

4.7 LAND USE

4.7.1 Impact Criteria and Methodology

Impacts to land use were assessed by determining the types of land uses in the project area, then evaluating these uses to determine their sensitivity to the short-term and long-term project effects. Consistency of project activities with the objectives and policies of the Marin Countywide Plan and the relevant LCP and other community and land management plans, as summarized in Section 3.7, was also considered. Additional information pertaining to land use was obtained from Marin County and GFNMS staff and from site visits.

The following criteria have been developed based on significance criteria regarding impacts to land use adopted by Marin County. The project is considered to have a significant impact to land use resources if it were to result in any of the following:

- Converts prime agricultural land to nonagricultural use or impair the productivity of prime agricultural land;
- Conflicts with county land use goals or policies;
- Conflicts with existing or proposed uses at the periphery of the project area or with other local land use plans;
- Results in open space being converted to urban or suburban scale development;
- Conflicts with local zoning; or
- Results in nuisance impacts as a result of incompatible land uses.

4.7.2 Riparian Alternative

Significant but Mitigable Impacts

Impact 4.7.1: Compatibility with Uses at the Project Site

Project measures include the installation of a slurry pipeline in the lagoon, the presence of which would have an additional impact on recreational use of the lagoon. During the three-month construction period for each of the nine years the project is ongoing, the pipeline would run from the dredge to the end of the Stinson Beach spit east of the inlet, and then out to the disposal scow. During high tide the pipeline would float, and during low tide it would likely rest on the mudflats. Current uses of the lagoon for recreation, therefore, would be interrupted at certain times of the year.

Mitigation 4.7.1: This impact on kayakers and Seadrift recreational boaters would be mitigated by submerging the pipeline at one or two places along its length within the lagoon. Kayaks draw only five inches, but motorboats draw no less than two feet. The pipeline would be anchored to the bottom of the lagoon as it crosses the Main Channel, and this location would be clearly flagged for boaters to allow them to cross

the pipeline at high tide. In this way kayakers putting in along Highway 1 would be able to cross to Bolinas, and Seadrift motorboats would be able to exit the lagoon.

Less than Significant Impacts

Consistency with Countywide Plan and LCP

Stream Protection Policies II-1 and II-2 of the LCP allow stream diversions “where the primary function is the improvement of fish and wildlife habitat.” This policy is directed at protecting habitat for migrating steelhead trout and coho salmon. The Riparian Alternative proposes limited construction activities and vegetation removal in the PGC Delta, where 8.6 acres of upland delta habitat will be removed. There would be no upland riparian habitat removed under the Riparian Alternative, and impacts to the delta upland habitat are expected to be temporary. Schedules have not been defined at this stage, but excavation in PGC Delta is expected to last no more than three months over two seasons.

Also, sediment would be deposited continuously in the riparian and delta areas of Pine Gulch Creek. This deposition would provide for the natural regeneration of PGC Delta upland, and delta riparian habitat is expected to steadily reassert itself over the life of the project (Romanoski 2002). Further, the proposed action would improve long-term access to spawning grounds in PGC Delta. The project would have significant short-term impacts, but overall impacts to delta riparian habitat would be positive for the fish species that Policy II intends to protect.

Consistency with GFNMS Regulations and Management Plan

GFNMS regulations and the GFNMS Management Plan prohibit dredging in the seabed except for, among other activities, ecological maintenance. The purpose of the proposed action and the Riparian Alternative is to prevent the loss of intertidal and subtidal habitat and to prevent the creation of unnatural hydrological conditions in Bolinas Lagoon. The dredging, therefore, would maintain the ecological characteristics of the lagoon and is consistent with the GFNMS regulations and management plan. Further, GFNMS will be considering the environmental impacts of the plan through its authority to grant or withhold a permit under National Marine Sanctuary regulations (15 CFR 922.48).

Consistency with Countywide Plan and LCP

The Bolinas Lagoon Plan states that “Dredging should be permitted only after documentation of need is established and the absence or mitigation of the adverse environmental impacts is established.” The proposed project is consistent with this provision because the need to restore the lagoon is well documented and this project provides for measures that mitigate the project impacts. Therefore, the Riparian Alternative, with mitigation measures identified in this chapter, complies with the Bolinas Lagoon Plan limitations on dredging. The activities and mitigation proposed under the Riparian Alternative that would preserve the intertidal and subtidal marine

environment of the lagoon are described in Section 2.2.1 and in sections 4.2 and 4.3 regarding hydrology and biological resources.

Compatibility with Uses at the Project Site

Bolinas Lagoon is used to both protect and study natural resources. The Riparian Alternative would ensure and enhance these uses in the long term but would have short-term impacts on preserving habitat and research and education. As discussed in the project description and as analyzed in Section 4.3, these short-term impacts to habitat would be scheduled to avoid sensitive times of year, such as those when breeding, spawning, or nesting take place. Also, local government and nonprofit groups, such as Point Reyes Bird Observatory and the Audubon Canyon Ranch, use Bolinas Lagoon and the lagoon watershed for research. During construction, researchers may need to alter their wildlife observation schedules, but the construction should not substantially reduce the access or opportunity to study these species. There would be no long-term impacts to these activities because restoration of the lagoon would not alter its scientific uses.

Compatibility with Adjacent Uses

Under the Riparian Alternative, facilities that would be incompatible with adjacent residential use would not be developed. Also, implementing any of the alternatives would not affect range management or ranching or agriculture in the Bolinas watershed.

Construction Impacts: Beach and Bay Recreation Access at Stinson Beach Spit

The pipeline across Stinson Beach Spit would be in place for three months per year for up to nine years. Actual installation and removal of the pipeline each year would be of limited duration, and the pipeline would be constructed so as not to block access to beachgoers, probably by use of a bridge or walkway that would be installed over the pipeline. The presence of the pipeline could be considered an interference with the public's right of access to the sea, but the pipeline would occupy an area where the public's right of access is already limited (the property it crosses belongs to the Seadrift Homeowners' Association) and where the public's activities are restricted to passage rather than in-place recreation. Therefore, this impact is not considered a significant impact.

The presence of the pipeline in Bolinas Bay during project construction would have minimal impact because it would run along the ocean bottom, rather than along the surface of the water. This should result in minimal interference with kayakers, surfers, and swimmers during the project period.

Beneficial Impacts

Consistency with General and Community Plans, LCP and Bolinas Lagoon Management Plan

The project would be consistent with and, in many cases, would implement specific policies in Chapter 2, Natural Resource Protection, of the LCP, and the California

Coastal Act, as outlined in Section 3.8 of this EIS/EIR. The project sponsors would restore and preserve the intertidal marine environment, would maintain and improve the educational and research functions of the lagoon, and would maintain the recreational priority use for the site. The Riparian Alternative would have a long-term beneficial impact on the fulfillment of objectives and policies of the General Plan and LCP.

Goal 1 of the Bolinas Lagoon Management Plan is “to preserve and restore the ecological values of Bolinas Lagoon,” and methods for achieving this goal, include “Objective 3) Restore water quality and hydraulic functions that will decrease sedimentation and prevent the loss of rich estuarine habitats.” Under Parks, Recreation and Open Space, the Bolinas Community Plan states that, “11. ... We urge the county to begin studies to determine the possibility of dredging the mouth of the channel, to improve the flushing capabilities of the lagoon, and to allow Bolinas fisherman better access to the sea.” The proposed project would accomplish the goals of the Bolinas Lagoon Management Plan and the Bolinas Community Plan by restoring Bolinas Lagoon’s tidal, riparian, and flushing capabilities.

4.7.3 Estuarine Alternative

Significant Impacts

Impact 4.7.2: Consistency with Countywide Plan and LCP

Stream Protection Policy II-4 of the Marin County LCP states that “No construction, alteration of land forms or vegetation removal, shall be permitted within the riparian protection area.” While Policy II-4 is aimed at developing and constructing structures within riparian areas, it does not limit its reach to such projects. The Estuarine Alternative proposes limited construction activities in the Pine Gulch Creek and Delta, where 11 acres of upland habitat will be removed, including 7 of the 17 acres of riparian habitat in the delta. Because the Estuarine Alternative necessitates removing vegetation in the riparian protection area of Pine Gulch Creek, there would be a significant impact due to the conflict with Policy II-4.

(Stream protection policies II-1 and II-2 allow stream diversions “where the primary function is the improvement of fish and wildlife habitat” One of the proposed project’s underlying purposes is protecting habitat for migrating steelhead trout and coho salmon, so policies II-1 and II-2 contemplate the disturbance of streams for projects such as this, but these policies do not allow for the removal of vegetation.)

This vegetation removal and the impacts to biological resources of the riparian habitat of Pine Gulch Creek and Delta are addressed in section 4.3. It states that while there would be biological impacts due to loss of riparian vegetation, the proposed action would improve long-term access to spawning grounds in Pine Gulch Creek. Therefore, the project would have significant short-term impacts due to the removal of vegetation

in the riparian area. However, overall impacts to riparian habitat would be positive for the fish species the project and Policy II intend to protect.

The Estuarine Alternative has more impacts to Pine Gulch Creek upland riparian habitat than the Riparian Alternative, and acreage and volume of upland habitat would be lower with both action alternatives than it would be with the No Action Plan. Also, sediment would be deposited continuously in the riparian and delta areas of Pine Gulch Creek. This deposition would provide for long term natural regeneration of Pine Gulch Creek upland areas and upland habitat and is expected to steadily reassert itself over the life of the project (Romanoski 2002). Therefore, the project would have significant short-term impacts, but overall impacts to riparian habitat would be positive for the fish species.

Mitigation 4.7.2: Apply best management practices to control erosion and runoff and provide restoration of disturbed areas by replanting with plant species naturally found on the site. While this would lessen the long-term biological impacts, such a mitigation measure would not remove the conflict with Stream Protection Policy II-4.

Less than Significant Impacts

Long-term impacts under the Estuarine Alternative would be similar to those described for the Riparian Alternative. The Estuarine Alternative would have more impacts to biological resources in Pine Gulch Creek and therefore more impacts on land uses for habitat, but the Estuarine Alternative would have greater long-term benefits for tidal processes. The Estuarine Alternative would have slightly more positive impacts on the fulfillment of objectives and policies of the Countywide Plan and LCP for restoration of the lagoon.

Compatibility with Uses at Project Site

Impacts under the Estuarine Alternative would be similar to those described for the Riparian Alternative.

Compatibility with Adjacent Uses

Impacts under the Estuarine Alternative would be similar to those described for the Riparian Alternative.

4.7.4 No Action Alternative

Less than Significant Impacts

Long-Term Impacts: Lagoon Recreation Access

Without a restoration program and the dredging of the lagoon, the sediment in Bolinas Lagoon would be allowed to continue to build up and fill in open water areas within the lagoon. This sedimentation would degrade habitat values and would result in navigation problems in the lagoon for small boats that use the lagoon. With no project, open water areas would evolve into mudflats and marshland areas.

Allowing the continued sedimentation of Bolinas Lagoon would not directly conflict with county land use zoning and goals or policies because the area currently complies with the County General Plan and the Marin County LCP. No changes would be made to agricultural land in the project or peripheral areas. However, the current status of the lagoon as intertidal and subtidal marine environment would probably change without dredging. The elimination of this environment would conflict with the goals of the Bolinas Lagoon Plan identified in the LCP for “restoration and preservation of the intertidal and subtidal marine environment.” (MCCDA 1980). There are currently no plans to restore tidal habitat, but the county is managing the lagoon to preserve tidal habitats by restricting uses that may negatively affect such habitat in the short term. Therefore, tidal habitat would still be preserved under the No Action alternative, and there would be no significant impact to land use. No changes would be made to land use designations or local zoning, nor would any agricultural land in the project or peripheral areas be converted or impaired.

In addition, sedimentation of the lagoon and the expansion of upland land forms could change the public’s perception of the area as an open water area with marshland. This visual change could have indirect effects on the shoreline land uses, including recreation and tourism. For instance, the Bolinas County Community Plan includes the goal of maintaining the aesthetic value of the spatial and visual landforms. As the area silts in and tends to degrade, this effect could affect community goals or carry over to adjacent land uses. These uses, such as recreation or commercial tourism, may change over time.

Failure to address sedimentation in Bolinas Lagoon is likely to have impacts on other recreational land uses in the lagoon. As mentioned in Section 4.6, fishing and kayaking in the lagoon would be adversely affected by the significant reductions in intertidal and subtidal habitat. These impacts on recreation land uses would be permanent. All of the impacts of the No Action Alternative assume the absence of seismic activity or some other occurrence that would change the morphology of the lagoon and restore intertidal and subtidal habitat.

Beneficial Impacts

Long-Term Impacts: Lagoon Recreation Access

The Corps has predicted that under the No Action Alternative, the lagoon would acquire significantly more upland acreage at the expense of subtidal and intertidal habitat. While the Corps has not identified precisely where these habitat changes would take place, it is probable that the upland area in PGC Delta would continue to expand. This could result in limited beneficial impacts for some recreational users, such as birdwatchers and hikers, who would be able to access the delta from the MCOSD property on the west side of the lagoon.