

CHAPTER 5.0 ALTERNATIVES TO THE PROPOSED PROJECT

5.0 ALTERNATIVES TO THE PROPOSED PROJECT

CEQA requires that an EIR describe a range of reasonable alternatives to the project or to the location of the project that could feasibly avoid or lessen significant environmental impacts while substantially attaining the basic objectives of the project (State CEQA Guidelines §15126.6). An EIR should also evaluate the comparative merits of the alternatives.

This chapter sets forth potential alternatives to the Proposed Project and provides a qualitative analysis of each alternative and a comparison of each alternative to the Proposed Project. Key provisions of the State CEQA Guidelines pertaining to the alternatives analysis are summarized below:

- Describe a reasonable range of alternatives to the project that would “...*feasibly attain most of the basic objectives of the project, but would avoid or substantially lessen any of the significant effects of the project, and evaluate the comparative merits of the alternatives.*” [State CEQA Guidelines Section 15126.6(a)];
- Identify ways to mitigate or avoid significant effects of the project on the environment: “...*the discussion of alternatives shall focus on alternatives to the project or its location which are capable of avoiding or substantially lessening any significant effects of the project, even if these alternatives would impede to some degree the attainment of the project objectives, or would be more costly.*” [State CEQA Guidelines Section 15126.6(b)];
- Include a range of potential alternatives that could feasibly accomplish most of the basic objectives of the project and those that could avoid or substantially lessen one or more of the significant adverse effects. If there is a specific Proposed Project or a preferred alternative, the EIR must explain why other alternatives considered in developing the Proposed Project were rejected in favor of the proposal. “*The EIR should also identify any alternatives that were considered by the lead agency but were rejected as infeasible during the scoping process and briefly explain the reasons underlying the lead agency's determination.*” [State CEQA Guidelines Section 15126.6(c)];
- Include sufficient information about each alternative to allow meaningful evaluation, analysis, and comparison with the Proposed Project. “*If an alternative would cause one or more significant effects in addition to those that would be caused by the project as proposed, the significant effects of the alternative shall be discussed, but in less detail than the significant effects of the project as proposed.*” [State CEQA Guidelines Section 15126.6(d)];
- Discuss the "no project" alternative. The purpose of describing and analyzing a no project alternative is to allow "decision-makers to compare the impacts of approving the

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Proposed Project with the impacts of not approving the Proposed Project." The State CEQA Guidelines also stipulate that the "no project" analysis "shall discuss the existing conditions at the time the (EIR) Notice of Preparation is published as well as what would reasonably be expected to occur in the foreseeable future if the project were not approved, based on current plans." [State CEQA Guidelines Section 15126.6(e)]; and

- Recognizes a "rule of reason" that requires an EIR to set forth only those alternatives necessary to permit a reasoned choice. *"The alternatives shall be limited to ones that would avoid or substantially lessen any of the significant effects of the project. Of those alternatives, the EIR need examine in detail only the ones that the lead agency determines could feasibly attain most of the basic objectives of the project. The range of feasible alternatives shall be selected and discussed in a manner to foster meaningful public participation and informed decision making."*
- CEQA requires that the discussion of alternatives focus on alternatives to the project or its location that are capable of avoiding or substantially lessening any significant effects of the project. The key question and first step in the analysis is whether any of the significant effects of the project would be avoided or substantially lessened by putting the project in another location. Only locations that would avoid or substantially lessen any of the significant effects of the project need be considered for inclusion in the EIR [State CEQA Guidelines §15126.6(f)(2)].

5.1 SIGNIFICANT AND UNAVOIDABLE IMPACTS

The environmental assessment contained within the EIR determined that implementation of the *Olive Pit Mining and Reclamation Plan* would result in significant and unavoidable air quality and traffic impacts during Proposed Project operations. All other potentially significant impacts are found to be less than significant with implementation of the recommended mitigation measures, and no other significant unavoidable adverse impacts would occur with Project implementation.

NO_x emissions during the Proposed Project operations would be above the SCAQMD significance threshold and thus, significant and unavoidable. The South Coast Air Basin is in nonattainment for ozone, and NO_x is an ozone precursor, therefore the Proposed Project would result in a significant and unavoidable regional cumulative impact.

Although the City will require the Project to mitigate traffic impacts and pay its fair share toward long-term transportation improvements, involving Azusa Canyon Road / Arrow Highway and the I-605 SB Off-ramp / Arrow Highway, at this time neither the City nor Caltrans have adopted fee programs for traffic improvements. Therefore, the City cannot find with certainty that necessary improvements will be constructed before impacts will occur, and for that reason, traffic impacts are concluded to be significant and unavoidable.

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Adherence to adopted federal, State, and City regulations, and project-specific mitigation measures have been identified as conditions of approval for this mining and reclamation project, and would eliminate or minimize the potential for significant adverse impacts. Long term mine reclamation is a central feature of this Proposed Project, with environmental benefits by leaving the site after completion of mining in a condition suitable for economically productive land development (32 acres), with the balance of the site (158 acres) supporting open space recreational land uses, and/or for storm water retention and/or a ground water recharge basin.

5.2 PROJECT OBJECTIVES

Pursuant to State CEQA Objectives 15124(b), the Project Description shall include a statement of objectives. These objectives assist the City in developing a reasonable range of alternatives to evaluate in the EIR, and aid the decision-makers in preparing its findings, and a Statement of Overriding Considerations, if deemed appropriate. The objectives are designed to demonstrate the underlying purpose of the project. The City of Irwindale and United Rock (applicant/operator) have identified the following list of project objectives for the *Olive Pit Mine and Reclamation Project*.

City of Irwindale

- Recovery of aggregate materials by extraction of remaining resources that have been designated as a Regionally Significant Construction Aggregate Source by the State Mining and Geology Board (SMGB), identified as having statewide and regional significance.
- Extraction of all economically recoverable mineral resources from the Olive Pit to provide a portion of the Los Angeles region's demand for construction aggregate materials.
- Reclamation of the Olive Pit property for use of a portion of the site for future land development that would provide some economic development for the city, including providing jobs and/or taxes, and the remainder of the site for public uses, such as a storm water retention, flood control facility, groundwater recharge basin, and/or open space recreational land uses¹.
- Reclamation of the Olive Pit site consistent with reclamation policies of the State Surface Mining and Reclamation Act (SMARA).

¹ Post-reclamation land use development(s) of the 32 acre backfill portion of the Olive Pit mine site is not a part of the Proposed Project. This project is limited to zoning to allow the extraction, and preparation of the site to a state that will allow future development. The project does not involve re-planning the project site. As such, the environmental analysis of the Proposed Project is limited to potential impacts from the new access road, aggregate extraction, and the proposed reclamation of the site. Future potential development, which may occur after 15 to 30+ years is speculative at this point in time, and will be required to undergo independent environmental analysis pursuant to CEQA, as applicable at the time they are proposed.

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- Attain the Irwindale General Plan policies, including the following:
 - *City of Irwindale General Plan, Resource Management Element Policy 4*; The City of Irwindale will continue to protect the use of the area's resources through appropriate land use controls and planning.
 - *City of Irwindale General Plan, Resource Management Element Policy 12*; The City recognizes the mineral information classified by the California State Geologist and incorporated by the State Mining and Geology Board into the State Mining and Geology Board Reclamation Regulations, at Section 3550.5 for Sectors D and E. Through measures in this Element, City will encourage the conservation and development of identified mineral deposits, subject to environmental considerations and the City's discretionary authority over land use entitlements.
 - *City of Irwindale General Plan, Resource Management Element Policy 13*; The City will encourage environmental considerations and the City's discretionary authority over land use entitlements, the conservation and possible future extraction of areas classified by the State Geologist and designated by the State Mining and Geology Board Reclamation Regulations as regionally significant mineral deposits through designation of such areas under the City's Quarry Zone overlay or "Q Zone" and attendant standards and regulations.

United Rock Products

- Recovery of aggregate materials by extraction of remaining resources that have been designated as a Regionally Significant Construction Aggregate Source by the State Mining and Geology Board (SMGB), identified as having statewide and regional significance.
- Extraction of all economically recoverable mineral resources from the Olive Pit to provide the Los Angeles Basin with construction aggregate materials.
- Maintenance of United Rock's existing customer base by supplying aggregate resources from production sites within its market area (LA basin). This is important because it reduces regional traffic congestion, air quality impacts and road maintenance requirements.
- Extend the life of existing processing equipment, thus preventing the requirement to construct similar facilities at other sites.
- Maintain existing work force.

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5.3 FACTORS IN SELECTION OF ALTERNATIVES

The alternatives addressed in this EIR were selected in consideration of one or more of the following factors:

- Extent to which the alternative would accomplish most of the basic objectives of the Proposed Project;
- Extent to which the alternative would avoid or lessen any of the identified significant adverse environmental effects of the Proposed Project;
- Feasibility of the alternative, taking into account site suitability, economic viability, availability of infrastructure, consistency with regulatory limitations, and whether the project sponsor can reasonably acquire, control, or otherwise have access to the site;
- Appropriateness of the alternative in contributing to a “reasonable range” of alternatives necessary to permit a reasoned choice; and
- Requirement of CEQA Guidelines to consider a “no project” alternative as well as an “environmentally superior” alternative (CEQA Guidelines §15126.6).

In consideration of the above factors, four alternatives were selected to be addressed in this EIR. Each of these alternatives is described below.

5.4 ALTERNATIVES CONSIDERED BUT REJECTED

The following discussion has been prepared in accordance with the requirements of CEQA Guideline §15126.6(c), which requires that an EIR identify Alternatives that were considered by the Lead Agency but not chosen for further evaluation. The following Alternative was not considered for further evaluation because it failed to achieve the Proposed Project objective(s) or would result in additional significant impacts.

Alternative Location

Potential alternative locations were initially considered by the City. However, the City does not have any different locations for their potential siting of the Proposed Project because the City does not own any other mine sites or sites containing mineral resources that are large enough to accommodate a new mine. In addition, selection of an alternative location, even if one was available, would not likely avoid or substantially lessen potentially significant air quality impacts because the air quality impacts are from Project Operations and are not site specific. Rather, the threshold that is exceeded by the Project is a regional threshold likely to be exceeded with a similar resource extraction project regardless of location.

Additionally, the Olive Pit Mine is a formerly active mine site with an abundance of readily available and recoverable aggregate. The SMGB has designated aggregate materials found at the Olive Pit as a Regionally Significant Construction Aggregate Source and has identified the

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aggregate materials as having statewide and regional significance. The fundamental or basic project objectives are to extract the remaining minerals from the Olive Pit Mine and reclaim the site. Since an alternative site would not meet this basic or fundamental Project Objectives, consistent with the requirements of CEQA Guideline §15126.6(f)(2), an alternative location was rejected from further consideration in this EIR.

5.5 ALTERNATIVES IDENTIFIED AND ANALYZED

This section presents an analysis of the project alternatives carried forward in this EIR and a comparison of the potential impacts between the alternatives and the Proposed Project for the environmental issues addressed in the EIR. In all cases, the comparison of impacts assumes that all mitigation measures identified in this DEIR have been implemented for the impacts resulting from the Proposed Project. Similarly, in all cases where there are feasible mitigation measures for impacts that could be caused by a given Alternative, it is assumed that those mitigation measures would be adopted as conditions of approval as well.

The alternatives assessed within this EIR include the following:

1. Backfill of Entire Site Alternative;
2. Backfill to Above Exposed Groundwater Alternative;
3. Reduced Intensity [Daily Operations] Alternative; and
4. No Project Alternative.

Alternative 1 – Backfill of Entire Site

Description

This alternative involves reclamation backfill of the entire 190-acre open-pit mine site and would further the majority of the City's objectives as well as those of United Rock Products. Backfilling the entire site would involve the same construction (newly graded on-site access road) and mining activities as the Proposed Project, However, under this alternative, reclamation activities would be modified to backfill the entire 190-acre open-pit mine site. In contrast to the Proposed Project, which would involve reclamation of only 32 acres of the eastern portion of the site, resulting in a pad suitable for future land development, this alternative would reclaim the entire site and result in a much larger site suitable for future land development. Under this alternative, backfilling of the entire site would result in a longer duration for reclamation activities and is estimated at a total of 100+ years, rather than the 35 years estimated for the Proposed Project. While this alternative would not necessarily result in a street-grade building pad of the entire site, for the purpose of this analysis, it is assumed the building pad could be within 30 feet of the existing street grade, similar to the mine reclamation that resulted in the

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Irwindale Business Center located south of Arrow Highway and west of Irwindale Avenue, generally across the street from Irwindale City Hall.

Impacts

Aesthetics

Similar to the Proposed Project, this alternative would alter the existing visual character of the site from all view perspectives. Relative to the Proposed Project, the aesthetic impacts associated with construction of an on-site access road and surface mining would remain the same (less than significant). Under this alternative, conclusion of all reclamation phases on the site would result in a visually different site when compared to the Project resulting in the entire 190 acres of developable land, with no exposed water table. A larger buildable area would not be expected to result in greater aesthetics impacts in comparison to the Proposed Project but would represent a visual change over what is anticipated with the Project. The overall aesthetics impacts from this alternative would be similar to those of the Proposed Project and expected to be less than significant.

Air Quality / Greenhouse Gases / Health Risk Assessment

In comparison to the Proposed Project, backfilling the entire site would result in greater air quality / greenhouse gas emission/ health risk assessment impacts because onsite operations would be substantially extended beyond the Project timeline horizon for completion. This alternative would not reduce the significant impacts caused by NO_x emissions. Extending reclamation activities to occur over 100+ years would result in greater air quality and greenhouse gas impacts because of the increased emissions produced by the additional 65+ years of over-the-road haul truck trips and on-site reclamation equipment use that would occur. Extending reclamation activities to occur over 100+ years could pose greater health risks because receptors in the region would be exposed to air pollutants for essentially their entire lifetime. The overall air quality/ greenhouse gas emission/ health risk assessment impacts from this alternative would be greater than those of the Proposed Project and would be significant and unavoidable.

Biological Resources

Similar to the Proposed Project, this alternative would result in biological resource impacts that are less than significant with mitigation incorporated. In contrast, since the lifetime of the reclamation activities would be extended to occur over 100+ years, mitigation measures requiring on-site restoration would be delayed. In addition, many of the slopes that are targeted for restoration would not be restored under this alternative because backfilling of the entire site to approximate street grade would leave fewer slopes remaining to be restored. However, mitigation measures could be modified to occur off-site. Overall, biological resources impacts from this alternative would be greater than the Proposed Project, but would be less than significant with off-site mitigation.

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Geology, Soils, and Mineral Resources

Backfilling the entire site would eliminate or significantly reduce the potential for slope failure around the perimeter of the mine. Similar to the Proposed Project, overall geology, soils, and mineral resources from this alternative would be less than significant.

Hazards and Hazardous Materials

Similar to the Proposed Project, this alternative would result in hazards and hazardous materials impacts that are less than significant. The alternative would result in the same types of activities and materials used in the Proposed Project. Therefore, the hazard related impacts from this alternative would be similar to the Proposed Project and would be less than significant.

Land Use and Planning

Similar to the Proposed Project, this alternative would result in land use and planning impacts that are less than significant. Backfilling the entire site would take a substantially longer period of time but would result in a larger building site for future land development, relative to the Project. However, long term nuisance effects on surrounding land uses including noise and traffic associated with an active mining and backfilling operation would persist onsite for a substantially longer period of time under this alternative in comparison to the Project. Additionally, attainment of the City's long term land use planning vision for this site to be redeveloped would also be delayed many decades under this alternative. As for the Proposed Project, future post-reclamation land uses would be determined by the City once the land is suitable for reuse. Therefore, the overall land use and planning impacts from this alternative would be similar to the Proposed Project and would be less than significant.

Noise

In comparison to the Proposed Project, this alternative would result in similar noise impacts although the duration of noises generated by onsite reclamation activities would persist for a substantially longer period of time (approximately 100 years) in comparison to the Project. As stated above, it is assumed that the buildable area could be within 30 feet of the existing street grade [as similarly accomplished in another reclamation project within the City]. A building area ranging from street level to 30 feet below existing street grade would result in similar noise impacts compared to the Proposed Project because the 30 feet of remaining exposed slope would essentially act as a noise barrier for those portions of the site. However, as the building pad gets closer to existing street grade, the likelihood of significant noise impacts would increase. For the purposes of this analysis, it is assumed that a portion of the reclaimed land could be within 30 feet of existing street grade, therefore the overall noise impact from this alternative would be similar to the Proposed Project and would be less than significant with mitigation incorporated.

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Traffic and Circulation

Similar to the Proposed Project, this alternative would result in traffic and circulation impacts that are less than significant with mitigation incorporated. It is assumed that backfilling the entire site would require the same amount of daily over-the-road haul truck trips, however the number of years to complete reclamation activities onsite would be substantially longer (anticipated to be a 100 years) in comparison to the Project. Therefore the overall traffic impact from the alternative would be greater than and similar in nature to than the Proposed Project and would be less than significant with mitigation incorporated.

Water Quality and Hydrology

Backfilling the entire project site would result in similar water and groundwater quality impacts. As, with the Project, there would be no impervious surfaces created that would reduce stormwater infiltration and increase the overall runoff coefficient of the site. Therefore, similar to the Proposed Project, impacts would be less than significant and no mitigation is required.

Summary

Under Alternative 1 (Backfilling of the Entire Site), the potential environmental impacts from construction and mining activities would still exist, and under this scenario, extended impacts from truck traffic, and related noise and air quality impacts as well as those impacts from extended reclamation operations over the course of a projected 100+ years would be greater than those of the Proposed Project. Although this alternative may attain more of the City and applicant objectives, implementation of the alternative would not lessen any of the potential environmental impacts identified in the EIR including potentially significant and unavoidable air quality impacts.

Alternative 2 - Backfill to Above Exposed Groundwater Alternative

Description

This alternative involves reclamation of the 32 acre eastern pad as proposed, with the balance of the site to be backfilled to a level approximately 5 or 10 feet above the average historical water table level (approximately 285 feet AMSL), and not use the site for stormwater management and groundwater recharge. This alternative was developed in response to comments received from the Main San Gabriel Valley Watermaster and the Los Angeles Regional Water Quality Control Board in their comments on the NOP to avoid potential stormwater/groundwater contact.

Similar to the proposed project, this alternative includes the construction of an on-site access road and phased mining. This alternative differs from the proposed Project, in that the reclamation activities would allow for two separate post-reclamation potential future uses. One is a 32-acre site [as proposed in the project] and the remainder of the site would be backfilled above the ground water table instead of used as open space and/or a water retention / storm water basin. Under this alternative, the additional backfilling of the western area of the site would

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result in a longer duration for backfilling and is estimated at a total of about 80+ years, rather than the 35 years estimated for the Proposed Project. The City would determine specific future post-reclamation land uses once the site is ready for reuse.

Impacts

Aesthetics

Similar to the Proposed Project, this alternative would alter the existing visual character of the site from all view perspectives. In comparison to the Proposed Project, the aesthetic impacts associated with construction of an on-site access road, surface mining, and reclamation of the eastern 32-acre building pad would remain the same (less than significant). Under this alternative, reclamation of the site would differ visually in that the western portion of the site would be partially backfilled rather than retaining the exposed water table. The overall aesthetics impacts from this alternative would otherwise be the similar as those of the Proposed Project and expected to be less than significant.

Air Quality / Greenhouse Gases / Health Risk Assessment

In comparison to the Proposed Project, this alternative would result in greater air quality/ greenhouse gas emission/ health risk assessment impacts. Extending reclamation activities to occur over 80+ years would result in greater air quality and greenhouse gas impacts because of the increased emissions produced by the additional 45+ years of over-the-road haul truck trips and on-site reclamation equipment use that would occur. Extending reclamation activities to occur over 80+ years would pose significant health risks because receptors in the region would be exposed to air pollutants for essentially their entire lifetime as compared to the overall shorter duration of daily air emissions that would occur with the Project. The overall air quality/ greenhouse gas emission/ health risk assessment impacts from this alternative would be greater than those of the Proposed Project and would also be significant and unavoidable.

Biological Resources

Similar to the Proposed Project, this alternative would result in biological resource impacts that are less than significant with mitigation incorporated. In contrast, since the lifetime of the reclamation activities would be extended to occur over 80+ years, mitigation measures requiring on-site restoration would be delayed for the lower portion of the remaining pit resulting in greater overall impacts. Therefore, the overall biological resources impacts from this alternative would be greater than the Proposed Project but less than significant with mitigation.

Geology, Soils, and Mineral Resources

This alternative would result in 2:1 side slopes extending down to about 5 feet above the historic average water table within the western portion of the Olive Pit. Similar to the Proposed Project, overall impacts to geology, soils, and mineral resources from this alternative would be less than significant and similar to the Project.

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Hazards and Hazardous Materials

Similar to the Proposed Project, this alternative would result in hazards and hazardous materials impacts that are less than significant. The alternative would result in the same types of activities and materials used in the Proposed Project. Therefore, the overall hazards and hazardous materials impacts from this alternative would be similar to the Proposed Project and would be less than significant.

Land Use and Planning

Similar to the Proposed Project, this alternative would result in land use and planning impacts that are less than significant. Backfilling the western remainder of the site to 5 or 10 feet above the water table would leave an open space pit and a 32 acre building pad for future land development. However, long term nuisance effects on surrounding land uses including noise and traffic associated with an active mining and backfilling operation would persist onsite for a substantially longer period of time under this alternative in comparison to the Project. Additionally, attainment of the City's long term land use planning vision for this site to be redeveloped would also be delayed many decades under this alternative. Therefore, the overall land use and planning impacts from this alternative would be similar to the Proposed Project and would be less than significant.

Noise

In comparison to the Proposed Project, this alternative would result in similar noise impacts. In contrast to the Project, noise impacts from the site would persist longer as reclamation of the site would take longer. This alternative would result in the same noise impacts during the excavation phases and reclaiming the eastern 32-acre pad as the Proposed Project. Backfilling the rest of the site during reclamation activities would be well below the Olive Pit slope faces, which would act as a natural noise barrier. Therefore, the overall noise impact from this alternative would be longer in duration but similar to the Proposed Project and would be less than significant with mitigation incorporated.

Traffic and Circulation

Similar to the Proposed Project, this alternative would result in traffic and circulation impacts that are less than significant with mitigation incorporated. It is assumed that partial backfilling of the western portion of the site would require the same amount of daily over-the-road haul truck trips (albeit for a longer duration in time). Therefore, the overall traffic impact from the alternative would be greater than the Proposed Project because traffic and circulation impacts would occur over almost 80 years (compared to 35 with the Project) and would be less than significant with mitigation incorporated.

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Water Quality and Hydrology

Backfilling to 5-10 feet above the average historical water table would produce equivalent water and groundwater quality impacts as the Proposed Project Similar to the Proposed Project, water quality and hydrology impacts would be less than significant.

Summary

The potential environmental impacts from construction and mining activities would still exist, the significant and unavoidable air quality impacts would not be reduced, and under this scenario, extended impacts from truck traffic, and related noise and air quality impacts as well as those impacts from extended reclamation operations over the course of a projected 80+ years would be greater than those of the Proposed Project; and therefore, not lessen the potential impacts in consideration of those associated with the implementation of the Proposed Project.

Alternative 3 – Reduced Daily Mining Intensity

Description

This alternative is intended to reasonably attain most of the Project objectives while reducing the Project's one identified potentially significant unavoidable impact to air quality (NO_x). Two scenarios including a 20 percent reduction and a 50 percent reduction are considered in this Alternative.

Reducing the significant and unavoidable air quality impact (NO_x emissions) below the SCAQMD operational standard of 55 pounds per day to a less-than-significant level would require reducing the daily mining intensity of the Proposed Project so that fewer truck trips are made between the Olive Pit and the URP processing plant. This is due to the fact that SCAQMD standards, like all air quality standards, are evaluated on a daily emissions basis specified as a pound per day threshold. Therefore, in order to reduce daily NO_x emissions from the Proposed Project's daily mining operations, the amount of aggregate mined per day would have to be reduced in direct proportion to the emissions generated. As a result, use of on-site mining equipment and over-the-road haul truck trips would be reduced, leading to decreased air (NO_x) emissions.

A reduction in the Proposed Project's daily extraction intensity and over-the-road haul truck trips (131 round trips) would reduce the mining intensity because the daily amount of aggregate mined directly corresponds with the amount transported by over-the-road haul trucks to the nearby URP processing plant. Thus, limiting the daily over-the-road haul truck trips limits would limit the daily mining intensity and related air quality impacts as well. Because less material could be recovered on a daily and annual basis, this alternative also extends the duration of the operations over a period of approximately 15 to 35 additional years depending upon level of reduction to allow complete extraction of the available mineral resources. The total life of operations with this alternative is therefore approximately 50 to 70 years, rather than approximately 35 years as proposed.

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Impacts

Aesthetics

Aesthetic impacts associated with this alternative would be the same as for the Proposed Project and would be expected to be less than significant.

Air Quality / Greenhouse Gases / Health Risk Assessment

In comparison to the Proposed Project, a 20 percent reduction in the daily mining intensity would result in a reduction in daily air emissions of NO_x, overall air quality impacts and greenhouse gas emission/ health risk assessment impacts. The extent of the reduction in mining intensity needed to meet SCAQMD operational standards is calculated based upon assumed availability of off-road equipment (Tier 4 or Tier 3) since different equipment tiers produce different NO_x emissions. The two cases are analyzed below:

Tier 4 Off-Road Equipment

When using Tier 4 off-road equipment, Proposed Project operations would result in NO_x emissions of 67 pounds per day with mitigation incorporated. By reducing daily over-the-road haul truck trips by approximately 20 percent to 100 round trips per day, Proposed Project operations would result in NO_x emissions below the SCAQMD operational standard of 55 pounds per day, thus reducing the significant and unavoidable air quality impact to a less-than-significant level with mitigation incorporated.

Tier 3 Off-Road Equipment

When using Tier 3 off-road equipment, Proposed Project operations would result in NO_x emissions of 104 pounds per day with mitigation incorporated. By reducing daily over-the-road haul truck trips by approximately 50 percent to 65 round trips per day, Proposed Project operations would result in NO_x emissions below the SCAQMD operational standard of 55 pounds per day, thus reducing the significant and unavoidable air quality impact to a less than significant level with mitigation incorporated.

The overall air quality/ greenhouse gas emission/ health risk assessment impacts from this alternative would be less than those of the Proposed Project and would be less than significant with mitigation incorporated.

Biological Resources

Similar to the Proposed Project, this alternative would result in biological resource impacts that are less than significant with mitigation incorporated. In contrast, since the lifetime of the mining activities would be extended to occur for up to 70 years due to lower daily extraction rates, mitigation measures requiring on-site restoration would be correspondingly delayed resulting in a potentially significant temporary impact and potentially greater mitigation ratio. Therefore,

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overall biological resources impacts from this alternative would be greater than the Proposed Project and would require mitigation to reduce impacts to less than significant.

Geology, Soils, and Mineral Resources

Similar to the Proposed Project, overall impacts to geology, soils, and mineral resources from this alternative would be less than significant. Although this alternative would extend the overall duration of reclamation activities onsite due to the additional backfilling associated with this alternative, the slope stability issues would be addressed early on consistent with the Project and would be less than significant.

Hazards and Hazardous Materials

Similar to the Proposed Project, this alternative would result in hazards and hazardous materials impacts that are less than significant. The alternative would result in the same activities and materials used in the Proposed Project. Therefore, the overall hazards and hazardous impacts from this alternative would be similar to the Proposed Project and would be less than significant.

Land Use and Planning

The overall land use and planning impacts from this alternative would be somewhat greater when compared to the Proposed Project because nuisance/land use compatibility impacts associated with having an active mining and reclamation project onsite would be prolonged by 15 to 35 years with this alternative. Although impacts would be less than significant under this alternative, they would be longer in overall duration due to the extended life of operations with this alternative.

Noise

The overall noise impacts from this alternative would be somewhat greater when compared to the Proposed Project because the active mining and reclamation phases of the project would be prolonged by 15 to 35 years with this alternative. Noise impacts from this alternative would be reduced when considered on a daily basis due to the lower extraction rate and fewer truck trips when compared to the Proposed Project. However, the same equipment will be used onsite that would be used for the Project and the noise from that equipment would be the same under this alternative as it would for the Project. Overall, noise-related impacts would be less than significant with mitigation incorporated.

Traffic and Circulation

In comparison to the Proposed Project, this alternative would result in reduced daily traffic and circulation impacts due to the lower daily extraction rate. A reduction in mining intensity would result in a reduction in daily over-the-road haul truck trips. However, project traffic would extend over 15-35 additional years due to the lower daily extraction rate associated with this alternative. Therefore, when compared to the Project, the overall traffic impact from the

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alternative would be greater than the Proposed Project and would be less than significant with mitigation incorporated.

Water Quality and Hydrology

Water Quality impacts from this alternative would be the same as the Proposed Project and would be less than significant although they would be longer in overall duration due to the lower daily extraction rate associated with this alternative.

Summary

A reduction in the Proposed Project's mining intensity to get below the daily SCAQMD NO_x threshold would significantly extend the lifetime of the Proposed Project by an estimated 15 to 35 years based on equipment availability. The net result would be that overall potential environmental impacts associated with this alternative would be greater due to the additional years that the site would be in use for resource extraction and backfilling operations. Under this alternative, biological resources, noise, and traffic impacts would be greater when compared to the Project because they would be prolonged over many more years due to the lower daily extraction rate associated with this alternative. Although there may be fewer truck trips and operational noise on a daily basis with this alternative, the truck trips and related operational noises onsite would persist for an estimated 15-35 additional years. .

The SMGB has designated aggregate materials that are readily available and recoverable at the Olive Pit Mine as a Regionally Significant Construction Aggregate Source and identified the aggregate materials as having statewide and regional significance. The resources extracted from the Olive Pit would provide a portion of the construction aggregate materials needed to meet demands within the Los Angeles Basin. The Project has been sized to meet projected market demand for aggregate supply in the region. Therefore, a reduction in the Proposed Project's mining intensity may not meet basic project objectives related to meeting demand for construction aggregate materials in the Los Angeles Basin, as construction aggregate is in increasingly higher demand but lower supply throughout the region; (California Surface Mining Law, Chapter 2, California's Mineral Production and Demand, D.P. Cole, Solano Press Books, 2007).

In addition, a reduction in the onsite mining intensity (ranging from 20 to 50 percent) would not meet the projected regional demand for aggregate in the Los Angeles basin because it would take an additional 15-35 years of mining beyond the 32 years anticipated by the Project. The City has established the following objective "extraction of all economically recoverable mineral resources from the Olive Pit to provide a portion of the Los Angeles region's demand for construction aggregate materials." This alternative would significantly delay attainment of the City's primary objective for this site which is to reclaim the 32 acres in Phase I reclamation to the same level as it would take a longer period of time (estimated at an additional 15 to 35 years) to complete and would delay making that property available for future economic development. The City strongly

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desires to attain the ultimate goal of site reclamation following extraction of all State and regionally significant mineral resources onsite. Attainment of this goal would be postponed 15-35 years under this alternative delaying reclamation of the site and delaying site redevelopment that would generate economic development for the city, including providing jobs and/or taxes, and reuse of the remainder of the site for public uses, such as a storm water retention, flood control facility, groundwater recharge basin, and/or open space recreational land uses.

Alternative 4 – No Project

CEQA requires consideration and analysis of a No Project Alternative. In this case, the No Project Alternative assumes that the Olive Pit would remain inactive and as an existing open-pit mine site. Under this alternative, mining of aggregate resources [designated as a Regionally Significant Construction Aggregate Source by the State Mining and Geology Board] would not occur at this site. The purpose of the “Regionally Significant Construction Aggregate Source” designation is to identify deposits of prime importance for meeting present and future construction aggregate demand in the region. Designating a site as a regionally significant construction aggregate resource is intended to make the local land use authority, regulatory agencies and the public aware of the location of these designated mineral resources and to ensure their importance is considered in land-use planning decisions. Due to the high quality of the aggregate material known to occur in the Olive Pit, this alternative would remove a key source of “Regionally Significant Construction Aggregate Source” from availability to meet demands locally within the Los Angeles Basin.

Currently, there is no Reclamation Plan for the Olive Pit and no requirement exists to reclaim or backfill the 190-acre site. Therefore, under the No Project Alternative, there would be no plan for reclamation of the inactive Olive Pit. Similarly, the possibility for long term economically viable urban land redevelopment or reuse project would not occur under the No Project Alternative.

Impacts

Aesthetics

No aesthetic impacts would occur with this alternative because no changes in the existing conditions of the site would occur in the absence of the Project.

Air Quality / Greenhouse Gases / Health Risk Assessment

No air quality, greenhouse gases, or health risks would be generated from the site since the No Project Alternative assumes the site continues to persist as an inactive aggregate mine.

Biological Resources

Implementation of the No Project Alternative would likely result in neutral to beneficial effects to onsite biological resources as it would not be affected by the restarting of mineral extraction operations.

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Geology, Soils, and Mineral Resources

Existing slope stability and geological factors of safety problems would continue to exist under the No Project Alternative. Existing landslide and seismic risks would continue to persist and would not be remediated in the absence of the Project under the No Project Alternative.

Hazards and Hazardous Materials

No hazards or hazardous materials impacts would occur onsite under the No Project Alternative. The existing groundwater contamination would continue to exist and would continue to exist under the No Project Alternative.

Land Use and Planning

The overall land use and planning impacts from the No Project Alternative would be greater than under the Proposed Project because the City's long term land use planning goals and policies identify this site for reclamation and redevelopment and this alternative would not meet the City's planning goals to extract regionally significant minerals. In addition, the presence of a large inactive mining pit would continue to be an attractive nuisance for the surrounding communities.

Noise

In comparison to the Project, no noise impacts would occur onsite or offsite (and attributable to the site) under the No Project Alternative.

Traffic and Circulation

In comparison to the Proposed Project, no traffic or circulation noise impacts would occur onsite or offsite under the No Project Alternative.

Water Quality and Hydrology

Existing water quality and hydrology conditions would persist onsite under the No Project Alternative. The existing groundwater contamination would continue to exist and would continue to exist under the No Project Alternative as well as with the Project.

Summary

The No Project Alternative precludes attainment of all of Project Objectives as well as the long term benefits of the Proposed Project, including reclamation of an inactive open-pit mine to conditions suitable to support productive land development within the City at some point in the future. In addition, Project backfilling and reclamation activities will enhance the aesthetics, biological resource productivity, slope stability, and future land use compatibility of the property. Finally, this alternative also precludes extraction of key mineral resources that are needed throughout the region.

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Therefore, the No Project Alternative would not provide the long term environmental and economic benefits of continued mining, and complete reclamation and viable land development that are the City's and URP's stated project objectives for this property and this Proposed Project.

5.6 ENVIRONMENTALLY SUPERIOR ALTERNATIVE

CEQA requires identification of an environmentally superior alternative. The results of the comparative environmental impact analysis described above are summarized in **Table 5.0-1**. The comparison is presented based on whether the Alternative would have the same impact (S), greater impact (G), or lesser impact (L) when compared to the Proposed Project.

The results of the comparative Project Objectives analysis are summarized in **Table 5.0-2**. The comparison is presented based on whether the Alternative would have the same ability (S), greater ability (G), or lesser ability (L) than the Proposed Project in attaining / achieving the Project Objectives.

Although the No Project Alternative would avoid the significant adverse air quality and traffic impacts that would occur with the Project, geology and soils and land use and planning impacts would be greater under the No Project Alternative when compared to the Project. In addition, the No Project Alternative would completely preclude attainment of the City's objectives for the Proposed Project.

Alternative 3, the reduced daily mining alternative also reduces NO_x impacts when compared to the Project and would not result in any significant air quality impacts because resource extraction operations would be slowed to ensure attainment of air quality standards for NO_x. However, as shown in Table 5.0-1, biological resources, land use and planning, noise and traffic and circulation impacts would likely be greater under the reduce mining intensity alternative when compared to the Project because active mining and backfilling/reclamation activities would occur on a daily basis for another 15-35 years beyond the date they would cease if the Project were implemented. In addition, this alternative is less effective at attaining the City's Objectives for the site due to the significantly extended period of time it would take to extract all economically recoverable mineral resources and to reclaim/recycle the site for subsequent productive land uses.

Therefore, the Proposed Project is the environmentally superior alternative because although it would result in a daily exceedance of the NO_x threshold and have significant unavoidable traffic impacts, it would have reduced impacts to biological resources, land use and planning, noise and traffic when compared to the other alternatives considered in this analysis.

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Table 5.0-1 Comparative Analysis of Environmental Impacts

Resource Area	Alternative 1 Backfill of Entire Site	Alternative 2 Backfill to Above Exposed Groundwater	Alternative 3 Reduced Daily Mining Intensity	Alternative 4 No Project
Aesthetics	S	S	S	L
Air Quality / Greenhouse Gas Emission / Health Risk Assessment	G	G	L	L
Biological Resources	G	G	G	L
Geology, Soils and Mineral Resources	S	S	S	G
Hazards and Hazardous Materials	S	S	S	L
Land Use and Planning	G	G	G	G
Noise	G	G	G	L
Traffic and Circulation	G	G	G	L
Water Quality and Hydrology	G	G	S	L

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Table 5.0-2 Comparative Analysis of City of Irwindale Project Objectives

Project Objective	Alternative 1 Backfill of Entire Site	Alternative 2 Backfill to Above Exposed Groundwater	Alternative 3 Reduced Daily Mining Intensity	Alternative 4 No Project
Recovery of aggregate materials by extraction of remaining resources that have been designated as a Regionally Significant Construction Aggregate Source by the State Mining and Geology Board (SMGB), identified as having statewide and regional significance.	S	S	L	L
Extraction of all economically recoverable mineral resources from the Olive Pit to provide the Los Angeles Basin with construction aggregate materials.	S	S	L	L
Reclamation of the Olive Pit property for use of a portion of the site for future land development that would provide some economic development for the city, including providing jobs and/or taxes, and the remainder of the site for public uses, such as a storm water retention, flood control facility, groundwater recharge basin, and/or open space recreational land uses.	S	S	L	L
Reclamation of the Olive Pit site consistent with reclamation policies of the State Surface Mining and Reclamation Act (SMARA).	S	S	L	L
Further the goals of the Irwindale General Plan policies	S	S	L	L