

Chapter 4.0 Environmental Consequences

This chapter presents the environmental consequences, both beneficial and adverse, of the various management alternatives considered in Chapter 2, “Alternatives.” Each of the sections in this chapter addresses a specific resource area associated with the natural or human environment (such as wildlife, cultural resources, and socioeconomics). An explanation of the terminology used to describe effects is provided in the introduction to the chapter, as well as a summary of the environmental consequences under all alternatives for all resources that were analyzed.

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Chapter 4

Environmental Consequences

4.0.1 Introduction

This chapter addresses the environmental consequences (or effects) of implementing the proposed management actions of all alternatives (The management actions for the alternatives are described in Chapter 2, “Alternatives.”) The discussions of management actions for each alternative incorporate appropriate mitigation for anticipated effects.

4.0.2 Terminology for Effects

Effects may be beneficial or adverse. Adverse effects may include direct, indirect, or cumulative effects. In this chapter, the foreseeable effects of these three types are addressed together as needed. The descriptions of alternatives in Chapter 2 incorporate appropriate mitigation for anticipated adverse effects.

Thresholds for adverse effects are defined and used to determine the degree of each potential adverse effect on a resource. This is also determined by weighing together both short-term and long-term effects.

Terms referring to effect intensity, context, and duration are used in the effects analysis. Unless otherwise stated, the standard definitions for these terms are as follows:

- *No Effect*: The effect is at the lower level of detection; there would be no measurable change.
- *Minor Effect*: The effect is slight but detectable; there would be a small change. In the case of adverse effects, the effect is not substantial enough to trigger the need for mitigation under NEPA.
- *Moderate Effect*: The effect is readily apparent; a measurable change could result in a small but permanent change. In the case of adverse effects, a moderate effect would trigger the need for mitigation under NEPA.
- *Major Effect*: The effect is severe; a highly noticeable, long-term, or permanent measurable change would result. In the case of adverse effects, a major effect would trigger the need for mitigation under NEPA.
- *Indeterminate Effect*: The effect could be adverse or beneficial, depending on the method of implementation of a given management action, and cannot be determined at this time. Future analysis would be required when more details are known regarding the management action in question, and such analysis may identify the need for mitigation that is not identified in this EIS.

Note that, by definition, minor adverse effects do not trigger the need for mitigation under NEPA, while moderate and major adverse effects do trigger such a need. For this reason, discussions of minor adverse effects in the following sections do not identify any mitigation.

The baseline for measuring effects is the current condition of the CCNM under the current management policy and implementation, which is described in Chapter 2 under “No Action Alternative.” The effect of a proposed management action on either ecosystem function or the human environment that involves continuation of current management is considered in this assessment to have no net effect, either beneficial or adverse.

4.0.3 Contents of the Chapter

Chapter 4 identifies the adverse and beneficial effects of alternate management plans for the following areas:

- 4.1, Air Quality;
- 4.2, Vegetation Resources;
- 4.3, Wildlife Resources;
- 4.4, Cultural Resources;
- 4.5, Environmental Justice;
- 4.6, Geologic and Soil Resources;
- 4.7, Health and Safety;
- 4.8, Indian Trust Resources;
- 4.9, Land Use/Lands and Realty;
- 4.10, Noise;
- 4.11, Paleontologic Resources;
- 4.12, Population and Housing;
- 4.13, Public Services;
- 4.14, Utilities and Service Systems;
- 4.15, Recreation;
- 4.16, Research;
- 4.17, Socioeconomics;
- 4.18, Traffic and Transportation;
- 4.19, Visual Resources;
- 4.20, Water Resources;
- 4.21, Wilderness and Other Special Designations; and
- 4.22, Other NEPA Considerations.

For all alternatives, management actions have been developed for the following areas:

- Visual Resources;
- Special Designations;
- Cadastral Support;
- Geologic, Soil, and Paleontologic Resources;
- Cultural Resources;
- Vegetation Resources;
- Wildlife Resources;
- Recreation;

- Education and Interpretation;
- Research Activities;
- Land Tenure Adjustments; and
- Land Use Authorizations.

If no adverse effects are anticipated on a particular resource for any activities associated with one of the management actions identified above, the management action is listed under the heading “Actions with No Reasonably Foreseeable Effects on [the specific resource].” Management actions with no anticipated effects are not discussed further for that resource.

4.0.4 Effects Summary

Table 4.0-1 summarizes the benefits and adverse effects of the No Action Alternative and proposed management actions on the various resources and resource uses.

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Table 4.0-1. Summary of Environmental Consequences of the No Action Alternative and Management Actions for the CCNM

	No Action Alternative	Visual Resources Management Actions	Special Designations	Cadastral Support	Geologic, Soil, and Paleontologic Resources Management Actions	Cultural Resources Management Actions	Vegetation Resources Management Actions	Wildlife Resources Management Actions	Recreation Management Actions	Education and Interpretation Management Actions	Research Activities Management Actions	Land Tenure Adjustments	Land Use Authorizations
<i>Air Quality</i>	⊗												
Alternative A		⊗	⊗	⊗	⊗	⊗	□	□	◇ □	□	□	⊗	□
Alternative B		⊗	⊗	⊗	⊗	⊗	□	□	◇ □	□	□	⊗	□
Alternative C		⊗	⊗	⊗	⊗	⊗	⊗	⊗	◇ □	□	□	⊗	□
<i>Vegetation Resources</i>	⊗												
Alternative A		I	⊗	⊗	◇ □	◇	◆ □	◇ □	◆ □	◇ □	I ◇	I	□
Alternative B		I	⊗	⊗	◆	◆	◆	◆	◆ □	◇ □	◇	I	⊗
Alternative C		I	⊗	⊗	⊗	⊗	⊗	◇	◆ □	◆ □	I ◇	I	□
<i>Wildlife Resources</i>	⊗												
Alternative A		□ I	⊗	⊗	◇ □	◇	◇ □	◆ □	◆ □	◇ □	I	I	□
Alternative B		□ I	⊗	⊗	◆	◆	◆	◆	◆ □	◇ □	⊗	I	⊗
Alternative C		□ I	⊗	⊗	⊗	⊗	⊗	◇	□	◆ □	I	I	□
<i>Cultural Resources</i>	⊗												
Alternative A		□	⊗	⊗	◇	◆	◇ □	◆ □	◆	◇	⊗	⊗	⊗
Alternative B		□	⊗	⊗	◆ I	◆	◇ □	◆	◆	◇	⊗	⊗	⊗
Alternative C		□	⊗	⊗	⊗	⊗	⊗	◇	◇	◆	⊗	⊗	⊗

- ⊗ = No effect.
- = Minor adverse effect.
- ◇ = Minor beneficial effect.
- I = Indeterminate effect.
- = Moderate adverse effect.
- ◆ = Moderate beneficial effect.
- = Major adverse effect.
- ◆ = Major beneficial effect.

Note: Complete definitions of types of effects are included in the “Notes” section of this table.

Table 4.0-1. Summary of Environmental Consequences of the No Action Alternative and Management Actions for the CCNM (continued)

	No Action Alternative	Visual Resources Management Actions	Special Designations	Cadastral Support	Geologic, Soil, and Paleontologic Resources Management Actions	Cultural Resources Management Actions	Vegetation Resources Management Actions	Wildlife Resources Management Actions	Recreation Management Actions	Education and Interpretation Management Actions	Research Activities Management Actions	Land Tenure Adjustments	Land Use Authorizations
<i>Environmental Justice</i>	⊗												
Alternative A		⊗	⊗	⊗	□	□	□	□	⊗	◇	⊗	⊗	⊗
Alternative B		⊗	⊗	⊗	□	□	□	□	⊗	◇	⊗	⊗	⊗
Alternative C		⊗	⊗	⊗	⊗	⊗	⊗	⊗	⊗	◇	⊗	⊗	⊗
<i>Geologic and Soil Resources</i>	⊗												
Alternative A		□ I	⊗	⊗	◇	◇	◇ □	◇ □	◆ □	◇ □	□	⊗	□
Alternative B		□ I	⊗	⊗	◆	◆	◇	◇	◆ □	◇ □	□	⊗	⊗
Alternative C		□ I	⊗	⊗	⊗	⊗	⊗	◇	◆ □	◆ □	□	⊗	□
<i>Health and Safety</i>	⊗												
Alternative A		⊗	⊗	⊗	◇	◇	◇ □	◆	◆ □	◇ □	□	⊗	◆
Alternative B		⊗	⊗	⊗	◆	◆	◇ □	◆	◆ □	◇ □	□	⊗	◆
Alternative C		⊗	⊗	⊗	⊗	⊗	⊗	◇	◆ □	◇ □	□	⊗	◆
<i>Indian Trust Resources</i>	⊗												
Alternative A		⊗	⊗	⊗	⊗	⊗	⊗	⊗	⊗	⊗	⊗	⊗	⊗
Alternative B		⊗	⊗	⊗	⊗	⊗	⊗	⊗	⊗	⊗	⊗	⊗	⊗
Alternative C		⊗	⊗	⊗	⊗	⊗	⊗	⊗	⊗	⊗	⊗	⊗	⊗

- ⊗ = No effect.
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- ◇ = Minor beneficial effect.
- I = Indeterminate effect.
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- ◆ = Moderate beneficial effect.
- = Major adverse effect.
- ◆ = Major beneficial effect.

Note: Complete definitions of types of effects are included in the “Notes” section of this table.

Table 4.0-1. Summary of Environmental Consequences of the No Action Alternative and Management Actions for the CCONM (continued)

	No Action Alternative	Visual Resources Management Actions	Special Designations	Cadastral Support	Geologic, Soil, and Paleontologic Resources Management Actions	Cultural Resources Management Actions	Vegetation Resources Management Actions	Wildlife Resources Management Actions	Recreation Management Actions	Education and Interpretation Management Actions	Research Activities Management Actions	Land Tenure Adjustments	Land Use Authorizations
<i>Land Use/Lands and Realty</i>	⊗												
Alternative A		⊗	⊗	⊗	⊗	⊗	⊗	⊗	⊗	⊗	⊗	⊗	⊗
Alternative B		⊗	⊗	⊗	⊗	⊗	⊗	⊗	⊗	⊗	⊗	⊗	⊗
Alternative C		⊗	⊗	⊗	⊗	⊗	⊗	⊗	⊗	⊗	⊗	⊗	⊗
<i>Noise</i>	⊗												
Alternative A		⊗	⊗	⊗	⊗	⊗	□	◇ □	◇ □	□	⊗	⊗	□
Alternative B		⊗	⊗	⊗	⊗	⊗	□	◇ □	◇ □	□	⊗	⊗	□
Alternative C		⊗	⊗	⊗	⊗	⊗	⊗	◇	◇ □	□	⊗	⊗	□
<i>Paleontologic Resources</i>	⊗												
Alternative A		□ I	⊗	⊗	◇	◇	◇ □	◇ □	◆ □	◇ □	□	I	□
Alternative B		□ I	⊗	⊗	◆	◆	◇	◇	◆ □	◇ □	⊗	I	⊗
Alternative C		□ I	⊗	⊗	⊗	⊗	⊗	◇	◆ □	◆ □	□	I	□
<i>Population and Housing</i>	⊗												
Alternative A		⊗	⊗	⊗	⊗	⊗	⊗	⊗	⊗	⊗	⊗	⊗	□
Alternative B		⊗	⊗	⊗	⊗	⊗	⊗	⊗	⊗	⊗	⊗	⊗	□
Alternative C		⊗	⊗	⊗	⊗	⊗	⊗	⊗	⊗	⊗	⊗	⊗	□

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Note: Complete definitions of types of effects are included in the “Notes” section of this table.

Table 4.0-1. Summary of Environmental Consequences of the No Action Alternative and Management Actions for the CCNM (continued)

	No Action Alternative	Visual Resources Management Actions	Special Designations	Cadastral Support	Geologic, Soil, and Paleontologic Resources Management Actions	Cultural Resources Management Actions	Vegetation Resources Management Actions	Wildlife Resources Management Actions	Recreation Management Actions	Education and Interpretation Management Actions	Research Activities Management Actions	Land Tenure Adjustments	Land Use Authorizations
<i>Public Services</i>	⊗												
Alternative A		⊗	⊗	⊗	□	□	□	□	□	□	□	I	□
Alternative B		⊗	⊗	⊗	□	□	□	□	□	□	□	I	□
Alternative C		⊗	⊗	⊗	⊗	⊗	⊗	⊗	□	□	□	I	□
<i>Utilities and Service Systems</i>	⊗												
Alternative A		⊗	⊗	⊗	⊗	⊗	⊗	⊗	□	□	⊗	⊗	□
Alternative B		⊗	⊗	⊗	⊗	⊗	⊗	⊗	□	□	⊗	⊗	□
Alternative C		⊗	⊗	⊗	⊗	⊗	⊗	⊗	□	□	⊗	⊗	□
<i>Recreation</i>	⊗												
Alternative A		◇ I	⊗	⊗	□	□	□	□	◇ ■	◇ □	◇ □	⊗	□
Alternative B		◇ I	⊗	⊗	■	■	■	□	◇ ■	◇ □	◇	⊗	□
Alternative C		◇ I	⊗	⊗	⊗	⊗	⊗	□	◆ ■	◆ □	◇	⊗	□
<i>Socioeconomics</i>	⊗												
Alternative A		⊗	⊗	◇	□	□	□	□	◇ □	◇ □	⊗	I	I
Alternative B		⊗	⊗	◇	□	□	□	□	◇ □	◇ □	⊗	I	I
Alternative C		⊗	⊗	◇	⊗	⊗	⊗	⊗	◆ ■	◆ ■	⊗	I	I

- ⊗ = No effect.
- = Minor adverse effect.
- ◇ = Minor beneficial effect.
- I = Indeterminate effect.
- = Moderate adverse effect.
- ◆ = Moderate beneficial effect.
- = Major adverse effect.
- ◆ = Major beneficial effect.

Note: Complete definitions of types of effects are included in the “Notes” section of this table.

Table 4.0-1. Summary of Environmental Consequences of the No Action Alternative and Management Actions for the CCNM (continued)

	No Action Alternative	Visual Resources Management Actions	Special Designations	Cadastral Support	Geologic, Soil, and Paleontologic Resources Management Actions	Cultural Resources Management Actions	Vegetation Resources Management Actions	Wildlife Resources Management Actions	Recreation Management Actions	Education and Interpretation Management Actions	Research Activities Management Actions	Land Tenure Adjustments	Land Use Authorizations
<i>Traffic and Transportation</i>	⊗												
Alternative A		⊗	⊗	⊗	⊗	⊗	⊗	⊗	□	□	⊗	⊗	□
Alternative B		⊗	⊗	⊗	⊗	⊗	⊗	⊗	□	□	⊗	⊗	□
Alternative C		⊗	⊗	⊗	⊗	⊗	⊗	⊗	□	□	⊗	⊗	□
<i>Visual Resources</i>	⊗												
Alternative A		◇	⊗	⊗	⊗	⊗	◇ □	◇ □	◇ □	◇ □	⊗	⊗	□
Alternative B		◇	⊗	⊗	⊗	⊗	◇	◇	◇ □	◇ □	⊗	⊗	□
Alternative C		◇	⊗	⊗	⊗	⊗	⊗	◇	◇ □	◇ □	⊗	⊗	□
<i>Water Resources</i>	⊗												
Alternative A		□ I	⊗	⊗	◇ □	◇	◇ □	◇ □	◇ □	◇ □	◇ I	I	□
Alternative B		□ I	⊗	⊗	◇	◆	◇	◇	◇ □	◇ □	◇	I	⊗
Alternative C		□ I	⊗	⊗	⊗	⊗	⊗	◇	◇ □	◇ □	◇ I	I	□
<i>Wilderness and Other Special Designations</i>	⊗												
Alternative A		⊗	⊗	⊗	⊗	⊗	⊗	⊗	□	□	⊗	I	⊗
Alternative B		⊗	⊗	⊗	⊗	⊗	⊗	⊗	⊗	□	⊗	I	⊗
Alternative C		⊗	⊗	⊗	⊗	⊗	⊗	⊗	□	□	⊗	I	⊗

- ⊗ = No effect.
- = Minor adverse effect.
- ◇ = Minor beneficial effect.
- I = Indeterminate effect.
- = Moderate adverse effect.
- ◆ = Moderate beneficial effect.
- = Major adverse effect.
- ◆ = Major beneficial effect.

Note: Complete definitions of types of effects are included in the “Notes” section of this table.

Notes:

- ⊗ = *No effect.* The effect is at the lower level of detection; there would be no measurable change.
- I = *Indeterminate effect.* The effect could be adverse or beneficial, depending on the method of implementation of a given management action, and cannot be determined at this time. Future analysis would be required when more details are known regarding the management action in question, and such analysis may identify the need for mitigation that is not identified in this EIS.
- = *Minor adverse effect.* The effect is slight but detectable; there would be a small adverse change; not substantial enough to trigger the need for mitigation.
- ▣ = *Moderate adverse effect.* The effect is readily apparent; there would be a measurable change that could result in a small but permanent adverse change; would trigger the need for mitigation.
- = *Major adverse effect.* The effect is severe; there would be a highly noticeable, long-term or permanent adverse change; would trigger the need for mitigation.
- ◇ = *Minor beneficial effect.* The effect is slight but detectable; there would be a small beneficial change.
- ◈ = *Moderate beneficial effect.* The effect is readily apparent; there would be a measurable change that could result in a small but permanent beneficial change.
- ◆ = *Major beneficial effect.* The effect is severe; there would be a highly noticeable, long-term or permanent beneficial change.

4.1.1 Methodology

To assess potential air quality effects, activities associated with each alternative were evaluated for their potential to generate pollutants. Because detailed information was not available, potential air quality effects are discussed qualitatively.

4.1.2 Thresholds for Adverse Effects

The NEPA review process must be integrated with other regulatory review processes and consider applicable regulations. A nontransportation action located in a nonattainment or maintenance area must undergo a general conformity analysis in accordance with 40 CFR 93 to ensure that the action does not:

- Cause or contribute to new violations of any standard in any area;
- Increase the frequency or severity of an existing violation of any standard; or
- Delay timely attainment of any standard, required interim emission reduction, or other milestones.

As part of the general conformity process, a conformity analysis is required if a federal action satisfies one of the following two conditions:

1. The action's direct and indirect emissions have the potential to emit one or more of the six criteria pollutants at or above emission rates shown in Table 4.1-1.
2. The action's direct and indirect emissions of any criteria pollutant represent 10 percent of a nonattainment or maintenance area's total emissions inventory for that pollutant.

If the total direct and indirect emissions associated with the action are below the *de minimus* levels indicated in Table 4.1-1, general conformity requirements do not apply, and the action is considered in conformity and would not result in an adverse effect. Portions of the southern CCNM in the SCAQMD are in non-attainment for CO and PM10; conformity determinations apply for the portion of emissions resulting from actions in this area. The remainder of the CCNM is in attainment for the criteria pollutants indicated in Table 4.1-1, except ozone (transitional status). Conformity for ozone must be completed for all the action alternatives throughout the CCNM.

Table 4.1-1. Emission Rates for Criteria Pollutants in Nonattainment Areas

Pollutant	Emission Rate (Tons per Year)
Ozone (volatile organic compounds or oxides of nitrogen [NO _x])	
Serious nonattainment areas	50
Severe nonattainment areas	25
Extreme nonattainment areas	10
Other ozone nonattainment areas outside an ozone transport region	100
Marginal and moderate nonattainment areas inside an ozone transport region	
Volatile organic compounds	50
NO _x	100
Carbon monoxide (CO): All nonattainment areas	100
Sulfur dioxide (SO ₂) or NO ₂ : All nonattainment areas	100
Particulate matter 10 microns or less in diameter (PM10)	
Moderate nonattainment areas	100
Serious nonattainment areas	70
Lead (Pb): All nonattainment areas	25

Note: The emission rates in this table are *de minimus* threshold levels for conformity applicability analysis.

Source: 40 CFR 51.853.

4.1.3 Effects on Air Quality

4.1.3.1 No Action Alternative

Under the No Action Alternative, no changes to the existing regulatory environment related to the CCNM would occur. Use of motorized vehicles, boats, and construction equipment along the coast are all expected to increase over time—corresponding to increased coastal populations—which would increase CO, ROG, NO_x, and PM10 emissions from these sources over time. However, no management activities are anticipated to occur on the CCNM that would increase emissions. There would be no effects on air resources.

Conclusion

No Action Alternative: No effects on air quality from no action.

4.1.3.2 Vegetation and Wildlife Resources Management Actions

The proposed management and eradication of invasive plant and wildlife species have the potential to result in dust emissions, and hydrocarbon and ozone precursor emissions from internal combustion engines during control activities. No long-term adverse effects on air quality are expected from these

activities. These increased emissions would occur during the proposed control activities; when the activities have ceased, the sites are expected to return to pre-control emission levels.

For Alternatives A and B, adverse effects from invasive species control actions are considered short term and minor. Alternative C would not implement management actions that would increase air emissions, and so would result in no effects.

Conclusions

Alternatives A and B: Minor adverse effects on air quality from vegetation and wildlife resources management actions.

Alternative C: No effects on air quality from vegetation and wildlife resources management actions.

4.1.3.3 Recreation Management Actions

Use of motorized vehicles, boats, planes, and helicopters along the coast would increase hydrocarbon and ozone precursor emissions from these sources over time, as these uses are expected to increase—corresponding to increased population and increased public use of the monument.

Construction activities associated with development of recreation infrastructure would result in the temporary generation of emissions of CO, ROG, NO_x, and PM₁₀. Emissions would originate from mobile and stationary construction equipment exhaust, employee vehicle exhaust, dust from clearing the land, exposed soil eroded by wind, and volatile organic compounds (VOCs) from architectural coatings, and asphalt paving. Construction-related emissions would vary substantially, depending on the level of activity, length of the construction period, specific construction operations, types of equipment, number of personnel, wind and precipitation conditions, and soil moisture content. Measures have been identified for the action alternatives to offset or avoid these effects (see Chapter 2, “Alternatives”). Any major facilities construction in support of recreation would also require project-specific environmental analysis. Consequently, no adverse effects on air resources are anticipated that would require mitigation under any of the action alternatives.

All action alternatives would limit on-island recreational activities that would degrade monument resources and therefore are expected to reduce vehicle emissions to the extent that vehicles are used as part of recreation activities. However, because motorized recreation on the CCNM is very minor, if it occurs at all, this is considered a minor beneficial effect. Measures also would be implemented under all action alternatives to avoid or offset adverse construction-related effects that could be associated with new recreational facilities or installation of signage. Because additional recreational facilities and programs are encouraged under Alternative C, this alternative would result in greater effects related to construction activities than Alternatives A and B. However, Chapter 2, “Alternatives,” also describes measures that would be implemented to ensure that construction of centralized recreation facilities and other facilities upgrades would result in only minor adverse effects under any of the action alternatives.

Conclusions

Alternatives A–C: Minor beneficial effects on air quality from recreation management actions; minor adverse effects on air quality from construction.

4.1.3.4 Education and Interpretation Management Actions

Construction activities associated with BLM actions would result in the temporary generation of emissions of CO, ROG, NO_x, and PM10. Emissions would originate from mobile and stationary construction equipment exhaust, employee vehicle exhaust, dust from clearing the land, exposed soil eroded by wind, and VOCs from architectural coatings, and asphalt paving. Construction-related emissions would vary substantially, depending on the level of activity, length of the construction period, specific construction operations, types of equipment, number of personnel, wind and precipitation conditions, and soil moisture content. Measures have been identified in Chapter 2, “Alternatives,” that would be implemented for all the action alternatives to offset or avoid these effects. Any major facilities construction in support of recreation would also require project-specific environmental analysis. No adverse effects on air resources therefore are anticipated under any of the action alternatives that would require mitigation.

Publicity and other efforts to bring more visitors to the coast could result in increased emissions associated with vehicle trips. However, this increase in number of visitors to the coast is not anticipated to be sufficiently substantial under any action alternative to result in adverse effects on air quality that would require mitigation.

All alternatives could involve the construction of new or upgraded facilities, including signs, wayside shelters, and buildings. Because multiple new education and interpretation facilities would be constructed along the coast, Alternative C would result in greater effects related to construction activities than Alternatives A and B. However, measures would be implemented such that adverse effects associated with these activities would be minor (see Chapter 2, “Alternatives”). Increased visitation to the coast is anticipated to result in minor adverse air quality effects.

Conclusions

Alternatives A–C: Minor adverse effects on air quality from education and interpretation management actions.

4.1.3.5 Research Activities Management Actions

Research activities, if they involve the use of motorized boats, aircraft, or other vehicles, could result in hydrocarbon and ozone precursor emissions from use of internal combustion engines. No long-term adverse effects on air quality are expected from these activities. These effects are expected to occur during the duration of the proposed research; when the research activity has ceased, the sites should return to pre-control emission levels.

For all action alternatives, adverse effects from research activities are considered minor.

Conclusions

Alternatives A–C: Minor adverse effects on air quality from research activities management actions.

4.1.3.6 Land Use Authorizations

Construction activities associated with land use authorizations would result in the temporary generation of emissions of CO, ROG, NO_x, and PM₁₀. Emissions would originate from mobile and stationary construction equipment exhaust, employee vehicle exhaust, dust from clearing the land, exposed soil eroded by wind, and VOCs from architectural coatings, and asphalt paving, if any. Construction-related emissions would vary substantially, depending on the level of activity, length of the construction period, specific construction operations, types of equipment, number of personnel, wind and precipitation conditions, and soil moisture content. Chapter 2, “Alternatives,” identifies measures that would be implemented to offset or avoid these effects. Any major facilities construction also would require additional project-specific environmental analysis. No adverse effects are therefore anticipated under any action alternative that would require mitigation.

Because measures would be required to offset effects (see Chapter 2, “Alternatives”), all action alternatives would result in only minor adverse effects on air quality.

Conclusions

Alternatives A–C: Minor adverse effects on air quality from land use authorizations.

4.1.3.7 Actions with No Reasonably Foreseeable Effects on Air Quality

Activities associated with the following management actions would not adversely affect air quality:

- Visual Resources;
- Special Designations
- Cadastral Support;
- Geologic, Soil, and Paleontologic Resources;
- Cultural Resources; or
- Land Tenure Adjustments.

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Section 4.2

Vegetation Resources

4.2.1 Methodology

Most actions beyond continuing existing management would result in positive effects on vegetation as a result of decreasing actual and potential disturbances. The actual effects on plant populations were assessed by evaluating the characteristics of proposed or existing activities in the context of the biology and distribution of vegetation in the monument. Effects on vegetation are discussed from a general standpoint due to the lack of site-specific vegetation information. For the purposes of this document, the term “vegetation” refers to native individuals or populations of plants that inhabit the monument.

4.2.2 Thresholds for Adverse Effects

Thresholds for effects are provided to help the reader and decision maker understand the magnitude and intensity of effects. Some thresholds were determined using quantitative data, while others rely on qualitative data.

For this analysis, an effect on vegetation was considered adverse and would require mitigation if it would result in:

- A loss of a number of individuals of any native plant species that could affect abundance or diversity of that species beyond normal variability;
- A negative effect on a species, natural community, or habitat that is specifically recognized as biologically significant in local, state, or federal policies, statutes, or regulations;
- Harm, harassment, or destruction of a species, natural community, or habitat that is recognized for scientific, recreational, ecological, or commercial importance;
- An alteration or destruction of habitat that would prevent the reestablishment of native biological communities that inhabited the area prior to the disturbance; or
- An extensive loss of biological communities in high quality habitat for longer than 1 year.

For the purposes of this analysis, an effect on a special-status plant species or habitat was considered adverse if it would result in any of the following:

- Harm or destruction of any federally listed endangered, threatened, or candidate species, or its habitat; or
- Harm or destruction of any BLM-sensitive species or CNHP rare species, or its habitat.

4.2.3 Effects on Vegetation Resources

4.2.3.1 No Action Alternative

Given the existing protections provided by current regulations, the No Action Alternative likely would not affect vegetation in the CCNM. Over the long term, activities that change habitat (e.g., structures built on rocks) and some recreational activities (e.g., kelp collection and recreational exploration) may increase as coastal population increases. As recreational use of the monument increases, these disturbances likely would increase and result in correspondingly greater potential for negative effects on vegetation. However, existing regulations in place for management of vegetation resources are anticipated to be sufficient to ensure that such negative effects do not occur, assuming that adequate enforcement resources are available. No effects on vegetation resources are anticipated.

Conclusion

No Action Alternative: No effects on vegetation from no action.

4.2.3.2 Visual Resources Management Actions

In general, management of the CCNM for VRM Class II objectives would benefit vegetation resources due to the preservation element in this class. However, VRM Class II could allow some development on the CCNM that may result in habitat loss and disturbance related to building and maintenance of structures. As most rocks and islands in the monument are not suitable for building of structures, this classification likely would not affect vegetation in the monument. In addition, prior to approving any developments on the CCNM consistent with the VRM Class II objective, further project-specific analysis would be required that would evaluate the potential adverse or beneficial effects of the proposed action. As described in Chapter 2, “Alternatives,” BMPs and other mitigations would be applied to offset effects. It is possible that no mitigation would be available to fully offset these effects.

Minor adverse effects could potentially result from development activities under the VRM Class II designation. Effects of future changes to the VRM class designation may be beneficial or adverse. If the VRM class changes to a class with more restrictions on the activities that may occur in the CCNM, the effects are likely to be beneficial. Adverse effects likely would occur if fewer activities were restricted.

Conclusions

Alternatives A–C: Indeterminate effects on vegetation from visual resources management actions.

4.2.3.3 Geologic, Soil, and Paleontologic Resources Management Actions

Restricting on-island activities on the CCNM for the purposes of protecting geologic, soils, and paleontologic resources would minimize the potential for incidental introduction of invasive plant or wildlife species by people, which would reduce the potential for adverse effects on native plant communities. Reducing foot and vehicular traffic on the monument’s rocks and islands also would result

in a net beneficial effect on vegetation resources, by minimizing or eliminating soil disturbance and tramping of vegetation by foot traffic and other activities. Further prohibiting all surface-disturbing activities (except foot traffic) on the CCNM would result in even greater beneficial effects on vegetation resources by minimizing or eliminating soil disturbance to an even greater extent.

Research activities that better define the extent, nature, and value of geologic, soil, and paleontologic resources on the monument can benefit future management activities, and therefore would result in minor indirect benefits on vegetation.

Alternatives A and B would result in beneficial effects on vegetation resources through restrictions on recreational activities. Alternative B would result in the most direct beneficial effect, as it would eliminate all surface-disturbing activities with the potential to disturb vegetation. Research activities under Alternative A would result in both beneficial and adverse effects. Research and resource characterization activities can help improve management actions; however, during data collection scientists may trample vegetation resources. Alternative B would result in no adverse impact from research activities through its emphasis on remote evaluation.. Alternative C would not involve any management actions that would deviate from current management, and therefore would result in no effects, either adverse or beneficial, relative to baseline conditions.

Conclusions

Alternative A: Minor beneficial effects on vegetation resources from geologic, soil, and paleontologic resources management actions; minor adverse effects from research activities.

Alternative B: Moderate beneficial effects on vegetation resources from geologic, soil, and paleontologic resources management actions.

Alternative C: No effects on vegetation resources from geologic, soil, and paleontologic resources management actions.

4.2.3.4 Cultural Resources Management Actions

Historic and prehistoric archaeological resources generally do not pose a direct threat to vegetation. If these resources are not protected, however, public access or illegal removal of these resources is possible. These actions may affect vegetation through excavation, erosion from foot traffic, and other human disturbances. Restricting on-island activities on the CCNM to protect cultural resources would minimize the potential for further human disturbances. The effects of Native American TCPs on vegetation are similar to those identified for historic and prehistoric resources above, and depend on the degree of human use of these properties. Limiting human access to Native American TCPs would benefit vegetation in the CCNM by reducing disturbance levels in those areas. If activities geared toward removing invasive species were denied or delayed due to management of cultural resources, a minor adverse effect on native plant species could result.

Preparation of a CRMP and nomination of NRHP-eligible properties for listing likely would contribute to beneficial effects on vegetation resources because additional management actions and regulations would apply. Monitoring and surveillance of cultural resources would ensure that all recreation and seasonal restrictions are enforced, thereby producing even greater net beneficial effects. Designation of the entire CCNM as a Cultural Resources Management Zone would benefit vegetation resources to the greatest

extent by treating all areas as if they contain cultural resources, thereby enacting more stringent use controls.

Alternative A would result in minor beneficial effects on vegetation as a result of on-island restrictions in areas managed for cultural resources, designation of historic properties, surveillance by law enforcement personnel, and public education. Alternative B would result in the largest beneficial effect by implementing these management actions throughout the entire CCNM, and the beneficial effects under this alternative are considered major. Alternative C would not involve any management actions that would deviate from current management, and therefore would result in no effects, either adverse or beneficial, relative to baseline conditions.

Conclusions

Alternative A: Minor beneficial effects on vegetation resources from cultural resources management actions.

Alternative B: Major beneficial effects on vegetation resources from cultural resources management actions.

Alternative C: No effects on vegetation resources from cultural resources management actions.

4.2.3.5 Vegetation Resources Management Actions

Restricting on-island activities to protect vegetation would reduce the potential for human trampling, as well as the potential introduction of invasive species. Reducing disturbance to native plant populations on the rocks and islands would enable natural plant life cycles to emerge, and special-status plant species would benefit the most from protection.

Sensitive plants and plant communities would generally benefit from the positive effects of invasive vegetation removal through reduced competition from invasive plant species. However, the degree of benefit would depend on the relative locations of the sensitive plant species and exotic plant species, and the degree to which the native and exotic species compete for resources. Any control prescriptions would be consistent with protection of native plants inhabiting the area to be treated.

Research activities that better define the extent, nature, and value of vegetation on the monument can benefit future management activities; however, during data collection scientists may trample vegetation resources or collect vegetation samples.

Alternative A would result in moderate beneficial effects from restrictions of on-island activity with potential to adversely affect native vegetation, and invasive species management activities. Alternative B would result in smaller beneficial effects from invasive species management due to the more conservative approach under this alternative (i.e., certain invasive species activities allowed under Alternative A would not be allowed under Alternative B if they had potential to adversely affect monument resources). However, under Alternative B, the additional resources redirected from education and interpretation activities toward direct vegetation management and enhancement are anticipated to result in somewhat greater beneficial effects than under Alternative A. These beneficial effects are still considered moderate. Research activities under Alternative A would result in both minor beneficial and minor adverse effects. Alternative B would result in no adverse impact from research activities through its emphasis on remote

evaluation. Alternative C would not involve any management actions that would deviate from current management, and therefore would result in no effects, either adverse or beneficial, relative to baseline conditions.

Conclusions

Alternative A: Moderate beneficial effects on vegetation resources from vegetation resources management actions; minor adverse effects from research activities.

Alternative B: Moderate beneficial effects on vegetation resources from vegetation resources management actions.

Alternative C: No effects on vegetation resources from vegetation resources management actions.

4.2.3.6 Wildlife Resources Management Actions

Designation of seasonal restrictions for areas with sensitive seabirds, marine mammals, and/or intertidal species would benefit native plant populations in these portions of the monument. Restrictions that prohibit access during breeding seasons would both protect wildlife from disturbance and protect vegetation from trampling.

Native plant species also would benefit from measures taken to control invasive wildlife species in the monument. Invasive wildlife species can often adversely affect native vegetation through feeding, trampling, and other alterations in habitat characteristics. For example, nonnative Canada geese may alter habitat characteristics by grazing native vegetation. These effects could be attenuated somewhat to the extent that such wildlife species provide control of nonnative or invasive plants through grazing.

Research activities that better define the extent, nature, and value of wildlife populations on the monument, and their ecological relationships with native vegetation communities, can benefit future management activities related to vegetation to the extent such research leads to improved management of native vegetation communities in support of wildlife management.

Alternatives A and B would result in beneficial effects by implementing on-island recreation restrictions and seasonal restrictions on areas with wildlife that may also host sensitive vegetation; the greater focus on direct management of wildlife under Alternative B would result in correspondingly greater beneficial effects than under Alternative A. Alternatives A and B also would result in beneficial effects by conducting invasive wildlife species management activities. Research activities would result in both beneficial and adverse effects, because disturbance of vegetation may occur incidentally as wildlife research and inventories are conducted. Alternative B would result in fewer benefits from invasive wildlife species control and fewer adverse impacts from research activities through its emphasis on resource protection above all else. Under Alternative C, seasonal restrictions on monument lands where conflicts exist would benefit wildlife populations and habitats undergoing known disturbance.

Conclusions

Alternative A: Minor beneficial effects on vegetation resources from wildlife resources management actions; minor adverse effects on vegetation resources from research activities.

Alternative B: Moderate beneficial effects on vegetation resources from wildlife resources management actions.

Alternative C: Minor beneficial effects on vegetation resources from wildlife resources management actions.

4.2.3.7 Recreation Management Actions

As the human population expands, so does the frequency and intensity of recreational activities along the California coast. Recreation activities with no active support from BLM in the monument may adversely affect vegetation resources through trampling or other disturbance. Passive landside recreations, such as wildlife viewing and scenic overlooks, would not likely affect vegetation on the monument rocks and islands but could result in a small adverse effect on mainland populations. Restricting certain types of on-island recreational activities, such as camping, off-highway vehicle use, launching for hang-gliders, and rock climbing, would result in beneficial effects on vegetation resources by reducing the potential for disturbance.

Recreational opportunities in and around the CCNM that are offered, sponsored, or partnered by BLM are anticipated to result in minimal effects on vegetation in the monument. BLM-sponsored or -partnered activities would be managed and staffed by employees knowledgeable about the CCNM's resources and protective regulations; therefore, such programs should not disturb vegetation. Organized recreational activities related to the monument could also provide users with a personal, first-hand experience under the leadership of a guide knowledgeable about the monument and its plants.

Educational programs aimed at educating or certifying entities that offer recreational opportunities in the vicinity of the CCNM would benefit vegetation. Education of recreational program employees regarding resources and protective regulations and guidelines in the monument would help reduce disturbance. Furthermore, such organizations could be helpful in disseminating educational information and materials to the public. Recreational program managers would be knowledgeable about the monument, its vegetation, and the regulations in place to protect its resources.

Actively promoting recreational opportunities, unless within the framework of organized activities offered by BLM or others, may increase use and levels of human disturbance. The ultimate effect of increased publicity on vegetation resources would depend on the concomitant increase in educational efforts to reduce disturbance.

Upgrading and construction of signs, viewing platforms, or other facilities for use as recreational infrastructures, are not anticipated to result in direct adverse effects on vegetation in the CCNM but could affect local plant populations at mainland sites where these facilities are constructed. The alternatives have identified measures that would be implemented to offset or avoid these effects. Any major facilities construction in support of recreation would require additional project-specific environmental analysis. Indirectly, the educational value of such facilities may result in a beneficial effect on vegetation resources.

All action alternatives would encourage low-impact recreation and prohibit certain forms of on-island recreation, and would therefore result in moderate beneficial effects on vegetation. Recreation management activities, such as educational programs for recreation entities, would result in indirect beneficial effects. Measures would be implemented under all action alternatives to avoid or offset adverse construction-related effects that could be associated with new or upgraded recreational facilities

or installation of signage, and the adverse effects from construction would be minor. The more active recreation focus of Alternative C is likely to increase human use of the monument, and hence the potential for disturbance and trampling of vegetation resources; however, as mentioned above, the active role of BLM in such recreation activities would help to ensure that any adverse effects on vegetation would still be minor.

Conclusions

Alternatives A and B: Moderate beneficial effects on vegetation from recreation management actions; minor adverse effects on vegetation from construction.

Alternative C: Moderate beneficial effects on vegetation from recreation management actions; minor adverse effects on vegetation from construction and increased recreational activity.

4.2.3.8 Education and Interpretation Management Actions

Over the long-term, vegetation in the CCNM would benefit from development of an educational and interpretive infrastructure. People living or recreating near the CCNM would be educated about sensitive plants and informed of appropriate use and behavior while recreating near the monument. Some short-term adverse effects on mainland vegetation could result from the construction of facilities near areas with sensitive plant species.

Use of signs and kiosks would result in a positive effect on biological resources by providing effective direction to visitors regarding the plants inhabiting the CCNM and their sensitivity to human activities. Visitor centers would provide interpretative public education programs for the monument and disseminate print media information. The benefits of these facilities would include increased awareness and understanding of biological issues on the monument. Publicizing the CCNM through other venues, such as the Internet, may also help educate the public and raise awareness regarding sensitive plant species—resulting in minor beneficial effects on vegetation resources.

Educational opportunities related to the CCNM that are offered, sponsored, or partnered by BLM are anticipated to result in minimal effects on vegetation in the monument. BLM-sponsored or -partnered activities would be managed and staffed by employees knowledgeable about the CCNM's resources and protective regulations; therefore, such programs should not disturb vegetation. Organized education and interpretation programs could provide users with a personal, first-hand experience under the leadership of a guide knowledgeable about the monument and its plants.

Both present and future designation of points of contact, and construction and operation of visitor facilities for the CCNM could result in negative effects if sites were chosen too close to sensitive plant populations. The alternatives have identified measures that would be implemented to offset or avoid these effects. Any major facilities construction in support of recreation would require additional project-specific environmental analysis. The educational resources these facilities will provide would further result in beneficial effects on native plants inhabiting the monument.

All action alternatives could involve the construction of new or upgraded facilities, including signs, wayside shelters, and buildings. Because multiple new education and interpretation facilities would be constructed along the coast, Alternative C would result in greater effects from construction activities than Alternatives A and B. However, measures would be implemented to avoid adverse effects, and effects on

vegetation would be minor (see Chapter 2, “Alternatives”). Educational programs would result in indirect beneficial effects related to increased education and awareness, and would be conducted in a manner to avoid degrading vegetation resources. Aggressive educational outreach under Alternative C would result in moderate beneficial effects, as a larger population of visitors would understand the sensitivity of CCNM vegetation resources.

Conclusions

Alternatives A and B: Minor beneficial effects on vegetation resources from education and interpretation management actions; minor adverse effects on vegetation from construction.

Alternative C: Moderate beneficial effects on vegetation resources from education and interpretation management actions; minor adverse effects on vegetation from construction.

4.2.3.9 Research Activities Management Actions

Limiting disturbance for any reason typically would benefit native vegetation. However, research provides critical information regarding the management, population trends, and status of plant species. Well-planned research that provides information useful for management of CCNM resources may temporarily disturb plant populations, but such disturbance may be justifiable. Quality research, accomplished in a timely manner, ultimately would benefit native plant species management in the CCNM. This type of research could cause minor, adverse, short-term effects on vegetation but ultimately could result in minor to major, positive, long-term effects—depending on the outcome of the research. Remote forms of research, such as aerial photograph interpretation, would not have such a potential for adverse effects.

Alternatives A and C include provisions for protection of resources in approval of research proposals; however, it is still possible that research could be approved that would cause adverse effects on vegetation. Although many measures may be available to offset or avoid these effects, specific research proposals may result in effects for which mitigation cannot be identified at this time. Nevertheless, outcomes of the research could result in beneficial effects. Alternative B would not allow research with the potential to adversely affect vegetation resources and thus would not have the potential for adverse effects. Research could result in minor beneficial effects, depending on the topic and outcome.

Conclusions

Alternatives A and C: Indeterminate effects on vegetation resources from research activities management actions; minor beneficial effects on vegetation resources from research conclusions.

Alternative B: Minor beneficial effects on vegetation resources from research activities management actions.

4.2.3.10 Land Tenure Adjustments

Depending on the characteristics of acquired land, acquisition could result in benefits to native plant populations. Policies to obtain lands and interests determined to be desirable for consolidation would result in beneficial effects on vegetation by increasing the land base and providing greater protection to

some rocks and islands. Further project-specific analysis would be required to evaluate the effects of each specific land acquisition proposal. It is anticipated that BLM policies would be sufficiently protective to avoid adverse effects on vegetation resources.

Conclusions

Alternatives A–C: Indeterminate effects on vegetation resources from land tenure adjustments.

4.2.3.11 Land Use Authorizations

Many forms of land use authorizations have been discussed under the other management categories, such as recreational, educational, and interpretive facilities. Land use authorizations not previously discussed include construction and maintenance of aids to navigation and communications facilities. Allowing the construction of these facilities may negatively affect vegetation on the CCNM by making rocks temporarily or permanently unavailable as habitat. As human populations expand, demands may increase for such structures to be constructed and maintained in the monument. Consequently, denying or restricting this use in the monument would benefit vegetation on the monument now and in the future. Further project-specific analysis would be required to evaluate the effects of each specific proposal for a permitted land use authorization. As described in Chapter 2, “Alternatives,” BMPs and other measures would be required to reduce or eliminate any effects on vegetation resources.

Potential land use authorizations would result in minor adverse effects on vegetation under Alternatives A and C. Alternative B would not allow land uses with the potential to adversely affect vegetation, and therefore would result in no effects on vegetation resources.

Conclusions

Alternatives A and C: Minor adverse effects on vegetation resources from land use authorizations.

Alternative B: No effects on vegetation resources from land use authorizations.

4.2.3.12 Actions with No Reasonably Foreseeable Effects on Vegetation Resources

Activities for the following management actions would not adversely affect vegetation resources:

- Special Designations, or
- Cadastral Support.

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4.3.1 Methodology

Most actions beyond continuing existing management would result in positive effects on seabird and marine mammal species as a result of decreasing actual and potential disturbances. The actual effects on wildlife populations were assessed by evaluating the characteristics of proposed or existing activities in the context of the biology and distribution of wildlife populations within the monument. The biology and distribution unique to individual species of seabirds and marine mammals were paramount to this analysis. For example, various seabird species such as murre and some cormorants nest in the open in dense colonies. These species are particularly vulnerable to disturbance from external sources, such as aircraft. Other species such as the smaller auklets and storm-petrels are vulnerable to changes in vegetative and soil characteristics of their nesting sites. Some seabird species are widespread and found throughout the CCONM while others are very limited in their distribution. Many species of marine mammals are particularly sensitive to the presence of people close to haul-out and pupping sites. For the purposes of this document, the term “wildlife” refers to native individuals or populations of wildlife—primarily seabirds, shorebirds, and marine mammals (seals, sea lions, and sea otters)—that inhabit the monument.

4.3.2 Thresholds for Adverse Effects

4.3.2.1 Wildlife, Fish, and Aquatic Life

Thresholds for effects are provided to help the reader and decision-maker understand the magnitude and intensity of effects. Some thresholds were determined using quantitative data, while others rely on qualitative data.

For this analysis, an effect on wildlife, fish, or aquatic life was considered adverse and would require mitigation if it would result in:

- A loss of a number of individuals of any native animal species that could affect abundance or diversity of that species beyond normal variability;
- A substantial interference with movement of any resident or migratory fish or wildlife species;
- An adverse effect on a species, natural community, or habitat that is specifically recognized as biologically significant in local, state, or federal policies, statutes, or regulations;

- Harm, harassment, or destruction of a species, natural community, or habitat that is recognized for scientific, recreational, ecological, or commercial importance;
- An alteration or destruction of habitat that would prevent the reestablishment of native biological communities that inhabited the area prior to the disturbance; or
- An extensive loss of biological communities in high quality habitat for longer than 1 year; or a violation of the MBTA.

4.3.2.2 Special-Status Species and Habitat

For the purposes of this analysis, an effect on special-status species and habitat was considered adverse and would require mitigation if it would result in:

- Harm, harassment, or destruction of any federally listed endangered, threatened, or candidate species, its habitat, migration corridors, or breeding areas; or
- Harm, harassment, or destruction of any BLM-sensitive species, or CNHP-rare species, its habitat, migration corridors, or breeding areas.

4.3.3 Effects on Wildlife Resources

4.3.3.1 No Action Alternative

Given the existing protections provided by current regulations, the No Action Alternative would likely not affect wildlife resources in the CCNM. Over the long term, activities that change habitat (e.g., structures built on rocks) or recreational activities (e.g., kelp collection, motor boats, or kayaks and aircraft that approach too closely to wildlife) that disturb wildlife, especially during breeding seasons, could be directly responsible for negatively affecting wildlife populations. As human populations grow and recreational use of the monument increases, these disturbances likely would increase and result in correspondingly greater potential for negative effects on wildlife species. However, existing regulations in place for management of wildlife resources are anticipated to be sufficient to ensure that such negative effects do not occur, assuming adequate enforcement resources are available. There would be no effects on wildlife resources.

Conclusion

No Action Alternative: No effects on wildlife resources from no action.

4.3.3.2 Visual Resources Management Actions

Managing the CCNM to VRM Class II standards could potentially allow habitat loss and disturbance related to building and maintenance of structures within the CCNM. As most rocks and islands within the monument are not suitable for the building of structures, however, this classification likely would not adversely affect wildlife within the monument. In addition, prior to approving any developments on the CCNM consistent with the VRM Class II objective, further analysis would be required that would

evaluate the potential adverse effects of the project-specific action. As described in Chapter 2, “Alternatives,” BMPs and other mitigations would be applied to offset effects.

Minor adverse effects could potentially result from development activities under the VRM Class II designation. Effects of future changes to the VRM class designation may be beneficial or adverse. If the VRM class changes to a class with more restrictions on the activities that may occur in the CCNM, the effects are likely to be beneficial. Adverse effects likely would occur if fewer activities were restricted.

Conclusions

Alternatives A–C: Minor adverse effects on wildlife resources in the near term, and indeterminate effects in the long term, from visual resources management actions.

4.3.3.3 Geologic, Soil, and Paleontologic Resources Management Actions

Restricting on-island activities on the CCNM to protect geologic, soil, and paleontologic resources could result in beneficial effects on seabird and marine mammal species by reducing the potential for disturbance or harassment of these species. Prohibiting all surface-disturbing activities (except foot traffic) on the CCNM would result in even greater beneficial effects on wildlife resources by further reducing the potential for wildlife disturbance.

Research activities that better define the extent, nature, and value of geologic, soil, and paleontologic resources on the monument can benefit future management activities.

Alternatives A and B would result in minor beneficial effects on wildlife resources through restrictions on recreational activities. Alternative B would result in the most direct beneficial effect as it would eliminate all surface-disturbing activities, thereby greatly reducing the potential to disturb wildlife. Research activities under Alternative A would result in both beneficial and adverse effects. Research and inventory activities can help improve management actions; however, during data collection scientists may disturb wildlife. Alternative B would result in no adverse impact from research activities through its emphasis on remote evaluation. Alternative C would not involve any management actions that would deviate from current management, and therefore would result in no effects, either adverse or beneficial, relative to baseline conditions.

Conclusions

Alternative A: Minor beneficial effects on wildlife resources from geologic, soil, and paleontologic resources management actions; minor adverse effects on wildlife resources from research.

Alternative B: Moderate beneficial effects on wildlife resources from management actions for geologic, soil, and paleontologic resources.

Alternative C: No effects on wildlife resources from management actions for geologic, soil, and paleontologic resources.

4.3.3.4 Cultural Resources Management Actions

Most actions beyond continuing existing management practices would result in positive effects on seabird and marine mammal species as a result of decreasing actual and potential disturbances. Restricting on-island activities on the CCNM to protect cultural resources would minimize the potential for incidental introduction of invasive species by people. Reducing foot and vehicular traffic on the monument's rocks and islands would result in a net beneficial effect on wildlife resources through reduced potential for disturbance of sensitive species. Similarly, limiting human access to Native American TCPs would result in positive effects on wildlife in the CCNM by reducing disturbance levels. If management of TCPs restricts activities geared toward removing invasive species, a minor negative effect on seabirds and marine mammals could result.

Preparation of a CRMP and nomination of NRHP-eligible properties for listing likely would contribute to beneficial effects on wildlife resources because additional management actions and regulations would apply. Monitoring and surveillance of cultural resources would ensure that all recreation and seasonal restrictions are enforced, thereby producing even greater net beneficial effects. Designation of the entire CCNM as a Cultural Resources Management Zone would further benefit wildlife resources by treating all areas as if they contain cultural resources, thereby enacting more stringent use controls.

Alternatives A and B would result in beneficial effects on wildlife in locations managed for cultural resources as a result of on-island restrictions, designation of historic properties, surveillance by law enforcement personnel, and public education. Alternative B would result in the largest beneficial effect through management of the entire monument as a Cultural Resource Management Zone, reducing disturbance on the entire CCNM. Alternative C would not involve any management actions that would deviate from current management, and there would result in no effects, either adverse or beneficial, relative to baseline conditions.

Conclusions

Alternative A: Minor beneficial effects on wildlife resources from cultural resources management actions.

Alternative B: Major beneficial effects on wildlife resources from cultural resources management actions.

Alternative C: No effects on wildlife resources from cultural resources management actions.

4.3.3.5 Vegetation Resources Management Actions

Restricting on-island activities to benefit sensitive plants and plant communities also would protect wildlife such as seabirds and pinnipeds from human disturbance. The wildlife species that use these vegetation communities for foraging and habitat would experience the most benefit. Similarly, invasive vegetation removal would generally result in beneficial effects by maintaining a mosaic of compositionally and structurally diverse habitat types. Some wildlife species may benefit from the removal of exotic plant species while others would not be affected. Any control prescriptions would be consistent with protection of wildlife inhabiting the area to be treated (e.g., be conducted outside breeding and pupping seasons).

Research activities that better define the extent, nature, and value of vegetation on the monument can benefit future management activities.

Alternative A would result in minor beneficial effects on wildlife resources from on-island activity restrictions and invasive species management. Alternative B would result in moderate benefits by the more active focus on direct vegetation management; however, the invasive species management program under Alternative B would be of less intensity and consequently would result in smaller benefits than those identified for Alternative A. Research activities under Alternative A would result in both beneficial and adverse effects. Research and inventory activities can help improve management actions; however, during data collection scientists may disturb wildlife. Alternative B would result in no adverse impact from research activities through its emphasis on remote evaluation. Alternative C would not involve any management actions that would deviate from current management, and therefore would result in no effects, either adverse or beneficial, relative to baseline conditions.

Conclusions

Alternative A: Minor beneficial effects on wildlife resources from vegetation resources management actions; minor adverse effects on wildlife resources from research.

Alternative B: Moderate beneficial effects on wildlife resources from vegetation resources management actions.

Alternative C: No effects on wildlife resources from vegetation resources management actions.

4.3.3.6 Wildlife Resources Management Actions

Designation of seasonal restrictions in areas with sensitive seabirds and marine mammals would greatly benefit those species within the CCNM. Posted access restrictions during nesting and pupping seasons would help prevent human activities that would harm or harass the species. Other management measures are also anticipated to result in beneficial effects on wildlife resources. Native wildlife species would benefit from measures taken to control invasive wildlife species within the monument by maintaining a mosaic of compositionally and structurally diverse habitat types. For example, nonnative Canada geese may alter habitat characteristics at seabird colonies. Black rats or cats that have been introduced to an island can decimate breeding populations of seabirds. Removal of such nonnative invasive wildlife species benefits native wildlife. Control of invasive wildlife species that prey upon sensitive and special-status wildlife populations on the monument would benefit those species and allow growth of wildlife populations. Implementation of additional special management actions for special-status species, per applicable ESA regulations and BLM policy, also would benefit wildlife resources on the monument.

Intensive research and inventory activities that include monument-wide surveys of marine birds and pinnipeds, annual photographic documentation, focused surveys, and status of invasive wildlife species would result in major benefits to future wildlife populations, depending on the research conclusions.

Alternatives A and B would result in major beneficial effects on wildlife resources due to on-island restrictions, seasonal access restrictions, invasive wildlife species control, and specific management for special-status species. Alternative B would result in the greatest beneficial effects through its emphasis on resource protection. However, the invasive wildlife species control program would be smaller to prevent degradation of any other monument resources (e.g., geology and soils, vegetation, and cultural

resources). Research activities would result in both beneficial and adverse effects, because wildlife disturbance may accidentally occur as research and inventories are conducted. Emphasis on remote research methods for wildlife resources would contribute to beneficial effects on wildlife resources under Alternative B. Under Alternative C, seasonal restrictions on monument lands where conflicts exist would benefit wildlife populations undergoing known disturbance.

Conclusions

Alternative A: Major beneficial effects on wildlife resources from wildlife resources management actions; minor adverse effects on wildlife resources from research.

Alternative B: Major beneficial effects on wildlife resources from wildlife resources management actions.

Alternative C: Minor beneficial effects on wildlife resources from wildlife resources management actions.

4.3.3.7 Recreation Management Actions

As the human population expands, so does the frequency and intensity of recreational activities along the California coast. Unrestricted recreation activities, such as seaweed harvesting, scuba diving, foot exploration, and surfing, can cause disturbance to breeding and roosting seabirds and breeding or hauled-out pinnipeds. In particular, foot access to islands could negatively affect nesting seabirds, shorebirds (e.g. black oystercatcher), and undocumented populations of seabirds—especially nocturnal or burrowing seabirds. While low levels of water contact recreation do not likely disturb wildlife significantly, areas with high levels of water contact recreation can stress and disturb wildlife in the vicinity, including on nearby rocks and islands. Non-motorized boats such as kayaks can similarly affect wildlife. Restricting on-island activities, such as camping, off-highway vehicle use, launching for hang-gliders, and rock climbing, would benefit wildlife by decreasing or eliminating disturbance to seabirds and marine mammals in these areas.

Unrestricted motorized boat use near rocks and islands inhabited by seabirds and marine mammals causes disturbance and stress to these species. Harbor seals are sensitive to human disturbance and generally flush from their haul-out site when approached. Similarly, seabirds and shorebirds inhabiting rocks and islands are disturbed and may abandon nests and colonies if frequently disturbed. Encouraging state and federal wildlife management agencies to restrict motorboat use during nesting and pupping seasons (see “Wildlife Resources Management Actions” above) could reduce the level of stress and disturbance these vehicles cause to wildlife.

Aerial disturbance from planes and helicopters is of particular concern for wildlife welfare. Seabirds are especially vulnerable to this type of disturbance. Low flying planes and helicopters can cause an entire colony of seabirds to flush, leaving nests and young vulnerable to predation or exposure. Seals and sea lions are also sensitive to this type of disturbance and also are most vulnerable during the breeding season. Encouraging seasonal restrictions on aerial access within specified distances of the CCNM, and coordination with the FAA on enforcement, would greatly benefit wildlife inhabiting the CCNM.

Recreation activities within the monument with no active support from BLM may adversely affect wildlife as a result of direct disturbance. Low-impact landside recreation such as wildlife viewing and

scenic overlooks could negatively affect nearby breeding and resting sites for seabirds and marine mammals if activities are allowed too close to sensitive populations. These activities also may result in positive effects if contacts with visitors allow a better understanding of potential effects on wildlife within the monument. In areas where wildlife occurs on rocks that are accessible by people during low tide, specific wildlife viewing restrictions would be beneficial. Throughout most of the monument, however, wildlife viewing from the mainland is not likely to affect wildlife inhabiting the nearshore rocks and islands in the CCNM.

Recreational opportunities in and around the CCNM that are offered, sponsored, or partnered by BLM are expected to result in minimal effects on wildlife within the monument. BLM-sponsored or -partnered activities would be managed and staffed by employees knowledgeable about the resources and protective policies of the CCNM; therefore, such programs are not expected to disturb wildlife. Organized recreational activities related to the monument could also provide users with a personal, first-hand experience under the leadership of a guide knowledgeable about the monument and its wildlife.

Educational programs aimed at educating or certifying entities that offer recreational opportunities within the vicinity of the CCNM also would benefit wildlife. Education of recreational program employees regarding resources and protective regulations and guidelines within the monument would help reduce disturbance. Furthermore, such organizations could be helpful in disseminating educational information and materials to the public. Recreational program managers would be knowledgeable about the monument, its wildlife, and the regulations in place to protect its resources.

Actively promoting recreational opportunities in the CCNM, unless within the framework of organized activities offered by BLM or others, may increase use and levels of human disturbance. The ultimate effect of increased publicity would depend on the concomitant increase in educational efforts to reduce disturbance.

Upgrading and construction of signs, viewing platforms, and other facilities for use as recreational infrastructures are not expected to directly affect wildlife within the CCNM, but could affect local wildlife populations at mainland sites where these facilities are constructed. Chapter 2, "Alternatives," discusses the measures that would be implemented to offset or avoid these potential effects. Any major facilities construction in support of recreation also would require additional project-specific environmental analysis. Indirectly, the educational value of such facilities may result in a beneficial effect on wildlife.

All action alternatives would encourage low-impact recreation and prohibit certain forms of on-island recreation, and therefore would result in moderate beneficial effects on wildlife. Recreation management activities, such as educational programs, also would result in indirect beneficial effects. Under all action alternatives, measures would be implemented to ensure that construction of recreation facilities and facilities upgrades would result in only minor adverse effects. The more active recreation focus of Alternative C would increase human use of the monument and could increase the potential for adverse effects on wildlife resources through increased disturbance and harassment of wildlife resources. However, education regarding safe recreational practices and other measures would be implemented such that any adverse effects would be minor, and no mitigation would be required.

Conclusions

Alternatives A and B: Moderate beneficial effects on wildlife resources from recreation management actions; minor adverse effects on wildlife resources from construction.

Alternative C: Minor adverse effects on wildlife resources from recreation management actions; minor adverse effects on wildlife from publicity and construction.

4.3.3.8 Education and Interpretation Management Actions

Over the long-term, wildlife in the CCNM would benefit from development of an educational and interpretive infrastructure. People living or recreating near the CCNM would be educated about sensitive wildlife and informed of appropriate use and behavior while recreating near the monument. Some short-term adverse effects on wildlife populations could result from the construction of facilities near areas with sensitive wildlife.

Public education regarding the monument's resources would benefit wildlife species occurring in the CCNM. In particular, print media would be greatly beneficial if made readily available to those involved in recreation activities prone to cause high levels of disturbance (e.g., activities involving motorboats, airplanes, or helicopters). Education regarding proper disposal of litter also would benefit wildlife; corvids (ravens and crows) are attracted to areas with high human usage, such as campgrounds and picnic areas. Corvid abundance and distribution is increasing along coastal California and corvids are common predators of nests for numerous bird species. If seabirds are flushed from nests and colonies, their nests are highly vulnerable to predation by corvids.

Development of signs and kiosks would positively affect biological resources by providing effective direction to visitors regarding the wildlife inhabiting the CCNM and its sensitivity to human activities. The benefits would include increased awareness and understanding of biological issues on the monument. Visitor's centers would provide interpretative public education programs for the monument and disseminate print media information. Raising public awareness and appreciation for the resources of the monument would benefit the wildlife that inhabits the CCNM.

Educational opportunities related to the CCNM that are offered, sponsored, or partnered by BLM are anticipated to result in minimal effects on wildlife in the monument. Organized public tours of the monument would provide users with a personal, first-hand experience under the leadership of a guide knowledgeable about the monument and its wildlife. Tour leaders would understand regulations and restrictions regarding activities surrounding the monument, and how to minimize the potential disturbance such activities may cause.

Use of direct and self-guided points of contact for the CCNM could cause negative effects if sites chosen too close to sensitive seabird and marine mammal breeding or resting sites increased disturbance or attracted nest predators (i.e., ravens and crows). The potential for wildlife disturbance would be considered in designation of these points of contact and associated infrastructure, thus reducing the potential for these adverse effects. The educational resources these facilities would provide may result in beneficial effects on wildlife inhabiting the monument.

Upgrading and construction of signs, kiosks, wayside exhibits, and visitor centers should not directly affect wildlife in the CCNM but could affect local wildlife populations at mainland sites where these facilities are constructed. Chapter 2, "Alternatives," has identified measures that would be implemented to offset or avoid these effects. Any major facilities construction in support of education and interpretation also would require additional project-specific environmental analysis. Indirectly, the educational value of such facilities may benefit wildlife.

All action alternatives could involve designation and use of points of contact that could adversely affect wildlife. Because multiple new education and interpretation facilities would be constructed along the coast, Alternative C would result in greater effects from construction activities than Alternatives A and B. However, measures would be implemented to avoid adverse effects (see Chapter 2, “Alternatives”). Educational programs would result in indirect beneficial effects related to increased education and awareness, and would be conducted in a manner to minimize wildlife disturbance. Aggressive educational outreach under Alternative C would result in greater beneficial effects, as a larger population of visitors would understand the sensitivity of CCNM wildlife populations.

Conclusions

Alternatives A and B: Minor beneficial effects on wildlife resources from education and interpretation management actions; minor adverse effects on wildlife resources from construction.

Alternative C: Moderate beneficial effects on wildlife resources from education and interpretation management actions; minor adverse effects on wildlife resources from construction.

4.3.3.9 Research Activities Management Actions

Limiting disturbance for any reason typically benefits wildlife. Although some degree of disturbance may be associated with research, it can provide critical information regarding the management, population trends, and status of wildlife species. Well-planned research that provides information useful for management of CCNM resources may temporarily disturb wildlife, but this disturbance may be justifiable. Quality research, accomplished in a timely manner, ultimately would benefit wildlife species management within the CCNM. Such research could result in minor, negative, short-term effects on seabirds and marine mammals but ultimately could result in minor to major, positive, long-term effects—depending on the outcome of the research. Remote forms of research, such as aerial photograph interpretation, would not have such a potential for adverse effects.

Alternatives A and C include provisions for protection of resources in approval of research proposals; it is still possible, however, that research could be approved that would cause adverse effects on wildlife. Although many measures may be available to offset or avoid adverse effects, specific research proposals may result in effects for which mitigation cannot be identified at this time. Outcomes of the research could result in long-term beneficial effects. Alternative B would not allow research with the potential to adversely affect resources and thus would have no potential for adverse effects. Research could result in minor to major beneficial effects, depending on the topic and outcome.

Conclusions

Alternatives A and C: Indeterminate effects on wildlife resources from research activities management actions; potential major indirect beneficial effects on wildlife resources from results of research activities.

Alternative B: No adverse effects on wildlife resources from research activities; potential minor indirect beneficial effects on wildlife resources from results of research activities.

4.3.3.10 Land Tenure Adjustments

Depending on the characteristics of acquired land, acquisition could result in positive effects on seabird and marine mammal populations. Policies to obtain lands and interests determined to be desirable for consolidation would result in beneficial effects on wildlife by increasing the land base and providing greater protection to some rocks and islands. Further project-specific analysis would be required to evaluate the effects of each specific land acquisition proposal; therefore, the overall effect is considered indeterminate.

Conclusions

Alternatives A–C: Indeterminate effects on wildlife resources from land tenure adjustments.

4.3.3.11 Land Use Authorizations

Many forms of land use authorizations have been discussed under the other management categories, such as recreational, educational, and interpretive facilities. Land use authorizations not previously discussed include construction and maintenance of aids to navigation and communications facilities. Allowing the construction of aids to navigation and communication facilities may negatively affect wildlife inhabiting the CCNM by making rocks temporarily or permanently unavailable as habitat. As human populations expand, demands may increase for such structures to be constructed and maintained within the monument. Consequently, denying or restricting this use within the monument would benefit wildlife inhabiting the monument now and in the future. Further project-specific analysis would be required to evaluate the effects of each specific proposal for a permitted land use authorization. As described in Chapter 2, “Alternatives,” measures would be required to reduce or eliminate adverse effects on wildlife.

Potential land use authorizations would result in minor adverse effects on wildlife under Alternatives A and C. Alternative B would not allow land uses with the potential to adversely affect wildlife, and therefore would result in no effects on wildlife resources.

Conclusions

Alternatives A and C: Minor adverse effects on wildlife resources from land use authorizations.

Alternative B: No effects on wildlife resources from land use authorizations.

4.3.3.12 Actions with No Reasonably Foreseeable Effects on Wildlife Resources

Activities for the following management actions would not adversely affect wildlife resources:

- Special Designations, or
- Cadastral Support.

Section 4.4

Cultural Resources

4.4.1 Methodology

Because there is little recent history of federal undertakings in the CCNM, the record of previous cultural resources studies on offshore rocks and islands is sparse, precluding the use of CCNM-specific historical and archaeological research data as source material for this analysis. Background research methods included a search of existing archaeological site records in CHRIS; BLM conducted the search in 2001. BLM also corresponded with Native American tribes, groups, and individuals with known or possible interest in the coastal areas (refer to Chapter 5, “Consultation and Coordination”). This correspondence addressed the potential for CCNM management activities to affect offshore sacred sites or TCPs.

4.4.2 Criteria for Determining Significance

Under federal regulations, adverse effects on cultural resources need only be analyzed if a resource meets the eligibility criteria for listing in the NRHP. Federal regulations define an adverse effect on a cultural resource when the effect may diminish the integrity of the property’s location, design, setting, materials, workmanship, feeling, or association. Adverse effects on historic properties can include:

- Physical destruction of or damage to all or part of the property;
- Alteration of a property, including restoration, rehabilitation, repair, maintenance, stabilization, hazardous material remediation, and provision of handicapped access, that is not consistent with the secretary of the interior’s standards for the treatment of historic properties (36 CFR Part 68) and applicable guidelines;
- Removal of the property from its historic location;
- Change of the character of the property’s use or of physical features within the property’s setting that contribute to its historic significance;
- Introduction of visual, atmospheric, or audible elements that diminish the integrity of the property’s significant historic features;
- Neglect of a property that causes its deterioration, except where such neglect and deterioration are recognized qualities of a property of religious and cultural significance to an Indian tribe or Native Hawaiian organization; and
- Transfer, lease, or sale of property out of federal ownership or control without adequate and legally enforceable restrictions or conditions to ensure long-term preservation of the property’s historic significance.

4.4.3 Impacts on Cultural Resources

4.4.3.1 No Action Alternative

The following four primary future conditions have the potential to affect cultural resources in the CCNM:

- (1) Natural erosion of soils would continue on offshore rocks and islands, disturbing or eliminating buried cultural resources. Weathering and continued lack of maintenance also would lead to the decay and destruction of historic buildings and structures in the CCNM. However, natural weathering is not considered an adverse effect of BLM management.
- (2) Impacts on cultural resources in the CCNM may presently be occurring from public recreational use that unfortunately includes vandalism of archaeological sites and unmaintained built resources. Public use of the CCNM is also expected to increase as a result of management programs. Illegal disturbances of cultural sites are an indirect result of unrestricted access.
- (3) Marine wildlife management programs are likely to increase marine mammal populations (e.g., seals and sea lions), whose behavior may adversely affect cultural sites. However, wildlife behavior is not considered an adverse effect of BLM management.
- (4) Given recent legislation protecting Native American cultural values (AIRFA and NAGPRA), it is anticipated that TCPs—including offshore TCPs—would be increasingly recognized and used by Native Americans.

Although these factors could potentially affect the monument over the long term, no known degradation of CCNM cultural resources is occurring, and existing regulations in place for management of cultural resources are anticipated to be sufficient to ensure that such negative effects do not occur in the future, assuming that adequate enforcement resources are available. No effects on cultural resources are anticipated.

Conclusion

No Action Alternative: No effects on cultural resources from no action.

4.4.3.2 Visual Resources Management Actions

Managing CCNM areas as VRM Class II may affect viewsheds or landscapes that contribute to the importance of a historic property or that alter the character of Native American TCPs. The potential for adverse effects would be avoided through consultation, inventory, and evaluation of TCPs in the CCNM and by negotiating access agreements with tribes on a case-by-case basis.

Under all action alternatives, any remaining adverse effects would be minor.

Conclusions

Alternatives A–C: Minor adverse effects on cultural resources from visual resources management actions.

4.4.3.3 Geologic, Soil, and Paleontologic Management Actions

Restricting on-island activities on the CCNM to protect geologic, soils, and paleontologic resources would minimize the potential for incidental erosion of soils and exposure of buried cultural resources. Reduced foot and vehicular traffic on the monument's rocks and islands would result in a net beneficial effect on cultural resources.

Prohibiting all surface-disturbing activities (except foot traffic) on the CCNM would result in even greater beneficial effects on cultural resources by minimizing or eliminating soil disturbance. An adverse effect may occur if surface-disturbing restrictions are applied to NRHP-eligible TCPs where Native Americans have a legitimate and established practice of visiting ancestral sites. The potential for adverse effects would be avoided through consultation, inventory, and evaluation of TCPs in the CCNM and by negotiating access agreements with tribes on a case-by-case basis.

Alternatives A and B would result in beneficial effects on cultural resources through restrictions on recreational activities. Alternative B would result in the most direct beneficial effect, as it would eliminate all surface-disturbing activities with the potential to erode soils and expose buried cultural resources. However, indeterminate adverse effects could result if surface-disturbing restrictions are applied to NRHP-eligible TCPs where Native Americans have a legitimate and established practice of visiting ancestral sites. Alternative C would not involve any management actions that would deviate from current management, and therefore would result in no effects, either adverse or beneficial, relative to baseline conditions.

Conclusions

Alternative A: Minor beneficial effects on cultural resources from geologic, soil, and paleontologic resources management actions.

Alternative B: Moderate beneficial effects on cultural resources from geologic, soil, and paleontologic management actions; indeterminate effects on TCPs from bans on surface-disturbing activities.

Alternative C: No effects on cultural resources from geologic, soil, and paleontologic management actions.

4.4.3.4 Cultural Resources Management Actions

Restricting on-island activities on the CCNM to protect cultural resources would minimize potential for disturbance, theft, or vandalism. Reducing foot and vehicular traffic on the monument's rocks and islands also would result in a net beneficial effect on cultural resources through reduced potential for soil erosion and subsequent exposure of buried cultural resources.

Preparation of a CRMP and nomination of NRHP-eligible properties for listing would clearly benefit all potentially significant cultural resources through resulting preservation actions. Monitoring and

surveillance of cultural resources would ensure that all recreation and seasonal restrictions are enforced, thereby producing even greater net beneficial effects. Designation of the entire CCNM as a Cultural Resources Management Zone would benefit cultural resources to the greatest degree by enacting stringent use controls and offering protection to cultural resources throughout the entire CCNM.

Research and inventory of cultural resources in the CCNM would maximize management benefits and provide historic properties the highest degree of protection and preservation.

No effects on CCNM archaeological sites and historic resources are expected to occur as a result of managing Native American ancestral sites and TCPs in conjunction with existing preservation laws, their implementing regulations, and BLM instructives. Management of NRHP-eligible TCPs in conjunction with proactive tribal consultation and ethnographic study would promote their preservation and increase use by Native Americans. Development of BLM programs and partnerships with tribes to protect TCPs and encourage their continued use by Native Americans would enhance government-to-government relationships, maximize the potential for gaining a more complete inventory of TCPs in the CCNM, and afford the public an increased understanding of native groups and traditional values through interpretation. Additional public access restrictions to offshore TCPs may result from a larger inventory of these sites.

In summary, beneficial effects have been identified for proposed management actions under Alternatives A and B. Alternative A would result in moderate beneficial effects to known sites due to access restrictions, preparation of a CRMP, listing of NRHP-eligible properties, consultation with tribes over offshore TCPs, and research. Alternative B, because it would apply management to the entire CCNM, would result in major beneficial effects by expanding these benefits to unknown cultural resources sites. Alternative C would not involve any management actions that would deviate from current management, and therefore would result in no effects, either adverse or beneficial, relative to baseline conditions.

Conclusions

Alternative A: Moderate beneficial effects on cultural resources from cultural resources management actions.

Alternative B: Major beneficial effects on cultural resources from cultural resources management actions.

Alternative C: No effects on cultural resources from cultural resources management actions.

4.4.3.5 Vegetation Resources Management Actions

Cultural resources may benefit as a result of designating on-island restrictions in the CCNM in order to protect sensitive plants and plant communities, to the extent that they restrict disturbance of cultural resources sites.

Ground disturbance during mechanical removal of invasive plants, or burning or use of herbicides to eradicate invasive plant species, has the potential to affect both archaeological sites and TCPs used for traditional resource harvesting by Native Americans. Adverse effects on these resources would be avoided through integrated cultural resources management strategies or reduced through implementation

of Section 106 of the NHPA (required for federal undertakings with a potential to affect historic properties).

Alternatives A and B would result in minor beneficial effects on cultural resources from on-island activity restrictions. Invasive plant management could occur under Alternatives A and B, with a potential for adverse effects; however, measures would be implemented such that any effects would be minor. Alternative C would not involve any management actions that would deviate from current management, and therefore would result in no effects, either adverse or beneficial, relative to baseline conditions.

Conclusions

Alternatives A and B: Minor beneficial and adverse effects on cultural resources from vegetation resources management actions.

Alternative C: No effects on cultural resources from vegetation resources management actions.

4.4.3.6 Wildlife Resources Management Actions

Cultural resources would benefit from on-island seasonal access restrictions, to the extent that these restrictions would reduce the potential for disturbance, theft, or vandalism of cultural materials.

An adverse effect may occur if seasonal restrictions are inadvertently applied to NRHP-eligible TCPs where Native Americans have a legitimate and established practice of visiting ancestral sites. The potential for adverse effects would be avoided through consultation, inventory, and evaluation of TCPs in the CCNM and by negotiating access agreements with tribes on a case-by-case basis.

Any ground-disturbing activities associated with wildlife management, such as measures to improve habitat or control invasive wildlife species, have the potential to affect archaeological sites in the CCNM. Adverse effects on these resources can be avoided through integrated cultural resources management or reduced through implementation of Section 106 of the NHPA (required for federal undertakings with the potential to affect historic properties).

Alternatives A and B would result in moderate beneficial effects on cultural resources from wildlife resources management actions by establishing on-island activity restrictions and seasonal use restrictions during known breeding seasons, thereby reducing human trampling. Ground disturbance associated with habitat removal or invasive wildlife species control could occur under Alternative A—with a potential for adverse effects; however, measures would be implemented to avoid or offset these effects such that any remaining effects are considered minor. Alternative B would result in no adverse impacts from ground disturbance activities due to its emphasis on resource protection above all else. Under Alternative C, seasonal restrictions on monument lands where known conflicts exist would reduce disturbance to cultural resources, to the extent that such conflicts occur on cultural resource sites; however, beneficial effects are considered minor.

Conclusions

Alternative A: Moderate beneficial effects on cultural resources from wildlife resources management actions; minor adverse effects from invasive wildlife species control.

Alternative B: Moderate beneficial effects on cultural resources from wildlife resources management actions.

Alternative C: Minor beneficial effects on cultural resources from wildlife resources management actions.

4.4.3.7 Recreation Management Actions

Public access to the CCNM for purposes of recreation has the potential to adversely affect prehistoric and historic archaeological sites, historic buildings and structures, and Native American TCPs through increased exposure, use of site areas, and potential for vandalism. Development activities associated with public recreation in the CCNM also have the potential to adversely affect historic properties through ground disturbance and by increasing public use of culturally sensitive areas. Adverse effects on these resources would be avoided through integrated cultural resources management strategies, or mitigated to less than significant through implementation of Section 106 of the NHPA (required for federal undertakings with the potential to affect historic properties).

All action alternatives would restrict some on-island recreational activities that could be resulting in damage to cultural resources. Alternatives A and B would result in moderate beneficial effects on cultural resources. Alternative C would encourage active recreation at the CCNM to a greater extent, thereby resulting in smaller beneficial effects.

Conclusions

Alternatives A and B: Moderate beneficial effects on cultural resources from recreation management actions.

Alternative C: Minor beneficial effects on cultural resources from recreation management actions.

4.4.3.8 Education and Interpretation Management Actions

Construction associated with education and interpretive development has the potential to affect archaeological sites in coastal areas of the CCNM. Adverse effects on known, or as yet unrecorded, archaeological resources would be avoided through implementation of Section 106 of the NHPA (required for federal undertakings with the potential to affect historic properties).

Development of BLM facilities and infrastructure to provide education and interpretive programs for the CCNM would afford the public an increased understanding of CCNM cultural properties and would enhance BLM partnerships and other government-to-government relationships. This is an indirect minor beneficial effect.

All action alternatives would involve construction of education and interpretive facilities with the potential to affect cultural resource sites. However, no adverse impacts would result due to implementation of Section 106 of the NHPA. Educational programs would result in indirect beneficial effects related to increased education and awareness, and would be conducted in a manner to minimize disturbance of cultural resources. Aggressive educational outreach under Alternative C would result in

greater beneficial effects, as a larger population of visitors would understand the sensitivity of CCNM cultural resources.

Conclusions

Alternatives A and B: Minor indirect beneficial effects on cultural resources from education and interpretation management actions.

Alternative C: Moderate indirect beneficial effects on cultural resources from education and interpretation management actions.

4.4.3.9 Research Activities Management Actions

Ground-disturbing activities associated with temporary or ongoing research activities permitted in the CCNM would have the potential to affect archaeological sites in the CCNM. Adverse effects on these resources would be avoided through integrated cultural resources management or through implementation of Section 106 of the NHPA (required for federal undertakings with the potential to affect historic properties).

All action alternatives would include provisions for resource protection as part of the research approval process. In addition, the measures identified in Chapter 2 under “Research—Research Permit Procedure Guidelines” would avoid any impacts on cultural resources, resulting in no effect.

Conclusions

Alternatives A–C: No effects on cultural resources from research activities management actions.

4.4.3.10 Land Use Authorizations

Ground-disturbing activities resulting from any offshore construction or development have the potential to affect archaeological sites or other historic properties in the CCNM. Adverse effects on these resources would be avoided through integrated cultural resources management and land use planning, or through implementation of Section 106 of the NHPA (required for federal undertakings with the potential to affect historic properties).

Under all action alternatives, no adverse effects on cultural resources would result from land use authorizations.

Conclusions

Alternatives A–C: No effects on cultural resources from land use authorizations.

4.4.3.11 Actions with No Reasonably Foreseeable Impact on Cultural Resources

The following actions would not affect cultural resources:

- Special Designations,
- Cadastral Support, or
- Land Tenure Adjustments.

Section 4.5

Environmental Justice

4.5.1 Methodology

To determine whether the management alternatives would be likely to result in disproportionately high and adverse human health or environmental effects on low-income and minority populations, demographic information was obtained on the potential area of effect (the coastal counties of California). The definitions of minority and low-income populations used for the purposes of this environmental justice analysis (described in Section 3.5) are those of the Council on Environmental Quality, whose definitions are widely used to assess environmental justice in the environmental review process. Disproportionate effects were determined according to the following criteria:

- Where the minority population percentage of the affected area (coastline counties) is greater than 50 percent of the minority population percentage of the general population (California); and
- Where the population percentage of the affected area (coastline counties) is below the annual poverty threshold defined by the U.S. Census Bureau as 80 percent or less of the household median income of the general population (California).

Note that the ensuing analysis addresses subsistence fishing, hunting and gathering. Effects on commercial harvesting (e.g., of seaweed) are not related to the issue of environmental justice and therefore are not discussed in this section.

4.5.2 Thresholds for Adverse Effects

For this analysis, an effect on environmental justice was considered adverse and would require mitigation if it would:

- Result in disproportionately high and adverse human health effects (including, bodily impairment, infirmity, illness, or death); or
- Result in disproportionately high and adverse environmental effects (including effects on the natural or physical environment that would substantially and adversely affect minority, low-income or Native American populations. (a disproportionate effect is defined as an effect that is predominantly borne, more severe, or of a greater magnitude in areas with environmental justice populations than in other areas.)

4.5.3 Effects Related to Environmental Justice

4.5.3.1 No Action Alternative

The No Action Alternative assumes that the Presidential Proclamation and BLM's interim management would stay in place and would continue to allow the public, including minority, low-income, and Native American populations, relatively unrestricted access to the CCNM. Because the monument would continue to be used to access scenic views, sport and subsistence fishing, and other recreational activities, low-income and minority populations would not be disproportionately affected. No effects related to environmental justice are anticipated.

Conclusion

No Action Alternative: No effects related to environmental justice from no action.

4.5.3.2 Management Actions for Geologic, Soil, and Paleontologic Resources; Cultural Resources; and Vegetation Resources

Although the extent of subsistence collection of food and other materials by disadvantaged communities in the CCNM is unknown, it is likely that these activities only occur on CCNM features easily accessible from shore (e.g., accessible by foot at low tide). Actions restricting access to, or activities on, the CCNM for protection of various resources in this nearshore area could therefore affect subsistence collection to some degree. Depending on the extent of restrictions, numerous areas along the mainland and the CCNM would remain for these types of activities. As discussed in Chapter 2, "Alternatives," if BLM is notified that an environmental justice community is being adversely affected, further study would be conducted and appropriate measures would be taken to adequately offset or eliminate effects on those disproportionately affected. Coordination with DFG, who is responsible for controlling fishing, hunting, and gathering in coastal waters, also would be conducted.

Alternatives A and B may result in minor adverse effects on disadvantaged communities through restrictions of on-island activities and potential additional actions developed through management of cultural resources. Alternative B also would involve restrictions on surface-disturbing activities and designation of the entire CCNM as a Cultural Resources Management Zone. These management actions for geologic, soil, and paleontologic; cultural; and vegetation resources are considered to have minor adverse effects on environmental justice. Alternative C would result in no effects related to environmental justice, as disadvantaged communities would continue to have relatively unrestricted access to the CCNM.

Conclusions

Alternatives A and B: Minor adverse effects related to environmental justice from management actions for geologic, soil, and paleontologic resources; cultural resources; and vegetation resources.

Alternative C: No effects related to environmental justice from management actions for geologic, soil, and paleontologic resources; cultural resources; and vegetation resources.

4.5.3.3 Wildlife Resources Management Actions

As discussed in Chapter 2, “Alternatives,” the collection of small amounts of seaweed and invertebrates for personal, non-commercial use would still be allowed under the various alternatives; and fish can be caught from boats and mainland areas. These activities would continue to be managed by DFG. Areas subject to seasonal restrictions have the potential to disproportionately affect low-income and minority populations who use the CCNM and its surrounding environs as a site to conduct subsistence fishing, or who rely on harvesting of non-commercial ocean products (such as seaweed and shellfish) from these areas as a major source of food. It is likely that these subsistence activities would be restricted to areas of the CCNM close to shore. Locations near the shore do not generally house sensitive wildlife due to the potential for access by predators and the likelihood of a history of ongoing human disturbance. Therefore, the potential for conflicts between areas subject to seasonal restrictions and subsistence activities is relatively low.

. Alternatives A and B would implement seasonal restrictions around known sensitive wildlife sites during nesting and pupping seasons; these alternatives likely would not result in large areas that would be closed to subsistence activities, and it is expected that other areas would remain available for these activities. Adverse effects related to environmental justice from wildlife resources management actions therefore are considered minor under Alternatives A and B. Alternative C would result in no effects related to environmental justice, as disadvantaged communities would continue to have relatively unrestricted access to the CCNM.

Conclusions

Alternatives A and B: Minor adverse effects related to environmental justice from wildlife resources management actions.

Alternative C: No effects related to environmental justice from wildlife resources management actions.

4.5.3.4 Recreation Management Actions

Restrictions on fishing and/or other species collection, whether restricted entirely or allowed with seasonal restrictions, may have the potential to disproportionately affect low-income and minority populations who rely on subsistence harvesting as a major source of food. However, as discussed in Chapter 2, “Alternatives,” the collection of small amounts of seaweed and invertebrates for personal, non-commercial use would still be allowed under the plan. Also, fish can be caught from boats and mainland areas adjacent to the monument.

All three action alternatives include provisions for subsistence collection. No adverse effects related to environmental justice from recreation management actions have been identified.

Conclusions

Alternatives A–C: No effects related to environmental justice from recreation management actions.

4.5.3.5 Education and Interpretation Management Actions

Education and interpretation actions, including the distribution of outreach materials in languages other than English, seek to improve educational outreach and information sharing with the community. The strategies presented under the action alternatives would be applied to all segments of the human population and would not disproportionately adversely affect low-income or minority populations; instead, they may result in a minor beneficial effect.

All action alternatives involve the dissemination of educational materials, and all alternatives would potentially result in the same beneficial effect.

Conclusions

Alternatives A–C: Minor beneficial effects related to environmental justice from education and interpretation management actions.

4.5.3.6 Actions with No Reasonably Foreseeable Effects Related to Environmental Justice

Activities for the following management actions would not adversely affect environmental justice:

- Visual Resources,
- Special Designations,
- Cadastral Support,
- Research Activities,
- Land Tenure Adjustments, or
- Land Use Authorizations.

Geologic and Soil Resources

4.6.1 Methodology

Effects related to geology, soils, and associated hazards were analyzed qualitatively, based on a review of soil and geologic data for the CCNM and on professional judgment. Analysis focused on the potential of the various alternatives to increase the risk of personal injury, loss of life, and damage to property—including BLM-owned and other facilities—as a result of existing geologic conditions in the CCNM project area. This effects analysis assumes that BLM would conform to the latest Caltrans and UBC building code standards, county general plan seismic safety standards, county grading ordinances, and NPDES requirements.

4.6.2 Thresholds for Adverse Effects

For this analysis, an effect on geologic or soil resources was considered adverse and would require mitigation if it would:

- Expose people or structures to potential substantial adverse effects, including the risk of loss, injury, or death involving:
 - Rupture of a known earthquake fault, as delineated on the most recent Alquist-Priolo Earthquake Fault Zoning Map issued by the State Geologist for the area or based on other substantial evidence of a known fault. Refer to California Division of Mines and Geology (CDMG) Special Publication 42;
 - Strong seismic ground shaking;
 - Seismic-related ground failure, including liquefaction; or
 - Landslides.
- Result in substantial soil erosion or the loss of topsoil;
- Be located on a geologic unit or soil that is unstable or that would become unstable as a result of the project and potentially result in an onsite or offsite landslide, lateral spreading, subsidence, liquefaction, or collapse;
- Be located on expansive soil, as defined in Table 18-1-B of the UBC (1994), creating substantial risks to life or property; or

- Be located on soils incapable of adequately supporting the use of septic tanks or alternative wastewater disposal systems in areas where sewers are not available for the disposal of wastewater and such disposal is needed.

4.6.3 Effects on Geologic and Soil Resources

4.6.3.1 No Action Alternative

The No Action Alternative assumes that the Presidential Proclamation and BLM and core partner interim MOU stay in place; however, no further restrictions or management actions would be enacted.

Many of the rocks and pinnacles in the CCNM are smaller-scale features with minor amounts of soil that could easily be degraded. Degradation or erosion of these soils could occur naturally or as a result of human actions. Natural physical factors leading to the formation and dissolution of the rocks and islands within the monument include the erodibility of the geologic material and the extent of tectonic forces and of wave, wind, and tidal action. However, natural weathering is not considered an adverse effect as it can lead to increased soil formation, and is not a result of BLM management activity.

Humans could accelerate the degradation or erosion of the geologic or soil resources through foot or vehicle traffic. Although these factors could potentially affect the monument over the long term, existing regulations in place for management of physical resources are anticipated to be sufficient to ensure that such negative effects do not occur, assuming that adequate enforcement resources are available.

The No Action Alternative would not change the present hazards associated with faulting, ground shaking, or landslides because access to the monument and the potential hazards associated with this access would remain the same. No effects on geologic and soil resources are anticipated..

Conclusion

No Action Alternative: No effects on geologic and soil resources from no action.

4.6.3.2 Visual Resources Management Actions

As part of all action alternatives, BLM would manage the CCNM to VRM Class II standards until VRM classes are permanently established in the future. The Class II designation may indirectly protect geologic or soil resources of the CCNM by prohibiting activities that may substantially alter the visual quality of the rocks and islands. Prohibited activities are not specified but may potentially include any surface-disturbing activity or any activity that would erode soils and alter the existing views. However, the Class II designation could allow some development to occur in the CCNM. Prior to approving any development, further analysis would be required that would evaluate the potential adverse and beneficial effects of the project-specific action. In the event of adverse effects, BMPs and other mitigation measures that are described in Chapter 2, "Alternatives," would be applied to offset these effects. It is possible that no mitigation would be available to fully offset these effects.

Minor adverse effects potentially could result from development activities under the VRM Class II designation. Effects of future changes to the VRM class designation may be beneficial or adverse. If the VRM class changes to one with more restrictions on the activities that may occur in the CCNM, then the

effects likely would be beneficial. Adverse effects are anticipated if fewer activities were restricted. Prior to any development, project-specific adverse and beneficial effects would be identified. Mitigation would be implemented when possible to minimize potential adverse effects (see Chapter 2, “Alternatives”).

Conclusions

Alternatives A–C: Minor adverse effects on geologic and soil resources in the near term, and indeterminate effects in the long term, from visual resources management actions.

4.6.3.3 Geologic, Soil, and Paleontologic Management Actions

Restricting on-island activities on the CCNM generally would result in beneficial effects on geologic and soil resources. Decreased human activities would reduce the potential effects of human-induced erosion caused by trampling, as well as the potential safety risks to humans caused by ground shaking, liquefaction, landslides, fault ruptures, and soil expansion.

Further prohibiting all surface-disturbing activities (except foot traffic) on the CCNM would result in even greater beneficial effects on geologic, soil, and paleontologic resources. Eliminating structural development and construction activities on the CCNM would reduce the potential for accelerated runoff, erosion, and sedimentation during construction activities and reduce the potential for structural damage caused by geologic or soil hazards.

Research that seeks to better understand the nature of CCNM soils and geology also would contribute to improved future management actions.

Alternatives A and B would result in beneficial effects on geologic and soil resources through restrictions of on-island activities. Alternative B would result in the most direct beneficial effect, as it would eliminate all surface-disturbing activities with the potential to erode soils, affect geological and paleontological formations, and expose people to safety risks. Alternatives A and B also would benefit from research focused on resource protection. Alternative C would not involve any management actions that would deviate from current management, and therefore would result in no effects, either adverse or beneficial, relative to baseline conditions.

Conclusions

Alternative A: Minor beneficial effects on geologic and soil resources from geologic, soil, and paleontologic management actions.

Alternative B: Moderate beneficial effects on geologic and soil resources from geologic, soil, and paleontologic management actions.

Alternative C: No effects on geologic and soil resources from geologic, soil, and paleontologic management actions.

4.6.3.4 Cultural Resources Management Actions

The cultural resources management actions would preserve significant cultural resources by restricting on-island recreational activities, preparing a CRMP, and nominating NRHP-eligible properties for listing. Such management actions would decrease human-induced soil erosion and activities that could affect geologic and paleontologic resources, such as illegal excavation and collection.

Designating the entire CCNM as a Cultural Resources Management Zone would result in major beneficial effects to geologic and soil resources by enacting more stringent use controls throughout the monument. Monitoring and surveillance of cultural resources also would ensure that recreation and seasonal restrictions are enforced, thereby further reducing soil erosion and sedimentation effects. Native American traditional activities practiced in the CCNM are not expected to cause substantial degradation of the CCNM's geologic or soil resources because the activities would be performed only in consultation with BLM.

Alternative A would result in minor beneficial effects on geology and soils at known cultural resources sites as a result of increased management, designation of historic properties, surveillance by law enforcement personnel, and public education. Alternative B would result in major beneficial effects through application of these management actions throughout the entire CCNM. Alternative C would not involve any management actions that would deviate from current management, and therefore would result in no effects, either adverse or beneficial, relative to baseline conditions.

Conclusions

Alternative A: Minor beneficial effects on geologic and soil resources from cultural resources management actions.

Alternative B: Major beneficial effects on geologic and soil resources from cultural resources management actions.

Alternative C: No effects on geologic and soil resources from cultural resources management actions.

4.6.3.5 Vegetation Resources Management Actions

Loss of vegetation in the CCNM could lead to an accelerated rate of erosion and therefore likely would result in an adverse effect on geologic and soils resources in the project area. Ground disturbance during mechanical removal of invasive plants, or burning or use of herbicides to eradicate invasive plant species, has the potential to cause accelerated soil erosion. Because erosion control would be implemented, it is unlikely that the invasive plant species control program would adversely affect geologic and soil resources to a degree that mitigation would be required. Restricting on-island activities generally would result in beneficial effects as human-induced erosion is minimized.

The invasive plant species control program identified as part of Alternative A could result in the short-term degradation of soils resources, as soils would be subject to disturbance. Alternative B would allow invasive plant species removal only if it can be shown to result in no adverse effects on soil resources, therefore eliminating the potential for any adverse effects. Alternative C would not involve any management actions that would deviate from current management, and therefore would result in no effects, either adverse or beneficial, relative to baseline conditions.

Conclusions

Alternative A: Minor beneficial effects on geologic and soil resources from vegetation resources management actions; minor adverse effects from invasive plant species control.

Alternative B: Minor beneficial effects on geologic and soil resources from vegetation resources management actions.

Alternative C: No effects on geologic and soil resources from vegetation resources management actions.

4.6.3.6 Wildlife Resources Management Actions

The primary effect from protection of sensitive seabird, marine mammal, and/or intertidal species would be reduced human-induced erosion because access to the CCNM would be seasonally limited at sensitive sites. Seasonal restrictions to some of the rocks and islands would reduce human trampling and associated erosion effects.

Any ground-disturbing activities associated with wildlife management, such as measures to improve habitat or control invasive wildlife species, have the potential to affect geology and soils on the monument. Such activities may result in adverse effects; however, erosion control measures described in Chapter 2, "Alternatives," would be implemented to avoid or offset these effects such that any remaining effects are considered minor.

Alternatives A and B would result in minor beneficial effects on geology and soils from wildlife resources management actions by establishing on-island activity restrictions and seasonal use restrictions during known breeding seasons, thereby reducing human trampling. Invasive wildlife species control under Alternative A could degrade soil resources from potential human-induced erosion, depending on the scale and nature of control actions. These effects are anticipated to be temporary and minor, however, and measures have been identified in the alternatives to reduce such disturbance. Alternative B would limit research and inventory activities to remote evaluation, and would not allow invasive species removal with the potential to adversely affect soil resources. Under Alternative C, seasonal restrictions on monument lands where known conflicts exist would reduce disturbance to soils and geologic formations in a limited number of locations.

Conclusions

Alternative A: Minor beneficial effects on geologic and soil resources from wildlife resources management actions; minor adverse effects from invasive wildlife species control and research activities.

Alternatives B and C: Minor beneficial effects on geologic and soil resources from wildlife resources management actions.

4.6.3.7 Recreation Management Actions

Restricting on-island recreational activities, such as camping, off-highway vehicle use, launching for hang-gliders, and rock climbing, would result in beneficial effects on geology and soils. Adverse effects from active support of recreation activities would include degradation of soils and geologic resources resulting from human-induced erosion; however, BLM-sponsored activities are anticipated to be

conducted in a manner such that sensitive soil, geologic, or paleontologic resources are not adversely affected.

Actively engaging in offering, sponsoring, and partnering to provide active recreation opportunities in and around the CCNM is considered potentially adverse because increased recreation activities could degrade geologic and soils resources. However, all the action alternatives include measures to minimize the potential for resource degradation as a result of these activities (see Chapter 2, “Alternatives”).

Structural development and construction activities related to recreational infrastructure would introduce the potential for accelerated runoff, erosion, and sedimentation during construction activities, and the potential for structural damage caused by geologic or soil hazards. Standard UBC and county general plan construction standards would be incorporated into facility design to minimize the potential geologic or soil hazards to any approved structures. Other measures identified in Chapter 2, “Alternatives,” to minimize these potential effects include implementing an SWPPP and preparing a geotechnical report to identify geologic and soil hazards associated with facilities development.

Publicizing the CCNM and the recreation opportunities it presents would result in increased human activities and potential effects of human-induced erosion caused by trampling, as well as the potential safety risks to humans caused by ground shaking, liquefaction, landslides, fault ruptures, and soil expansion. As mentioned above, however, BLM would publicize and support only activities without the potential for degradation of monument resources.

Because all action alternatives would restrict on-island recreational activities, they would result in moderate beneficial effects on geologic and soil resources. Alternative C would foster the greatest degree of recreation in the CCNM by creating numerous recreational access points and actively offering, sponsoring, and partnering to provide recreation opportunities. However, as mentioned above, all activities would be conducted such that degradation of resources does not occur. For construction of facilities, as described in Chapter 2, “Alternatives,” measures would be implemented for all action alternatives to ensure that construction of recreation facilities and other facilities upgrades would result in only minor adverse effects.

Conclusions

Alternatives A and B: Moderate beneficial effects on geologic and soil resources from recreation management actions; minor adverse effects on geologic and soil resources from construction.

Alternative C: Moderate beneficial effects on geologic and soil resources from recreation management actions; minor adverse effects on geologic and soil resources from publicity and construction.

4.6.3.8 Education and Interpretation Management Actions

Construction-related effects on geologic and soil resources from education and interpretation management actions would be similar to those described under “Recreation Management Actions.” Construction activities related to educational and interpretive infrastructure would introduce the potential for accelerated runoff, erosion, and sedimentation, and the potential for structural damage caused by geologic or soil hazards.

Publicizing the CCNM through education and interpretive facilities and programs likely would result in increased human activities and the potential effects of human-induced erosion caused by trampling. Educational opportunities in and around the CCNM that are offered, sponsored, or partnered by BLM are anticipated to result in minimal effects on geology and soils in the monument, however, because they would be managed and staffed by employees knowledgeable about the CCNM's resources and protective regulations. Education and interpretation management activities would potentially decrease degradation of geologic or soils resources by informing the public of these potential human-induced effects.

Alternatives A and B would emphasize use of existing buildings, signs, and facilities for infrastructure as much as possible. Alternative A would select minimal additional points of visitor contact necessary to implement the education and interpretive program. During plan implementation, points of visitor contact where educational activities can occur would be screened and selected. Alternative C would provide education and interpretation opportunities to the maximum extent possible and would include the construction of multiple new centralized interpretive and management centers. Construction activities would have the potential for adverse effects on geology and soils. However, Chapter 2, "Alternatives," provides measures to ensure that construction and upgrades of education and interpretive facilities would result in only minor adverse effects.

All action alternative would provide education and interpretation activities via the internet and printed materials. All action alternatives are considered to result in indirect beneficial effects arising from increased public awareness. Alternative C would implement a much more aggressive campaign to educate the public about coastal resources, which would result in greater beneficial effects as individuals have greater understanding and respect for monument resources.

Conclusions

Alternatives A and B: Minor beneficial effects on geologic and soil resources from education and interpretation management actions; minor adverse effects on geologic and soil resources from construction.

Alternative C: Moderate beneficial effects on geologic and soil resources from education and interpretation management actions; minor adverse effects on geologic and soil resources from construction.

4.6.3.9 Research Activities Management Actions

Limiting disturbance for any reason typically benefits geology and soils. Allowing access to the rocks and islands for research activities would increase human use of the monument, thereby increasing human-induced erosion caused by trampling. Over the long term, erosion could expose and degrade geologic and soils resources.

All action alternatives would allow research activities throughout the CCNM except where designated otherwise as a result of management actions identified for other resources or uses. Approved research activities under Alternatives A and C would increase the understanding of the CCNM's resources, or address problems or questions of importance to science or society that show promise of making an important contribution to such knowledge. Alternative B would favor research efforts that protect the ecological integrity of the CCNM. Appropriate mitigation would be required for research activities that disturb geologic or soil resources under each of these alternatives (see Chapter 2, "Alternatives").

Consequently, inadvertent and direct degradation of geologic and soil resources through research activities is not a substantial concern under any action alternative.

Conclusions

Alternatives A–C: Minor adverse effects on geologic and soil resources from research activities management actions.

4.6.3.10 Land Tenure Adjustments

Land acquisitions are not expected to adversely affect geologic or soils resources. On the contrary, they could increase the number of rocks and islands receiving management attention by BLM and its partners. No adverse effects are anticipated under any of the action alternatives.

Conclusions

Alternatives A–C: No effects on geologic and soil resources from land tenure adjustments.

4.6.3.11 Land Use Authorizations

Land use authorizations, such as construction of aids to navigation and communications facilities, could lead to human-induced erosion, accelerated runoff or erosion associated with construction activities, and the risk to humans or structures from geologic or soil hazards. Further project-specific analysis would be required to evaluate the effects of each specific proposal for a permitted land use authorization. As described in Chapter 2, “Alternatives,” measures would be required to reduce or eliminate adverse effects on geology and soils.

All action alternatives would include land use authorizations. Alternatives A and C would incorporate measures to offset or reduce adverse effects. Under Alternative B, no land use authorization would be allowed unless it was shown to not adversely affect CCNM resources.

Conclusions

Alternatives A and C: Minor adverse effects on geologic or soil resources from land use authorizations.

Alternative B: No effects on geologic or soil resources from land use authorizations.

4.6.3.12 Actions with No Reasonably Foreseeable Effects on Geologic and Soil Resources

Activities for the following management actions would not adversely affect geologic or soil resources:

- Special Designations, or
- Cadastral Support.

4.7.1 Thresholds for Adverse Effects

For this analysis, an effect on health and safety was considered adverse and would require mitigation if it would:

- Create a major hazard to the public or the environment through the routine transport, use, or disposal of hazardous materials;
- Create a major hazard to the public or the environment through reasonably foreseeable upset and accident conditions involving the release of hazardous materials into the environment;
- Emit hazardous emissions or handle hazardous or acutely hazardous materials, substances, or waste within 0.25 mile of an existing or proposed school;
- Be located on a site that is included on a list of hazardous materials sites compiled pursuant to Government Code Section 65962.5 and, as a result, would create a major hazard to the public or the environment;
- For a project located within an airport land use plan or—where such a plan has not been adopted— within 2 miles of a public airport or public use airport, create a safety hazard for people residing or working in the project area;
- For a project within the vicinity of a private airstrip, create a safety hazard for people residing in the project area;
- Impair implementation of or physically interfere with an adopted emergency response plan or emergency evacuation plan;
- Expose people or structures to a substantial risk of loss, injury, or death involving wildland fires—including where wildlands are adjacent to urbanized areas or where residences are intermixed with wildlands; or
- Otherwise endanger the health and safety of people.

4.7.2 Effects on Health and Safety

4.7.2.1 No Action Alternative

Under the No Action Alternative, existing public access to the CCNM and adjacent areas would continue, and likely would increase over time as population in California grows. The incidence of injury or death due to mishap on the rocks and islands likely would increase slightly as coastal population and recreation increases. However, no management activities are anticipated to occur on the CCNM that would increase health and safety risks. No effects on health and safety would result.

Conclusion

No Action Alternative: No effects on health and safety from no action.

4.7.2.2 Management Actions for Geology, Soil, and Paleontologic Resources

In general, restriction of public access to CCNM rocks and islands would decrease the rate of accidents and injuries on the monument. Restricting on-island activities on the CCNM to protect geologic, soils, and paleontologic resources would result in beneficial effects to public health and safety. Prohibiting all surface-disturbing activities (except foot traffic) on the CCNM would result in even greater beneficial effects by further minimizing human access and related exposure to hazards.

Alternatives A and B would result in beneficial effects to public health and safety through restrictions on recreational activities. Alternative B would result in the most direct beneficial effect, as it would eliminate all surface-disturbing activities with the potential to expose people to safety risks. Alternative C would not involve any management actions that would deviate from current management, and therefore would result in no effects, either adverse or beneficial, relative to baseline conditions.

Conclusions

Alternative A: Minor beneficial effects on health and safety from geologic, soil, and paleontologic resources management actions.

Alternative B: Moderate beneficial effects on health and safety from geologic, soil, and paleontologic resources management actions.

Alternative C: No effects on health and safety from geologic, soil, and paleontologic resources management actions.

4.7.2.3 Cultural Resources Management Actions

Under the various alternatives, on-island activities would be prohibited or limited in an attempt to protect cultural resources on the monument. In general, restriction of public access to CCNM rocks and islands would decrease the rate of accidents and injuries on the monument. Additionally, monitoring and

surveillance of cultural resources by law enforcement personnel would discourage people from participating in dangerous or risky activities on the monument.

Alternatives A and B would result in beneficial effects due to designation of historic properties and surveillance by law enforcement. Alternative B would result in greater beneficial effects as it would extend such management to the entire CCNM. Alternative C would not involve any management actions that would deviate from current management, and therefore would result in no effects, either adverse or beneficial, relative to baseline conditions.

Conclusions

Alternative A: Minor beneficial effects on health and safety from cultural resources management actions.

Alternative B: Major beneficial effects on health and safety from cultural resources management actions.

Alternative C: No effects on health and safety from cultural resources management actions.

4.7.2.4 Vegetation Resources Management Actions

Applications of herbicides to invasive plant species could expose people to toxic substances. Although it is unlikely that visitors would be exposed to chemical doses that would cause immediate or lasting harm, if these chemical applications occurred near popular recreation areas, urbanized areas, or residential areas, people may be exposed to repeated or long-term exposure to potentially hazardous substances. The likelihood of this occurrence is considered very low. In addition, Chapter 2, "Alternatives," identifies BMPs and other measures that would be implemented to offset or avoid these effects, and herbicide applications would be conducted in accordance with manufacturer's specifications and label instructions.

Restricting public access to CCNM rocks and islands in order to protect vegetation resources would decrease the rate of accidents and injuries on the monument. Recreational activities such as fires, off-highway vehicles, and hang gliders would all be prohibited on the CCNM, therefore reducing potential injuries.

Alternatives A and B would result in minor beneficial effects on health and safety through restrictions on on-island activities. Alternatives A and B may also result in the adverse effects from potential exposure of adjacent users to hazardous materials used in the invasive species control program. However, BMPs and other measures that would be implemented to offset or avoid these effects. Alternative C would not involve any management actions that would deviate from current management, and therefore would result in no effects, either adverse or beneficial, relative to baseline conditions.

Conclusions

Alternatives A and B: Minor beneficial effects on health and safety from vegetation resources management activities; minor adverse effects on health and safety from invasive species control activities.

Alternative C: No effects on health and safety from vegetation resources management actions.

4.7.2.5 Wildlife Resources Management Actions

On-island activity restrictions and seasonal use restrictions during breeding seasons would reduce public access to CCONM rocks and islands, and would therefore decrease the rate of accidents and injuries on the monument.

Alternatives A and B, by designating on-island activity restrictions and seasonal restrictions, would result in moderate beneficial effects. Public access to these portions of the monument would be restricted and the rate of accidents and injuries on the monument would correspondingly decrease. Under Alternative C, seasonal restrictions on monument lands where known conflicts exist also would reduce public access, though to a lesser degree.

Conclusions

Alternatives A and B: Moderate beneficial effects on health and safety from management actions for wildlife resources.

Alternative C: Minor beneficial effects on health and safety from management actions for wildlife resources.

4.7.2.6 Recreation Management Actions

Increasing the number of recreation facilities along the coast likely would draw more visitors to the monument, as would increasing the amount of publicity and other support for various recreational activities. The presence of more visitors, especially visitors actively recreating on and around the monument, would lead to an increase in the rate of accidents and injuries on monument lands. However, proper signage at recreation facilities would be installed to provide information on visitor safety and warnings about hazards associated with accessing the monument for recreation and other uses. Further, various forms of on-island recreation would be prohibited for public safety and resource protection purposes, such as camping, off-highway vehicle use, launching for hang-gliders, and rock climbing, which would lead to a decrease in risky activity on and around the monument. Any adverse effects on health and safety from increased recreational activity as a result of the management alternatives would be offset by implementing these restrictions.

Construction of recreation facilities may involve exposure to hazardous materials during construction, should the facilities be located on lands with hazardous materials in the soils or waters. In the event of potential adverse effects, BMPs and other mitigation would be applied to ensure that no adverse effects would result (see Chapter 2, "Alternatives"). Any major facilities construction would require additional project-specific environmental analysis.

All action alternatives would restrict on-island recreational activities on the monument that pose a health and safety risk, and would therefore result in moderate beneficial effects on health and safety by decreasing the rate of injury on the monument. Under Alternative C, more active recreation activities and programming on the CCONM would be encouraged, resulting in an increased likelihood of injuries. As discussed in Chapter 2, "Alternatives," education regarding safe recreational practices and other measures

would be implemented such that any remaining adverse effects would be minor, and no mitigation would be required. All three action alternatives would potentially include construction and related potentially adverse effects associated with hazardous materials. As discussed in Chapter 2, “Alternatives,” BMPs and other measures would be implemented to ensure that adverse effects would be minor.

Conclusions

Alternatives A and B: Moderate beneficial effects on health and safety from recreation management actions; minor adverse effects on health and safety from construction.

Alternative C: Moderate beneficial effects on health and safety from recreation management actions; minor adverse effects on health and safety from publicity and construction.

4.7.2.7 Education and Interpretation Management Actions

Proper signage at kiosks, visitor centers, and other educational and interpretive facilities may provide information on visitor safety and warnings about hazards associated with accessing the monument. This would result in a minor beneficial effect on health and safety. On the other hand, increasing the number of educational facilities along the coast likely would draw more visitors to the monument, which would increase the potential for accidents and injuries on monument lands. Education and other measures to address this issue are identified in Chapter 2, “Alternatives.”

Construction of educational and interpretive facilities might involve exposure to construction-related hazardous materials. In the event of potential adverse effects, BMPs and other mitigation would be applied to ensure that no adverse effects would result (see Chapter 2, “Alternatives”). Any major facilities construction in support of education and interpretation would require additional project-specific environmental analysis.

All action alternatives would involve the construction of new or upgraded facilities, and would include educational materials regarding safe use of the monument. Therefore, all action alternatives would potentially result in beneficial effects on health and safety. Although an aggressive education and outreach campaign in Alternative C would further improve public knowledge of potential safety risks, it also likely would attract additional recreationists and visitors to the CCNM, thereby exposing more individuals to possible injury and negating the increased beneficial effects. Construction of such new or upgraded facilities would increase the potential for exposure to hazardous materials or other safety risks. Implementation of the BMPs identified in Chapter 2, “Alternatives,” would ensure that only minor adverse effects would result.

Conclusions

Alternatives A–C: Minor beneficial effects on health and safety from education and interpretation management actions; minor adverse effects on health and safety from construction.

4.7.2.8 Research Activities Management Actions

Allowing access to the rocks and islands for research activities would increase the rate of accidents and injuries on the monument, because researchers would be exposed to the hazards and safety risks. In

addition, individuals otherwise attracted to research may sustain injuries. Chapter 2, “Alternatives,” identifies that safety training and other measures would be required for all research to prevent injuries on the monument; consequently, no mitigation would be required.

Additional adverse effects would result if the rocks and islands accessed for research activities contained any hazardous materials. While the probability of such a condition is very low, researchers potentially could be exposed to these materials. In the event of the discovery of hazardous materials, BMPs and other mitigation would be applied (see Chapter 2, “Alternatives”), and further analysis and remediation would be required pursuant to federal law. Given the flexible nature of most research, it is anticipated that these measures would be sufficient to avoid an adverse effect related to exposure to hazardous materials.

All action alternatives would allow research activities on the monument, which may result in injury or safety risks. However, none of the action alternatives would result in potential adverse effects requiring mitigation related to exposure to hazardous materials.

Conclusions

Alternatives A–C: Minor adverse effects on health and safety from research activities management actions.

4.7.2.9 Land Tenure Adjustments

The extent to which land acquisitions may cause health and safety effects depend on previous ownership. If use of the rock or island had previously involved hazardous materials, future visitors to that holding could be exposed to hazardous materials, resulting in an adverse effect. Project-specific analysis would be required to evaluate the effects of each specific land acquisition proposal, and the presence of hazardous materials would result in further analysis and remediation pursuant to federal law. These measures would preclude the potential for exposure of the public to hazardous materials on newly acquired lands. No effects are anticipated under any action alternative.

Conclusions

Alternatives A–C: No effects on health and safety from land tenure adjustments.

4.7.2.10 Land Use Authorizations

Installation of navigational aids and communications facilities may decrease the frequency of accidents involving disoriented boaters. However, construction of these facilities may involve exposure to hazardous materials—during construction or operations. In the event of potential adverse effects, BMPs and other mitigation would be applied to ensure that no adverse effects would result (see Chapter 2, “Alternatives”). Any major facilities construction in support of education and interpretation would require additional project-specific environmental analysis.

All action alternatives would allow land use authorizations, including navigational aids. All action alternatives therefore potentially would result in beneficial effects on health and safety as a result of installation of navigational aids and other boating safety features.

Conclusions

Alternatives A–C: Moderate beneficial effects on health and safety from land use authorizations.

4.7.2.11 Actions with No Reasonably Foreseeable Effects on Health and Safety

Activities for the following management actions would not adversely affect health and safety:

- Visual Resources,
- Special Designations,
- Cadastral Support.

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Section 4.8

Indian Trust Resources

4.8.1 Thresholds for Adverse Effects

For this analysis, an effect was considered adverse and would require mitigation if it would:

- Interfere or conflict with any property rights relevant to Indian trust resources.

4.8.2 Effects on Indian Trust Resources

4.8.2.1 No Action Alternative

The No Action Alternative would not restrict or change uses allowed on any part of the monument. There would be no conflict with or effects on Indian trust resources.

Conclusion

No Action Alternative: No effects on Indian trust resources from no action.

4.8.2.2 Wildlife Resources Management Actions

Seasonal use restrictions for rocks and islands with sensitive populations of seabirds, marine mammals, and/or intertidal species might conflict with uses and rights accorded to Indian trust resources.

Under all alternatives, seasonal use restrictions might conflict with uses and rights accorded to Indian trust resources. However, as discussed in Chapter 2, “Alternatives,” valid existing rights would take precedence over limitations exacted by the seasonal restrictions. There would be no effect on Indian trust resources from wildlife resources management actions under any alternative.

Conclusions

Alternatives A–C: No effects on Indian trust resources from wildlife resources management actions.

4.8.2.3 Recreation and Education and Interpretation Management Actions

While it is possible that recreational and/or interpretive facilities might be planned for construction on Indian lands, these activities would be conducted with relevant tribes under voluntary partnerships. Therefore, no potential exists for conflicts with Indian trust resources. There would be no effect from these management actions under any alternative.

Conclusions

Alternatives A–C: No effects on Indian trust resources from recreation or education and interpretation management actions.

4.8.2.4 Actions with No Reasonably Foreseeable Effects on Indian Trust Resources

Activities for the following management actions would not adversely affect Indian trust resources:

- Visual Resources;
- Special Designations;
- Cadastral Support;
- Geologic, Soil, and Paleontologic Resources;
- Cultural Resources;
- Vegetation Resources;
- Research Activities;
- Land Tenure Adjustments; or
- Land Use Authorizations.

Land Use/Lands and Realty

4.9.1 Methodology

For actions solely within BLM's jurisdiction, no potential exists for conflicts related to land use and lands and realty. This section therefore focuses on plan decisions that would be implemented in areas outside BLM's jurisdiction, such as mainland education and recreation facilities.

4.9.2 Thresholds for Adverse Effects

For this analysis, an effect on land use/lands and realty was considered adverse and would require mitigation if it would:

- Physically divide an established community;
- Conflict with any applicable land use plan, policy, or regulation of an agency with jurisdiction over the project (including, but not limited to the general plan, specific plan, local coastal program, or zoning ordinance) adopted for the purpose of avoiding or mitigating an environmental effect; or
- Conflict with any applicable habitat conservation plan or natural community conservation plan.

4.9.3 Effects on Land Use/Lands and Realty

4.9.3.1 No Action Alternative

The No Action Alternative would not affect land use/lands and realty. This alternative would not include any land acquisitions, nor would it restrict or change uses presently allowed on any part of the monument. As noted in the Presidential Proclamation, the lands of the monument would not be sold, leased, or used for mineral extraction. No effects on land use/lands and realty would result.

Conclusion

No Action Alternative: No effects on land use/lands and realty from no action.

4.9.3.2 Management Actions for Geologic, Soil, and Paleontologic Resources; Cultural Resources; and Vegetation Resources

Management actions for protection of geologic, soil, and paleontologic resources, cultural resources, and vegetation resources may result in on-island recreation restrictions on lands that have *de facto* been entered and used for a variety of purposes over time. However, the access restrictions would apply only to the monument lands, which are subject only to the actions in this RMP and the regulations that apply to Ecological Reserves in California, and would not conflict with any planning directives related to the CCNM or surrounding areas.

No adverse effects on land use/lands and realty would result under any action alternative from management actions related to geologic, soil, and paleontologic resources, cultural resources, or vegetation resources.

Conclusions

Alternatives A–C: No effects on land use/lands and realty from management actions related to geologic, soil, and paleontologic resources; cultural resources; or vegetation resources.

4.9.3.3 Wildlife Resources Management Actions

Seasonal restrictions on rocks and islands with sensitive populations of seabirds, marine mammals, and/or intertidal species would restrict activities on lands within BLM's jurisdiction only, and would not conflict with any existing land use or management plans. As discussed in Chapter 2, "Alternatives," the agencies that manage adjacent areas would be consulted and coordinated with concerning designation and enforcement of all wildlife resources management actions.

Seasonal restrictions would be established under all action alternatives. For the reasons stated above, no adverse effects related to wildlife resources management actions are anticipated for any of the alternatives.

Conclusions

Alternatives A–C: No effects on land use/lands and realty from wildlife resources management actions.

4.9.3.4 Recreation Management Actions

None of the activity restrictions identified in the various recreation alternatives extend outside BLM's jurisdiction and therefore would have no potential to conflict with existing land use or other management plans for mainland and aquatic areas adjacent to the monument. Construction of mainland recreation facilities would be conducted in accordance with the land use plans of the relevant jurisdiction.

Locating construction within the habitat of federally or state-listed endangered species could conflict with an existing habitat conservation plan (HCP) or natural community conservation plan (NCCP). However, any major facilities construction in support of recreation would require additional project-specific environmental analysis, which would identify these plans and require consultation with USFWS and/or

DFG—and potentially changes in the project as a result of these consultations—to eliminate any conflicts with these plans.

Alternatives A and C would involve the construction of new or upgraded recreational facilities, and the restriction of certain forms of on-island recreational activities. However, these activities are not anticipated to result in any adverse effects related to land use/lands and realty. Alternative B would limit recreational access to existing facilities, and would therefore have no effect on land use/lands and realty.

Conclusions

Alternatives A–C: No effects on land use/lands and realty from recreation management actions.

4.9.3.5 Education and Interpretation Management Actions

Construction of new or upgraded educational and interpretive facilities on the mainland could conflict with existing zoning or land use designations in these locations. As discussed in Chapter 2, “Alternatives,” the agencies that manage the relevant mainland areas would be consulted, coordinated, and/or partnered with to avoid or minimize any adverse effects such that no mitigation would be required.

Locating construction within the habitat of federally or state-listed endangered species could conflict with an existing HCP or NCCP. These effects would be similar to the effects discussed under “Recreation Management Actions,” and appropriate measures would be taken such that no mitigation would be required.

All action alternatives would involve the construction of new or upgraded facilities—including signage and kiosks. However, no adverse effects on land use/lands and realty have been identified relative to these facilities.

Conclusions

Alternatives A–C: No effects on land use/lands and realty from education and interpretation management actions.

4.9.3.6 Land Tenure Adjustments

Land tenure adjustments would not divide any existing communities. Because BLM would be the lead supervising agency of the lands in question, there would be no conflict with an agency’s policies or management plans. None of the alternatives would result in an adverse effect on land use/lands and realty that is related to land tenure adjustments.

Conclusions

Alternatives A–C: No effects on land use/lands and realty from land tenure adjustments.

4.9.3.7 Actions with No Reasonably Foreseeable Effects on Land Use/Lands and Realty

Activities for the following management actions would not adversely affect land use/lands and realty:

- Visual Resources;
- Special Designations;
- Cadastral Support;
- Research Activities; or
- Land Use Authorizations.

4.10.1 Methodology

To assess potential noise effects, activities associated with each alternative that have a potential to generate noise have been identified. Because descriptions of activities are general, potential noise effects are discussed qualitatively at a program level of detail.

4.10.2 Thresholds for Adverse Effects

For this analysis, a noise effect was considered to be adverse and would require mitigation if a proposed action could generate noise that would be considered a substantial nuisance or would affect a large number of noise-sensitive receptors.

4.10.3 Effects on Wilderness and Other Special Designations

4.10.3.1 No Action Alternative

Under the No Action Alternative, no changes to the existing regulatory environment would occur. Use of motorized vehicles, boats, and construction equipment along the coast are all expected to increase over time—corresponding to increased coastal populations—which would increase noise emissions from these sources over time. However, no management activities are anticipated to occur on the CCNM that would increase noise levels. No effects on noise are anticipated.

Conclusion

No Action Alternative: No effects on noise from no action.

4.10.3.2 Vegetation Resources Management Actions

Vegetation resources management actions would include invasive plant species management and removal, as discussed in Chapter 2, “Alternatives.” Potential tools or methods to remove the plants are not identified in the descriptions of the alternatives. If methods are selected that generate significant

amounts of noise, such as certain forms of mechanical removal, the potential for adverse effects would exist. In all cases, this increase in noise would be temporary, and much of the control activities would be located on the coast, in areas with few noise-sensitive receptors. As discussed in Chapter 2, “Alternatives,” activities would be required to comply with local noise ordinances.

Invasive species removal activities would be conducted under Alternatives A and B. Anticipated adverse effects would be minor; however, no adverse effects have been identified related to noise that would require mitigation. Alternative C would not implement management actions that would increase noise levels, and therefore would result in no effect.

Conclusions

Alternatives A and B: Minor adverse effects on noise from vegetation resources management actions.

Alternative C: No effects on noise from vegetation resources management actions.

4.10.3.3 Wildlife Resources Management Actions

Noise effects related to invasive wildlife management activities would be similar to those discussed for vegetation resources above.

Establishing seasonal restrictions for known sensitive populations of seabirds, marine mammals, and intertidal species would result in beneficial effects on ambient noise levels in the CCNM. During seasonal restrictions, all activities with the potential to disturb wildlife would be prohibited or discouraged—including activities that may be very loud, such as overflights by airplanes, motorboat traffic and fireworks. Aircraft overflights are significant among seabirds, particularly when nesting; consultation with the FAA will be an important component of wildlife management to ensure that regulations pertaining to overflights are adequately enforced.

Seasonal restrictions established under all action alternatives would result in minor beneficial effects on noise levels within the CCNM. Invasive wildlife species control under Alternatives A and B may result in minor adverse effects on monument noise levels.

Conclusions

Alternatives A and B: Minor beneficial effects on noise from wildlife resources management actions; minor adverse effects on noise from invasive wildlife species control.

Alternative C: Minor beneficial effects on noise from wildlife resources management actions.

4.10.3.4 Recreation Management Actions

As part of recreation management actions, structures or other facilities may be built near the CCNM to support the CCNM’s recreation programs. New facilities would be a source of noise that could adversely affect noise-sensitive receptors in the vicinity. Noise from construction activities would include noise from grading, scraping, excavation, and compaction activities; hauling of materials; and facility construction. Construction activities could intermittently generate high noise levels on and near the

construction site. The magnitude of construction noise effects would depend on the type of construction activity; the noise level generated by various pieces of construction equipment; the duration of the activity; the distance between the activity and noise-sensitive receptors; and any shielding effects that might result from local barriers, including topography. Construction equipment can operate intermittently or fairly continuously, with multiple pieces of equipment operating concurrently. Consequently, construction activities could have the potential to generate noise that would be considered a substantial nuisance or affect a large number of sensitive receptors. Chapter 2, "Alternatives," identifies that all construction activities would comply with local noise ordinances and that noise control measures would be implemented to maintain the existing noise environment. Further project-specific environmental analysis would also be required for major construction projects, which would identify any additional measures necessary to control noise effects.

Restricting certain types of on-island activities, such as camping, off-highway vehicle use, launching for hang-gliders, and rock climbing, would result in beneficial effects on surrounding noise levels. However, BLM does not maintain jurisdiction over the waters surrounding the CCNM; therefore, the alternatives would not restrict motorized boats, which create the greatest noise nuisance along coastal waters.

All action alternatives would limit certain on-island recreational activities on the CCNM, and therefore would limit noise effects from these sources. Alternative C would foster the greatest degree of recreation in the CCNM by creating numerous recreational access points and actively offering, sponsoring and partnering to provide recreation opportunities. Adverse effects on noise levels under Alternative C would be the greatest; however, BLM would not sponsor or encourage recreation activities that would generate noise to such a degree that mitigation would be required.

Under Alternatives A and B, existing buildings, signs, and facilities would be used as much as possible for recreational purposes. Accordingly, new noise-generating activities would be minimal, and no adverse effects that would require mitigation are anticipated for these activities. Alternative C would create multiple mainland recreation facilities; however, as identified above, measures would be implemented to minimize noise from construction and these effects would be temporary.

Conclusions

Alternatives A and B: Minor beneficial effects on noise from recreation management actions; minor adverse effects on noise from construction.

Alternative C: Minor beneficial effects on noise from recreation management actions; minor adverse effects on noise from publicity and construction.

4.10.3.5 Education and Interpretation Management Actions

As part of the education and interpretation management actions, structures would be built near the CCNM to support the monument's operations and education and recreation programs. Construction activities associated with the new educational and interpretive facilities would be a temporary source of noise that could adversely affect noise-sensitive receptors in the vicinity of the activity. Noise from construction activities would include grading, scraping, excavation, and compaction activities; hauling of materials; and facility construction. Construction activities associated with the proposed project could intermittently generate high noise levels on and near the construction site. The magnitude of construction noise effects would depend on the type, scheduling, and design of construction activity, as described in "Recreation

Management Actions” above. Construction equipment can operate intermittently or fairly continuously, with multiple pieces of equipment operating concurrently. Consequently, construction activities have the potential to generate noise that would be a substantial nuisance and/or affect a large number of noise-sensitive receptors. Chapter 2, “Alternatives,” identifies that all construction activities would comply with local noise ordinances and that noise control measures would be implemented to maintain the existing noise environment. Further project-specific environmental analysis would be required for any major construction projects; any additional measures necessary to control noise effects would be identified.

Under Alternatives A and B, existing buildings, signs, and facilities would be used as much as possible for educational and interpretive purposes. Accordingly, new noise-generating activities would be minimal, and no adverse effects related to noise that would require mitigation are anticipated. Alternative C would provide education and interpretation opportunities to the maximum extent possible and would include the construction of multiple new mainland education and interpretation facilities. Under all action alternatives, construction activities would comply with local noise ordinances, noise control measures would be implemented to maintain the existing noise environment, and increased construction-related noise levels would be temporary (see Chapter 2, “Alternatives”). No adverse effects related to noise from education and interpretation management actions that would require mitigation are anticipated.

Conclusions

Alternatives A–C: Minor adverse effects on noise from education and interpretation management actions.

4.10.3.6 Land Use Authorizations

As part of land use authorizations, structures may be built in the CCNM—such as communications facilities and aids to navigation. Construction of these facilities could generate noise, as discussed under “Recreation Management Actions,” and “Education and Interpretation Management Actions.” It is likely, however, that many of these land use authorizations would be located on rocks and islands far from noise-sensitive receptors that could be adversely affected. Further, Chapter 2, “Alternatives,” identifies that all construction activities would comply with local ordinances and that noise control measures would be implemented to maintain the existing noise environment; these actions would minimize any adverse effects from construction-related noise. Further project-specific environmental analysis also would be required for any major construction projects; any additional measures necessary to control noise effects from construction activities would be identified.

Construction of new facilities could be authorized under all action alternatives. However, potential noise effects on sensitive receptors would be minor. No adverse effects that would require mitigation are anticipated for any of these activities.

Conclusions

Alternatives A–C: Minor adverse effects on noise from land use authorizations.

4.10.3.7 Actions with No Reasonably Foreseeable Effects on Noise

Activities for the following management actions would not adversely affect noise in the project area:

- Visual Resources;
- Special Designations;
- Cadastral Support;
- Geologic, Soil, and Paleontologic Resources;
- Cultural Resources;
- Research Activities; or
- Land Tenure Adjustments.

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Section 4.11

Paleontologic Resources

4.11.1 Methodology

Effects related to paleontologic resources (i.e., fossils) were analyzed qualitatively, based on a review of paleontologic data for the CCNM and on professional judgment. Analysis focused on the potential of the proposed management action to increase loss of or damage to paleontologic resources.

4.11.2 Thresholds for Adverse Effects

For this analysis, an effect on a paleontologic resource was considered adverse and would require mitigation if it would:

- Directly or indirectly destroy a unique paleontologic resource or site, or a unique geologic feature.

4.11.3 Effects on Paleontologic Resources

4.11.3.1 No Action Alternative

The No Action Alternative assumes that the Presidential Proclamation and the interim management by BLM and its core partner stay in place, and that no further restrictions or management actions would be enacted.

Human-induced erosion and natural erosion could potentially erode rocks and pinnacles in the CCNM, thereby affecting paleontologic resources. Multiple physical factors could lead to the erosion of rocks and islands in the monument, including the erodibility of the geologic material and the extent of tectonic forces and wave, wind, and tidal action. However, natural weathering is not considered an adverse effect of BLM management.

In addition to the erosional effects caused by humans, the risk of theft of paleontologic resources would increase as humans explored the rocks and pinnacles in the CCNM. Although these factors could potentially affect the monument over the long term, existing regulations in place for management of physical resources are anticipated to be sufficient to ensure that such negative effects do not occur, assuming that adequate resources are available for enforcement. There would be no effects on paleontologic resources.

Conclusion

No Action Alternative: No effects on paleontologic resources from no action.

4.11.3.2 Visual Resources Management Actions

Under all action alternatives, BLM would manage the CCNM to VRM Class II standards until VRM classes are permanently established in the future. The Class II designation may indirectly protect paleontologic resources of the CCNM by prohibiting activities that may significantly alter the visual quality of the rocks and islands. Prohibited activities are not specified but may potentially include any surface-disturbing activity or any activity that would erode soils or alter the existing views. However, the Class II designation could allow some development to occur in the CCNM. Prior to approving any development, further analysis would be required that would evaluate the potential adverse and beneficial effects of the project-specific action. In the event of adverse effects, BMPs and other mitigations would be applied to offset these effects (See Chapter 2, “Alternatives”). It is possible that no mitigation would be available to offset these effects.

Minor adverse effects potentially could result from development activities under the VRM Class II designation. Effects of future changes to the VRM class designation may be beneficial or adverse. If the VRM class changes to a class with more restrictions on the activities that may occur in the CCNM, the effects are likely to be beneficial. Adverse effects would likely occur if fewer activities were restricted. Prior to any development, the adverse and beneficial effects would be identified. Mitigation would be implemented when possible to minimize potential adverse effects.

Conclusions

Alternatives A–C: Minor adverse effects on paleontologic resources in the near term, and indeterminate effects in the long term, from visual resources management actions.

4.11.3.3 Geologic, Soil, and Paleontologic Resources Management Actions

Erosion could potentially erode rocks and pinnacles in the CCNM, thereby affecting paleontologic resources. Multiple physical factors lead to the erosion of rocks and islands in the monument, including the erodibility of the geologic material and the extent of tectonic forces and wave, wind, and tidal action. Most of this erosion is natural and therefore not considered adverse. However, human-induced erosion from trampling could degrade paleontologic resources.

Restricting on-island activities on the CCNM to protect geologic, soils, and paleontologic resources would minimize potential for incidental erosion of soils and exposure of paleontologic resources. Prohibiting all surface-disturbing activities (except foot traffic) on the CCNM would result in even greater beneficial effects on paleontologic resources by minimizing or eliminating soil disturbance. The risk of theft and/or vandalism also would decrease if humans were discouraged from exploring the rocks and pinnacles in the CCNM.

Research that seeks to better understand the nature of coastal and intertidal resources also would contribute to improved future management actions related to paleontologic resources.

Alternatives A and B would result in beneficial effects on paleontologic resources through restrictions on recreational activities. Alternative B would result in the most direct beneficial effect, as it would eliminate all surface-disturbing activities with the potential to erode soils and expose paleontologic resources. Alternatives A and B also would benefit from research programming focused on resource protection. Alternative C would not involve any management actions that would deviate from current management, and therefore would result in no effects, either adverse or beneficial, relative to baseline conditions.

Conclusions

Alternative A: Minor beneficial effects on paleontologic resources from geologic, soil, and paleontologic resources management actions.

Alternative B: Moderate beneficial effects on paleontologic resources from geologic, soil, and paleontologic resources management actions.

Alternative C: No effects on paleontologic resources from geologic, soil, and paleontologic resources management actions.

4.11.3.4 Cultural Resources Management Actions

Restricting on-island recreational activities, preparing a CRMP, and nominating NRHP-eligible properties for listing would decrease human-induced erosion and potential exposure of buried fossils in areas managed for cultural resources. Designating the entire CCNM as a Cultural Resources Management Zone would result in major beneficial effects on paleontologic resources by enacting the most stringent use controls. Monitoring and surveillance of cultural resources will also ensure that recreation and seasonal restrictions are enforced, thereby further reducing soil erosion effects.

Native American traditional activities practiced in the CCNM are not expected to cause degradation of the CCNM's paleontologic resources, and the activities would be performed only in approved locations through consultation with BLM.

Alternative A would result in minor beneficial effects on paleontologic resources as a result of on-island activity restrictions, designation of historic properties, and surveillance by law enforcement personnel. Alternative B would result in major beneficial effects by designating the entire CCNM as a Cultural Resources Management Zone. Alternative C would not involve any management actions that would deviate from current management, and therefore would result in no effects, either adverse or beneficial, relative to baseline conditions.

Conclusions

Alternative A: Minor beneficial effects on paleontologic resources from cultural resources management actions.

Alternative B: Major beneficial effects on paleontologic resources from cultural resources management actions.

Alternative C: No effects on paleontologic resource from cultural resources management actions.

4.11.3.5 Vegetation Resources Management Actions

Loss of vegetation in the CCNM could lead to an accelerated rate of erosion with potential to adversely affect geologic formations and paleontologic resources. Ground disturbance during mechanical removal of invasive plants, or burning or use of herbicides to eradicate invasive plant species, has the potential to cause accelerated soil erosion. Because erosion control would be implemented, it is unlikely that the invasive plant species control program would adversely affect paleontological resources to a degree that mitigation would be required. Restricting on-island activities generally would result in beneficial effects as human-induced erosion is minimized.

Alternative A would allow invasive plant species eradication that has the potential to affect paleontologic resources, resulting in minor adverse effects. Soil disturbance during invasive plant species removal may accidentally expose buried fossils or other paleontologic resources. Because Alternative B would disallow invasive plant removal activities that would adversely affect monument resources, no adverse effect would result. Alternative C would not involve any management actions that would deviate from current management, and therefore would result in no effects, either adverse or beneficial, relative to baseline conditions.

Conclusions

Alternative A: Minor beneficial effects on paleontologic resources from vegetation resources management actions; minor adverse effects on paleontologic resources from invasive species removal.

Alternative B: Minor beneficial effects on paleontologic resources from vegetation resources management actions.

Alternative C: No effects on paleontologic resources from vegetation resources management actions.

4.11.3.6 Wildlife Resources Management Actions

Protection of sensitive seabird, marine mammal, and/or intertidal species would result in reduced human-induced erosion by restricting certain on-island activities and human access to the CCNM during breeding seasons. Restricting human access would thereby reduce human trampling and associated erosion effects, as well as illegal collection, that could potentially expose, damage or remove buried fossils and other paleontologic resources.

Control activities for invasive wildlife species could also cause soil and therefore paleontologic resource degradation from potential human-induced erosion—depending on the scale and nature of these activities. These effects are anticipated to be minor, and measures have been identified in the alternatives to reduce such potential disturbance.

Alternatives A and B would result in minor beneficial effects on paleontologic resources through use and access restrictions. Alternative A would result in potential adverse effects due to invasive wildlife species management. Alternative B would result in the no adverse effects on paleontologic resources because it would disallow any invasive species management actions with the potential to adversely affect paleontologic resources. Additionally, emphasis on remote research methods would contribute to beneficial effects on paleontologic resources under Alternative B. Under Alternative C, seasonal

restrictions on monument lands where known conflicts exist would reduce disturbance to wildlife, habitats, soils, and paleontologic resources.

Conclusions

Alternative A: Minor beneficial effects on paleontologic resources from wildlife resources management actions; minor adverse effects on paleontologic resources from invasive wildlife species control.

Alternatives B and C: Minor beneficial effects on paleontologic resources from wildlife resources management actions.

4.11.3.7 Recreation Management Actions

Restricting on-island recreational activities, such as camping, off-highway vehicle use, launching for hang-gliders, and rock climbing, would result in beneficial effects on paleontologic resources. Anticipated effects from active support of recreation activities would be human-induced erosion and degradation of paleontologic resources. No active support of recreation activities would be considered beneficial to paleontologic resources because these resources would not be damaged or stolen. Educational programs would indirectly benefit paleontologic resources because increased awareness could increase protection of these resources. Actively engaging in offering, sponsoring, and partnering to provide active recreation opportunities in and around the CCNM would be considered adverse as increased recreation activities could erode soil surfaces and potentially expose buried fossils. The action alternatives include measures to minimize the potential for resource degradation as a result of these activities (see Chapter 2, “Alternatives”).

Structural development and construction activities related to recreational infrastructure would introduce the potential for accelerated runoff, erosion, and sedimentation during construction activities, which could lead to the degradation of paleontologic resources. Measures to minimize these potential effects have been identified in Chapter 2, “Alternatives.”

Publicizing the CCNM and the recreation opportunities it presents would result in increased human activities and potential effects of human-induced erosion caused by trampling, as well as increased potential for illegal collection of fossil and other paleontologic resources.

Because all action alternatives would limit certain forms of on-island recreation, they would result in moderate beneficial effects on paleontologic resources. Alternative C would foster the greatest degree of recreation in the CCNM by creating numerous recreational access points and actively offering, sponsoring, and partnering to provide recreation opportunities. However, education regarding safe recreational practices and other measures would be implemented such that any adverse effects would be minor, and no mitigation would be required. As described in Chapter 2, adverse effects from facilities construction under all alternatives would include measures to ensure that construction of centralized recreation facilities and other facilities upgrades would result in minor adverse effects.

Conclusions

Alternatives A and B: Moderate beneficial effects on paleontologic resources from recreation management actions; minor adverse effects on paleontologic resources from construction.

Alternative C: Moderate beneficial effects on paleontologic resources from recreation management actions; minor adverse effects on paleontologic resources from publicity and construction.

4.11.3.8 Education and Interpretation Management Actions

Construction-related effects from education and interpretation management actions would be similar to those described above for “Recreation Management Actions.” Construction activities related to educational and interpretive infrastructure would introduce the potential for accelerated runoff, erosion, and sedimentation during construction activities, as well as excavation where needed, which could lead to the degradation of paleontologic resources.

Publicizing the CCNM through education and interpretive facilities and programs would likely result in increased human activities and potential effects of human-induced erosion caused by trampling. However, educational opportunities in and around the CCNM that are offered, sponsored, or partnered by BLM are expected to result in minimal effects on paleontologic resources in the monument because they would be managed and staffed by employees knowledgeable about the CCNM’s resources and protective regulations. Education and interpretation activities would potentially decrease degradation to paleontologic resources by informing the public of the potential human-induced effects.

Alternatives A and B would use existing buildings, signs, and facilities for infrastructure as much as possible. Alternative A would select minimal additional points of visitor contact necessary to implement the education and interpretive program. During plan implementation, points of visitor contact where educational activities can occur would be screened and selected. Alternative C would provide education and interpretation opportunities to the maximum extent possible and would include construction of multiple new interpretive and management centers. Construction activities would have adverse effects on geology and soils. However, Chapter 2, “Alternative,” provides measures to ensure that construction and upgrades of education and interpretive facilities would result in only minor adverse effects.

All action alternative would provide education and interpretation activities via the Internet and printed materials. All action alternatives would result in minor indirect beneficial effects on paleontologic resources from increased public awareness of their presence. Alternative C would implement a much more aggressive campaign to educate the public about coastal resources, which would result in greater beneficial effects as individuals have greater understanding and respect for monument resources.

Conclusions

Alternatives A and B: Minor beneficial effects on paleontologic resources from education and interpretation management actions; minor adverse effects on paleontologic resources from construction.

Alternative C: Moderate beneficial effects on paleontologic resources from education and interpretation management actions; minor adverse effects on paleontologic resources from construction.

4.11.3.9 Research Activities Management Actions

Limiting disturbance for any reason typically benefits paleontologic resources. Allowing access to the rocks and islands for research activities would increase human use of the monument, thereby increasing

human-induced erosion caused by trampling. Over the long term, erosion could expose and degrade paleontologic resources.

All action alternative would allow research activities throughout the CCNM except where designated otherwise as a result of management actions identified for other resources or uses. Approved research activities under Alternatives A and C would increase the understanding of the CCNM's resources, and address problems or questions of importance to science or society that show promise of making an important contribution to such knowledge. Alternative B would favor research efforts that protect the ecological integrity of the CCNM. Alternative C would not allow research in locations on the CCNM with known or suspected paleontologic resources if the research activities had the potential to adversely affect these resources; however, unknown or undiscovered resources could be inadvertently degraded. Appropriate mitigation would be required for research activities with the potential to disturb paleontologic or other resources (see Chapter 2, "Alternatives"). Consequently, inadvertent degradation of paleontologic resources through research activities is not anticipated.

Conclusions

Alternatives A and C: Minor adverse effects on paleontologic resources from research activities management actions.

Alternative B: No effects on paleontologic resources from research activities management actions.

4.11.3.10 Land Tenure Adjustments

Depending on the characteristics of acquired land, acquisition could result in positive effects on paleontologic resources. Policies to obtain lands and interests determined to be desirable for consolidation would result in beneficial effects on these resources by increasing the land base and providing greater protection to some rocks and islands. Further project-specific analysis would be required to evaluate the effects of each specific land acquisition proposal. It is anticipated that BLM policies would be sufficiently protective to avoid adverse effects on paleontologic resources.

Conclusions

Alternatives A–C: Indeterminate effects on paleontologic resources from land tenure adjustments.

4.11.3.11 Land Use Authorizations

Land use authorizations, such as construction of aids to navigation and communications facilities, could lead to human-induced erosion and accelerated runoff or erosion associated with construction activities, resulting in a small potential for effects on paleontologic resources.

All action alternatives would allow land use authorizations. Alternatives A and C would incorporate measures to offset or reduce any adverse effects. Under Alternative B, no land use authorization would be allowed unless it was shown to not adversely affect CCNM resources.

Conclusions

Alternatives A and C: Minor adverse effects on paleontologic resources from land use authorizations.

Alternative B: No effects on paleontologic resources from land use authorizations.

4.11.3.12 Actions with No Reasonably Foreseeable Effects on Paleontologic Resources

Activities for the following management actions would not adversely affect paleontologic resources:

- Special Designations, or
- Cadastral Support.

Section 4.12

Population and Housing

4.12.1 Thresholds for Adverse Effects

For this analysis, an effect on population and housing was considered adverse and would require mitigation if it would:

- Induce substantial population growth; or
- Displace a substantial number of existing housing units or people, necessitating construction of replacement housing.

4.12.2 Effects on Population and Housing

4.12.2.1 No Action Alternative

Under the No Action Alternative, no action would be taken that would induce population growth. No construction would be undertaken, and no housing units or people would be displaced. No effects on population or housing would result.

Conclusion

No Action Alternative: No effects on population and housing from no action.

4.12.2.2 Recreation Management Actions

Proposed locations and types of recreation facilities in the CCNM are not likely to conflict with housing on mainland areas adjacent to the monument, because facilities are likely to be located on agency-owned land—which tends to contain minimal housing. In addition, any major facilities construction in support of recreation would also require additional project-specific environmental analysis, which would identify all adverse effects and offsetting mitigation. As discussed in Chapter 2, “Alternatives,” the agencies that manage the relevant mainland areas would be consulted and coordinated with to avoid or minimize any adverse effects.

Alternatives A and C would involve construction of new or upgraded recreational facilities. However, these facilities are not anticipated to result in any adverse effects on population and housing. Additionally, measures would be implemented to avoid adverse effects on land use or other plans.

Alternative B would limit recreational access to existing mainland facilities and therefore would result in no effect on population and housing.

Conclusions

Alternatives A–C: No effects on population and housing from recreation management actions.

4.12.2.3 Land Use Authorizations

Authorizing the use of monument lands for the construction of utility corridors could indirectly induce population growth. However, any approved land uses would be consistent with monument purposes and it is unlikely that major development proposals or utility improvements would be approved in the CCNM. Any major facilities construction would require additional project-specific environmental analysis, which would identify all adverse effects and offsetting mitigation. As discussed in Chapter 2, “Alternatives,” the agencies that manage the relevant mainland areas would be consulted and coordinated with to avoid or minimize any adverse effects.

All action alternatives could involve land use authorizations on monument lands, and measures would be implemented to avoid adverse effects.

Conclusions

Alternatives A–C: Minor adverse effects on population and housing from land use authorizations.

4.12.2.4 Actions with No Reasonably Foreseeable Effects on Population and Housing

Activities for the following management actions would not adversely affect population and housing:

- Visual Resources;
- Special Designations;
- Cadastral Support;
- Geologic, Soil, or Paleontologic Resources;
- Cultural Resources;
- Vegetation Resources;
- Wildlife Resources;
- Education and Interpretation;
- Research Activities; or
- Land Tenure Adjustments.

4.13.1 Thresholds for Adverse Effects

For this analysis, an effect on public services was considered adverse and would require mitigation if it would result in substantial adverse physical effects from construction of new or altered governmental facilities needed to maintain acceptable service ratios, response times, or other performance objectives for:

- Emergency services, such as fire protection and emergency response;
- Police protection;
- Parks; or
- Other public services.

4.13.2 Effects on Public Services

4.13.2.1 No Action Alternative

Under the No Action Alternative, existing public access to the CCNM and adjacent areas would continue and likely would increase over time as population in California grows. However, it is not likely that the increase in population alone would prompt a need for more public services at the monument.

The agencies that currently provide law enforcement for the monument and adjacent areas would continue to patrol with no increase in frequency and no additional BLM staff. Provisions for emergency services would not change. There would be no adverse effects.

Conclusion

No Action Alternative: No effects on public services from no action.

4.13.2.2 Management Actions for Geologic, Soil, and Paleontologic Resources; Cultural Resources; Vegetation Resources; and Wildlife Resources

Key management actions that may be taken to manage physical, cultural, vegetation, and wildlife resources under the RMP are on-island activity restrictions, surveillance of sensitive sites, and seasonal wildlife restrictions. Restricting on-island recreation to low-impact activities and closing areas of the monument to human access during nesting and pupping seasons would result in an increased need for law enforcement. Patrols would be needed to prevent people from illicitly accessing the rocks and islands. Additional, regular surveillance of sensitive cultural resource sites also would necessitate new patrols.

Establishing seasonal restrictions for sensitive wildlife populations could cause an increase in demand for recreation facilities at other locations along the coast. Designating some portions of the coast as off-limits during certain seasons likely would shift recreationists to other areas with fewer restrictions. If the less-restricted areas are offshore of parks, new recreation facilities (such as boat docks) would be needed to accommodate the increased demand. A similar effect potentially could result from publicizing and encouraging increased recreation activities. Such actions could cause an increase in demand on non-BLM coastal recreation areas, resulting in potential minor adverse effects on local public service agencies.

This increase in demand would need to be met either by BLM as managing owner, by DFG as the current patrolling agency, or by other agencies and entities with adjoining jurisdictions. If either BLM or DFG took responsibility for the extra patrolling, the agency would likely need to hire new staff, and either create new facilities for law enforcement agents or expand existing facilities. If neither BLM nor DFG increased patrols, the two agencies would need to coordinate with local neighboring agencies and jurisdictions to ensure that the increase in demand for patrols was met by other means.

On the other hand, closing areas of the monument to human access during sensitive seasons could reduce the number of situations that require emergency services, because fewer people would be climbing on the monument (see Section 3.7, "Health and Safety," for more discussion about health and safety issues associated with the rocks).

For both of these issues, the extent of changes that would result from access restrictions on the coast are difficult to predict, because there is little existing data on law enforcement and emergency services on the monument. It is anticipated that any changes would be minor.

Alternatives A and B would result in adverse effects on public services through on-island recreation restrictions, surveillance of sensitive cultural resource sites, and seasonal wildlife restrictions, because of staffing needed for new law enforcement. Alternative C would not involve any management actions that would deviate from current management, and would result in no effects related to public services, because additional law enforcement would not be needed.

Conclusions

Alternatives A and B: Minor adverse effects on public services from management actions for geologic, soil, and paleontologic resources; cultural resources; vegetation resources; and wildlife resources.

Alternative C: No effects on public services from management actions for geologic, soil, and paleontologic resources; cultural resources; vegetation resources; and wildlife resources.

4.13.2.3 Recreation Management Actions

Restricting certain types of on-island recreational activities, such as camping, off-highway vehicle use, launching for hang-gliding, and rock climbing, would require increased law enforcement, because patrols likely would be needed to enforce these restrictions. Restricting certain types of recreational activities also could result in an offsetting effect by reducing the number of situations that require emergency services, because fewer people would be engaging in risky activities on or near the monument.

Management actions that encourage new recreation activities potentially would increase the demand for emergency services, because such recreational programs likely would draw more visitors to the project area and create more opportunities for visitors to engage in risky activities (see Section 3.7, “Health and Safety”).

Construction of recreational facilities would lead to a temporary increase in emergency service response times in the project area if construction activities interfered with traffic. Construction of new recreational facilities also would increase the demand for law enforcement, because the facilities would need to be included in patrol routes of local law enforcement jurisdictions. Facilities likely would be located in rural areas, further increasing the effect because their locations may not be in areas that are currently patrolled. The action alternatives have incorporated BMPs and other measures that would be implemented to offset or avoid these effects (see Chapter 2, “Alternatives”). In addition, any major facilities construction in support of recreation would require further project-specific environmental analysis.

All action alternatives would restrict certain on-island recreational activities and therefore would lead to more demand for law enforcement. However, reductions in high-risk recreation on the monument also would decrease demand for emergency services. Under Alternative C, more active recreation activities on the CCONM would be encouraged, therefore resulting in increased demand for emergency services—in addition to increased demand for law enforcement. However, education regarding safe recreational practices and other measures would be implemented such that any remaining adverse effects would be minor. All of these effects are anticipated to be minimal and, as discussed in Chapter 2, “Alternatives,” BLM would coordinate with surrounding agencies to ensure that no adverse effects on public services would result. All alternatives would include construction of new recreational facilities, but measures would be implemented to ensure that construction of centralized recreation facilities and other facilities upgrades would not result in adverse effects (see Chapter 2, “Alternatives”).

Conclusions

Alternatives A–C: Minor adverse effects on public services from recreation management actions.

4.13.2.4 Education and Interpretation Management Actions

Educational and interpretive activities in and of themselves would not directly affect public services. New educational and interpretive facilities, such as signs and buildings, could lead to an increase in the need for emergency services along the coast due to the ambient potential for emergencies related to visitors of these facilities. In addition, the construction of new education and interpretation facilities would increase the demand for law enforcement, because the buildings would need to be included in patrol routes for law enforcement jurisdictions but would be located in rural areas that may not already be patrolled. The alternatives have incorporated BMPs and other measures that would be implemented to

offset or avoid these effects (see Chapter 2, “Alternatives”). In addition, any major facilities construction in support of education and interpretation would require further project-specific environmental analysis.

Increasing the amount of education infrastructure, including web media, print media, signage, kiosks, and visitor centers, would cause an increase in the number of visitors at the monument, thus increasing demand for law enforcement patrols and emergency services.

Increasing the amount of education infrastructure also would cause an increase in demand for recreational facilities at parks along the coast. The education infrastructure would be designed to attract visitors to the coast. Because the monument is easily accessed from many parks along the coast and some education infrastructure would be located on park lands, the creation of such infrastructure would likely lead to an increase in demand for park facilities. Under the action alternatives, BLM would coordinate with DPR to ensure that any DPR concerns are addressed in planning education infrastructure improvements and that no adverse effects would result.

All action alternatives would involve the construction of new or upgraded facilities—including signage, kiosks, and interpretive centers—and therefore potentially would cause increased demand for public services. Although an aggressive education and outreach campaign in Alternative C would further improve public knowledge of potential safety risks, it also likely would attract additional recreationists and visitors to the CCNM, thereby exposing more individuals to possible injury. All action alternatives would result in minor adverse effects on law enforcement patrols and emergency services. Measures that would be implemented to avoid adverse effects on public services from education and interpretation management activities, such as coordination with other agencies, are described in Chapter 2, “Alternatives.”

Conclusions

Alternatives A–C: Minor adverse effects on public services from education and interpretation management actions.

4.13.2.5 Research Activities Management Actions

Establishing a more active permitting program for research activities could lead to an increased need for law enforcement, because patrols would be needed to check for proper permits. Additional law enforcement personnel also may be needed at coastal points of access and other staging areas to patrol areas where researchers house equipment.

All action alternatives would include permitting for research activities on the monument. None of the alternatives is anticipated to result in more than minor increases in demand for law enforcement services, and no adverse effects have been identified that trigger the need for mitigation.

Conclusions

Alternatives A–C: Minor adverse effects on public services from research activities management actions.

4.13.2.6 Land Tenure Adjustments

The extent to which land acquisitions may cause effects on public services would depend on previous ownership and past regulations. If regulations for the previous ownership were stricter than those under BLM management, less law enforcement and more emergency services would likely be needed. If the regulations for the previous ownership were less stringent than those under BLM, more law enforcement and less emergency services likely would be needed. Further project-specific analysis would be required to evaluate the effects of each specific land acquisition proposal. It is anticipated that BLM policies would provide for sufficient public services such that adverse effects would not occur.

Conclusions

Alternatives A–C: Indeterminate effects on public services from land tenure adjustments.

4.13.2.7 Land Use Authorizations

Many forms of land use authorizations have been discussed under the other management categories, such as recreational and educational and interpretive facilities. Land use authorizations not previously discussed include construction and maintenance of aids to navigation and communications facilities. Installation of navigational aids may decrease the frequency of boating accidents and thus decrease the demand for emergency services. Construction activities also could result in a temporary decrease in emergency service response times in the project area if the construction interfered with traffic circulation patterns.

Construction of new navigational aids or communications facilities would increase the demand for law enforcement, because the buildings would need to be included in patrol routes for law enforcement jurisdictions.

Further project-specific analysis would be required to evaluate the effects of each specific proposal for a permitted land use authorization. In addition, implementation of BMPs and other measures would reduce or eliminate any potential adverse effects on public services (see Chapter 2, “Alternatives”).

All action alternatives would require measures to offset potential adverse effects related to land use authorizations, and therefore would not result in adverse effects on public services that would trigger the need for further mitigation.

Conclusions

Alternatives A–C: Minor adverse effects on public services from land use authorizations.

4.13.2.8 Actions with No Reasonably Foreseeable Effects on Public Services

Activities for the following management actions would not adversely affect public services:

- Visual Resources,
- Special Designations, or
- Cadastral Support.

Utilities and Service Systems

4.14.1 Thresholds for Adverse Effects

For this analysis, an effect was considered to be adverse and would require mitigation if a project-related action would:

- Exceed wastewater treatment requirements of the applicable RWQCB;
- Require or result in the construction of new water or wastewater treatment facilities, or expansion of existing facilities, the construction of which could cause adverse environmental effects;
- Require or result in the construction of new storm water drainage facilities, or expansion of existing facilities, the construction of which could cause adverse environmental effects;
- Require new or expanded water entitlements;
- Require substantial new infrastructure for supplying electricity or gas power;
- Exceed the capacity of the wastewater treatment provider that serves or may serve the project to serve the project's projected demand in addition to the provider's existing commitments;
- Exceed the permitted capacity of a landfill to accommodate the project's solid waste disposal needs; or
- Fail to comply with federal, state, or local statutes and regulations related to solid waste.

4.14.2 Effects on Utilities and Service Systems

4.14.2.1 No Action Alternative

Under the No Action Alternative, existing public access to the CCNM and adjacent areas would continue and likely would increase over time as population in California grows. Because the monument does not require the use of any utilities or other services, increased public access would not affect utilities or other system systems under the No Action Alternative. No effects on utilities and service systems would result.

Conclusion

No Action Alternative: No effects on utilities and service systems from no action.

4.14.2.2 Recreation and Education and Interpretation Management Actions

Construction of recreational, educational, and interpretive facilities, such as signs and buildings, would require new utility infrastructure and use of various utilities and service systems, such as electricity, water, wastewater treatment, and waste management. BLM or its partners would coordinate with relevant utilities and service providers to ensure that these services could be effectively provided. Further, these additional demands are not anticipated to exceed the capacity of any of these providers. Any major facilities construction in support of recreation or education and interpretation with potential for adverse effects would require additional project-specific environmental analysis, which would identify necessary mitigation measures to offset any adverse effects.

All action alternatives could involve the construction of new or upgraded facilities, including signs, wayside shelters, and buildings, and feasible measures would be implemented to avoid adverse effects on utility and service systems. No adverse effects requiring mitigation have been identified.

Conclusions

Alternatives A–C: Minor adverse effects on utilities and service systems from recreation and education and interpretation management actions.

4.14.2.3 Land Tenure Adjustments

The extent to which land acquisitions may cause effects on utilities and service systems would depend on what previously existed on the land. If the land previously contained facilities that required utilities, the facilities would potentially be left unused by BLM and the utilities would no longer be required. If no facilities previously existed, the acquisition would not affect utilities at all. No adverse effects on utilities are anticipated from land tenure adjustments.

Conclusions

Alternatives A–C: No effects on utilities and service systems from land tenure adjustments.

4.14.2.4 Land Use Authorizations

Many forms of land use authorizations have been discussed under the other management categories, such as recreational and educational and interpretive facilities. Land use authorizations not previously discussed include construction and maintenance of aids to navigation and communications facilities. These authorizations could require new utility infrastructure and would likely require the use of various utilities and service systems. Coordination with relevant utilities and service providers would be the responsibility of the permittee. Further project-specific analysis would be required to evaluate the effects of each specific proposal for a permitted land use authorization, and it is anticipated that measures would be available to sufficiently mitigate any adverse effects.

All action alternatives potentially would allow land use authorizations and involve the construction of new structures or facilities that would require utilities. No adverse effects on utility and service systems have been identified that would require mitigation.

Conclusions

Alternatives A–C: Minor adverse effects on utilities and service systems from land use authorizations.

4.14.2.5 Actions with No Reasonably Foreseeable Effects on Utilities and Service Systems

Activities for the following management actions would not adversely affect utilities or service systems:

- Visual Resources;
- Special Designations;
- Cadastral Support;
- Geologic, Soil, and Paleontologic Resources;
- Cultural Resources;
- Vegetation Resources;
- Wildlife Resources; or
- Research Activities.

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4.15.1 Methodology

For this analysis, recreational activities in the CCNM were grouped into six categories: on-island, water-contact, non-motorized boating, motorized boating, aerial, and mainland viewing. The over 12,000 rocks, islands, and reefs that make up the CCNM are, for the most part, inaccessible to most recreationists due to their small individual size, location in the rugged surf zone, and lack of landing areas. Nevertheless, recreational activities on the mainland and in the water adjoining the monument could be affected by management activities.

In the context of this document, most potential effects and management decisions regarding recreational uses would require additional analysis as specific actions within the management plan are considered.

4.15.2 Thresholds for Adverse Effects

Effects on recreation under the various alternatives would vary, based on the type of recreational activity, the estimated numbers of individuals participating, and the extent to which that recreational activity would be affected within a particular region of the coast. Thresholds for effects would not be met in situations where a particular recreational activity can be redirected to a nearby and similar location as needed to protect sensitive resources. For this analysis, an effect on recreation was considered adverse and would require mitigation if it would:

- Close an entire section of coastline to a particular recreational activity or activities,
- Restrict access to a unique location that is currently being used for a particular recreational activity or activities, or
- Limit access to areas with the potential for recreational use without offering alternative access points within a reasonable distance.

4.15.3 Effects on Recreation

4.15.3.1 No Action Alternative

The No Action Alternative would not affect the existing recreational uses in or surrounding the CCNM. Current federal and state regulations protecting natural and cultural resources would remain in force on

the lands in the CCNM and on the surrounding waters and mainland. As demand for coastal recreation grows and new recreational pursuits develop over time, the potential for resource damage in the monument and conflicts between user groups may also grow, requiring future management actions that may affect recreational uses of the monument. However, no adverse effects have been identified relative to existing regulatory practices.

Conclusion

No Action Alternative: No effects on recreation from no action.

4.15.3.2 Visual Resources Management Actions

In general, management of the CCNM for VRM Class II objectives would benefit recreation because some development—potentially including staging areas for recreational activities—on the CCNM would be allowed. Prior to approving any developments on the CCNM consistent with the VRM Class II objective, further project-specific analysis would be required that would evaluate the potential adverse or beneficial effects of the proposed action. As described in Chapter 2, “Alternatives,” BMPs and other measures would be applied to offset effects. It is possible that no mitigation would be available to fully offset these effects.

Minor beneficial effects potentially could result from development activities under the VRM Class II designation. Effects of future changes to the VRM class designation may be beneficial or adverse. If the VRM class changes to a class with fewer restrictions on the recreational infrastructure that may be constructed on the CCNM, the effects are likely to be beneficial. Adverse effects are likely occur if more restrictions are enacted.

Conclusions

Alternatives A–C: Minor beneficial effects on recreation in the near term, and indeterminate effects in the long term, from visual resources management actions.

4.15.3.3 Management Actions for Geologic, Soil, and Paleontologic Resources and Vegetation Resources

Restricting on-island activities on the CCNM to protect geologic resources and/or vegetation resources would adversely affect recreation along the coast where such restrictions affect areas used for recreation. In particular, closures to all surface-disturbing activities would eliminate most forms of on-island recreation.

Alternative A would result in only minor adverse effects on recreation from on-island activity restrictions, because restrictions would apply to only portions of the monument, and alternative locations for recreation activities are anticipated. Alternative B would result in the most direct adverse effect, as it would eliminate all surface-disturbing activities, which would affect most forms of on-island recreation and would not provide alternate locations for displaced recreationists. This is considered a major adverse effect, for which mitigation would not be available. Alternative C would result in no effects related to recreation as people would continue to have the same level of access to the CCNM as currently exists.

Conclusions

Alternative A: Minor adverse effects on recreation from management actions for geologic, soil, and paleontologic resources and vegetation resources.

Alternative B: Major adverse effects on recreation from management actions for geologic, soil, and paleontologic resources and vegetation resources, for which mitigation may not be available to fully offset effects.

Alternative C: No effects on recreation from management actions for geologic, soil, and paleontologic resources and vegetation resources.

4.15.3.4 Cultural Resources Management Actions

Restricting on-island activities in order to protect cultural resources could result in adverse impacts on recreation. Although few on-island recreational activities occur in areas where cultural resources are likely to be found, the potential effect on recreational activities from on-island activity restrictions does exist.

Monitoring and surveillance by law enforcement to protect sensitive cultural resource sites and Native American TCPs could adversely affect recreational activities. Presence of law enforcement personnel would discourage active use and result in minor adverse effects on recreation. Closure of rocks and islands to non-Native American use would adversely affect all forms of recreation. Closures restricted to sensitive areas, or negotiated closures based on conflicting uses, could result in minor to moderate adverse effects on recreation—depending on how far removed recreationists must be from sensitive sites. These closures would adversely affect location-specific recreational user groups that were restricted.

Alternative A would result in minor adverse effects on recreation as a result of on-island activity restrictions and surveillance by law enforcement personnel. Alternative B would manage the entire monument for cultural resources by designating the entire CCNM as a Cultural Resources Management Zone. Although this designation would not categorically exclude all recreation, it is anticipated that certain additional forms of recreation would not be allowed. Alternative B would result in a moderate adverse effect on recreational activities for which mitigation would not be available to fully offset effects. Alternative C would result in no effects related to recreation as people would continue to have the same level of access to the CCNM as currently exists.

Conclusions

Alternative A: Minor adverse effects on recreation from cultural resources management actions.

Alternative B: Moderate adverse effects on recreation from cultural resources management actions for which mitigation would not be available to fully offset effects.

Alternative C: No effects on recreation from management actions for cultural resources.

4.15.3.5 Wildlife Resources Management Actions

Designation of seasonal use restrictions on CCNM features hosting sensitive wildlife populations would potentially affect recreational activities to the extent that a given activity occurs on the monument itself. Examples of activities that may be affected by seasonal restrictions include tidepooling, exploration, and staging areas for scuba diving and snorkeling. However, it is anticipated that limited closures for the protection of sensitive wildlife resources would be in locations that currently do not receive much recreational use. Where limited closures do affect existing recreational activities, redirection of users to other nearby areas would be possible. More detailed discussion follows for the following categories: non-motorized and motorized boating, aerial recreation, and mainland viewing.

Recreation activities that occur near the monument would not be restricted by seasonal restrictions, and so would not be affected.

Under Alternatives A and B, seasonal use restrictions would be designated around rocks and islands with known sensitive populations of seabirds, marine mammals, and intertidal species. Activities prohibited during seasonal restrictions include any activities with potential to disturb wildlife, their nests, or their pups. These restrictions could result in adverse effects on many forms of recreation on the CCNM; however, alternate recreation locations are anticipated to be available such that any adverse effects are considered minor. Under Alternative C, seasonal restrictions would be implemented only where known conflicts exist and also would result in only minor adverse impacts because those recreationists could be directed to other monument locations.

Conclusions

Alternatives A–C: Minor adverse effects on recreation from wildlife resources management actions.

4.15.3.6 Recreation Management Actions

Restricting certain forms of on-island recreational activities in order to protect public safety or monument resources, including camping, off-highway vehicle use, launching for hang-gliding, and rock climbing, would directly impact recreation on the CCNM. While the overall use of most of the rocks and islands is unknown, it is assumed that most rocks and islands do not experience substantial recreational use, particularly those areas not accessible by foot at low tide, and closures to these areas would not result in adverse effects requiring mitigation. Areas accessible at low tide, on the other hand, are thought to receive substantial recreational use and therefore closures may result in a local adverse effect where such rocks and islands are located.

Restrictions on recreational activities on the CCNM would not extend to appropriate water-contact activities in adjacent areas. Activities such as swimming, scuba diving, snorkeling, surfing, and wind surfing may use the CCNM as staging or resting areas. These activities are popular throughout the state and attract millions of participants; they contribute substantial economic benefits to coastal communities and the state as a whole. Swimming is more popular in southern California, where water temperatures are warmer and shore conditions are more conducive to swimming. Surfing occurs throughout the state but is generally located in areas with good surf conditions resulting from open ocean swells breaking on shallow reefs or beaches. While some surfing may occur near rocks and islands, most is done well away from the rocks themselves. Scuba diving and snorkeling is best done in rocky areas, in water depths ranging from a few feet to about 100 feet. The waters adjoining the CCNM provide an important and primary location

for these activities. Wind surfers are more inclined to select sites with plenty of open water and high winds. Rocky shorelines are not ideal for this sport. In summary, scuba diving and snorkeling appear to be the water-contact recreational activities that are most dependent on the waters surrounding the CCNM. These activities would not be affected by on-island prohibitions intended to protect monument resources.

While motorized boating in all its forms is a popular activity along the California coast, most of these boaters would not be affected by any management restrictions placed on the rocks or islands due to their tendency to stay well back from the rocks and islands for safety.

A lack of active recreation monitoring and management could lead to conflicts between recreational user groups, overuse of certain areas, or underutilization of other areas. Active recreation management would seek solutions to these problems through education, redirection, or seasonal closures, and would result in beneficial effects.

Management options include designation of points of recreational access, and range from no designations at this time to designation of many points. A lack of points of access could lead to misinformed or destructive recreational practices in areas where recreational infrastructure and information is not available. In addition, limited points of access could clump visitor use in ways that could be detrimental to local communities—from increased traffic or competition for recreational access. In all cases, existing state parks and other coastal public access areas with the infrastructure to manage increased coastal recreation would continue to be used. It is unknown if these parks in general, or certain recreational activities in these areas, are at carrying capacity. Overall, increasing points of contact could spread recreational use out over a wider area and would minimize effects in any one area.

Designation of scenic viewing platforms and other recreational access points also would encourage appropriate low-impact forms of recreation, including wildlife viewing, photography and painting, and filming—all activities that could be engaged in from the mainland. Construction of mainland recreational facilities would benefit visitors who prefer passive forms of recreation.

Installation of signage and kiosks at recreational access points would benefit recreationists by informing them of excluded and encouraged recreational uses, as well as of hazards or safety risks associated with the monument. Educational and interpretive activities at access points along the coast would further benefit recreational programming on the monument.

All action alternatives would restrict certain on-island recreational activities on the monument. Adverse effects of activity restrictions would be minor for most of the coast's recreationists. For particular users with no alternative locations to recreate, however, adverse effects would be considerable; and no mitigation may be available. Alternative A designates the minimal necessary additional mainland facilities needed to support recreation programs, while Alternative B limits recreational programs to existing mainland facilities. Adverse effects could arise from not designating adequate points of access, as described above. Alternative C would take a more active approach to recreational facility construction, publicity, and programming on and adjacent to the monument, which would cause a major beneficial effect by dispersing recreational activities along the length of the coast. Educational and interpretive activities, including installation of informational signage, would benefit recreational programming under all action alternatives.

Conclusions

Alternatives A and B: Major adverse effects on certain recreation uses from recreation management actions, for which mitigation may not be available to fully offset effects; minor beneficial effects on recreation from educational activities.

Alternative C: Major adverse effects on certain recreation uses from recreation management actions, for which mitigation may not be available to fully offset effects; major beneficial effects on recreation from publicity, construction, and educational activities.

4.15.3.7 Education and Interpretation Management Actions

The use of new or existing visitor centers, wayside exhibits, viewing platforms, and interpretive facilities would be important and positive mechanisms for directing visitors to areas most able to withstand recreational activities. Guided tours and other educational activities would be used as teaching tools for the various recreational activities occurring in the area. These facilities and programs could also be used to educate recreational users about the laws that protect the cultural and natural resources of the CCNM.

Web-based and print media would be an effective tool for assisting recreationists in planning visits to the CCNM. Establishing expected behaviors and actions before a visitor arrives is the best way to minimize effects between users and between the individual recreationist and the natural and cultural resources. Web-based applications can also be used to track recreation trends and use patterns in the CCNM.

Management options include designation of direct and self-guided points of visitor contact along the California coast. Limited points of contact could minimize demand for recreational access and place less stress on existing recreational users and local communities. However, limited points of contact could also lead to misinformed or destructive recreational practices in areas where information is not available. In addition, limited points of contact could clump visitor use in ways that could be detrimental to local communities from increased traffic or competition for recreational access. Utilizing existing state parks and other coastal public access areas for points of contact would continue to direct use to sites with the infrastructure to manage increased coastal recreation. It is unknown, however, if these parks in general, or if certain recreational activities in these areas, are at carrying capacity. Overall, more points of contact being available could spread recreational use out over a wider area to minimize effects on any one area.

In general, all action alternatives would include education activities and programs that would benefit recreation. Alternative A designates the minimal necessary additional mainland facilities needed to support education programs, while Alternative B limits education programs to existing mainland facilities. Adverse effects could arise from not designating adequate points of access, as described above. Alternative C would take a more active approach to educational and interpretive facility construction, publicity, and programming on and adjacent to the monument, which would cause a moderate beneficial effect by dispersing recreational activities along the length of the coast.

Conclusions

Alternatives A and B: Minor beneficial effects on recreation from education and interpretation management actions; minor adverse effects on recreation from limited construction.

Alternative C: Moderate beneficial effects on recreation from education and interpretation management actions; minor adverse effects on recreation from construction.

4.15.3.8 Research Activities Management Actions

Research projects are not anticipated to affect most recreational activities, unless popular recreational areas or activities were restricted from use during a research project. These types of effects would be identified by the land manager and researcher prior to the start of a project, and would be addressed on a case-by-case basis. Research approvals would require that mitigation be built into the research methodology and that mitigation would help to offset adverse effects on recreational activities. Further, research activities and findings may be used as an interpretive tool, which could positively affect recreational activities that would be enhanced by interpretive exhibits or programs.

Alternatives A and C would include provisions to reduce conflicts with recreational activities during approval of research proposals. Although it is still possible that research activities could be approved that would cause adverse effects, these instances are anticipated to be few and would not result in adverse effects that would require mitigation. Because Alternative B would not allow research with the potential to conflict with recreational activities, no adverse effects would result. Under all action alternatives, outcomes of the research could result in beneficial effects on recreation.

Conclusions

Alternative A: Minor adverse effects on recreation from research activities management actions; minor beneficial effects on recreation from research conclusions.

Alternatives B and C: Minor beneficial effects on recreation from research activities management actions.

4.15.3.9 Land Use Authorizations

Although land use authorizations could include approvals of activities that conflict with recreational uses, few such instances are anticipated. Further, additional project-specific analysis would be required to evaluate the effects of each specific proposal for a permitted land use authorization.

Under all action alternatives, any adverse effects on recreation from land use authorizations are anticipated to be minor.

Conclusions

Alternatives A–C: Minor adverse effects on recreation from research activities management actions.

4.15.3.10 Actions with No Reasonably Foreseeable Effects on Recreation

Activities for the following management actions would not adversely affect recreation:

- Special Designations,
- Cadastral Support, or
- Land Tenure Adjustments.

Section 4.16

Research

Effects on research activities were not discussed in this document, since research activities are not part of the environmental issues associated with the monument as defined by NEPA or BLM policy. Research management actions are described in Chapter 2, “Alternatives,” and their impacts are discussed in each relevant resource section of this document.

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4.17.1 Thresholds for Adverse Effects

For this analysis, an effect on socioeconomics was considered to be adverse and would require mitigation if a project-related action would:

- Affect economies of adjacent communities by causing a decrease in property values, revenue generated, local prices of goods, employment levels, or average income; or
- Affect the quality of life of nearby residents.

4.17.2 Effects on Socioeconomics

4.17.2.1 No Action Alternative

Under the No Action Alternative, existing public access to the CCNM and adjacent areas would continue and likely would increase over time as population in California grows. This increase in access and visitation could beneficially affect adjacent communities' economic conditions, particularly through increases in sales and transient occupancy revenues. However, no substantial increase in visitation is anticipated to be generated by continuation of existing CCNM management that would be large enough to substantially affect socioeconomics or quality of life in any communities along the coast. Overall, no effects on socioeconomics would result under the No Action Alternative.

Conclusion

No Action Alternative: No effects on socioeconomics from no action.

4.17.2.2 Cadastral Support Management Actions

Determining the current land ownership status of all rocks and islands, and developing maps of the monument could beneficially affect local economies, insofar as contracts would be let, and these contracts could be secured by the businesses and residents in the surrounding communities—thus increasing revenues and income.

This beneficial action is common to all alternatives.

Conclusions

Alternatives A–C: Minor beneficial effects on socioeconomics from cadastral support management actions.

4.17.2.3 Management Actions for Geologic, Soil, and Paleontologic Resources; Cultural Resources; Vegetation Resources; and Wildlife Resources

Key management actions that may be taken to manage physical, cultural, vegetation, and wildlife resources under the RMP are on-island activity restrictions and seasonal wildlife restrictions. Restricting access to rocks and islands would deter visitation to the coast, and this decrease in visitation could potentially adversely affect adjacent communities' economic conditions, particularly through decreases in sales and transient occupancy revenues. However, because accessing the monument is only one of many attractions to most areas along the coast, and because there are relatively few communities adjacent to monument lands that would be affected by on-island access restrictions and/or seasonal wildlife restrictions, this effect would not require mitigation.

Alternatives A and B would involve on-island activity restrictions, surveillance of sensitive cultural resource sites, and seasonal wildlife restrictions. Alternative B also would involve bans on surface-disturbing activities and designation of the entire CCNM as a Cultural Resources Management Zone. These management actions are considered to result in minor adverse effects on socioeconomics. Alternative C would not implement management actions that would restrict visitation, and so would have no effect.

Conclusions

Alternatives A and B: Minor adverse effects on socioeconomics from management actions for geologic, soil, and paleontologic resources; cultural resources; vegetation resources; and wildlife resources.

Alternative C: No effects on socioeconomics from management actions for geologic, soil, and paleontologic resources; cultural resources; vegetation resources; and wildlife resources.

4.17.2.4 Recreation Management Actions

Construction of recreational facilities and expansion of recreational programming would encourage visitation to the coast, and this increase in visitation could potentially benefit economic conditions in adjacent communities—particularly through increases in sales and transient occupancy revenues. In addition, construction or expansion of recreational facilities on parklands that charge entrance fees would increase revenue in the parks and thus further benefit local economies. Finally, the development of new recreational facilities would represent a beneficial economic effect insofar as contracts would be let, and these contracts could be secured by the businesses and residents in the surrounding communities, thus increasing revenues and income.

Actions that would encourage recreation through publicity or other means would likely cause further beneficial effects on local economies in the form of increased spending on recreation, recreational equipment, and spillover tourism activities.

On the other hand, increased visitation could negatively affect the quality of life in some communities, because some sections of the coast are valued for their seclusion from crowds. This decrease in quality of life could in turn adversely affect property values, in extreme cases. Construction of new facilities is not anticipated to substantially increase visitation to coastal towns, especially in rural, secluded areas. Any adverse effects would be minor, and no mitigation would be required.

Alternatives A and C would involve the construction of new recreational facilities, which would result in both beneficial and adverse effects on socioeconomics in nearby coastal communities. Alternative B would limit recreational programming to existing mainland facilities, which would limit benefits to minor effects on existing communities. Alternative C would actively publicize recreational activities and programs in the CCNM, thereby generating greater beneficial and adverse effects in nearby coastal communities. Adverse effects on quality of life under Alternative C could be moderate, and no mitigation may be available to avoid or offset effects.

Conclusions

Alternatives A and B: Minor beneficial and adverse effects on socioeconomics from recreation management actions.

Alternative C: Moderate beneficial and adverse effects on socioeconomics from recreation management actions; no mitigation may be available to offset adverse effects.

4.17.2.5 Education and Interpretation Management Actions

Construction of educational and interpretive facilities, such as signs and buildings, would encourage visitation to the coast, and this increase in visitation potentially could benefit economic conditions in adjacent communities—particularly through increases in sales and transient occupancy revenues. Additionally, dissemination of educational materials via the internet also would increase visitation along the coast. Construction or expansion of educational and interpretive facilities on parklands that charge entrance fees would increase revenue in the parks and thus further benefit local economies. Finally, the development of new facilities would represent a beneficial economic effect insofar as contracts would be let, and these contracts could be secured by the businesses and residents in the surrounding communities, thus increasing revenues and income.

On the other hand, increased visitation could negatively affect the quality of life in some communities, because some sections of the coast are valued for their seclusion from crowds. This decrease in quality of life could in turn adversely affect property values, in extreme cases. Construction of new facilities is not anticipated to substantially increase visitation to coastal towns, especially in rural, secluded areas. Any adverse effects would be minor, and no mitigation would be required.

All action alternatives would involve the construction of new facilities—including signage, kiosks, and interpretive centers—and the dissemination of educational materials. Therefore, all action alternatives would result in beneficial effects related to socioeconomics. Aggressive outreach and educational programming under Alternative C likely would generate even greater beneficial effects in most nearby coastal communities. However, some rural areas may be adversely affected by spillover effects of increased outreach and publicity. Under Alternative C, adverse effects on quality of life could be moderate, and no mitigation may be available to avoid or offset effects.

Conclusions

Alternatives A and B: Minor beneficial and adverse effects on socioeconomics from education and interpretation management actions

Alternative C: Moderate beneficial and adverse effects on socioeconomics from education and interpretation management actions; no mitigation may be available to offset adverse effects.

4.17.2.6 Land Tenure Adjustments

The extent to which land acquisitions may affect socioeconomic conditions would depend on what previously existed on the land. If the land previously contained facilities or supported activities that generated revenues or otherwise supported local economies, and the facilities were left unused or the activities restricted by BLM, an adverse effect would result. If no facilities or revenue-generating activities previously existed, the acquisition likely would not affect socioeconomic conditions. In general, rocks and islands off the coast that are not already under BLM jurisdiction are not host to substantial economic activity; therefore, the potential for adverse effects from land tenure adjustments would be relatively minor. Further project-specific analysis would also be required to evaluate the effects of each specific land acquisition proposal, which would identify mitigation measures as necessary to offset any adverse effects. No adverse effects have been identified at this time that would require mitigation.

Conclusions

Alternatives A–C: Indeterminate effects on socioeconomics from land tenure adjustments.

4.17.2.7 Land Use Authorizations

Land use authorizations could allow construction of new facilities and infrastructure, which would represent a beneficial economic effect insofar as contracts would be let, and these contracts could be secured by the businesses and residents in the surrounding communities, thus increasing revenues and income.

Construction of facilities and infrastructure on pristine monument lands could adversely affect the quality of life of adjacent residents (due to visual, noise, and air quality effects), and therefore indirectly adversely affect property values. However, consistent with the monument purpose, the approval of major land use authorizations with potential for such effects is unlikely. Further, as discussed in Chapter 2, “Alternatives,” any structures would be designed to meet standards outlined in local general plans, and other mitigation would be implemented as necessary. Further project-specific analysis would be required to evaluate the effects of each specific proposal for a permitted land use authorization.

All action alternatives could potentially allow land use authorizations and involve the construction of new facilities. Effects are considered indeterminate but are likely to be minor, depending on the specific land use authorization.

Conclusions

Alternatives A–C: Indeterminate effects on socioeconomics from land use authorizations.

4.17.2.8 Actions with No Reasonably Foreseeable Effects on Socioeconomics

Activities for the following management actions would not adversely affect socioeconomics:

- Visual Resources,
- Special Designations, or
- Research Activities..

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Traffic and Transportation

4.18.1 Methodology

The following methods and assumptions were used to estimate the construction-related and operation-related effects associated with the facilities and management options related to each planning issue. Traffic effects associated with possible construction activities and management of the CCNM were identified by evaluating the various management activities in the context of local and regional circulation patterns, local and emergency access requirements, and stated policies and goals.

The assumptions used in developing information related to potential construction activities (including haul routes for construction materials and personnel) and operation activities (including material deliveries and operating personnel) are based on professional judgment.

4.18.2 Thresholds for Adverse Effects

Thresholds for potential traffic and transportation effects requiring mitigation are based on relevant thresholds established by agencies with jurisdictional authority, and applicable laws and regulations. For this analysis, an effect on traffic and transportation was considered adverse and would require mitigation if it would:

- Cause an increase in traffic that is substantial in relation to the existing traffic load and capacity of the street system,
- Cause a substantial deterioration of the roadway surface due to construction activities,
- Substantially increase the traffic delay experienced by drivers,
- Substantially alter present patterns of circulation or movement, or
- Cause traffic hazards to pedestrians or operators of motor vehicles or bicycles.

Due to the temporary nature of construction-related effects, wide geographical project area, and minimal permanent effects expected to result from roadway modifications and facility operations, the level of service (LOS) of affected roadways—and potential effects on LOS—were not included as effects thresholds in this analysis.

4.18.3 Effects on Traffic and Transportation

4.18.3.1 No Action Alternative

For all resource issues and uses, the present patterns of circulation and movement would continue under the No Action Alternative. Because project facilities would not be constructed, construction-related effects, as well as operational effects, on traffic and circulation patterns and roadways would not occur.

Although coastal population and recreation are anticipated to increase over time, it is not likely that the increase in population alone would prompt a need for traffic or transportation improvements to serve the monument. There would be no adverse effects on traffic or transportation under the No Action Alternative.

Conclusion

No Action Alternative: No effects on traffic and transportation from no action.

4.18.3.2 Recreation Management Actions

Recreation management actions generally include developing recreational programs at the CCNM, publicizing the recreational uses of the CCNM, and constructing additional facilities and infrastructure. These actions would attract more visitors to the CCNM by improving the recreational opportunities available at the CCNM and by informing the public of these improvements. These actions are not anticipated to generate substantial additional traffic, considering that many of these visitors would already travel to the coast to pursue other existing recreational and tourism opportunities.

Construction of infrastructure or facilities could result in lane or road closures, detours, closure of bicycle routes, and the addition of construction truck and equipment on the surrounding roadway system. During construction activities, the present patterns of vehicular circulation could be altered, traffic delays could be increased, and traffic hazards could increase. Only for construction of new centralized recreation facilities are these potential effects anticipated to be substantial. Any major construction would be required to undergo additional project-level environmental analysis to further evaluate potential adverse effects; feasible mitigation would be recommended to reduce, offset, or eliminate these effects.

CCNM-related operation of boat ramps as part of recreational management would affect traffic and transportation in and around the CCNM. Traffic congestion would occur mainly at the boat launches because of the time and space needed to launch or load the vessel. In addition, depending on the location of the boat launch, traffic conflicts may arise between boat launch users and other visitors to the CCNM. BLM would coordinate with partners at existing boat ramps to ensure that their activities did not cause undue conflicts.

Alternatives A and B would provide for the facilities and programming necessary to sustain recreation activities, and would result in minor adverse effects on traffic and transportation. Alternative C would foster the greatest degree of recreation in the CCNM by creating numerous recreational access points and actively offering, sponsoring, and partnering to provide recreation opportunities. As discussed in Chapter 2, "Alternatives," measures would be taken to minimize any adverse effects. Consequently,

Alternative C would result in minor effects on traffic and transportation but would not trigger the need for mitigation.

Conclusions

Alternatives A–C: Minor adverse effects on traffic and transportation from recreation management actions.

4.18.3.3 Education and Interpretation Management Actions

Education and interpretive management actions generally include developing educational programs at the CCNM, publicizing the educational and interpretive opportunities at the CCNM, and constructing additional facilities and infrastructure. These actions would attract more visitors to the CCNM by improving the opportunities available at the CCNM and by informing the public of these improvements. These actions are anticipated to cause only minimal adverse effects on traffic and transportation, considering that many of these visitors would already travel to the coast to pursue other existing recreational and tourism opportunities.

Construction of infrastructure or facilities could result in lane or road closures, detours, closure of bicycle routes, and the addition of construction truck and equipment on the surrounding roadway system. These effects would be similar to those described under “Recreation Management Actions.”

Alternatives A and B would provide for the facilities necessary to sustain educational and interpretive programming, and would result in minor adverse effects on traffic or transportation. Alternative C would foster the greatest degree of visitation to the CCNM by creating numerous points of contact and actively offering, sponsoring, and partnering to provide education opportunities. However, as previously discussed, construction of educational and interpretive facilities would require additional project-specific analysis that would identify feasible mitigation to avoid or offset effects. Consequently, Alternative C would result in minor effects on traffic and transportation but would not trigger the need for mitigation.

Conclusions

Alternatives A–C: Minor adverse effects on traffic and transportation from education and interpretation management actions.

4.18.3.4 Land Use Authorizations

Aids to navigation, communication facilities, and other permitted land use authorizations could result in traffic and circulation effects related to landside staging of construction activities. These effects would be similar to the construction effects described for “Recreation Management Actions” and “Education and Interpretation Management Actions.”

The improvement or construction of aids to navigation and communication facilities could require full-time, onsite personnel, potentially increasing daily traffic volumes in and adjacent to the CCNM. Because of the wide geographical project area and the minimal permanent effects expected to result from the addition of personnel, no substantial effects on traffic and circulation are expected.

Under all action alternatives, land use authorizations could occur. However, no adverse effects on traffic or transportation that would require mitigation have been identified.

Conclusions

Alternatives A–C: Minor adverse effects on traffic and transportation from land use authorizations.

4.18.3.5 Actions with No Reasonably Foreseeable Effects on Traffic and Transportation

Activities for the following management actions would not adversely affect traffic and transportation:

- Visual Resources;
- Special Designations;
- Cadastral Support;
- Geologic, Soil, and Paleontologic Resources;
- Cultural Resources;
- Vegetation Resources;
- Wildlife Resources;
- Research Activities; or
- Land Tenure Adjustments.

4.19.1 Methodology

BLM has developed an analytical process (called the VRM system) that identifies, sets, and meets objectives for maintaining scenic values and visual quality. Under this system, proposed actions are evaluated using the methodology described below.

When a site-specific project is proposed, the degree of contrast between the proposed activity and the existing landscape is measured. This Contrast Rating process compares the proposed activity with existing conditions element-by-element (form, line, color, and texture) and feature-by-feature (land/water surface, vegetation, and structures). The Contrast Rating is compared to the appropriate Management Class to determine whether contrasts are acceptable. If the proposed activity exceeds—the allowable contrast, a BLM decision is made to (1) redesign, (2) abandon or reject, or (3) proceed but with mitigation measures stipulated to reduce critical effects. As discussed in Chapter 2, “Alternatives,” the CCNM would be managed to VRM Class II standards, whose objective is to retain the existing character of the landscape. Contrasts are visible but must not attract attention. Any changes should repeat the basic elements of form, line, color, and texture found in the predominant natural features of the characteristic landscape.

Effects on the visual resources of the CCNM were evaluated in this context. Descriptions of visual character and quality in this assessment rely on the following standard terms (Federal Highway Administration 1983):

- **Vividness** – The visual power or memorability of landscape components as they combine in striking or distinctive visual patterns.
- **Intactness** – The visual integrity of the natural and artificial landscape and its freedom from encroaching elements. Intactness can be present in well-kept urban and rural landscapes, as well as in natural settings.
- **Unity** – The visual coherence and compositional harmony of the landscape considered as a whole; it frequently attests to the careful design of individual components in the artificial landscape.

The appearance of the landscape is described below using these criteria and descriptions of the dominance of elements of form, line, color, and texture. These elements are the basic components used to describe visual character and quality for most visual assessments (U.S. Forest Service 1974, Federal Highway Administration 1983). In addition to their use as descriptors, vividness, unity, and intactness are used more objectively as part of a rating system to assess a landscape’s visual quality. This rating system includes a range of seven categories, ranging from very low to moderate to very high. Viewer sensitivity

or concern is based on the visibility of resources in the landscape, the proximity of viewers to the visual resource, the relative elevation of viewers to the visual resource, the frequency and duration of views, the number of viewers, and the types and expectations of individuals and viewer groups.

The criteria for identifying importance of views are related in part to the position of the viewer relative to the resource. An area of the landscape that is visible from a particular location (e.g., an overlook) or series of points (e.g., a road or trail) is defined as a viewshed. To identify the importance of views of a resource, a viewshed may be broken into distance zones of foreground, middleground, and background. Generally, the closer a resource is to the viewer, the more dominant it is and the greater is its importance to the viewer. Although distance zones in viewsheds may vary between different geographic regions or types of terrain, a commonly used set of criteria identifies the foreground zone as 0.4–0.8 kilometer (0.25–0.5 mile) from the viewer, the middleground zone as extending from the foreground zone to 4.8–8—kilometers (3–5 miles) from the viewer, and the background zone as extending from the middleground zone to infinity (U.S. Forest Service 1974).

Visual sensitivity also depends on the number and type of viewers, and the frequency and duration of views. Generally, visual sensitivity increases with an increase in total numbers of viewers, the frequency of viewing (e.g., daily or seasonally), and the duration of views (i.e., how long a scene is viewed). Also, visual sensitivity is higher for views seen by people who are driving for pleasure; people engaging in recreational activities such as hiking, biking, or camping; and homeowners. Sensitivity tends to be lower for views seen by people driving to and from work or as part of their work (U.S. Forest Service 1974, Federal Highway Administration 1983, U.S. Soil Conservation Service 1978). Views from recreation trails and areas, scenic highways, and scenic overlooks are generally assessed as having high visual sensitivity.

4.19.2 Thresholds for Adverse Effects

According to professional standards, an effect on visual resources is considered adverse and would require mitigation if it would substantially:

- Conflict with local guidelines or goals related to visual quality;
- Alter the existing natural viewsheds, including changes in natural terrain;
- Alter the existing visual quality of the region or eliminate visual resources;
- Increase light and glare in the project vicinity; or
- Result in backscatter light into the nighttime sky, or result in a reduction of sunlight or introduction of shadows in community areas.

4.19.3 Effects on Visual Resources

4.19.3.1 No Action Alternative

The No Action Alternative assumes that the Presidential Proclamation and BLM's interim management would stay in place, but no further restrictions or management actions would be enacted. Visual

resources would be protected by law from entry for oil exploration and other development, but no parts of the monument would be closed to public access.

Illegal disturbances to visual resources in the CCNM may be the result of unrestricted access and public recreational uses that have, unfortunately, led to vandalism of these resources. Public use of the CCNM is expected to increase in the future, with potential for corresponding increases in visual disturbances. Although these factors could potentially affect the monument over the long term, existing regulations in place for management of visual resources are anticipated to be sufficient to ensure that such negative effects do not occur, assuming that adequate resources are available for enforcement. Natural weathering processes will continue to erode formations and cause resource losses in the CCNM. While these processes may result in loss over time, they are also the source of creation for these resources that act to continually transform the landforms in a way that makes them visually unique. Therefore, these are not considered adverse visual effects. Overall, no effects are related to visual resources under the No Action Alternative.

Conclusion

No Action Alternative: No effects on visual resources from no action.

4.19.3.2 Visual Resources Management Actions

Managing the CCNM to VRM Class II standards would allow for low levels of visual disturbance to the landscape. In VRM Class II, management activities may be seen but should not attract the attention of the casual observer. Visible changes to the existing view could occur, but changes must not attract attention. Any changes should repeat and not contrast against the basic elements of form, line, color, and texture found in the predominant natural features of the characteristic landscape.

The VRM Class II classification could potentially allow habitat loss and disturbance related to building and maintenance of structures in the CCNM. As most rocks and islands in the monument are not suitable for the building of structures, however, this classification would not likely affect visual resources in the monument. Because the objective of VRM Class II is to retain the existing character of the landscape, this designation would result in preservation of the monument's scenic qualities.

Management actions related to visual resources would result in an overall benefit to visual resources occurring in the CCNM, as they would protect the visual resources of the CCNM.

Conclusions

Alternatives A–C: Moderate beneficial effects on visual resources from visual resources management actions.

4.19.3.3 Vegetation Resources Management Actions

Introduction of nonnative and invasive plant species may have occurred in the CCNM largely because of human activity, but some level of natural dispersal from the mainland may be partly responsible. Invasive plant species control could result in the short-term degradation of visual resources, as views would be subject to disturbance.

Ground disturbance during mechanical removal of invasive plants or burning to eradicate invasive plant species has the potential to temporarily adversely affect visual resources. The introduction of mechanical equipment into the viewshed for management activities would result in temporary visual intrusions. Adverse effects on visual resources would be avoided through screening ground disturbance activities and replanting any disturbed areas for erosion control and visual quality immediately following disturbance. Burning of invasive species would affect visual resources through the creation of smoke that temporarily limits the line of sight and the scarred landscape left as a result. Adverse visual effects from burning would be largely avoided through using small controlled burn areas that are replanted with native species as soon as possible following the activity. Although the activities of removing invasive plants would, temporarily, result in potential adverse effects, the reintroduction of native species into the viewshed, potentially would result in long-term beneficial effects on visual resources.

The invasive plant species control program in Alternatives A and B would affect existing views in the CCNM and therefore result in potentially adverse effects on visual resources—depending on the scale and nature of control techniques. These effects would be temporary, and measures would be taken to reduce adverse visual effects; adverse effects are therefore considered minor. Additionally, Alternative B would allow invasive plant species removal only if it can be shown to result in no adverse effects on monument resources, therefore reducing any adverse effects. Revegetation of native species under Alternatives A and B would result in moderate benefits on visual resources over the long term. Alternative C would not involve any management actions that would deviate from current management, and therefore would result in no effects, either adverse or beneficial, relative to baseline conditions.

Conclusions

Alternative A: Moderate beneficial effects on visual resources from vegetation resources management actions; minor adverse effects on visual resources from invasive plant species control.

Alternative B: Minor beneficial effects on visual resources from vegetation resources management actions.

Alternative C: No effects on visual resources from vegetation resources management actions.

4.19.3.4 Wildlife Resources Management Actions

Invasive wildlife species control could result in the short-term degradation of visual resources, as views would be subject to disturbance as a result of use of boats and other equipment. Invasive species control likely would affect existing views in the CCNM and therefore result in potentially adverse effects on visual resources—depending on the scale and nature of control techniques. However, these effects would be temporary and measures would be taken to reduce adverse visual effects; adverse effects are therefore considered minor. Invasive species management would result in minor beneficial effects on visual resources over the long term.

Other wildlife management actions, such as on-island activity restrictions and seasonal use restrictions to protect sensitive populations during breeding, are likely to improve the visual quality of the monument through minimized human trampling and maximized wildlife use of the monument.

Invasive species control under Alternative A would result in minor adverse effects on visual resources over the short term. Emphasis on resource protection under Alternative B would ensure that no invasive

species control actions would be taken that potentially harms monument resources. Seasonal use and activity restrictions also would contribute to beneficial effects under Alternatives A and B due to reductions in human disturbances. Additionally, emphasis on remote research methods for wildlife resources would contribute to beneficial effects on visual resources under Alternative B. Under Alternative C, seasonal restrictions on monument lands where known conflicts exist would benefit wildlife, habitats, and overall visual resources.

Conclusions

Alternative A: Moderate beneficial effects effects on visual resources from wildlife resources management actions; minor adverse effects on visual resources from invasive wildlife species control.

Alternative B: Moderate beneficial effects on visual resources from wildlife resources management actions.

Alternative C: Minor beneficial effects on visual resources from wildlife resources management actions.

4.19.3.5 Recreation Management Actions

The growing population and increasing popularity of coastal recreation in California will heighten demand for recreational access points along the coast, particularly boat launch ramps. The demand for public access to the rocks and islands themselves is not anticipated to increase substantially over time. However, the rapid growth of non-motorized boating (due to improved technology and safety, lower equipment costs, and an increase in guide services) probably will occur for other water-based recreational activities (such as scuba diving, snorkeling, and motorized boating) as well. Wildlife viewing and sightseeing will also continue to grow in popularity, and additional access points on bluffs overlooking the CCONM will be needed to meet this demand.

Human-induced disturbance associated with recreation activities could degrade visual resources in the monument, as views would be subject to disturbance. Human presence would directly affect visual resources through littering, vandalism, and trampling and indirectly through the introduction of built elements (e.g., tourist centers, informational kiosks, and signage) into the viewshed. All action alternatives restrict on-island recreational activities that would degrade monument resources, thereby creating beneficial effects on visual resources.

Management actions that do not actively support recreation activities or actions that enforce restrictions on recreational activities would be considered beneficial for visual resources, as they would not be disturbed and scenic overlooks would continue to be maintained. Educational programs about the value of monument resources would be considered beneficial, as such knowledge would facilitate resources protection. Publicizing or actively engaging in offering, sponsoring, and partnering to provide active recreation opportunities in and around the CCONM would be considered potentially adverse, as increased recreation activities could degrade visual resources.

Construction of new recreational facilities along the coast could affect the quality of the scenic values of the CCONM and adjacent lands for the viewers traveling along that route. As described in Chapter 2, “Alternatives,” all facilities would be constructed in a manner consistent with the existing character of the CCONM including, but not limited to, construction materials, height, and landscaping—to avoid detracting from existing scenic resources.

All action alternatives would restrict certain on-island recreational activities and would result in minor beneficial effects on visual resources. Alternatives A and B would result in minor adverse effects on visual resources from facility construction. Alternative A designates the minimal necessary additional mainland facilities needed to support recreation programs, while Alternative B limits recreational programs to existing mainland facilities. Chapter 2, “Alternatives,” contains provisions to avoid any adverse effects associated with facilities construction. Alternative C would result in greater adverse effects due to its increased focus on publicizing and sponsoring recreational activities, as well as construction of new centralized recreational facilities along the coast. However, as mentioned previously, the alternatives contain provisions for minimizing the visual impacts of facility construction.

Conclusions

Alternatives A and B: Minor beneficial effects on visual resources from recreation management actions; minor adverse effects on visual resources from construction.

Alternative C: Minor beneficial effects on visual resources from recreation management actions; minor adverse effects on visual resources from publicity and construction.

4.19.3.6 Education and Interpretation Management Actions

BLM-sponsored or -partnered activities for education and interpretation would be managed and staffed by employees knowledgeable about the CCNM’s resources and protective regulations; therefore, such programs are not expected to result in visual degradation. Organized education and interpretation programs could provide users with a personal, first-hand experience under the leadership of a guide knowledgeable about the monument and its visual resources.

As described in Chapter 2, “Alternatives,” new facilities would be located on the landward side of SR 1 to protect the quality of the scenic values of the CCNM and adjacent lands for the viewers traveling along that route, who are considered sensitive. All facilities would be constructed in a manner consistent with the existing character of the CCNM, including but not limited to, construction materials, height, and landscaping—to avoid detracting from existing scenic resources. For these reasons, new facilities are not anticipated to result in adverse effects on visual resources.

All action alternatives would involve the construction of new or upgraded facilities, including signs, wayside shelters, and buildings. As described in Chapter 2, “Alternatives,” measures would be implemented to avoid adverse effects of construction activities. Although Alternative C includes an aggressive public outreach campaign, impacts on CCNM’s visual resources would be minimized; construction would be limited to areas of minimal visual impact under all action alternatives. Educational programs would result in indirect beneficial effects related to increased education and awareness, and would be conducted in a manner to avoid degrading visual resources.

Conclusions

Alternatives A–C: Minor beneficial effects on visual resources from education and interpretation management actions; minor adverse effects on visual resources related to construction.

4.19.3.7 Land Use Authorizations

All land use authorizations would be required to adhere to VRM Class II standards. As discussed under “Visual Resources Management Actions,” these standards would require that any new facilities on the CCNM not create a visual disturbance for the casual observer.

All action alternatives are common in this respect. Consequently, adverse effects requiring mitigation are not anticipated under any of the action alternatives.

Conclusions

Alternatives A–C: Minor adverse effects on visual resources from land use authorizations.

4.19.3.8 Actions with No Reasonably Foreseeable Effects on Visual Resources

Activities for the following management actions would not adversely affect visual resources:

- Special Designations;
- Cadastral Support;
- Geologic, Soil, and Paleontologic Resources;
- Cultural Resources;
- Research Activities; or
- Land Tenure Adjustments.

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Section 4.20

Water Resources

4.20.1 Methodology

Effects on water resources were assessed by evaluating the characteristics of proposed or existing activities in the context of the potential for water quality degradation at the monument and on the adjacent mainland. Several mechanisms for effects were considered. Construction activities (e.g., construction of signage, kiosks, and visitor centers) were considered for their potential to create ground disturbance, erosion and sedimentation, and release of construction-related hazardous materials. Recreational, research, and other human activities were examined for their potential to accelerate erosion from foot or off-highway vehicle traffic, deposition of trash, and contribution of water quality contaminants such as nutrients and coliform from human and animal waste. Other activities, such as invasive species control, were reviewed in the context of the potential for release of toxic substances and physical disturbance. Finally, changes in runoff, drainage, and potential for flooding hazards were considered.

4.20.2 Thresholds for Adverse Effects

For this analysis, an effect on water resources was considered adverse and would require mitigation if it would:

- Violate any water quality standards or waste discharge requirements, or otherwise substantially degrade water quality;
- Substantially alter existing drainage patterns in a manner that would result in substantial erosion, siltation, or flooding onsite or offsite; or
- Create or contribute runoff water that would exceed the capacity of existing or planned stormwater drainage systems, or provide substantial additional sources of polluted runoff.

4.20.3 Effects on Water Resources

4.20.3.1 No Action Alternative

Under the No Action Alternative, existing public access to the CCNM and adjacent areas would continue and likely would increase over time as population in California grows. Water quality in many coastal areas is already impaired, as discussed in Chapter 3, “Affected Environment.” Consequently, the No Action Alternative could result in potential for short- and long-term water quality degradation through the

deposition of trash, accelerated erosion from foot traffic on the CCNM, and contribution of water quality contaminants from human and animal waste. However, existing regulations in place for management of water resources are anticipated to be sufficient to ensure that such negative effects do not occur, assuming that adequate resources are available for enforcement.

Under current management, no mineral development would occur with the potential to affect water quality on or off the monument. In addition, existing programs to protect coastal water quality (e.g., the OSPR program) would continue.

Overall, no adverse effects are anticipated under the No Action Alternative.

Conclusion

No Action Alternative: No effects on water resources from no action.

4.20.3.2 Visual Resources Management Actions

In general, management of the CCNM for VRM Class II objectives would benefit water quality and water resources due to the preservation element in this class. However, VRM Class II could allow some development on the CCNM that may result in erosion or other construction and operational water quality effects. Prior to approving any developments on the CCNM consistent with the VRM Class II objective, further analysis would be required that would evaluate the potential adverse or beneficial effects of the project-specific action. In the event of adverse effects, BMPs and other mitigation measures would be applied to offset these effects.

Minor adverse effects potentially could result from development activities under the VRM Class II designation. Future designation of VRM Classes could result in positive or negative effects, depending on the classification. Designation of VRM Class I and Class II would generally be beneficial due to the restriction on development and related water quality effects. Designation of portions of the monument in VRM Classes III or IV would have greater potential for an adverse effect due to the allowance of additional activities that could affect water quality.

Conclusions

Alternatives A–C: Minor adverse effects on water resources in the near term, and indeterminate effects in the long term, from visual resources management actions.

4.20.3.3 Geologic, Soil, and Paleontologic Resources Management Actions

Restricting on-island recreational activities and prohibiting surface-disturbing activities on CCNM rocks and islands with sensitive soil, geologic, or paleontologic features would improve water quality, thereby resulting in beneficial effects on water resources, by reducing the potential for erosion from foot traffic, deposition of trash, contribution of water quality contaminants from human and animal waste, and other activities that could adversely affect water quality.

Research activities that better define the extent, nature, and value of geologic, soil, and paleontologic resources on the monument can benefit future management activities.

Alternatives A and B would result in beneficial effects on water resources through restrictions on certain activities that may cause erosion or degrade water quality, as described above. Alternative B would result in a direct beneficial effect, as it would eliminate all surface-disturbing activities with the potential to cause erosion and water quality contamination. Research activities under Alternative A would result in both beneficial and adverse effects. Research and inventory activities can help improve management actions; however, during data collection scientists may trample vegetation, causing erosion and water quality contamination. Alternative B would result in no adverse impact from research activities through its emphasis on remote evaluation. Alternative C would not involve any management actions that would deviate from current management, and therefore would result in no effects, either adverse or beneficial, relative to baseline conditions.

Conclusions

Alternative A: Minor beneficial effects on water resources from geologic, soil, and paleontologic resources management actions; minor adverse effects on water resources from research.

Alternative B: Moderate beneficial effects on water resources from geologic, soil, and paleontologic resources management actions.

Alternative C: No effects on water resources from geologic, soil, and paleontologic resources management actions.

4.20.3.4 Cultural Resources Management Actions

Historic and prehistoric archaeological resources generally do not pose a direct threat to water quality or water resources. However, public access and/or illegal removal of these resources may affect water quality indirectly through excavation, erosion from foot traffic, and deposition of trash. Restricting such activities would result in beneficial effects by preventing potential thieves or vandals from camping on the rocks and islands as staging for excavation activities. Restricting access also would reduce potential human-induced erosion and water quality contamination. Designation of the entire CCNM as a Cultural Resource Management Zone would further contribute major beneficial effects to water resources by enacting more stringent use controls

The potential effects of Native American TCPs on water resources is similar to those identified for historic and prehistoric resources above, and depends on the degree of human use of these properties. Monitoring and surveillance of sensitive cultural resource sites and Native American TCPs by law enforcement personnel would result in beneficial impacts on water resources by further discouraging on-island activity.

Alternative A would result in minor beneficial effects on water resources as a result of on-island activity restrictions and increased patrolling and surveillance of all known historic and prehistoric properties. Human use of TCPs could adversely affect water quality; however, the action alternatives contain provisions for resource protection, rendering this effect minor. Alternative B would result in major beneficial effects by designating the entire CCNM as a Cultural Resources Management Zone.

Alternative C would not involve any management actions that would deviate from current management and therefore would result in no effects, either adverse or beneficial, relative to baseline conditions.

Conclusions

Alternative A: Minor beneficial effects on water resources from cultural resources management actions.

Alternative B: Major beneficial effects on water resources from cultural resources management actions.

Alternative C: No effects on water resources from cultural resources management actions.

4.20.3.5 Vegetation Resources Management Actions

Vegetation management activities could result in positive or negative effects on water resources, depending on the activity. In general, restricting recreational activities on the monument would result in beneficial water quality effects as previously identified. Other actions that preserve the integrity of vegetation resources would also be beneficial, as reduced disturbance of vegetation would decrease associated erosion effects and improve runoff filtration.

Invasive species management would likely result in short-term adverse effects on water quality. In particular, manual or mechanical removal of invasive plants would lead to direct soil disturbance and areas of bare soil, resulting in erosion. Herbicide application, by reducing plant cover, would also cause short-term erosion effects—as well as presenting the additional potential for violations of water quality standards if herbicides were applied in excess. The management alternatives include provisions to ensure that BMPs and herbicide application volumes are appropriate to avoid these effects (See Chapter 2, “Alternatives”). It is possible that some invasive species control techniques could result in short-term effects for which no mitigation is available. Over the long term, native vegetation would recolonize areas where invasive species control activities have taken place, restoring the ability to retain soil and returning the area to pre-control conditions.

Restricting on-island activities in Alternatives A and B would result in minor beneficial effects from decreased human-induced erosion. Invasive plant species management under Alternatives A and B, however, could result in minor short-term adverse effects on water resources by increasing erosion and sedimentation. Effects on water resources under Alternative B would be reduced because invasive plant species removal could occur only if it can be shown to result in no adverse effects on monument resources. Alternative C would not involve any management actions that would deviate from current management and therefore would result in no effects, either adverse or beneficial, relative to baseline conditions.

Conclusions

Alternative A: Minor beneficial effects on water resources from vegetation resources management actions; minor adverse effects on water resources from invasive plant species control.

Alternative B: Minor beneficial on water resources from vegetation resources management actions.

Alternative C: No effects on water resources from vegetation resources management actions.

4.20.3.6 Wildlife Resources Management Actions

Wildlife management activities could result in positive or negative effects on water resources, depending on the activity. In general, restricting recreational access would result in beneficial water quality effects, as previously identified. Seasonal restrictions applied to sensitive wildlife populations during breeding seasons also would reduce erosion from foot traffic and deposition of trash, thereby reducing water quality contamination.

Invasive species management likely would result in decreased erosion over the long term because these wildlife species would no longer pose the potential to burrow, disturb vegetation, or otherwise generate surface disturbance. In addition, removal of invasive wildlife would reduce any release of associated animal wastes and related contaminants (e.g., nutrients and fecal coliform) to surface waters. The physical actions taken to control these species could result in soil disturbance or otherwise degrade water quality; however, the management alternatives include provisions to ensure that BMPs and other measures would be implemented to avoid these effects. It is possible that some invasive species control techniques could result in short-term effects on water quality for which no mitigation is available. Invasive species management would result in minor beneficial effects on water resources over the long term.

On-island activity restrictions and seasonal use restrictions designated under Alternatives A and B would reduce human disturbance and result in beneficial effects on water resources. Invasive species management under Alternative A could result in short-term adverse effects on water resources if methods used resulted in increased erosion or releases of substances. As discussed in Chapter 2, "Alternatives," measures would be taken to protect water quality such that any adverse effects would be minor. Under Alternative B, no invasive species efforts would be conducted with potential adverse water quality effects; however, the long-term beneficial effects of those activities would also be lost. Under Alternative C, seasonal restrictions on monument lands where known conflicts exist would reduce soil disturbance and erosion during certain seasons in certain locations.

Conclusions

Alternative A: Moderate beneficial effects on water resources from wildlife resources management actions; minor adverse effects on water resources from invasive species removal.

Alternative B: Moderate beneficial effects on water resources from wildlife resource management actions.

Alternative C: Minor beneficial effects on water resources from wildlife resources management actions.

4.20.3.7 Recreation Management Actions

The proposed recreation alternatives involve two basic categories of activities: activities on the CCNM and in surrounding waters, and activities adjacent to the CCNM on the mainland. Recreation activities on and surrounding the CCNM can contribute to water quality degradation through releases of fuels, oils, and other contaminants from boats and the mechanisms previously identified associated with human use of the monument, which include increased erosion and sedimentation as a result of foot traffic and other surface-disturbing activities, deposition of trash, and human and animal waste.

Recreational activities on the mainland involve more passive activities; however, similar mechanisms apply and could degrade coastal water quality. In addition, construction of recreational facilities, such as signs and buildings, could lead to erosion and sedimentation and the potential for release of construction-related hazardous materials. The alternatives have identified that BMPs and other measures would be implemented to offset or avoid these effects (see Chapter 2, "Alternatives"). Any major facilities construction in support of recreation also would require additional project-specific environmental analysis.

Designation of points of recreational access and development of recreational programs for those points of access could result in beneficial or adverse effects on water resources, depending on the specific programs that would be implemented.

All action alternatives would restrict certain on-island recreational activities on the monument, such as camping, off-highway vehicle use, launching for hang-gliders, and rock climbing, and would therefore benefit water quality. In addition, recreation management activities under these alternatives, such as educational programming, would result in indirect beneficial effects. Minor adverse effects on water resources would result from facility construction. Alternative A designates the minimal necessary additional mainland facilities needed to support recreation programs, while Alternative B limits recreational programs to existing mainland facilities. Alternative C would encourage more active recreation activities on the CCNM and construction of new centralized recreational facilities. Consequently, the adverse effect of increased recreation activities and users on water quality would be greater. Measures would be implemented to ensure that construction of centralized recreation facilities and other facilities upgrades would result in only minor adverse effects.

Conclusions

Alternatives A and B: Minor beneficial effects effects on water resources from recreation management actions; minor adverse effects on water resources from construction.

Alternative C: Minor beneficial effects on water resources from recreation management actions; minor adverse effects on water resources from publicity and construction.

4.20.3.8 Education and Interpretation Management Actions

Educational and interpretive activities would generally increase awareness regarding how to protect the CCNM, and therefore are anticipated to result in indirect beneficial effects on water resources. Designation of visitor points of contact and development of associated educational and interpretive programs could result in positive or negative effects, depending on the specific program. However, educational and interpretive activities generally would be focused on the mainland or waters surrounding the CCNM, and would not involve activities with a high potential to cause soil disturbance, sedimentation, or water quality degradation on CCNM rocks and islands.

Construction of educational and interpretive facilities, such as signs and buildings, could lead to erosion and sedimentation, and the potential for release of construction-related hazardous materials into groundwater or surface water bodies. The alternatives have identified that BMPs and other measures would be implemented to offset or avoid these effects (see Chapter 2, "Alternatives"). Any major facilities construction in support of education and interpretation would also require additional project-specific environmental analysis.

All action alternatives would involve the construction of new or upgraded facilities, including signs, wayside shelters, and buildings. As described in Chapter 2, “Alternatives,” measures would be implemented to avoid adverse water quality effects on the monument. Educational programs would result in indirect beneficial effects related to increased education and awareness, and would be conducted in a manner to avoid degrading visual resources.

Conclusions

Alternatives A–C: Minor beneficial effects on water resources from education and interpretation management actions; minor adverse effects on water resources related to construction.

4.20.3.9 Research Activities Management Actions

Research could result in indirect beneficial effects on water resources to the extent that it would inform future management of the CCNM. However, research activities themselves have the potential for adverse effects, including erosion and sedimentation, trash, and human wastes resulting from research-related surface disturbance and other human activity on the CCNM. Research conducted from boats and the mainland also could result in similar water quality effects. Remote forms of research, such as aerial photograph interpretation, would not have such potential for adverse effects.

Alternatives A and C would protect monument resources in the approval process for research proposals; nevertheless, research could be approved that would cause adverse water quality effects. While many measures may be available to offset or avoid these effects, specific research proposals may result in effects for which mitigation cannot be identified at this time. Alternative B would not allow research with the potential to adversely affect resources and would not trigger the need for mitigation. Research could result in minor beneficial effects, depending on the topic and outcome. Under all action alternatives, long-term beneficial effects are expected as a result of research.

Conclusions

Alternatives A and C: Indeterminate effects on water resources from research activities management actions; minor beneficial effects on water resources from research conclusions.

Alternative B: Minor beneficial effects on water resources from research activities management actions.

4.20.3.10 Land Tenure Adjustments

The extent to which land acquisitions may cause water resources effects depends on previous ownership and past regulations. If regulations for water resources were stricter for the previous ownership than for BLM, negative effects would occur. If regulations for water resources were less stringent under the previous ownership than for BLM, the effects would be beneficial. Further project-specific analysis would be required to evaluate the effects of each specific land acquisition proposal. It is anticipated that BLM policies would be sufficiently protective that adverse effects on water quality would not occur.

Conclusions

Alternatives A–C: Indeterminate effects on water resources from land tenure adjustments.

4.20.3.11 Land Use Authorizations

Land use authorizations could adversely affect water quality as a result of construction-related effects, including erosion and release of hazardous materials. Land use authorizations also could result in effects associated with human activity on or adjacent to the CCNM—which could also lead to erosion and release of other contaminants as identified in “Recreation Management Actions” and “Education and Interpretation Management Actions.” Further project-specific analysis would be required to evaluate the effects of each specific proposal for a permitted land use authorization. As described in Chapter 2, “Alternatives,” BMPs and other measures would be required to reduce or eliminate any water quality effects.

All action alternatives would include land use authorizations. Alternatives A and C would result in only minor adverse effects on water quality or trigger further mitigation requirements. Alternative B would not allow land uses with the potential to adversely affect water resources, and therefore would result in no adverse effects.

Conclusions

Alternatives A and C: Minor adverse effects on water resources from land use authorizations.

Alternative B: No effects on water resources from land use authorizations.

4.20.3.12 Actions with No Reasonably Foreseeable Effects on Water Resources

Activities for the following management actions would not adversely affect water resources:

- Special Designations, or
- Cadastral Support.

Wilderness and Other Special Designations

4.21.1 Thresholds for Adverse Effects

For this analysis, an effect on wilderness and other special designations was considered adverse and would require mitigation if a management action would

- Conflict with any applicable policy or regulation associated with a special designation on monument lands.

4.21.2 Effects on Wilderness and Other Special Designations

4.21.2.1 No Action Alternative

Under the No Action Alternative, the existing ACEC and Ecological Preserve designations would remain in place. No areas would be designated as having wilderness characteristics. This alternative would not include any land acquisitions, nor would it change any uses presently allowed on any part of the monument. As noted in the Presidential Proclamation, the lands of the monument would not be sold, leased, or used for mineral extraction. There would be no conflict with or changes made to existing designations. There would be no effects on special designations from the No Action Alternative.

Conclusion

No Action Alternative: No effects on wilderness and other special designations from no action.

4.21.2.2 Special Designations

Under all action alternatives, the existing ACEC would be maintained, and its name would be changed from the California Islands Wildlife Sanctuary ACEC to the California Coastal ACEC. Maintenance of current special designations would not preclude the future designation of portions of the monument for other special uses. There would be no effects.

Conclusions

Alternatives A–C: No effects on wilderness and other special designations from special designations.

4.21.2.3 Recreation Management Actions

Proposed recreation activities and facilities under the alternatives may conflict with special designations on mainland and aquatic areas adjacent to the monument. Any major facilities construction or BLM-sponsored recreational activities would require additional project-specific environmental analysis, which would identify all adverse effects and offsetting mitigation. As discussed in Chapter 2, “Alternatives,” the agencies that manage the relevant areas would be consulted and coordinated with to offset or avoid any adverse effects. It is not anticipated that these entities would approve such activities if they would result in significant conflicts with existing designations.

Alternatives A and C would involve the construction of new or upgraded recreational facilities, and measures would be implemented to avoid adverse effects on wilderness and other special designations. Alternative B would limit recreational access to existing mainland facilities, and would therefore have no effect on special designations.

Conclusions

Alternatives A and C: Minor adverse effects on wilderness and other special designations from recreation management actions.

Alternative B: No effects on wilderness and other special designations from recreation management actions.

4.21.2.4 Education and Interpretation Management Actions

Proposed locations and types of education facilities under the alternatives may conflict with special designations on mainland areas adjacent to the monument. Any major facilities construction in support of education and interpretation would require additional project-specific environmental analysis, which would identify all adverse effects and offsetting mitigation. As discussed in Chapter 2, “Alternatives,” the agencies that manage the relevant mainland areas would be consulted and coordinated with to avoid or minimize any adverse effects.

All action alternatives could involve the construction of new or upgraded facilities for education and interpretation, including signs, wayside shelters, and buildings. Measures would be implemented to avoid adverse effects on areas under special designation.

Conclusions

Alternatives A–C: Minor adverse effects on wilderness and other special designations from education and interpretation management actions.

4.21.2.5 Land Tenure Adjustments

The extent to which land acquisitions may cause effects on special designations would depend on previous ownership. In the event of potential adverse effects, BMPs and other mitigation would be applied, as described in Chapter 2, “Alternatives.” It is possible, however, that no mitigation would be available to fully offset these effects. BLM would deal with each acquisition on an individual basis; further project-specific analysis would be required to evaluate the effects of each specific land acquisition proposal.

Conclusions

Alternatives A–C: Indeterminate effects on wilderness and other special designations from land tenure adjustments.

4.21.2.6 Actions with No Reasonably Foreseeable Effects on Wilderness and Other Special Designations

All action alternatives would include revocation of all existing designations except for the Ecological Reserve, and the policies applicable to the monument as an ecological preserve are included in the planning criteria for this RMP (see Chapter 1, “Introduction”). Therefore, activities for the following management actions would not result in an adverse effect on wilderness and other special designations:

- Visual Resources;
- Cadastral Support;
- Geologic, Soil, and Paleontologic Resources;
- Cultural Resources;
- Vegetation Resources;
- Wildlife Resources;
- Research Activities; or
- Land Use Authorizations.

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Section 4.22

Other NEPA Considerations

4.22.1 Introduction

This section addresses several considerations required by NEPA, including growth-inducing and cumulative effects and effects related to environmental sustainability.

4.22.2 Growth Inducement

The potential for the various action alternatives to induce growth is discussed in Section 4.12, Population and Housing. In short, while the various action alternatives could result in increased visitation to the coast, they are not anticipated to generate large numbers of new jobs or lead to major new infrastructure development such that population growth on the coast would be directly or indirectly induced.

4.22.3 Cumulative Effects

4.22.3.1 Methodology

NEPA requires evaluation of a proposed action's potential to contribute to "cumulative" environmental impacts. A cumulative impact is defined as:

The impact on the environment which results from the incremental impact of the action when added to other past, present, or reasonably foreseeable future actions, regardless of what agency or person undertakes such other actions. Cumulative impacts can result from individually minor but collectively significant actions taking place over a period of time. Cumulative impacts can result from similar projects or actions, as well as from projects or actions that have similar impacts (40 CFR 1508.7).

The objective of a cumulative impact analysis is to evaluate the significance of the proposed action's contribution to cumulative environmental impacts. It is accomplished in three steps:

Step 1: Identify the cumulative impacts study area for each resource evaluated. Unless otherwise indicated, the cumulative impacts study area covers the 12-nautical mile offshore area of the CCNM plus any potentially affected areas of the mainland.

Step 2: Identify and describe past, present, and reasonably foreseeable future actions in the cumulative impact study area that are similar to the proposed action or have substantial impacts to which the proposed action would contribute.

Step 3: Evaluate the potential for the proposed action to result in a substantial contribution to cumulative environmental impacts, with the potential to significantly affect the environment.

The time frame for the cumulative impact analysis begins at the anticipated time that this RMP will first take effect, in 2005, and extends for the 20-year life of the plan to 2025. It includes existing conditions of the landscape, particularly alterations from past activities and uses of the coastal zone.

4.22.3.2 Analysis

Chapter 3 has identified certain resources and uses that are currently degraded or have reasonable potential to be degraded in the future. These include features on the monument that experience degradation as a result of invasive species, improper recreation practices, coastal water quality degradation, and other impairments to the condition of the human and natural environment. A more detailed discussion of past, present, and reasonably foreseeable future actions in the cumulative impact study area is provided in the *California Coastal National Monument Management Situation Analysis* (Jones & Stokes 2004). The cumulative setting was considered when identifying management alternatives.

The action alternatives, in general, are targeted to address existing impairments on the CCNM and would generally result in beneficial cumulative effects. For management actions with the potential for adverse effects on or off the monument, measures to reduce, offset, or eliminate these effects have been identified as part of the alternative. For these actions, therefore, no adverse effects requiring mitigation have been identified that would contribute to a cumulative adverse effect.

The remaining activities with the potential for adverse effects are identified in Chapter 4 as having adverse effects for which no mitigation has been identified at this time. For these actions, future project-specific environmental analysis would be required prior to implementation that would evaluate the specific action's potential to contribute to cumulative adverse effects. Because sufficient detail about these actions is not known at this time to make a determination concerning whether cumulative effects would result, these actions were considered to result in no cumulative adverse effect. As stated, future analysis would identify the potential for cumulative effects related to project-specific actions.

Because current regulations are considered to be sufficient such that degradation of resources does not occur, the No Action Alternative would not result in cumulatively adverse effects on various resources on the monument, assuming that adequate resources are available for management action and enforcement under existing regulations. Resources with the greatest potential to be affected by inadequate management resources and experience cumulative adverse effects include cultural resources (as a result of illegal collection, vandalism, and natural degradation over time) and biological resources (as a result of invasive species and other direct or indirect conflicts with human activities). All of the action alternatives would result in cumulatively beneficial effects by implementing protection for these resources to varying degrees.

4.22.4 Effects Related to Environmental Sustainability

4.22.4.1 Short-Term Uses of the Environment versus Maintenance and Enhancement of Long-Term Productivity

NEPA requires that the local short-term benefits of implementing any of the action alternatives be compared to the maintenance and enhancement of long-term productivity (42 USC 4332, 40 CFR 1502.16). This RMP focuses on maintenance and enhancement of long-term productivity in the form of protection for sensitive monument resources, in concordance with the Presidential Proclamation.

The degree to which the various action alternatives would result in short-term uses of the environment varies. For instance, Alternative C would result in more active recreation on the CCNM than Alternatives A and B. Under all of the action alternatives, no short-term uses would be conducted that would inhibit long-term productivity. Major short-term implementation actions with potential for long-term effects would be subjected to further project-specific environmental analysis, which would identify in more detail the tradeoff associated with the particular action. In summary, under all action alternatives, the values of the existing environment would not be degraded over the short term and would experience substantial benefits in the long term.

4.22.4.2 Irreversible or Irretrievable Commitments of Resources

Irreversible commitments of resources would not immediately result from implementation of the RMP itself as the plan does not bind BLM to implement any particular actions. However, implementation of actions identified in the RMP would result in such commitments of resources. These resources include:

- Materials used for invasive species management, construction of facilities, and research;
- Labor associated with the various proposed activities;
- Energy needed for construction, operation, and maintenance of facilities and administration; and
- Minor land conversion for recreational, educational and interpretive, and other facilities.

Note that because these implementation actions would be subject to available funding and implementation priorities, the extent to which implementation would occur cannot be determined at this time. For this reason, adoption of the RMP itself is not considered to result in irreversible commitments of resources.

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