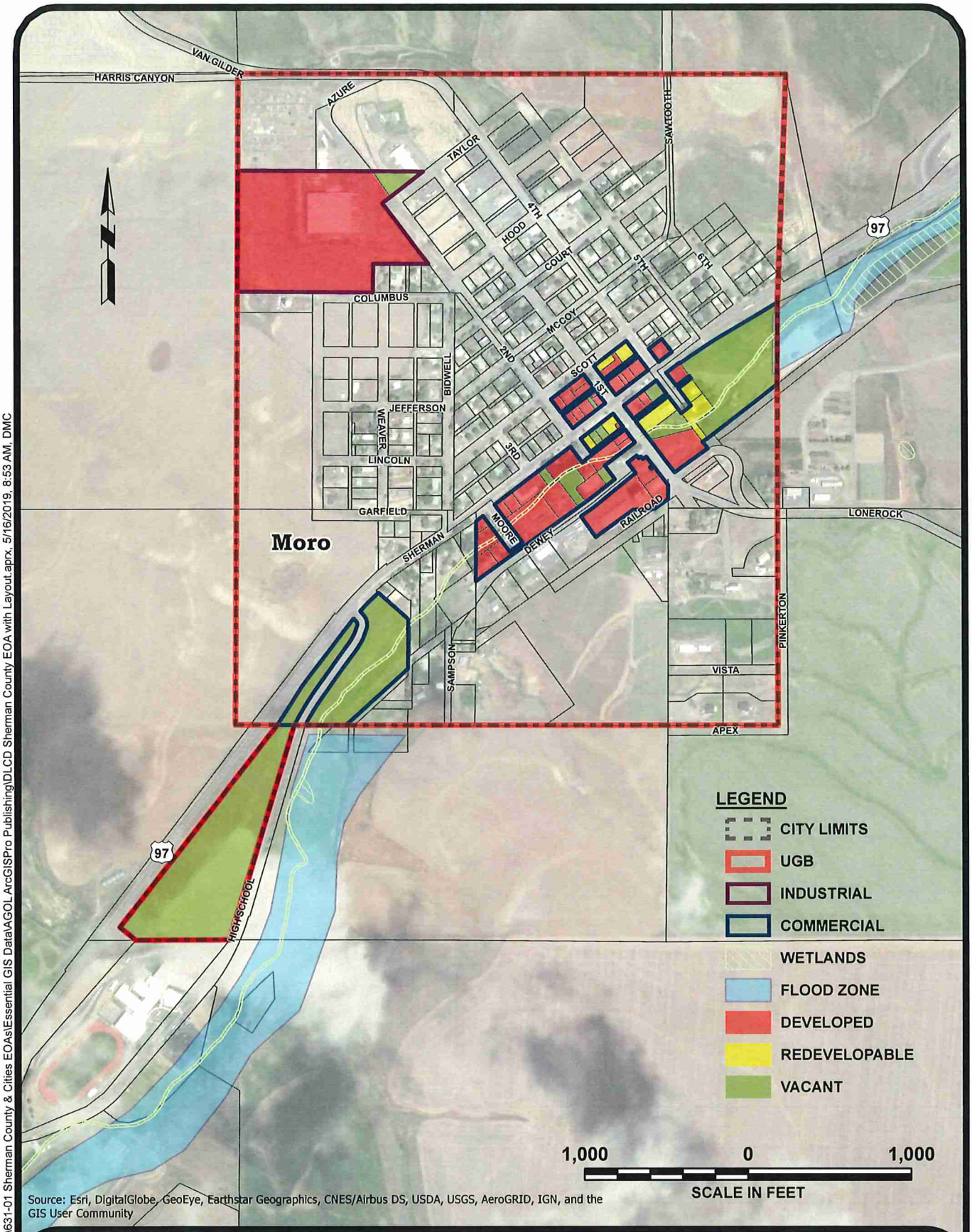
OREGON DEPARTMENT OF LAND CONSERVATION AND DEVELOPMENT

SHERMAN COUNTY CITIES ECONOMIC OPPORTUNITIES ANALYSIS

CITY OF GRASS VALLEY - BUILDABLE EMPLOYMENT LANDS INVENTORY MAP

FIGURE

3-1



\\LGSVR6\gisprojects\DLCD\631-01 Sherman County & Cities EOAs\Essential GIS Data\AGOL ArcGISPro Publishing\DLCD Sherman County EOA with Layout.aprx, 5/16/2019, 8:53 AM, DMC

anderson perry & associates, inc.

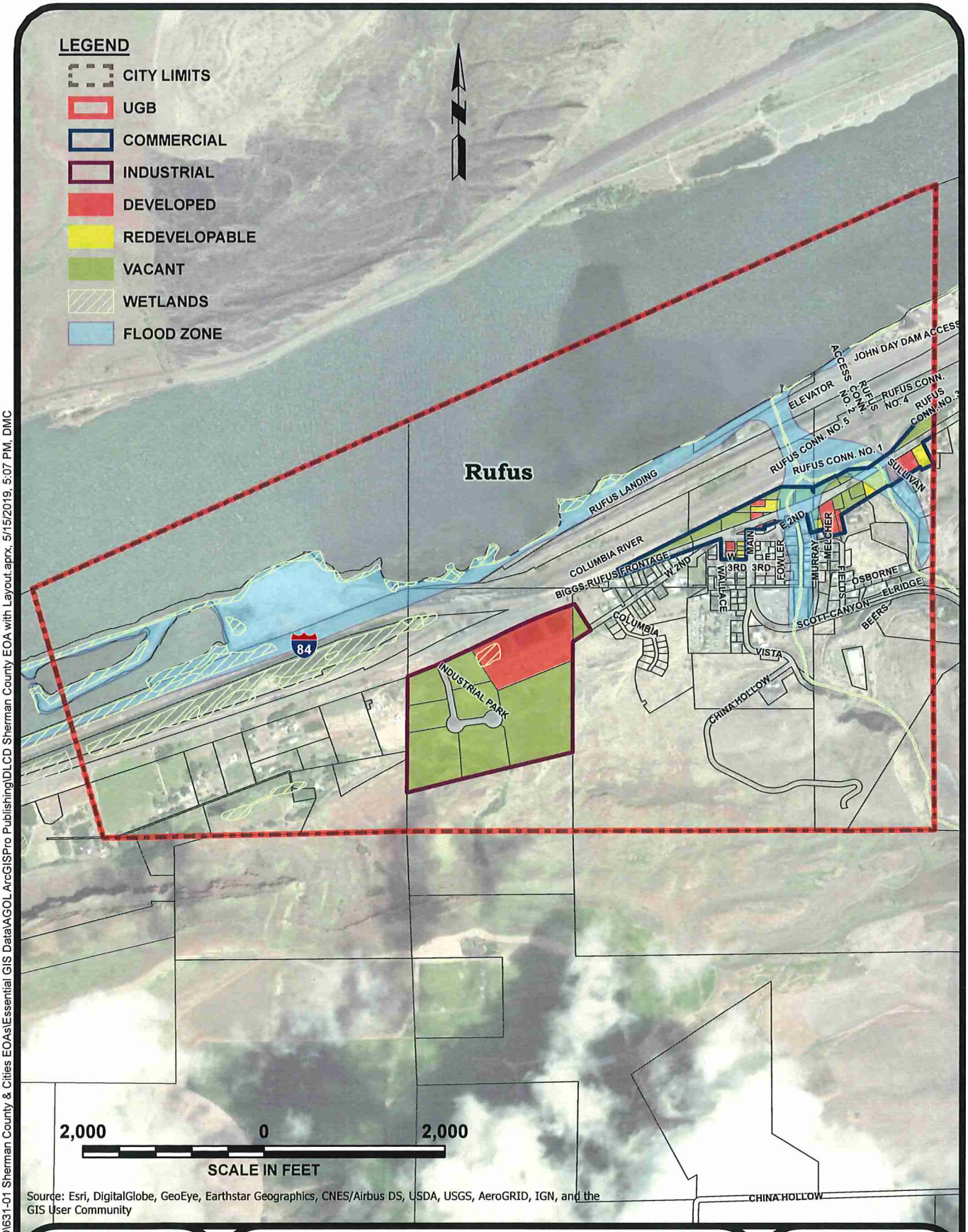
OREGON DEPARTMENT OF LAND CONSERVATION AND DEVELOPMENT

SHERMAN COUNTY CITIES ECONOMIC OPPORTUNITIES ANALYSIS

CITY OF MORO - BUILDABLE EMPLOYMENT LANDS INVENTORY MAP

FIGURE

3-2



\\LGSVR6\gisprojects\DLCD\631-01 Sherman County & Cities EOAs\Essential GIS Data\AGOL ArcGISPro Publishing\DLCD Sherman County EOA with Layout.aprx, 5/15/2019, 5:07 PM, DMC

anderson perry & associates, inc.

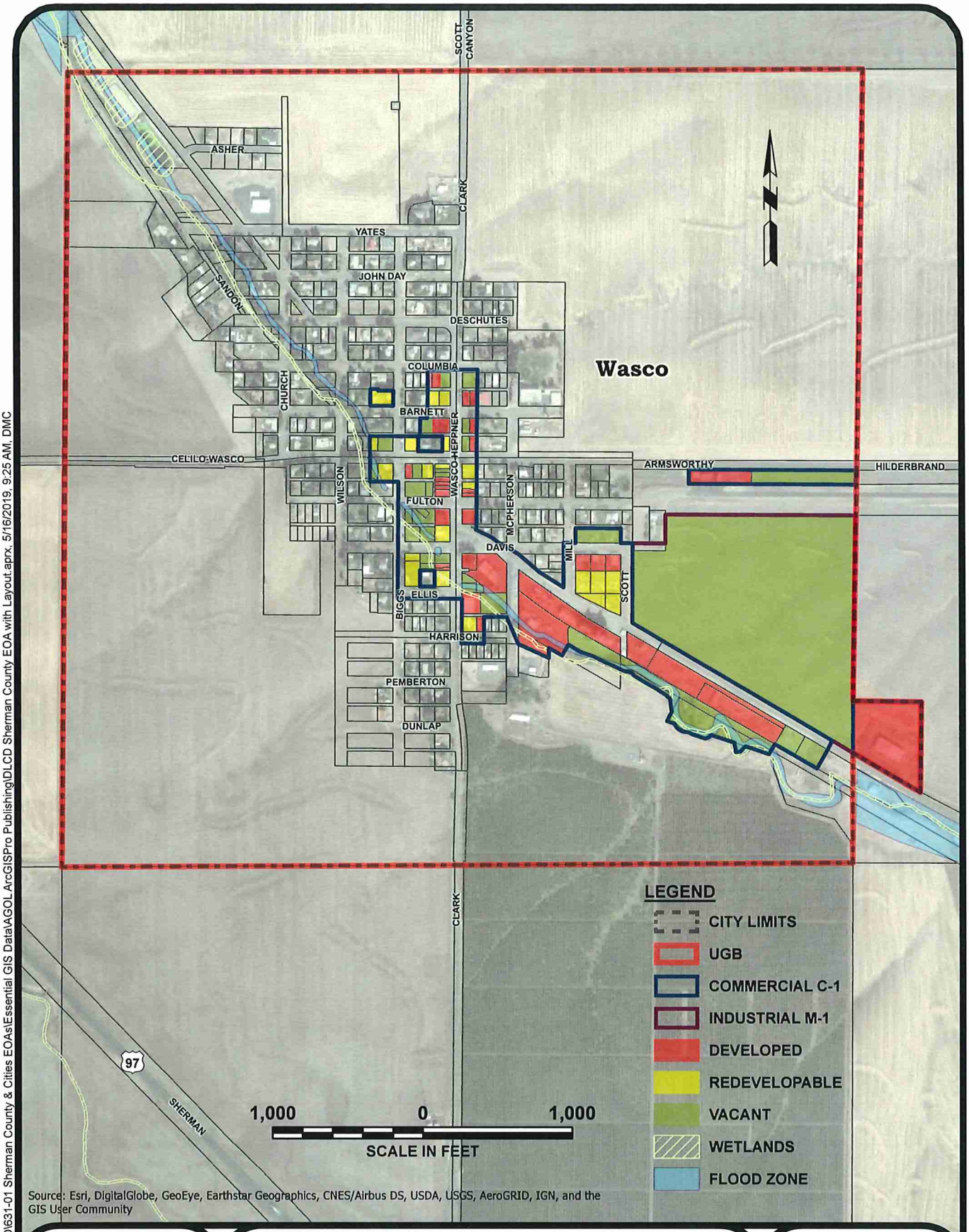
OREGON DEPARTMENT OF LAND CONSERVATION AND DEVELOPMENT

SHERMAN COUNTY CITIES ECONOMIC OPPORTUNITIES ANALYSIS

CITY OF RUFUS - BUILDABLE EMPLOYMENT LANDS INVENTORY MAP

FIGURE

3-3



\\LGSVR6\gisprojects\DLCD\631-01 Sherman County & Cities EOAs\Essential GIS Data\AGOL ArcGISPro Publishing\DLCD Sherman County EOA with Layout.aprx, 5/16/2019, 9:25 AM, DMC

anderson perry & associates, inc.

OREGON DEPARTMENT OF LAND CONSERVATION AND DEVELOPMENT

SHERMAN COUNTY CITIES ECONOMIC OPPORTUNITIES ANALYSIS

CITY OF WASCO - BUILDABLE EMPLOYMENT LANDS INVENTORY MAP

FIGURE

3-4

Section 4.0 - Economic Opportunities

4.1 Introduction

This section presents the information required for preparing an Assessment of Community Economic Development Potential for each city in Sherman County, as required under Oregon Administrative Rules (OAR) 660-009-0015(4).

The types of uses that could reasonably be expected to locate or expand within each city's planning area are identified and assessed in relation to the recommended target industries. These industries and the types of uses identified present the most favorable opportunities for each city to focus its economic development efforts.

Each city's projected commercial and industrial land needs (i.e., demand) are then reconciled with its available commercial and industrial land supplies to determine whether or not the city is expected to have enough land available during the 20-year planning period to meet its projected employment land needs. Factors (positive or negative) that impact economic development efforts that are typical for small cities in eastern Oregon are then briefly assessed for each city.

4.2 Requirements for Assessment of Community Economic Development Potential

The final step in developing an Economic Opportunities Analysis under OAR 660-009 is to conduct an assessment of community economic development potential. An assessment of community economic development potential under OAR 660-009-0015(4) is required to:

- Estimate the types and amounts of industrial and other employment uses likely to occur in the planning area based on information and findings from previous steps;
- Reconcile existing land supply with projected land need for employment use;
- Consider each planning area's relevant economic advantages and disadvantages including, but not limited to, such factors as location, size and buying power of markets, transportation facilities, public facilities and utilities, labor market factors, and others.

As noted during development of the Buildable Land Inventories (BLIs), the planning areas for the cities in Sherman County include all land within their respective urban growth boundaries (UGBs), which are also coterminous with their city limits.

4.3 Recommended Target Industries for Cities in Sherman County

With only variation in terms of ranking for each city, the following industries identified by FCS GROUP during its review of economic trends form the basis from which the top five target industries were attributed to each city in Sherman County.

- Value-added Agriculture/ Light Manufacturing
- Renewable Energy
- Tourism and Recreation
- Highway Commercial
- Home-based Businesses
- Construction

During review of FCS GROUP's economic trends analysis, local advisory committee members felt that Light Manufacturing should be included with Value-added Agriculture to provide a broader range of business and industry for cities to include in their planning efforts.

Feedback and additional information from local advisory committee members assisted in confirming the target industries and background information used to perform the final step in developing an Economic Opportunities Analyses for each city.

In addition to the above industries, Sherman County and its cities recently secured fiber optic broadband service for their communities to better serve existing homes and businesses and to provide additional incentive for new businesses and industries to locate in the area.

Sherman County is located within the federally-funded Mid-Columbia Economic Development District (MCEDD) and is working with MCEDD to pursue businesses in the high tech and healthcare industries. Businesses in these industries would also benefit greatly from fiber optic broadband service.

4.3.1 Value-added Agriculture and Light Manufacturing Defined

Grain production is by far the leading industry in Sherman County. As such, before assessing of each City's economic development potential, a brief explanation of the nature of the target industries of Value-added Agriculture and Light Manufacturing is helpful to understand the types of uses associated with these industries that could be expected to expand or locate in the area.

4.3.1.1 Value-added Agriculture Defined

The U.S. Department of Agriculture Rural Development defines value-added products as follows:

- A change in the physical state or form of the product (such as milling wheat into flour or making strawberries into jam).
- The production of a product in a manner that enhances its value, as demonstrated through a business plan (such as organically produced products).
- The physical segregation of an agricultural commodity or product in a manner that results in the enhancement of the value of that commodity or product (such as an identity preserved marketing system).

As a result of the change in physical state or the manner in which the agricultural commodity or product is produced and segregated, the customer base for the commodity or product is expanded and a greater portion of revenue derived from the marketing, processing, or physical segregation is made available to the producer of the commodity or product.

One researcher[7] described the process of adding value to agriculture as follows:

[7] Jennifer Vandeburg, MS, Ag Economics, Community College Ag Prof, Ag in my blood and dirt on my hands, June 8, 2015. https://www.quora.com/profile/Jennifer-Vandeburg

> From a supply chain viewpoint, value added happens anytime you take an ag product and do something to it that makes it more valuable to the next stage of the supply chain… That value may simply be transport to a location where the product can be used, or warehousing until a time when it can be used… The key to profitably engaging in value-added activity is to learn the supply chain for your product and then do something to your product that makes it more valuable to the stages of the chain after you… Ultimately, it is about the end consumer.

The Agriculture Marketing Resource Center at https://www.agmrc.org/ provides a wealth of information for understanding "value-added agriculture." The website includes a number of examples of farmers and farmers' cooperatives adding value to their crops such as developing dry cookie mixes from home-made recipes, and producing consumer-ready frozen dough products for pizzas, cinnamon rolls, and bread.

The literature emphasizes the need for a solid business plan for financing, marketing, quality production, and distribution. Unfortunately, there is no simple formula that applies to everyone for value-added agriculture.

4.3.1.2 Light Manufacturing Defined

Light manufacturing is activity that uses partially processed materials to produce items of relatively high value per unit. Value is added by the application of skill to physical or raw materials where all processing, fabricating, assembly, or disassembly of items takes place within an enclosed building. The manufacturing of clothes, shoes, furniture, consumer electronics, and household items are a few examples of light manufacturing industries.[8]

4.4 Assessment of Community Economic Development Potential for Cities in Sherman County based on Target Industries

An assessment of each city's economic development potential is discussed in the following subsections in relation to the target industries recommended for each city. Considering their locations, similar geography, climate, and distance to markets, each city in Sherman County shares much the same economic advantages and disadvantages. As pointed out by FCS GROUP during its review of economic trends, businesses that benefit from interaction across multiple sectors will present significant economic opportunities for cities in Sherman County.

4.4.1 Value-added Agriculture/Light Manufacturing

Value-added Agriculture/Light Manufacturing are recommended target industries for each city in Sherman County. Under this subsection, the following analyses of the types of industries likely to provide the best opportunities for new business or expansion of existing businesses under this category apply to the cities of Grass Valley, Moro, Rufus, and Wasco.

[8] http://itsallaboutbusiness.com/Manufacturing.htm.

4.4.1.1 Grain

Grain farming, primarily in the form of wheat production, is by far the most significant industry in Sherman County in terms of its impact on the economy and the number of jobs. Grain farming contributed more than $22 million to the local economy and employed 177 people in 2016.

Sherman County includes the following information on its website concerning wheat:

> About 85% of soft white wheat is exported around the world to be made into food. Oregon wheat truly does feed the world.
>
> Farmers may sell their grain for cash or elect to store it either in farm storage or at local cooperatively owned warehouses (known as "elevators") for later sales. Since so much grain is sold to other countries, it must be shipped to ports in the Portland region to be loaded onto ships. The farmer pays the cost of shipping to the Portland area.
>
> Most grain is shipped on barges which carry about 116,000 bushels each. The Columbia River averages two four-barge tows a day, or nearly one million bushels per day. That reportedly makes it the third largest grain export corridor in the world. Without the barges, another 1,000 trucks per day would be needed for the transport to Portland.

Mid-Columbia Producers (MCP), which is headquartered in the City of Moro, maintains facilities in Grass Valley, Moro, Rufus, and Wasco. MCP provides a number of added value services for grain growers, including market research, transportation, storage, seed supply, and fuel delivery. These types of value-added services cover the most basic needs of grain farmers within Sherman County. Changes and innovations have occurred over the years in how these services have been provided with improvements in technology and transportation, but the basic service needs have largely remained the same.

Morrow County Grain Growers, Inc., which provides similar services as MCP, also has a presence in Sherman County.

To benefit from value-added grain production, the industry must continually explore markets for processed grain products that offer added value along the supply chain or to the end consumer. Facilities to develop market-viable grain products will provide the cities in Sherman County with their best chances to create new value-added agriculture and light manufacturing industries and jobs.

Moro has the added advantage of having the Oregon State University Columbia Basin Agricultural Research Center, which conducts research on dryland wheat, barley, and alternative crops.

4.4.1.2 Hemp

A relatively new agricultural commodity that appears to have tremendous potential for growth and job creation is the growing and processing of hemp. Hemp is actually one of the oldest plants cultivated by man but was banned in the U.S. in 1937 under the Controlled Substances Act due to its close relationship to cannabis, also known as marijuana. Hemp is considered "new" because it was delisted only in December 2018 as a Schedule I Controlled Substance by the federal government. The delisting allows hemp farmers to obtain federal crop insurance and bank financing. Growers and processors are required to obtain a permit from the Oregon Department of Agriculture prior to starting operations.

Hemp can be used in making a wide variety of products including clothes, ropes, food products, medicinal products, paper, bio-fuel, construction materials, and a multitude of other products. There seems little doubt that with the legalization of hemp, much more research will be conducted into new uses for this versatile plant.

The real demand for hemp currently stems from the production of cannabidiol products, which are believed by many to help relieve pain, reduce anxiety and depression, and have other health-related benefits. The low tetrahydrocannabinol content in hemp (0.3 percent or less) means it is not capable of producing the "high" associated with cannabis.

A hemp processing facility recently received conditional use approval in Grass Valley in an abandoned elementary school building on land zoned Residential-Agriculture. The new facility currently employs approximately 40 people. However, a lack of adequate workforce housing in the area has become a major issue for the employer.

4.4.2 Renewable Energy

Renewable energy is a recommended target industry for each city in Sherman County. Under this subsection, the following analyses of the types of industries likely to provide the best opportunities for new businesses or expansion of existing businesses under this category apply to the Cities of Grass Valley, Moro, Rufus, and Wasco.

Renewable energy comes in several forms, including conventional hydroelectric power; biomass such as wood, waste, and alcohol fuels; geothermal; solar; and wind.

4.4.2.1 Wind Energy

The driving force behind renewable energy in Sherman County is by far the development of wind turbine farms. The American Wind Energy Association estimates that each megawatt (MW) of wind power provides enough energy to light 300 average American homes each year. Wind turbines in Sherman County stand approximately 400 feet tall from the bottom of the tower to the tip of the highest blade. Local communities benefit from jobs, property taxes from wind farm owners, annual lease payments to property owners, energy supply security, and tourist appeal.

Seven wind farms have been constructed in Sherman County. The Klondike I, II, and III Wind Farms are located southeast of the City of Wasco and consist of 274 wind turbines capable of producing 475 MW of electricity. The Klondike Wind Farms are owned by Avangrid, which also owns the Hay Canyon and Starpoint Wind Farms. These wind farms, constructed between 2004 and 2009, have a total of 100 to 120 wind turbines producing 207.9 MW. Avangrid received permit approval from Sherman County and the state of Oregon for the Golden Hills Wind Farm, which will consist of 267 turbines capable of producing 400 MW when completed.

Another large wind farm is the Biglow Canyon Wind Farm, which is owned by Portland General Electric (PGE). Biglow Canyon Wind Farm has 150 wind turbines, constructed between 2007 and 2010, capable of producing 450 MW. The Oregon Trail/PaTu Wind Farm was constructed in 2010 and consists of six wind turbines producing 10 MW. These wind farms supply clean, renewable electricity to PGE, Bonneville Power Administration, Eugene Water & Electric Board, and other power companies region-wide.

The following information is from an article entitled *Wind Energy Investment Makes Sherman County Economy Hum* from the Business Oregon website. The information provides a summary of the benefits Sherman County and its cities have received from these wind farms.

Wind energy companies have poured more than $17 million in property taxes, fees and strategic investments into Sherman County, according to a 2011 assessment of wind's impact on the rural area.

As a result of wind power development, county residents have received more than $1 million through the Sherman County's Resident Compensation Program, which pays $590 to heads of households as a means of sharing surplus revenue and encouraging a positive outlook on new development, according to the study. County officials said the county saves between 20% and 30% of the revenue it receives from wind in a rainy day fund and is using it to make long-term investments that can pay off over the years, as the value and thus tax receipts from wind farms decline.

The Sherman County projects, which began operating in 2002, have resulted in significant public investment in the county. The county's taxing districts have seen additional support from property tax paid by wind farms. Money from wind development has also been used for capital projects like construction of new public buildings, including a school and library and [a] new city hall[s] in

> Moro [~~and Grass Valley~~].[9] It also has helped purchase new computers and musical instruments at schools, provided support for teachers and launched a renewable energy technician program at Columbia Gorge Community College.
>
> Sherman County has a population of about 1,800, 65% of whom are senior citizens living on fixed incomes. In addition to boosting the county's annual revenues from about $315,000 in 2002 to $10 million in 2010, the wind industry also has brought eight jobs per 100 megawatts, or about 80 jobs for the 1,000 megawatts of wind power now installed.
>
> Wind power manufacturers like Vestas and Iberdrola Renewables have already chosen Oregon for their North American headquarters, as well as to manage wind farms in the Columbia Gorge and Eastern Oregon hills. Oregon currently has 1,920 MW of operational wind farms, with 3,000 MW more either under construction or approved for development. Oregon's growing wind energy sector is poised for even faster growth in the future.

Wind energy production occurs in the vast expanses of the unincorporated areas of Sherman County, outside of the cities' UGBs. Because there are no wind farms or facilities within UGBs, property taxes from each wind farm go directly to Sherman County. Increased tax revenues from wind farms could be targeted for public infrastructure improvements in each of the cities as a way to address needed public infrastructure and encourage new business development. Gilliam County, adjacent to the east, passed an ordinance in 1991 directing how and where monies from waste disposal host fees are distributed and updates the ordinance at least every five years. Sherman County and its cities could consider a similar approach with wind farm tax revenues to help ensure cities have more stable funding to implement plans for water, wastewater, and other needed public facilities and infrastructure.

4.4.2.2 Biomass Energy

Although more research is needed, considering its versatility hemp production could provide an opportunity to develop a facility for processing hemp into bio-fuel as a renewable energy.

4.4.2.3 Solar Energy

Avangrid constructed a solar farm in Sherman County capable of producing 10 MW and is considering constructing another large solar farm on 3,000 to 5,000 acres elsewhere in the County.

Sherman County has developed small solar projects for its road department, fairgrounds, and the Sherman County RV Park. Strategic solar power projects may

[9] Information from the Sherman County Planning Director during the local advisory committee's review indicated that the *Wind Energy Investment Makes Sherman County Economy Hum* article from the Business Oregon website is mistaken in reference to Grass Valley. Moro received assistance with a new city hall, but Grass Valley has not.

provide each city in Sherman County with energy cost savings for similar services or businesses.

4.4.3 Highway Commercial

Highway commercial is a recommended target industry for the Cities of Grass Valley, Moro and Rufus. The following analysis of the types of industries likely to provide the best opportunities for new businesses or expansion of existing businesses under this category are provided for each city.

4.4.3.1 Grass Valley

Grass Valley serves as a rural service center; however, its location along Highway 97, a major north-south highway extending from its junction from Interstate 5 in northern California northward through Oregon and Washington, ensures a steady flow of truck and passenger vehicle traffic through the community. These travelers have needs for services and goods such as fuel, restaurants, and convenience goods. The steady supply of travelers provides local retail and service establishments with opportunities to meet both local and the traveling public's needs. As with other targeted uses identified for Grass Valley, the need to provide on-site sanitation due to the lack of a public wastewater system will be one of the most difficult obstacles for retail or service uses to overcome.

4.4.3.2 Moro

Moro is the county seat for government in Sherman County and serves as a rural service center. Moro is centrally located along Highway 97 between Grass Valley to the south and Biggs Junction and Interstate 84 (I-84) to the north. Moro is also a short distance (approximately one mile) south of the intersection of Highway 97 and Highway 216, which intersects with nearby Highway 206, leading to Cottonwood Canyon to the east and Wasco to the north. This combination of locational factors ensures a steady flow of truck and passenger vehicle traffic through the community. This steady flow of travelers provides local retail and service establishments with opportunities to meet the needs of travelers and recreationists in the surrounding area.

4.4.3.3 Rufus

Rufus serves as a rural service center; however, its location along I-84 and near Highway 97 ensures a steady flow of truck and passenger vehicle traffic. These travelers have needs for services and goods such as fuel, restaurants, and convenience goods. The steady supply of travelers provides local retail and service establishments with opportunities to meet both local and the traveling public's needs.

4.4.4 Home-based Businesses

Home-based businesses are a recommended target industry for the Cities of Grass Valley, Moro, Rufus, and Wasco. Local data on the number and types of home-based businesses are not available publicly due to privacy laws and the small number of businesses in each of these

communities. The recent extension of fiber optic for broadband service to each of these cities should help attract home-based businesses and enhance the competitiveness of existing home-based businesses. The following analysis of the types of industries likely to provide the best opportunities for new businesses or expansion of existing businesses under this category applies to each of these cities.

Home-based businesses can include any number of service or retail providers to other local businesses or residents or to anywhere in the world with the Internet. Examples include bookkeeping, web designer, home daycare provider, tax preparer, hair stylist, marketing consultant, interior designer, and many more. Home-based businesses often require little investment compared to off-site retail and office locations. The vast number of opportunities for home-based businesses coupled with the relatively low investment required make home-based businesses ideal opportunities in small rural areas like Grass Valley, Moro, Rufus, and Wasco. In some cases, home-based businesses may outgrow their environments and need to expand into retail or commercial space, especially if there is a need to hire additional help.

4.4.5 Tourism and Recreation

Tourism and recreation is a recommended target industry for each city in Sherman County. The following analyses of the types of industries likely to provide the best opportunities for new businesses or expansion of existing businesses under this category are provided for each city.

4.4.5.1 Grass Valley

The City of Grass Valley's greatest asset from which to develop and promote viable tourism and recreation is the Oregon Raceway Park located approximately 1 to 2 miles east of Grass Valley. Oregon Raceway Park is limited to memberships and is not open to the general public. The raceway park is used by racing enthusiasts from all over the Northwest and receives rave reviews for its design. In 2019, the raceway park has 25 scheduled race days, but unscheduled race days can be requested by club members with advance notice.

An article from The Oregonian dated May 20, 2010,[10] two years after the raceway park opened, noted that:

> The track rents for $3,500 a day during the week and $6,000 per day Fridays, Saturdays and Sundays. Racers must retain fire and ambulance services, which can run $2,000 a day, and also pay for timers and 12 course marshals.

In 2019, depending on the month and day of the week, rates range from $2,250 per day up to $6,250 per day, plus other fees. Obviously, there is much opportunity for racers to contribute to the local Grass Valley economy with the right accommodations. In the same article from The Oregonian, the author notes that:

[10] *The Oregonian*. Oregon Raceway Park is a track of dreams for some Oregon racing enthusiasts. May 20, 2010.

> Grass Valley, population 160, has two small cafes and a run-down RV park. The nearest motel is nine miles away in Moro and has 12 rooms, which fill quickly on race days, pushing visitors to facilities in Biggs, 27 miles to the north.

There has been interest expressed in developing a motel and other accommodations and even an auto parts store to take advantage of the opportunity provided by the Oregon Raceway Park; however, Grass Valley's lack of a public wastewater system has deterred such development to date.

4.4.5.2 Moro

Given the lack of a public wastewater system to encourage new development in Grass Valley to the south, Moro likely sees the greatest benefits from racers to the Oregon Raceway Park, which is located approximately 9 miles southeast of Moro. Oregon Raceway Park is limited to memberships and not open to the general public. The raceway park is used by racing enthusiasts from all over the Northwest and receives rave reviews for its design. In 2019, the raceway park has 25 scheduled race days, but unscheduled race days can be requested by club members with advance notice. As noted previously for Grass Valley, racers spend significant amounts of money on their sport and have other needs when they come to area.

With an overflow of racers needing to seek accommodations as far away as Biggs to the north, there appears to be opportunity for existing or new business in Moro to capture additional recreation dollars from racers and racing enthusiasts.

4.4.5.3 Rufus

Rufus has locational advantages that provide opportunities to attract new tourism and recreation-related business or to expand existing businesses. The City's location along the Columbia River and its proximity to the mouths of the Deschutes River to the west and the John Day River to the east where they enter the Columbia River provides the greatest opportunity upon which to focus its efforts around tourism and recreation. Boating and fishing could provide opportunities to supply boating and fishing needs or to conduct guided river tours for fishing and sightseeing. The Columbia River also offers high-quality windsurfing at Rufus, which may also provide opportunities for a new or existing business to meet the recreational needs of surfers.

4.4.5.4 Wasco

Wasco has the locational advantage of serving as a gateway to Cottonwood Canyon State Park approximately 25 miles to the southeast of the City via Highway 206. Cottonwood Canyon State Park is an 8,000-acre state park established in 2013 along the John Day River that offers hiking, fishing, boating, picnicking, and camping. These recreational activities could provide opportunities for expanding existing businesses or creating new businesses to supply visitor needs.

4.4.6 Construction

Construction is a recommended target industry for the Cities of Moro, Rufus, and Wasco. The following analysis of the types of industries likely to provide the best opportunities for new businesses or expansion of existing businesses under this category applies to these cities.

The North American Industrial Classification System divides the Construction industry (code 23) into several subcategories, as shown below.

- Residential Building Construction (2361)
- Nonresidential Building Construction (2362)
- Utility System Construction (2371)
- Land Subdivision (2372)
- Highway, Bridge, and Street Construction (2373)
- Other Heavy and Civil Engineering Construction (2379)
- Foundation, Structure, and Building Exterior Contractors (2381)
- Building Equipment Contractors (2382)
- Building Finishing Contractors (2383)
- Other Specialty Trade Contractors (2389)

Each of the above subcategories is further subdivided into classifications that are more specific and descriptive of the type of construction activity performed.

Nonresidential Building Construction (2362) includes Industrial Building Construction (236210) and Commercial and Institutional Building Construction (236220). Utility System Construction (2371) includes Power and Communication Line and Related Structures Construction (237130). These types of construction activities appear to represent the most significant types of construction occurring in Sherman County. Much of this construction activity is driven by wind farm development and maintenance in the County. Providing materials and equipment, storage, and staging for construction activities associated with these types of construction should provide opportunities for expansion of existing businesses or for new businesses in Moro, Rufus, and Wasco.

Residential building construction may increase in each of these cities as strategies to provide more workforce housing are developed.

4.5 Reconciliation of Land Demand and Supply and Factors Affecting Development

4.5.1 Reconciliation of Land Demand and Supply for Grass Valley

4.5.1.1 Summary of Site Requirements

Table 4-1 summarizes the site requirement needs identified by FCS GROUP for projected industrial, commercial, and other employment land needs for the City of Grass Valley for the 20-year planning period.

TABLE 4-1
SUMMARY OF GRASS VALLEY'S SITE REQUIREMENTS

Industrial Site Requirements	Commercial Site Requirements	Other
Four 2-acre sites	Flex buildings on 2 acres	Home-based Businesses

Source: FCS GROUP, 2019

Flex buildings are existing or new buildings that offer flexibility for businesses to economically reconfigure their interiors for space in ways that best suit their needs, whether that is for office space, retail use, production or distribution areas, showroom, studio, or any combination that meets their needs. Reconfiguration does not impact the structural integrity of a building. Flex buildings vary in size and ability to meet certain needs and can be located in downtown areas or other parts of a community where space and off-street parking needs are greater.

4.5.1.2 Summary of Buildable Employment Lands Inventory

Table 4-2 summarizes the total vacant and redevelopable commercial and industrial buildable land available to meet site requirement needs for Grass Valley for the 20-year planning period.

TABLE 4-2
SUMMARY OF GRASS VALLEY'S BUILDABLE LANDS INVENTORY

Zone	Total Acres by Zone	Gross Vacant Acres	Vacant Constrained Acres	Redevelopable Acres	Net Buildable Acres
Commercial	4.89	1.31	0.33	0.14	1.12
Commercial-Industrial	19.08	5.07	2.05	4.17	6.89

As shown on Table 4-2 above, Grass Valley currently has 1.12 acres of commercially zoned vacant and redevelopable land to meet its need for retail and service uses, and 6.89 acres of industrially zoned vacant and redevelopable land to meet its needs during the 20-year planning period.

The above summary on Table 4-2 is derived from the BLIs shown in Section 3.

4.5.1.3 Reconciliation

Table 4-3 below summarizes the project land need and supply for each of Grass Valley's Commercial and Commercial-Industrial zones and indicates whether there is either a net shortage or surplus.

TABLE 4-3
SUMMARY OF GRASS VALLEY'S EMPLOYMENT LAND NEEDS AND SUPPLY

Zone	Projected Land Demand	Available Land Supply	Surplus (+)/ Deficiency (-)
Commercial	2 acres	1.12 acres	-0.88 acres
Commercial-Industrial	8 acres	6.89 acres	-1.11 acres

The City of Grass Valley's existing supply of 1.12 acres of vacant and redevelopable commercial land is deficient by nearly 1 acre in meeting its projected land needs for the 20-year planning period. It is recommended that the City seek to develop at least 0.88 acre to meet its projected land supply needs for anticipated commercial development. Flood zones impact a considerable portion of the City's commercial area. The City should consider obtaining the needed commercial land outside the flood zone.

Grass Valley's existing 6.89 acres of vacant and redevelopable industrial land is also deficient by more than 1 acre in meeting its projected land needs for the 20-year planning period. The City should seek to develop at least 1.11 acres to meet its projected land supply needs for industrial development. Flood zones impact a considerable portion of the City's industrial area. The City should consider obtaining the needed industrial land outside the flood zone. The City's lack of a public wastewater collection and treatment system has been, and will continue to be, its greatest barrier to attracting and accommodating new business, industry, and needed housing.

4.5.2 Factors Affecting Development of Employment Lands in Grass Valley

A number of factors can limit the ability or desirability of inventoried employment lands to meet land supply needs during the 20-year planning period. Listed below are factors that individually, or in combination with each other, may affect the supply of inventoried vacant and redevelopable employment land within the City of Grass Valley, as well as the suitability of certain lands for development. The factors discussed below are typical of the primary concerns that require planning and coordination for economic development to succeed in many small cities in eastern Oregon.

4.5.2.1 Environment and Topography

Environmental factors that affect the development of land include flood zones, wetlands, slope, and similar factors. The presence of one or more environmental or topographic factors may not necessarily preclude development since the application of special development standards may be an option to mitigate constraints. Compliance with special development standards tends to significantly increase the costs of

development, which may otherwise limit the feasibility of a number of economic development opportunities.

Within Grass Valley's Commercial and Commercial-Industrial zones, several lots, both vacant and developed, appear to be within Flood Zone A according to Federal Emergency Management Agency (FEMA) Flood Map 410192005A (September 24, 1984) for Grass Valley, as shown on Figure 3-1. Vacant lots within the flood zone are constrained for development, especially when other factors such as lot size and lack of a public wastewater system are taken into account. The Grass Valley City Council has indicated it would like to study options for other areas within its UGB to accommodate commercial and industrial uses outside the flood zone.

4.5.2.2 Location and Lot Size

Location, lot size, and, to some extent, lot configuration can pose limitations on certain types of commercial or industrial development.

All of Grass Valley's commercial and industrial zoning is situated within previously platted areas of the City, which has the effect of limiting lot sizes for commercial or industrial use, especially when wastewater disposal systems must also be accommodated on site. The largest vacant lot zoned solely for commercial use is approximately 0.25 acre in size, while the largest vacant or redevelopable lot planned for industrial use is approximately 1.5 acres in size. In contrast, the new hemp processing facility is located on a site that is approximately 6.25 acres in size.

Grass Valley does have a Downtown Development Plan. However, with the City's desire to plan for commercial development outside the flood zone, the City may want to re-examine the Downtown Development Plan to reflect new site needs, public facilities, and community desires.

As Grass Valley looks either within or outside its UGB for industrial land to meets its projected needs, consideration should be given to sites that will provide for larger lot or parcel sizes.

4.5.2.3 Access and Public Services

Access and public services, primarily water and wastewater facilities, are critical factors that influence the ability, cost, and timing of development, as well as the amount of land supply needed to meet projected land needs. Where these facilities do not exist, the land area needed to accommodate them must be taken from the available land supply.

Anderson Perry & Associates, Inc. (AP) conducted a cursory review regarding access from existing streets to inventoried vacant and redevelopable Commercial and Commercial-Industrial zoned lots as part of the review for Grass Valley's buildable employment lands analysis. All vacant and redevelopable lots within the City were found to have adequate frontage along one or more City streets, suggesting that access should not constitute an unreasonable constraint to appropriate development.

Grass Valley does not have a public wastewater system. Wastewater treatment must be provided on site on individual lots. Developing an on-site wastewater system can both necessitate more land to be acquired and limit the potential commercial or industrial waste discharge due to Oregon Department of Environmental Quality permitting requirements. Not having a public wastewater system has proven to be a detraction to potential commercial and industrial business development in Grass Valley.

Water and electrical services are assumed to be available to each inventoried lot, or could be made available from within existing street rights-of-way (ROWs) at the developer's expense. Although costs for extending public services are sometimes prohibitive in being able to develop a lot, such costs cannot be a factor as a matter of public policy for excluding a lot from the City's buildable employment lands inventory.

Considering the relatively small sizes of vacant and redevelopable lots, the existing street networks, and the assumed availability, or capability, of providing public services (except wastewater), no allowance was made in the inventory to deduct area for roads and utilities to serve any of the vacant or redevelopable Commercial or Commercial-Industrial zoned lots.

4.5.2.4 Public Water, Wastewater, and Storm Drainage System Capacities

The ability for a city to accommodate economic development is dependent on whether the city's water and wastewater systems have capacity to supply and treat the demands of projected development during the 20-year planning period.

The City of Grass Valley indicated that its water system is capable of accommodating projected commercial and industrial development.

Grass Valley does not have developed wastewater or storm drainage systems. As a result, any new development must be able to accommodate an on-site wastewater system and address stormwater on site.

4.5.2.5 Ownership

Ownership is a less obvious factor that can affect the availability of land for development. For example, a significant number of vacant or redevelopable lots in the same ownership may indicate speculative private investment with unrealistic return expectations. Conversely, vacant land owned by a city may present unique opportunities using a public/private partnership approach.

During development of the buildable employment lands inventory for the City of Grass Valley, AP made a cursory review of the ownership of vacant and redevelopable lots to determine if there appeared to be any obvious patterns that could hinder or help development.

Several lots in both the Commercial and the Commercial-Industrial zones are concentrated in one or two individual or business ownerships. The financial motivations

of these owners may affect how likely much of the inventoried lands are to be developed or redeveloped during the 20-year planning period.

4.5.2.6 Lack of Affordable Workforce Housing

Local advisory committee members emphasized the lack of available and affordable workforce housing in Grass Valley (and Sherman County) as a major impediment to new businesses or expansion of existing businesses that require employees to live near where they work, including home-based professionals and telecommuters.

In Grass Valley, one new major employer has underwritten several small mobile-unit homes placed in the Grass Valley RV Park to provide housing for some of its employees to address this issue. This case demonstrates how real the housing problem is, but the effort by this employer is not likely to be repeated by other employers. Although the issue of affordable housing is beyond the scope of this project, the issue is noted here to underscore the importance of housing to economic development. Grass Valley is currently conducting a housing needs analysis with assistance from Sherman County to help further understand the nature and extent of the problem.

4.5.2.7 Fiber Optic Broadband Service Capability

Grass Valley, working with Sherman County and the Cities of Moro, Rufus, and Wasco, recently secured fiber optic cable to the community that will allow residents and businesses the ability to obtain high-speed broadband and Internet service. The new fiber optic cable will provide the City of Grass Valley with the same broadband and Internet capabilities that exist in larger cities in the region, including The Dalles and Hermiston. Fiber optic provides critical infrastructure needed to attract new businesses to the community and allow existing businesses greater opportunity to expand.

4.5.2.8 Climate Change

In August 2018, the Oregon Climate Change Research Institute (OCCRI) prepared a report entitled *Climate Change Influence on Natural Hazards in Eight Oregon Counties*. The report identified 11 types of natural hazards and projected the risks that the Earth's warming climate may have on each type of natural hazard by the 2050s as compared to the baseline study period from 1971 to 2000. Sherman County is one of the eight counties included in the report.

The natural hazards discussed include heat waves, cold waves, heavy rains, river flooding, drought, wildfire, poor air quality, windstorms, dust storms, increased invasive species, and loss of wetland ecosystems. For Sherman County, the risk of climate warming on drought, poor air quality, and windstorms by the 2050s is expected to stay about the same. Cold waves and dust storms are projected to decrease. For all other types of natural hazards, the risks are anticipated to increase in the number of occurrences and severity.

The increased risk of climate warming on natural hazards may, in turn, have adverse impacts on existing industries and businesses, and livability in general. Similarly, new

economic development opportunities may arise. The wind energy industry is one example of an opportunity to reduce climate warming while meeting energy needs and creating jobs.

4.5.3 Reconciliation of Land Demand and Supply for Moro

4.5.3.1 Summary of Site Requirements

Table 4-4 summarizes the site requirement needs for projected industrial, commercial, and other employment land needs for the City of Moro for the 20-year planning period.

TABLE 4-4
SUMMARY OF MORO'S SITE REQUIREMENTS

Industrial Site Requirements	Commercial Site Requirements	Other
Five 2-acre sites and One 4-acre site	Flex buildings on 4 acres	Home-based Businesses

Source: FCS GROUP, 2019

Flex buildings are existing or new buildings that offer flexibility for businesses to economically reconfigure their interiors for space in ways that best suit their needs, whether that is for office space, retail use, production or distribution areas, showroom, studio, or any combination that meets their needs. Reconfiguration does not impact the structural integrity of a building. Flex buildings vary in size and ability to meet certain needs and can be located in downtown areas or other parts of a community where space and off-street parking needs are greater.

4.5.3.2 Buildable Employment Lands Inventory

Table 4-5 summarizes the total vacant and redevelopable commercial and industrial buildable land available to meet site requirement needs for Moro for the 20-year planning period.

TABLE 4-5
SUMMARY OF MORO'S BUILDABLE LANDS INVENTORY

Zone	Total Acres by Zone	Gross Vacant Acres	Vacant Constrained Acres	Redevelopable Acres	Net Buildable Acres
Commercial	28.57	14.46	0.06	2.09	16.49
Industrial	29.06	13.15	0.56	NA	12.59

As shown on Table 4-5 above, Moro currently has 16.49 acres of commercially zoned vacant and redevelopable land to meet its need for retail and service uses, and 12.59 acres of industrially zoned vacant and redevelopable land to meet its needs during the 20-year planning period.

The above summary on Table 4-5 is derived from the BLIs shown in Section 3.

4.5.3.3 Reconciliation

Table 4-6 below summarizes the projected land need and supply for each of Moro's Commercial and Industrial zones and indicates whether there is either a net shortage or surplus.

TABLE 4-6
SUMMARY OF MORO'S EMPLOYMENT LAND NEEDS AND SUPPLY

Zone	Projected Land Need	Available Land Supply	Surplus (+)/ Deficiency (-)
Commercial	4 acres	16.49 acres	+12.49 acres
Industrial	14 acres	12.59 acres	-1.41 acres

Table 4-6 shows that Moro has a net surplus of 12.49 acres of commercially zoned land to meet its need for retail and service type uses. The City's existing supply of industrial land as shown on Table 4-6 is deficient by 1.41 acres in being able to meet its projected land need for industrial-type uses.

4.5.4 Factors Affecting Development of Employment Lands in Moro

A number of factors can limit the ability or desirability of inventoried employment lands to meet land supply needs during the 20-year planning period. Listed below are factors that individually, or in combination with each other, may affect the supply of inventoried vacant and redevelopable employment land within the City of Moro, as well as the suitability of certain lands for development. The factors discussed below are typical of the primary concerns that require planning and coordination for economic development to succeed in many small cities in eastern Oregon.

4.5.4.1 Environment and Topography

Environmental factors that affect the development of land include flood zones, wetlands, slope, and similar factors. The presence of one or more environmental or topographic factors may not necessarily preclude development since the application of special development standards may be an option to mitigate constraints. Compliance with special development standards tends to significantly increase the cost of development, which may otherwise limit the feasibility of a number of economic development opportunities.

The City of Moro has not been mapped for flood zones by FEMA. As a result, no attempt is made to ascertain whether any of Moro's employment-type lands may be subject to flooding and no properties are excluded from the BLI on this basis. No topographic constraints were identified by the limited assessment conducted for this evaluation.

4.5.4.2 Location and Lot Size

Location, lot size, and, to some extent, lot configuration can pose limitations on certain types of commercial or industrial development.

Moro appears to have a mix of vacant and redevelopable lot sizes concentrated within or near the downtown core to accommodate different types of commercial uses. A commercial lot in the southwest corner of the City is irregularly shaped but appears to be large enough that its configuration should not present much of a constraint to commercial use of the site.

The City does have a Downtown Development Plan and will need someone to champion its objectives. A distinct downtown commercial core may encourage more tourist-related businesses to locate in Moro.

Industrial development on the inventoried vacant industrial site adjacent to Moro High School may not be compatible with the school. The site is also owned by the Sherman County School District, which may not be supportive of industrial use on the property. If the site is determined to be unsuitable for industrial use for these reasons, the site should be rezoned for more appropriate use. However, this would leave the City with a deficiency of industrially zoned land of up to 14 acres rather than the 1.41 acres shown on Table 4-6. The City would need to look elsewhere within or outside the UGB for land to meet its 20-year industrial land needs.

One small triangle-shaped lot, approximately 0.55 acre in size, in the northwest corner of the UGB zoned for industrial use appears to have been mis-zoned considering its size, shape, and location.

4.5.4.3 Access and Public Services

Access and public services, primarily water and wastewater facilities, are critical factors that influence the ability, cost, and timing of economic development, as well as the amount of land supply needed to meet projected land needs. Where these facilities do not exist, the land area needed to accommodate them must be taken from the available land supply.

AP conducted a cursory review regarding access from existing streets to inventoried vacant and redevelopable Commercial and Industrial zoned lots as part of the review for the City's buildable employment lands analysis. All vacant and redevelopable lots within the City were found to have decent frontage along one or more City streets, suggesting that access should not constitute an unreasonable constraint to appropriate development.

Electricity, water, and wastewater services were assumed to be available to each of the inventoried lots within existing street ROWs or could be made available from within existing street ROWs at the developer's expense. Although costs for extending public services are sometimes prohibitive in being able to develop a lot, such costs cannot be a factor as a matter of public policy for excluding a lot from the City's buildable employment lands inventory.

Considering the relatively small sizes of vacant and redevelopable lots, the existing street networks, and the assumed availability or capability of providing public services, no allowance was made in the inventory to deduct area for roads and utilities to serve any of the vacant or redevelopable Commercial zoned lots.

The City should consider additional area for roads and utilities in meeting the City's projected industrial land needs if it decides to rezone the existing industrial land near the Moro High School and look elsewhere to meet its industrial land needs.

4.5.4.4 Public Water, Wastewater, and Storm Drainage System Capacities

The ability for a city to accommodate economic development is dependent on whether a city's water and wastewater systems have the capacities to supply and treat the demands of projected development during the 20-year planning period.

The City of Moro indicated that its water and wastewater systems have the capacities to accommodate the projected commercial and industrial land needs for the 20-year planning period. The City does not have a developed storm drainage system. As a result, any new development must be able to accommodate stormwater on site.

4.5.4.5 Ownership

Ownership is a less obvious factor that can affect the availability of land for development. For example, a significant number of vacant or redevelopable lots in the same ownership may indicate speculative private investment with unrealistic return expectations. Conversely, vacant land owned by a city may present unique opportunities using a public/private partnership approach.

During development of the buildable employment lands inventory for the City of Moro, AP made a cursory review of the ownership of vacant and redevelopable lots to determine if there appeared to be any obvious patterns that could hinder or help development. Ownership of lots within both the Commercial and Industrial zones appears to be relatively diverse, suggesting that speculation, or conversely lack of interest, in developing or redeveloping these properties is unlikely to be a constraint factor.

The large industrial lot in the southwest section of Moro is owned by the Sherman County School District, which is unlikely to make the property available for industrial use. A new ballfield was recently constructed on a portion of the property. Considering the ownership of the property along with its location adjacent to the high school, and its potential for land use conflicts with adjoining and nearby uses if developed for industrial use, the City of Moro should consider rezoning the property to a public use or similarly compatible zone and look elsewhere to meet its projected industrial land needs.

4.5.4.6 Lack of Affordable Workforce Housing

Local advisory committee members emphasized the lack of available and affordable workforce housing in Moro (and Sherman County) as a major impediment to new businesses or expansion of existing businesses that require employees to live near where they work, including home-based professionals and telecommuters.

4.5.4.7 Fiber Optic Broadband Service Capability

Moro, working with Sherman County and the Cities of Grass Valley, Rufus, and Wasco, recently secured fiber optic cable to allow residents and businesses in the community the ability to obtain high-speed broadband and Internet service. The new fiber optic cable will provide the City of Moro with the same broadband and Internet capabilities that exist in larger cities in the region, including The Dalles and Hermiston. Fiber optic provides critical infrastructure needed to attract new businesses to the community and allow existing businesses greater opportunity to expand.

4.5.4.8 Climate Change

In August 2018, the OCCRI prepared a report entitled *Climate Change Influence on Natural Hazards in Eight Oregon Counties*. The report identified 11 types of natural hazards and projected the risks that the Earth's warming climate may have on each type of natural hazard by the 2050s as compared to the baseline study period from 1971 to 2000. Sherman County is one of the eight counties included in the report.

The natural hazards discussed include heat waves, cold waves, heavy rains, river flooding, drought, wildfire, poor air quality, windstorms, dust storms, increased invasive species, and loss of wetland ecosystems. For Sherman County, the risk of climate warming on drought, poor air quality, and windstorms by the 2050s is expected to stay about the same. Cold waves and dust storms are projected to decrease. For all other types of natural hazards, the risks are anticipated to increase in the number of occurrences and severity.

The increased risk of climate warming on natural hazards may, in turn, have adverse impacts on existing industries and businesses, and livability in general. Similarly, new economic development opportunities may arise. The wind energy industry is one example of an opportunity to reduce climate warming while meeting energy needs and creating jobs.

4.5.5 Reconciliation of Land Demand and Supply for Rufus

4.5.5.1 Summary of Site Requirements

Table 4-7 summarizes the site requirement needs for projected industrial, commercial, and other employment land needs for the City of Rufus for the 20-year planning period.

TABLE 4-7
SUMMARY OF RUFUS'S SITE REQUIREMENTS

Industrial Site Requirements	Commercial Site Requirements	Other
Four 2-acre sites	Flex buildings on 2 acres	Home-based Businesses

Source: FCS GROUP, 2019

Flex buildings are existing or new buildings that offer flexibility for businesses to economically reconfigure their interiors for space in ways that best suit their needs,

whether that is for office space, retail use, production or distribution areas, showroom, studio, or any combination that meets their needs. Reconfiguration does not impact the structural integrity of a building. Flex buildings vary in size and ability to meet certain needs and can be located in downtown areas or other parts of a community where space and off-street parking needs are greater.

4.5.5.2 Buildable Employment Lands Inventory

Table 4-8 summarizes the total vacant commercial and industrial buildable land available to meet site requirement needs for Rufus for the 20-year planning period.

TABLE 4-8
SUMMARY OF RUFUS'S BUILDABLE LANDS INVENTORY

Zone	Total Acres by Zone	Gross Vacant Acres	Vacant Constrained Acres	Redevelopable Acres	Net Buildable Acres
Commercial	18.62	11.02	2.05	3.00	11.97
Industrial	59.40	45.67	NA	NA	45.67

As shown on Table 4-8 above, Rufus currently has 11.97 acres of commercially zoned vacant and redevelopable land to meet its need for retail and service uses, and 45.67 acres of industrially zoned vacant and redevelopable land to meet its needs during the 20-year planning period.

The above summary on Table 4-8 is derived from the BLIs shown in Section 3.

4.5.5.3 Reconciliation

Table 4-9 below summarizes the project land need and supply for each of Rufus' Commercial and Industrial zones and indicates whether there is either a net shortage or surplus.

TABLE 4-9
SUMMARY OF RUFUS'S EMPLOYMENT LAND NEEDS AND SUPPLY

Zone	Projected Land Need	Available Land Supply	Surplus (+)/ Deficiency (-)
Commercial	2 acres	11.97 acres	+ 9.97 acres
Industrial	8 acres	45.67 acres	+ 37.67acres

Table 4-9 shows that Rufus has approximately 11.97 acres of existing vacant and redevelopable commercial land, which exceeds the projected land need of 2 acres for the 20-year planning period. Rufus has a number of vacant and redevelopable commercially zoned sites in varying sizes and locations that appear capable of accommodating flex buildings in a variety of sizes to suit the different types of anticipated commercial uses.

Rufus's existing supply of vacant and redevelopable industrial land totals more than 45 acres and far exceeds the projected land need of 8 acres for industrial uses during the 20-year planning period. The 45-plus acres of industrial land are capable of accommodating four 2-acre sites projected as needed.

4.5.6 Factors Affecting Development of Employment Lands in Rufus

A number of factors can limit the ability or desirability of inventoried employment lands to meet land supply needs during the 20-year planning period. Listed below are factors that individually or in combination with each other may affect the supply of inventoried vacant and redevelopable employment land within the City of Rufus, as well as the suitability of certain lands for development. The factors discussed below are typical of the primary concerns that require planning and coordination for economic development to succeed in many small cities in eastern Oregon.

4.5.6.1 Environment and Topography

Environmental factors that affect the development of land include flood zones, wetlands, slope, and similar factors. The presence of one or more environmental or topographic factors may not necessarily preclude development since the application of special development standards may be an option to mitigate constraints. Compliance with special development standards tends to significantly increase the cost of development, which may otherwise limit the feasibility of a number of economic development opportunities.

Within Rufus's UGB, the only identifiable environmental constraints affecting certain inventoried employment lands were flood zone designations and depth to bedrock, which greatly affects the ability and cost to provide public services. No other topographic constraints were identified.

The City of Rufus has invested significantly in developing its industrial park through grading and providing paved access and public infrastructure. As mentioned, depth to bedrock proved to be a greater-than-expected obstacle in getting the industrial sites ready for businesses. Depth to bedrock is a constraint that affects much of the area within Rufus's UGB.

The Commercial zone contains several lots, both vacant and redevelopable, that appear to be within Flood Zone A according to FEMA Flood Map 410194005A (September 24, 1984), as shown on the BLI map for Rufus (Figure 3-3). None of the Industrial zoned lots are in a flood zone.

Some commercial lots in the flood zone were excluded from the inventory, while others were included. Lots in the flood zone typically had other factors associated with them, such as size or location, that ultimately determined whether they should be included in the inventory. Portions of two Commercial zoned lots were found to be within a floodway and were determined to be unbuildable as a result.

4.5.6.2 Location and Lot Size

Location, lot size, and, to some extent, lot configuration can pose limitations on certain types of commercial or industrial development.

Commercial zoning within Rufus reflects a definite orientation to highway commercial-type uses. A number of commercial lots are very small and/or triangular shaped. Lots with acute angles limit the amount of buildable or useable area. Larger lots are located along First Street (the main thoroughfare) with great visibility from I-84. Some of these larger lots are partially or wholly within the flood zone; however, their larger sizes and apparent locational advantages would seem to justify the additional expense and effort to develop them in compliance with flood hazard prevention regulations. Currently, several of these lots are used for truck parking in conjunction with adjacent or nearby uses.

Rufus currently lacks a distinct downtown commercial core area. The City does have a downtown redevelopment plan that will need someone to champion its objectives. A distinct downtown commercial core may encourage more tourist-related businesses to locate in Rufus.

Seven Industrial zoned lots are located within an industrial park-like setting at the west end of Rufus currently owned by the City. The sizes of the lots vary from 3 acres up to 16 acres, providing a variety to suit different industrial needs. Lots to the east of the main access into the park are shovel-ready with public services available. Lots to the west of the main access will need significant earthwork before access and public services can be made available.

4.5.6.3 Access and Public Services

Access and public services, primarily water and wastewater facilities, are critical factors that influence the ability, cost, and timing of economic development, as well as the amount of land supply needed to meet projected land needs. Where these facilities do not exist, the land area needed to accommodate them must be taken from the available land supply.

AP conducted a cursory review regarding access from existing streets to inventoried vacant and redevelopable Commercial and Industrial zoned lots as part of the review for the City's buildable employment lands analysis. Vacant and redevelopable lots within the City's Commercial and Industrial zones were found to have decent frontage along one or more City streets, suggesting that access should not constitute an unreasonable constraint to appropriate development.

Electricity, water, and wastewater services are assumed to be available to each of the lots within existing street ROWs or could be made available from within existing street ROWs at the developer's expense. Although costs for extending public services are sometimes prohibitive in being able to develop a lot, such costs cannot be a factor as a matter of public policy for excluding a lot from the City's buildable employment lands

inventory. The City of Rufus has invested heavily in providing services to sites within its industrial park to make the sites "shovel ready" for new businesses.

Considering the relatively small sizes of vacant and redevelopable lots, the existing street networks, and the assumed availability or capability of providing public services, no allowance was made in the inventory to deduct area for roads and utilities to serve any of the vacant or redevelopable Commercial zoned lots.

4.5.6.4 Public Water, Wastewater, and Storm Drainage System Capacities

The ability for a city to accommodate economic development is dependent on whether a city's water and wastewater systems have the capacities to supply and treat the demands of projected development during the 20-year planning period.

The City of Rufus indicated that its water and wastewater systems have the capacities to accommodate the projected commercial and industrial land needs for the 20-year planning period. In 2009, the City invested $1.6 million to complete improvements to their wastewater treatment system, which consisted of a new influent lift station, rehabilitation of the existing three-cell facultative lagoon system, rehabilitation of lagoon flow control structures, new lagoon piping, and new electrical controls and generator. The project also included a new 6.5-acre subsurface drip irrigation system for effluent reuse.

The City does not have a developed storm drainage system. As a result, any new development must be able to accommodate stormwater on site.

4.5.6.5 Ownership

Ownership is a less obvious factor that can affect the availability of land for development. For example, a significant number of vacant or redevelopable lots in the same ownership may indicate speculative private investment with unrealistic return expectations. Conversely, vacant land owned by a city may present unique opportunities using a public/private partnership approach.

During development of the buildable employment lands inventory for each city, AP made a cursory review of the ownership of vacant and redevelopable lots to determine if there appeared to be any obvious patterns that could hinder or help with development. Ownership of lots within the Commercial zone appears to be relatively diverse, suggesting that speculation, or conversely lack of interest, in developing or redeveloping these properties is unlikely to be a constraint factor.

The City of Rufus owns all of the lots within its Industrial zone. The City has been actively working to market and make the vacant lots available for private industrial development.

4.5.6.6 Lack of Affordable Workforce Housing

Local advisory committee members emphasized the lack of available and affordable workforce housing in Rufus (and Sherman County) as a major impediment to new businesses or expansion of existing businesses that require employees to live near where they work, including home-based professionals and telecommuters.

4.5.6.7 Fiber Optic Broadband Service Capability

Rufus, working with Sherman County and the Cities of Grass Valley, Moro, and Wasco, recently secured fiber optic cable to allow residents and businesses in the community the ability to obtain high-speed broadband and Internet service. The new fiber optic cable will provide the City of Rufus with the same broadband and Internet capabilities that exist in larger cities in the region, including The Dalles and Hermiston. Fiber optic provides critical infrastructure needed to attract new businesses to the community and allow existing businesses greater opportunity to expand.

4.5.6.8 Climate Change

In August 2018, the OCCRI prepared a report entitled *Climate Change Influence on Natural Hazards in Eight Oregon Counties*. The report identified 11 types of natural hazards and projected the risks that the Earth's warming climate may have on each type of natural hazard by the 2050s as compared to the baseline study period from 1971 to 2000. Sherman County is one of the eight counties included in the report.

The natural hazards discussed include heat waves, cold waves, heavy rains, river flooding, drought, wildfire, poor air quality, windstorms, dust storms, increased invasive species, and loss of wetland ecosystems. For Sherman County, the risk of climate warming on drought, poor air quality, and windstorms by the 2050s is expected to stay about the same. Cold waves and dust storms are projected to decrease. For all other types of natural hazards, the risks are anticipated to increase in the number of occurrences and severity.

The increased risk of climate warming on natural hazards may, in turn, have adverse impacts on existing industries and businesses, and livability in general. Similarly, new economic development opportunities may arise. The wind energy industry is one example of an opportunity to reduce climate warming while meeting energy needs and creating jobs.

4.5.7 Reconciliation of Land Demand and Supply for Wasco

4.5.7.1 Summary of Site Requirements

Table 4-10 summarizes the site requirement needs for projected industrial, commercial, and other employment land needs for the City of Wasco for the 20-year planning period.

TABLE 4-10
SUMMARY OF WASCO'S SITE REQUIREMENTS

Industrial Site Requirements	Commercial Site Requirements	Other
Four 2-acre sites and two 4-acre sites	Flex buildings on 4 acres	Home-based Businesses

Source: FCS GROUP, 2019

Flex buildings are existing or new buildings that offer flexibility for businesses to economically reconfigure their interiors for space in ways that best suit their needs, whether that is for office space, retail use, production or distribution areas, showroom, studio, or any combination that meets their needs. Reconfiguration does not impact the structural integrity of a building. Flex buildings vary in size and ability to meet certain needs and can be located in downtown areas or other parts of a community where space and off-street parking needs are greater.

4.5.7.2 Buildable Employment Lands Inventory

Table 4-11 summarizes the total vacant commercial and industrial buildable land available to meet site requirement needs for Wasco for the 20-year planning period.

TABLE 4-11
SUMMARY OF WASCO'S BUILDABLE LANDS INVENTORY

Zone	Total Acres by Zone	Gross Vacant Acres	Vacant Constrained Acres	Redevelopable Acres	Net Buildable Acres
Commercial	35.51	17.46	5.06	2.11	14.51
Industrial	38.02	38.02	NA	NA	38.02

As shown on Table 4-11 above, Wasco currently has 14.51 acres of commercially zoned vacant and redevelopable land to meet its need for retail and service uses, and 38.02 acres of industrially zoned vacant and redevelopable land to meet its needs during the 20-year planning period.

The above summary on Table 4-11 is derived from the BLIs shown in Section 3.

4.5.7.3 Reconciliation

Table 4-12 below summarizes the project land need and supply for each of Wasco's Commercial and Industrial zones and indicates whether there is either a net shortage or surplus.

TABLE 4-12
SUMMARY OF WASCO'S EMPLOYMENT LAND NEEDS AND SUPPLY

Zone	Projected Land Need	Available Land Supply	Surplus (+)/ Deficiency (-)
Commercial	4 acres	14.51 acres	+ 10.51 acres
Industrial	16 acres	38.02 acres	+ 22.02 acres

Table 4-12 shows that Wasco has more than 14 acres of existing vacant and redevelopable Commercial zoned land, which exceeds the projected land need of 4 acres for the 20-year planning period. Wasco has a number of vacant and redevelopable commercially zoned sites in varying sizes and locations that appear capable of accommodating flex buildings in a variety of sizes to suit the different types of anticipated commercial uses.

Wasco's existing supply of vacant and redevelopable Industrial zoned land totals more than 38 acres and exceeds the projected land need of 16 acres for industrial uses during the 20-year planning period. The 38-plus acres of industrially zoned land appear capable of accommodating at least four 2-acre sites and two 4-acre sites projected as needed.

4.5.8 Factors Affecting Development of Employment Lands in Wasco

A number of factors can limit the ability or desirability of inventoried employment lands to meet land supply needs during the 20-year planning period. Listed below are factors that individually or in combination with each other may affect the supply of inventoried vacant and redevelopable employment land within the City of Wasco, as well as the suitability of certain lands for development. The factors discussed below are typical of the primary concerns that require planning and coordination for economic development to succeed in many small cities in eastern Oregon.

4.5.8.1 Environment and Topography

Environmental factors that affect the development of land include flood zones, wetlands, slope, and similar factors. The presence of one or more environmental or topographic factors may not necessarily preclude development since the application of special development standards may be an option to mitigate constraints. Compliance with special development standards tends to significantly increase the costs of development, which may otherwise limit the feasibility of a number of economic development opportunities.

Within Wasco's UGB, the only identifiable environmental constraint affecting certain inventoried employment lands was flood zone designations. No topographic constraints were identified. The Commercial zone contains several lots, both vacant and developed, that appear to be within Flood Zone AE according to FEMA Flood Map 410195001A (September 15, 1989), as shown on the BLI map for Wasco (Figure 3-4). None of the Industrial zoned land appears to be in a flood zone.

Vacant commercial lots in the flood zone were excluded from the inventory. Lots in the flood zone typically had other factors associated with them, such as size or location, that ultimately determined whether they should be included in the inventory.

4.5.8.2 Location and Lot Size

Location, lot size, and, to some extent, lot configuration can pose limitations on certain types of commercial or industrial development.

Lots in the Commercial zone reflect a distinct downtown commercial core and a section intended for highway-commercial related uses. Vacant and redevelopable lot sizes vary and offer a variety of options for commercial uses. The City does have a Downtown Development Plan and will need someone to champion its objectives.

Vacant inventoried land in Wasco's Industrial zone consists of a single 38.02-acre parcel located adjacent to the Wasco State Airport. Some concern was expressed during local advisory committee meetings that uncertainty with building height restrictions due to airport approach zones has dissuaded potential businesses that have considered the site. The City does not have an airport overlay zone or development zone to help protect the airport and guide safe development near the airport. The City should consider adopting an airport overlay zone for these reasons. Greater certainty is needed for potential developers to know how the site could be developed without interfering with the airport.

4.5.8.3 Access and Public Services

Access and public services, primarily water and wastewater facilities, are critical factors that influence the ability, cost, and timing of economic development, as well as the amount of land supply needed to meet projected land needs. Where these facilities do not exist, the land area needed to accommodate them must be taken from the available land supply.

AP conducted a cursory review regarding access from existing streets to inventoried vacant and redevelopable commercial and industrial lots as part of the review for the City's buildable employment lands analysis. Vacant and redevelopable lots within the City's Commercial and Industrial zones were found to have decent frontage along one or more City streets, suggesting that access should not constitute an unreasonable constraint to appropriate development.

Electricity, water, and wastewater services are assumed to be available to each of the lots within existing street ROWs or could be made available from within existing street ROWs at the developer's expense. Although costs for extending public services are sometimes prohibitive in being able to develop a lot, such costs cannot be a factor as a matter of public policy for excluding a lot from the City's buildable employment lands inventory.

Considering the relatively small sizes of vacant and redevelopable lots, the existing street networks, and the assumed availability, or capability, of providing public services, no allowance was made in the inventory to deduct area for roads and utilities to serve any of the vacant or redevelopable Commercial zoned lots.

Because land needs tend to vary greatly for different types of industrial uses, no allowance was made to deduct area for roads and utilities to serve uses in the Industrial zone. However, because the City's existing industrial land supply consists of a single 38.02-acre vacant parcel, the City could consider deducting area for roads and utilities if needed to justify expansion of the UGB to meet its industrial land supply need.

Development of an airport master plan may indicate additional area on the site that should not be developed in order to protect airport approach and take-off zones.

4.5.8.4 Public Water, Wastewater, and Storm Drainage System Capacities

The ability for a city to accommodate economic development is dependent on whether a city's water and wastewater systems have the capacities to supply and treat the demands of projected development during the 20-year planning period.

The City of Wasco indicated that its water and wastewater systems have the capacities to accommodate the projected commercial and industrial land needs for the 20-year planning period.

The City does not have a developed storm drainage system. As a result, any new development must be able to accommodate stormwater on site.

4.5.8.5 Ownership

Ownership is a less obvious factor that can affect the availability of land for development. For example, a significant number of vacant or redevelopable lots in the same ownership may indicate speculative private investment with unrealistic return expectations. Conversely, vacant land owned by a city may present unique opportunities using a public/private partnership approach.

During development of the buildable employment lands inventory for each city, AP made a cursory review of the ownership of vacant and redevelopable lots to determine if there appeared to be any obvious patterns that could hinder or help development. Ownership of lots within both the Commercial and Industrial zones appears to be relatively diverse, suggesting that speculation, or conversely lack of interest, in developing or redeveloping these properties is unlikely to be a constraint factor.

4.5.8.6 Lack of Affordable Workforce Housing

Local advisory committee members emphasized the lack of available and affordable workforce housing in Wasco (and Sherman County) as a major impediment to new businesses or expansion of existing businesses that require employees to live near where they work, including home-based professionals and telecommuters.

4.5.8.7 Fiber Optic Broadband Service Capability

Wasco, working with Sherman County and the Cities of Grass Valley, Moro, and Rufus, recently secured fiber optic cable to allow residents and businesses in the community the ability to obtain high-speed broadband and Internet service. The new fiber optic cable will provide the City of Wasco with the same broadband and Internet capabilities that exist in larger cities in the region, including The Dalles and Hermiston. Fiber optic provides critical infrastructure needed to attract new businesses to the community and allow existing businesses greater opportunity to expand.

4.5.8.8 Climate Change

In August 2018, the OCCRI prepared a report entitled *Climate Change Influence on Natural Hazards in Eight Oregon Counties*. The report identified 11 types of natural hazards and projected the risks that the Earth's warming climate may have on each type of natural hazard by the 2050s as compared to the baseline study period from 1971 to 2000. Sherman County is one of the eight counties included in the report.

The natural hazards discussed include heat waves, cold waves, heavy rains, river flooding, drought, wildfire, poor air quality, windstorms, dust storms, increased invasive species, and loss of wetland ecosystems. For Sherman County, the risk of climate warming on drought, poor air quality, and windstorms by the 2050s is expected to stay about the same. Cold waves and dust storms are projected to decrease. For all other types of natural hazards, the risks are anticipated to increase in the number of occurrences and severity.

The increased risk of climate warming on natural hazards may, in turn, have adverse impacts on existing industries and businesses, and livability in general. Similarly, new economic development opportunities may arise. The wind energy industry is one example of an opportunity to reduce climate warming while meeting energy needs and creating jobs.

Section 5.0 - Draft Economic Policy Recommendations

5.1 Introduction

This section includes current economic development goals and polices for each city in Sherman County with draft amendments and new recommended draft community economic development policies and objectives consistent with Oregon Administrative Rules 660-009-0020. A list of recommended next steps is provided following the updated draft economic development comprehensive plan policies for Goal 9. The draft policies and objectives listed below are intended to guide positive economic development within the urban growth boundary.

Each city's existing stated economic goal and policies are shown in Section 5.2. Recommended amendments and new policies, objectives, and strategies are shown in **bold.** Existing language recommended to be deleted is shown with a strikeout line, like ~~this~~.

5.2 Recommended Policies, Objectives, and Strategies

5.2.1 City of Grass Valley: Recommended Amendments to Current Economic Development Policies; Recommended New Policies, Objectives, and Strategies

Part V. Social Characteristics

Goal V. **Economic Development**

A. To improve**, diversify, and maintain** the economy of Grass Valley **and support the overall economic health of Sherman County** and the state.

Policies V. **Economic Development Policies, Objectives, and Strategies**

The City shall continually strive to meet its goal for economic development through proactive implementation of the following policies, objectives, and strategies, or as new opportunities are presented. The City of Grass Valley will:

1. ~~That development shall be encouraged which will improve employment opportunities, providing desirable living conditions in the area are not diminished by such development.~~ **Encourage business and economic development that will improve employment opportunities by becoming a visible economic development partner in Sherman County.**

   Objective 1.1: Support City, County, regional, state, and federal projects and initiatives that may positively impact or influence business development in Grass Valley.

   Objective 1.2: Focus primary economic development efforts on existing important local sectors including Value-added Agriculture and Light Manufacturing,

Renewable Energy, Highway Commercial, Tourism and Recreation, and Home-Based Businesses, as identified in the Economic Opportunities Analyses for Grass Valley.

Strategies:

- **Encourage development opportunities within Grass Valley that support the Oregon Raceway Park located 2 miles east of Grass Valley.**

Objective 1.3: Actively promote benefits of the Sherman County Enterprise Zone within Grass Valley's urban growth boundary to new businesses.

Objective 1.4: Seek and foster working relationships with the Mid-Columbia Economic Development District (MCEDD) and other local and regional economic development agencies that encourage cooperation to leverage assistance and funding options for economic planning and economic development projects.

Strategies:

- **Partner with MCEDD on five-year plans to help garner infrastructure funding, workforce development, and more.**

Objective 1.5: Encourage local support and seek funding for a plan to develop a public wastewater system for the City of Grass Valley.

Objective 1.6: Encourage and support efforts to provide safe and affordable childcare as a way to help address labor shortages for local businesses in Grass Valley.

2. ~~That those employment opportunities shall be encouraged which are compatible with existing and anticipated uses of land as shown in the plan.~~ **Develop clear and objective standards for new or expanding commercial and industrial uses that promote compatibility with existing and anticipated uses of land, as shown in the Comprehensive Plan.**

   Objective 2.1: Maintain compatibility with existing uses and desirable living conditions while streamlining the review and approval process for new or expanding commercial and industrial uses.

   Strategies:

   - **Review and consider local zone code amendments to siting standards for commercial and industrial uses.**
   - **Consider more than one zoning district for commercial and industrial uses.**

3. ~~That the impacts of major development project proposals shall be consistent with or enhance the social, environmental and economic quality and rural character of the~~

~~community.~~ **Maintain an adequate amount of employment (commercial and industrial) land for future needs.**

Objective 3.1: Maintain a 20-year buildable land inventory of vacant commercial and industrial zoned sites proportionally to meet business expansion requirements for target industries identified in this Economic Opportunities Analyses (Section 3), as current sites develop.

Objective 3.2: Support full utilization of buildable vacant and redevelopable lands within the City for multiple types of businesses, including commercial and industrial.

Strategies:

- **Provide public services that can be extended to employment lands.**
- **Develop a tracking system for the development of employment lands.**
- **Promote commercial and industrial lands for sale or lease on Business Oregon's Prospector Site (www.oregonprospector.com).**

4. ~~That a~~ **Encourage and support a** coordinated effort between regional agencies**,** ~~and the county~~ **Sherman County, and the City of Grass Valley** to stimulate economic development at the level the City of Grass Valley desires~~, be encouraged~~.

   Objective 4.1: Identify the level of economic development desired by the citizens of Grass Valley.

   Strategies:

   - **Develop a community vision that reflects community values and can serve as a basis for a five-year economic development strategy.**

5. ~~That decisions related to employment opportunities shall take into account (1) alternative sites for proposed uses and (2) alternative uses for possible sites.~~ **Support retention and expansion of existing businesses.**

~~6. That environmental effects to air, water and land resources quality shall be considered in addition to social economic factors when making economic planning decisions.~~

~~7. That the City shall encourage the Northeast Sherman County Irrigation Development project.~~

~~8. That the City shall encourage the location of a consolidated agency service center within Grass Valley.~~

6. **Work with public and private development partners to ensure adequate housing supply for all income ranges, including workforce housing.**

7. Support home-based businesses and provide for a streamlined review and approval process for them.

Objective 7.1: Monitor home-based business occupations.

Strategies:

- **Conduct annual survey of local businesses to determine local business expansion needs.**

8. Update or develop a more complete economic development plan beyond the EOA due to its land needs focus.

Objective 8.1: Develop a more comprehensive economic development plan to help meet the City's economic development goal.

Strategies:

- **Review and update the City's Downtown Development Plan.**
- **Develop an Economic Development Marketing Strategy for Grass Valley.**
- **Identify and empower a champion to further the City's economic development policies, objectives, and strategies.**

9. Monitor Performance and Periodically Adjust Goals, Policies, and Objectives

Objective 9.1: Periodically (every five years) monitor the overall completion and cost and benefits attributed to the aforementioned economic goals and objectives using key metrics such as number of business establishments and covered workers within city limits, average wages per worker, and assessed valuation levels (for tax lots) within city limits.

5.2.2 City of Moro: Recommended Amendments to Current Economic Development Policies; Recommended New Policies, Objectives, and Strategies

Part V. Social Characteristics

Goal V. **Economic Development**

A. To improve**, diversify, and maintain** the economy of Moro **and support the overall economic health of Sherman County** and the state.

Policies V. **Economic Development Policies, Objectives, and Strategies**

The City shall continually strive to meet its goal for economic development through proactive implementation of the following policies, objectives, and strategies, or as new opportunities are presented. The City of Moro will:

1. ~~That development shall be encouraged which will improve employment opportunities, providing desirable living conditions in the area are not diminished by such development.~~ **Encourage business and economic development that will improve employment opportunities by becoming a visible economic development partner in Sherman County.**

   Objective 1.1: Support City, County, regional, state, and federal projects and initiatives that may positively impact or influence business development in Moro.

   Objective 1.2: Focus primary economic development efforts on existing important local sectors including Value-added Agriculture and Light Manufacturing, Renewable Energy, Construction, Tourism and Recreation, and Home-Based Businesses, as identified in the Economic Opportunities Analyses for Moro.

   Strategies:

   - **Encourage development opportunities within Moro that support the Oregon Raceway Park located 2 miles east of Grass Valley.**

   Objective 1.3: Actively promote benefits of the Sherman County Enterprise Zone within Moro's urban growth boundary to new businesses.

   Objective 1.4: Seek and foster working relationships with the Mid-Columbia Economic Development District (MCEDD) and other local and regional economic development agencies that encourage cooperation to leverage assistance and funding options for economic planning and economic development projects.

   Strategies:

   - **Partner with MCEDD on five-year plans to help garner infrastructure funding, workforce development, and more.**

   Objective 1.5: Encourage and support efforts to provide safe and affordable childcare as a way to help address labor shortages for local businesses in Moro.

2. ~~That those employment opportunities shall be encouraged which are compatible with existing and anticipated uses of land as shown in the plan.~~ **Develop clear and objective standards for new or expanding commercial and industrial uses that promote compatibility with existing and anticipated uses of land, as shown in the Comprehensive Plan.**

   Objective 2.1: Maintain compatibility with existing uses and desirable living conditions while streamlining the review and approval process for new or expanding commercial and industrial uses.

   Strategies:

   - **Review and consider local zone code amendments to siting standards for commercial and industrial uses.**

- **Consider more than one zoning district for commercial and industrial uses.**

3. ~~That the impacts of major development project proposals shall be consistent with or enhance the social, environmental and economic quality and rural character of the community.~~ **Maintain an adequate amount of employment (commercial and industrial) land for future needs.**

   Objective 3.1: Maintain a 20-year buildable land inventory of vacant Commercial and Industrial zoned sites proportionally to meet business expansion requirements for target industries identified in this Economic Opportunities Analyses (Section 3), as current sites develop.

   Objective 3.2: Support full utilization of buildable vacant and redevelopable lands within the City for multiple types of businesses, including commercial and industrial.

   Strategies:

   - **Provide public services that can be extended to employment lands.**
   - **Develop a tracking system for the development of employment lands.**
   - **Promote commercial and industrial lands for sale or lease on Business Oregon's Prospector Site (www.oregonprospector.com).**

4. ~~That a~~ **Encourage and support a** coordinated effort between regional agencies**,** ~~and the county~~ **Sherman County, and the City of Moro** to stimulate economic development at the level the City of Moro desires~~, be encouraged~~.

   Objective 4.1: Identify the level of economic development desired by the citizens of Moro.

   Strategies:

   - **Develop a community vision that reflects community values and can serve as a basis for a five-year economic development strategy.**

5. ~~That decisions related to employment opportunities shall take into account (1) alternative sites for proposed uses and (2) alternative uses for possible sites.~~ **Support retention and expansion of existing businesses.**

~~6. That environmental effects to air, water and land resources quality shall be considered in addition to social economic factors when making economic planning decisions.~~

~~7. That the City shall encourage the Northeast Sherman County irrigation development project.~~

~~8. That the City shall encourage the location of a consolidated agency service center within Moro.~~

6. **Work with public and private development partners to ensure adequate housing supply for all income ranges, including workforce housing.**

7. **Support home-based businesses and provide for a streamlined review and approval process for them.**

   Objective 7.1: Monitor home-based business occupations.

   Strategies:

- **Conduct annual survey of local businesses to determine local business expansion needs.**

8. **Update or develop a more complete economic development plan beyond the Economic Opportunities Analyses due to its land needs focus.**

   Objective 8.1: Develop a more comprehensive economic development plan to help meet the City's economic development goal.

   Strategies:

   - **Review and update the City's Downtown Development Plan.**
   - **Develop an Economic Development Marketing Strategy for Moro.**
   - **Identify and empower a champion to further the City's economic development policies, objectives, and strategies.**

9. **Monitor Performance and Periodically Adjust Goals, Policies, and Objectives**

   Objective 9.1: Periodically (every five years) monitor the overall completion and cost and benefits attributed to the aforementioned economic goals and objectives using key metrics such as number of business establishments and covered workers within city limits, average wages per worker, and assessed valuation levels (for tax lots) within city limits.

5.2.3 City of Rufus: Recommended Amendments to Current Economic Development Policies; Recommended New Policies, Objectives, and Strategies

Part V. Social Characteristics

Goal V. **Economic Development**

A. To improve**, diversify, and maintain** the economy of Rufus **and support the overall economic health of Sherman County** and the state.

Policies V. **Economic Development Policies, Objectives, and Strategies**

The City shall continually strive to meet its goal for economic development through proactive implementation of the following policies, objectives, and strategies or as new opportunities are presented. The City of Rufus will:

1. ~~That development shall be encouraged which will improve employment opportunities, providing desirable living conditions in the area are not diminished by such development.~~ **Encourage business and economic development that will improve employment opportunities by becoming a visible economic development partner in Sherman County.**

   Objective 1.1: Support City, County, regional, state, and federal projects and initiatives that may positively impact or influence business development in Rufus.

   Objective 1.2: Focus primary economic development efforts on existing important local sectors including Value-added Agriculture and Light Manufacturing, Renewable Energy, Highway Commercial, and Tourism and Recreation, as identified in the Economic Opportunities Analyses for Rufus.

   Objective 1.3: Actively promote benefits of the Sherman County Enterprise Zone within Rufus's urban growth boundary to new businesses.

   Objective 1.4: Seek and foster working relationships with the Mid-Columbia Economic Development District (MCEDD) and other local and regional economic development agencies that encourage cooperation to leverage assistance and funding options for economic planning and economic development projects.

   Strategies:

   - **Partner with MCEDD on five-year plans to help garner infrastructure funding, workforce development, and more.**

   Objective 1.5: Encourage and support efforts to provide safe and affordable childcare as a way to help address labor shortages for local businesses in Rufus.

2. ~~That those employment opportunities shall be encouraged which are compatible with existing and anticipated uses of land as shown in the plan.~~ **Develop clear and objective standards for new or expanding commercial and industrial uses that promote compatibility with existing and anticipated uses of land, as shown in the Comprehensive Plan.**

   Objective 2.1: Maintain compatibility with existing uses and desirable living conditions while streamlining the review and approval process for new or expanding commercial and industrial uses.

   Strategies:

   - **Review and consider local zone code amendments to siting standards for commercial and industrial uses.**

- **Consider more than one zoning district for commercial and industrial uses.**

3. ~~That the impacts of major development project proposals shall be consistent with or enhance the social, environmental and economic quality and rural character of the community.~~ **Maintain an adequate amount of employment (commercial and industrial) land for future needs.**

   Objective 3.1: Maintain a 20-year buildable land inventory of vacant Commercial and Industrial zoned sites proportionally to meet business expansion requirements for target industries identified in this Economic Opportunities Analyses (Section 3), as current sites develop.

   Objective 3.2: Support full utilization of buildable vacant and redevelopable lands within the City for multiple types of businesses, including commercial and industrial.

   Strategies:

   - **Provide public services that can be extended to employment lands.**
   - **Develop a tracking system for the development of employment lands.**
   - **Promote commercial and industrial lands for sale or lease on Business Oregon's Prospector Site (www.oregonprospector.com).**

4. ~~That a~~ **Encourage and support a** coordinated effort between regional agencies**,** ~~and the county~~ **Sherman County, and the City of Rufus** to stimulate economic development at the level the City of Rufus desires~~, be encouraged~~.

   Objective 4.1: Identify the level of economic development desired by the citizens of Rufus.

   Strategies:

   - **Develop a community vision that reflects community values and can serve as a basis for a five-year economic development strategy.**

5. ~~That decisions related to employment opportunities shall take into account (1) alternative sites for proposed uses and (2) alternative uses for possible sites.~~ **Support retention and expansion of existing businesses.**

~~6. That environmental effects to air, water and land resources quality shall be considered in addition to social economic factors when making economic planning decisions.~~

~~7~~**6**. Review and implement the City's Downtown Development Plan. Develop downtown Rufus as a unified business district with a unique feel and ambiance.

Objective 6.1: Identify a champion to implement the Downtown Development Plan and the Economic Opportunities Analyses recommendations.

7. **Work with public and private development partners to ensure adequate housing supply for all income ranges, including workforce housing.**

8. **Support home-based businesses and provide for a streamlined review and approval process for them.**

   Objective 8.1: Monitor home-based business occupations.

   Strategies:

   - **Conduct annual survey of local businesses to determine local business expansion needs.**

9. **Update or develop a more complete economic development plan beyond the Economic Opportunities Analyses due to its land needs focus.**

   Objective 9.1: Develop a more comprehensive economic development plan to help meet the City's economic development goal.

   Strategies:

   - **Review and update the City's Downtown Development Plan.**
   - **Develop an Economic Development Marketing Strategy for Rufus.**
   - **Identify and empower a champion to further the City's economic development policies, objectives, and strategies.**

10. **Monitor Performance and Periodically Adjust Goals, Policies, and Objectives**

    Objective 10.1: Periodically (every 5 years) monitor the overall completion and cost and benefits attributed to the aforementioned economic goals and objectives using key metrics such as number of business establishments and covered workers within city limits, average wages per worker, and assessed valuation levels (for tax lots) within city limits.

5.2.4 City of Wasco: Recommended Amendments to Current Economic Development Policies; Recommended New Policies, Objectives, and Strategies

Part V. Social Characteristics

Findings V.

1. This Plan was developed to conform with the statewide goal on the economy (Goal 9).

2. Agriculture is the primary industry in Sherman County.

3. Employment for residents of Wasco is generally outside the City itself.

4. Residents indicate that heavy industry is not desired but that light industry and new businesses should be encouraged.

Part V. Social Characteristics

Goal V. **Economic Development**

A. To improve**, diversify, and maintain** the economy of Wasco **and support the overall economic health of Sherman County** and the state.

Policies V. **Economic Development Policies, Objectives, and Strategies**

The City shall continually strive to meet its goal for economic development through proactive implementation of the following policies, objectives, and strategies, or as new opportunities are presented. The City of Wasco will:

1. ~~That development shall be encouraged which will improve employment opportunities, providing desirable living conditions in the area are not diminished by such development.~~ **Encourage business and economic development that will improve employment opportunities by becoming a visible economic development partner in Sherman County.**

   Objective 1.1: Support City, County, regional, state, and federal projects and initiatives that may positively impact or influence business development in Wasco.

   Objective 1.2: Focus primary economic development efforts on existing important local sectors including Value-added Agriculture and Light Manufacturing, Renewable Energy, Construction, Tourism and Recreation, and Home-Based Businesses, as identified in the Economic Opportunities Analyses for Wasco.

   Strategies:

   - **Encourage development opportunities associated with Cottonwood Canyon State Park.**

   Objective 1.3: Actively promote benefits of the Sherman County Enterprise Zone within Wasco's urban growth boundary to new businesses.

   Objective 1.4: Seek and foster working relationships with the Mid-Columbia Economic Development District (MCEDD) and other local and regional economic development agencies that encourage cooperation to leverage assistance and funding options for economic planning and economic development projects.

   Strategies:

   - **Partner with MCEDD on five-year plans to help garner infrastructure funding, workforce development, and more.**

Objective 1.5: Encourage and support efforts to provide safe and affordable childcare as a way to help address labor shortages for local businesses in Wasco.

2. ~~That those employment opportunities shall be encouraged which are compatible with existing and anticipated uses of land as shown in the plan.~~ **Develop clear and objective standards for new or expanding commercial and industrial uses that promote compatibility with existing and anticipated uses of land, as shown in the Comprehensive Plan.**

   Objective 2.1: Maintain compatibility with existing uses and desirable living conditions while streamlining the review and approval process for new or expanding commercial and industrial uses.

   Strategies:

   - **Review and consider local zone code amendments to siting standards for commercial and industrial uses.**
   - **Consider more than one zoning district for commercial and industrial uses.**

3. ~~That the impacts of major development project proposals shall be consistent with or enhance the social, environmental and economic quality and rural character of the community.~~ **Maintain an adequate amount of employment (commercial and industrial) land for future needs.**

   Objective 3.1: Maintain a 20-year buildable land inventory of vacant Commercial and Industrial zoned sites proportionally to meet business expansion requirements for target industries identified in this Economic Opportunities Analyses (Section 3), as current sites develop.

   Objective 3.2: Support full utilization of buildable vacant and redevelopable lands within the City for multiple types of businesses, including commercial and industrial.

   Strategies:

   - **Provide public services that can be extended to employment lands.**
   - **Develop a tracking system for the development of employment lands.**
   - **Promote commercial and industrial lands for sale or lease on Business Oregon's Prospector Site (www.oregonprospector.com).**

4. ~~That a~~ **Encourage and support a** coordinated effort between regional agencies**,** ~~and the county~~ **Sherman County, and the City of Wasco** to stimulate economic development at the level the City of Wasco desires~~, be encouraged~~.

   Objective 4.1: Identify the level of economic development desired by the citizens of Wasco.

Strategies:

- **Develop a community vision that reflects community values and can serve as a basis for a five-year economic development strategy.**

5. ~~That decisions related to employment opportunities shall take into account (1) alternative sites for proposed uses and (2) alternative uses for possible sites.~~ **Support retention and expansion of existing businesses.**

~~6. That environmental effects to air, water and land resources quality shall be considered in addition to social economic factors when making economic planning decisions.~~

~~7~~**6**. Commercial development shall be encouraged to locate in the existing commercial zone of the City. Several strategies are available to the City to ensure that these are as follows:

A. New commercial development locating in the existing commercial zone on platted lots, shall not be required to provide off-street parking, as would be required for new development in new areas of the City.

7. Work with public and private development partners to ensure adequate housing supply for all income ranges, including workforce housing.

8. Support home-based businesses and provide for a streamlined review and approval process for them.

Objective 8.1: Monitor home-based business occupations.

Strategies:

- **Conduct annual survey of local businesses to determine local business expansion needs.**

9. Update or develop a more complete economic development plan beyond the Economic Opportunities Analyses due to its land needs focus.

Objective 9.1: Develop a more comprehensive economic development plan to help meet the City's economic development goal.

Strategies:

- **Review and update the City's Downtown Development Plan.**
- **Develop an Economic Development Marketing Strategy for Wasco.**
- **Identify and empower a champion to further the City's economic development policies, objectives, and strategies.**

10. Monitor Performance and Periodically Adjust Goals, Policies, and Objectives

Objective 10.1: Periodically (every five years) monitor the overall completion and cost and benefits attributed to the aforementioned economic goals and objectives using key metrics such as number of business establishments and covered workers within city limits, average wages per worker, and assessed valuation levels (for tax lots) within city limits.

5.3 Draft Recommended Next Steps

1. Develop a community vision and continue to work with MCEDD to implement localized economic development strategies to help guide appropriate economic opportunities and development, and identify partner roles and responsibilities on an annual or semi-annual basis.

2. Continue to address workforce housing needs and opportunities through Goal 10 Housing implementation with the Department of Land Conservation and Development, and Oregon Housing and Community Services.

3. Update each city's capital improvement program for public infrastructure to support and encourage needed employment and housing development in the near term.

APPENDIX

Cities of Sherman County

Economic Opportunities Analysis Market Analysis and Employment Land Needs

Prepared by

FCS GROUP

Appendix A

TABLE OF CONTENTS

Section I. SUMMARY

The Economic Opportunities Analysis (EOA) for cities in Sherman County is intended to serve as a basis for the cities of the county to explore and document new information regarding their respective buildable land inventories (BLI), population and employment trends, and development policies and objectives aimed at strengthening the local economy. The EOA for cities in Sherman County will serve as the basis for the cities to document and adopt local policies and actions that help make them more economically viable places to live for residents, businesses, and workers.

This section includes a summary of the economic trends and local competitive advantages according to prepared employment growth forecasts in accordance with OAR 660-009-0015(1-4).

MARKET REGION

FCS GROUP conducted an economic overview of Sherman County in context with a large market region and the state of Oregon. For the purposes of this study, the primary market area (PMA) consists of the counties that make up the Mid-Columbia Economic Development District (MCEDD) with the addition of Gilliam County. These counties were selected because they share a common labor shed along with access to Interstate 84, the Columbia River as well as Union Pacific and Burlington Northern Santa Fe (BNSF) rail lines.

POPULATION TRENDS

In 2017 the PMA had a total population of 84,840. Sherman County's population declined slightly from 2010 to 2017, from 1,819 to 1,635. Forecasts from Portland State University's (PSU) Population Research Center (PRC) project growth for Sherman County and the region over the next 25 years.

SOCIO-ECONOMIC CHARACTERISTICS

Income

An analysis of income levels indicates that Sherman County has a relatively high per capita income of $34,226 in comparison to the statewide figure of $30,410 as of 2017. Incomes rose in Sherman County in every metric over the past two decades.

Education

Most of Sherman County's residents aged 25 and older have obtained a high school diploma or equivalent.

Notably, the workforce of Sherman County has a slightly higher share of workers with Associates Degrees which could help attract industries such as manufacturing or value-added agricultural processing.

Recent analysis of job vacancies indicates that there are many unfilled job opportunities in Sherman County, particularly in agriculture and specialty trades/contractors, which may indicate a tight labor market and possibly the need for additional local workforce.

Unemployment

Historically, Sherman County's unemployment rate has been slightly below the PMA region but above the statewide average. 2017 was no different with employment in Oregon at 4.1%, the PMA at 5.7%, and Sherman County at 4.8%.

Labor force

Labor force includes residents aged 16 years and older that are working or actively looking for work. The labor force of the PMA region was 45,345 in 2017.

Employment

Within the PMA region, most businesses are concentrated within cities along the Columbia River

In 2016, Sherman County comprised 3.3% of the region's total employment in 2016, according to IMPLAN data.

The top three sectors contribute directly to agriculture (grain farming, beef cattle ranching and farming and support activities for agriculture such as warehousing and storage). By far the leading sector in Sherman County is grain farming which was responsible for 177 jobs and over $22 million in annual output in 2016.

Agriculture

The latest Census of Agriculture (2012) indicated that the value of agricultural products sold in Sherman County grew to $54 million in 2012 up from $32 million five years prior. Trends observed in the Census of Agriculture indicate that while the number of farms has decreased slightly, the acres being farmed have remained virtually unchanged and the value produced from those acres has increased significantly.

The leading employment sectors in Sherman County are depicted in **Exhibit 1.** The top three sectors contribute directly to agriculture (grain farming, beef cattle ranching and farming and support activities for agriculture such as warehousing and storage). The top-10 sectors in the county make up 51% of the county's output and 62% of its total employment. By far the leading sector in Sherman

County is grain farming which was responsible for 177 jobs and over $22 million in annual output in 2016.

Exhibit 1: Top-Ten Sectors in Sherman County

Sorted by Top 10 Sectors	Employment	Output
Grain farming	177	$22,283,066
Federal govt, non-military	126	$21,709,299
Warehousing and storage	92	$8,973,637
Local govt, non-education	83	$4,225,883
Full-service restaurants	73	$3,604,816
Retail - Gasoline stores	60	$3,086,864
Wholesale trade	58	$13,100,770
Real estate	54	$4,137,035
Local govt, education	54	$2,931,327
Beef cattle ranching and farming	53	$3,071,082
Subtotal	829	$87,123,777
Other	511	$84,174,944
Total	**1,340**	**$171,298,721**

Source: IMPLAN model for Sherman County, 2016.

Potential Target Industry Sectors

Based on the Location Quotient Analysis for the Cities of Sherman County, there are several potential target business clusters, including:

- General manufacturing (small businesses that serve regional markets)
- Agricultural commodities, products and services (cluster with high LQ and positive growth forecast).
- Transportation and utilities (significant cluster with high LQ could include additional establishments to support specialty trades/contractors and agricultural expansion).
- Energy related research and development
- Home-based businesses (sector with significant projected growth for the region which may attract more businesses).

Another exciting development for cities of Sherman County include recent opportunity zone designation for the entire county. In 2018, the U.S. Treasury authorized opportunity zone designations to encourage long-term investments through a federal tax incentive. Governor Brown's nomination resulted in 86 qualified opportunity zones in Oregon (web link).

EMPLOYMENT LAND NEEDS

In addition to information provided above, FCS GROUP undertook individual analysis of each of the major cities of Sherman County. In order to determine the relative market strength of each city, FCS GROUP complied information regarding local assets, existing employment, history, demographics, and geographic location. Using these datapoints in concert with the larger regional trends discussed previously, recommended target industries for each city are identified below along with distinguishing information which impacted the recommendations.

The analysis of employment land needs considers the projected level of job growth within the PMA region, and the potential for Sherman County cities to attract a proportionate share of business activity. The overall findings portend continued positive growth for the region in all major job sectors, with the possible exception of government jobs which tend to be largely driven by federal and state spending patterns as well as local population growth.

FCS GROUP expects overall private job growth within the PMA to approach 9,000 jobs over the next 20 years (high growth scenario). It is anticipated that the most significant increase will be in the service sector (includes business, personal, health care and hospitality industries) with 5,156 net new jobs expected. The industrial and agricultural sectors are expected to add 3,626 jobs, and the retail sector is expected to add only 150 net new jobs, as much traditional retail is replaced by on-line non-store sales. It should be noted that these estimates exclude home-based workers, which would not require employment-zoned land.

Using population as a basis for forecasting Sherman County's capture of commercial and service job growth, and historic industrial job growth over the past 10 years as a basis for forecasting future industrial job growth, FCS GROUP determined future job growth potential for Sherman County for two primary categories:

- Industrial and Agriculture-related employment
- Commercial/Service employment

Projected vacant buildable employment land needs over Next 20 years

- Grass Valley: 9 buildable acres
- Moro: 18 buildable acres
- Rufus: 10 buildable acres
- Wasco: 20 buildable acres

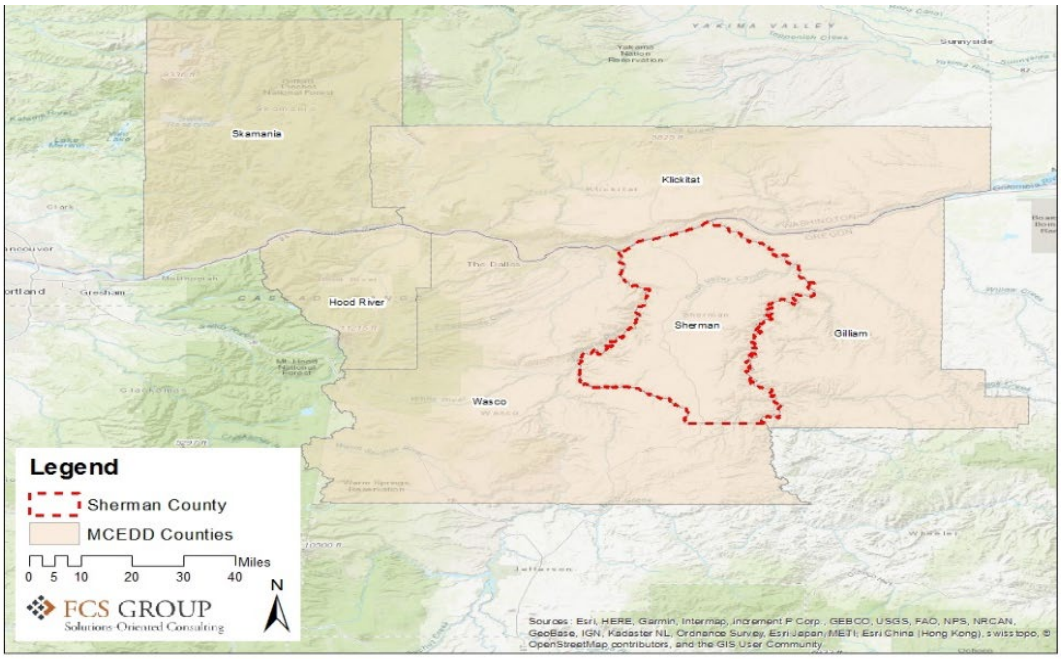
A breakdown of these acres is provided in the next section.

SECTION II. MARKET TRENDS

MARKET REGION

FCS GROUP conducted an economic overview of Sherman County in context with a large market region and the state of Oregon. For the purposes of this study, the primary market area (PMA) consists of the counties that make up the Mid-Columbia Economic Development District (MCEDD) with the addition of Gilliam County (**Exhibit 2**). These counties were selected because they share a common labor shed along with access to Interstate 84, the Columbia River as well as Union Pacific and Burlington Northern Santa Fe (BNSF) rail lines.

Exhibit 2 – Sherman County and the Primary Market Region



POPULATION TRENDS

In 2017 the PMA had a total population of 84,840. Over the past two decades, the PMA experienced significant population growth. While the population of the counties within the region have largely increased or held steady, Sherman County's population declined slightly from 2010 to 2017 (**Exhibit 3**).

Exhibit 3: PMA County Population Trends (2000-2017)

	2000	2010	2017	Change (2000 to 2017)	AGR %
Sherman	1,934	1,819	1,635	-299	-1.0%
Grass Valley	171	103	160	-11	-0.4%
Moro	337	290	330	-7	-0.1%
Rufus	268	217	190	-78	-2.0%
Wasco	381	522	377	-4	-0.1%
Gilliam	1,915	1,871	1,910	-5	0.0%
Hood River	20,411	22,346	22,938	2,527	0.7%
Klickitat	19,161	20,318	21,172	2,011	0.6%
Skamania	9,872	11,066	11,498	1,626	0.9%
Wasco	23,791	25,213	25,687	1,896	0.5%
Total	77,084	82,633	84,840	7,756	0.6%
Oregon	3,421,389	3,831,074	3,982,267	560,878	0.9%

Source: US Census Bureau, Decenial Census 2000, 2010 (Table DP-1) and ACS 2017 (Table DP05).
AGR = Annual Growth Rate.

Forecasts from Portland State University's (PSU) Population Research Center (PRC) project positive growth for Sherman County and the region over the next 25 years (**Exhibit 4**).

Exhibit 4: Oregon, PMA, Sherman County Population Forecasts (2016-2040)

	2016	2020	2025	2030	2035	2040
Sherman County	1,795	1,816	1,836	1,844	1,842	1,834
Region (MCEDD+ Gilliam)	88,144	88,024	90,989	93,658	95,892	97,914
Oregon	3,982,267	4,252,100	4,516,200	4,768,000	4,995,200	5,203,000

Source: Portland State University Population Forecasts and Washington State Government Office of Financial Management.

SOCIO-ECONOMIC CHARACTERISTICS

Income

An analysis of income levels indicates that Sherman County has a relatively high per capita income of $34,226 in comparison to the statewide figure of $30,410 as of 2017. Incomes rose in Sherman County in every metric over the past two decades.

Exhibit 5: Oregon, Gilliam County, Sherman County Income Trends (2010-2017)

	2010	2017	AGR
Median Household Income			
Gilliam County	$42,148	$39,831	-0.8%
Sherman County	$41,354	$42,074	0.2%
Oregon	$49,260	$56,119	1.9%
Median Family Income			
Gilliam County	$52,885	$55,625	0.7%
Sherman County	$52,361	$65,417	3.2%
Oregon	$60,402	$69,031	1.9%
Per Capita Income			
Gilliam County	$25,559	$24,178	-0.8%
Sherman County	$21,688	$34,226	6.7%
Oregon	$26,171	$30,410	2.2%

Source: 2000 Census (in 1999 dollars) and 2017 ACS 5-year Estimates (in 2017 inflation-adjusted dollars).
AGR = Annual Growth Rate.

Education

Sherman County's economy is further defined by the educational attainment of its labor force. The majority of Sherman County's residents aged 25 and older have obtained a high school diploma or equivalent. Sherman County workers surpass the region and state average with college experience as well. Notably, the workforce of Sherman County has a slightly higher share of workers with Associates Degrees which could help attract industries such as manufacturing or value-added agricultural processing.

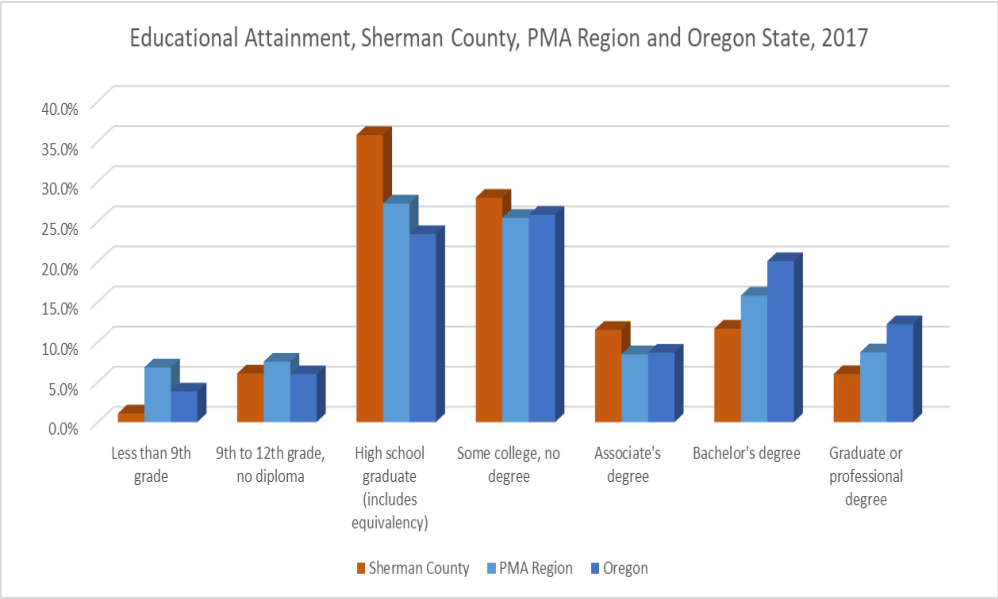
Exhibit 6: Educational Attainment of Population 25 years and over

	Sherman County	% Dist.	PMA Region	% Dist.	Oregon	% Dist.
Less than 9th grade	14	1.1%	4,074	6.8%	106,711	3.8%
9th to 12th grade, no diploma	79	6.1%	4,503	7.5%	166,982	6.0%
High school graduate (includes equivalency)	467	35.8%	16,292	27.3%	655,921	23.4%
Some college, no degree	365	28.0%	15,222	25.5%	723,165	25.8%
Associate's degree	150	11.5%	5,055	8.5%	242,247	8.7%
Bachelor's degree	152	11.6%	9,422	15.8%	561,492	20.1%
Graduate or professional degree	78	6.0%	5,196	8.7%	341,435	12.2%
Total	**1,305**	**100%**	**59,764**	**100%**	**2,797,953**	**100%**

Source: 2017 ACS 5-year Estimates.

Recent analysis of job vacancies indicates that there are many unfilled job opportunities in Sherman County, particularly in agriculture and specialty trade/contractors, which may indicate a tight labor market and possibly the need for additional local workforce (Oregon Employment Department 2017).

Exhibit 7: Oregon, PMA, Sherman County Educational Attainment (2017)



Racial and Ethnic Composition

Sherman County's racial and ethnic characteristics also highlights the changing nature of the workforce in the county as well as business needs. Sherman County's population has decreased overall between 2000 and 2017, however, has experienced growth among African American and multiracial (two or more races) populations (**Exhibit 8**).

Exhibit 8: Racial and Ethnic Composition of Sherman County and Oregon (2000-2017)

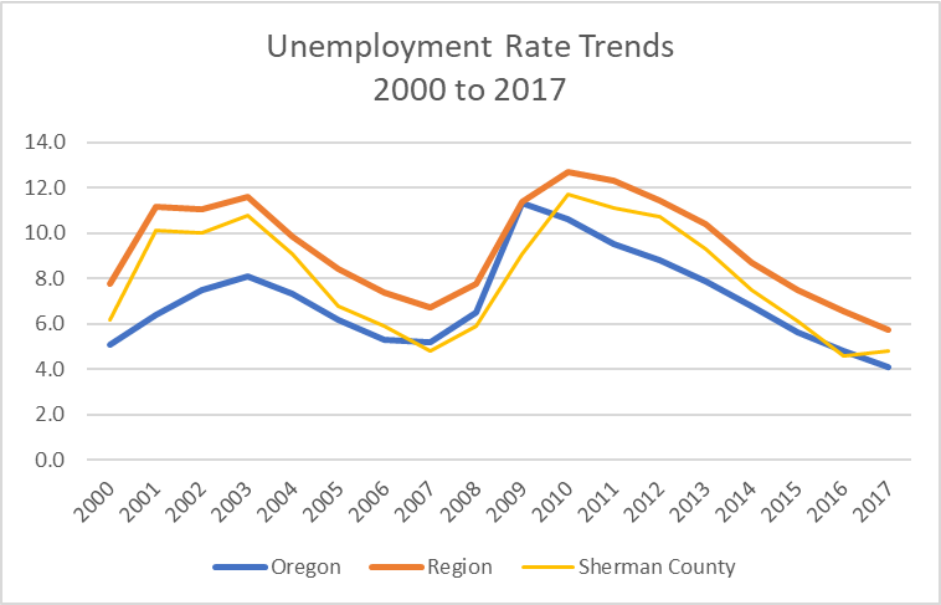
	Sherman County			Oregon		
	2000	2017	Change	2000	2017	Change
Total:	1,934	1,635	-15.5%	3,421,399	4,025,127	17.6%
White alone	1,810	1,572	-13.1%	2,961,623	3,416,776	15.4%
Black or African American alone	4	13	225.0%	55,662	76,347	37.2%
American Indian and Alaska Native alone	27	13	-51.9%	45,211	45,332	0.3%
Asian alone	9	2	-77.8%	101,350	166,351	64.1%
Native Hawaiian and Other Pacific Islander alone	-	-	N/A	7,976	15,157	90.0%
Some other race alone	54	-	-100.0%	144,832	121,000	-16.5%
Two or more races:	30	35	16.7%	104,745	184,164	75.8%
Two races including Some other race	3	-	-100.0%	29,929	17,499	-41.5%
Two races excluding Some other race, and three or more races	27	35	29.6%	74,816	166,665	122.8%
Hispanic or Latino	94	73	-22.3%	275,314	509,507	85.1%

Source: 2000 Census (SF1, Table QT-P3) and 2017 ACS 5-year Estimates (Tables B02001 & B03002).

Unemployment

Historically, Sherman County's unemployment rate has been slightly below the PMA region but above the statewide average. 2017 was no different with employment in Oregon at 4.1%, the PMA at 5.7%, and Sherman County at 4.8% (**Exhibit 9**).

Exhibit 9: Oregon, PMA, Sherman County Unemployment (2000-2017)



Source: Oregon Employment Department.

Labor force

Labor force includes residents aged 16 years and older that are working or actively looking for work. The labor force of the PMA region was 45,345 in 2017. The average commute time for workers living in the PMA was 20.6 minutes which compares favorably to most urban areas (**Exhibit 10).**

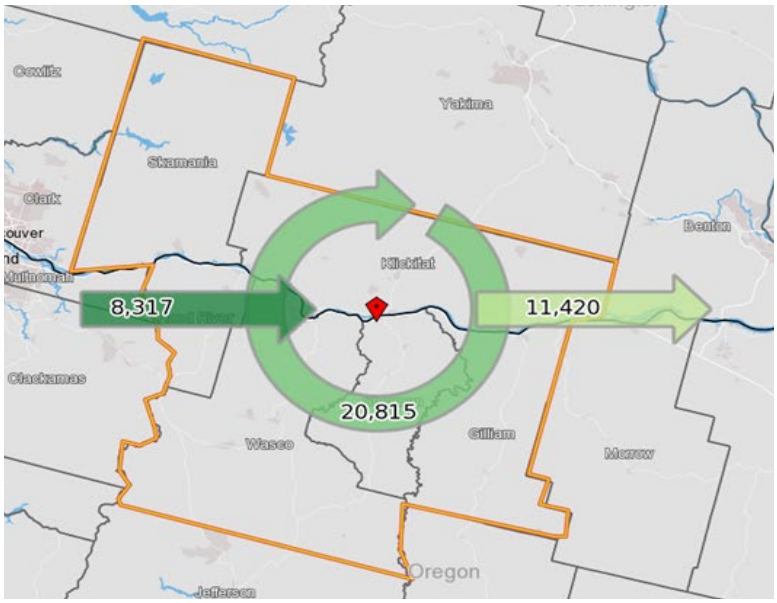
Exhibit 10: PMA Labor Force and Commute Patterns

	Labor Force	Commute Time (in min)	Car or Carpool	Works at Home	Other
Gilliam	865	17.5	82.8%	7.4%	9.8%
Hood River	14,359	17.4	79.5%	11.2%	9.3%
Klickitat	10,051	24.1	82%	12%	6.0%
Skamania	5,218	30.5	84.1%	9.9%	6.0%
Sherman	897	22.3	80.3%	10.8%	8.9%
Wasco	13,955	17.6	85.8%	7.9%	6.3%
Total	**45,345**	**20.6**	**82.6%**	**10.1%**	**7.3%**

Source: Bureau of Labor Statistics, 2017 Unemployment Data and US Census Bureau ACS 2017, Table S0801.

In 2015 there were 40,552 workers employed at businesses within the PMA region. About half of these workers lived and worked inside of the PMA region. About one in four workers commuted outside of the PMA to jobs elsewhere. In addition, the PMA region had 8,317 workers commuting in from outside of the area (**see Exhibit 11**).

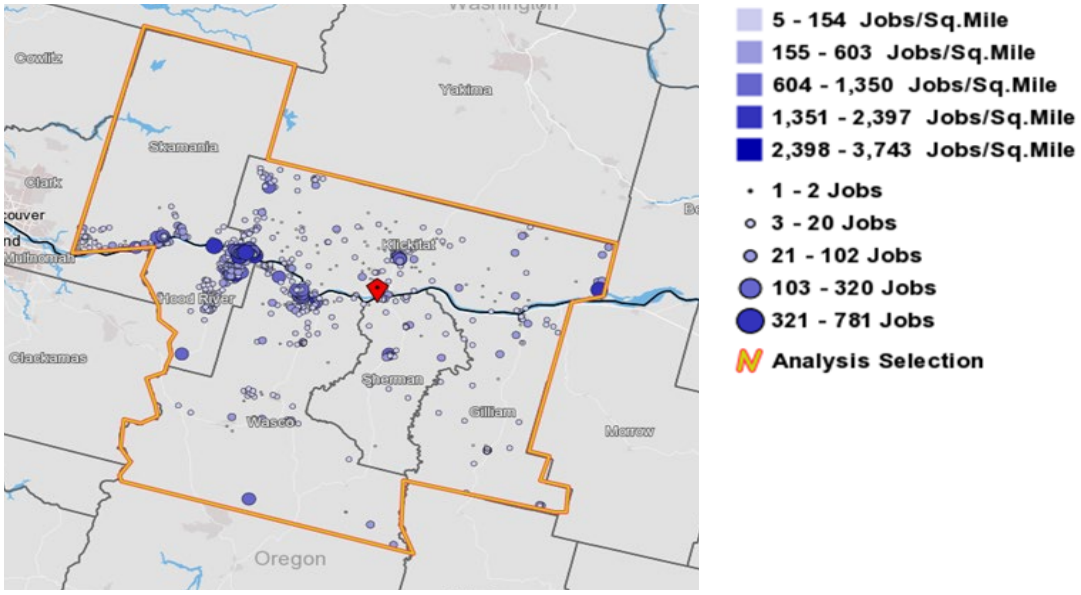
Exhibit 11: Worker Commute Patterns, PMA Region (Census On The Map)



Employment

Within the PMA region, most businesses are concentrated within cities along the Columbia River **(Exhibit 12)**.

Exhibit 12: Job Concentration



Source: OnTheMap.com

In 2016, Sherman County comprised 3.3% of the region's total employment in 2016, according to IMPLAN data. As a share of the PMA, the county's share of industrial employment has ranged from

5% to 10% of the region over the past decade. The county also represents a fairly even distribution of jobs among industrial, service and government sectors.

Exhibit 13: Total Employment, 2016

	PMA Employment	Sherman County Employment
Industrial	6,222	303
Retail	3,793	82
Services	18,117	378
Government	3,925	299
Total	**32,057**	**1,062**

Source: IMPLAN, Compiled by FCS GROUP, includes full-time and part-time jobs.

The leading employment sectors in Sherman County are depicted in **Exhibit 14**. The top three sectors contribute directly to agriculture (grain farming, beef cattle ranching and farming and support activities for agriculture such as warehousing and storage). The top-10 sectors in the county make up 51% of the county's output and 62% of its total employment. By far the leading sector in Sherman County is grain farming which was responsible for 177 jobs and over $22 million in annual output in 2016.

Exhibit 14: Top-Ten Sectors in Sherman County

Sorted by Top 10 Sectors	Employment	Output
Grain farming	177	$22,283,066
Federal govt, non-military	126	$21,709,299
Warehousing and storage	92	$8,973,637
Local govt, non-education	83	$4,225,883
Full-service restaurants	73	$3,604,816
Retail - Gasoline stores	60	$3,086,864
Wholesale trade	58	$13,100,770
Real estate	54	$4,137,035
Local govt, education	54	$2,931,327
Beef cattle ranching and farming	53	$3,071,082
Subtotal	829	$87,123,777
Other	511	$84,174,944
Total	**1,340**	**$171,298,721**

Source: IMPLAN model for Sherman County, 2016.

Within the PMA region, large employment gains have been made in both industrial and services clusters between 2005 and 2015 (**Exhibit 15**).

Exhibit 15: Job Trends by Industry Sector – PMA Region

Region Jobs by NAICS Industry Sector	2005 - 2015 Job Growth	2005	2015	Change
Industrial		5,575	7,388	1,813
Retail Trade		2,769	2,834	65
Services		10,905	13,483	2,578
Government		1,513	1,422	(91)
Total		**20,762**	**25,127**	**4,365**

Source: US Census Bureau, 2000 to 2015, provided by OnTheMap.com

A similar analysis of Sherman County reveals that the industrial and services clusters have added the most jobs over the last ten years with additional job growth in the government sector (**Exhibit 16**).

Exhibit 16: Job Trends by Industry Sector – Sherman

Sherman Jobs by NAICS Industry Sector	2005 - 2015 Job Growth	2005	2015	Change
Industrial		104	267	163
Retail Trade		66	48	(18)
Services		195	234	39
Government		46	79	33
Total		**411**	**628**	**217**

Source: US Census Bureau, 2000 to 2015, provided by OnTheMap.com

Agriculture

The latest Census of Agriculture (2012) indicated that the value of agricultural products sold in Sherman County grew to $54 million in 2012 up from $32 million five years prior. Trends observed in the Census of Agriculture indicate that while the number of farms has decreased slightly, the acres being farmed have remained virtually unchanged and the value produced from those acres has increased significantly **(Exhibit 17**).

Exhibit 17: Sherman County Agricultural Census (2007-2012)

	2007	2012	Change
# of Farms	208	186	-11%
Land in Farms (acres)	514,004	513,649	-1%
Average Size of Farm (Acres)	2,471	2,762	12%
Market Value of Products Sold	$31,749,000	$54,482,000	72%
Average Per Farm	$292,912	$292,912	92%
Government Payments	$6,848,000	$8,820,000	29%
Average per farm receiving payments	$37,017	$50,688	37%

Source: Census of Agriculture.

The most recent employment forecast conducted by the Oregon Employment Department (OED) projects robust job growth in the Gilliam, Hood River, Sherman, Wasco and Wheeler counties (grouped together by OED) in all industries. **(Exhibit 18).**

Exhibit 18: Employment Forecasts for the East Cascades Region (2017-2027)

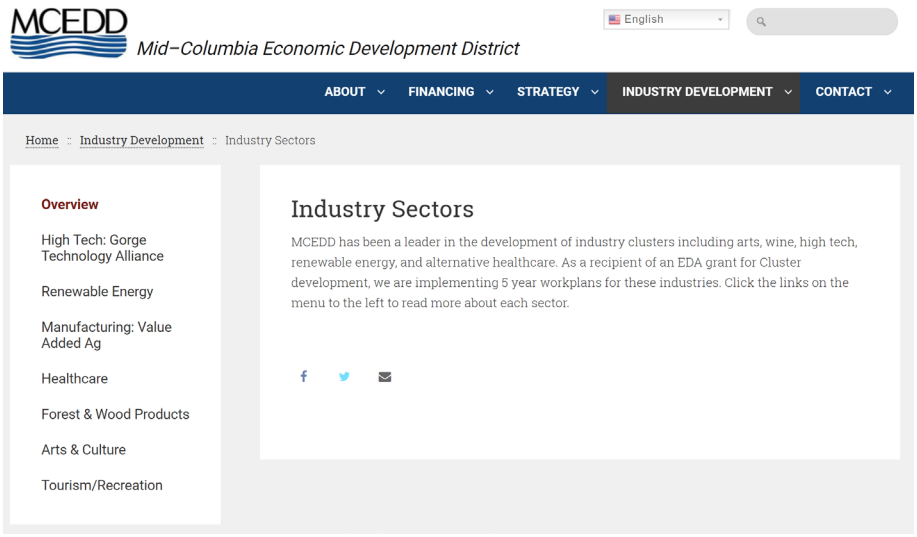
Sector	2017	2027	Change	Projected Growth
Industrial	9,110	9,980	870	10%
Retail	3,340	3,590	250	7%
Services	18,380	21,060	2,680	15%
Government	4,120	4,300	180	4%
Total	**34,950**	**38,930**	**3,980**	**11%**

Source: State of Oregon Employment Department, 2018

Potential Target Industry Sectors

The method used to determine target industries takes into account current target industry sectors that are currently the focus of MCEED, as well as other potential sectors that have been identified this EOA. The industrial sectors targeted by MCEED include:

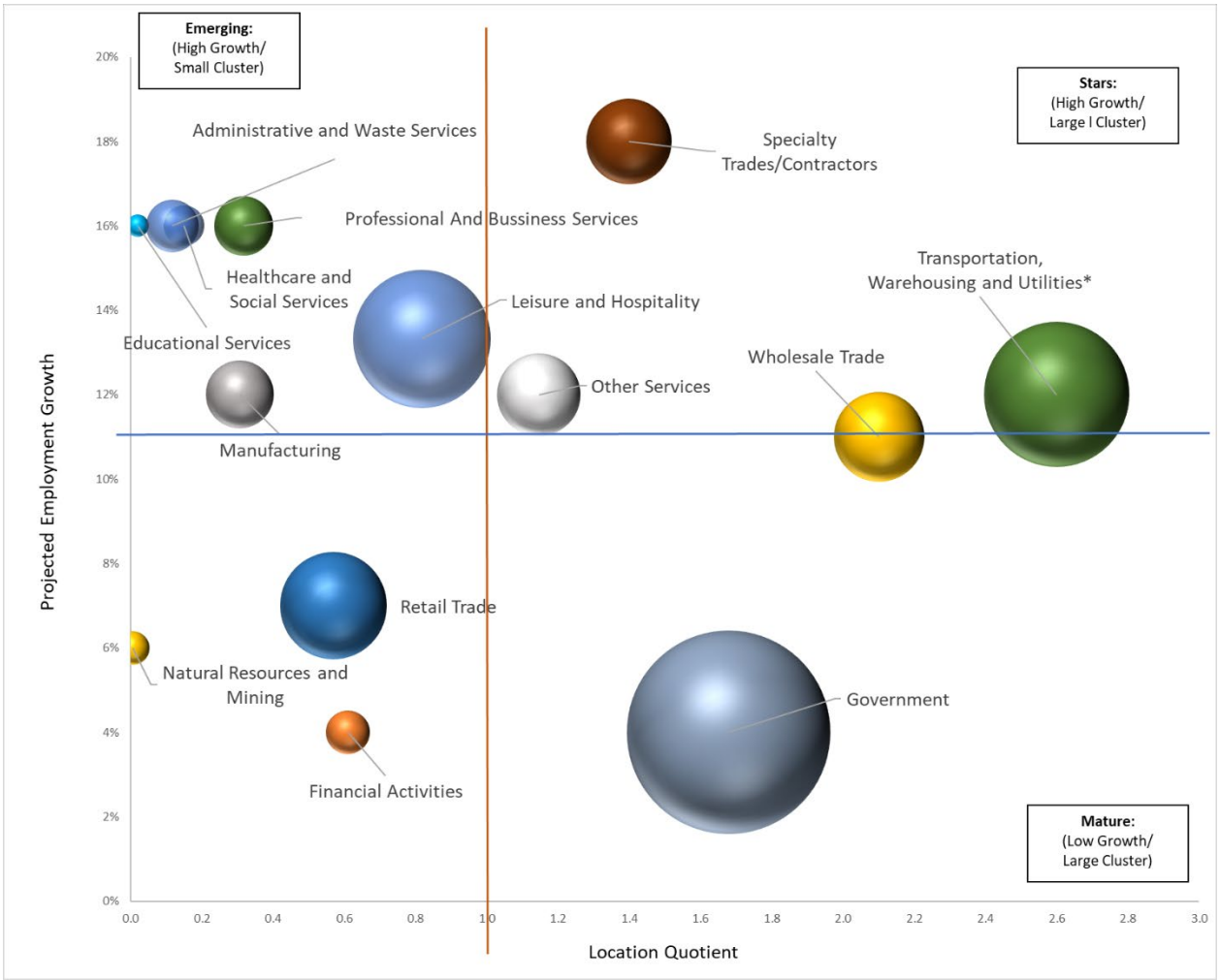
- High Tech: Gorge Technology Alliance
- Renewable Energy
- Manufacturing: Value Added Agriculture
- Healthcare
- Forest and Wood Products
- Arts & Culture
- Tourism and Recreation



In addition, an analysis of location quotients (LQs). LQ analysis is a method of determining which business sectors are clustered in Sherman County in comparison to the PMA region. LQ analysis reveals what makes the local economy "unique" in comparison to a broader geography. The LQ analysis in this study indicates existing and emerging business clusters present in Sherman County based on their size (as measured by employment) and projected growth potential. The data used for the cluster analyses were derived from the Oregon Employment Department 2017 wage and salary employment statistics and ten-year job growth forecasts (**Exhibit 19**).

Business clusters in Sherman County with high LQs include transportation, warehousing and utilities, as well as wholesale trade and specialty trades/contractors. The utilities sector, which includes Sherman County's sizable wind farms, has an LQ of 6 (six times more concentrated than the regional average).

Exhibit 19: Location Quotient Analysis – Sherman County



*LQ adjusted to maintain legible scale. True LQ is 6.0

Based on these findings, the LQ analysis for the Cities of Sherman County identifies several potential target business clusters, including:

- Agricultural commodities, products and services (cluster with high LQ and positive growth forecast).
- General manufacturing, transportation and utilities (significant cluster with high LQ could include additional establishments to support specialty trades/contractors and agricultural expansion).
- Energy related research and development
- Home-based businesses (sector with significant projected growth for the region which may attract more businesses).

Another exciting development for cities of Sherman County include recent opportunity zone designation for the entire county. In 2018, the U.S. Treasury authorized opportunity zone

designations to encourage long-term investments through a federal tax incentive. Governor Brown's nomination resulted in 86 qualified opportunity zones in Oregon (web link).

Cities in Sherman County may be best situated to leverage their unique position in the PMA by investing in sectors that have an established presence in the county. Recommended target industries, such as agriculture and green energy have a strong and growing presence in the county and have the potential to leverage supply chains and value-added processing. Of the industries discussed throughout this analysis those highlighted in **Exhibit 20** represent excellent opportunities for growth for the cities of Sherman County.

Exhibit 20: Target Employment Clusters

Target Use	Market Potential	Relative Wage Rates	Potential Job Creation	MCEED Target Industry	Recommended Target Industry for Cities of Sherman County
General Manufacturing	●	●	●	☐	☑
Value-added Agriculture Mfg.	●	●	●	☑	☑
Renewable Energy	●	●	●	☑	☑
Transportation (auto/truck repair)	●	●	●	☐	☑
Tourism & Recreation	●	●	●	☑	☑
Home Based Businesses	●	●	●	☐	☑
High Tech	●	●	●	☑	☐
Healthcare	●	●	●	☑	☐
Forest & Wood Products	●	●	●	☑	☐
Legend:					
Good: ●	Fair: ●	Poor: ○			

Source: FCS GROUP based on EOA findings.

APPENDIX A. CITY PROFILES & SITE REQUIREMENTS

In addition to information provided above, FCS GROUP undertook individual analysis of each of the major cities of Sherman County. In order to determine the relative market strength of each city, FCS GROUP complied information regarding local assets, existing employment, history, demographics, and geographic location. Using these datapoints in concert with the larger regional trends discussed previously, recommended target industries for each city are identified below along with distinguishing information which impacted the recommendations.

EMPLOYMENT LAND NEEDS

The analysis of employment land needs takes into account the projected level of job growth within the PMA region, and the potential for Sherman County cities to attract a proportionate share of business activity. The overall findings portend continued positive growth for the region in all major job sectors, with the possible exception of government jobs which tend to be largely driven by federal and state spending patterns as well as local population growth.

Based on historic trends and related economic forecasts discussed previously, FCS GROUP expects overall private job growth within the PMA to approach 9,000 jobs over the next 20 years (high growth scenario). As indicated in **Exhibit 21**, it is anticipated that the most significant increase will be in the service sector (includes business, personal, health care and hospitality industries) with 5,156 net new jobs expected. The industrial and agricultural sectors are expected to add 3,626 jobs, and the retail sector is expected to add only 150 net new jobs, as much traditional retail is replaced by on-line non-store sales. It should be noted that these estimates exclude home-based workers, which would not require employment-zoned land.

Using population as a basis for forecasting Sherman County's capture of commercial and service job growth, and historic industrial job growth over the past 10 years as a basis for forecasting future industrial job growth, FCS GROUP determined future job growth potential for Sherman County for two primary categories:

- Industrial and Agriculture-related employment
- Commercial/Service employment

A range of low and high job growth capture rates have been prepared in order to determine the lower and upper-bound of projected land needs. Local city job growth forecasts assume a "fair share" allocation that takes into account current population levels and relative market strength in attracting business investment.

Exhibit 21: 20-Year Employment and Land Needs Forecast

Projected Employment Growth Capture Rates

	Pop	% share of PMA Region	Low Scenario	High Scenario	Notes
Sherman County	1,635	2%			
Commercial & Service capture			2%	4%	based on emp.
Industrial & Ag capture rates			8%	10%	based on emp.
		% share of County Pop.	Low Scenario	High Scenario	
Local Cities					
Grass Valley	160	10%	10%	15%	based on pop.
Moro	330	20%	20%	30%	based on pop.
Rufus	190	12%	12%	17%	based on pop.
Wasco	377	23%	23%	35%	based on pop.
Subtotal local cities	**1,057**	**65%**	**65%**	**97%**	based on pop.
PMA Region	84,840				

Projected 20-year Employment Growth, High Scenario

	Industrial & Ag.	Retail	Services	Total
PMA Region	3,626	150	5,156	8,932
Sherman County	362.60	6	206	575
Local Cities				
Grass Valley	53	1	30	84
Moro	110	2	62	174
Rufus	63	1	36	100
Wasco	125	2	71	199

Projected Employment Land Needs (buildable acres)

	Industrial & Ag.	Retail	Services	Total
Jobs Per Acre	8	16	16	
Acres Required				
Grass Valley	7	0.1	2	9
Moro	14	0.1	4	18
Rufus	8	0.1	2	10
Wasco	16	0.1	4	20

Source: derived from prior tables.

As indicated in **Exhibit 21**, the expected net new job growth for Sherman County over the next 20 years equates to 575 jobs under the high forecast scenario. Projected job growth among local cities ranges from 84 jobs in Grass Valley, 100 jobs in Rufus, 174 jobs in Moro and 199 jobs in Wasco. Again, most of these jobs are expected to be within the industrial, agricultural and service sectors.

Using industry standards for estimated land needs based on job growth, this level of job growth is expected to require industrial and commercial zoned sites within each city as depicted in **Exhibits 21 and 22**. The employment site requirements under the high-growth scenario for each city is shown below.

Exhibit 22: Employment Site Requirements: High Growth Scenario, 20-Year Forecast

	Industrial Site Requirements	Commercial Site Requirements	Other
Grass Valley	Four 2-acre sites	Flex building(s) on 2 acres	Home based occupations
Moro	Five 2-acre sites & one 4-acre site	Flex building(s) on 4 acres	Home based occupations
Rufus	Four 2-acre sites	Flex building(s) on 2 acres	Home based occupations
Wasco	Four 2-acre sites & two 4-acre sites	Flex building(s) on 4 acres	Home based occupations

Source: derived from prior tables.

It should be noted that these employment growth scenarios omit potential land needs attributed to special siting requirements for major facilities, such as schools, parks and investments by major utilities. It is possible that each City Council may identify certain desired uses that would enhance the land needs requirements stated above.

THE CITY OF GRASS VALLEY

Image Source: Wikipedia

With hemp legalized in the state, the future of Grass Valley looks promising. Currently the city is a site of a hemp processing facility that aims to process CBD, an agricultural commodity in high demand locally and abroad.

Grass Valley is home to the Oregon Raceway Park, a race track and club with some renown in the automobile, motorcycle and kart racing community.

Grass Valley also serves as an easy entryway to the Deschutes, John Day and Columbia River's.

Population: 164

Number of Businesses: 12

Labor force within 45 Minutes of UGB: 2,314

10 – year Employment Growth Rate: 10%

Distance from Interstate 84: 28 Miles

Leading Sectors

1. Manufacturing
2. Information
3. Public Administration

Existing Assets

1. Oregon Raceway Park
2. RV Park
3. Interstate 84, Oregon Routes 97 and 216

Recommended Target Industries

1. Value-added Agriculture (.mfg)
2. Renewable Energy
3. Highway Commercial
4. Home-based Businesses
5. Tourism & Recreation

THE CITY OF MORO

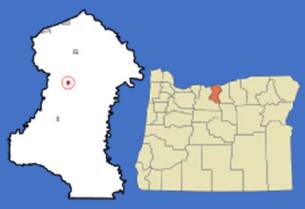


Image Source: Wikipedia

Moro serves as the seat of Sherman County and has seen tremendous growth in job creation, increasing from 68 jobs in 2005 to 241 in 2015.

Moro hosts Mid Columbia Producer's Cooperative's headquarters, the region's largest agricultural employer, as well as Azure Standard Foods warehouse center, the largest single employer in the city.

Population: 325

Number of Businesses: 29

Labor force within 45 Minutes of UGB: 12,143

10 – year Employment Growth Rate: 35%

Distance from Interstate 84: 18 Miles

Leading Sectors

1. Warehousing
2. Agriculture
3. Educational Services

Existing Assets

1. Sherman County Courthouse
2. Oregon State Ag Research Center, Sherman County, Oregon
3. Interstate 84, Highway 97

Recommended Target Industries

1. Value-added Agriculture (mfg.)
2. Renewable Energy
3. Tourism & Recreation
4. Home-based Businesses
5. Specialty Trades/Contractors
6. Highway Commercial

THE CITY OF RUFUS

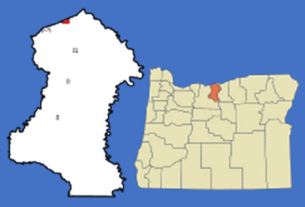


Image Source: Wikipedia

Rufus is situated at the boarder of Oregon and Washington along the Columbia River. Not far from Biggs Junction, Rufus is near the John Day Dam and the confluence of the John Day River, Interestate 84, Route 97, Giles French, LePage and Deschutes River Parks and Clark Highway in Washington.

Population: 249

Number of Businesses: 11

Labor force within 45 Minutes of UGB: 12,531

10 – year Employment Growth Rate: (%2)

Distance from Interstate 84: 0

Leading Sectors

1. Accommodation and Food Services
2. Wholesale Trade
3. Public Administration

Existing Assets

1. Rail
2. Available Lots at Industrial Park
3. Interstate 84, Hwy 97, WA Hwy 14

Recommended Target Industries

1. Highway Commercial
2. Value-added Agriculture (mfg.)
3. Tourism & Recreation
4. Renewable Energy
5. Specialty Trades/Contractors
6. Home Based Businesses

THE CITY OF WASCO

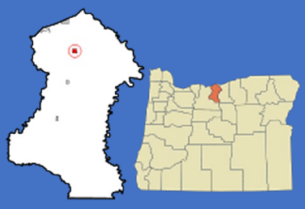


Image Source: Wikipedia

Recently, the City of Wasco purchased the abandoned Wasco School building and converted it into an even center, library and gymnasium.

Avangrid Renewables is headquartered in Klondike just blocks away from Wasco UGB.

Wasco city plans to open a youth center in the near future which is projected to employ 50 people.

Population: 405

Number of Businesses: 23

Labor force within 45 Minutes of UGB: 10,643

10 – year Employment Growth Rate: 6%

Distance from Interstate 84: 10 Miles

Leading Sectors

1. Wholesale Trade
2. Public Administration
3. Green Energy

Existing Assets

1. Wasco State Airport
2. Interstate 84, Highway 97 and Highway 206
3. Wasco School Events Center

Recommended Target Industries

1. Renewable Energy
2. Value-added Agriculture (mfg.)
3. Specialty Trades/Contractors
4. Tourism & Recreation
5. Home-based Businesses