Chapter 2:

Alternatives, Including the Preferred Alternative

Photo: John Teichert

INTRODUCTION

This chapter describes the process used by the planning team to develop the four alternatives that are included in this *Draft General Management Plan / Environmental Impact Statement*. The alternatives are fully described on the area-specific maps that are included in this chapter. This chapter also contains a summary of impacts table, which is based on the analysis in "Chapter 4: Environmental Consequences."

FORMULATION OF THE ALTERNATIVES

A planning team comprised of NPS staff from Olympic National Park, the Denver Service Center, and the Pacific West Regional Office developed management alternatives for Olympic National Park using public concerns generated through the public participation process.

The first opportunity for public comment, or scoping, was at the beginning of the general management plan process in 2001. The National Park Service solicited input from the public, park staff, government agencies, tribal officials, and other organizations regarding issues and desired conditions for the national park. About 126 comments were received during this first phase of scoping.

The scoping comments helped the park planning team determine the topics to be considered, the framework for the alternatives, and the decisions to be made through the plan.

The framework for the alternatives, or the desired conditions (see chapter 1), was partly based on public comments, but also on the park's purpose and significance, which was derived from the Olympic National Park establishing legislation and Congressional Report (HR 2247). The desired conditions also take into account servicewide mandates and policies.

Once the desired conditions were identified, the next step was to develop the initial alternatives, and again, the park reached out to the public for assistance.

In January 2002, public workshops were held to help develop alternative visions for protecting and managing Olympic National Park. These meetings were attended by 187 people. Using the public input received during this process, and incorporating laws and policies and recommendations from park staff, the planning team identified potential management zones to consider within the park.

MANAGEMENT ZONES

Management zones define specific desired conditions and management approaches to be achieved and maintained in each area of the park. Eight management zones have been developed for Olympic National Park, and these zones are applied to different areas of the park in each action alternative.

- development
- day-use
- low-use
- river
- intertidal reserve
- wilderness trail
- primitive wilderness
- primeval wilderness

There is currently no management zoning in Olympic National Park that meets current NPS management zoning standards. However, for the purposes of the comparison, zoning reflective of the current conditions was included for the no-action alternative.

These zones, described in the following section, form the basis of the plan's alternatives and reflect the range of ideas proposed by the public and by the NPS planning team.

In addition to the management zones, park managers would continue to use the superintendent's compendium to effect limitations or closures as necessary to protect resources and wilderness values. The superintendent's compendium is a list of designations, closures, requirements, and other restrictions imposed under the discretionary authority of the park superintendent as provided for in Title 36 of the *Code of Federal Regulations* (CFR).

TABLE 1: MANAGEMENT ZONES

This table presents descriptions of each zone considered in the development of the alternatives. The topics include the general zone concept, desired natural and cultural resource conditions, visitor opportunities, and facilities. The zones are included in the alternatives maps by frontcountry park area. There are separate zoning maps for wilderness. The maps include specific descriptions of the components of each alternative. The alternative maps begin on page 71.

	FRONTCOUNTRY ZONES			SPECIAL ZONES		WILDERNESS ZONES		
Topic	**Development Zone**	**Day-Use Zone**	**Low-Use Zone**	**River Zone**	**Intertidal Reserve Zone**	**Wilderness Trail Zone**	**Primitive Wilderness Zone**	**Primeval Wilderness Zone**
ZONE CONCEPT	Concentrated visitor service facilities, overnight lodging, developed campgrounds (with up to 250 campsites, flush toilets, and cold running water) and park operational facilities would be accommodated. Road access is via unpaved or paved road.	High to moderate levels of day use would be accommodated. No campgrounds or overnight lodging would be accommodated. Road access can be via unpaved or paved road.	Low levels of day use and a range of less-developed camping opportunities (generally fewer than 50 sites, no or limited potable water, and vault toilets) in less-developed areas would be accommodated. No overnight lodging would be provided. Some areas would be accessible by paved or unpaved roads, but some may be areas without roads.	Prime fish and wildlife habitat would be protected in naturally sustainable river ecosystems. This zone is considered in alternative B.	The park's intertidal reserve zone (the coastal area between high and low tides) is an ecologically critical area that sustains diverse assemblages of plant and animal life, and a rich array of habitats. Selected coastal and intertidal areas within the park would be designated as intertidal reserves to protect these highly diverse communities. Protective measures would include mandatory no harvest zones to preserve seed sources. Nothing in this designation affects tribal treaty rights.	Resources would be protected while providing access by trails and related facilities (i.e., bridges, boardwalks) to park wilderness. Camping at designated sites would be accommodated. Many trails would be maintained for pack or riding stock, but stock would not be allowed in some areas.	Resources would be protected and primitive recreational opportunities with fewer maintained trails than in the wilderness trail zone would be provided. This zone would include the less developed and more primitive trails. Camping would be accommodated at designated sites or on durable surfaces. Pack or riding stock would not be allowed.	Primeval wilderness resources and character with large trail-less areas and opportunities for unconfined, primitive recreation would be preserved. There would be no maintained trails and no designated campsites in this zone. Access or use might be restricted or limited along park boundaries, roads, or lake edges for resource protection. Pack or riding stock would not be allowed.
DESIRED NATURAL RESOURCE CONDITIONS	Natural resources might be highly modified for visitor access, services, recreation, and park operations or residential use in ways that harmonize with park settings.	Natural resources might be highly modified for road corridors providing visitor access, and slightly modified for recreation, and visitor services (i.e. trails, picnic areas, educational facilities), but in ways that harmonize with the natural environment and or park setting.	Natural resources might be modified for visitor access, recreation, and visitor services, but in ways that harmonize with the natural environment.	Natural resources may be minimally but not permanently modified for access purposes, such as through provision of a temporary, narrow gravel road, potentially for seasonal use only. River banks or meanders would not be hardened or altered. Natural flooding and hydrologic processes would be allowed to occur.	Natural resources would not be modified. Wilderness visitation in the intertidal reserves would be managed to ensure resource protection.	Natural resources might be slightly modified for visitor use, administrative use, and research. There may be slight disruptions to the natural systems.	Natural resources might be minimally modified for visitor recreational, administrative, research, and access purposes, but in ways that harmonize with natural conditions and processes.	Natural resources would be in as pristine a condition as possible, and would not have irreversible modifications for recreational purposes, research, and administrative use. There would be very little disruption to the natural system.
	Unwanted trails would be removed and rehabilitated or allowed to recover naturally.	Unwanted trails would be removed and rehabilitated or allowed to recover naturally.	Unwanted trails would be removed and rehabilitated or allowed to recover naturally.	Unwanted trails would be removed and rehabilitated or allowed to recover naturally.	Unwanted trails would be removed and rehabilitated or allowed to recover naturally.	Unwanted trails and sites, such as campsites, would be removed and rehabilitated or allowed to recover naturally. Existing trails could be modified or rerouted for resource protection or to maintain access, however, no new trails would be constructed.	Unwanted trails and sites, such as campsites, would be removed and rehabilitated or allowed to recover naturally. Existing trails could be modified or slightly rerouted for resource protection or to maintain access, however, no new trails would be constructed.	Trails and sites, such as campsites, would be removed and rehabilitated, or allowed to recover naturally. No new trails would be constructed.

	FRONTCOUNTRY ZONES			SPECIAL ZONES		WILDERNESS ZONES		
Topic	**Development Zone**	**Day-Use Zone**	**Low-Use Zone**	**River Zone**	**Intertidal Reserve Zone**	**Wilderness Trail Zone**	**Primitive Wilderness Zone**	**Primeval Wilderness Zone**
DESIRED NATURAL RESOURCE CONDITIONS (cont.)	Seasonal access restrictions might occur along some shoreline and lake areas to protect sensitive habitats for rare aquatic plants, as well as spawning, rearing, and feeding areas for fish.	Seasonal access restrictions might occur along some shoreline and lake areas to protect sensitive habitats for rare aquatic plants, as well as spawning, rearing, and feeding areas for fish.	Seasonal access restrictions might occur along some shoreline and lake areas to protect sensitive habitats for rare aquatic plants, as well as spawning, rearing, and feeding areas for fish.	Seasonal access restrictions might occur along some shoreline areas to protect sensitive habitats for rare aquatic plants, as well as spawning, rearing, and feeding areas for fish.	Specific areas might be temporarily closed (e.g. hiking, day use or overnight use) during critical periods to protect organisms.	Some shoreline and lake areas might be closed to protect riparian habitat.	Some shoreline and lake areas might be closed to protect riparian habitat.	Some shoreline and lake areas might be closed to protect riparian habitat.
	Development impacts affecting adjacent zones would be minimized.	Development impacts affecting adjacent zones would be minimized.	Recovered and acquired lands would be intensively restored.	The riparian and floodplain habitats of rivers, streams, and estuaries would be protected. Using proactive measures, including identifying flood-prone areas near facilities and roads, the park staff would develop methods for the protection of riparian and river areas.	Specific areas might be closed for restoration or to achieve desired resource conditions.	Areas might be closed for restoration or to achieve desired resource conditions.	Areas might be closed for restoration or to achieve desired resource conditions.	Most evidence of modern human presence would be removed and areas would be rehabilitated. Areas might be closed for restoration or to achieve desired resource conditions.
DESIRED CULTURAL RESOURCE CONDITIONS	Historic properties (structures, landscapes, or archeological sites) would be readily visible and accessible.	Historic properties (structures, landscapes, or archeological sites) would be visible and accessible.	Historic properties (structures, landscapes, or archeological sites) would be readily visible and accessible.	This zone would not apply to areas with historic structures or districts.	Some historic properties (structures, landscapes, or archeological sites) would be visible and accessible.	Historic properties (structures, landscapes, or archeological sites) would be visible and accessible.	Few historic properties (structures, landscapes, or archeological sites) would be visible.	Historic structures and cultural landscapes would not be visible. Archeological sites would not be readily visible.
	A full range of interpretive techniques (e.g., kiosks, wayside exhibits, signs, brochures, on-site programs) would be used.	A full range of interpretive techniques (e.g., kiosks, wayside exhibits, signs, brochures, on-site programs) would be used.	A selected range of interpretive techniques (e.g., waysides, signs, brochures, on-site programs) would be used.	NA	A selected range of interpretive techniques (e.g., signs, trailhead kiosks, hand-outs) would be used.	A selected range of interpretive techniques (e.g., signs, trailhead kiosks, hand-outs) would be used.	A limited range of interpretive techniques (e.g., handouts, visitor contacts) would be used.	There would be no interpretation of historic properties.
	Uses would be for public enjoyment and/or administrative use.	Uses would be for public enjoyment and/or administrative use.	Uses would be for public enjoyment and/or administrative use.	NA	NA	Uses of some historic structures would be managed for public and/or administrative use.	Uses of some historic structures would be managed for public and/or administrative use.	There are no historic structures in this zone.
VISITOR OPPORTUNITIES	Many opportunities to visit educational and recreational facilities, stay overnight in park/concession-run lodging or campgrounds, and purchase food/ supplies/gifts within a national park context.	Many opportunities to enjoy park scenery, have educational experiences, and participate in trail/water-based day use recreation.	Opportunities to participate in trail and water-based recreation and choose among a range of less-developed types of camping.	There would be opportunities for river-based recreation, except during closures.	There would be opportunities to participate in primitive recreation in a coastal wilderness.	There would be opportunities to appreciate pristine wilderness resources and character and participate in primitive recreation.	There would be more opportunities to appreciate pristine wilderness resources and character and participate in primitive recreation than in the wilderness trail zone.	This zone would have the most opportunities to appreciate the pristine wilderness resources and character, without trails and related facilities, and partici-pate in primitive recreation.
	There would be minor risk and challenge.	There would be minor risk and challenge.	There would be some risk and challenge.	There would be more opportunities for risk and challenge.	There would be more risk and challenge in proportion to remoteness, terrain, and tides.	There would be increasing risk and challenge in proportion to remoteness, terrain, or tides.	There would be more risk and challenge in proportion to remoteness, terrain, or tides.	This zone would have the most risk and challenge in proportion to remoteness, terrain, or tides.
	There would be few opportunities for solitude, remoteness, and presence of natural sounds.	There would be some opportunities for solitude, remoteness, and presence of natural sounds.	There would be more opportunities for solitude, remoteness and presence of natural sounds.	There would be more oppor-tunities for solitude, remote-ness, and presence of natural sounds if current conditions change (i.e., roads and facilities are removed from river zone as a result of natural processes).	There would be more opportunities for solitude, remoteness, and presence of natural sounds.	There would be opportunities for solitude proportional to remoteness and presence of natural sounds.	There would be more opportunities for solitude and remoteness and presence of natural sounds.	This zone would have the most opportunities for solitude and remoteness and presence of natural sounds.

	FRONTCOUNTRY ZONES			SPECIAL ZONES		WILDERNESS ZONES		
Topic	**Development Zone**	**Day-Use Zone**	**Low-Use Zone**	**River Zone**	**Intertidal Reserve Zone**	**Wilderness Trail Zone**	**Primitive Wilderness Zone**	**Primeval Wilderness Zone**
VISITOR OPPORTUNITIES (cont.)	Recreational opportunities would include activities such as camping, motorized and nonmotorized boating, walking, swimming, and bicycling.	Appropriate activities would include: scenic driving (provides opportunities for intermediate and distant views of lakes, ocean, and mountains), motorized and nonmotorized boating, hiking, swimming, fishing, and bicycling.	Appropriate activities would include camping, motorized and nonmotorized boating, hiking, swimming, fishing, and bicycling.	Appropriate activities might include: fishing, motorized and nonmotorized boating, rafting, swimming, nature viewing, and wildlife watching.	Appropriate activities include hiking, nature viewing, collecting of shells and wood, and wildlife watching. There would be no harvest of mussels, hard shell clams (butter and little neck), gooseneck barnacles, surf smelt, or Dungeness crabs Surf fishing would be permitted in accordance with existing regulations.	Appropriate activities would include: hiking, nature viewing, wildlife watching, fishing, mountaineering, nonmotorized/hand-powered boating, stock use, and camping.	Appropriate activities would include: hiking, nature viewing, wildlife watching, fishing, mountaineering, nonmotorized/hand-powered boating, and camping.	Appropriate activities would include: hiking, nature viewing, wildlife watching, fishing, mountaineering, nonmotorized/hand-powered boating, and camping.
	Use areas would be designed to reduce or avoid user conflicts.	Use areas would be designed to reduce or avoid user conflicts.	Use areas would be designed to reduce or avoid user conflicts.	Use areas might be designed to reduce or avoid user conflicts, to ensure the safety of park visitors, or to improve resource conditions. For example, areas might be closed to visitor use seasonally or permanently, or types of use and/or activities might be limited as necessary to protect the floodplain and processes.	Use areas might be designed to reduce visitor conflicts or for resource protection.	Use areas might be designed to reduce visitor conflicts or for resource protection.	Use areas might be designed to reduce visitor conflicts or for resource protection.	Use areas might be designed to reduce visitor conflicts or for resource protection.
Encounter rates	Probability of meeting other visitors on a regular basis would be very high to extremely high.	Probability of meeting other visitors and parties would be high to extremely high, and might vary seasonally.	Probability of meeting other visitors on a regular basis would be low to moderate.	Probability of meeting other visitors on a regular basis would be low to moderate.	The probability of meeting visitors on a regular basis would be low to moderate in these areas.	Probability of meeting other visitors on a regular basis would be low to high.	Probability of meeting other visitors on a regular basis would be low.	Probability of meeting other visitors on a regular basis would be extremely low.
	Areas might be crowded, but use levels might vary seasonally.	Areas might be crowded, but use levels might vary seasonally.	Sometimes visitors would be free of sight and sound of others — they might find quiet or solitude.	Sometimes visitors would be free of sight and sound of others — they might find quiet or solitude.	Sometimes visitors would be free of sight and sound of others – they might find quiet or solitude.	Sometimes visitors would be free of sight and sound of others — they might find quiet or solitude.	Visitors would often be free of sight and sound of others — would likely find quiet or solitude.	Visitors would very often be free of sight and sound of others — they would very likely find quiet or solitude.
	There would be a very high likelihood of encountering park staff.	There would be a moderate to high likelihood of encountering park staff.	There would be a moderate likelihood of encountering park staff.	There would be a low likelihood of encountering park staff in areas with no facilities or after facilities and roads have been removed from the designated river zones.	There would be a low to moderate likelihood of encountering park staff.	There would be a moderate to high likelihood of encountering park staff.	There would be a very low likelihood of encountering park staff.	There would be a very low likelihood of encountering park staff.
Education, Orientation, and Way-finding	Full range of educational services would be provided on site, including personal services, wayside exhibits, visitor centers, and ranger stations.	Full range of educational services would be provided on site, including personal services, wayside exhibits, visitor centers, and ranger stations.	Some educational services might be provided, such as signs.	Some educational services might be provided, such as signs.	NPS staff would work with the Olympic Coast National Marine Sanctuary to enhance education and outreach on and offsite. Education and outreach would focus on the importance of intertidal reserves.	Wilderness education, orientation, and information would be provided on site in some areas.	Wilderness education, orientation, and information might be provided on site, but most would be provided offsite or at trailheads.	Wilderness education would not be provided within this zone. It would be provided in other wilderness zones or off-site.
	Orientation and information would be provided at trailheads, along pedestrian and vehicular routes and at parking lots.	Orientation and information might be provided at trailheads, along pedestrian and vehicle routes, and at parking lots.	Orientation and information might be provided at trailheads.	Some orientation and information might be provided at trailheads in other zones.	Orientation and information would be provided at trailheads.	Location/ direction/ mileage signs might be provided at trail junctures.	Location/ direction/ mileage signs would not be provided.	No location, directional, or mileage signs would be provided.

	FRONTCOUNTRY ZONES			SPECIAL ZONES		WILDERNESS ZONES		
Topic	**Development Zone**	**Day-Use Zone**	**Low-Use Zone**	**River Zone**	**Intertidal Reserve Zone**	**Wilderness Trail Zone**	**Primitive Wilderness Zone**	**Primeval Wilderness Zone**
Education, Orientation, and Way-finding (cont.)	Way-finding to activities and facilities would be easy and might include elements such as fences and paving to direct use.	Way-finding to activities and facilities would be easy and might include elements such as temporary barriers, fencing, signs and paving to direct use.	Way-finding would be moderately easy. Some trail and directional information would be provided. Where the zone is along a road, there could be temporary barriers, fencing, or signs to direct use. Map-reading skills might be needed.	Directional signs could be provided in this area (e.g. at boat launches).	Directional signs might be provided.	Way-finding would be easy to moderate depending on area. Map-reading, climbing, and orienteering skills might be necessary.	Way-finding would be moderate to very difficult depending on area and remoteness. Map-reading, climbing, and mountaineering and orienteering skills would often be necessary.	Way-finding would be moderate to very difficult depending on area and remoteness. Map-reading, climbing and mountaineering and orienteering skills would often be necessary.
Stock use *<u>Note:</u> Stock would generally be restricted from some trails and sites and from camping above 3,500' elevation. Some stock use might be restricted to protect native species.*	Stock use would be allowed in designated areas.	Stock use would be allowed in designated areas.	Stock use would be allowed in designated areas.	Stock use may or may not be allowed.	Stock use would not be allowed.	Stock use would be allowed only on trails. Stock use would not be allowed on wilderness beaches. Certified weed-free feed would be required. Areas might be closed to stock to protect resources.	Stock use would not be allowed.	Stock use would not be allowed.
	No stock camping would be allowed.	No stock camping would be allowed.	Stock camping would be allowed in designated areas.	No stock camping would be allowed.	NA	Camping with stock might be allowed, but only at designated sites.	NA	NA
	Grazing would not be allowed.	Grazing would not be allowed.	Grazing might be allowed.	Grazing would not be allowed.	NA	Grazing might be allowed in some areas.	NA	NA
Boating *<u>Note:</u> Personal watercraft would continue to be prohibited under any scenario.*	Motorized and nonmotorized boating would be allowed.	Motorized and nonmotorized boating would be allowed.	Motorized and nonmotorized boating would be allowed.	Motorized and/or nonmotorized boating may be allowed, or it may be restricted for safety or for the protection of park resources.	Landing of watercraft would not be permitted (it is currently not permitted along entire coastal portion of the park).	Only nonmotorized/hand-powered boating would be allowed in portions of the trail zone adjacent to and including waterways.	Only nonmotorized/hand-powered boating would be allowed in portions of the primitive zone adjacent to and including waterways.	Only nonmotorized/hand-powered boating would be allowed in the portions of the primeval zone adjacent to and including waterways.
	Use areas might be restricted or limited based on safety, visitor conflicts, resources protection, etc.	Use areas might be restricted or limited based on safety, visitor conflicts, resources protection, etc.	Use areas might be restricted or limited based on safety, visitor conflicts, resources protection, etc.	Use areas might be restricted or limited based on safety, visitor conflicts, resources protection, etc.	NA	Use areas might be restricted or limited based on safety, visitor conflicts, resources protection, etc.	Use areas might be restricted or limited based on safety, visitor conflicts, resources protection, etc.	Use areas might be restricted or limited based on safety, visitor conflicts, resources protection, etc.
APPROPRIATE FACILITIES General Description	Primarily, paved and unpaved roads/parking areas, visitor services facilities, and park operational facilities would be allowed. The majority of park operational and concession facilities would be in this zone. Various types of development would be separated to provide desired experience, safety, fire protection, and ability to work.	Primarily day use educational/ recreational facilities and services, paved and unpaved roads/parking, with some related park operational facilities would be allowed.	Primarily small-scale recreational facilities, limited visitor services, paved and unpaved roads, parking, and some minor park operational facilities would be allowed.	In areas where roads and or facilities were removed due to the river meander or flooding, NPS staff would assess options to provide access, including, but not limited to the construction of narrow, temporary, and/or seasonal-use gravel roads, boat ramps, trailheads, or other facilities, as long as desired natural resource conditions could be met.	Some designated campsites and facilities (e.g. toilets) might be allowed adjacent to the intertidal reserve zone. Limited research and monitoring equipment and resource signs might be present.	Trails with some designated campsites and facilities (e.g., trail shelters, toilets, and trail bridges/foot logs) would be allowed. Limited administrative facilities (e.g. ranger stations and associated facilities), research/ monitoring/radio facilities and equipment and boundary and resource signs might be present.	Fewer facilities and maintained trails (e.g., very few toilets, bridges, or foot logs) would be present in this zone. Limited research/ monitoring/radio facilities and equipment and boundary and other signs related to resource protection might be present.	Trail-less zone. Areas would be largely free of evidence of human presence. Limited research/ monitoring/radio facilities and equipment and boundary and resource signs might be present.

	FRONTCOUNTRY ZONES			SPECIAL ZONES		WILDERNESS ZONES		
Topic	**Development Zone**	**Day-Use Zone**	**Low-Use Zone**	**River Zone**	**Intertidal Reserve Zone**	**Wilderness Trail Zone**	**Primitive Wilderness Zone**	**Primeval Wilderness Zone**
Trails *Note: See subsequent glossary of terms for trail types.*	Maintained trail types would include nature, all-purpose, multipurpose bicycle, secondary, foot, and primitive trails. Some trails would be universally accessible.	Maintained trail types would include nature, all-purpose, multipurpose bicycle, secondary, foot, and primitive trails. Some trails would be universally accessible.	Maintained trail types would include nature, all-purpose, multipurpose bicycle, secondary, foot, and primitive trails. Some trails would be universally accessible.	Some trails would be maintained, while unwanted trails would be removed. Some trails may be removed as a result of allowing natural processes to occur.	There are no maintained trails in intertidal reserve zones. There are trailways nearby, and some maintained overland and headland trails that provide access between coastal areas. Routes could be established to protect resources. Some directional signs might be in place to direct visitors away from critical resource areas or for safety reasons.	Maintained trail types would include nature, all-purpose (open to hikers and stock), secondary, foot, and primitive trails. Some trails would be universally accessible.	Maintained trail types would include only primitive trails.	No trails.
Roads and Parking	Access is by paved or unpaved two-lane roads. Pullouts, scenic overlooks, viewpoints, parking areas, and access to park attractions and trailheads would be provided. Most parking areas would be paved with defined edges.	Access is by paved or unpaved one or two-lane roads. Pull-outs, scenic overlooks, viewpoints, parking areas, and access to park attractions and trailheads would be provided. Some paved and unpaved parking areas with defined edges would be provided.	Access is by paved or unpaved roads. Some roads might be less than two lanes wide and have pullouts for passing. Parking areas and access to park attractions and trailheads would be provided. Smaller parking areas might not be paved and might be defined by natural elements (e.g., logs and rocks).	Roads may or may not be provided depending on river processes.	There would be no roads and no parking.	NA	NA	NA
	Vehicular bridges would be provided.	Vehicular bridges would be provided.	Vehicular bridges or low water crossings might be provided.	Low-water crossings and bridges may be provided if it can be accomplished in such as way as to meet the desired resource conditions.	NA	NA	NA	NA
Campgrounds and Campsites	Developed campgrounds would include well-defined individual or group campsites.	There would be no camping in day-use zones.	Camping opportunities in low-use zone areas include smaller campgrounds with less developed individual sites and group campsites.	NA	Camping would only be allowed in designated sites outside or adjacent to the intertidal reserve zone.	Sites for camping would be designated along the trail system, on wilderness beaches, and on some gravel bars.	Camping would be at designated sites or on durable surfaces.	No established campsites would exist in this zone. Camping would be on durable surfaces.
	Developed campgrounds with up to 250 sites would offer a range of car camping experi-ences from tent to RV. Campgrounds in the development zone would have flush toilets and cold running water.	NA	Campgrounds in the low use zone would generally contain less than 50 sites and have vault toilets and no potable water.	NA	NA	NA	Recognizable campsites might exist, but they are small and occur infrequently.	Camping impacts are not evident.
	Campgrounds would generally be maintained at current levels, but sites and facilities might be adjusted or modified for resource or visitor protection.	NA	Campgrounds would generally be maintained at current levels, but sites and facilities might be adjusted or modified for resource or visitor protection.	NA	Limits on campers might be established in areas adjacent to the intertidal reserve zones, with some areas closed to camping for resource protection.	Limits on campers might be established with some areas closed to camping for resource protection.	Limits on campers might be established with some areas closed to camping for resource protection.	Limits on campers might be established with some areas closed to camping for resource protection.

THE ALTERNATIVES

This *Draft General Management Plan / Environmental Impact Statement* presents four alternatives: the no-action alternative (alternative A, continuation of existing management and trends); alternative B (emphasizing resource protection); alternative C (emphasizing visitor opportunities), and alternative D, the National Park Service management preferred alternative (a combination of the other action alternatives.).

Each of the action alternatives consists of the following elements:

- an overall management concept and general management strategies
- a description of how zones would be applied to the different areas of the national park under each alternative
- potential boundary adjustments, land purchases, and easements

The no-action alternative is included as a baseline for comparing the environmental consequences of implementing each alternative.

The goal of the four alternatives is to express the range of what the public and the National Park Service want to see accomplished with regard to natural resource conditions, wilderness resource character conditions, cultural resource conditions, visitor use and experience, visitor access, activities, and facilities at Olympic National Park. All of the alternatives considered reflect the park's desired conditions, but components of each alternative may meet the desired conditions to a lesser or greater extent.

The management zones are incorporated into the alternatives. Each of the alternatives would apply the zones differently, but all would support the park's purpose and significance, address issues of concern, avoid unacceptable resource impacts, meet the park's long-term goals, and respond to differing public concerns.

The implementation of any alternative will depend on future funding and in some cases a more detailed environmental analysis. The approved plan establishes a vision of the future that will guide daily and yearly management of the national park, but full implementation could take many years.

IDENTIFICATION OF THE NPS MANAGEMENT PREFERRED ALTERNATIVE

The development of a management preferred alternative was accomplished between 2003 and 2004 and involved evaluating the alternatives with the use of an objective analysis called "choosing by advantages." This process determines the benefits and disadvantages of each alternative relative to the following factors:

- protecting natural resources and processes
- protecting cultural resources
- providing orientation and education for visitors
- providing visitor access and recreational opportunities
- protecting the health, safety, and welfare of the public and park employees
- improving park operational efficiency and sustainability
- ensuring compatibility of the park's actions with its neighbors and the surrounding ecosystem

This comparison helped the park planning team to determine the actions that would be most advantageous to the resources and the public.

The costs of implementing the alternatives were also considered. For the purposes of cost estimating, general assumptions were made regarding the amounts and size of development or restoration. These assumptions are

then carried across all alternatives so that comparable costs can be considered for each alternative. Costs identified in the general management plan are not intended to replace more detailed consideration of needs, sizes, and amounts of future development. They should not be used as a basis for funding requests or budgeting. Cost information is summarized in table 2. These costs only relate to NPS capital development and do not include costs by other public or private entities for items of work that support the alternatives.

The National Park Service recognizes that this is a long-term plan, and in the framework of the plan, park managers would take incremental steps to reach park management goals and objectives. Although some of the actions can be accomplished with little or no funding, some actions would require more detailed implementation plans, site-specific compliance, and additional funds. The park would actively seek alternative sources of funding, but there is no guarantee that all the components of the plan would be implemented.

TABLE 2: SUMMARY OF COMPARATIVE COSTS (FY 2005 DOLLARS)*

	Alternative A	Alternative B	Alternative C	Alternative D
Annual Reoccurring Costs (Base plus Fee)	$12,500,000	$12,500,000	$12,500,000	$12,500,000
Cyclic Maintenance Costs* PMIS Data 2006-2010	$5,093,626	$5,093,626	$5,093,626	$5,093,626
Initial Capital Development Costs — New Facilities	$ 0	$3,000,000–$6,000,000	$9,000,000–$13,000,000	$7,000,000–$11,000,000
Total Life Cycle Costs (Present Worth)** (Including Staff Increases)	$128,000,000	$169,000,000	$182,000,000	$175,000,000
Road and Facility Removal and Restoration Costs	$45,000	$18,100,000	$500,000	$520,000
Land Protection/ Boundary Adjustments	$500,000	$24,000,000-$30,000,000	$15,000,000-$20,000,000	$18,000,000-$24,000,000

*Note: Figures are rounded. The *Olympic National Park Business Plan* identified $6.6 million in unmet needs parkwide. Since that time, a reduction of 30 FTEs has occurred in the park.
**Note: Total Life Cycle Costs — The total cost of a system, facility, or other product computed over its useful life. It includes all relevant costs involved in acquiring, owning, operating, maintaining, and disposing of the system or product over its useful life or other specified period of time, including environmental and energy costs. The present-worth method is used in determining life -cycle costs. The present-worth method is an economic method that requires conversion of costs and benefits by discounting future cash flows to a baseline date.

GENERAL DESCRIPTION OF THE ALTERNATIVES

The alternatives in this *Draft General Management Plan / Environmental Impact Statement* are closely related because they all meet the park's purpose and significance and they were developed using the desired conditions. Some components of each alternative may meet the desired conditions more successfully than another alternative. For example, alternative B may better meet the desired condition of protecting floodplains due to road closures and restoring the natural river processes, but it may not fully meet the desired conditions for visitor access and opportunities.

This section describes the basic concept of each alternative and provides a summary of differences between alternatives. A detailed discussion of each alternative for each park area and for wilderness is included on the alternative maps later in this section.

ALTERNATIVE A — NO ACTION

The no-action alternative, alternative A, is required by the National Environmental Policy Act and provides the baseline from which to compare other alternatives. Under this alternative current management practices would continue. The park would be managed in accordance with approved management documents.

Park resources would continue to be protected while educational and recreational opportunities are provided in superlative natural settings. No changes in current management strategies would occur.

Natural resources would be managed in conformance with existing laws, policies, and resource management plans. Cultural resources would be managed according to existing laws, policies, and ongoing treatment programs. Structures or cultural landscapes listed or eligible for listing in the National Register of Historic Places would be managed in accordance with the *Secretary of the Interior's Standards*, which set forth standards for the treatment of historic properties and contain standards for preservation, rehabilitation, restoration, and reconstruction, in accordance with the National Historic Preservation Act.

Cultural resources such as archeological sites, historic trails, routes, cultural landscapes, and structures that have been included within wilderness will be protected and maintained using methods that are consistent with preservation of wilderness character and values and cultural resource requirements. (The Wilderness Act specifies that the designation of any area of the park system as wilderness "shall in no manner lower the standards evolved for the use and preservation of" such unit of the park system under the various laws applicable to that unit (16 USC Section 1133(a)(3)). Thus, the laws pertaining to historic preservation also remain applicable within wilderness.)

No change in the visitor's wilderness recreation experiences would occur.

A variety of educational opportunities on a limited basis would continue to be provided in the park. There would also continue to be outreach programs for school and community groups to improve the general understanding of park resources and research. Education and interpretive facilities would continue to be located at existing sites in the frontcountry.

Roads, trails, and park facilities would remain at approximately their current levels.

No boundary adjustments would be considered under this alternative.

For the purposes of the analysis, zoning reflective of the current conditions was included on the no-action alternative maps. The current zoning is a combination of frontcountry zones (day use, development, and low use zones) and wilderness zones (wilderness trail, primitive, and primeval zones).

ALTERNATIVE B

Alternative B emphasizes cultural and natural resource protection. Natural processes would take priority over visitor access in certain areas of the park. In general, the park would be managed as a large ecosystem preserve emphasizing wilderness management for resource conservation and protection, with a reduced number of facilities to support visitation.

Natural resources protection would receive increased emphasis, and some previously disturbed areas would undergo restoration. Greater emphasis would be placed on identifying, evaluating, and preserving historic properties. Structures or cultural landscapes listed or eligible for listing in the National Register of Historic Places would be managed in accordance with the *Secretary of the Interior's Standards*. Where these resources have been included within wilderness, they will be protected and maintained using methods that are consistent with preservation of wilderness character and values and cultural resource requirements.

Some wilderness recreation experiences would be enhanced from the reduction of trails and related facilities, and there would be more opportunities for solitude in the wilderness. Wilderness suitability studies would be conducted for nonwilderness areas near Lake Crescent and Ozette Lake.

A variety of educational opportunities would be provided in the park with more emphasis on personal guided activities, off-site programs, and web-based education. There would be increased outreach with the area communities, focusing on improving the general understanding of park resources, research, and the protection of resources and natural processes.

Some roads might be moved or closed to protect the natural processes. Some roads might be converted to trails. Some trails might be closed and rehabilitated to protect resources. Transit systems would be explored to provide access to some frontcountry areas. Facilities such as campgrounds and visitor centers might be modified, closed, or moved to protect natural processes. Visitor access and services in sensitive areas would be reduced.

Boundary adjustments for the purposes of resource protection would be considered adjacent to the park in the Ozette, Lake Crescent, Hoh, Queets, and Quinault areas.

When compared with all the alternatives, this alternative would have less frontcountry acreage designated as development, and more acreage designated as low-use and day-use zones. This alternative includes a river zone and an intertidal reserve zone. Within the wilderness, this alternative includes a larger primeval zone and a reduced wilderness trail zone when compared with the other alternatives.

ALTERNATIVE C

Under alternative C, increased visitor opportunities, recreation, and tourism would be emphasized. The natural, cultural, and recreational resources at Olympic National Park would be important regional attractions. Partnerships would be sought to improve park and regional facilities. Access would be retained to all existing frontcountry areas, and increased access would be provided by improving park roads to extend the season of use.

Natural resources would be protected through management actions and resource education programs; however, maintaining access to existing facilities would be a priority in this alternative. Structures and cultural landscapes listed or eligible for listing in the National Register of Historic Places would be managed in accordance with the *Secretary of the Interior's Standards*. Some historic structures may be adaptively reused to achieve preservation and/or administrative objectives. Where these resources have been included within wilderness, they will be protected and maintained using methods that are consistent with preservation of wilderness character and values and cultural resource requirements.

This alternative would accommodate increases in frontcountry visitation and improve access to the wilderness. Fewer opportunities for solitude would be provided. Wilderness suitability studies would be conducted for nonwilderness areas at Ozette Lake.

Educational opportunities would be expanded and could include regional learning centers. There would be increased outreach programs focusing on improving the general understanding and protection of park resources, research, and visitor opportunities.

New or expanded interpretation and education facilities might be constructed within or outside the park. The National Park Service would partner with agencies, area communities, and tribes to develop these facilities.

Roads might be modified or relocated for resource protection, and seasonal transit systems would be studied to provide improved access to existing frontcountry areas. Trails, campgrounds, and related facilities would be improved and/or increased where appropriate and feasible. Some frontcountry trails would be modified for universal accessibility.

This alternative would include a boundary adjustment in the Ozette area.

When compared with the other alternatives, this alternative would have increased acreages zoned as development and day use and decreased acreages of low-use zone areas. This alternative would include an intertidal reserve zone; there would be no river zone. The amount of wilderness designated as wilderness trail would increase, but the most wilderness would be designated as primeval.

ALTERNATIVE D — MANAGEMENT PREFERRED

Alternative D is the management preferred alternative. It was developed using components of the no-action alternative and alternatives B and C using the factors in the "Identification of Management Preferred Alternative" section described previously in this chapter. Under alternative D, management emphasis would be on protecting resources while improving visitor experiences. This would be accomplished by accommodating visitor use, providing sustainable access through mass transit, and concentrating improved educational and recreational opportunities in the developed areas of the park.

Natural processes would be promoted, and some previously disturbed areas would be restored. Management activities would use methods that minimize adverse effects on park resources to the extent possible.

Structures and cultural landscapes listed or eligible for listing in the National Register of Historic Places would be preserved and rehabilitated to retain a high degree of integrity and would be managed in accordance with the *Secretary of the Interior's Standards*. Some historic structures might be adaptively reused to achieve preservation and/or administrative objectives. The park staff would develop a strategy for the maintenance and preservation of historic structures using the existing list of classified structures (see appendix E) and ongoing cultural resource assessments of

condition and history. Where historic structures or cultural landscapes have been included within wilderness, they would be protected and maintained using methods that are consistent with preservation of wilderness character and values and cultural resource requirements.

A variety of educational opportunities would be provided in the park with facility-based contacts and personal guided activities. More web-based education would be provided. Education programs would be coordinated with partners and focus on improving the understanding of the park's natural and cultural resources, biodiversity, research, wilderness, and recreational and visitor opportunities.

Visitor education and interpretation facilities would be retained, but might be relocated reconstructed, or moved to areas within or outside the park to protect resources and provide improved visitor opportunities. The National Park Service would partner with outside agencies and tribes to develop opportunities for regional education and interpretation.

Roads might be modified or relocated for resource protection and/or to maintain vehicular access; seasonal transit systems would be studied to provide improved access to existing frontcountry areas. Trails, campgrounds, and related facilities would be kept at approximately their current levels or might be modified for resource protection, restoration, or visitor experience or to address increased visitation. Some frontcountry trails would be modified for universal accessibility.

This alternative includes boundary adjustments in adjacent lands in the Lake Crescent, Ozette, and Queets areas.

This alternative includes slightly more development zone acreage in the frontcountry when compared with alternative B, and slightly less than alternative C. This alternative has more day-use zone acreage than alternative B, and more low-use zone acreage than alternative C. This alternative does not include a river zone, but does include an intertidal reserve zone. This alternative includes slightly more wilderness trail zone and slightly less primitive zone than alternative B, but more primeval zone than alternative C.

The following alternative maps show different zoning based on the overall intent (concept) of each of the alternatives. The first set of maps show the alternative zoning in the frontcountry areas of the park. These are followed by maps showing the wilderness zone for each alternative. The no-action alternative includes zoning based on current park management to make it easier for the reader to compare the alternatives. The zones for each alternative are approximate.

VISITOR USE AND USER (CARRYING) CAPACITY

USER CAPACITIES

General management plans are required to address user capacity (formerly referred to as visitor carrying capacity) for national park system units. The National Park Service defines user capacity as the type and level of visitor use that can be accommodated while sustaining desired resource conditions and visitor experiences in the park. User capacity does not necessarily involve identifying a number for visitor use, nor does it necessarily imply closures or use limits. User capacity cannot be measured simply as a number of people because impacts on desired resource conditions and visitor experience are often related to a variety of factors, including the number of people, the types of activities people engage in, where they go, what type of resources are in the area, and the level and type of management presence.

The user capacity process for national parks typically involves the following steps:

1. Identify desired conditions for resources and visitors.
2. Identify indicators (things to monitor to determine whether desired conditions are being met).
3. Identify standards (limits of acceptable change) for the indicators.
4. Monitor indicators.
5. Take management actions to ensure that standards are met.
6. Evaluate and make adjustments based on new information and lessons learned.

General management plans provide a broad approach to addressing user capacity, identifying desired conditions for resources and visitors, and focusing more specific monitoring and management on areas where action is most likely needed to achieve conditions. Implementation-level plans, such as the future wilderness management plan, would provide more specific direction for addressing user capacity.

The following section identifies the types of indicators that may be monitored and a range of actions that may be taken when indicators are not showing progress towards meeting the desired conditions.

Development Zone

The development zone includes the high-use frontcountry areas of the park. Levels of use are primarily controlled by the physical capacity of facilities such as parking areas, campgrounds, and visitor centers. General information would continue to be collected, such as visitation trends, visitor complaints, parking problems, crowding in the visitor centers, vandalism, increase in law enforcement incidents, accidents, waste quantity, and requests for special uses. This information would be analyzed to watch for trends. More specific indicators and standards would be established to monitor invasive plants and social trails.

The range of management actions that might be undertaken if unacceptable impacts occur could include increasing education, developing transportation studies, designing facilities to confine or reduce impacts, removing exotic plants, and restoring damaged areas.

Day Use Zone

The day use zone is generally a high-use zone at or near developed areas with no overnight lodging or camping and along paved roads in the park. Levels of use in this zone are primarily controlled by the physical capacity of facilities such as trails, parking areas, and visitor centers. Park staff would continue to collect the same information as described in

the development zone. This information would be analyzed to watch for trends.

In addition, indicators would be monitored to ensure desired resources conditions are met. These indicators could include the physical user capacity of current facilities such as roads, parking lots, and buildings; the number of visitors at one time at popular destinations; the condition of natural and cultural resources; visible impacts such as the presence of visitor-created trails and unplanned widening of trails; the presence of invasive plants; and visitor satisfaction.

The range of management actions that might be undertaken to address unacceptable impacts in the day use zone include providing seasonal transit to popular destinations, increasing education, modifying facilities, and encouraging visitors to come during less crowded times or to visit less popular park areas.

Low-Use Zone

Areas within the low-use zone include those frontcountry areas that have fewer facilities and services and provide a more remote or isolated visitor experience. Smaller, more primitive campgrounds are provided, trailheads are provided, and trails may connect this zone with other zones. Levels of use are primarily controlled by facilities such as parking areas and campsites.

Indicators in this zone may include the condition of important resources (riparian communities, indicator species, soils, vegetation cover, archeological sites, water quality, and natural soundscape) and visible impacts (such as the presence of visitor-created trails, trash, or invasive plants). Indicators would be monitored to ensure that desired resource condition standards are met. Resource management plans contain details for monitoring.

Types of management actions that may be undertaken in the low-use zone to address changes in resource conditions include defining road and parking facility edges so that parking is limited to desired locations, defining trailheads and river access points, restoring disturbed sites, improving trail delineation or hardening trails, removing invasive plants and revegetating using native plants, and expanding educational programs.

River Zone (Alternative B only)

The river zone would be applied to selected rivers in the frontcountry where self-sustaining natural riverine systems would function largely untouched by humans, or where restoration is feasible. Indicators used in this zone might include the condition of important resources such as riparian and aquatic communities, indicator species, and water quality, and visible impacts such as the presence of trash and invasive plants. A combination of indicators would be monitored in specific popular or resource-sensitive areas to ensure that desired resource conditions are maintained.

The range of management actions that might be undertaken to address changes in resource conditions include removing facilities or roads, closing and rehabilitating unwanted trails, closing areas seasonally, removing invasive plants and revegetating using native plants, and expanding educational programs.

Intertidal Reserve Zone

The intertidal reserve zone would be applied to those nearshore areas (between high tide and low tide) within the coastal portion of Olympic National Park that are critical to protect areas of high biodiversity as "seed sources" for adjacent areas. These are considered by biologists as the most important areas in the park coastal strip that warrant measures to protect the ecosystem for future

generations. Considered for zone designation are the following areas: Point of Arches, Cape Alava to Sand Point, 2-Bit Point, Cape Johnson/Hole-in-the-Wall, Teahwhit Head, Taylor Point, and Goodman Creek to Hoh River.

Protective measures would include mandatory no-harvest zones to preserve seed sources and more structured visitor management. Currently, the following organisms may be harvested in appropriate seasons with appropriate licenses: mussels, hard shell clams (butter and little neck), gooseneck barnacles, surf smelt, and Dungeness crabs. The harvesting of these organisms and other live organisms would no longer be permitted in the designated intertidal reserve zones; however, surf fishing would be permitted in accordance with existing regulations.

The gathering of wood and shells would be permitted in accordance with existing regulations.

Nothing in this zoning would diminish existing tribal treaty rights.

Indicators in this zone might include the condition of intertidal habitats and organisms, community structure and complexity, evidence of trampling, visitor use levels, and visitor experiences.

The range of management actions that might be undertaken to address changes in resource conditions includes expanding educational programs (primarily off site and some onsite), limiting campsites and overnight use in adjacent wilderness areas, limiting/restricting tide pool access or designating routes, limiting group size, defining a maximum number of permits for these areas, limiting commercial use, and prohibiting fire.

Wilderness Zones (Wilderness Trail Zone, Primitive Wilderness Zone, and Primeval Wilderness Zone)

Management of visitor use in the designated and potential wilderness would be determined in the future Olympic National Park wilderness management plan. Park staff would monitor resource conditions, visitor use, and trends in the wilderness. General information, such as permit information and follow-up use data would continue to be collected. The number of permits issued may be adjusted to protect park resources and the visitor experience. Specific resource and visitor experience monitoring would continue.

Indicators in these zones might include the condition of important resources (meadow condition, riparian communities, indicator species, soil erosion, vegetation cover, snow fields, historic structures, water quality, natural soundscape); visible impacts (the presence of social way trails, bare ground campsites, other campsite conditions, trash, down-wood availability, invasive plants); and visitor experience values (such as encounter rates, camp area capacity, human or stock excrement, and aesthetics). A combination of indicators would be monitored in specific popular or resource-sensitive areas to ensure that desired resource conditions are maintained and that desired visitor experiences are achieved. The wilderness management plan would include a wilderness monitoring program that would be tied directly to plan indicators and standards to achieve wilderness management objectives.

A variety of actions may be undertaken to address changes in resource conditions or visitor experiences including: managing the resource (removing invasive plants, rehabilitating damaged areas); managing user activities (modifying permit numbers to reduce or shift use, modifying visitor activities); managing information (educating and informing visitors and the public); managing facilities (modifying trails,

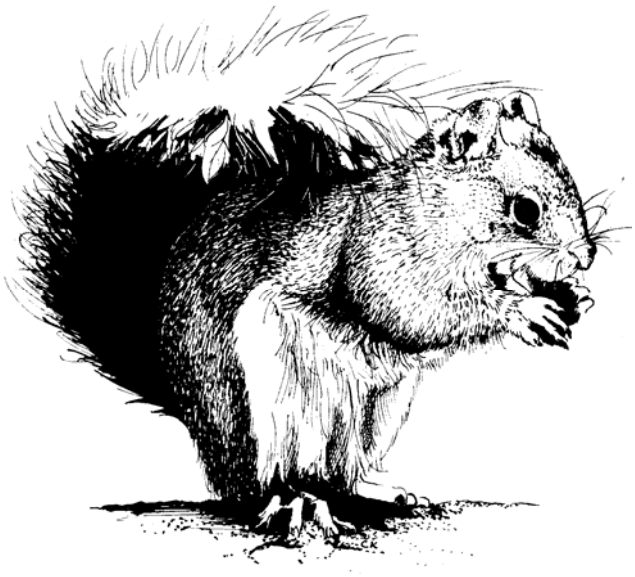
campsites, trailheads); and managing administrative practices (changing wilderness staff levels, altering permit requirements for special uses). A more detailed list would be developed for inclusion in the park's wilderness management plan.

IMPLEMENTATION

Frontcountry areas of the park do not face major user capacity issues in the foreseeable future. Most existing facilities provide good visitor opportunities and, based on projected trends, will continue to function well. Some facilities need improvements as they are inadequate to meet current and future visitor needs. For example, the frontcountry trails do not adequately support universal accessibility. Certain frontcountry visitor centers are extremely crowded during the summer season, and the displays are outdated. Occasionally roads in the more popular areas are busy, parking areas are full, and parking occurs off the pavement or along roads. Social trails are present in the frontcountry areas in picnic areas, near frontcountry trails, and in campgrounds and near overlooks. These social trails create impacts on soil and vegetation. Nonnative plants are present along roads and in developed areas.

The overall approach to user capacity in frontcountry areas is to contain visitor impacts within the developed area and monitor general trends for change. Change would trigger site specific monitoring and management.

Of greater concern is the wilderness. User capacity within the wilderness is directly related to the level of use that can be sustained while meeting wilderness standards and guidelines. Use levels in the wilderness, especially along the coast and in subalpine lake basins, are consistently high. As a result, the park faces major user capacity issues. An increase in use may cause changes to visitor experiences and impacts on resources. The park staff collects information regarding numbers of users and where they are going from the overnight permits. More specific indicators and standards will be developed in the wilderness management plan to maintain or achieve desired conditions.



MITIGATIVE MEASURES COMMON TO ALL ALTERNATIVES

Mitigative measures are the practicable and appropriate methods that would be used under any alternative to avoid and/or minimize harm to park natural and cultural resources, wilderness, visitors and the visitor experience, and socioeconomic resources. These mitigative measures have been developed by using existing laws and regulations, best management practices, conservation measures, and other known techniques from past and present work in and around Olympic National Park.

The general management plan provides a management framework for the park. Within this broad context, the alternatives include the following measures that may be used to minimize potential impacts from the implementation of the alternatives. These measures would be applied to all alternatives, subject to funding and staffing levels. Additional mitigation would be identified as part of implementation planning and for individual projects to further minimize resource impacts.

MANAGEMENT AND PROTECTION OF NATURAL RESOURCES

Air Quality

- Implement a dust abatement program. Standard dust abatement measures could include the following elements: water or otherwise stabilize soils, cover haul trucks, employ speed limits on unpaved roads, minimize vegetation clearing, and revegetate with native species.
- Minimize NPS vehicle emissions by using the best available technology whenever possible.
- Encourage the public and commercial tour companies to employ methods that reduce emissions.
- Employ sustainable designs that reduce energy demands, thus reducing pollutant production.

Soundscapes / Natural Quiet

- Implement standard noise abatement measures during park operations, including: scheduling to minimize impacts in noise-sensitive areas, using the best available noise control techniques wherever feasible, using hydraulically or electrically powered impact tools when feasible, and locating stationary noise sources as far from sensitive uses as possible.
- Site and design facilities to minimize objectionable noise.
- Minimize idling of motors when power tools, equipment, and vehicles are not in use.
- Muffle above ambient noise whenever possible to reduce noise impacts.

Night Skies (Lightscapes)

- Replace existing outdoor lighting in the park with fixtures that do not contribute to nighttime light pollution.
- In frontcountry zones, install energy-efficient lights equipped with timers and/or motion detectors so that light would only be provided when it is needed to move safely between locations.
- In frontcountry zones, use low-impact lighting, such as diffused light bulbs, and techniques such as downlighting to prevent light spill and preserve the natural lightscape.

Hydrologic Systems including Wetlands

- Time projects adjacent to or in waterways to occur during the dry season (late summer).
- Implement erosion control measures, minimize discharge to water bodies, and regularly inspect construction equipment for leaks of petroleum and other chemicals to prevent water pollution. Minimize the use of heavy equipment in a waterway.
- Integrate runoff control systems into the designs of larger parking areas near water resources to minimize water pollution.
- Develop sediment control and prevention plans for projects that could impact water quality.
- Delineate wetlands and apply protection measures during projects. Perform project activities in a cautious manner to prevent damage caused by equipment, erosion, siltation, etc.
- Delineate 100-year floodplains and minimize development in these areas.

Soils

- Build new facilities on soils suitable for development. Minimize soil erosion by limiting the time that soil is left exposed and by applying other erosion control measures, such as erosion matting, silt fencing, and sedimentation basins in construction areas to reduce erosion, surface scouring, and discharge to water bodies. Once work is completed, revegetate construction areas with appropriate native plants in a timely period.
- Work with the Natural Resource Conservation Service to produce a soil survey of Olympic National Park to provide some of the information needed for sustainable soil management.

Vegetation

- Monitor areas used by visitors (e.g., trails, campsites) for signs of native vegetation disturbance. Use public education, revegetation of disturbed areas with native plants, erosion control measures, and barriers to control potential impacts on plants from erosion or social trails.
- Designate river and stream access/crossing points, and use barriers and closures to prevent trampling and loss of riparian vegetation.
- Develop revegetation plans for disturbed areas and require the use of genetically appropriate native species. Revegetation plans should specify species to be used, seed/plant source, seed/plant mixes, site-specific restoration conditions, soil preparation, erosion control, ongoing maintenance and monitoring requirements, etc. Salvaged vegetation should be used to the extent possible.
- Implement a noxious weed control program. Standard measures could include the following elements: use only weed-free materials for road and trail construction, repair, and maintenance; ensure equipment arrives on site free of mud or seed-bearing material; certify all seeds and straw material as weed-free; identify areas of noxious weeds pre-project; treat noxious weeds or noxious weed topsoil before construction (e.g., topsoil segregation, storage, herbicide treatment); when depositing ditch spoils along the roads, limit the movement of material to as close as possible to the excavation site; scrupulously and regularly clean areas that serve as introduction points for invasive plants (campgrounds, staging areas, maintenance areas, and corrals); revegetate with genetically appropriate native species; inspect rock and gravel sources to ensure these areas are free of noxious weed species; and monitor locations of ground-disturbing operations for at least

three years following the completion of projects.

Fish and Wildlife

- Employ techniques to reduce impacts on fish and wildlife, including visitor education programs, restrictions on visitor and park activities, and law enforcement patrols.
- Implement a wildlife protection program. Standard measures would include project scheduling (season and/or time of day), project monitoring, erosion and sediment control, fencing or other means to protect sensitive resources adjacent to project areas, disposing of all food-related items or rubbish, salvaging topsoil, and revegetating.
- Consult with NOAA Fisheries for projects within essential fish habitat.

Special Status Species

Mitigation actions would occur during normal park operations as well as before, during, and after projects to minimize immediate and long-term impacts on rare, threatened, and endangered species. These actions may vary by project area, and additional mitigation measures may be added depending on the action and location. Many of the measures listed for vegetation, wildlife, and water resources would also benefit rare, threatened, and endangered species by helping to preserve habitat.

- Conduct surveys for rare, threatened, and endangered species as warranted.
- Locate and design facilities/actions/operations to avoid or minimize the removal of rare, threatened, and endangered species habitat. If avoidance is infeasible, minimize and compensate for adverse effects as appropriate and in consultation with the appropriate resource agencies.
- Plan work in areas in or near suitable threatened and endangered bird habitat as late as possible in the summer/fall.
- Conduct work outside of critical periods for the specific species when possible.
- Develop and implement restoration and/or monitoring plans as warranted. Plans should include methods for implementation, performance standards, monitoring criteria, and adaptive management techniques.
- For projects in or near streams, employ appropriate best management practices.
- Implement measures to reduce adverse effects of nonnative plants and wildlife on rare, threatened, and endangered species.
- Carry out surveys and monitoring for special status species.
- Protect and preserve critical habitat features, such as nest trees, whenever possible.

MANAGEMENT AND PROTECTION OF WILDERNESS VALUES

In the park's future wilderness management plan, more specific desired conditions will be developed for wilderness resources, visitor experiences, and management protocols. Standards and guidelines establishing acceptable limits of change and mitigation measures would be developed for each zone. Monitoring would be conducted to ensure that conditions are meeting established standards and to determine if mitigation measures have been successful.

Minimum Requirement Process

The Wilderness Act directs that agencies administer wilderness to preserve the wilderness character. The purpose of the minimum requirement process is to reduce the effects of management on wilderness

character and values. It provides a method for developing, evaluating, and selecting the actions that would be the least intrusive on wilderness character and values, while allowing the administration of the wilderness. The concept is applied to all management actions, programs, and activities within Olympic National Park that might affect wilderness and potential wilderness.

The process involves a determination of whether a proposed management action is appropriate and necessary for the administration of the area as wilderness and does not threaten wilderness resources and character. If the project is found to be appropriate and necessary, then the management method (tool or technique) is selected that would result in the least amount of impact to the wilderness resources and character.

The minimum requirement process provides a formalized method for developing alternative ways to address an issue, and to evaluate each alternative's effects on wilderness character and wilderness resources. If a nonconforming use (i.e., mechanized equipment) is determined to be the minimum and necessary action to achieve wilderness management objectives, the use must conform to the minimum requirement concept.

MANAGEMENT AND PROTECTION OF CULTURAL RESOURCES

The protection of Olympic National Park's cultural resources is essential for understanding the past, present, and future relationship of people with the park environment and the expressions of our cultural heritage. The park would pursue strategies to protect its cultural resources, including museum collections and archeological, historic, ethnographic, and archival resources, while encouraging visitors and employees to recognize and understand their value. The strategies would allow the integrity of the park's cultural resources to be preserved unimpaired. They would also ensure that Olympic National Park is recognized and valued as an outstanding example of resource stewardship, conservation education and research, and public use.

Some of the park cultural resources are within designated wilderness. In accordance with NPS management policies, cultural resources that have been included in wilderness would be protected and maintained according to the pertinent laws and policies governing cultural resources, using management methods that are consistent with the preservation of wilderness character and values (6.3.8). These NPS policies incorporate cultural resource stewardship requirements into the management standards for wilderness areas and reflect the requirements of the Wilderness Act as well as the numerous pieces of cultural resource legislation, including the National Historic Preservation Act, the Archeological Resources Protection Act, the American Indian Religious Freedom Act, the Native American Graves Protection and Repatriation Act, and Executive Order 13007 that addresses government-to-government consultation.

Adverse impacts on properties listed in or determined eligible for listing in the National Register of Historic Places, would be avoided if possible. If adverse impacts could not be avoided, mitigation would be developed through a consultation process with all interested parties. In accordance with NPS management policies, proposed adverse effects would be evaluated to determine whether the proposed actions constitute impairment of significant fundamental park cultural resources.

Archeological Resources

Archeological surveys would precede ground-disturbance required for new construction or removal of eligible historic properties. Known archeological resources would be avoided to the greatest extent possible. If national register-eligible or-listed archeological resources could not be avoided, an appropriate mitigation strategy would be developed in consultation with the state historic preservation officer and associated American Indian tribes.

If unknown archeological resources are discovered during project work, work in the immediate vicinity of the discovery would be halted until the resources could be identified, evaluated, and documented and an appropriate mitigation strategy could be developed, if necessary, in consultation with the state historic preservation office and associated American Indian tribes.

Historic Structures/Buildings

All project work relating to historic structures/buildings would be conducted in accordance with the guidelines and recommendations of the *Secretary of the Interior's Standards for the Treatment of Historic Properties with Guidelines for Preserving, Rehabilitating, Restoring and Reconstructing Historic Buildings*. Typical mitigation measures for historic structures/buildings include measures to avoid adverse impacts, such as rehabilitation and adaptive reuse, designing new development to be compatible with surrounding historic properties, and screening new development from surrounding historic resources to minimize impacts on cultural landscapes and ethnographic resources.

Adaptive use is the best strategy to ensure that buildings remain in good condition. When not being adaptively used, the best approach for preserving these structures is regular preservation maintenance, which ensures that roofs and walls as well as supporting structural elements are maintained in a sound, weather-resistant condition. An example of adaptive use is using historic structures to house park operations.

Historic structures would be maintained or stabilized until appropriate maintenance could be undertaken. Benign neglect would not be considered an appropriate management strategy. No national register-listed or -eligible structure would be removed or allowed to decay naturally without prior review by park and region cultural resource specialists, including approval by the NPS regional director and consultation with the state historic preservation office. Before a national register-listed or –eligible structure is removed, appropriate documentation recording the structure would be prepared in accordance with Section 110(b) of the National Historic Preservation Act, and the documentation would be submitted to the Historic American Buildings Survey (HABS)/Historic American Engineering Record (HAER) or Historic American Landscape Survey (HALS) program.

Cultural Landscapes

All project work relating to cultural landscapes would be conducted in accordance with the guidelines and recommendations of the *Secretary of the Interior's Standards for the Treatment of Historic Properties with Guidelines for the Treatment of Cultural Landscapes*. Typical mitigation measures for cultural landscapes include measures to avoid adverse impacts, such as designing new development to be compatible with surrounding historic properties and screening new development from surrounding cultural landscapes to minimize impacts on those landscapes. Adaptive use is the best strategy to ensure that landscapes remain in good condition.

Ethnographic Resources

The National Park Service would continue to consult with culturally associated Native American tribes on a government-to-government basis to identify ethnographic resources and develop appropriate strategies to mitigate impacts on these resources. Such strategies could include continuing to provide access to traditional use or spiritual areas and screening new development from traditional use areas to minimize impacts on ethnographic resources. Consultations with American Indians linked by ties of kinship, culture, or history to park lands would address the inadvertent discovery of human remains, funerary objects, sacred objects, or objects of cultural patrimony, and all provisions outlined in the Native American Graves Protection an Repatriation Act (25 USC 3001) of 1990 would be followed.

Museum Collections

Mitigative measures related to museum collections consist of conservation of a collection through proper storage, handling, and exhibit of objects as specified in the *NPS Museum Handbook* and NPS Director's Order No. 24, NPS Museum Collections Management.

SCENIC RESOURCES

Mitigative measures are designed to minimize human-made visual intrusions. These include the following:

- Where appropriate, use facilities such as boardwalks and fences to route people away from sensitive natural and cultural resources while still permitting access to important viewpoints.
- Design, site, and construct facilities to minimize adverse effects on natural and cultural resources and visual intrusion.
- Provide vegetative screening, where appropriate.

SOCIOECONOMIC ENVIRONMENT

During the future planning and implementation of the approved management plan for Olympic National Park, the National Park Service would pursue partnerships with tribes, local communities, and county governments to further identify potential impacts and mitigating measures that would best serve the interests and concerns of both the National Park Service and the local communities.

SUSTAINABLE DESIGN AND AESTHETICS

Sustainable practices would be used in the selection of building materials and sources and building location and sitting. Design standards specific to the park would be developed in all repair, rehabilitation, and construction projects.

Projects would use sustainable practices and resources whenever practicable by recycling and reusing materials, by minimizing materials, by minimizing energy consumption during the project, and by minimizing energy consumption throughout the lifespan of the project.

FUTURE STUDIES AND IMPLEMENTATION PLANS NEEDED

After completion and approval of a general management plan for managing the national park, other more detailed studies and plans, including additional environmental compliance (National Environmental Policy Act, National Historic Preservation Act, and other relevant laws and policies) and public involvement would be needed. Those additional studies may include, but would not be limited to, the following.

A wilderness management plan would be prepared addressing the specific management strategies for the Olympic National Park Wilderness.

Land acquisitions and boundary adjustments would be done in accord with an updated and approved Olympic National Park "Land Protection Plan," which would focus on resource protection, visitor use, and operational needs within a priority context. If boundary adjustments are approved, it is envisioned that for the Ozette area, a forest management plan would be developed by the Washington Department of Natural Resources, in collaboration with other partners, including the National Park Service.

Program management plans would be developed, including wildlife management plans and/or recovery plans, to examine the future management direction for wildlife, fish, exotics, and nuisance animals within the park. Olympic National Park will likely have a key role in the development and implementation of recovery plans for bull trout, Ozette Lake sockeye, and Puget Sound Chinook salmon.

A vegetation management plan would be developed. Topics could include the management and monitoring of rare plants and the control and eradication of exotic vegetation.

A Lake Crescent a shoreline protection/ management plan would be developed to focus on water quality and shoreline issues, including issues associated with waste water treatment and development.

If wild and scenic rivers are designated in the park, a river management plan would be developed to address future management strategies and protective measures for designated rivers. NPS staff would use existing and future river reach studies to develop protective and/or restorative measures for rivers and streams in the park.

An air tour management plan would be developed with the Federal Aviation Administration to address the management of air tours and analyze the effects of these flights over the park.

Historic structure reports would be completed on several structures and historic districts in the park, including but not limited to the Elwha ranger station, the headquarters facilities in Port Angeles, the Kestner Homestead, and backcountry structures. Cultural landscape inventories would be conducted to identify the specific strategies and to determine priorities for the management and protection of these resources. Currently there are 27 cultural landscapes identified in the park (see appendix F).

Development concept plans, implementation plans, and site-specific compliance may be necessary for selected actions within the general management plan (such as actions associated with the Kalaloch road realignment).

A North Shore Road/Finley Creek development concept plan would be developed to address the hydrologic and geomorphic issues associated with maintaining year-round vehicle access in this unstable environment and to return Finley Creek to a more naturally functioning and stable condition.

ALTERNATIVES AND ACTIONS CONSIDERED BUT NOT EVALUATED

In the planning process, one action considered was a boundary modification to include land southeast of the Quinault River slightly beyond all potential river meander areas. This would enhance management of elk that occur in this area of the park by providing an easily defined park boundary. The current boundary is the river, which frequently meanders. To accomplish this, several parcels of private land would have to be purchased in accordance with NPS policy. The difficulty of making such purchases and the controversy of such a boundary modification were reasons for not evaluating this action any further in this general management plan.

IDENTIFICATION OF THE ENVIRONMENTALLY PREFERRED ALTERNATIVE

The environmentally preferred alternative is defined as "the alternative that will best promote the national environmental policy as expressed in section 101(b) of the National Environmental Policy Act." Basically, the environmentally preferred alternative would cause the least damage to the biological and physical environment and best protect, preserve, and enhance historic, cultural, and natural resources.

After the environmental consequences of the alternative were analyzed, each alternative was evaluated as to how well the goals stated in section 101 of the National Environmental Policy Act are met. The criteria were established by section 101 and are listed in table 3. The following discussion highlights how each alternative meets these goals while table 3 compares the advantages and disadvantages of each alternative.

The no-action alternative (alternative A) represents continuity with the present course of management. The park would continue to be managed in accordance with approved plans and policies. The no-action alternative responds to resource impacts and visitor demands as they occur rather than formulating a plan to address potential issues proactively. Many traditional uses would continue, the park would continue to be managed as a wilderness park, and the roads and facilities would be maintained. Some would be gradually replaced with more sustainable facilities.

Resource preservation goals (A and D) and sustainability goals (C and F) would not be met to the same degree as in the other alternatives. Visitor experience goals (B, C, and E) would be achieved to a lesser degree than under alternatives C and D.

Alternative B emphasizes cultural and natural resource protection, and results in a decrease number of roads and facilities to support visitors. The wilderness would include a larger primeval zone and a reduced wilderness trail zone; therefore, there would be reduced numbers of maintained trails. This alternative would fully meet criteria A, D, and F because it would achieve a high level of protection for cultural and natural resources. However, it would only partially meet the remaining criteria B, C, and E because it would reduce the amount of visitor access and opportunities for enjoyment of some areas of the park.

Alternative C would focus on increasing visitor and recreational opportunities. Access would be retained to all existing frontcountry areas and could be improved. Although this alternative would fully meet criteria B, C, D, E, and F by providing greater access to and enjoyment of the park's resources, it would not best preserve and enhance cultural and natural resources. Therefore, it would only partially meet criteria A — fulfill the responsibilities of each generation as trustee of the environment for succeeding generations.

Alternative D was developed based on combining the advantages of the other alternatives. Visitor access and opportunities would remain, though they could be modified for resource protection or to provide more sustainable access and opportunities. Management emphasis would be on protecting cultural and natural resources. The wilderness would be managed primarily as a primeval area with some trails and facilities. This alternative would protect, preserve, and enhance natural and cultural resources (criteria A, D, and F) while allowing appropriate human use and enjoyment (criteria B, C, and E). Taken as a whole, this alternative is the environmentally preferred alternative because it would best meet all six goals stated in the National Environmental Policy Act.

TABLE 3: ENVIRONMENTALLY PREFERRED ALTERNATIVE ANALYSIS

NEPA Section 101(b) Goals	No-Action Alternative A	Alternative B	Alternative C	Alternative D, Preferred
A. Fulfill the responsibilities of each generation as trustee of the environment for succeeding generations.	Meets goal: • Protects the ecosystem and preserves park natural and cultural resources. • Provides for ongoing wilderness preservation and management. • Restoration activities continue. Does not meet goal: • Responds to management issues and visitors needs as they arise with no long-term management outlook. • All facilities remain in place.	Meets goal: • Protects the ecosystem and preserves park natural and cultural resources. • Provides for on-going wilderness preservation and management. • Reduces current impacts of management actions by removing some facilities from sensitive areas. • Restoration activities continue.	Meets goal: • Protects the ecosystem and preserves park natural and cultural resources. • Provides for on-going wilderness preservation and management. • Limited relocation of facilities. • Restoration activities continue. Does not meet goal: • Most facilities remain in place, even in sensitive areas.	Meets goal: • Protects the ecosystem and preserves park natural and cultural resources. • Provides for on-going wilderness preservation and management. • Relocation of facilities and access from most sensitive areas. • Restoration activities continue.
B. Ensure safe, healthful, productive, and aesthetically and culturally pleasing surroundings for all Americans.	Meets goal: • Facilities and roads remain in place. Does not meet goal: • Facilities and roads remain with only minimal improvements. • Congestion can affect visitor access. • No increases in opportunities. • Education and outreach remain in place but are limited.	Meets goal: • Some facilities and roads remain in place or are moved outside the park to a less intrusive location. Does not meet goal: • Overall, reduces visitor access, facilities, and services. • Reduces maintained trails in wilderness. • Educational facilities would not be improved. • Not all user group needs are met.	Meets goal: • Improves facilities, transportation and access options. • Addresses congestion through redesign. • Improves front-country trail system. • Increases the amount of visitor services. • More opportunities results in more dispersed visitor use. • Expands educational opportunities.	Meets goal: • Improves facilities, transportation, and access options. • Improves frontcountry trail system. • Visitor services increased through longer season of operation in some areas. • Expands educational opportunities.

NEPA Section 101(b) Goals	No-Action Alternative A	Alternative B	Alternative C	Alternative D, Preferred
C. Attain the widest range of beneficial uses of the environment without degradation, risk of health or safety, or other undesirable and unintended consequences.	Meets goal: • In the long term, facilities are upgraded for more sustainability. Does not meet goal: • Continues current use patterns. • Roads and facilities are not upgraded proactively. • Relocating Kalaloch Lodge could result in undesirable environmental consequences. • No universally accessible trails would be developed.	Meets goal: • Some facilities would be located outside the park and be more sustainable. Does not meet goal: • Reduces visitor access, facilities, and services • Reduces number of maintained trails in wilderness. • Reduces stock use. • No universally accessible trails would be developed.	Meets goal: • Increases visitor facilities in developed areas. • Provides for more sustainable facilities, services, and transportation. • Accommodates a wide variety of uses, including increased stock use and increased universally accessible trails. Does not meet goal: • Improving or increasing existing facilities and roads could result in environmental degradation in sensitive areas.	Meets goal: • Provides sustainable level of services, facilities, and transportation. • Provides a wide variety of opportunities in the frontcountry and wilderness. • Allows for pro-active management to meet visitor needs while preserving resource values. • Accommodates a wide variety of uses, including stock use and universally accessible trails. Does not meet goal: • Relocating some facilities and roads could result in undesirable environmental consequences.
D. Preserve important historic, cultural and natural aspects of our national heritage and maintain, wherever possible, an environment that supports diversity and variety of individual choice.	Meets goal: • Preserves unique and important cultural and natural resources. • Provides opportunities for frontcountry and wilderness experiences. Does not meet goal: • No universally accessible trails would be developed.	Meets goal: • Preserves unique and important cultural and natural resources. • Provides opportunities for frontcountry and wilderness experiences. Does not meet goal: • No universally accessible trails would be developed.	Meets goal: • Preserves unique and important cultural and natural resources. • Provides opportunities for frontcountry and wilderness experiences. • Provides some universally accessible trails.	Meets goal: • Preserves unique and important cultural and natural resources. • Provides opportunities for frontcountry and wilderness experiences. • Provides some universally accessible trails.

NEPA Section 101(b) Goals	No-Action Alternative A	Alternative B	Alternative C	Alternative D, Preferred
E. Achieve a balance between population and resource use that will permit high standards of living and a wide sharing of life's amenities.	Meets goal: • Over time, facilities could be more sustainable. Does not meet goal: • Congestion continues. • Some roads are not sustainable. • Does not effectively respond to the needs of changing user groups.	Meets goal: • Limits visitation through reduced access, which could provide a higher quality experience to fewer visitors. Does not meet goal: • Access is limited or reduced. • Fewer facilities and services. • Does not address recreational need for diverse user groups. • Fewer facilities would result in increased congestion in remaining frontcountry areas.	Meets goal: • Facilities are more sustainable. • Access is improved and retained. • More facilities and services are provided. • Addresses recreational needs for diverse user groups. Does not meet goal: • Some roads are not sustainable.	Meets goal: • Facilities are more sustainable. • Some roads are more sustainable. • Addresses recreational needs for diverse user groups. Does not meet goal: • Some roads are not sustainable.
F. Enhance the quality of renewable resources and approach the maximum attainable recycling of depletable resources.	Meets goal: • Replaces some facilities with more sustainable facilities. Does not meet goal: • Continues some patterns of incompatible development.	Meets goal: • Areas where facilities and roads are removed would be restored.	Meets goal: • Facilities would be upgraded for improved sustainability.	Meets goal: • Facilities and roads would be upgraded or relocated for improved sustainability.

TABLE 4: SUMMARY OF KEY IMPACTS OF IMPLEMENTING THE ALTERNATIVES

Note: There would be no impairment of park resources or values as a result of implementing any of these alternatives.

RESOURCE	ALTERNATIVE A	ALTERNATIVE B	ALTERNATIVE C	ALTERNATIVE D
IMPACTS ON NATURAL RESOURCES				
Air Quality	Implementing alternative A would have no effect on changing the possible long-term trend towards degrading air quality in Olympic National Park. There would be no contribution to cumulative effects.	Implementing alternative B would have long-term minor beneficial impacts on air quality. The cumulative effects of past, present, and reasonably foreseeable future actions would be minor to moderate, long term, and adverse; this alternative's contribution to these impacts would be very small.	Implementing alternative C would have a long-term minor adverse impact on the region's air quality. The cumulative effects of past, present, and reasonably foreseeable future actions, in combination with alternative C, would be minor, long term, and adverse; however, this alternative's contribution to these impacts, would be very small.	Implementing alternative D would have a negligible to minor long-term adverse impact on the region's air quality. The cumulative effects of past, present, and reasonably foreseeable future actions in combination with alternative D would be minor, long term, and adverse; however, this alternative's contribution to these impacts would be very small.
Soundscapes	Implementing alternative A would result in a negligible to minor adverse impact on the park's soundscapes. Cumulative impacts would be minor to moderate and adverse. This alternative's contribution to these effects would be very small.	Implementing alternative B would have long-term minor beneficial impacts on natural soundscapes in some areas of the park. Cumulative impacts would be long term and beneficial for frontcountry soundscapes, and no change for wilderness soundscapes. The cumulative effects would be minor and beneficial. This alternative's contribution to these impacts would be small.	Alternative C would have long-term minor adverse impacts on natural soundscapes in the park. There would be long-term beneficial cumulative impacts on frontcountry soundscapes and no change in wilderness soundscapes. The cumulative effects would be minor to moderate and adverse. This alternative's contribution to these effects would be small and adverse.	Implementing alternative D would have long-term negligible to minor adverse impacts on natural soundscapes in the frontcountry area of the park, and minor to moderate adverse effects on the park wilderness from operational activities. The cumulative effects would be minor to moderate and adverse. This alternative's contribution to these effects would be small and adverse.
Geologic Processes	Implementing alternative A would have no effect on geologic features and processes, and thus there would be no project-related cumulative effects.	Alternative B would result in long-term minor to moderate beneficial impacts on geologic features and processes. The cumulative effects would be reduced relative to the no-action alternative, but would still be long term, adverse, and minor in intensity; this alternative's contribution to these impacts would be small.	Implementing alternative C would result in long-term, minor adverse impacts and long-term moderate beneficial impacts on geologic features and processes. The cumulative effects would be long term, minor to moderate, and adverse; this alternative's contribution to these impacts would be relatively small.	Implementing alternative D would result in a continuation of long-term minor adverse impacts on geologic features and processes. The cumulative effects would be long term, minor to moderate, and adverse; this alternative's contribution to these effects would be small.
Hydrologic Systems	The long-term moderate adverse effects on hydrologic systems occurring in the park would continue under the no-action alternative. This alternative could create long-term minor to moderate adverse impacts on floodplains or wetlands from ongoing park operations and road protective measures. The cumulative effects of other actions would be long-term, moderate, and adverse and beneficial. Implementing this alternative would add slightly to the overall cumulative effect.	Implementing alternative B would have long-term minor to moderate beneficial effects on hydrologic systems, including floodplains and wetlands in the park. The cumulative effects of other actions in combination with alternative B would be moderate to major, long term, and beneficial; this alternative's contribution to these impacts would be modest and beneficial.	Implementing alternative C would have a long-term minor to moderate adverse effect on hydrologic systems in the park. It would have no additional effect on wetlands. The cumulative effects of past, present, and reasonably foreseeable future actions in combination with alternative C would be minor to moderate, long-term, and adverse; this alternative's contribution to these effects would be modest.	Implementing alternative D would result in a long-term moderate beneficial effect and a long-term minor to moderate adverse effect on hydrologic systems. This alternative includes moving facilities out of floodplains in some areas, and some facilities would continue to be located in floodplains elsewhere. There would be no effects to wetlands. The cumulative effects of other actions in combination with implementing alternative D would be minor, long term, and adverse and beneficial; this alternative's contribution to these effects would be modest.
Intertidal Areas	Implementing alternative A would have no direct effect on resources in the intertidal areas but would provide no further protection for the most fragile intertidal areas. The cumulative effects of human-related impacts and expected increases in visitation would be long-term, minor to moderate, and adverse.	Implementing alternative B would have long-term moderate beneficial impacts on resources in intertidal areas. Overall cumulative impacts on ecologically critical areas would be minor to moderate and beneficial; this alternative's contribution to these impacts would be small.	Implementing alternative C would have long-term moderate beneficial impacts on resources in intertidal areas. Overall cumulative impacts on ecologically critical areas would be minor to moderate and beneficial; this alternative's contribution to these impacts would be small.	Implementing alternative D would have long-term moderate beneficial impacts on resources in intertidal areas. Overall cumulative impacts on ecologically critical areas would be minor to moderate and beneficial; this alternative's contribution to these impacts would be small.
Soils	Implementing alternative A would have a long-term minor adverse effect on soil resources. Cumulative effects would be long-term, moderate and adverse; this alternative's contribution would be small.	Implementing alternative B would have a long-term moderate beneficial impact on the park's soils. Cumulative effects, including implementation of this alternative, on soils in the park would be long term, moderate, and adverse. This alternative's contribution to these impacts would be modest.	Implementing alternative C would have a long-term minor adverse impact on the park's soils. Cumulative effects, including implementation of this alternative, on soils in the park would be long term, minor, and adverse; this alternative's contribution to these effects would be modest and adverse.	Implementing alternative D would have a long-term minor to moderate adverse impact and a long-term negligible to minor beneficial impact on the park's soils. Cumulative effects on soils in the park would be long term, moderate, and adverse; this alternative's contribution to these effects would be small.

RESOURCE	ALTERNATIVE A	ALTERNATIVE B	ALTERNATIVE C	ALTERNATIVE D
Vegetation	Implementing the no-action alternative would result in long-term minor adverse impacts on native vegetation communities. There would be moderate adverse cumulative effects on vegetative resources in the park; this alternative's contribution to these effects would be very small.	Implementing alternative B would have long-term minor to moderate beneficial and long-term negligible adverse impacts on native vegetation**.** The cumulative effects on vegetation in the park would be long term, minor, and beneficial; this alternative's contribution to these impacts would be small and beneficial.	Implementing alternative C would result in long-term, minor to moderate adverse impacts on native vegetation. The cumulative effects on vegetation in the park would be long term, minor, and adverse; however, this alternative's contribution to these impacts would be modest.	Implementing alternative D would result in long-term minor adverse impacts on native vegetation. The cumulative effects on vegetation in the park would be long term, minor, and adverse; however, this alternative's contribution to these impacts would be small.
Fish and Wildlife	Implementation of this alternative would have a long-term negligible adverse impact and would result in the continuation of adverse effects. There would be minor to moderate adverse cumulative effects on fish and wildlife populations; this alternative's contribution to these effects would be very small.	Implementation of this alternative would have long-term moderate beneficial impacts on fish and wildlife individuals and populations. Overall, cumulative impacts on fish and wildlife in the region would be long term, moderate to major, adverse and beneficial. This alternative's contribution to these effects would be modest.	Implementing this alternative would have long-term minor beneficial and long-term minor adverse impacts. Cumulative impacts on fish and wildlife populations in the region would be long term, moderate to major, beneficial and adverse; this alternative's contribution to these effects would be small.	Implementing this alternative would have long-term minor adverse impacts and long-term moderate beneficial impacts on wildlife and fisheries. Cumulative impacts on fish and wildlife populations in the region would be long term, moderate to major, beneficial and adverse; this alternative's contribution to these effects would be small.
Special Status Species	Implementing the no-action alternative may affect, but is not likely to adversely affect, special status species. Cumulative effects would be moderate and adverse; this alternative's contribution to these effects would be minor to moderate.	Implementing this alternative would result in short-term minor adverse impacts and long-term minor beneficial impacts on special status wildlife and long-term major beneficial impacts for bull trout and other listed salmonids. There could be short-term, minor to moderate adverse effects from actions associated with the removal of facilities. Overall cumulative impacts on special status species in the region would be long term, moderate to major, and adverse; this alternative's contribution to these impacts would be small and beneficial.	Implementing this alternative would result in beneficial and adverse impacts on bull trout and other sensitive salmonids. This alternative might adversely affect spotted owls and marbled murrelets. It might affect, but is not likely to adversely effect, other listed species occurring in the park. The overall cumulative impacts on special status species in the region would be long term, moderate to major, and adverse; this alternative's contribution to these effects would be a small beneficial component and a small adverse component.	Implementing this alternative would result in long-term minor adverse and beneficial impacts on bull trout and sensitive salmonids. This alternative might adversely affect spotted owls and marbled murrelets, and would not likely adversely affect other sensitive or listed species in the park. The overall cumulative impacts on special status species in the region would be long term, moderate to major, and adverse; this alternative's contribution to these cumulative effects would include a small beneficial component and a modest adverse component.
IMPACTS ON WILDERNESS VALUES				
	Implementing alternative A would result in continued long-term, minor to moderate beneficial and adverse impacts on wilderness experience and wilderness character. The overall cumulative effects on wilderness values would be long term, moderate, and beneficial; this alternative would not change the current conditions.	Implementing alternative B would result in long-term minor beneficial impacts on resources in wilderness, wilderness character, and wilderness visitor experience, and long-term negligible adverse impacts to the visitor experience if use increases in the wilderness trail zone. Cumulative effects on wilderness values would be moderate and beneficial; this alternative's contribution to these impacts would be small.	Implementing alternative C would result in long-term minor adverse impacts on wilderness character, natural resources, and visitor experience. Cumulative effects on wilderness values would be beneficial; this alternative would contribute small beneficial and adverse components to these cumulative effects.	Implementing alternative D would result in long-term minor beneficial impacts on wilderness character and long-term negligible beneficial impacts on resources and visitor experience. Cumulative effects on wilderness values would be beneficial; this alternative's contribution to these effects would be small and beneficial.
IMPACTS ON CULTURAL RESOURCES				
Archeological Resources	Avoidance of national register-eligible or -listed archeological resources during excavation, construction, and demolition would result in no adverse effect. If, however, archeological resources could not be avoided, the impacts on such resources would be moderate to major and adverse. The overall cumulative impacts would be adverse, and the actions proposed in this alternative would be a very small component of that cumulative impact.	Increased emphasis on archeological identification, evaluation, and resource protection measures would assist the park's long-term preservation objectives. Implementation of alternative B would result in negligible to minor beneficial impacts on archeological resources, resulting in a determination of no adverse effects on archeological resources. Because alternative B would have no adverse effects, it would not contribute to the adverse cumulative effects.	If important archeological resources could not be avoided, the impacts on such resources would be adverse. Implementation of alternative C would potentially result in long-term, moderate, adverse effects on archeological resources and would contribute a small increment to the adverse cumulative effects.	Implementing alternative D would result in negligible to minor, long-term adverse effects, resulting in a no adverse effect determination. Implementation of alternative D would be expected to contribute a small increment to overall adverse cumulative effects on archeological resources.
Historic Structures and Cultural Landscapes	The implementation of the no-action alternative would have long-term minor to moderate beneficial effects on the historic structures and cultural landscapes of Olympic National Park, resulting in a no adverse effect determination. The cumulative effects would be adverse; this alternative would contribute modestly to the overall beneficial cumulative effects, and would not contribute to the adverse cumulative effects.	The implementation of alternative B would have no adverse effect on the historic structures and cultural landscapes of Olympic National Park. There would be long-term minor to moderate beneficial impacts on historic structures and cultural landscapes from implementing alternative B. Alternative B would have no adverse effects and would not contribute to the adverse cumulative effects, and would result in long-term, beneficial effects to these resources.	The implementation of alternative C would have a long-term minor to moderate beneficial effect on the historic structures and cultural landscapes of Olympic National Park, resulting in a no adverse effect determination. The beneficial effect of alternative C would contribute modestly to the overall beneficial cumulative effects.	The implementation of alternative D would have no adverse effect on the historic structures and cultural landscapes of Olympic National Park and would result in long-term minor to moderate beneficial effects to these resources. Alternative D would have no adverse effects and would not contribute to the adverse cumulative effects.

RESOURCE	ALTERNATIVE A	ALTERNATIVE B	ALTERNATIVE C	ALTERNATIVE D
Ethnographic Resources	Actions under alternative A would generally have negligible to minor long-term adverse impacts on ethnographic resources in the national park. Alternative A would also contribute a small and adverse increment to the minor long-term adverse cumulative impacts on ethnographic resources.	Actions under alternative B would have negligible to minor long-term adverse impacts on ethnographic resources. The negligible to minor adverse impacts of this alternative would contribute a small component to the overall minor to moderate long-term cumulative adverse impacts.	Implementation of alternative C would have a negligible to minor adverse impact on ethnographic resources. This alternative would contribute a small component of the minor to moderate long-term cumulative adverse impacts on ethnographic resources.	Implementing alternative D would have negligible to minor adverse impacts on ethnographic resources in the park. This alternative would also contribute s small increment to the adverse cumulative impacts.
Museum Collections	The ongoing program has resulted in major beneficial impacts to the museums collections. The planned cumulative activities would result in major beneficial long-term impacts. Alternative A would not add to these impacts.	The ongoing program has resulted in major beneficial impacts to the museums collections. There would be long-term minor beneficial impacts on the collections. The planned cumulative activities would result in major beneficial long-term impacts. This alternative would add a small component to these impacts.	The ongoing program has resulted in major beneficial impacts to the museums collections. There would be long-term minor beneficial impacts on the collections. The planned cumulative activities would result in major beneficial long-term impacts. This alternative would add a small component to these impacts.	The ongoing program has resulted in major beneficial impacts to the museums collections. There would be long-term minor beneficial impacts on the collections. The planned cumulative activities would result in major beneficial long-term impacts. This alternative would add a small component to these impacts.
IMPACTS ON VISITATION				
	The impacts of continuing current management practices for most of the year would be long-term, negligible, and adverse. However, during the peak season in summer and holiday weekends, the most popular destinations in the park would be more crowded resulting in long-term, moderate, and adverse impacts to visitor use during those periods, primarily from continued congestion.	Because there would be reduced facilities and roads, the overall impacts on visitation would be moderately adverse and long term.	The overall impacts on visitation of improving or expanding facilities and services would be moderately beneficial and long term.	The overall impacts of alternative D on visitation would be moderately beneficial and long-term because of improved or additional facilities and services.
IMPACTS ON VISTOR OPPORTUNITIES				
	The full spectrum of park visitor experiences would continue to provide visitor enjoyment and recreation. Continuing current management practices would maintain existing visitor experiences, with some moderate local beneficial impacts as already planned facility improvements take place and facilities were relocated, repaired, or replaced. However, crowding would persist primarily in the day-use zone during the summer or other peak periods, resulting in localized short-term moderate adverse impacts. Some campsites at risk from erosion could be lost, resulting in long-term, minor to moderate, adverse impacts on camping opportunities at high-risk areas. There would be moderate to major long-term to permanent beneficial cumulative impacts on visitors to Olympic National Park and the Olympic Peninsula; this alternative's contribution to these cumulative impacts would be a modest increment.	Under this alternative, it would be harder for many visitors to enjoy the full spectrum of park visitor experiences and recreation compared to the no-action alternative. Alternative B, in spite of the moderate permanent beneficial impact of past, present and reasonably foreseeable future cumulative actions, would result in fewer recreational opportunities, facilities, and services within the region than alternative A, resulting in substantially fewer visitor experiences. The impact of implementing alternative B on visitor experience would be moderate, adverse, and long term to permanent. There would be moderate to major, long-term to permanent beneficial cumulative impacts on visitors to Olympic National Park and the Olympic Peninsula, since the cumulative actions affect access to the park and provide additional visitor opportunities or experiences. This alternative's contribution to these cumulative impacts would be a modest increment.	Alternative C's emphasis is providing visitor opportunities. Day-use, development, and wilderness trail zones would be larger, regional trail and bike system connections would be improved, and skiing opportunities would be improved at Hurricane Ridge. More sustainable roads would result in less disruption of visitor access to river valleys, and visitor facilities and commercial services would be expanded. These changes would be apparent to most visitors. Alternative C would result in additional, more diverse, and improved recreational opportunities and services in the region compared to alternative A. The impact on visitor experiences would be moderate to major, long term to permanent, and beneficial. Alternative C, in conjunction with past, present, and reasonably foreseeable future actions by others, would result in major, long-term, and beneficial cumulative effects; this alternative's contribution to these effects would be substantial due to new and improved visitor opportunities.	Compared to the no-action alternative, the preferred alternative increases visitor experience opportunities, giving more people access to facilities and the spectrum of activities in the park as the result of more development, day-use, and primeval wilderness zones. Wilderness opportunities would have slightly more focus on trail-less areas and would have slightly less stock use opportunity. Developing sustainable roads would result in less disruption of visitor access; winter opportunities would be retained; frontcountry camping would be improved in some areas; and some visitor facilities would be relocated, redesigned, or improved and very few visitor use areas would be closed. Alternative D would result in somewhat more and more diverse recreational opportunities and improved facilities and services in the region. The impact on visitor experience would generally be moderate to major, long term, and beneficial. Alternative D, in conjunction with past, present, and reasonably foreseeable future actions, would result in major, long-term beneficial cumulative impacts on visitors because the cumulative actions affect access to the park and provide additional visitor opportunities or experiences. This alternative's contribution to these cumulative impacts would be modest.

RESOURCE	ALTERNATIVE A	ALTERNATIVE B	ALTERNATIVE C	ALTERNATIVE D
IMPACTS ON INFORMATION, ORIENTATION, AND INTERPRETATION				
	This alternative would be expected to continue to have minor long-term beneficial impacts on the visitor's ability to understand park themes and experience and appreciate park resources. Under this alternative, there would be a minor to moderate, long-term adverse effect to visitors who do not fully comprehend the park's role on the peninsula and the complexity of park resources because of the lack of educational and informal programs. Visitors who bypass the area visitor centers (perhaps partly due to limited parking on peak days) might find it difficult to fully understand and appreciate the park's remarkable diversity and the variety of visitor experience opportunities. The overall cumulative impacts would be minor to moderate and beneficial; this alternative's contribution to these impacts would be modest.	Overall, under this alternative, there would continue to be insufficient interpretive educational medial and programs. In some areas, facilities would be improved, but most facilities would not be improved, resulting in a continued minor to moderate long-term adverse impact on information, orientation, and interpretation. Education and outreach programs would focus on the primary interpretive themes, which would help the visitor understand and appreciate their connections to park resources, resulting in long-term, minor to moderate, beneficial effects. There would be a minor to moderate beneficial cumulative impact on the visitor's ability to understand park themes and experience park resources; this alternative's contribution to these effects would be modest.	The increased number of interpretive and educational media, programs, and new or expanded facilities would accommodate projected increases in park visitation, address all of the primary interpretive themes, assist with trip-planning opportunities, provide an integrated approach to cultural and natural resources and processes, and connect park resources to the broader expanse of the Olympic Peninsula. This would have a long-term moderate to major beneficial impact on the visitor experience in the park and throughout the region. The cumulative effects would be minor to moderate and beneficial; this alternative's contribution to these effects would be appreciable.	The increased number of interpretive and educational media, programs, and new or expanded facilities would accommodate projected increases in park visitation, address all of the primary interpretive themes, assist with trip-planning opportunities, provide an integrated approach to cultural and natural resources and processes, and connect park resources to the broader expanse of the Olympic Peninsula. This would have a long-term, moderate to major beneficial impact on the visitor experience in the park and throughout the region. The overall cumulative impacts would be minor to moderate and beneficial; this alternative's contribution to these effects would be appreciable.
IMPACTS ON VISTOR ACCESS AND TRANSPORTATION				
	During peak use periods, implementing alternative A would have a long-term minor to moderate adverse impact on visitor access. During off-peak periods, visitors would continue to find ready access and available parking and would experience excellent roadway capacity conditions. The effects on alternative transportation and health and safety at popular park destinations would be limited. Therefore, alternative A would have a negligible effect on visitor access during off-peak periods. Over the short-term, the planned road and facility improvements in the park would have a minor to moderate adverse impact on visitor access depending upon the degree of disruption in construction areas and long-term minor to moderate beneficial effects by maintaining road access to park areas. These short term impacts would be more intense at the popular destinations in the park in the peak use period. The management actions under alternative A (or lack of actions) would contribute substantially to these cumulative impacts. Over the long term, when the combination of impacts from development activities outside the park that directly affect visitor access are combined with the management actions under alternative A, this would result in minor to moderate beneficial and adverse cumulative impacts overall. Alternative A would contribute a substantial portion of these cumulative impacts.	During peak use periods, implementing alternative B would result in long-term moderate adverse impacts on parkwide visitor access largely due to the systemwide reduction in access, roads, and facilities. Due to redistribution of visitation, alternative B would also result in a long-term minor to moderate adverse impact locally on less used areas in the park. During peak periods, alternative B would result in a long-term minor beneficial effect locally on visitor access. The reduction in roads and related facilities would be somewhat offset during peak periods by the implementation of mandatory seasonal mass transit in congested areas. Under alternative B people visiting the park during off-peak periods would continue to find ready access and available parking and find excellent roadway capacity conditions, and limited effects would occur to alternative transportation and health and safety at popular destinations in the park. Therefore, alternative B would have a negligible effect on visitor access during off-peak periods. Cumulatively, over the short term, the planned road and facility improvements in the park would have a moderate adverse impact on road access and parking depending upon the degree of disruption in construction areas. Alternative B would contribute to these cumulative impacts in a minor way. Over the long term, the management provisions in alternative B would limit the amount of visitor use and access allowed in the park. Cumulative impacts on visitor access over the long term could be an overall	During peak use periods, implementing alternative C would have a long-term moderate beneficial impact on visitor access. For proposed facilities and infrastructure expansion and improvement actions under alternative C, temporary and short-term minor to moderate, adverse impacts would result locally to transportation. This conclusion would primarily apply to access, parking capacity, and health and safety due to the potential for access delays to visitors and traffic and parking disruptions during construction. Under alternative C, people visiting the park during off-peak periods would continue to find ready access and available parking, and would experience excellent roadway capacity conditions. Therefore, alternative C would have a negligible effect on visitor access during off-peak periods. The planned road and facility improvements in the park would have a moderate adverse cumulative impact on road access and parking depending upon the degree of disruption in construction areas. The management actions under alternative C would contribute substantially to these cumulative impacts. Over the long term, the management actions under alternative C would result in a net increase in roads, trails, and related facilities (where appropriate and feasible), which would have the effect of enhancing parkwide access and parking capacity. Therefore, the cumulative impact of alternative C, in combination with past and other reasonably foreseeable actions, would result in a moderate benefit to visitor access in the park as a whole, and actions under this alternative would	Overall, implementing alternative D would result in negligible to minor, beneficial and adverse impacts on visitor access to the park. The number of roads, trails, and related facilities under alternative D would be kept at approximately their current levels. With visitation expected to increase, this action would constitute a long-term minor adverse impact on visitor access and transportation during peak periods, particularly at popular destinations such as Hoh, Sol Duc, and Hurricane Ridge. Under alternative D, people visiting the park during off-peak periods would continue to find ready access, available parking, and excellent roadway capacity conditions at popular destinations in the park. Therefore, alternative D would have a negligible effect on transportation during off-peak periods. Assuming that parkwide facilities and infrastructure would be kept at current levels, with only slight expansions authorized, or possible reductions or modifications elsewhere, alternative D contribute a slight increment to the short-term minor adverse cumulative impacts. Management actions under this alternative would include the implementation of alternative forms of transportation and or other transit options, and this could minimize the adverse effects on visitor access of increasing demand. Over the long-term, when the impacts from development activities outside the park that directly affect visitor access are combined with actions proposed under alternative D, this would result in minor to moderate beneficial and adverse cumulative impacts on

RESOURCE	ALTERNATIVE A	ALTERNATIVE B	ALTERNATIVE C	ALTERNATIVE D
		decline in the diversity of the visitor opportunities in the park, and increase the levels and types of use and access on lands adjacent to the park. The actions under alternative B would contribute substantially to these overall moderate long-term adverse cumulative impacts.	account for almost all of that benefit.	transportation.
IMPACTS ON THE SOCIOECONOMIC ENVIRONMENT				
	Existing approved projects would continue to have negligible to minor short term beneficial impacts on the regional economy. The current range and level of impacts (tourism spending) on adjacent communities would continue to be beneficial providing income, employment, and business opportunities within the gateway communities and regional economy. Current impacts relating to concessioners would continue, with negligible changes in short- or long-term effects on their business operations. The cumulative impacts would be major and beneficial; this alternative's contribution to these effects would be modest.	Based on expenditures for development, restoration, and other projects impacts on individual firms and individuals would be moderate to major, short term, and most likely beneficial depending upon the individual situations. The impacts on the regional economy would be negligible to minor due to the size of the area economy and because the projects would be accomplished in phases over the next 15 to 20 years. Impacts on the economies of gateway communities would most likely be minor to moderate over the long term. Whether these effects were beneficial or negative would depend on the public's demand for facilities and services (since some would be removed from the park) and whether they would be supplied by the private sector in adjacent areas. Some concessioners and their employees would experience long-term moderate to major adverse impacts with the loss of business and job opportunities. Over the long term, these firms and individuals would find other commercial and employment opportunities within the regional economy, resulting in minor impacts. The public could look to the private sector within the gateway communities to provide services no longer offered in the parks. The overall cumulative impacts would be minor and beneficial; this alternative's contribution to these effects would be modest.	Projected annual expenditures and employment at the park would increase. These changes are important for the park but they would have only a minor positive long-term impact on the regional economy. Several gateway communities would receive minor to moderate benefits, which might be long term, due to increased sales associated with increases in visitor use of some areas of the park. Concessions facilities in some areas of the park would be expanded, resulting in long-term, minor, beneficial effects on those concessioners. The cumulative impacts would be moderate to major and beneficial; this alternative's contribution to these effects would be modest.	Based on expenditures for development and other projects impacts on individual firms and individuals would be moderate to major, short term, and most likely beneficial. The impacts on the regional economy would be negligible The current range and level of impacts (regarding future tourism spending and park expenditures for goods and services from the gateway communities) on adjacent communities would continue to be beneficial, providing income, employment, and business opportunities in the gateway communities and regional economy. Changes might be expected, but their impacts are indeterminate at this time. Under this alternative, most concessions operations would remain the same, but some expansion in the season of operation could occur, resulting in long-term minor beneficial effects to those concessioners. Relocating Kalaloch Lodge would result in short-term adverse impacts associated with the cost of moving or reconstructing this facility, but over the long term, would result in a more sustainable facility which be a beneficial effect. The cumulative impacts would be moderate to major and beneficial; this alternative's contribution to these effects would be modest.
IMPACTS ON PARK OPERATIONS				
	Under the no action alternative, staffing levels would continue to be inadequate and not meet park needs, resulting in long-term, minor adverse impacts to park operations. As more projects are completed to improve the conditions of facilities and replace aging systems, more sustainable and efficient systems are in place, resulting in a reduced need for maintenance in the long term. Until the time when facilities are replaced, many still require periodic and extensive maintenance. When projects are completed, this results in long-term, moderate, beneficial cumulative impacts from decreased operational needs. Considered with the no action alternative, the overall impact would be long term, negligible to minor, and beneficial.	Under alternative B, increases in staff levels, both temporary and permanent, would be required to meet the action elements of this alternative. Park operational functions would be relocated in those areas where road access is eliminated. This would require a great deal of staff time and without increases in park staff, staff time would have to be redirected from other project work, resulting in negative impacts to facilities parkwide. Ongoing projects in the park are resulting in improved facilities that are more sustainable, and in the long term, would result in decreased maintenance. Until the time when facilities are replaced, many still require periodic and extensive maintenance. When projects are completed, this results in long-term, moderate, beneficial cumulative impacts from decreased operational needs. When combined with the elements of alternative B, the overall impact to park operations would be long term, minor to moderate, and adverse.	Under the alternative C, staffing levels would continue to be inadequate and not meet park needs, resulting in long-term, minor adverse impacts to park operations. As more projects are completed to improve the conditions of facilities and replace aging systems, more sustainable and efficient systems are in place, resulting in a reduced need for maintenance in the long-term. Until the time when facilities are replaced, many still require periodic and extensive maintenance. When projects are completed, this results in long-term, moderate, beneficial cumulative impacts from decreased operational needs. Considered with the no action alternative, the overall impact would be long-term, moderate, and beneficial.	Under this alternative, staffing levels would continue to be inadequate and not meet park needs, resulting in long-term, minor adverse impacts to park operations. As more projects are completed to improve the conditions of facilities and replace aging systems, more sustainable and efficient systems are in place, resulting in a reduced need for maintenance in the long-term. Until the time when facilities are replaced, many still require periodic and extensive maintenance. When projects are completed, this results in long-term, moderate, beneficial cumulative impacts from decreased operational needs. Considered with the no action alternative, the overall impact would be long-term, negligible to minor, and beneficial.