

CANBY PIT - PHASE 4 AGGREGATE MINING SITE
CANBY AREA
CLACKAMAS COUNTY, OREGON

**APPLICATIONS FOR POST-ACKNOWLEDGEMENT ZONE MAP AMENDMENT,
COMPREHENSIVE PLAN TEXT AMENDMENT and SITE REVIEW**



APPLICANT:

CADMAN MATERIALS INC.
7554 185TH AVE. NE
REDMOND, WASHINGTON 98052

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REDMOND, WASHINGTON 98052**

NARRATIVE PREPARED BY:

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September 5, 2019
Project No. 05-176D

Ms. Martha Fritize
Senior Planner
Clackamas County Planning and Zoning Division
150 Beavercreek Rd.
Oregon City, OR 97045

Re: Proposed Cadman Canby Pit - Phase 4 Aggregate Mine Site – Goal 5 Land Use Application and Site Review Authorization

Dear Ms. Fritize,

Kuper Consulting LLC (KC) is pleased to submit this Post-Acknowledgment Plan Amendment Application (PAPA) requesting a comprehensive plan text and a zone map amendment to add an “Mineral Aggregate Overlay” to an existing “Exclusive Farm Use” zone; inclusion of the subject site on the County’s adopted Inventory of Mineral and Aggregate Resource Sites pursuant to Statewide Planning Goal 5 and Site Review authorization with regard to the proposed Cadman Canby Pit - Phase 4 Aggregate Mine (“Site”) located in Clackamas County, Oregon. The attached application submittal addresses and demonstrates compliance with applicable review criteria in accordance with applicable Statewide Planning Goal provisions, and particularly Oregon Statewide Planning Goal 5 and implementing administration regulations (OAR Chapter 660 Division 23).

We appreciate the opportunity to work with County representatives on this land use review.

Sincerely,

KUPER CONSULTING LLC

Dorian E. Kuper

Dorian E. Kuper, CEG
President, Certified Engineering Geologist Oregon E - 1132

cc: Mr. Steven Pfeiffer, Perkins Coie (with enc.)
Client (with enc.)

**APPLICATIONS FOR POST-ACKNOWLEDGMENT ZONE MAP AMENDMENT,
COMPREHENSIVE PLAN TEXT AMENDMENT, AND SITE REVIEW FOR
CADMAN CANBY PIT - PHASE 4 AGGREGATE MINE SITE**

Applicant:	Ms. Sophie Mullen Mr. Noel Barnett Cadman Materials Inc. 7554 185 th Ave. NE, Suite 100 Redmond, Washington 98052
Property Owner:	Various, See Appendix J
Applicant's Representatives:	Ms. Dorian Kuper Kuper Consulting LLC Mr. Steven Pfeiffer Perkins Coie
Address:	Approximately three quarters mile south of the Intersection of Highway 99E and S. Barlow Road
Legal Description:	T4S, R1E, Sec.7, Tax Lots 500, 600, 1002, 1003, 1004 and Portions of 700, 800, 801
Mine Life:	8 - 10 years, market dependent
Reclaimed Use:	Reclamation will be concurrent with aggregate mining, where possible. A portion of the site will be backfilled with overburden, the remainder of the area will be a lake as mining progresses across the site. The Reclamation Plan will be subject to review and approval by DOGAMI in accordance with applicable requirements under OAR 632- 030-0027.
Pre-Application Conference:	January 15, 2019

TABLE OF CONTENTS

	Page
TITLE PAGE	i
LETTER OF TRANSMITTAL	ii
APPLICATION INFORMATION	iii
EXECUTIVE SUMMARY	viii
I. INTRODUCTION	1
A. Applicable Approval Criteria:.....	1
B. Technical Studies Completed	2
II. PROPERTY SUMMARY	2
A. Description of Site	2
1. Description of Surrounding Area.....	3
a. Properties to the East and Northeast	3
b. Properties to the North, Northwest and West	3
c. Properties Southwest, South and Southeast of the Subject Site	3
B. Application Approval Criteria	3
1. Overview	3
2. Mine Plan	4
3. Reclamation	5
4. Public Benefits	6
III. OREGON STATEWIDE PLANNING GOAL 5	6
A. Is the Mineral and Aggregate Resource Significant? (OAR 660-023- 0180(3)(a))	7
1. Quality of the Resource	7
2. Quantity of the Resource	8
3. Location of the Resource	9
4. OAR 660-023-0180(3)(d): Soils & Width (sic) of Aggregate Layers Criteria	9
5. Summary	10
B. If the Site Is Significant, What Is the Extent of the Resource's Impact Area? (OAR 660-023-0180(5)(a))	10
1. Existing and Approved Uses Within the Impact Area.....	11

TABLE OF CONTENTS

(continued)

	Page
C. What Conflicts, if Any, Could Be Generated Between the Resource and Existing or Approved Land Uses in the Impact Area? (OAR 660-023-0180(5)(b))	12
1. Conflict and Identification Assessment	12
D. If Conflicts Are Identified, Are There Any Reasonable and Practicable Measures that Would Minimize the Conflicts? (OAR 660-023-0180(5)(c)).....	13
1. Conflicts Due to Noise, Dust, or Other Discharges	13
a. Noise	13
b. Dust	16
c. Wetlands	17
d. Groundwater	17
e. Archaeological Study	19
f. Other Discharges	20
(i) Diesel Engine Emissions	20
(ii) Stormwater	20
2. Potential Conflicts to Local Roads	21
3. Safety Conflicts with Existing Public Airports (OAR 660-023-0180(5)(b)(C))	24
4. Conflicts with Significant Acknowledged Goal 5 Resource Sites (OAR 660-023-0180(5)(b)(D))	24
a. Mineral and Aggregate Resources, OAR 660-023-0180	25
5. Conflicts with Agricultural Practices (OAR 660-023-0180(5)(b)(E))	25
6. Conflicts with Ordinances That Supersede DOGAMI Regulations	27
7. Summary of Predicted Conflicts	27
8. Conflict Minimization Plan	28
a. Minimization of Noise Conflicts	29
b. Minimization of Dust Conflicts	29
c. Minimization of Surface Water and Groundwater Conflicts	29
d. Minimization of Traffic Conflicts	29
e. Minimization of Goal 5 Resource Conflicts	29
f. Concluding Statement	29

TABLE OF CONTENTS

(continued)

	Page
E. If Any Identified Conflicts Cannot Be Minimized, Does an Analysis of the Economic, Social, Environmental, and Energy (“ESEE”) Consequences of the Resource Support Approving the Mining Use? (OAR 660-023-0180(5)(d)).....	30
F. If Mining Is Approved, What Is the Post-Mining Use of the Site? (OAR 660-023-0180(5)(f)).....	30
1. Conceptual Reclamation Plan.....	30
G. If Mining Is Approved, Does an ESEE Support the County Allowing, Limiting, or Preventing Conflicting Uses Within the Impact Area? (OAR 660-023-0180(7)).....	31
1. Program to Achieve Goal 5.....	31
2. Oregon Statewide Planning Goals	32
IV. REQUEST FOR MODIFICATION OF CONDITION OF APPROVAL FOR BOARD ORDER Z20348-93-CP/Z0349-93-Z - MATERIAL PROCESSING ON A SATURDAY	40
V. CLACKAMAS COUNTY ZONING AND DEVELOPMENT ORDINANCE.....	40
A. Section 708 – Mineral and Aggregate Overlay District (MAO).....	40
B. Section 1006 Water Supply, Sanitary Sewer, Surface Water-Septic and Utilities Concurrency	49
C. Section 1010 Signs.....	56
VI. LIMITATIONS.....	57
VII. PROPOSED CONDITIONS OF APPROVAL	57
VIII. REFERENCES	60

TABLES

Table 1: Predicted loudest hour noise levels at nearest residences without mitigation	14
Table 2: Predicted loudest hour noise levels at nearest residences with mitigation	16
Table 3: Location of Information.....	60
Table 4: Potential Conflicts with Existing Uses within the Impact Area	60
Table 5: Potential Conflicts with Future Uses Permitted Outright or Conditionally.....	61

FIGURES (Located at end of Text):

- Figure 1 – Vicinity Map
- Figure 2 – Tax Lot Map and Impact Area
- Figure 3 – Site Plan
- Figure 4 – Permitted Mine Sites
- Figure 5 – Existing Conditions
- Figure 6 – Mining and Operation Plan
- Figure 7 – Conceptual Reclamation Plan
- Figure 8 – Proposed Noise Mitigation and Receivers

APPENDICES

- Appendix A – *Aggregate Resource Evaluation and Goal 5 Significance Determination, Cadman Expansion Properties – Canby Phase 4* (H. G. Schlicker & Associates, Inc.)
- Appendix B – *Hydrogeologic Analysis, Cadman Expansion Properties – Canby Pit Phase 4*, (H.G. Schlicker & Associates, Inc.)
- Appendix C – *Cadman Canby Pit/Barlow Road Aggregate Mine, Phase 4 Noise Study* (ABD Engineering and Design)
- Appendix D – *Cadman Materials Inc., Canby Pit – Phase 4 Expansion- Traffic Study* (Sandow Engineering, LLC)
- Appendix E – *Clackamas County Mineral Aggregate Overlay Post Acknowledgement Plan Amendment, Cadman-Canby Pit Phase 4 Expansion: National Wetlands Inventory Mapping*, (SWCA)
- Appendix F – *Summary of Results of Archaeological Survey for the Canby Pit Phase 4 Aggregate Surface Mining Operation* (Heritage Research Associates, Inc.)
- Appendix G – Stormwater Plan, DEQ Permit
- Appendix H – Existing Uses within the 1,500 foot Impact Area
- Appendix I – Clackamas County Application Forms
- Appendix J – Title Information, BPA Phase 3 Agreement, Miscellaneous Permits for Site

EXECUTIVE SUMMARY

The purpose of these applications is to expand the existing Cadman Materials Incorporated Canby Pit Phase 3 site in order to provide on-going supply of aggregate at the location of their existing operation. Processing of the material will continue to occur at the current processing site, which is located immediately east of Phase 3 and the proposed Phase 4 site. Only excavation will take place on Phase 4. The site, which will be known as Canby Pit - Phase 4 (“Phase 4”), will assure a local source for high quality aggregate in Clackamas County for the next eight to ten years, depending on market conditions. This is a benefit for the local community through economic and fiscal contributions including enhancement of the affordability of aggregate products for local public and private construction and infrastructure projects. The facility is anticipated to support 15 to 20 full time equivalent jobs and the employment opportunities afforded by the operation will, consistent with current industry market characteristics, continue to enhance local source hiring opportunities.

Cadman Materials Inc. (the “Applicant”) seeks land use approvals for the Canby Pit - Phase 4 Site (“Site”) to allow the expansion of the existing and adjacent Canby Pit Phase 3 aggregate mining site (“Phase 3”). Upon approval, the Site will provide a replacement supply of sand and gravel for processing. The Applicant submits these concurrent Applications (“Applications”) requesting that Clackamas County (“County”):

- (1) Amend the Clackamas County Comprehensive Plan (“CCCP”) Goal 5 “Inventory of Mineral and Aggregate Resource Sites” to identify approximately 99 acres of the Site identified as Tax lot Map 41E07: Tax lots 500, 600, 1002, 1003, 1004 and portions of 700, 800, and 801 currently zoned Exclusive Farm Use (EFU 20) in Township 4 South, Range 1 East, Section 5, as a significant mineral and aggregate resource site;
- (2) Amend the Clackamas County zone map to apply a Mineral and Aggregate Overlay district (MAO) designation to the Site;
- (3) Approve the Site Plan Review for the project; and
- (4) Approve request to modify Condition of Approval for File No Z20348-93-CP/Z0349-3-Z to allow processing on Saturday.

As proposed, only excavation of the sand and gravel deposit will occur on the Site. The material will then be conveyed east under S. Barlow Road via an existing culvert to the existing Cadman processing facility (Oregon Department of Geology and Mineral Industries “DOGAMI” Permit No. 03-0206). The majority of the processed materials will be transported off site via S. Barlow Road to Highway 99E. Some materials may be transported south on S. Barlow Road for local deliveries.

The Goal 5 administrative rule (Oregon Administrative Rule (“OAR”) Chapter 660, Division 23) establishes the exclusive criteria by which the County must determine if the Site is a significant aggregate resource, whether all identified conflicts are minimized and mining should be allowed at the Site, and whether future conflicting uses should be allowed, limited, or prohibited, as needed to protect the identified significant aggregate resource. OAR Chapter 660, Division 23

was adopted in 1996, amended in 2004, and replaced OAR Chapter 660, Division 16 for purposes of processing PAPAs concerning aggregate resources. OAR 660-023-0250(1). Over time, local governments must amend their comprehensive plans and land use regulations to include procedures and requirements consistent with OAR 660, Division 23, and specifically OAR 660-023-0180, for the consideration of PAPAs concerning aggregate resources. Until such incorporation into local plans and implementing ordinances is accomplished, the requirements of the provisions of Division 023-180 shall be directly applied to the proposed PAPA. See OAR 660 023 180(9); *Morse Bros, Inc. v. Columbia County*, 37 Or LUBA 85 (1999), *aff'd* 165 Or App 512 (2000); *Eugene Sand & Gravel, Inc. v. Lane County*, 44 Or LUBA 50, 96 (2003), *aff'd*. 189 Or App 21 (2003).

Consistent with OAR 660-023-180(8)(a)-(e), these Applications include the substantial evidence and analysis required to demonstrate compliance with the applicable criteria under Goal 5 including the following:

- (1) Information regarding the significance of the Site – location, quality, and quantity – sufficient to meet the standards and conditions set forth in OAR 660-023-0180(3).
- (2) A conceptual site reclamation plan.
- (3) A traffic impact assessment pursuant to OAR 660-023-0180(5)(b)(B).
- (4) The identification of predicted conflicts with existing or approved uses within the impact area, and, as necessary, any measures required to minimize such conflicts.
- (5) Mine/Site plan describing the mining operation.
- (6) A proposed program to achieve Goal 5 consistent with OAR 660-023-0040.

With regard to significance, the evidence presented in this Application demonstrates the Site should be deemed a Significant Aggregate Resource and be included in the County's acknowledged Goal 5 inventory under the Goal 5 criteria. The Site was evaluated as to the location of the aggregate resource, the aggregate was tested and meets Goal 5 quality requirements, and the Site contains approximately 8.1 million tons of aggregate resource, which exceeds the criterion in OAR 660-023-0180(3)(a) requiring 2 million tons for a site. The Canby Pit - Phase 4 Aggregate site is a significant aggregate resource based on these criteria. See Appendix A.

Further, the Application demonstrates that potential conflicts to existing and approved uses from the proposed aggregate site can be minimized to a level no longer significant through reasonable and practicable measures. Finally, the analysis under OAR 660-023-0040 demonstrates that, while some protection from future conflicting uses may be warranted, no future uses within the impact area need to be prohibited or otherwise restricted. Therefore, the County can determine that the substantive requirement of Goal 5 is satisfied.

Attachments to this narrative include the Applicant's proposed conditions of approval addressing conflict minimization, together with numerous technical studies and reports prepared by

qualified consultants addressing the full range of applicable review criteria. Based upon the substantial evidence included with this submittal, the Applicant requests the County find that the applicable criteria are met and approval should be confirmed, subject to the final conditions of approval.

CANBY PIT - PHASE 4 SITE

I. INTRODUCTION

Cadman Materials Inc. (Applicant) hereby submits three (3) Land Use applications to Clackamas County requesting the following:

- (a) Amend the County's Comprehensive Plan Text and Map and designate the property as a Significant Mineral and Aggregate Resource Site,
- (b) Add a Mineral and Aggregate Overlay (MAO) zone designation to the Site,
- (c) Approve a Site Plan Review for the Site, and
- (d) Approve request to modify Condition of Approval for File No Z20348-93-CP/Z0349-3-Z to allow processing on Saturday.

The following narrative describes how the referenced applications satisfy the provisions and standard requirements of Oregon Administrative Rules, OAR 660-023-0180 and Oregon's Statewide Planning Goals. In addition, the applicant provides information pertinent to onsite mining operations and proposed reclamation of the property.

In our professional opinion, this application(s) provides information demonstrating that the Canby Pit - Phase 4 Site meets the applicable criteria of OAR 660-023-180, including resource significance.

This consolidated application includes several studies and reports prepared by consultants with specific expertise addressing applicable criteria under OAR 660-23-180. The studies include analyses addressing, but not limited to, resource significance and potential impacts related to noise, dust, groundwater, archaeological/cultural, and traffic considerations. The studies focus on site conditions, potential impacts and proposed minimization measures to ensure compliance with Division 023-180.

A. Applicable Approval Criteria:

The following identifies the various approval criteria and provides detailed evidence within this text to demonstrate how the Applications satisfy each applicable criterion. Where appropriate to ensure on going compliance with applicable criteria, the following also includes Applicant's proposed conditions of approval.

The following criteria are addressed:

- Statewide Planning Goal 5 Implementing Rule – OAR-660-023-180
- Statewide Planning Goals, as applicable
- Site Plan Review, Clackamas County Zoning and Development Ordinance (CCZDO) Section 708, 1006 and 1010.

B. Technical Studies Completed

Extensive technical analysis were performed on the Site addressing resource significance and any potential for significant conflicts within the Impact Area resulting from the proposed project (as defined by OAR 660-023-180 (5)(a)). Studies which document such analysis include the following:

- Geological, ground water and soils analysis;
- Cultural and historical resources;
- Analysis of potential conflicts with Goal 5 resources;
- Analysis of noise, dust and other discharges; and
- Transportation impact analysis addressing applicable Statewide Planning Goal requirements.

These studies provide substantial evidence and analysis by qualified consultants in support of a determination of compliance with applicable criteria.

II. PROPERTY SUMMARY

A. Description of Site

The subject site is located approximately three quarters of a mile south of the intersection of Highway 99E and S. Barlow Road, See Figure 1, Vicinity Map. The property is zoned Exclusive Farm Use (EFU 20 acres) and is located immediately south of Phase 3 on the west side of S. Barlow Road. The processing area is located immediately east of Phases 3 and 4, on the east side of S. Barlow Road. The property is approximately 99 acres in size and is a gradual sloping site with elevations ranging from approximately 110 feet mean sea level (MSL) in the eastern portion to approximately 100 feet (MSL) in the western portion of the property. The proposed extraction site lies above the one hundred (100) year flood elevation of the Molalla River and is classified as “Upland Property.”

Vegetation on the property consists of grasses, bushes, and some trees. Older structures (barn, sheds, and a house) will be removed prior to excavation. The site contains no wetland areas identified on the National Wetlands Inventory (NWI) map, which the applicant understands to constitute the County’s significant wetland inventory for purpose of Goal 5. *See* Appendix E SWCA letter. Although preliminary site investigation indicates that non-wetland water features within the proposed mining area, i.e. ditches may require state and or federal permitting prior to excavation; these areas are not included on the County’s significant wetland inventory.

Background of Mining in the Area

There is a long history of surface mining in the area. Surface mining first occurred to the northeast of Phase 4 along the Molalla River around 1950 by a variety of mining operators. Predecessors to Cadman initiated mining in the area of the existing processing area in the 1990’s,

then moved to the south and then to Phase 3, immediately north of the proposed Phase 4. As reflected on Figure 4, there are several mining sites located within the vicinity of the proposed Phase 4.

1. Description of Surrounding Area

As reflected in the attached Appendix H, Table 1, Impact Area Uses, and on Figure 2 the following is a brief description of the uses within the area. The impact area is described as those uses within 1,500 feet of the proposed mining area.

a. Properties to the East and Northeast

The subject properties are zoned Exclusive Farm Use (EFU) with an existing Mineral Aggregate Overlay (MAO) designation with the exception of two residence (zoned EFU) identified as the Hanes and Estrada properties. The Hanes property is located along the east side of S. Barlow Road, northeast of Phase 4 and the Estrada property is located along the east side of S. Barlow Road, east of the southeast corner of Phase 4. In addition, there is a Northwest Natural gas pipeline located on the Lee property within a 35 foot wide easement along the southeast corner of Phase 4. The pipeline alignment parallels S. Barlow Road along the east side of Phase 4, northerly along Phase 3 (Figure 5). Proposed excavation will maintain a minimum 30 foot setback from the easement. The types of uses within the Impact Area in this area include the two residences, gas line and aggregate mining and processing.

b. Properties to the North, Northwest and West

The impact area extends northerly across Phase 3, and includes only mine excavation uses taking place on the Cadman property authorized for such uses in 2012. This property is zoned EFU with a MAO overlay designation.

Highway 99E and the Union Pacific Railroad run along the subject site on the northwest and west side of Phase 4. A Bonneville Power Administration (BPA) transmission tower exists on Phase 3, north of the northwest portion of Phase 4, and connects to a transmission tower on the western portion of Phase 4. Excavation around the Phase 4 tower will maintain a 100 foot setback. There are scattered residences and a few businesses in this area. Properties include lands zoned EFU and FF-10.

c. Properties Southwest, South and Southeast of the Subject Site

The properties located southwest, south and southeast of the site consist of EFU zoned land. There are properties with scattered residences and businesses such as forestry and nurseries in this area.

B. Application Approval Criteria

1. Overview

The intent of these applications is to expand the existing Cadman Materials Inc. excavation operations Phase 3 site to ensure an additional supply of aggregate for processing. Specifically,

the applicant is requesting the following: (1) amend the CCCP to designate approximately 99 acres of the Site identified as the above referenced tax lots as a Significant Aggregate Resource Site (2) apply the Mineral and Aggregate Overlay (MAO) as a designation to the Site (3) approve the Site Plan Review for the Site pursuant to Section 708 of the CCZDO and (4) approve the request to modify Condition of Approval for File No Z20348-93-CP/Z0349-3-Z to allow processing on Saturday.

In accordance with OAR 660-023-0030, local governments are required to inventory and protect significant Goal 5 resources including aggregate. Additionally, the Land Conservation and Development Commission (LCDC) have implemented rules pertinent to Goal 5 including provisions of OAR 660-023-0180, which establishes procedures and criteria for including a specific resource site as significant on adopted Goal 5 inventories.

The Oregon Land Use Board of Appeals (LUBA) and the Court of Appeals have determined that the provisions of OAR 660-023-0180 pre-empt local government criteria for designating significant aggregate sites and, accordingly, serves as the sole criteria for review of an application requesting significant status and mining authorization. Further, the Land Use Board of Appeals and the Court of Appeals have ruled that if a local government has yet to amend its Comprehensive Plan and regulations to support compliance of OAR 660-023-0180 that provisions of OAR 660-023-0180 (9) requires local governments to directly apply the requirements and procedures of OAR 660-023-0180 when evaluating a proposed aggregate mining application.

The County has not amended its Comprehensive Plan including Land Use regulations to include procedures consistent with OAR 660-023-0180. Therefore, the County is required to apply exclusively the provisions of OAR 660-023-0180 to the review of this application, and substantive provisions of the County's Comprehensive Plan and Zoning Development Ordinance, including zone map amendment criteria, are not applicable to the review process.

2. Mine Plan

The size of the site is approximately 99 acres, which includes the proposed approximate 94 acre aggregate extraction site as reflected in the mine plan. The significance (Geology) report prepared by H.G. Schlicker & Associates (HGSA) estimates there is approximately 8.1 million tons of alluvial sand and gravel materials that underlie the property and that the aggregates meet the applicable standards of Goal 5 to establish that the property as a significant mineral and aggregate resource site.

The applicant has developed a mine plan consistent with land use regulations and regulatory requirements pertinent to aggregate mining operations. The mine plan takes into account the existing conditions on site (Figure 5) and identifies the contiguous sand and gravel property of Phase 3, operations and the infrastructure facilities in place that serve the operations (Figure 3).

Details of the mine plan excavation are described in the ABD Noise report (Appendix C, Section 4.2.1). Excavation is proposed to be developed in a series of three east-west trending cells progressing from the north to the south and one north-south cell along the eastern mine boundary. Excavation of the materials will start in the northwest corner of the property and

move to the east in Cell 4A as presented on Figure 6 of this text. Topsoil and overburden averaging ten feet in thickness will be removed as the mining progresses across the property where the material will be used for both screening and acoustical barriers as well as stockpiled in setback areas for use in the reclamation of the site.

The thickness of the sand and gravel varies across the site, ranging from 30 - 35 feet on the west side to approximately 60 feet on the east side of the site. Based on the HGSA report (Appendix A) the average thickness of the resource is approximately 33 feet. The mining excavation floor elevation will reflect the thickness of the sand and gravel. The water level is approximately 10 feet below ground surface in its natural condition. The site will be dewatered approximately 10 feet below the water level, and then will be “wet” mined with equipment that will allow them to excavate the remaining resource in the wet.

Water that is pumped to decrease the water level during mining will be reintroduced into the groundwater system on site. Surface water runoff will be captured and conveyed to the processing area to stormwater ponds, as is currently done in Phase 3.

With approval of these consolidated applications, the existing Phase 3 excavation site will be expanded to include the contiguous Phase 4 site. The mining operation, as reflected in Figure 6, will involve onsite aggregate extraction and conveyance to the Cadman processing site located within the Phase 2 area. The aggregate will be transported via a conveyor across the Phase 4 property to an existing conveyor system which currently runs east under S. Barlow Road through a culvert. The conveyed material will be processed at the above-referenced Cadman processing area, immediately east of S. Barlow Road. The majority of the processed materials will then exit the processing site in trucks northbound on S. Barlow Road to Highway 99E. A small amount of trucks will travel southbound on S. Barlow Road for local deliveries. Since the proposed Phase 4 excavation area serves as a replacement for Phase 3 upon completion of excavation no additional truck trips are anticipated beyond current trips associated with Phase 3. See TIA in Appendix D.

A Bonneville Power Authority (BPA) tower and easement transects the site in a northerly direction on the western portion of the property (Figure 5). A second tower is located to the north of Phase 4 on the Phase 3 mine property. A setback of 100 feet from the tower base will be imposed upon the excavation in Phase 4, consistent with the current BPA agreement and conditions applicable to and required under the earlier Phase 3 authorization. (*See Appendix J*) Cadman anticipates a condition of approval requirement similar to the agreement with BPA, and Cadman is currently pursuing this agreement with BPA for Phase 4. We have included a proposed placeholder condition of approval incorporating this revised BPA agreement.

3. Reclamation

The site will be reclaimed, to the extent practical, concurrently with mining. Mining will begin in the northwest portion of the property, progressing north to south in Cell 1 as the mining moves easterly across the mine cells. As presented in Figure 7, Conceptual Reclamation Plan, the northwest portion of the site will be backfilled with overburden from the site to the approximate current existing contours of elevation 100 Mean Sea Level (MSL). The remainder of the site

will remain as a lake with an undulating shoreline. The Conceptual Reclamation Plan centers on the designated “reclaimed beneficial use” of the mining site.

4. Public Benefits

Subject to demonstrated compliance with applicable criteria, the County can find that authorization of excavation and processing at the Site will be in the public’s best interest. Aggregate products are essential in the construction of new buildings, industrial sites, transportation networks, and residential development.

The Site is located in the rural area of the County and lies outside the Urban Growth Boundary. Urban encroachment or conflicts will not significantly increase since adjacent uses and activities reflect generally the surrounding zoning of Exclusive Farm Use (EFU) and Farm Forest 10 (FF-10).

The Site is located in proximity to several cities where proposed aggregate materials are required to accommodate urban development activities and related infrastructure. The region is readily accessible via major transportation networks. The benefit to the public is that a competitive priced material will reduce construction costs for infrastructure maintenance and new development in comparison to products being produced and delivered from sites located further in distances to the construction project.

III. OREGON STATEWIDE PLANNING GOAL 5

The Goal 5 Review Process

In evaluating a proposed mineral and aggregate resource site under OAR 660-023-0180, the County must proceed through the following steps:

- (a) Is the mineral and aggregate resource significant?
- (b) If so, what is the extent of the resource’s impact area?
- (c) What conflicts, if any, could be generated between the resource and existing or approved land uses in the impact area?
- (d) If conflicts are identified, are there any reasonable and practicable measures that would minimize the conflicts?
- (e) If any identified conflicts cannot be minimized, does an analysis of the Economic, Social, Environmental, and Energy (“ESEE”) consequences of the resource support approving the mining use?
- (f) If mining is approved, what is the post-mining (beneficial) use of the Site?
- (g) If mining is approved, does an ESEE analysis support the County allowing, limiting, or preventing conflicting uses within the impact area?

A. Is the Mineral and Aggregate Resource Significant? (OAR 660-023-0180(3)(a))

The site is significant based upon the quality, quantity, and location of the aggregate resource.

OAR 660-023-0180, Determining the Proposed Site as Significant

In determining the proposed extraction site as a “Significant Resource,” the applicant must provide information that substantiates the Significant Resource designation by providing evidence as to the quality, quantity, and location of the aggregate (OAR 660-023-180(3)(a)).

As further explained below and in Appendix A, the project geologists at H.G. Schlicker & Associates (HGSA) have evaluated the site and determined it meets these criteria. Therefore, the County should find that the site is a significant aggregate resource site. The information provided in this application supports the finding that the Site is a significant Goal 5 resource which qualifies for addition to the County’s inventory of significant aggregate resource sites.

Sampling of the resource and geologic data collection were conducted pursuant to established industry standards for the purpose of defining the quality and quantity of the resource at the Site consistent with OAR Division 23 requirements.

Goal 5 requires that a *representative set of samples* of aggregate material meet ODOT specifications for base rock. See OAR 660 23 180(3). Goal 5 does not define “representative samples,” which leaves this determination to the judgment of a qualified geologist. Within the aggregate and development industries, it is typically the geologist or geotechnical engineer that decides what material samples provide the most accurate representation of the deposit that underlies the site and then apply their best professional judgment to assign laboratory tests of those representative samples. For the purpose of this PAPA, as reflected in Appendix A, a representative sample for quality can generally be defined as a sample that reflects the on-site variation in material characteristics present in the rock deposit. HGSA has extensive experience in the geotechnical realm of evaluating a “representative sample”.

To assess the quality, quantity, and location of the resource, HGSA has reviewed published geology reports, supported a subsurface investigation of the Site, and submitted aggregate samples to a certified laboratory for quality testing. As is explained further below and in greater detail in Appendix A, available site specific evidence demonstrates the site meets the applicable criteria of OAR 660 023 0180(3) and, accordingly, is a significant Goal 5 aggregate resource site.

1. 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).

OAR 660-023-0180(3)(a) requires 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.¹ The ODOT Standard Specifications for Highway Construction (revised 2018, 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 described in Appendix A, the project geologists evaluated the quality of the resource through the following procedure:

An Oregon licensed engineering geologist from HGSA worked with a geologist from Cadman where 18 test borings were drilled, leaving five (5) monitoring wells in place (Appendix A). The borings were logged and samples secured for testing.

Representative samples were delivered to an Oregon Department of Transportation (ODOT) testing laboratory for quality testing of the aggregate materials delivered. ODOT tested for sodium sulfate (soundness), air degradation, and abrasion on samples submitted, to determine if the materials met the standard qualifications for ODOT approved base rock in accordance with Section 02630 of ODOT’s Standard Specifications for Highway Construction, Revised 2018 Edition Handbook. Copies of the boring logs and test results are included in the HGSA report (Appendix A).

Based on the test results, the County can find that the onsite aggregate materials meet or exceed ODOT’s minimum quality standards. Accordingly, the County can find that the site satisfies the quality threshold of OAR 660-023-0180(3)(a).

Based on the data and analysis set forth in Appendix A, the sand and gravel aggregate resource on the site meets or exceeds the minimum quality criteria for a significant aggregate site, as required by OAR 660-023-180(3)(a).

2. Quantity of the Resource

*“A representative set of samples of aggregate material in the deposit on the site meets Oregon Department of Transportation (ODOT) specifications for base rock * * *, and the estimated amount of material is more than 2,000,000 tons in the Willamette Valley, or 500,000 tons outside the Willamette Valley[.]” OAR 660-023-0180(3)(a).*

¹ Oregon Department of Transportation, *Standard Specifications for Highway Construction* (rev ed 2018).

OAR 660-023-0180(3)(a) requires that an aggregate resource site within the Willamette Valley have more than 2,000,000 tons of aggregate to qualify as significant. Clackamas County is considered the “Willamette Valley” within the Goal 5 definition. To estimate the quantity of aggregate at the Site, the top and bottom elevations of the aggregate deposit were identified based on the borings. The top elevations of the aggregate deposit, that is, the top of the aggregate resource located below the residual soil/weathered material (overburden), were identified. The bottom elevations of the aggregate deposit were also identified using the borings. The bottom elevations of the resource, for the purposes of volume calculations, were artificially limited to the depths of the proposed mine floor, which varies in depth across the site. As a result, the volume of resource and reserve as set forth in Appendix A is considered a conservative estimate of the quantity of aggregate present on the site.

Resource volume is defined as the entire amount of sand and gravel within the extraction area while the reserve volume is the available minable volume that includes setbacks, slope angles and a mining floor depth. In addition, it is noted that cubic yards were translated to tons using a very conservative conversion factor of 1.54 tons per one cubic yard.

A total of approximately 8.1 million tons (5.2 million in-place cubic yards) of resource aggregate is calculated to be present within the quality sand and gravel 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 within the Willamette Valley.

3. Location of the Resource

The Site includes the eight tax lots identified on Tax Lot Map 41E07, tax lots 500, 600, 1002, 1003, 1004 and portions of 700, 800, and 801. The Site is identified on Figure 2 of this application, as well as on Figures 1 and 2 of the HGSA report (Appendix A). The field investigation consisting of 18 borings confirms the presence of the sand and gravel aggregate resource that underlies this acreage. In addition, active mining operations by Cadman directly north and to the northeast of the property by others (Figure 4), and Oregon Water Resource Department (OWRD) water supply well reports in the surrounding area (Appendix F within HGSA Groundwater Report located within Appendix B of the PAPA application) further substantiates the location of the resource. Based on the geological review and interpretation of the subsurface investigations by certified engineering geologists, an aggregate resource has been identified and is located within the Phase 4 site boundary.

4. OAR 660-023-0180(3)(d): Soils & Width (sic) of Aggregate Layers Criteria

For an aggregate extraction site to be determined “Significant” as part of OAR 660-023-0180(3)(d), the following criteria applies:

“The site cannot be deemed Significant if either (A) more than 35% of the proposed extraction site consists of Class I Soils on the Natural Resources and Conservation Maps (NRCS) June 11, 2004 or (B) more than 35% of the proposed mining site consists of soil classified as Class II, or a combination of Class II and Class I or unique soils on NRCS Maps, made available on June 11, 2014 unless the average thickness of the aggregate within the mining area exceeds the following:

(ii) 25 feet in the Willamette Valley (Clackamas County)”

Soil classifications on the Site are consistent with Class III and IV soils, as presented as mapped by the NRSCS (Appendix A). OAR 660-023-0180(3)(B)(ii) provides that a Site may be inventoried as Significant with Class I and II soils if the thickness of the aggregate deposit averages a minimum of 25 feet in the Willamette Valley. However, the soils are described as Class III and IV, therefore this site is not subject to this provision.

HGSA worked with a Cadman geologist who oversaw the excavation of 18 borings drilled at various locations throughout the proposed mining site. The purpose of the subsurface work was to evaluate the average thickness of the aggregate deposit, and test representative aggregate samples from the site against Oregon Department of Transportation (ODOT) base rock criteria as required by Goal 5 (Refer to HGSA, Appendix A).

The thickness of the topsoil and overburden on average were measured and recorded to be approximately 10 feet. As presented in the HGSA report, the borings indicate that the aggregate thickness ranges from 15 to 60 feet, with an average thickness of 33 feet.

5. Summary

This Application provides information adequate to demonstrate that the Site meets the significance criteria in OAR 660-023-0180(3)(a) and (d). Meeting one or more of the significance criteria in OAR 660-023-0180(3)(a) through (c) and not being ineligible for mining under OAR 660-023-0180(3)(d) establishes a site as a significant Goal 5 aggregate resource. More specifically:

- The location of the Site and resource has been documented.
- The quality of the significant resource meets and exceeds the ODOT specifications for base aggregate.
- The quantity of the resource is approximately 8.1 million tons, which exceeds the minimum 2 million ton requirement.
- The Site is not ineligible on the basis of soil allocations on the site.

Therefore, the County can amend the inventory in the comprehensive plan to list the Canby Pit - Phase 4 Site as a significant aggregate resource site.

B. If the Site Is Significant, What Is the Extent of the Resource’s Impact Area? (OAR 660-023-0180(5)(a))

“The impact area shall be large enough to include uses listed in [OAR 660-023-0180(5)(a) and (b)(A) through (F)] 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.” OAR 660-023-0180(5)(a).

In this instance, available evidence demonstrates that the impact area is appropriately limited to 1,500 feet from the boundaries of the “mining area”. See OAR 660 23 180 (5)(a).

Technical studies prepared by qualified consultants are relied upon to identify potential conflicts with existing or approved land uses within the Impact Area from mining and to determine the extent of such conflicts, if any. These technical studies, which are included as Appendices A through H provide the evidentiary and analytical basis for a determination of compliance with applicable requirements of OAR 660-023-0180(5). The technical studies include analyses of traffic conditions, noise and other potential discharges, groundwater conditions, and archaeological information within the impact area.

The impact area is defined by OAR 660-023-0180(5)(a) as a maximum of 1,500 feet, except when factual information demonstrates that it is necessary to go beyond 1,500 feet. This is measured from the mining area, which includes the actual excavation of the resource. The Applicant’s technical studies found no factual evidence indicating the presence in this instance of significant potential conflicts with existing or authorized uses beyond 1,500 feet. As such, the impact area is properly limited to 1,500 feet from the boundaries of the mining area Site, as depicted on the Impact Area Map (Figure 2).

As required by OAR 660-023-0180(5)(b)(B), a transportation analysis was completed for local roads within one mile of the entrance to the site (Appendix D). However, the size of the transportation study area is not representative of the size of the impact area, because the scope of the transportation analysis study area is established separately within the Goal 5 Rule.

The impact area is properly limited to a distance of 1,500 feet from the boundaries of the mining area because there is no evidence of “significant potential conflicts” beyond this distance.

1. Existing and Approved Uses Within the Impact Area

Goal 5 requires that the existing and approved land uses within the impact area be identified to allow the County to evaluate conflicts between such uses and the proposed mining activity. The Goal 5 Rule describes what uses constitute existing and approved uses and lists the limited types of conflicts to be considered during this portion of the local government’s Goal 5 evaluation.

Based upon available information, an inventory of existing land uses within 1,500 feet of the Canby Pit - Phase 4 site has been completed. The existing land uses in the 1,500-foot impact area can be characterized generally as surface mining, rural industrial, large lot rural residential, and agricultural practices (Figure 2). Table 1 in Appendix H identifies each tax lot or portion of a tax lot in the impact area and lists the apparent existing uses on each tax lot.

Under Goal 5, “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.” OAR 660-023-0180(5)(b).

Of the 59 tax lots within the impact area, an inventory of uses within the impact area was completed based upon available information. Tax lots within the impact area were reviewed for applicable zoning and current uses. Given the extensive history of mining within the impact area and surrounding area beginning in the 1950's, surface mining and associated activities are domain to the site to the north, northeast and east within the impact area. See Figure 4 and Appendix H. Industrial uses occupy the lands within the impact area to the west and northwest of the site. There appears to be approximately 20 residences within the impact area, which are located primarily to the south and west of the site. Finally, within the 1,500-foot impact area, there appears to be 6 vacant parcels zoned Exclusive Farm Use. These vacant parcels are owned by the Union Pacific Railroad Co. and Weyerhaeuser NR Company. Based on conversations with the County in July 2019, there are no current or pending land use approvals for those 6 vacant parcels.

C. What Conflicts, if Any, Could Be Generated Between the Resource and Existing or Approved Land Uses in the Impact Area? (OAR 660-023-0180(5)(b))

1. Conflict and Identification Assessment

Under the Rule, a conflict is deemed minimized when either reduced to a level that is no longer significant or the identified conflict is addressed by local, state, or federal regulatory standards. For purposes of demonstrating compliance with the Goal 5 rule, conflicting uses or activities located within the impact area must be identified and assessed for potential conflicts per the rule; such conflicts must be minimized by reasonable and practical measures as a condition of authorization absent the County's analysis of the ESEE consequences of allowing or not allowing the proposed mining. OAR 660-023-180(5)(c). A 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. OAR 660-023-0180(1)(b). However, the Rule expressly limits the conflicts that may be considered in making the decision to allow mining to only those conflicts specified in OAR 660-023-0180(5)(b)(A) through (F), which states:

“(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[.]” OAR 660 023 0180(5)(b).

The narrative discussion below identifies and describes potential conflicts, along with proposed minimization measures and methods that, when implemented, will reduce the identified potential impacts to a level no longer significant.

D. If Conflicts Are Identified, Are There Any Reasonable and Practicable Measures that Would Minimize the Conflicts? (OAR 660-023-0180(5)(c))

1. Conflicts Due to Noise, Dust, or Other Discharges

As required by the Goal 5 rule, the Applicant has evaluated the potential conflicts due to noise, dust, and other discharges that might arise with regard to existing and approved uses and associated activities that are sensitive to such discharges. OAR 660-023-0180(5)(b)(A). Where conflicts are identified, the County must determine whether there are any reasonable and practicable measures that would minimize the identified conflicts to a level that is no longer significant. OAR 660-023-0180(1)(g); OAR 660-023-0180(5)(c). For conflicts addressed by local, state, or federal standards such as Oregon Department of Environmental Quality (“DEQ”) standards for noise and dust levels, “minimize a conflict” means to ensure that the mine conforms to the applicable standard. *Id.* As such, these local, state, or federal standards are effectively “safe harbors” for the project. If reasonable and practicable measures are identified to minimize all identified conflicts, the County must allow mining at the site. OAR 660-023-0180(5)(c). Proposed conditions to ensure mitigation of such conflicts are presented with this submittal.

a. Noise

ABD Engineering and Design (“ABD”) evaluated the noise levels predicted to occur under a worst-case scenario from mining activities at the mining site. The report is included as Appendix C. The information contained in that report is merely summarized here for reference purposes, and the Noise Report should be reviewed for purposes of methodology and technical analysis/conclusions.

Noise conflicts are considered minimized under the Goal 5 rule (OAR 660-023-0180(1)(f)) when the relevant sections of Oregon Department of Environmental Quality (DEQ) noise regulation OAR 340-035-0035 are met. Therefore, to address the requirements of the Goal 5 regulation, the ABD study was conducted using the criteria set forth in the DEQ noise regulation OAR 340-035-0035, “Noise Control Regulations for Industry and Commerce.”

The ABD study was based on the following:

1. The loudest hourly statistical noise levels that could ever radiate from the proposed mining operations were predicted at residences in the vicinity of the site. The residences chosen were considered representative of the residences in the area with the greatest potential of receiving noise that could exceed the appropriate criteria.
2. The loudest hour noise levels predicted at the residences were compared to the limits specified in the DEQ “Noise Control Regulation for Industry and Commerce” (OAR Chapter 340, Division 035).
3. Noise mitigation measures were identified where needed to ensure the noise would meet the DEQ noise regulation limits and thus minimize noise as required by the Goal 5 rule.
4. In addition to predicting noise levels at individual noise sensitive receivers, noise level predictions were also made to determine what ABD calls the “DEQ Noise Compliance Boundary” for the site. The “DEQ Noise Compliance Boundary” is defined as the boundary around the mine site within which noise radiating from the site will exceed the DEQ noise regulation limits. Outside the boundary, the noise levels will be less than or equal to those specified by the noise regulations. In this study, ABD considered the area where noise levels will exceed the DEQ regulation limits as the noise impact area addressed in the Goal 5 rule.

There are three statistical noise level criteria specified in the DEQ regulation (the hourly L_{01} , L_{10} , and L_{50} noise levels), of which the hourly L_{50} noise level is the most difficult criterion to meet for mining operations. This is due to the fact that the noise associated with a mining site that has excavation and crushing operations is typically fairly steady in level and duration. Although only excavation is occurring on the site, there were residences where the criterion was not met.

Table 1, below (Table 4 of the ABD report) indicates several residences exceed the DEQ loudest hourly daytime noise level of 55 dBA. (See Figure 5 and of the report for a map showing the locations of the noise receivers).

Table 1: Predicted loudest hour noise levels at nearest residences without mitigation

Receiver ¹	Loudest Hourly L_{50} Noise Level ² (dBA)			DEQ Daytime Hourly L_{50} Noise Level Limit (dBA)
	Conveyor & Processing	Excavation	Total	
R1	37	44	45	55
R2	43	51	51	
R3	35	38	40	
R4	43	55	56	
R5	37	45	45	
R6	39	48	48	
R7	45	61	61	
R8	41	52	53	
R9	39	49	50	
R10	42	67	67	
R11	41	57	57	

Receiver ¹	Loudest Hourly L ₅₀ Noise Level ² (dBA)			DEQ Daytime Hourly L ₅₀ Noise Level Limit (dBA)
	Conveyor & Processing	Excavation	Total	
R12	42	66	66	
R13	43	70	70	
R14	36	50	50	
R15	38	53	53	
R16	42	57	57	
R17	37	51	51	

ABD analyzed the worst case scenario for noise radiating from the site's equipment. From this, ABD has recommended the following proposed conditions to minimize the impact of noise on the residences and meet the required DEQ noise levels.

MINIMIZATION OF POTENTIAL NOISE CONFLICTS – PROPOSED CONDITIONS:

ABD's report recommends the following noise control measures to meet the DEQ noise limits within the impact area, as shown in their report. See Figure 7 of this application for residences locations and proposed mitigation.

- Noise levels at R4 will remain in compliance with the DEQ noise regulation limit with the excavation and two front-end loader hauling operations occurring as proposed if a 20 foot high barrier² is constructed at the southeast corner of the site where shown in Figure 6.
- Noise levels at R7 will remain in compliance with the DEQ noise regulation limit with the excavation and two front-end loader hauling operations occurring as proposed if a 25 foot high barrier is constructed where shown in Figure 6 at the east and north sides of receiver R7, and also a 20 foot high barrier is constructed where shown on the north and west sides of R7.
- Noise levels at R10 – R13 will remain in compliance with the DEQ noise regulation limit if a 35 foot high barrier is constructed where shown in Figure 6 in the southwest corner of the site in the vicinity of residences R10 – R13, and an administrative control is used that requires the excavator to use retreat mining traveling from south to north in the blue cross-hatched portions of Cells 4A, 4B, and 4C. Additionally, when operations occur within the red-dotted overlay, only one FEL may be used to transport material to the conveyor feed-hopper.
- Noise levels at R16 will remain in compliance with the DEQ noise regulation limits if a 20 foot high barrier is constructed along the perimeter of the site where shown in Figure 6 in the northwest part of the site, and an administrative control is used that requires the excavator to use retreat mining traveling from south to north in the blue

¹ Barrier heights are relative to the existing grade elevation of the site, 100 feet above sea level.

cross-hatched portions of Cells 4A, 4B, and 4C. Additionally, when operations occur within the red-dotted overlay, only one FEL may be used to transport material to the conveyor feed-hopper.

Table 2, below (Table 5 of the ABD report) reflects implementing the above mitigation measures which will meet the DEQ daytime hourly noise level.

Table 2: Predicted loudest hour noise levels at nearest residences with mitigation

Receiver ²	Loudest Hourly L ₅₀ Noise Level (dBA)			DEQ Daytime Hourly L ₅₀ Noise Level Limit (dBA)
	Conveyor & Processing	Excavation	Total	
R1	37	47	47	55
R2	43	51	52	
R3	35	38	39	
R4	43	54	55	
R5	37	45	45	
R6	39	48	49	
R7	42	54	55	
R8	41	51	51	
R9	39	47	48	
R10	40	54	54	
R11	38	52	52	
R12	42	54	54	
R13	42	55	55	
R14	36	49	49	
R15	38	51	51	
R16	42	54	54	
R17	36	47	48	

The results of ABD's noise study demonstrates that, with the use of reasonable and practicable noise control mitigation measures, noise levels radiating from equipment operating at the aggregate mine and within the proposed Phase 4 area will be in compliance with the Oregon Department of Environmental Quality (DEQ) Noise Control Regulations.

b. Dust

Topsoil/overburden removal, stockpiling and aggregate extraction and reclamation activities proposed at the site are potential sources of dust. Typically, the need for dust suppression arises when the upper levels of topsoil/overburden are disturbed during the summer dry conditions. Dust and dust generating activities are addressed by mine operators at every quarry and gravel mine in Oregon. Over the years, the industry has developed standard dust suppression methods acceptable to operators, DOGAMI and neighbors.

While dust often is the most noticeable consequence of aggregate extraction operations, successful mitigation measures are readily available and, if properly employed, fugitive emissions can be controlled to insignificant levels. Further, it is important to note that the

majority of the aggregate of this location will be mined in the “wet” and thereby significantly reduce dust emissions.

Dust mitigation measures to be employed at the subject site are the subject of the specific recommended conditions, which are summarized below. These mitigation measures are well established, feasible, and utilized throughout in the aggregate mining industry. These measures are also recommended in the Oregon Department of Geology and Mineral Industries Best Management Practices guidelines.

MINIMIZATION OF POTENTIAL DUST CONFLICTS – PROPOSED CONDITIONS:

- (a) Onsite haul roads and staging areas will be watered as a method for suppressing fugitive dust emissions.
- (b) Topsoil and overburden will be stockpiled or used for construction of berms on site. They will be seeded in order to reduce the potential of wind or surface water erosion and protect neighboring properties from potential dust emissions.
- (c) Dewatering of the site will only occur 10 feet below the ground water level. This allows the majority of the resource to be mined in the “wet”, greatly reducing the potential for dust generation.
- (d) A 15 MPH speed limit for onsite truck traffic will be posted on all haul roads within the subject site. Low travel speeds serve to reduce the amount of dust compared to the volumes generated at higher speeds.
- (e) Conveyors will be covered to help keep the materials wet.
- (f) The applicant maintains a DEQ Air Containment Discharge Permit for the current crusher located on the Cadman processing site. The permit regulates and conditions dust emission levels at the existing plant.

c. Wetlands

No wetlands are identified within the mining area and associated impact area on the U.S. Fish and Wildlife Service National Wetlands Inventory (NWI), as documented in the SWCA letter in Appendix E.

d. Groundwater

The applicant retained the professional services of H.G. Schlicker & Associates (HGSA) for the purpose of providing a study reflecting groundwater conditions on the Site and within the 1500 foot impact area. A copy of the HGSA report is included in the application in Appendix B. The study identifies the classification of the aggregates that underlie the subject property as an alluvial deposit, based on numerous borings and monitoring wells on the site. The report states that the alluvial deposit on the site consists of interbedded sand and gravel with a silty matrix. Available well logs within the 1,500 foot impact area were analyzed for the type of geologic deposit present and the water levels of the various wells. There is an upper terrace to the south

of the site, approximately 60 feet above the site. Well logs from the upper terrace indicate the deposits are typically sands or gravels with interbeds of silty and clayey materials.

HGSA analyzed potential impacts to the water quality and quantity of mining the cells on site and within the impact area. Water quality and quantity will continue to be monitored utilizing the five monitoring wells on site along with additional monitoring wells to be constructed. Mining will occur for the most part in the “wet”; however the water level will be lowered (dewatered) approximately 10 feet below the water table to access the deeper sand and gravel.

In order to protect the domestic and irrigation wells near the Phase 4 expansion site from groundwater drawdown due to dewatering, mine cells are proposed to be primarily wet-mined such that there is minimal lowering of the groundwater surface. Dewatering will be limited to a depth of approximately 20 feet, which is approximately 10 feet below the groundwater levels that were present prior to mining in the Phase 3 area. Extensive monitoring of onsite wells for any changes in the groundwater quality and quantity will be implemented. Furthermore, an approximately 20 feet deep infiltration trench may be constructed along the southern boundary of the proposed Phase 4 expansion area to maintain groundwater at sufficient levels to prevent significant impacts to nearby wells if monitoring data indicates substantial impact will occur.

HGSA concluded that the effective filtering of alluvial deposits, the proposed restrictive depth of dewatering, and monitoring the water quantity and quality on site for any changes will provide measures that will support their conclusion that groundwater quality and quantity will not be compromised as a result of onsite extraction operations.

MINIMIZATION MEASURES OF POTENTIAL GROUNDWATER CONFLICT – PROPOSED CONDITIONS:

In accordance with provisions of OAR 660-023-0180(5)(D), HGSA has recommended the following measures to minimize impacts on groundwater sources within the designated impact area.

- (a) Appropriate equipment shall be utilized for “wet” mining extraction for removal of the gravel below the depth of approximately 20 feet.
- (b) Mining shall begin at the northern part of the site moving in a west – east direction progressing to the south, excavating one cell at a time. This will allow ongoing monitoring of the groundwater quantity and quality during mining and will provide real-time data on groundwater levels as mining progresses across the site.
- (c) There are five monitoring wells installed on the site to measure the groundwater quality and quantity during mining. HGSA recommends installation of an additional four monitoring wells prior to the initiation of mining, as presented on Figure 10 in Appendix B.
- (d) Wells should be monitored quarterly for at least one year prior to initiation of mining and the five southern monitoring wells should have continuous water level recorders for the life of the mine.

- (e) All monitoring wells should be monitored prior to mining and semi-annually for heavier and lighter hydrocarbons (DX and GX), and polycyclic aromatic hydrocarbons (PAHs) until the wells are abandoned or for the life of the mine.
- (f) If a trend is observed that could significantly affect nearby wells, the applicant shall work with regulatory agencies to modify its mining plans to mitigate the effects to a level no longer significant within the impact area. Strategies to accomplish this could include:
 - establishment of a recharge area constructed at the southern end of the Canby Phase 4 site so that the recharge activity is directly between the mining activity and the nearby domestic and irrigation wells,
 - altering the mining cell order and/or size of the mining cells, and/or
 - reducing dewatering depths.
- (g) A report of monitoring data shall be submitted to DOGAMI and Clackamas County upon request.
- (h) If water well quantity impacts were to occur with the impact area, the company shall rebuild to its historic level of production any well that is demonstrated to be significantly affected by its operations.

e. Archaeological Study

An archaeological study was performed by Heritage Research Associates, Inc. (HRA) for the Site to determine if potentially significant early historical or prehistoric archaeological resources are present that may be impacted by mining (Appendix F). The purpose of the study is to ensure compliance with Section 106 of the National Historic Preservation Act of 1966 (as amended) and with Oregon state laws requiring identification and protection of archaeological resources.

HRA concludes that no evidence of artifacts, cultural features, or sites relating to early historical or prehistoric activity was observed during their survey. Based on the nature of the Site, HRA considers it unlikely that significant cultural resources are present. There is a chance that ground disturbing activities may expose previously undiscovered cultural deposits or materials that are early historical or prehistoric in age. In anticipation of such a find, an Inadvertent Discovery Plan (IDP), such as that presented in Appendix F, should be put in place prior to ground disturbance to ensure actions and notification in compliance with Oregon State law (ORS 97.740 to 97.760, 358.905 to 358.955, and 390.235) that requires that work in the vicinity of such finds be suspended immediately.

MINIMIZATION MEASURES OF POTENTIAL ARCHAEOLOGICAL CONFLICTS – PROPOSED CONDITIONS:

Listed below are mitigation measures that will be implemented.

- (a) An Inadvertent Discovery Plan (IDP) should be put in place prior to ground disturbance to ensure actions and notification in compliance with Oregon State law (ORS 97.740 to 97.760, 358.905 to 358.955, and 390.235) that requires that work in the vicinity of such finds be suspended.

f. Other Discharges

An evaluation of conflicts from “other discharges” is limited to conflicts that could occur between the proposed mining and those existing and approved uses and associated activities in the impact area that are sensitive to such discharges. “Other discharges” considered from the site are: (1) diesel engine emissions from onsite mobile equipment and vehicle travel and (2) stormwater runoff. The effects of these discharges are evaluated under OAR 660-023-0180(5)(b)(A).

(i) Diesel Engine Emissions

Use of mining equipment and vehicles will generate diesel engine exhaust, which contains pollutants such as nitrogen oxides, carbon monoxide, sulfur dioxide, and particulate matter. The release of diesel emissions could, if not minimized, create potential conflicts with residential uses in the Impact Area. In order to mitigate, control, and limit these criteria pollutants from diesel engines in operation at the project site, the following actions and Best Management Practices (BMP’s) of preventative measures will be implemented.

The majority (in terms of total fleet horsepower) of diesel engines powering off-road equipment shall meet federal Tier 3 off-road engine standards or better. This requirement can be met by using equipment with engines originally built to meet these standards or through additional abatement measures that can be undertaken on existing equipment.

Therefore, minimization measures include adherence to DEQ and EPA standards and is the subject of a recommended condition of approval. Because these measures will be in conformance with applicable DEQ and EPA standards, these measures will, by definition, minimize diesel emission conflicts from the mine for purposes of OAR 660-023-0180.

MINIMIZATION OF POTENTIAL DIESEL ENGINE CONFLICT – PROPOSED CONDITIONS

By implementing the following mitigation measures on the site, they will minimize any potential diesel engine emissions as a potential conflict will be minimized consistent with adopted state and federal standards:

- (a) Off-road equipment shall meet federal Tier 3 off-road engine standards, and/or equipment to be modified as such.

(ii) Stormwater

DOGAMI and DEQ have joint regulatory authority of the treatment and discharge of stormwater at mine sites. Turbid stormwater can be generated when stormwater runoff is allowed to flow over areas of disturbed soils. As mining progresses across the Site, removal of vegetation and

overburden will occur, exposing the soil to potential erosion. BMP's will be utilized at the Site and will be used as part of the mining process on the Site to protect surface water runoff.

The current Phase 3 and processing site have a Stormwater Protection Control Plan (SWPCP) and DEQ Stormwater permit in place and approved by DOGAMI (Appendix G). As with Phase 3, stormwater will be infiltrated back into Phase 4 and/or collected and conveyed offsite to the processing site to stormwater ponds. If stormwater is planned to exit the Phase 4 site within the same manner as that described within the SWPCP for Phase 3, the plan will be revised for review and approval by DEQ and DOGAMI as a condition of Phase 4 operations. The revised plan will document that storm and surface waters are properly managed in accordance with permit requirements.

MINIMIZATION OF POTENTIAL STORMWATER CONFLICTS – PROPOSED CONDITIONS:

Best management practices and potentially a revised stormwater plan would be in effect for the life of the mine site.

The applicant has incorporated these reasonable and practicable measures into its proposed conditions of approval as follows:

- (a) Applicant shall prepare an SWPCP for the Phase 4 mining, and provide documentation of approval from DEQ and DOGAMI, as required.
- (b) The mining operator shall comply with the stormwater and erosion control measures approved by DEQ when conducting mining activities on the Site.

2. Potential Conflicts to Local Roads

The Goal 5 administrative rule requires an assessment of:

“[p]otential 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.”

A traffic study was prepared by Sandow Engineering, LLC (“Sandow”). The access to the site is off of S. Barlow Road approximately three quarters of a mile (3/4) from Highway 99E. No commercial truck traffic will access Phase 4. All processed aggregate will exit the existing processing area immediately to the east of Phases 3 and 4 across S. Barlow Road. The study addressed how the proposed extraction site will impact local transportation networks. A copy of the study is included in the application (Appendix D).

The Sandow Report evaluated the traffic volume based on the fact that the future Phase 4 operations will generate the same truck traffic at the processing area as that of the permitted Phase 3. The current Phase 3 operations are permitted to generate during AM peak operations up to 154 daily truck trips and 120 daily truck trips during PM peak hours.

The Sandow Report conclusions state that:

- The existing site driveway will meet the mobility standard for the year of opening and through the end of Clackamas County Transportation System Plan planning horizon with the comprehensive plan amendment.
- The existing horizontal alignment of all roadways can accommodate truck traffic consistent with applicable standards under Goal 5.
- The application was found to meet all applicable traffic analysis code criteria.
- The Transportation Planning Rule (TPR) has been demonstrated to be met for the proposed zone change and comprehensive plan amendment.
- Highway 99E at South Barlow Road currently does not meet the adopted mobility standard which is expected to continue through Clackamas County's Transportation System Plan planning horizon. Oregon Highway Plan Action 1F.5 defines the mobility standard as no further degradation for this intersection. Since the application requests authorization of a minable inventory of aggregate resource to replace depleted resources at the facility, traffic associated with the application of the MAO overlay from the proposed aggregate extraction operation does not modify the volume-to-capacity ratios beyond existing background conditions, meeting ODOT mobility targets as defined in the Oregon Highway Plan.

Goal 5 (specifically, OAR 660-23-180(5)(b)) requires that local governments determine existing and approved land uses within the impact area that will be adversely affected by proposed mining operations and specify the predicted conflicts. For determination of traffic conflicts from proposed mining of a significant aggregate site, the local government shall limit its consideration to the following:

“(B) Potential conflicts to local roads used for access and egress to the mining site within one mile of the entrance of 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;” OAR 660-23-180(5)(b)(B)

Goal 5 requires an analysis of potential transportation impacts to **local roads**, i.e. not state or federal roadways, used for access and egress to the mine site within one mile of the entrance or to the nearest arterial, if a greater distance is necessary. Vehicle traffic generated by the subject site will remain the same as that of Phase 3; no additional truck trips will be implemented. S. Barlow Road is considered a “major arterial” by the Clackamas County Transportation System Plan. Highway 99E has an Oregon Highway Plan designation of Regional Highway and National Network (Federal Designated Truck Route), Federal Functional Classification of a

Principal Arterial, and is under ODOT's Jurisdiction. S. Barlow Road is the only local road providing direct ingress or egress to the processing area. No commercial trucks will be accessing Phase 4 directly because all trucks will be only accessing/leaving the processing area. Once at the intersection of Highway 99E and S. Barlow Road, the primary vehicular route will be travel to the east on Highway 99E or continuing north on S. Barlow Road.

The analysis evaluated the sight distance, intersection geometry, road capacity, and horizontal elements. All elements meet applicable standard either by existing conditions or by proposed mitigation to improve existing conditions. The Transportation Planning Rule requires an evaluation of traffic operations at intersections that will be impacted by the proposed zone change and mining operation.

The nearest major intersection is Highway 99E at S. Barlow Road which was evaluated to determine if the proposed zone change and development will significantly affect the intersection as defined in the Transportation Planning Rule. This is the only intersection within 1 mile that will receive regular turning truck traffic. The transportation analysis evaluates conflicts from truck traffic generated by the site from the driveway of the processing site to the intersection of Highway 99E and S. Barlow Road. Analysis by Sandow concludes that this intersection meets all Goal 5 criteria with regard to site distance, turning movements, road capacity and horizontal alignments associated with the Phase 4 mining. This condition is based upon the fact that the number and distribution of truck trips for Phase 4 will be consistent with existing trips associated with current Phase 3 mining.

Goal 12, (OAR) 660-12-0060 (1) requires that a local government ensures that an amendment to a functional plan, an acknowledged comprehensive plan, or a land use regulation (including a zoning map) does not significantly affect an existing or planned transportation facility. A plan or land use amendment significantly affects a transportation facility if it would:

“(a) *Change the functional classification of an existing or planned transportation facility (exclusive of correction of map errors in an adopted plan);*

The traffic from the proposed plan amendment/zone change and use will not change the functional classification of any existing or planned transportation facilities.

(b) *Change standards implementing a functional classification system; or*

The traffic from the proposed plan amendment/zone change will not change the standard implementing a functional classification system.

(c) *Result in any of the effects listed in paragraphs (A) through (C) of this subsection based on projected conditions measured at the end of the planning period identified in the adopted TSP.*

(i) *Types or levels of travel or access that is inconsistent with the functional classification of an existing or planned transportation facility;*

The traffic from the proposed plan amendment/zone change and use will not result in levels of travel or access that are inconsistent with the functional classification of an existing or planned transportation facility.

(ii) *Degrade the performance of an existing or planned transportation facility such that it would not meet the performance standards identified in the TSP or comprehensive plan; or*

The traffic from the proposed plan amendment/zone change and use will not degrade the performance of any existing or planned transportation facility to below mobility standards.

(iii) *Degrade the performance of an existing or planned transportation facility that is otherwise projected to not meet the performance standards identified in the TSP or comprehensive plan.” OAR 660-12-0060(1).*

This criterion is not applicable as the studied intersection has been identified to not meet the mobility standards.

In summary, Sandow did not identify potential conflicts to local roads. Their study provides information that demonstrates that future aggregate extraction operations at the subject property will not adversely impact the transportation network in the area.

MINIMIZATION OF POTENTIAL TRANSPORTATION CONFLICTS:

As the Sandow Report concludes, there are no conflicts with the proposed use and roads. The existing access entrance off S. Barlow Road connecting to Highway 99E will continue to be used for access to the processing site for all Phase 4 processing and off-site road access. The Phase 4 site is contiguous with the existing Phase 3 site and will utilize existing Phase 3 access driveways, no new access driveways are necessary.

3. Safety Conflicts with Existing Public Airports (OAR 660-023-0180(5)(b)(C))

The purpose of this aspect of the analysis is to ensure that the proposed mining use does not maintain water impoundments that attract birds, which can cause safety conflicts for nearby airports. As specified in OAR chapter 660, division 013, and ORS 836.623, new water impoundments are subject to conflict minimization only if located within the approval zone of a public airport and within 5000 feet of the end of a runway approach corridor. The closest public airport is the Aurora Airport, located approximately 9,800 feet west of the site, and the Phase 4 does not lie within the mapped Aurora approach corridor. Accordingly, this conflict criterion is not applicable.

4. Conflicts with Significant Acknowledged Goal 5 Resource Sites (OAR 660-023-0180(5)(b)(D))

The County must also consider whether the proposed mining will conflict with other inventoried Goal 5 resource sites within the Impact Area that are shown on an acknowledged list of significant resources. OAR 660-023-0180(5)(b)(D). Specifically, Division 23 limits consideration of conflicts with Goal 5 resources to “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 Clackamas County Comprehensive Plan includes acknowledged inventories of significant Goal 5 resources. Based upon a review of such adopted inventories, the subject mining site and impact area contain no such inventoried resources other than nearby existing aggregate resources site, as discussed below. Regarding significant wetland status under the National Wetland Inventory mapping, *see* Appendix E, (SWCA memo).

a. Mineral and Aggregate Resources, OAR 660-023-0180

Goal 5 Significant Aggregate Resource Sites

Aggregate extraction and processing of gravels has historically been part of the local landscape since the 1950’s. There are four aggregate resource properties inventoried by the County as significant which are located within the impact area. The four aggregate resource sites are identified as follows:

1. Cadman Phase 3 Pit (Paradis) – active mine
2. Cadman (old Wilmes) – current processing area
3. Cadman (Rodrigues) – inactive mine, part of the processing area/stormwater ponds
4. CalPortland site – active mine

The three Cadman sites are consolidated as one operation: current surface mining on the Paradis site (Phase 3) and processing on the old Wilmes and Rodrigues sites. A small portion of the CalPortland site lies within the northeastern portion of the 1,500 foot impact area. The operations at the CalPortland site and Cadman Phase 3 are similar in scope. Based on similar types of operations and the apparent consistency of self-generated aggregate mining conflicts, there are no impacts on the CalPortland site resulting from operations at the proposed Phase 4 Cadman aggregate extraction site. Based on conversations with the County in July, 2019, there are no other Goal 5 significant resources inventoried within the impact area of the Phase 4 site.

Minimization Measures

Based on the above, minimization measures are not required.

5. Conflicts with Agricultural Practices (OAR 660-023-0180(5)(b)(E))

IDENTIFICATION OF POTENTIAL CONFLICTS:

In this review of the application, the County must consider whether future operations at the subject site will generate any conflicts or impacts with agricultural practices. The County is required to follow ORS 215.296 when conducting their analysis rather than the requirements of the Goal 5 rule. ORS 215.296 requires that a use will not:

- (a) “Force a significant change in accepted farm or forest practices on surrounding lands devoted to farm or forest use.”
- (b) “Significantly increase the cost of accepted farm or forest practices on surrounding lands devoted to farm or forest use.”

Based upon available information, the following narrative provides the necessary analysis and supporting evidence demonstrating compliance with the above criteria as to accepted farm/forest practices within the immediate area.

Aggregate mining has been active in the area since the mid-1950's. Aggregate and agriculture within the area have both been ongoing activities. Both activities have a long history in the area, are good neighbors to each other and provide much needed jobs. As aggregate mines move across the landscape in this area, reclamation includes lakes, wetlands and wildlife habitat which enhance the area. The following is a description of the agricultural uses within the Impact Area of Phase 4.

Based on a reconnaissance of the impact area, it appears that there are three properties that under hay cultivation and two properties under corn cultivation located west of Phase 4 and west of both Highway 99E and the Union Pacific Railway. The hay cultivation properties range from 700 to 1,200 feet from Phase 4. The corn cultivation ranges from 400 to 1,000 feet from Phase 4.

One property cultivating hay is located south of Phase 4 on a terrace approximately 60 feet above the site and approximately 600 feet to the south; and one property with a variety of vegetables being grown is also located on the terrace, approximately 1,400 feet to the south of the property.

For those properties under commercial cultivation west of Phase 4, no foreseeable change in accepted farm practices or costs would be anticipated given the distance from Phase 4 and given the railroad and Highway 99E in-between those properties and Phase 4.

For those properties under commercial cultivation south of Phase 4, no foreseeable change in acceptable practices or costs would be anticipated given the elevation difference between the site and those properties above and given the distance from Phase 4.

Weyerhaeuser has a tree seedling site adjacent to S. Lone Elder Road and Highway 99E. The Weyerhaeuser property is located approximately 500 feet southwest of the proposed mining area and on an upper terrace approximately 60 feet in elevation above the proposed extraction site. Weyerhaeuser produces evergreen seedlings for reforestation projects. Additionally, there are two commercial nurseries within the impact area. Willamette Nursery is located about 700 feet south of the proposed mining area on the same terrace and produces fruit and ornamental trees. Miles Nursery is located approximately 1200 feet to the southeast of the proposed mining area on the same terrace, and produces primarily trees and bushes (maples, etc.) for commercial sale.

Based upon distance and higher elevation, the primary potential impact to these agricultural produces relates to dust emissions. Upon implementation of proposed dust impact minimization measures, any impact resulting from future operations would be insignificant at best. The majority of agriculture activities in the area are located south and at least 60 feet above of the

subject site, which is terraced land adjacent to S. Lone Elder Road. Since the mine operation will only be dewatering the upper 10 feet of the water table, the majority of the mining will be in the “wet” with the result that the aggregate materials will be wet when excavated. Watering the interior mine site roads, conveyors and implantation of the dust BMPs as proposed will further minimize impacts.

The following analysis addresses potential impacts associated with other potential mining conflicts with accepted agricultural practices:

1. The Sandow Traffic Study concludes that the applicant’s current and future use of the local transportation network will not adversely impact traffic conditions in the area. The study identifies the continued use of the existing driveway access from the processing area onto S. Barlow Road to Highway 99E, major intersections in the proximity of the subject site, and the daily trip loads of trucks traveling to and from the existing gravel operations. Furthermore, the report concludes that future transportation use will be in compliance with applicable State Standards and Requirements. Based on the above, there will be no conflicts between transportation and accepted agriculture practices and associated costs.
2. Surface water runoff will be subject to an updated Stormwater Pollution Control Plan (SWPCP) for Phase 4 if water will be going offsite. Consistent with the current Phase 3 SWPCP, surface water from Phase 4 will be conveyed to the processing facility to stormwater ponds and not onto agricultural lands located in the Impact Area.
3. HGSA prepared a Groundwater study for Phase 4 as previously discussed. Extensive monitoring of wells on Phase 4 and restrictions to depths of dewatering to mine the resource will reduce impacts to offsite agricultural wells to minimal. See Appendix B.

Based on all of the above, the County can find that mitigation measures implemented in the mine plan will reduce impacts generated at the extraction site to a minimal level on surrounding properties, including agricultural lands.

6. Conflicts with Ordinances That Supersede DOGAMI Regulations

OAR 660-023-0180(5)(b)(F) requires an assessment of conflicts for which consideration is necessary to carry out ordinances that supersede DOGAMI regulations pursuant to ORS 517.780. The County has not adopted any ordinances that supersede DOGAMI regulations; therefore, OAR 660 023 0180(5)(b)(F) is not applicable.

7. Summary of Predicted Conflicts

The Goal 5 Rule defines “uses” subject to conflict minimization as follows, OAR 660-023-0180(5)(b):

*“(b) The local government shall determine **existing or approved land uses** (emphasis added) 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.”

Further “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** (emphasis added);”*

As explained previously, the scope of the County’s consideration of predicted conflicts is limited to the conflicts listed in OAR 660-023 0180(5)(b)(A) through (F). Existing and approved uses in the impact area have been identified and potential conflicts with the proposed mining assessed. A summary and discussion of the limited potential conflicts and recommended minimization measures is set forth below. Table 2 at the end of the document represents potential uses which may be allowed in the current underlying zone within the impact area.

BPA has determined that the tower and transmission line is sensitive to only those limited uses and activities which are identified in the conditions incorporated into the existing agreement for the tower facility on Phase 3; these identified potential conflicts are minimized through implementation of the measures incorporated into the executed agreement with BPA. The proposed conditions of approval include a condition requiring such ongoing compliance. See Appendix J.

8. Conflict Minimization Plan

*“If reasonable and practicable measures are identified to minimize all identified conflicts, mining shall be allowed at the [significant aggregate resource] site * * *.”*
OAR 660 023 0180(5)(c).

“‘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.” OAR 660 023 0180(1)(g).

*“To determine whether proposed measures would minimize conflicts to agricultural practices, the requirements of ORS 215.296 shall be followed * * *.”* OAR 660 023 0180(5)(c).

All potential conflicts with approved and existing uses within the impact area requiring that consideration under OAR 660 023 0180(5)(b)(A) through (F) have been identified as described above. For potential conflicts which may be more than insignificant, such conflicts are minimized through implementation of reasonable and practicable measures described below, which are included as proposed approval conditions.

SUMMARY OF MINIMIZATION TO POTENTIAL CONFLICTS

a. Minimization of Noise Conflicts

The ABD report indicates that without mitigation, potential exceedances of noise levels allowed under the DEQ administrative rule could occur at certain residences within the 1,500 foot impact under worst-case conditions. Therefore, minimization measures are required to minimize the potential conflict, which, in this case, means compliance with DEQ noise regulations. Noise barriers will minimize the noise impacts in accordance with the DEQ standards. As presented in the previous section, the proposed minimization measures are both reasonable and practicable, as well as consistent with of established industry standards for such mitigation. *See* proposed conditions of approval numbers 22 – 25.

b. Minimization of Dust Conflicts

As discussed, the proposed wet mining for the majority of the site will significantly reduce the extent of dust emissions within the impact area. In addition, application of water on interior roads, stockpiles, and disturbed surfaces via implementation of the proposed dust management condition of approval will greatly reduce the potential for generation of dust to a level no longer significant. Dust impact minimization requirements are addressed in the proposed conditions of approval numbers 26 - 29.

c. Minimization of Surface Water and Groundwater Conflicts

Surface water will be allowed to infiltrate into the Phase 4 area and/or will be conveyed to the stormwater ponds at the processing facility for eventual outfall into the Molalla River. No surface water will otherwise leave the site, which ensures no stormwater discharge impact to water or the impact area. Impacts to wells in the Impact Area is reduced to an insignificant level by only dewatering approximately 10 feet below the water level and extensive on site monitoring of wells. *See* Appendix B and proposed condition of approval numbers 12 – 18.

d. Minimization of Traffic Conflicts

The Sandow Engineering traffic report indicates that no mitigation measures are necessary as there are no traffic conflicts identified. Under OAR 660-023-180(1)(g) when compliance with an existing standard is demonstrated, the conflict is deemed to be minimized.

e. Minimization of Goal 5 Resource Conflicts

The only resources identified on the acknowledged Goal 5 inventory are the four other Aggregate Resource sites, of which the applicant owns three. Phase 4 will not be in conflict with the existing inventoried mine sites that are adjacent to or near the site due to the similar nature of the resources.

f. Concluding Statement

*“The local government shall determine reasonable and practicable measures that would minimize the conflicts identified under subsection (b) 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.” OAR 660-023-0180(5)(c).

The above analysis and related evidentiary support demonstrate that all potential conflicts within the impact area and as required under ORS 215.296 have been minimized using reasonable and practicable measures in accordance with OAR 660-023-0180(5)(c), and the application otherwise fully complies with the remainder of applicable Goal 5 requirements. Consequently, approval of the proposed PAPA and Site Review is warranted and supported by available evidence.

E. If Any Identified Conflicts Cannot Be Minimized, Does an Analysis of the Economic, Social, Environmental, and Energy (“ESEE”) Consequences of the Resource Support Approving the Mining Use? (OAR 660-023-0180(5)(d))

If the local government identifies significant conflicts that cannot be minimized, the local government must determine the ESEE consequences of allowing, limiting, or not allowing mining at the site. OAR 660-023-0180(5)(d). However, where the local government has identified reasonable and practical measures to minimize all identified conflicts, mining must be allowed at the site, and no ESEE analysis is necessary. OAR 660-023-0180(5)(c). For the reasons set forth above, all identified potential conflicts will be minimized with the recommended minimization measures. Therefore, this criterion is not applicable.

F. If Mining Is Approved, What Is the Post-Mining Use of the Site? (OAR 660-023-0180(5)(f))

1. Conceptual Reclamation Plan

“An Application for a PAPA concerning a significant aggregate site shall be adequate if it includes:

** * * * **

(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), OAR 660 023 0180(8)(b).

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.” OAR 660-023-0180(5)(f).

Under Goal 5, a conceptual reclamation plan is required to be submitted as part of the PAPA Application. The purpose of the conceptual reclamation plan is to demonstrate that the site can be mined and reclaimed in a viable manner. A conceptual reclamation plan that satisfies the requirements of Goal 5 is provided on Figure 7, which also provides documentation of the post-mining use that the Applicant proposes.

DOGAMI Reclamation Requirements

The mine and reclamation plans prepared by Cadman meet the requirement of the Goal 5 rule (OAR 660-023-180(8)(b)) and the conceptual DOGAMI reclamation requirements. Figures 6 and 7 contain the proposed mine and reclamation plans for the Site. A DOGAMI operating permit will be secured following land use approval at the County. The purpose of the operating permits issued by DOGAMI is to show the agency and the public that Phase 4 will be excavated and reclaimed in a safe manner, leaving a stable condition once reclamation is final.

Conceptual Reclamation Plan

Reclamation will be initiated once cell 4a is completed, as the mining moves into cell 4b. Where possible, reclamation will be concurrent with mining until mining ceases. The western portions of cells 4a and 4b will be backfilled with overburden from other cells and brought back to the approximate original elevation of 100 MSL. As previously described, the remaining portions of the site will be reclaimed as a lake. The mine and reclamation plans propose to leave a stable site once reclamation has been completed. All final grading will occur as part of the mine plan. The conceptual reclamation plan (Figure 7) presents the approximate final contours and site elevations. Final reclamation of the Site is consistent with the proposed zoning.

Upon approval, the County must determine the post-mining use of the Site and provide for this use specifically in the MAO zone, OAR 660-023-0180(5)(f). A reclamation plan set will be prepared and submitted to DOGAMI by Cadman with the appropriate mining phasing, final contours and site elevations, final slope inclination, and placement of overburden materials. Post-mining uses of Phase 4 are those allowed as outright and conditionally under a current map designation. In this instance, the County can determine that the partial backfilling and lake creation and subsequent development of uses and activities allowed under current acknowledged land use regulations applicable to the site are authorized, subject to final DOGAMI authorization.

The County can find that the applicable Goal 5 reclamation provisions are met.

G. If Mining Is Approved, Does an ESEE Support the County Allowing, Limiting, or Preventing Conflicting Uses Within the Impact Area? (OAR 660-023-0180(7))

If the County approves the Applications, the County, in its discretion, may choose to allow, limit, or prevent new conflicting uses within the Impact Area. OAR 660-023-0180(7). In order to do so, the County must follow the standard ESEE process in OAR 660-023-0040 and 660-023-0050. *Id.* At the time of this submittal, the Applicant is not requesting that the County authorization include limitations on or prohibitions of new conflicting uses in the Impact Area. If however, the County determines otherwise upon approval, the Applicant will assist with the preparation of an appropriate ESEE analysis as necessary to address any such determination.

1. Program to Achieve Goal 5

“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 Applications does not provide information sufficient to determine clear and objective measures to resolve identified conflicts;

(B) Not requested in the PAPA Applications; or

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

For each Goal 5 resource site, the local government conducting the Goal 5 evaluation must adopt comprehensive plan provisions and land use regulations to implement the decisions made pursuant to Goal 5. See OAR 660-023-0050(1). Within the context of a PAPA request made under Goal 5 in relation to a mineral and aggregate resource, and therefore within the context of OAR 660-023-0180, the relevant decisions are those relating to:

- determining resource significance,
- authorizing mining,
- identifying conflict minimization measures, and
- limiting, allowing, or prohibiting future conflicting uses.

The aggregate-specific section of Goal 5 requires that local governments shall, upon a demonstration of compliance with applicable Goal 5 criteria, amend the Goal 5 resource inventories in their comprehensive plan to include the significant site and to amend the comprehensive plan and implementing map designations, together with issuance of site plan approval to allow mining and to provide for the post mining use. See OAR 660-023-0180(5)(e) and (f).

The Applicant’s recommendations for amendments to the Clackamas County Comprehensive Plan and implementing map designations, together with discretionary permit authorization, necessary to implement the County’s determination that the site is a significant Goal 5 mineral and aggregate site and decision to allow mining of the site are:

- Amend the County’s Comprehensive Plan Text and Comprehensive Map and Zone Map to include (designate) approximately 99 acres of property as a Significant Mineral and Aggregate Resource Site;
- Add a Mineral and Aggregate Overlay (MAO) district (Clackamas County Zoning and Development Ordinance Section 708) to the Extraction Area; and
- Approve Site Review for this site.

2. Oregon Statewide Planning Goals

(Goal 5 Analysis and Potential Impacts)

Since 1973, the State of Oregon has adopted nineteen (19) Land Use Goals that provide as a foundation and guideline for Land Use Regulation in the State. The adopted Statewide Planning Goals are listed below:

Goal 1.	Citizen Involvement, OAR 660-015-0000(1)	Goal 11.	Public Facilities and Services
Goal 2.	Land Use Planning, OAR 660-0	Goal 12.	Transportation
Goal 3.	Agricultural Lands	Goal 13.	Energy Conservation
Goal 4.	Forest Lands	Goal 14.	Urbanization
Goal 5.	Natural Resources, Scenic and Historic Areas, and Open Space	Goal 15.	Willamette River Greenway
Goal 6.	Air Quality and Land Source Quality	Goal 16.	Estuarine Resources
Goal 7.	Areas Subject to Natural Hazards	Goal 17.	Coastal Shorelines
Goal 8.	Recreational Needs	Goal 18.	Beach and Dunes
Goal 9.	Economic Development	Goal 19.	Ocean Resources
Goal 10.	Housing		

Oregon's statewide planning program is directed by Land Conservation and Development Commission (LCDC). LCDC relies on a partnership between state and local governments for implementation of the 19 Statewide Goals through local comprehensive planning. Implementation is further achieved through portions of the Clackamas County Zoning and Development Ordinance (ZDO), as applicable to these Applications.

On January 15, 2019, the applicants' representatives met with County staff to introduce the project. The following portions of the ZDO, as they pertain to the Mineral and Aggregate Overlay zone were discussed by staff. Below is a discussion of compliance with Statewide Planning Goals.

Generally, the Oregon Statewide Planning Goals apply to PAPAs. ORS 197.175(2)(a); *1000 Friends of Oregon v. LCDC*, 301 Or 447, 724 P2d 268 (1986). See also *Beaver State Rock, Inc. v. Douglas County*, 43 Or LUBA 140 (2002) (post-acknowledgment plan amendment to add a new site to County's Goal 5 inventory must comply with applicable Goals). The Applications request a PAPA, including a request to add a new aggregate site to the County's inventory of significant sites under Goal 5. Therefore, certain Goals are applicable, and the Applications must demonstrate consistency with such provisions. For the reasons explained below, the County can find that the PAPA Applications are consistent with the Goals.

Goal 1. Citizen Involvement

Purpose: To develop a citizen involvement program that insures the opportunity for citizens to be involved in all phases of the planning process.

Response: Clackamas County has adopted in its Land Use Planning process, incorporated programs designed for citizen involvement. The adopted programs are identified as notice to citizens, neighbors, regulatory agencies and local citizen planning organizations. Citizens have the opportunity to comment either in written form or at a series of public hearings, their opposition to or support of a Land Use application. These procedures will provide ample opportunity for citizen involvement in all phases of these Applications. The County can find that, upon compliance with the County's notice and hearing procedures, the Applications are consistent with Planning 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

Purpose: To establish a Land Use Planning process and policy framework as a basis for all decisions and actions related to use of land and to assure an adequate factual base for such decisions and actions.

Response: Goal 2 requires establishing a land use planning process and policy framework as a basis for all 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 enclosed 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. As such, 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 will provide notice and an opportunity to comment to affected government agencies, and the State Department of Land Conservation and Development (DLCD).

The County can find that the Applications are consistent with Planning Goal 2.

Goal 3. Agriculture Lands

Purpose: To preserve and maintain agriculture lands.

Response: Goal 3 requires for the preservation and maintenance of farm lands. In terms of addressing Goal 3, ORS Chapter 215 provides that certain non-farm uses may be allowed on properties zoned Exclusive Farm Use (EFU). Aggregate mining is identified as a type of use allowed subject to the standards, provisions, and requirements of Oregon's adopted Land Use rules and statutes and the approval by the respective County the EFU property is located in.

LCDC has adopted the Goal 5 PAPA process to assist in the balancing between preservation and maintenance of agricultural lands and the need to protect significant mineral and aggregate resources. Following the provisions of the PAPA rule (which includes a conflict analysis and mandatory analysis of measures to minimize effects on agriculture uses and practices on agricultural lands), Goal 3 and ORS 215.296 allow counties to authorize non-farm uses defined by LCDC that will not have a significant adverse effect on farms or farm practices.

Measures are available to minimize the potential effects of the Applicant's proposed mining activities on commercial agricultural uses and farm practices on surrounding lands. As demonstrated by the discussion of ORS 215.296 above, Applicant's requested mineral and extraction use will not have any significant adverse effect on accepted farm practices or the cost of accepted farm practices on surrounding lands. Because mineral and aggregate uses are allowed under state statute on agricultural lands and Goal 5 provides a process for balancing all statewide goals, the Applications complies and meets the requirements of Planning Goal 3.

The County can find the Applications are in compliance with Goal 3.

Goal 4. Forest Lands

Purpose: 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, fish and wildlife resources and to provide for recreational opportunities and agriculture.

Response: Goal 4 requires that forest lands be maintained for continuous use and economic purposes. The subject site is not located in a zoning district which implements Goal 4. Based on the above, the County can conclude that Goal 4 is not applicable to these applications.

Goal 5. Natural Resources, Scenic and Historic Areas, and Open Spaces

Purpose: To identify, inventory and protect natural resources within the State of Oregon. OAR 660-015-0000(5) including amendments effective 8-30-96 requires local governments to adopt programs, procedures, and criteria when evaluating conflicting "Goal 5" categories.

Response: Goal 5 calls for the protection of natural resources and the conservation of scenic and historic areas and open spaces. Goal 5 identifies mineral and aggregate resources as a significant resource. As applied to mineral and aggregate sites, Goal 5 is implemented by OAR 660-023-0180. This narrative addresses requirements of this adopted administrative rule, including how the location, quantity, and quality of the mineral and aggregate resource on the Site are significant. Mining is currently occurring on Phase 3 immediately to the north of the proposed Phase 4. In addition, previous mining and current processing of materials from Phase 3 occurs immediately to the east of Phases 3 and 4. Lastly, mining is currently occurring to the northeast of Phase 4 on the CalPortland site. This area has had historic mining since the early 1950's due to the quality of the sand and gravel underlying this area. This application narrative identifies potential conflicts between Phase 4 and allowed uses and proposes reasonable and practicable measures to minimize identified conflicts.

The Clackamas County Comprehensive Plan includes acknowledged inventories of significant Goal 5 resources. Based upon a review of such adopted inventories and discussion with County staff, the subject mining site and impact area contain no such inventoried resources other than nearby existing aggregate resources site.

For these reasons, the County can find that the Applications are consistent with Goal 5.

Goal 6. Air, Water, and Land Resource Quality

Purpose: To maintain and improve the quality of the air, water and land resources of the State.

Response: The purpose of Goal 6 is to maintain and improve the quality of the air, water and land resources of the state. Excavation of aggregate is requested as part of these Applications. As such, discharges from surface water runoff will continue to be in compliance with the current Phase 3 SWPCP, as modified for Phase 4 during the DOGAMI permitting process and subject to

applicable DEQ requirements. Consistent with best management practices (BMP's) established by the Oregon Department of Environmental Quality (DEQ) the Applicant will minimize dust emissions by using water, as well as conducting the majority of the proposed excavation in the "wet". Pursuant to a DOGAMI permit and DOGAMI standards, reclamation will be accomplished partial backfilling of the excavation and by the creation of a lake in accordance with the conceptual reclamation plan. This ultimately will improve the quality of the Site by transforming it from an agricultural field to a lake.

The applicant has included in the application, copies of current regulatory permits related to air and water.

1. DEQ Air Contaminant Discharge Permit – which provides evidence that a similar permit for Phase 4, if necessary, is equally feasible.
2. DEQ NPDES 1200A Storm-water Discharge Permit and Phase 3 SWPCP plan – which provides evidence that a similar permit for Phase 4, if necessary, is equally feasible.

For the reasons set forth in the DEQ permits relating in Appendix G for water quality and in Appendix J for air quality, the County can find that the Applications are consistent with Goal 6.

Goal 7. Areas Subject to Natural Hazards

Purpose: To protect people and property from natural hazards.

Response: The subject site is elevated above the one hundred (100) year flood elevation and is classified as an Upland Property. The property is not listed on the County's "Hazard Map" which identifies lands that are likely to be impacted by a natural hazard whether flood, landslides, earthquakes, tsunamis, coastal erosion, or wildfire. The applications are consistent with Goal 7; therefore, the requirements of Goal 7 are satisfied.

Goal 8. Recreational Needs

Purpose: 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.

Response: Goal 8 requires satisfying the recreational needs of citizens and visitors and to some extent provide for the permitting of recreational facilities located on or near the subject site. The Molalla River is approximately three quarters of a mile (3/4) due east of Phase 4. At that distance, there should be no interruption to the current recreational uses currently employed on the river. The County will find that the applications are consistent with Goal 8 thereby, satisfying the objectives of the Goal.

Goal 9. Economic Development

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

Response: The subject site is located in a rural area of Clackamas County and is located outside the Metropolitan Portland Urban Growth Boundary. In terms of economic goals, the planned project will further the sustainability of the County's Economic Development Plan by providing continued employment, welfare, health and prosperity for approximately 15 to 20 employees and their families; as well as local truckers and service providers for the mining industry.

Aggregate products are essential to construction and infrastructure development to the degree that virtually all projects are dependent upon the materials produced. Phase 4 will contribute to the various aggregate products needed to support the varying construction projects for several years.

The County will find that the objectives and requirements of Goal 9 are satisfied.

Goal 10. Housing

Purpose: To provide for the housing needs of the State.

Response: A requirement of Goal 10 is that local Governments are required to inventory and subsequently maintain an anticipated inventory of buildable lands that will support future population growth. The applications are not in conflict with the requirements of Goal 10. The availability of buildable lands in the area is limited due to conflicting zoning districts.

The approval of the applications will however, provide the housing sector identified in the County's Comprehensive Plan with an essential construction material. Residential development, as it exists in today's society cannot be constructed without the use of aggregate products and their subsequent use in hot mix asphalt and ready-mix concrete.

The County can find that the applications are consistent with Goal 10; to the extent that it is applicable.

Goal 11. Public Facilities and Services

Purpose: To plan and develop a timely and efficient arrangement of public facilities to serve as a framework for Urban and Rural Development.

Response: The submitted applications do not require public water, sanitary, or storm-water services. Goal 11 does not apply to the applications.

Goal 12. Transportation

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

Response: Aggregate mining operations at the Cadman properties have been part of the landscape in this area for over thirty (30) years. Throughout that period, Highway 99E has been the predominant route used for the delivery of aggregates to construction sites. Goal 12 requires providing a safe, convenient, and economic transportation system. The Project will further the objectives of this goal by providing a material (aggregate) 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 D, Sandow compared the reasonable worst-case trip generation scenario of the Site under the existing zoning designation (EFU), with the reasonable worst-case trip generation scenario under the proposed zoning designation (MAO). This comparison indicated that Phase 4 would generate the same amount of trips under the proposed zoning designation as that of the adjacent Phase 3 site; however, at the end of the County planning period 2033, 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.

Goal 13. Energy Conservation

Purpose: To conserve energy.

Response: Aggregate mining sites located in the close proximity of Urban Growth centers conserve energy by consuming less fuel, in comparison to sites that are located at further distances. The subject site is located in proximity of several Urban Growth centers. These market locations include Canby, Wilsonville, Tualatin, Oregon City, West Linn, Lake Oswego, Milwaukie, Gladstone and the Sunnyside Corridor.

The County can find that the applications are consistent with Goal 13.

Goal 14. Urbanization

Purpose: To provide for an orderly and efficient transition from rural to urban land.

Response: The subject site is located in a rural area and is located outside the Metropolitan Urban Growth Boundary. The rural area is predominately zoned Exclusive Farm Use with MAO allowing mining by Clackamas County. Aggregate mining is considered a rural land use and does not promote urbanization. Therefore, given its location being surrounded in the most part by mining and agricultural properties, in its current state, Goal 14 is not applicable.

Goal 15. Willamette River Greenway

Purpose: 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.

Response: The subject property is not located in the designated Willamette River Greenway. The County can find that Goal 15 is not applicable to the application.

Goal 16. Estuarine Resources

Purpose: To recognize and protect the unique environmental, economic, and social values of each estuary and associated wetlands; and to protect, maintain, where appropriate develop, and where appropriate restore the long-term environmental, economic, and social values, diversity and benefits of Oregon's estuaries.

Response: The subject site is not located near an estuarine resource therefore; the County can find that Goal 16 is not applicable to the application.

Goal 17. Coastal Shorelines

Purpose: To conserve, protect, where appropriate, develop and where appropriate restore the resources and benefits of all coastal shorelands, recognizing their value for protection and maintenance of water quality, fish and wildlife habitat, water-dependent uses economic resources and recreation and aesthetics. The management of these shoreland areas shall be compatible with the characteristics of adjacent coastal waters; and to reduce the hazard to human life and property, and the adverse effects upon water quality and fish and wildlife habitat, resulting from the use and enjoyment of Oregon's coastal shorelands.

Response: The subject property is not located within a coastal shoreland area therefore; the County can find that Goal 17 is not applicable to the application.

Goal 18. Beaches and Dunes

Purpose: To conserve, protect, where appropriate develop, and where appropriate restore the resources and benefits of coastal beach and dune area; and to reduce the hazard to human life and property from natural or man-induced actions associated with these areas.

Response: The subject site is not located near a designated beach or dune area therefore; the County can find that Goal 18 is not applicable to the application.

Goal 19. Ocean Resources

Purpose: To conserve marine resources and ecological functions for the purpose of providing long-term ecological, economic, and social value and benefits to future generations.

Response: The subject site is not located near the Pacific Ocean therefore; the County can find that Goal 19 is not applicable to the application.

Conclusion: The applications satisfy the standards, provisions, and requirements of OAR 660-023-0180 and are consistent with the goal requirements set-forth in Oregon Land Use Rules and Statutes. The County has been provided sufficient information, explanation, and detail and should make a decision of approval.

IV. REQUEST FOR MODIFICATION OF CONDITION OF APPROVAL FOR BOARD ORDER Z20348-93-CP/Z0349-93-Z - MATERIAL PROCESSING ON A SATURDAY

On January 12, 1995, the Board of Commissioners issued an order approving a Comprehensive Plan Amendment to add tax lots 600, 700 and 800 (4-1E-8) as a “Significant Aggregate Site” on the Goal 5 inventory included in The Plan and applying The MAO district to the subject properties. These properties are the site of the existing Aggregate Processing Facilities which will serve the proposed Phase 4 expansion, and such processing activities also were authorized under the Board’s action.

The conditions of Approval imposed under the Board’s action include the following condition;

“5. Mining, processing and hauling shall be restricted to the hours of 7:00 a.m. to 6:00 p.m., Monday through Friday. Other activities may operate without restriction provided that the Department of Environmental Quality noise control standards are met.”

Subsequent to the Board’s imposition of the Condition of Approval, Section 708.05.F of the CCZDO was amended to expressly allow processing operations on Saturday as well as Monday through Friday.

The Applicant requests that the above-referenced condition of approval be amended concurrent with final action on this Application to authorize Cadman Materials, Inc processing facilities on Saturday’s between the hours of 8:00 p.m. and 5:00 p.m.

V. CLACKAMAS COUNTY ZONING AND DEVELOPMENT ORDINANCE

A. Section 708 – Mineral and Aggregate Overlay District (MAO)

Background: The consolidated applications consist of expanding the Phase 3 site onto contiguous properties under the control of Cadman (Canby Pit - Phase 4). The extraction operations will involve transport of the aggregates via a conveyor system to the east under S. Barlow Road to the current processing site owned by Cadman. There is an established transportation route from the processing site north on S. Barlow Road to Highway 99E. The size of Phase 4 is approximately 99 acres which includes the proposed approximate 94 acre aggregate extraction site. The Goal 5 Significance/Geology Report prepared by HGSA estimates approximately 8.1 million tons of alluvial sand and gravel materials underlay the property and that the aggregates meet the applicable standards of Goal 5 to establish that the property is a Significant Mineral and Aggregate Resource Site.

The applicant has developed a mine plan consistent with site planning regulations implementing the MAO designation, i.e. Section 708. The plan, which is included as Figure 6 includes

adopting mitigation measures recommended by expert consultants and engineers that will reduce impacts resulting from operations to the level of minimal or insignificant.

The mine plan identifies the contiguous sand and gravel property (Phase 3), operations and infrastructure facilities in place that serve the operations. The narrative includes information that provides as a basis of how the application satisfies the applicable standards and procedural requirements of the County's Zoning Development Ordinances, identified as ZDO's 708, 1006, and 1010. Such evidence and analysis demonstrating compliance is set forth in the various studies and reports prepared by consultants, which are attached as Appendices A – F. 708.01 Purpose

The Mineral and Aggregate Overlay District (MAO) carries out the decisions and policies of the Comprehensive Plan for significant mineral and aggregate resources. The overlay assures protection of mineral and aggregate resource sites and regulates the mining of these sites to assure compatibility with nearby land uses.

Response: In accordance with the provisions and policies outlined in Clackamas County's Land Use, ZDO Section 708, the application submitted is a request to include the proposed Canby Pit - Phase 4 aggregate extraction site into the County's Mineral and Aggregate Overlay (MAO) District and to inventory the extraction site as a Significant Mineral and Aggregate Resource site in accordance with OAR 660-023-0180(3)(a).

708.05 Extraction Area Development Standards

The following standards and criteria are applicable to mining and processing activities in the MAO District. Before beginning any mining or processing activity, the applicant shall show compliance with these standards and criteria.

A. Access

On-site roads used in mining and processing, and access roads from the extraction area to a public road shall meet the following standards:

1. All access roads within 100 feet of a paved county road or state highway shall be paved, oiled, or watered.

Response: The subject site will not require new access/egress locations. S. Barlow Road will be utilized for access purposes. The driveway into the processing facility is paved for a distance of approximately 1,500 feet and is washed, as needed, as a dust control measure. Gravel roads on site and within the processing facility are well maintained and watered for dust control. A truck wheel wash is located approximately 1,800 feet east of the processing facility's exit driveway which connects to S. Barlow Road. Trucks are required to use the wheel wash prior to leaving the site. This measure provides that potential tracking of mud is greatly reduced, as well as dust is further suppressed on site.

2. All roads in the mining area shall be constructed and maintained to ensure compliance with applicable state standards for noise control and ambient air quality.

Response: ABD analyzed future aggregate extraction operations to account for the loudest predicted noise levels that could ever radiate at the site. Based on the study, ABD recommended noise mitigation measures that when implemented would reduce noise to allowable levels. The applicant has incorporated in its Mining Plan, the recommendations of the ABD Noise Study.

Roads in the mining area shall be constructed and maintained for ambient air quality compliance purposes. A list of measures and methods incorporated in the Mining Plan operations are as follows:

- (a) Onsite haul roads will be elevated, graded, graveled, ditched (where necessary) and maintained.
 - (b) Operations at the mining site will include the watering of haul roads and staging areas. This mitigation method ensures that dust emissions are reduced to minimal levels.
 - (c) Onsite haul roads will not be constructed within two hundred fifty (250) feet of a neighboring residence. This measure ensures that dust emissions will not be generated as a result of road usage in sensitive areas adjacent to the extractions site.
3. All roads in the extraction area shall be paved at all points within 250 feet of a noise or dust sensitive uses existing on February 22, 1996.

Response: There are no roads in the extraction area that are within 250 feet of the residences.

B. Screening

1. The mining activities listed in Subsection 708.05(B)(2) shall be obscured from the view of screened uses, unless one of the exceptions in Subsection 708.05(B)(4) applies. Screening shall be accomplished in a manner consistent with Subsection 708.05(B)(3).
2. Mining Activities to be Screened:
 - (a) All excavated areas, except where reclamation activity is being performed, internal onsite roads existing on the date of County adoption, new roads approved as part of the Site Plan Review, material excavated to create berms, and material excavated to change the level of the mine site to an elevation that provides natural screening.

Response: The screening of the excavation area of Phase 4 will include the construction of new screening and noise control barriers around the majority of the extraction site. Future barriers will be constructed along the west, south and east property lines. The barriers will be built up in such a manner to restrict access.

(b) All Equipment Stored on the site:

Response: All equipment stored within the excavation site area will be buffered by the screening perimeter berms. The equipment to be stored is identified as the portable conveyor system, hydraulic excavator, and a front end loader. Haul trucks and a dozer when stripping overburden for a new mine cell will be stored on site. All other equipment such as dump trucks, service vehicles and water trucks will be stored at the existing Cadman processing facility. Additionally, as the site is excavated, the equipment stored will be stationed on the lowered levels, and out of public view.

3. Types of Screening:

- (a) Natural screening is existing vegetation or other landscape features within the boundaries of the excavation area that obscure mining activities from screened uses. Natural screening shall be preserved and maintained except where removed according to a Mining or Reclamation Plan approved by DOGAMI.

Response: Very few trees are present on the Phase 4 site. Vegetation consists of low growing grasses for livestock and bushes along some property lines. The hillside climbing immediately to the south of Phase 4 is treed and does provide a substantial amount of natural screening along the southern border. The impact area to the south is adjacent to the natural bluff topography. An exception to the screening is warranted based on Section 708.05(B)(4).

- (b) Supplied screening is either vegetative or earthen screening. Supplied vegetative screening is screening that does not exist at the time of the Site Plan Review. Plantings used in supplied vegetative screening shall be evergreen shrubs and trees, and shall not be required to exceed six feet in height when planted. Supplied earthen screening shall consist of berms covered with earth stabilized with ground cover.

Response: The screening berms constructed of the overburden will be seeded in a Perennial Rye Grass for ground cover and erosion control purposes. Where a combination of dirt berm and/or wall or other structure for noise attenuation is planned, a variety of vegetation can be planted to obscure the structure (s).

4. Exceptions: Supplied screening shall not be required if any of the followings circumstances exist:

- (a) The natural topography of the site obscures mining and processing from screened uses.

Response: The natural topography of the site does not obscure the site; therefore, the exception does not apply.

- (b) Supplied screening can effectively obscure the proposed aggregate extraction property from public view.

Response: Screening utilizing berms, where appropriate, will obscure the proposed aggregate extraction property.

- (c) Supplied screening can be established by implementing best management practices.

Response: Supplied screening of the subject site will be established by implementing best management practices. The practices include the selection of grasses and plants conducive to the intended use, applying proper planting techniques and maintaining the vegetation planted in a manner that provides for healthy growth, which in turn provides for an established screening of the aggregate extraction site.

C. Air and Water Quality

Air Quality – The discharge of contaminants and dust created by mining and processing shall comply with applicable state air quality and emissions standards and applicable state and federal water quality standards.

Response: The applicant shall operate the subject mining site in compliance with applicable State Air Quality and Emission Standards. The applicant maintains DEQ issued permits that regulate operating conditions and requirements at the active aggregate mining operation. The permits are identified as Air Contaminant Discharge Permit No. 37-0494-08-01 and an NPDES-1200A-Stormwater Discharge Permit/SWPCP. If the application is approved, the applicant will amend the referenced permits to include operations at the subject site. Copies of the permits are included in the application in Appendix G. The applicant has an approved DOGAMI regulated Stormwater Control Plan in place for Phase 3. The plan will also be modified to include Stormwater Control measures and methods that will be employed in Phase 4.

D. Streams and Drainage

Mining and processing shall not occur within 100 feet of mean high water of any lake, river, perennial water body or wetland not constructed as part of a reclamation plan approved by DOGAMI unless allowed by specific provisions adopted in the Comprehensive Plan.

Response: The applicant is not proposing to mine within 100 feet of the mean high water of any lake, river, perennial waterbody or wetland. There will be no processing on the site.

E. Noise

Mining and processing shall comply with State Noise Control Standards. Operators may show compliance with noise standards through the report of a certified engineer that identifies mitigation methods to control noise. Examples of noise mitigation measures are siting mining and processing using existing topography, using supplied berms, or modifying mining and processing equipment.

Response: The application includes a noise analysis and report prepared by ABD. *See* Appendix C. The purpose of the study was to identify noise impacts resulting from aggregate extraction and to recommend mitigation methods for noise control. The Noise Study provides mitigation measures which demonstrate that the extraction operation will be in compliance with applicable DEQ requirements.

The purpose of the study was to identify noise impacts resulting from aggregate extraction and to recommend mitigation methods for noise control. The Noise Study provides mitigation measures to assure the extraction operation will be in compliance with the DEQ requirements.

F. Hours of Operation

1. Mining and processing is restricted to the hours of 7:00 am to 6:00 pm Monday through Friday and 8:00 am to 5:00 pm Saturday. Hauling and other activities may operate without restrictions provided that state noise control standards are met.
2. No operations shall take place on Sundays or the following legal holidays: New Year's Day, Memorial Day, the Fourth of July, Labor Day, Thanksgiving Day and Christmas Day.

Response: Operating hours at the proposed extraction site and the processing facility shall be restricted to 7:00 am to 6:00 pm Monday through Friday and 8:00 am through 5:00 pm on Saturday. There will be no work performed on Sunday.

The following holidays will be recognized and no work will be conducted.

- | | |
|-------------------|---------------------|
| 1. New Year's Day | 4. Labor Day |
| 2. Memorial Day | 5. Thanksgiving Day |
| 3. Fourth of July | 6. Christmas Day |

G. Drilling and Blasting

1. Drilling and blasting is restricted to the hours of 9:00 am to 4:00 pm Monday through Friday. No drilling or blasting shall occur on Saturdays, Sundays, or the

following holidays: New Year's Day, Memorial Day, the Fourth of July, Labor Day, Thanksgiving Day, and Christmas Day.

2. Notice of blasting events shall be posted at the Extraction Area in a manner calculated to be seen by landowners, tenants, and the public at least 48 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 days and hours when the blasting event is expected to occur.

Response: There will be no drilling for blasting or blasting at the subject extraction site.

H. Surface and Groundwater

Surface and groundwater shall be managed in a manner that meets all applicable state water quality standards and DOGAMI requirements. The applicant shall demonstrate that all water necessary for the proposed operation has been appropriated to the site and is legally available.

Response: The NPDES permit for Phase 3 will be revised for Phase 4 to assure water quality standards are met. Water required for dust control will be less than the exempt 5,000 gallons per day in accordance with the Oregon Department of Water Resources requirements.

I. Compliance with Special Conditions

The County may impose additional, special conditions to resolve issues specific to an individual site. The conditions shall be specified in the site-specific program to achieve the Goal adopted as part of the Comprehensive plan.

Response: The applicant acknowledges that Clackamas County may impose special conditions to resolve issues specific to an individual site and that the conditions shall be specific in the site-specific program to adopt as part of the Comprehensive Plan. The applicant has attached a list of proposed conditions that directly apply to the proposed aggregate extraction operations via the requested application of the MAO overlay designation to the Site.

J. Security

The permittee shall fence the Extraction Area boundary between the mining site and any parcel where dwellings are a primary use. Fencing shall be a cyclone type fence a minimum of six feet high.

Response: The requirements of this Subsection do not apply to the permit application because the dwellings located within the Impact Area are within an Exclusive Farm Use (EFU) Zoning District or Farm Forestry (FF10) and a dwelling is not considered the principal use in the EFU or FF-10 Zones. In lieu of fencing, berms will be placed within the setback areas around the extraction area to provide additional security.

K. Performance Requirements

1. The mining operator shall maintain DOGAMI and other state agency permits.

Response: The applicant shall obtain and maintain a DOGAMI Surface Mining permit and approved Reclamation Plan for the subject site. Additionally, other State agency permits will be obtained and maintained. These agency permits include the following:

- (a) DEQ Air Contaminate Discharge permits will be maintained for appropriate equipment.
 - (b) NPDES, 1200-A, Stormwater Discharge will be amended during the DOGAMI permitting phase to include the subject property aggregate extraction site, as necessary.
2. The mining operator shall carry a comprehensive general liability policy covering mining, and incidental activities during the term of operation and reclamation, with an occurrence limit of at least \$500,000. A certificate of insurance for a term of one year shall be deposited with the County prior to the commencement of mining and a current certificate of insurance shall be kept on file with the County during the term of operation and reclamation.

Response: The applicant/operator shall comply with the insurance requirements and forward to Clackamas County a certificate of insurance on an annual basis throughout the term of operation and reclamation of the subject property.

708.06 Reclamation

- A. No mining shall begin until the permittee provides the County with a copy of an Oregon Department of Geology and Mineral Industries (DOGAMI) Operating Permit or exemption in accordance with Oregon Revised Statutes (ORS) 517.750 through 517.900 and the rules adopted thereunder.

Response: The operator of the subject mining site will provide the County with evidence of a current operating permit issued and regulated by DOGAMI prior to the commencement of mining.

- B. The County's jurisdiction over mined land reclamation is limited to determining the subsequent beneficial use of mined areas, ensuring that the subsequent beneficial use is compatible with the Comprehensive Plan and this Ordinance, and ensuring that mine operations and reclamation activities are consistent with the program to achieve the Goal adopted as part of the Comprehensive Plan.

Response: The Reclamation Plan confirms that the proposed reclamation of the mining site is partially backfilled to a generally flat area with a lake. In the event that subsequent alternate development is proposed, such uses and activities will be consistent with

acknowledged land use regulations applicable to the site, which ensures on-going consistency with the Comprehensive Plan.

C. The County shall coordinate with DOGAMI to ensure compatibility between DOGAMI and the County in the following manner:

1. When notified by DOGAMI that an operator has applied for a Reclamation Plan and an Operating permit, the County shall inform DOGAMI whether Site Plan Review approval by the County is required.
 - (a) If a Site Plan Review approval is required, the County shall request that DOGAMI delay final action on the application for approval of the Reclamation Plan and issuance of the Operating Permit until after Site Plan Review approval has been granted.
 - (b) If Site Plan Review approval is not required, the County shall so notify DOGAMI and the County shall review the proposed reclamation plan and Operating Permit during DOGAMI's notice and comment period.

Response: This section requires that Clackamas County and DOGAMI coordinate their review of operating permits and Reclamation Plans. The Site Plan review has been applied for as part of this application and will be subject to review by Planning Commission and the Board of County Commissioner prior to the issuance of DOGAMI's Operating Permit and approval of the Reclamation Plan. The Site Plan is presented on Figure 3 and as the Mine Plan on Figure 6. Based on the above, this criterion is met.

2. When reviewing a proposed reclamation plan and Operating Permit application circulated by DOGAMI, the County shall review the plan against the following criteria:
 - (a) The plan provides for rehabilitation of mined land for a use specified in the Comprehensive Plan, including subsequent beneficial uses identified through the Goal 5 planning process.
 - (b) The reclamation plan and surface mining and reclamation techniques employed to carry out the plan comply with the standards of Subsection 708.05.
 - (c) Measures are included which will ensure that other significant Goal 5 resources determined to conflict with mining will be protected in a manner consistent with the Comprehensive Plan.

Response: The applicant has included in the application a Conceptual Reclamation Plan for the subject property. The purpose for the submittal is to provide County Planning staff, County Planning Commission members, and the Board of County Commissioners with information and

details pertinent to the plan at the same time other sections of the application are being reviewed. It is the applicant's opinion that the inclusion of the Reclamation Plan provides for a clear, concise and complete application. Additionally, the County will have the opportunity to review and provide input during DOGAMI's notice and comment period.

708.07 Extraction Area Permits

- A. An extraction area permit shall require as a Type 1 application pursuant to Section 1307 to the extent that Section 1307 is consistent with the requirements of ORS 197.195 and 215.425.

Response: Pursuant to subsections 1305.02 (A) (E) and (G) through (I), the applicant has filed for an application concurrently with the PAPA and MAO applications and request that the County Planning Commission review and make recommendations to the Board of County Commissioners for a decision of the Site Plan Review application.

- B. An extraction area permit shall be subject to Sections 708, 1006, and 1010, and the requirements of the site specific program to achieve Goal 5 adopted as part of the Comprehensive Plan.

Response: The applicant has responded in a direct, clear and concise manner, to the standards and requirements of Section 708. Compliance with ZDO Sections 1006 and 1010 is addressed below.

708.09 Termination of the Mineral and Aggregate Overlay District

When a site has been fully mined and reclamation has been fully completed, the County shall remove the site from the Comprehensive Plan inventory and rezone the property to remove the MAO District. The Comprehensive Plan amendment and zone change shall be initiated by the County or the owner or contract purchaser of the property comprising the extraction area. If a restrictive covenant is imposed within the MAO District, it shall state that the obligations imposed expire upon the termination of the MAO District.

Response: The provisions and requirements of 708.09 will be met by the applicant/ owner of the property comprising the extraction area. Any restrictive covenants will be removed once the MAO is terminated.

- B. Section 1006 Water Supply, Sanitary Sewer, Surface Water-Septic and Utilities Concurrency**

ZDO 1006 outlines the County's adopted standards and requirements for public services (water supply, sanitary sewer, storm sewer, and utilities) on proposed development in urban and rural land areas. Subsections 1006.01, 1006.02, and 1006.04 describe purpose, general standards, and definitions of the ordinance.

Subsection 1006.05 outlines standards for water supply on land located inside and outside the Portland Metropolitan Urban Growth Boundary. Beginning with Subsection 1006.02, the applicant responds to the standards and provisions of the referenced subsections.

1006.02 General Standards

The standards and requirements of this subsection are related to adequate services and facilities appropriate to the scale and type of development concurrently with the development it is intended to serve. The general standards require that all development which has a need for electricity, gas, and communications services shall install them pursuant to the requirements of the district or company serving the development.

Response: The only utility service required for operations at the aggregate extraction site is electricity. PGE (supplier) provides electricity for the conveyor on site. The electricity will run from the conveyor tunnel under S. Barlow Road south along the east side of Cell 4D and out along the conveyor line as needed.

1006.03 Water supply standards inside the Portland Metropolitan Urban Growth Boundary and Mount Hood Urban area. (6/1/15)

Response: The subject property is not located within an Urban Growth Boundary therefore, the standards and provisions do not apply to the application.

1006.05 Water supply standards outside the Portland Metropolitan Urban Growth Boundary and Mount Hood Urban area. (6/1/15)

Response: The subject property is located outside the Urban Growth Boundary. The area is classified as “Rural” and is not serviced by any public or private water or sewer service district. The extension of public water, sanitary sewer, or storm sewer facilities is not proposed or required to support the proposed aggregate mining operation.

- A. Subsection 1006.05 (A) provides the following; “applicant for any development Permit shall specify a lawful water source for the proposed development, such as a public or community water system, certified water right or exempt-use well.” (6/1/15)

Response: Water will be required for dust control management on haul roads and staging areas within the aggregate extraction site. The volume required is estimated at less than 5,000 gallons per day, and is based on present day quantities used in similar operations at Phase 3. The use of water and the volume of 5,000 gallons per day are considered an Exempt Use in accordance with ORS 537.545, Exempt Uses. Provisions of 537.545 include the following:

1. No registration, certification of registration, application for a permit, Certificate of Completion, or Groundwater Right Certificate under 737.505 (Short Title) to 537.795 (ORS 537.795 Supplementary) and 537.992 (Civil Penalties) is required for the use of ground water for:

- (a) Any single industrial commercial purpose in the amount not exceeding 5,000 gallons per day.

The Water Resource Departments position is that as long as a single, industrial or commercial use does not exceed 5,000 gallons per day, the groundwater source is considered exempt.

- B. All subdivisions outside the Portland Metropolitan Urban Growth Boundary proposing to use an Exempt-Use well or wells and all land divisions, and new industrial, commercial or institutional development located within a sensitive groundwater area and proposing to use an Exempt-Use well or wells must affirmatively demonstrate: (6/1/15)

- 1. That the subject aquifer is capable of sustaining the proposed development with sufficient potable water.

Response: The subject property and water source identified is not located in a sensitive (critical, limited, or inventoried well-head area) groundwater area. As previously noted, the prescribed use of the water source is for dust control purposes.

- 2. That the proposed development is not likely to unreasonably interfere with existing wells (6/1/15)

Response: The application does not request land division authorization and is not limited in a groundwater area. Consequently, this criterion is inapplicable. However, this issue has been addressed in the Hydrogeologic Report (Appendix B). Mitigation measures in the form of restricting dewatering of the mine site and implementation of monitoring wells on site provide protection to existing wells nearby.

- 3. That the proposed development is not likely to contribute to the overdraft of the affected aquifer.

Response: The volume of water required for the prescribed use (dust control) is less than 5,000 gallons per day. The existing water source is not listed by the Department of Water Resources as being located in a critical, limited, or inventoried well-head area. Based on the above, it is highly unlikely that the use will create a situation where an overdraft of the aquifer will occur.

- C. Unless waived by the Planning Director, an applicant for any proposed development subject to ZDO 1006.05 (B) shall submit a hydrogeologic review with the subject application. The purpose of a hydrogeologic review is to provide information on professional analysis regarding the geology and hydrogeology of the area in the immediate vicinity of the proposed development for the County to determine compliance with ZDO 1006.05 (B) (1)-(3). Study findings, maps and conclusions shall be presented in a clear and understandable report. (6/1/15)

Response: A hydrogeological study is not applicable to the application because the provisions and requirements of Subsection 1006.05 (b) apply if the proposed development is a subdivision or if the new development is industrial or commercial and is located within a critical, limited, or inventoried well-head area. The submitted application is not for the development of a subdivision, and the proposed use is not located in a listed critical groundwater area. However, a hydrogeological study has been completed for Phase 4 and is presented in Appendix B. The study evaluates the geology and hydrogeology in the area and on site, and provides reasonable mitigation measures from any impacts as a result of the proposed mining.

- D. All reviews and plans required by this section shall be reviewed by a qualified professional of the County's choice during the development review process. Such review shall include examination to ensure required elements have been completed, study procedures and assumptions are generally accepted and all conclusions and recommendations are supported and reasonable. (6/1/15)

Response: The above is an administrative process and does not require the applicant to participate in the review other than to provide County Planners with additional information if requested.

- E. Outside of sensitive groundwater areas, the Planning Director may, at the Director's discretion, waive some or all of the requirements for a hydrogeologic review where an applicant demonstrates through well logs or other evidence that the specified information is not necessary to determine compliance with ZDO 1006.058. (6/1/15)

Response: The applicant acknowledges that the review and determination is an administrative process that can be made at the discretion of the Planning Director. The applicant has provided information in the application that demonstrates that a hydrogeologic study and subsequent review is not necessary. However, the applicant has provided a hydrogeologic study to support the Goal 5 application.

Information provided in the application includes the HGSA Groundwater Study. There are no documented cases of groundwater drawdown as a result of the minimal amount of water to be used on a daily basis from an exempt groundwater source for dust control.

- F. Water service for partitions and subdivisions shall be provided according to the provisions of ORS 92.090. When no water is to be provided by a public or community system, there shall be a note on the final plat indicating that no public water service is being provided, in addition to the filing and disclosure requirements or ORS 292.090.

Response: The above requirement is not applicable to the application. The provision requirement pertains to subdivision development.

- G. Approved land divisions at densities requiring public water service shall include a note on the final plat indicating that public water service is required for development. (6/1/15)

Response: The above requirement is not applicable to the application. The provision requirement pertains to subdivision development.

- H. For any subdivision of 11 lots or more, all logs shall be served by a single public or community water source. (6/1/15)

Response: The above requirement is not applicable to the application. The provision requirement pertains to subdivision development.

1006.06 Public Sanitary Sewer Systems

- A. All development which has a need for public/private sanitary sewers shall install the facilities pursuant to the requirements of the district or company serving the development. Installation of such facilities shall be coordinated with the extension of necessary water services and storm drainage facilities.

Response: The subject site is located outside the Portland Metropolitan Urban Growth Boundary and the Metropolitan Service District. Public sanitary sewer disposal is not available in the proximity of the subject site therefore; extending services to public sanitary sewer systems is not an option. Additionally, Statewide Goal 11 generally does not allow for public sanitary services to extend beyond a designated service district boundary. Based on the above, the provisions set forth in 1006.06 are not applicable to the application.

- B. Approval of a development that requires public sanitary sewer service shall be granted only if the applicant provides a Preliminary Statement of Feasibility from the sanitary sewage treatment service provider and the collection system service provider. (6/1/15)
1. The statement shall verify that sanitary sewer capacity in the waste water treatment system and the sanitary sewage collection system is available to serve the development or can be made available through improvements completed by the developer or the system owner. (6/1/15)
 2. The service provider may require preliminary sanitary sewer system plans and calculations for the proposed development prior to signing a Preliminary Statement of Feasibility. (6/1/15)
 3. The statement shall be dated no more than one year prior to the date a complete Land Use application is filed and need not reserve sanitary sewer system capacity for development.

Response: The proposed application does not propose a need for public/private sanitary sewers in its operations. The applicant is proposing to use port-a-potties as an alternate to septic systems. The proposed aggregate operations are not stationary in that excavating activities move frequently and are normally conducted over a large area. Permanent or isolated sanitary facilities are not ideal for ever moving employee work stations. The port-a-potties referred to are trailer-mounted and are relocated at staging areas as operations move through the subject site.

1006.07 Subsurface Sewage Disposal Standards

- A. All development proposing sub-surface sewer disposal shall receive approval for the system from the Clackamas County Water Environment Services, Soils Section prior to submittal of a Land Use application to the County for development. Said systems shall be installed pursuant to ORS. 605-454.745 and Chapters 171, 523 and 828. Administrative Rules 340, Divisions 71 and 73 and the policies of the Clackamas County, WES, Soils Section.

Response: The applicant is not proposing a subsurface sewer disposal system for the subject site. The applicant is proposing the use of portable toilets (port-a-potties) for onsite sanitary purposes. Portable toilets have been utilized at the company's existing operations and are considered an effective alternative to septic tanks and drain fields at active aggregate sites. The reason being, as extraction operations move throughout the aggregate extraction site, the portable restroom will be relocated as a means of accommodation and accessibility.

- B. Within the Portland Metropolitan Urban Growth Boundary and the Mount Hood Urban Area, all land divisions or other development requiring subsurface disposal systems shall be prohibited except for:

Exceptions listed in (1) through (4).

Response: Subsection B is not applicable to the application in that the subject site is not located within the Portland Metropolitan Urban Growth Boundary or the Mount Hood Urban Area.

1006.08 Surface Water Management Standards

- A. All developments shall provide for positive drainage and adequate conveyance of storm and surface water run-off from roofs, footings, foundations and other impervious surfaces to an appropriate discharge point and shall:

Response: For the purpose of clarification, the regulatory agency for stormwater control and management at aggregate mining sites is DOGAMI. The applicant has an approved Stormwater/Surface Water Management Control plan in place for operations at the existing Phase 3 site. If the application is approved, the applicant will modify the SWPCP to include like operations on Phase 4.

With regard to requirements of County Roadway Standards, the applicant is not proposing to drain or convey storm/surface waters into roadside ditches. Stormwater will be managed and conveyed to the processing area's stormwater ponds.

- B. Installation of stormwater management and conveyance facilities shall be coordinated with the extension of necessary water and sanitary sewer services.

Response: As previously noted, the subject site is not located within the Urban Growth Boundary or the Metropolitan Service District. In addition, there are no private or community service providers for the collection and control of storm/surface waters in the

rural Barlow area. Therefore, the Provision of 1006.08 (B) does not apply to the application.

- C. Approval of a development shall be granted only if the applicant provides a Preliminary Statement of Feasibility from the Surface Water Management Regulatory Authority. The statement shall verify that adequate surface water management treatment and conveyance is available to serve the development or can be made available through improvements by the developer or system owner.

Response: Storm and surface waters will be managed to allowable levels onsite or at applicants existing stormwater ponds located to the east of the subject aggregate extraction boundary within the processing area. The existing SWPCP will be modified to include measures and methods to be employed at the subject site. Included in the plan will be the location of detention ponds, as needed, proposed methods of conveyance, site conditions, and erosion control measures.

1. The service provider may require a Preliminary Stormwater Management Plan, Stormwater Drainage Report, Natural Resource Assessment and Buffer Analysis prior to signing the Preliminary Statement of Feasibility.

Response: There will be no Service Provider for Storm or Surface Water Management therefore, the provision is not applicable.

2. In those areas that are not within a Surface Water Management District, the Preliminary Statement of Feasibility shall be signed by the County Department of Transportation and Development, Engineering Division. The statement shall be dated no more than one year prior to the date a complete Land Use application is filed and need not reserve surface water treatment and conveyance system capacity for the development.

Response: Preliminary Statement of Feasibility has been obtained, signed and dated by the County's Department of Transportation and Development, Engineering Division.

1006.09 Exceptions

- A. A Land Use application shall be deemed complete and may be approved without the submittal of one or more of the Preliminary Statements of Feasibility required by Subsections 1006.02, 1006.06 and 1006.08 if the applicant demonstrates that a good faith attempt has been made to obtain the statements(s). At a minimum, demonstration of a good faith attempt shall require the applicant to submit the following:

1. A statement signed by the applicant indicating that the Service Provider or Surface Water Management Authority has not responded to a request for a Preliminary Statement of Feasibility, or has refused to issue one, When the refusal to issue a Preliminary Statement of Feasibility is based on a finding that adequate service cannot be provided, such refusal shall not qualify for an exemption under this rule; and

2. A copy of a letter delivered to the Service Provider or Surface Water Management Authority clearly requesting a Preliminary Statement of Feasibility. The letter shall be dated no less than 30 days prior to the submittal of Land Use application.

Response: The applicant will comply with the requirements of ZDO 1006. A Preliminary Statement of Feasibility under the Provisions of 1006.02 will not be required in that onsite water requirements are minimal (less than 5,000 gallons per day) and used for dust control purposes. Information provided in 1006.05 and 1006.05 (1) (F) of this application describes the proposed water source as an Exempt Use under ORS 537.795 (1) (F). Based on the above requirements set forth in 1006.02 (F)(1) do not apply.

- B. In the absence of evidence in the record to the contrary, it shall be presumed that the failure of a Service Provider or Surface Water Management Authority to respond to a request for a Preliminary Statement of Feasibility constitutes a finding of adequacy of service. The presumption shall be for the purposes of Land Use application approval only and does not guarantee that the service can be provided.

Response: The applicant has included in the application, the required Preliminary Statement of Feasibility document.

1006.10 Administration

- A. For subdivisions, partitions, and commercial, industrial, and institutional developments, the provisions of Section 1006 shall be applied during the development review process.

Response: Subsection 1006.10 refers to the County review process of the application. The purpose of the review is to ensure that the provisions, standards and requirements of ZDO 1006 pertaining to the application are included in the application.

C. Section 1010 Signs

1010 Signs

1010.01 Purpose

The provisions of Section 1010 are intended to maintain a safe and pleasing environment for the people of Clackamas County by regulating the size, height, number, location, type, structure, design, lighting, and maintenance of signs.

Response: The application does not include a request for signs. As previously mentioned in the application(s), the designated use of the property is classified as an “expansion” of an aggregate extraction site (Phase 4). The application does not include new access/exit driveways onto Highway 99E or a County road. Access to and from Phase 4 is at the current Phase 3 driveway. The existing access/exit driveway currently has signage for the processing area is on S. Barlow Road.

VI. LIMITATIONS

The conclusions presented in this report are based on the information provided to us by our client, Cadman Materials, Inc.; and by a variety of consultants. Professional judgments presented are based partly on our understanding of the proposed aggregate mining development, and partly on our general experience. Our work and judgments rendered meet current professional standards; no other warranties, either expressed or implied, are made. This report is subject to review and should not be relied upon after three years, given changes that occur in State and County jurisdictional codes.

VII. PROPOSED CONDITIONS OF APPROVAL

This document provides a listing of proposed conditions intended to ensure on-going compliance with applicable approval criteria, as recommended.

General Operations Related Conditions

1. All mining and processing activities related to Phase 4, except for routine maintenance, is restricted to the hours of 7:00 AM to 6:00 PM Monday through Friday, and 8 AM to 5 PM on Saturday. No mining activities will occur on Sunday. No mining activities shall 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.
2. Copies of all permits issued for the Site shall be provided to the County including, but not limited to, any permits issued by DOGAMI, DEQ, and OWRD.
3. There shall be no blasting on the site.
4. Extraction shall be limited to those areas of the site labeled as appropriate for such activities and depicted on the approved Mine Plan, Figure 6 of the PAPA.
5. Identified setbacks from the Property lines, utilities, and easements will be maintained in accordance with the Mine Plan. The operator shall maintain a minimum 30-foot property line setback, 30-foot setback from S. Barlow Road except where the 35 foot wide gas line easement occurs and then a 30 foot setback from the easement and a 30-foot setback from Highway 99E for excavation. The operator shall maintain a minimum 100-foot setback for excavation near the BPA tower.
6. Prior to any land disturbance within the Bonneville Power Administration ("BPA") right-of-way, the applicant shall submit to the County Planning Division a copy of a current Land Use Agreement between the applicant and the BPA authorizing mining within the BPA right-of-way. The applicant shall comply with all compatibility requirements included in such Land Use Agreement.
7. All lighting shall be directional to minimize glare and light intrusion on surrounding properties within the impact area.
8. There will be no livestock grazing on the subject site.

9. In the event that cultural resources are encountered during the project activities, the applicant shall comply with all applicable State laws and regulations regarding suspension of work activities, and recovery disposition of such resources. An Inadvertent Discovery Plan (IDP) will be put in place prior to ground disturbance to ensure actions and notification in compliance with Oregon State law (ORS 97.740 to 97.760, 358.905 to 358.955, and 390.235).
10. Reclamation with the applicant's proposed submittal and as approved by DOGAMI shall be completed concurrently, as feasible.
11. Interior extraction slopes will be graded, shaped, and planted for erosion control purposes.

Water Related Conditions

12. Applicant shall obtain DEQ approval of a Spill Prevention Controls and Countermeasures Plan for the Site and shall comply with same.
13. Applicant/operator shall obtain and implement Stormwater Pollution Control Plan (SWPCP) approved by DOGAMI addressing stormwater discharges from the proposed extraction site.
14. Dewatering during excavation will be limited to approximately 10 feet below the existing water level throughout the mining area.
15. Excavation shall be undertaken consistent with the applicant's excavation plan Figure 6 of the PAPA.
16. Installation of four monitoring wells at locations identified by HGSA on Figure 10 of Appendix B is required prior to the initiation of mining. Onsite monitoring of wells will begin at least one year prior to inception of mining. Well reports shall be forwarded to DOGAMI and Clackamas County, upon request.
17. Recommended impact minimization measures in the HGSA report in Appendix B, dated August, 27, 2019 shall be met if a trend is observed that could significantly affect wells in the Impact Area.
18. If water well quantity impacts attributable to the authorized mining within the impact area occurs, the operator shall rebuild to its historic level of production for any well that is demonstrated to be significantly affected by the mining operations.

Transportation Related Conditions

19. No interior haul roads will be constructed within 250 feet of the Hanes Residence.
20. Employees shall park their personal vehicles at the designated parking lot located at the Cadman processing facility or onsite in designated areas.

21. Aggregate trucks shall maintain and utilize the existing truck wheel wash located near the exit driveway connecting to S. Barlow Road from the processing facility as a sediment/dust control method.

Acoustic Related Conditions

22. The mine operator shall comply with all recommended noise mitigation measures including barriers/berms and Figure 6 of the report identified in the noise study prepared by ABD Engineering Design in Appendix C dated August 30, 2019.
23. The overburden berms for noise mitigation and/or safety will be planted in accordance with DOGAMI recommendations to reduce the potential for erosion.
24. Off-road equipment (*i.e.* excavators, front-end loaders, loading trucks, and bulldozers) used for internal site operations shall be fitted with broadband rather than traditional narrowband backup alarms.
25. The operator must use factory or enhanced muffler systems.

Air Quality Related Conditions

26. The operator shall maintain vegetative cover on stockpiles and shall sprinkle interior roads with a water truck from March 1 to November 1 for dust impact minimization.
27. The conveyor shall be covered to reduce the potential for dust dispersion.
28. No more than 5,000 gallons per day will be used for dust suppression.
29. A 15 MPH speed limit for onsite truck traffic will be posted on all haul roads within the subject site.
30. Off-road equipment shall meet federal Tier 3 off-road engine standards, and/or equipment to be modified as such.

DOGAMI Requirements

31. The operator shall 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.
32. Security and noise berms/barriers, stockpiling of aggregate materials, construction of internal access roads, and construction of DOGAMI-approved stormwater control measures are allowed within the setback areas.
33. Slope inclinations will vary from 3:1 (horizontal to vertical) above water level to 1:1 slopes below water level within the excavation mining, unless otherwise approved by DOGAMI.

34. 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 operator must restore the disturbed area to a condition that is comparable to pre-disturbance condition as approved by DOGAMI.

VIII. REFERENCES

Aerial Photograph, Google Earth, 2015 and 2017.

Clackamas County Zoning and Development Ordinance, Sections 708, 1006, 1008 and 1010, 2014 and 2018.

DOGAMI Open-File Report 0-96-2, Washington Division of Geology and Earth Resources, Open File Report 96-2, revised edition December 1997, *Best Management Practices for Reclaiming Surface Mines in Washington and Oregon*.

Land Conservation and Development Commission, Oregon's Statewide Planning Goals, 1985, revised 1996 and 2004.

Oregon Administrative Rule Chapter 632, Division 30, Department of Geology and Mineral Industries, Mined Land Reclamation Act, 2015.

Table 3: Location of Information

Criteria	Type of Information Provided	Location in Applications
(a)	Quality, Quantity, and Location of Resource	Appendix A
(b)	Conceptual Reclamation Plan	PAPA – Figure 7
(c)	Traffic Impact Assessment	Appendix D
(d)	Proposal To Minimize Conflicts	PAPA Application – Section D
(e)	Site Plan	PAPA Application – Figure 3

Table 4: Potential Conflicts with Existing Uses within the Impact Area

Regulation	Category	Was a Conflict Identified?	Specific Type of Conflict
OAR 660-023-0180(5)(b)(A)	Noise, Dust, and Other Discharges	NO	----
OAR 660-023-0180(5)(b)(B)	Traffic	NO	----
OAR 660-023-0180(5)(b)(C)	Airports	NO	----
OAR 660-023-0180(5)(b)(D)	Significant Goal 5 Resources	NO	----
OAR 660-023-0180(5)(b)(E)	Agriculture	NO	----
OAR 660-023-0180(5)(b)(F)	DOGAMI Regulations	NO	----

Table 5: Potential Conflicts with Future Uses Permitted Outright or Conditionally

FUTURE USES IN COUNTY ZONING: EFU	POTENTIAL CONFLICTS?	
	YES	NO
Accessory buildings to industrial uses		X
Bed & Breakfast Inns	X	
Boat & recreational vehicle rental facilities		X
Bulk plants		X
Caretaker residences for farm workers & families		X
Churches, cemeteries, lodges & grange halls	X	
Commercial utility & communication facility (<i>e.g.</i> , sanitary sewer, domestic water line, generation of power)		X
Commercial activity in conjunction with farm use		X
Disposal site for solid waste materials		X
Exploration for mineral and aggregate resources		X
Exploration for and production of geothermal, gas, oil other associated hydrocarbons per ORS Chapter 520		X
Facility for primary processing of forest products		X
Farm stand & store		X
Farm use & accessory buildings services		X
Farm & equipment sales & services		X
Fire stations, fire emergency suppression		X
Fish and Game Management		X
Forest management research and experimentation facilities		X
Forest operations, practices, any other uses		X
Golf courses & stables		X
Home occupation, multifamily dwellings	X	
Improvement of public roads and highway-related facilities		X
Kennel		X
Local distribution of utilities (<i>e.g.</i> , dams, electricity, telephone, natural gas)		X
Lumber & building materials dealer, sale of wood products		X
Manufacturing of industrial products		X
Meat market, grocery store, feed & seed stores		X
Mobile home parks	X	
Nursery – retail or wholesale		X
Operations conducted for exploration, mining, crushing, or		X

FUTURE USES IN COUNTY ZONING: EFU	POTENTIAL CONFLICTS?	
	YES	NO
stockpiling of aggregate and other subsurface resources		
Operations conducted for exploration, production, mining, and processing of geothermal resources		X
Private hunting and fishing operations		X
Processing of aggregate into asphalt or Portland cement and of other subsurface resources		X
Propagation, cultivation, maintenance, and harvesting of forest resources		X
Public road and highway projects		X
Public or private schools		X
Public & semi-private buildings		
Public or private parks, playgrounds, hunting and fishing preserves, campgrounds, and community centers		X
Public pumping or treatment facilities		X
Railroad yards, freight stations		X
Reservoirs and water impoundments,		X
Residential care home & care facilities	X	
Sanitary landfills, non-hazardous waste disposal site		X
Seasonal/caretaker farm worker & family housing	X	
Service station, auto repair shop, welding repair, junk yards, auto wrecking		X
Signs		X
Slaughter houses		X
Taverns		X
Television, microwave, and radio communication facilities and transmission towers		X
Temporary helipads created for purposes of forest management or timber harvesting activities		X
Temporary forest labor camps		X
Temporary portable facility for the primary processing of forest products		X
Temporary public road and highway detours		X
Temporary asphalt and concrete batch plants		X
Uninhabitable structures accessory to fish and wildlife		X
Veterinarian Clinic		X

FUTURE USES IN COUNTY ZONING: EFU	POTENTIAL CONFLICTS?	
	YES	NO
Warehousing, wholesale or storage use		X
Wrecking yards – auto		X