

4.5 BIOLOGICAL RESOURCES

4.5.1 ALTERNATIVE A – PREFERRED ALTERNATIVE: CASINO, HOTEL, CONFERENCE CENTER, AND PARKING FACILITY

SIGNIFICANCE CRITERIA

A project would have a significant adverse impact on biological resources if it would:

- Have a substantial adverse effect, either directly or through habitat modifications, on any species protected by federal law;
- Have a substantial adverse effect on federally protected wetlands as defined by Section 404 of the CWA (including, but not limited to, marsh, vernal pool, coastal) through direct removal, filling, hydrological interruption, or other means;
- Interfere substantially with the movement of any native resident or migratory fish or wildlife species or with established native resident or migratory wildlife corridors, or impede the use of native wildlife nursery sites;
- Conflict with the provisions of an adopted Habitat Conservation Plan or Natural Community Conservation Plan.

POTENTIAL EFFECTS TO WILDLIFE AND HABITATS

Implementation of the project would result in an increase in human activity within the project area, which would include grading and development of about 9.3 acres of the 203.5± acre site. Some species of wildlife will avoid areas that have a high degree of human activity, thereby causing them to forage over greater distances and reducing the number of breeding and resting sites that are available. This would be an insignificant impact to species that are not federally threatened or endangered, due to the small area that would be disturbed under this alternative, and the large area of similar habitat in the immediate vicinity.

Table 4-8 provides a summary of the acreage of each habitat type that would be affected under Alternative A. As shown in this table, Alternative A would affect 9.3 acres of annual grassland/pasture habitat within the project site. The 9.3 acre figure is based on the preliminary grading plan included in **Appendix B**. A letter from the USFWS estimates, based on **Figure 2-2** of the DEIS, that there will be approximately 15 acres of development area including hard-surfaced areas, landscaping, trails, detention swales, and other facilities (**Appendix U**, Comment Letter F-1). While landscaped areas and detention swales would be included in the larger development area, these facilities are not included in **Figure 2-2**. Detention swales and landscaped areas are considered pervious for drainage purposes. As discussed in the Coastal Commission findings (**Appendix Q**), detailed project plans including plans for water quality, hydrology, lighting, signs, roads, sewer and water infrastructure, landscaping and revegetation,

and building plans will be submitted to Coastal Commission staff for review and agreement, as applicable.

TABLE 4-8
ANTICIPATED EFFECTS TO HABITAT TYPES –ALTERNATIVE A

Habitat Type	Total Acres	Acreage Affected	Percentage Affected
Annual grassland/pasture	113.5	9.3	8
Sitka spruce forest	38	0	0
Wetland prairie	25.5	0	0
Red alder/mixed deciduous woodland	19	0	0
Riparian wetland	5.5	0	0
Intermittent drainage	2	0	0
Total	203.5	9.3	5

SOURCE: SHN Engineers, 2004; AES, 2005.

The annual grassland/pasture habitat presents limited resources for wildlife and is currently subject to disturbance from existing forms of land use, specifically cattle grazing by the tenant rancher. Much of this area was a lily farm before it was returned to annual grassland/pasture. Impacts to the habitat are considered less than significant due to the relatively common and abundant nature of the affected habitat types in the region compared to the relatively small area of anticipated disturbance. Annual grassland/pasture habitat is relatively abundant on a local and regional scale and is not considered a sensitive resource due to disturbance levels and dominance of non-native species.

Development of Alternative A would result in potentially significant effects to off-site areas in the Crescent City Marsh. Stormwater runoff from most of the proposed development area eventually flows into the Crescent City Marsh. The overall watershed contributing to the Crescent City Marsh is approximately 1,120 acres, of which 510 acres are developed and 610 are undeveloped. Assuming the development of 9.3 acres, Alternative A would increase developed areas in the watershed by 0.8%. These 9.3 acres represent 1.5% of the undeveloped portions of the watershed.

The outflow from the project is shown in **Table 4-1** in **Section 4.3**. This amount could potentially affect stormwater runoff to the marsh, however mitigation measures specified in **Section 5.2.2** would further reduce potential impacts to the marsh. The hydrologic model developed for predicting runoff with mitigation incorporated in an individual sub-area shows that the mitigated peak flows for the 2-year, 10-year, and 25-year flow conditions were less than the peak flows under existing conditions and matched peak flows for the 100-year return interval (**Appendix B**). Thus, the swales would reduce impacts to less than significant. An Adaptive Management Plan is also recommended as mitigation, which would ensure effectiveness of the stormwater treatment system.

WATERS OF THE U.S.

Analytical Environmental Services (AES) biologists conducted a formal delineation for the project (**Appendix K**). This delineation was verified by the USACE. 33.01 acres of jurisdictional wetlands and several intermittent drainages (all waters of the U.S.) occur within the Martin Ranch property. Alternative A has been designed to avoid impacts to all jurisdictional wetlands and waters of the U.S. Access road improvement would not impact USACE jurisdictional wetlands in the Coastal Zone. The culverts to be used for the road over crossings of the jurisdictional waters of the U.S. are all open bottoms and will be installed in a manner that does not impact the waters and is, therefore, not subject to permitting. The footing for the culverts would be outside of the jurisdictional boundary and the open bottom design of the culvert would ensure that there is no fill or other impacts to the drainage of the jurisdictional waters. No fill of wetlands or waters of the U.S., as regulated by the USACE, would occur.

Also considered are non-jurisdictional wetlands as described by the USFWS classification system. The design features of the project, including vegetated swales, combined with the monitoring and Adaptive Management Plan (**Appendix X**) which would be submitted to the Coastal Commission staff, per CZMA review, would minimize the 0.31 acre impact of the project and would replace the functions of any the impacts to single parameter wetlands that may be impacted on site. Further mitigation measures for potential impacts to wetlands are identified in **Section 5.0**.

Without mitigation, indirect impacts could occur, and therefore mitigation is required for jurisdictional waters of the U.S. Potential indirect impacts to jurisdictional waters of the U.S. include increased sedimentation and pollutants resulting from site runoff, inadvertent spills of fuel, lubricants, or other toxic materials, and location of construction staging areas. Reduced water quality due to project-related activities could impact sensitive species associated with aquatic habitats. Potential impacts include increases in water temperature, decreased available oxygen content, decreased visibility, and an increase in pollutants (e.g. fuel, oil, grease, suspended solids). These impacts are considered significant. Mitigation measures to reduce potential impacts to less than significant levels are identified in **Section 5.0**.

STATE AND CNPS SPECIES

One species listed by the CNPS (List 2), great burnet (*Sanguisorba officinalis*), was found on site during surveys conducted with a USFWS biologist on June 4, 2004. Impacts to this species will be less than significant as this is a wetland species and the habitat has been avoided from the project design.

FEDERALLY LISTED SPECIES

Two federally listed animal species (northern red-legged frogs and ferruginous hawks) were observed by AES biologists during the field assessments. Based upon the review of known occurrences, habitat requirements, and the habitat types present within the Martin Ranch property and surrounding vicinity, the proposed project would result in possible significant impacts to federally listed plant and animal species and therefore mitigation is required. Suitable trees and other vegetation occurring on and within the vicinity of the proposed project site represent potential nesting habitat for protected raptor and migratory bird species. Potential project-related impacts to federally listed species are identified below. No impacts to bald eagles would occur as no bald eagles or bald eagle nests have been observed on the property and they are not reported to occur within 5 miles of the property (**Appendix A**).

Potential nesting habitat for Cooper's hawk, northern harrier, white-tailed kite, and other raptor species is present on and within 500 feet of the proposed project site. Tree removal and other construction activities associated with the proposed project development could result in significant adverse impacts to these species.

Development of the proposed project is anticipated to result in direct impacts to annual grassland/pasture habitat. The removal of woody and herbaceous vegetation within portions of the property would be required in order to implement the proposed project. This vegetation represents potential nesting habitat for migratory bird species. Impacts occurring to these habitats during the nesting season could result in significant adverse impacts to these species. Mitigation measures to reduce potential impacts to less than significant levels are discussed in **Section 5.0**.

Western Lily

Western lily has not been observed on the site although potential habitat is located in the northwest corner and within the large, central wetland of the property. Wetlands will be avoided and there will be no significant impacts to this potential habitat.

Stormwater runoff from the proposed development area flows to Crescent City Marsh, which has known populations of western lily. Drainage basin 1 drains to the Crescent City Marsh through the northern tributary located on site and indirectly through the ditch and seep system located at the southern edge of basin 1. Drainage basins 2 and 3 drain indirectly to the Crescent City Marsh (SHN, 2005). As discussed in **Section 4.3**, Alternative A would increase developed areas in the watershed by 0.8% (SHN, 2006). Estimated outflows for the project are shown in **Table 4-1** in **Section 4.3**. Without mitigation, the impact to western lily in the Marsh is considered potentially significant. Impacts will be reduced to less than significant levels by stormwater runoff mitigation including vegetated swales (**Section 5.2.2**) and an Adaptive Management Plan (**Appendix X**). The hydrologic model developed for predicting runoff volumes shows that the

mitigated peak flows for the 2-year, 10-year, and 25-year flow conditions were less than the peak flows under existing conditions and matched peak flows for a 100-year return interval (SHN, 2006). These findings are based on smaller individual sub-areas.

The U.S. Fish and Wildlife Service through informal consultation has concurred, pursuant to Section 7 of the Endangered Species Act (ESA), that the proposed project may affect but is not likely to adversely affect western lily. The letter of concurrence is included as **Appendix AA**.

Tidewater Goby

The project site does not support populations of tidewater goby, nor does the Crescent City Marsh, due to the lack of brackish conditions within the Marsh. The discussion of the western lily above describes the drainage from the project site to the Crescent City Marsh. The vegetated swale design and results of the hydrologic analysis show that runoff to the Crescent City Marsh will be mitigated to maintain pre-project flows. Stormwater mitigation listed in **Section 5.2.2** would further reduce the amount of drainage to the marsh, and would ensure that the water quality of the stormwater runoff is acceptable.

The U.S. Fish and Wildlife Service through informal consultation has concurred, pursuant to Section 7 of the ESA, that the proposed project may affect but is not likely to adversely affect tidewater goby. The letter of concurrence is included as **Appendix AA**.

Northern Spotted Owl and Marbled Murrelet

No habitat for the northern spotted owl and marbled murrelet occurs on the Martin Ranch property. Due to the lack of habitat, the project would have no effect on spotted owl populations.

MIGRATORY BIRDS

Potential adverse direct effects to migratory birds will be avoided or minimized by implementation of the mitigation measures identified in **Section 5.0**.

4.5.2 ALTERNATIVE B – GOLF COURSE, HOTEL, CONFERENCE CENTER, AND PARKING FACILITY (NON-GAMING ALTERNATIVE)

GENERAL EFFECTS

Construction and operation of Alternative B could impact sensitive biological resources including Sitka spruce forest, red alder riparian woodland, waters of the U.S, and federally listed species. This alternative would result in potential impacts due to the increased intensity of the land use and more grading in woodlands and wetlands.

POTENTIAL EFFECTS TO WILDLIFE AND HABITATS

Implementation of Alternative B would result in a substantial increase in human activity within the project area. Many species of wildlife will avoid areas that have a high degree of human activity, thereby causing them to forage over greater distances and reducing the number of breeding and resting sites that are available.

Development of Alternative B would result in effects to on-site habitats that are utilized by many species of wildlife (refer to habitat descriptions in **Section 3.5.2**). **Table 4-9** provides a summary of the acreage of each habitat type that would be affected under Alternative B. As shown in this table, Alternative B would affect a total of approximately 103 acres of habitat within the project site. Approximately 9 acres of disturbance would occur in the wet prairie habitat as a result of grading for the golf course and maintenance facility. Also 7 acres of Sitka spruce forest, 82 acres of annual grassland/pasture, and 5 acres of red alder/mixed deciduous forest would be graded for the construction of the golf course, hotel, conference center, and parking facility.

TABLE 4-9
ANTICIPATED EFFECTS TO HABITAT TYPES – ALTERNATIVE B

Habitat Type	Total Acres	Acreage Affected	Percentage Affected
Annual grassland/pasture	113.5	82	72
Sitka spruce forest	38	7	18
Wetland prairie	25.5	9	35
Red alder/mixed deciduous woodland	19	5	26
Riparian wetland	5.5	0	0
Intermittent drainage	2	<0.1	<1
Total	203.5	103	51

SOURCE: AES, 2005.

WATERS OF THE U.S.

Direct impacts (i.e., fill, modification, etc.) to waters of the U.S. would occur as a result of project development (**Table 4-10**) under this alternative. Indirect impacts to waters of the U.S. could result from increased sedimentation and pollutants resulting from project site runoff, inadvertent spills of fuel, lubricants, or other toxic materials, and location of construction staging areas. Reduced water quality due to project-related activities could impact sensitive species associated with aquatic habitats. Potential impacts include increases in water temperature, decreased available oxygen content, decreased visibility, and an increase in pollutants (e.g. fuel, oil, grease, suspended solids). Implementation of the mitigation measures in **Section 5.0** would reduce potential impacts to insignificant levels.

Obtaining and complying with all the terms and conditions (e.g. compensatory mitigation for loss of “waters of the U.S.”) of the appropriate Department of the Army permit and implementation of

the minimization and avoidance measures identified in **Section 5.0** will avoid or minimize the potential for significant adverse effects to “waters of the U.S.”.

TABLE 4-10
ANTICIPATED DIRECT EFFECTS TO WATERS OF THE U.S. – ALTERNATIVE B

Project Component	Waters of the U. S. Type	Activity Description	Effect Acreage
Main Entrance Road	Wetland Prairie	Bridge Abutments or Culverts	<0.1
Golf Course and Maintenance Facility	Wetland Prairie	Grading, fills, water quality BMPs	9.5
Hotel Service Road	Intermittent Stream	Bridge Abutments or Culverts	<0.1
TOTAL			9.5

SOURCE: AES, 2004.

FEDERALLY LISTED SPECIES

Potential impacts to federally listed species would be greater than those identified for Alternative A. The increased intensity of this alternative could have adverse indirect effects on federally listed species. Implementation of the mitigation measures identified for Alternative A would reduce potential impacts to a less than significant level. These mitigation measures are described in **Section 5.0**. Additionally, there could be adverse indirect effects to the Crescent City Marsh, including impacts to known populations of western lily and potential populations of tidewater goby. Mitigation for stormwater, as described in **Section 5.0**, will reduce this impact to a less than significant level.

MIGRATORY BIRDS

Potential adverse direct effects to migratory birds will be avoided or minimized by implementation of the mitigation measures identified in **Section 5.0**.

4.5.3 ALTERNATIVE C – CASINO, HOTEL, CONFERENCE CENTER, GOLF COURSE, AND PARKING FACILITY

GENERAL EFFECTS

As with Alternative B, construction and operation of Alternative C could potentially impact sensitive biological resources including Sitka spruce forest, red alder riparian woodland, waters of the U.S., and federally listed species. This alternative would result in significantly greater potential impacts due to the increased intensity of the alternative.

POTENTIAL EFFECTS TO WILDLIFE AND HABITATS

Implementation of the project would result in a substantial increase in human activity within the project area. Many species of wildlife will avoid areas that have a high degree of human activity,

thereby causing them to forage over greater distances and reducing the number of breeding and resting sites that are available.

Development of Alternative C would result in effects to on-site habitats that are utilized by many species of wildlife (refer to habitat descriptions in **Section 3.5.2**). **Table 4-11** provides a summary of the acreage of each habitat type that would be affected under Alternative C. As shown in this table, Alternative C would affect a total of approximately 103 acres of habitat within the project site. Approximately 9 acres of disturbance would occur in the wet prairie habitat as a result of grading for the golf course and maintenance facility. Another 7 acres of Sitka spruce forest, 82 acres of annual grassland/pasture, and 5 acres of red alder/mixed deciduous forest would be graded for the construction of the hotel, casino, conference center, and parking facility.

TABLE 4-11
ANTICIPATED EFFECTS TO HABITAT TYPES – ALTERNATIVE C

Habitat Type	Total Acres	Acreage Affected	Percentage Affected
Annual grassland/pasture	113.5	82	72
Sitka spruce forest	38	7	18
Wetland prairie	25.5	9	35
Red alder/mixed deciduous woodland	19	5	26
Riparian wetland	5.5	0	0
Intermittent drainage	2	<0.1	<1
Total	203.5	103	51

SOURCE: AES, 2004.

WATERS OF THE U.S.

Direct impacts (i.e., fill, modification, etc.) to waters of the U.S. would occur as a result of project development (**Table 4-12**). Indirect impacts to waters of the U.S. could result from increased sedimentation and pollutants resulting from project site runoff, inadvertent spills of fuel, lubricants, or other toxic materials, and location of construction staging areas. Reduced water quality due to project-related activities could impact sensitive species associated with aquatic habitats. Potential impacts include increases in water temperature, decreased available oxygen content, decreased visibility, and an increase in pollutants (e.g. fuel, oil, grease, suspended solids). Implementation of the mitigation measures described for Alternative A, discussed in **Section 5.0**, would reduce potential impacts to less than significant levels.

Obtaining and complying with all the terms and conditions (e.g. compensatory mitigation for loss of “waters of the U.S.”) of the appropriate Department of the Army permit and implementation of the minimization and avoidance measures identified in **Section 5.0** will avoid or minimize the potential for significant adverse effects to “waters of the U.S.”

TABLE 4-12
ANTICIPATED DIRECT EFFECTS TO WATERS OF THE U.S. – ALTERNATIVE C

Project Component	Waters of the U.S. Type	Activity Description	Effect Acreage
Main Entrance Road	Wetland Prairie	Bridge Abutments or Culverts	<0.1
Golf Course and Maintenance Facility	Wetland Prairie	Grading, fills, water quality BMPs	9.5
Hotel and Casino Service Road	Intermittent Stream	Bridge Abutments or Culverts	<0.1
TOTAL			9.5

SOURCE: AES, 2004.

FEDERALLY LISTED SPECIES

Potential impacts to federally listed species would be greater than those identified for Alternative A. The increased intensity of this alternative could have adverse indirect effects on federally listed species. Implementation of the mitigation measures identified for Alternative A would reduce potential impacts to a less than significant level. These mitigation measures are described in **Section 5.0**. Additionally, there could be adverse indirect effects to the Crescent City Marsh including impacts to known populations of western lily and potential populations of tidewater goby. Mitigation for stormwater identified in **Section 5.0** would reduce this impact to a less than significant level.

MIGRATORY BIRDS

Potential adverse direct effects to migratory birds will be avoided or minimized by implementation of the mitigation measures identified in **Section 5.0**.

4.5.4 ALTERNATIVE D – ENDERTS BEACH DEVELOPMENT

GENERAL EFFECTS

Development under the Enderts Beach Alternative has the potential to result in adverse impacts to sensitive biological resources, including palustrine emergent marsh wetland, palustrine scrub-shrub wetland, and palustrine forested wetland habitats. The site is currently designated a “resource conservation zone” by Del Norte County. All development, including soil disturbance or vegetation removal, is severely restricted. The property also falls within an area containing sensitive habitats, as shown in the Local Coastal Plan.

WATERS OF THE U.S.

The Enderts Beach site contains approximately 15.67 acres of jurisdictional wetlands and two intermittent drainages (other “waters of the U.S.”) totaling approximately 1,130 linear feet (Oscar Larson & Associates, 1990). Over approximately 11 acres of palustrine emergent marsh, palustrine scrub-shrub and palustrine forested wetlands and the entire length of several

intermittent drainages could be directly impacted by this project alternative. These wetlands include palustrine emergent marsh in the southwest portion of the property, a strip of palustrine scrub-shrub located in the central portion of the property, and palustrine forested wetlands in the central and southeast portions of the property.

Additional direct impacts would occur due to construction of detached bungalows. Indirect impacts are also likely to occur, as the conceptual site plan currently shows development within a 100-foot wetland buffer established by Del Norte County ordinance. Potential indirect impacts to waters of the U.S. include increased sedimentation and pollutants resulting from site runoff, inadvertent spills of fuel, lubricants, or other toxic materials, and location of construction staging areas. Reduced water quality due to project-related activities could impact sensitive species associated with aquatic habitats. Potential impacts include increases in water temperature, decreased available oxygen content, decreased visibility, and an increase in pollutants. Potential impacts to waters of the U.S. are considered significant. Although the mitigation measures identified in **Section 5.0** would be incorporated into the project, residual impacts are still expected to be significant due to the unique nature of the habitat and its location on the Pacific coast.

FEDERALLY LISTED SPECIES

Based upon the review of known occurrences, habitat requirements, and the habitat types present within the Enderts Beach property and surrounding vicinity, the project could result in potentially significant impacts to federally listed plant and animal species, however no federally listed plant or animal species were observed during the 2002 field assessment. Potential special-status species at the site include, but are not limited to, western lily (*Lilium occidentale*), western snowy plover (*Charadrius alexandrinus nivosus*), and bald eagle (*Haliaeetus leucocephalus*). In addition, suitable trees and other vegetation occurring on and within the vicinity of the site represent potential nesting habitat for protected raptor and migratory bird species.

Vegetation removal and other project related construction activities could potentially result in significant adverse impacts to federally listed species. Potential nesting habitat for raptor species is present on and within 500 feet of the site. Tree removal and other construction activities associated with project development could result in significant adverse impacts to these species. Mitigation measures, including pre-construction surveys for nesting raptors and federally listed species, would be necessary. Residual impacts would be significant and unavoidable (see **Section 4.14**).

4.5.5 ALTERNATIVE E – NO ACTION

Existing biological resources would remain as-is for an unknown period of time and habitats would not be disturbed under the No-Action Alternative. Each property would continue to be

used for existing purposes, and would be controlled by County land use regulations. Because these habitats would not be disturbed, it is assumed that all existing plant and animal species would continue to remain, although the relative intensity of future activities is unknown.