

## **5.0 PROGRAMMATIC IMPACTS OF THE PROPOSED ARM PLAN AND SMARO AMENDMENTS**

### **5.1 INTRODUCTION**

This Draft EIR already discusses the ARM Plan and mining ordinance amendments at considerable length. The amendments are identified and discussed in detail in Section 1.5 of Chapter 1, Project Description. The potential impacts of implementing the amendments are disclosed, analyzed, and mitigated in Section 3.2, “Geomorphology, Hydrology, and Water Quality”; Section 3.3, “Vegetation and Wildlife”; and Section 3.4, “Fisheries Resources”. The relevant impacts are also summarized in Chapter 2, “Summary”. In addition, the impacts of not adopting the proposed amendments are identified and evaluated in several sections of Chapter 4, including the No Project Alternative (in which neither the amendments nor the proposed mining would be approved) and Alternative 2, which proposes mining in compliance with all existing ARM Plan and mining ordinance standards, and without amending the ARM Plan or SMARO.

This chapter thus provides one additional evaluation of the proposed ARM Plan and mining ordinance amendments. In Section 5.2, this chapter again identifies the amendments as currently proposed, though they are subject to change as part of the public process for this project. In Section 5.3, this chapter again discloses, analyzes, and mitigates the potential impacts of the proposed amendments.

Like the PEIR for the ARM Plan, this chapter necessarily provides a programmatic, first-tier analysis rather than a site-specific evaluation of any potential future project. CEQA and its Guidelines state that a programmatic analysis is appropriate for a proposed approval of “rules, regulations, plans, or other general criteria to govern the conduct of a continuing program.” CEQA Guidelines, § 15168, subd. (a)(3). CEQA encourages agencies to prepare a programmatic analysis “for a large-scale planning approval, such as a general plan or component thereof (e.g., an area plan or community plan),” and to defer the development of detailed, site-specific information until such time as the agency receives an application and prepares a future environmental document for a project with a specific site. CEQA Guidelines, § 15152, subds. (b) and (c).

The proposed amendments consist entirely of “rules, regulations, plans, [and] other general criteria to govern the conduct of a continuing program.” The proposed amendments would govern mining in Sonoma County and the Lower Alexander Valley Reach of the Russian River. They would not approve any potential future mining project, nor compel any future County decisionmaker to ever doing the same. A future mining project would instead require a separate application and a separate, site-specific environmental review document, and would be subject to the unfettered discretion of the relevant decisionmakers. The decisionmakers would be free to either deny future projects, and/or impose conditions on them limiting their extent, reach, methods, or environmental impacts.

As a result, this chapter provides a programmatic analysis of the potential environmental impacts of revising the ARM Plan and SMARO as set forth below. Any future permit renewal or other mining project would be required to obtain a use permit from the County and would be assessed in a CEQA document that discloses, analyzes, and mitigates any site- and project-specific environmental impacts. This chapter and DEIR also identify measures to mitigate

potentially significant environmental impacts, and provides that these measures shall be incorporated into the ARM Plan or mining ordinance as appropriate.

## 5.2 DESCRIPTION OF ARM PLAN AND SMARO AMENDMENTS

The proposed ARM Plan and SMARO amendments were developed by staff in consultation with the County's Scientific Review Consultants and the resource agencies, and have been further revised through the development of mitigation measures in this EIR. The proposed amendments incorporate new goals and objectives for the protection of aquatic and other resources, and establish a process for permitting future exceptions to mining standards based upon an assessment of enhancement opportunities and implementation of an enhancement program. The proposed amendments would require mining plans that depart from the ARM Plan standards to provide a reclamation plan that incorporates a river enhancement plan. Enhancement plans would enable a more coordinated interagency permitting process and collaboration with property owners and other community groups to achieve a broader management strategy for the river system.

As discussed in Chapter 1, "Introduction and Project Description", the proposed amendments would modify specific objectives, standards, and requirements of the existing ARM Plan and mining ordinance related to instream mining. The amendments would revise existing ARM Plan Sections 7.2, "Goals and Objectives" and 7.5, "Instream Management Program." Some amendments would apply to instream mining projects proposed anywhere within Sonoma County, while others would apply only to projects in the Lower Alexander Valley Reach of the Russian River. Other rivers and reaches would not be governed by the latter category of proposed amendments.

### A. Countywide Amendments.

The following amendments would apply to all future instream mining projects in the County. They would clarify existing language and expand the major objectives of the instream management program to include protection of aquatic habitat and public infrastructure and allow for an adaptive management strategy to achieve broader objectives for river management. These changes include:

- adding an objective to "maintain or enhance the aquatic and terrestrial habitat" associated with instream operations to Section 7.5.2, "Operating Standards,"
- adding an operating standard for the "protection of public infrastructure" to Section 7.5, "Instream Management Program," and
- providing a suggested procedure for the reclamation of mined gravel bars to Section 7.5.3, "Reclamation":

"Reclamation plans and enhancement programs may include removal of invasive species and establishment of riparian vegetation to strengthen banks and offset potential for lateral bank erosion within the mining reach."

These proposed amendments are consistent with the language and intent of the current ARM Plan and mining ordinance, but were not specifically incorporated in the objectives sections. Adding these objectives would lead to a more integrated system of river management, and thus result in a beneficial environmental impact over the long-term.

The proposed amendments would also modify the ARM Plan and mining ordinance to allow consideration of future exceptions to existing mining standards for projects that include an

assessment of enhancement opportunities, implementation of an enhancement program, and a site-specific environmental analysis with expanded study requirements. The proposed amendments would specifically require future mining plans that seek to depart from the ARM Plan standards to provide a detailed, site-specific analysis demonstrating how the project would restore or enhance terrestrial and aquatic habitat and minimize potential for bank erosion. In addition, applicants would be required to propose a reclamation plan that includes measures to enhance and restore riparian habitat, stabilize banks, minimize erosion, and improve aquatic habitat.

The amendments would specifically revise the ARM Plan and/or SMARO to state:

“Exceptions to the [ARM Plan] mining standards may only be considered in conjunction with a use permit and reclamation plan that incorporates an enhancement program and site-specific objectives and performance criteria. Revised mining standards may be approved only where it has been demonstrated through site-specific analysis and environmental review that the proposed mining method would enhance or restore terrestrial and aquatic habitat, particularly riparian habitat, and minimize potential for bank erosion. Adaptive management of instream mining methods shall be subject to annual review and approval by PRMD staff, in consultation with the County’s Scientific Review Consultants and resource agencies to determine compliance with adopted objectives and performance criteria and any modifications to the mining plan, monitoring requirements, or mitigation measures that are required by the County to meet the objectives.”

Use permit applicants proposing to remove gravel from the upstream half of a gravel bar are currently required to submit a study prepared by qualified, County-approved experts demonstrating that the proposed mining methods and best management practices are the best approach for reducing impacts to adjacent stream banks. The ARM Plan lists the minimum information that is required for this study. The proposed amendments would require additional information for any proposed exceptions to the ARM Plan standards. Future studies would be required to:

- assess bank stability, and terrestrial and aquatic habitat, particularly riparian habitat;
- identify additional land uses and existing infrastructure such as wells, bridges, roads, levees, or other infrastructure;
- identify opportunities to:
  - strengthen banks with riparian vegetation and/or bioengineered technical bank stabilization measures,
  - enhance a diversity of terrestrial and aquatic habitat, and
  - enhance aquatic habitat;
- make recommendations for setbacks, buffers, or other management practices that would improve bank stability and enhance terrestrial and aquatic habitat;
- provide a comparative analysis of the level of environmental mitigation and benefits which would be achieved by alternate performance standards;
- include an analysis of cumulative impacts arising from the instream mining alternative standards, if data are already available; and

- prepare a reclamation plan incorporating an enhancement program that includes measures to enhance or restore riparian habitat, stabilize banks, minimize potential for bank erosion and improve aquatic habitat.

**B. Amendments Specific to the Lower Alexander Valley Reach of the Russian River.**

Projects in the Lower Alexander Valley Reach of the Russian River are subject to existing Countywide and Russian River-specific ARM Plan and mining ordinance goals, objectives, and mining standards. The proposed amendments would incorporate new site-specific objectives and performance criteria for the Lower Alexander Valley Reach, as discussed in Section 3.0 “Environmental Impact Analysis” and summarized below. These proposed amendments would apply only to projects proposed in the Lower Alexander Valley Reach. These proposed amendments would add the following objectives for instream mining in the Lower Alexander Valley Reach:

- Reduce the potential for bank erosion in a manner that maintains or enhances riparian vegetation and habitat conditions for fish and wildlife.
- Avoid activities in the stream flow or below water level unless shown to be necessary to improve aquatic habitat conditions.
- Maintain and enhance opportunities for terrestrial wildlife movement.
- Maintain and enhance diverse riparian vegetation as necessary to protect beneficial uses. Strengthen banks along the mining reach with substantial riparian vegetation and/or bioengineered technical measures to improve bank stability and minimize bank erosion.
- Avoid disturbance of existing mature riparian vegetation. Where disturbance of riparian vegetation is shown to be necessary for mining operations and/or reclamation, replace/replant vegetation that provides equal or better habitat than existed prior to mining. Onsite replacement is preferable to offsite replacement.
- Manage extraction to minimize disturbance to physical processes that provide for pool and riffle habitat and maintain a confined channel with complex margins along the riparian zone. Retain, to the extent possible, the topographic attributes of gravel bars including robust bar heads, and bar margins strong enough to withstand the effective discharge stage flows.
- Manage extraction to maintain the minimum baseline reference elevation of the bars established at 1 foot above the summer low flow water level prior to the first year of mining in the reach. Limit annual extraction to the recharge that occurs above the established baseline elevations.
- Limit extraction to the area downstream of the apex or widest point on the bar. Permit exceptions to allow mining up to two-thirds of the bar only where the head of bar buffer is at least 8 feet above the water surface elevation or as determined necessary to protect public infrastructure, but in no case shall mining occur on the upstream one-third of the bar length.
- Monitor thalweg elevations annually at each riffle crest and pool within the mining reach and upstream and downstream of the mining area.
- Manage extraction to assure that:
  - average thalweg elevations measured at riffle crests throughout the mining reach do not drop more than 0.5 feet below pre-mining elevations,

- thalweg elevations measured at riffle crests downstream of each mined gravel bar do not drop more than one-foot below pre-mining elevations, and
- residual pool depths are maintained or increased.
- Utilize an adaptive management strategy (AMS) in consultation with the County's Scientific Review Consultants and resource agencies. Conduct annual review and approval of instream mining plans prior to mining activities in order to assure that mining activities meet all applicable objectives and standards as well as permit and reclamation conditions.

### **5.3 POTENTIAL PROGRAMMATIC IMPACTS**

As noted above, this DEIR already evaluates the potential environmental impacts of the proposed ARM Plan and mining ordinance amendments identified above in several chapters and sections, including Section 3.2, "Geomorphology, Hydrology, and Water Quality"; Section 3.3, "Vegetation and Wildlife"; and Section 3.4, "Fisheries Resources". As discussed therein, the proposed amendments are intended to improve the mining standards to preserve and enhance geomorphic processes and protect aquatic habitat. Impacts could nevertheless result from the changes to operating standards for instream mining projects, as well as from adaptive management and enhancement plans. The ARM Plan has previously been amended to allow revised mining standards in both Austin Creek and Gualala River.

As noted above, the proposed amendments would require:

- preparation of significant new site-specific environmental studies;
- implementation of enhancement plans (goals, actions, performance standards); and
- implementation of an adaptive management strategy.

As discussed throughout this EIR, and again below, implementation of the proposed amendments would result in several beneficial impacts to the natural environment.

The proposed objectives would better protect and enhance hydrologic values and wildlife habitat by promoting the maintenance and enhancement of aquatic habitat, the maintenance of riffle and pool attributes and a channel with complex margins, the protection of public infrastructure, the maintenance of channel flood capacity, the protection of riparian vegetation and removal of invasive species, and the reduction of bank erosion and its resulting sedimentation.

The proposed amendments also would compel applicants to submit substantial new and detailed information as part of any future request to deviate from current mining standards. The amendments would require applicants to submit, among other items, an assessment of bank stability and riparian habitat; an analysis of cumulative impacts; an explanation of how the proposed project would enhance or restore terrestrial and aquatic habitat and minimize the potential for bank erosion; and a reclamation plan and enhancement program that includes measures to enhance or restore habitat and existing banks. These new requirements would assist in understanding the environmental impacts of potential future projects, developing enhancement and restoration programs, and ensuring that future applications would provide environmental benefits by enhancing or restoring terrestrial and aquatic habitat and minimizing bank erosion. These amendments would thus result in beneficial environmental impacts over the existing ARM Plan and mining ordinance.

The proposed amendments would also directly protect aquatic and terrestrial habitat by requiring compliance with performance standards and adaptive management strategies. Future projects would be required to retain the topographic attributes of gravel bars, avoid extraction below a baseline reference elevation, and manage extraction to preserve the thalweg elevation, residual pool depths, and pool and riffle habitat. The amendments also call for adaptive management and yearly reviews to ensure that all applicable objectives and standards are met, and enhancement programs to enhance or restore riparian habitat, stabilize banks, minimize the potential for bank erosion, and improve aquatic habitat.

Thus, implementation of these amendments would result in significant, long-term, and Countywide beneficial impacts to hydrology and water quality, vegetation, wildlife, other aquatic resources, and fish species and habitat.

Nevertheless, potential future mining projects and their accompanying enhancement and restoration components may use heavy equipment to construct or enhance aquatic and terrestrial habitats, and may thus result in various short-term and some longer-term impacts. These impacts are described in the following subsections, along with measures to mitigate them (where necessary), and the beneficial impacts of the proposed amendments.

#### **A. Geology Minerals and Soils**

The 1994 ARM Plan PEIR explained that instream mining can result in channel lowering and incision and increased bank erosion, but mitigated these potential impacts through the mining standards, including the prohibition of mining in the upper half of a bar or below the 2% cross-slope. These standards have proven effective at limiting channel lowering, incision and bank erosion. The proposed amendments would allow revisions to these mitigation measures for projects that propose an exception to existing standards. The expanded monitoring program and adaptive management strategy would mitigate any resulting impacts, however, by limiting mining in specified areas, changing the mining methods, or suspending mining altogether.

The proposed amendments do not mention, implicate, or require construction of any structures, which are not normally involved in instream mining in any case. As a result, the proposed amendments would not result in any impacts to life or property from expansive soils, ground ruptures, ground shaking, liquefaction, or landsliding.

Habitat enhancement plans and activities, such as the construction of oxbows or alcoves, could result in soil erosion or loss of topsoil, as well as slope stability impacts. These potential impacts would be mitigated to a less than significant level by the best management practices and mitigation measures identified in the Section 3.2, "Geomorphology, Hydrology, and Water Quality".

#### **B. Geomorphology, Hydrology, and Water Quality**

As discussed in Section 3.2, "Geomorphology, Hydrology, and Water Quality", Section 8.3, "Hydrology" of the 1994 ARM Plan Program EIR (Sonoma County, 1994) evaluated potential impacts that could result from bar skimming in the absence of standards and regulations. The PEIR determined that instream mining operations could lower the channel thalweg elevation, resulting in incision, over-steepening of streambanks and increased bank erosion that would affect channel stability and potentially impact water quality by increasing fine sediment loads in the Russian River and its tributaries. The ARM Plan also recognized the possibility of secondary impacts related to channel incision and bank erosion, including loss of streamside agricultural soils, increased sedimentation, and loss of riparian and fishery habitat. Instream operations

could also alter the natural geomorphic characteristics of the channel, creating a wide, shallow low flow channel with elevated water temperatures, reduction in pools and riffles, and generally simplifying channel complexity needed for fish habitat.

The PEIR recommended mitigation measures that the County thereafter adopted as operating standards (Section 7.5.2) and restrictions in the management plan. These measures included limiting extraction to more closely match the amount of recharge by implementing a minimum baseline elevation below which mining cannot occur, limiting mining to the lower half of the bar, establishing buffers around the bar perimeter and other operating standards, and requiring participation in the Russian River Gravel Mitigation Program and installation of erosion control. Monitoring data collected since adoption of the ARM Plan indicate that these measures have been effective at preventing channel incision and limiting bank erosion, but may not have been as effective at maintaining aquatic habitat.

The proposed amendments are evaluated at length in section 3.2, “Geomorphology, Hydrology, and Water Quality”. As discussed therein, the proposed amendments would result in significant beneficial impacts. The proposed goals, objectives, and standards would better protect and enhance hydrologic values and water quality by ensuring the enhancement or creation of aquatic habitat, the maintenance of riffle and pool attributes and a channel with complex margins, the protection of infrastructure, the maintenance of channel flood capacity, and the reduction of bank erosion through the AMS.

Section 3.2, “Geomorphology, Hydrology, and Water Quality” also discloses that the proposed amendments could result in adverse impacts. The section evaluates the extent to which revising the method for establishing baseline elevations could result in lowering of the channel. It analyzes the possible hydrologic impacts of revised head-of-bar, side-bar, and outer bank buffers, and potential impacts on groundwater levels as a result of mining’s potential to lower the channel bed.

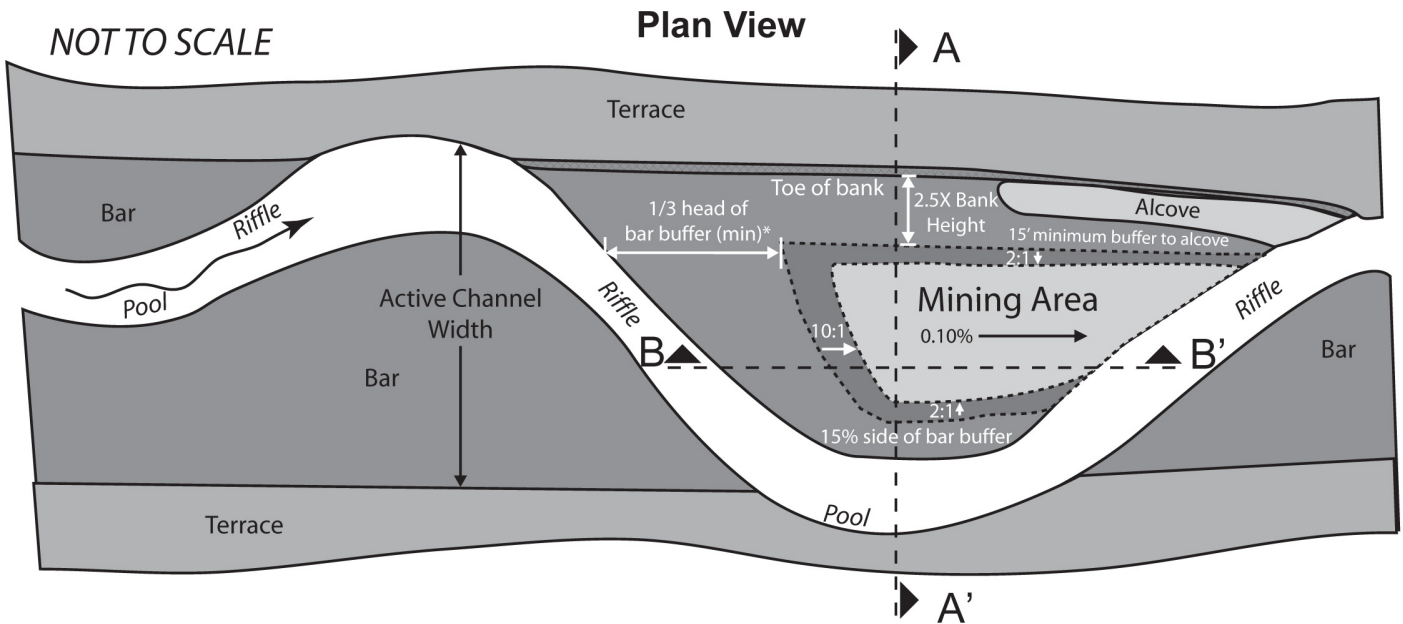
Section 3.2, “Geomorphology, Hydrology, and Water Quality” further identifies mitigation measures to reduce all potential hydrologic impacts to a less than significant level. Those measures would be incorporated into the ARM Plan and mining ordinance, are illustrated in Figure 5-1, and are further described as follows:

- Change the baseline below which mining cannot occur from a 2% cross-slope from the low flow water surface elevation to a level slope (0% slope) established one-foot above the highest low-flow water surface elevation data from 1997 or 2007 as shown in Figure 3.2-9.
- Retain the current ARM Plan standards to allow mining only downstream of the apex or widest point on the bar. Allow mining up to two-thirds of the bar length only when the head of bar buffer elevation is at least 8 feet above the water surface elevation measured from the upstream riffle crest at approximately 200 cfs flow. Mining would only be allowed in the upper half of a bar with a head of bar buffer less than 8 feet above the water surface elevation if necessary to protect public infrastructure. Require that cut slopes be maintained at 10:1 from the bar head to the skim floor surface and sloped to drain to the downstream outlet at the bar tail.
- Expand the required side bar buffer from a minimum of 15 feet to 15% of the active channel (defined as the widest point of the bar and low flow channel) but not less than 50 feet. Limit side bar buffer heights to those of the head of bar buffer, tapering them in width at the downstream end to allow drainage. Require an undisturbed outer bank

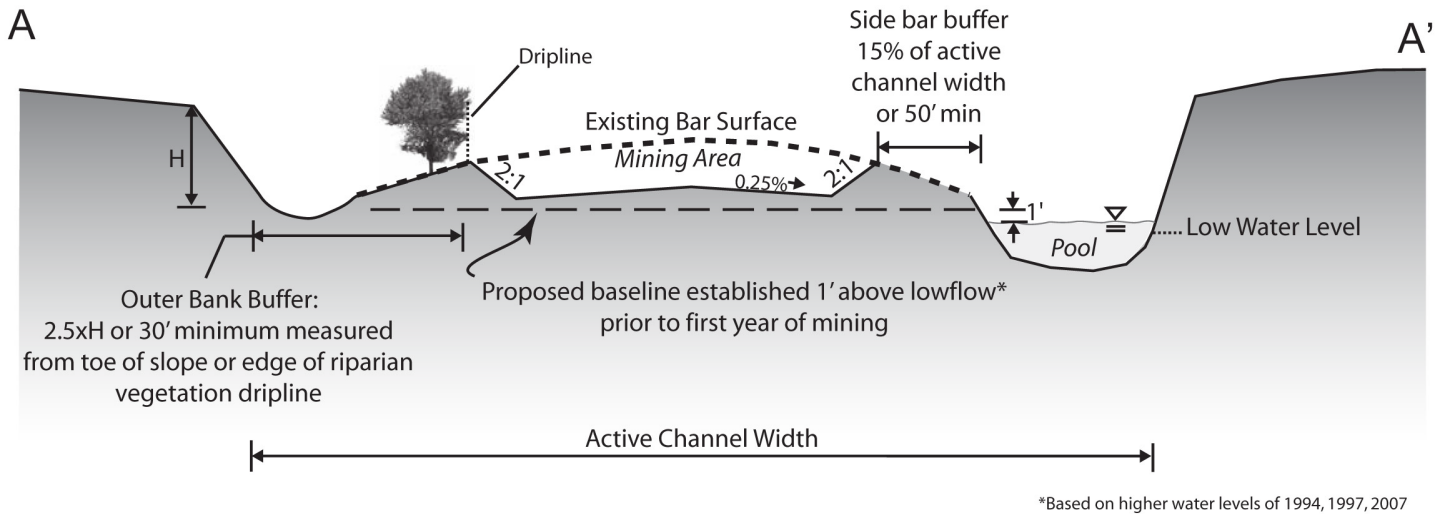
buffer of either 2.5 times the height of the bank or 30 feet, whichever is greater, that protects the dripline of existing riparian vegetation towards the low flow channel.

- Impose substantial new monitoring and data collection requirements up and downstream of the mining reach. Require new and improved data regarding sediment storage, channel vertical stability, bar surface areas, low-flow channel width, and pool depths.
- Require compliance with substantial new performance standards (defined in Mitigation Measure 3.2-5) for sediment storage, channel vertical stability, bar surface areas, low-flow channel width, and pool depths.
- Require development and approval of a river enhancement plan and compliance with restoration standards, monitoring requirements, and performance criteria for any requested waiver of the Russian River Gravel Mitigation Fee.
- Impose adaptive management strategies to require future projects to suspend mining, provide additional studies, implement modified mining methods or limitations on the location of future mining activities, and/or construct additional enhancements or other remediation measures if performance standards are not met.

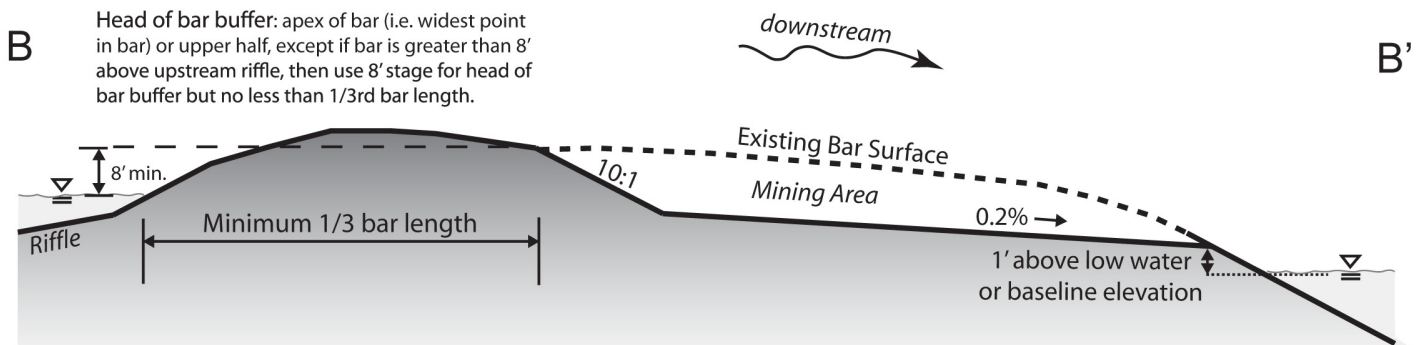
Implementation of the proposed amendments would reduce potential impacts to a less-than-significant level, while providing substantial beneficial impacts on geomorphology, hydrology, and water quality.



**Cross Section View - A**



**Longitudinal Section View - B**



Source: Syar (2010)  
 Note: please see Figure 1-6 for cross sections

Figure 5-1  
**Proposed Change to ARM Plan Standards with Mitigation for Lower Alexander Valley Reach**

### **C. Vegetation and Wildlife**

The ARM Plan PEIR (Sonoma County 1994) evaluated potential vegetation and wildlife impacts in Section 8.6, “Vegetation and Wildlife”. The PEIR determined that instream operations would create short-term habitat losses during mining, and long-term losses if the same zones are continually mined. The PEIR mitigated short- and long-term impacts by requiring implementation of mining standards, off-site mitigation measures, standard mitigation and reclamation plan requirements, and contribution towards the Russian River Gravel Mitigation Fund Stream Restoration Program. These measures were incorporated into the ARM Plan policies and SMARO. The PEIR determined that these mitigation measures would reduce instream mining impacts on vegetation and wildlife resources to less-than-significant levels.

The proposed amendments are discussed and analyzed at great length in Section 3.3, “Vegetation and Wildlife”, of this EIR. Section 3.3 notes that impacts could result from the revised outer bank setback, the waiver of mitigation fees based on an enhancement plan, and revised mining methods and enhancement activities that could affect protected species.

Section 3.3, “Vegetation and Wildlife” then imposes mitigation measures to reduce those potential impacts, including:

- Revising the ARM Plan and mining ordinance to require the outer bank setback be measured from the toe of the outer bank slope and include the dripline of any existing riparian vegetation (Mitigation Measure 3.3-1). This measure would be incorporated into the mining ordinance at Section 26A-09-020(e)(3)(iii), “Setbacks”.
- Imposing restoration standards, monitoring requirements and performance criteria for riparian restoration activities, as specified in Mitigation Measure 3.3-2.
- Requiring surveys for and protection of special status and protected species and other vegetation and wildlife (Mitigation Measure 3.3-3).

Section 3.3, “Vegetation and Wildlife” explains that, with mitigation, the proposed amendments would result in a beneficial impact on vegetation and wildlife resources by increasing the area, extent, and performance of proposed riparian restoration activities. Section 3.3 further explains that the remaining, adverse impacts of the proposed amendments would be less than significant with implementation of the measures and mining standards identified above.

### **D. Fisheries Resources**

The 1994 ARM Plan (Sonoma County, 1994) identified potential impacts to fisheries related to bank erosion, increased water temperatures, increased sedimentation, loss of cover, loss of spawning habitat, a reduction of food supply, an increased potential for stranding of juvenile fish and interference with migratory patterns. The ARM Plan established standards to address impacts to fisheries resources including: no mining below water; limitations on the mining season; required buffers that limit the area of mining and establishment of standards for stream crossings; sedimentation and erosion controls; and contribution to the Russian River Gravel Mitigation Fund.

Section 3.4, “Fisheries Resources” explains that the proposed amendments include new goals, objectives, and standards that would protect and enhance fisheries resources. The amendments include revised objectives to protect aquatic habitat and include revised performance standards to maintain the bar form and geomorphic processes that provide aquatic habitat. The amendments also call for adaptive management of the instream mining methods

within the Russian River and require an enhancement program when revised mining standards are proposed. These amendments are intended to protect fisheries resources and would be beneficial.

Section 3.4, "Fisheries Resources" also discusses the potential adverse impacts of these amendments at length. Section 3.4 discloses and evaluates the potential impacts that could result from allowing revisions to mining standards, including impacts on pool and riffle habitat; possible fish stranding impacts; erosion and other impacts of revised bar buffers and implementation of the AMS, and the effects of allowing a waiver of impact fees based on a river enhancement plan. This EIR imposes significant mitigation measures, in Sections 3.2, "Geomorphology, Hydrology, and Water Quality"; 3.3, "Vegetation and Wildlife"; and 3.4, "Fisheries Resources and others, that would reduce all such adverse impacts to a less-than-significant level, while preserving the beneficial impacts of the proposed amendments.

### **E. Cultural Resources**

The ARM Plan PEIR identified potential impacts to cultural resources (including archeological, paleontological and historic resources) as a result of ground clearing, aggregate removal or associated processing, transportation activities and reclamation activities. The ARM Plan and mining ordinance includes mitigation measures requiring consultation with tribal authorities, literature search, pre-mining field surveys, cultural resource orientation of mining operators, halting work if resources are encountered, and recovery measures as defined in SMARO Section 26A-09-010(p). The proposed amendments would not change these requirements, although they should be updated to reflect current tribal contact information.

In accordance with SB 18, the County initiated consultation with tribal authorities for the proposed amendments to the ARM Plan and mining ordinance. No comments were received during the Notice of Preparation or as the date of publication of the Draft EIR.

The proposed amendments do not mention or directly address cultural resources issues. The proposed amendments do allow for river enhancement plans, however, and such plans may include the construction or enhancement of aquatic and terrestrial habitats. Indirect impacts could occur if such construction exposed or disturbed cultural artifacts or remains. The ARM Plan and SMARO already contain mitigation measures that reduce all such impacts to a less-than-significant level, however, and the proposed amendments would not change them.

In addition, any effects on cultural resources from a potential future project would be disclosed, analyzed, and mitigated as part of the CEQA review for that specific approval. As a result, approval of the proposed amendments would not result in any significant adverse impacts related to cultural resources.

### **F. Traffic and Circulation**

The ARM Plan PEIR identified significant operational and safety impacts from gravel truck traffic on County roads. The ARM Plan established the Aggregate Road Mitigation Fund to partially mitigate the impacts of excessive road wear, and required that all roads used for site access have sufficient width, shoulders and pavement strength or other features necessary to adequately mitigate the traffic impacts of proposed operations.

The proposed amendments do not alter these requirements. They would only implicate traffic indirectly, and only to the extent potential future enhancement plan activities could involve construction that would result in increased road use by construction equipment and other

vehicles. Any such road use would be temporary, and limited to the extent necessary to implement enhancement plan activities.

Section 26A-09-010(c) of the mining ordinance already requires the following measures, which would be incorporated into project conditions to reduce the level of the above impacts to less-than-significant:

- All private roads or driveways providing access to a mining site shall be adequately managed to prevent aggregate or other materials being drawn onto the public roads and rights-of-ways;
- Payment of annual traffic mitigation fee for cumulative operational impacts;
- Upgrade of driveways and access routes with approval of encroachment permits;
- Traffic warning signs, bicycle lanes, acceleration-deceleration lanes, turning lanes or other traffic management facilities shall be placed by the operator at appropriate locations as determined by the County;
- Upgrading of haul routes to a standard capable of accommodating the additional weight of trucks and minimizing traffic hazards;
- Payment of annual aggregate road mitigation fee for excessive wear and tear impacts to County roads;
- Development and implementation of a truck driver education program including details on preferred haul routes and procedures to reduce conflicts and respond to complaints about gravel trucks; and
- All roads used for site access should have sufficient width, shoulders, pavement strength and other features necessary to adequately mitigate the traffic impacts. Public access roads shall meet the design requirements of the General Plan and related standards and traffic levels on public access roads shall not exceed the acceptable levels identified in the General Plan.

These measures would reduce any potential future impacts to a less-than-significant level. In addition, any future mining and enhancement proposals or permit renewals would be subject to a project-specific CEQA and public review to further reduce or avoid potential impacts.

## **G. Air Quality**

The ARM Plan PEIR identified impacts to air quality from on-site vehicular and equipment emissions and suspended particulate and dust emissions from aggregate operations. Mitigation measures incorporated into the ARM Plan include:

- Watering exposed soils twice daily with complete site coverage and increasing frequency when wind speeds exceed 15 mph;
- Road sweeping of mud and dust carried onto street surfaces;
- Spraying of haul routes and drop piles;
- Covering haul trucks; and
- Post mining revegetation or soil stabilization.

The proposed amendments would not change these requirements. They would only implicate air quality issues indirectly, to the extent future enhancement plans may include the construction or enhancement of aquatic and terrestrial habitats that would require construction equipment, new vehicle trips, or other emissions.

Any such impacts would be temporary, and limited to emissions necessary to implement enhancement activities. The ARM Plan and mining ordinance, Section 26A-09-010(o)(2), already include substantial measures to reduce them to less than significant. These measures include:

- Water all active construction areas and haul routes at least twice daily and more often during windy periods (i.e., 15 mph). Active areas adjacent to residences shall be kept damp at all times. Pave and apply water at least twice daily, or apply (nontoxic) soil stabilizers on all unpaved access roads, parking areas, and staging areas. Enclose, cover, and water twice daily, or apply (nontoxic) soil binders to exposed stockpiles. Install wheel washers for all existing trucks, or washing off the tires or tracks of all trucks and equipment leaving the site.
- Suspend excavation and grading activity when winds (instantaneous gusts) exceed 25 mph.
- Cover all hauling trucks or maintain at least 2 feet of freeboard.
- Sweep daily (with water sweepers) all paved access roads, parking areas, and staging areas and sweep streets daily (with water sweepers) wherever visible soil material is deposited onto the adjacent roads.
- Hydroseed or apply (nontoxic) soil stabilizers to inactive mining areas and haul routes (previously graded areas that are inactive for 10 days or more).

In addition, potential future projects would be subject to site-specific environmental review. Such CEQA review would evaluate project consistency against then-applicable thresholds and standards for criteria pollutants, CO<sub>2</sub>e emissions, and other air quality concerns identified by CEQA. Mitigation measures would be required to the extent necessary to bring potential future projects into compliance with the relevant significance thresholds, which change over time. As discussed above, the proposed amendments do not approve any future project, and only implicate air quality concerns to the extent that implementation future enhancement plans may generate additional emissions. Such emissions would be limited, temporary, and mitigated by measures identified in the ARM Plan, mining ordinance, and project-specific environmental review.

## **H. Aesthetics**

The ARM Plan PEIR and mining ordinance impose mitigation measures and require adherence to standards to reduce the potential impacts of mining operations on visual resources. These measures include requiring buffering, berming, and visual screening between operations and adjacent public streets or public uses, and requiring special provisions for screening for operations in designated scenic areas or within 300 feet of General Plan-designated scenic corridors.

The proposed amendments do not change these requirements or otherwise directly impact visual resources. The proposed amendments would only implicate aesthetic concerns if future enhancement plans including construction or enhancement of aquatic and terrestrial habitats that would be visible from public or scenic viewpoints. Such construction or enhancement

activity could result in short-term impacts related to views of construction equipment, removal of invasive vegetation, or relocation of native, riparian vegetation. Such impacts would be temporary, and limited to the work necessary to implement enhancement measures.

The proposed amendments would result in beneficial long-term impacts by promoting the enhancement of the natural habitat for vegetation and wildlife, and thus complementing the scenic views of enhanced areas. The planting of new, native vegetation communities and development of alcoves, oxbows, or other enhancement features would result in increased scenic and other aesthetic values along the Russian River and near other mining sites.

## **I. Noise**

The ARM Plan PEIR identified potentially significant and unavoidable noise impacts related to the volume of truck traffic traveling to and from the mining sites. Mitigation Measures identified in the ARM Plan include:

- construction of sound barriers or installation of landscape noise buffers, berms and / or stockpiles could be used to shield the nearest noise-sensitive receptors;
- insulation of affected residential units and other design techniques;
- limitation on the hours of operation for haul trucks to daytime hours only;
- limit on the number of trucks per hour; and
- restriction on the use of air brakes.

The ARM Plan PEIR (Sonoma County 1994) found that these measures would reduce noise impacts, but would not fully mitigate cumulative noise from haul trucks on public roadways. The Board of Supervisors therefore adopted a statement of overriding considerations for noise impacts from haul trucks related to implementation of the ARM Plan and associated mining ordinance.

The proposed amendments do not specifically address noise impacts or change existing requirements in the ARM Plan or mining ordinance. Noise issues would be indirectly implicated only through the implementation of potential future enhancement plans that require the use of construction equipment or other noise-generating activities.

Such impacts would be temporary and limited to the equipment and activities necessary to implement the proposed enhancement. The impacts would be reduced through implementation of the above-identified ARM Plan mitigation, as well as additional measures identified through the CEQA process for the specific project and enhancement plan.

## **J. Public Services and Utilities**

The ARM Plan PEIR (Sonoma County 1994) identified degradation of local roadways from increased truck traffic as a potentially significant impact to public services and utilities, and established a Road Mitigation Fund to address maintenance and repairs from heavy truck traffic. The proposed amendments do not change these requirements. However, as discussed in Section 5.2.F, implementation of the proposed amendments could result in increased traffic related to the potential future enhancement activities. Mitigation measures already included in the mining ordinance would reduce such impacts on public roadways to a less than significant level. In addition, potential future proposed projects (and any future enhancement proposals) also would be subject to site-specific CEQA review and further mitigation.

### **K. Hazards and Hazardous Materials**

The ARM Plan PEIR (Sonoma County 1994) identified potential impacts related to storage and use of hazardous materials at mining sites and required development and implementation of spill prevention plans to reduce such impacts to less-than-significant. The proposed amendments would not change these requirements or directly implicate hazard concerns. Enhancement activities implement pursuant to the proposed amendments could involve construction equipment that have the potential to release hazardous substances, but compliance with the ARM Plan and mining ordinance, including the required development and implementation of spill prevention and recovery plans, would reduce such impacts to a less than significant level. In addition, potential future mining plans and enhancement proposals would be subject to a site-specific CEQA and further mitigation.

### **L. Energy**

The ARM Plan PEIR (Sonoma County 1994) did not identify any impacts to energy resources related to instream mining. The proposed amendments do not implicate energy resources, and would not result in any significant impacts. Projects would not generally generate demand for energy services that would result in the need for new or physically altered facilities or exceed the ability of the service provider to provide service without substantially decreasing its ability to serve the existing population. Energy consumption related to vehicle and equipment use would increase, however the ARM Plan identified local production of aggregates as a means of meeting projected demand while minimizing the energy required for production. The impact of the proposed amendments would not result in any significant impacts on energy use.

### **M. Land Use**

The proposed amendments would not result in impacts on land use. The amendments would not divide a community, or displace people or buildings used for housing. There are no adopted habitat conservation plan or natural community conservation plans that would be implicated by the proposed amendments, and potential future enhancement activities would not conflict with agricultural operations and are considered compatible uses under the County's Rules for Administering Williamson Act contracts.

### **N. Recreation**

The ARM Plan PEIR (Sonoma County 1994) identified that instream mining could result in adverse impacts to recreation, including reduced stream access; unaesthetic conditions, noise, and dust; disruption of wildlife habitat; and potential conflicts with recreational users on public roads used as gravel haul routes. The PEIR also identified a significant cumulative reduction in the quality of the river recreation experience. Mitigation measures incorporated into the ARM Plan and mining ordinance reduce all such impacts to less than significant by limiting instream mining activities to weekdays only, and requiring operators to contribute a fair-share to the Russian River Gravel Mitigation Fund as set forth in the Board of Supervisor's resolution 95-0450 or as later amended.

The proposed amendments do not mention, directly address, or change these requirements. They would only implicate recreational resources to the extent that possible future enhancement plan that include the construction of habitat enhancement features that are unsightly, generate noise, or temporarily block access to a recreation area. Such impacts would be temporary and limited to the implementation of enhancement activities, and would be substantially reduced by the existing requirements limiting mining to weekdays and a limited mining season (June 1 to

November 1), when the bulk of recreation use typically occurs on weekends. Implementation of the proposed amendments would thus result in temporary and less than significant on recreation.

Moreover, long-term impacts of enhancement activities would be entirely beneficial. In accordance with ARM Plan goals and objectives, enhancement projects would increase the natural habitat for vegetation and wildlife and provide more opportunities for recreation.