

# ***APPENDICES***

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# ***APPENDIX O***

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***UPDATED SUBSTITUTION EFFECTS ANALYSIS FOR THE  
COQUILLE MEDFORD PROJECT***



# Global Market Advisors

Updated Substitution Effects Analysis  
For the Coquille Medford Project

GMA 014-23

June 2023

Prepared for:  
Acorn Environmental

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## I. EXECUTIVE SUMMARY

The Coquille Tribe is proposing development of a new gaming facility in Medford, Oregon, in which they are expecting development in three phases. Ahead of development, the Coquille Tribe is interested in the impact a new gaming facility would have on other casinos and gaming facilities in the competitive market. To this end, Global Market Advisors (“GMA”) performed the following Substitution Effects Study detailed in this report.

For the purpose of this analysis, GMA classified Phase I as the initial phase, which will include 150 Class II gaming devices; Phase II was classified as a slightly larger development, including 300 Class II gaming devices; and Phase III was classified as the final development stage, or “Full Build”, of development, with an offering of 650 Class II gaming devices. This allowed GMA to properly measure revenue levels the Project can expect to garner at each individual phase and associated impacts. GMA also assumed that the food and beverage and other amenity offerings provided by the facility would remain constant through each phase of development, featuring a small restaurant, and bar.

To perform the Substitution Effects Study, GMA utilized gravity model methodology for each phase of development. The model was first calibrated to current market conditions which utilized data from the trailing twelve-month Mill Casino player database activity to calibrate the model with a greater degree of accuracy. GMA then grew the model to the subject years 2025, 2027, and 2029 by only factoring in expected changes in population and income as well as anticipated changes within the greater market to establish baseline projections for each phase of development. GMA assumed these years, the second year of operations in each phase, to be the first full year of stabilized operations for the respective phases. Finally, GMA layered in the development scope for each defined phase to project gaming revenue for each phase. The following table illustrates the proposed Project scope in each phase of development.

Scenario	Gaming Machines	Tables	Other
Phase I	150	0	1 Restaurant/Bar
Phase II	300	0	1 Restaurant/Bar
Full Build	650	0	1 Restaurant/Bar

Source: GMA



**SUMMARY OF FINDINGS**

**PROJECTED GAMING REVENUE GENERATION FOR EACH PHASE**

The Project is expected to generate the highest level of gaming revenue in the Full Build phase, where the Project is projected to generate approximately \$49.4 million in total gaming revenue in 2029. The second highest projected revenue for the Project is expected to be generated in Phase II, projected at \$31.6 million in 2025. The Project is expected to generate the lowest level of gaming revenue in Phase I at \$18.4 million. The following table further illustrates Project gaming revenue projections for each phase.

<b>Project Phase Gaming Revenue Comparison, Stabilized Years</b>			
	<b>Phase I</b>	<b>Phase II</b>	<b>Full Build</b>
# Gaming Machines	150	300	650
Win Per Gaming Machine	\$336	\$289	\$208
Slot Revenue	\$ 18,388,370	\$ 31,612,491	\$ 49,403,070
<b>TOTAL</b>	<b>\$ 18,388,370</b>	<b>\$ 31,612,491</b>	<b>\$ 49,403,070</b>
<i>Source: GMA</i>			

**PROJECTED SUBSTITUTION EFFECT ON OTHER TRIBAL CASINOS**

Each phase of development is expected to have some level of substitution effect on other tribal casinos in the State of Oregon and neighboring states. It is important to note that substitution effects tend to dissipate over time due to natural growth in the market. For the purposes of this evaluation, GMA included the following casinos in performing each scenario, projecting gaming revenues and estimating the resulting substitution effects: Three Rivers Coos Bay, Three Rivers Casino Resort, Chinook Winds Casino Resort, Spirit Mountain Casino, Seven Feathers Casino Resort, Kla-Mo-Ya Casino, Lucky 7 Casino, Elk Valley Casino, Redwood Hotel Casino, Win-River Casino, Rain Rock Casino, and Pit River. It is also important to note that GMA also considered the expected substitution effect on State of Oregon video lottery terminals, which are prevalent and available throughout the region.

The Project is expected to garner gaming revenue from three sources: new market growth (stemming from the growth of market gaming factors), substitution effect on other regional competitors, and the capture of a portion of the VLT market. For the purposes of the Substitution Effect Analysis, GMA focused its analysis on local market gaming revenue. By projecting the source of the Project’s local market gaming revenue in each phase, GMA was able to estimate the substitution effect on each gaming market participant and quantify the amount of expected new market growth in each phase.



The largest level of projected new market growth is expected to occur in the Full Build phase, as this phase represents the completion of development and thus will have the largest impact on regional gaming factors. Phase II of development is expected to generate a moderate level of new market growth, as the additional gaming machines (and associated enhanced mix of games) increase the attraction of the facility comparatively to Phase I, increasing the impact on regional gaming factors. Phase I is expected to generate the lowest level of new market growth, due to capacity impacts and a lack of sizeable gaming offering.

The largest level of substitution effect is expected to occur in the Full Build phase, in which the Project is expected to impact other facility local market gaming revenues generated at casinos by \$36.2 million in 2029. The second highest level of substitution effect is expected to occur in Phase II, representing a decline of \$24.3 million in expected local market gaming revenues generated at other casino facilities in the market in 2027. Phase I is expected to have the lowest impact on expected local market gaming revenues at surrounding casinos, representing a decline of \$12.6 million at these facilities. The following table summarizes the results of the Substitution Effect Analysis in each phase.

<b>Projected Project Phase Substitution Effect Summary, Stabilized Years</b>			
	<b>Projected Local Revenue</b>	<b>Substitution Effect</b>	<b>New Market Growth</b>
Phase I	\$ 18,204,487	\$ (12,566,438)	\$ 5,638,048
Phase II	\$ 31,138,304	\$ (24,272,635)	\$ 6,865,669
Full Build	\$ 48,167,993	\$ (36,218,686)	\$ 11,949,308

Source: GMA



## II. MAJOR ASSUMPTIONS

The following major assumptions were utilized to prepare the projections presented in this report. Additional assumptions are detailed in subsequent chapters.

- The Project will commence operations at the beginning of 2024.
- The Project will take place in three phases, all taking place at the same location:
  - Phase I: 150 gaming machines with a small restaurant and bar
  - Phase II: 300 gaming machines with a small restaurant and bar
  - Full Build: 650 gaming machines with a small restaurant and bar
- The second calendar year of each phase will represent the first stabilized year of operations for the Project. The phases will begin operations on two-year intervals, with the stabilized year of Phase I and Phase II representing the calendar year before the subsequent phase begins operations.
  - Phase I first stabilized year: 2025
  - Phase II first stabilized year: 2027
  - Full Build first stabilized year: 2029
- Management will employ an effective marketing strategy, allowing it to compete and succeed in the increasingly competitive marketplace.
- All other material market changes that will occur in the greater market area (openings, expansions, or closures) during the timeline of projections are represented in this analysis





### III. METHODOLOGY

The Consulting Team employed the following methodology to complete this assessment.

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#### ANALYSIS

##### GAMING DEMAND FORECASTING MODEL

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To understand the substitution effect of the Project in each phase of development, GMA developed a series of gravity models. The gravity model is a business forecasting model based on Newton’s Universal Law of Gravitation. Newton’s Law of Gravitation simply states that every particle in the universe attracts every other particle with a force that is directly proportional to the product of their masses and inversely proportional to the square of the distance between them. Newton’s theory, which was first published in his 1687 work, “Mathematical Principles of Natural Philosophy,” started to be adapted for commercial applications early in the 20<sup>th</sup> century.

Through a number of modifications, Newton’s Law of Gravitation can be applied to the gaming industry. While a casino twice the size of another may not have twice the attraction of another, it does have some constant increased factor of attraction. In terms of distance, squaring the distance is not necessarily always the right figure. Typically, the power to which the distance is taken varies from a factor 1.5 to 2.5. The reason for this is that actual distance between two objects will have a different impact on communities throughout the United States. This is primarily attributed to varying traffic patterns and geographical barriers between different communities, which results in significant changes in drive time. For example, for an individual living in rural Texas, traveling 100 miles to reach a business may not be perceived as a barrier as it would likely take less than 1.5 hours to reach. However, for someone living in the middle of Los Angeles, 100 miles could take up to three or more hours due to traffic congestion.

By estimating revenue levels at each of the gaming properties within the competitive set, researching the number of gaming positions provided within each, visiting each facility to understand their relative aesthetic attractiveness (including a consideration of non-gaming amenities), and utilizing gaming factors from proprietary and public sources, the model was calibrated to current market performance. Once calibrated, GMA grew the model to the subject years of 2025, 2027, and 2029 creating a “Base Projections Scenario” for each phase of the Project in which the Project is not introduced. Then, GMA layered in the Project in each phase. The gravity model then projected the likely source and distribution of gaming revenue in the market given the introduction of the Project in each phase.



## SUBSTITUTION EFFECT ANALYSIS

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To estimate the Project's substitution effect on other regional gaming facilities for each phase, GMA compared the Base Projections Scenario, in which the Project is not introduced, to each phase in which the Project is layered in. This comparison yielded the substitution effect on each regional gaming facility and any anticipated new market growth in each phase.



## IV. REGIONAL MARKET OVERVIEW

The following sections provide a demographic and economic overview of the regional market area. GMA compiled and analyzed data focusing on population, income, housing, and employment trends to understand the relative economic strength of the region.

For the purposes of this analysis, GMA defined the regional market area to include the following Oregon counties: Coos County and Jackson County. Combined, these counties encompass the primary trade and catchment areas served by the Project and its primary competitors. Data at the county level was derived from PCensus, the U.S. Bureau of Labor Statistics, and other publicly available and reliable sources.

### SITE VISIT AND MARKET RESEARCH

#### DEMOGRAPHIC OVERVIEW

##### POPULATION

The Consulting Team analyzed regional population estimates and projections to illustrate regional growth potential and trends within the analyzed areas. The Consulting Team also evaluated the region's total adult population (age 21 or older) to illustrate the number of potential gaming customers within the market area. Statistics in this report were derived primarily from PCensus/Claritas demographic mapping software, along with other publicly available and reliable sources. Claritas provided demographic data estimates for defined years, and GMA calculated relevant compound growth rates with these combined years to project demographic data levels for 2029.

##### JACKSON COUNTY, OREGON

The total population of Jackson County, OR, is estimated at 225,798 in 2022. The total population is expected to steadily increase over the next four years at a projected CAGR of 0.91%, resulting in a projected total population of 240,551 in 2029. Jackson County's adult population is estimated at 171,873 in 2022, which represents 76.1% of the total population. The adult population is expected to grow at a slightly higher rate of 0.95%, reaching 183,588 by 2029.

##### COOS COUNTY, OREGON

Coos County, OR, is home to an estimated total population of 64,717 in 2022. Of that total, 51,051 are adults aged 21 or older, representing 78.9% of the county's total population. The total population is expected to undergo gradual growth at a compound annual growth rate



("CAGR") of 0.48%. This indicates that the total population is estimated to slowly increase over the next several years to reach 66,931 in 2029. The adult population is expected to grow at a similar yet marginally higher rate, with a projected CAGR of 0.51% over the next four years. The adult population of Coos County is expected to reach 52,887 in 2029.

The following tables highlight the current and projected total population and the adult population (aged 21 or older) of each county and the region overall in 2022.

Total Population			
	2022	2029	CAGR
Jackson County, OR	225,798	240,551	0.91%
Coos County, OR	64,717	66,931	0.48%
Oregon	4,322,956	4,622,738	0.96%

Source: PCensus, GMA

Adult Population (21+)			
	2022	2029	CAGR
Jackson County, OR	171,873	183,588	0.95%
Coos County, OR	51,051	52,887	0.51%
Oregon	3,273,052	3,532,930	1.10%

Source: PCensus, GMA

### AVERAGE ANNUAL HOUSEHOLD INCOME

Average annual household income ("AAHI") was evaluated for Coos County, Jackson County, and the State of Oregon as a whole. By evaluating regional AAHI, the Consulting Team can better understand a market's economic expectations and evaluate a region's economy. Typically, higher income levels correlate to higher disposable income levels, leading to a greater spend on entertainment, which may include gambling. GMA analyzed AAHI estimates for 2022, projections for 2026, and projected annual growth rates out to 2029. It is important to note that within GMA's analysis, GMA assumed lower AAHI CAGRs would be achieved through 2029. These assumptions were made to maintain conservative projections.

### JACKSON COUNTY, OREGON

Jackson County AAHI was estimated at \$85,396 in 2022. The Jackson County AAHI is expected to undergo significant growth over the next four years at a projected CAGR of 2.93%. Jackson County households on average earn \$15,407 more than the average household in Coos County, and this gap is expected to widen as AAHI growth in Jackson County outpaces that of Coos County. Jackson County AAHI still lags slightly behind the statewide average of \$98,114 in 2022, but to a lesser degree than Coos County. The average household in Jackson County earns just under 87% of the statewide average household income.

### COOS COUNTY, OREGON

Coos County AAHI was estimated at \$69,989 in 2022, and it is expected to grow somewhat significantly over the next four years at a projected CAGR of 2.17%. Overall, AAHI in Coos County lags behind that of both Jackson County and the State of Oregon overall, both in terms of their



value and in terms of expected growth. In 2022, it is estimated that Coos County residents earn less than 72% of the average household income for the State of Oregon as a whole, and this percentage is estimated to fall below 69% by 2029.

The following table summarizes the estimated and projected AAHI for each of the analyzed regions in 2022 and 2029.

Average Annual Household Income			
	2022	2029	CAGR
Jackson County, OR	\$85,396	\$104,539	2.93%
Coos County, OR	\$69,989	\$81,352	2.17%
Oregon	\$98,114	\$118,371	2.72%

Source: PCensus, GMA

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## ECONOMIC OVERVIEW

GMA analyzed employment data for Coos County, Jackson County, and the State of Oregon as a whole. The Consulting Team focused on evaluating regional unemployment rates, as this key economic indicator characterizes the strength and stability of a local economy. Additionally, GMA evaluated the largest employers in each respective county to understand the regional population’s reliance on certain industries.

## UNEMPLOYMENT

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### JACKSON COUNTY, OREGON

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Jackson County reported an unemployment rate of 4.3% in 2019, which represents a ten-year low. The county’s unemployment rate has steadily declined from the recessionary high of 11.1% in 2012. Similar to Coos County, unemployment levels have fluctuated over the past 24 months, with the highest levels being reported during the winter. Jackson County’s unemployment rates have historically been slightly lower when compared to Coos County but have lagged behind the State of Oregon as a whole.

### COOS COUNTY, OREGON

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The unemployment rate in Coos County in 2022 was quantified at 6.3%, which represents a slight improvement over the prior year’s unemployment rate of 8.6%. The county’s unemployment rate has steadily declined from the recessionary high of 11.1% in 2012 through 2019, before increasing in 2020 due to impacts from the coronavirus pandemic. Unemployment levels in Coos County reached a ten-year low in 2019.



When examining the trailing 24-month period, unemployment levels fluctuated between 4.0% and 7.8%, with higher levels being reported during the winter months of January through March. Coos County unemployment rates have historically followed a similar trend to Jackson County, although Jackson County achieved slightly lower levels of unemployment during this period.

The following tables illustrate unemployment rates for Jackson County, Coos County, and the State of Oregon from 2012 through 2022, as well as the trailing 24-month period through January 2023. Each analyzed region reported their lowest unemployment levels in the most recent month of May 2022, with Jackson County, Coos County, and the State of Oregon all reporting less than 4.0% unemployment.

10-Year Annual Unemployment Trend										
	2012	2013	2014	2015	2016	2017	2018	2019	2020	2021
Jackson County	11.1%	9.6%	8.3%	6.6%	5.6%	4.7%	4.6%	4.3%	7.8%	5.4%
Coos County	11.1%	10.1%	8.8%	7.3%	6.3%	5.4%	5.2%	4.8%	8.6%	6.3%
State of Oregon	8.8%	7.8%	6.7%	5.5%	4.7%	4.1%	4.0%	3.7%	7.6%	5.2%

Source: U.S. Bureau of Labor Statistics, GMA

Jackson County Unemployment Trend				
Trailing 12-Month		Prior Year		% Change
Month	Rate	Month	Rate	Y-O-Y
Jan-23	6.0%	Jan-22	4.9%	22.4%
Dec-22	5.1%	Dec-21	3.7%	37.8%
Nov-22	4.8%	Nov-21	3.8%	26.3%
Oct-22	4.4%	Oct-21	3.9%	12.8%
Sep-22	4.4%	Sep-21	4.4%	0.0%
Aug-22	4.8%	Aug-21	5.4%	-11.1%
Jul-22	4.5%	Jul-21	5.5%	-18.2%
Jun-22	4.1%	Jun-21	6.0%	-31.7%
May-22	3.4%	May-21	5.6%	-39.3%
Apr-22	3.9%	Apr-21	6.0%	-35.0%
Mar-22	4.3%	Mar-21	6.8%	-36.8%
Feb-22	4.2%	Feb-21	6.9%	-39.1%

Source: U.S. Bureau of Labor Statistics, GMA

Coos County Unemployment Trend				
Trailing 12-Month		Prior Year		% Change
Month	Rate	Month	Rate	Y-O-Y
Jan-23	6.3%	Jan-22	5.8%	8.6%
Dec-22	6.1%	Dec-21	4.5%	35.6%
Nov-22	5.8%	Nov-21	4.6%	26.1%
Oct-22	5.3%	Oct-21	4.7%	12.8%
Sep-22	5.3%	Sep-21	5.3%	0.0%
Aug-22	5.7%	Aug-21	6.3%	-9.5%
Jul-22	5.3%	Jul-21	6.3%	-15.9%
Jun-22	4.8%	Jun-21	6.9%	-30.4%
May-22	4.0%	May-21	6.4%	-37.5%
Apr-22	4.6%	Apr-21	6.9%	-33.3%
Mar-22	5.0%	Mar-21	7.8%	-35.9%
Feb-22	4.8%	Feb-21	7.7%	-37.7%

Source: U.S. Bureau of Labor Statistics, GMA

## MAJOR EMPLOYERS

The following table lists the top employers for both Jackson County and Coos County. Both counties' workforces are employed in a similar composition of industries, with government, healthcare, and education related fields combining for over 40% of the workforce in each county. Other significant industry sectors in both counties include hospitality/leisure, transportation, manufacturing, and retail.



Major Employers	
Jackson County	Coos County
Asante Health System	Bandon Dunes Golf Resort
Harry & David Operations Inc.	Bay Area Hospital
U.S. Government (Federal)	North Bend Medical Center
Medford School District	North Bend School District
Amy's Kitchen	Roseburg Forest Products
Providence Medical Center	SW Oregon Community College
State of Oregon	South Coast Education Services
Jackson County	The Mill Casino
Boise	Walmart Stores
Lithia Motors	

Source: Jackson County CAFR, Medford Chamber, SCDC, GMA

## HOUSING VALUES

GMA analyzed historical housing values to better understand the region’s economic activity and trends. Housing values are key economic indicators that allude to the strength and stability of a regional economy. Housing value fluctuation often impacts expected population growth and disposable income. GMA also evaluated this data to understand how the most recent recession impacted the local economy and how the region has recovered. The Consulting Team also analyzed the number of total housing units and the associated housing vacancy rates to understand the overall health of the housing market. GMA utilized statistics collected by the U.S. Census Bureau to understand these housing market trends.

### JACKSON COUNTY, OREGON

The median housing value for Jackson County was estimated at \$384,703 in 2022. This represents an increase of 16.3% from the previous year’s median housing value of \$330,845. Currently, housing values in Jackson County are significantly higher than pre-recession levels and have rebounded by 100.3% since 2012, when housing values reached their lowest level. Since then, housing value recovery in Jackson County has also outperformed Coos County, however the median housing value within State of Oregon as a whole has been increasing at the highest rate of the competitive set. A combination of strong growth in housing values, coupled with relatively low vacancy rates, indicates that Jackson County has a healthy housing market overall.

### COOS COUNTY, OREGON

The median housing value for Coos County was estimated at \$287,662 in 2022. This represents an increase of 19.4% from the previous year’s median housing value of \$240,958. Currently, housing values in Coos County are significantly higher than their pre-recession levels. Additionally, housing values have rebounded by 112.9% from 2012, when housing values reached

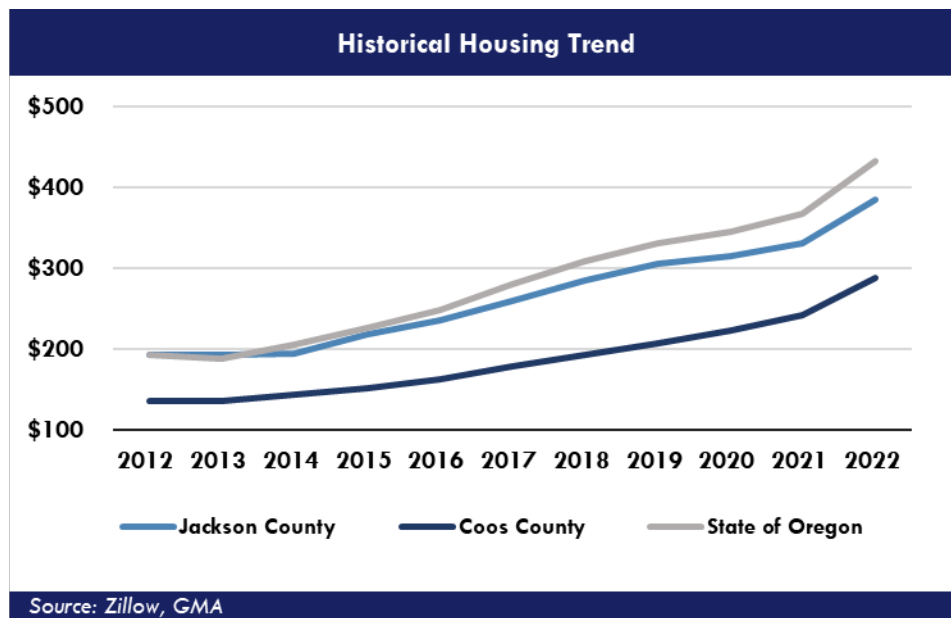


their lowest level. In comparison to Jackson County and the State of Oregon as a whole, the housing values in Coos County are considerably lower and have recovered at a much slower pace since the recession.

Housing Value Summary												
	2012	2013	2014	2015	2016	2017	2018	2019	2020	2021	2022	CAGR
Jackson County	\$192,035	\$192,035	\$194,655	\$217,277	\$235,643	\$258,785	\$284,430	\$305,524	\$314,266	\$330,845	\$384,703	7.2%
Coos County	\$135,118	\$135,118	\$142,783	\$151,953	\$162,144	\$178,341	\$193,127	\$206,550	\$223,232	\$240,958	\$287,662	7.8%
State of Oregon	\$192,950	\$188,494	\$205,527	\$226,031	\$247,900	\$280,067	\$308,113	\$330,770	\$344,743	\$367,648	\$431,447	8.4%

Source: Zillow, GMA

The following graph illustrates trends in housing value growth and decline from 2012 through 2022. Median housing values in both counties and the State of Oregon reached their lowest levels between 2012 and 2013. While housing values for Jackson County and the State of Oregon have followed a similar trend, housing values in Coos County have achieved a noticeably slower recovery during this period.



### EDUCATIONAL ATTAINMENT

Understanding the educational attainment of the local populace is useful in order to define the types of potential gaming customers in a specific region. GMA analyzed the estimated educational attainment data for Coos County, Jackson County, and the State of Oregon as a whole for 2021.

In Jackson County, 34.6% of residents have obtained a high school degree or less, and 27.9% have earned a bachelor’s degree or higher. In Coos County, 41.2% of the adult population has obtained





a high school degree or less, while 18.0% has earned a bachelor’s degree or higher. The educational attainment in Jackson County is more aligned with the State of Oregon overall, although Jackson County still reports a higher share of its population with no education past high school, as well as a lower share with a bachelor’s degree or higher. For the State of Oregon as a whole, only 31.9% of residents have not achieved any post-secondary education, and 33.7% of residents have earned at least a bachelor’s degree. When compared to Coos County, more residents possess some form of higher education in both Jackson County and the State of Oregon as a whole.

The following table details educational attainment statistics for Jackson County, Coos County, and the State of Oregon as a whole.

2021 Educational Attainment (Est. Population Aged 25+)						
	Coos County		Jackson County		State of Oregon	
	Total	% Total	Total	% Total	Total	% Total
Less than 9th grade	1,137	2.4%	5,087	3.2%	109,088	3.6%
Some High School, no diploma	4,219	8.7%	11,383	7.1%	176,650	5.8%
High School Graduate (or GED)	14,524	30.1%	39,146	24.4%	681,147	22.5%
Some College, no degree	15,525	32.2%	46,673	29.1%	767,711	25.4%
Associate Degree	4,179	8.7%	13,537	8.4%	271,874	9.0%
Bachelor's Degree	5,195	10.8%	27,978	17.4%	631,699	20.9%
Master's Degree	2,477	5.1%	11,856	7.4%	271,181	9.0%
Professional School Degree	626	1.3%	3,202	2.0%	67,407	2.2%
Doctorate Degree	372	0.8%	1,758	1.1%	50,251	1.7%
<b>TOTAL (Age 25+)</b>	<b>48,254</b>	<b>100.0%</b>	<b>160,620</b>	<b>100.0%</b>	<b>3,027,008</b>	<b>100.0%</b>

Source: PCensus, GMA

The following table shows the size of the education systems in each county. The overall size of Coos County’s education system is much smaller than Jackson County’s, which is attributable to the difference in the size of each county’s population.

Educational Facilities					
	School Districts	High Schools	Middle Schools	Elementary Schools	Charter Schools
Jackson County	9	13	12	36	12
Coos County	6	7	6	11	6

Source: The Oregonian (OregonLive.com), GMA      Note: last updated 4 April 2023

ALAMEDA FIRE

On September 8th, 2020, the “Almeda Fire” started and roared through Jackson County, Oregon, burning over 3,200 acres. The fire destroyed an estimated 2,357 residential structures in the



area. Over 1,700 of the 2,357 residential structures were manufactured homes that were in twelve mobile home parks in Jackson County. Different media outlets report anywhere from 3,000 to 4,200 residents were displaced. Most of the residents displaced were senior citizens and Latino families, many of which didn't have home insurance. The Red Cross set up a location at the Jackson County Fairground where fire evacuees stayed after leaving their homes. Many of the displaced were forced to live in motels, hotel rooms, and some were forced to sleep in their cars and tents along the streets in the surrounding areas. It was reported that over 24,000 residents of Oregon applied for FEMA assistance after the fire decimated several areas in the state. However, 57% of the applicants were turned down. A full year after the fire, some residents were still reported to be living in temporary housing. GMA took the impact of this fire from a regional population and income perspective into consideration within its analysis.



## V. COMPETITIVE SUMMARY

GMA conducted a competitive analysis for each casino in the regional competitive set. To accomplish this task, GMA quantified and qualified the size and scope of each existing facility and its amenities. Additionally, the Consulting Team evaluated any new additions to supply or anticipated market changes during its competitive assessment. This chapter summarizes the existing and proposed primary, secondary, and tertiary competition in the region.

### PRIMARY COMPETITION

#### SEVEN FEATHERS CASINO & RESORT

Seven Feathers Casino & Resort is located in Canyonville, OR, about 75 miles north of Medford. This facility is owned and operated by the Cow Creek Tribe. The casino features 950 Class III slot machines and 19 table games. The property has effective signage along I-5 and has excellent visibility and access from the highway. The property offers one of the better gaming experiences in the region, and several dining options to visitors.

Dining options include five restaurants, two lounges, and a café. In June 2022, the resort completed an overhaul of their flagship restaurant, Stix Sports Bar. The sports bar has a completely new interior with 24 televisions, a new menu, and several local beers available.

#### CASINO

- 950 Class III slot machines
- 19 table games
- 325-seat bingo hall
- Keno

#### FOOD & BEVERAGE

- K-Bar Steak House
- Cow Creek Restaurant
- Stix Sports Bar
- Takelma Roasting Company
- Steelhead Lounge
- Elements Lounge

#### PARKING

- Surface parking
- Valet parking



#### HOTEL

- 300 standard rooms and suites

#### AMENITIES & ENTERTAINMENT

- Live music
- Fitness Center
- Pool
- RV Park
- Spa
- Art gallery
- Meeting/convention space

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#### RAIN ROCK CASINO

The Rain Rock Casino opened in April of 2018. It is owned by the Karuk Tribe and is located just east of Interstate 5 at Exit 773 in Yreka, CA. Situated on a hillside overlooking the interstate, the casino property is 50 miles south of Medford and the closest casino to the Medford site. It currently does not offer the same level of amenities found at Seven Feathers. However, Rain Rock Casino is currently building a new 43,000 square-foot resort that will include 80 rooms (with separate VIP cabins), a pool, and a convention center. The new casino will double the number of slot machines the current casino holds, as well as table games and new food and beverage options. The new Rain Rock Casino and Resort is projected to be completed and open by the timeline of projections presented in this report. The stretch of interstate highway between Yreka and Medford is a fairly arduous drive, but not worse than what gamers from Medford must endure when visiting other regional competitors.

#### CASINO

- 349 Class III slot machines
- 8 table games

#### FOOD & BEVERAGE

- Rain Rock Restaurant

#### PARKING

- Surface parking



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## KLA-MO-YA CASINO

Kla-Mo-Ya Casino is located in Chiloquin, OR, about 90 miles east of Medford. The property, owned and operated by the Klamath, Modoc & Yahooskin Tribes, serves as a convenience-based gaming option for the local population and traffic intercept market. The property has very limited amenity options. The casino features 300 Class III gaming machines and six table games. The facility only offers one full-service restaurant, which also serves as a lounge and bar, a limited-service hotel, and 30 RV camping spots in the East Parking Lot of the Casino.

### CASINO

- 300 Class III slot machines
- 6 table games

### FOOD & BEVERAGE

- Peak to Peak (restaurant & lounge)

### PARKING

- Surface parking

### HOTEL (OPENED IN NOVEMBER 2018)

- 76-room Sleep Inn hotel
- 30 RV Camping sites

### AMENITIES

- Gift shop

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## THREE RIVERS COOS BAY

Three Rivers Coos Bay Casino is located in Coos Bay, OR and is owned and operated by the Coos, Lower Umpqua & Siuslaw Indians. The facility is a longer than three-hour drive approximately 170 miles northwest of Medford. The property opened in May 2015 and is the newest casino in the region. The casino only offers Class II gaming; it features 250 Class II machines and does not offer any table games. The facility also offers patrons one dining/bar option, Café 1297.

### CASINO

- 250 Class II electronic gaming machines

### FOOD & BEVERAGE

- Café 1297



## PARKING

- Surface parking
- Valet parking

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## THREE RIVERS CASINO & RESORT

Three Rivers Casino & Resort is also owned and operated by the Coos, Lower Umpqua & Siuslaw Indians. This Class III facility is located in Florence, OR, about 195 miles northwest of Medford. The casino is one of the largest gaming options in the region. The casino features approximately 600 Class III slot machines, fifteen table games and three poker tables. In 2022, the casino partnered with JCM Global to install a 200 square-foot LED wall for their new sportsbook, making their sports betting screen the largest in Oregon. The property also offers multiple dining options including a four-station food court, sports bar, a seafood cold bar, and a steakhouse which is temporarily closed. The casino features a 90-room hotel and several other amenities, including a nearby golf course, RV park, gift shop, and meeting/conference rooms.

## CASINO

- 600 Class III slot machines
- 15 table games
- 3 poker tables

## FOOD & BEVERAGE

- Bonfire (Temporarily Closed)
- Blue Bills Sports Bar & Tap Room
- Pacific Cold Bar & Cocktails
- Food Court: The 101 Burger Bar, Mamma Mia!, Garden Fresh, Costal Roasters

## PARKING

- Surface parking
- Valet parking

## HOTEL

- 90 standard rooms and suites

## AMENITIES & ENTERTAINMENT

- Nearby golf course
- RV Park
- Gift shop
- Meeting/conference rooms



## SECONDARY COMPETITION

### LUCKY 7 CASINO

Lucky 7 Casino is located in Smith River, CA, about 120 miles southwest of Medford. The property, owned and operated by the Tolowa Dee-ni' Nation, has excellent access to US-101, and serves both the local population and tourists. The facility's interior features a lodge style décor with wooden and stone pillars. The casino contains 300 Class III slot machines, and two table games. The property offers two dining options including a full-service restaurant and a sports bar. There is also a connecting hotel that features 71 standard rooms and suites. Amenities and entertainment options include a connecting gas station, pool, business center, gift shop, and 6,400 square feet of meeting and convention space.

#### CASINO

- 300 Class III slot machines
- 2 table games

#### FOOD & BEVERAGE

- House of Howonquet Restaurant
- Club 7 Sports Bar

#### PARKING

- Surface parking

#### HOTEL

- 71 standard rooms and suites

#### AMENITIES & ENTERTAINMENT

- Bingo Hall
- Pool
- Connected gas station
- Business center
- Gift shop
- Meeting/convention space



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## ELK VALLEY CASINO

Elk Valley Casino is located in Crescent City, CA, about 110 miles southwest of Medford. This property is one of the gaming options near the California/Oregon border. The new casino that opened in 2022 is 36,000 square-feet, which is 50% larger than the previous Elk Valley Casino. The new casino features 300 Class III slot machines, a poker room, and offers limited table games such as Blackjack and Spanish 21. The casino also includes a large events center, and a brand-new fresh air ventilation system. For dining and beverage options the property offers one dining option: Warriors Bar & Grill, and a quick café and tobacco store called Perks.

### CASINO

- 300 Class III slot machines
- Poker Room
- Table Games

### FOOD & BEVERAGE

- Warriors Bar & Grill
- Perks

### PARKING

- Surface parking

### AMENITIES

- Nearby RV park
- Meeting/convention space





TERTIARY COMPETITION

The following table details the remaining tertiary competition in the broader region. Although each casino would compete minimally with the subject facility, the Consulting Team evaluated and considered each facility to understand the greater competitive set as a whole. In total, the remaining regional gaming facilities offer 4,198 gaming devices, 74 table games, and 8 poker tables.

Tertiary Competition			
	Slots	Tables	Poker Tables
Chinook Winds Casino Resort	1,100	22	3
Spirit Mountain Casino	1,700	28	0
Redwood Hotel Casino	99	0	0
Win-River Resort & Casino	655	18	5
Indian Head Casino	490	6	0
Pit River Casino	154	0	0
<b>TOTAL</b>	<b>4,198</b>	<b>74</b>	<b>8</b>
Source: GMA			

EXISTING VIDEO LOTTERY TERMINAL COMPETITION

Along with the casino-based gaming facilities mentioned in this section, the State of Oregon supported over 11,500 video lottery terminal machines as of fiscal year 2022. These VLT’s are operated by the State of Oregon and are located in bar and retail establishments. In CY 2021 and CY 2022, the State of Oregon’s VLT’s generated approximately \$1.11 billion and \$1.22 billion in revenue, respectively. The State of Oregon has upgraded its VLT gaming offerings and technology in recent years. Although regional VLT facilities offer a less attractive gaming option than regional Class III and Class II gaming facilities, they still compete for a substantial portion of regional customers’ annual gaming spend and enhance the overall maturity of the gaming market as a whole.



## VI. SUBSTITUTION EFFECT ANALYSIS

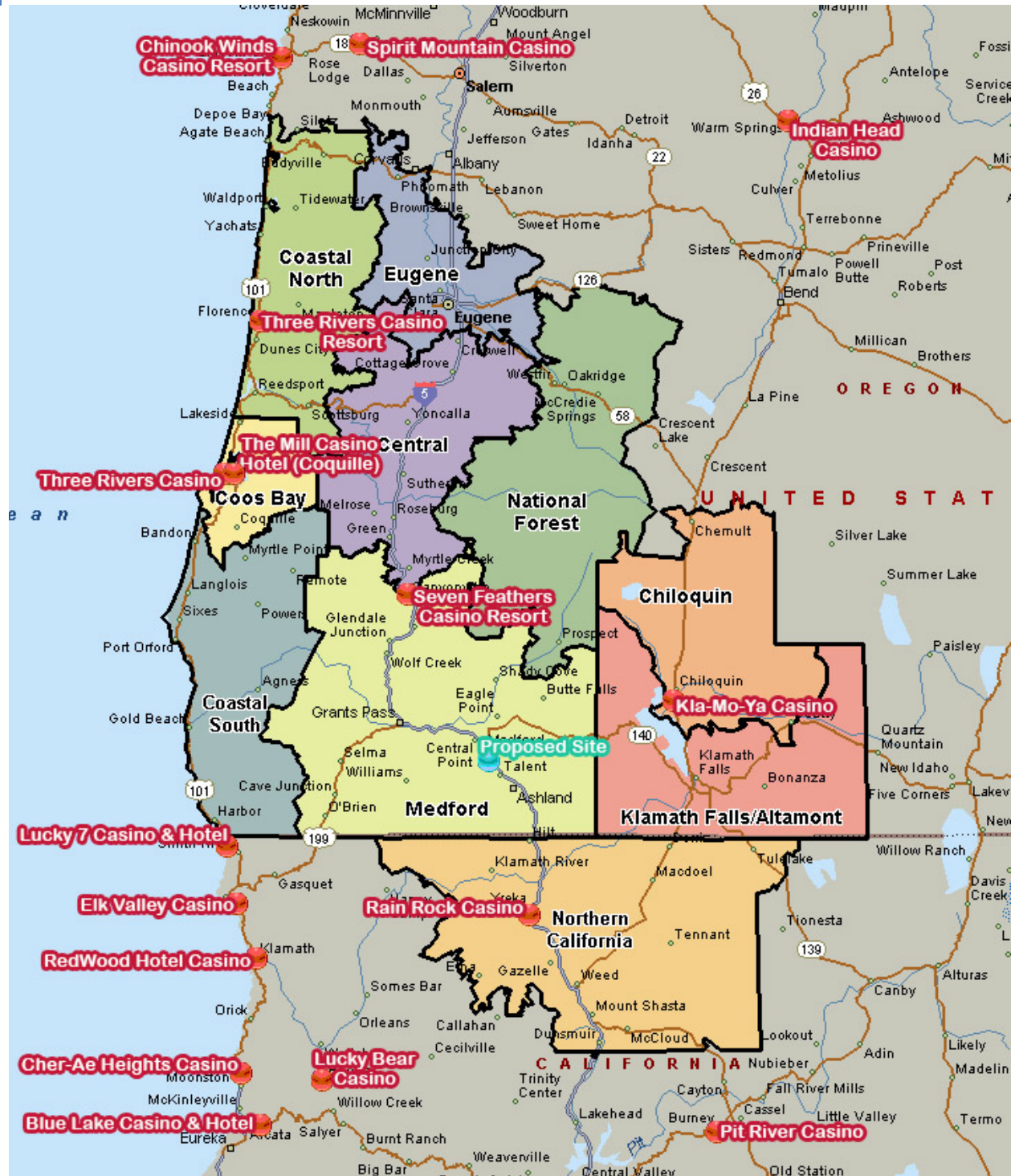
### GREATER MARKET AREA DEFINITIONS

The first step in performing the Gaming Market Assessment was to divide the greater market area into market segments based on variations in the demographic composition of the various communities, access to the subject facility as well as competing facilities, and the availability of other (non-gaming) entertainment activities.

The map on the following page illustrates the ten segments used in this analysis and the location of each casino in the region. The map is followed by a brief discussion of the demographic composition of each individual market segment. For each market segment, total population, adult (21+) population, and average annual household income (“AAHI”) were quantified.



GREATER MARKET SEGMENT MAP



## DEMOGRAPHIC SUMMARY

### COOS BAY

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The Coos Bay market segment is located between the Coastal North and Coastal South markets and has two gaming facilities within its borders: The Mill Casino and Three Rivers Casino Coos Bay. In 2022, the total population of this market segment is estimated at 51,558 residents. Approximately 78.1% of this market segment's population are adults, with 21+ population reported at 40,275. The number of total residents is projected to increase at a rate of approximately 0.6% through 2029 with total and adult population estimated at 53,204 and 41,604, respectively.

Income levels in this market are below the average AAHI of the ten analyzed regions, with AAHI quantified at \$72,004 in 2022. AAHI is estimated to undergo growth, projected at 2.2% annually, reaching \$83,913 by 2029.

### COASTAL NORTH

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The Coastal North market segment extends north of the Coos Bay market segment and includes the City of Florence and the Three Rivers Casino Resort. This area contains a total population of 55,281 in 2022. The total population is expected to increase by 0.8% annually in the coming years to reach 58,333 in 2029. Approximately 82.0% of this market segment's population are adults, with 21+ population reported at 45,314. The adult population is projected to reach 47,998 in 2029.

The Coastal North market segment's AAHI is estimated to be below the AAHI average of the ten analyzed regions, with an AAHI of \$71,465 in 2022. AAHI is expected to grow at an annual rate of 2.3% and is projected to reach \$83,876 by 2029.

### EUGENE

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The Eugene market segment extends east from the Coastal North market segment and contains the cities of Eugene and Springfield. This market segment does not contain any gaming facilities within its borders. The area is home to 364,035 residents in 2022. According to projections, total population is projected to reach 387,295 by 2029. Adults represent approximately 76.0% of the market's population with 21+ population reported at 276,697 in 2022. The adult population will grow by an average annual rate of 1.2%, reaching an estimated population of 301,339 in 2029.



Income levels in the Eugene market segment are higher than any of the other analyzed market segments, with AAHI quantified at \$83,734 in 2022. AAHI is estimated to undergo growth of 2.7% annually and is projected to reach \$101,187 in 2029.

## CENTRAL

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The Central market segment extends south from the Eugene market segment and does not contain any gaming facilities. However, the Seven Feathers Casino Resort is situated immediately to the south of Central's southern-most border in Canyonville. In 2022, total population was quantified at 130,689. Adults represent roughly 77.4% of this region's population, with 21+ population reported at 101,165. Both total and adult population levels in this market are estimated to grow, with total and adult populations expected to reach 137,581 and 107,059, respectively, in 2029.

The Central market segment has slightly lower income levels than the AAHI average of the ten markets, with AAHI of \$73,320 in 2022. AAHI is estimated to undergo growth, projected at 2.3% annually, reaching an AAHI of \$86,108 by 2029.

## MEDFORD

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The Medford market segment extends south from the Central market segment and runs along the California/Oregon border. The Medford market segment contains the Project site as well as the city of Medford and Phoenix. Additionally, the Seven Feathers Casino Resort is located in the far northern part of this market segment. This market has a total population quantified at 331,333 in 2022. Adults represent roughly 76.5% of this region's population, with 21+ population reported at 253,618. Both total and adult population levels are estimated to grow, with these populations expected to reach 351,601 and 269,836, respectively, in 2029.

The Medford market segment AAHI is estimated to be slightly above the AAHI average of the ten markets, with AAHI reported at \$80,128 in 2022. AAHI is estimated to undergo growth, projected at 2.9% annually, reaching \$97,943 by 2029.

## COASTAL SOUTH

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The Coastal South market segment is located south of the Coos Bay market segment and does not contain any gaming facilities. The area is home to a total of 36,453 residents in 2022. This market is expected to grow by 0.6% annually with a total population projected at 37,925 in 2029. Adults account for approximately 82.8% of the local population, with 21+ population reported at 30,189 in 2022. The adult population is expected to reach 31,403 in 2029.



Income levels in the Coastal South market segment are below the AAHI average of the ten analyzed regions, with the market segment's AAHI quantified at \$68,530 in 2022. AAHI is estimated to undergo 2.1% annual growth in the coming years and GMA projects it at \$79,525 in 2029.

## NATIONAL FOREST

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The National Forest market segment extends east from the Central market segment and does not include any gaming facilities within its borders. The market segment has an estimated 9,587 total residents in 2022, of which 7,693, or 80.2%, are at least 21 years of age. This segment is projected to experience population growth in the coming years, with total and adult population estimated at 10,174 and 8,197, respectively, in 2029.

The National Forest market segment's AAHI are among the lowest of the ten market segments, with AAHI quantified at \$64,043 in 2022. AAHI is projected to grow at an annual rate of 2.3%, reaching \$74,997 in 2029.

## CHILOQUIN

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The Chiloquin market segment is located east of the National Forest market segment and includes the City of Chiloquin. This market segment contains one gaming facility: the Kla-Mo-Ya-Casino. The region has a total population of 4,775 in 2022. Adults represent approximately 82.6% of the population, with 21+ population at 3,926 in 2022. Total population is expected to increase by 0.9% annually to reach an estimated at 5,062 in 2029.

The Chiloquin market segment's AAHI is the lowest among all the analyzed market segments in 2022. AAHI in this market is quantified at \$55,610 in 2022 and AAHI is projected to grow at an average annual rate of 1.5%, reaching \$61,680 in 2029.

## KLAMATH FALLS/ALTAMONT

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The Klamath Falls/Altamont market segment extends south from the Chiloquin market segment and runs along the California/Oregon border. This market does not contain any gaming facilities. The region has an estimated total population of 60,896 in 2022. Adults represent approximately 73.1% of the population, with 21+ population reported at 44,510. Total population is projected to increase by roughly 0.5% annually with total population estimated at 63,122 in 2029. It is further projected that adult population will increase and reach 45,811 in 2029.

The Klamath Falls/Altamont market segment's AAHI is second lowest of the ten analyzed markets with AAHI quantified at \$64,000 in 2022. AAHI in this market is projected to grow at an average annual rate of 2.0%, reaching \$73,405 in 2029.



NORTHERN CALIFORNIA

The Northern California market segment is located south of the Medford and Klamath Falls/Altamont market segments and contains the Rain Rock Casino off Interstate 5. In 2022, this market has a total population of 42,439 residents. Adults comprise approximately 76.5% of this market’s population, with 21+ population reported at 32,465. The number of total residents is projected to slightly decrease in the coming years, with an average annual growth rate of -0.1%. As such, both total and adult population are estimated to fall to 42,083 and 32,300, respectively, in 2029.

Income levels in this market segment are below the average AAHI of the ten analyzed regions, with AAHI quantified at \$69,252 in 2022. AAHI is estimated to undergo growth, projected at 1.9% annually, reaching \$78,780 in 2029.

The following tables summarize the demographic analysis for each market segment.

Total Population by Market Segment			
	2022	2029	CAGR
Coos Bay	51,558	53,204	0.45%
Coastal North	55,281	58,333	0.77%
Eugene	364,035	387,295	0.89%
Central	130,689	137,581	0.74%
Medford	331,333	351,601	0.85%
Coastal South	36,453	37,925	0.57%
National Forest	9,587	10,174	0.85%
Chiloquin	4,755	5,062	0.90%
Klamath Falls/Altamont	60,896	63,122	0.51%
Northern California	42,439	42,083	-0.12%
<b>TOTAL</b>	<b>1,087,025</b>	<b>1,146,380</b>	<b>0.76%</b>

Source: PCensus, GMA



Average Annual Household Income by Market Segment			
	2022	2029	CAGR
Coos Bay	\$72,004	\$83,913	2.21%
Coastal North	\$71,465	\$83,876	2.31%
Eugene	\$83,734	\$101,187	2.74%
Central	\$73,320	\$86,108	2.32%
Medford	\$80,128	\$97,943	2.91%
Coastal South	\$68,530	\$79,525	2.15%
National Forest	\$64,043	\$74,997	2.28%
Chiloquin	\$55,610	\$61,680	1.49%
Klamath Falls/Altamont	\$64,000	\$73,405	1.98%
Northern California	\$69,252	\$78,790	1.86%
<b>Average</b>	<b>\$77,673</b>	<b>\$93,212</b>	<b>2.63%</b>

Source: PCensus, GMA

## GAMING FACTORS AND OVERALL MARKET SIZE

Gaming factors consist of Propensity and Average Annual Win. For the purposes of this assessment, GMA added an additional category to reflect the percentage of gamer visits that will accrue to casinos and VLTs that were not included in the defined local market. This allows the model to account for those visits lost to regional VLT facilities and other jurisdictions such as Reno/Tahoe and Las Vegas. This further allows the model’s gaming factors to be calibrated to the actual behaviors of regional gaming patrons. It is important to note that GMA sized the total market to include the regional VLTs to ensure accuracy of the calibration of the model. The multiplication of these gaming factors by a market’s adult population and its AAHI determines the gross levels of gaming revenue generated by the subject market.

### PROPENSITY

Propensity represents the percentage of the adult population (defined as people age 21 and over) that will visit a casino at least once in a given year. Propensity factors experience large ranges throughout the United States. At the high-end of the scale is the local Las Vegas market in which almost 70% of adults gamble. In rural sections of the country with few gaming options, this factor can be as low as 17%. In the greater market area, relatively high gaming factors are expected as this population has had exposure to gaming facilities for quite some time.

Gaming factors in the United States have remained fairly constant over the past few years and generally only change with the addition of new casinos. However, the onset of the recession has had an estimated negative one or two percentage point impact on these figures. In estimating





gaming factors, GMA utilized proprietary research data gathered by GMA as well as other sources.

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#### AVERAGE ANNUAL WIN

Average Annual Win (“Average Win”) represents the amount of money a gamer in a market will lose on average to a casino over a twelve-month period. This factor is generally dependent on a player’s average household income and the distance that he/she must travel to reach a casino. Average Win is based on a percentage of a player’s AAHI. Annual expenditures on casino gaming is generally positively correlated with the frequency that individuals visit casinos: high frequency often equates to situations where a population is presented with multiple options and good venue accessibility and low when comparatively inaccessible, limited in options and/or limited in scope or attractiveness.

Average Win as a percent of gamers annual income figures experienced in the greater Coquille market area are higher than other gaming markets around the country. Percent income figures in the market area range from 1.9% to 2.8%, compared to other gaming markets where this figure ranges between 1.1% and 2.6%.

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#### ATTRACTION AND DISTANCE FACTORS

After adjusting the model’s gaming factors and competitive characteristics, including the sizing, location, and revenue generation of each existing and potential competitor, GMA assigned each regional market participant an attraction factor and distance factor.

#### ATTRACTION

Attraction factors are utilized to help differentiate market participants based upon the quality of their gaming and non-gaming amenities. By performing detailed property evaluations during the site visit, GMA was able to assign attraction factors for each member of the competitive set. Typically, attraction factors are assigned with a range of numerical figures from 0.00 to 2.00, based upon the Consulting Team’s understanding of the true level of attraction of each facility. A facility’s attraction factor may exceed 1.00 based upon a variety of factors, including branding, the quality of the facility, and marketing practices. Typically, a quality racetrack casino with slots would only achieve an attraction factor of 0.85, while a quality full-service casino would achieve an attraction factor of 1.00. In some markets, these factors do not achieve those attraction factor benchmarks as market conditions and facility conditions have not allowed the market participants to fully penetrate the market.



## DISTANCE AND ACCESS

The Consulting Team also assigns varying distance factors for each facility for each regional market segment. This portion of the analysis allows the Consulting Team to adjust each facility's access to the regional market segments. Without this step, the model would interpret the distance between a facility and a market segment on an "as the crow flies" basis, ignoring the regional road network, traffic, construction, any geographic barriers such as large bodies of water or mountains, and unique marketing initiatives/campaigns.

## GAMING REVENUE CALIBRATION AND PROJECTIONS

### 2022 CALIBRATION

By analyzing and estimating historical gaming revenue levels at each of the casino and VLT facilities within the competitive set, researching the number of gaming positions provided within each competitor's casino, visiting each facility to understand their relative aesthetic attractiveness (including a consideration of non-gaming amenities) and utilizing gaming factors from both public and proprietary sources, GMA calibrated the model to current market conditions. To further calibrate the model, GMA adjusted the percentage of potential gaming revenue that would flow to casinos in the model. This allowed GMA to isolate the casino gaming market from the VLT gaming market and understand how gaming revenue is currently distributed between regional casino facilities and regional VLT facilities. To increase the accuracy of the gravity model, GMA gathered historical database information, detailing the source of The Mill Casino's gaming customers and revenue during the trailing twelve months ("TTM"), and calibrated the model accordingly.

### BASE PROJECTIONS

Once the gravity model was calibrated, GMA constructed a forecasting model to grow the market to 2025, 2027, and 2029 to generate a base scenario projection for the assumed stabilized year of each individual phase of development. It was important to establish this baseline, assuming the Project does not occur in any phase, to allow GMA to quantify new market growth versus the resulting substitution effect on other facilities from the development of the Project in each phase. In the Base Scenarios, GMA factored in anticipated market changes and expansions that are expected to be completed in the Project timeline.



**SCENARIO PROJECTIONS**

In Phase I, GMA layered in the impact of the proposed Project assuming it would feature 150 Class II gaming machines, a small restaurant, and bar. In Phase II, GMA layered in the impact of the expansion of the proposed Project to 300 Class II gaming machines, a small restaurant, and bar. In the Full Build phase, GMA assumed that the Project would offer 600 Class II gaming machines, a small restaurant, and bar.

**REVENUE PROJECTIONS SUMMARY AND COMPARISON**

The following table illustrates the projected gaming revenue levels for the Project in each phase of development. Additionally, the table illustrates projected gaming device revenue as well as Win Per Device Per Day. In 2029, the Project is expected to generate the largest level of gaming revenue, estimated at \$49.4 million in the subject year.

<b>Project Phase Gaming Revenue Comparison, Stabilized Years</b>			
	<b>Phase I</b>	<b>Phase II</b>	<b>Full Build</b>
# Gaming Machines	150	300	650
Win Per Gaming Machine	\$336	\$289	\$208
Slot Revenue	\$ 18,388,370	\$ 31,612,491	\$ 49,403,070
<b>TOTAL</b>	<b>\$ 18,388,370</b>	<b>\$ 31,612,491</b>	<b>\$ 49,403,070</b>
<i>Source: GMA</i>			

**SUBSTITUTION EFFECT ANALYSIS**

To quantify the impact of the Project on the region’s casinos, GMA completed a Substitution Effect Analysis. GMA compared each market participant’s projected local market revenue levels (as the gravity model only projects the distribution of local market gaming revenue) between each phase and their respective Base Projections Scenario, in which the Project does not occur. As revenues are not public for the market participants, aside from benchmarks for existing VLT facilities, GMA utilized its proprietary knowledge of the market in conjunction with available data in the public domain and other sources to estimate revenues for each gaming facility. With an understanding of the distribution of expected regional population and income growth, these revenue levels were grown to the subject year in each phase. In each phase, local market gaming revenue is expected to be generated in three ways: substitution effect from existing Oregon



casinos, substitution effect from non-Oregon casinos, and new local market growth (which, for purposes of this analysis, includes any substitution effect on VLT facilities).<sup>1</sup>

The following table illustrates the expected substitution effect in each phase of the Project.

Projected Substitution Effect Summary, Stabilized Years				
	Revenue Source	Phase I	Phase II	Full Build
Confederated Tribes of Grand Ronde	Spirit Mountain Casino	-1.1%	-1.6%	-2.4%
Confederates Tribes of Siletz Indians	Chinook Winds Casino Resort	-1.0%	-1.5%	-2.3%
Coos, Lower Umpqua & Siuslaw Indians	Three Rivers Coos Bay, Three Rivers Casino Resort	-1.6%	-2.5%	-4.0%
Coquille Indian Tribe	The Mill Casino	-1.7%	-2.6%	-5.9%
Cow Creek Tribe	Seven Feathers Casino Resort	-7.1%	-15.7%	-21.3%
Elk Valley Rancheria	Elk Valley Casino	-2.6%	-4.0%	-5.8%
Karuk Tribe	Rain Rock Casino	-9.4%	-16.2%	-23.4%
Klamath, Modoc & Yahooskin Tribes	Kla-Mo-Ya Casino	-5.0%	-8.7%	-17.6%
Redding Rancheria	Win-River Resort & Casino	-1.1%	-1.7%	-2.6%
Tolowa Dee-ni' Nation	Lucky 7 Casino	-2.2%	-3.4%	-5.3%
Yurok Tribe	Redwood Hotel Casino	-2.9%	-4.4%	-6.3%

Source: GMA

Only three tribal entities that own casinos are expected to experience a substitution effect that could be equal or greater than 5.0% of their expected Base Case Projections Scenario gaming revenue in Phase I. These entities include the Cow Creek Tribe; Klamath, Modoc & Yahooskin Tribes; and Karuk Tribe.

As the facility expands in Phase II, substitution effects are expected to increase for the competitive set. Karuk Tribe and Cow Creek Tribe are expected to experience the greatest substitution effect on a percentage basis of Base Case Scenario revenue in this phase (at 16.2% and 15.7%, respectively).

In Full Build phase, several tribal entities that own casinos are expected to experience substitution effects greater than or equal to 5.0%. These entities include the Cow Creek Tribe; Klamath, Modoc & Yahooskin Tribes; Yurok Tribe; Elk Valley Rancheria; Tolowa Dee-ni' Nation; Karuk Tribe; and the Coquille Tribe at the Mill Casino. The Cow Creek Tribe; Karuk Tribe; and Klamath, Modoc & Yahooskin Tribes are expected to experience the greatest substitution effects at 21.3%, 23.4%, and 17.6%, respectively.

<sup>1</sup> New market growth includes the substitution effect on VLT facilities as the gravity model is only inclusive of casino gaming revenue generation. As such, the introduction of the Project is expected to recapture a portion of VLT facility gaming revenue in certain alternative scenarios.



## VII. DISCLAIMER

Global Market Advisors has made its best effort to secure accurate information, however, much of the information contained in this report was received from third parties, which Global Market Advisors did not validate or verify. Accordingly, Global Market Advisors makes no warranty, real or implied, regarding the data contained in this report. This report also contains projections of future events based upon certain assumptions. As it is not possible to predict future outcomes with absolute accuracy, these projections should be treated only as estimates of potential future results. Actual results may differ due to unforeseen events. Consequently, Global Market Advisors assumes no liability for the accuracy of these projections.



## VIII. APPENDICES

### FIRM QUALIFICATIONS

GMA provides clients with market feasibility studies, primary research, economic impact studies, due diligence, payroll control, operations analysis, business and marketing plan development, and player reward program design for the gaming, hospitality, and tourism industries. The principals and associates of GMA have hands-on experience in nearly all aspects of the gaming industry including domestic and international operations, project development, marketing expertise, and detailed market analysis.

Global Market Advisors is a (Nevada) Limited Liability Corporation with offices in Las Vegas, Denver, Singapore, Tirana, and London.

### BIOGRAPHIES OF KEY MEMBERS OF THE CONSULTING TEAM

#### STEVEN M. GALLAWAY

Steve Gallaway is Managing Partner at Global Market Advisors. His areas of expertise include gaming market assessments, hotel and casino feasibility studies, operational reviews and marketing analysis.

Mr. Gallaway has spent his entire career in the gaming and hospitality industry, starting as a valet attendant and eventually rising to chief operating officer and managing partner of a casino in Colorado. Prior to forming GMA, he served as senior vice president of a hospitality consulting firm where he honed his craft in the fields of gaming market assessments and feasibility analysis. During the span of his career, Steve developed hands-on experience in operations management, organizational development, project development, business development, process improvement, contract negotiations, employee development, and customer service training.

In 2005, Mr. Gallaway formed Gaming Market Advisors. In 2014, the firm was rebranded as Global Market Advisors, reflecting the company's evolution as an international gaming, tourism and hospitality consulting firm.

Mr. Gallaway has completed over 500 feasibility studies, with a strong focus on international gaming operations and integrated resort development. Mr. Gallaway has worked on more than 1,000 projects in Asia, Western and Eastern Europe, the Caribbean, Central America, Canada, and Australia. His knowledge and understanding of emerging markets, particularly those in Asia, has led him to advise institutional investors on new market opportunities in that region, as well as an



advisor on established markets. Today, Steve’s clients include most public gaming companies, investment banks, private developers and government institutions.

Mr. Gallaway is a visiting lecturer at the University of Nevada Reno’s School of Continuing Education where he teaches a class on casino feasibility analysis and marketing measurement. He is a periodic contributor to Global Gaming Business Magazine and Indian Gaming Magazine, and has spoken at G2E Las Vegas and the Asian Gaming Congress.

Mr. Gallaway graduated from Boston College with a B.A. in Economics.

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KIT L. SZYBALA

Kit L. Szybala is a Partner and the Executive Director of Operations at GMA. Mr. Szybala oversees the output and quality of GMA’s feasibility studies, due diligence assignments, strategic planning assessments, and market assessments.

While at GMA, Kit has created over 250 robust financial models in various markets globally. As a part of completing these financial models, he has evaluated over 300 casinos and integrated resorts. Mr. Szybala has written a multitude of extensive, analytical reports, including feasibility studies, impact and cannibalization studies, gaming market assessments, hotel market assessments, non-gaming amenity analyses, and strategic planning assessments.

Kit has in-depth experience in various markets with broad knowledge of markets in the United States, Canada, India, Japan, and Australia. Recently, he completed a white paper entitled “Gaming in India: An Evaluation of the Market’s Potential” and assisted in the completion of the white paper entitled “Japan Integrated Resorts.”

Mr. Szybala is a visiting lecturer on casino feasibility analysis at the University of Nevada, Reno’s School of Continuing Education. He is a periodic contributor to Global Gaming Business (GGB) Magazine and Asia Gaming Brief and is often referenced for market insights in gaming industry articles. Kit frequently participates on panels and presents at industry conferences, seminars, and events, including ICE Totally Gaming and Sports Betting and Gaming India. Kit was appointed to the 2018-2019 Class of the Emerging Leaders of Gaming 40 Under 40, a program that recognizes gaming industry professionals under the age of 40 who are making significant impacts on the industry.

He began his career in hospitality working with Vail Resorts as a member of the Vail Resorts College Program. This program gave him valuable insight into hospitality management and operations by giving him various opportunities to meet with chief members of resort management. It also afforded him the opportunity to work in several different capacities for the corporation, giving him the opportunity to understand the intricacies of resort operations.



Kit graduated from Southern Methodist University as a Hunt Leadership Scholar with a B.B.A. in Finance, B.A. in International Studies – European Concentration, and minor in History.





# ***APPENDIX P***

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***TRAFFIC TECHNICAL MEMORANDUM: COMPARISON OF 2019  
TRAFFIC IMPACT ANALYSIS VOLUMES TO 2023 TRAFFIC  
VOLUMES***

# TECHNICAL MEMORANDUM

## DRAFT – YEARS 2019 AND 2023 TRAFFIC VOLUME COMPARISON

**Date:** May 4, 2023

**To:** Ryan Sawyer, AICP and Bibiana Sparks, Acorn Environmental

**From:** Angela Rogge, PE and Majaël Cantu, EIT, David Evans and Associates, Inc.

**Project:** Coquille Indian Tribe Fee-to-Trust and Gaming Facility Project

**Subject:** Comparison of 2019 Traffic Impact Analysis Volumes to 2023 Traffic Volumes

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This memorandum presents a comparison of existing design hour volumes from the 2019 Traffic Impact Analysis (TIA) to 2023 design hour volumes developed from new traffic counts collected in 2023. The analysis found that traffic volume trends have remained consistent, and the conclusions of the original 2019 TIA are still applicable.

## 1 BACKGROUND

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In 2019, a TIA was prepared to evaluate the traffic analysis and potential impacts of two gaming facility alternatives near the southern edge of the City of Medford. Comments received in 2023 highlighted public concern that the traffic volumes used for the TIA were no longer applicable due to recent changes in the project vicinity (e.g., COVID-19 and the Almeda Fire). To respond to this concern, the project team collected new traffic counts to compare to the 2019 traffic counts.

## 2 METHODOLOGY

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The project team collected new traffic counts on April 11, 2023, for the same intersections collected for the 2019 TIA:

- |  |   |
|--|---|
| 1. Barnett Rd at Highland Dr                                   | 10. Cherry Ln at N Phoenix Rd                                   |
| 2. Interchange 27 (Single Point Urban Interchange)             | 11. Barnett Rd at N Phoenix Rd                                  |
| 3. Garfield St at Center Dr                                    | 12. Juanipero Way at N Phoenix Rd                               |
| 4. S Riverside Ave at E Barnett Rd                             | 13. Project Driveway (Arrowhead Ranch Driveway) at N Phoenix Rd |
| 5. Riverside Ave at E Stewart St                               | 14. Interchange 24 (Fern Valley) Northbound Ramp Terminal       |
| 6. Garfield St at OR 99  | 15. Interchange 24 (Fern Valley) Southbound Ramp Terminal       |
| 7. Charlotte Anne at OR 99                                     |   |
| 8. Human Bean Driveway at OR 99 (combined with intersection 9) |   |
| 9. Roxy Lanes Driveway at OR 99 (combined with intersection 9) |   |

Analysis of traffic conditions typically uses design hourly volumes (DHVs), also known as 30th highest hour volumes. By using DHVs in traffic operations analysis, results are valid for all but a few hours of the year. Since the counts collected for the 2019 TIA were a different month than the 2023 traffic counts, all traffic volumes in this memorandum represent DHVs per the procedures outlined in ODOT’s *Analysis Procedures Manual Volume 2* to account for seasonal changes in traffic volumes.

### 3 COMPARISON OF TRAFFIC VOLUMES

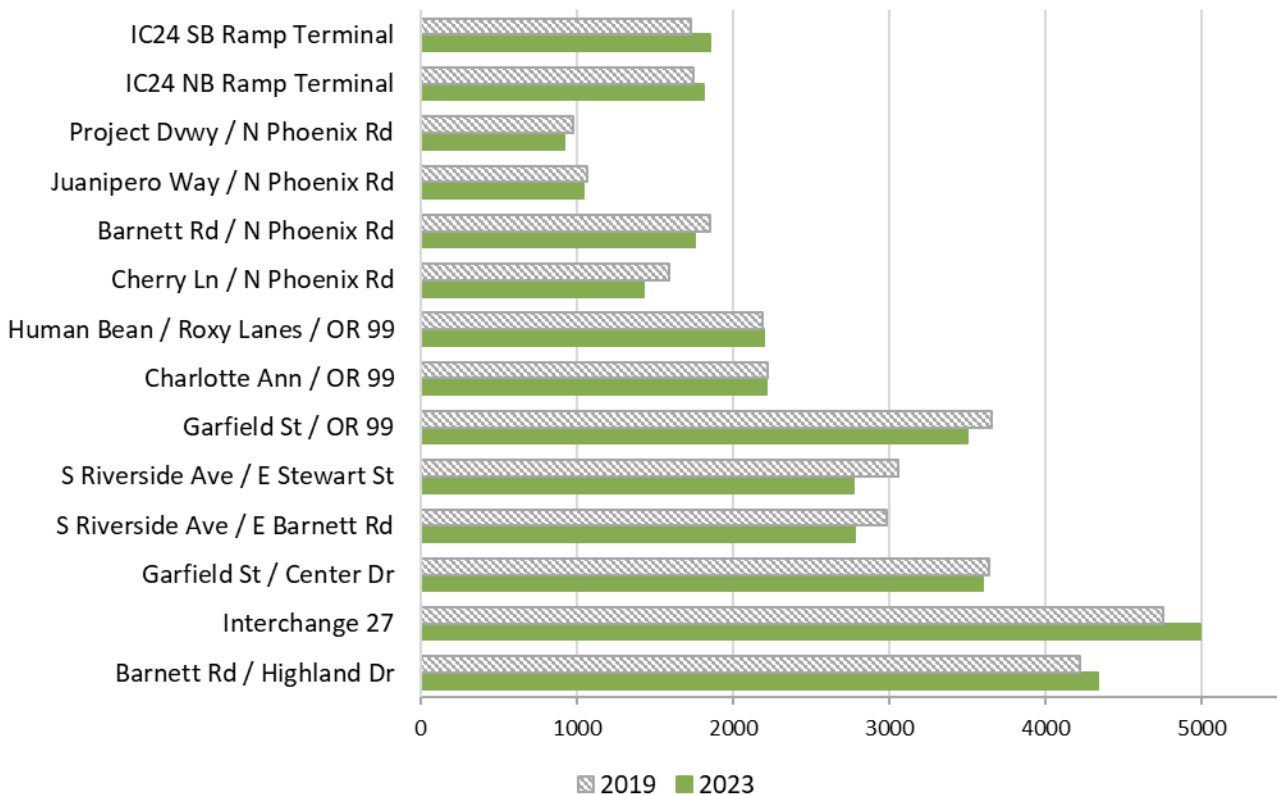
The comparison of traffic volumes includes a review of the total entering volumes at each study intersection as well as a review of the turning movement volume distribution.

#### 3.1 TOTAL ENTERING VOLUMES

A review of the 2019 and 2023 total entering volumes at each study intersection indicates that the overall study area has less traffic traveling through intersections in the design hour in 2023 than in 2019. As shown in Figure 1, five of the 14 intersections analyzed saw a slight increase in total entering volumes in 2023. The remaining nine intersections experience less volume in 2023 than 2019, indicating that traffic volumes may not have fully rebounded from their pre-pandemic levels.

Table 1 summarizes the percent change in total entering volumes from 2019 to 2023. At the intersection level, the absolute percent difference is less than 10%. None of the intersections saw a percent change greater than +/- 10% and the overall percent change of the study area intersections was -1%.

FIGURE 1. DESIGN HOUR TOTAL ENTERING VOLUME AT STUDY INTERSECTIONS (2019 – 2023)



Source: David Evans and Associates, Inc. 2019 and 2023 Design Hour Volumes

TABLE 1. PERCENT CHANGE OF DESIGN HOUR TOTAL ENTERING VOLUME (2019 – 2023)

INTERSECTION	2019 DHV TEV	2023 DHV TEV	DIFFERENCE	PERCENT CHANGE
Barnett Rd / Highland Dr	4222	4340	118	3%
Interchange 27	4751	4991	240	5%
Garfield St / Center Dr	3640	3601	-39	-1%
S Riverside Ave / E Barnett Rd	2982	2777	-205	-7%
S Riverside Ave / E Stewart St	3063	2773	-289	-9%
Garfield St / OR 99	3655	3505	-150	-4%
Charlotte Ann / OR 99	2223	2218	-5	0%
Human Bean / Roxy Lanes / OR 99	2192	2199	7	0%
Cherry Ln / N Phoenix Rd	1595	1431	-164	-10%
Barnett Rd / N Phoenix Rd	1854	1753	-101	-5%
Juanipero Way / N Phoenix Rd	1066	1048	-18	-2%
Project Dvwy / N Phoenix Rd	976	922	-54	-6%
IC24 NB Ramp Terminal	1749	1810	61	3%
IC24 SB Ramp Terminal	1728	1859	131	8%
<b>Total</b>	<b>35695</b>	<b>35227</b>	<b>-469</b>	<b>-1%</b>

Source: David Evans and Associates, Inc. 2019 and 2023 Design Hour Volumes

### 3.2 TURNING MOVEMENT VOLUME DISTRIBUTION

To understand whether there were significant changes in traffic patterns between 2019 and 2023, the project team compared the ratio of the intersection turning movement volumes to the overall total entering volumes at that intersection.

Table 2 below provides a sample of this analysis performed at the intersection of Garfield Street at Center Street. Attachment B includes detailed analysis results for the remaining study intersections. The results of this intersection indicate no significant shifts in travel movements between 2019 and 2023.

TABLE 2. TURNING MOVEMENT PERCENT OF TOTAL ENTERING VOLUME (2019 – 2023)

INTERSECTION	MOVEMENT	2019 % OF TEV	2023 % OF TEV	DIFFERENCE
Garfield St / Center Dr	EB L	5%	4%	0%
	EB T	25%	23%	-2%
	EB R	1%	2%	2%
	WB L	2%	2%	0%
	WB T	26%	26%	0%
	WB R	15%	14%	-1%
	NB L	1%	1%	1%
	NB T	0%	1%	0%
	NB R	1%	3%	2%
	SB L	14%	15%	0%
	SB T	1%	1%	1%
	SB R	9%	7%	-2%

Source: David Evans and Associates, Inc. 2019 and 2023 Design Hour Volumes

EB = Eastbound; WB = Westbound; NB = Northbound; SB = Southbound; L = Left; T = Through; R = Right

As shown in Attachment B, the remaining study intersections did not experience a significant shift in traffic patterns either, with majority of movements fluctuating less than 2% of the overall total entering volume

between 2019 and 2023. The greatest change in travel patterns occurred along North Phoenix Road in the northbound direction; northbound through movements in 2023 are between four and eight percent less of the total entering volume when compared to 2019. This does not constitute a meaningful change in overall travel patterns as the other movements did not see comparable shifts in overall utilization.

## 4 CONCLUSIONS AND RECOMMENDATIONS

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The results of the comparison of 2019 and 2023 traffic volumes indicate no meaningful change in either traffic volumes or travel patterns. Since the 2023 traffic volumes are slightly lower than the 2019 volumes at most study intersections, and we expected some growth between 2019 and 2023, we would not expect a revised TIA to identify additional impacts or mitigations. Therefore, we do not recommend revising the TIA at this time. The findings of the 2019 TIA are still applicable.

**ATTACHMENTS (PDF DOCUMENT INCLUDES ATTACHMENTS)**

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Attachment A: 2023 Seasonal Adjustment Calculations

Attachment B: 2019 – 2023 Turning Movement Volume Comparisons

## ATTACHMENT A

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### 2023 Seasonal Adjustment Calculations

**ATR on OR 99 + Commuter Factor**  
Used for seasonal adjustment of OR 99

ATR 15-014: Talent (0.33m NW of Talent Ave)* 9048			
	April	AWT	% of ADT
	2021	8205	114
	2019	9308	111
	2018	10054	120
	2017	10764	115
	2016	10989	112
	Average=	9864	114
Peak Mo.		AWT	% of ADT
June	2021	8327	116
June	2019	9537	114
April	2018	10054	120
June	2017	10974	117
May	2016	11320	116
	Average=	11147	116
April Seasonal Factor =		1.130	1.02

**OR 99 FACTOR: 1.08**

ATR 15-014 and seasonal trends for summer/commuter

**ATR Characteristic Table + Seasonal Trend**  
Used for developing adjustment factors for I-5 Ramp Terminals

15-001: Gold Hill				15-019: Medford Viaduct			
	April	AWT	% of ADT		April	AWT	% of ADT
	2021				2021	61583	113
	2019	42624	104		2019	58990	107
	2018	41715	103		2018	58036	107
	2017	41108	103		2017	57302	108
	2016	38907	101		2016	54908	105
	Average=	41089	103		Average=	58164	107
Peak Mo.		AWT	% of ADT	Peak Mo.		AWT	% of ADT
July	2021	51324	126	July	2021	65515	120
July	2019	47383	116	June	2019	63713	116
July	2018	46662	115	June	2018	62655	116
August	2017	47421	119	August	2017	61702	116
July	2016	44516	115	June	2016	59650	114
	Average=	47461	117		Average=	62647	116
April Seasonal Factor =		1.155	1.13	April Seasonal Factor =		1.077	1.08

**Ramps FACTOR: 1.08**

ATRs 15-001, 15-019 and seasonal trends for Interstate Urban and commuter

SEASONAL TREND TABLE (Updated: 6/26/19)											Seasonal Trend Peak Period
TREND	15-Jan	1-Feb	15-Feb	1-Mar	15-Mar	1-Apr	15-Apr	1-May	15-May	1-Jun	
INTERSTATE UR	1.1592	1.1547	1.1502	1.0841	1.0180	0.9963	0.9746	0.9815	0.9885	0.9625	0.9056
INTERSTATE NO	1.3303	1.3475	1.3647	1.2141	1.0634	1.0236	0.9838	0.9687	0.9536	0.9130	0.8084
COMMUTER	1.1479	1.1341	1.1204	1.0651	1.0099	0.9836	0.9574	0.9663	0.9752	0.9544	0.9336
COASTAL DESTI	1.2243	1.2052	1.1862	1.1005	1.0149	0.9887	0.9625	0.9672	0.9720	0.9181	0.8130
COASTAL DESTI	1.3694	1.3728	1.3763	1.2315	1.0867	1.0419	0.9972	0.9581	0.9191	0.8590	0.7225
AGRICULTURE	1.4915	1.4980	1.5046	1.3605	1.2164	1.1152	1.0141	0.9356	0.8572	0.8266	0.7960
RECREATIONAL	1.5326	1.6112	1.6898	1.4761	1.2623	1.1772	1.0921	0.9752	0.8582	0.7947	0.7082
RECREATIONAL	0.8394	0.9654	1.0914	1.0422	0.9930	1.0357	1.0785	1.0310	0.9834	0.9358	0.6767
RECREATIONAL	0.5112	0.5988	0.6864	0.7354	0.7845	0.9435	1.1025	1.2219	1.3414	1.2723	0.5086
SUMMER	1.2914	1.2738	1.2563	1.1530	1.0496	1.0061	0.9625	0.9423	0.9220	0.8906	0.8279
SUMMER < 2500	1.3194	1.3010	1.2826	1.1889	1.0952	1.0262	0.9573	0.9119	0.8664	0.8549	0.8434

\*Seasonal Trend Table factors are based on previous year ATR data. The table is updated yearly.

\*Grey shading indicates months where seasonal factor is greater than or less than 30%

	AVERAGE Interpolated			Peak Period	April
	1-Apr	11-Apr	15-Apr		
Interstate Urbanized	0.9963	0.9808	0.9746	0.9056	1.08
Commuter	0.9836	0.9649	0.9574	0.9336	1.03
Summer	1.0061	0.9750	0.9625	0.8279	1.18

Seasonal Adjustment Factors - AVERAGE		April
Interstate Urbanized		1.08
Commuter/Summer Trend Average		1.11
Commuter Trend		1.03



## ATTACHMENT B

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2019 – 2023 Turning Movement Volume Comparisons

Gaming Facility  
ACRN0000001  
PM Turning Movement Volumes

Intersection	Movement	2019	2023	2019-2023	2019	2023	2019-2023
		Design Hour Adjusted 1-Hr Volume PM Peak	Design Hour Adjusted 1-Hr Volume PM Peak	Delta Design Hour	Movement Percentage of TEV	Movement Percentage of TEV	Delta Percentage of TEV
Barnett Rd / Highland Dr	EBL	199	173	-26	5%	4%	-0.7%
	EBT	406	389	-17	10%	9%	-0.7%
	EBR	231	238	7	5%	5%	0.0%
	WBL	765	730	-35	18%	17%	-1.3%
	WBT	644	698	54	15%	16%	0.8%
	WBR	68	86	18	2%	2%	0.4%
	NBL	209	199	-10	5%	5%	-0.4%
	NBT	420	465	45	10%	11%	0.8%
	NBR	537	549	12	13%	13%	-0.1%
	SBL	43	47	4	1%	1%	0.1%
	SBT	500	534	34	12%	12%	0.5%
	SBR	200	232	32	5%	5%	0.6%
	<b>TEV</b>	<b>4222</b>	<b>4340</b>	<b>118</b>			<b>0.0%</b>
Interchange 27	EBL	590	632	42	12%	13%	0.2%
	EBT	446	482	36	9%	10%	0.3%
	EBR	449	427	-22	9%	9%	-0.9%
	WBL	327	315	-12	7%	6%	-0.6%
	WBT	548	503	-45	12%	10%	-1.5%
	WBR	645	755	110	14%	15%	1.6%
	NBL	403	342	-61	8%	7%	-1.6%
	NBT	0	0	0	0%	0%	0.0%
	NBR	343	354	12	7%	7%	-0.1%
	SBL	383	436	54	8%	9%	0.7%
	SBT	0	0	0	0%	0%	0.0%
	SBR	618	744	126	13%	15%	1.9%
	<b>TEV</b>	<b>4751</b>	<b>4991</b>	<b>240</b>			<b>0.0%</b>
Garfield St / Center Dr	EBL	171	154	-17	5%	4%	-0.4%
	EBT	897	822	-75	25%	23%	-1.8%
	EBR	28	86	58	1%	2%	1.6%
	WBL	70	80	10	2%	2%	0.3%
	WBT	945	940	-5	26%	26%	0.1%
	WBR	551	497	-54	15%	14%	-1.3%
	NBL	25	51	26	1%	1%	0.7%
	NBT	15	24	9	0%	1%	0.3%
	NBR	53	111	58	1%	3%	1.6%
	SBL	527	529	2	14%	15%	0.2%
	SBT	26	44	18	1%	1%	0.5%
	SBR	332	263	-69	9%	7%	-1.8%
	<b>TEV</b>	<b>3640</b>	<b>3601</b>	<b>-39</b>			<b>0.0%</b>
S Riverside Ave / E Barnett Rd	EBL	102	84	-18	3%	3%	-0.4%
	EBT	182	144	-38	6%	5%	-0.9%
	EBR	104	74	-30	3%	3%	-0.8%
	WBL	134	116	-18	4%	4%	-0.3%
	WBT	227	204	-23	8%	7%	-0.3%
	WBR	326	347	21	11%	12%	1.6%
	NBL	61	54	-7	2%	2%	-0.1%
	NBT	622	638	16	21%	23%	2.1%
	NBR	65	53	-12	2%	2%	-0.3%
	SBL	262	241	-21	9%	9%	-0.1%
	SBT	839	786	-53	28%	28%	0.2%
	SBR	57	35	-22	2%	1%	-0.7%
	<b>TEV</b>	<b>2982</b>	<b>2777</b>	<b>-205</b>			<b>0.0%</b>
S Riverside Ave / E Stewart St	EBL	137	153	16	4%	6%	1.0%
	EBT	312	297	-15	10%	11%	0.5%
	EBR	214	195	-19	7%	7%	0.0%
	WBL	60	40	-20	2%	1%	-0.5%
	WBT	342	336	-6	11%	12%	0.9%
	WBR	44	41	-3	1%	1%	0.0%
	NBL	313	258	-55	10%	9%	-0.9%
	NBT	578	505	-73	19%	18%	-0.7%
	NBR	68	40	-28	2%	1%	-0.8%
	SBL	94	110	16	3%	4%	0.9%
	SBT	740	635	-104	24%	23%	-1.2%
	SBR	161	163	2	5%	6%	0.6%
	<b>TEV</b>	<b>3063</b>	<b>2773</b>	<b>-289</b>			<b>0.0%</b>
Garfield St / OR 99	EBL	56	52	-4	2%	1%	0.0%
	EBT	301	295	-6	8%	8%	0.2%
	EBR	49	82	33	1%	2%	1.0%
	WBL	550	563	13	15%	16%	1.0%
	WBT	488	465	-23	13%	13%	-0.1%
	WBR	227	186	-41	6%	5%	-0.9%
	NBL	65	76	11	2%	2%	0.4%
	NBT	511	504	-7	14%	14%	0.4%
	NBR	479	487	8	13%	14%	0.8%
	SBL	329	262	-67	9%	7%	-1.5%
	SBT	567	496	-71	16%	14%	-1.4%
	SBR	33	37	4	1%	1%	0.2%
	<b>TEV</b>	<b>3655</b>	<b>3505</b>	<b>-150</b>			<b>0.0%</b>
Charlotte Ann / OR 99	EBL	13	3	-10	1%	0%	-0.4%
	EBT	0	0	0	0%	0%	0.0%
	EBR	17	8	-9	1%	0%	-0.4%
	WBL	5	2	-3	0%	0%	-0.1%
	WBT	0	0	0	0%	0%	0.0%
	WBR	9	10	1	0%	0%	0.0%
	NBL	6	3	-3	0%	0%	-0.1%
	NBT	1026	1008	-18	46%	45%	-0.7%
	NBR	4	6	2	0%	0%	0.1%
	SBL	7	6	-1	0%	0%	0.0%
	SBT	1116	1162	46	50%	52%	2.2%
	SBR	20	10	-10	1%	0%	-0.4%
	<b>TEV</b>	<b>2223</b>	<b>2218</b>	<b>-5</b>			<b>0.0%</b>
Human Bean / Roxy Lanes / OR 99	EBL	0	0	0	0%	0%	0.0%
	EBT	0	0	0	0%	0%	0.0%
	EBR	0	0	0	0%	0%	0.0%
	WBL	4	7	3	0%	0%	0.1%
	WBT	0	0	0	0%	0%	0.0%

Gaming Facility  
ACRN0000001  
PM Turning Movement Volumes

Intersection	Movement	2019	2023	2019-2023	2019	2023	2019-2023
		Design Hour Adjusted 1-Hr Volume PM Peak	Design Hour Adjusted 1-Hr Volume PM Peak	Delta Design Hour	Movement Percentage of TEV	Movement Percentage of TEV	Delta Percentage of TEV
	WBR	8	26	18	0%	1%	0.8%
	NBL	0	0	0	0%	0%	0.0%
	NBT	1035	986	-49	47%	45%	-2.4%
	NBR	0	6	6	0%	0%	0.3%
	SBL	1	25	24	0%	1%	1.1%
	SBT	1143	1149	6	52%	52%	0.1%
	SBR	0	0	0	0%	0%	0.0%
	<b>TEV</b>	<b>2192</b>	<b>2199</b>	<b>7</b>			<b>0.0%</b>
Cherry Ln / N Phoenix Rd	EBL	0	2	2	0%	0%	0.1%
	EBT	0	1	1	0%	0%	0.1%
	EBR	2	5	3	0%	0%	0.2%
	WBL	125	137	12	8%	10%	1.7%
	WBT	1	1	0	0%	0%	0.0%
	WBR	47	46	-1	3%	3%	0.3%
	NBL	3	5	2	0%	0%	0.2%
	NBT	653	525	-128	41%	37%	-4.3%
	NBR	204	214	10	13%	15%	2.2%
	SBL	41	45	4	3%	3%	0.6%
	SBT	516	448	-68	32%	31%	-1.0%
	SBR	3	2	-1	0%	0%	0.0%
	<b>TEV</b>	<b>1595</b>	<b>1431</b>	<b>-164</b>			<b>0.0%</b>
Barnett Rd / N Phoenix Rd	EBL	509	472	-37	27%	27%	-0.5%
	EBT	19	27	8	1%	2%	0.5%
	EBR	171	164	-7	9%	9%	0.1%
	WBL	11	16	5	1%	1%	0.3%
	WBT	14	19	5	1%	1%	0.3%
	WBR	20	21	1	1%	1%	0.1%
	NBL	85	76	-9	5%	4%	-0.2%
	NBT	416	378	-38	22%	22%	-0.9%
	NBR	18	13	-5	1%	1%	-0.2%
	SBL	14	16	2	1%	1%	0.2%
	SBT	363	362	-1	20%	21%	1.1%
	SBR	214	189	-25	12%	11%	-0.8%
	<b>TEV</b>	<b>1854</b>	<b>1753</b>	<b>-101</b>			<b>0.0%</b>
Juanipero Way / N Phoenix Rd	EBL	25	29	4	2%	3%	0.4%
	EBT	0	2	2	0%	0%	0.2%
	EBR	119	119	0	11%	11%	0.2%
	WBL	2	3	1	0%	0%	0.1%
	WBT	0	4	4	0%	0%	0.4%
	WBR	0	26	26	0%	2%	2.5%
	NBL	73	79	6	7%	8%	0.7%
	NBT	428	335	-93	40%	32%	-8.2%
	NBR	5	7	2	0%	1%	0.2%
	SBL	8	31	23	1%	3%	2.2%
	SBT	381	383	2	36%	37%	0.8%
	SBR	25	30	5	2%	3%	0.5%
	<b>TEV</b>	<b>1066</b>	<b>1048</b>	<b>-18</b>			<b>0.0%</b>
Project Dwy / N Phoenix Rd	EBL	0	0	0	0%	0%	0.0%
	EBT	0	0	0	0%	0%	0.0%
	EBR	0	0	0	0%	0%	0.0%
	WBL	1	2	1	0%	0%	0.1%
	WBT	0	0	0	0%	0%	0.0%
	WBR	0	1	1	0%	0%	0.1%
	NBL	0	0	0	0%	0%	0.0%
	NBT	496	427	-69	51%	46%	-4.5%
	NBR	0	2	2	0%	0%	0.2%
	SBL	1	1	0	0%	0%	0.0%
	SBT	478	489	11	49%	53%	4.1%
	SBR	0	0	0	0%	0%	0.0%
	<b>TEV</b>	<b>976</b>	<b>922</b>	<b>-54</b>			<b>0.0%</b>
IC24 NB Ramp Terminal	EBL	237	251	14	14%	14%	0.3%
	EBT	342	377	35	20%	21%	1.3%
	EBR	0	0	0	0%	0%	0.0%
	WBL	0	0	0	0%	0%	0.0%
	WBT	501	557	56	29%	31%	2.1%
	WBR	157	148	-9	9%	8%	-0.8%
	NBL	194	185	-9	11%	10%	-0.9%
	NBT	0	0	0	0%	0%	0.0%
	NBR	318	293	-26	18%	16%	-2.0%
	SBL	0	0	0	0%	0%	0.0%
	SBT	0	0	0	0%	0%	0.0%
	SBR	0	0	0	0%	0%	0.0%
	<b>TEV</b>	<b>1749</b>	<b>1810</b>	<b>61</b>			<b>0.0%</b>
IC24 SB Ramp Terminal	EBL	0	0	0	0%	0%	0.0%
	EBT	443	455	12	26%	24%	-1.2%
	EBR	145	136	-9	8%	7%	-1.1%
	WBL	246	311	65	14%	17%	2.5%
	WBT	450	446	-4	26%	24%	-2.0%
	WBR	0	0	0	0%	0%	0.0%
	NBL	0	0	0	0%	0%	0.0%
	NBT	0	0	0	0%	0%	0.0%
	NBR	0	0	0	0%	0%	0.0%
	SBL	134	164	31	8%	9%	1.1%
	SBT	0	0	0	0%	0%	0.0%
	SBR	311	347	36	18%	19%	0.6%
	<b>TEV</b>	<b>1728</b>	<b>1859</b>	<b>131</b>			<b>0.0%</b>

# ***APPENDIX Q***

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***UPDATED USFWS SPECIES LIST AND TABLE OF REGIONALLY  
OCCURRING SENSITIVE SPECIES AND THEIR LIKELIHOOD OF  
OCCURRENCE***

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*Listed Species and Sensitive Species Table*

LIST TABLE OF LISTED SPECIES AND SPECIAL STATUS SENSITIVE SPECIES THAT HAVE THE POTENTIAL TO OCCUR IN THE VICINITY OF ALTERNATIVE SITES

SCIENTIFIC NAME COMMON NAME	FEDERAL/ STATE STATUS/ ORBIC LIST	DISTRIBUTION (FROM NATURESERVE 2023)	HABITAT REQUIREMENTS (FROM NATURESERVE 2023)	PERIOD OF IDENTIFICATION	NEAR WHICH SITE?	POTENTIAL TO OCCUR ON-SITE
<b>BIRDS</b>						
<i>Strix occidentalis caurina</i> Northern spotted owl	FT/ST/1	Geographic range extends from British Columbia to northwestern California south to San Francisco. The breeding range includes the Cascade Range, North Coast Ranges, and the Sierra Nevada. Some breeding populations also occur in the Transverse Ranges and Peninsular Ranges.	Resides in mixed conifer, redwood, and Douglas-fir habitats, from sea level up to approximately 2,300 meters. Appear to prefer old-growth forests, but use of managed (previously logged) lands is not uncommon. Owls do not appear to use logged habitat until approximately 60 years after logging unless some larger trees or snags remain after logging. Nesting habitat is a tree or snag cavity, or the broken top of a large tree. Requires a nearby, permanent source of water. Foraging habitat consists of any forest habitat with sufficient prey (e.g. flying squirrels, mice, and voles).	Year-round	<u>Mill Casino and Medford/Phoenix Site</u>	<b>No.</b> Suitable habitat for this species does not occur within any of the project sites.
<i>Pelecanus occidentalis</i> California brown pelican	--/SE/2	Nesting colonies of brown pelicans on the Pacific coast are located from the Channel Islands in the Southern California Bight to the islands off Nayarit, Mexico. Prior to 1959, intermittent nesting was observed as far north as Point Lobos in Monterey County, California. Since that time, the breeding distribution of the brown pelican in California has been restricted to Anacapa Island in the Channel Islands off southern California. More recently, the expanding population of brown pelicans have established other smaller breeding sites on this island group. Brown pelicans have not nested north of the Channel Islands since the subspecies' major	Brown pelicans nest in colonies on offshore islands that are free of mammalian predators and human disturbance, are of sufficient elevation to prevent flooding of nests, and are associated with an adequate and consistent food supply. Brown pelicans roost communally, generally in areas that are near adequate food supplies, have some type of physical barrier to predation and disturbance, and provide some protection from environmental stresses such as wind and high surf. The brown pelican uses breakwaters, jetties, sand spits and offshore sand bars extensively as daily loafing and nocturnal roost areas. Brown pelican numbers in a given area may vary greatly with the season. The brown pelican is rarely found away from	Year-round	Mill Casino	<b>Yes.</b> The aquatic habitat adjacent to the Mill Casino site is appropriate for the California Brown Pelican

SCIENTIFIC NAME COMMON NAME	FEDERAL/ STATE STATUS/ ORBIC LIST	DISTRIBUTION (FROM NATURESERVE 2023)	HABITAT REQUIREMENTS (FROM NATURESERVE 2023)	PERIOD OF IDENTIFICATION	NEAR WHICH SITE?	POTENTIAL TO OCCUR ON-SITE
		population decline in the late 1950s and early 1960s. Non-breeding pelicans, including juveniles and non-breeding adults, disperse during the late spring, summer and early fall months as far north as southern British Columbia, Canada, and south into southern Mexico and Central America.	salt water and does not normally venture more than 20 miles out to sea.			
<i>Charadrius alexandrinus nivosus</i> Western snowy plover	FT/ST/--	The Pacific coast breeding population of the western snowy plover currently extends from Damon Point, Washington, to Bahia Magdalena, Baja California, Mexico. The snowy plover winters mainly in coastal areas from southern Washington to Central America.	Snowy plovers (Pacific coast population) breed primarily above the high tide line on coastal beaches, sand spits, dune-backed beaches, sparsely vegetated dunes, beaches at creek and river mouths, and salt pans at lagoons and estuaries. In winter, snowy plovers are found on many of the beaches used for nesting as well as on beaches where they do not nest, in manmade salt ponds, and on estuarine sand and mud flats.	Year-round	Mill Casino	<b>No.</b> Suitable habitat is not present on-site.
<i>Brachyramphus marmoratus</i> Marbled murrelet	FT/ST/--	Found from the western Aleutian Islands through coastal southern and southeastern Alaska, British Columbia, Washington, Oregon, and northern central California (NatureServe, 2014).	Nests from May through early August in Washington. Outside of the breeding season, found in coastal areas, mainly in salt water within 2 km of shore, including bays and sounds. Nests in trees in terrestrial habitat including alpine, conifer forest, and Tundra (NatureServe, 2014).	Year-round	Mill Casino	<b>No.</b> The project site does not provide habitat for this species. The project site does not occur within designated Critical Habitat for this species.
<i>Agelaius tricolor</i> <u>Tricolored blackbird</u>	--/--/1	<u>Breeding range extends from central southern Oregon south through interior California, and along the coast from central California south to northwestern Baja California. Abundance is highest in central and central northern California.</u>	<u>Breeding habitat is freshwater marshes. Nests are in vegetation of marshes or thickets, sometimes on the ground; in recent decades much nesting has shifted to non-native vegetation (e.g., Himalayan blackberry). In migration and winter these blackbirds inhabit open cultivated lands and pastures as well as marshes</u>	<u>Year-round</u>	<u>Medford/Phoenix Site</u>	<b>No/Yes.</b> <u>The Medford project site does not provide habitat for this species. The Phoenix site has habitat where the marsh occurs.</u>

SCIENTIFIC NAME COMMON NAME	FEDERAL/ STATE STATUS/ ORBIC LIST	DISTRIBUTION (FROM NATURESERVE 2023)	HABITAT REQUIREMENTS (FROM NATURESERVE 2023)	PERIOD OF IDENTIFICATION	NEAR WHICH SITE?	POTENTIAL TO OCCUR ON-SITE
<u><i>Ammodramus savannarum</i></u> Grasshopper sparrow	--/--/2	<u>Large range, extending from southern Canada to northern South America; significant population declines in North America</u>	<u>Dense grasslands on rolling hills, lowland plains, in valleys &amp; on hillsides on lower mountain slopes....favors native grasslands with a mix of grasses, forbs &amp; scattered shrubs. loosely colonial when nesting.</u>	<u>Year-round</u>	<u>Medford/ Phoenix Site</u>	<u>No/Yes. The Medford project site does not provide habitat for this species. The Phoenix site has habitat where grassland occurs.</u>
<u><i>Aquila chrysaetos</i></u> Golden eagle	<u>Eagle/--/3</u>	<u>Northern hemisphere</u>	<u>Generally inhabit open and semi-open country such as prairies, sagebrush, tundra, savannah or sparse woodland, in areas with sufficient mammalian prey base and near suitable nesting sites. Nests are most often on rock ledges of cliffs but sometimes in large trees</u>	<u>Year-round</u>	<u>Medford/ Phoenix Site</u>	<u>No/Yes. The Medford project site does not provide habitat for this species. The Phoenix site has marginal habitat.</u>
<u><i>Melanerpes lewis</i></u> Lewis's woodpecker	--/--/2	<u>Western U.S. and adjacent southern Canada</u>	<u>Bbreeds in open forest and woodland with an open canopy and brushy understory....requires dead trees for nest cavities.</u>	<u>Year-round</u>	<u>Medford/ Phoenix Site</u>	<u>No/Yes. The Medford project site does not provide habitat for this species. The Phoenix site has marginal habitat.</u>
<u><i>Polioptila caerulea</i></u> Blue-gray gnatcatcher	--/--/3	<u>Northern U.S. and adjacent southern Canada</u>	<u>Deciduous forest, open woodland, second growth, scrub, brushy areas and chaparral</u>	<u>Year-round</u>	<u>Medford/ Phoenix Site</u>	<u>No/Yes. The Medford project site does not provide habitat for this species. The Phoenix site has marginal habitat.</u>
<b>PLANTS</b>						
<u><i>Lomatium cookii</i></u> Cook's Lomatium	FE/SE/1	<u>Two major population centers exist. One is located in the Illinois River Valley near Cave Junction and the other in the Rogue River Valley on the NE side of Medford. There are no known populations in between these two population centers and</u>	<u>Habitat differs between the two major population centers. In Josephine county, L. cookii is found in ephemeral wet meadow habitat, often on Brockman clay loam soils weathered from colluvial deposits of serpentine outcrops. Such meadows are often dominated by the</u>	<u>March to Mid-May</u>	<u>Medford/ Phoenix Site</u>	<u>No. Serpentine soils and vernal pools are not found on any of the proposed project sites.</u>



SCIENTIFIC NAME COMMON NAME	FEDERAL/ STATE STATUS/ ORBIC LIST	DISTRIBUTION (FROM NATURESERVE 2023)	HABITAT REQUIREMENTS (FROM NATURESERVE 2023)	PERIOD OF IDENTIFICATION	NEAR WHICH SITE?	POTENTIAL TO OCCUR ON-SITE
		due to the plant's fairly recent discovery in 1981, little is known about the historic range.	grasses <i>Danthonia californica</i> and <i>Deschampsia caespitosa</i> . In Jackson county, <i>L. cookii</i> is usually found along the edges of vernal pools in poorly drained Agate-Winlo silty-clay loam soils weathered from Rogue River alluvial deposits. Such vernal pool systems are often dominated on the mounds by the introduced grasses <i>Taeniatherum caput-medusae</i> and <i>Poa bulbosa</i> and the native grasses <i>Achnatherum lemmonii</i> and <i>Festuca roemerii</i>			
<i>Fritillaria gentneri</i> Gentner's Fritillary	FE/SE/1	Gentner's fritillary is known only from scattered localities in southwest Oregon, along the Rogue and Illinois River drainages in Josephine and Jackson counties. It is highly localized in a 48 kilometers (30 miles) radius around Jacksonville, Oregon, on land managed by the Bureau of Land Management, USDA Forest Service, Department of Transportation, Southern Oregon University, City of Jacksonville, and private landowners.	Gentner's fritillary typically grows in or on the edge of open woodlands at elevations from 180 to 1,360 meters (60 to 450 feet) with Oregon white oak ( <i>Quercus garryana</i> ) and Pacific madrone ( <i>Arbutus menziesii</i> ) as the most common overstory plants. Can also grow in open chaparral/grassland habitat, which is often found within or adjacent to the mixed hardwood forest type, but always where some wind or sun protection is provided by other shrubs. It does not grow on very dry sites.	April to May	Medford/ Phoenix Site	<b>No.</b> Known populations are not found at any of the project sites.
<i>Limnanthes floccosa</i> <i>ssp. grandiflora</i> Large-flowered Woolly Meadowfoam	FE/SE/1	<i>Limnanthes floccosa</i> ssp. <i>grandiflora</i> is currently, and historically, only known to exist near vernal pools in the Agate Desert region, north of Medford near White City.	<i>Limnanthes floccosa</i> ssp. <i>grandiflora</i> is found near the wet inner edges of vernal pools. This is in contrast to <i>Limnanthes floccosa</i> ssp. <i>floccosa</i> , which usually prefers the drier outer edges of the same vernal pools.	March to Mid- April	Medford/ Phoenix Site	<b>No.</b> Vernal pools are not found at any of the project sites.
<i>Limnanthes floccosa</i> <i>ssp. bellingeriana</i> Bellinger's meadow- foam	--/ST/1	<u>A narrow range in southern Oregon and adjacent California.</u>	<u>Vernal pool edges; Elevation 300--1100 m</u>	<u>March to April</u>	<u>Medford/ Phoenix Site</u>	<u><b>No.</b> Vernal pools are not found at any of the project sites.</u>
<i>Lilium occidentale</i>	FE/SE/1	Western lily is restricted within a narrow 4-mile- (6.4-kilometer-) wide	Western lily is often found near the ocean in freshwater fens and on the edges of	June to July	Mill Casino	<b>No.</b> There are no appropriate habitats

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Western Lily		band that spans about 200 miles (320 kilometers) along the Pacific coastline from Hauser, Coos County, Oregon to Loleta, Humboldt County, California. There are approximately 23 extant principle populations occurring within this limited region (as recognized by U.S. Fish and Wildlife Service), all of which are small (ranging from less than 0.1 acres to 10 acres), isolated, and densely clumped.	bogs, in coastal prairie and scrub, and in transition zones between these communities. The species also occurs in spruce forest, but plants in this habitat are stunted and do not produce flowers. It occurs at elevations ranging from just above sea level to about 120 m (400 ft). The species occurs in two distinct soil types. The first type, deep organic peat, which is saturated for most of the year, appears to be correlated with the "Oregon form" of western lily (see Plant description). The second type, mineral-based soils, which tend to be acidic, poorly drained, and exhibit either a shallow iron pan or clay pan that holds water seasonally, appears correlated with the "California form" of the species.			for this species at any of the project sites.
<i>Lomatium cookii</i> J.S. Kagan agate desert parsley	FE/SE/1	Two major population centers exist. One is located in the Illinois River Valley near Cave Junction and the other in the Rogue River Valley on the NE side of Medford. There are no known populations in between these two population centers and due to the plant's fairly recent discovery in 1981, little is known about the historic range.	In Jackson county, <i>L. cookii</i> is usually found along the edges of vernal pools in poorly drained Agate-Winlo silty-clay loam soils weathered from Rogue River alluvial deposits.	Late March to Late April	Medford/Phoenix Site	<b>No.</b> Vernal pools <u>and requisite soils</u> are not found at any of the project sites.
<i>Limnanthes pumila floccosa</i> Howell ssp. <i>Pumilapumila</i> dwarf wooly meadow-foam	SQC-/ST/1	Dwarf wooly meadow-foam is currently, and historically, only known to exist on the summits of Upper and Lower Table Rocks, north of Medford.	Dwarf wooly meadow-foam is usually found near the edges of vernal pools. However, the taxon may also be found near the edges of wet trails, roads, and small streams. The soils it inhabits are volcanic in origin.	March to Mid-April	Medford/Phoenix Site	<b>No.</b> Vernal pools / <u>volcanic soils</u> are not found at any of the project sites.
<i>Abronia umbellata</i> var. <i>breviflora</i> Pink Sandverbena	SQC-/SE/1	Historically known along beaches from Vancouver Island to northern California, pink sandverbena has significantly declined within the past	In Oregon, most populations occur on broad beaches and/or near the mouths of creeks and rivers. The species usually occurs on beaches in fine sand between	June to September	Mill Casino Site	<b>No.</b> Appropriate beach habitat does not occur on the project site.

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		<p>century. The species was thought to be extinct in the northern portion of its range, from Washington northward, until two individuals were found on Vancouver Island in 2000. However, this population has not re-established itself in subsequent years. In 2006, another two individuals were discovered in Willapa Bay in Washington. Over the past three decades, the number of populations of pink sandverbena in Oregon has declined from about 10 to about five, with the most stable of these populations occurring along the southern Oregon coast.</p>	<p>the high-tide line and the driftwood zone, in areas of active sand movement below the foredune</p>			
<p><i>Cordylanthus maritimus</i> ssp. <i>palustris</i> Pt. Reyes bird's-beak</p>	<p>SOC--/SE/1</p>	<p>Point Reyes bird's-beak occurs along the Pacific Coast from Tillamook County in Oregon, south to Santa Clara County, California. In Oregon, the species is restricted to Netarts Bay, Yaquina Bay, and Coos Bay, with the majority of known occurrences located in Coos Bay.</p>	<p>Point Reyes bird's-beak inhabits the upper end of maritime salt marshes at approximately 2.3-2.6 m (7.5-8.5 ft) above Mean Lower Low Water (MLLW, the mean height of water at the lowest of the daily low tides), in sandy substrates with soil salinity 34-55 parts per trillion (ppt), and less than 30% bare soil in summer. Point Reyes bird's-beak is a hemiparasite, forming root connections with host plants from which it derives some of its resources. Point Reyes bird's-beak is not host-specific, but standard hosts for the species probably include <i>Salicornia virginica</i>, <i>Jaumea carnosa</i>, <i>Distichlis spicata</i>, <i>Limonium californicum</i>, and <i>Deschampsia cespitosa</i>. Other associated species are <i>Cuscuta salina</i>, <i>Plantago maritima</i>, <i>Hordeum jubatum</i>, <i>Juncus gerardii</i>, <i>Castilleja ambigua</i> var. <i>ambigua</i>, <i>Spergularia macrotheca</i>, <i>S. canadensis</i>, <i>Atriplex patula</i>, <i>Carex lyngbyei</i>, and <i>Glaux</i></p>	<p>June to October</p>	<p>Mill Casino Site</p>	<p>No. Suitable habitat above MLLW with sandy substrates does not exist at the project site.</p>

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			maritima			
<i>Phacelia argentea</i> Silvery phacelia	SOC--/ST/1	Silvery phacelia occurs near the coast in Coos and Curry counties, Oregon, and neighboring Del Norte County, California, from the vicinity of Bandon, Oregon, south to the vicinity of Crescent City, California.	Silvery phacelia occurs along the coast, occupying open sand above the high tide line, open and partly stabilized sand dunes further inland, and coastal bluffs.	Late May to Early August	Mill Casino Site	<b>No.</b> Appropriate sandy habitat does not exist on the project site.
<i>Calochortus umpquaensis</i> Umpqua mariposa-lily	SOC--/SE/1	Umpqua mariposa lily is largely restricted to the Umpqua River drainage in Douglas County. Originally discovered near Glide, this species has since been reported from approximately 15 sites, several of which support thousands of individuals. Two populations south of the Douglas County grouping are located in northern Jackson and Josephine counties, and future surveys may discover additional populations.	The Umpqua mariposa lily is largely restricted to serpentine-derived soils in the Umpqua River drainage, although it has been reported from isolated areas of serpentine substrate in Josephine and Jackson counties. Preferred habitat includes the ecotone between open, grassy hillsides and Jeffrey pine woodlands, although some populations are located within forested areas.	Late May to Mid-June	Medford/Phoenix Site	<b>No.</b> Appropriate serpentine-derived soils do not exist at the project sites, and populations have not been previously recorded <u>at the project sites.</u>
<i>Microseris douglasii</i> ssp. <i>douglasii</i> Douglas' microseris	--/--/H	<u>Historically occurred in California and Oregon; may be extirpated; needs taxonomic review</u>	<u>Inland clay soils, grassland, often near vernal pools or serpentine outcrops; Elevation &lt; 1100 m</u>	<u>March to May</u>	<u>Medford/Phoenix Site</u>	<b>No.</b> <u>Vernal pools and serpentine outcrops do not exist at the project sites, and populations have not been previously recorded at the project sites.</u>
<i>Ranunculus austro-oreganus</i> Southern Oregon buttercup	--/SC/3	<u>A narrow endemic of central Jackson County, Oregon.</u>	<u>Open oak savannahs and grasslands and along the margins of rocky vernal pools at low elevations on a valley floor and margins.</u>	<u>Spring</u>	<u>Medford/Phoenix Site</u>	<b>No.</b> <u>The Medford project site does not provide habitat for this species. The Phoenix site has marginal habitat.</u>

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<u><i>Scirpus pendulus</i></u> <u>Drooping bulrush</u>	--/1	<u>Northern U.S. and adjacent southern Canada</u>	<u>This species is found often on calcareous substrates, and in marshes, moist meadows, and ditches, at elevations ranging from 0 to 600 meters</u>	<u>June to August</u>	<u>Medford/Phoenix Site</u>	<u>No. Requisite habitat does not exist on the project sites.</u>
<u><i>Eucephalus vialis</i></u> <u>Wayside aster</u>	<u>SOC--/ST/1</u>	<u>Wayside aster ranges from Linn County in western Oregon south to northern California. Most occurrences of the species are found in Oregon, although a few are reported from Del Norte and Humboldt counties in California. Wayside aster occurs within three different ecoregions: Klamath Mountains, West Cascade Range and Crest, and Willamette Valley.</u>	<u>This species occupies a range of habitat types, including dense coniferous forests, open deciduous woodlands, grassy balds, and exposed serpentine slopes. It is often found in relatively open areas in the understory of mixed coniferous/hardwood forests, along roadsides, and on open slopes and prairie balds. Most populations occur at elevations ranging from 150-450 m (490-1480 ft), although the species is found at a few high elevation sites at up to 2040 m (6680 ft). The open habitat preferred by wayside aster is thought to have been historically maintained by frequent fires. In areas where reduced canopy cover allows high levels of light to reach the ground, higher levels of reproduction and vigor have been observed among wayside aster plants compared to those growing in closed canopy conditions.</u>	<u>July to September</u>	<u>Medford/Phoenix Site</u>	<u>Yes. Appropriate Potential habitat exists at the Medford and Phoenix sites.</u>
<u><i>Astragalus gambelianus</i></u> <u>Gambel's milk-vetch</u>	<u>--/1</u>	<u>Oregon and California</u>	<u>Coastal Sage Scrub, Oak Woodland, Foothill Woodland</u>	<u>March to June</u>	<u>Medford/Phoenix Site</u>	<u>No/Yes. The Medford project site does not provide habitat for this species. The Phoenix site has marginal habitat.</u>
<b>FISH, AMPHIBIANS, AND REPTILES</b>						
<u><i>Oncorhynchus kisutch</i></u> <u>Coho salmon-Oregon Coast ESU</u>	<u>FT/SV/1</u>	<u>Colombia River in Clatsop County south to Cape Blanco in Curry County in coastal estuaries, rivers, streams, and tributaries.</u>	<u>Spawning and rearing occurs in low gradient tributary streams with pea to orange size spawning gravel. They over winter in off-channel alcoves and prefer</u>	<u>Year-round</u>	<u>Mill Casino Site</u>	<u>Yes. Appropriate habitat for some lifecycles exists</u>

<b>SCIENTIFIC NAME COMMON NAME</b>	<b>FEDERAL/ STATE STATUS/ ORBIC LIST</b>	<b>DISTRIBUTION (FROM NATURESERVE 2023)</b>	<b>HABITAT REQUIREMENTS (FROM NATURESERVE 2023)</b>	<b>PERIOD OF IDENTIFICATION</b>	<b>NEAR WHICH SITE?</b>	<b>POTENTIAL TO OCCUR ON-SITE</b>
			shaded streams with complex structure and tree lined banks.			adjacent to the mill casino site
<u><i>Oncorhynchus kisutch</i></u> Coho salmon-So. OR/No. CA Coast ESU	<u>FT/SV/2</u>	<u>Northern California and Southern Oregon</u>	<u>Riverine Habitats: medium to large rivers, in pools and riffles; requires certain gravel substrates for spawning</u>	<u>Dependent upon population</u>	<u>Medford/Phoenix Site</u>	<b>No.</b> The nearest aquatic habitat is Bear Creek. The Medford Site is about 1,400 feet from Bear Creek and the Phoenix Site is about 800 feet from Bear Creek.
<u><i>Oncorhynchus mykiss</i></u> Steelhead (Klamath Mountains Province ESU, summer and winter runs)	<u>--/1/2</u>	<u>Northern California and Southern Oregon</u>	<u>Riverine Habitats: medium to large rivers, in pools and riffles; spawns in gravelly substrate in cool, clear, well-oxygenated streams (natal stream)</u>	<u>Summer and winter</u>	<u>Medford/Phoenix Site</u>	<b>No.</b> The nearest aquatic habitat is Bear Creek. The Medford Site is about 1,400 feet from Bear Creek and the Phoenix Site is about 800 feet from Bear Creek.
<u><i>Entosphenus tridentatus</i></u> Pacific lamprey	<u>--/1</u>	<u>Northwestern USA and Canada</u>	<u>The predatory phase of the life cycle (excluding land-locked populations) occurs in the ocean, primarily near stream mouths in estuaries. Adults spawn in runs and riffles in rock-, sand-, or gravel-bottomed clear streams, in small, shallow depressions, or crude nests, at the heads of riffles</u>	<u>Dependent upon population</u>	<u>Medford/Phoenix Site</u>	<b>No.</b> The nearest aquatic habitat is Bear Creek. The Medford Site is about 1,400 feet from Bear Creek and the Phoenix Site is about 800 feet from Bear Creek.
<u><i>Acipenser medirostris</i></u> green sturgeon- southern DPS	<u>FT/--/3</u>	<u>Ensenada, Mexico north to the Bering Sea, Alaska, in marine waters, coastal estuaries, and inland rivers.</u>	<u>Spawning occurs every two to five years in deep pools in large, turbulent freshwater rivers that have a variety of sand, cobble, or bedrock substrate.</u>	<u>Year-round</u>	<u>Mill Casino Site</u>	<b>Yes.</b> Appropriate habitat for some lifecycles exists adjacent to the mill casino site

SCIENTIFIC NAME COMMON NAME	FEDERAL/ STATE STATUS/ ORBIC LIST	DISTRIBUTION (FROM NATURESERVE 2023)	HABITAT REQUIREMENTS (FROM NATURESERVE 2023)	PERIOD OF IDENTIFICATION	NEAR WHICH SITE?	POTENTIAL TO OCCUR ON-SITE
<i>Thaleichthys pacificus</i> Pacific eulachon – southern DPS	FT/--/2	San Francisco Bay Region north to the Bearing Sea in marine waters, coastal estuaries, and inland rivers.	Spawning occurs between the years of 2 and 5 late winter to early summer in cool waters that have a variety of sand, cobble, or bedrock substrate. Spawning typically occurs in waters influenced by tides.	Year-round	Mill Casino Site	<b>Yes.</b> Appropriate habitat for some lifecycles exists adjacent to the mill casino site
<i>Actinemys marmorata</i> Western pond turtle	--/--/2	Northwestern USA and Canada	Permanent and intermittent waters of rivers, creeks, small lakes and ponds, marshes, unlined irrigation canals, and reservoirs.	Year-round	Medford/ Phoenix Site	<b>No.</b> Neither site has the requisite aquatic habitat.
<i>Rana boylei</i> Foothill yellow-legged frog	--/--/2	e	Partly-shaded, shallow streams & riffles with a rocky substrate in a variety of habitats; need at least some cobble-sized substrate for egg-laying. need at least 15 weeks to attain metamorphosis.	Spring through Fall	Medford/ Phoenix Site	<b>No.</b> Neither site has the requisite stream habitat.
<b>MAMMALS</b>						
<i>Pekania pennanti</i> Fisher	FPT/SC/2	Historically, the species ranged the northern forests of Canada and the United States as well as forests in the Appalachian, Rocky and Pacific Coast Mountains. Today, fishers are found only in parts of their historic range. The West Coast population of fisher is found only in Southern Oregon, Northern California and the Southern Sierra Nevada Mountains.	Fishers inhabit upland and lowland forests, including coniferous, mixed, and deciduous forests. They occur primarily in dense coniferous or mixed forests, including early successional forest with dense overhead cover. They generally avoid areas with little forest cover or significant human disturbance. The fisher is adapted for climbing but is primarily terrestrial. It is a generalized predator whose major prey are small to medium- sized mammals and birds, and carrion.	Year-round	Medford/ Phoenix Site	<b>No.</b> Fishers require forests for feeding. No such habitats exist within the project sites.
<i>Martes caurina</i> Pacific Marten, Coastal DPS	FT/--/3	Northwestern USA and Canada	Occurs in dense deciduous, mixed, or (especially) coniferous upland and lowland forest. It also may use rocky alpine areas.	Year-round	Mill Casino	<b>No.</b> The project site does not have the requisite habitat.

SCIENTIFIC NAME COMMON NAME	FEDERAL/ STATE STATUS/ ORBIC LIST	DISTRIBUTION (FROM NATURESERVE 2023)	HABITAT REQUIREMENTS (FROM NATURESERVE 2023)	PERIOD OF IDENTIFICATION	NEAR WHICH SITE?	POTENTIAL TO OCCUR ON-SITE
<i>Canus lupus</i> Gray wolf	FE/SE/2	Known from Arizona, Colorado, Illinois, Indiana, Iowa, Missouri, New Mexico, North Dakota, Ohio, Oregon, South Dakota, Utah, and Washington (NatureServe, 2014).	Found in temperate forests, mountains, tundra, taiga, and grasslands. Territory ranges from less than 100 to 10,000s of square kilometers. Breeds from February to March. Gestates for two months. Pups remain in the den until they are 8 to 10 weeks old (NatureServe, 2014). Young and parents vacate the den when young are about 3 months old (Hoffmeister, 1986).	Year-round	Medford/ Phoenix Site	<b>No.</b> The project sites does not provide habitat for this species. <u>The project sites have too much urbanization and habitat fragmentation.</u>
<i>Gulo gulo</i> Wolverine	FT/ST/2	In Oregon, Wolverines have been found on Three-fingered Jack in Linn County on the Steens Mountain in Harney County, Broken Top Mountain in Deschutes County, and in the Eagle Cap Wilderness Area in the Wallowa Mountains of northeastern Oregon. More recently it was confirmed in Wallowa County, as well.	Wolverines prefer open forests and alpine areas and tend to avoid clear-cut areas and the young, dense forests that grow up after that. In addition, wolverines require a habitat that provides cold, snowy conditions for much of the year because they rely on deep snow for denning as well as food storage.	Year-round	Medford/ Phoenix Site	<b>No.</b> The project sites does not provide habitat for this species.
<i>Antrozous pallidus</i> <u>Pallid bat</u>	--/--/2	<u>Northwestern USA and Canada</u>	<u>Deserts, grasslands, shrublands, woodlands &amp; forests. most common in open, dry habitats with rocky areas for roosting. In Oregon, night roosts were in buildings, under rock overhangs, and under bridges.</u>	<u>Year-round</u>	<u>Medford/ Phoenix Site</u>	<b>No/Yes.</b> <u>The Medford project site does not provide habitat for this species. The Phoenix site has marginal foraging habitat.</u>
<i>Myotis volans</i> <u>Long-legged myotis bat</u>	--/--/3	<u>Northwestern USA and Canada</u>	<u>Most common in woodland &amp; forest habitats above 4000 ft. Trees are important day roosts; caves &amp; mines are night roosts....nursery colonies usually under bark or in hollow trees, but occasionally in crevices or buildings.</u>	<u>Year-round</u>	<u>Medford/ Phoenix Site</u>	<b>No.</b> <u>The project sites do not provide habitat for this species.</u>
<b><u>INSECTS</u></b>						



SCIENTIFIC NAME COMMON NAME	FEDERAL/ STATE STATUS/ ORBIC LIST	DISTRIBUTION (FROM NATURESERVE 2023)	HABITAT REQUIREMENTS (FROM NATURESERVE 2023)	PERIOD OF IDENTIFICATION	NEAR WHICH SITE?	POTENTIAL TO OCCUR ON-SITE
<u>Bombus franklini</u> Franklin's Bumble Bee	FE/--/1	species has precipitously declined since 1998; found only in southern Oregon/northern California between the Coast and Sierra-Cascade Ranges	Found in open grassy coastal prairies and coast range meadows; food plants include <u>Agastache</u> , <u>Centaurea</u> , <u>Ceanothus</u> , <u>Eriogonum</u> , <u>Lupinus</u> , <u>Eschscholzia</u> , <u>Monardella</u> and <u>Vicia</u>	Summer/Fall	Medford/ Phoenix Site	<b>No/Yes.</b> The Medford project site does not provide habitat for this species. The Phoenix site has marginal habitat.
<u>Bombus occidentalis</u> Western bumblebee	--/--/2	once common & widespread, species has declined precipitously from central CA to southern B.C., perhaps from disease.	Found in a range of habitats, including mixed woodlands, farmlands, urban areas, montane meadows and into the western edge of the prairie grasslands	Summer/Fall	Medford/ Phoenix Site	<b>No/Yes.</b> The Medford project site does not provide habitat for this species. The Phoenix site has marginal habitat.
<u>Danaus plexippus</u> Monarch Butterfly	FC/--/--	Northwestern USA and Canada	Habitat is a complex issue for this species. In general, breeding areas are virtually all patches of milkweed in North America and some other regions. The critical conservation feature for North American populations is the overwintering habitats, which are certain high altitude Mexican conifer forests or coastal California conifer or Eucalyptus groves	Summer/Fall	Mill Casino and Medford/ Phoenix Site	<b>No.</b> The project sites do not provide habitat for this species.

**STATUS CODES**

**FEDERAL: United States Fish and Wildlife Service**

- FE Federally Endangered
- FT Federally Threatened
- FC Federal Candidate for Listing
- FPT Federally Proposed as Threatened
- Eagle Protected under the Bald and Golden Eagle Protection Act
- SOC Species of Concern

**STATE: Oregon Department of Fish and Wildlife (ODFW)**

- SE State Endangered
- ST State Threatened
- SV State Vulnerable
- SC State Candidate

<b>SCIENTIFIC NAME</b> <b>COMMON NAME</b>	<b>FEDERAL/  STATE  STATUS/  ORBIC LIST</b>	<b>DISTRIBUTION  (FROM NATURESERVE 2023)</b>	<b>HABITAT REQUIREMENTS  (FROM NATURESERVE 2023)</b>	<b>PERIOD OF  IDENTIFICATION</b>	<b><u>NEAR  WHICH  SITE?</u></b>	<b>POTENTIAL TO  OCCUR ON-SITE</b>
<b>STATE: Oregon Biodiversity Information Center (ORBIC)</b> 1      Critically Imperiled 2      Imperiled 3      Rare H      Historically occurred in Oregon						

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*Medford Site Trust Resources Report*



## United States Department of the Interior



FISH AND WILDLIFE SERVICE  
Oregon Fish And Wildlife Office  
2600 Southeast 98th Avenue, Suite 100  
Portland, OR 97266-1398  
Phone: (503) 231-6179 Fax: (503) 231-6195

In Reply Refer To:

March 23, 2023

Project Code: 2023-0059734

Project Name: Coquille Indian Tribe Fee-to-Trust and Gaming Facility Project

Subject: List of threatened and endangered species that may occur in your proposed project location or may be affected by your proposed project

To Whom It May Concern:

The enclosed species list identifies threatened, endangered, proposed and candidate species, as well as proposed and final designated critical habitat, that may occur within the boundary of your proposed project and/or may be affected by your proposed project. The species list fulfills the requirements of the U.S. Fish and Wildlife Service (Service) under section 7(c) of the Endangered Species Act (Act) of 1973, as amended (16 U.S.C. 1531 *et seq.*). This is not a consultation.

New information based on updated surveys, changes in the abundance and distribution of species, changed habitat conditions, or other factors could change this list. Please feel free to contact us if you need more current information or assistance regarding the potential impacts to federally proposed, listed, and candidate species and federally designated and proposed critical habitat. Please note that under 50 CFR 402.12(e) of the regulations implementing section 7 of the Act, the accuracy of this species list should be verified after 90 days. This verification can be completed formally or informally as desired. The Service recommends that verification be completed by visiting the ECOS-IPaC website at regular intervals during project planning and implementation for updates to species lists and information. An updated list may be requested through the ECOS-IPaC system by completing the same process used to receive the enclosed list.

The purpose of the Act is to provide a means whereby threatened and endangered species and the ecosystems upon which they depend may be conserved. Under sections 7(a)(1) and 7(a)(2) of the Act and its implementing regulations (50 CFR 402 *et seq.*), Federal agencies are required to utilize their authorities to carry out programs for the conservation of threatened and endangered species and to determine whether projects may affect threatened and endangered species and/or designated critical habitat.

A Biological Assessment is required for construction projects (or other undertakings having similar physical impacts) that are major Federal actions significantly affecting the quality of the human environment as defined in the National Environmental Policy Act (42 U.S.C. 4332(2))

(c)). For projects other than major construction activities, the Service suggests that a biological evaluation similar to a Biological Assessment be prepared to determine whether the project may affect listed or proposed species and/or designated or proposed critical habitat. Recommended contents of a Biological Assessment are described at 50 CFR 402.12.

If a Federal agency determines, based on the Biological Assessment or biological evaluation, that listed species and/or designated critical habitat may be affected by the proposed project, the agency is required to consult with the Service pursuant to 50 CFR 402. In addition, the Service recommends that candidate species, proposed species and proposed critical habitat be addressed within the consultation. More information on the regulations and procedures for section 7 consultation, including the role of permit or license applicants, can be found in the "Endangered Species Consultation Handbook" at:

<http://www.fws.gov/endangered/esa-library/pdf/TOC-GLOS.PDF>

**Migratory Birds:** In addition to responsibilities to protect threatened and endangered species under the Endangered Species Act (ESA), there are additional responsibilities under the Migratory Bird Treaty Act (MBTA) and the Bald and Golden Eagle Protection Act (BGEPA) to protect native birds from project-related impacts. Any activity, intentional or unintentional, resulting in take of migratory birds, including eagles, is prohibited unless otherwise permitted by the U.S. Fish and Wildlife Service (50 C.F.R. Sec. 10.12 and 16 U.S.C. Sec. 668(a)). For more information regarding these Acts see <https://www.fws.gov/birds/policies-and-regulations.php>.

The MBTA has no provision for allowing take of migratory birds that may be unintentionally killed or injured by otherwise lawful activities. It is the responsibility of the project proponent to comply with these Acts by identifying potential impacts to migratory birds and eagles within applicable NEPA documents (when there is a federal nexus) or a Bird/Eagle Conservation Plan (when there is no federal nexus). Proponents should implement conservation measures to avoid or minimize the production of project-related stressors or minimize the exposure of birds and their resources to the project-related stressors. For more information on avian stressors and recommended conservation measures see <https://www.fws.gov/birds/bird-enthusiasts/threats-to-birds.php>.

In addition to MBTA and BGEPA, Executive Order 13186: *Responsibilities of Federal Agencies to Protect Migratory Birds*, obligates all Federal agencies that engage in or authorize activities that might affect migratory birds, to minimize those effects and encourage conservation measures that will improve bird populations. Executive Order 13186 provides for the protection of both migratory birds and migratory bird habitat. For information regarding the implementation of Executive Order 13186, please visit <https://www.fws.gov/birds/policies-and-regulations/executive-orders/e0-13186.php>.

We appreciate your concern for threatened and endangered species. The Service encourages Federal agencies to include conservation of threatened and endangered species into their project planning to further the purposes of the Act. Please include the Consultation Code in the header of this letter with any request for consultation or correspondence about your project that you submit to our office.

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Attachment(s):

- Official Species List
  - USFWS National Wildlife Refuges and Fish Hatcheries
  - Migratory Birds
  - Wetlands
-

## **OFFICIAL SPECIES LIST**

This list is provided pursuant to Section 7 of the Endangered Species Act, and fulfills the requirement for Federal agencies to "request of the Secretary of the Interior information whether any species which is listed or proposed to be listed may be present in the area of a proposed action".

This species list is provided by:

**Oregon Fish And Wildlife Office**

2600 Southeast 98th Avenue, Suite 100

Portland, OR 97266-1398

(503) 231-6179

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## PROJECT SUMMARY

Project Code: 2023-0059734  
Project Name: Coquille Indian Tribe Fee-to-Trust and Gaming Facility Project  
Project Type: Commercial Development  
Project Description: transfer of 2.4 acres into federal trust of a 7.24 acre parcel located in Medford on SR99 between Charlotte Ann Lane and Lowry Lane (an existing bowling alley), and subsequent development of a 30,300 sq. ft. gaming facility

Project Location:

The approximate location of the project can be viewed in Google Maps: <https://www.google.com/maps/@42.3043902,-122.85186658688026,14z>



Counties: Jackson County, Oregon

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## ENDANGERED SPECIES ACT SPECIES

There is a total of 5 threatened, endangered, or candidate species on this species list.

Species on this list should be considered in an effects analysis for your project and could include species that exist in another geographic area. For example, certain fish may appear on the species list because a project could affect downstream species.

IPaC does not display listed species or critical habitats under the sole jurisdiction of NOAA Fisheries<sup>1</sup>, as USFWS does not have the authority to speak on behalf of NOAA and the Department of Commerce.

See the "Critical habitats" section below for those critical habitats that lie wholly or partially within your project area under this office's jurisdiction. Please contact the designated FWS office if you have questions.

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1. [NOAA Fisheries](#), also known as the National Marine Fisheries Service (NMFS), is an office of the National Oceanic and Atmospheric Administration within the Department of Commerce.

### MAMMALS

NAME	STATUS
Gray Wolf <i>Canis lupus</i> Population: U.S.A.: All of AL, AR, CA, CO, CT, DE, FL, GA, IA, IN, IL, KS, KY, LA, MA, MD, ME, MI, MO, MS, NC, ND, NE, NH, NJ, NV, NY, OH, OK, PA, RI, SC, SD, TN, TX, VA, VT, WI, and WV; and portions of AZ, NM, OR, UT, and WA. Mexico. There is <b>final</b> critical habitat for this species. Species profile: <a href="https://ecos.fws.gov/ecp/species/4488">https://ecos.fws.gov/ecp/species/4488</a>	Endangered

### BIRDS

NAME	STATUS
Northern Spotted Owl <i>Strix occidentalis caurina</i> There is <b>final</b> critical habitat for this species. Your location does not overlap the critical habitat. Species profile: <a href="https://ecos.fws.gov/ecp/species/1123">https://ecos.fws.gov/ecp/species/1123</a>	Threatened

### INSECTS

NAME	STATUS
Franklin's Bumble Bee <i>Bombus franklini</i> No critical habitat has been designated for this species. Species profile: <a href="https://ecos.fws.gov/ecp/species/7022">https://ecos.fws.gov/ecp/species/7022</a>	Endangered
Monarch Butterfly <i>Danaus plexippus</i> No critical habitat has been designated for this species. Species profile: <a href="https://ecos.fws.gov/ecp/species/9743">https://ecos.fws.gov/ecp/species/9743</a>	Candidate

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**FLOWERING PLANTS**

NAME	STATUS
Gentner's Fritillary <i>Fritillaria gentneri</i> No critical habitat has been designated for this species. Species profile: <a href="https://ecos.fws.gov/ecp/species/8120">https://ecos.fws.gov/ecp/species/8120</a>	Endangered

**CRITICAL HABITATS**

THERE ARE NO CRITICAL HABITATS WITHIN YOUR PROJECT AREA UNDER THIS OFFICE'S JURISDICTION.

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# **USFWS NATIONAL WILDLIFE REFUGE LANDS AND FISH HATCHERIES**

Any activity proposed on lands managed by the [National Wildlife Refuge](#) system must undergo a 'Compatibility Determination' conducted by the Refuge. Please contact the individual Refuges to discuss any questions or concerns.

THERE ARE NO REFUGE LANDS OR FISH HATCHERIES WITHIN YOUR PROJECT AREA.

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## MIGRATORY BIRDS

Certain birds are protected under the Migratory Bird Treaty Act<sup>1</sup> and the Bald and Golden Eagle Protection Act<sup>2</sup>.

Any person or organization who plans or conducts activities that may result in impacts to migratory birds, eagles, and their habitats should follow appropriate regulations and consider implementing appropriate conservation measures, as described [below](#).

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1. The [Migratory Birds Treaty Act](#) of 1918.
  2. The [Bald and Golden Eagle Protection Act](#) of 1940.
  3. 50 C.F.R. Sec. 10.12 and 16 U.S.C. Sec. 668(a)

**The birds listed below are birds of particular concern either because they occur on the [USFWS Birds of Conservation Concern \(BCC\) list](#) or warrant special attention in your project location.** To learn more about the levels of concern for birds on your list and how this list is generated, see the FAQ [below](#). This is not a list of every bird you may find in this location, nor a guarantee that every bird on this list will be found in your project area. To see exact locations of where birders and the general public have sighted birds in and around your project area, visit the [E-bird data mapping tool](#) (Tip: enter your location, desired date range and a species on your list). For projects that occur off the Atlantic Coast, additional maps and models detailing the relative occurrence and abundance of bird species on your list are available. Links to additional information about Atlantic Coast birds, and other important information about your migratory bird list, including how to properly interpret and use your migratory bird report, can be found [below](#).

For guidance on when to schedule activities or implement avoidance and minimization measures to reduce impacts to migratory birds on your list, click on the PROBABILITY OF PRESENCE SUMMARY at the top of your list to see when these birds are most likely to be present and breeding in your project area.

NAME	BREEDING SEASON
Allen's Hummingbird <i>Selasphorus sasin</i> This is a Bird of Conservation Concern (BCC) throughout its range in the continental USA and Alaska. <a href="https://ecos.fws.gov/ecp/species/9637">https://ecos.fws.gov/ecp/species/9637</a>	Breeds Feb 1 to Jul 15
Bald Eagle <i>Haliaeetus leucocephalus</i> This is not a Bird of Conservation Concern (BCC) in this area, but warrants attention because of the Eagle Act or for potential susceptibilities in offshore areas from certain types of development or activities.	Breeds Jan 1 to Sep 30

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NAME	BREEDING SEASON
<p>Cassin's Finch <i>Carpodacus cassinii</i></p> <p>This is a Bird of Conservation Concern (BCC) throughout its range in the continental USA and Alaska.</p> <p><a href="https://ecos.fws.gov/ecp/species/9462">https://ecos.fws.gov/ecp/species/9462</a></p>	Breeds May 15 to Jul 15
<p>Evening Grosbeak <i>Coccothraustes vespertinus</i></p> <p>This is a Bird of Conservation Concern (BCC) throughout its range in the continental USA and Alaska.</p>	Breeds May 15 to Aug 10
<p>Golden Eagle <i>Aquila chrysaetos</i></p> <p>This is not a Bird of Conservation Concern (BCC) in this area, but warrants attention because of the Eagle Act or for potential susceptibilities in offshore areas from certain types of development or activities.</p> <p><a href="https://ecos.fws.gov/ecp/species/1680">https://ecos.fws.gov/ecp/species/1680</a></p>	Breeds Jan 1 to Aug 31
<p>Oak Titmouse <i>Baeolophus inornatus</i></p> <p>This is a Bird of Conservation Concern (BCC) throughout its range in the continental USA and Alaska.</p> <p><a href="https://ecos.fws.gov/ecp/species/9656">https://ecos.fws.gov/ecp/species/9656</a></p>	Breeds Mar 15 to Jul 15
<p>Olive-sided Flycatcher <i>Contopus cooperi</i></p> <p>This is a Bird of Conservation Concern (BCC) throughout its range in the continental USA and Alaska.</p> <p><a href="https://ecos.fws.gov/ecp/species/3914">https://ecos.fws.gov/ecp/species/3914</a></p>	Breeds May 20 to Aug 31
<p>Rufous Hummingbird <i>selasphorus rufus</i></p> <p>This is a Bird of Conservation Concern (BCC) throughout its range in the continental USA and Alaska.</p> <p><a href="https://ecos.fws.gov/ecp/species/8002">https://ecos.fws.gov/ecp/species/8002</a></p>	Breeds Apr 15 to Jul 15
<p>Western Grebe <i>aechmophorus occidentalis</i></p> <p>This is a Bird of Conservation Concern (BCC) throughout its range in the continental USA and Alaska.</p> <p><a href="https://ecos.fws.gov/ecp/species/6743">https://ecos.fws.gov/ecp/species/6743</a></p>	Breeds Jun 1 to Aug 31
<p>Wrentit <i>Chamaea fasciata</i></p> <p>This is a Bird of Conservation Concern (BCC) throughout its range in the continental USA and Alaska.</p>	Breeds Mar 15 to Aug 10

## PROBABILITY OF PRESENCE SUMMARY

The graphs below provide our best understanding of when birds of concern are most likely to be present in your project area. This information can be used to tailor and schedule your project activities to avoid or minimize impacts to birds. Please make sure you read and understand the FAQ "Proper Interpretation and Use of Your Migratory Bird Report" before using or attempting to interpret this report.

### Probability of Presence (■)

Each green bar represents the bird's relative probability of presence in the 10km grid cell(s) your project overlaps during a particular week of the year. (A year is represented as 12 4-week months.) A taller bar indicates a higher probability of species presence. The survey effort (see below) can be used to establish a level of confidence in the presence score. One can have higher confidence in the presence score if the corresponding survey effort is also high.

How is the probability of presence score calculated? The calculation is done in three steps:

1. The probability of presence for each week is calculated as the number of survey events in the week where the species was detected divided by the total number of survey events for that week. For example, if in week 12 there were 20 survey events and the Spotted Towhee was found in 5 of them, the probability of presence of the Spotted Towhee in week 12 is 0.25.
2. To properly present the pattern of presence across the year, the relative probability of presence is calculated. This is the probability of presence divided by the maximum probability of presence across all weeks. For example, imagine the probability of presence in week 20 for the Spotted Towhee is 0.05, and that the probability of presence at week 12 (0.25) is the maximum of any week of the year. The relative probability of presence on week 12 is  $0.25/0.25 = 1$ ; at week 20 it is  $0.05/0.25 = 0.2$ .
3. The relative probability of presence calculated in the previous step undergoes a statistical conversion so that all possible values fall between 0 and 10, inclusive. This is the probability of presence score.

### Breeding Season (■)

Yellow bars denote a very liberal estimate of the time-frame inside which the bird breeds across its entire range. If there are no yellow bars shown for a bird, it does not breed in your project area.

### Survey Effort (|)

Vertical black lines superimposed on probability of presence bars indicate the number of surveys performed for that species in the 10km grid cell(s) your project area overlaps. The number of surveys is expressed as a range, for example, 33 to 64 surveys.

### No Data (—)

A week is marked as having no data if there were no survey events for that week.

### Survey Timeframe

Surveys from only the last 10 years are used in order to ensure delivery of currently relevant information. The exception to this is areas off the Atlantic coast, where bird returns are based on all years of available data, since data in these areas is currently much more sparse.

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■ probability of presence   ■ breeding season   | survey effort   — no data

SPECIES      JAN    FEB    MAR    APR    MAY    JUN    JUL    AUG    SEP    OCT    NOV    DEC

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Additional information can be found using the following links:

- Birds of Conservation Concern <https://www.fws.gov/program/migratory-birds/species>
- Measures for avoiding and minimizing impacts to birds <https://www.fws.gov/library/collections/avoiding-and-minimizing-incident-take-migratory-birds>
- Nationwide conservation measures for birds <https://www.fws.gov/sites/default/files/documents/nationwide-standard-conservation-measures.pdf>

## MIGRATORY BIRDS FAQ

**Tell me more about conservation measures I can implement to avoid or minimize impacts to migratory birds.**

[Nationwide Conservation Measures](#) describes measures that can help avoid and minimize impacts to all birds at any location year round. Implementation of these measures is particularly important when birds are most likely to occur in the project area. When birds may be breeding in

the area, identifying the locations of any active nests and avoiding their destruction is a very helpful impact minimization measure. To see when birds are most likely to occur and be breeding in your project area, view the Probability of Presence Summary. [Additional measures](#) or [permits](#) may be advisable depending on the type of activity you are conducting and the type of infrastructure or bird species present on your project site.

### **What does IPaC use to generate the list of migratory birds that potentially occur in my specified location?**

The Migratory Bird Resource List is comprised of USFWS [Birds of Conservation Concern \(BCC\)](#) and other species that may warrant special attention in your project location.

The migratory bird list generated for your project is derived from data provided by the [Avian Knowledge Network \(AKN\)](#). The AKN data is based on a growing collection of [survey, banding, and citizen science datasets](#) and is queried and filtered to return a list of those birds reported as occurring in the 10km grid cell(s) which your project intersects, and that have been identified as warranting special attention because they are a BCC species in that area, an eagle ([Eagle Act](#) requirements may apply), or a species that has a particular vulnerability to offshore activities or development.

Again, the Migratory Bird Resource list includes only a subset of birds that may occur in your project area. It is not representative of all birds that may occur in your project area. To get a list of all birds potentially present in your project area, please visit the [Rapid Avian Information Locator \(RAIL\) Tool](#).

### **What does IPaC use to generate the probability of presence graphs for the migratory birds potentially occurring in my specified location?**

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Probability of presence data is continuously being updated as new and better information becomes available. To learn more about how the probability of presence graphs are produced and how to interpret them, go the Probability of Presence Summary and then click on the "Tell me about these graphs" link.

### **How do I know if a bird is breeding, wintering or migrating in my area?**

To see what part of a particular bird's range your project area falls within (i.e. breeding, wintering, migrating or year-round), you may query your location using the [RAIL Tool](#) and look at the range maps provided for birds in your area at the bottom of the profiles provided for each bird in your results. If a bird on your migratory bird species list has a breeding season associated with it, if that bird does occur in your project area, there may be nests present at some point within the timeframe specified. If "Breeds elsewhere" is indicated, then the bird likely does not breed in your project area.

### **What are the levels of concern for migratory birds?**

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Migratory birds delivered through IPaC fall into the following distinct categories of concern:

1. "BCC Rangewide" birds are [Birds of Conservation Concern](#) (BCC) that are of concern throughout their range anywhere within the USA (including Hawaii, the Pacific Islands, Puerto Rico, and the Virgin Islands);
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Although it is important to try to avoid and minimize impacts to all birds, efforts should be made, in particular, to avoid and minimize impacts to the birds on this list, especially eagles and BCC species of rangewide concern. For more information on conservation measures you can implement to help avoid and minimize migratory bird impacts and requirements for eagles, please see the FAQs for these topics.

### **Details about birds that are potentially affected by offshore projects**

For additional details about the relative occurrence and abundance of both individual bird species and groups of bird species within your project area off the Atlantic Coast, please visit the [Northeast Ocean Data Portal](#). The Portal also offers data and information about other taxa besides birds that may be helpful to you in your project review. Alternately, you may download the bird model results files underlying the portal maps through the [NOAA NCCOS Integrative Statistical Modeling and Predictive Mapping of Marine Bird Distributions and Abundance on the Atlantic Outer Continental Shelf](#) project webpage.

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### **What if I have eagles on my list?**

If your project has the potential to disturb or kill eagles, you may need to [obtain a permit](#) to avoid violating the Eagle Act should such impacts occur.

### **Proper Interpretation and Use of Your Migratory Bird Report**

The migratory bird list generated is not a list of all birds in your project area, only a subset of birds of priority concern. To learn more about how your list is generated, and see options for identifying what other birds may be in your project area, please see the FAQ "What does IPaC use to generate the migratory birds potentially occurring in my specified location". Please be aware this report provides the "probability of presence" of birds within the 10 km grid cell(s) that overlap your project; not your exact project footprint. On the graphs provided, please also look carefully at the survey effort (indicated by the black vertical bar) and for the existence of the "no data" indicator (a red horizontal bar). A high survey effort is the key component. If the survey effort is high, then the probability of presence score can be viewed as more dependable. In contrast, a low survey effort bar or no data bar means a lack of data and, therefore, a lack of

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## WETLANDS

Impacts to [NWI wetlands](#) and other aquatic habitats may be subject to regulation under Section 404 of the Clean Water Act, or other State/Federal statutes.

For more information please contact the Regulatory Program of the local [U.S. Army Corps of Engineers District](#).

Please note that the NWI data being shown may be out of date. We are currently working to update our NWI data set. We recommend you verify these results with a site visit to determine the actual extent of wetlands on site.

THERE ARE NO WETLANDS WITHIN YOUR PROJECT AREA.

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## **IPAC USER CONTACT INFORMATION**

Agency: Acorn Environmental  
Name: G.O. Graening  
Address: 520 Wallingford Lane  
City: Folsom  
State: CA  
Zip: 95630  
Email: ggraening@gmail.com  
Phone: 9164525442

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*Phoenix Site Trust Resources Report*



## United States Department of the Interior



FISH AND WILDLIFE SERVICE  
Oregon Fish And Wildlife Office  
2600 Southeast 98th Avenue, Suite 100  
Portland, OR 97266-1398  
Phone: (503) 231-6179 Fax: (503) 231-6195

In Reply Refer To:

March 28, 2023

Project Code: 2023-0061486

Project Name: Coquille Indian Tribe Fee-to-Trust and Gaming Facility Project

Subject: List of threatened and endangered species that may occur in your proposed project location or may be affected by your proposed project

To Whom It May Concern:

The enclosed species list identifies threatened, endangered, proposed and candidate species, as well as proposed and final designated critical habitat, that may occur within the boundary of your proposed project and/or may be affected by your proposed project. The species list fulfills the requirements of the U.S. Fish and Wildlife Service (Service) under section 7(c) of the Endangered Species Act (Act) of 1973, as amended (16 U.S.C. 1531 *et seq.*). This is not a consultation.

New information based on updated surveys, changes in the abundance and distribution of species, changed habitat conditions, or other factors could change this list. Please feel free to contact us if you need more current information or assistance regarding the potential impacts to federally proposed, listed, and candidate species and federally designated and proposed critical habitat. Please note that under 50 CFR 402.12(e) of the regulations implementing section 7 of the Act, the accuracy of this species list should be verified after 90 days. This verification can be completed formally or informally as desired. The Service recommends that verification be completed by visiting the ECOS-IPaC website at regular intervals during project planning and implementation for updates to species lists and information. An updated list may be requested through the ECOS-IPaC system by completing the same process used to receive the enclosed list.

The purpose of the Act is to provide a means whereby threatened and endangered species and the ecosystems upon which they depend may be conserved. Under sections 7(a)(1) and 7(a)(2) of the Act and its implementing regulations (50 CFR 402 *et seq.*), Federal agencies are required to utilize their authorities to carry out programs for the conservation of threatened and endangered species and to determine whether projects may affect threatened and endangered species and/or designated critical habitat.

A Biological Assessment is required for construction projects (or other undertakings having similar physical impacts) that are major Federal actions significantly affecting the quality of the human environment as defined in the National Environmental Policy Act (42 U.S.C. 4332(2))

(c)). For projects other than major construction activities, the Service suggests that a biological evaluation similar to a Biological Assessment be prepared to determine whether the project may affect listed or proposed species and/or designated or proposed critical habitat. Recommended contents of a Biological Assessment are described at 50 CFR 402.12.

If a Federal agency determines, based on the Biological Assessment or biological evaluation, that listed species and/or designated critical habitat may be affected by the proposed project, the agency is required to consult with the Service pursuant to 50 CFR 402. In addition, the Service recommends that candidate species, proposed species and proposed critical habitat be addressed within the consultation. More information on the regulations and procedures for section 7 consultation, including the role of permit or license applicants, can be found in the "Endangered Species Consultation Handbook" at:

<http://www.fws.gov/endangered/esa-library/pdf/TOC-GLOS.PDF>

**Migratory Birds:** In addition to responsibilities to protect threatened and endangered species under the Endangered Species Act (ESA), there are additional responsibilities under the Migratory Bird Treaty Act (MBTA) and the Bald and Golden Eagle Protection Act (BGEPA) to protect native birds from project-related impacts. Any activity, intentional or unintentional, resulting in take of migratory birds, including eagles, is prohibited unless otherwise permitted by the U.S. Fish and Wildlife Service (50 C.F.R. Sec. 10.12 and 16 U.S.C. Sec. 668(a)). For more information regarding these Acts see <https://www.fws.gov/birds/policies-and-regulations.php>.

The MBTA has no provision for allowing take of migratory birds that may be unintentionally killed or injured by otherwise lawful activities. It is the responsibility of the project proponent to comply with these Acts by identifying potential impacts to migratory birds and eagles within applicable NEPA documents (when there is a federal nexus) or a Bird/Eagle Conservation Plan (when there is no federal nexus). Proponents should implement conservation measures to avoid or minimize the production of project-related stressors or minimize the exposure of birds and their resources to the project-related stressors. For more information on avian stressors and recommended conservation measures see <https://www.fws.gov/birds/bird-enthusiasts/threats-to-birds.php>.

In addition to MBTA and BGEPA, Executive Order 13186: *Responsibilities of Federal Agencies to Protect Migratory Birds*, obligates all Federal agencies that engage in or authorize activities that might affect migratory birds, to minimize those effects and encourage conservation measures that will improve bird populations. Executive Order 13186 provides for the protection of both migratory birds and migratory bird habitat. For information regarding the implementation of Executive Order 13186, please visit <https://www.fws.gov/birds/policies-and-regulations/executive-orders/e0-13186.php>.

We appreciate your concern for threatened and endangered species. The Service encourages Federal agencies to include conservation of threatened and endangered species into their project planning to further the purposes of the Act. Please include the Consultation Code in the header of this letter with any request for consultation or correspondence about your project that you submit to our office.

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Attachment(s):

- Official Species List
  - USFWS National Wildlife Refuges and Fish Hatcheries
  - Migratory Birds
  - Wetlands
-



## **OFFICIAL SPECIES LIST**

This list is provided pursuant to Section 7 of the Endangered Species Act, and fulfills the requirement for Federal agencies to "request of the Secretary of the Interior information whether any species which is listed or proposed to be listed may be present in the area of a proposed action".

This species list is provided by:

**Oregon Fish And Wildlife Office**

2600 Southeast 98th Avenue, Suite 100

Portland, OR 97266-1398

(503) 231-6179

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## PROJECT SUMMARY

Project Code: 2023-0061486  
Project Name: Coquille Indian Tribe Fee-to-Trust and Gaming Facility Project  
Project Type: Commercial Development  
Project Description: Alternate site for a gaming facility  
Project Location:

The approximate location of the project can be viewed in Google Maps: <https://www.google.com/maps/@42.288564199999996,-122.81768167146492,14z>



Counties: Jackson County, Oregon

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## ENDANGERED SPECIES ACT SPECIES

There is a total of 5 threatened, endangered, or candidate species on this species list.

Species on this list should be considered in an effects analysis for your project and could include species that exist in another geographic area. For example, certain fish may appear on the species list because a project could affect downstream species.

IPaC does not display listed species or critical habitats under the sole jurisdiction of NOAA Fisheries<sup>1</sup>, as USFWS does not have the authority to speak on behalf of NOAA and the Department of Commerce.

See the "Critical habitats" section below for those critical habitats that lie wholly or partially within your project area under this office's jurisdiction. Please contact the designated FWS office if you have questions.

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1. [NOAA Fisheries](#), also known as the National Marine Fisheries Service (NMFS), is an office of the National Oceanic and Atmospheric Administration within the Department of Commerce.

### MAMMALS

NAME	STATUS
Gray Wolf <i>Canis lupus</i> Population: U.S.A.: All of AL, AR, CA, CO, CT, DE, FL, GA, IA, IN, IL, KS, KY, LA, MA, MD, ME, MI, MO, MS, NC, ND, NE, NH, NJ, NV, NY, OH, OK, PA, RI, SC, SD, TN, TX, VA, VT, WI, and WV; and portions of AZ, NM, OR, UT, and WA. Mexico. There is <b>final</b> critical habitat for this species. Species profile: <a href="https://ecos.fws.gov/ecp/species/4488">https://ecos.fws.gov/ecp/species/4488</a>	Endangered

### BIRDS

NAME	STATUS
Northern Spotted Owl <i>Strix occidentalis caurina</i> There is <b>final</b> critical habitat for this species. Your location does not overlap the critical habitat. Species profile: <a href="https://ecos.fws.gov/ecp/species/1123">https://ecos.fws.gov/ecp/species/1123</a>	Threatened

### INSECTS

NAME	STATUS
Franklin's Bumble Bee <i>Bombus franklini</i> No critical habitat has been designated for this species. Species profile: <a href="https://ecos.fws.gov/ecp/species/7022">https://ecos.fws.gov/ecp/species/7022</a>	Endangered
Monarch Butterfly <i>Danaus plexippus</i> No critical habitat has been designated for this species. Species profile: <a href="https://ecos.fws.gov/ecp/species/9743">https://ecos.fws.gov/ecp/species/9743</a>	Candidate

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## FLOWERING PLANTS

NAME	STATUS
Gentner's Fritillary <i>Fritillaria gentneri</i> No critical habitat has been designated for this species. Species profile: <a href="https://ecos.fws.gov/ecp/species/8120">https://ecos.fws.gov/ecp/species/8120</a>	Endangered

## CRITICAL HABITATS

THERE ARE NO CRITICAL HABITATS WITHIN YOUR PROJECT AREA UNDER THIS OFFICE'S JURISDICTION.

# **USFWS NATIONAL WILDLIFE REFUGE LANDS AND FISH HATCHERIES**

Any activity proposed on lands managed by the [National Wildlife Refuge](#) system must undergo a 'Compatibility Determination' conducted by the Refuge. Please contact the individual Refuges to discuss any questions or concerns.

THERE ARE NO REFUGE LANDS OR FISH HATCHERIES WITHIN YOUR PROJECT AREA.

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## MIGRATORY BIRDS

Certain birds are protected under the Migratory Bird Treaty Act<sup>1</sup> and the Bald and Golden Eagle Protection Act<sup>2</sup>.

Any person or organization who plans or conducts activities that may result in impacts to migratory birds, eagles, and their habitats should follow appropriate regulations and consider implementing appropriate conservation measures, as described [below](#).

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1. The [Migratory Birds Treaty Act](#) of 1918.
  2. The [Bald and Golden Eagle Protection Act](#) of 1940.
  3. 50 C.F.R. Sec. 10.12 and 16 U.S.C. Sec. 668(a)

**The birds listed below are birds of particular concern either because they occur on the [USFWS Birds of Conservation Concern \(BCC\) list](#) or warrant special attention in your project location.** To learn more about the levels of concern for birds on your list and how this list is generated, see the FAQ [below](#). This is not a list of every bird you may find in this location, nor a guarantee that every bird on this list will be found in your project area. To see exact locations of where birders and the general public have sighted birds in and around your project area, visit the [E-bird data mapping tool](#) (Tip: enter your location, desired date range and a species on your list). For projects that occur off the Atlantic Coast, additional maps and models detailing the relative occurrence and abundance of bird species on your list are available. Links to additional information about Atlantic Coast birds, and other important information about your migratory bird list, including how to properly interpret and use your migratory bird report, can be found [below](#).

For guidance on when to schedule activities or implement avoidance and minimization measures to reduce impacts to migratory birds on your list, click on the PROBABILITY OF PRESENCE SUMMARY at the top of your list to see when these birds are most likely to be present and breeding in your project area.

NAME	BREEDING SEASON
Allen's Hummingbird <i>Selasphorus sasin</i> This is a Bird of Conservation Concern (BCC) throughout its range in the continental USA and Alaska. <a href="https://ecos.fws.gov/ecp/species/9637">https://ecos.fws.gov/ecp/species/9637</a>	Breeds Feb 1 to Jul 15
Bald Eagle <i>Haliaeetus leucocephalus</i> This is not a Bird of Conservation Concern (BCC) in this area, but warrants attention because of the Eagle Act or for potential susceptibilities in offshore areas from certain types of development or activities.	Breeds Jan 1 to Sep 30

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NAME	BREEDING SEASON
<p>Cassin's Finch <i>Carpodacus cassinii</i></p> <p>This is a Bird of Conservation Concern (BCC) throughout its range in the continental USA and Alaska.</p> <p><a href="https://ecos.fws.gov/ecp/species/9462">https://ecos.fws.gov/ecp/species/9462</a></p>	Breeds May 15 to Jul 15
<p>Evening Grosbeak <i>Coccothraustes vespertinus</i></p> <p>This is a Bird of Conservation Concern (BCC) throughout its range in the continental USA and Alaska.</p>	Breeds May 15 to Aug 10
<p>Golden Eagle <i>Aquila chrysaetos</i></p> <p>This is not a Bird of Conservation Concern (BCC) in this area, but warrants attention because of the Eagle Act or for potential susceptibilities in offshore areas from certain types of development or activities.</p> <p><a href="https://ecos.fws.gov/ecp/species/1680">https://ecos.fws.gov/ecp/species/1680</a></p>	Breeds Jan 1 to Aug 31
<p>Oak Titmouse <i>Baeolophus inornatus</i></p> <p>This is a Bird of Conservation Concern (BCC) throughout its range in the continental USA and Alaska.</p> <p><a href="https://ecos.fws.gov/ecp/species/9656">https://ecos.fws.gov/ecp/species/9656</a></p>	Breeds Mar 15 to Jul 15
<p>Olive-sided Flycatcher <i>Contopus cooperi</i></p> <p>This is a Bird of Conservation Concern (BCC) throughout its range in the continental USA and Alaska.</p> <p><a href="https://ecos.fws.gov/ecp/species/3914">https://ecos.fws.gov/ecp/species/3914</a></p>	Breeds May 20 to Aug 31
<p>Rufous Hummingbird <i>selasphorus rufus</i></p> <p>This is a Bird of Conservation Concern (BCC) throughout its range in the continental USA and Alaska.</p> <p><a href="https://ecos.fws.gov/ecp/species/8002">https://ecos.fws.gov/ecp/species/8002</a></p>	Breeds Apr 15 to Jul 15
<p>Western Grebe <i>aechmophorus occidentalis</i></p> <p>This is a Bird of Conservation Concern (BCC) throughout its range in the continental USA and Alaska.</p> <p><a href="https://ecos.fws.gov/ecp/species/6743">https://ecos.fws.gov/ecp/species/6743</a></p>	Breeds Jun 1 to Aug 31
<p>Wrentit <i>Chamaea fasciata</i></p> <p>This is a Bird of Conservation Concern (BCC) throughout its range in the continental USA and Alaska.</p>	Breeds Mar 15 to Aug 10

## PROBABILITY OF PRESENCE SUMMARY

The graphs below provide our best understanding of when birds of concern are most likely to be present in your project area. This information can be used to tailor and schedule your project activities to avoid or minimize impacts to birds. Please make sure you read and understand the FAQ "Proper Interpretation and Use of Your Migratory Bird Report" before using or attempting to interpret this report.

### Probability of Presence (■)

Each green bar represents the bird's relative probability of presence in the 10km grid cell(s) your project overlaps during a particular week of the year. (A year is represented as 12 4-week months.) A taller bar indicates a higher probability of species presence. The survey effort (see below) can be used to establish a level of confidence in the presence score. One can have higher confidence in the presence score if the corresponding survey effort is also high.

How is the probability of presence score calculated? The calculation is done in three steps:

1. The probability of presence for each week is calculated as the number of survey events in the week where the species was detected divided by the total number of survey events for that week. For example, if in week 12 there were 20 survey events and the Spotted Towhee was found in 5 of them, the probability of presence of the Spotted Towhee in week 12 is 0.25.
2. To properly present the pattern of presence across the year, the relative probability of presence is calculated. This is the probability of presence divided by the maximum probability of presence across all weeks. For example, imagine the probability of presence in week 20 for the Spotted Towhee is 0.05, and that the probability of presence at week 12 (0.25) is the maximum of any week of the year. The relative probability of presence on week 12 is  $0.25/0.25 = 1$ ; at week 20 it is  $0.05/0.25 = 0.2$ .
3. The relative probability of presence calculated in the previous step undergoes a statistical conversion so that all possible values fall between 0 and 10, inclusive. This is the probability of presence score.

### Breeding Season (■)

Yellow bars denote a very liberal estimate of the time-frame inside which the bird breeds across its entire range. If there are no yellow bars shown for a bird, it does not breed in your project area.

### Survey Effort (|)

Vertical black lines superimposed on probability of presence bars indicate the number of surveys performed for that species in the 10km grid cell(s) your project area overlaps. The number of surveys is expressed as a range, for example, 33 to 64 surveys.

### No Data (—)

A week is marked as having no data if there were no survey events for that week.

### Survey Timeframe

Surveys from only the last 10 years are used in order to ensure delivery of currently relevant information. The exception to this is areas off the Atlantic coast, where bird returns are based on all years of available data, since data in these areas is currently much more sparse.

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■ probability of presence   ■ breeding season   | survey effort   — no data

SPECIES      JAN    FEB    MAR    APR    MAY    JUN    JUL    AUG    SEP    OCT    NOV    DEC

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Additional information can be found using the following links:

- Birds of Conservation Concern <https://www.fws.gov/program/migratory-birds/species>
- Measures for avoiding and minimizing impacts to birds <https://www.fws.gov/library/collections/avoiding-and-minimizing-incident-take-migratory-birds>
- Nationwide conservation measures for birds <https://www.fws.gov/sites/default/files/documents/nationwide-standard-conservation-measures.pdf>

## MIGRATORY BIRDS FAQ

**Tell me more about conservation measures I can implement to avoid or minimize impacts to migratory birds.**

[Nationwide Conservation Measures](#) describes measures that can help avoid and minimize impacts to all birds at any location year round. Implementation of these measures is particularly important when birds are most likely to occur in the project area. When birds may be breeding in

the area, identifying the locations of any active nests and avoiding their destruction is a very helpful impact minimization measure. To see when birds are most likely to occur and be breeding in your project area, view the Probability of Presence Summary. [Additional measures](#) or [permits](#) may be advisable depending on the type of activity you are conducting and the type of infrastructure or bird species present on your project site.

### **What does IPaC use to generate the list of migratory birds that potentially occur in my specified location?**

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Again, the Migratory Bird Resource list includes only a subset of birds that may occur in your project area. It is not representative of all birds that may occur in your project area. To get a list of all birds potentially present in your project area, please visit the [Rapid Avian Information Locator \(RAIL\) Tool](#).

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certainty about presence of the species. This list is not perfect; it is simply a starting point for identifying what birds of concern have the potential to be in your project area, when they might be there, and if they might be breeding (which means nests might be present). The list helps you know what to look for to confirm presence, and helps guide you in knowing when to implement conservation measures to avoid or minimize potential impacts from your project activities, should presence be confirmed. To learn more about conservation measures, visit the FAQ "Tell me about conservation measures I can implement to avoid or minimize impacts to migratory birds" at the bottom of your migratory bird trust resources page.

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## WETLANDS

Impacts to [NWI wetlands](#) and other aquatic habitats may be subject to regulation under Section 404 of the Clean Water Act, or other State/Federal statutes.

For more information please contact the Regulatory Program of the local [U.S. Army Corps of Engineers District](#).

Please note that the NWI data being shown may be out of date. We are currently working to update our NWI data set. We recommend you verify these results with a site visit to determine the actual extent of wetlands on site.

THERE ARE NO WETLANDS WITHIN YOUR PROJECT AREA.

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## **IPAC USER CONTACT INFORMATION**

Agency: Acorn Environmental  
Name: G.O. Graening  
Address: 520 Wallingford Lane  
City: Folsom  
State: CA  
Zip: 95630  
Email: ggraening@gmail.com  
Phone: 9164525442

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*Mill Casino Site Trust Resources Report*



## United States Department of the Interior



FISH AND WILDLIFE SERVICE  
Oregon Fish And Wildlife Office  
2600 Southeast 98th Avenue, Suite 100  
Portland, OR 97266-1398  
Phone: (503) 231-6179 Fax: (503) 231-6195

In Reply Refer To:

June 14, 2023

Project Code: 2023-0093488

Project Name: Coquille Indian Tribe Fee-to-Trust and Gaming Facility Project

Subject: List of threatened and endangered species that may occur in your proposed project location or may be affected by your proposed project

To Whom It May Concern:

The enclosed species list identifies threatened, endangered, proposed and candidate species, as well as proposed and final designated critical habitat, that may occur within the boundary of your proposed project and/or may be affected by your proposed project. The species list fulfills the requirements of the U.S. Fish and Wildlife Service (Service) under section 7(c) of the Endangered Species Act (Act) of 1973, as amended (16 U.S.C. 1531 *et seq.*). This is not a consultation.

New information based on updated surveys, changes in the abundance and distribution of species, changed habitat conditions, or other factors could change this list. Please feel free to contact us if you need more current information or assistance regarding the potential impacts to federally proposed, listed, and candidate species and federally designated and proposed critical habitat. Please note that under 50 CFR 402.12(e) of the regulations implementing section 7 of the Act, the accuracy of this species list should be verified after 90 days. This verification can be completed formally or informally as desired. The Service recommends that verification be completed by visiting the ECOS-IPaC website at regular intervals during project planning and implementation for updates to species lists and information. An updated list may be requested through the ECOS-IPaC system by completing the same process used to receive the enclosed list.

The purpose of the Act is to provide a means whereby threatened and endangered species and the ecosystems upon which they depend may be conserved. Under sections 7(a)(1) and 7(a)(2) of the Act and its implementing regulations (50 CFR 402 *et seq.*), Federal agencies are required to utilize their authorities to carry out programs for the conservation of threatened and endangered species and to determine whether projects may affect threatened and endangered species and/or designated critical habitat.

A Biological Assessment is required for construction projects (or other undertakings having similar physical impacts) that are major Federal actions significantly affecting the quality of the human environment as defined in the National Environmental Policy Act (42 U.S.C. 4332(2))



(c)). For projects other than major construction activities, the Service suggests that a biological evaluation similar to a Biological Assessment be prepared to determine whether the project may affect listed or proposed species and/or designated or proposed critical habitat. Recommended contents of a Biological Assessment are described at 50 CFR 402.12.

If a Federal agency determines, based on the Biological Assessment or biological evaluation, that listed species and/or designated critical habitat may be affected by the proposed project, the agency is required to consult with the Service pursuant to 50 CFR 402. In addition, the Service recommends that candidate species, proposed species and proposed critical habitat be addressed within the consultation. More information on the regulations and procedures for section 7 consultation, including the role of permit or license applicants, can be found in the "Endangered Species Consultation Handbook" at:

<http://www.fws.gov/endangered/esa-library/pdf/TOC-GLOS.PDF>

**Migratory Birds:** In addition to responsibilities to protect threatened and endangered species under the Endangered Species Act (ESA), there are additional responsibilities under the Migratory Bird Treaty Act (MBTA) and the Bald and Golden Eagle Protection Act (BGEPA) to protect native birds from project-related impacts. Any activity, intentional or unintentional, resulting in take of migratory birds, including eagles, is prohibited unless otherwise permitted by the U.S. Fish and Wildlife Service (50 C.F.R. Sec. 10.12 and 16 U.S.C. Sec. 668(a)). For more information regarding these Acts see <https://www.fws.gov/birds/policies-and-regulations.php>.

The MBTA has no provision for allowing take of migratory birds that may be unintentionally killed or injured by otherwise lawful activities. It is the responsibility of the project proponent to comply with these Acts by identifying potential impacts to migratory birds and eagles within applicable NEPA documents (when there is a federal nexus) or a Bird/Eagle Conservation Plan (when there is no federal nexus). Proponents should implement conservation measures to avoid or minimize the production of project-related stressors or minimize the exposure of birds and their resources to the project-related stressors. For more information on avian stressors and recommended conservation measures see <https://www.fws.gov/birds/bird-enthusiasts/threats-to-birds.php>.

In addition to MBTA and BGEPA, Executive Order 13186: *Responsibilities of Federal Agencies to Protect Migratory Birds*, obligates all Federal agencies that engage in or authorize activities that might affect migratory birds, to minimize those effects and encourage conservation measures that will improve bird populations. Executive Order 13186 provides for the protection of both migratory birds and migratory bird habitat. For information regarding the implementation of Executive Order 13186, please visit <https://www.fws.gov/birds/policies-and-regulations/executive-orders/e0-13186.php>.

We appreciate your concern for threatened and endangered species. The Service encourages Federal agencies to include conservation of threatened and endangered species into their project planning to further the purposes of the Act. Please include the Consultation Code in the header of this letter with any request for consultation or correspondence about your project that you submit to our office.

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Attachment(s):

- Official Species List
  - USFWS National Wildlife Refuges and Fish Hatcheries
  - Migratory Birds
  - Wetlands
-

## **OFFICIAL SPECIES LIST**

This list is provided pursuant to Section 7 of the Endangered Species Act, and fulfills the requirement for Federal agencies to "request of the Secretary of the Interior information whether any species which is listed or proposed to be listed may be present in the area of a proposed action".

This species list is provided by:

**Oregon Fish And Wildlife Office**

2600 Southeast 98th Avenue, Suite 100

Portland, OR 97266-1398

(503) 231-6179

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## PROJECT SUMMARY

Project Code: 2023-0093488  
Project Name: Coquille Indian Tribe Fee-to-Trust and Gaming Facility Project  
Project Type: Commercial Development  
Project Description: an alternate site for casino expansion  
Project Location:

The approximate location of the project can be viewed in Google Maps: <https://www.google.com/maps/@43.39313995,-124.21895037302286,14z>



Counties: Coos County, Oregon

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## ENDANGERED SPECIES ACT SPECIES

There is a total of 6 threatened, endangered, or candidate species on this species list.

Species on this list should be considered in an effects analysis for your project and could include species that exist in another geographic area. For example, certain fish may appear on the species list because a project could affect downstream species.

IPaC does not display listed species or critical habitats under the sole jurisdiction of NOAA Fisheries<sup>1</sup>, as USFWS does not have the authority to speak on behalf of NOAA and the Department of Commerce.

See the "Critical habitats" section below for those critical habitats that lie wholly or partially within your project area under this office's jurisdiction. Please contact the designated FWS office if you have questions.

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1. [NOAA Fisheries](#), also known as the National Marine Fisheries Service (NMFS), is an office of the National Oceanic and Atmospheric Administration within the Department of Commerce.

## MAMMALS

NAME	STATUS
Pacific Marten, Coastal Distinct Population Segment <i>Martes caurina</i> There is <b>proposed</b> critical habitat for this species. Your location does not overlap the critical habitat. Species profile: <a href="https://ecos.fws.gov/ecp/species/9081">https://ecos.fws.gov/ecp/species/9081</a>	Threatened

## BIRDS

NAME	STATUS
Marbled Murrelet <i>Brachyramphus marmoratus</i> Population: U.S.A. (CA, OR, WA) There is <b>final</b> critical habitat for this species. Your location does not overlap the critical habitat. Species profile: <a href="https://ecos.fws.gov/ecp/species/4467">https://ecos.fws.gov/ecp/species/4467</a>	Threatened
Northern Spotted Owl <i>Strix occidentalis caurina</i> There is <b>final</b> critical habitat for this species. Your location does not overlap the critical habitat. Species profile: <a href="https://ecos.fws.gov/ecp/species/1123">https://ecos.fws.gov/ecp/species/1123</a>	Threatened
Western Snowy Plover <i>Charadrius nivosus nivosus</i> Population: Pacific Coast population DPS-U.S.A. (CA, OR, WA), Mexico (within 50 miles of Pacific coast) There is <b>final</b> critical habitat for this species. Your location does not overlap the critical habitat. Species profile: <a href="https://ecos.fws.gov/ecp/species/8035">https://ecos.fws.gov/ecp/species/8035</a>	Threatened

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**INSECTS**

NAME	STATUS
Monarch Butterfly <i>Danaus plexippus</i> No critical habitat has been designated for this species. Species profile: <a href="https://ecos.fws.gov/ecp/species/9743">https://ecos.fws.gov/ecp/species/9743</a>	Candidate

**FLOWERING PLANTS**

NAME	STATUS
Western Lily <i>Lilium occidentale</i> No critical habitat has been designated for this species. Species profile: <a href="https://ecos.fws.gov/ecp/species/998">https://ecos.fws.gov/ecp/species/998</a>	Endangered

**CRITICAL HABITATS**

THERE ARE NO CRITICAL HABITATS WITHIN YOUR PROJECT AREA UNDER THIS OFFICE'S JURISDICTION.

YOU ARE STILL REQUIRED TO DETERMINE IF YOUR PROJECT(S) MAY HAVE EFFECTS ON ALL ABOVE LISTED SPECIES.

# **USFWS NATIONAL WILDLIFE REFUGE LANDS AND FISH HATCHERIES**

Any activity proposed on lands managed by the [National Wildlife Refuge](#) system must undergo a 'Compatibility Determination' conducted by the Refuge. Please contact the individual Refuges to discuss any questions or concerns.

THERE ARE NO REFUGE LANDS OR FISH HATCHERIES WITHIN YOUR PROJECT AREA.

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## MIGRATORY BIRDS

Certain birds are protected under the Migratory Bird Treaty Act<sup>1</sup> and the Bald and Golden Eagle Protection Act<sup>2</sup>.

Any person or organization who plans or conducts activities that may result in impacts to migratory birds, eagles, and their habitats should follow appropriate regulations and consider implementing appropriate conservation measures, as described [below](#).

- 
1. The [Migratory Birds Treaty Act](#) of 1918.
  2. The [Bald and Golden Eagle Protection Act](#) of 1940.
  3. 50 C.F.R. Sec. 10.12 and 16 U.S.C. Sec. 668(a)

**The birds listed below are birds of particular concern either because they occur on the [USFWS Birds of Conservation Concern \(BCC\) list](#) or warrant special attention in your project location.** To learn more about the levels of concern for birds on your list and how this list is generated, see the FAQ [below](#). This is not a list of every bird you may find in this location, nor a guarantee that every bird on this list will be found in your project area. To see exact locations of where birders and the general public have sighted birds in and around your project area, visit the [E-bird data mapping tool](#) (Tip: enter your location, desired date range and a species on your list). For projects that occur off the Atlantic Coast, additional maps and models detailing the relative occurrence and abundance of bird species on your list are available. Links to additional information about Atlantic Coast birds, and other important information about your migratory bird list, including how to properly interpret and use your migratory bird report, can be found [below](#).

For guidance on when to schedule activities or implement avoidance and minimization measures to reduce impacts to migratory birds on your list, click on the PROBABILITY OF PRESENCE SUMMARY at the top of your list to see when these birds are most likely to be present and breeding in your project area.

NAME	BREEDING SEASON
Bald Eagle <i>Haliaeetus leucocephalus</i> This is not a Bird of Conservation Concern (BCC) in this area, but warrants attention because of the Eagle Act or for potential susceptibilities in offshore areas from certain types of development or activities.	Breeds Jan 1 to Sep 30
Black Oystercatcher <i>Haematopus bachmani</i> This is a Bird of Conservation Concern (BCC) throughout its range in the continental USA and Alaska. <a href="https://ecos.fws.gov/ecp/species/9591">https://ecos.fws.gov/ecp/species/9591</a>	Breeds Apr 15 to Oct 31

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NAME	BREEDING SEASON
<p><b>Black Swift</b> <i>Cypseloides niger</i>            This is a Bird of Conservation Concern (BCC) throughout its range in the continental USA and Alaska.  <a href="https://ecos.fws.gov/ecp/species/8878">https://ecos.fws.gov/ecp/species/8878</a></p>	Breeds Jun 15 to Sep 10
<p><b>Black Turnstone</b> <i>Arenaria melanocephala</i>            This is a Bird of Conservation Concern (BCC) throughout its range in the continental USA and Alaska.</p>	Breeds elsewhere
<p><b>California Gull</b> <i>Larus californicus</i>            This is a Bird of Conservation Concern (BCC) throughout its range in the continental USA and Alaska.</p>	Breeds Mar 1 to Jul 31
<p><b>Clark's Grebe</b> <i>Aechmophorus clarkii</i>            This is a Bird of Conservation Concern (BCC) throughout its range in the continental USA and Alaska.</p>	Breeds Jun 1 to Aug 31
<p><b>Evening Grosbeak</b> <i>Coccothraustes vespertinus</i>            This is a Bird of Conservation Concern (BCC) throughout its range in the continental USA and Alaska.</p>	Breeds May 15 to Aug 10
<p><b>Golden Eagle</b> <i>Aquila chrysaetos</i>            This is not a Bird of Conservation Concern (BCC) in this area, but warrants attention because of the Eagle Act or for potential susceptibilities in offshore areas from certain types of development or activities.  <a href="https://ecos.fws.gov/ecp/species/1680">https://ecos.fws.gov/ecp/species/1680</a></p>	Breeds Jan 1 to Aug 31
<p><b>Lesser Yellowlegs</b> <i>Tringa flavipes</i>            This is a Bird of Conservation Concern (BCC) throughout its range in the continental USA and Alaska.  <a href="https://ecos.fws.gov/ecp/species/9679">https://ecos.fws.gov/ecp/species/9679</a></p>	Breeds elsewhere
<p><b>Marbled Godwit</b> <i>Limosa fedoa</i>            This is a Bird of Conservation Concern (BCC) throughout its range in the continental USA and Alaska.  <a href="https://ecos.fws.gov/ecp/species/9481">https://ecos.fws.gov/ecp/species/9481</a></p>	Breeds elsewhere
<p><b>Olive-sided Flycatcher</b> <i>Contopus cooperi</i>            This is a Bird of Conservation Concern (BCC) throughout its range in the continental USA and Alaska.  <a href="https://ecos.fws.gov/ecp/species/3914">https://ecos.fws.gov/ecp/species/3914</a></p>	Breeds May 20 to Aug 31
<p><b>Rufous Hummingbird</b> <i>selasphorus rufus</i>            This is a Bird of Conservation Concern (BCC) throughout its range in the continental USA and Alaska.  <a href="https://ecos.fws.gov/ecp/species/8002">https://ecos.fws.gov/ecp/species/8002</a></p>	Breeds Apr 15 to Jul 15
<p><b>Short-billed Dowitcher</b> <i>Limnodromus griseus</i>            This is a Bird of Conservation Concern (BCC) throughout its range in the continental USA and Alaska.  <a href="https://ecos.fws.gov/ecp/species/9480">https://ecos.fws.gov/ecp/species/9480</a></p>	Breeds Jun 1 to Aug 10

NAME	BREEDING SEASON
<b>Western Grebe <i>aechmophorus occidentalis</i></b> This is a Bird of Conservation Concern (BCC) throughout its range in the continental USA and Alaska. <a href="https://ecos.fws.gov/ecp/species/6743">https://ecos.fws.gov/ecp/species/6743</a>	Breeds Jun 1 to Aug 31
<b>Willet <i>Tringa semipalmata</i></b> This is a Bird of Conservation Concern (BCC) throughout its range in the continental USA and Alaska.	Breeds elsewhere
<b>Wrentit <i>Chamaea fasciata</i></b> This is a Bird of Conservation Concern (BCC) throughout its range in the continental USA and Alaska.	Breeds Mar 15 to Aug 10

## PROBABILITY OF PRESENCE SUMMARY

The graphs below provide our best understanding of when birds of concern are most likely to be present in your project area. This information can be used to tailor and schedule your project activities to avoid or minimize impacts to birds. Please make sure you read and understand the FAQ "Proper Interpretation and Use of Your Migratory Bird Report" before using or attempting to interpret this report.

### Probability of Presence (■)

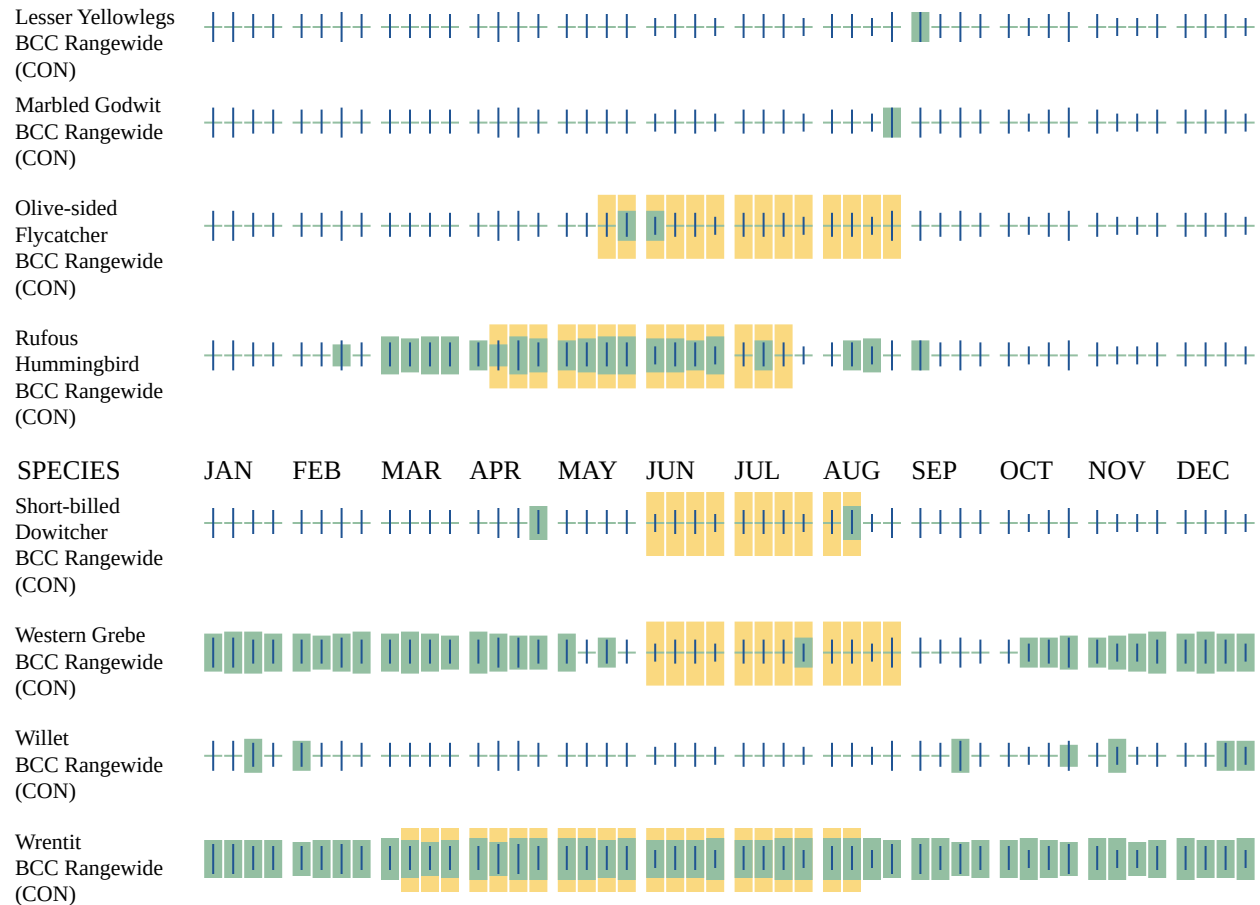
Each green bar represents the bird's relative probability of presence in the 10km grid cell(s) your project overlaps during a particular week of the year. (A year is represented as 12 4-week months.) A taller bar indicates a higher probability of species presence. The survey effort (see below) can be used to establish a level of confidence in the presence score. One can have higher confidence in the presence score if the corresponding survey effort is also high.

How is the probability of presence score calculated? The calculation is done in three steps:

1. The probability of presence for each week is calculated as the number of survey events in the week where the species was detected divided by the total number of survey events for that week. For example, if in week 12 there were 20 survey events and the Spotted Towhee was found in 5 of them, the probability of presence of the Spotted Towhee in week 12 is 0.25.
2. To properly present the pattern of presence across the year, the relative probability of presence is calculated. This is the probability of presence divided by the maximum probability of presence across all weeks. For example, imagine the probability of presence in week 20 for the Spotted Towhee is 0.05, and that the probability of presence at week 12 (0.25) is the maximum of any week of the year. The relative probability of presence on week 12 is  $0.25/0.25 = 1$ ; at week 20 it is  $0.05/0.25 = 0.2$ .
3. The relative probability of presence calculated in the previous step undergoes a statistical conversion so that all possible values fall between 0 and 10, inclusive. This is the probability of presence score.

### Breeding Season (■)





Additional information can be found using the following links:

- Birds of Conservation Concern <https://www.fws.gov/program/migratory-birds/species>
- Measures for avoiding and minimizing impacts to birds <https://www.fws.gov/library/collections/avoiding-and-minimizing-incident-take-migratory-birds>
- Nationwide conservation measures for birds <https://www.fws.gov/sites/default/files/documents/nationwide-standard-conservation-measures.pdf>

## MIGRATORY BIRDS FAQ

**Tell me more about conservation measures I can implement to avoid or minimize impacts to migratory birds.**

[Nationwide Conservation Measures](#) describes measures that can help avoid and minimize impacts to all birds at any location year round. Implementation of these measures is particularly important when birds are most likely to occur in the project area. When birds may be breeding in the area, identifying the locations of any active nests and avoiding their destruction is a very helpful impact minimization measure. To see when birds are most likely to occur and be breeding in your project area, view the Probability of Presence Summary. [Additional measures](#) or [permits](#)

may be advisable depending on the type of activity you are conducting and the type of infrastructure or bird species present on your project site.

### **What does IPaC use to generate the list of migratory birds that potentially occur in my specified location?**

The Migratory Bird Resource List is comprised of USFWS [Birds of Conservation Concern \(BCC\)](#) and other species that may warrant special attention in your project location.

The migratory bird list generated for your project is derived from data provided by the [Avian Knowledge Network \(AKN\)](#). The AKN data is based on a growing collection of [survey, banding, and citizen science datasets](#) and is queried and filtered to return a list of those birds reported as occurring in the 10km grid cell(s) which your project intersects, and that have been identified as warranting special attention because they are a BCC species in that area, an eagle ([Eagle Act](#) requirements may apply), or a species that has a particular vulnerability to offshore activities or development.

Again, the Migratory Bird Resource list includes only a subset of birds that may occur in your project area. It is not representative of all birds that may occur in your project area. To get a list of all birds potentially present in your project area, please visit the [Rapid Avian Information Locator \(RAIL\) Tool](#).

### **What does IPaC use to generate the probability of presence graphs for the migratory birds potentially occurring in my specified location?**

The probability of presence graphs associated with your migratory bird list are based on data provided by the [Avian Knowledge Network \(AKN\)](#). This data is derived from a growing collection of [survey, banding, and citizen science datasets](#).

Probability of presence data is continuously being updated as new and better information becomes available. To learn more about how the probability of presence graphs are produced and how to interpret them, go the Probability of Presence Summary and then click on the "Tell me about these graphs" link.

### **How do I know if a bird is breeding, wintering or migrating in my area?**

To see what part of a particular bird's range your project area falls within (i.e. breeding, wintering, migrating or year-round), you may query your location using the [RAIL Tool](#) and look at the range maps provided for birds in your area at the bottom of the profiles provided for each bird in your results. If a bird on your migratory bird species list has a breeding season associated with it, if that bird does occur in your project area, there may be nests present at some point within the timeframe specified. If "Breeds elsewhere" is indicated, then the bird likely does not breed in your project area.

### **What are the levels of concern for migratory birds?**

Migratory birds delivered through IPaC fall into the following distinct categories of concern:

1. "BCC Rangewide" birds are [Birds of Conservation Concern](#) (BCC) that are of concern throughout their range anywhere within the USA (including Hawaii, the Pacific Islands, Puerto Rico, and the Virgin Islands);
-

2. "BCC - BCR" birds are BCCs that are of concern only in particular Bird Conservation Regions (BCRs) in the continental USA; and
3. "Non-BCC - Vulnerable" birds are not BCC species in your project area, but appear on your list either because of the [Eagle Act](#) requirements (for eagles) or (for non-eagles) potential susceptibilities in offshore areas from certain types of development or activities (e.g. offshore energy development or longline fishing).

Although it is important to try to avoid and minimize impacts to all birds, efforts should be made, in particular, to avoid and minimize impacts to the birds on this list, especially eagles and BCC species of rangewide concern. For more information on conservation measures you can implement to help avoid and minimize migratory bird impacts and requirements for eagles, please see the FAQs for these topics.

### **Details about birds that are potentially affected by offshore projects**

For additional details about the relative occurrence and abundance of both individual bird species and groups of bird species within your project area off the Atlantic Coast, please visit the [Northeast Ocean Data Portal](#). The Portal also offers data and information about other taxa besides birds that may be helpful to you in your project review. Alternately, you may download the bird model results files underlying the portal maps through the [NOAA NCCOS Integrative Statistical Modeling and Predictive Mapping of Marine Bird Distributions and Abundance on the Atlantic Outer Continental Shelf](#) project webpage.

Bird tracking data can also provide additional details about occurrence and habitat use throughout the year, including migration. Models relying on survey data may not include this information. For additional information on marine bird tracking data, see the [Diving Bird Study](#) and the [nanotag studies](#) or contact [Caleb Spiegel](#) or [Pam Loring](#).

### **What if I have eagles on my list?**

If your project has the potential to disturb or kill eagles, you may need to [obtain a permit](#) to avoid violating the Eagle Act should such impacts occur.

### **Proper Interpretation and Use of Your Migratory Bird Report**

The migratory bird list generated is not a list of all birds in your project area, only a subset of birds of priority concern. To learn more about how your list is generated, and see options for identifying what other birds may be in your project area, please see the FAQ "What does IPaC use to generate the migratory birds potentially occurring in my specified location". Please be aware this report provides the "probability of presence" of birds within the 10 km grid cell(s) that overlap your project; not your exact project footprint. On the graphs provided, please also look carefully at the survey effort (indicated by the black vertical bar) and for the existence of the "no data" indicator (a red horizontal bar). A high survey effort is the key component. If the survey effort is high, then the probability of presence score can be viewed as more dependable. In contrast, a low survey effort bar or no data bar means a lack of data and, therefore, a lack of certainty about presence of the species. This list is not perfect; it is simply a starting point for identifying what birds of concern have the potential to be in your project area, when they might be there, and if they might be breeding (which means nests might be present). The list helps you know what to look for to confirm presence, and helps guide you in knowing when to implement conservation measures to avoid or minimize potential impacts from your project activities,

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should presence be confirmed. To learn more about conservation measures, visit the FAQ "Tell me about conservation measures I can implement to avoid or minimize impacts to migratory birds" at the bottom of your migratory bird trust resources page.

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## WETLANDS

Impacts to [NWI wetlands](#) and other aquatic habitats may be subject to regulation under Section 404 of the Clean Water Act, or other State/Federal statutes.

For more information please contact the Regulatory Program of the local [U.S. Army Corps of Engineers District](#).

Please note that the NWI data being shown may be out of date. We are currently working to update our NWI data set. We recommend you verify these results with a site visit to determine the actual extent of wetlands on site.

ESTUARINE AND MARINE DEEPWATER

- [E1UBL](#)
-



## **IPAC USER CONTACT INFORMATION**

Agency: Acorn Environmental  
Name: G.O. Graening  
Address: 520 Wallingford Lane  
City: Folsom  
State: CA  
Zip: 95630  
Email: ggraening@gmail.com  
Phone: 9164525442

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*EFH Mapper Medford Area*

## EFH Mapper Report

### EFH Data Notice

Essential Fish Habitat (EFH) is defined by textual descriptions contained in the fishery management plans developed by the regional fishery management councils. In most cases mapping data can not fully represent the complexity of the habitats that make up EFH. This report should be used for general interest queries only and should not be interpreted as a definitive evaluation of EFH at this location. A location-specific evaluation of EFH for any official purposes must be performed by a regional expert. Please refer to the following links for the appropriate regional resources.

[West Coast Regional Office](#)

[Alaska Regional Office](#)

### Query Results

Degrees, Minutes, Seconds: Latitude = 42° 17' 57" N, Longitude = 123° 9' 28" W


Decimal Degrees: Latitude = 42.299, Longitude = -122.842

The query location intersects with spatial data representing EFH and/or HAPCs for the following species/management units.

### EFH

No Essential Fish Habitats (EFH) were identified at the report location.

### Salmon EFH

Link	HUC Name	Species/Management Unit	Lifestage(s) Found at Location	Management Council	FMP
	Middle Rogue	Chinook Salmon, Coho Salmon	All	Pacific	Pacific Coast Salmon Plan

### HAPCs

No Habitat Areas of Particular Concern (HAPC) were identified at the report location.

### EFH Areas Protected from Fishing

No EFH Areas Protected from Fishing (EFHA) were identified at the report location.

**Spatial data does not currently exist for all the managed species in this area. The following is a list of species or management units for which there is no spatial data.**

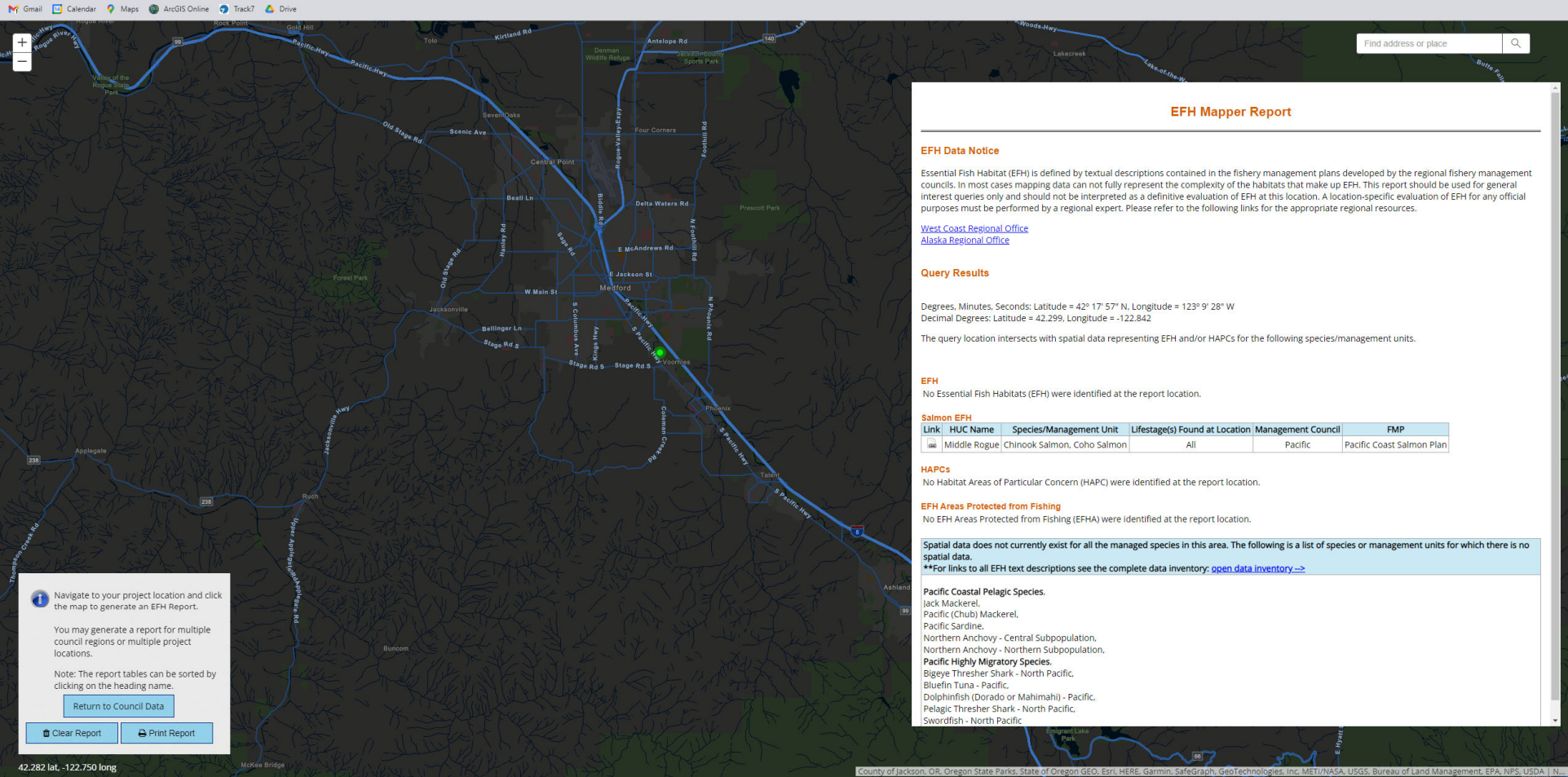
**\*\*For links to all EFH text descriptions see the complete data inventory: [open data inventory -->](#)**

**Pacific Coastal Pelagic Species,**  
 Jack Mackerel,  
 Pacific (Chub) Mackerel,  
 Pacific Sardine,  
 Northern Anchovy - Central Subpopulation,  
 Northern Anchovy - Northern Subpopulation,  
**Pacific Highly Migratory Species,**  
 Bigeye Thresher Shark - North Pacific,  
 Bluefin Tuna - Pacific,

**Spatial data does not currently exist for all the managed species in this area. The following is a list of species or management units for which there is no spatial data.**

**\*\*For links to all EFH text descriptions see the complete data inventory: [open data inventory -->](#)**

Dolphinfish (Dorado or Mahimahi) - Pacific,  
Pelagic Thresher Shark - North Pacific,  
Swordfish - North Pacific



**i** Navigate to your project location and click the map to generate an EFH Report.

You may generate a report for multiple council regions or multiple project locations.

Note: The report tables can be sorted by clicking on the heading name.

[Return to Council Data](#)

[Clear Report](#) [Print Report](#)

## EFH Mapper Report

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**EFH Data Notice**

Essential Fish Habitat (EFH) is defined by textual descriptions contained in the fishery management plans developed by the regional fishery management councils. In most cases mapping data can not fully represent the complexity of the habitats that make up EFH. This report should be used for general interest queries only and should not be interpreted as a definitive evaluation of EFH at this location. A location-specific evaluation of EFH for any official purposes must be performed by a regional expert. Please refer to the following links for the appropriate regional resources.

[West Coast Regional Office](#)  
[Alaska Regional Office](#)

**Query Results**

Degrees, Minutes, Seconds: Latitude = 42° 17' 57" N. Longitude = 123° 9' 28" W  
 Decimal Degrees: Latitude = 42.299, Longitude = -122.842

The query location intersects with spatial data representing EFH and/or HAPCs for the following species/management units.

**EFH**

No Essential Fish Habitats (EFH) were identified at the report location.

**Salmon EFH**

Link	HUC Name	Species/Management Unit	Lifestage(s) Found at Location	Management Council	FMP
	Middle Rogue	Chinook Salmon, Coho Salmon	All	Pacific	Pacific Coast Salmon Plan

**HAPCs**

No Habitat Areas of Particular Concern (HAPC) were identified at the report location.

**EFH Areas Protected from Fishing**

No EFH Areas Protected from Fishing (EFHA) were identified at the report location.

Spatial data does not currently exist for all the managed species in this area. The following is a list of species or management units for which there is no spatial data.  
 \*\*For links to all EFH text descriptions see the complete data inventory: [open data inventory ->](#)

**Pacific Coastal Pelagic Species.**  
 Jack Mackerel,  
 Pacific (Chub) Mackerel,  
 Pacific Sardine,  
 Northern Anchovy - Central Subpopulation,  
 Northern Anchovy - Northern Subpopulation.

**Pacific Highly Migratory Species.**  
 Bigeye Thresher Shark - North Pacific,  
 Bluefin Tuna - Pacific,  
 Dolphinfish (Dorado or Mahimahi) - Pacific,  
 Pelagic Thresher Shark - North Pacific,  
 Swordfish - North Pacific.

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*EFH Mapper Mill Casino Area*

## EFH Mapper Report

### EFH Data Notice

Essential Fish Habitat (EFH) is defined by textual descriptions contained in the fishery management plans developed by the regional fishery management councils. In most cases mapping data can not fully represent the complexity of the habitats that make up EFH. This report should be used for general interest queries only and should not be interpreted as a definitive evaluation of EFH at this location. A location-specific evaluation of EFH for any official purposes must be performed by a regional expert. Please refer to the following links for the appropriate regional resources.

[West Coast Regional Office](#)

[Alaska Regional Office](#)

### Query Results

Degrees, Minutes, Seconds: Latitude = 43° 23' 39" N, Longitude = 125° 46' 53" W


Decimal Degrees: Latitude = 43.394, Longitude = -124.219

The query location intersects with spatial data representing EFH and/or HAPCs for the following species/management units.

### EFH

No Essential Fish Habitats (EFH) were identified at the report location.

### Salmon EFH

Link	HUC Name	Species/Management Unit	Lifestage(s) Found at Location	Management Council	FMP
	Coos	Chinook Salmon, Coho Salmon	All	Pacific	Pacific Coast Salmon Plan

### HAPCs

No Habitat Areas of Particular Concern (HAPC) were identified at the report location.

### EFH Areas Protected from Fishing

No EFH Areas Protected from Fishing (EFHA) were identified at the report location.

**Spatial data does not currently exist for all the managed species in this area. The following is a list of species or management units for which there is no spatial data.**

**\*\*For links to all EFH text descriptions see the complete data inventory: [open data inventory -->](#)**

**Pacific Coastal Pelagic Species,**  
 Jack Mackerel,  
 Pacific (Chub) Mackerel,  
 Pacific Sardine,  
 Northern Anchovy - Central Subpopulation,  
 Northern Anchovy - Northern Subpopulation,  
**Pacific Highly Migratory Species,**  
 Bigeye Thresher Shark - North Pacific,  
 Bluefin Tuna - Pacific,

**Spatial data does not currently exist for all the managed species in this area. The following is a list of species or management units for which there is no spatial data.**

**\*\*For links to all EFH text descriptions see the complete data inventory: [open data inventory -->](#)**

Dolphinfish (Dorado or Mahimahi) - Pacific,  
Pelagic Thresher Shark - North Pacific,  
Swordfish - North Pacific





## EFH Mapper Report

### EFH Data Notice

Essential Fish Habitat (EFH) is defined by textual descriptions contained in the fishery management plans developed by the regional fishery management councils. In most cases mapping data can not fully represent the complexity of the habitats that make up EFH. This report should be used for general interest queries only and should not be interpreted as a definitive evaluation of EFH at this location. A location-specific evaluation of EFH for any official purposes must be performed by a regional expert. Please refer to the following links for the appropriate regional resources.

[West Coast Regional Office](#)

[Alaska Regional Office](#)







### Query Results

Degrees, Minutes, Seconds: Latitude = 43° 23' 38" N, Longitude = 125° 46' 59" W


Decimal Degrees: Latitude = 43.394, Longitude = -124.217

The query location intersects with spatial data representing EFH and/or HAPCs for the following species/management units.

### EFH

Link	Data Caveats	Species/Management Unit	Lifestage(s) Found at Location	Management Council	FMP
		Finfish	ALL	Pacific	
		Coastal Pelagic Species	ALL	Pacific	
		Groundfish	ALL	Pacific	Groundfish

### Salmon EFH

Link	HUC Name	Species/Management Unit	Lifestage(s) Found at Location	Management Council	FMP
	Coos	Chinook Salmon, Coho Salmon	All	Pacific	Pacific Coast Salmon Plan

### HAPCs

No Habitat Areas of Particular Concern (HAPC) were identified at the report location.

### EFH Areas Protected from Fishing

No EFH Areas Protected from Fishing (EFHA) were identified at the report location.

**Spatial data does not currently exist for all the managed species in this area. The following is a list of species or management units for which there is no spatial data.**

**\*\*For links to all EFH text descriptions see the complete data inventory: [open data inventory -->](#)**

#### **Pacific Coastal Pelagic Species,**

Jack Mackerel,

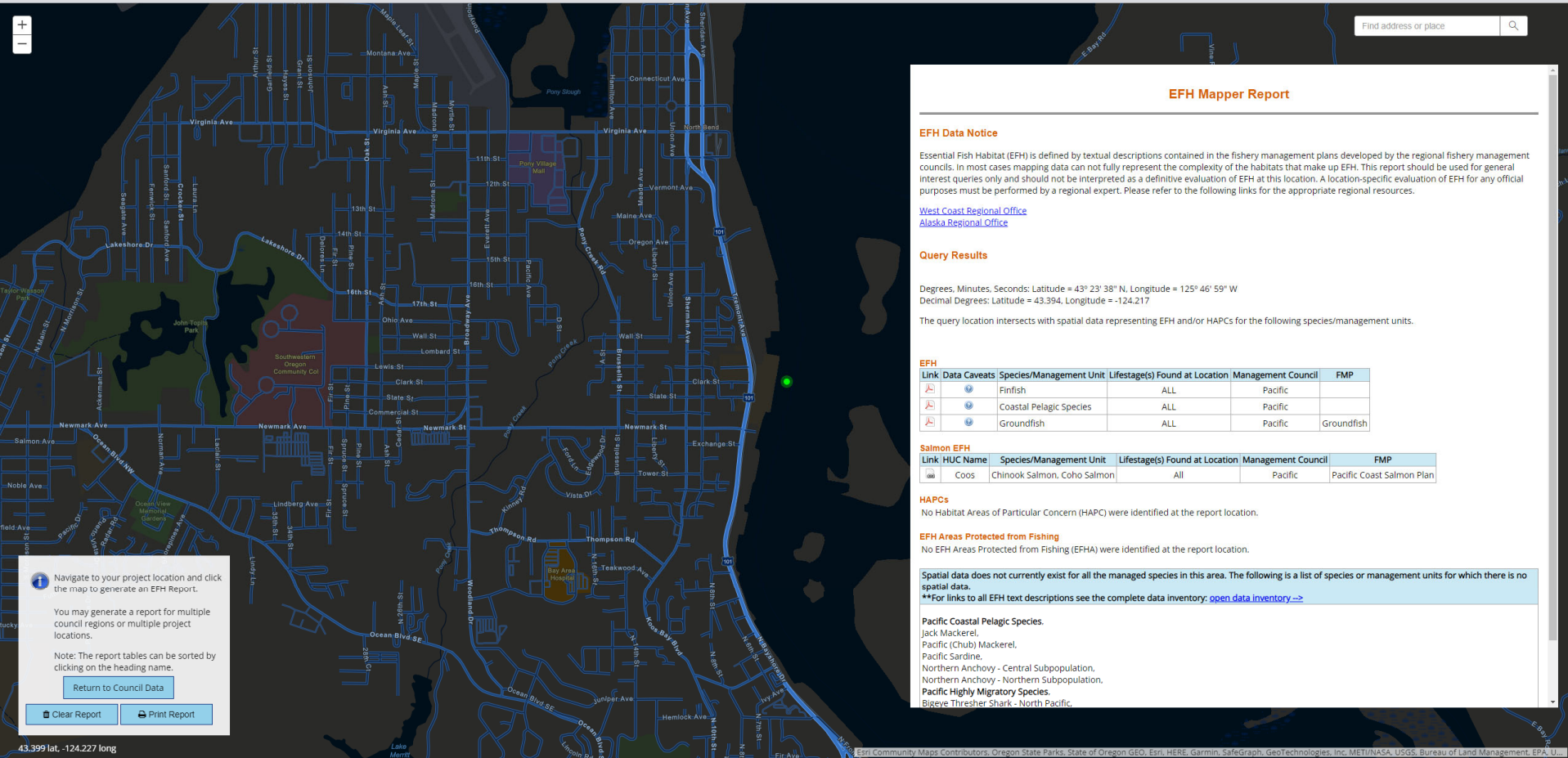
Pacific (Chub) Mackerel,

Pacific Sardine,

**Spatial data does not currently exist for all the managed species in this area. The following is a list of species or management units for which there is no spatial data.**

**\*\*For links to all EFH text descriptions see the complete data inventory: [open data inventory -->](#)**

Northern Anchovy - Central Subpopulation,  
Northern Anchovy - Northern Subpopulation,  
**Pacific Highly Migratory Species,**  
Bigeye Thresher Shark - North Pacific,  
Bluefin Tuna - Pacific,  
Dolphinfish (Dorado or Mahimahi) - Pacific,  
Pelagic Thresher Shark - North Pacific,  
Swordfish - North Pacific



**i** Navigate to your project location and click the map to generate an EFH Report.

You may generate a report for multiple council regions or multiple project locations.

Note: The report tables can be sorted by clicking on the heading name.

[Return to Council Data](#)

[Clear Report](#) [Print Report](#)

43.399 lat, -124.227 long

## EFH Mapper Report

### EFH Data Notice

Essential Fish Habitat (EFH) is defined by textual descriptions contained in the fishery management plans developed by the regional fishery management councils. In most cases mapping data can not fully represent the complexity of the habitats that make up EFH. This report should be used for general interest queries only and should not be interpreted as a definitive evaluation of EFH at this location. A location-specific evaluation of EFH for any official purposes must be performed by a regional expert. Please refer to the following links for the appropriate regional resources.

- [West Coast Regional Office](#)
- [Alaska Regional Office](#)

### Query Results

Degrees, Minutes, Seconds: Latitude = 43° 23' 38" N, Longitude = 125° 46' 59" W  
 Decimal Degrees: Latitude = 43.394, Longitude = -124.217

The query location intersects with spatial data representing EFH and/or HAPCs for the following species/management units.

### EFH

Link	Data Caveats	Species/Management Unit	Lifestage(s) Found at Location	Management Council	FMP
		Finfish	ALL	Pacific	
		Coastal Pelagic Species	ALL	Pacific	
		Groundfish	ALL	Pacific	Groundfish

### Salmon EFH

Link	HUC Name	Species/Management Unit	Lifestage(s) Found at Location	Management Council	FMP
	Coos	Chinook Salmon, Coho Salmon	All	Pacific	Pacific Coast Salmon Plan

### HAPCs

No Habitat Areas of Particular Concern (HAPC) were identified at the report location.

### EFH Areas Protected from Fishing

No EFH Areas Protected from Fishing (EFHA) were identified at the report location.

Spatial data does not currently exist for all the managed species in this area. The following is a list of species or management units for which there is no spatial data.

\*\*For links to all EFH text descriptions see the complete data inventory: [open data inventory ->](#)

- Pacific Coastal Pelagic Species.**  
 Jack Mackerel,  
 Pacific (Chub) Mackerel,  
 Pacific Sardine,  
 Northern Anchovy - Central Subpopulation,  
 Northern Anchovy - Northern Subpopulation,  
**Pacific Highly Migratory Species.**  
 Bigeye Thresher Shark - North Pacific.

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*NOAA Fisheries Critical Habitat Report- Mill Casino Site*

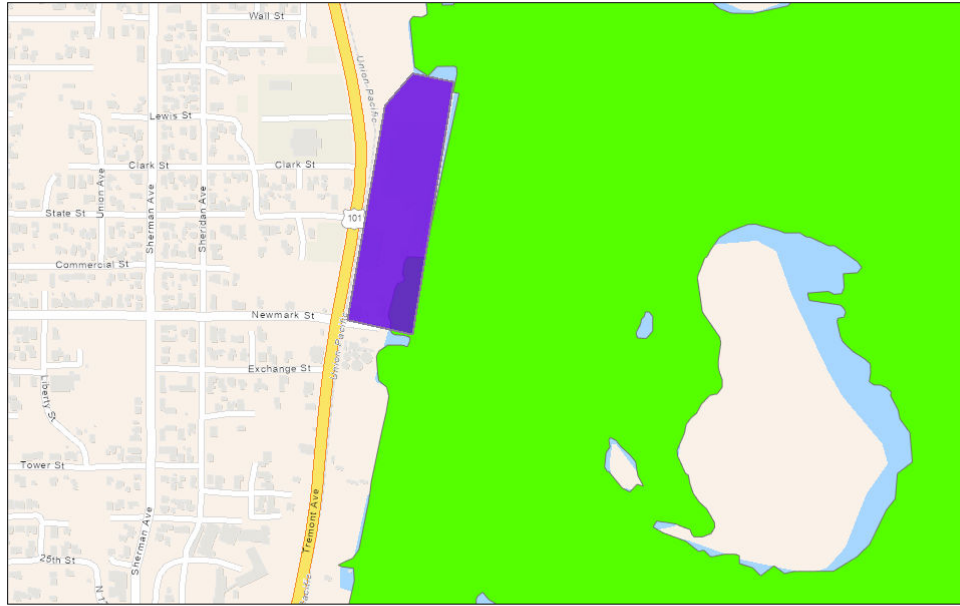


# NMFS Critical Habitat Report

## Area of Interest (AOI) Information

Area : 0.05 km<sup>2</sup>

Jun 14 2023 10:11:31 Pacific Daylight Time



 All\_critical\_habitat\_poly\_20230502



## Summary

Name	Count	Area(km <sup>2</sup> )	Length(m)
All Critical Habitat Polyline	0	N/A	0
All Critical Habitat Polygon	1	< 0.01	N/A

## All Critical Habitat Polygon

#	Scientific Name	Common Name	Listed Entity	Area(km <sup>2</sup> )
1	Acipenser medirostris	Sturgeon, green	Sturgeon, green [Southern DPS]	< 0.01

# ***APPENDIX R***

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***UPDATED EXPANDED REGULATORY AND ENVIRONMENTAL  
SETTING***



# APPENDIX R

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## UPDATED EXPANDED REGULATORY AND ENVIRONMENTAL SETTING

### 1 INTRODUCTION

This appendix presents an expanded discussion of the regulations cited in the Environmental Impact Statement (EIS) for the Coquille Indian Tribe (Tribe) Fee-to-Trust and Gaming Facility Project (Proposed Project) that may be applicable to the Proposed Action and alternatives analyzed. Expanded regulatory discussions are provided for the following resource area or issue:

<b>EIS Section</b>	<b>Resource Area or Issue</b>
3.2	Geology and Soils
3.3	Water Resources
3.4	Air Quality
3.5	Biological Resources
3.6	Cultural and Paleontological Resources
3.7	Socioeconomic Conditions
3.8	Transportation and Circulation
3.9	Land Use
3.11	Noise
3.12	Hazardous Materials
3.13	Aesthetics

### 2 GEOLOGY AND SOILS

#### SEISMIC INTENSITY: THE MODIFIED MERCALLI INTENSITY SCALE

Seismic intensity is the measurement of the strength of shaking experienced during an earthquake. The Modified Mercalli Intensity (MMI) scale is a common measure of earthquake effects due to ground shaking intensity. The MMI scale is an arbitrary ranking of intensity based on observed effects from an earthquake and does not have a mathematical basis. The MMI scale is composed of 12 increasing levels of intensity that range from imperceptible shaking to catastrophic destruction, expressed by Roman numerals (**Table 1**). The “intensity” reported generally decreases the farther the location is removed from the earthquake epicenter. The lower numbers of the MMI scale generally describe the manner in which people feel the earthquake, while the higher numbers of the scale define observed structural damage that could accompany an earthquake (Bolt, 1988). Intensity levels ranging from IV to X could cause moderate to significant structural damage.

The damage level represents the estimated overall level of damage that will occur for various MMI scale intensity levels. The damage, however, will not be uniform. Some buildings will experience substantially more damage than this overall level, and others will experience substantially less damage. The age, material, type, method of construction, size, and shape of a building all affect its performance (Bolt, 1988). In addition, geologic factors of a particular site strongly influence the intensity of an earthquake – sites on soft ground or alluvium experience intensities two to three values higher than sites on bedrock (Bolt, 1988). Maximum peak ground acceleration at the Medford Site is predicted to be approximately

1.96 meters per second per second (approximately 20% of the acceleration of gravity), and thus is expected to cause between MMI scale intensity level VII and VIII effects (USGS, 2014). Ground shaking effects of this intensity could include considerable damage in ordinary substantial buildings, with partial collapse, while damage would be slight in specially designed structures.

**TABLE 1**  
MODIFIED MERCALLI INTENSITY SCALE

<b>Intensity Value</b>	<b>Intensity Description</b>	<b>Average Peak Acceleration</b>
I.	Not felt except by very few persons under especially favorable circumstances.	< 0.0015 g <sup>1</sup>
II.	Felt only by a few persons at rest, especially on upper floors of buildings. Delicately suspended objects may swing.	< 0.0015 g
III.	Felt quite noticeably indoors, especially on upper floors of buildings, but many persons do not recognize it as an earthquake. Standing motorcars may rock slightly. Vibration similar to the passing of a truck. Duration estimated.	< 0.0015 g
IV.	During the day felt indoors by many, outdoors by few. At night, some awakened. Dishes, windows, doors disturbed; walls make cracking sound. Sensation like heavy truck striking building. Standing motorcars rocked noticeably.	0.015 g-0.02 g
V.	Felt by nearly everyone, many awakened. Some dishes, windows, etc., broken; a few instances of cracked plaster; unstable objects overturned. Disturbances of trees, poles, and other tall objects sometimes noticed. Pendulum clocks may stop.	0.03 g-0.04 g
VI.	Felt by all, many frightened and run outdoors. Some heavy furniture moved; a few instances of fallen plaster or damaged chimneys. Damage slight.	0.06 g-0.07 g
VII.	Everybody runs outdoors. Damage negligible in buildings of good design and construction; slight to moderate in well-built ordinary structures; considerable in poorly built or badly designed structures; some chimneys broken. Noticed by persons driving motorcars.	0.10 g-0.15 g
VIII.	Damage slight in specially designed structures; considerable in ordinary substantial buildings, with partial collapse; great in poorly built structures. Panel walls thrown out of frame structures. Fall of chimneys, factory stacks, columns, monuments, walls. Heavy furniture overturned. Sand and mud ejected in small amounts. Changes in well water. Persons driving motorcars disturbed.	0.25 g-0.30 g
IX.	Damage considerable in specially designed structures; well-designed frame structures thrown out of plumb; great in substantial buildings, with partial collapse. Buildings shifted off foundations. Ground cracked conspicuously. Underground pipes broken.	0.50 g-0.55 g
X.	Some well-built wooden structures destroyed; most masonry and frame structures destroyed with foundations; ground badly cracked. Rails bent. Landslides considerable from riverbanks and steep slopes. Shifted sand and mud. Water splashed (slopped) over banks.	> 0.60 g
XI.	Few, if any, (masonry) structures remain standing. Bridges destroyed. Broad fissures in ground. Underground pipelines completely out of service. Earth slumps and land slips in soft ground. Rails bent greatly.	> 0.60 g
XII.	Damage total. Practically all works of construction are damaged greatly or destroyed. Waves seen on ground surface. Lines of sight and level are distorted. Objects are thrown upward into the air.	> 0.60 g
Notes: <sup>1</sup> g is gravity = 980 centimeters per second squared Source: Bolt, 1988.		

## **LIQUEFACTION**

Liquefaction is the temporary transformation of saturated, non-cohesive material from a relatively stable, solid condition to a liquefied state as a result of increased soil pore water pressure. Soil pore water pressure is the water pressure between soil particles. Liquefaction occurs most often in non-marine soils if three factors are present: seismic activity, loose sand or silty soil, and shallow groundwater. Liquefaction potential has been found to be greatest where the groundwater is within a depth of 50 feet or less, and submerged loose, fine sands occur within that depth. Liquefaction potential decreases with increasing grain size and clay and gravel content, but increases as the ground acceleration and duration of shaking increases.

## **HYDROLOGIC SOIL GROUPS**

The hydrologic soil group is a classification based on the runoff potential of the soils when thoroughly saturated by a long duration storm. Soils are grouped into four classes with letters ranging from A to D, with A being coarse-grained soils with high infiltration and low runoff potential, and D being mostly fine-grained clays with extremely slow infiltration and high runoff potential.

## **SOILS CAPABILITY CLASS**

The soils capability class indicates limitations for practical use for food, fiber, or forage production. Classes are designated 1 through 8, with additional coding by subclass indicated by lower case letters. Class 1 is the least restricted with Class 8 being severely limited and nearly precluded from use for commercial crop production. Prime farmland soils are those located on land that has a combination of physical and chemical characteristics best suited to produce forage, feed, food, and other crops.

## **VOLCANIC HAZARD**

Volcanically active regions in the state of Oregon include the major 19 volcanoes scattered in the Cascade Range area. Volcanic hazards include tephra falls, lahar or debris flows, pyroclastic flows and surges, lateral blasts, and debris avalanches (Sherrod and Smith, 1995). Tephra is produced during volcanic activity, and can include dust, ash, cinders, pumice, and blocks (Blake et al., 2008). Tephra falls present a great hazard even for distant communities surrounding active volcanoes, as the material can travel up to 225 miles per hour and be carried more than 5 miles from the volcano. Lahar, also called mudflows or debris flows, are landslides consisting of pyroclastic material traveling down the slopes of a volcano, and the deposits these slides produce (Blake et al., 2008). Lahar present the greatest hazard from volcanism because they travel farther than any other hazards with the exception of airborne tephra and affect river valley communities where extensive human development often occurs (Sherrod and Smith, 1995). The Medford Site is approximately 54 miles from the nearest volcano (Crater Lake) and approximately 74 miles from Cinnamon Butte.

## **GEOLOGY OF THE MEDFORD SITE AND PHOENIX SITE**

The Medford Site lies within the Cascade Volcanoes geologic province (Cascade province) that is east of the Klamath Mountains in the southern portion of the Middle Cascade Mountains of southwestern Oregon. The Cascade province is comprised of two volcanic regions: the older, broader, and deeply eroded Western Cascades; and the higher, easterly volcanoes of the High Cascades. The Cascade Range, like most of the Pacific Northwest, was formed by an active volcanic arc associated with the under-thrusting of oceanic lithosphere beneath North America in the Cascadia Subduction Zone. Subduction zones are formed when one tectonic plate is forced underneath another and the friction and pressure of the plates heats the material which rises and forms mountain ranges, earthquakes, and other volcanic attributes. In the case of the Cascade Range, the Juan de Fuca oceanic plate, located offshore

approximately 200 miles west of Medford, is subsiding under the North American continental plate (Pacific Northwest Seismograph Network, U.S. Geological Survey, Awtater, & Clague, n.d.).

## **SATURATED HYDRAULIC CONNECTIVITY FOR THE MEDFORD SITE**

Saturated hydraulic conductivity is a quantitative measurement of the movement of water through saturated soil, abbreviated “Ksat.” The drainage class is a measure of the frequency and duration of wet periods under the conditions in which the soil developed. While this classification is similar to Ksat, drainage class accounts for conditions of the soil in its natural state. In moderately drained soils, which are the majority of the Medford Site, water is slowly removed from the soil. Free moisture is not likely to be encountered at deep to very deep levels. Erosion hazard ranges from slight to very severe.

The Agate-Winlo complex has a soil capability classes of 4s and 6s where the soils have a severe limitation that reduces the choice of plants or needs very careful management where the soil is shallow, droughty, or stony. The Gregory soils are in the 2w capability class when irrigated, indicating that the soils have moderate limitations that require moderate conservation practices and water in the soil may interfere with plant growth or cultivation.

## **GEOLOGY OF THE MILL CASINO SITE**

The Mill Casino Site, as described in Section 2.2, is located within Coos County in the Town of North Bend on the east shore of the bay. The 10.95-acre Mill Casino Site is located within the west Coastal Mountain Range of Oregon.

Volcanic activity approximately 66 million years ago during the Cretaceous Period created offshore islands beginning in the southern portion of the current coastal range. These Roseburg volcanics were followed by the Siletz River Volcanics in the northern portions of the range, and lastly a series of basalt flows from the Columbia River also added to these formations with some smaller flows between (USFWS, 2009). Many of the formations are the result of pillow basalt formations created when a hot basalt flow rapidly cooled upon meeting the salt water of the ocean. These deposits offshore were then pushed into the continental plate. This tectonic collision forced the basalt formations (and newer sedimentary rock formations that include marine terrace deposits) upward and created the coastal range.

The geologic boundaries of the coast range formation extend from southwest Washington State in the north to near the Coquille River in the south where the older and taller Klamath Mountains begin. In the east, the mountains begin as foothills forming the western edge of the Willamette Valley and continue west to the coastline and beyond where the basalt formation tapers off into the continental shelf and ends at the continental slope with several banks and basins offshore (Berkman, 1990).

The Coastal Range is divided into three categories, North, Central, and South, with the South being the “oldest” formed. The southern portion of the coast includes mountains and cliffs. Bone Mountain is 3,547 feet amsl and some cliffs are as high as 400 feet (Berkman, 1990). Because Southwestern Oregon’s coast range was likely formed by islands that were pushed together, many river valleys were formed and steep crevasses allowed for three major rivers to develop in the area: Coos River, Coquille River, and the Umpqua River.

## **3 WATER RESOURCES**

Executive Order 11988 Executive Order (EO) 11988 pertaining to floodplain management states that each federal agency shall “provide leadership and shall take action to reduce the risk of flood loss.” In order for

the BIA to carry out its responsibility, the order requires determination of whether a project is located within a floodplain and consideration of alternative project locations not within a floodplain. If the project must reside on a floodplain, BIA must minimize any potential impacts. The Federal Emergency Management Agency (FEMA) is responsible for predicting the potential for flooding in most areas. FEMA routinely performs this function through the update and issuance of Flood Insurance Rate Maps (FIRM) that depict various levels of predicted inundation.

## **CLEAN WATER ACT**

The federal Clean Water Act (CWA), 33 USC Section 1251(a)(2), sets forth national goals that waters shall be “fishable, swimmable” waters (CWA Section 101 [a][2]). The CWA addresses both point and non-point sources of pollution (Sections 402 and 319, respectively), both of which are controlled through the National Pollution Discharge Elimination System (NPDES). An NPDES permit must be obtained in order to discharge pollutants into “Waters of the U.S.” In some states, the US Environmental Protection Agency (USEPA) has delegated permitting authority to the regional water quality agency, in this case the Washington Department of Ecology. However, the USEPA retains authority to regulate discharges to waters on tribal lands, including the alternative sites identified in this EIS. The CWA also directs states to establish water quality standards for waterways in their jurisdiction and to review and update these standards every three years (Section 303[c]).

Section 303(d) of the CWA requires states to periodically prepare a list of all surface waters in their respective jurisdictions for which beneficial uses of the water – such as for drinking, recreation, aquatic habitat, and industrial use – are impaired by pollutants. These include water bodies that do not meet state surface water quality standards and are not expected to improve within the next two years. States establish a priority ranking of these impaired waters for purposes of developing water quality control plans that include Total Maximum Daily Loads (TMDL). A TMDL is a calculation of the maximum amount of a pollutant that a water body can receive and still meet water quality standards, and includes an allocation for each of the pollutant’s sources. These water quality control plans describe how an impaired water body will meet water quality standards through the use of TMDLs.

## **SAFE DRINKING WATER ACT**

Under the mandate of the Safe Drinking Water Act, the USEPA sets legally enforceable National Primary Drinking Water Regulations (primary standards) that apply to public water systems. These standards are established to protect human health by limiting the levels of contaminants in drinking water. The USEPA also defines National Secondary Drinking Water Regulations (secondary standards) for contaminants that cause cosmetic and aesthetic effects, but not health effects. The USEPA recommends that these secondary standards be met but does not require systems for compliance. Both primary and secondary drinking water standards are expressed as either Maximum Contaminant Levels (MCL), which define the highest level of a contaminant allowed in drinking water, or Maximum Contaminant Level Goals (MCLG), which define the level of a contaminant below which there is no known or expected risk to health.

## **2011 ODEQ ROGUE BASIN GROUNDWATER INVESTIGATION**

According to a 2011 ODEQ Rogue Basin Groundwater Investigation, contaminants of substantial groundwater quality concern for the Middle Rogue Sub-basin include nitrate, bacteria, arsenic, and fluoride (ODEQ, 2013). The 2011 Rogue Basin Groundwater Investigation tested 52 domestic wells in rural areas of Jackson County and Josephine County. Samples were tested for the following primary constituents of concern: nitrogen, arsenic, fluoride, boron, manganese, and arsenic. Findings concluded that the majority of groundwater contamination by nitrate in Jackson County centered on Central Point, West Medford, and North Ashland. All Central Point wells had moderate to high levels of nitrate and

moderate nitrate concentrations were detected in all wells immediately north and west of Medford. This is likely caused by agricultural uses as the highest levels detected were adjacent to heavy agricultural practices. Fluoride levels were found to be low in the majority of the wells. Boron levels were elevated in only two wells; however, the location of these wells was not cited. Manganese levels were detected in some wells, but none were above the thresholds or elevated. Arsenic levels were detected in approximately 17% of the wells, but only three were over the 10 parts per billion (ppb) threshold and were not located in or near Medford. Well data is available in Appendix D of the 2011 Rogue Basin Groundwater Investigation (ODEQ, 2013).

## 4 AIR QUALITY

### NATIONAL AMBIENT AIR QUALITY STANDARDS

The Clean Air Act (CAA) of 1970, as amended, establishes air quality standards for several pollutants that have been identified by the USEPA as being detrimental to human health. The USEPA has designated six criteria air pollutants (CAP): ozone (O<sub>3</sub>), carbon monoxide (CO), particulate matter (PM, 10 or 2.5 microns in size notated as PM<sub>10</sub> or PM<sub>2.5</sub>, respectively), nitrogen dioxide (NO<sub>2</sub>), sulfur dioxide (SO<sub>2</sub>), and lead (Pb). PM<sub>10</sub> and CO are CAPs of special concern. These pollutants are termed “criteria” pollutants because the USEPA has established specific concentration threshold criteria based upon specific medical evidence of health effects or visibility reduction, soiling, nuisance, and other forms of damage.

The federal government has established National Ambient Air Quality Standards (NAAQS) to define levels of air quality that protect the public health and welfare from the known adverse effects of air pollutants. Standards were developed for all CAPs. These NAAQS are divided into primary standards and secondary standards. Primary standards are designed to protect public health and secondary standards are intended to protect the public welfare from effects such as visibility reduction, soiling, nuisance, and other forms of damage. Ambient air quality standards are presented in **Table 2**.

Areas are designated attainment, nonattainment, or maintenance by the USEPA depending on whether the area is below or exceeding the established NAAQS. Nonattainment areas must take steps towards attainment within a specific period of time. Once an area reaches attainment for a particular criteria pollutant, then the area is redesignated as attainment or maintenance. The CAA places most of the responsibility on states to achieve compliance with the NAAQS. States, municipal statistical areas, air basins, and counties that contain areas of nonattainment are required to develop a State Implementation Plan (SIP), which outlines policies and procedures designed to bring the nonattainment area into compliance with the NAAQS.

The Medford-Ashland Air Quality Maintenance Area (AQMA), which encompasses the Medford and Phoenix sites (Alternatives A and B), is designated maintenance for PM<sub>10</sub>. The Medford UGB, which encompasses the Medford Site (Alternative A), is designated maintenance for CO. The Medford-Ashland AQMA and the Medford UGB are designated attainment for all other CAPs (USEPA, 2019). There are no CAPs of special concern in the Coos Bay region because Coos County is designated attainment for all CAPs (USEPA, 2019).

**TABLE 2**  
NATIONAL AMBIENT AIR QUALITY STANDARDS

Pollutants	Averaging Time	Primary		Secondary		Violation Criteria
		ppm	µg/m <sup>3</sup>	ppm	µg/m <sup>3</sup>	
O <sub>3</sub>	8 hours	0.070	-	0.070	-	Annual fourth-highest daily maximum 8-hour concentration, averaged over 3 years
CO	8 hours	9	-	-	-	Not to be exceeded more than once per year
	1 hour	35	-	-	-	Not to be exceeded more than once per year
NO <sub>2</sub>	1 year	0.053	-	0.053	-	Annual mean
	1 hour	0.100	-	-	-	98 <sup>th</sup> percentile of 1-hour daily maximum concentrations, averaged over 3 years
SO <sub>2</sub>	1 hour	0.075	-	-	-	99 <sup>th</sup> percentile of 1-hour daily maximum concentrations, averaged over 3 years
	3 hours	-	-	0.5	-	Not to be exceeded more than once per year
PM <sub>10</sub>	24 hours	-	150	-	150	Not to be exceeded more than once per year on average over 3 years
PM <sub>2.5</sub>	1 year	-	12.0	-	15.0	Annual mean, averaged over 3 years
	24 hours	-	35	-	35	98 <sup>th</sup> percentile, averaged over 3 years
Pb	Rolling 3 month average	-	0.15	-	0.15	Not to be exceeded
Notes: µg/m <sup>3</sup> = micrograms per cubic meter of air ppm = parts per million Source: USEPA, 2019b.						

## STATE IMPLEMENTATION PLAN

Nonattainment areas must take steps towards attainment by a specific timeline. These steps are consolidated within the SIP as mandated by the CAA. The SIP sets forth the state's strategy for achieving federal air quality standards. The SIP is not a single document, but a compilation of new and previously submitted plans, programs (such as monitoring, modeling, permitting), district or regional rules, state regulations, and federal controls. All of the items that are included in the SIP are published in the CFR.

In 2001, ODEQ demonstrated that the Medford UGB had attained the 8-hour CO standard and submitted a maintenance plan which was approved by the USEPA in 2002. A limited CO maintenance plan was submitted based on USEPA guidance in December 2015 (ODEQ, 2015). There have been several PM<sub>10</sub> plans developed for the Medford-Ashland AQMA. The initial attainment plan was adopted in 1991 and updated in 1998 and 2004. On June 19, 2006, ODEQ approved and updated the PM<sub>10</sub> attainment plan, which also included a maintenance plan (40 C.F.R § 1.52,81 2006).

ODEQ is the air quality management agency for the geographic region encompassing the Medford-Ashland region and the geographic region encompassing the Coos Bay area. ODEQ's role is to establish statewide standards and rules that must be met. Local agencies may adopt more stringent standards and rules if the local air quality requires such action. The ODEQ has the responsibility for all outdoor air

pollution sources within its jurisdiction, including automobiles, chemical paper, saw, and pulp mills, and aluminum reduction plants.

The ODEQ operate an air quality monitoring network that determines whether the Medford-Ashland region and Coos Bay area of Oregon complies with the NAAQS. There are four monitoring stations in Medford which monitor PM<sub>10</sub>, PM<sub>2.5</sub>, and O<sub>3</sub>. CO monitoring in Medford ended in 2010. There is one monitoring station in the City of Roseburg, approximately 45 miles west of North Bend, which monitors PM<sub>10</sub> and PM<sub>2.5</sub>. ODEQ does not operate monitoring stations within Coos County.

## **FEDERAL GENERAL CONFORMITY**

Under the General Conformity Rule, most recently updated in March of 2010, the lead agency with respect to a federal action is required to demonstrate that the proposed federal action conforms to the applicable SIP before the action is taken. There are two phases to a demonstration of general conformity.

- 1) The Conformity Review process, which entails an initial review of the federal action to assess whether a full conformity determination is necessary, and
- 2) The Conformity Determination process, which requires that a proposed federal action be demonstrated to conform to the applicable SIP.

The Conformity Review requires the lead agency to compare estimated emissions to the applicable general conformity *de minimis* threshold(s). If the emission estimates from step one is below the applicable threshold(s), then a general conformity determination is not necessary and the full Conformity Determination is not required. If emission estimates are greater than *de minimis* levels, the lead agency must conduct a Conformity Determination.

## **HAZARDOUS AIR POLLUTANTS (HAPs)**

In addition to the criteria pollutants discussed above, Hazardous Air Pollutants (HAPs) are a group of pollutants of concern. HAPs are listed airborne chemicals developed by the USEPA. Sources of HAPs include industrial processes such as petroleum refining and chrome plating operations, commercial operations such as gasoline stations and dry cleaners, cigarette smoke, and motor vehicle exhaust. Cars and trucks release at least forty different HAPs. The most important, in terms of health risk, are diesel particulates, benzene, formaldehyde, 1,3-butadiene, and acetaldehyde. Health effects of HAPs can include cancer, birth defects, and neurological damage.

HAPs are less pervasive in the urban atmosphere than CAPs, but are linked to short-term (acute) or long-term (chronic or carcinogenic) adverse human health effects. Currently, there are over 188 HAPs listed by the USEPA. The majority of the estimated health risk from HAPs can be attributed to relatively few compounds, the most important being the HAPs found in diesel particulate matter (DPM). Diesel engines emit a complex mixture of air pollutants, composed of gaseous and solid material. The visible emissions in diesel exhaust are particulate matter that includes carbon particles or “soot.” Diesel exhaust also contains a variety of harmful gases and over 40 other cancer causing substances. Exposure to DPM is a health hazard, particularly to children whose lungs are still developing and the elderly who may have other serious health problems.

Environmental tobacco smoke (ETS) is a complex mixture of thousands of gases and fine particulate matter; many of these compounds have been defined by the USEPA as HAPs. The composition will vary depending on heat of combustion, tobacco content and additives present, and type of filter material used. Researchers distinguish cigarette smoke as being comprised of two main components: mainstream and



sidestream smoke. ETS is a combination of exhaled mainstream smoke, sidestream smoke, and compounds that diffuse through the cigarette paper.

Section 112 of the CAA includes provisions for the promulgation of National Emissions Standards for Hazardous Air Pollutants (NESHAP), or maximum achievable control technology (MACT) standards, as well as several related programs to enhance and support the program. The NESHAP are additional Federal emission limitations established for less widely emitted, but highly dangerous or toxic air pollutants that are not covered by the NAAQS.

## **FEDERAL CLASS I AREAS**

Title 1, Part C of the CAA was established, in part, to preserve, protect, and enhance the air quality in national parks, national wilderness areas, national monuments, national seashores, and other areas of special national or regional natural, recreational, scenic, or historic value. The CAA designates all international parks, national wilderness areas, and memorial parks larger than 5,000 acres and national parks larger than 6,000 acres as “Class I areas.” The CAA prevents significant deterioration of air quality in Class I areas under the Prevention of Significant Deterioration (PSD) program. The PSD Program protects Class I areas by allowing only a small increment of air quality deterioration in these areas by requiring assessment of potential impacts on air quality related values of Class I areas.

Any major source of emissions within 100 kilometers (km) (62.1 miles) from a federal Class I area is required to conduct a pre-construction review of air quality impacts on the area(s). A “major source” for the PSD program is defined as a facility that will emit (from direct stationary sources) 250 tons per year of regulated pollutant. For certain industries, these requirements apply to facilities that emit (through direct stationary sources) 100 tons per year or more of a regulated pollutant. Mobile sources (i.e. vehicle emissions) are by definition not stationary sources and are therefore not subject to the PSD program. Federal Class I area within 62.1 miles of the Medford Site and Phoenix Site include Mountain Lakes, Oregon, Marble Mountain, California, and Crater Lake National Park, Oregon. There are no Federal Class I areas within 62.1 miles of the Mill Casino Site. Because there are federal class I areas within 62.1 miles of the Medford Site and Phoenix Site, a pre-construction review is required for the project alternatives.

## **TRIBAL NEW SOURCE REVIEW**

A Tribal New Source Review (NSR) permit is required prior to construction in both attainment and nonattainment areas if the projected aggregate operational emissions from stationary sources at the proposed facility exceed the minor NSR thresholds listed in 40 CFR 49.153 and shown in **Table 3** below. NSR programs must comply with the standards and control strategies of the Tribal Implementation Plan (TIP) or SIP. If there is not an applicable SIP or TIP, the USEPA issues permits and implements the program. If applicable, the Tribe would apply for and obtain a site-specific or, if promulgated prior to the start of construction, a general minor NSR permit in accordance with the USEPA guidelines and Tribal NSR regulations.

## **FEDERAL EXECUTIVE ORDER 13990**

On February 19, 2021, pursuant to federal Executive Order (EO) 13990, Protecting Public Health and the Environment and Restoring Science to Tackle the Climate Crisis, the Council on Environmental Quality (CEQ) rescinded its 2019 Draft National Environmental Policy Act (NEPA) Guidance on Consideration of Greenhouse Gas Emissions and is reviewing, for revision and update, the 2016 Final Guidance for Federal Departments and Agencies on Consideration of Greenhouse Gas Emissions and the Effects of Climate Change in National Environmental Policy Act Reviews. In the interim, EO 13990 directs

agencies to consider all available tools and resources in assessing GHG emissions and climate change effects of their proposed actions, including the 2016 GHG Guidance.

**TABLE 3**  
TRIBAL MINOR NEW SOURCE REVIEW THRESHHOLDS

<b>Pollutant</b>	<b>Emissions Thresholds for Attainment Areas (tons per year)</b>	<b>Emissions Thresholds for Attainment Areas (tons per year)</b>
Nitrogen Oxide	10	5
Reactive Organic Gas (ROG)	5	2
Particulate Matter	10	5
Particulate Matter Less than 10 Microns in Size	5	1
Particulate Matter Less than 23 .5 Microns in Size	3	0.6
Carbon Monoxide	10	5
Sulfur Dioxide	10	5
Lead	0.1	0.1
Source: 40 CFR 49.153		

To assess impacts, the 2016 GHG Guidance states that federal agencies should quantify direct and indirect emissions of the project alternatives with the level of effort being proportionate to the scale of the emissions relevant to the NEPA review. The CEQ guidance advises federal lead agencies to consider the following:

1. The potential effects of a proposed action on climate change as indicated by assessing GHG emissions, and
2. The effects of climate change on a proposed action and its environmental impacts.

This guidance does not propose a specific, quantitative threshold of significance; however, it states that agencies should consider the potential for mitigation measures to reduce or mitigate GHG emissions and climate change effects when those measures are reasonable and consistent with achieving the purpose and need for the proposed action. Examples of mitigation provided for in the guidance include, but are not limited to, enhanced energy efficiency design, lower GHG-emitting technology, carbon capture, carbon sequestration (e.g., restoration of forest, agricultural soils, and coastal habitat), and compensation.

Additionally, on February 19, 2021, Secretary of the Interior Deb Haaland issued Secretarial Order (SO) 3399 to prioritize action on climate change throughout the Department and to restore transparency and integrity in the Department’s decision-making processes. SO 3399 specifies that when considering the impact of GHG emissions from a proposed action, Bureaus/Offices should use appropriate tools, methodologies, and resources available to quantify GHG emissions and compare GHG quantities across alternatives. SO 3399 acknowledges that identifying the interactions between climate change and the environmental impacts of a proposed action in NEPA documents can help decision makers identify opportunities to reduce GHG emissions, improve environmental outcomes, and contribute to protecting communities from the climate crisis.

## **OREGON STATE REGULATIONS REGARDING CLIMATE CHANGE**

### **Oregon House Bill 3543**

House Bill 3543, the Climate Change Integration Act was passed in 2007 and sets specific Greenhouse Gas (GHG) emissions reduction goals for Oregon:

- 1) By 2010, arrest the growth of Oregon's GHG emissions and begin to reduce them.
- 2) By 2020, achieve GHG levels that are 10 percent below 1990 levels.
- 3) By 2050, achieve GHG levels that are at least 75 percent below 1990 levels.

The bill also created the Global Warming Commission; the Commission is responsible for recommendations to meet the GHG reduction targets.

### **Oregon House Bill 2001**

The 2009 House Bill 2001 (Jobs and Transportation Act) is essentially a transportation funding plan. The three core themes of the bill are:

- 1) Accountability, innovation, and environmental stewardship
- 2) Highway, road, and street funding
- 3) Multimodal funding

### **Oregon House Bill 2186**

House Bill 2186, adopted in 2009, is a wide-ranging piece of legislation that seeks to reduce Oregon's GHG emissions. Section 10 requires the creation of a Metropolitan Planning Organization (MPO) Greenhouse Gas Emissions Task Force to evaluate alternative land use and transportation scenarios that would meet community growth needs, while reducing GHG emissions, and recommend future legislative action to support such efforts.

### **Oregon Senate Bill 1059**

In 2010, the Oregon Legislature directed the Oregon Department of Transportation (ODOT) and the Oregon Department of Land Conservation and Development (DLCD) to provide an overall framework for transportation and climate change in Senate Bill 1059. The purposes of ODOT and DLCD are to:

- 1) Coordinate and consult with MPOs and other state agencies to develop a state-level strategy to reduce GHGs from transportation.
- 2) Develop a toolkit to assist local governments and MPOs in reducing GHGs from transportation.
- 3) Develop guidelines for scenario planning, and provide information to DLCD to set transportation-related GHG reduction targets for major metropolitan areas.
- 4) Conduct outreach and education to the public.
- 5) Work with local governments within areas served by an MPO to consider what actions they might take, transportation-wise, to reduce GHGs in the short-term.

## **Oregon Senate Bill 692**

In 2015, the Oregon Senate Bill 692 Chapter 418 was established to create new provisions and to clarify and amend existing provisions related to the sale and installation of products and their adherence to minimum energy efficiency standards.

## **Oregon House Bill 2250**

House Bill 2250, adopted in 2019, requires the Department of Environmental Quality and Oregon Health Authority to regularly assess final changes to federal environment laws to determine whether changes are significantly less protective of public health, environment or natural resources than standards and requirements contained in those federal environmental laws, as in effect on January 19, 2017.

Additionally, HB 2250 requires the State of Oregon to take actions under certain circumstances as necessary to retain protections afforded by certain federal environmental laws as in effect on January 19, 2017.

## **Climate-Friendly and Equitable Communities Rules**

In March of 2020, Governor Kate Brown issued Executive Order No. 20-04 directing state agencies to take actions to reduce and regulate greenhouse gas emissions and mitigate the impacts of climate change while also centering the needs of Oregon's most vulnerable communities. In response, the Oregon Land Conservation and Development Commission developed new requirements, the Climate-Friendly and Equitable Communities (CFEC) rules, for cities to help meet these goals through changes to local transportation and housing planning systems. The rules include requirements for new buildings to install electrical conduit to support electric vehicle charging, consistent with the Oregon Building Code, ORS Section 455.417.

## **MEDFORD SITE AND PHOENIX SITE REGIONAL METEOROLOGY**

The climate and topography of a region can dictate a region's air quality. The Ashland-Medford area, which includes the City of Phoenix, has cold winters and warm summers, with temperatures averaging 40 degrees Fahrenheit (°F) in the winter and 70 °F in the summer. Precipitation ranges from 1.4 inches in the summer to 8.3 inches in the winter, with an average annual snow fall of 6.8 inches. During most of the year, the prevailing direction of the wind is from the north or northwest. Fog often fills the lower portion of the Medford valley during winter and early spring months. The structure and orientation of terrain features will often influence and even control air motion and mechanical turbulence in the lower atmosphere, which can dictate weather a region, will have an increased or decreased concentration of air pollution. Medford is located in a mountain valley formed by the famous Rogue River and one of its tributaries, Bear Creek. The major portion of the valley ranges in elevation from 1,300 to 1,400 feet above sea level. Mountains surround the valley on all sides, to the east the Cascades, ranging up to 9,500 feet, to the south the Siskiyou Mountains, ranging up to 7,600 feet, and to the west and north the Coast Range and Umpqua Divide, ranging up to 5,500 feet above sea level. The valley exits to the ocean 80 miles westward through the narrow canyon of the Rogue River (WRCC, 2016).

## **MILL CASINO SITE REGIONAL METEOROLOGY**

The Coos Bay region has cold winters and moderate summers, with temperatures averaging 47°F in the winter and 59°F in the summer. Precipitation ranges from 2.7 inches in the summer to 29 inches in the winter, with an average annual snow fall of 1.3 inches. During most of the year, the prevailing direction of the wind is from the north or south-southeast. Several times each year winds of hurricane force strike the coast in the Coos Bay region. The Coos Bay region includes the Oregon coastal plain and coastal

valleys, and the Coast Range. Coast Range peaks range from 2,000 to 5,500 feet above sea level (WRCC, 2016).

## 5 BIOLOGICAL RESOURCES

### WETLANDS AND WATERS OF THE U.S.

Any person, firm, or agency planning to alter or work in ~~navigable jurisdictional w~~Waters of the U.S., including the discharge of dredged or fill material, must first obtain authorization from the U.S. Army Corps of Engineers (USACE). Additionally, to comply with EO 11990, agencies are responsible for minimizing the destruction of wetlands, safeguarding against the loss or degradation of wetlands, and preserving and enhancing the natural and beneficial values of wetlands. Permits, licenses, variances, or similar authorization may also be required by other federal, state, and local statutes. Section 10 of the Rivers and Harbors Act of 1899 prohibits the obstruction or alteration of navigable Waters of the U.S. without a permit from the USACE (33 USC 403). Section 301 of the Federal Water Pollution Control Act (FWPCA) and Amendments of 1972 prohibits the discharge of pollutants, including dredged or fill material, into Waters of the U.S. without a Section 404 permit from USACE (33 USC 1344). A Section 401 Water Quality Certification may be required by the USEPA for trust lands before other permits are issued.

Effective September 8, 2023, the U.S. Environmental Protection Agency and the USACE have issued a new final rule in the Code of Federal Regulations to conform the definition of ‘waters of the United States’ to the 2023 Supreme Court’s May 25, 2023 decision in Sackett vs. EPA. Under the new final rule, tributaries and wetlands must have a continuous surface connection to navigable waterways to be considered jurisdictional under the Clean Water Act. Only those relatively permanent, standing, or continuously flowing bodies of water meet the current definition.

However, all wetland/waters in the vicinity of the project sites have been assessed in the EIS as potentially jurisdictional waters of the U.S.

Waters of the U.S. are defined as:

~~all waters used in interstate or foreign commerce; all interstate waters including interstate wetlands; all other waters such as intrastate lakes, rivers, streams (including intermittent and ephemeral streams), mudflats, sand flats, wetlands, sloughs, prairie potholes, wet meadows, playa lakes, or natural ponds, where the use, degradation, or destruction of which could affect interstate commerce; impoundments of these waters; tributaries of these waters; or wetlands adjacent to these waters (Section 404 of the CWA; 33 CFR Part 328).~~

Wetlands are defined as:

~~those areas that are inundated or saturated by surface or groundwater at a frequency and duration sufficient to support, and that under normal circumstances do support, a prevalence of vegetation typically adapted for life in saturated soil conditions (Federal Register, 1980, 1982; Braddock and Huppman, 1995).~~

~~The USACE and the USEPA issued the USACE Jurisdictional Determination Form Instructional Guidebook on May 30, 2007, to provide guidance based on the Supreme Court’s decision regarding Rapanos v. United States and Carabell v. United States (Rapanos Guidance) (USACE, 2007). The decision provides new standards that distinguish between traditional navigable waters (TNWs, relatively~~

~~permanent waters (RPW), and non-relatively permanent waters (non-RPW). Wetlands adjacent to non-RPWs are subject to CWA jurisdiction if the water body is relatively permanent, if a water body abuts a RPW, or if a water body, in combination with all wetlands adjacent to that water body, has a significant nexus with TNWs. The significant nexus standard will be based on evidence applicable to ecology, hydrology, and the influence of the water on the “chemical, physical, and biological integrity of downstream traditional navigable waters” (USACE, 2007). Isolated wetlands are not subject to the FWPCA jurisdiction based on the Supreme Court’s decision regarding Solid Waste Agency of Northern Cook County (SWANCC) (Guzy, 2001).~~

## **FEDERAL ENDANGERED SPECIES ACT**

The USFWS enforces the provisions of the federal Endangered Species Act (ESA) for all terrestrial species. Section 9 (§1538) prohibits the "taking" of a listed species by anyone, including private individuals and state and local agencies. Threatened and endangered species on the federal list (50 CFR Sections 17.11 and 17.12) are protected from take, defined as direct or indirect harm. If "take" of a listed species is necessary to complete an otherwise lawful activity, this triggers the need for consultation under Section 7 of the ESA for federal agencies, including Tribes. A Section 7 Biological Opinion with incidental take provisions would be rendered.

Pursuant to the requirements of the ESA, a federal agency reviewing a proposed project within its jurisdiction must determine whether any federally listed species may be present on the proposed project site and whether the proposed project will have a potentially significant impact on such species. A discussion of regionally listed species is provided in consideration of potential impacts associated with project implementation under each alternative below. Under the ESA, habitat loss is considered to be an impact to the species. In addition, the agency is required to determine whether the project is likely to jeopardize the continued existence of any species that is proposed for listing under the ESA or to result in the destruction or adverse modification of critical habitat proposed to be designated for such species (16 USC Section 1536[3], [4]). Therefore, should it be determined that a project would result in impacts to these species, or their habitats, it would be considered significant and require mitigation.

## **MAGNUSON-STEVENS FISHERY CONSERVATION AND MANAGEMENT ACT**

The Magnuson-Stevens Fishery Conservation and Management Act (MSMA) mandates the conservation and management of fishery resources off the coasts of the U.S., anadromous species, and Continental Shelf fishery resources of the U.S., including the conservation and management of highly migratory species through the implementation and enforcement of international fishery agreements. The National Marine Fisheries Service (NMFS) enforces the MSMA, and regulates commercial and recreational fishing and the management of fisheries resources. The Sustainable Fisheries Act of 1996 amended the MSMA to include new fisheries conservation provisions by emphasizing the importance of fish habitat in regards to the overall safety and sustainability of U.S. marine fisheries (Public Law 104-267). The revised MSMA mandates the identification and protection of essential fish habitat (EFH) for managed species during the review of projects conducted under federal permits that have the potential to affect such habitat. Federal agencies are required to consult with NMFS on all actions and proposed actions that are authorized, funded, or undertaken by the agency, which may adversely affect EFH (MSMA 305.b.2). Adverse effects can be direct (contamination or physical disruption), indirect (loss of prey or reduction in species fecundity), site-specific, or habitat-wide impacts, including individual, cumulative, or synergistic consequences of actions (50 CFR 600.810). Four Fishery Management Plans (FMP) occur in California, Oregon, and Washington. The FMPs identify EFH for groundfish, coastal pelagic species, salmon, Pacific halibut, and highly migratory fisheries.

The Mill Casino Site occurs hydrologically upstream of a designated EFH for chinook salmon, coho salmon, and green sturgeon.

## **MIGRATORY BIRD TREATY ACT**

Migratory birds are protected under the federal Migratory Bird Treaty Act (MBTA) of 1918 (16 USC 703-712). The MBTA makes it unlawful to take, possess, buy, sell, purchase, or barter any migratory bird listed under 50 CFR 10, including feathers or other parts, nests, eggs, or products, except as allowed by implementing regulations (50 CFR 21). The direct injury or death of a migratory bird, due to construction activities or other construction-related disturbance that causes nest abandonment, nestling abandonment, or forced fledging would be considered take under federal law. As such, project-related disturbances must be reduced or eliminated during the nesting season. The general nesting season extends from February 15 to September 15.

## **BALD AND GOLDEN EAGLE PROTECTION ACT**

In 1940, the Bald and Golden Eagle Protection Act (16 USC 668-668d, 54 Stat. 250) was enacted (and later amended) to prohibit anyone, without a permit issued by the Secretary, from taking bald and golden eagles, including their parts, nests, or eggs. The Bald and Golden Eagle Protection Act provides criminal penalties for persons who "take, possess, sell, purchase, barter, offer to sell, purchase to barter, transport, export, or import, at any time or any manner, any bald eagle ... [or any golden eagle], alive or dead, or any part, nest, or egg thereof." The Bald and Golden Eagle Protection Act defines "take" as "pursue, shoot, shoot at, poison, wound, kill, capture, trap, collect, molest, or disturb."

## **OREGON ENDANGERED SPECIES ACT**

Oregon's threatened and endangered species lists include all native species listed under the federal ESA as of May 15, 1987, plus any additional native species determined by the appropriate state agency to be threatened or endangered. The species recovery mechanism under state law is limited to state-owned land, state-leased land, and land over which the state has a recorded easement.

## **MEDFORD SITE FEDERALLY LISTED SPECIES**

### ***Coho Salmon – Oregon Coast ESU (*Oncorhynchus kisutch*)*** ***Federal Status: Threatened***

The Oregon Coast coho salmon ESU was listed by the NMFS as federally threatened on May 12, 2008 (73 Federal Register 7816) in response to severe population declines in the 1990s and mid-2000s. The Oregon Coast coho salmon includes all naturally spawned populations of coho salmon (and their progeny) in rivers and streams from the Columbia River south to Cape Blanco in southern Oregon. Adult Oregon Coast coho salmon enter streams to spawn between November and January after runoff from significant rainfall events have opened river and stream mouths and increased flows to allow for upstream passage. Spawning typically occurs from January through March in pool tailouts. Juveniles exhibit optimum growth at water temperatures between 12°C -14°C. Juvenile Oregon Coast coho salmon prefer complex in-stream habitat consisting of riffle and deep pool complexes with abundant large woody debris and a well-developed riparian canopy for optimum survival. Juveniles spend 12-18 months rearing in freshwater habitat foraging on a diet consisting primarily of aquatic invertebrates before migrating to the ocean. Oregon Coast coho salmon typically spend two years in near shore and occasionally pelagic saltwater habitat foraging on crustaceans, small fish, and squid before reaching maturity and returning to freshwater habitat to spawn. Nearly all females return as three-year old fish, while males typically return

in three to five years to spawn, although some males return as two-year old ‘jacks’<sup>1</sup>. Critical habitat for Oregon Coast coho salmon was established on May 12, 2008 (73 Federal Register 7816) and includes all coastal streams and river reaches accessible to Oregon Coast coho salmon from the Columbia River south to Cape Blanco in southern Oregon. Designated critical habitat includes the stream channels within the designated stream reaches, and includes the lateral extent, as defined by the ordinary high-water line (33 CFR 329.11). In areas where the ordinary high-water line has not been defined, the lateral extent is defined by the bankfull elevation (70 FR 52488). A recovery plan for this ESU has not been finalized. A map depicting Oregon Coast coho salmon critical habitat is included as Figure 3.5-5.

The Mill Casino Site is entirely developed and contains no aquatic habitat features. However, construction of the 5,000 square-foot addition would involve reinforcement of the bulkhead below the site within the Ferndale Lower Range, which serves as critical habitat for coho salmon.

***Green Sturgeon – Southern DPS (Acipenser medirostris)***  
***Federal Status: Threatened***

The green sturgeon southern DPS was listed by the NMFS as federally threatened on April 7, 2006 (71 FR 17757). The green sturgeon ranges from Ensenada, Mexico north to the Bering Sea, Alaska. Adults spend the majority of their lives in near shore oceanic waters, bays, and estuaries, returning to fresh water only to spawn. Spawning occurs every two to five years and the juveniles remain in fresh water for one to four years. Green sturgeon spawn in freshwater rivers that have a variety of sand, cobble, and bedrock substrate. Cold, clean water is necessary for proper embryonic development.

Critical habitat for green sturgeon southern DPS was established on October 9, 2009 (74 FR 195) and includes all coastal marine waters up to 60 fathoms deep from Monterey Bay, California to Cape Flattery, Washington. Additionally, the following waters are included in the critical habitat designation: San Francisco Bay, Humboldt Bay, Coos Bay, Winchester Bay, Yaquina Bay, Nehalem Bay, Suisun Bay, San Pablo Bay, Wallipa Bay and Grays Harbor, as well as inland fresh waters of the Sacramento River, lower Yuba River, lower Feather River, and lower Columbia River. A recovery plan does not exist for this DPS. A map depicting green sturgeon critical habitat is included as Figure 3.5-5.

The Mill Casino Site is entirely developed and contains no aquatic habitat features. However, construction of the 5,000 square-foot addition will involve reinforcement of the bulkhead below the site within the Ferndale Lower Range, which serves as critical habitat for the green sturgeon.

***Pacific Eulachon – Southern DPS (Thaleichthys pacificus)***  
***Federal Status: Threatened***

The Pacific eulachon southern DPS was listed by the NMFS as federally threatened on March 18, 2010 (75 FR 13012). Pacific eulachon are known to live in from the San Francisco Bay north to the Bering Sea, Alaska. Adults spend over 95% of their lives in near shore oceanic waters, returning to estuaries and fresh water only to spawn. Eulachon spawn at two to five years of age from late winter to early summer. Juveniles remain in fresh water and estuaries for several weeks before commencing to deeper ocean waters. Pacific eulachon spawn in tidally influenced freshwater in a variety of sand, cobble, or bedrock substrate. Cold, clean water is necessary for proper embryonic development. The largest Pacific eulachon run exist in the Columbia River Basin, but smaller runs have been observed in the Tenmile Creek and Umpqua River in Oregon as well as several rivers in northern California and Washington. Critical habitat for the Pacific eulachon southern DPS was established on October 20, 2011 (76 FR 65323) and includes 16 rivers and creeks throughout California, Oregon, and Washington. As with the coho salmon and green

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<sup>1</sup> A “jack” is a salmon that returns to spawn earlier than typical for the species.



sturgeon, Tribal Lands are excluded from this critical habitat designation. The nearest critical habitat for the Pacific eulachon is the Umpqua River, approximately 15 miles north of the Mill Casino Site.

The Mill Casino Site is entirely developed and contains no aquatic habitat features. However, construction of the 5,000 square-foot addition will involve reinforcement of the bulkhead below the site within the Ferndale Lower Range, which serves as potential habitat for the Pacific eulachon.

## **6 CULTURAL AND PALEONTOLOGICAL RESOURCES**

### **SECTION 106 OF THE NATIONAL HISTORIC PRESERVATION ACT**

Section 106 of the National Historic Preservation Act (NHPA) as amended, and its implementing regulations found in 36 CFR Part 800, require federal agencies to identify cultural resources that may be affected by actions involving federal lands, funds, or permitting. The significance of the resources must be evaluated using established criteria outlined in 36 CFR § 60.4, as described below.

If a resource is determined to be a historic property, Section 106 requires that effects of the federal undertaking on the resource be determined. A historic property is defined as “any prehistoric or historic district, site, building, structure, or object included in, or eligible for inclusion in the National Register of Historic Places [NRHP], including artifacts, records, and material remains related to such a property” (NHPA Section 301[5]).

Section 106 prescribes specific criteria for determining whether a project would adversely affect a historic property, as defined in 36 CFR § 800.5. An impact is considered adverse when prehistoric or historic archaeological sites, structures, or objects that are listed or are eligible for listing in the NRHP are subjected to the following.

- Physical destruction of or damage to all or part of the property
- Alteration of a property
- Removal of the property from its historic location
- Change of the character of the property’s use or of physical features within the property’s setting that contribute to its historic significance
- Introduction of visual, atmospheric, or audible elements that diminish the integrity of the property’s significant historic features
- Neglect of a property that causes its deterioration, transfer, lease, or sale of the property out of federal control without adequate and legally enforceable restrictions or conditions to ensure long-term preservation of the property’s historic significance. If the historic property would be adversely affected by development, then prudent and feasible measures to avoid or reduce adverse impacts must be taken. The State Historic Preservation Officer (SHPO) must be provided an opportunity to review and comment on these measures prior to project implementation.

### **NATIONAL REGISTER OF HISTORIC PLACES**

The NHPA of 1966, as amended through 2000, and its implementing regulations found at 36 CFR 800 authorize the NRHP, a program for the preservation of historic properties (“cultural resources”) throughout the nation. The eligibility of a resource for listing in the NRHP is determined by evaluating the resource using criteria defined in 36 CFR 60.4

Sites younger than 50 years, unless of exceptional importance, are not eligible for listing in the NRHP.

All properties change over time. Therefore, it is not necessary for a property to retain all of its historic physical features or characteristics in order to be eligible for listing on the NRHP. The property must, however, retain enough integrity to enable it to convey its historic identity; in other words, to be recognizable to a historical contemporary. In order to properly assess integrity, however, significance (why, where, and when a property is important) must first be fully established. Therefore, the issues of significance and integrity must always be considered together when evaluating a historic property.

## **NATIVE AMERICAN TRIBES**

In 1992, the NHPA was amended to allow Native American tribes the opportunity to assume the functions of the SHPO in the Section 106 process for undertakings on tribal lands. The responsibilities can include identifying and maintaining inventories of culturally significant properties, nominating properties for inclusion on national and tribal registers of historic places, and conducting Section 106 reviews of federal agency projects on tribal lands and on tribal ancestral lands. This includes designating a Tribal Historic Preservation Officer with whom federal agencies are required to consult in lieu of the SHPO for undertakings occurring on or affecting historic properties on tribal lands or on tribal ancestral lands.

## **ARCHAEOLOGICAL RESOURCES PROTECTION ACT OF 1979**

The Archaeological Resources Protection Act of 1979 (ARPA) (Public Law 96-95; 16 USC 470), provides for the protection of archaeological resources and sites which are on public and Indian lands, and fosters increased cooperation and exchange of information between governmental authorities, the professional archaeological community, and private individuals having collections of archaeological resources and data which were obtained before October 31, 1979. ARPA also provides for penalties for noncompliance and illegal trafficking.

## **ANTIQUITIES ACT OF 1906**

The Antiquities Act of 1906 (Public Law 59-209; 34 Stat. 225) calls for the protection of historic landmarks, historic and prehistoric structures, and other objects of historic or scientific interest on lands owned or controlled by the United States government. Additional provisions appear in the Archaeological and Historic Data Preservation Act of 1974, as amended, for the survey, recovery, and preservation of significant scientific, prehistoric, historic, archaeological, or paleontological data, in such cases wherein this type of data might be otherwise destroyed or irrecoverably lost as a result of federal projects.

## **NATIVE AMERICAN GRAVES PROTECTION AND REPATRIATION ACT**

The Native American Graves Protection and Repatriation Act (NAGPRA) is a federal law passed in 1990. NAGPRA provides a process for museums and federal agencies to return certain Native American cultural items – human remains, funerary objects, sacred objects, or objects of cultural patrimony – to lineal descendants, and culturally affiliated Indian tribes and Native Hawaiian organizations. NAGPRA includes provisions for unclaimed and culturally unidentifiable Native American cultural items, intentional and inadvertent discovery of Native American burials and cultural items on federal and tribal lands, and penalties for noncompliance and illegal trafficking.

## **PALEONTOLOGICAL RESOURCES PRESERVATION ACT**

The Paleontological Resources Preservation subtitle of the Omnibus Public Land Management Act of 2009, (PL 111-011, Title VI, Subtitle D) requires the U.S. Department of Agriculture and the U.S. Department of the Interior to issue implementation regulations to provide for the preservation, management, and protection of paleontological resources on federal lands. Significance for

Paleontological Resources is reflected in terms of compliance with the Antiquities Act of 1906 (PL 59-209; 16 USC 431 et seq.; 34 Stat. 225), which calls for the protection of historic landmarks, historic and prehistoric structures, and other objects of historic or scientific interest on federal land. Additional provisions appear in the Archaeological and Historic Data Preservation Act of 1974, as amended, for the survey, recovery, and preservation of significant scientific, prehistoric, historic, archaeological, or paleontological data, in such cases wherein this type of data might be otherwise destroyed or irrecoverably lost as a result of federal projects.

## **EXTENDED CULTURAL SETTING FOR MEDFORD SITE AND PHOENIX SITE**

### **Prehistory**

Several cultural chronologies have been posited for the southern Oregon region, including those specific to the Rogue Basin, Elk Creek/Upper Rogue River, and southwest Oregon in general (McDaniel, 2009) based on studies conducted at a number of archaeological sites located throughout the greater Rogue River Basin. In earlier phases of archaeological investigations, a five-phase chronological sequence was used to describe cultural change through time in southern Oregon (McDaniel, 2009) that included the Paleo-Indian, Applegate, Marial, Coquille, and Rogue phases.

However, the chronological sequence presented above is based on older archaeological research that was conducted and published by Richard Pettigrew and Clayton Lebow in the early 1980s during cultural resource management work for the Elk Creek Dam on the upper Rogue River (Pettigrew and Lebow, 1987). This chronology was developed without the benefit of a sufficient radiocarbon and obsidian hydration chronology and relied on perceived similarity of projectile point forms with temporally sensitive projectile point forms identified on the Columbia Plateau and elsewhere. Subsequent research led to the division of the regional prehistory into an Early Holocene/Pre-Mazama Era, a Middle Holocene/Early Late Holocene era, and a Late Holocene era (C.F. Aikens et al., 2011: Chapter 6). During these periods, the climate shifted from a post-Pleistocene warming trend to the cooler Middle Holocene period, finally warming once again to modern levels with commensurate shifts in vegetation, fauna, and resource exploitation strategies.

### **Ethnographic and Historic Setting**

The project area is located in a region claimed by both Penutian-speaking and Hokan-speaking groups. Before European or Euro-American contact, the valley was home to Native American people who identified ethnically and linguistically as Takelma, Shasta, and Athapaskan. These groups lived in generally autonomous villages centered around extended patrilineal families, but these villages and families were in turn linked into relationships with other families and villages near and far through kinship, marriage, shared cultural practices, trade in materials goods, and visiting for social and spiritual occasions.

Both the Upland Takelma and Shasta were comprised of small, politically and economically autonomous groups. People related to one another inhabited villages, and marriage partners were sought from outside the group, creating and strengthening alliances between villages. While the Takelma traced their descent patrilineally and were patrilocal, the Shasta descent bilaterally and residence patterns were not strictly observed. Within the village, a man could achieve a position of leadership and respect through the acquisition of wealth and its strategic redistribution. Although the individual groups were autonomous, they could be mobilized and coalesce to form larger bodies with common goals, such as conducting communal fishing and hunting, or war (McDaniel, 2009).

Villages were strategically located to take advantage of hunting, fishing, and plant gathering activities, particularly where there was an abundance of predictable resources. The Shasta located their villages along the valley edge close to a stream. The Takelma dispersed during the warmer summer months to gather economically important plant resources, first collecting those in the valley bottoms followed by those that ripened later at higher elevations. Additionally, trade from the coast to the interior valleys was common in northern California and southern Oregon.

Native American culture in southwestern Oregon, and elsewhere, underwent a series of changes beginning in approximately AD 1500. Locally, these changes included the disappearance of pottery, and a change in house form from circular to rectangular. These changes coincide with a smallpox epidemic that is thought to have occurred in AD 1520-1524 and resulted in mortality rates of up to 75% (McDaniel, 2009).

Initial contact between Euro-American and Native American peoples in Jackson County occurred early in the spring of 1827 when Peter Skene Ogden of the Hudson Bay Company led a brigade through the Rogue Valley. Over the next few years, others from the Hudson Bay Company explored the area, with two of the expeditions resulting in the deaths of some local Native Americans due to altercations between the two groups.

## **Coquille Tribe**

Coquille Tribe members are descended from Native Americans who inhabited the Coquille River drainages and parts of Coos Bay (Coquille Tribe, 2016). Treaties signed in the mid-19th century ceded much of their territory to the United States, though those treaties were never ratified by Congress. Major villages were located near Bandon, Myrtle Point, Charleston, and Bullards, focused on the banks of the lower Coquille River and its tributaries (Oregon's Adventure Coast, 2016). Satellite villages and gathering areas were established near resource locations, to take advantage of seasonally available resources. Permanent Coquille villages were most often oriented around a group of related men of Athapaskan or Milluk ethnicity, but also included women from neighboring groups from across southern Oregon and beyond.

## **EXTENDED CULTURAL SETTING FOR THE MILL CASINO SITE**

### **Prehistory**

A general chronology has been developed for Native American use and occupation of the Oregon coast, including the Coos Bay region, where the Mill Casino is located. That chronology is divided into five broad periods. Isolated finds of fluted points in western Oregon attest to the presence of people in the Pacific Northwest in the Paleo-Indian period (prior to 10,000 years before present [BP]), but none have been identified along the modern coastline. The earliest evidence for occupation of the Oregon coast occurs in the Early Archaic period (10,000-5500 BP). The lifeways of these early groups are unclear. Many of the Early Archaic sites lack associated shell middens, leading some researchers to suggest that these earliest inhabitants pursued a "pre-marine" or "pre-littoral" subsistence strategy. By the Middle Archaic period (5500-3000 BP), marine-oriented subsistence strategies were clearly in use. Faunal material indicate Middle Archaic groups were using a variety of intertidal shellfish, coastal birds, and mammals (terrestrial and marine). Economies focused on intensive use of marine resources were present throughout the southern Northwest Coast region by the Late Archaic period (3,000-1,500 BP). The earliest evidence on the Oregon coast for the rectangular plank houses and bone/antler artwork typical of Northwest Coast late prehistoric and ethnographic societies is found during this period. Finally, the Formative Period (1,500-200 BP) encompassed the full emergence of ethnographic Northwest Coast culture patterns along the Oregon coast, characterized by large villages containing plank houses, ranked

societies, and distinctive modes of artistic elaboration. The final 200 years of this period is subdivided as the Protohistoric era, when non-native artifacts entered sites along the northern Oregon coast. The epidemic diseases that accompanied Europeans to North America apparently resulted in a rapid decline in the coastal Formative population and had a disastrous impact on their cultural and economic lifeways (BLM, 2002).

## **Ethnographic and Historic Setting**

The ethnographic setting for the Mill Casino Site is the same as for the Medford and Phoenix Sites described previously.

European trappers and traders began exploring western Oregon early in the eighteenth century, and growth continued slowly through the latter half of the nineteenth century and into the twentieth century. Construction of a military wagon road connecting Coos Bay with Roseburg began in 1870, and the CBW Road was opened to traffic in 1872, providing Coos Bay with a connection to the interior valleys (BLM, 2002).

A small group of Americans reached Coos Bay in 1853, and established the first town of Empire City, which is now part of the city of Coos Bay (originally called Marshfield). Lumberman and shipbuilder Asa Meade Simpson established the mill and shipbuilding town of North Bend in 1856. The pioneer period on Coos Bay lasted for about another half century, and led to the development of sawmills, shipyards, and coal mining. By the late 1850s and 1860s, farmers settled along the Coos River and Coquille River, providing resources to San Francisco and Portland. The coal industry collapsed early in the twentieth century, but forest products assumed an increasing role in the local economy, eased by road construction and the development of an extended transportation network.

## **7 SOCIOECONOMIC CONDITIONS**

### **EXECUTIVE ORDER 12898**

*Executive Order 12898, Federal Actions to Address Environmental Justice in Minority and Low-Income Populations (EO 12989)*, as amended, directs federal agencies to develop an Environmental Justice Strategy that identifies and addresses disproportionately high and adverse human health or environmental effects of their programs, policies, and activities on minority populations and low-income populations. The Council on Environmental Quality (CEQ) has oversight responsibility compliance by the federal government c with EO 12898 and NEPA. The CEQ, in consultation with the USEPA and other agencies, has developed guidance to assist federal agencies with their NEPA procedures so that environmental justice concerns can be effectively identified and addressed.

According to guidance from the CEQ (1997) and USEPA (1998), agencies should consider the composition of the affected area, to determine whether minority populations, low-income populations, or Indian tribes are present in the area affected by a Proposed Action and, if so, whether there may be disproportionately high and adverse environmental effects to those populations. Communities may be considered “minority” under EO 12898 if one of the following characteristics apply.

- The cumulative percentage of minorities within a census tract is greater than 50% (primary method of analysis).
- The cumulative percentage of minorities within a census tract is less than 50%, but the percentage of minorities is meaningfully greater than the minority population percentage in the general population or other appropriate unit of geographic analysis (secondary method of analysis).

According to the USEPA, either the county or the state can be used when considering the scope of the “general population.” A definition of “meaningfully greater” is not given by the CEQ or USEPA, although the latter has noted that any affected area that has a percentage of minorities above the statewide percentage is a potential minority community and any affected area that has a minority percentage double that of the state is a definite minority community under EO 12898.

Communities may be considered “low-income” under EO 12898 if one of the following characteristics applies.

- The median household income for a census tract is below the poverty line (primary method of analysis).
- Other indications are present that indicate a low-income community is present within the census tract (secondary method of analysis).

In most cases, the primary method of analysis will suffice to determine whether a low-income community exists in the affected environment. However, when a census tract income may be just over the poverty line or where a low-income pocket within the tract appears likely, the secondary method of analysis may be warranted. Other indications of a low-income community under the secondary method of analysis include limited access to health care, overburdened or aged infrastructure, and dependence on subsistence living. A secondary measure considered was the percentage of households whose income is less than or equal to twice the poverty level, which is used by USEPA’s Environmental Justice Mapping and Screening Tool (USEPA, 2022).

## **EXECUTIVE ORDER 14096**

Executive Order 14096, Revitalizing Our Nation's Commitment to Environmental Justice for All (EO 14096), issued in April of 2023, builds on and supplements EO 12898. EO 14096 defines environmental justice as:

“the just treatment and meaningful involvement of all people, regardless of income, race, color, national origin, Tribal affiliation, or disability, in agency decision-making and other Federal activities that affect human health and the environment so that people:

(i) are fully protected from disproportionate and adverse human health and environmental effects (including risks) and hazards, including those related to climate change, the cumulative impacts of environmental and other burdens, and the legacy of racism or other structural or systemic barriers; and

(ii) have equitable access to a healthy, sustainable, and resilient environment in which to live, play, work, learn, grow, worship, and engage in cultural and subsistence practices.”

EO 14096 directs federal agencies to identify, analyze, and address disproportionate and adverse human health and environmental effects and hazards of federal activities, including those related to climate change and cumulative impacts, on communities with environmental justice concerns. EO 14096 also creates the Environmental Justice Subcommittee of the National Science and Technology Council, requires federal agencies to develop environmental justice strategic plans, and provides public notification and meeting requirements in the event of a release of toxic substances from a federal facility.

## 8 TRANSPORTATION AND CIRCULATION

### Medford Site Roadway System

Major roadways in the vicinity of the Medford Site are described below:

- **OR 99** is a north-south principal arterial under the jurisdiction of the ODOT; portions of OR 99 are under the jurisdiction of the City of Medford. OR 99 is a five-lane facility with a two-way center left turn lane and dedicated left turn lanes at key intersections and arterials. The posted speed limit is 45 (mph). OR 99 is called South Riverside Avenue north of Garfield Street and South Pacific Highway south of Garfield Street.
- **East Stewart Avenue** is an east-west four-lane road and is designated as an arterial under the City of Medford with a two-way center left turn lane and dedicated left and right turn lanes at key intersections and arterials. The posted speed limit is 35 mph. East Stewart Avenue curves north and terminates at East Barnett Road north of its intersection with Center Drive.
- **East Barnett Road** is an east-west four-lane road and is designated as a minor arterial under the City of Medford with dedicated left and right turn lanes at key intersections and arterials. The posted speed limit is 35 mph.
- **Garfield Street** is an east-west four-lane road and is designated as a minor arterial under the City of Medford. The posted speed limit is 35 mph. Garfield Street turns into Highland Drive north of I-5.
- **Charlotte Ann Road** is a local east-west two-lane roadway under the jurisdiction of the City of Medford. The speed limit is 25 mph.
- **Center Drive** is a four-lane north-south minor arterial roadway under the jurisdiction of the City of Medford. The speed limit is 35 mph. Center Drive terminates past Garfield Street to the south and at East Stewart Avenue to the north.
- **Highland Drive** is a two-lane north-south major collector under the jurisdiction of the City of Medford. The speed limit is 35 mph. South of I-5, Highland Drive is called Garfield Street (see above).

### Phoenix Site Roadway System

Major roadways in the vicinity of the Medford Site are described below:

- **I-5** is a north-south four-lane interstate highway under the jurisdiction of ODOT. The northbound and southbound ramps consist of two lanes each, with posted speed limits of 45 mph.
- **North Phoenix Road** is a north-south two-lane (four lanes north of East Barnett Road) City road and is designated as an arterial (within the City) under the City of Medford. Outside of the City of Medford, North Phoenix Road is under the jurisdiction of Jackson County. The posted speed limit is 45 mph. From north to south, North Phoenix Road intersects with Cherry Lane, East Barnett Road, Juanipero Way, and Fern Valley Road.
- **Cherry Lane** is an east-west two-lane City road and is designated as a collector under the City of Medford with occasional two-way center left turn lane and dedicated left and right turn lanes at key intersections and arterials. The posted speed limit is 25 mph.

- **East Barnett Road** is an east-west four-lane City road and is designated as an arterial under the City of Medford with dedicated left and right turn lanes at key intersections and arterials. The posted speed limit is 40 mph.
- **Juanipero Way** is an east-west four-lane (west of North Phoenix Road) City road and is designated as a collector under the City of Medford with dedicated left and right turn lanes at key intersections and arterials. The posted speed limit is 25 mph. Currently, Juanipero Way ends at North Phoenix Road, with plans for eastward extension.
- **Fern Valley Road** is an east-west four-lane County road and is designated as a rural minor arterial under Jackson County with dedicated left and right turn lanes at key intersections and arterials. The posted speed limit is 30 mph. Fern Valley Road connects with on- and off-ramps to I-5.

## 9 LAND USE

### FEDERAL

#### Coastal Zone Management Act

The Coastal Zone Management Act (CZMA), passed in 1972, is administered by the NOAA Office of Ocean and Coastal Resource Management (OCRM) and provides for the management of resources along the U.S. coast and balances economic development with environmental conservation. The CZMA states that each federal activity within or outside the coastal zone that affects any land or water use or natural resource of the coastal zone should be carried out in a manner that is consistent to the maximum extent practicable with the enforceable policies of approved state management programs. The term “maximum extent practicable” means federal activities, including development projects directly affecting the coastal zone of states with approved management programs, must be fully consistent with such programs unless compliance is prohibited due to the requirements of existing law applicable to the fundamental operations of an agency.

#### Farmland Protection Policy Act

The Farmland Protection Policy Act (FPPA) is intended to minimize the impact federal programs have on the unnecessary and irreversible conversion of farmland to non-agricultural uses. It assures that federal programs are administered in a matter that is compatible with state and local units of government as well as private programs and policies to protect farmland (7 USC § 4201).

The NRCS is responsible for the implementation of the FPPA and categorizes farmland in a number of ways. These categories include prime farmland, farmland of statewide importance, and unique farmland. Prime farmland is considered to have the best possible features to sustain long-term productivity. Farmland of statewide importance includes farmland similar to prime farmland, but with minor shortcomings, such as greater slopes or less ability to store soil moisture. Unique farmland is characterized by inferior soils and generally needs irrigation depending on climate.

The Land Evaluation and Site Assessment is a numeric rating system used by the NRCS to evaluate the relative agricultural importance of farmlands. This evaluation is completed on Form AD 1006, the Farmland Conversion Impact Rating (FCIR) Form.



## STATE

### Oregon's Statewide Planning Goals and Guidelines

Statewide Planning Goals provide basic planning direction and establish the framework for planning programs of all governmental agencies and bodies in the state and county. Since 1973, Oregon has maintained a strong statewide program for land use planning including a foundation of 19 Statewide Planning Goals that express policies on land use and related topics, such as citizen involvement, housing, and natural resources. Most of the goals are accompanied by non-mandatory guidelines that are suggestions for how a goal may be applied.

Oregon's statewide goals are achieved through local comprehensive planning. State law requires each city and county to adopt a comprehensive plan consistent with the Statewide Planning Goals and the zoning and land-division ordinances needed for implementation. Plans are reviewed for consistency by the Oregon Land Conservation and Development Commission (LCDC).

## LOCAL – MEDFORD SITE

### City of Medford Comprehensive Plan - General Land Use Plan Element

The central purpose of the ~~2004~~ City of Medford Comprehensive Plan is to provide the “goals and policies [to] establish a framework upon which to base decisions and actions related to the use of land” (City of Medford, 2018a). The Comprehensive Plan contains 11 elements, including a General Land Use Plan Element, which individually and collectively influence future development in Medford.

The General Land Use Plan (GLUP) map graphically represents the present and future land use patterns within the City of Medford, and the future patterns within the UGB (City of Medford, 2016b). It is dynamic and not meant to be site-specific, nor the sole basis for making zoning changes. The GLUP map has 13 different land use designations that are described in the zoning code.

The purpose of a city code is to regulate the use of land, buildings, or other structures for residences, commerce, industry, and other uses required by the community. Additionally, city code regulates the location, height, and size of buildings, structures, yards, courts, and open spaces as well as the amount of building coverage permitted and population density in each zone.

Figure 3.9-1, shows the land use and zoning designations of the City of Medford for the area that includes the Medford Site. As shown on Figure 3.9-1, the Medford Site has a commercial land use designation and is zoned for regional and heavy commercial development; surrounding parcels have commercial, industrial, and residential land use designations. City land use designations applicable to the Medford Site and vicinity are described below.

**Commercial:** This designation permits the largest spectrum of commercial development as well as residential development under certain circumstances. It permits multiple-family dwellings meeting the density standards of the MFR-30 (Multi-Family Residential - 30 units per gross acre) zoning district, except for mixed-use (commercial-residential) buildings, which have no maximum density limitation.

The C-N (Neighborhood Commercial), C-C (Community Commercial), C-R (Regional Commercial), and C-H (Heavy Commercial) zoning districts are permitted in this designation.

**Urban Medium Density Residential:** This designation permits medium density urban residential uses (10 to 15 units per gross acre), including townhouses (row houses), duplexes, apartments, mobile home

parks, and group quarters. The zoning district permitted in this designation is MFR-15 (Multiple Family Residential - 15 units per gross acre).

**Parks and Schools:** This designation depicts existing and proposed public parks and schools. There is no specific zoning district associated with this designation.

**General Industrial:** This designation permits the I-L (Light Industrial) and the I-G (General Industrial) zoning districts. The most appropriate zoning district for each site designated General Industrial shall be determined based on the following criteria.

- The I-L zone is intended for office uses and light manufacturing. The I-L zoning district is suitable for areas near residential and commercial properties.
- The I-G zone provides land for industrial uses in which production and processing activities involve a degree of noise, vibration, air pollution, radiation, glare, and fire and explosive hazards. The I-G zoning district is suitable for areas near the Heavy Commercial and the Heavy Industrial zoning districts due to the higher intensity of uses permitted in this zone.

**Heavy Industrial:** This designation permits uses with a large amount of noise, vibration, air pollution, or other nuisance. It permits the I-G and Heavy Industrial (I-H) zoning districts. The most appropriate zoning district for each site designated Heavy Industrial should be determined based on the following criteria.

- The I-G zone provides land for industrial uses in which production and processing activities involve a degree of noise, vibration, air pollution, radiation, glare, and fire and explosive hazards.
- The I-G zoning district is suitable for areas near the Heavy Commercial and the Heavy Industrial zoning districts due to the higher intensity of uses permitted in this zone.

## City of Medford Urban Growth Boundary

The Medford Site is within the designated UGB of Medford. This includes land within the city as well as selected land surrounding the city that is committed to and/or planned for future city growth that is likely to require the extension of urban services (City of Medford and Jackson County, 2018).

## Official City of Medford Land Development Code

Chapter 10 of the City of Medford's Municipal Code is the Land Development Code, and Article III describes the zoning districts in Medford (Medford Planning, 2019). Applicable zoning designations for the Medford Site and vicinity are described below.

- **Regional Commercial, C-R:** The C-R zone provides land for the development of those service and commercial uses which serve shoppers from the surrounding region as well as from the local community. The C-R zone shall be located in areas served by adequate regional and local street systems to avoid the impact of regional traffic using neighborhood streets.
- **General Industrial, I-G:** The I-G district provides land for industrial uses in which production and processing activities involve a degree of noise, vibration, air pollution, radiation, glare phenomena, and fire and explosive hazards. The physical effects of such phenomena shall be limited to levels as per the performance standards contained in Article V. Offices shall be

permitted only when accessory and subordinate to the principle permitted use. This district is not intended to be customer-oriented, and retailing shall be permitted as an accessory use only.

- **Heavy Commercial, C-H:** The C-H district provides lands for those heavier commercial and service commercial uses which typically may produce a greater degree of noise, vibration, air pollution, and glare than residential or other commercial zones. All uses, excluding those customarily conducted outdoors, should be conducted wholly within an enclosed building.
- **Single-Family Residential (SFR) - 00 (1 dwelling unit per existing lot):** The primary purpose of this zoning district is to provide a holding zone for properties that are changing from county to city zoning and have not yet been tested for facility adequacy to allow development to urban level densities and intensities. These parcels will primarily be located within the urbanized area of Medford. In addition to one dwelling unit, one accessory dwelling unit (ADU) will be allowed per existing parcel.

## LOCAL – PHOENIX SITE

### Jackson County Comprehensive Plan

The Jackson County Comprehensive Plan, originally adopted in 1972 and updated regularly, -is the official long-range land use policy document for Jackson County. The Land Use element, most recently updated in 2004, ~~plan~~ sets forth general land use planning policies and allocates land uses into resource, residential, commercial, and industrial categories. The plan serves as the basis for the coordinated development of physical resources, and the development or redevelopment of the county based on physical, social, economic, and environmental factors (Jackson County, 2004). The Jackson County Comprehensive Plan addresses each of the 14 applicable Statewide Planning Goals, as well as local goals, and contains policies and implementation strategies aimed at compliance with these goals.

Figure 3.9-2 shows the Jackson County zoning designations for the area that includes the Phoenix Site. As shown in Figure 3.9-2, the Phoenix Site is zoned for EFU; surrounding parcels to the east of I-5 are also zoned EFU while land across I-5 is zoned urban residential.

The site is also part of the PH-5 urban reserve area (URA). The local land use policies that apply to the Phoenix Site are discussed below to provide a context for the analysis of potential land use conflicts in Section 4.0.

- Areas designated as agricultural land in Jackson County will be zoned EFU. Jackson County intends to preserve agricultural lands for farm use, preventing uses or activities that are incompatible with farm use within or near agricultural land.
- The EFU zoning district will be established on the Jackson County Zoning Maps for all plan map designated as agricultural land, and permissible development standards will be established in the Jackson County Land Development Ordinance in accordance with state law and the Jackson County Comprehensive Plan. It may also be applied to land designated in the Comprehensive Plan for long-range non-resource uses as an interim zoning district (e.g., within a UGB).
- The Comprehensive Plan map designates Urban Residential areas where the lands are justified for that use through the Goal Exceptions process or lie within urban growth, urban containment, or urban unincorporated community boundaries. The Urban Residential designation provides for urban level densities where public facilities and services are sufficient to serve that level of

development. Urban level development within urban growth boundaries can only occur consistent with the mutually adopted UGB agreements, which usually require annexation.

## **Greater Bear Creek Valley Regional Problem Solving (RPS) Plan**

On November 23, 2011, the Jackson County Board of Commissioners adopted the Greater Bear Creek Valley Regional Problem Solving (RPS) Plan as an amendment to its comprehensive plan.

The core elements of the RPS Plan include the region's planning area, planning horizon, problem statements, and the plan goals. It establishes URAs for the cities of Central Point, Eagle Point, Medford, Phoenix, and Talent to accommodate planned residential, commercial, and industrial growth. URAs were identified through the RPS process as the preferred locations for future UGB expansions. The first part of a UGB expansion, the evaluation of the potential environmental, economic, and social impacts of urbanization, was completed and the URAs established such that they would provide a 50-year supply of residential and employment land (Jackson County, 2011).

The Phoenix Site is located within the PH-5 URA, which consists of 427 acres (of which 412 are considered "reasonably developable") located north of Phoenix city limits and its UGB, immediately east of I-5. Medford is to the north, and agricultural land is to the east. Much of the land immediately south and within Phoenix has been developed; there is a Home Depot® building supply store, a La-Z-Boy® furniture store, and a Peterbilt truck center adjacent to I-5, at the regionally important Fern Valley Interchange (City of Phoenix, 2015).

All of PH-5 is currently planned for agriculture and zoned EFU by Jackson County. The Resource Lands Review Committee, a group of resource land experts involved in the RPS planning process, recommended that PH-5 not be recognized as part of the commercial agricultural land base, despite the existence of an operating cattle ranch and equestrian center (Arrowhead Ranch [co-located with the Phoenix Site]). Compared to all the other surrounding agriculture lands, PH-5 is comprised of the least capable agricultural soils. The proposed uses for PH-5 are 22% residential, 12% open space/parks, and 66% employment land (City of Phoenix, 2015).

## **LOCAL – MILL CASINO SITE**

The Mill Casino Site is located on tribal trust land and is not subject to state and local land use plans and regulations.

## **10 NOISE**

Noise standards used in the EIS include the Federal Highway Administration (FHWA) Noise Abatement Criteria (NAC) for the assessment of noise consequences related to surface traffic, and the noise impact criteria established by the ODOT noise policy. These standards are discussed below. Vibration standards used in this study consist of the Federal Transportation Administration (FTA) construction vibration criteria for damage to structures and annoyance of sensitive receptors.

## **FEDERAL NOISE ABATEMENT CRITERIA**

The FHWA provides construction noise level thresholds in its Construction Noise Handbook, 2006, which are provided in **Table 4**.

**TABLE 4**  
FEDERAL CONSTRUCTION NOISE THRESHOLDS

Noise Receptor Locations and Land-Uses	dBA, Lmax Daytime (7 a.m. - 6 p.m.)	dBA, Lmax Evening (6 p.m. - 10 p.m.)	dBA, Lmax Nighttime (10 p.m. - 7 a.m.)
Noise-Sensitive Locations: (Residences, Institutions, Hotels, etc.)	85	85	80
Source: FHWA, 2006.			

The FHWA establishes NAC for various land uses that have been categorized based upon activity. Land uses are categorized on the basis of their sensitivity to noise as indicated in **Table 5**. The FHWA NAC is based on peak traffic hour noise levels. Sensitive receptors with the potential to be impacted by the project alternatives include residential land uses; thus, the Category B, 67 dBA Leq noise standard would apply.

**TABLE 5**  
FEDERAL NOISE ABATEMENT CRITERIA HOURLY A-WEIGHTED SOUND LEVEL DECIBELS<sup>1</sup>

Activity Category	Activity Criteria <sup>2</sup> Leq (h), dBA <sup>3</sup>	Evaluation Location	Activity Category Description
A	57	Exterior	Lands on which serenity and quiet are of extraordinary significance and serve an important public need and where the preservation of those qualities is essential if the area is to continue to serve its intended purpose.
B <sup>4</sup>	67	Exterior	Residential.
C <sup>4</sup>	67	Exterior	Active sport areas, amphitheatres, auditoriums, campgrounds, cemeteries, day care centers, hospitals, libraries, medical facilities, parks, picnic areas, places of worship, playgrounds, public meeting rooms, public or nonprofit institutional structures, radio studios, recording studios, recreation areas, Section 4(f) sites, schools, television studios, trails, and trail crossings.
D	52	Interior	Auditoriums, day care centers, hospitals, libraries, medical facilities, places of worship, public meeting rooms, public or nonprofit institutional structures, radio studios, recording studios, schools, and television studios.
E <sup>4</sup>	72	Exterior	Hotels, motels, offices, restaurants/bars, and other developed lands, properties or activities not included in A-D or F.
F	--	--	Agriculture, airports, bus yards, emergency services, industrial, logging, maintenance facilities, shipyards, utilities (water resources, water treatment, electricity), and warehousing.
G	--	--	Undeveloped lands that are not permitted.
<p>Notes:<sup>1</sup> Either Leq(h) or L10(h) (but not both) may be used on a project.  <sup>2</sup> The Leq(h) and L10(h) Activity Criteria values are for impacts determination only, and are not design standards for noise abatement measures.  <sup>3</sup> Hourly A-weighted sound level, decibels (dBA).  <sup>4</sup> Includes undeveloped lands permitted for this activity category.                      Source: FHWA, 2010.</p>			

## FEDERAL VIBRATION STANDARDS

The effects of groundborne vibrations typically cause only a nuisance to people, but damage to buildings may occur at extreme vibration levels. Although groundborne vibration can be felt outdoors, it commonly

becomes an annoyance indoors because of the associated effects of the building shaking. Groundborne noise is an effect of groundborne vibration. It is produced from the noise that radiates from the motion of the walls and floors of a room and may consist of the rattling of windows or dishes on shelves. Consequently, groundborne noise occurs solely in indoor environments.

Peak particle velocity (PPV) is often used to measure vibration. PPV is the maximum instantaneous peak (inches per second) of the vibration signal. The PPV levels are used to estimate  $L_v$  or VdB levels (vibration decibels with a reference velocity of one micro-inch per second). Scientific studies have shown that human responses to vibration vary by the source of vibration, which is either continuous or transient. Continuous sources of vibration include construction, while transient sources include truck movements. Generally, the thresholds of perception and annoyance are higher for transient sources than for continuous sources. **Table 6** summarizes the FTA’s guideline vibration damage criteria for various structural categories. As shown therein, buildings extremely susceptible to vibration damage could be damaged if vibration levels exceed 90 VdB. Sensitive receptors have a perceptibility threshold of 65 VdB and begin to exhibit a significant response at approximately 75 VdB. Background vibration velocity in residential areas is usually 50 VdB or lower (FTA, 2018).

**TABLE 6**  
CONSTRUCTION VIBRATION DAMAGE CRITERIA

Building Category	Approximate $L_v$ (VdB)
Reinforced-concrete, steel, or timber (no plaster)	102
Engineered concrete and masonry (no plaster)	98
Non-engineered timber and masonry buildings	94
Buildings extremely susceptible to vibration damage	90
Source: FTA, 2018.	

## STATE OF OREGON NOISE REGULATIONS

In 1971, the Oregon Department of Environmental Quality (ODEQ) adopted noise standards. These standards establish motor vehicle noise emission limits and set ambient noise limits for commercial and industrial operations. The standards vary according to time of day and proximity to noise sensitive properties (City of Medford, 2019b). ODOT implements the regulations adopted by ODEQ (ODOT, 2011).

While FHWA considers a traffic noise impact to occur if predicted peak-hour traffic noise levels “approach” or exceed the NAC or “substantially exceed” existing levels, ODOT considers traffic noise impacts to occur if predicted peak-hour traffic noise levels “approach” 2 dBA of the NAC or “substantially exceed” existing levels by greater than 10 dBA. Because ODOT’s standards are more stringent than the FHWA, ODOT criteria will be used to determine whether a traffic noise impact would occur. Therefore, the NAC in **Table 5** will be reduced by 2 dBA in accordance with ODOT criteria and the absolute criteria for Activity Category B would be 65 dBA.

## LOCAL NOISE REGULATIONS

The City of Medford publishes specific noise standards in Municipal Code Section 10.752 (Noise Standards and Regulations for Commercial and Industrial Sources). The City of Medford provides an exemption from these noise standards for sounds that originate on construction sites in compliance with Municipal Code Section 5.225, Unnecessary Noise. Construction must be limited to the hours of 7:00 a.m. to 6:00 p.m. to be in compliance unless exempted by the City Manager from this restriction (City of Medford, 2019b).

The Phoenix Site is located outside of the Phoenix city limits within Jackson County. Jackson County does not publish specific noise standards or ordinances.

The City of North Bend publishes general guidelines regarding generation of unnecessary noise in the North Bend City Code. For example, City Code 9.04.030(5) limits “the erection, including excavation, demolition, alteration or repair of any building, other than between the hours of 7:00 a.m. and 6:00 p.m., except upon special permit granted by the city council” (City of North Bend, 2011).

## ACOUSTICAL BACKGROUND AND TERMINOLOGY

Sound is defined as any pressure variation in air that the human ear can detect and is technically described in terms of loudness (amplitude) and frequency (pitch). The standard unit of sound amplitude measurement is the decibel (dB). The dB scale uses the hearing threshold (20 micropascals of pressure), as a point of reference, defined as 0 dB. Other sound pressures are then compared to the reference pressure, and the logarithm is used to keep the numbers in a practical range. The dB scale allows a million-fold increase in pressure to be expressed as 120 dB.

The perceived loudness of sounds depends on many factors, including sound pressure level and frequency content. However, within the usual range of environmental noise levels, perception of loudness is relatively predictable and can be approximated by weighing the frequency response of a sound level meter by standardized means.

Community noise is commonly described in terms of the “ambient” noise level, which is defined as the all-encompassing noise level associated with a given noise environment. A common statistical tool to measure the ambient noise level is the average, or equivalent, sound level (Leq) over a given time period (usually one hour). The Leq is the foundation of the Day-Night Average Level (Ldn) noise descriptor and shows a strong correlation with community response to noise.

**Table 7** contains definitions of acoustical terminology used in this section. **Table 8** shows examples of noise sources and their effects on humans, which correspond to various sound levels.

**TABLE 7**  
ACOUSTICAL TERMINOLOGY

Terms	Definitions
Decibel, dB	A unit describing the amplitude of sound, equal to 20 times the logarithm of base 10 of the ratio of the pressure of the sound measured to the reference pressure, which is 20 micropascals (20 micronewtons per square meter).
Frequency, Hertz	The number of complete pressure fluctuations per second above and below atmospheric pressure.
A-Weighted Sound Level (dBA)	Sound pressure level in decibels as measured on a sound level meter using the A-weighting filter network. This accounts for sensitivity by de-emphasizing very low and very high frequency components of the sound in a manner similar to the frequency response of the human ear and correlates well with subjective reactions to noise.
Lmax	The maximum A-weighted sound level associated with a given event.
Equivalent Noise Level (Leq)	The average A-weighted noise level during the measurement period.
Day/Night Noise Level (Ldn)	The average A-weighted noise level during a 24-hour day that is obtained after the addition of 10 dB to levels measured in the night between 10:00 p.m. and 7:00 a.m.
Ambient Noise Level	All-encompassing sound associated with a given environment, excluding the analysis system’s electrical noise and the sound of interest.

<b>Terms</b>	<b>Definitions</b>
Source: FHWA, 2016; Oregon Administrative Rule: Chapter 340, Division 35.	



**TABLE 8**  
TYPICAL SOUND LEVELS

Sound Source	dB	Typical Human Response
Sonic Boom	140	Painfully Loud
Jet Takeoff (200 feet)	120	Limits of Amplified Speech
Auto Horn (3 feet)	110	Maximum Vocal Effort
Shout (0.5 foot)	100	Very Annoying
Heavy Truck (50 feet)	90	Annoying
Pneumatic Drill (50 feet)	80	Telephone Use Difficult
Freeway Traffic (50 feet)	70	
Air-conditioning Unit (20 feet)	60	
Living Room	50	Quiet
Library	40	
Soft Whisper	30	Very Quiet
Leaves Rustling	10	Just Audible
	5	Threshold of Hearing
Source: City of Medford, 2018b.		

## EFFECTS OF NOISE ON PEOPLE

Human reaction to a new noise can be estimated through comparison of the new noise to the existing ambient noise level within a given environment. In general, the more a new noise exceeds the previously existing ambient noise level, the less acceptable the new noise will likely be judged by the recipients. With regard to increases in A-weighted noise levels, the following relationships occur.

- Except in carefully controlled laboratory experiments, a change of 1-dBA cannot be perceived.
- Outside of the laboratory, a 3-dBA change is considered a just-perceivable difference.
- A change in level of at least 5-dBA is required before any noticeable change in human response would be expected.
- A 10-dBA change is subjectively heard as approximately a doubling in loudness and can cause adverse response.

Generally, most noise is generated by transportation systems, principally motor vehicle noise, but also including aircraft noise and rail noise. The level of traffic noise depends on three things: 1) the volume of the traffic, 2) the speed of the traffic, and 3) the number of trucks in the flow of the traffic. Because noise is measured on a logarithmic scale, 50 dBA plus 50 dBA does not equal 100 dBA. Instead, two sources of equal noise added together have been found to result in an increase of 3 dBA. For example, if a certain volume of traffic results in a noise level of 50 dBA and there is an addition of the same volume of traffic, or doubling, the combined noise level is 53 dBA (ODOT, 2011). As stated above, 3 dBA is just audible; therefore, if the project doubles the traffic volume, there would be an audible increase in the ambient noise level.

The primary source of noise in the Medford-Ashland region is generated by traffic on OR 99 and I-5, and aircraft that fly over the site from the RVIMA, Ashland Municipal Airport, and the Crater Lake-Klamath Regional Airport that also serves as the Kingsley Field Air National Guard Base. The primary source of noise in the Coos Bay region is generated by traffic on US-101, aircraft that fly over the site from the Southwest Oregon Regional Airport, and commercial and passenger traffic in Coos Bay. Changing the

traffic volume affects noise levels. Given that the traffic composition, speed and driving patterns are unchanged, the logarithmic nature of the dB scale means that a 50% reduction of the traffic volume results in a 3 dB reduction in noise levels, regardless of the absolute number of vehicles.

Stationary point sources of noise, including stationary mobile sources, such as idling vehicles, attenuate (lessen) at a rate of 6 to 9 dBA per doubling of distance from the source, depending on environmental conditions (i.e., atmospheric conditions and noise barriers, either vegetative or manufactured, etc.). Widely distributed noises, such as a large industrial facility or a street with moving vehicles would typically attenuate at a lower rate, approximately 4 to 6 dBA per doubling of distance.

## **11 HAZARDOUS MATERIALS**

### **RESOURCE CONSERVATION AND RECOVERY ACT (RCRA)**

Hazardous materials are subject to numerous laws and regulations at several levels of government. The primary legislation enacted to control the disposal of hazardous materials is RCRA (codified in 42 USC section 6901 et seq). Under RCRA, materials are considered hazardous if they display one or more of the following characteristics: corrosivity, flammability, reactivity, or toxicity (40 CFR Section 261).

### **RESIDENTIAL LEAD-BASED PAINT HAZARD REDUCTION ACT**

The Residential Lead-Based Paint Hazard Reduction Act of 1992 amended the Toxic Substances Control Act (TSCA) to include Title IV, Lead Exposure Reduction. The USEPA regulates building renovation activities that could create lead-based paint hazards in target housing and child-occupied facilities and has established standards for lead-based paint hazards and lead dust cleanup levels in most pre-1978 housing and child-occupied facilities.

### **NATIONAL EMISSION STANDARDS FOR ASBESTOS**

The CAA was enacted in 1970 and requires the USEPA to establish primary and secondary national ambient air quality standards. The CAA also required each state to prepare an air quality control plan, referred to as a State Implementation Plan. Section 112 of the CAA defines “hazardous air pollutants” and sets threshold limits. Asbestos is a federal hazardous air pollutant (40 CFR Part 61, Subpart M [National Emission Standards for Hazardous Air Pollutants, Asbestos]).

### **HAZARDOUS MATERIALS SITES NEAR THE MEDFORD SITE**

#### **Davis Finish Products/Smith Lumber Co.**

The Davis Finish Products/Smith Lumber Co. site is located adjacent to the easternmost parcel of the Medford Site. The property is listed on the RCRA NonGen/NLR, FINDS, and ECHO databases as a furniture and related product manufacturing business. As it is listed on the RCRA NonGen/NLR database, the site does not presently generate hazardous waste (**Appendix M**). According to the ECHO website, this site has no compliance violations (USEPA, 2019b). The site is listed on the LUST and UST database due to two previous USTs that were present on the site but have since been decommissioned and removed. Cleanup of the leaking tanks began in 1990 and is listed as complete since 1991. According to the 2015 Phase I ESA prepared for Tax Lot 37-1W-32C-4701, the leak was due to an overflow of the tank and was not a long-term leak (SWCA, 2015). Furthermore, the leak was cleaned up to ODEQ standards and the cleanup was listed as complete, receiving regulatory closure from ODEQ in 1991. Due to the details of the spill and the completed cleanup actions, this incident does currently not pose a risk to the environmental quality of the Medford Site.

## **Royal-Goldencrest-Silvercrest Orchards**

Approximately 0.9 miles away from the Medford Site is the Royal-Goldencrest-Silvercrest Orchards Site. The ODEQ received a work plan for the cleanup of pesticides adjacent to a mixing shed on this site, but no follow-up information was provided. The current status of this site is listed as requiring investigation with suspected contamination, and ODEQ recommends site screening (ODEQ, 2019b).

## **HAZARDOUS MATERIALS SITES NEAR THE PHOENIX SITE**

### **Royal-Goldencrest-Silvercrest Orchards**

Approximately 0.9 miles away from the Phoenix Site is the Royal-Goldencrest-Silvercrest Orchards Site. Refer above for a description of the Royal-Goldencrest-Silvercrest Orchards Site.

## **HAZARDOUS MATERIALS SITES NEAR THE MILL CASINO SITE**

### **Sun Plywood Mill**

The former Sun Plywood Mill site is located on the Mill Casino Site. Details of this site are discussed earlier in the Previous Investigations section.

### **Tyree Oil**

Less than 0.1 mile southwest of the Mill Casino Site is the Tyree Oil Site. In 1968, approximately 1,200 gallons of bunker oil was released from an aboveground storage tank (AST). Cleanup was documented and the local ODEQ office documented the contaminant and cleanup and did not require any further actions. In 1993, a soil assessment was performed and TPH concentrations at 2 feet below ground surface (bgs) exceeded ODEQ RBCs for residential soils for diesel or gasoline at two different locations. In 2004, the site status was updated to state that impacts via surface water are not anticipated due to sediment sample results showing only low concentrations and the lack of on-site wells. However, there may be some groundwater contamination at the site. An expanded preliminary assessment was recommended, but further action was rated as low priority (Appendix M).

### **Unocal Marketing Terminal**

Located approximately 0.3 miles south of the Mill Casino Site is the Unocal Marketing Terminal site, which is listed as a conditional no further action site (Appendix M). This site was formerly operated as a “bulk terminal for the storage and distribution of petroleum products such as gasoline, diesel, and stove oil. Operations began in 1935 and included a wharf, railroad track, railroad unloading rack, and fuel pipelines” (ODEQ, 2019b). These facilities were decommissioned or demolished in 2006. However, during operation, this site experienced “historical releases of petroleum products from the petroleum piping, loading racks, tanks and other facilities associated with the terminal and bulk plant [such that] residual concentrations of oil, diesel, gasoline, and their constituents are present in soil and groundwater beneath the site” (ODEQ, 2019b). ODEQ has determined that no further action is required at this site as long as the terms of the Contaminated Media Management Plan (CMMP) are followed. These measures include procedures intended as precautions to be taken during construction events on the site, such as soil excavation or groundwater extraction.

### **Chevron Bulk Plant Former**

Located approximately 0.3 miles south of the Mill Casino, a bulk-fuel plant was operational at the Chevron site from the 1920s to 1980. Diesel and gasoline were found in the soil under the facility. Chevron remediated contamination in the groundwater in 1981. In 1997, it was reported that groundwater

cannot be used at the site because of the wood waste fill, salinity, and low yield. Benzene, toluene, ethylbenzene, and xylene (BTEX) and PAHs have been detected in soils and sediment at the site. To treat groundwater contamination, a biosparging and funnel and gate treatment system was installed (Appendix M).

## **12 AESTHETICS**

### **NATIONAL SCENIC BYWAY PROGRAM**

The National Scenic Byway Program is part of the U.S. Department of Transportation (USDOT), Federal Highway Administration (FHWA). The U.S. Secretary of Transportation recognizes certain roads as All-American Roads or National Scenic Byways based on one or more archeological, cultural, historic, natural, recreational, and scenic qualities

### **FEDERAL HIGHWAY ADMINISTRATION**

The FHWA includes guidelines for the Visual Impact Assessment of highway projects and provides mitigation and BMPs for construction and aesthetic design features on new structures along highways. The mitigation measure specific to the use of aesthetic design features on structures states the following.

“Design structures associated with the proposed project in a manner that allows these features to blend with the surrounding built and natural environments so that they complement the visual landscape. Such measures will include, but are not limited to, the following.

- Aesthetic treatments to structures will be implemented to help soften their visual intrusion upon the landscape, especially in areas of high use, to improve project aesthetics.
- Structures will be constructed with low-sheen and nonreflective surface materials to reduce potential for glare. Unpainted metal surfaces will not be permitted.
- At a minimum, finishes will be matte and roughened and concrete [insert structure] will be painted or will use concrete colored integrally with a shade that is two to three shades darker than the general surrounding area. Choose colors from the Federal Color Standard 595. All paints used for the color panels and structures will be color matched directly from the physical color chart, rather than from any digital or color-reproduced versions of the color chart. Paints will be of a dull, flat, or satin finish only to reduce potential for glare, and the use of glossy paints for surfaces will be avoided. Appropriate paint type will be selected for the finished structures to ensure long-term durability of the painted surfaces. The appropriate operating agency or organization will maintain the paint color over time. (FHWA, 2015.)”

### **VIEWSHED CHARACTERISTICS**

A viewshed is comprised of one or more viewing corridors from a specific location or viewpoint. Each of these viewpoints provides a line of sight that can be characterized uniquely from among other viewpoints within the viewshed. The visual experience within each viewpoint is comprised of the following constituent elements.

1. Clarity in Line of Sight is the overall visibility of the object within the viewshed, influenced by such factors as trees, buildings, topography, or any other potential visual obstruction within the viewshed.

2. Duration of Visibility is the amount of time the object is exposed to viewers within the viewshed, i.e., a passing commuter will experience a shorter period of viewing time than a resident within the viewshed.
3. Proximity of the Viewer are the effects of foreshortening due to the distance of the viewer from the object that influence the dominance of the object in the perspective of the viewer within the viewshed.
4. Number of Viewers pertains to the number of viewers anticipated to experience the visual character of the object in forward-oriented view (i.e., not through a rear-view mirror). A densely populated residential district or a busy highway within the viewshed of the object would present more viewers than unpopulated areas.

Viewsheds and viewpoints are described by expressing the strength of the viewing experience, framed within the analytical criteria listed above. While the viewing experience is personal and subjective in nature, the application of the above criteria allows for an objective, baseline assessment of the visual environment and subsequent visual impacts.

## **SCENIC RESOURCES**

There is no comprehensive list of specific features that automatically qualify as scenic resources; however, certain characteristics can be identified that contribute to the determination of a scenic resource. The following is a partial list of visual qualities and conditions that, if present, may indicate the presence of a scenic resource.

- A tree that displays outstanding features of form or age
- A landmark tree or a group of distinctive trees accented in a setting as a focus of attention
- An unusual planting that has historical value
- A unique, massive rock formation
- A historic building that is a rare example of its period, style, or design, or that has special architectural features and details of importance
- A feature specifically identified in applicable planning documents as having a special scenic value
- A unique focus or a feature integrated with its surroundings or overlapping other scenic elements to form a panorama
- A vegetative or structural feature that has local, regional, or statewide importance

## **MEDFORD SITE**

If the federal government acquires the proposed trust property<sup>2</sup> in trust for the Tribe, that property will not be subject to local or regional land use regulations; the Tribe has jurisdictional authority over aesthetic matters within its trust lands. The following is a brief description of the applicable local regulations that would apply to the portion of the Medford Site that would remain in fee.

Development in the area of the Medford Site is guided in part by the City of Medford ordinances related to building development, lighting, and signage. As described in Section 3.9, the Medford Site has a commercial land use designation and is zoned for Regional-Commercial; surrounding parcels have commercial, industrial, and residential land use designations (see Figure 3.9-1). The City of Medford

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<sup>2</sup> Under Alternative A, the proposed trust property is Tax Lot Number 37-1W-32C-4701.

zoning code limits building height in C-R zoning districts to 85 feet and 35 feet in C-H zoning districts. In all districts, the City of Medford Municipal Code requires that any operation or activity producing glare should be conducted so that direct or indirect light from the source should not have a maximum permitted illumination in excess of 0.5 footcandles on any property in a residential district other than the lot on which the glare is generated. Additional restrictions on lighting include prohibiting the use of flickering or flashing lights and the locating of light sources within buffered areas, except on pedestrian walkways. The City of Medford allows the following signs within C-R and C-H zoning districts, subject to certain limitations: ground signs, wall signs, projecting signs, and awning/canopy/marquee signs.

## **PHOENIX SITE**

If the federal government acquires the Phoenix Site in trust for the Tribe, the property will not be subject to local or regional land use regulations. The Tribe has jurisdictional authority over aesthetic matters within its trust lands. The following is a brief description of the applicable local regulations if the property not taken into trust, but developed privately or publicly.

Development in the area of the Phoenix Site is guided in part by the Jackson County Comprehensive Plan's Natural and Historic Resources Element. This element of the comprehensive plan sets forth a policy to "maintain or enhance the aesthetic qualities and values of the significant natural scenic landscape resources of the County" through appropriate zoning of natural resource lands and use of a scenic resource overlay to designate areas of special protection. There are no special protection areas within the vicinity of the Phoenix Site.

## **MILL CASINO SITE**

The Mill Casino Site is located on land that is held in federal trust for the benefit of the Tribe and is therefore not subject to any local or regional land use regulations. The Tribe has jurisdictional authority over aesthetic matters within its trust lands.

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# ***APPENDIX S***

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## ***UPDATED AIR QUALITY OUTPUT TABLES***

**Table 1a**  
Alternative A - Percent Distribution, Patrons, and Vehicle Miles Travels per Year

Routes <sup>1</sup>	Market Areas	Trip Distribution <sup>1</sup>	Average Distance (miles) <sup>2</sup>	Alternatives A and B	
				Trips <sup>3</sup>	VMT/Year
North of Project Site	Medford and Grants Pass	0.75	12	299,927	3,599,128
South of Project Site	Northbound I-5. Pheonix, Ashland	0.25	23	99,976	2,299,443
<b>Total VMT (miles)</b>					<b>5,898,571</b>

<sup>1</sup> Traffic Impact Analysis (JRH Transportation Engineering, 2015, Appendix X)

<sup>2</sup> Trip lengths based on weighted aveage of distance to population centers.

<sup>3</sup> Based on 1,753 average daily patrons and 1.6 patrons per vehicle.

Sources: Business Plan For Porposed Class II Gaming Facility in Medford, Oregon; April 2013; AES, 2016

**Table 1b**  
Alternative B - Percent Distribution, Patrons, and Vehicle Miles Travels per Year

Routes <sup>1</sup>	Market Areas	Trip Distribution <sup>1</sup>	Average Distance (miles)	Alternatives C	
				Trips	VMT/Year
South of Project Site	Northbound I-5. Pheonix, Ashland	35%	28	139,966	3,919,051
North of Project Site	Medford and Grants Pass	65%	14	259,937	3,639,118
<b>Total VMT (miles)</b>					<b>7,558,169</b>

<sup>1</sup> Traffic Impact Analysis (JRH Transportation Engineering, 2015, Appendix X)

<sup>2</sup> Trip lengths based on weighted aveage of distance to population centers.

<sup>3</sup> Based on 1,753 average daily patrons and 1.6 patrons per vehicle.

Sources: Business Plan For Porposed Class II Gaming Facility in Medford, Oregon; April 2013; AES, 2016

**Table 1c**  
Alternative C - Percent Distribution, Patrons, and Vehicle Miles Travels per Year

Routes <sup>1</sup>	Market Areas	Trip Distribution <sup>1</sup>	Average Distance (miles) <sup>2</sup>	Alternatives D	
				Trips <sup>3</sup>	VMT/Year
City Streets and Route 101	North Bend and Coos Bay	100	3	43,435	130,305

<sup>1</sup> Traffic Impact Analysis (JRH Transportation Engineering, 2015, Appendix X)

<sup>2</sup> Trip lengths based on weighted aveage of distance to population centers.

<sup>3</sup> Based on 190 average daily patrons and 1.6 patrons per vehicle.

Sources: Business Plan For Purposed Class II Gaming Facility in Medford, Oregon; April 2013; AES, 2016

**Table 2a**  
**2025 Mobile Operations Criteria Pollutant and GHG Emissions**

<b>Alternatives</b>	<b>Alternative A</b>	<b>Alternative B</b>	<b>Alternative C</b>
<b>Speed (mph)</b>	<b>Freeway, Arterial, and Local</b>	<b>Freeway, Arterial, and Local</b>	<b>Freeway, Arterial, and Local</b>
<b>vmt/yr</b>	5,898,571	7,558,169	130,305
<b>Criteria Pollutant Emissions (tpy)</b>			
NO <sub>x</sub>	2.83	3.58	0.22
VOC	0.72	0.88	0.18
SO <sub>2</sub>	0.02	0.02	0.001
CO	20.02	25.10	2.34
PM <sub>2.5</sub>	0.10	0.13	0.01
PM <sub>10</sub>	0.34	0.43	0.01
<b>Greenhouse Gas<sup>1</sup></b>			
CO <sub>2</sub>	2676.9	3418.2	100.10
CH <sub>4</sub>	0.2	0.3	0.03
N <sub>2</sub> O	0.1	0.1	0.01
CO <sub>2</sub> e	2697.7	3443.7	105.09

<sup>1</sup> GHG emissions shown in metric tonnes.

Source: MOVES3.1

**Table 2b**  
**2042 Mobile Operations Criteria Pollutant and GHG Emissions**

<b>Alternatives</b>	<b>Alternative A</b>	<b>Alternative B</b>	<b>Alternative C</b>
<b>Speed (mph)</b>	<b>Freeway, Arterial, and Local</b>	<b>Freeway, Arterial, and Local</b>	<b>Freeway, Arterial, and Local</b>
<b>vmt/yr</b>	5,898,571	7,558,169	130,305
<b>Criteria Pollutant Emissions (tpy)</b>			
NO <sub>x</sub>	1.60	2.03	0.14
VOC	0.38	0.46	0.11
SO <sub>2</sub>	0.01	0.02	0.001
CO	10.0	12.56	1.19
PM <sub>2.5</sub>	0.07	0.09	0.01
PM <sub>10</sub>	0.31	0.40	0.01
<b>Greenhouse Gas<sup>1</sup></b>			
CO <sub>2</sub>	2221.16	2835.13	87.17
CH <sub>4</sub>	0.24	0.30	0.02
N <sub>2</sub> O	0.04	0.05	0.01
CO <sub>2</sub> e	2238.43	2856.28	91.00

<sup>1</sup> GHG emissions shown in metric tonnes.

Source: MOVES3.1

**Table 3a**  
Build Out 2025 Operational Mobile Annual  
Average Emission Factors

<b>Criteria Pollutant</b>	<b>grams per mile</b>
NOx	0.41
VOC	0.08
SO <sub>2</sub>	0.003
CO	2.78
PM <sub>2.5</sub>	0.01
PM <sub>10</sub>	0.05
<b>Greenhouse Gases</b>	
CO <sub>2</sub>	446.71
CH <sub>4</sub>	0.04
N <sub>2</sub> O	0.01
CO <sub>2</sub> e	449.47

Source: MOVES3

**Table 3c**  
Build Out 2025 Operational Start Annual  
Average Emission Factors

<b>Criteria Pollutant</b>	<b>grams per start</b>
NOx	0.38
VOC	0.38
SO <sub>2</sub>	0.001
CO	4.41
PM <sub>2.5</sub>	0.01
PM <sub>10</sub>	0.02
<b>Greenhouse Gases</b>	
CO <sub>2</sub>	104.76
CH <sub>4</sub>	0.06
N <sub>2</sub> O	0.03
CO <sub>2</sub> e	116.32

Source: MOVES3

**Table 3b**  
Build Out 2042 Operational Mobile Annual  
Average Emission Factors

<b>Criteria Pollutant</b>	<b>grams per mile</b>
NOx	0.23
VOC	0.04
SO <sub>2</sub>	0.002
CO	1.39
PM <sub>2.5</sub>	0.01
PM <sub>10</sub>	0.05
<b>Greenhouse Gas</b>	
CO <sub>2</sub>	369.95
CH <sub>4</sub>	0.04
N <sub>2</sub> O	0.005
CO <sub>2</sub> e	372.28

Source: MOVES3

**Table 3d**  
Build Out 2042 Operational Start Annual  
Average Emission Factors

<b>Criteria Pollutant</b>	<b>grams per start</b>
NOx	0.24
VOC	0.24
SO <sub>2</sub>	0.001
CO	2.24
PM <sub>2.5</sub>	0.01
PM <sub>10</sub>	0.02
<b>Greenhouse Gas</b>	
CO <sub>2</sub>	97.44
CH <sub>4</sub>	0.05
N <sub>2</sub> O	0.03
CO <sub>2</sub> e	106.26

Source: MOVES3

Table 4 - Alternatives A, B, and C Fugitive Dust Emissions

**Table 4**  
Fugitive Dust Emissions from Construction

<b>Alternatives</b>	<b>Alternative A</b>	<b>Alternative B</b>	<b>Alternative C</b>
Construction Area (acres)	6.00	7.80	1.00
Duration of Construction (months)	12	18	12
On-site cut/fill (1,000 cubic yards)	20	20	0
PM <sub>10</sub> Emission Factor (tons PM <sub>10</sub> /acre-month)	0.011	0.011	0.011
On-site cut/fill PM10 Emission Factor (tons PM10/1,000 cubic yards)	0.059	0.059	0.059
<b>Total PM10 Emissions (tons)</b>	<b>1.97</b>	<b>2.72</b>	<b>0.13</b>
<b>Total PM<sub>2.5</sub> Emissions (tons)</b>	<b>0.99</b>	<b>1.36</b>	<b>0.07</b>

Source: Emission factors from WRAP's Fugitive Dust Handbook (Level 2).

Note: On-site cut/fill conservatively estimated based on project description. PM2.5 conservatively estimated to be half of PM10 emissions.





**Table 6c**  
Alternative C - Construction GHG Emissions

Construction Equipment <sup>1</sup>	Horsepower <sup>2</sup>	Load Factor <sup>2</sup>	Hours in Use <sup>2</sup> (hours/day)	Emission Factors (g/bhp/hr) <sup>4</sup>	Emission (tons/year)
				CO2	CO2
<b>2018 Site Grading</b>					
1 Motor Grader	174	0.575	8	478.53	140
1 Water Truck	417	0.49	8	472.93	282
1 Other Construction Equipment	190	0.62	8	495.93	170
Employee Trips (miles) <sup>3</sup>		500		552.80	0
<b>Total Site Grading</b>					<b>592</b>
<b>Construction</b>					
1 Concrete/Industrial Saw	84	0.73	8	568.30	112
1 Rough Terrain Forklift	94	0.475	8	499.17	72
1 Tractors/Loader/Backhoe	79	0.465	8	502.80	59
1 Other Construction Equipment	190	0.62	8	495.93	188
Employee Trips (miles) <sup>3</sup>		500		552.80	0
<b>Paving</b>					
1 Paver	132	0.59	8	472.5552	118
1 Paving Equipment	111	0.53	8	473.2205	90
1 Rollers	114	0.43	8	473.9012	75
<b>Total Construction Emissions</b>					<b>1,306</b>

Source: EPA, 2011; AES, 2016

<sup>1</sup> Construction equipment list from USEPA approved EMFAC 2011 air model.

<sup>2</sup> Hours per normal work day.

<sup>3</sup> Emission factors provided by EMFAC, 2014, EPA approved offroad emission factors, as sourced from CalEEMod Default Data Tables: <http://www.aqmd.gov/docs/default->

**Table 7a**  
Alternative A

Pollutant/GHG	MMscf/year	Emission Factors (lb/MMscf)	Conversion factor (lb/tons)	Emissions (tons)
VOC	30	5.50	0.0005	0.08
NOx	30	0.64	0.0005	0.01
CO	30	11.00	0.0005	0.17
SO <sub>2</sub>	30	0.60	0.0005	0.01
PM <sub>10</sub>	30	5.70	0.0005	0.09
PM <sub>2.5</sub>	30	1.90	0.0005	0.03
<b>Greenhouse Gas</b>			<b>lb/MT</b>	<b>MT</b>
CO <sub>2</sub>	30	120,000	0.00045	1,620

Stationary Sources include boilers, stoves, heating units, and other equipment.

Source: EPA, AP 42, 1997; AES, 2016.

**Table 7b**  
Alternative B

Pollutant/GHG	MMscf/year	Emission Factors (lb/MMscf)	Conversion factor (lb/tons)	Emissions (tons)
VOC	40	5.50	0.0005	0.11
NOx	40	0.64	0.0005	0.01
CO	40	11.00	0.0005	0.22
SO <sub>2</sub>	40	0.60	0.0005	0.01
PM <sub>10</sub>	40	5.70	0.0005	0.11
PM <sub>2.5</sub>	40	1.90	0.0005	0.04
<b>Greenhouse Gas</b>			<b>lb/MT</b>	<b>MT</b>
CO <sub>2</sub>	40	120,000	0.00045	2,160

Stationary Sources include boilers, stoves, heating units, and other equipment.

Source: EPA, AP 42, 1997; AES, 2016.

**Table 7c**  
Alternative C

Pollutant/GHG	MMscf/year	Emission Factors (lb/MMscf)	Conversion factor (lb/tons)	Emissions (tons)
VOC	20	5.50	0.0005	0.06
NOx	20	0.64	0.0005	0.01
CO	20	11.00	0.0005	0.11
SO <sub>2</sub>	20	0.60	0.0005	0.01
PM <sub>10</sub>	20	5.70	0.0005	0.06
PM <sub>2.5</sub>	20	1.90	0.0005	0.02
<b>Greenhouse Gas</b>			<b>lb/MT</b>	<b>MT</b>
CO <sub>2</sub>	20	120,000	0.00045	1,080

Stationary Sources include boilers, stoves, heating units, and other equipment.

Source: EPA, AP 42, 1997; AES, 2016.

Tables 8a and b - Energy, Solid Waste, and Water/Wastewater

<b>Table 8a - Alternative A and B</b>		
Energy, Solid Waste, and Water/Wastewater		
<b>Electricity</b>	<b>Water/Wastewater</b>	<b>Solid Waste</b>
<b>Emission Factor</b>		
MT/MW-h	MT/gal	MT/tons of waste
0.428	3.54E-07	0.010296546
<b>Use</b>		
MW-h	Gallons	Tons of Waste
118	7,948,970	886
50	3	9

<b>Table 8b - Alternative C</b>		
Energy, Solid Waste, and Water/Wastewater		
<b>Electricity</b>	<b>Water/Wastewater</b>	<b>Solid Waste</b>
<b>Emission Factor</b>		
MT/MW-h	MT/gal	MT/tons of waste
0.428	3.54E-07	0.010296546
<b>Use</b>		
MW-h	Gallons	Tons of Waste
39	2,108,970	50
17	1	1

# ***APPENDIX T***

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***PUBLIC SERVICES MEMORANDUM***



# Global Market Advisors

## MEMORANDUM

**TO: Acorn Environmental**

**FROM: Global Market Advisors**

**DATE: June 15, 2023**

**RE: Police, Fire, and EMS Impact of Medford Project**

### OVERVIEW

The Coquille Tribe (“Tribe”) is proposing the development of a new gaming facility (“Project”) in Medford, Oregon, and in turn has engaged Global Market Advisors (“GMA”) to help better understand the impact the Project is expected to have on local police, fire, and emergency medical services (“EMS”) infrastructure. As such, GMA has prepared the following memorandum to share the results of its analysis and projected impact of the Project on the local emergency infrastructure.

### POLICE, FIRE, AND EMS IMPACT AT PROJECT SITE

As with any commercial development, a gaming facility opening can generate an increase in local emergency services, including police, fire, and emergency medical services. Through an evaluation of historical staffing levels, activity volume, and anecdotal commentary by department officials in comparable jurisdictions, GMA finds that casinos and gaming facilities do not generally require additional emergency services staff or costs to manage casino related incidents. Fluctuations in staffing levels may be attributable to events such as recessions and other factors, and the volume of incident calls and arrests varies from market to market, although the types of crime reported remain fairly consistent. Traffic related incidents and DUI/DWI arrests were the most common and prevalent issues reported.

In 2014, when a new casino resort was being contemplated for Orange County, NY, the county conducted a study on the possible impact of the facility, particularly to address any potential increases in DUI/DWI cases and felony crimes such as murder and assault. In this study, the Orange County Department of Emergency Services contacted numerous emergency services agencies in New York and Connecticut to understand the impact that casinos have had in these jurisdictions. According to that study,

The overall finding from these telephonic interviews is that the casinos have had a minimal impact in terms of crime rates, medical calls, fire-related incidents, and emergency management activities. The common theme from all the representatives interviewed for this study was that the impact of the casinos caused some initial issues but as the facilities matured, the impact was minimized.<sup>1</sup>

To understand how casinos in the greater market area have impacted nearby police services, GMA analyzed the impact that The Mill Casino, located in North Bend, Oregon, had on the nearby police force. Specifically, GMA evaluated annual incident calls and arrests for the property for a full calendar year in 2022. In this assessment, GMA learned that there was a total of 297 police calls and 26 arrests at the casino during this year. This equated to a police call rate of .45 per gaming position and an arrest rate of 9% (with the Mill Casino having 656 gaming positions at that time – with 600 gaming machines and 8 table games at 7 positions per table). Based on these metrics and with an assumed 650 gaming machines during the Full Build phase of the Project, GMA estimates that the Project would generate 294 annual police calls and 26 arrests during its first stabilized year of operations.

GMA was unable to garner recent Fire and EMS related incident data for The Mill Casino, but recently studied combined Fire and EMS related incidents at another casino in a comparable market area in Northern California. Through this study, it learned that the property experienced incident rates that ranged from .83 incidents per day in 2020 (with a total of 303 incidents) and .88 incidents per day in 2021 (with a total of 321 incidents). The analyzed facility offers 3,840 gaming positions, which means that it garnered approximately .084 Fire and EMS related incidents per gaming position in 2021. With this factor applied to the Project's number of gaming positions, it is estimated the Project would have approximately 54 Fire and EMS incidents annually. In 2020, the city of Medford Fire and EMS performed a total of 11,662 incident responses. With 54 projected Fire and EMS incidents, the Project can be expected to make up .47% of incident responses for the city of Medford annually.

As a result of this quantitative and qualitative analysis, GMA finds that the negative impacts on community services in areas in which a casino has opened are expected to be minimal. The incremental increase of criminal and or Fire/EMS activity attributable to the analyzed facilities has warranted little or no additional departmental resources. Given the size of the Project in comparison to the other analyzed casinos, it is unlikely that additional staffing would be required for either outside service.

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<sup>1</sup> Orange County Department of Emergency Services, "Impact of Casinos on Emergency Services in Orange County", [www.co.orange.ny.us](http://www.co.orange.ny.us), April 2014.

