

BEFORE THE BOARD OF COMMISSIONERS OF LANE COUNTY, OREGON

ORDINANCE NO: PA 1343

IN THE MATTER OF AMENDING THE LANE COUNTY RURAL COMPREHENSIVE PLAN (RCP) TO ADD A QUARRY SITE TO THE INVENTORY OF SIGNIFICANT MINERAL AND AGGREGATE SITES; AUTHORIZE MINING AND PROCESSING AS PROVIDED BY OREGON ADMINISTRATIVE RULES (OAR) 660-023-180; AMENDING THE RCP TO REDESIGNATE LAND FROM FOREST (F) TO NATURAL RESOURCE: MINERAL (NR:M), AND REZONE THAT LAND FROM NON-IMPACTED FOREST LAND (F-1) ZONE AND IMPACTED FOREST LAND (F-2) ZONE TO QUARRY AND MINE OPERATIONS (QM) ZONE; REQUIRE SITE REVIEW OF THE PROPOSED MINING OPERATIONS PURSUANT TO LANE CODE 16.257(4)(A)-(J); AND ADOPTING SAVINGS AND SEVERABILITY CLAUSES. (PLANNING FILE NOS 509-PA15-05803 AND 509-PA15-05804; APPLICANT: OLD HAZELDELL QUARRY).

WHEREAS, the Board of County Commissioners of Lane County, through enactment of Ordinance PA 1343, has adopted Land Use Designations and Zoning for lands within the planning jurisdiction of the Lane County Rural Comprehensive Plan; and

WHEREAS, Lane Code 16.400 sets forth procedures for amendment of the Rural Comprehensive Plan; and

WHEREAS, Oregon Administrative Rules (OAR) Chapter 660 Division 23 sets forth procedures for amendment of the Goal 5 Inventory of Significant Mineral & Aggregate Sites within Lane County as well as addressing requests for a post-acknowledgment plan amendment (PAPA) affecting those sites; and

WHEREAS, on December 9, 2015, application nos. 509-PA15-05803 and 509-PA15-05804 were made for a major amendment to add a site to the Lane County Goal 5 Inventory of Significant Mineral & Aggregate Sites, to authorize mining and processing; to amend the RCP to redesignate land from Forest (F) to Natural Resource: Mineral (NR:M) and rezone that land from Non-impacted Forest Land (F-1) Zone and Impacted Forest Land (F-2) Zone to Quarry and Mine Operations (QM) Zone; to require a site review of the proposed mining operations on the subject property (as tax lot 502 and a portion of tax lot 100 of map 21-35-22, and a portion of tax lot 1900 of map 21-35-15); and

WHEREAS, the Lane County Planning Commission reviewed the proposal in public hearings on April 19, 2016 and May 10, 2016, and deliberated on July 26, 2016, and forwarded the matter to the Board with formal Planning Commission recommendations; and

WHEREAS, evidence exists within the record indicating that the proposal meets the requirements of Lane Code Chapter 16, and the requirements of applicable state and local law; and

WHEREAS, the Board of County Commissioners has conducted a public hearing and is now ready to take action.



NOW, THEREFORE, the Board of County Commissioners of Lane County Ordains as follows:

**Section 1.** The Lane County Rural Comprehensive Plan is hereby amended to add the significant resource site shown on the Mining Area Maps in Exhibit "A" Figure 4, attached and incorporated here and depicted as a portion of tax lots 502 and 100 of map 21-35-22, and a portion of tax lot 1900 of map 21-35-15 as the significant resource site of aggregate resources to be added to the existing Goal 5 Inventory of Significant Mineral and Aggregate Sites identified and included in Appendix "D" of the "Mineral and Aggregate Resources Working Paper"; and to allow mining and processing as known mineral resource to be conserved for present and future mineral and aggregate use based on the findings and conclusions as described in Exhibit "C" attached and incorporated herein.

**Section 2.** The Lane County Official Zoning Map is amended to change the Plan / Zone classifications shown on the Mining Area Maps in Exhibit "A" Figure 2, attached and incorporated here and depicted as tax lot 502 and a portion of tax lot 100 of map 21-35-22, and a portion of tax lot 1900 of map 21-35-15 from Forest (F) to Natural Resource: Mineral (NR:M), and rezone that land from Non-impacted Forest Land (F-1) Zone and Impacted Forest Land (F-2) Zone to Quarry and Mine Operations (QM) Zone. This is depicted on the Official Lane County Plan / Zone maps and further identified as Exhibit "B" attached and incorporated herein.

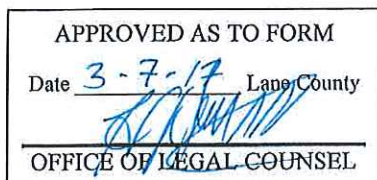
**Section 3.** Site Review is required prior to authorize mining and processing on the subject property pursuant to Lane Code 16.257 based on findings and conclusions as described in Exhibit "C" attached and incorporated herein, and subject to compliance with the conditions of approval contained therein, and the Planning Director is hereby delegated authority to monitor ongoing mining and processing operations, and to review requested amendments to the mining operations plan as necessary, consistent with this approval.

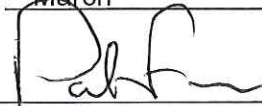
The prior designation status and zone authorizations replaced by this Ordinance remain in full force and effect to authorize prosecution of persons in violation thereof prior to the effective date of this Ordinance.

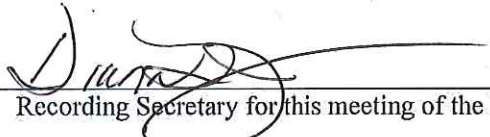
If any section, subsection, sentence, clause, phrase or portion of this Ordinance is for any reason held invalid or unconstitutional by any court or administrative agency of competent jurisdiction, such portion is deemed a separate, distinct and independent provision, and such holding does not affect the validity of the remaining portions hereof.

FURTHER, although not a part of this Ordinance except as described above, the Board of County Commissioners adopts Findings and Conclusions as set forth in Exhibit "C" attached and incorporated here by this reference, in support of this action.

ENACTED this 14th day of March, 2017



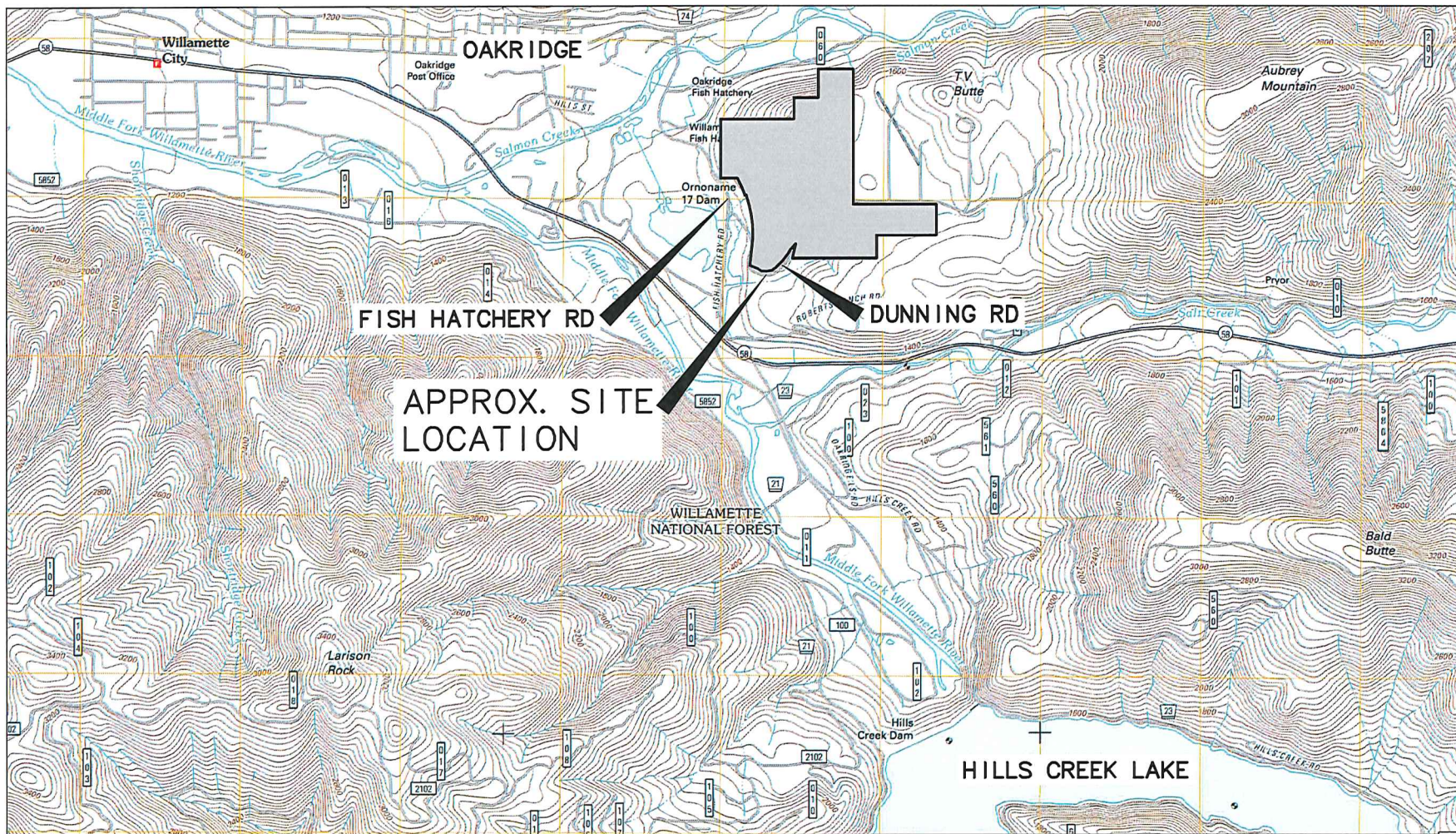
  
\_\_\_\_\_  
Chair, Lane County Board of County Commissioners

  
\_\_\_\_\_  
Recording Secretary for this meeting of the Board



# VICINITY MAP FOR OLD HAZELDELL QUARRY SITE

## FIGURE 1



SCALE: NTS

DATE	03/2015
DRAWN BY	PEK
CHECKED BY	BEM
REVISIONS	
JOB NO.	2372-001

**KUPER CONSULTING LLC**  
 ENGINEERING GEOLOGY CONSULTANTS  
 TIGARD, OREGON (503)638-9722  
 HELENA, MONTANA (406)475-3244

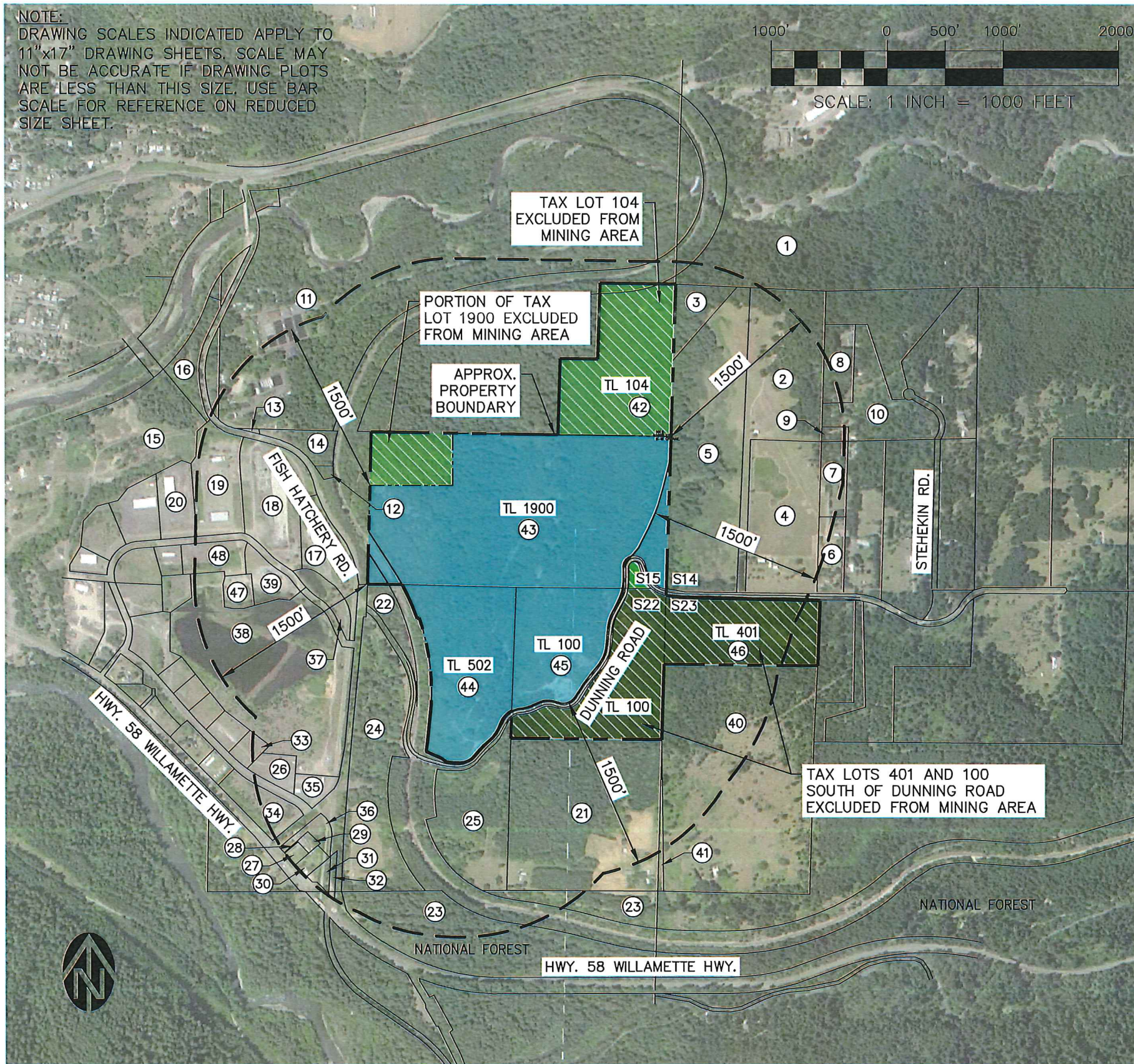
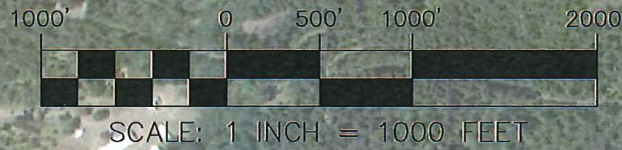
**WESTLAKE**  
 CONSULTANTS INC.

ENGINEERING ♦ SURVEYING ♦ PLANNING

PACIFIC CORPORATE CENTER  
 15115 S.W. SEQUOIA PARKWAY, SUITE 150 (503) 884-0652  
 TIGARD, OREGON 97224 FAX (503) 624-0157



NOTE:  
DRAWING SCALES INDICATED APPLY TO  
11"x17" DRAWING SHEETS. SCALE MAY  
NOT BE ACCURATE IF DRAWING PLOTS  
ARE LESS THAN THIS SIZE. USE BAR  
SCALE FOR REFERENCE ON REDUCED  
SIZE SHEET.



- |  |   |   |  |
|--|---|---|--|
| ① MAP 21-35-14<br>TAX LOT 100, ZONE F1   | ⑩ MAP 21-35-14<br>TAX LOT 903, ZONE RR10    | ⑲ MAP 21-35-15<br>TAX LOT 4200, ZONE I2     | ②⑸ MAP 21-35-22.20<br>TAX LOT 105, ZONE I2   |
| ② MAP 21-35-14<br>TAX LOT 200, ZONE RR10 | ⑪ MAP 21-35-15<br>TAX LOT 100, ZONE F1      | ⑳ MAP 21-35-15<br>TAX LOT 4300, ZONE I2     | ②⑹ MAP 21-35-22.20<br>TAX LOT 1701, ZONE CA  |
| ③ MAP 21-35-14<br>TAX LOT 201, ZONE F2   | ⑫ MAP 21-35-15<br>TAX LOT 605, ZONE I2      | ㉑ MAP 21-35-22<br>TAX LOT 200, ZONE F2      | ③⑰ MAP 21-35-22.20<br>TAX LOT 1800, ZONE RR2 |
| ④ MAP 21-35-14<br>TAX LOT 202, ZONE RR10 | ⑬ MAP 21-35-15<br>TAX LOT 606, ZONE I2      | ㉒ MAP 21-35-22<br>TAX LOT 300, ZONE I2      | ③⑱ MAP 21-35-22.20<br>TAX LOT 1900, ZONE RR2 |
| ⑤ MAP 21-35-14<br>TAX LOT 203, ZONE F2   | ⑭ MAP 21-35-15<br>TAX LOT 1701, ZONE I2     | ㉓ MAP 21-35-22<br>TAX LOT 400, ZONE F1      | ④⑰ MAP 21-35-23<br>TAX LOT 500, ZONE F2      |
| ⑥ MAP 21-35-14<br>TAX LOT 400, ZONE RR10 | ⑮ MAP 21-35-15<br>TAX LOT 2000, ZONE I2     | ㉔ MAP 21-35-22<br>TAX LOT 501, ZONE F2      | ④⑱ MAP 21-35-23<br>TAX LOT 501, ZONE F2      |
| ⑦ MAP 21-35-14<br>TAX LOT 500, ZONE RR10 | ⑯ MAP 21-35-15<br>TAX LOT 2100, ZONE I2     | ㉕ MAP 21-35-22<br>TAX LOT 105, ZONE I2      | ④⑲ MAP 21-35-15<br>TAX LOT 3900, ZONE I2     |
| ⑧ MAP 21-35-14<br>TAX LOT 901, ZONE RR10 | ⑰ MAP 21-35-15<br>TAX LOT 4000, ZONE I2     | ㉖ MAP 21-35-22.20<br>TAX LOT 1700, ZONE CA  | ④⑳ MAP 21-35-23<br>TAX LOT 500, ZONE F2      |
| ⑨ MAP 21-35-14<br>TAX LOT 902, ZONE RR10 | ⑱ MAP 21-35-15<br>TAX LOT 2000, ZONE I2     | ㉗ MAP 21-35-22.20<br>TAX LOT 1800, ZONE RR2 | ④㉑ MAP 21-35-15<br>TAX LOT 1900, ZONE F1     |
| ⑩ MAP 21-35-14<br>TAX LOT 903, ZONE RR10 | ⑳ MAP 21-35-15<br>TAX LOT 2000, ZONE I2     | ㉘ MAP 21-35-22.20<br>TAX LOT 1900, ZONE RR2 | ④㉒ MAP 21-35-22<br>TAX LOT 502, ZONE F2      |
| ⑪ MAP 21-35-15<br>TAX LOT 100, ZONE F1   | ㉑ MAP 21-35-22<br>TAX LOT 200, ZONE F2      | ㉙ MAP 21-35-22.20<br>TAX LOT 2000, ZONE CA  | ④㉓ MAP 21-35-22<br>TAX LOT 100, ZONE F2      |
| ⑫ MAP 21-35-15<br>TAX LOT 605, ZONE I2   | ㉒ MAP 21-35-22<br>TAX LOT 300, ZONE I2      | ㉚ MAP 21-35-22.20<br>TAX LOT 2001, ZONE I2  | ④㉔ MAP 21-35-23<br>TAX LOT 401, ZONE F2      |
| ⑬ MAP 21-35-15<br>TAX LOT 606, ZONE I2   | ㉓ MAP 21-35-22<br>TAX LOT 400, ZONE F1      |   | ④㉕ MAP 21-35-15<br>TAX LOT 3000, ZONE I2     |
| ⑭ MAP 21-35-15<br>TAX LOT 1701, ZONE I2  | ㉔ MAP 21-35-22<br>TAX LOT 501, ZONE F2      |   | ④㉖ MAP 21-35-15<br>TAX LOT 3800, ZONE I2     |
| ⑮ MAP 21-35-15<br>TAX LOT 2000, ZONE I2  | ㉕ MAP 21-35-22<br>TAX LOT 501, ZONE F2      |   |  |
| ⑯ MAP 21-35-15<br>TAX LOT 2100, ZONE I2  | ㉖ MAP 21-35-22<br>TAX LOT 502, ZONE F2      |   |  |
|  | ㉗ MAP 21-35-22.20<br>TAX LOT 1700, ZONE CA  |   |  |
|  | ㉘ MAP 21-35-22.20<br>TAX LOT 1800, ZONE RR2 |   |  |
|  | ㉙ MAP 21-35-22.20<br>TAX LOT 1900, ZONE RR2 |   |  |
|  | ㉚ MAP 21-35-22.20<br>TAX LOT 2000, ZONE CA  |   |  |
|  | ㉛ MAP 21-35-22.20<br>TAX LOT 2001, ZONE I2  |   |  |

**PROPERTY DESCRIPTION:**

TAX LOTS 104 AND 1900 MAP 21-35-15  
TAX LOTS 100 AND 502 MAP 21-35-22  
TAX LOT 401 MAP 21-35-23  
IN LANE COUNTY

**ZONING LEGEND:**

F1 - NONIMPACTED FOREST LANDS  
F2 - IMPACTED FOREST LANDS  
RR2 - RURAL RESIDENTIAL, 2 ACRES  
RR10 - RURAL RESIDENTIAL, 10 ACRES  
CA - RURAL COMMERCIAL  
I2 - HEAVY INDUSTRIAL (CITY OF OAKRIDGE)

**PROPOSED ZONING LEGEND:**

- F1 - NONIMPACTED FOREST LANDS
- F2 - IMPACTED FOREST LANDS
- QM - QUARRY AND MINE OPERATIONS

**OLD HAZELDELL QUARRY  
TAX LOT MAP, IMPACT AREA AND PROPOSED ZONE CHANGES  
PORTIONS OF SECTIONS 14, 15, 22, AND 23, T.21S. R.3E. W.M.**

**FIGURE 2**

<b>KUPER CONSULTING LLC</b> ENGINEERING GEOLOGY CONSULTANTS TIGARD, OREGON (503)638-9722 HELENA, MONTANA (406)475-3244	DATE 03/2016
	DRAWN BY CMH
	CHECKED BY BEM
	REVISIONS
	JOB NO. 2372-001

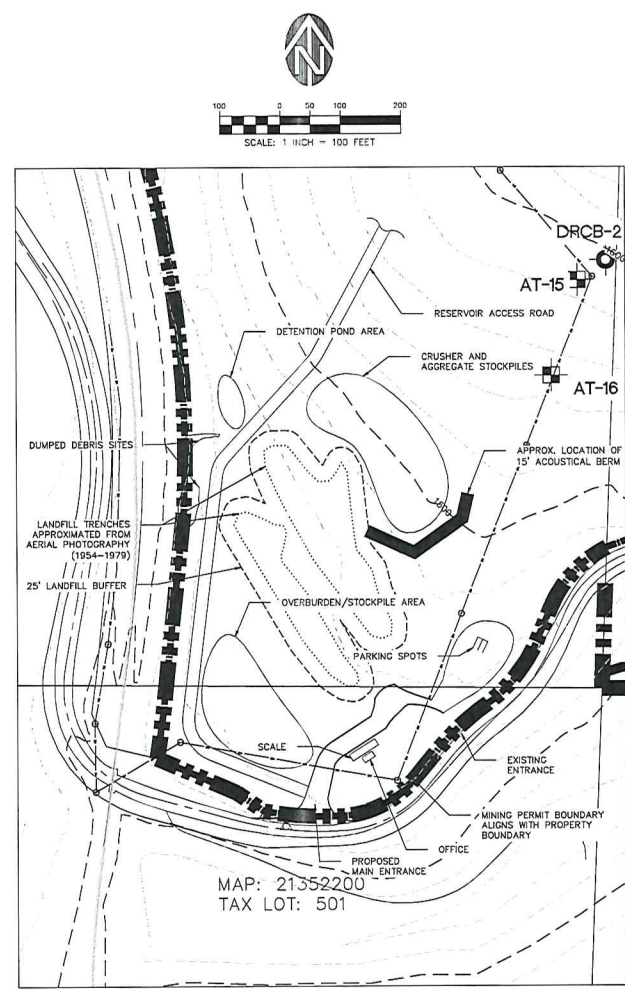
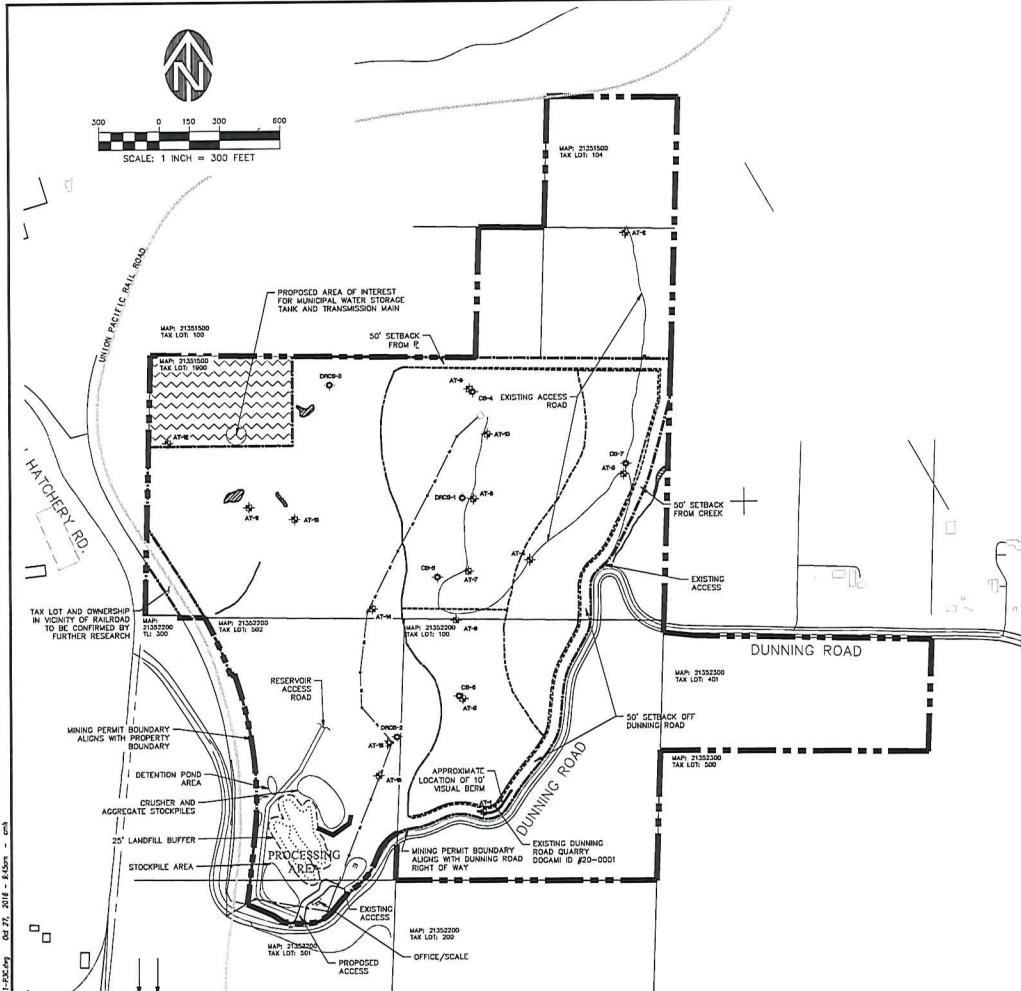
<b>WESTLAKE</b> CONSULTANTS INC.	ENGINEERING ♦ SURVEYING ♦ PLANNING	
PACIFIC CORPORATE CENT 15115 S.W. SEQUOIA PARK TIGARD, OREGON 97224	Attachment 1 Exhibit A: Mining Area Maps	

Drawing Name: J:\2372-001\13\Engin\CAD\Production\PAFA\237201\_PAPA-FIG2\_Impact Area.dwg Mar 07, 2016 - 1:49pm - cmh









**LEGEND:**

	APPROXIMATE PROPERTY BOUNDARY
	MINING PERMIT BOUNDARY (EXCLUDES TL104; TL401 & TL100 SOUTH OF DUNNING ROAD)
	MINING EXCAVATION BOUNDARY (PHASES 1-3)
	EXISTING 20' MINOR CONTOUR
	EXISTING 100' MAJOR CONTOUR
	EXISTING ROAD
	EXISTING STRUCTURE
	DUNNING ROAD RIGHT-OF-WAY
	EXISTING RAILROAD
	EXISTING POWER/TELEPHONE LINE
	EXISTING POWER/TELEPHONE POLE
	CONTROL POINT

	APPROXIMATE AIR TRACK LOCATION (KUPER CONSULTING)
	APPROXIMATE CORE BORE LOCATION (KUPER CONSULTING)
	APPROXIMATE CORE BORE LOCATION (SHANNON & WILSON)
	APPROXIMATE LOCATION OF SEEPS/WETLANDS (TERRA SCIENCE, INC.)
	APPROXIMATE LOCATION OF FUTURE RESERVOIR AND CITY IMPROVEMENTS

**NOTES:**  
 FOR STORMWATER INFORMATION REFER TO THE "PROPOSED CONCEPTUAL SWALE/CATCHMENT LOCATION FOR OLD HAZELDELL QUARRY" EXHIBIT.

**WESTLAKE CONSULTANTS INC.**  
 ENGINEERING • SURVEYING • PLANNING  
 10000 NE SUNNYSIDE AVENUE, SUITE 100  
 PORTLAND, OREGON 97224

**OLD HAZELDELL QUARRY**  
 DOCUMENT # 20-0165  
 OAKRIDGE, LAKE COUNTY, OREGON  
 SITE PLAN

**PRELIMINARY**

THIS DRAWING AND THE PROPERTY OF WESTLAKE CONSULTANTS, INC. AND NO PART OF IT IS TO BE REPRODUCED OR TRANSMITTED IN ANY FORM OR BY ANY MEANS, ELECTRONIC OR MECHANICAL, WITHOUT THE WRITTEN PERMISSION OF WESTLAKE CONSULTANTS, INC.

REVISIONS	NO.	DATE	DESCRIPTION
	1	05/15/2018	HAZELDELL QUARRY REVISIONS
	2	10/27/2018	HAZELDELL QUARRY REVISIONS

PLATE  
**3C**

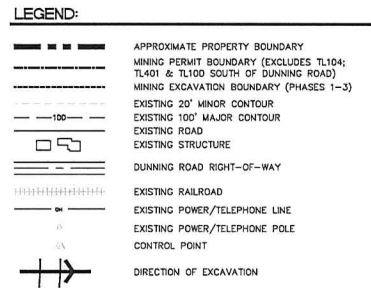
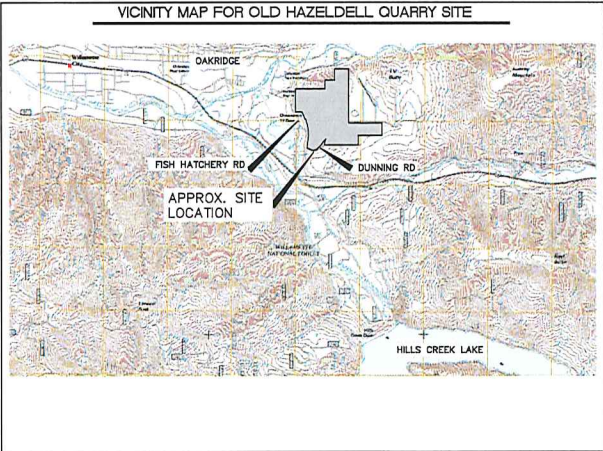
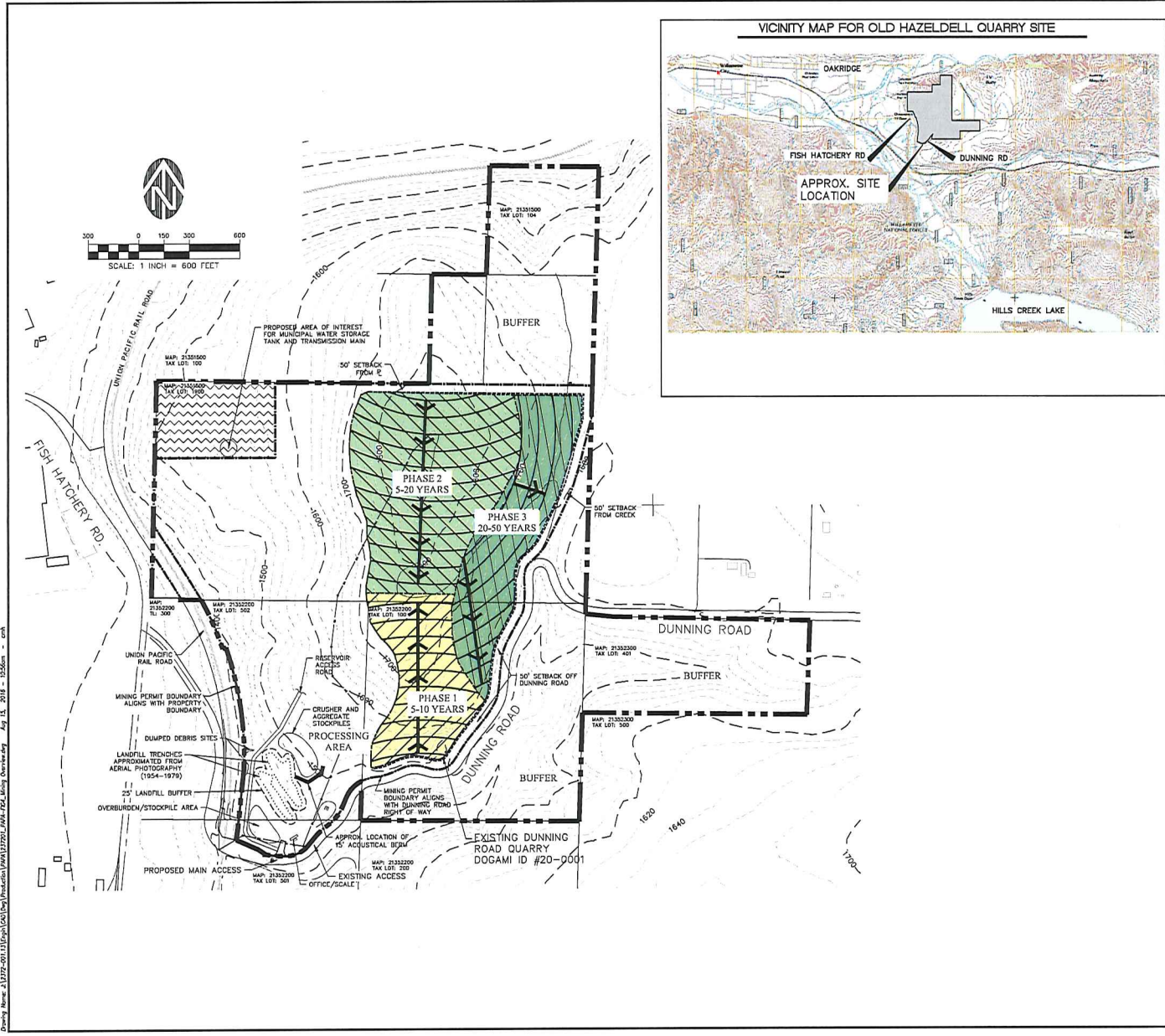
JOB NO.  
 2372-001

DATE PLOTTED  
 OCTOBER 2015

Attachment 1  
 Exhibit A: Mining Area Maps



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**NOTES:**

**PROPERTY LEGAL DESCRIPTION:**  
 TAX LOTS 104 AND 1800 MAP 21-35-15  
 ZONED NON-IMPACTED FOREST (F1)  
 TAX LOTS 100 AND 502 MAP 21-35-22  
 TAX LOT 401 MAP 21-35-23  
 ZONED IMPACTED FOREST (F2) IN LANE COUNTY

ALL UTILITY EASEMENT LOCATIONS AND WIDTHS TO BE CONFIRMED (SURVEYED) IN THE FIELD IN COORDINATION WITH THE UTILITY COMPANIES PRIOR TO MINING.

FOR STORMWATER INFORMATION REFER TO THE PROPOSED CONCEPTUAL SWALE/CATCHMENT LOCATION FOR OLD HAZELDELL QUARRY EXHIBIT.

A BERM 10 FT HIGH WITH 2:1 SLOPES WILL SPAN THE CURRENT WIDTH OF THE OLD EXISTING QUARRY. THE BERM WILL BE LOCATED WITHIN THE 50 FT. SETBACK OF THE ROAD.

**NOTE:**  
 DRAWING SCALES INDICATED APPLY TO 11"x17" DRAWING SHEETS. SCALE MAY NOT BE ACCURATE IF DRAWING PLOTS ARE LESS THAN THIS SIZE. USE BAR SCALE FOR REFERENCE ON REDUCED SIZE SHEET.

**PERMITTEE/OPERATOR:**  
 OLD HAZELDELL QUARRY, LLC  
 800 WILLAMETTE STREET, SUITE 800  
 EUGENE, OR 97401  
 (541) 484-0188  
 CONTACT: MR. MICHAEL REEDER

**ENGINEERING GEOLOGIST:**  
 KUPER CONSULTING LLC  
 ENGINEERING GEOLOGY CONSULTANTS  
 TIGARD, OREGON (503)638-9722  
 HELENA, MONTANA (406)475-3244

**WESTLAKE CONSULTANTS INC.**

ENGINEERING • SURVEYING • PLANNING

TIGARD, OREGON 97146  
 SUITE 500, 2000 W. BARNHART AVENUE, SUITE 100 TIGARD, OREGON 97146  
 (503) 638-9722 FAX (503) 638-0101

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**OLD HAZELDELL QUARRY**  
 DOGAMI ID# 20-0166  
 OKANOGA, LAKE COUNTY, OREGON  
 MINING OVERVIEW  
 FIGURE 4

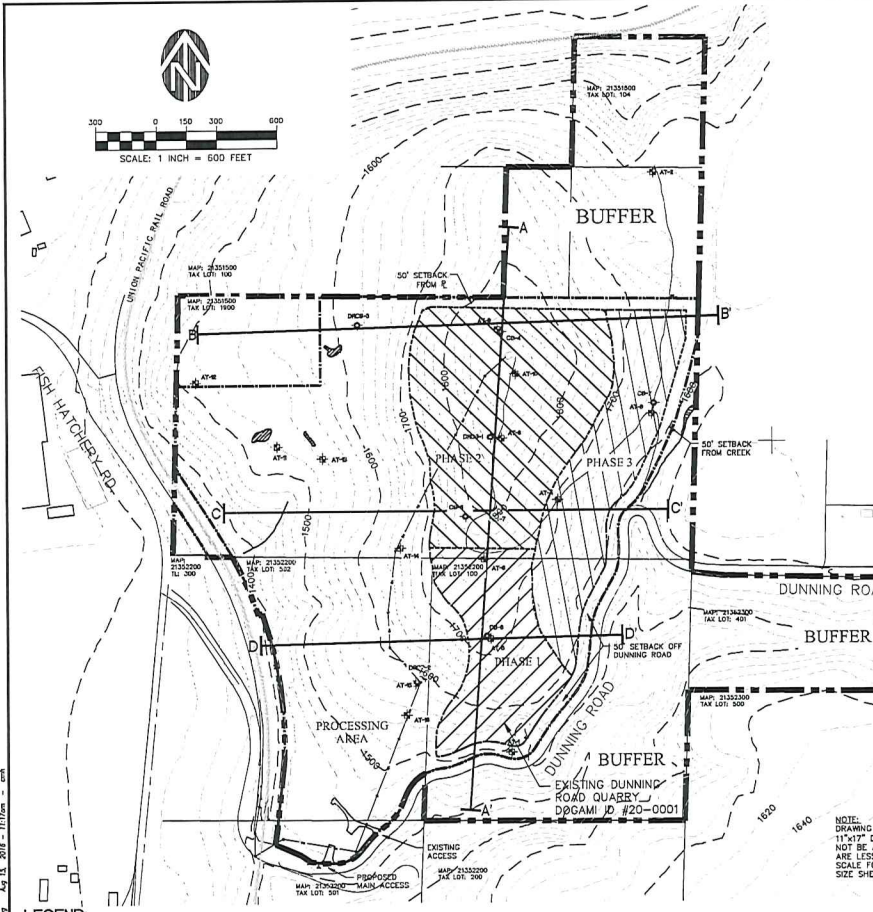
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REVISIONS	NO.	DATE	DESCRIPTION

FIGURE  
**4**

JOB NO.  
**2372-001**





**NOTES:**

- 1) THE PROPOSED QUARRY IS IN LANE COUNTY. THE SITE IS ZONED NON-IMPACTED FOREST (F1) AND IMPACTED FOREST (F2), AND WILL BE REZONED TO QUARRY & MINE OPERATIONS ZONE (QM-RPC).
- 2) THE OPERATIONAL LIFE OF THE MINE IS APPROXIMATELY 30-50 YEARS.
- 3) EXCAVATIONS AND CRUSHING MINING OPERATIONS ARE RESTRICTED TO THE HOURS OF:  
7:00 AM TO 6:00 PM MON - FRI  
AND 8:00 AM TO 5:00 PM SAT

NO OPERATION SHALL TAKE PLACE ON SUNDAYS OR THE FOLLOWING LEGAL HOLIDAYS:  
 • NEW YEAR'S DAY  
 • MEMORIAL DAY  
 • INDEPENDENCE DAY  
 • LABOR DAY  
 • THANKSGIVING DAY  
 • CHRISTMAS DAY

- 4) DRILLING AND BLASTING IS RESTRICTED TO THE HOURS OF:  
8:00 AM TO 4:00 PM MON - FRI

NO DRILLING OR BLASTING SHALL OCCUR ON SATURDAYS, SUNDAYS, OR THE FOLLOWING LEGAL HOLIDAYS:  
 • NEW YEAR'S DAY  
 • MEMORIAL DAY  
 • INDEPENDENCE DAY  
 • LABOR DAY  
 • THANKSGIVING DAY  
 • CHRISTMAS DAY

**NOTES:**

**PROPERTY LEGAL DESCRIPTION:**  
 TAX LOTS 104 AND 1900 MAP 21-35-15  
 ZONED NON-IMPACTED FOREST (F1)  
 TAX LOTS 100 AND 502 MAP 21-35-22  
 TAX LOT 401 MAP 21-35-23  
 ZONED IMPACTED FOREST (F2) IN LANE COUNTY

ALL UTILITY EASEMENT LOCATIONS AND WIDTHS TO BE CONFIRMED (SURVEYED) IN THE FIELD IN COORDINATION WITH THE UTILITY COMPANIES PRIOR TO MINING.

A BERM 10 FT HIGH WITH 2:1 SLOPES WILL SPAN THE CURRENT WIDTH OF THE OLD EXISTING QUARRY. THE BERM WILL BE LOCATED WITHIN THE 50 FT. SETBACK OF THE ROAD.

**MINE SITE STATISTICS:**

AREAS:	TAX LOT	AREA PER TAX MAP	AREA PER EXHIBITS*
	TAX LOT 100	±38.25 AC	±38.75 AC
	TAX LOT 104	±25.00 AC	±24.33 AC
	TAX LOT 401	±17.58 AC	±17.43 AC
	TAX LOT 502	±28.85 AC	±24.90 AC
	(PORTION OF FORMER TAX LOT 500)		
	TAX LOT 1900	±75.83 AC	±77.62 AC
	PERMITTED MINING AREA		±107.0 AC
	MINING EXCAVATION AREA		± 46.3 AC

\*AREAS USED IN REPORTS AND EXHIBITS

**PERMITTEE/OPERATOR:**

**OLD HAZELDELL QUARRY LLC**

800 WILLAMETTE STREET, SUITE 800  
 EUGENE, OR 97401  
 (541) 484-0188  
 CONTACT: MR. MICHAEL REEDER

**ENGINEERING GEOLOGIST:**

**KUPER CONSULTING LLC**  
 ENGINEERING GEOLOGY CONSULTANTS  
 TICARD, OREGON (503)638-9722  
 HELENA, MONTANA (406)475-3244

**OLD HAZELDELL QUARRY  
 MINING PLAN**

**FIGURE 5**

**NOTES (CONT):**

- 5) NOTICE OF BLASTING EVENTS SHALL BE GIVEN TO NEIGHBORS WITHIN 500 FEET AND NO MORE THAN 8 HOURS PRIOR TO THE BLASTING EVENT. IN THE CASE OF ONGOING BLASTING ACTIVITIES, NOTICE SHALL BE PROVIDED ONCE EACH MONTH FOR THE PERIOD OF BLASTING ACTIVITIES, AND SPECIFY THE DATES AND HOURS WHEN THE BLASTING EVENT IS EXPECTED TO OCCUR.
- 6) NOISE MITIGATION BARRIERS IN ACCORDANCE WITH THE DALY-STANDLEE & ASSOCIATES, INC. NOISE STUDY DATED SEPTEMBER, 2015.
- 7) PROPERTY LINE SETBACK DISTANCES:  
A. DOGAMI SETBACK 50 FEET.
- 8) FINAL PERIMETER SLOPE INCLINATIONS AND CONFIGURATIONS TO BE EVALUATED BY A CERTIFIED ENGINEERING GEOLOGIST ONCE SLOPE MATERIALS ARE EXPOSED IN THE EXCAVATIONS.
- 9) REFER TO THE SHANNON & WILSON, INC. REPORT DATED SEPTEMBER, 2015 FOR GROUNDWATER INFORMATION.
- 10) PROPOSED ACCESS ROADS SHALL BE PAVED, OILED, OR WATERED FOR DUST SUPPRESSION.
- 11) THE APPLICANT SHALL FLAG OR OTHERWISE MARK THE BOUNDARIES OF THE REQUIRED EXCAVATION SETBACKS FROM PROPERTY BOUNDARIES BEFORE BEGINNING EXCAVATION AT THE AGGREGATE SITE.
- 12) ACCESS ROADS TO AGGREGATE SITE SHALL BE GATED AND LOCKED WHEN NOT IN OPERATION.
- 13) TAX LOT AND AERIAL DATA WAS PROVIDED BY WESTLAKE CONSULTANTS INC. AND JDI, LLC. TAX LOTS ARE APPROXIMATE ONLY AND ARE FOR ILLUSTRATIVE PURPOSE ONLY. NOT TO BE USED AS A SURVEYED LOCATION OF BOUNDARY/AREA.
- 14) MINING OPERATIONS TO BE IN ACCORDANCE WITH LANE COUNTY DEVELOPMENT CODE, CHAPTER 16.216.
- 15) NO WETLANDS WILL BE IMPACTED PER TSI REPORT.

**PHASING:**

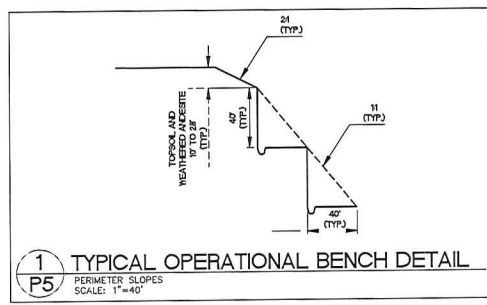
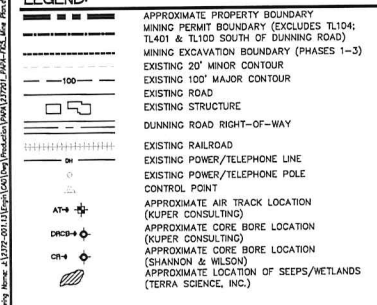
- 16) APPROXIMATE QUARRY FLOOR ELEVATION IS 1,420' MSL.
- 17) THE TIMING FOR MINING IS DEPENDENT ON MARKET CONDITIONS. THEREFORE, THE TIMING OF MINING EACH PHASE COULD VARY. MINING CAN OCCUR WITHIN THE PHASE 1 TO 3 AREAS AT ANY TIME DURING THE LIFE OF THE MINE AND MAY OCCUR ON MULTIPLE BENCHES UTILIZING NOISE MITIGATION MEASURES PER DSA REPORT AND OTHER APPLICABLE REFERENCE REPORTS.
- 18) MINE ROCK CRUSHING EQUIPMENT WILL BE LOCATED IN THE PROCESSING AREA. RECLAMATION TO BE PERFORMED DURING AND AFTER MINING OPERATIONS HAVE BEEN COMPLETED.
- 19) FUGITIVE DUST WILL BE CONTROLLED BY A WATER TRUCK AS NEEDED ON THE SITE ROADS, AND BY WATER SPRAY BARS ON THE PROCESSING EQUIPMENT.
- 20) AS MINING PROCEEDS ACROSS THE SITE, VEGETATION WILL BE HARVESTED AND REMOVED. THE OVERBURDEN WILL BE STRIPPED AND STOCKPILED FOR USE IN NOISE BERMS AND RECLAMATION.
- 21) ALL OVERBURDEN AND REJECT ARE TO BE STOCKPILED (WHERE FEASIBLE) IN SETBACK AREAS, PERMETER BERMS, PROCESSING AND EQUIPMENT AREAS ON SITE OR USED IN QUARRY SLOPE RECLAMATION. THE STOCKPILE IS TO BE GRADED WITH 2:1 SIDE SLOPES. THE STOCKPILES ARE TO RECEIVE 6" OF TOPSOIL AND BE SEEDED. ESTIMATED TOTAL QUANTITY OF TOPSOIL/OVERBURDEN AVAILABLE = 1,550,000 CY. TOPSOIL/OVERBURDEN TO BE USED TO LEVEL STAGING AREA, BULK BERMS, AND COVER QUARRY SLOPES AND FLOOR DURING SITE RECLAMATION.
- 22) PRODUCT TO BE STOCKPILED WITHIN THE MINING AND PROCESSING AREAS AS INDICATED ON THESE PLANS.

**STORMWATER:**

- 23) STORMWATER FROM DISTURBED AREAS OF THE QUARRY MINING OPERATIONS TO BE CONTAINED ON THE PROPERTY WITHIN THE QUARRY EXCAVATION.
  - 23.1. STORMWATER PLAN TO BE MODIFIED AS MINING PROGRESSES ACROSS THE SITE.
  - 23.2. STORMWATER FROM UNDISTURBED AREAS TO BE DIRECTED AROUND THE MINING AREA BY THE USE OF BERMS, SWALES, AND DITCHES AS APPROPRIATE FOR FIELD CONDITIONS, PER REFERENCE 1 ON THIS SHEET.
  - 23.3. FIELD CONDITIONS SHALL BE VERIFIED PRIOR TO CONSTRUCTION OF ANY STORMWATER CONTROL FACILITIES.
  - 23.4. STORMWATER AND EROSION CONTROL TO BE CONDUCTED IN ACCORDANCE WITH DOGAMI BEST MANAGEMENT PRACTICES FOR RECLAIMING SURFACE MINES IN OREGON.
  - 23.5. MODIFICATIONS TO THE STORMWATER FACILITIES SHALL BE MADE TO BRING STORMWATER QUALITY INTO COMPLIANCE SHOULD IT NOT MEET THE PERMIT REQUIREMENTS.
  - 23.6. PIT BENCHES SHALL BE SLOPED BACK TOWARDS THE HIGH WALL.

**REFERENCES:**

- 1) DOGAMI: BEST MANAGEMENT PRACTICES FOR RECLAIMING SURFACE MINES IN WASHINGTON AND OREGON, 1997
- 2) AGGREGATE RESOURCE EVALUATION AND SIGNIFICANCE DETERMINATION, OLD HAZELDELL QUARRY PROPERTY, LANE COUNTY, OREGON KUPER CONSULTING LLC, OCTOBER, 2015
- 3) OLD HAZELDELL QUARRY, TRAFFIC IMPACT ANALYSIS, LANE CO., OREGON, SANDOW ENGINEERING, OCTOBER, 2015
- 4) OLD HAZELDELL QUARRY SITE GOAL 5 NOISE STUDY, DSA, OCTOBER, 2015
- 5) OLD HAZELDELL QUARRY GROUNDWATER REPORT, OAKRIDGE, OREGON, SHANNON & WILSON, OCTOBER, 2015.
- 6) TSI WETLAND DELINEATION REPORT FOR TAX LOTS 100, 502 AND 1900; JULY, 2012 (REVISED NOVEMBER, 2013)
- 7) RECORDS REVIEW FOR THE OLD HAZELDELL QUARRY PROJECT, OAKRIDGE VICINITY, LANE COUNTY, OREGON, HERITAGE RESOURCES ASSOCIATES, INC., FEBRUARY, 2015.
- 8) STORMWATER ANALYSIS FOR OLD HAZELDELL QUARRY, LLC, OAKRIDGE, OREGON, WESTLAKE CONSULTANTS, INC., JULY, 2015.



**WESTLAKE CONSULTANTS INC.**  
 ENGINEERING • SURVEYING • PLANNING  
 PACIFIC OPERATIVE CENTER  
 1500 N. WASHINGTON ST., SUITE 1500  
 EUGENE, OREGON 97401 FAX (503) 684-0079

**OLD HAZELDELL QUARRY**  
 DOGAMI IDE # 20-0166  
 OAKRIDGE, LANE COUNTY, OREGON  
 MINING AND OPERATIONS PLAN  
 FIGURE 5

**PRELIMINARY**

THIS DRAWING AND THE PROPERTY HEREON CONSTITUTE A PROFESSIONAL ENGINEERING DESIGN AND SHALL BE KEPT IN CONFIDENCE. NO PART OF THIS DRAWING IS TO BE REPRODUCED OR TRANSMITTED IN ANY FORM OR BY ANY MEANS WITHOUT THE WRITTEN PERMISSION OF WESTLAKE CONSULTANTS, INC.

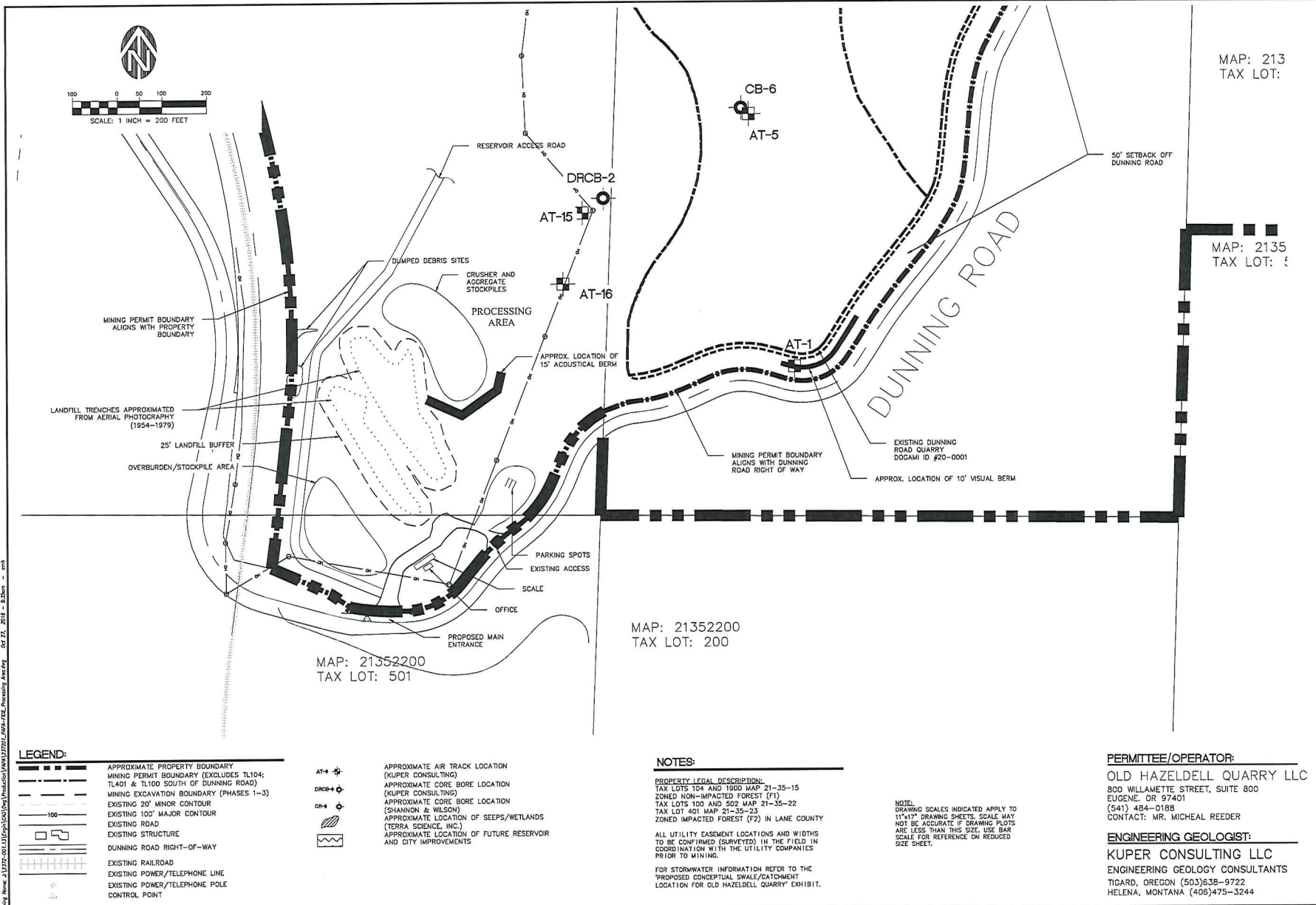
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	3	08/27/2015	KUPER REVIEWS
	4	08/27/2015	KUPER REVIEWS
	5	08/27/2015	KUPER REVIEWS

FIGURE 5

JOB NO. 2372-001

DATE: OCTOBER 2015





MAP: 213  
TAX LOT:

MAP: 2135  
TAX LOT: 1

MAP: 21352200  
TAX LOT: 200

MAP: 21352200  
TAX LOT: 501

- LEGEND:**
- APPROXIMATE PROPERTY BOUNDARY
  - - - MINING PERMIT BOUNDARY (EXCLUDES TL104; TL401 & TL100 SOUTH OF DUNNING ROAD)
  - - - MINING EXCAVATION BOUNDARY (PHASES 1-3)
  - EXISTING 20' MINOR CONTOUR
  - EXISTING 100' MAJOR CONTOUR
  - EXISTING ROAD
  - EXISTING STRUCTURE
  - DUNNING ROAD RIGHT-OF-WAY
  - EXISTING RAILROAD
  - EXISTING POWER/TELEPHONE LINE
  - EXISTING POWER/TELEPHONE POLE
  - CONTROL POINT

- AT-4
  - DRCB-4
  - CR-4
  - SEEPS/WETLANDS
- APPROXIMATE AIR TRACK LOCATION (KUPER CONSULTING)
- APPROXIMATE CORE BORE LOCATION (KUPER CONSULTING)
- APPROXIMATE CORE BORE LOCATION (SHANNON & WILSON)
- APPROXIMATE LOCATION OF SEEPS/WETLANDS (TERRA SCIENCE, INC.)
- APPROXIMATE LOCATION OF FUTURE RESERVOIR AND CITY IMPROVEMENTS

**NOTES:**

PROPERTY LEGAL DESCRIPTION:  
 TAX LOTS 104 AND 19DD MAP 21-35-15  
 ZONED NON-IMPACTED FOREST (F1)  
 TAX LOTS 100 AND 502, MAP 21-35-22  
 TAX LOT 401 MAP 21-35-23  
 ZONED IMPACTED FOREST (F2) IN LANE COUNTY

ALL UTILITY EASEMENT LOCATIONS AND WIDTHS TO BE CONFIRMED (SURVEYED) IN THE FIELD IN COORDINATION WITH THE UTILITY COMPANIES PRIOR TO MINING.

FOR STORMWATER INFORMATION REFER TO THE PROPOSED CONCEPTUAL SWALES/CATCHMENT LOCATION FOR OLD HAZELDELL QUARRY EXHIBIT.

NOTE:  
 DRAWING SCALES INDICATED APPLY TO 11x17" DRAWING SHEETS. SCALE MAY NOT BE ACCURATE IF DRAWING PLOTS ARE LESS THAN THIS SIZE. USE BAR SCALE FOR REFERENCE ON REDUCED SIZE SHEET.

**PERMITTEE/OPERATOR:**  
 OLD HAZELDELL QUARRY LLC  
 800 WILLAMETTE STREET, SUITE 800  
 EUGENE, OR 97401  
 (541) 484-0188  
 CONTACT: MR. MICHAEL REEDER

**ENGINEERING GEOLOGIST:**  
 KUPER CONSULTING LLC  
 ENGINEERING GEOLOGY CONSULTANTS  
 TIGARD, OREGON (503)638-9722  
 HELENA, MONTANA (406)475-3244

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 TEL: (503) 664-0852 FAX: (503) 664-1005

**OLD HAZELDELL QUARRY**  
 DOGAMI ID# 20-0166  
 OAKRIDGE, LANE COUNTY, OREGON  
 PROCESSING AREA  
 FIGURE 6

**PRELIMINARY**

THESE DRAWINGS ARE THE PROPERTY OF WESTLAKE CONSULTANTS INC. AND ARE NOT TO BE REPRODUCED OR TRANSMITTED IN ANY FORM OR BY ANY MEANS WITHOUT THE WRITTEN PERMISSION OF WESTLAKE CONSULTANTS INC.

REVISIONS	NO.	DATE	DESCRIPTION
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	2	10/02/2015	MAPER REVISIONS

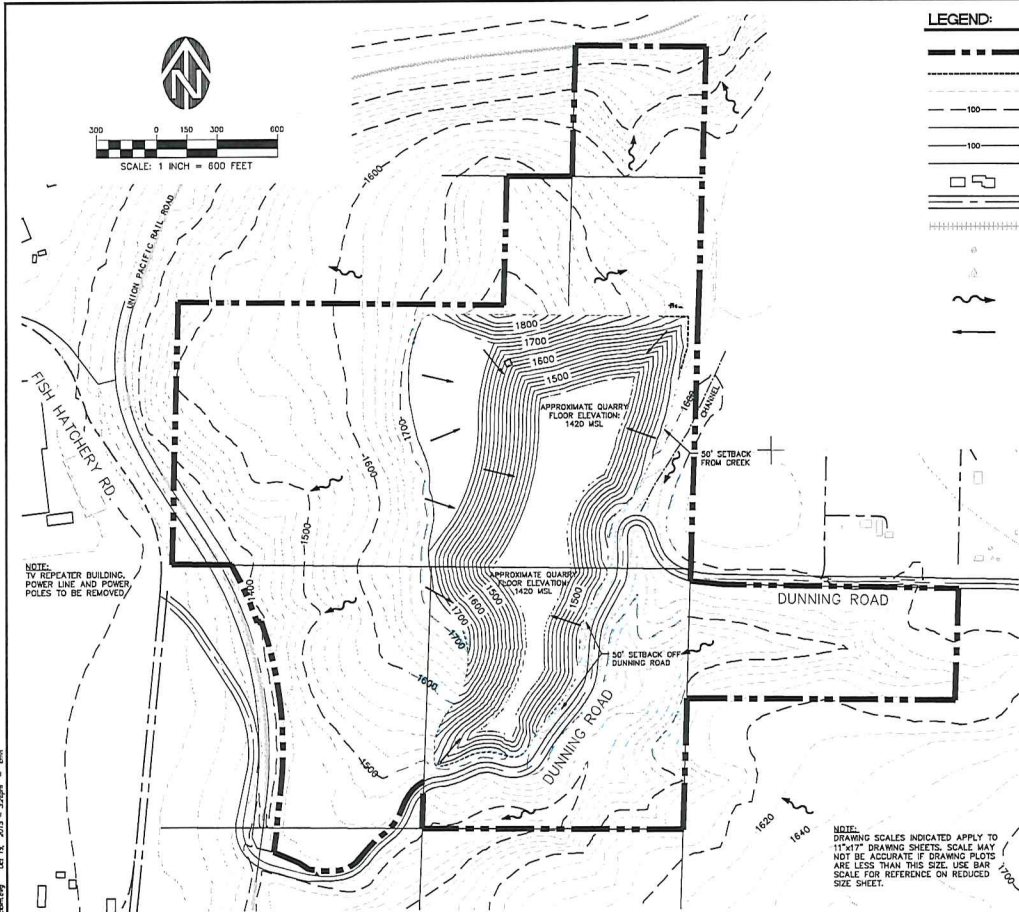
FIGURE 6

JOB NO. 2372-001

OCTOBER 2015

Attachment 1  
 Exhibit A: Mining Area Maps





**LEGEND:**

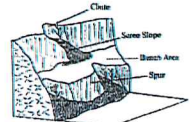
- APPROXIMATE PROPERTY BOUNDARY
- MINING EXCAVATION BOUNDARY (PHASES 1-3)
- - - - - EXISTING 20' MINOR CONTOUR
- - - - - EXISTING 100' MAJOR CONTOUR
- - - - - PROPOSED 20' MINOR CONTOUR
- - - - - PROPOSED 100' MAJOR CONTOUR
- — — — — EXISTING ROAD
- — — — — EXISTING STRUCTURE
- — — — — DUNNING ROAD RIGHT-OF-WAY
- — — — — EXISTING RAILROAD
- ⊙ EXISTING POWER/TELEPHONE POLE
- ⊙ CONTROL POINT
- STORM WATER FLOW DIRECTION BEFORE MINING
- RECLAIMED LAND GENERAL FLOW DIRECTION

**NOTES:**

1. RECLAMATION TO BE PERFORMED CONCURRENT WITH, AND FOLLOWING COMPLETION, OF MINING OPERATIONS. QUARRY TO BE RECLAIMED TO ORIGINAL ZONED USE (ZONED NON-IMPACTED FOREST [F1] AND IMPACTED FOREST [F2]).
  2. FINAL MINE RECLAMATION SLOPES TO DRAIN. SLOPES TO BE AS FOLLOWS:
    - OUBURDEN
    - CUT SLOPE
    - 2:1 (HORIZONTAL-VERTICAL) SLOPES
    - ANDESITE RESOURCE AND TUFF RESOURCE
    - MAX. INCLINATION
    - 1:1 (HORIZONTAL-VERTICAL) SLOPES
  3. REFER TO DETAILS ON THIS SHEET AND NOTE 2 FOR FINAL RECLAIMED CONFIGURATION OF EXCAVATED SLOPES.
  4. EXISTING GROUND CONTOUR INTERVAL=20'
  5. FINISHED GRADES FOR RECLAIMED SLOPES WERE DERIVED FROM "BEST MANAGEMENT PRACTICES FOR RECLAIMING SURFACE MINES IN WASHINGTON AND OREGON", 1997, OREGON DEPARTMENT OF GEOLOGY AND MINERAL INDUSTRIES.)
  6. ALL DISTURBED AREAS WILL BE PLANTED FOR EROSION CONTROL PER DDCAMI BEST MANAGEMENT PRACTICES (BMP).
  7. PLANTING OF THE MINING AREA WILL CONSIST OF SEEDING FOR EROSION CONTROL.
- RECOMMENDED EROSION CONTROL SEED MIX:
- |   |               |
|---|---------------|
| A. NATIVE UPLANDS MIX BY SUNMARK SEEDS (1.888.214.7333) |               |
| BLUE WILDRYE  | 50% BY WEIGHT |
| NATIVE RED FESCUE                                       | 30% BY WEIGHT |
| CALIFORNIA BROUW  | 10% BY WEIGHT |
| SPIKE BENTGRASS   | 10% BY WEIGHT |
- NOXIOUS WEEDS TO BE CONTROLLED BY SPOT SPRAYING TO CONTROL BLACKBERRY, OTHER BROADLEAF WEEDS OR GRASSES COMPETING WITH PLANTATION. REPLANT AS NECESSARY TO INSURE THE SITE IS FULLY OCCUPIED. TWO YEARS TO 4 YEARS AFTER PLANTING, IMPLEMENT "PLANTATION RELEASE" TO CONTROL WEED SPECIES THAT MAY THREATEN THE SURVIVAL OR REDUCE GROWTH RATES OF DESIRABLE TREE SPECIES.
- B. SITE PREPARATION:
- SOIL PLACED ON THE STEPPED BENCHES OF THE QUARRY SHOULD BE OF A QUALITY SUITABLE FOR GROWING NATIVE TREES SPECIES. FINAL GRADING SHOULD PROVIDE ADEQUATE POSITIVE DRAINAGE THAT AVOIDS STANDING WATER, BUT STILL ALLOWS WATER TO MOVE DOWN INTO THE SOIL. SLOPES OF 2% TO 3% TYPICAL.

NOTE: TV REPIRATOR BUILDING, POWER LINE AND POWER POLES TO BE REMOVED

NOTE: DRAWING SCALES INDICATED APPLY TO "11x17" DRAWING SHEETS. SCALE MAY NOT BE ACCURATE IF DRAWING PLOTS ARE LESS THAN THIS SIZE. USE BAR SCALE FOR REFERENCE ON REDUCED SIZE SHEET.



FROM "BEST MANAGEMENT PRACTICES FOR RECLAIMING SURFACE MINES IN WASHINGTON AND OREGON", 1997, DDCAMI/DNR.



CASCADIA HILLSIDE TERRAIN CONCEPTUAL QUARRY FACE RECLAMATION (EXAMPLE PHOTO)

## OLD HAZELDELL QUARRY CONCEPTUAL RECLAMATION PLAN FIGURE 7

**PERMITEE/OPERATOR:**  
 OLD HAZELDELL QUARRY LLC  
 800 WILLAMETTE STREET, SUITE 800  
 EUGENE, OR 97401  
 (541) 484-0188  
 CONTACT: MR. MICHAEL REEDER

**ENGINEERING GEOLOGIST:**  
 KUPER CONSULTING LLC  
 ENGINEERING GEOLOGY CONSULTANTS  
 TIGARD, OREGON (503)638-9722  
 HELENA, MONTANA (406)475-3244

**WESTLAKE**  
CONSULTANTS P.C.

ENGINEERING • SURVEYING • PLANNING

PACIFIC CORPORATION CENTER  
1015 S.W. SHERWOOD AVENUE, SUITE 150  
TIGARD, OREGON 97133

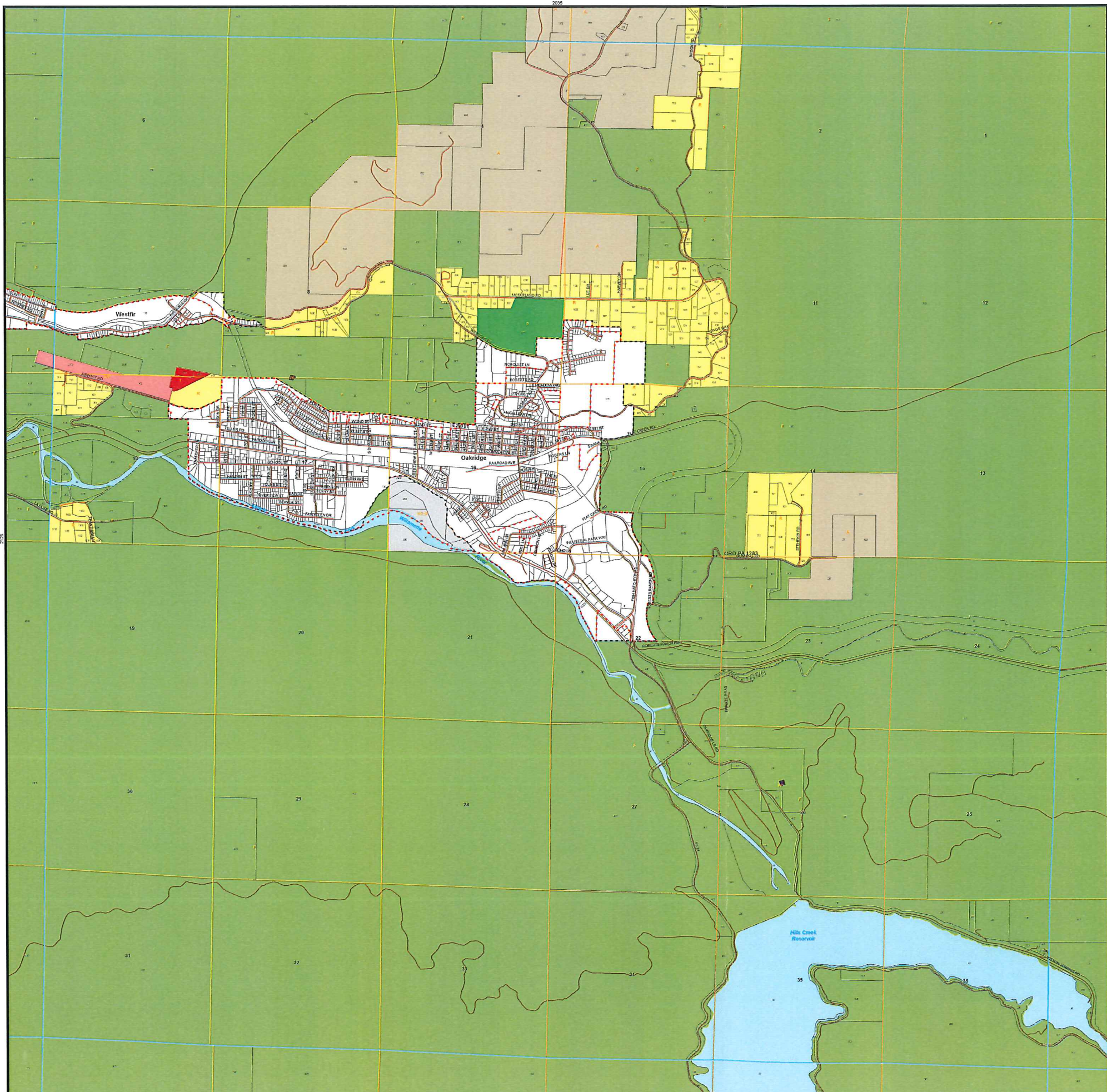
**OLD HAZELDELL QUARRY**  
 DDCAMI ID# 20-0166  
 OAKRIDGE, LAKE COUNTY, OREGON  
 CONCEPTUAL RECLAMATION PLAN  
 FIGURE 7

THIS DRAWING IS THE PROPERTY OF WESTLAKE CONSULTANTS P.C. AND IS NOT TO BE REPRODUCED IN ANY MANNER WITHOUT THE WRITTEN PERMISSION OF WESTLAKE CONSULTANTS P.C.

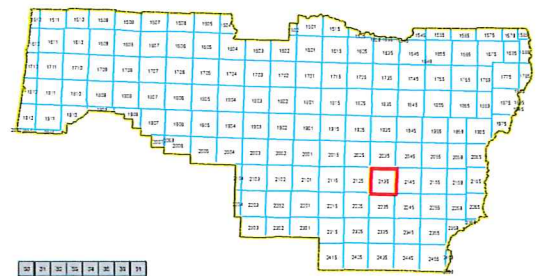
REVISIONS	NO.	DATE	DESCRIPTION	DRAWN	CHECKED	DATE
FIGURE	7					
JOB NO.	2372-001					

OCTOBER 2015





Township 21 South, Range 03 East



Section Legend

1	2	3	4	5	6	7	8	9	10
11	12	13	14	15	16	17	18	19	20
21	22	23	24	25	26	27	28	29	30
31	32	33	34	35	36				

- RCP Plan Designations**
- F - Forest
  - A - Agricultural
  - ML - Marginal
  - C - Commercial
  - I - Industrial
  - R - Residential
  - NRES - Non Resource
  - P - Parks
  - AIR - Airport
  - NR:CA - Natural Resource Conservation Area
  - NR:M - Natural Resource : Mineral
  - NR:W - Natural Resource : Wildlife
  - E - Estuary
  - DR - Destination Resort
  - PF - Public Facility

- UGB
- City Limits
- Communities
- Township Range
- Sections
- Metro Plan Boundary
- Parcels
- Roads
- Surface Water

ORIGINAL ADOPTING ORDINANCE NUMBER: ORD.PA1246

Revision	Ordinance or Order Number	Date Effective	Planning Action Number	Revision Description
1	ORD.PA1246	July 11, 2008	NA	Map Adopted
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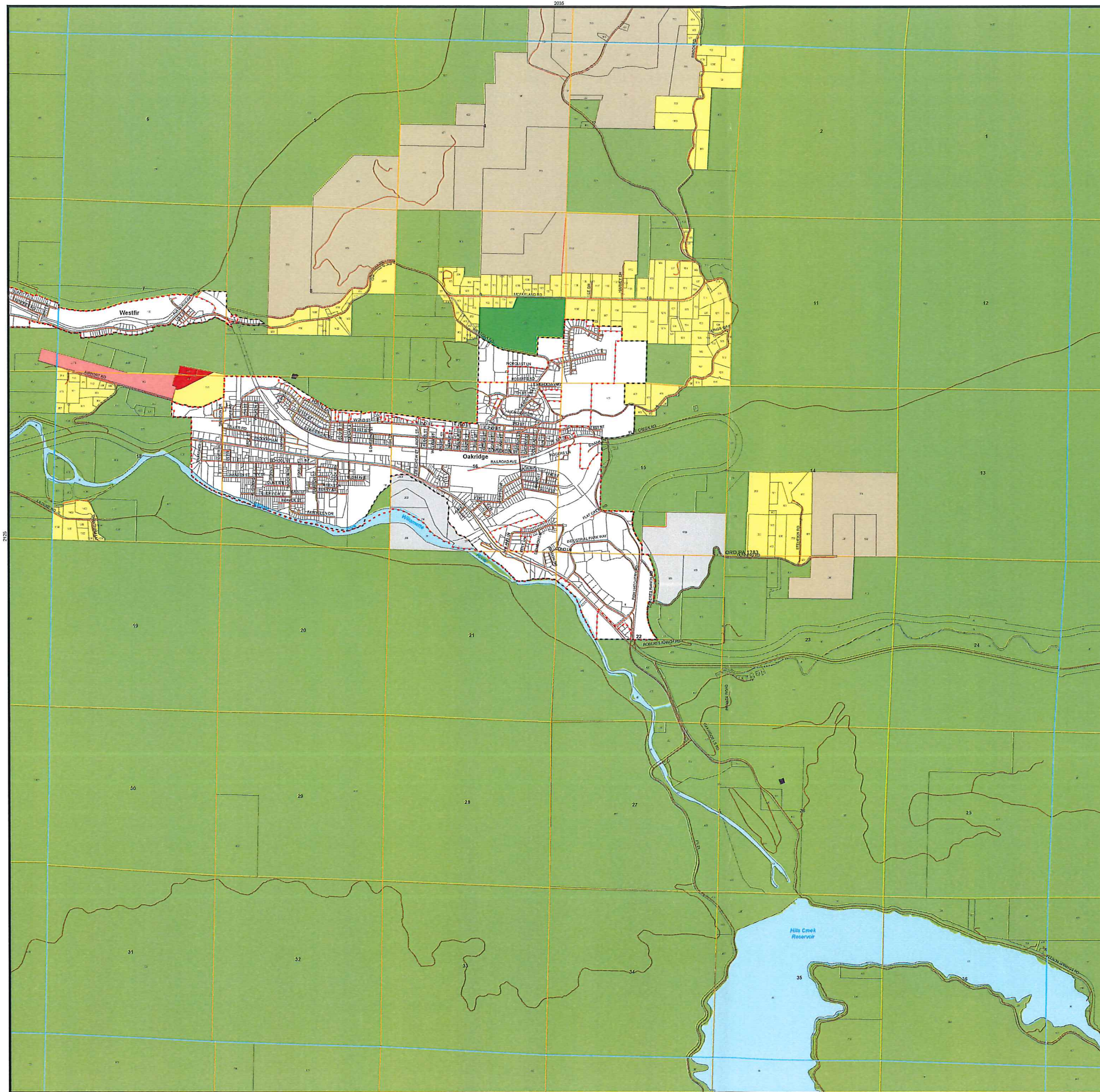
N

0 500 1,000 2,000 3,000 4,000 Feet

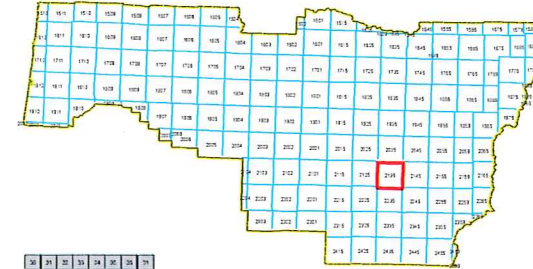
Official Lane County  
Plan Map

Attachment 1  
Exhibit B: Existing Plan Map





Township 21 South, Range 03 East



Section Legend

1	2	3	4	5	6	7	8
9	10	11	12	13	14	15	16
17	18	19	20	21	22	23	24
25	26	27	28	29	30	31	32
33	34	35	36	37	38	39	40

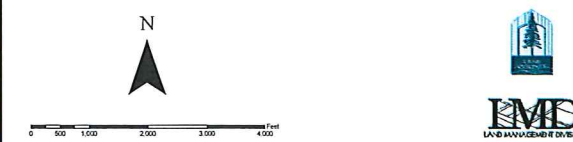
RCP Plan Designations

- F - Forest
- A - Agricultural
- ML - Marginal
- C - Commercial
- I - Industrial
- R - Residential
- NRES - Non Resource
- P - Parks
- AIR - Airport
- NR-CA - Natural Resource Conservation Area
- NR-M - Natural Resource : Mineral
- NR-W - Natural Resource : Wildlife
- E - Estuary
- DR - Destination Resort
- PF - Public Facility

- UGB - Urban Growth Boundary
- City Limits
- Communities: Rural, Urban
- Township Range
- Sections
- Metro Plan Boundary
- Parcels
- Roads
- Surface Water

ORIGINAL ADOPTING ORDINANCE NUMBER: ORD.PA1246

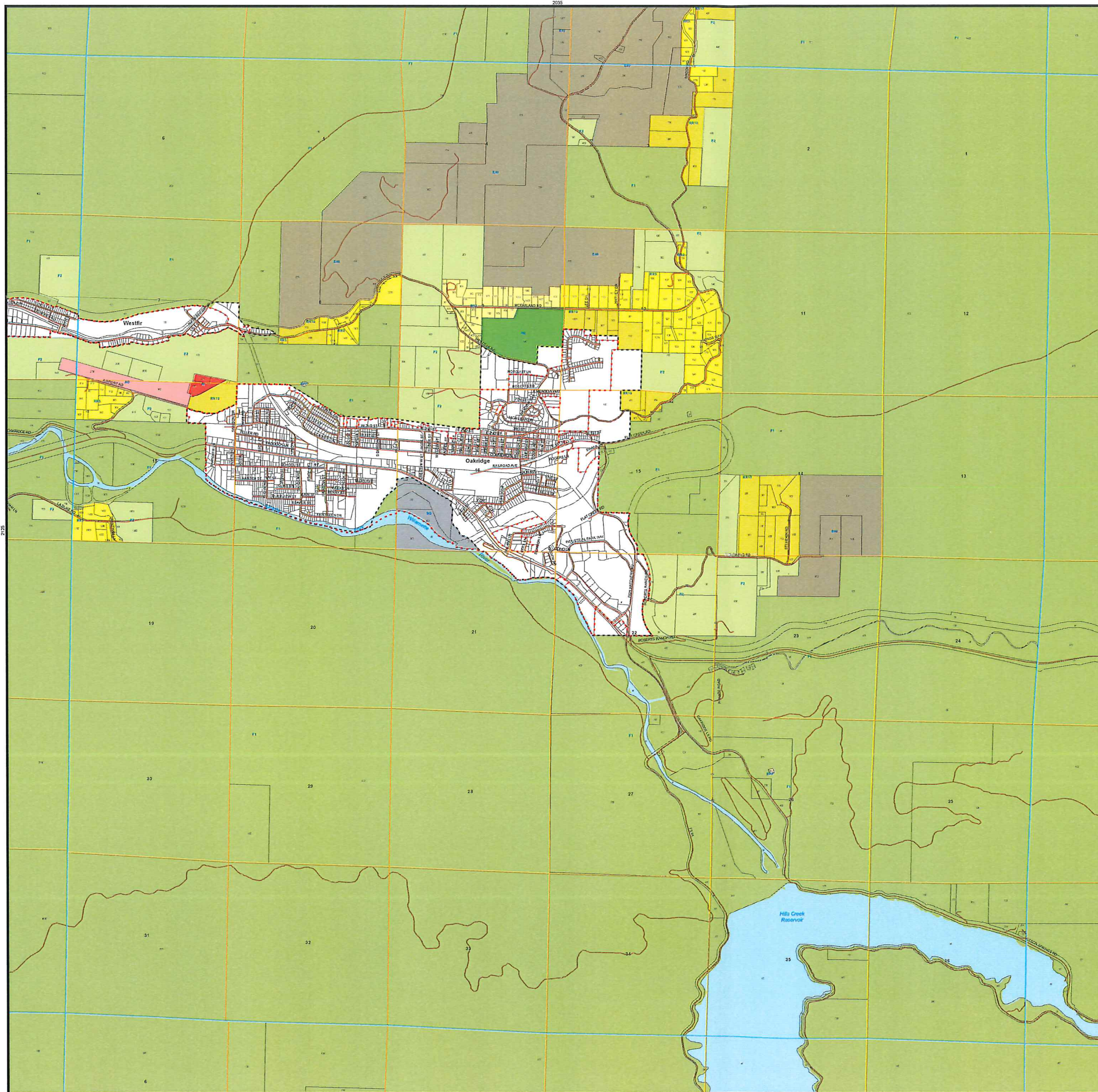
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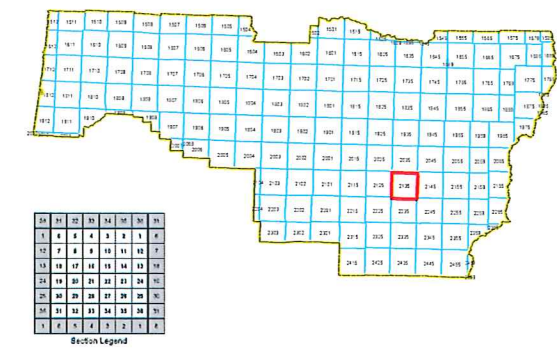
Official Lane County Plan Map

Attachment 1  
Exhibit B: Proposed Plan Map





**Township 21 South, Range 03 East**

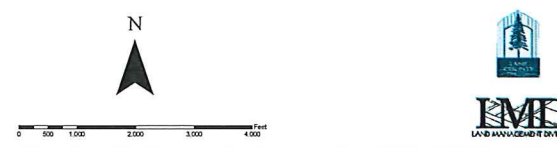


- Zoning**
- F1 - Non-Impacted Forest
  - F2 - Impacted Forest
  - E25 - Exclusive Farm Use (25 acre minimum)
  - E30 - Exclusive Farm Use (30 acre minimum)
  - E40 - Exclusive Farm Use (40 acre minimum)
  - E60 - Exclusive Farm Use (60 acre minimum)
  - ML - Marginal Lands
  - RC - Rural Commercial
  - RI - Rural Industrial
  - LI - Light Industrial
  - GI - General Industrial
  - RPF - Rural Public Facility
  - RR1 - Rural Residential (1 acre minimum)
  - RR2 - Rural Residential (2 acre minimum)
  - RR2-NRES - Non Resource (2 acre minimum)
  - RR5 - Rural Residential (5 acre minimum)
  - RR5-NRES - Non Resource (5 acre minimum)
  - RR10 - Rural Residential (10 acre minimum)
  - RR10-NRES - Non Resource (10 acre minimum)
  - PR - Park and Recreation
  - RPR - Rural Park and Recreation
  - AO - Airport Operations
  - CLWP - Clear Lake Watershed Protection Area
  - NR - Natural Resource
  - NE - Natural Estuary
  - DR - Destination Resort
  - QM - Quarry and Mining Operations
  - SG - Sand, Gravel and Rock Products
  - SGCP - Sand, Gravel and Rock Products Combining Processing
  - CR - Rural Commercial
  - C2 - Neighborhood Commercial
  - C3 - Commercial
  - M2 - Light Industrial
  - PF - Public Facility

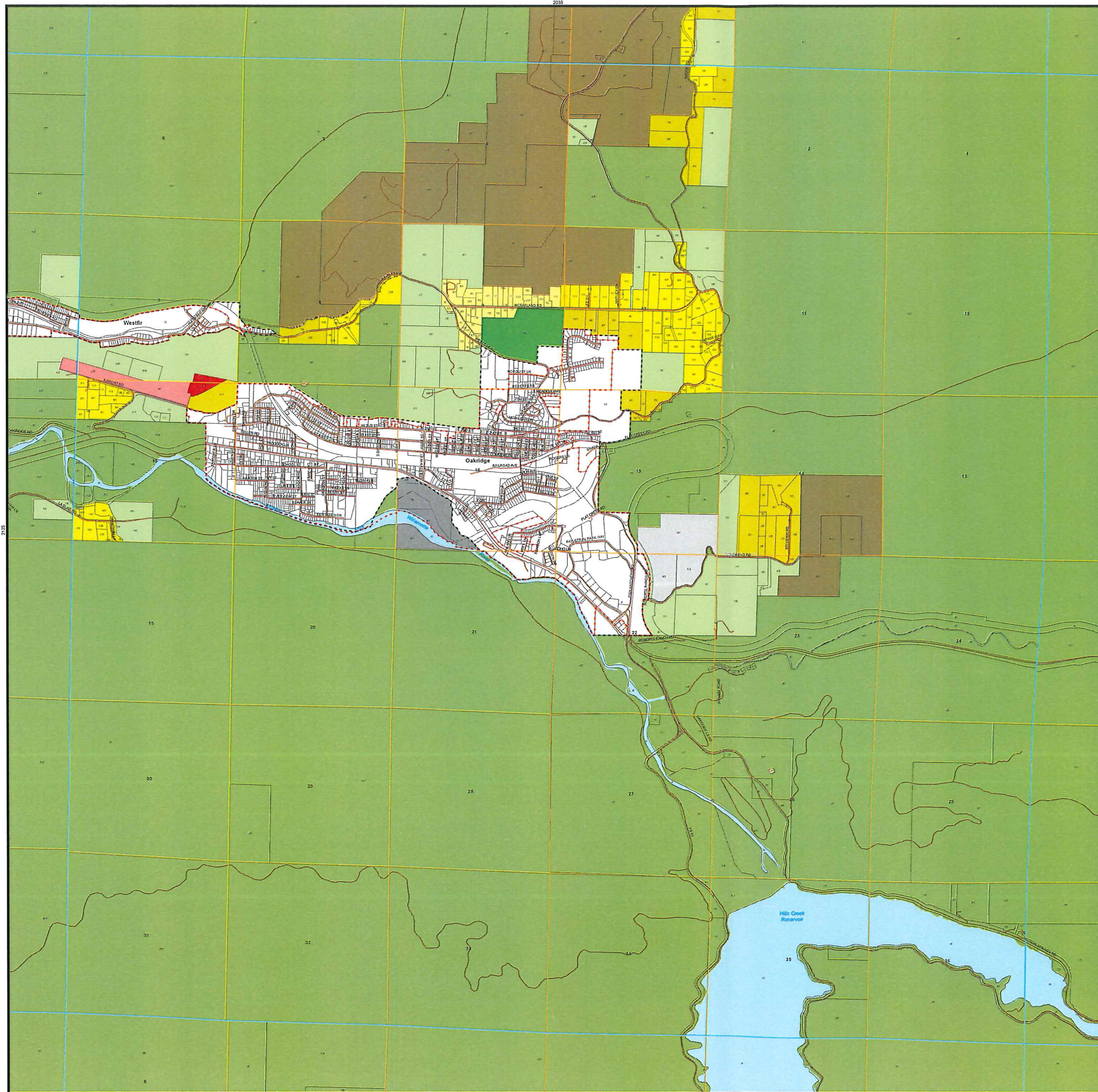
- UGB - Urban Growth Boundary
- City Limits - City Limits
- Township Range - Township Range
- Sections - Sections
- Roads - Roads
- Surface Water - Surface Water

ORIGINAL ADOPTING ORDINANCE NUMBER: ORD.PA1246

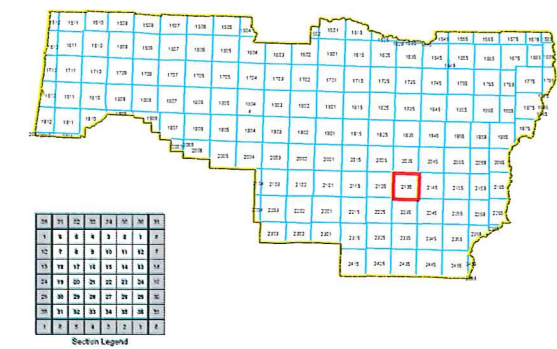
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1	ORD.PA1246	July 11, 2008	NA	Map Adopted
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Township 21 South, Range 03 East

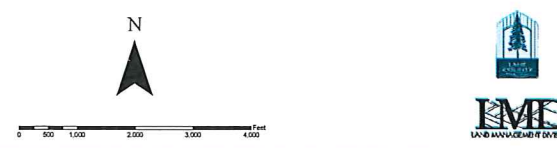


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  - F2 - Impacted Forest
  - E25 - Exclusive Farm Use (25 acre minimum)
  - E30 - Exclusive Farm Use (30 acre minimum)
  - E40 - Exclusive Farm Use (40 acre minimum)
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  - RI - Rural Industrial
  - LI - Light Industrial
  - GI - General Industrial
  - RPF - Rural Public Facility
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  - RR2 - Rural Residential (2 acre minimum)
  - RR2-NRES - Non Resource (2 acre minimum)
  - RR5 - Rural Residential (5 acre minimum)
  - RR5-NRES - Non Resource (5 acre minimum)
  - RR10 - Rural Residential (10 acre minimum)
  - RR10-NRES - Non Resource (10 acre minimum)
  - PR - Park and Recreation
  - RPR - Rural Park and Recreation
  - AO - Airport Operations
  - CLWP - Clear Lake Watershed Protection Area
  - NR - Natural Resource
  - NE - Natural Estuary
  - DR - Destination Resort
  - QM - Quarry and Mining Operations
  - SG - Sand, Gravel and Rock Products
  - SG/CP - Sand, Gravel and Rock Products Combining Processing
  - CR - Rural Commercial
  - C2 - Neighborhood Commercial
  - C3 - Commercial
  - M2 - Light Industrial
  - PF - Public Facility

- UGB - Township Range
- City Limits - Sections
- Roads - Roads
- Surface Water - Surface Water

ORIGINAL ADOPTING ORDINANCE NUMBER: ORD.PA1246

Revision	Ordinance or Order Number	Date Effective	Planning Action Number	Revision Description
1	ORD.PA1246	July 11, 2008	NA	Map Adopted
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**Official Lane County Zoning Map**







## **B. Proposal:**

Amend the Lane County Rural Comprehensive Plan (RCP) to add a quarry site to the inventory of Significant Mineral and Aggregate Sites and authorize mining and processing as provided by Statewide Planning Goal 5 “Post Acknowledgment Plan Amendment” (PAPA) requirements found in Oregon Administrative Rules (OAR) 660-023-180. In addition, the County authorizes a Site Review Permit. The applicant proposes to mine north and northeastward from the existing Dunning Road Quarry. A processing area will be utilized to the west of the mining (extraction) area. As presented in the Kuper Consulting LLC (KC) PAPA Application, Figure 4 delineates the area to be added to the County inventory of significant mineral and aggregate sites. In accordance with the OAR and statutory definitions of “mining area”, “mining” and “processing”, it includes all the area that is used for the extraction and processing of the resource: the proposed processing area, the remaining extraction area in the existing Dunning Road Quarry, and the extraction and processing area. Upon adoption of this Ordinance, the applicant will be operating the quarry under an operating permit that meets the current Mineral and Aggregate requirements found in Goal 5 Administrative Rules.

The record contains a map from KC that illustrates the area of 46 acres to be excavated within the site that consists of a volume of rock calculated to be approximately 16.9 million tons. This amount of material is greater than 2 million tons and may be determined to be significant under the provisions of OAR 660-023-0180(3)(a).

## **II. SITE AND PLANNING PROFILE**

### **A. Location**

The site is located just east of Oakridge and north of Highway 58. The site is generally located northeast of the intersection of Dunning Road and Fish Hatchery Road. Of the 183 acres of ownership, approximately 107 acres is the mining area, of which approximately 46 acres will be excavated. The 107-acre subject property comprises of three tax lots identified on Assessors Map 21-35-22, tax lot 502, portions of tax lot 100 and portions of tax lot 1900 as identified on Assessors Map 21-35-15.

### **B. Zoning**

The property is zoned “Non-Impacted Forest Lands (F-1, RCP) and Impacted Forest Lands, (F-2, RCP). The Rural Comprehensive Plan (RCP) designation is currently Forest Land. The intent is to rezone the site to Quarry and Mine Operations (QM) and designate the site as Natural Resource in accordance with the RCP.

### **C. Site Characteristics**

The subject property lies east and outside of the City of Oakridge and includes approximately 183 acres of vacant forested land. The site contains the existing Dunning Road Quarry, previously mined and permitted with the Oregon Department of Geology and Mineral Industries (DOGAMI) permit #20-0001, at the southern portion of the Old Hazeldell property. The intent is to mine (excavate) north and northeastward from the existing quarry on approximately 46 acres. The processing area will be located on Tax Lot 502, immediately west of the excavation



area. The site is made up of andesitic rock that occurs as a north-south trending ridgeline of which will be excavated. Elevations range from approximately 1900 feet Mean Sea Level (MSL) in the northern portion of the site, to a low of 1,600 feet MSL on the eastern portion of the site and a low of 1,400 MSL on the western portion of the site. The access to the mining area will be off of and to the north of Dunning Road and east of the Union Pacific railroad line, onto the processing area, as reflected on the Revised Site Plan dated October, 2016.

### **Surrounding Area**

The area surrounding the subject property is illustrated on Figure 2 in the KC PAPA which includes the 1,500 foot impact area. Properties surrounding the property are forestry zoned to the north and south, industrial to the west and a combination of forestry and rural residential to the east.

There are 42 properties within the 1,500 foot impact area, excluding the Old Hazeldell LLC ownership. The zoning of those properties ranges from Forestry (F-1, F-2) to Industrial (I2) to nine Rural Residential (RR10) lots. Uses for each tax lot are presented in Appendix M of the KC PAPA, "Existing Uses within the 1,500 foot Impact Area and Existing Farm and Forest Practices within ½ mile of the Site".

### **D. Services & Resources**

Fire: Hazeldell Rural Fire District.

Police: County Sheriff, State Police

Water: on-site well and/or purchased water

School District: Oakridge School District 76

Power: Lane Electric

Access: Highway 58, north on Fish Hatchery Road, east on Dunning Road

Class I Stream: none identified on the subject property.

Historical: none identified on the subject property

Archaeological: none identified on the subject property

Sensitive Habitat: No inventoried Goal 5 resources occur on the site

Water Quantity: The property is located within a water quantity limited area.

Wetlands: No wetlands are identified within the quarry area. Wetlands are identified in the western portion of the overall ownership where no mining or processing will occur. In addition, Salmon Creek and its associated inventoried riparian area are located off-site within the Impact Area.

## **III. CRITERIA AND ANALYSIS**

### **A. Character of the Request**

This application request is characterized as a Post-Acknowledgement Plan Amendment (PAPA) to the Lane County Rural Comprehensive Plan (RCP). The applicant requests that the proposed mining area of 46 acres to be excavated be recognized as a significant Goal 5 aggregate resource, added to the Lane County Significant Mineral and Aggregate Resources Inventory, and granted



approval to conduct mining and processing of the resource. In addition, the applicant is requesting a zone change from Forestry to Quarry and Mine Operations, and to change the RCP designation from Forest Land to Natural Resource, and issuance of a Site Review permit for the entire 107 acres.

## **B. Evaluation**

The applicant has addressed the Goal 5 requirements of Oregon Administrative Rules (OAR) 660-023 - 0180 which authorizes Lane County to add the site to the Lane County Rural Comprehensive Plan "Significant Mineral and Aggregate Resources Inventory" and authorize mining and processing of the resource. The Lane Code requirements of LC 16.400 that govern review of Plan Amendments are also addressed below.

### **1. Classification of Amendment**

*a. LC 16.400(8)(a) Amendments to the Rural Comprehensive Plan shall be classified according to the following criteria:*

*(i) Minor Amendment. An amendment limited to the Plan Diagram only and, if requiring an exception to Statewide Planning Goals, justifies the exception solely on the basis that the resource land is already built upon or is irrevocably committed to other uses not allowed by an applicable goal.*

*(ii) Major Amendment. Any amendment that is not classified as a minor amendment.*

The applicant requests that the Lane County Significant Mineral and Aggregate Resources Inventory be amended to include the area of the subject property utilized for mining. Since the proposal does not require an amendment to the Plan Diagram only, the Board of Commissioners finds that the amendment is classified as a Major Amendment.

### **2. Plan Amendment Criteria**

*a. Lane Code 16.400(6)(h)(iii)*

*The Board may amend or supplement the Rural Comprehensive Plan upon making the following findings:*

*(aa) For Major and Minor Amendments as defined in LC 16.400(8)(a) below, the Plan component or amendment meets all applicable requirements of local and state law, including Statewide Planning Goals and Oregon Administrative Rules.*

The Oregon Land Use Board of Appeals (LUBA) and the Oregon Court of Appeals have determined that the Goal 5 rule for mineral and aggregate establishes a comprehensive regulatory scheme that is intended to supersede local review standards for aggregate. *Eugene Sand and Gravel, Inc. v. Lane County, 44 Or LUBA 50 (2003)*. The applicable requirements for review of this application are found in the Oregon Administrative Rules and the Statewide Planning Goals only. The decision in *Eugene Sand and Gravel, Inc.* was based upon OAR 660-023-0180(2)(c) and OAR 660-023-0180(9)(a) formerly (7). Section (9) has not changed since the date of that LUBA decision while subsection (2)(c) was amended in 2004 to include subsection (6) that is applicable to the approval of the mining and processing proposed in this application. Since Lane County has not amended its Rural Comprehensive Plan and land use regulations after 1989 to include procedures and requirements consistent with the 1996 and 2004 administrative rule



changes for the consideration of PAPAs concerning aggregate resources, the Board of Commissioners finds that the substantive review of this application is limited to applicable review criteria identified within the Goal 5 Rule, subject to the procedures and requirements in the applicable Lane County regulations.

*(bb) For Major and Minor Amendments as defined in LC 16.400(8)(a) below, the Plan amendment or component is:*

*(i-i) necessary to correct an identified error in the application of the Plan; OR*

*(ii-ii) necessary to fulfill an identified public or community need for the intended result of the component or amendment; OR*

*(iii-iii) necessary to comply with the mandate of local, state or federal policy or law; OR*

*(iv-iv) necessary to provide for the implementation of adopted Plan policy or elements; OR*

*(v-v) otherwise deemed by the Board, for reasons briefly set forth in its decision, to be desirable, appropriate or proper.*

This request is in conformance with Lane Code 16.400(6)(h)(iii)(bb)(iii-iii) above. Lane County is mandated to comply with the Oregon Administrative Rule (OAR) 660-023-180(2) which states: “Local governments are not required to amend acknowledged inventories or plans with regard to mineral and aggregate resources except in response to an application for a PAPA, or at periodic review as specified in OAR 660-023-0180(7)” (emphasis added). This proposal is a request for a Post Acknowledgement Plan Amendment (PAPA) to add this site to the significant Mineral & Aggregate Resource Inventory. The Board of Commissioners finds that it is necessary to amend the Rural Comprehensive Plan to comply with the mandate of the identified state rule.

**b. Lane Code 12.050(2)**

*The Board may amend or supplement the comprehensive plan upon a finding of:*

*(a) an error in the plan; or*

*(b) changed circumstances affecting or pertaining to the plan; or*

*(c) a change in public policy; or*

*(d) a change in public need based on a reevaluation of factors affecting the plan; provided, the amendment or supplement does not impair the purpose of the plan as established by LC 12.005 above.*

As explained above, the Board of Commissioners finds that the substantive review of this application is limited to those applicable review criteria identified within the Goal 5 Rule. This code section is not applicable, except to establish a procedural requirement to process an application submitted pursuant to OAR 660-023-0180.

**3. Oregon Administrative Rules (OAR)**

Statewide Planning Goal 5 was amended on June 14, 1996 and the Amendment became effective September 1, 1996. Accompanying Oregon Administrative Rules 660, Division 23 was amended and became effective on the same date. A subsequent amendment to the rules occurred effective June 25, 2004 which is applicable to small mineral and aggregate mine sites such as the



one proposed on the subject property. The application addresses the relevant provisions of OAR 660, Division 23 regarding mineral and aggregate resources.

**A. PROCESS**

OAR 660-023-180 is the section of Oregon Administrative Rules 660, Division 23 that applies specifically to mineral and aggregate resources. OAR 660-023-180(2) states:

*“Local governments are not required to amend acknowledged inventories or plans with regard to mineral and aggregate resources except in response to an application for a post acknowledgement plan amendment (PAPA) or at periodic review as specified in section (9) of this rule. The requirements of this rule modify, supplement, or supersede the requirements of the standard Goal 5 process in OAR 660-023-0030 through 660-023-0050, as follows:”*

*(a) A local government may inventory mineral and aggregate resources throughout its jurisdiction, or in a portion of its jurisdiction. When a local government conducts an inventory of mineral and aggregate sites in all or a portion of its jurisdiction, it shall follow the requirements of OAR 660-023-0030 except as modified by subsection (b) of this section with respect to aggregate sites. When a local government is following the inventory process for a mineral or aggregate resource site under a PAPA, it shall follow the applicable requirements of OAR 660-023-0030, except where those requirements are expanded or superseded for aggregate resources as provided in subsections (b) through (d) of this section and sections (3), (4) and (8) of this rule;*

*(b) Local governments shall apply the criteria in section (3) or (4) of this rule, whichever is applicable, rather than OAR 660-023-0030(4), in determining whether an aggregate resource site is significant;*

*(c) Local governments shall follow the requirements of section (5) or (6) of this rule, whichever is applicable, in deciding whether to authorize the mining of a significant aggregate resource site, and OAR 660-023-0040 through 660-023-0050 in deciding whether to authorize mining of a significant mineral resource; and*

*(d) For significant mineral and aggregate sites where mining is allowed, except for aggregate sites that have been determined to be significant under section (4) of this rule, local governments shall decide on a program to protect the site from new off-site conflicting uses by following the standard ESEE process in OAR 660-023-0040 and 660-023-0050 with regard to such uses.*

As directed by OAR 660-023-0180(2)(a) above, Lane County is required to amend the acknowledged mineral and aggregate inventory in response to this application for a Post Acknowledgement Plan Amendment (PAPA) provided the relevant criteria are met. The Goal 5 Rule provides two avenues to add a mineral and aggregate site to the inventory and authorize mining, characterized by staff as “large” and “small”. Large sites are subject to Sections (3) and (5) while small sites may use Sections (4) and (6). Subsection (2)(b) states that “the local governments shall apply the criteria in section (3) or (4) of this rule, whichever is applicable.”



Section (4) is applicable only on “farmland” and whenever the “quantity of material proposed to be mined from the site is estimated to be 2,000,000 tons of aggregate material or less for a site in the Willamette Valley”. OAR 660-023-0180(4)(a). In this instance, the property is within Forest Land and NOT the Exclusive Farm Use Zone and the applicant proposes to mine more than 2,000,000 tons of material from the site. The Board of Commissioners finds that review of this proposal to mine a quantity of aggregate more than 2,000,000 tons, OAR 660-023-0180(2) directs the use of OAR 660-023-0180(3) to determine whether the aggregate resource site is significant, and the use of OAR 660-023-0180(5) to evaluate whether to authorize mining and processing of the resource. The relevant provisions are addressed below.

The Board of Commissioners finds that the site meets the test of Significance, in that the site meets the location, quality and quantity as reflected in the findings below.

## **B. DEFINITIONS**

The relevant criteria for review of the proposal include several terms or phrases which are defined in OAR 660-023-0180(1) and several that rely upon definitions found in the Oregon Revised Statutes (ORS):

### **OAR 660-023-0180(1)**

(a) *"Aggregate resources" are naturally occurring concentrations of stone, rock, sand gravel, decomposed granite, limestone, pumice, cinders, and other naturally occurring solid materials commonly used in road building or other construction.*

(f) *"Mineral resources" are those materials and substances described in ORS 517.750(7) but excluding materials and substances described as "aggregate resources" under subsection (a) of this section.*

(h) *"Mining" is the extraction and processing of mineral or aggregate resources, as defined in ORS 215.298(3) for farmland, and in ORS 517.750 for land other than farmland.*

(i) *"Mining area" is the area of a site within which mining is permitted or proposed, excluding undisturbed buffer areas or areas on a parcel where mining is not authorized.*

(j) *"Processing" means the activities described in ORS 517.750(10)<sup>1</sup>.*

**ORS 517.750 (11)** *"Processing" includes, but is not limited to, crushing, washing, milling and screening as well as the batching and blending of mineral aggregate into asphalt and portland cement concrete located within the operating permit area.*

**ORS 215.010(5)** *"The Willamette Valley" is Clackamas, Linn, Marion, Multnomah, Polk, Washington and Yamhill Counties and the portion of Benton and Lane Counties lying east of the summit of the Coast Range.*

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<sup>1</sup> The 2007 Legislature adopted Senate Bill 149 which changed the ORS numbering for the definition of “processing” to ORS 517.750(11) effective January 1, 2008



**C. GOAL 5 ANALYSIS**

Division 23 of the Administrative Rules Chapter 660 establishes the procedures and criteria for evaluating Goal 5 resources. The Board of Commissioners finds that the application addresses the relevant criteria to determine the significance of the resource, add the mining area to the Significant Mineral and Aggregate Inventory of the Lane County Rural Comprehensive Plan, and allow mining and processing of the resource.

**1. Significance of the Resource**  
**OAR 660-023-0180(3)(a) – Quality of the Resource**

*“A representative set of samples of aggregate material in the deposit on the site meets applicable Oregon Department of Transportation (ODOT) specifications for base rock for air degradation, abrasion, and soundness”.*

OAR 660-023-0180(3)(a) requires that the aggregate resource meet quality standards for base aggregate. Base aggregate is tested in the laboratory for its ability to withstand abrasion and degradation. Aggregate samples that meet specified durability criteria are accepted by Oregon Department of Transportation (“ODOT”) for use as base aggregate.

The abrasion test indicates how aggregate will withstand grinding actions (*e.g.*, generated from heavy traffic). The air degradation test measures the quantity and quality of the material produced by attrition (*e.g.*, repeated traffic loading and unloading). The sodium sulfate soundness test measures the quantity of material produced by repeated immersion in a corrosive solution of sodium sulfate. While ODOT has specific soundness criteria for asphaltic concrete aggregate, it does not have soundness criteria for base rock aggregate.<sup>2</sup> The ODOT Standard Specifications for Highway Construction (revised 2015, current edition) Section 02630 describes the requirements for base rock aggregate. As part of the base rock aggregate requirements under Durability Section 02630.10(c) only the Abrasion and Degradation tests are required. Therefore, this test cannot be applied to base rock quality evaluations within the context of Goal 5 because there is no applicable ODOT standard for this quality characteristic.

As presented in the Kuper Consulting LLC (KC) *Aggregate Resource Evaluation and Significance Determination, Old Hazeldell Quarry Property, Lane County, Oregon (Oct. 12, 2015)*, Appendix A of the KC PAPA, on the basis of the test results, KC concluded that the identified resource to be extracted within the mining site meets or exceeds ODOT’s minimum quality standards. On the basis of this testimony, the Board of Commissioners finds that the resource meets the quality standards of this rule.

**OAR 660-023-0180(3)(a) – Quantity of the Resource**

*“...the estimated amount of material is more than 2,000,000 tons in the Willamette Valley, or 500,000 tons outside of the Willamette Valley...”*

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<sup>2</sup> Oregon Department of Transportation, *Standard Specifications for Highway Construction* (rev ed 2015).



The Board of Commissioners finds that all of Lane County east of the summit of the Coast Range is considered the “Willamette Valley” within the Goal 5 definition. As presented in the KC Significance Report, Appendix A of the KC PAPA a total of at least 11.3 million in-place cubic yards (16.9 million tons) of aggregate is calculated to be present within the quality rock deposits underlying the Site. Therefore, the Site exceeds the quantity criteria of 2 million tons required in OAR 660-023-0180(3)(a) for sites outside of the Willamette Valley.

Opponents that are not registered engineering geologists alleged that the calculation of 16.9 million tons is in error because a large quantity of lower grade volcanoclastic rock and weathered highly fractured and internal contact zone rock of the andesite rock are included in the total. Based on responsive evidence contained in the November, 2016 KC Letter and the KC Significance Report, the Board of Commissioners finds that the estimated volume of rock identified to be extracted that meets the base rock specifications on the site is approximately 17 million tons, which far exceeds the required 2 million ton requirement for aggregate resources.

#### **OAR 660-023-0180(3)(a) – Location of the Resource**

The surrounding area has been the subject of historical mining activity as evidenced by Dunning Quarry. The Dunning Quarry, is an inactive mining site, located on the southern portion of the property. While the site was listed on the County’s inventory of Signification Mineral and Aggregate list under Ordinance No. 883 & 889 it was deleted under Ordinance 892. This later Ordinance revised the inventory list and removed several mining sites where there was a lack of information regarding the aggregate. Regardless, a review of the local geology maps in the area, coupled with borings performed on the site as documented in Appendix A of the KC PAPA support the conclusion that there is a sufficient abundance of rock on the site.

The Board of Commissioners finds that the aggregate at the site meets the location criteria for a significant aggregate sites, as required by OAR 660-023-0180(3)(a) and as identified in the KC report in Appendix A.

The remaining significance criteria set forth at OAR 660-23-180(3)(b-d) and (4) are not applicable to this Application. Soils that have been mapped on the Site by the Natural Resource and Conservation Service (NRCS) and are presented in the KC report in Appendix A of the KC PAPA. The NRCS *Soil Survey of Lane County, Oregon*<sup>3</sup> shows Class III, VI and VII soils mapped on the site. There are no Class I, Class II or Unique soils mapped on this site. Therefore, since there are no Class I, II or unique soils on site, the criteria of OAR 660-023-0180(3)(d) do not apply.

The Board of Commissioners finds that the inventory in the comprehensive plan shall be amended to list the Old Hazeldell Quarry Site as a significant aggregate resource site.

#### **OAR 660-23- 0180(3)(b-d) and (4)**

The Board of Commissioners finds that the remaining significance criteria set forth al OAR 660-23- 1 80(3)(b-d) and (4) are not applicable to this Application. Soils that have been mapped on

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<sup>3</sup> The Soil Conservation Service has been renamed the Natural Resource and Conservation Service.



the Site by the Natural Resource and Conservation Service (NRCS) and are presented in the KC report in Appendix A. The NRCS *Soil Survey of Lane County, Oregon*<sup>4</sup> shows Class HI, VI and VII soils mapped on the site. There are no Class I, Class II or Unique soils mapped on this site.

**OAR 660-023-0180(5)** *For significant mineral and aggregate sites, local governments shall decide whether mining is permitted. For a PAPA application involving an aggregate site determined to be significant under section (3) of this rule, the process for this decision is set out in subsections (a) through (g) of this section. A local government must complete the process within 180 days after receipt of a complete application that is consistent with section (8) of this rule, or by the earliest date after 180 days allowed by local charter.*

The Board of Commissioners finds that the County has correctly processed the Applications. First, as explained below, the County applied the applicable criteria in subsections (a) through (g) of this section to decide that mining is permitted on the Property. Second, the Board of Commissioners finds that it is adopting an ordinance approving the Applications on March 31, 2016 a date that is within the time period allowed by this rule, as extended by the Applicant. Specifically, the County deemed the Applications complete on March 31, 2016. No one contended that the County committed a procedural error under this section. Therefore, the Board of Commissioners finds that it has complied with the procedural requirements of this section.

**OAR 660-023-0180(5)(a)** *The local government shall determine an impact area for the purpose of identifying conflicts with proposed mining and processing activities. The impact area shall be large enough to include uses listed in subsection (b) of this section and shall be limited to 1,500 feet from the boundaries of the mining area, except where factual information indicates significant potential conflicts beyond this distance. For a proposed expansion of an existing aggregate site, the impact area shall be measured from the perimeter of the proposed expansion area rather than the boundaries of the existing aggregate site and shall not include the existing aggregate site.*

For the reasons explained below and based upon the evidence presented by the applicant, the Board of Commissioners finds that the appropriate impact area is 1,500 feet.

OAR 660-023-0180(5)(b) provides that the local government shall determine existing or approved land uses within the impact area that may be adversely affected by the proposed mining operations and the potential conflicts. This determination is further clarified by OAR 660-023-0180(5)(b)(A)-(F), which limits conflicts the Board of Commissioners may consider. Existing uses are existing land uses, and these are typically characterized as permanent or semi-permanent structures or purposeful activities which commit the land to an existing use. The Land Conservation and Development Commission's ("LCDC") intent to limit existing and approved uses to permanent or semi-permanent activities and structures is further clarified in OAR 660-023-0180(5)(b)(A) with the term "with regard to those existing and approved uses and associated activities (e.g., houses and schools)." As such, the occasional wild elk traversing the property do not constitute an existing use within the context of Division 23, unless these



activities are deemed associated with a resource deemed significant on an acknowledged Goal 5 inventory or similar temporary, random or infrequent events, which is not the case here.

With regard to the Airstrip, this use has been acknowledged by the applicant as an existing use within the impact area. As detailed further below, with the mitigation measures included in the conditions of approval, the Board of Commissioners finds that the record, including submittals by W&H Pacific, demonstrates that conflicts with this use are unlikely to occur.

With regard to the recreational trails located outside the established impact area boundary, this activity is similar to many types of uses which exist outside the impact area. However, the only impacts to the use of the trails in the vicinity of the project that opponents identify are conflicts with cyclists and trucks on Dunning Road, which is the public roadway serving the nearest trailhead. Since there will be no truck traffic east of the site access on Dunning Road, and since there certainly will be no trucks on or affecting this trail, it is difficult to imagine the source of the alleged conflict with the use of the trail or trailhead. With regard to potential truck conflicts with cyclists on Dunning Road to the west, such conflicts have been minimized with required roadway improvements on Dunning Road and through the providing an easement for off-road access pursuant to condition of approval number 47, and as documented with the recommended Public Works condition regarding road improvements and the expert testimony submitted by Sandow Engineering.

Finally, the former Dunning Road landfill has long since been closed and is no longer active, which means that it is not an existing use within the application of Division 23. Further, the fact that the former landfill has long been closed and the use terminated means that there can be no conflicts with a use which no longer exists. And even if the landfill remained an existing use, the substantial evidence in the record demonstrates that avoidance of this limited area, coupled with mitigation measures preventing stormwater intrusion, will preclude any potential conflicts.

In sum, the Board of Commissioners finds the applicant and staff have correctly applied the 1,500-foot impact boundary for purposes of conflict minimization under Division 23. By the terms of the Goal 5 rule, the impact boundary shall only be 1,500 feet, "except where factual information indicates significant potential conflicts beyond this distance." OAR 660-023-0180(5)(a). As explained in the applicant's technical responses and further enumerated below, potential conflicts associated with dust and groundwater discharges, which are the primary issues raised by opponents, cannot have an effect beyond 1,500 feet since this expert testimony confirms that the discharges, which diminish with distance, are successfully minimized within 1,500 feet.

**OAR 660-023-0180(5)(b)** *The local government shall determine existing or approved land uses within the impact area that will be adversely affected by proposed mining operations and shall specify the predicted conflicts. For purposes of this section, "approved land uses" are dwellings allowed by a residential zone on existing platted lots and other uses for which conditional or final approvals have been granted by the local government. For determination of conflicts from proposed mining of a significant aggregate site, the local government shall limit its consideration to the following:*

Goal 5 requires that existing and approved land uses within the impact area be identified to allow the County to evaluate conflicts with future mining activity if mining is permitted.

The Board of Commissioners has identified the following uses within 1,500 feet from the boundaries of the mining area, also shown in the table below. The existing land uses in the 1,500-foot impact area can be characterized generally as undeveloped, rural residential, and forestry uses. In addition, a partially developed industrial park exists to the west of the site and within the 1,500 foot impact area. An ODFW fishery hatchery is also located to the north of the site. A County-owned shooting range exists to the south of the site and the Dunning Quarry exists on the southern portion of the site.

An inventory of allowed residential uses within the impact area was completed. Tax lots within the impact area were researched and permit records for approved uses were reviewed within the 1,500-foot impact area. There appear to be 16 residences within the impact area. In addition to residential uses, non-residential uses include the fish hatchery, the industrial park, shooting range and one convenience store within the 1,500-foot impact area (Appendix M). Within the 1,500-foot impact area, there is one approved residence under a forest template (Map 21-35-22, Tax Lot 501 ). In addition to the above described developed properties, there are three vacant tax lots within the 1,500-foot impact area: Map 21-35-14, Tax Lot 902, Map 21-35-14, Tax Lot 203, and Map 21-35-23, Tax Lot 501. The Goal 5 Rule does not require an applicant to analyze potential future uses on vacant properties in this circumstance.

<b>Location</b>	<b>Existing Use</b>
North	Undeveloped, Fish Hatchery with Several Residences
West	Rural Commercial, Heavy Industrial (Industrial Park)
East	Undeveloped, Rural Residences
South	Undeveloped, Rural Residences

OAR 660-023-0180(5)(b)(A) *Conflicts due to noise, dust, or other discharges with regard to those existing and approved uses and associated activities (e.g., houses and schools) that are sensitive to such discharges;*

**Noise:**

Identification of Conflicts:

The mining project will produce noise that has the potential to impact residential uses within the impact area. The Board of Commissioners finds that, based on substantial evidence provided by the applicant, the quarry will not generate noise that will conflict with land uses in the Impact



Area. The Board of Commissioners further finds that although quarry operation will generate noise, because the quarry will not exceed the applicable Oregon Department of Environmental Quality (“DEQ”) Noise Control Regulation limits at all noise sensitive receivers within the Impact Area, noise generated by the project will not conflict with uses in the Impact Area. The Board of Commissioners relies on the mitigation measures adopted as conditions of approval as evidence of mitigation of potential conflicts.

Noise from the proposed quarry constitutes a “new” noise source on a previously unused site. The DEQ noise regulations found at OAR 340-035-0035(1)(b)(B) limits noise produced by a new noise source to an increase of 10 dBA on existing ambient L10 and L50 sound levels at noise sensitive receivers, and requires that the noise produced be under the maximum hourly statistical noise levels, summarized for daytime and nighttime in the table below.

	DEQ Daytime Limit (7am - 10pm)	DEQ Nighttime Limit (10pm - 7am)
L <sub>50</sub>	55 dBA	50 dBA
L <sub>10</sub>	60 dBA	55 dBA
L <sub>01</sub>	75 dBA	60 dBA

The applicant presented evidence in the form of a noise modeling study dated October 13, 2015 conducted by a licensed engineer at Daly-Standlee & Associates (DSA), Inc. in Appendix F of the application and letters submitted on May 31, 2016, June 20, 2016, October 31, 2016 and November 22, 2016. DSA selected eight locations to measure ambient noise levels of noise sensitive receivers for future sound level predictions to estimate the worst-case noise scenario that could occur from the proposed mining activities. A computer model was used to evaluate future sound levels for the residences near the site. The model assumed the following equipment would be used on or near the site:

- Crusher system, screening equipment
- Front-end loader
- On-site haul trucks, off site dump trucks
- Excavators
- Rock drilling

The noise model assumed the worst case scenario that all equipment would be operating at the same time and concluded that without mitigation, noise levels from the mining operation at certain residences could exceed DEQ standards listed above for some surrounding residences at some point during the mining operation. Therefore, because the noise model predicted the noise from mining operation under a worst-case scenario would exceed DEQ noise regulations, a noise conflict is identified and minimization is required. DSA identified mitigation measures that will reduce the noise produced by the project under a worst-case scenario to below the allowed DEQ noise levels and these mitigation measures are required to be implemented during mining operations as conditions of approval for the project.

Quarry operation noise also has the potential to impact future residences developed on vacant lots surrounding the project. Only one vacant lot (Tax Lot 203) lies within the noise level

compliance boundary and is zoned F-2. No specific land use authorizations have been approved for this lot and a forest template approval from the County would be required to develop a residence on this lot. Because no authorization is in place, the Board of Commissioners finds that future conflicts with a residence in this location are not relevant to the conflicts determination.

The Board of Commissioners concludes that based on the evidence presented by DSA, the conflict minimization plan required as COAs 21-25 will minimize noise conflicts to below the allowed DEQ levels noise levels.

Opponents allege that noise generated by the quarry will be amplified by the canyon geography of Oakridge, that residences “down-wind” of the quarry will be disproportionately impacted by noise, that the noise analysis assumed below-grade operations and did not account for initial above grade noise, and that enforcement of noise-related mitigation was uncertain.

The Board of Commissioners finds that evidence presented by DSA in the May 31, 2016 response adequately responds to these concerns. DSA presented evidence that any amplification of noise by the canyon geography was accounted for in the noise measurements and noise generated by the project will not exceed DEQ regulation limits at sensitive receptors around the quarry. DSA also presented evidence that noise modeling accounted for “down-wind” impacts to residences in the area. DSA presented evidence that measurements of quarry operation noise were taken assuming that all equipment was operating at grade and these measurements show compliance with DEQ noise levels. The applicant proposed conditions of approval requiring enforcement of the noise limits.

Opponents allege that the noise evaluation presented by the applicant is deficient because it does not account for weekends and varying times of day, the study identified 22 receivers but only sampled at 8, the ambient noise data was not measured within 25 feet, the noise sampling was done by computer modeling and therefore is inaccurate, and noise generated by blasting and berm construction are not accounted for. Other concerns were raised about the impact of blasting noise on agricultural cultivation.

The Board of Commissioners finds that the evidence presented by DSA in the June 20, 2016 response adequately responds to these concerns. DSA chose to sample noise in an accurate and conservative manner (as to times of day and sampling locations) which is consistent with DSA’s years of professional experience modeling noise impacts and DEQ’s guidance. The Board of Commissioners finds that DSA’s modeling followed standard industry practice and that DSA used a model that accounted for geography of the canyon. The Board of Commissioners further finds that DSA presents sufficient evidence that blasting noise will not conflict with land uses in the Impact Area if DEQ limitations are complied with. DSA’s proposed Noise Compliance Monitoring Plan is required to be implemented for the project as COA 25.

Opponents allege that repositioning of the crushing plan and shrinking the berm nullifies the berms’ effectiveness at reducing noise impacts. Opponents again raised concerns regarding the effects of geography on noise impacts to residences. A Board member raised concerns regarding



the inclusion of on-site haul trucks in the noise modeling. Other opponents were concerned that blasting noise was not addressed at the October 12, 2016 hearing, and that noise monitoring would not be needed for 10 years.

The Board of Commissioners finds that the evidence presented by DSA in the October 31, 2016 response adequately responds to these concerns. The Board of Commissioners finds that repositioning of the crusher allows the noise berm to be reoriented and shortened in length without compromising its effectiveness in reducing crusher noise. The Board also finds that DSA adequately addressed concerns regarding the effects of area geography on noise impacts by accounting for this geography in its noise modeling and that noise from on-site haul trucks was included in the noise modeling.

Several members of the community have voiced concerns with assurance on how the mining operation will meet the DEQ noise regulations over time. The Board finds that concerns about noise and blasting were adequately addressed in previous submittals from DSA. The Board further finds that adopting the noise compliance monitoring plan is reasonable and monitoring will begin at the commencement of quarry operations as required by COA 25. The specific provisions of the noise compliance monitoring plan are listed on pages 8-9 of the DSA letter dated June 20, 2016.

The Board of Commissioners finds that the evidence presented by DSA in the October 31, 2016 response adequately responds to these concerns.

#### Measures to Minimize Conflicts:

The Board of Commissioners finds that reasonable and practicable measures will minimize the limited conflicts identified above. Specifically, the Board of Commissioners finds that implementing the following mitigation measures on the site will ensure that noise levels at residences will conform to DEQ standards.

COA 21. The applicant/owner must utilize the noise mitigation provisions set forth in the written noise study report prepared by Daly Standlee and Associates, Inc. (DSA) dated October, 2015 to ensure compliance with the DEQ noise regulations.

COA 22. The applicant/owner must utilize berms, buffers or polyurethane screens in accordance with the DSA report in order to mitigate the noise impacts associated with the operation of crushing and screening equipment in the processing area.

COA 23. The applicant/owner must use mufflers and radiator fan controls which reduce the noise level of the haul trucks to a level of 79 dBA at a reference distance of 500 feet and the excavators to a level of 76 dBA at a reference distance of 50 feet.

COA 24. The applicant/owner must maintain a 20 foot high natural barrier on the east side of the quarry as excavation moves west to east. When the rock drill is operating on a top bench on the

eastern side of the north-south ridgeline, an up-close barrier or curtain system attached to the rock drill feed-beam must be used in addition to the natural barrier.

COA 25. The applicant/owner must comply with the Noise Compliance Monitoring Plan set forth at pages 8-9 of the correspondence submitted by Daly-Standlee and Associates dated June 20, 2016 which states:

- a. Within one week after the beginning of any operations on the quarry site, the applicant through registered mail, must notify property owners of all residences located within the Old Hazeldell Quarry Impact Area that the owner can have noise compliance measurements made at their residence if written permission for the measurements is provided to the applicant within 30 days of receipt of the notification.
- b. Upon receipt of written permission from the owner of any residence included in the Old Hazeldell Quarry Impact Area for noise compliance measurements, the applicant must have sound level measurements made at the residence. The noise compliance measurements must be made during a time when a rock drill is in operation at the quarry as well as the aggregate crushing and screening equipment using procedures considered acceptable under the DEQ noise regulation rule. The measurements must be completed within 3 months of the beginning of aggregate crushing and screening operations at the quarry.
- c. Within 30 days of the completion of the noise compliance measurement period, a report must be provided to the County showing the results of all initial noise compliance measurements made on behalf of the applicant.
- d. If the results of the initial noise compliance measurements show noise from the mining operations is exceeding the applicable DEQ noise regulation limits at any of the residences where monitoring occurred, changes must be made at the quarry within 30 days of the date when the report was provided to the County to reduce the amount of noise radiating to the residence(s) to a level of compliance with applicable DEQ regulations. Within 90 days of when the initial noise compliance report was submitted to the County, follow-up sound level measurements must be made at those residences where the initial measurement results showed non-compliance with the DEQ limits and a follow-up compliance report provided to the County.
- e. If the results of the 2<sup>nd</sup> compliance measurements show the noise at any residence in the Old Hazeldell Quarry Impact Area is still exceeding the applicable DEQ limit, the same conditions stated in Condition 25.d. must go into effect. These conditions must continue in effect until full compliance is demonstrated at all residences in the Old Hazeldell Quarry Impact Area.
- f. Once noise compliance measurements show the noise radiating from the Old Hazeldell Quarry is in compliance with the DEQ noise limits at all residences included in the



measurement program, the applicant may cease noise measurements made until excavation operations move from Phase 1 excavation area to Phase 2 excavation area.

- g. When excavation operations move from Phase 1 excavation area to the Phase 2 excavation area (and again from Phase 2 area to the Phase 3 area), the applicant must, using registered mail, notify all residential property owners inside the Old Hazeldell Quarry Impact Area of the operational changes and let them know that they can have measurements made at their residence if written permission is provided to the applicant within 30 days of receipt of the notification.
- h. Noise compliance measurements and reporting must be made the beginning of Phase 2 and Phase 3 operations using the same procedures described in Conditions 25. b. c. and d.
- i. A blast-monitoring program to physically measure ground vibration and airblast energy must be used for all blasts occurring in the first year of operations at the quarry. Measurements of the ground movement in terms of peak-particle velocity must be made. Airblast measurements must be made in terms of the C-weighted, slow response sound pressure level. Measurements must be made at all residences located within the Old Hazeldell Quarry Impact Area where written permission has been given to have measurements made. Blast measurement reports to include the limits applicable to the blast energy must be provided to the County within 10 business days of the blast event.

## **Dust and Other Impacts to Air Quality**

### Identification of Conflicts:

Topsoil and overburden removal, stockpiling, drilling for blast holes, aggregate extraction, and on-site truck and equipment movement have the potential to create dust which may impact land uses in the impact area.

Arctic Engineering LTD. submitted an Air Quality Report as appendix K of the application that details the potential dust impacts from quarry operations and proposes Best Management Practices (“BMPs”) acknowledged by DOGAMI to mitigate these impacts. These BMPs are required to be implemented through the project conditions of approval.

Opponents raised concerns alleging impacts to air quality from the proposed mining operation. Opponents allege that dust from drilling, sizing, blasting and transportation of aggregate will generate large amounts of dust that will directly impact homes and properties within and outside of the Goal 5 Impact Area. Opponents also alleged that a quantitative analysis of mining-generated dust is required and was not completed. Opponents raised concerns regarding diesel truck exhaust, poor air quality in the winter (due to wood stove use), and toxic dust that could be released from the landfill. Finally, opponents expressed concerns that silica dust would cause human health impacts.

Arctic Engineering provided testimony that the quarry operation does not anticipate detrimental air quality impacts beyond the extent of the applicant's property. In order to reduce PM2.5 and PM10 emissions to regulatory insignificant levels (approximately a 95% reduction), the applicant will pave the access road from Dunning Road and will aggressively water this access road when weather conditions require. As noted above, the quarry will also implement a Best Management Practices & Fugitive Emissions Control Plan, including the use of water sprays, pursuant to conditions of approval 25 and 44, , planting vegetation on topsoil overburden stockpiles, and others.

Arctic Engineering provides evidence in its May 23, 2016 letter that an air dispersion study and modeling is not required because the PM and PM10 annual emission rates are below the significant emission rates set by the project's LRAPA permit.

As explained by Arctic Engineering in its May 23, 2016 letter, mobile sources of air contamination must comply with LRAPA and Oregon Department of Environmental Quality standards (as further discussed below under Diesel Emissions). Wood stove use in the area is not relevant to or impacted by the quarry and seasonal weather in the fall and winter (rain and storms) is likely to reduce particulate matter in the air. As explained in these Findings, the quarry operations (including excavation and process) will avoid the landfill and no disturbance will occur in the landfill area. Because the landfill will be avoided, toxic dust resulting from disturbance of the landfill will not occur.

Silica is naturally present in the soils that will be disturbed for the mining operation, and dust containing silica is primarily an occupational health hazard. As such, the mining operation will be subject to regulation by Oregon OSHA and Oregon MSHA, and subject to fine, penalties and other actions for poor performance in controlling silica dust. The Lane Regional Air Protection Agency ("LRAPA") also regulates fugitive dust emissions, including emissions of dust that contain silica. Per the condition of approval 44 and LRAPA's requirements, the project will fully comply with air quality standards imposed by a LRAPA General Air Contaminant Discharge Permit. The applicant's consultant Arctic Engineering, LTD also prepared an additional Fugitive Dust Mitigation and Daily Reporting Plan that the applicant will be required to implement through conditions of approval. This Plan imposes additional requirements beyond the LRAPA permits to ensure that fugitive dust, including silica dust, does not impact land uses in the impact area.

Based on the substantial evidence presented by the applicant's consultant and the conditions of approval requiring air quality mitigation and monitoring, the Board of Commissioners finds that dust and other air quality discharges will not adversely affect approved land uses in the impact area surrounding the quarry.

Measures to Minimize Conflicts:

The Board of Commissioners finds that the following reasonable and practicable measures will minimize the limited conflicts identified above.



COA 28. The applicant/owner must maintain vegetative ground cover on stockpiles to reduce dust.

COA 29. The applicant/owner must sprinkle interior roads with a water truck to reduce dust.

COA 30. The applicant/owner must have water spray bars on the crusher/screens to reduce dust potential.

COA 31. The applicant/owner must use a crusher that meets LRAPA/DEQ permit standards.

COA 32. The applicant/owner must follow DOGAMI's Best Management Practices (BMP's) for aggregate mining to suppress dust emissions.

COA 33. The applicant/owner must pave the main facility access road from Dunning Road to the scale house.

COA 34. The applicant/owner must use off-road equipment that meets federal Tier 3 off-road engine standards, and/or equipment to be modified as such.

COA 35. The applicant/owner must limit onsite idle times for heavy-duty diesel truck engines to no more than three minutes per truck trip.

COA 36. The applicant/owner must assure that if contracted services are present, (i.e. asphalt paving plant or a batch concrete mixing facility) that materials removed from air pollution control equipment will be stored in a covered container to prevent the material from becoming airborne during storage and transfer.

COA49. The operator must install and maintain a wheel wash facility for use by aggregate trucks prior to exiting the project site onto Dunning Road.

### **Other Discharges - Diesel Engine Emissions:**

#### Identification of Conflicts:

The use of mining equipment and vehicles will generate diesel engine exhaust, which contains pollutants such as nitrogen oxide, carbon monoxide, sulfur dioxide, and particulate matter. The release of diesel emissions could, if not minimized, create potential conflicts with residential or other uses in the impact area.

Opponents commented that the emissions from diesel vehicles would lead to high levels of respiratory illness and that trucks "driving through the middle of town" would drastically increase particulate matter.

The Board of Commissioners finds that the evidence presented by Artic Engineering, LTD is persuasive and shows that diesel emissions will not present a conflict with uses in the impact area when mitigation measures are implemented.

Arctic Engineering found that operation of diesel vehicles has the potential to impact air quality and therefore proposes a Diesel Engine Operation and Maintenance Control Plan for the project. Compliance with this plan is a condition of approval for the project. These mitigation measures require the majority of the project's diesel vehicles will meet federal Tier 3 off-road engine standards or better and limit idle time to no more than 3 minutes. The project will also be required to adhere to LRAPA, DEQ and EPA standards for diesel emissions. Arctic engineering finds that implementation of these mitigation measures will lower the level of pollutants produced by the diesel vehicles to an insignificant level at the residential uses within 1,500 feet of the project site.

**Measures to Minimize Conflicts:**

The Board of Commissioners finds that the following reasonable and practicable measures will minimize the limited conflicts identified above.

COA 34. The applicant/owner must use off-road equipment that meets federal Tier 3 off-road engine standards, and/or equipment to be modified as such.

COA 35. The applicant/owner must limit onsite idle times for heavy-duty diesel truck engines to no more than three minutes per truck trip.

**Other Discharges - Storm Water:**

**Identification of Conflicts:**

Turbid storm water can be generated when storm water runoff is allowed to flow over areas of disturbed soils resulting from the mining excavations. DOGAMI and DEQ have joint regulatory authority of the treatment and discharge of storm water at mine sites. The applicant's mine plan and erosion control methods will be required to comply with DOGAMI requirements.

A stormwater report by Westlake Consultants (Applicant's Appendix I) and supplemented by a May 18, 2016 memorandum was presented by the applicant. Westlake finds that all stormwater runoff within disturbed areas will remain on site and either be captured for on-site recycling or infiltrate back into the aggregate resource. The applicant worked with Lane County Public Works staff to design a conceptual swale/catchment facility map that will be located down gradient from the driveway that enters Dunning Road. This catchment facility will be used to store water for storm events, which will evaporate or infiltrate, or if necessary will be pumped back into the site.

Opponents raised concerns that stormwater could leach back into the groundwater and cause contamination and that runoff could reach Salmon Creek and its fish hatchery approximately 1,500 feet from the site.



Westlake explains that the mining operation will be constructed in a bowl shape, which will catch and direct stormwater toward the lowest elevation on the site (the pit). A series of berms at crucial locations will prevent stormwater from flowing to the access road or moving by sheet flow off of the property. Due to the mining site design, stormwater will not flow toward Salmon Creek. Shannon & Wilson, Inc. also provides information regarding comments on runoff in a May 31, 2016 letter, and concludes that no pathways exist for surface runoff to enter Salmon Creek or its floodplain. Any stormwater that percolates back into the ground will do so in the same manner as currently occurs and will not be impacted by the mining activities.

Opponents also raised concerns regarding infiltration of stormwater into the landfill area and resultant impacts to groundwater. Westlake Consultants recommended installation of up-gradient berms to direct and divert overland rainfall and stormwater around the landfill to stormwater conveyance ditches/treatment areas. The Board of Commissioners finds that adoption of COA 8 which requires these berms and capture areas, will prevent potential impacts to the landfill from stormwater inundation.

#### Measures to Minimize Conflicts:

The Board of Commissioners finds that the following reasonable and practicable measures will minimize the limited conflicts identified above.

COA 8. The applicant/owner must comply with the storm water and erosion control plan prepared by Westlake Consultants, dated July, 2015 and May 18, 2016 or as modified by DOGAMI.

### **Impacts to and from Dunning Road Landfill.**

#### Identification of Conflicts:

Opponents raised various concerns regarding potential impacts associated with the Dunning Road landfill, including concerns that the landfill contains hazardous and toxic wastes and that the mining operation has potential for contamination of groundwater with landfill waste.

Through site reconnaissance, the applicant determined that the deed records inaccurately described the location of the former landfill on the quarry site. A corrected deed accurately describing the location of the landfill was recorded with County and provided to the Board of Commissioners. DEQ has not classified the landfill as contaminated and opponents have not presented evidence of contamination at the landfill.

The Board of Commissioners finds that there will be no potential conflicts with the Dunning Road landfill based on the responsive evidence submitted by the applicant as follows. An extensive historical records search and on-site reconnaissance was conducted by Shannon & Wilson, Inc. and presented to the Board in a May 31, 2016 letter. This investigation identified the historic boundaries of the landfill operations and the likely trench locations. On May 31, 2016, the applicant confirmed in writing by memorandum and revised Site Plan that the proposed project will avoid the former landfill in its entirety and include a 25-foot buffer from this portion of the site. *See Kuper Consulting LLC Memorandum dated May 31, 2016.*

Opponents raised concerns that contamination on the abandoned Pope & Talbot Mill site had the potential to contaminate the area in conjunction with the proposed mining project. Other opponents raised concerns about contamination from rusted drums on the property and from placing the processing plant atop the former landfill site. Opponents also commented that crusher vibrations may cause open ground fractures and released contaminants, that crusher vibrations and heavy truck traffic may increase soil permeability and introduce water to the landfill area and that water used for dust suppression may infiltrate into the buried landfill trenches.

Based on the responsive evidence provided by Shannon & Wilson, Inc. in its June 16, 2016 and November 1, 2016 letters, the Board of Commissioners finds that contamination from these sources is unlikely to occur. The Pope & Talbot Mill site is not connected to the former landfill and will not be impacted by the mining operation; therefore, no contamination from that site will occur in conjunction with mining. Shannon & Wilson found through site reconnaissance that the rusted drums are unconnected to the landfill trenches and appear to be surface debris that was not previously buried. The mining operation will implement a 25-foot offset barrier from the landfill and no mining activities will take place within this barrier or on the landfill property itself. As discussed in the stormwater impacts section, a series of berms will be constructed up-gradient of the landfill trenches to collect and divert storm or surface water from entering the landfill area. The land underneath the processing area has a low groundwater table and there is no evidence of groundwater seepage from that area into the landfill. The presence of heavy trucks and vibration at the processing area will compact the soil and make groundwater seepage even less likely. An up-gradient berm east of the landfill will be used to divert stormwater, processing water, and water used for dust suppression away from the landfill to sealed collection reservoirs or tanks where it will be recycled and reused on site.

Based upon the applicant's responsive materials, the Board of Commissioners finds that approval of the applications will not result in adverse impacts to the Dunning Road landfill. The Board of Commissioners denies the opponents' contentions on this issue.

#### Measures to Minimize Conflicts:

The Board of Commissioners finds that the following reasonable and practicable measures will minimize the limited conflicts identified above.

COA 5. Extraction, processing and activities including stockpiling of aggregate material must occur only in the areas identified on the approved site plan for such activities.

COA 7. Setbacks from the property lines and easements identified in the approved site plan must be maintained.

COA 8. The applicant/owner must comply with the storm water and erosion control plan prepared by Westlake Consultants, dated July, 2015 and May 18, 2016 or as modified by DOGAMI.



COA 48. No excavation, stockpile, fill or other activity shall occur within the former landfill area or within the associated 25-foot buffer area, as identified on PAPA Figure 6, dated Oct. 27, 2016, “Old Hazeldell Quarry Processing Area” submitted by the applicant.

### ***Other Conflicts Identified By Project Opponents***

#### **Seismic Issues and Earth Movement**

Opponents expressed concerns that active earthquake faults in Salt Creek and Hills Creek drainages could result in earthquakes or fault rupture with detrimental impacts to the proposed quarry. Opponents also commented that blasting for the mining activities could trigger local earthquakes.

Based on responsive evidence presented by Shannon & Wilson, Inc. in letters dated May 31, 2016, November 11, 2016, and November 22, 2016 the Board of Commissioners finds that the quarry project is not likely to be impacted by or cause seismic activity. There is no evidence that any of the faults along the Eugene-Denio Lineament within the Western Cascades have been active in the past million years. The USGS mapping of the area does not show active fault activity. Although high pressure fluid injection in fault lines has been shown to trigger local earthquakes, blasting activities have not been shown to trigger earthquakes.

#### **Earthflows and Slope Stability**

Opponents allege that active earthflows on the site contribute to slope instability and provided a LIDAR map of the mining area marked to show these earthflows, however, the origin of the mapping analysis is unknown. Opponents provided DOGAMI hazard maps showing relative landslide hazards for the quarry as ranging from high to very high and raised concerns that the quarry would be incompatible with these geologic hazards. Opponents also presented photographs of pavements cracks and stated that these had been caused by earthflows at the site and argue that the 1:1 slopes proposed for the quarry present a large potential for disaster, damage or death and that RQD values at the site have been associated with weaker rock masses.

The Board of Commissioners finds that testimony provided by the applicant’s consultant, Shannon & Wilson, Inc. on May 31, 2016 and November 22, 2016 and by Kuper Consulting on November 16, 2016 successfully rebuts these contentions. The applicant’s team of engineering geologists regularly interprets LIDAR maps and determined that the mining area’s LIDAR map does not indicate unstable slopes or debris flow. Additionally, published geologic maps from the U.S. Army Corps of Engineers, DOGAMI and the USGS show no known landslides or earthflows at the processing and mining areas. The DOGAMI maps referenced by opponents show a relative hazard assessment, which is mapped as “moderate” to “high landslide susceptibility” for the quarry. These susceptibility measurements only lead to landslides if the overlying soil is weak, which is not the case at the quarry site, where the soil is made of competent bedrock. The landslide inventory shows no landslides on or near the quarry site, due to this shallow competent bedrock. Due to the soil conditions at the site and lack of landslide activity, the actual landslide hazard level of the site is very low. The pavement cracks present no

evidence of landsliding as soil settling on cut and fill slopes (as shown in the photograph) may have settled under pavement, causing cracks.

Kuper Consulting provided its expert opinion as Engineering Geologists that RQD is only one factor associated with weak rock masses and that performance of existing excavated slopes in the same andesite resources is a better predictor of slope stability. The same andesite materials that will form the quarry walls in this project are present in the Hills Creek Dam quarry to the south of the site, and these perform very well with no massive slope failures. A 1:1 slope is very conservative by established industry standard. DOGAMI reviews mine plans specifically for slope stability concerns. The project slopes will not be allowed to exceed 1:1 unless approved by DOGAMI, per COA 42.

Based on the substantial evidence in the record, the Board of Commissioners denies opponents contentions on these issues.

### **Impacts to Groundwater**

Opponents raised concerns regarding the mining operation's impact on the surrounding alluvial aquifer and four private groundwater wells within the impact area east of the excavation. Opponents allege that the aquifer surrounding the mine pit will steadily drain into the mine pit at all times, depleting the water available for neighboring wells. Opponents also raised concerns about water quality impacts to nearby wells from the mining operation.

The Board of Commissioners finds that responsive evidence provided by Shannon & Wilson Inc. in the Groundwater Report and their May 31, 2016 letter that a small amount of groundwater will seep into the pit excavation at slow rate. Due to the impermeability of the bedrock, this seepage will come from water trapped in the bedrock within very close proximity to the excavation area. In addition, evidence provided by Shannon & Wilson Inc. in their November 22, 2016 letter further substantiates that wells and the groundwater regime within the impact area will not be impacted. The mining site and surrounding area are designated by Lane County as a Groundwater Limited Area. Wells in this area draw water from the surrounding impermeable bedrock and therefore the radius of potential impacts to a well's supply and quality is very small. The quarry will not reduce the yield of or interfere with the quality of nearby wells due to the small spheres of influence around these wells. Additionally, tight joints and clay between the rock in the area make a large amount of seepage into the pit unlikely.

S&W also provided information about the elevation of the wells and the planned elevation of the mine pit. The pit will be elevated above the level of the neighboring wells and would need to flow uphill to reach these areas, which will not naturally occur. It is highly unlikely that water trapped in the mine will flow through the impermeable bedrock to neighboring wells.

Opponents further contended that there will be impacts on wells if the mine operator withdrawals 5,000 gallons per day from an onsite well for use for dust suppression and for processing of the aggregate. The Board of Commissioners finds responsive evidence provided by Shannon & Wilson Inc. in their Nov. 1 and Nov. 22, 2016 letters that there will be no impacts to wells within the impact area by withdrawing 5,000 gallons per day.



The City of Oakridge requested that the County require groundwater monitoring of its wells based on a geological study performed by GSI Water Solutions and Curran-McLeod, Inc. The GSI and Curran-McLeod report was not completed or signed by a licensed Certified Engineering Geologist or Geotechnical Engineer. *See* ORS 672.505. Nonetheless, the applicant's Certified Engineering Geologists Kuper Consulting and Shannon & Wilson, who are experienced in quarry operations and familiar with the subject property, provide compelling substantial evidence in response to the above testimony. The applicant's experts conclude that the risk of impacts to the City's supply aquifer are very low, given that the City's wellfield and replacement well is outside of the impact area and do not recommend a monitoring program. However, to further ensure water quality monitoring the Board has imposed condition of approval 46 that will establish a baseline for water quality and sampling at 6 month intervals during the mining activity in Phase 2. With the addition of this mitigation measure, required by COA 46, the Board of Commissioners finds that there is substantial evidence that the project will not have adverse impacts on the City's wells.

Based on the substantial evidence provided by the applicant's consultant, the County finds that the mining operation will not impact the surrounding alluvial aquifer or groundwater wells.

### **Geothermal Activity:**

Commenters raised concerns about geothermal activity in the vicinity of the Project based on a sulfur smell encountered while drilling a well. Opponents did not present any additional information or evidence regarding the presence of geothermal activity

As noted in their logs, exploration geologists and experienced drillers working on the quarry property did not identify indications of geothermal activity, such as heat or a sulfur smell. No surface or subsurface evidence of geothermal activity was observed during field work in the impact area. The Board of Commissioners finds that geothermal activity does not present a conflict with uses in the area because there is not substantial evidence that geothermal activity is occurring in the mining or impact area.

### **Blasting Impacts to Structures and Wells**

Opponents raised concerns that blasting used in the mining operation would affect neighboring structures and water wells.

Shannon & Wilson, Inc. addressed potential impacts to blasting in May 31, 2016 and June 21, 2016 letters. A 1980 U.S. Bureau of Mines ("USBM") report, which synthesizes 40 years of research, establishes thresholds for vibration above which damage to older residential structures may occur. The distance between the quarry excavation and the nearest residents is approximately 1,000 feet and will significantly offset blast-induced vibration. Vibration at the nearest structures will be far lower than the threshold for structural damage. Potential impacts to wells can be measured using the same thresholds and are not expected to occur.

To minimize potential impacts from blasting, the Board of Commissioners adopts the following condition of approval. The Board of Commissioners finds that responsive evidence provided by

Shannon & Wilson Inc. in their May 31 and June 21, 2016 letters that blast induced vibrations will not impact wells within the impact area.

COA 37. The applicant/owner must maintain a record of each blast for at least two years. These records must be available to the County, the State Department of Geology and Mineral Industries and other governmental agencies with appropriate jurisdiction upon request. Such records must show the following for each blast:

- (i) Name of quarry or mine.
- (ii) Date, time and location of blast.
- (iii) Description of type of explosive and accessories used.
- (iv) Time interval of delay in milliseconds.
- (v) Number of different delays.
- (vi) Number of holes per delay.
- (vii) Nominal explosive weight per hole.
- (viii) Total explosive weight per delay.
- (ix) Total weight of explosives per blast.
- (x) Blast hole diameter, depth, spacing and stemming height"

**OAR 660-023-0180(5)(b)(B)** *Potential conflicts to local roads used for access and egress to the mining site within one mile of the entrance to the mining site unless a greater distance is necessary in order to include the intersection with the nearest arterial identified in the local transportation plan. Conflicts shall be determined based on clear and objective standards regarding sight distances, road capacity, cross section elements, horizontal and vertical alignment, and similar items in the transportation plan and implementing ordinances. Such standards for trucks associated with the mining operation shall be equivalent to standards for other trucks of equivalent size, weight, and capacity that haul other materials;*

**Potential Conflicts to Local Roads (within 1 Mile of the mine entrance):**

The addition of project trucks and other vehicle traffic to the roadway system has the potential to impact two local roads within 1 mile of the mine entrance - Dunning Road and Fish Hatchery Road. Highway 58 also occurs within 1 mile of the mine entrance but is not a local road and impacts to this Highway are outside of the scope of the OAR 660-023-0180(5)(b)(B) analysis.

Based on persuasive evidence presented by the applicant and conditions of approval adopted as noted below, the Board of Commissioners finds that project will not conflict with local roads within 1 mile of the mine entrance.

A Transportation Impact Analysis (the "TIA") was completed by Sandow Engineering ("Sandow"), Appendix G, for roadways and intersections within one mile of the proposed Site entrance, as well as to the nearest arterial, Highway 58 (classified as a Statewide Highway). All truck access to and from the site will be by way of an access road that intersects Dunning Road approximately three tenths of a mile east of Fish Hatchery Road. Access to the Site is on Dunning Road. The existing gravel driveway will no longer be used; the site's truck access will be relocated to approximately 285 feet east of the Union Pacific Railroad crossing. The 30-foot

wide access will be constructed with pavement capable of supporting the quarry operation's vehicles.

The haul route follows Dunning Road to Fish Hatchery Road then south to Oregon Highway 58, the arterial route. From the intersection of Fish Hatchery Road and Highway 58, trucks will disperse both east and west with predominance to the west toward the City of Oakridge.

Based on an estimated peak annual production, the analysis assumes there would be up to 86 daily truck round trips during the busiest times. This would equate to a maximum of 8 to 9 round trips per hour, given a 10-hour day. It also has been assumed that the site would employ an average of approximately 12 people, once up and running. This would produce an additional 24 round trips per day.

As required by the Goal 5 rule, the TIA projects future road conditions that could occur when the site is fully operational. The TIA assesses potential conflicts based on clear and objective standards regarding sight distances, road capacity, and similar items in the transportation plan and implementing ordinances. The TIA also evaluates the proposed site pursuant to the requirements of Statewide Planning Goal 12 (Goal 12), and the implementing Transportation Planning Rule (TPR).

The project traffic engineer, Sandow, completed an analysis of existing conditions, and projected transportation impacts of the proposed mine and applicable standards. See Appendix G. As further detailed in the TIA, the Sandow analysis supports the following conclusions:

Sight Distance: Dunning Road traverses terrain that allows a maximum speed of 30 MPH for the section of the road adjacent to the site, based on the Sandow report. There is no posted speed limit on Fish Hatchery Road and its speed limit is therefore 55 MPH. Quarry trucks will use Fish Hatchery Road south of the Dunning Road intersection only to Highway 58.

The available stopping sight distance for southbound traveling vehicles on Fish Hatchery Road as they approach Kokanee Way is measured to be approximately 435 feet which does not meet the recommended 495 foot stopping sight distance for this movement. The sight distance is restricted due to the horizontal curvature of Fish Hatchery road just to the north where fencing and building on the inside of the curve (west side) are the limiting factor. The only way to meet sight distance is to remove the fencing and the buildings on the west side. This is not a feasible solution.

The available stopping sight distance for southbound traveling vehicles on Fish Hatchery Road as they approach Industrial Way is measured to be approximately 340 feet which does not meet the recommended 495 foot stopping sight distance for this movement. The sight distance is restricted due to the horizontal curvature of Fish Hatchery Road just to the north where fencing and buildings on the inside of the curve (west side) are the limiting factor. The only way to meet sight distance is to remove the fencing and the buildings on the west side. This is an infeasible solution. The maximum sight distance that can be achieved currently (340 feet) corresponds to a safe traveling speed of 40 mph.



The AASHTO manuals state that if existing intersections do not meet the standard it does not mean the location is required to be improved. An evaluation of conditions on the roadway indicates that a significant safety issue does not currently exist for either Kokanee Road or Industrial Way at Fish Hatchery Road. Crash data for the most recent available records (01/012009 - 11/30/2014) for both intersections above show no reported crashes. There is no indication that, although the intersections do not meet the SSD standard, the intersections are unsafe and requires geometric modification. However, it is recommended that an advanced intersection warning sign W2-7L with a supplemental W16-2P "XX FEET" sign be placed in advance of the Kokanee Way for both intersections for southbound traffic. The signage will alert motorists along Fish Hatchery Road of potential conflicts, effectively reducing reaction times and speeds, therefore improving conditions at this location.

The Fish Hatchery Road and Highway 58 intersection was also analyzed by Sandow with the knowledge that the majority of the trucks will turn right (west) at Highway 58. There is no sight distance issue at this intersection. The applicable criteria are therefore met for the sight distance for the studied intersections with the recommended mitigation measures set forth in the Sandow report.

Commenters encouraged the use of a trail overpass to allow mountain bikers to avoid road segments where trucks will turn into the project site. Contribution to and an easement for this trail segment is required as a condition of approval for the project.

Additional comments were made regarding school busses using the road a future time. To comply with public works requirements, the applicant will widen Dunning Road where needed to meet a 24-foot minimum width between Fish Hatchery Road and the railroad tracks. This 24-foot minimum width will safely accommodate passage of a school bus and gravel truck should school busses begin using this road segment. In a May 31, 2016 letter Sandow confirms that there is enough sight distance to allow for a gravel truck to safely see and stop for a school bus that has stopped at the railroad tracks. The Board of Commissioners finds that there is not a potential for conflicts between future bus use of the site and the project's operations.

Commenters also raised concerns about gravel trucks colliding with a train using the railroad tracks. Sandow's May 31, 2016 letter analyzed the scenarios under which a gravel truck might need to stop for an oncoming train and found that there is adequate time and distance to allow a truck to stop at the time the railroad guards begin to lower to prevent a collision with a train. A condition of approval requiring final resolution of crossing improvements by ODOT rail is included.

Commenters raised additional concerns about the appropriate width and classification of Dunning Road and the potential for collisions at the Highway 58 and Fish Hatchery Road intersection. Information contained in Sandow's May 31, 2016 letter responds to these comments. The proposed 24-foot width for Dunning Road meets City of Oakridge and County standards for local roads. In conjunction with county public works staff it was determined that on-street parking is not needed along this roadway segment and that the cost of sidewalks is disproportionate to the need for sidewalks. Sandow determines that the crash data for the

Highway 58-Fish Hatchery Road intersection is representative of typical crash circumstances and is not due to the shortened sight distance. The intersection line of sight is twice the stopping sight distance for this intersection which provides drivers with time to assess traffic risks and react. Sandow also clarified in its November 1, 2016 letter that the sight distance measurement for this intersection was field-verified and does account for the slight curve directly east of the intersection.

Commenters raised concerns regarding the eastern access point to the site and questioned why this was not studied for sight distance and trips. The eastern access point will be used only for initial set-up and access to the site on a temporary basis and haul trucks will not use this access point. The Board of Commissioners finds that the condition of approval prohibiting use of haul trucks at the Red Gate entrance sufficiently resolves these concerns.

Commenters also questioned the speed limit assumptions on Highway 58 used in Sandow's analysis, whether local road would be used to transport material from the quarry face to the processing area, and whether a 3-hour traffic count could produce accurate results. Commenters also raised concerns about crashes on Highway 58 between Dunning and Fish Hatchery Road and alleged that the gravel trucks would add to the road hazards of Highway 58.

The Board of Commissioners finds that Sandow's November 1, 2016 letter provides persuasive evidence regarding these points. Sandow explains that the 55mph speed limit assumed for Highway 58 is based on the speed limit, which it reasonably assumed will be enforced. On-site haul roads will exclusively be used to transport materials from one area of the quarry to another and local roads will not be impacted by the inter-quarry movement of materials. Sandow's 3-hour traffic count complies with industry standards and were cross-validated with ODOT's traffic counts for accuracy. Highway 58 is not a local road and therefore outside of the jurisdictional consideration for the project. Commenters have not provided any evidence that the presence of gravel trucks will add to the number of crashes or other hazards on Highway 58, which is a highway designed to accommodate truck traffic.

Based on this information, the Board of Commissioners finds that the project will not conflict with local roads within one mile of the site, subject to the below conditions of approval.

#### Measures to Minimize Conflicts:

The Board of Commissioners finds that the following reasonable and practicable measures will minimize the limited conflicts identified above.

COA 10. Access to the site is on Dunning Road. A new driveway must be constructed to 30 feet wide, consistent with Lane Code 15.707, capable of supporting the quarry operations vehicles, and consistent with the TIA.

COA 11. The applicant/owner must remove vegetation and the earth embankment at the site driveway intersection with Dunning Road as necessary to meet the minimum AASHTO westbound stopping sight distance identified in the TIA as 165 feet.

COA 12. A standard MUTCD warning sign with lettering, "TRUCKS" with a supplemental W16-2P "XX FEET" sign must be installed within the right of way no closer than 200 feet east of the driveway on Dunning Road to alert westbound traffic to the entering trucks. Sign installation to be completed by Lane County with costs reimbursed by the applicant.

COA 13. A standard MUTCD warning sign with lettering, "TRUCKS" with a supplemental W16-2P "XX FEET" sign must be installed within the right of way on Dunning Road to alert eastbound traffic to truck traffic. Sign installation to be completed by Lane County with costs reimbursed by the applicant.

COA 14. A standard MUTCD, advanced intersection warning sign (W2-7L with a supplemental W16-2P "XX FEET" sign) must be installed 495 feet in advance of the centerline of Kokanee Way intersection for southbound traffic. Sign installation to be completed by Lane County with costs reimbursed by the applicant.

COA 15. The applicant/owner must complete a pavement analysis for a 20 year design life based upon the existing traffic volumes and the addition of site generated traffic on both of the applicable sections of Dunning Road and Fish Hatchery Road. Such analysis and design proposal must comply with the applicable provisions of Lane Code 15.707(3). Any pavement structure mitigation measures determined necessary to meet a 20 year design life must be constructed by the applicant prior to the addition of 20 or more daily truck trips, within 5 years of commencing operations, or within 10 years of commencing operations provided the Pavement Condition Index (PCI) has not fallen below 70, whichever is less. Should the PCI fall below 70 after commencement of operation, the applicant/property owner must complete necessary pavement mitigation within one construction season. The PCI is measured routinely by Lane County. Any required paving work must be consistent with Lane County Road Overlay standards.

COA 16. The applicant/owner must comply with any future Rail Order issued by ODOT Rail.

COA 17. The applicant/owner must widen Dunning Road between Fish Hatchery Road and the Railroad right-of-way to a minimum paved width of 24 feet. Additional width must be constructed at guardrails to accommodate E distances and flares. Additional width is required to accommodate truck off-tracking along all curves on Dunning Road between the site driveway and Fish Hatchery Road. The applicant/owner must design and construct the facility to meet the requirements of LC 15.704.

COA 18. The applicant/owner must remove the existing driveway access located approximately 650 feet east of the railroad in conjunction with construction of the new driveway access.

COA 19. Lane County Facility Permits must be obtained for the following:

- Removal of the existing driveway access on Dunning Road.
- Construction of a new driveway access on Dunning Road.
- Required widening and paving improvement on Dunning Road.



- Paving improvements on Fish Hatchery Road.
- Removal of vegetation and earth embankment at the site driveway with Dunning Road to improve sight distance.
- Any other work required within the right-of-way of Dunning Road and/or Fish Hatchery Road.

COA 20. The applicant/owner must provide the following to the County Engineer at (541) 682-6928 for Lane County review of stormwater analysis: A final drainage report and drainage plans. The final report and plans must include information on the pre and post development drainage runoff flow rates, contours, drainage patterns, calculations, assumptions, details of detention pond, metering device, streams, culverts, roadside ditch, etc.

- If runoff is directed into any of the Dunning Road cross culverts, the flow capacity of these culverts must be evaluated in this report. If the culverts need to be upsized that will be the responsibility of the applicant.
- Water directed to the roadway must be directed to the cross culverts, not the roadside ditch.

**OAR 660-023-0180(5)(b)(C)** *Safety conflicts with existing public airports due to bird attractants, i.e., open water impoundments as specified under OAR chapter 660, division 013;*

### **Conflicts with the Private Use Airstrip**

Identification of Conflicts:

The Board of Commissioners finds that the private Aubrey Mountain Airstrip (“Airstrip”) is not a public airport and therefore conflicts with this land use are not required to be analyzed under this section. The Board of Commissioners further finds that Lane County’s Private Use Airport Overlay Zone does not apply to the Airstrip. Although the County regulates some private airports under Ordinance PA 1549, the Airstrip is not among the regulated airports. As such, there are no applicable criteria governing proposed land uses located near the Airstrip, which typically constitute the primary substantive requirements of this Overlay designation where applied elsewhere in the County.

Project opponents contend that the project will adversely impact the Airstrip by changing the topography in the area (by removing a portion of TV Butte) and thereby changing wind patterns and affecting flight safety, and by creating dust that will negatively impact visibility for pilots.

The Board of Commissioners finds that evidence presented by W&H Pacific in the May 26, 2016 and October 24, 2016 responses adequately responds to these concerns. The Board finds that TV Butte does not currently impact wind patterns at the Airstrip and does not protect the Airstrip from otherwise dangerous wind conditions. Thus, the Airstrip will not be impacted by a partial removal of TV Butte. The Board of Commissioners also finds that the relatively calm weather in the Oakridge area, combined with the fugitive dust mitigation measures (discussed at length under the dust responses) will ensure that quarry operations do not impact the Airstrip.

In a letter dated November 11, 2016, the Oregon Department of Aviation (“ODA”) raised a further concern with dust and suggested mitigation measures to ensure that dust does not impact the airport. Although ODA’s role is simply advisory, and ODA lacks independent regulatory or permitting authority over private airports, W&H Pacific a highly qualified airport design and operations consulting firm, reviewed ODA’s suggestions and concluded that the project will employ best management practices that are typically used for dust control mitigation at airports, which are required for the project by the conditions of approval. An additional condition of approval, number 43, requires the quarry operator to provide blasting schedules to the airport operator to ensure coordination if needed. Based upon the weight of the evidence in the record and the mitigation required by the conditions of approval, the Board of Commissioners finds that there is no reasonable basis to conclude that dust or other potential discharges will conflict with the continued operation of this Airstrip. For these reasons, the Board of Commissioners denies the opponents’ contention that the project will adversely impact the Airstrip.

Measures to Minimize Conflicts:

The Board of Commissioners finds that the following reasonable and practicable measures will minimize the limited conflicts identified above.

COA 43. The applicant/operator of the quarry must provide information on blasting events to Aubrey Mountain Airstrip operator not less than 48 hours prior to such events.

**OAR 660-023-0180(5)(b)(D)** *Conflicts with other Goal 5 resource sites within the impact area that are shown on an acknowledged list of significant resources and for which the requirements of Goal 5 have been completed at the time the PAPA is initiated;*

The Board of Commissioners finds, based on evidence presented by the applicant in Appendix E to the application, that three inventoried Goal 5 resources occur within the Impact Area and no “significant” “1C” classified resources exist on the property. The three resources are Riparian Corridor, Wetlands, and Wildlife Habitat specifically Salmon Creek, which occur off-site and within the Impact Area. The County adopted its Goal 5 inventories and resource designation for the rural areas in 1984 and the County’s consideration of conflicts with the project is limited to resources listed as significant in the adopted inventory. Based on the evidence presented by the applicant and the mitigation measures adopted as conditions of approval, the Board of Commissioners finds that there are not conflicts with inventoried Goal 5 resources. The Board of Commissioners finds, as further discussed below, that project opponent’s contentions to the contrary do not undermine the testimony presented by the applicant.

**Riparian Corridors, including Water and Riparian Areas and Fish Habitat.**

Salmon Creek is a mapped Goal 5 riparian corridor which contains Goal 5 sensitive fish and waterfowl habitat and is accompanied by wetlands that appear to be jurisdictional. Because the quarry will fully avoid these Goal 5 areas (as required by COAs 26 and 27) the Board of Commissioners concludes that the quarry project will not conflict with these Goal 5 resources.

*Riparian Corridors*

The Board of Commissioners finds that the proposed quarry will not impact Goal 5 riparian corridors within the Impact Area because the Project will avoid any intrusion into inventoried riparian corridors and will preserve a 100-foot setback from the Salmon Creek corridor.

As support for this conclusion, the Board relies on the evidence presented by James A. Mann, LLC and Terra Science, Inc.. The Board of Commissioners finds that the Impact Area includes a 1C significant Class 1 stream, Salmon Creek, which is located on Willamette National Forest Property, approximately 1,400 to 1,450 feet north of the quarry site. RCP Goal 5 Flora and Fauna Policy 6 applies a 1C significance category to riparian areas located within 100 feet of Class 1 streams and requires a 100-foot setback from ordinary high water in rural resource zones. The project will avoid this 100-foot setback area. Stormwater drainage from the quarry site will not run to Salmon Creek due to protective berms that will be erected to ensure storm water remains on the quarry site and does not run off into the Impact area.

### *Wetlands*

The Board of Commissioners finds that the proposed quarry will not impact Goal 5 wetlands within the Impact Area because quarry operations will not disturb wetland areas directly or the setback area around these wetlands.

As support for this conclusion, the Board relies on the evidence presented by James A. Mann, LLC and Terra Science, Inc.. Salmon Creek is the only 1C significant wetland identified on the Goal 5 natural resource inventory and requires the same 100-foot setback as the riparian area above. The project will avoid this 100-foot setback area. Stormwater drainage from the quarry site will not run to Salmon Creek due to protective berms that will be erected to ensure storm water remains on the quarry site and does not run off into the Impact Area.

Terra Science, Inc. (“TSI”) performed a wetland evaluation for the site, as well as submitted the evaluation to the Oregon Department of State Lands (DSL) and the U.S. Army Corps of Engineers (“Corps”) for their review. These findings are included in Appendix D of the project application. A review of aerial photos, literature search and site visits indicate that there is a riverine wetland running along the eastern boundary of Tax lot 1900 and through the southeast part of Tax lot 100. Although on the applicant's property, this is outside of the proposed mining area and south of Dunning Road.

Crossing the southeast corner of Tax lot 100 is another creek along with potential riparian wetlands associated with the creek. Both these two areas could be regulated by as jurisdictional wetlands/waters by the DSL and Corps. Another riverine wetland is located on the western part of Tax lot 502 (sic 500). Since all of these potential wetlands are outside of the proposed mining area and all impacts to these areas are avoided, authorization under the Clean Water Act and the Oregon Removal-Fill Law are not required for the project.

### *Wildlife Habitat*

The Board of Commissioners finds that the proposed quarry will not impact Goal 5 wildlife habitat within the Impact Area because quarry operations will not disturb wildlife areas directly and will provide a protective setback around these areas.



As support for this conclusion, the Board relies on the evidence presented by James A. Mann, LLC. RCP Goal 5, Flora and Fauna Policy 8 applies a 1C significant category to sensitive fish and waterfowl areas in the 1983 Revision of the Flora and Fauna Working Paper and requires protection of these resources as specified in Goal 5 Flora and Fauna Policy 7. Salmon Creek is a listed sensitive fish and water fowl area and a 100-foot protective setback will be applied to this area. Stormwater drainage from the quarry site will not run to Salmon Creek due to protective berms that will be erected to ensure storm water remains on the quarry site and does not run off into the Impact area.

#### Measures to Minimize Conflicts:

The Board of Commissioners finds that the following reasonable and practicable measures will minimize the limited conflicts identified above.

COA 26. Mining and processing must not occur within 50 feet of the unnamed creek on the east side of the property.

COA 27. The applicant/owner must not place fill, or excavate within wetlands on the site until obtaining appropriate permits from the Oregon Department of State Lands (DSL) and the Corps of Engineers (Corps).

#### **Impacts to Elk and Big Game Habitat**

##### Identification of Conflicts

Opponents contend that the potential presence of elk habitat and game habitat is a basis for conflict assessment and minimization under applicable criteria.

However, the Board of Commissioners finds, as documented in the record (*see* March 30, 2016 Response to Incompleteness Letter and November 1, 2016 Big Game Range Letter from Arnold Gallagher) the County did not classify Big Game Range as a “significant” Goal 5 resource during the Lane Rural Comprehensive Plan adoption process. In 1984 when DLCD acknowledged the RCP, it determined that Lane County’s inventory of resources was complete, adequate and complied with Goal 5, despite not identifying Big Game Range as a significant resource. Big Game Range was not identified as significant because other policies and restrictions on zones where Big Game Range was present made this categorization unnecessary. Pursuant to OAR 660-023-0180(5)(b)(D), the County may only review Goal 5 resource sites within the impact area that are included on an acknowledged list of significant Goal 5 resources. Neither the Lane County Rural Comprehensive Plan (RCP) or Flora and Fauna Working Paper designated Big Game Range areas as “1C” “significant” resource.

Since the County’s acknowledged Goal 5 resource list does not include Big Game Range, and because no habitat for any species constitutes a potential conflicted use under Division 23 absent

inclusion on an acknowledged inventory, neither the applicant nor the County may address potential conflicts with habitat.

Consequently, the Board of Commissioners finds the opponents' contentions are without merit, there are no conflicts with Goal 5-listed Big Game Range, and no measures to minimize conflicts are necessary.

### **Impacts to Historical Artifacts.**

#### Identification of Conflicts:

Based on testimony provided by HRA in the Cultural Resources Review report (Appendix H of the PAPA application) and as submitted by oral testimony from Dr. Rick Minor on October 12, 2016, the Board of Commissioners finds that there are no inventoried Goal 5 cultural or archaeological resources on the proposed quarry site or in the 1,500-foot impact area and no identified resources that would qualify for listing. The required conflicts analysis only pertains to Goal 5 resources and the Board of Commissioners finds that these resources are not present within the 1,500-foot impact area.

Nonetheless, project opponents raise a number of concerns regarding historical and cultural resources that were addressed by the applicant which we detail here.

Opponents contend that the quarry will impact Native American cultural and religious artifacts in a number of ways. These include reports of historical and archaeological artifacts within the mining area that would be impacted by the mining activities, identification of an Indian Trail across the elevation of TV Butte based on a 1988 interview by Lawrence Hills, concerns that quarry operations will disturb burial grounds of Charlie Tufti's ancestors, and reports that burial sites are located within the proposed mining area. Opponents also raised concerns about the mining impacts on a prehistoric village atop TV Butte and artifact finds in the vicinity of the quarry.

The Board of Commissioners finds that the applicant's archaeological experts Hart and Toepel and Heritage Resource Associates, Inc. ("HRA") provided responsive evidence in their May 27, 2016, October 30, 2016, and November 16, 2016 letters that persuasively rebuts opponents' contentions. HRA archaeologists conducted a physical reconnaissance of the mining area in May 2016 but no prehistoric or historical archaeological materials were observed. None of the artifacts reported in testimony to the County within the mining area have been confirmed by archaeological investigation.

HRA determined that the "old Indian trail" referenced by Lawrence Hills is likely to be the Aubrey Mountain trail which comes out on level ground. None of the maps researched for the project indicate that a historic trail was located on TV Butte. The pedestrian survey of site also did not show any indication of a historic trail. HRA's investigation also determined that Charlie Tufti's land claim did not include the mining area or the 1,500-foot impact area. HRA reviewed historical records regarding burial practices in the area and historic field investigations of the area that relate to the Tufti burials. None of the recitals regarding burial grounds reference TV Butte or any landforms corresponding to the TV Butte geology. Further, no earth disturbing

activities related to mining will occur in the Jim Chuck Chuck or Charlie Tufti land claims. Based on this information, HRA concluded that the Tufti burial grounds are most likely on the Tufti land claim in an area suitable for farming in their letter dated October 30, 2016.

Opponents also claimed that the quarry area was sacred land with extreme cultural and historical significance and that Indian artifacts had been found in the vicinity of the quarry site.

The Board of Commissioners finds HRA provided a responsive evidence in their June 18, 2016, May 27, 2016, October 30, 2016, and November 16, 2016 letter that persuasively rebuts opponents' contentions. No significant archaeological or historical sites are known to or likely to be present in the mining area that may be affected by the quarry. The absence of archaeological evidence in conjunction with the geography of TV Butte (steep slopes) suggests that use of the Butte was limited to occasional hunting and travel and therefore the mining site is not likely to contain historical artifacts.

Opponents raised concerns about impacts to burial grounds within the mining area and Impact area, the Old Indian Trail, an ancient village, and the potential to harm previously identified artifacts in the Impact Area.

The Board of Commissioners finds HRA provided a responsive evidence in their May 27, 2016, October 30, 2016 and November 16, 2016 letters that persuasively rebut opponents' contentions. Concerns regarding burial grounds and the Old Indian Trail were sufficiently addressed in HRA's earlier letter and do not show that either is likely to be present on the mining site. Opponents provide no evidence of an ancient village on TV Butte and the lack of archaeological evidence along with the site's conditions (steep rocky terrain and lack of water) make the Butte a very unlikely location of a previous Indian village. The artifacts identified within the Impact Area will not be impacted by the quarry because no ground disturbance will occur in the Impact Area. The Applicant fully assumes that DOGAMI will coordinate with tribal leaders in the area to ensure the project does not impact cultural resources.

Based on the responsive evidence provided by the application the Board of Commissioners denies opponents' contention that the project will impact historical artifacts.

Measures to Minimize Conflicts:

The Board of Commissioners finds that the following reasonable and practicable measures will minimize the limited conflicts identified above.

COA 9. In the event that buried cultural deposits are encountered during the project activities, the applicant/owner must comply with ORS 97.740-760 and ORS 358.905-961.

**OAR 660-023-0180(5)(b)(E)** *Conflicts with agricultural practices; and*

The Board of Commissioners finds that the mine will not generate any significant conflicts with agricultural practices on surrounding lands. As support for this conclusion the Board of



Commissioner relies on the applicant's agricultural survey contained in Appendix M of the application.

In determining whether conflicts with agricultural practices will result, the County is required to comply with ORS 215.296, rather than the requirements of the Goal 5 rule. OAR 660-023-0180(5)(c). ORS 215.296 requires a demonstration that the Project will not:

"(a) Force a significant change in accepted farm or forest practices on surrounding lands devoted to farm or forest use; or

"(b) Significantly increase the cost of accepted farm or forest practices on surrounding lands devoted to farm or forest use."

The Board of Commissioners finds that while low-intensive, small-scale agricultural activities, primarily livestock grazing, greenhouses, and private gardens, are occurring in the surrounding area, none of these activities appeared to be for commercial purposes. Therefore, they do not constitute "accepted farming practices" as defined in ORS 215.203(2)(c).. Additionally, no conflicts were identified with forest practices.

The Board of Commissioners further finds as discussed above, based on the evidence provided by the applicant, that, subject to adoption and implementation of various recommended minimization measures, there will be no significant conflicts with regard to noise, dust and other discharges including ground water and transportation access, and this analysis further supports the conclusion of compliance with the standards under ORS 215.296. Based upon the available evidence, the available documentation and analysis support the conclusion that, due to the limited nature and small scale of existing non-commercial agricultural practices, the relative lack of proximity to the mining operation, and the various measures that will minimize project conflicts to a level that is insignificant, the mining operation will not force a significant change in or significantly increase the cost of accepted farm practices on surrounding lands devoted to farm use.

**OAR 660-023-0180(5)(b)(F)** *Other conflicts for which consideration is necessary in order to carry out ordinances that supersede Oregon Department of Geology and Mineral Industries (DOGAMI) regulations pursuant to ORS 517.780;*

The Board of Commissioners finds that the proposed project will generate very limited conflicts, none are significant in nature, and all such conflicts can be minimized with reasonable and practicable measures that are imposed as conditions of approval. Specific issues raised by project opponents regarding conflicts and the minimization measures required by conditions of approval are addressed above.

**OAR 660-023-0180(5)(c)** *The local government shall determine reasonable and practicable measures that would minimize the conflicts identified under subsection (b) of this section. To determine whether proposed measures would minimize conflicts to agricultural practices, the requirements of ORS 215.296 shall be followed rather than the requirements of this section. If reasonable and practicable measures are identified to minimize all identified conflicts, mining*

*shall be allowed at the site and subsection (d) of this section is not applicable. If identified conflicts cannot be minimized, subsection (d) of this section applies.*

The Board of Commissioners finds that there are reasonable and practicable measures that would minimize identified conflicts, as set forth in the attached conditions of approval and further discussed above. As support for this conclusion, the Board of Commissioners relies upon the evidence provided by the applicant and its many expert consultants. Because there are reasonable and practicable measures that would minimize identified conflicts, the Board of Commissioners finds that mining shall be allowed at the site as proposed by the applicant, and no ESEE analysis is necessary. Specific concerns identified by opponents regarding proposed mitigation measures are discussed below:

**1. Watering is an effective means of dust control.**

In conjunction with the application, the applicant's technical consultants have provided evidence and analysis demonstrating that water spray measures are a feasible, acceptable industry standard and an effective best management practice for dust control, including silica dust. As support for this conclusion, the Board of Commissioners relies upon (1) the Response to Hearing Comments letter and Old Hazeldell Quarry, Response to Opposition submittals through November 1, 2016 letter, both from Kuper Consulting LLC; (2) the Rebuttal Letter and Response Submittal regarding Testimony regarding Air Quality and Permitting Assessment Compliance for Old Hazeldell Quarry, both from Arctic Engineering, LTD, and (3) the October 29, 2016 Letter regarding Old Hazeldell Quarry - Quarry Water Usage from Katie Jeremiah of Aggregate Resources Industries, Inc..

**2. TIA addresses necessary mitigation.**

With regard to alleged sight distance non-compliance, Sandow Engineering has provided rebuttal responses through memoranda dated May 31, 2016, June 20, 2016, and November 1, 2016. The Board of Commissioners finds that these rebuttal responses demonstrate compliance with applicable standards is feasible.

**3. Deed restrictions are not an applicable review criterion.**

A project opponent suggests that the noise berm cannot be constructed due to a restrictive covenant which provides, in relevant part:

“\* \* \* [N]o significant excavating work shall be performed on the portion of the Property described on the attached Exhibit ‘B’ except for the purpose of access road construction to the northerly and easterly areas of Exhibit ‘B’ Property. This restriction will expressly not prohibit Grantee, its successors or assigns, from **storing equipment or material**, running heavy machinery or otherwise using the Exhibit ‘B’ Property. This restrictive covenant shall run with the land and be irrevocable.” (Emphasis added. Exhibit “B” is the legal description of the former landfill portion of the property.)

As noted by Michael Reeder in a November 1, 2016 letter, the above referenced Exhibit B was amended to correct the legal description of the former landfill. The Board of Commissioners finds that opponents' analysis is incorrect as a matter of fact and law. First, the construction of a noise berm does not require excavation of any kind. A berm is constructed via the placement of material upon land, and in fact *this activity is expressly allowed* by the covenant. Moreover, so is certain road construction, storage of equipment or material, running machinery, and otherwise using the former landfill. There will be no excavation associated with these activities. In short, the express language and intent of the covenant at issue do not support his interpretation.

Second, it is well-established that deed restrictions are not an applicable review criterion. Opponents cite to *Butte Conservancy v. City of Gresham*, 51 Or LUBA 194 (2006) as authority that the County is required to consider covenants, conditions and restrictions in order to determine that a proposed condition is possible and likely to succeed. The Board of Commissioners finds that *Butte Conservancy* is, however, readily distinguishable from the present circumstance, which renders the ruling irrelevant to this review. The issue in *Butte Conservancy* was review of the feasibility of implementing a proposed condition of approval and not, as in this instance, whether the covenant serves as an applicable review criterion. Further, the facts of *Butte Conservancy* were markedly different than in the present application. In *Butte Conservancy*, a housing developer was required to provide secondary access where there was only one location to do so, which had a restrictive covenant prohibiting such use. In the pending application, there is no County imposed condition for a noise berm. Rather, the applicant has elected to provide the noise berm; and, more importantly, the record demonstrates that the proposed noise berm is intentionally located beyond the footprint of the former landfill. As support for this conclusion, the Board of Commissioners relies upon the Kuper Consulting LLC memoranda and Revised Site Plans dated May 31, 2016 and October 29, 2016. In sum, there is no mitigation or development activity imposed within the former landfill area; and only excavation, and not the placement of the berm, would be precluded by the covenant even if such activity were proposed. Consequently, the Board of Commissioners finds that the covenant is inapplicable.

Finally, private deed restrictions are not enforceable by local governments. OAR 660-023-0180 provides the exclusive review criteria for consideration of an aggregate PAPA. Notably, this rule does not require consideration of private deed restrictions. As such, the local government is not authorized to consider any such deed restrictions. Furthermore, applicable Oregon case law clearly provides that only intended beneficiaries of a deed restriction are entitled to enforce such restrictions. See *Providence Memorial Ass'n v. Providence Missionary Baptist Church*, 241 Or. 194, 199-201 (Or. 1965). In *Providence*, the Supreme Court of Oregon held that a prior first grantee was not entitled to enforce a restrictive covenant where it was not an intended third-party beneficiary. *Id.* 200-201. Thus, an intended beneficiary of a restriction is the proper party to seek its enforcement. Here the intended beneficiary is not the local government. As such, the local government is not required to consider private deed restrictions in their review of the proposed PAPA.

**OAR 660-023-0180(5)(d)** *The local government shall determine any significant conflicts identified under the requirements of subsection (c) of this section that cannot be minimized.*



*Based on these conflicts only, local government shall determine the ESEE consequences of either allowing, limiting, or not allowing mining at the site. Local governments shall reach this decision by weighing these ESEE consequences, with consideration of the following:*

**OAR 660-023-0180(5)(d)(A)** *The degree of adverse effect on existing land uses within the impact area;*

**OAR 660-023-0180(5)(d)(B)** *Reasonable and practicable measures that could be taken to reduce the identified adverse effects; and*

**OAR 660-023-0180(5)(d)(C)** *The probable duration of the mining operation and the proposed post-mining use of the site.*

The Board of Commissioners finds that it has identified reasonable and practicable measures to minimize all identified conflicts, as set forth in the conditions of approval. An economic, social, environmental, and energy (“ESEE”) analysis is required only in the event that one or more identified applicable conflicts under Division 23 are not successfully minimized. In this instance, and based upon substantial evidence in the record, the Board of Commissioners has found that the applicant has successfully minimized conflicts and that OAR 660-023-0180(5)(d) is not applicable. Therefore, the Board of Commissioners finds that mining must be allowed at the site, and no ESEE analysis is necessary.

**OAR 660-023-0180(5)(e)** *Where mining is allowed, the plan and implementing ordinances shall be amended to allow such mining. Any required measures to minimize conflicts, including special conditions and procedures regulating mining, shall be clear and objective. Additional land use review (e.g., site plan review), if required by the local government, shall not exceed the minimum review necessary to assure compliance with these requirements and shall not provide opportunities to deny mining for reasons unrelated to these requirements, or to attach additional approval requirements, except with regard to mining or processing activities:*

**OAR 660-023-0180(5)(e)(A)** *For which the PAPA application does not provide information sufficient to determine clear and objective measures to resolve identified conflicts;*

**OAR 660-023-0180(5)(e)(B)** *Not requested in the PAPA application; or*

**OAR 660-023-0180(5)(e)(C)** *For which a significant change to the type, location, or duration of the activity shown on the PAPA application is proposed by the operator.*

The Board of Commissioners recommends amending the RCP and implementing zoning as requested by the applicant to allow the proposed mining and related activities, subject to compliance with the attached conditions of approval, which are clear and objective in nature. Additional land use review was completed under the Site Review application (Planning File No. 509-PA15-05804) processed concurrently with this Plan Amendment, findings below.

**OAR 660-023-0180(5)(f)** *Where mining is allowed, the local government shall determine the post-mining use and provide for this use in the comprehensive plan and land use regulations.*

*For significant aggregate sites on Class I, II and Unique farmland, local governments shall adopt plan and land use regulations to limit post-mining use to farm uses under ORS 215.203, uses listed under ORS 215.213(1) or 215.283(1), and fish and wildlife habitat uses, including wetland mitigation banking. Local governments shall coordinate with DOGAMI regarding the regulation and reclamation of mineral and aggregate sites, except where exempt under ORS 517.780.*

Based upon testimony submitted by Kuper Consulting in the PAPA application, page 46, the record includes a proposed mine plan and reclamation plan submitted to DOGAMI by the applicant. The aggregate site is not located on Class I, II or Unique farmland. The applicant also notes that the post-mining use of the area, included as Appendix L of the PAPA application, which confirms such proposed post-mining activity, shall consist of blasted scree slopes and ledges. These uses are already provided for, as permitted uses within the current F-1 and F-2 designations for the property, as identified in the application.

***OAR 660-023-0180(5)(g)*** *Local governments shall allow a currently approved aggregate processing operation at an existing site to process material from a new or expansion site without requiring a reauthorization of the existing processing operation unless limits on such processing were established at the time it was approved by the local government.*

This criterion is inapplicable because the quarry is not an expansion of a currently approved aggregate processing operation.

***OAR 660-023-0180(7)*** *Except for aggregate resource sites determined to be significant under Section (4) of this rule, local governments shall follow the standard ESEE process in OAR 660-023-0040 and 660-023-0050 to determine whether to allow, limit, or prevent new conflicting uses within the impact area a of significant mineral and aggregate site. (This requirement does not apply if, under section (5) of this rule, the local government decides that mining will not be authorized at the site).*

The Board of Commissioners recommends amending the RCP and implementing zoning as requested by the applicant to allow the proposed mining and related activities, subject to the attached conditions of approval. Although the Board finds it unnecessary to impose restrictions or limitations to new uses within the impact area the following findings are made regarding the above criterion to support the Board's conclusion.

Pursuant to this criterion above, the local government shall determine the ESEE consequences of either allowing, limiting, or preventing new conflicting uses within the impact area a of a significant mineral and aggregate site. Local governments shall reach this decision by following the standard ESEE process, as follows:

- (A) Identify conflicting uses;
- (B) Determine the impact area;
- (C) Analyze the ESEE consequences; and
- (D) Develop a program to achieve Goal 5.

As discussed below, future new conflicting uses are those that are permitted outright or conditionally within the zone applied to the applicant's proposed aggregate mine and in its Impact Area. The site is proposed to be rezoned Quarry and Mine Operations (QM) zone. The property within the Impact Area within the County's jurisdiction is zoned F1, F2, RR2, RR10, and CR.

*(A) Identify Conflicting Uses:*

The uses permitted outright, with a land use review, and conditionally in the QM zone include the following:

- (a) Extracting and storing of minerals, including equipment and materials necessary to carry out these functions.
- (b) Plants for the processing of minerals from quarry and mine extraction operations.
- (c) Sale of products generated from the quarrying and mining operation.
- (d) Activities permitted or required as part of the reclamation process provided for in the Reclamation Plan.
- (e) Structures and buildings used in conjunction with the extracting and storing of minerals or related equipment.
- (f) Forest uses.
- (g) Farm uses as defined in ORS 215.203(2).
- (h) Water impoundments with less than 100 acre feet storage capacity and in conjunction with beneficial uses of water customarily associated with fire prevention, forest uses or farm uses.
- (i) Fish and wildlife habitat management and any necessary and accessory uses.
- (j) Maintenance and repair of a lawfully existing residence.
- (k) Lawfully-established uses necessary and accessory to those listed above.
- (l) Electrical facilities providing direct service to a use authorized in this zone.
- (m) On premise signs used in connection with quarry and mine operations. Signs so permitted shall be limited to two per operation, shall not exceed 200 square feet total surface area per sign, shall not contain moving or flashing lights or be capable of movement.
- (n) Caretaker's residence.
- (o) Transportation facilities.

The uses permitted outright, with a land use review, and conditionally in the F1, F2, RR2, RR10, I2 and CR zones are found in Lane Code Sections 16.210, 16.211, 16.231, and 16.223 respectively and are incorporated here by reference.

*(B) Determine the Impact Area:*

The Board of Commissioners has already determined that the Impact Area for the significant mineral and aggregate resource site is limited to 1,500 feet from the boundaries of the mining and processing area. As support for this conclusion, the Board of Commissioners refers to the response to OAR 660-023-0180(5)(a), above. The Board of Commissioners finds that it is required to conduct an analysis of the ESEE consequence of the future conflicting uses listed above that are limited to the Impact Area described above.



*(C) Analyze the ESEE consequences:*

Based on the above-listed and referenced future conflicting uses only, the Board of Commissioners finds that the ESEE consequences of allowing, limiting, or preventing the future conflicting uses are as follows.

**Economic:**

*Allowing Conflicting Uses:* The Board of Commissioners finds that the economic consequences of allowing the full range of future conflicting uses are myriad and positive. For example, forestry and farming have, and will continue to, contribute significantly to the economy of the region. The Board of Commissioners finds that there are no negative economic consequences from allowing the full range of future conflicting uses.

*Preventing Conflicting Uses:*

The Board of Commissioners finds that if the County does not allow future conflicting uses, the County will not reap any of the economic benefits associated with such uses as described above. The Board of Commissioners finds that there are no identifiable positive economic consequences to preventing all future conflicting uses.

*Limiting Conflicting Uses:* The Board of Commissioners finds that there are no identifiable positive economic consequences of limiting future conflicting uses. The Board of Commissioners further finds that the negative economic consequences of limiting future conflicting uses are the loss of at least a portion of the positive economic consequences of allowing such uses.

**Social:**

*Allowing Conflicting Uses:* The Board of Commissioners finds that the positive social consequence of allowing future conflicting uses include: (1) the positive social esteem for the workers employed at the conflicting uses; (2) the positive social esteem for owners of the properties establishing such the conflicting uses; (3) the social benefits associated with contributing to the overall good, such as with conservation of natural resources; and (4) the social benefits of using less fuel and traveling less by utilizing local facilities rather than traveling to other counties for such facilities.

The Board of Commissioners finds that there are no negative social consequences to allowing the full range of future conflicting uses.

*Preventing Conflicting Uses:*

The Board of Commissioners finds that if the County does not allow future conflicting uses, the County will not reap any of the social benefits associated with such uses as described above.

*Limiting Conflicting Uses:* The Board of Commissioners finds that limiting future conflicting uses will limit the positive social consequences described above. The Board of Commissioners finds that the degree to which these consequences are limited will be directly tied to the degree that the conflicting uses, themselves, are limited.

**Environmental:**

*Allowing Conflicting Uses:* The Board of Commissioners finds that there are positive environmental consequence of allowing some future conflicting uses. Allowing some of these uses would result in conservation and management of fish and wildlife resources, soil, air, and water quality and watersheds, fish and wildlife enhancement, and wetlands.

The Board of Commissioners also finds that there are negative environmental consequences of allowing some future conflicting uses, such as an increased carbon footprint, utilization of natural resources, and air, noise, and light pollution. Therefore, the Board of Commissioners finds that the environmental consequences of allowing conflicting uses are neutral.

*Preventing Conflicting Uses:* For the reasons stated above, the Board of Commissioners finds that the environmental consequences of not allowing conflicting uses are neutral. The Board of Commissioners reaches this conclusion because, although not allowing conflicting uses will prevent all new development, it will also preclude all of the positive consequences of allowing certain conflicting uses, as noted above.

*Limiting Conflicting Uses:* The Board of Commissioners finds that the environmental consequences of limiting future conflicting uses are also neutral. While limiting conflicting uses may protect against some of the environmental consequences of development, it will also limit the positive consequences flowing from future conflicting uses.

**Energy:**

*Allowing Conflicting Uses:* The Board of Commissioners finds that the energy consequences of allowing some future conflicting uses are positive. For example, uses such as road and highway construction or reconstruction will facilitate completion of many needed transportation improvements, which will, in turn, provide greater capacity and smoother surfaces. As a result, vehicles on roads throughout the region will be able to consume less fuel because they will spend less timing idling in traffic and/or confronting sub-standard road conditions.

The Board of Commissioners also finds that the energy consequences of allowing some conflicting uses are negative, in that some conflicting uses will result in increased energy impacts, such as farm uses and electrical facilities.

Therefore, the Board of Commissioners finds that the energy consequences of allowing conflicting uses are neutral.

*Preventing Conflicting Uses:*

The Board of Commissioners finds that the positive energy consequences of preventing some future conflicting uses are that there will be no development or distribution of goods and, thus, no related consumption of fuel. However, the Board of Commissioners also finds that the negative energy consequences of preventing future conflicting uses are that the region would not reap any of the positive energy consequences associated with the conflicting uses. Therefore, the Board of Commissioners finds that the energy consequences of preventing future conflicting uses is neutral.

*Limiting Conflicting Uses:* The Board of Commissioners finds that limiting future conflicting uses will limit the positive and negative energy consequences described above. The Board of Commissioners finds that the degree to which these consequences are limited will be directly tied to the degree that the conflicting uses, themselves, are limited.

*(D) Develop a Program to Achieve Goal 5:*

Having identified these ESEE consequences, the Board of Commissioners must weigh them and develop a program to achieve Goal 5.

Based on the ESEE analysis provided above, the Board of Commissioners determines that future conflicting uses should be allowed fully, notwithstanding the possible impacts on the resource site. The Board of Commissioners finds that none of the possible future conflicting uses will have a substantially negative impact on the aggregate mining site.

As explained in the above findings, the Board of Commissioners finds that the post-mining uses of the Property are those allowed as of right and conditionally under a current map designation or such other uses as may be allowed under future alternative designation, or allowed by law. Thus, the Board of Commissioners finds that the mining operation is of limited duration, and the proposed post-mining use of the site will be consistent with the law and surrounding uses.

Based on the foregoing analysis, the Board of Commissioners finds that, on balance, the positive economic, social, environmental, and energy consequences associated with allowing future conflicting uses outweigh any negative consequences both in number and degree. For these reasons, the Board of Commissioners finds that the ESEE analysis supports allowing future conflicting uses on the property and within the impact area.

As such, the Board of Commissioners does not propose to allow limit or prevent new uses with the impact area of the site. Furthermore, this section does not apply because under OAR 660-023-0180(5) the Board concluded that mining shall be authorized at the site with findings above.

***OAR 660-023-0180(8)*** *In order to determine whether information in a PAPA submittal concerning an aggregate site is adequate, local government shall follow the requirements of this section rather than OAR 660-023-0030(3). An application for approval of an aggregate site following sections (4) and (6) of this rule shall be adequate if it provides sufficient information to determine whether the requirements in those sections are satisfied.*

As explained above, the Board of Commissioners finds that the applicant has provided sufficient information to address the relevant criteria of section (3) and (5) of the Goal 5 rule relating to resource significance and conflict minimization, respectively, above. Further, the Board of Commissioners finds that the criteria of sections (4) and (6) are not relevant to the application.

***OAR 660-023-0180(9)*** *Local governments shall amend the comprehensive plan and land use regulations to include procedures and requirements consistent with this rule for the consideration of PAPAs concerning aggregate resources. Until such local regulations are*

*adopted, the procedures and requirements of this rule shall be directly applied to local government consideration of a PAPA concerning mining authorization, unless the local plan contains specific criteria regarding the consideration of a PAPA proposing to add a site to the list of significant aggregate sites, provided:*

*(a) Such regulations were acknowledged subsequent to 1989; and*

*(b) Such regulations shall be amended to conform to the requirements of this rule at the next scheduled periodic review after September 1, 1996, except as provided under OAR 660-023-0250(7).*

Lane County has not amended the Lane County Rural Comprehensive Plan or land use regulations for consistency with the Goal 5 Rule provisions adopted in 1996. The Oregon Land Use Board of Appeals (LUBA) has determined that the Goal 5 rule for mineral and aggregate establishes a comprehensive regulatory scheme that is intended to supersede local review standards for aggregate. *Eugene Sand & Gravel, Inc. v. Lane County*. LUBA No. 2002-068. The Board of Commissioners finds that the criteria which govern the review of this application to add a site to the significant aggregate sites and authorize mining and processing are found in the Oregon Administrative Rules and the Statewide Planning Goals.

Additional land use review was completed under the Site Review application (Planning File No. 509-PA15-05804) processed concurrently with this Plan Amendment, findings below. The Board finds the Site Review has not exceeded the minimum review necessary to assure compliance with the OAR requirements. Because the County complied with applicable notice and hearing procedures, the Board of Commissioners finds that the amendments are consistent with the method of adoption sections for Lane Code Plan Amendment standards.

#### **4. STATEWIDE PLANNING GOALS**

As directed by ORS 197.175(2)(a), comprehensive plan amendments must comply with the Statewide Planning Goals.

##### **Goal 1: Citizen Involvement**

##### **To provide for widespread citizen involvement.**

This goal requires that citizens and affected public agencies be provided an opportunity to comment on the proposed plan amendment. As part of the application review process, public notification in the form of a mailed notice was sent by Lane County to affected public agencies, including local service providers, Oregon Department of Transportation (ODOT), and the Department of Land Conservation and Development (DLCD). All owners of record within 750 feet of the subject property were also notified. Public notice of the Planning Commission and Board of Commissioners hearings were published in the *Eugene Register-Guard*, a general circulation newspaper. The proper notices were sent separately and prior to the Lane County Planning Commission and Lane County Board of Commissioner Hearings. The Lane County Planning Commission conducted the first of multiple public hearings on the project on April 19, 2016, and May 10, 2016 and deliberated on the matter on July 26, 2016. The Board of Commissioners received a recommendation of approval from the Planning Commission and held its first of multiple hearings on the project on October 12, 2016, and December 13, 2016. During



the Planning Commission and Board of Commission Hearings the record was held open in order for the public to submit additional evidence then subsequently rebut that evidence along with final arguments for the applicant prior to the record closing.

Testimony provided by Mr. Kevin Matthews alleges that the consolidated processing of the project application violates Statewide Planning Goal 1. The Board of Commissioners finds that ORS 215.416(2) specifically requires counties to provide “a consolidated procedure by which an applicant may apply at one time for all permits or zone changes needed for a development project,” and applicants have broad discretion about consolidating land use actions into one application. *See Cornell park Associates v. Washington County*, 16 Or LUBA 897, 900-901 (1988), *N.E. Medford Neighborhood Coalition v. City of Medford*, 214 Or App 46, 53-54 (2007). In conformance with state law, the state-acknowledged Lane Code specifically provides for consolidated or “combinable” applicants in Chapter 14.050. The Board of Commissioners finds that the applicant’s combined land use application does not violate Statewide Planning Goal 1.

Because the County complied with applicable notice and hearing procedures, the Board of Commissioners finds that the amendments are consistent with Goal 1. *See Wade v. Lane County*, 20 Or LUBA 369, 376 (1990) (Goal 1 is satisfied as long as the local government follows its acknowledged citizen involvement program).

**Goal 2: Land Use Planning**

**To establish a land use planning process and policy framework as a basis for all decision and actions related to use of land and to assure an adequate factual base for such decisions and actions.**

Goal 2 requires establishing a land use planning process and policy framework as a basis for land use decisions and requires an adequate factual base for all land use decisions. In the present case, the provisions of OAR chapter 660 division 023 establish the land use planning process and policy framework for considering the applications. Further, the applicant’s materials, which include detailed expert reports across a number of disciplines, demonstrate that the applications satisfy all applicable substantive standards of OAR chapter 660, division 023. Therefore, the Board of Commissioners finds that there is an adequate factual base for the County’s decision.

Additionally, Goal 2 requires that the County coordinate its review and decision on the applications with appropriate government agencies. In its review of the applications, the County provided notice and an opportunity to comment to affected government agencies, including the City of Oakridge, DLCD, DOGAMI, and ODOT.

Project opponents contend that an exception to Goal 2 is required because the property is currently inventories ad forest land and carries a comprehensive plan designation as forest land. The Board of Commissioners denies this contention for the following reasons.

Pursuant to OAR 660-004, a Goal 2 exception is not required unless a proposed use is not an allowed use or activity on lands or at a location where under applicable Goal requirements. Goal 4, Forest Lands, expressly establishes mining and processing of aggregate and mineral resources" as an allowed use under Goal 4. OAR 660-006-00259(4)(g). Thus, mining is an allowable use in Forest Lands, which means no exception is required under these circumstances.

The Goal 2 exception process further clarifies that an exception is not required for any of the forest or nonforest uses allowed in a forest zone under OAR 660-006, Forest Lands. OAR 660-004-0010(1)(b). Further, the exceptions process is generally not applicable where statewide goals include their own procedures for resolving conflicts between competing uses. OAR 660--4-0010(2). Here, OAR 660-023-0180 provides a process for conflict resolution between any such competing uses, and OAR 660-0234I80(5)(e) expressly requires that where mining is allowed, the plan and implementing ordinances *shall* be amended to allow such mining." (Emphasis added.) Notably absent is any requirement for a Goal 2 exception to implement the express requirements of Goal 5 to protect and allow the use of a significant aggregate resource. Taken together, these rules clearly establish that no Goal exception is required for the proposed uses, and the associated plan and zone map designations under review, in Forest Lands.

For the above reasons, the Board of Commissioners finds that the applications are consistent with Goal 2.

**Goal 3: Agricultural Lands**  
**To preserve and maintain agricultural lands.**

This goal recognizes the importance of maintaining agricultural lands as those are defined under the goal. In western Oregon, agricultural land consists of predominantly Class I through IV soils identified by the Soil Conservation Service and other lands which are suitable for farm use taking into consideration soil fertility, suitability for grazing, climatic conditions, existing and future availability of water for farm and irrigation purposes, existing land use patterns, technological and energy input required, for accepted farm practices. Agricultural lands shall be preserved and maintained for farm use, consistent with existing and future needs for agricultural products, forest and open space and with the state's agricultural land use policy expressed in ORS 215.243 and 215.700.

The purpose of Goal 3 is to preserve and maintain agricultural lands for farm use. Goal 3 is not applicable to this application as its acknowledged comprehensive plan designation is not mapped for exclusive farm use.

The analysis provided to address OAR 660-023-0180 above demonstrates that the proposed mining area does not occur on any Class I and II soils and does not impact farm or forest practices on the surrounding lands.

**Goal 4: Forest Lands**  
**To conserve forest lands by maintaining the forest land base and to protect the state's forest economy by making possible economically efficient forest practices that assure the continuous growing and harvesting of forest tree species as the leading use on forest land consistent with sound management of soil, air, water, and fish and wildlife resources and to provide for recreational opportunities and agriculture.**

The site is primarily located on designated forest resource (F-1, F-2) land. A portion of the land has been harvested for timber in the past, and a portion of the property has been previously mined (Dunning Quarry). Mining and processing of aggregate resources is permitted on forest lands under OAR 660-006-0025(4)(g). Reclamation of the site will result in scree slopes, and

benches with forest surrounding the site. The Board of Commissioners finds that the amendments are consistent with Goal 4.

**Goal 5: Natural Resources, Scenic and Historic Areas, and Open Spaces**

**To protect natural resources and conserve scenic and historic areas open spaces.**

The Goal 5 Rule calls for the protection of natural resources and the conservation of scenic and historic open spaces. The Board of Commissioners finds, based on evidence presented by the applicant in Appendix E to the application, that three inventoried Goal 5 resources occur within the 1,500' Impact Area and no "significant" "1C" classified resources exist on the property. The three resources are Riparian Corridor, Wetlands, and Wildlife Habitat all specifically related to Salmon Creek. The County adopted its Goal 5 inventories and resource designation for the rural areas in 1984 and the County's consideration of conflicts with the project is limited to resources listed as significant in the adopted inventory. Based on the evidence presented by the applicant and the mitigation measures adopted as conditions of approval, the Board of Commissioners finds that there are not conflicts with inventoried Goal 5 resources.

As discussed above under the section Riparian Corridors, including Water and Riparian Areas and Fish Habitat, the Board of Commissioners finds that the riparian, wetland and wildlife habitat resources identified in the Impact Area will not be impacted by the mining project. These resources lie outside of the mining area and do not overlap with the area designated as a significant aggregate resource. No riparian, historic, or cultural resources have been inventoried on the subject property and the site is not designated as a scenic resource. No conflicts with inventoried Goal 5 resources have been identified. The Board of Commissioners finds that the amendments are consistent with Goal 5.

**Goal 6: Air, Water and Land Resources Quality**

**To maintain and improve the quality of the air, water and land resources of the state.**

Processing of aggregate (e.g., crushing, screening, washing of the products) is requested as part of these applications. As such, discharges from processing will be treated and remain on site. Consistent with best management practices (BMP's) set out by the Lane Regional Air Protection Agency/Oregon Department of Environmental Quality visible emission and nuisance requirements, the applicant will minimize dust by graveling internal roads, using water to control dust, paving the access road, and promptly removing dirt and other material that might become airborne from paved portions. Storm water discharges will be directed on-site and will be handled through an NPDES 1200A permit, if necessary. Extraction activities at the site will unavoidably result in disruption of surface land resources. This is necessary to meet the provisions of Goal 5 to protect and allow the use of mineral and aggregate resources. Pursuant to a DOGAMI permit and DOGAMI standards, reclamation will be accomplished to return disrupted land to scree slopes and ledges, ultimately improving the quality of land resources in the State. For the reasons set forth in the Shannon & Wilson report as to water quality and quantity (Appendix B to the application), the Terra Science Inc. report as to wetlands (Appendix D to the application) and the Westlake report as to water quality (Appendix I to the application), and the related rebuttal testimony prepared by these consultants and entered into the record, the Board of Commissioners find that the applications are consistent with Goal 6.

**Goal 7: Areas Subject to Natural Disasters and Hazards**

**To protect life and property from Natural Disasters and Hazards.**

Under this goal, natural hazards are identified as floods (coastal and riverine), landslides, earthquakes and related hazards, tsunamis, coastal erosion, and wildfires. This area is not subject to such hazards and the risk of such hazards is not increased by the activity allowed by the plan amendment. The site is not subject to stream flooding, erosion or other particular natural hazards. The Board of Commissioners finds that the amendments are consistent with Goal 7. In support for this conclusion and in denial of contentions made otherwise by project opponents, the Board of Commissioners relies on the evidence presented by the Applicant discussed above under the Seismic Issues and Earth Movements section above.

**Goal 8: Recreational Needs**

**To satisfy the recreational needs of the citizens of the state and visitors and, where appropriate, to provide for the siting of necessary recreational facilities including Destination Resorts.**

No recreational facilities have been identified on the site by the Rural Comprehensive Plan. Further, no recreational opportunities are known to be reduced or eliminated by the proposed mining operation. The Board of Commissioners finds that Goal 8 is not applicable to the applications.

**Goal 9: Economic Development**

**To provide adequate opportunities throughout the state for a variety of economic activities vital to the health, welfare, and prosperity of Oregon's citizens.**

The goal contemplates that comprehensive plans and policies will contribute to a stable and healthy economy in the state. The goal primarily addresses commercial and industrial development within urban areas. The Board of Commissioners finds, based on substantial evidence provided by Arnold Gallagher on November 1, 2016, and in PAPA application Appendix J, that to the extent the goal is applicable to this application, the operation will contribute to the economy of the local area by its employment of persons and by providing the natural resource for construction of roads, which in turn facilitate the economy of the state. The Board of Commissioners finds that the amendments are consistent with Goal 9.

**Goal 10: Housing**

**To provide for the housing needs of the citizens of the state.**

The applications demonstrate conformance with the housing goal of the state to the extent that an adequate supply of aggregate is necessary for the construction of housing in the form of foundations, driveways, and streets and roads to provide access to such housing. The Board of Commissioners finds that the amendments are consistent with Goal 10.

**Goal 11: Public Facilities and Services**

**To plan and develop a timely, orderly and efficient arrangement of public facilities and services to serve as a framework for urban and rural development.**

The applications do not directly relate to this goal. The public facilities and services in the form of roads exist to provide access to and from the site. The approval does not result in the



extension of public facilities and services beyond those existing. The Board of Commissioners finds that the amendments are consistent with Goal 11.

**Goal 12: Transportation**

**To provide and encourage a safe, convenient and economic transportation system.**

Goal 12 requires providing a safe, convenient, and economic transportation system. The project will further the objectives of this goal by providing a material (rock) that is essential to the construction and reconstruction of a variety of transportation projects, including roads, airports, railroads, sidewalks, and bikeways.

Goal 12 is implemented by the Oregon Transportation Planning Rule (“TPR”), which requires local governments to determine whether or not a proposed PAPA will “significantly affect” an existing or planned transportation facility. OAR 660-012-0060(1). A PAPA will “significantly affect” an existing or planned transportation facility if it will: (1) change the functional classification of a facility; (2) change standards implementing a functional classification system; (3) as measured at the end of the planning period, result in types or levels of travel or access that are inconsistent with the functional classification of an existing facility; or (4) degrade the performance of an existing facility either below applicable performance standards, or if already performing below these standards, degrade it further. *Id.*

In its report set forth in Appendix G to the applications, Sandow Engineering compared the reasonable worst-case trip generation scenario of the Site under the existing zoning designation (F-1, F-2), with the reasonable worst-case trip generation scenario under the proposed zoning designation (QM-RCP). This comparison indicated that the site would generate more trips under the proposed zoning designation; however, at the end of the planning period (2036, as a 20 year study is required), the site access point and off-site intersections were forecast to perform within acceptable performance standards during weekday PM peak hour. Based upon these results, Sandow concluded that the applications would not significantly affect any existing or planned transportation facilities for purposes of the TPR and, as such, applicable Goal 12 requirements are met. The Board of Commissioners finds that no one presented testimony that undermined this conclusion. Therefore, the Board of Commissioners finds that the applications are consistent with Goal 12 and the TPR.

**Goal 13: Energy Conservation**

**To conserve energy.**

This goal contemplates that land and uses developed on the land shall be managed and controlled so as to maximize the conservation of all forms of energy, based upon sound economic principles.

To the extent that this goal is relevant to these applications, these applications will make aggregate resource available to the northwestern and western areas of Lane County, thus reducing fossil fuel use for transporting aggregate without a local source. The Board of Commissioners finds that the amendments are consistent with Goal 13.

**Goal 14: Urbanization**

**To provide for an orderly and efficient transition from rural to urban use.**

The subject property is not within an urban growth boundary and is not urbanizable; therefore, this goal does not have relevance to these applications. The Board of Commissioners finds that the amendments are consistent with and do not affect the RCP compliance with Goal 14.

**Goal 15 Willamette Greenway**

**To protect, conserve, enhance and maintain the natural, scenic, historical, agricultural, economic and recreational qualities of lands along the Willamette River as the Willamette River Greenway.**

The subject property is not located near the Willamette River or within the Willamette Greenway boundaries. This goal does not have relevance to these applications. The Board of Commissioners finds that the amendments are consistent with and do not affect the RCP compliance with Goal 15.

**Goal 16: Estuarine Resources**

**Goal 17: Coastal Shorelands**

**Goal 18: Beaches and Dunes**

**Goal 19: Ocean Resources.**

These four goals are geographically oriented to coastal resources; therefore, the Board of Commissioners finds that these Goals are not applicable to this application for mining within the Willamette Valley.

**IV. SITE REVIEW PERMIT CRITERIA**

In conjunction with Lane Code 16.216(5), Lane Code 16.257(2)(f) requires a Site Review Permit for the quarry. The Board of Commissioners finds that the project meets the following Site Review Permit criteria.

**Lane Code 16.257(4)(a): That the location design size shape and arrangement of the structures are sufficient for the proposal intent and are compatible with the surrounding vicinity;**

The Board of Commissioners finds that a significant aggregate resources is present at the site in the location proposed for mining. The size and shape of the proposed quarry is designed to excavate the maximum quality of rock on the property. Based on the substantial evidence provided by the applicant and its consultants, as well as the conditions of approval adopted for the project, the Board of Commissioners finds that the site is designed to minimize impacts to adjacent uses through provision of noise and visual berms. The mining operations will avoid the former landfill site and will prevent flows of water to the landfill site. The Board of Commissioners finds that the proposed location, design, size, shape and arrangement of the project's structures meet the intent of the quarry operation and are compatible with the surrounding vicinity.

**Lane Code 16.257(4)(b): That there is no unnecessary destruction of existing healthy trees or other major vegetation, and that due consideration is given to the preservation of distinctive historical or natural features;**

*Trees and Major Vegetation*

Healthy trees and vegetation will be used as visual screens where possible. The only trees that will be removed from the site are those that overlay the quarry pit excavation area. These trees sit directly atop the aggregate resource and must be removed to allow mining in this location. The Board of Commissioners finds that there will not be unnecessary destruction of existing healthy trees or other major vegetation.

*Distinctive Historical or Natural Features*

The Board of Commissioners finds that as discussed above in regards to historical artifacts and Goal 5 resources such as riparian areas and wetlands, there are no inventoried Goal 5 resources on the site that will be impacted by the mining operation. Furthermore, to the extent that concerns were raised about historic artifacts or features in the Impact Area, these will be fully avoided and not impacted by the quarry. Salmon Creek and its associated riparian area, as well as wetland areas in the Impact Area will also be avoided. With the exception of actual excavation, which is the purpose of the quarry use, no “natural features” will be impacted by the project. The Board of Commissioners therefore finds that distinctive historical and natural features on the site and within the impact area have been considered and will be preserved from impacts by the project.

**Lane Code 16.257(4)(c): That the quantity, location, height and materials of walls, fences, hedges, screen planting and landscape areas are such that they serve their intended purpose and have no undue adverse effect on existing or contemplated abutting land use;**

The Board of Commissioners finds that based on the information submitted by the applicant, the quarry will provide berms to screen adjacent sensitive uses from noise, as identified by Daly, Standlee and Associates. As discussed in the noise findings above, these berms will be adequate to buffer noise impacts and will not have undue adverse effects on abutting land uses. The quarry will also provide a fence along the existing landfill to avoid intrusion that will not pose adverse impacts. Finally, the quarry will provide a 10-foot visual berm and fence along Dunning Hill Road for safety purposes. This fence and berm will not have adverse effects on neighboring uses. No walls or hedges are proposed for the site or Impact Area.

**Lane Code 16.257(4)(d): That suitable planting of ground cover or other surfacing is provided to prevent erosion and reduce dust;**

The Board of Commissioners finds that the quarry will be required, through conditions of approval listed below, to provide ground cover and many other mitigation measures to control dust. Appendix L to the PAPA application (DOGAMI Plan Set) also provides recommendations for vegetation planting for disturbed areas to minimize the potential for erosion and dust. As detailed above in the extensive discussions of dust impacts and stormwater erosion impacts, the

Board of Commissioners finds that the project will adequately mitigate dust and erosion with planting and other methods.

The conditions of approval adopted to ensure control of erosion and dust are as follows:

COA 8. The applicant/owner must comply with the storm water and erosion control plan prepared by Westlake Consultants, dated July, 2015 and May 18, 2016 or as modified by DOGAMI.

COA 28. The applicant/owner must maintain vegetative ground cover on stockpiles to reduce dust.

COA 29. The applicant/owner must sprinkle interior roads with a water truck to reduce dust.

COA 30. The applicant/owner must have water spray bars on the crusher/screens to reduce dust potential.

COA 31. The applicant/owner must use a crusher that meets LRAPA/DEQ permit standards.

COA 32. The applicant/owner must follow DOGAMI's Best Management Practices (BMP's) for aggregate mining to suppress dust emissions.

COA 33. The applicant/owner must pave the main facility access road from Dunning Road to the scale house.

COA 34. The applicant/owner must use off-road equipment that meets federal Tier 3 off-road engine standards, and/or equipment to be modified as such.

COA 35. The applicant/owner must limit onsite idle times for heavy-duty diesel truck engines to no more than three minutes per truck trip.

COA 36. The applicant/owner must assure that if contracted services are present, (i.e. asphalt paving plant or a batch concrete mixing facility) that materials removed from air pollution control equipment will be stored in a covered container to prevent the material from becoming airborne during storage and transfer.

COA49. The operator must install and maintain a wheel wash facility for use by aggregate trucks prior to exiting the project site onto Dunning Road.

**Lane Code 16.257(4)(e): That the location, design and size of the uses are such that the residents or establishments to be accommodated will be adequately served by community facilities and services or by other facilities suitable for the intended uses;**

The Board of Commissioners finds that to the extent that the quarry requires community facilities and services, the quarry's needs are met. Services for the quarry will be provided by the following public agencies:

- Fire: Hazeldell Rural Fire District.
- Police: County Sheriff, State Police



- Water: on-site well and/or purchased water
- School District: Oakridge School District 76
- Power: Lane Electric
- Access: Highway 58, north on Fish Hatchery Road, east on Dunning Road

**Lane Code 16.257(4)(f): That, based on anticipated traffic generation, adequate additional right-of-way, road improvements, and on-site vehicular, bicycle and pedestrian improvements connecting directly to off-site roads, paths and sidewalks must be provided by the development in order to promote traffic safety and reduce traffic congestion.**

The Board of Commissioners finds that the applicant's traffic analysis discussed at length above studied the anticipated traffic generation by the quarry. Based on the results of the traffic analysis, the Board of Commissioners adopted conditions of approval 10 through 20, which will require road improvements, an easement for off-site safe bicycle passage, and other measures to enhance safety and minimize congestion. No sidewalks or paths are proposed for the quarry use, as safety is of utmost importance and visitation by the public is not encouraged. The adopted conditions of approval that respond to this criterion are as follows:

COA 10. Access to the site is on Dunning Road. A new driveway must be constructed to 30 feet wide, consistent with Lane Code 15.707, capable of supporting the quarry operations vehicles, and consistent with the TIA.

COA 11. The applicant/owner must remove vegetation and the earth embankment at the site driveway intersection with Dunning Road as necessary to meet the minimum AASHTO westbound stopping site distance identified in the TIA as 165 feet.

COA 12. A standard MUTCD warning sign with lettering, "TRUCKS" with a supplemental W16-2P "XX FEET" sign must be installed within the right of way no closer than 200 feet east of the driveway on Dunning Road to alert westbound traffic to the entering trucks. Sign installation to be completed by Lane County with costs reimbursed by the applicant.

COA 13. A standard MUTCD warning sign with lettering, "TRUCKS" with a supplemental W16-2P "XX FEET" sign must be installed within the right of way on Dunning Road to alert eastbound traffic to truck traffic. Sign installation to be completed by Lane County with costs reimbursed by the applicant.

COA 14. A standard MUTCD, advanced intersection warning sign (W2-7L with a supplemental W16-2P "XX FEET" sign) must be installed 495 feet in advance of the centerline of Kokanee Way intersection for southbound traffic. Sign installation to be completed by Lane County with costs reimbursed by the applicant.

COA 15. The applicant/owner must complete a pavement analysis for a 20 year design life based upon the existing traffic volumes and the addition of site generated traffic on both of the applicable sections of Dunning Road and Fish Hatchery Road. Such analysis and design proposal

must comply with the applicable provisions of Lane Code 15.707(3). Any pavement structure mitigation measures determined necessary to meet a 20 year design life must be constructed by the applicant prior to the addition of 20 or more daily truck trips, within 5 years of commencing operations, or within 10 years of commencing operations provided the Pavement Condition Index (PCI) has not fallen below 70, whichever is less. Should the PCI fall below 70 after commencement of operation, the applicant/property owner must complete necessary pavement mitigation within one construction season. The PCI is measured routinely by Lane County. Any required paving work must be consistent with Lane County Road Overlay standards.

COA 16. The applicant/owner must comply with any future Rail Order issued by ODOT Rail.

COA 17. The applicant/owner must widen Dunning Road between Fish Hatchery Road and the Railroad right-of-way to a minimum paved width of 24 feet. Additional width must be constructed at guardrails to accommodate E distances and flares. Additional width is required to accommodate truck off-tracking along all curves on Dunning Road between the site driveway and Fish Hatchery Road. The applicant/owner must design and construct the facility to meet the requirements of LC 15.704.

COA 18. The applicant/owner must remove the existing driveway access located approximately 650 feet east of the railroad in conjunction with construction of the new driveway access.

COA 19. Lane County Facility Permits must be obtained for the following:

- Removal of the existing driveway access on Dunning Road.
- Construction of a new driveway access on Dunning Road.
- Required widening and paving improvement on Dunning Road.
- Paving improvements on Fish Hatchery Road.
- Removal of vegetation and earth embankment at the site driveway with Dunning Road to improve sight distance.
- Any other work required within the right-of-way of Dunning Road and/or Fish Hatchery Road.

COA 20. The applicant/owner must provide the following to the County Engineer at (541) 682-6928 for Lane County review of stormwater analysis: A final drainage report and drainage plans. The final report and plans must include information on the pre and post development drainage runoff flow rates, contours, drainage patterns, calculations, assumptions, details of detention pond, metering device, streams, culverts, roadside ditch, etc.

- If runoff is directed into any of the Dunning Road cross culverts, the flow capacity of these culverts must be evaluated in this report. If the culverts need to be upsized that will be the responsibility of the applicant.
- Water directed to the roadway must be directed to the cross culverts, not the roadside ditch.

**Consideration shall be given to the need and feasibility of widening and improving abutting streets to specifications of LC Chapter 15, "Roads," and also to the necessity for such additional improvements as lighting, sidewalks, bicycle lane and path connections, and turn and deceleration/acceleration lanes. Improvements shall be consistent with access management, spacing standards, and other requirements of LC Chapter 15;**

The Board of Commissioners finds that the necessary upgrades to abutting streets, including such upgrades as lighting, sidewalks, bicycle paths and pedestrian connections were reviewed for the quarry. As necessary to mitigate impacts of the quarry operations, upgrades to streets and public facilities are required under the conditions of approval listed above.

**Lane Code 16.257(4)(g): That there is a safe and efficient circulation pattern within the boundaries of the development. Consideration shall include the layout of the site with respect to the location and dimensions of vehicular, bicycle, and pedestrian entrances, exists, drives, walkways, buildings and other related facilities;**

The Board of Commissioners finds that the site plan provides safe and efficient circulation for the quarry activities. The Board of Commissioners finds that pedestrian paths and walkways are not appropriate for an active mining site due to safety considerations.

**Lane Code 16.257(4)(h): That there are adequate off street parking and loading/unloading facilities provided in a safe, efficient and pleasant manner. Consideration shall include the layout of the parking and loading/unloading facilities and their surfacing, lighting and landscaping;**

The Board of Commissioners finds that the quarry site is designed for mining and processing of aggregate resources in a safe and efficient manner and is designed to facilitate loading and unloading at the processing area. The site layout is designed to minimize off-site impacts. The quarry's off-street parking and loading/unloading facilities are adequate for the quarry use, including parking areas for employees and visitors. Security lighting will be provided as is commonplace for all industrial uses, including mining. Condition of approval 6 requires all lighting to be directed downward and shielded to eliminate light pollution to surrounding properties.

**Lane Code 16.257(4)(i): That all signs and illumination are in scale and harmonious with the site and area;**

The Board of Commissioners finds that the signs and illumination for the quarry are adequate to serve the quarry use and provide direction and safety. The signs are in scale and harmonious with the quarry use. Condition of approval 6 requires all lighting to be directed downward and shielded to eliminate light pollution to surrounding properties.

**Lane Code 16.257(4)(j): That adequate methods are provided to ensure continued maintenance and normal replacement of facilities, landscaping and other improvements, etc. that are required by Site Review Permit.**

As detailed throughout these Findings, conditions of approval adopted by the Board of Commissioners will ensure that mitigation measures required to decrease significant impacts are implemented by the applicant. The applicant will also be responsible for on-going maintenance of the on-site structures, as well as landscaping on the site.

**Lane Code 16.257(5): Conditions. Reasonable conditions may be established in connection with a Site Review Permit as deemed necessary to secure the purpose and requirements of this section. Guarantees, evidence, dedications or bonding may be required to ensure that such conditions will be met.**

The Board of Commissioners finds that the conditions of approval adopted herewith will ensure that the applicant implements necessary mitigation measures for the project. To ensure such conditions will be met, the County will use its enforcement power to enforce the conditions of approval.

## **V. ADDITIONAL ISSUES RAISED DURING LOCAL PROCEEDINGS**

### **Economic Viability of the Quarry**

Opponents question the economic viability of the quarry. As discussed above, the site is properly classified as a significant aggregate resource under Goal 5 because it meets or exceeds the ODOT specifications for base rock materials. The Goal 5 criteria do not take into consideration the dollar value or marketable aspects of the resource when evaluating a proposed significant Resource Site. *See* OAR 660-023-180. The economic viability of the quarry is not otherwise an approval criterion upon which the County can base its decision. Therefore, to the extent that opponents questioned the economic benefit and viability of the quarry, these comments are irrelevant. The applicant's rebuttal testimony provides a credible analysis of the economic benefits of a quarry at this location and includes a study from Eco NW, Inc. regarding the demand for aggregate and the interaction between aggregate and farmland. Additionally, opponents' concerns regarding reclamation of the mine if it is not economically viable are addressed through the DOGAMI requirement to post a reclamation bond prior to mining disturbance. Should a mine operator fail to reclaim the land, DOGAMI can complete the reclamation with the bond funds. **Amount of property subject to the Quarry and Mine Operations ("QM") zoning designation.**

Opponents contend that the application of the QM Zone designation (and the area included on the plan inventory) must be limited to the portion of the site which is demonstrated to contain significant aggregate resources and cannot include related and wholly necessary processing and operations areas. The Planning Commission Staff report accurately describes the area proposed in the PAPA application as follows:

"The overall site under the applicant's ownership consists of approximately 183 acres, although the proposed land use authorization applies to approximately 107 acres of the



applicant's ownership. Of the 107 acres, the application states 46 acres will be mined, and the remaining acreage will include the processing area and internal setbacks.

The proposed mining site comprises five tax lots (100, 104, 401, 502, and 1900). The majority of the extraction operations will take place on Tax Lots 100 & 1900. Processing operations as well as a small amount of filling operations will take place on tax lot 502. A portion of tax lot 1900 will be excluded from the mining area. The application states there are no mining operations for tax lots 104 and 401 as these areas will serve as buffers from the mining operations."

Stated another way, opponents suggest that the area covered by the pending PAPA application should be limited to the significant aggregate resource footprint only and, accordingly, not include the related and wholly necessary processing and operation areas. This position is wholly unsupported by the applicable regulatory provisions governing aggregate PAPA authorizations. Specifically, OAR 660-023-0180(1)(h), (i) and (j) define (1) "mining" as the area necessary for extraction and processing, (2) "mining area" as the area within which mining is permitted or proposed, and (3) "processing" is as defined in ORS 517.750(11), which includes, but is not limited to, crushing, washing, milling and screening as well as the batching and blending of mineral aggregate into asphalt and Portland cement concrete located within the operating permit area. Taken together, these definitions establish that the acknowledged map and text provisions required to protect and allow utilization of significant aggregate resources, which is achieved here by the application of the proposed QM designation and related plan text amendments, appropriately includes the land area necessary for both extraction and a wide range of processing requirements including setbacks and buffer areas.

Further, OAR 660-006-0025(4)(g), as noted above, expressly provides that both "mining and processing" are allowable uses. This regulation once again clearly authorizes not just mining but processing activities as well. As such, the appropriate application of the proposed QM designation under this review is the full area required for and proposed by the application for the entire mining and processing activities on 107 acres.<sup>4</sup>

On a related note, opponents suggest that the applicant intends to mine outside of the 46-acre site and suggests such mining could occur without further review. The Board of Commissioners denies this contention for the following reasons. First, the geographic scope of the applicant's authorized mining area is defined by the adopted Site Plan, which here requests only mining within the identified 46-acre portion of the site. *See* Revised Site Plan provided on May 31, 2016 by Kuper Consulting LLC. A description of the area to be mined is set in the application at page 12, which states:

"The proposed quarry site comprises five tax lots (100, 104, 401, 502, and 1900) but the majority of the extraction operations will take place on tax lots 100 and 1900. Processing

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<sup>4</sup> The Board of Commissioners finds that the applicant made a typographical error in the Economic and Fiscal Impact Analysis and incorrectly stated "146 acres would be mined." The correct statement, as reflected in the PAPA narrative as submitted, is "[c]urrent plans anticipate that approximately 46 acres would be mined, with mining operations spanning thirty to fifty years."

operations, as well as a small amount of excavation and filling operations will take place on tax lot 502. A small 7.4 acre area in the extreme northwest corner of tax lot 1900 will remaining as Forest zoning for future use by the City for a proposed water storage tank. There are no planned mining operations for tax lots 104 and 401; and these areas will instead serve as buffers to the mining operation.”

As the site plan illustrates, the applicant is only requesting approval to mine a delineated 46-acre area, and adoption of the proposed mine plan by the Board of Commissioners and Board of Commissioners, as submitted or modified, will incorporate this authorized mining footprint limitation. As described in the PAPA submittal, the remaining 61 acres will be used for various uses and activities necessary to the commercial mining operation. Furthermore, the applicant will also need a surface mining permit from DOGAMI, which will also define the area to be mined consistent with the County authorization. Any changes to the approved Site Plan would require subsequent review and approval by the County and DOGAMI. The Board of Commissioners denies opponents’ contentions on this issue.

## **VI. CONCLUSION**

For the reasons stated above, the Board of Commissioners finds that the applications satisfy all applicable approval criteria, subject to imposing the attached conditions of approval. Accordingly, the Board of Commissioners recommends that the Board of Commissioners take the following actions:

- Adopt the Old Hazeldell Quarry site as a significant Goal 5 mineral and aggregate site by amending the County’s Comprehensive Plan text and adding the site to the County Inventory of Significant Mineral and Aggregate Sites;
- Amend the RCP to redesignate the land from Forest (F) to Natural Resource: Mineral (NR:M) and to rezone that land from Non-Impacted Forest Land (F-1) and Impacted Forest Land (F-2) Zones to Quarry and Mine Operations (QM) zone.
- Issue a Site Review for the proposed use pursuant to Lane Code 16.257 consistent with OAR 660-023-0180(5)(e).

## **Conditions of Approval**

### **General Operations Related Conditions**

1. Mining (including excavation, processing and material transport) is restricted to the hours of 7:00AM to 6:00PM Monday through Friday, and 8AM to 5 PM on Saturday. No mining can occur on Sunday. Drilling and blasting is restricted to 8AM through 4 PM Monday through Friday. No mining (including but not limited to excavation, processing and material transport), can take place on any of the following legal holidays: New Year's Day, Memorial Day, the Fourth of July, Labor Day, Thanksgiving Day, and Christmas Day. Equipment and site maintenance can take place Monday through Saturday, 7:00AM to 9:00PM.
2. The applicant/owner must obtain and comply with DEQ approval of a Spill Prevention Controls and Countermeasures Plan for the Quarry.
3. Copies of all permits issued for the Site by the County or State of Oregon must be provided to the County including, any permits issued by DOGAMI, DSL, DEQ, LRAPA and OWRD.
4. Off-road equipment (including excavators, front-end loaders, loading trucks, and bulldozers) used for internal site operations must be fitted with broadband rather than traditional narrowband backup alarms.

### **General Mine Plan Related Conditions**

5. Extraction, processing and activities including stockpiling of aggregate material must occur only in the areas identified on the approved site plan for such activities.
6. All outdoor lighting must be directed downward or shielded to reduce artificial light from the quarry to surrounding properties.
7. Setbacks from the property lines and easements identified in the approved site plan must be maintained.
8. The applicant/owner must comply with the storm water and erosion control report prepared by Westlake Consultants, dated July, 2015 and the stormwater plan dated May 18, 2016 or as modified by DOGAMI.
9. In the event that buried cultural deposits are encountered during the project activities, the applicant/owner must comply with ORS 97.740-760 and ORS 358.905-961.

### **Transportation Related Conditions**

10. Access to the site is on Dunning Road. A new driveway must be constructed to 30 feet wide, consistent with Lane Code 15.707, capable of supporting the quarry operations vehicles, and consistent with the TIA.

11. The applicant/owner must remove vegetation and the earth embankment at the site driveway intersection with Dunning Road as necessary to meet the minimum AASHTO westbound stopping site distance identified in the TIA as 165 feet.

12. A standard MUTCD warning sign with lettering, "TRUCKS" with a supplemental W16-2P "XX FEET" sign must be installed within the right of way no closer than 200 feet east of the driveway on Dunning Road to alert westbound traffic to the entering trucks. Sign installation to be completed by Lane County with costs reimbursed by the applicant.

13. A standard MUTCD warning sign with lettering, "TRUCKS" with a supplemental W16-2P "XX FEET" sign must be installed within the right of way on Dunning Road to alert eastbound traffic to truck traffic. Sign installation to be completed by Lane County with costs reimbursed by the applicant.

14. A standard MUTCD, advanced intersection warning sign (W2-7L with a supplemental W16-2P "XX FEET" sign) must be installed 495 feet in advance of the centerline of Kokanee Way intersection for southbound traffic. Sign installation to be completed by Lane County with costs reimbursed by the applicant.

15. The applicant/owner must complete a pavement analysis for a 20 year design life based upon the existing traffic volumes and the addition of site generated traffic on both of the applicable sections of Dunning Road and Fish Hatchery Road. Such analysis and design proposal must comply with the applicable provisions of Lane Code 15.707(3). Any pavement structure mitigation measures determined necessary to meet a 20 year design life must be constructed by the applicant prior to the addition of 20 or more daily truck trips, within 5 years of commencing operations, or within 10 years of commencing operations provided the Pavement Condition Index (PCI) has not fallen below 70, whichever is less. Should the PCI fall below 70 after commencement of operation, the applicant/property owner must complete necessary pavement mitigation within one construction season. The PCI is measured routinely by Lane County. Any required paving work must be consistent with Lane County Road Overlay standards.

16. The applicant/owner must comply with any future Rail Order issued by ODOT Rail.

17. The applicant/owner must widen Dunning Road between Fish Hatchery Road and the Railroad right-of-way to a minimum paved width of 24 feet. Additional width must be constructed at guardrails to accommodate E distances and flares. Additional width is required to accommodate truck off-tracking along all curves on Dunning Road between the site driveway and Fish Hatchery Road. The applicant/owner must design and construct the facility to meet the requirements of LC 15.704.

18. The applicant/owner must remove the existing driveway access located approximately 650 feet east of the railroad in conjunction with construction of the new driveway access.

19. Lane County Facility Permits must be obtained for the following:

- Removal of the existing driveway access on Dunning Road.
- Construction of a new driveway access on Dunning Road.
- Required widening and paving improvement on Dunning Road.



- Paving improvements on Fish Hatchery Road.
- Removal of vegetation and earth embankment at the site driveway with Dunning Road to improve sight distance.
- Any other work required within the right-of-way of Dunning Road and/or Fish Hatchery Road.

Please contact 541-682-6902 or visit

<http://www.lanecounty.org/Departments/PW/Engr/RightofWay/Pages/rowpermits.aspx>

regarding facility permits.

20. The applicant/owner must provide the following to the County Engineer at (541) 682-6928 for Lane County review of stormwater analysis: A final drainage report and drainage plans. The final report and plans must include information on the pre and post development drainage runoff flow rates, contours, drainage patterns, calculations, assumptions, details of detention pond, metering device, streams, culverts, roadside ditch, etc.

- If runoff is directed into any of the Dunning Road cross culverts, the flow capacity of these culverts must be evaluated in this report. If the culverts need to be upsized that will be the responsibility of the applicant.
- Water directed to the roadway must be directed to the cross culverts, not the roadside ditch.

### **Acoustic Related Conditions**

21. The applicant/owner must utilize the noise mitigation provisions set forth in the written noise study report prepared by Daly-Standlee and Associates, Inc. (DSA) dated June 20, 2016 to ensure compliance with the DEQ noise regulations.

22. The applicant/owner must utilize berms, buffers or polyurethane screens in accordance with the DSA report in order to mitigate the noise impacts associated with the operation of crushing and screening equipment in the processing area.

23. The applicant/owner must use mufflers and radiator fan controls which reduce the noise level of the haul trucks to a level of 79 dBA at a reference distance of 500 feet and the excavators to a level of 76 dBA at a reference distance of 50 feet.

24. The applicant/owner must maintain a 20 foot high natural barrier on the east side of the quarry as excavation moves west to east. When the rock drill is operating on a top bench on the eastern side of the north-south ridgeline, an up-close barrier or curtain system attached to the rock drill feed-beam must be used in addition to the natural barrier.

25. The applicant/owner must comply with the Noise Compliance Monitoring Plan set forth at pages 8-9 of the correspondence submitted by Daly-Standlee and Associates dated June 20, 2016 which states:

- a. Within one week after the beginning of any operations on the quarry site, the applicant through registered mail, must notify property owners of all residences located within the Old Hazeldell Quarry Impact Area that the owner can have noise compliance measurements made at their residence if written permission for the measurements is provided to the applicant within 30 days of receipt of the notification.

- b. Upon receipt of written permission from the owner of any residence included in the Old Hazeldell Quarry Impact Area for noise compliance measurements, the applicant must have sound level measurements made at the residence. The noise compliance measurements must be made during a time when a rock drill is in operation at the quarry as well as the aggregate crushing and screening equipment using procedures considered acceptable under the DEQ noise regulation rule. The measurements must be completed within 3 months of the beginning of aggregate crushing and screening operations at the quarry.
- c. Within 30 days of the completion of the noise compliance measurement period, a report must be provided to the County showing the results of all initial noise compliance measurements made on behalf of the applicant.
- d. If the results of the initial noise compliance measurements show noise from the mining operations is exceeding the applicable DEQ noise regulation limits at any of the residences where monitoring occurred, changes must be made at the quarry within 30 days of the date when the report was provided to the County to reduce the amount of noise radiating to the residence(s) to a level of compliance with applicable DEQ regulations. Within 90 days of when the initial noise compliance report was submitted to the County, follow-up sound level measurements must be made at those residences where the initial measurement results showed non-compliance with the DEQ limits and a follow-up compliance report provided to the County.
- e. If the results of the 2<sup>nd</sup> compliance measurements show the noise at any residence in the Old Hazeldell Quarry Impact Area is still exceeding the applicable DEQ limit, the same conditions stated in Condition 25.d. must go into effect. These conditions must continue in effect until full compliance is demonstrated at all residences in the Old Hazeldell Quarry Impact Area.
- f. Once noise compliance measurements show the noise radiating from the Old Hazeldell Quarry is in compliance with the DEQ noise limits at all residences included in the measurement program, the applicant may cease noise measurements made until excavation operations move from Phase 1 excavation area to Phase 2 excavation area.
- g. When excavation operations move from Phase 1 excavation area to the Phase 2 excavation area (and again from Phase 2 area to the Phase 3 area), the applicant must, using registered mail, notify all residential property owners inside the Old Hazeldell Quarry Impact Area of the operational changes and let them know that they can have measurements made at their residence if written permission is provided to the applicant within 30 days of receipt of the notification.
- h. Noise compliance measurements and reporting must be made the beginning of Phase 2 and Phase 3 operations using the same procedures described in Conditions 25. b. c. and d.
- i. A blast-monitoring program to physically measure ground vibration and airblast energy must be used for all blasts occurring in the first year of operations at the quarry. Measurements of the ground movement in terms of peak-particle velocity must be made. Airblast measurements must be made in terms of the C-weighted, slow response sound pressure level. Measurements must be made at all residences located within the Old Hazeldell Quarry Impact Area where written permission has been given to have measurements made. Blast measurement reports to include the limits applicable to the blast energy must be provided to the County within 10 business days of the blast event.

### **Wetland / Resource Related Conditions**

26. Mining and processing must not occur within 50 feet of the unnamed creek on the east side of the property.
27. The applicant/owner must not place fill, or excavate within wetlands on the site until obtaining appropriate permits from the Oregon Department of State Lands (DSL) and the Corps of Engineers (Corps).

### **Air Quality Related Conditions**

28. The applicant/owner must maintain vegetative ground cover on stockpiles to reduce dust.
29. The applicant/owner must sprinkle interior roads with a water truck to reduce dust.
30. The applicant/owner must have water spray bars on the crusher/screens to reduce dust potential.
31. The applicant/owner must use a crusher that meets LRAPA/DEQ permit standards.
32. The applicant/owner must follow DOGAMI's Best Management Practices (BMP's) for aggregate mining to suppress dust emissions.
33. The applicant/owner must pave the main facility access road from Dunning Road to the scale house.
34. The applicant/owner must use off-road equipment that meets federal Tier 3 off-road engine standards, and/or equipment to be modified as such.
35. The applicant/owner must limit onsite idle times for heavy-duty diesel truck engines to no more than three minutes per truck trip.
36. The applicant/owner must assure that if contracted services are present, (i.e. asphalt paving plant or a batch concrete mixing facility) that materials removed from air pollution control equipment will be stored in a covered container to prevent the material from becoming airborne during storage and transfer.

### **Blasting**

37. The applicant/owner must maintain a record of each blast for at least two years. These records must be available to the County, the State Department of Geology and Mineral Industries and other governmental agencies with appropriate jurisdiction upon request. Such records must show the following for each blast:
  - (i) Name of quarry or mine.
  - (ii) Date, time and location of blast.
  - (iii) Description of type of explosive and accessories used.
  - (iv) Time interval of delay in milliseconds.

- (v) Number of different delays.
- (vi) Number of holes per delay.
- (vii) Nominal explosive weight per hole.
- (viii) Total explosive weight per delay.
- (ix) Total weight of explosives per blast.
- (x) Blast hole diameter, depth, spacing and stemming height"

### **Oregon Department of Geology and Mineral Industries (DOGAMI)**

The following conditions are typically required of mining sites by DOGAMI.

- 38. The applicant/owner must clearly mark the DOGAMI permit boundary and required setbacks in the field, visible to all equipment operators.
- 39. The applicant/owner must salvage, stockpile and retain all available soil and overburden material for final reclamation. Soil and overburden stockpiles and berms must be seeded in a cover crop to reduce erosion.
- 40. The applicant/owner must maintain a minimum 50-foot property line setback for excavation and processing. Sound and noise berms, stockpiling of aggregate materials, construction of internal access roads, and construction of DOGAMI-approved storm water control measures are allowed within the setback areas.
- 41. If mining operations disturb any area outside of the permit area or area designated for active mining in the reclamation plan, including but not limited to disturbances caused by landslide or erosion, the applicant must restore the disturbed area to the pre-disturbance condition. If areas outside of the permit boundary or outside of the area proposed for active mining in the reclamation plan are disturbed, DOGAMI may increase the amount of the required financial security to cover the cost of such restoration.
- 42. Slope inclinations must not exceed an average slope of 1:1 - (horizontal to vertical) within the excavation during mining, unless approved by DOGAMI.

### **Additional Conditions**

- 43. The applicant/operator of the quarry must provide information on blasting events to Aubrey Mountain Airstrip operator not less than 48 hours prior to such events.
- 44. The applicant/operator of the quarry must implement and comply with the Fugitive Dust and Daily Reporting Plan submitted by Artic Engineering, LTD under letters dated June 12, 2016 and November 13, 2016.
- 45. The eastern access point on Dunning Road (the "red gate") must not be utilized by commercial trucks or other vehicles for commercial aggregate hauling purposes.
- 46. Prior to any mining activity in Phase 2 of the mine plan, the applicant must establish a baseline for water quality in the intermittent springs located on the western slope of TV Butte



and must conduct water quality sampling at the springs at six month intervals during the life of the mining activity in Phase 2. A written summary of the monitoring results must be provided to the City of Oakridge, Lane County Planning and DOGAMI within thirty (30) days of sampling.

47. Upon the applicant receiving all required governmental approvals and permits to begin mining operations and within thirty (30) days of receiving written notice from either the City of Oakridge or Lane County or both, the applicant shall transfer an easement to the public body or public bodies that provided notice that will accommodate the construction and provide use by the public of an unpaved bicycle trail along the eastern edge of Tax Lot 1900 and Tax Lot 104. Access shall be granted to the public at the existing easterly access to Tax Lot 1900 at the “red gate”, the trail will follow the existing on-site old logging road, to the north and east, where trail can be constructed along the eastern edge of Tax Lot 1900 and Tax Lot 104. The trail, if installed, shall provide connections from Dunning Road to the northern edge of Tax Lot 104.

48. No excavation, stockpile, fill or other activity shall occur within the former landfill area or within the associated 25-foot buffer area, as identified on PAPA Figure 6, dated Oct. 27, 2016, “Old Hazeldell Quarry Processing Area” submitted by the applicant.

49. The operator must install and maintain a wheel wash facility for use by aggregate trucks prior to exiting the project site onto Dunning Road.

June 20, 2016



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(503) 646-4420  
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Lane County Planning Commission  
Land Management Division  
Customer Service Center  
3050 N. Delta Highway  
Eugene, OR 97408

Attn: Planning Commissioners

From: Daly-Standlee & Associates, Inc.



EXPIRES: 6/30/16

Kerrie G. Standlee, P.E.  
Principal

Re: Old Hazeldell Quarry Goal 5 Application  
Response to Written Comments about Noise Submitted 5/31/16  
Project #: 146123

## 1. Introduction

On May 31, 2016, as part of the Planning Commission hearing process, members of the public submitted written comments into the Old Hazeldell Quarry, LLC Goal 5 application record concerning the accuracy and validity of the Daly-Standlee & Associates, Inc. (DSA) noise study. DSA provides this document to respond to those comments.

In addition to responding to written comments submitted into the record by opponents of the proposed Old Hazeldell Quarry, DSA offers a noise monitoring plan the Planning Commission can recommend be adopted as a condition of approval to help ensure the noise radiating from the Old Hazeldell Quarry will be in compliance and remain in compliance with the DEQ noise regulations during the time operations occur at the quarry.



## **2. Comments Submitted by Mr. Zack Mittage, Attorney at Law**

Mr. Zack Mittage from Hutchinson Cox, Attorneys at Law, submitted information into the Planning Commission record on May 31, 2016 on behalf of Ms. Linda McMahon and the Save TV Butte group. With regard to potential noise discharge conflicts, Mr. Mittage says,

### **4.0 The Applicant Does Not Properly Evaluate and Fails to Account for Conflicts Due to Noise, Dust or other Discharges from the Site.**

Relative to noise Mr. Mittage says:

#### **a) The Applicant's Noise Study Does Not Properly Evaluate Noise Impacts.**

According to Mr. Mittage, the DSA noise study does not properly evaluate noise impacts because:

- 1) The ambient noise measurements were made by DSA on a single day during a single six-hour block of time when the NPCS-1 manual says ambient noise measurements should be made at various times of the day, on at least 3 different days and on weekdays and weekends.
- 2) The DSA noise study identified 22 noise receivers but sampled ambient noise levels at only 8 locations when the NPCS-1 manual says ambient noise measurements should be made at several appropriate locations within the sampling area under consideration.
- 3) The DSA ambient noise data was not measured within 25 feet of noise sensitive receivers as specified in the NPCS-1 manual.
- 4) DSA's noise predictions do not include noise generated by blasting and noise generated by the construction of berms when the NPCS-1 manual says the noise predicted with the noise source in operation should include noise generated by sources such as increased traffic, warning device noise and other sounds that may be exempted from the rule due to other considerations.

#### **c) The Applicant Does Not Account for Impacts from Ground Acceleration, Airblast, and Flyrock**

Mr. Mittage says the DSA noise study has not adequately quantified the potential impact of blasting noise on the community because the noise study basically assumes the blasting contractor will design the blast to meet the DEQ blasting noise regulation. He argues that based on information presented in an article concerning airblast noise at surface coal mines in West Virginia (an article written by Jim Ratcliff, Ed Sheehan and Keith Carte of the West Virginia Department of Environmental Protection, Office of Explosives and Blasting (OEB) entitled, "Predictability of Airblast at Surface Coal Mines in West Virginia" in 2011), blasting noise impacts cannot be totally mitigated and the County will be plagued with complaints about blasting noise and vibration



coming from the Old Hazeldell Quarry. He offers no additional analysis or technical support for his conclusions.

## **2.1. DSA Response to Mr. Mittage's Comments**

### **2.1.1. The Applicant's Noise Study Does Not Properly Evaluate Noise Impacts**

In making his argument that DSA's noise study does not properly evaluate Old Hazeldell Quarry noise impacts, Mr. Mittage mainly references materials presented in Section 4.5.6 of the DEQ Sound Measurement Procedures Manual, NPCPS-1. Mr. Mittage includes a copy of Section 4.5.6 in the appendix of his material but he does not include a complete copy of the manual within the appendix. When the manual is reviewed in its entirety, it will be understood that, as stated in the Forward and Chapter 1 of the manual (the Introduction section of the manual), the objective of the manual is to provide uniform guidance regarding enforcement of the noise regulations across the state (see the complete copy of NCPS-1 attached to this document) rather than a manual in which every word had to be followed when conducting a noise study. In other words, the manual was first written to help the noise regulation enforcement team uniformly gather data that could be used in enforcement proceedings.

In the Policy section of Chapter 1, it is stated that the NCPS-1 manual contains procedures that can be used by the DEQ Noise Pollution Control Section and other persons taking environmental noise measurements to ensure conformity of environmental noise measurements throughout the state. However, in the last sentence of the Policy section it says, "Guidance is provided in the 'Comments'" within the document. This statement is key to understanding why Mr. Mittage's argument about the improper evaluation of the Old Hazeldell Quarry noise impacts is not a valid argument at all.

If one reads the NPCPS-1 document as a whole, it can be seen that there are certain procedural items discussed in the document that are mandatory and there are other procedural items discussed in the document that are optional. The mandatory procedural items discussed in the document are generally identified through the use of the word "shall" and the optional procedural items discussed in the document are generally identified through the use of the word "should". If one looks at the wording of Section 4.5.6 of the document, it can be seen that the section in its entirety is a "Comment" or "Guidance" section of the manual and not a mandatory section that requires everyone to use exactly the same procedures in conducting ambient noise measurements.

Beginning in 1978, and when I first began working with the DEQ noise regulations and until the time the DEQ Noise Pollution Control Section was defunded (and beyond through phone calls and letters with past DEQ Noise Pollution Control Section personnel), I would routinely call upon Noise Pollution Control Section staff to inquire about procedures that could be used in conducting noise measurements in conformance with NPCPS-1. During those conversations, the DEQ



staff agreed that ambient noise measurements did not necessarily have to be made 25 feet from a residence to gather data that would be considered representative of the ambient noise at the residence. In a January 12, 2001 letter from Mr. John Hector, Manager of the Oregon DEQ Noise Pollution Control Section from 1973 to 1986 and author of much of the noise control regulation, I was told that DEQ staff would sometimes make measurements further than 25 feet from a residence when noise sources local to the residence (such as farm animals located near a residence or mechanical equipment associated with a residence) could potentially affect the ambient noise level results and consequently affect the appropriate criteria that would be set by the results (see copy of the Hector letter attached at the end of this letter). In other words, when selecting an ambient noise measurement location for residences of interest, one needs to think about the noise sources that can influence the ambient noise at a residence and as long as the location selected does not result in noise levels that are higher than would be found at a residence in question, the data measured at the location can be considered representative of the ambient noise at the residence. This was the approach used by DSA in selecting the ambient noise measurement locations for the Old Hazeldell Quarry noise study and based on the professional experience we have in conducting ambient noise measurements in various settings across the Northwest, the data collected at the various measurement locations would be sufficiently representative of the ambient noise levels found at the residences referenced in the report.

In addition to using our professional experience to determine locations for ambient noise measurements around the proposed Old Hazeldell Quarry site, DSA utilized that experience in deciding when the measurements would be made, how long they would be made and the number of measurements that would be necessary at each location to obtain representative data that could be used to establish the appropriate noise criteria at each residence of concern. The lowest hourly ambient noise levels are the most important noise levels to capture when conducting a noise study for a “previously unused industrial or commercial site” because, with the “ambient noise degradation rule”, the noise criteria at a residence is the lower of the ambient noise plus 10 dB or the maximum allowable levels specified in the DEQ regulation.

On the east side of TV Butte, it was known that the lowest hourly ambient noise levels in the area would most likely occur during the late morning to middle afternoon hours due to the atmospheric conditions that would be present during that time and due to the reduced level of activity associated with noise sources most likely influencing the ambient noise levels in the area. It was known that measuring noise levels east of the butte during early morning hours on weekdays and at any time on weekends would likely result of higher noise levels than those found in the middle of the day due to two factors: 1) sound tends to travel further during the early morning hours of a day than it does during the middle of the day due to the presence of lower temperatures and higher humidity during those hours and during those hours, sound from traffic on Highway 58 could potentially affect the ambient noise in the area which would likely result in higher hourly noise levels rather than lower hourly noise levels, and 2) local traffic activity (people leaving their homes to commute to work or go out on errands) tends to be higher during the early





morning hours. It was also expected that, due to the presence of the bike trails located to the east of the site; there could be more human activity along Dunning Road during weekends than during the week. Therefore, it was decided that noise measurements made on weekends would likely not result in hourly noise levels lower than those found during the middle of the day on a weekday.

On the north, west and south sides of the proposed mine site, it was observed that there were noise sources that would tend to be present more consistently throughout the day (such as the creek on the north side of the butte and Highway 58 traffic on the west and south sides of the butte) so it was expected that the lowest hourly ambient noise levels would be found during those hours when the atmospheric conditions would minimize the transmission of sound from the sources to the residences. Those hours, like in the case of the residences on the east side of the butte, would occur during the late morning to late afternoon of the day when the temperatures would be higher and the relative humidity would tend to be lower so that is when DSA conducted sound measurements at the measurement locations.

Relative to the comment saying the DSA noise study did not including blasting noise and truck traffic noise in the calculation of the hourly statistical noise levels radiating from the quarry, the contribution of truck noise and blasting noise is included in the overall statistical noise levels shown in the report. In reality, blasting noise cannot affect the hourly statistical noise levels radiating from the site because the noise is generated for only seconds of an hour so it is not present long enough to influence the hourly  $L_{50}$  noise level (the level exceeded 30 minutes of the hour),  $L_{10}$  noise level (the level exceeded 6 minutes of the hour) or even the hourly  $L_{01}$  noise level (the level exceeded 36 seconds of the hour) radiating from the site. That is one reason why the DEQ noise regulations include a limit specifically for blasting.

In conclusion, ambient noise levels used to assess noise radiating from the Old Hazeldell Quarry were measured in a way that would provide the lowest hourly statistical noise levels that could reasonably be expected at residences around the quarry site. The results of those measurements were then used to define the noise criteria that would be applicable at the 22 residences considered in the study. The procedures used by DSA to develop the noise criteria that would be used to assess the Old Hazeldell Quarry noise are the same procedures discussed with DEQ Noise Pollution Control Section staff and they are the same procedures used by DSA staff to quantify ambient noise levels at residences over the past 28 years during hundreds of noise studies conducted by the firm.

#### **2.1.2. The Applicant Does Not Account for Impacts from Ground Acceleration, Airblast, and Flyrock**

In Mr. Mittage's discussion about blasting noise, he refers to the information presented in the article concerning airblast noise at surface coal mines in West Virginia. While the article referenced by Mr. Mittage discusses how airblast energy is generated and how that energy can be a source of complaint from residences



around a coal mining operation in West Virginia, the finding that airblast noise in West Virginia coal mines is a source of complaint around coal mines does not necessarily mean that the County should expect the same level of complaint around the Old Hazeldell Quarry in Oakridge, Oregon. For one thing, the noise limits for coal mines in West Virginia are 7 dB higher than those allowed by the DEQ noise limits (105 dBC slow response according to West Virginia rule 199CSR1-3.6.c.3. versus 98 dBC slow response under the DEQ noise rules). This means the blasting noise level (the level of airblast noise) allowed under the DEQ noise rule is almost half what is allowed under the West Virginia noise rule.

The difference in the allowable noise level in Oregon versus West Virginia is significant and it can possibly explain why complaints about blasting noise in Oregon is much lower than in West Virginia. In 1993 when the TriMet Westside Light Rail line was under construction and blasting was being used to construct the west end of the light rail tunnel, DSA was asked to help Washington County develop blasting noise criteria that could be used to limit the impact on residences located within 700 feet of the tunnel during 24-hour blasting operations. After researching criteria in use around the country to addressing blasting, DSA recommended that Washington County require the blasting contractor to meet the DEQ regulations for blasting noise (the DEQ nighttime hour noise limit is 93 dBC slow response while the daytime hour noise limit is 98 dBC slow response).

Initially, the light rail contractor was blasting only during daytime hours and noise complaints were not being received by the county. However, on the first night that blasting began, Washington County received numerous complaints about the airblast generated by the blasting and citizens threatened lawsuits to shut down the operations if something was not done to reduce the blasting effects. DSA assisted in developing a noise control that could be used to reduce the blasting noise reaching the residences and after doors were constructed inside the tunnels and closed prior to blasting, the noise reaching residences was reduced down to DEQ limits and all complaints about airblast noise ceased. This result indicated to me that compliance with the DEQ regulations for blasting noise will sufficiently minimize blasting noise impacts, and, based upon my best professional judgment and experience, I believe that such compliance with these applicable regulations is both feasible and will be achieved at this location. And to further assure the Planning Commission that blasting will not result in impacts on the community, DSA has suggested a Condition of Approval related to blasting in section 5.0 of this document.

One final note concerning the West Virginia BOE article on blasting in West Virginia coal mines, the article concluded that more monitoring of blasting events at the coal mines could go a long way in reducing the number of complaints concerning airblast impacts associated with coal mine blasting. According to information in the article, coal mine blasts monitoring in West Virginia tends to occur maybe once a calendar quarter. In Oregon, most blasting contractors monitor ground vibration and overpressure at residences in the vicinity of quarries during every blast they conduct. It is expected that the same will be true for the blasting



that occurs at the Old Hazeldell Quarry. Therefore, it is expected that blasting noise will be controlled as required by the DEQ noise regulations.

### **3. Comments Submitted by Steve and Shirley Durand**

Steve and Shirley Durand submitted a letter dated May 24, 2016 to Ms. Deana Wright of the Lane County Land Management Division in opposition of the proposed Old Hazeldell Quarry. In the letter Mr. and Mrs. Durand stated that they were concerned with the impacts that blasting noise and vibrations might have on their chickens' egg production.

#### **3.1 DSA Response to Comments by Steve and Shirley Durand**

In 1971, the Environmental Protection Agency contracted with Memphis State University to conduct a review of research literature involving impacts of noise on wildlife and other animals.<sup>1</sup> Information provided in the document produced by Memphis State showed the production of farm animals like chickens and turkeys was not affected by noise until the noise was at a level that is well above the level that will radiate to the Durand residence from the proposed quarry. Given the fact that there is an active airport in closer proximity to the Durand residence than the quarry, it is expected that if the egg production of the chickens owned by Mr. & Mrs. Durand has not been affected by noise generated by aircraft departure and landings at the airport, it will likely not be affected by the noise radiating from the mine site.

### **4. Comments Submitted by Ms. Katherine Pokorny**

Ms. Katherine Pokorny submitted a letter dated May 27, 2016 to Ms. Deanna Wright of the Lane County Land Management Division in opposition to the proposed Old Hazeldell Quarry. In the letter, Ms. Pokorny says:

*"The noise report used computer models only; no one actually came up and performed metered readings. The proposed quarry with crushing site is actually located on the north side of a canyon. Sounds echo very well in this area, with very little or no reduction in volume."*

#### **4.1. DSA Response to Ms. Pokorny's Comments:**

As stated in the noise study report, the study conducted by DSA for the Old Hazeldell Quarry application was conducted using the noise prediction program SoundPlan to predict future noise levels at receivers located around the proposed quarry site. The noise modeling program used reference noise level data that was measured by DSA at other quarry sites over the years. The approach of using a noise model to predict future mining-related noise levels without the actual presence of a mining operation is standard practice when it comes to conducting a study of a condition that does not already exist; especially when the noise modeling program has the ability to predict the effect of the terrain in the area such as a canyon like that described in Ms. Pokorny's letter.

<sup>1</sup> Effects of Noise on Wildlife and Other Animals, Memphis State University, December 31, 1971.



## 5. Proposed Noise Compliance Monitoring Plan

Several members of the community and members of the Planning Commission have voiced concern with how the County can be assured that the noise radiating from the proposed Old Hazeldell Quarry will be in compliance with the DEQ noise regulation limits and remain in compliance with the limits over time. After reviewing several noise compliance monitoring plans included as Conditions of Approval with other mining operations in Oregon and Washington, DSA submits the following noise compliance monitoring plan which can be adopted as a Condition of Approval for the Old Hazeldell Quarry:

- 1) Within one week after the beginning of any operations on the quarry site, the applicant, through registered mail, shall notify property owners of all residences located within the Old Hazeldell Quarry Impact Area that the owner can have noise compliance measurements made at their residence if written permission for the measurements is provided to the applicant within 30 days of receipt of the notification.
- 2) Upon receipt of written permission from the owner of any residence included in the Old Hazeldell Quarry Impact Area for noise compliance measurements, the applicant shall have sound level measurements made at the residence. The noise compliance measurements shall be made during a time when a rock drill is in operation at the quarry as well as the aggregate crushing and screening equipment using procedures considered acceptable under the DEQ noise regulation rule. The measurements shall be completed within 3 months of the beginning of aggregate crushing and screening operations at the quarry.
- 3) Within 30 days of the completion of the noise compliance measurement period, a report shall be provided to the County showing the results of all initial noise compliance measurements made on behalf of the applicant.
- 4) If the results of the initial noise compliance measurements show noise from the mining operations is exceeding the applicable DEQ noise regulation limits at any of the residences where monitoring occurred, changes shall be made at the quarry within 30 days of the date when the report was provided to the County to reduce the amount of noise radiating to the residence(s) to a level of compliance with applicable DEQ regulations. Within 90 days of when the initial noise compliance report was submitted to the County, follow-up sound level measurements shall be made at those residences where the initial measurement results showed non-compliance with the DEQ limits and a follow-up compliance report provided to the County.
- 5) If the results of the 2<sup>nd</sup> compliance measurements show the noise at any residence in the Old Hazeldell Quarry Impact Area is still exceeding the applicable DEQ limit, the same conditions stated in Condition 4 shall go into effect. These conditions shall continue in effect until full compliance is demonstrated at all residences in the Old Hazeldell Quarry Impact Area.
- 6) Once noise compliance measurements show the noise radiating from the Old Hazeldell Quarry is in compliance with the DEQ noise limits at all residences included in the



measurement program, the applicant may cease having noise measurements made until excavation operations move from the Phase 1 excavation area to Phase 2 excavation area.

- 7) When excavation operations move from the Phase 1 excavation area to the Phase 2 excavation area (and again from the Phase 2 area to the Phase 3 area), the applicant shall, using registered mail, notify all residential property owners inside the Old Hazeldell Quarry Impact Area of the operational changes and let them know that they can have measurements made at their residence if written permission is provided to the applicant within 30 days of receipt of the notification.
- 8) Noise compliance measurements and reporting shall be made at the beginning of Phase 2 and Phase 3 operations using the same procedures described in Condition 2, 3 and 4.
- 9) A blast-monitoring program to physically measure ground vibration and airblast energy shall be used for all blasts occurring in the first year of operations at the quarry. Measurements of the ground movement in terms of peak-particle velocity shall be made. Airblast measurements shall be made in terms of the C-weighted, slow response sound pressure level. Measurements shall be made at all residences located within the Old Hazeldell Quarry Impact Area where written permission has been given to have measurements made. Blast measurement reports to include the limits applicable to the blast energy shall be provided to the County within 10 business days of the blast event.

## 6. Conclusion

None of the written noise-related comments submitted into the Planning Commission record on May 31, 2016 changes DSA's conclusion that noise radiating from the proposed Old Hazeldell Quarry can and will be in compliance with the DEQ noise regulations and the Goal 5 rule through the use of the noise monitoring plan referenced in this report, as well as recommended Conditions No.'s 16-20 in the PAPA Goal 5 application:

16. The mine operator shall comply with the noise study prepared by Daly Standlee and Associates, Inc. (DSA) dated October, 2015.
17. The mine operator shall utilize polyurethane screens or proximate berms or buffers in accordance with the DSA report in order to mitigate the noise impacts associated with operation of crushing and screening equipment when it is located in the processing/processing area.
18. The operator must use quality grade mufflers and radiator fan controls for haul trucks and excavators.
19. The operator must maintain a natural high wall as excavation moves west to east, along with an up-close barrier or curtain system attached to the drive shaft enclosure of the rock drill.
20. The Quarry operator is not required to monitor or mitigate noise impacts to any off-site dwelling or property where the owner of the off-site dwelling or property





grants the Quarry operator a written and recorded noise easement allowing unmonitored and unmitigated noise impacts from the Quarry on the property and/or at the dwelling.

**660-023-0180**

**Mineral and Aggregate Resources**

(1) For purposes of this rule, the following definitions apply:

(a) "Aggregate resources" are naturally occurring concentrations of stone, rock, sand gravel, decomposed granite, limestone, pumice, cinders, and other naturally occurring solid materials commonly used in road building or other construction.

(b) "Conflicting use" is a use or activity that is subject to land use regulations and that would interfere with, or be adversely affected by, mining or processing activities at a significant mineral or aggregate resource site (as specified in subsection (5)(b) and section (7) of this rule).

(c) "Existing site" is an aggregate site that meets the requirements of subsection (3)(a) of this rule and was lawfully operating, or was included on an inventory of significant aggregate sites in an acknowledged plan, on September 1, 1996.

(d) "Expansion area" is an aggregate mining area contiguous to an existing site.

(e) "Farmland" means land planned and zoned for exclusive farm use pursuant to Goal 3 and OAR chapter 660, division 033.

(f) "Mineral resources" are those materials and substances described in ORS 517.750(7) but excluding materials and substances described as "aggregate resources" under subsection (a) of this section.

(g) "Minimize a conflict" means to reduce an identified conflict to a level that is no longer significant. For those types of conflicts addressed by local, state, or federal standards (such as the Department of Environmental Quality standards for noise and dust levels), to "minimize a conflict" means to ensure conformance to the applicable standard.

(h) "Mining" is the extraction and processing of mineral or aggregate resources, as defined in ORS 215.298(3) for farmland, and in ORS 517.750 for land other than farmland.

(i) "Mining area" is the area of a site within which mining is permitted or proposed, excluding undisturbed buffer areas or areas on a parcel where mining is not authorized.

(j) "Processing" means the activities described in ORS 517.750(10).

(k) "Protect" means to adopt land use regulations for a significant mineral or aggregate site in order to authorize mining of the site. For purposes of subsection (2)(d) of this rule, "protect" also means to limit or prohibit new conflicting uses within the impact area of the site.

(l) "Thickness of the aggregate layer" means the depth of the water-lain deposit of sand, stones, and pebbles of sand-sized fraction or larger, minus the depth of the topsoil and nonaggregate overburden.

(m) "Willamette Valley" means Clackamas, Columbia, Linn, Marion, Multnomah, Polk, Washington, and Yamhill counties and the portions of Lane and Benton Counties east of the summit of the Coast Range.

(2) Local governments are not required to amend acknowledged inventories or plans with regard to mineral and aggregate resources except in response to an application for a post acknowledgement plan amendment (PAPA) or at periodic review as specified in section (9) of this rule. The requirements of this

rule modify, supplement, or supersede the requirements of the standard Goal 5 process in OAR 660-023-0030 through 660-023-0050, as follows:

(a) A local government may inventory mineral and aggregate resources throughout its jurisdiction, or in a portion of its jurisdiction. When a local government conducts an inventory of mineral and aggregate sites in all or a portion of its jurisdiction, it shall follow the requirements of OAR 660-023-0030 except as modified by subsection (b) of this section with respect to aggregate sites. When a local government is following the inventory process for a mineral or aggregate resource site under a PAPA, it shall follow the applicable requirements of OAR 660-023-0030, except where those requirements are expanded or superceded for aggregate resources as provided in subsections (b) through (d) of this section and sections (3), (4) and (8) of this rule;

(b) Local governments shall apply the criteria in section (3) or (4) of this rule, whichever is applicable, rather than OAR 660-023-0030(4), in determining whether an aggregate resource site is significant;

(c) Local governments shall follow the requirements of section (5) or (6) of this rule, whichever is applicable, in deciding whether to authorize the mining of a significant aggregate resource site, and OAR 660-023-0040 through 660-023-0050 in deciding whether to authorize mining of a significant mineral resource; and

(d) For significant mineral and aggregate sites where mining is allowed, except for aggregate sites that have been determined to be significant under section (4) of this rule, local governments shall decide on a program to protect the site from new off-site conflicting uses by following the standard ESEE process in OAR 660-023-0040 and 660-023-0050 with regard to such uses.

(3) An aggregate resource site shall be considered significant if adequate information regarding the quantity, quality, and location of the resource demonstrates that the site meets any one of the criteria in subsections (a) through (c) of this section, except as provided in subsection (d) of this section:

(a) A representative set of samples of aggregate material in the deposit on the site meets applicable Oregon Department of Transportation (ODOT) specifications for base rock for air degradation, abrasion, and soundness, and the estimated amount of material is more than 2,000,000 tons in the Willamette Valley, or more than 500,000 tons outside the Willamette Valley;

(b) The material meets local government standards establishing a lower threshold for significance than subsection (a) of this section; or

(c) The aggregate site was on an inventory of significant aggregate sites in an acknowledged plan on September 1, 1996.

(d) Notwithstanding subsections (a) and (b) of this section, except for an expansion area of an existing site if the operator of the existing site on March 1, 1996, had an enforceable property interest in the expansion area on that date, an aggregate site is not significant if the criteria in either paragraphs (A) or (B) of this subsection apply:

(A) More than 35 percent of the proposed mining area consists of soil classified as Class I on Natural Resource and Conservation Service (NRCS) maps on June 11, 2004; or

(B) More than 35 percent of the proposed mining area consists of soil classified as Class II, or of a combination of Class II and Class I or Unique soil, on NRCS maps available on June 11, 2004, unless the average thickness of the aggregate layer within the mining area exceeds:

(i) 60 feet in Washington, Multnomah, Marion, Columbia, and Lane counties;

(ii) 25 feet in Polk, Yamhill, and Clackamas counties; or

(iii) 17 feet in Linn and Benton counties.

(4) Notwithstanding section (3) of this rule, a local government may also determine that an aggregate resource site on farmland is significant if subsections (a) and (b) of this section apply or if subsection (c) of this section applies:

(a) The quantity of material proposed to be mined from the site is estimated to be 2,000,000 tons of aggregate material or less for a site in the Willamette Valley, or 500,000 tons or less for a site outside the Willamette Valley; and

(b) Not more than 35 percent of the proposed mining area consists of soil

(A) Classified as Class I on Natural Resource and Conservation Service (NRCS) maps available on June 11, 2004; or

(B) Classified as Class II, or of a combination of Class II and Class I or Unique soil, on NRCS maps on June 11, 2004, unless the average thickness of the aggregate layer within the mining area exceeds the amounts specified in paragraph (B) of subsection (3)(d) of this rule; or

(c) A local land use permit that allows mining on the site was issued prior to April 3, 2003, and the permit is in effect at the time of the significance determination.

(5) For significant mineral and aggregate sites, local governments shall decide whether mining is permitted. For a PAPA application involving an aggregate site determined to be significant under section (3) of this rule, the process for this decision is set out in subsections (a) through (g) of this section. A local government must complete the process within 180 days after receipt of a complete application that is consistent with section (8) of this rule, or by the earliest date after 180 days allowed by local charter.

(a) The local government shall determine an impact area for the purpose of identifying conflicts with proposed mining and processing activities. The impact area shall be large enough to include uses listed in subsection (b) of this section and shall be limited to 1,500 feet from the boundaries of the mining area, except where factual information indicates significant potential conflicts beyond this distance. For a proposed expansion of an existing aggregate site, the impact area shall be measured from the perimeter of the proposed expansion area rather than the boundaries of the existing aggregate site and shall not include the existing aggregate site.

(b) The local government shall determine existing or approved land uses within the impact area that will be adversely affected by proposed mining operations and shall specify the predicted conflicts. For purposes of this section, "approved land uses" are dwellings allowed by a residential zone on existing platted lots and other uses for which conditional or final approvals have been granted by the local government. For determination of conflicts from proposed mining of a significant aggregate site, the local government shall limit its consideration to the following:

(A) Conflicts due to noise, dust, or other discharges with regard to those existing and approved uses and associated activities (e.g., houses and schools) that are sensitive to such discharges;

(B) Potential conflicts to local roads used for access and egress to the mining site within one mile of the entrance to the mining site unless a greater distance is necessary in order to include the intersection with the nearest arterial identified in the local transportation plan. Conflicts shall be determined based on clear and objective standards regarding sight distances, road capacity, cross section elements, horizontal and vertical alignment, and similar items in the transportation plan and implementing ordinances. Such

standards for trucks associated with the mining operation shall be equivalent to standards for other trucks of equivalent size, weight, and capacity that haul other materials;

(C) Safety conflicts with existing public airports due to bird attractants, i.e., open water impoundments as specified under OAR chapter 660, division 013;

(D) Conflicts with other Goal 5 resource sites within the impact area that are shown on an acknowledged list of significant resources and for which the requirements of Goal 5 have been completed at the time the PAPA is initiated;

(E) Conflicts with agricultural practices; and

(F) Other conflicts for which consideration is necessary in order to carry out ordinances that supersede Oregon Department of Geology and Mineral Industries (DOGAMI) regulations pursuant to ORS 517.780;

(c) The local government shall determine reasonable and practicable measures that would minimize the conflicts identified under subsection (b) of this section. To determine whether proposed measures would minimize conflicts to agricultural practices, the requirements of ORS 215.296 shall be followed rather than the requirements of this section. If reasonable and practicable measures are identified to minimize all identified conflicts, mining shall be allowed at the site and subsection (d) of this section is not applicable. If identified conflicts cannot be minimized, subsection (d) of this section applies.

(d) The local government shall determine any significant conflicts identified under the requirements of subsection (c) of this section that cannot be minimized. Based on these conflicts only, local government shall determine the ESEE consequences of either allowing, limiting, or not allowing mining at the site. Local governments shall reach this decision by weighing these ESEE consequences, with consideration of the following:

(A) The degree of adverse effect on existing land uses within the impact area;

(B) Reasonable and practicable measures that could be taken to reduce the identified adverse effects; and

(C) The probable duration of the mining operation and the proposed post-mining use of the site.

(e) Where mining is allowed, the plan and implementing ordinances shall be amended to allow such mining. Any required measures to minimize conflicts, including special conditions and procedures regulating mining, shall be clear and objective. Additional land use review (e.g., site plan review), if required by the local government, shall not exceed the minimum review necessary to assure compliance with these requirements and shall not provide opportunities to deny mining for reasons unrelated to these requirements, or to attach additional approval requirements, except with regard to mining or processing activities:

(A) For which the PAPA application does not provide information sufficient to determine clear and objective measures to resolve identified conflicts;

(B) Not requested in the PAPA application; or

(C) For which a significant change to the type, location, or duration of the activity shown on the PAPA application is proposed by the operator.

(f) Where mining is allowed, the local government shall determine the post-mining use and provide for this use in the comprehensive plan and land use regulations. For significant aggregate sites on Class I, II and



Unique farmland, local governments shall adopt plan and land use regulations to limit post-mining use to farm uses under ORS 215.203, uses listed under ORS 215.213(1) or 215.283(1), and fish and wildlife habitat uses, including wetland mitigation banking. Local governments shall coordinate with DOGAMI regarding the regulation and reclamation of mineral and aggregate sites, except where exempt under ORS 517.780.

(g) Local governments shall allow a currently approved aggregate processing operation at an existing site to process material from a new or expansion site without requiring a reauthorization of the existing processing operation unless limits on such processing were established at the time it was approved by the local government.

(6) For an aggregate site on farmland that is determined to be significant under section (4) of this rule, the requirements of section (5) of this rule are not applicable, except for subsection (5)(f), and the requirements of OAR 660-023-0040 through 660-023-0050 are not applicable. Instead, local governments shall decide whether mining is permitted by applying subsections (a) through (d) of this section:

(a) The proposed aggregate mine shall satisfy discretionary conditional use permit approval standards adopted by the local government pursuant to applicable requirements of ORS 215.213(2) or 215.283(2), and the requirements of ORS 215.296 and 215.402 through 215.416;

(b) The local government shall determine the post-mining use in accordance with subsection (5)(f) of this rule;

(c) The local government shall issue a permit for mining aggregate only for a site included on an inventory of significant aggregate sites in the comprehensive plan in accordance with ORS 215.298(2); and

(d) The conditional use permit shall not allow mining of more than the maximum amount of aggregate material specified under subsection (4)(a) of this rule.

(7) Except for aggregate resource sites determined to be significant under section (4) of this rule, local governments shall follow the standard ESEE process in OAR 660-023-0040 and 660-023-0050 to determine whether to allow, limit, or prevent new conflicting uses within the impact area of a significant mineral and aggregate site. (This requirement does not apply if, under section (5) of this rule, the local government decides that mining will not be authorized at the site.)

(8) In order to determine whether information in a PAPA submittal concerning an aggregate site is adequate, local government shall follow the requirements of this section rather than OAR 660-023-0030(3). An application for approval of an aggregate site following sections (4) and (6) of this rule shall be adequate if it provides sufficient information to determine whether the requirements in those sections are satisfied. An application for a PAPA concerning a significant aggregate site following sections (3) and (5) of this rule shall be adequate if it includes:

(a) Information regarding quantity, quality, and location sufficient to determine whether the standards and conditions in section (3) of this rule are satisfied;

(b) A conceptual site reclamation plan;

**(NOTE:** Final approval of reclamation plans resides with DOGAMI rather than local governments, except as provided in ORS 517.780)

(c) A traffic impact assessment within one mile of the entrance to the mining area pursuant to section (5)(b)(B) of this rule;

(d) Proposals to minimize any conflicts with existing uses preliminarily identified by the applicant within a 1,500 foot impact area; and

(e) A site plan indicating the location, hours of operation, and other pertinent information for all proposed mining and associated uses.

(9) Local governments shall amend the comprehensive plan and land use regulations to include procedures and requirements consistent with this rule for the consideration of PAPAs concerning aggregate resources. Until such local regulations are adopted, the procedures and requirements of this rule shall be directly applied to local government consideration of a PAPA concerning mining authorization, unless the local plan contains specific criteria regarding the consideration of a PAPA proposing to add a site to the list of significant aggregate sites, provided:

(a) Such regulations were acknowledged subsequent to 1989; and

(b) Such regulations shall be amended to conform to the requirements of this rule at the next scheduled periodic review after September 1, 1996, except as provided under OAR 660-023-0250(7).

Stat. Auth.: ORS 183 & 197

Stats. Implemented: ORS 197.040 & 197.225- 197.245

Hist.: LCDC 2-1996, f. 8-30-96, cert. ef. 9-1-96; LCDD 5-2004, f. & cert. ef. 6-25-04