

Chapter 7

Adaptive Management Area

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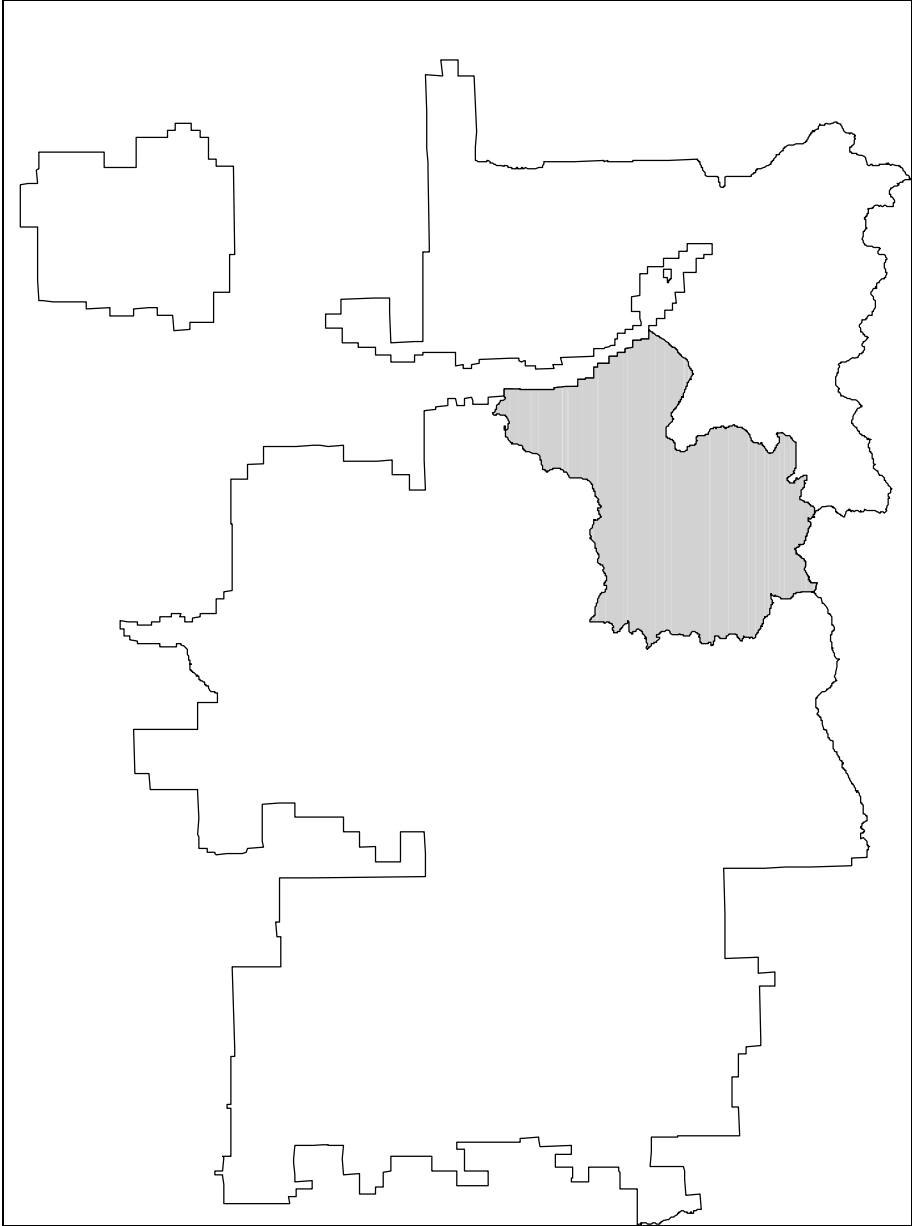
Adaptive Management Area

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Adaptive Management Areas Map

Gifford Pinchot National Forest



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Adaptive Management Area [ROD D-1]

Key and non-Key Watersheds are specified for all areas and, therefore, overlay all other land allocations. For the portion of Adaptive Management Area located within Key Watersheds, standards and guidelines for Key Watersheds, as well as standards and guidelines for the Adaptive Management Area, apply, with some flexibility as described below (see additional detail under "Hierarchy of Standards and Guidelines Within the AMA" on page 7-10).

Introduction

The Adaptive Management Area is a landscape unit designated to encourage the development and testing of technical and social approaches to achieving desired ecological, economic, and other social objectives. One area of about 144,000 acres of federal land has been identified on the Gifford Pinchot National Forest.

The overall objective for the Adaptive Management Area is to learn how to manage on an ecosystem basis in terms of both technical and social challenges, and in a manner consistent with applicable laws. It is hoped that localized, idiosyncratic approaches that may achieve the conservation objectives of these standards and guidelines can be pursued. These approaches rely on the experience and ingenuity of resource managers and communities rather than traditionally derived and tightly prescriptive approaches that are generally applied in management of forests.

The Adaptive Management Area is intended to contribute substantially to the achievement of objectives for these standards and guidelines. This includes provision of well-distributed late-successional habitat outside of reserves, retention of key structural elements of late-successional forests on lands subjected to regeneration harvest, and restoration and protection of riparian zones as well as provision of a stable timber supply.

The Adaptive Management Area concept incorporates the three adaptive management models/objectives discussed in the Forest Ecosystem Management Assessment Team (FEMAT) Report—technical, administrative, and cultural/social.

Key Features of the Adaptive Management Area:

- The areas are well-distributed geographically, represent a mix of technical and social challenges and are of sufficient size to provide for landscape-level management approaches.
- The areas provide for development and demonstration of monitoring protocols and new approaches to land management that integrate economic and ecological objectives based on credible development programs and watershed and landscape analysis.

- Opportunities exist for education, including technical training, to qualify local community residents for employment in monitoring and other management programs.
- Innovation in community involvement is encouraged, including approaches to implementation of initial management strategies and perhaps, over the longer term, development of new forest policies.
- Innovation is expected in developing adequate and stable funding sources for monitoring, research, retraining, restoration and other activities.
- Innovation in integration of multi-ownership watersheds is encouraged among federal agencies and is likewise encouraged among state and federal agencies and private landowners.
- Innovation in agency organization and personnel policies might include individual certification requirements and modification of recruitment and promotion procedures to encourage local longevity among the federal work force.

Selection of the Adaptive Management Area

The Adaptive Management Area was selected to provide opportunities for innovation, to provide examples in major physiographic provinces, and to provide a range of technical challenges, from an emphasis on restoration of late-successional forest conditions and riparian zones to integration of commercial timber harvest with ecological objectives.

The Adaptive Management Area is geographically located to minimize risk to achieving the conservation objectives of these standards and guidelines. The designation of Adaptive Management Area was intended to provide a mixture of public and private lands. In locating the Adaptive Management Area, the proximity of communities that were subject to adverse economic impacts resulting from reduced federal timber harvest was considered. The social and economic analysis of the Forest Ecosystem Management Assessment Team was a major source of information that helped guide these decisions.

Establishment of the Adaptive Management Area is not intended to discourage the development of innovative social and technical approaches to forest resource issues in other locales. They are intended to provide a geographic focus for innovation and experimentation with the intent that such experience will be widely shared. The array of areas provides a balance between having a system of areas that is: (1) so large and diffuse that it lacks focus and adequate resources; and has extensive management constraints because of its size and overall impact on regional conservation strategies; and (2) too small to allow for meaningful ecological and social experimentation.

Technical Objectives

The Adaptive Management Area has scientific and technical innovation and experimentation as objectives. The guiding principle is to allow freedom in forest management approaches to encourage innovation in achieving the goals of these standards and guidelines. This challenge includes active involvement by the land management and regulatory agencies early in the planning process.

The primary technical objectives of the Adaptive Management Area are development, demonstration, implementation, and evaluation of monitoring programs and innovative management practices that integrate ecological and economic values. Experiments, including some of large scale, are likely. Demonstrations and pilot projects alone, while perhaps significant, useful, and encouraged in some circumstances, may not be sufficient to achieve the objectives.

Monitoring is essential to the success of any plan and to an adaptive management program. Hence, development and demonstration of monitoring and training of the work force are technical challenges and should be emphasized.

Technical topics requiring demonstration or investigation are a priority for the Adaptive Management Area and cover a wide spectrum, from the welfare of organisms to ecosystems to landscapes. Included are development, demonstration, and testing of techniques for:

- Creation and maintenance of a variety of forest structural conditions including late-successional forest conditions and desired riparian habitat conditions.
- Integration of timber production with maintenance or restoration of fisheries habitat and water quality.
- Restoration of structural complexity and biological diversity in forests and streams that have been degraded by past management activities and natural events.
- Integration of the habitat needs of wildlife (particularly of sensitive and threatened species) with timber management.
- Development of logging and transportation systems with low impact on soil stability and water quality.
- Design and testing of effects of forest management activities at the landscape level.
- Restoration and maintenance of forest health using controlled fire and silvicultural approaches.

Each Adaptive Management Area will have an interdisciplinary technical advisory panel, including specialists from outside government agencies, that will provide advice and support to managers and local communities involved with this effort.

Social Objectives

The primary social objective of the Adaptive Management Area is the provision of flexible experimentation with policies and management. These areas should provide opportunities for land managing and regulatory agencies, other government entities, nongovernmental organizations, local groups, landowners, communities, and citizens to work together to develop innovative management approaches. Broadly, the Adaptive Management Area is intended to be a prototype of how forest communities might be sustained.

Innovative approaches include social learning and adaptation, which depend upon local communities having sufficient political capacity, economic resources, and technical expertise to be full participants in ecosystem management. Similarly, management will need to be coordinated and characterized by collaboration across political jurisdictions and diverse ownerships. This will require mediating across interests and disciplines,

strengthening local political capability, and enhancing access to technical expertise. Adaptive management is, by definition, information dependent. Setting objectives, developing management guidelines, educating and training a work force, organizing interactive planning and management institutions, and monitoring accomplishments all require reliable, current inventories. New information technologies can be used to provide such information. Local people might be ideally suited to this task if appropriately trained.

Agency Approaches and Management Review

Federal agencies are expected to use the Adaptive Management Area to explore alternative ways of doing business internally, and with each other, other organizations, local and state government, and private landowners. In effect, the areas should be used to “learn to manage” as well as to “manage to learn.”

Agencies are expected to develop plans (jointly where multiple agencies are involved) for the Adaptive Management Area. Development of a broad plan that identifies general objectives and roles and provides flexibility should be the goal. Such a plan could be used in competing for financial resources, garnering political support, providing a shared vision, and identifying experiences to be tracked.

If the Adaptive Management Area is to make timely contributions to the objectives of these standards and guidelines, and to the communities, it is absolutely critical that initiation of activities not be delayed by requirements for comprehensive plans or consensus documents beyond those required to meet existing legal requirements for activities. Development of such documents can proceed simultaneously with other activities. Current plans as modified by the direction established in these standards and guidelines can provide the starting point for activities. Initial involvement of user groups and communities would emphasize how the strategy and plans should be implemented.

Initial direction and continuing review should be provided by the Regional Interagency Executive Committee. It is important that the interagency coordination involve both the regulatory and management agencies, and that the regulatory agencies participate in planning and regular review processes.

AMA Implementation Guidelines

Role of Agencies - The agencies will facilitate collaborative efforts, partnerships, mutual learning and innovation. They will provide staff work to the process of managing the Adaptive Management Area. This could include providing meeting places, meeting facilitation, and expert analysis. Agency scientists are expected to provide scientific design of monitoring and experiments, though the decision is reserved for the federal land manager.

Although the agencies have a facilitation role, the land management agencies retain the authority and responsibility to make decisions and the regulatory agencies retain the authority and responsibility to regulate. Nothing in these guidelines is intended to change those authorities or responsibilities.

Local Communities - Specific community roles with public agencies and subject matter experts (such as the technical advisory panels) will include helping find innovative ways to set objectives, develop plans, implement projects, and monitor accomplishments. For example, Subtitle G of the 1990 Farm Bill gives criteria to identify “natural resource dependent communities” which may be used if appropriate when identifying local communities.

Participation in the Adaptive Management Area - Although the emphasis is on the participation of people who are actively involved with that geographic location, nothing in these guidelines should be construed to suggest that the interests of people living outside “local communities” should not be considered in making agency decisions. Participation will be self identifying to the extent possible. Experiments to address how this might happen are encouraged.

Project Development and Implementation - Specific project planning must:

- Involve the public early
- Coordinate with overall activities within the province
- Begin some projects as soon as practicable to respond to and facilitate public interest and involvement
- Begin some projects prior to completing an entire watershed analysis
- Begin watershed analysis as soon as possible
- Develop early plans and projects with the best available information
- Identify needs for improved inventory
- Proceed simultaneously with activities and Adaptive Management Area planning
- Assign priority status to watershed restoration projects that can be completed quickly
- Begin projects in nonsensitive sections of the Adaptive Management Area.

Area Assessment - The Adaptive Management Area plans need to be based on information about historical, current, and desired future conditions of the biophysical, social, and economic aspects of the area. The plans will rely largely on existing information. The area assessment will be a concise working document. The following is provided as a suggested framework:

Biophysical: Consider disturbance history, terrestrial and aquatic conditions, sensitive plant and animal species and/or habitat, capability of the system to produce a variety of forest products. A description of the desired future condition or a range of acceptable conditions for the biophysical system is needed. For example, what functions are important to maintain at the landscape level? What structure, species, age classes, and/or arrangement will maintain those functions? Consider both coarse and fine detail over time. What does the community want the Adaptive Management Area to be like in the future? What actions are needed to create that desired future condition?

Social: Consider historical and extant communities, their use patterns, uses of the land, issues, resources, and opportunities. In some areas, other demographic data will be helpful as well. What networks for communications are at work? How can the agencies better interact with these? What collaborative process will work best for the communities of interest to effectively participate in managing the Adaptive Management Area? What does the community want to look like in the future? Desired future social condition can be considered in terms of composition, structure, and/or functions over time.

Economic: A description of current economic conditions might include an inventory of local employment, resource workers, skills, and access to technology. Desired future conditions could describe the future employment opportunities (e.g., what forest work will be needed in the future?) and skills needed to seize those opportunities. As the desired future condition of the ecosystem is better understood, the future forest work will also be more clear. Identification of needed knowledge, skills, abilities, and technology for the future may be useful in developing training programs as well as business or marketing assistance.

Plans - The Adaptive Management Area will have a plan. An individual public, interagency approach to planning will be developed for the Adaptive Management Area. The plan should address or provide:

- A shared vision of the Adaptive Management Area, e.g., the kind of knowledge the participants hope to gain. Identification of the desired future conditions may be developed in collaboration with communities, depending on the area.
- Learning that includes social and political knowledge, not just biological and physical information.
- A strategy to guide implementation, restoration, monitoring and experimental activities.
- A short-term (three to five year) timber sale plan and long-term yield projections.
- Education of participants.

- A list of communities influenced by the Adaptive Management Area projects and outputs.
- An inventory of community strategies, and resources and partners being used.
- Coordination with overall activities within the province.
- A funding strategy.
- Integration of the community strategies and technical objectives.

Monitoring and Research - The ROD Monitoring and Evaluation Plan and watershed analysis present the framework and some required actions for each Adaptive Management Area. Additional efforts and specificity may be developed for each Adaptive Management Area.

The learning opportunity provided by the Adaptive Management Area will be enhanced if clear, measurable goals and objectives are set, monitored, and conveyed into the planning of projects or into the appropriate component of the Adaptive Management Area plan or Forest or District Plan. Shared synthesis of monitoring results will help provide a multiple-perspective assessment on whether social and ecosystem goals are being met, help identify problems to avoid in subsequent projects, and help gain consensus on what data gaps exist and what changes to the monitoring and research programs are needed.

Review - Monitoring and research, with careful experimental design, will be conducted in the Adaptive Management Area. Research in forest ecology and management as well as social, biological, and earth sciences may be conducted. Each Adaptive Management Area will have an interdisciplinary technical advisory panel that will provide advice to managers and the local communities involved with this effort. The technical advisory panels will provide advice and information on the appropriateness of the project.

Direction and review are provided by the Regional Interagency Executive Committee through the Regional Ecosystem Office. This review will help assure that plans and projects developed for the Adaptive Management Area will be both scientifically and ecologically credible. It will assure that new, innovative approaches are used, that the laws and the goals of the plan are met, and that validation monitoring is incorporated.

The Regional Ecosystem Office will facilitate and coordinate the implementation of the Adaptive Management Area program. Federal agencies are expected to use the Adaptive Management Area to explore new ways of working internally and externally.

Legal - All activities must comply with existing laws such as Endangered Species Act, National Environmental Policy Act, National Forest Management Act, Forest Land Policy and Management Act, Federal Advisory Committee Act, National Historic Preservation Act, Clean Water Act, Clean Air Act, and treaty rights. Management and regulatory agencies should work together to determine ways to expedite management while ensuring compliance, to improve cooperation through planning and on-the-ground consultation, and to avoid confrontation.

Other Issues - Some issues are beyond the authority of the agencies or the Regional Interagency Executive Committee. These include:

- Use of receipts from timber sales and other products derived from Adaptive Management Area to develop programs and projects within the areas
- Employment targets for local people for special jobs like planning, training, and monitoring
- Special land management or stewardship contracts
- Restricted local use of wood and other products derived from Adaptive Management Area.

Fire and Fuels Management

In the Adaptive Management Area, fire managers are encouraged to actively explore and support opportunities to research the role and effects of fire management on ecosystem functions. Cooperation across agency and ownership boundaries should be emphasized. The standards and guidelines in current plans for hazard reduction should be followed until approved Adaptive Management Area plans are established. Fire management experts will participate on the local Interdisciplinary Technical Advisory Panel on the Adaptive Management Area. Management of the Adaptive Management Area is intended to be innovative and experimental. Wildfire suppression actions, however, should use accepted strategies and tactics, and conform with specific agency policy.

Timber Supply

One reason for locating the Adaptive Management Area adjacent to communities experiencing adverse economic impacts is to provide opportunity for social and economic benefits to these areas. The Adaptive Management Area is expected to produce timber as part of their program of activities consistent with their specific direction under these standards and guidelines. The rates and methods of harvest will be determined on an area-by-area basis. Each area management team is expected to develop a strategy for ecosystem management as part of the Adaptive Management Area plan to guide implementation, restoration, monitoring, and experimental activities involving timber sales. The strategy should contain a short-term (3 to 5 year) timber sale component and an assessment of long-term outputs of timber.

Education

Each Adaptive Management Area was located adjacent to one or more communities with economies and culture long associated with utilization of forest resources. As a result, the people have a “sense of place” and desire for involvement. Many of these local workers already possess timber/forest-related skills and knowledge, as well as that sense of place, which in combination make them natural participants in ecosystem-based management and monitoring. Here adaptive management can bring indigenous knowledge together with formal studies, the local communities and the land management agencies in a mix that may provide creative common-sense approaches to complicated problems.

Technical and scientific training of a local work force should be an educational priority of the Adaptive Management Area Program. Formal schooling and field apprenticeship might provide the work force needed to help implement ecosystem management, particularly in the area of monitoring. This program might be based on collaborations among local community colleges, state universities, and the agencies.

Standards and Guidelines

Also see Chapter 2, “Forest-wide Management Direction.”

Unmapped Late-Successional Reserves within the Adaptive Management Area will be managed according to the standards and guidelines for such reserves except as provided elsewhere in this section. Management of these areas will comply with the standards and guidelines for Late-Successional Reserves, and management around these areas will be designed to reduce risk of natural disturbances. Unmapped Late-Successional Reserves are specified for spotted owl activity centers, occupied marbled murrelet sites, and for certain protection buffers (see Chapter 5).

Riparian protection in the Adaptive Management Area should be comparable to that prescribed for other federal land areas. For example, Key Watersheds with aquatic conservation emphasis within the Adaptive Management Area must have a full watershed analysis and initial Riparian Reserves comparable to those for Tier 1 Key Watersheds. Riparian objectives (in terms of ecological functions) in other portions of the Adaptive Management Area should have expectations comparable to Tier 2 Key Watersheds where applicable. Flexibility, however, is provided to achieve these conditions, if desired, in a manner different from that prescribed for other areas and to conduct bonafide research projects within riparian zones.

At the same time, any analysis of Riparian Reserve widths must also consider the contribution of these reserves to other, including terrestrial, species. Watershed analysis should take into account all species that were intended to be benefited by the prescribed Riparian Reserve widths. Those species include fish, mollusks, amphibians, lichens, fungi, bryophytes, vascular plants, American marten, red tree voles, bats, marbled murrelets, and northern spotted owls. The specific issue for spotted owls is retention of adequate habitat conditions for dispersal.

Standards and guidelines for Matrix management in Chapter 6 of these standards and guidelines (there is no Matrix in the Adaptive Management Area) provide specific measures for coarse woody debris, and for green tree and snag retention, for the Matrix. The intent of the measures must also be met in the Adaptive Management Area, but specific standards and guidelines are not prescribed for this area.

Modify site treatment practices, particularly the use of fire and pesticides, and modify harvest methods to minimize soil and litter disturbance.

Many species of soil and litter-dwelling organisms, such as fungi and arthropods, are sensitive to soil and litter disturbance. Site treatments should be prescribed which will minimize intensive burning, unless appropriate for certain specific habitats, communities or stand conditions. Prescribed fires should be planned to minimize the consumption of litter and coarse woody debris. Other aspects to this standard and guideline include minimizing

soil and litter disturbance that may occur as a result of yarding and operation of heavy equipment, and reducing the intensity and frequency of site treatments. Soil compaction, and removal or disturbance of humus layers and coarse woody debris, may impact populations of fungi and arthropods.

Provide for old-growth fragments in watersheds where little remains.

Matrix standards and guidelines on page 6-6 specify retention of old-growth fragments in fifth field watersheds containing less than 15 percent of such stands. In the Adaptive Management Area, less than 15 percent of fifth field watershed in late-successional forest should be considered as a threshold for analysis rather than a strict standard and guideline, and the role of remaining stands of late-successional forests must be fully considered in watershed analysis before they can be modified.

Habitat Management for Bats

These measures apply within Matrix and AMA lands. See page 2-78.

Survey and Manage

These measures apply within all land allocations. See page 2-63.

Recreation Sites

Measures to minimize disturbance to species applies in all land allocations, see page 2-50.

Hierarchy of Standards and Guidelines Within the AMA

In summary, management activities in the Adaptive Management Area will be conducted to achieve the objectives described in these standards and guidelines. Standards and guidelines for Unmapped Late-Successional Reserves must be followed when they occur within the Adaptive Management Area. Flexibility is provided to meet objectives for Riparian Reserves and Key Watersheds. Full watershed analysis will be conducted prior to new management activities in identified Key Watersheds within Adaptive Management Area.

Management area standards and guidelines need to be considered during planning and implementation of activities within Adaptive Management Areas, and they may be modified in Adaptive Management Area plans based on site-specific analysis. Otherwise, standards and guidelines are to be developed to meet the objectives of the Adaptive Management Area and the overall strategy. Coordination with the Regional Ecosystem Office through the Regional Interagency Executive Committee is required. <ROD D-12]

See Chapter 6 for standards and guidelines for the following Matrix management areas: DM, EM, ES, MM, MX, NL, QM, QX, TS, VL, and VM.

See Chapter 4 for standards and guidelines for the following Administratively Withdrawn management areas: 2L, 9L, NA, RL, RM, UD, UH, and UL

Management Area Categories

National Forest land within the Gifford Pinchot National Forest is assigned to various Management Area Categories (MACs). Each Management Area Category has a goal or management emphasis. Each Management Area Category includes one or more management areas. Each management area has a set of standards and guidelines and other management practices designed to achieve multiple use goals and objectives. The direction given in this section applies only to the management areas within the Adaptive Management Area. The management areas are shown on the Amendment Map.

Table 7-1 Management Area Categories within the Adaptive Management Area.

Management Area Category	Code	Acres*
Developed Recreation Sites	2L	357
Special Interest Area	9L	131
Roaded Recreation	DM	161
Deer and Elk Winter Range	EM	2,878
	ES	3,991
Mountain Goat Summer Range	MM	544
	MX	3,006
Scenic Rivers	NA	59
	NL	8,147
Mountain Goat Winter Range	QM	700
	QX	7,158
Roaded Recreation	RL	259
	RM	19,065
General Forest	TS	68,904
Unroaded Recreation	UD	9,152
	UH	8,177
	UL	557
Visual Emphasis	VL	2,814
	VM	7,123
Total Adaptive Management Area		143,182
*Includes Riparian Reserves		

Descriptions of the Cispus Adaptive Management Area

The Adaptive Management Area contributes to accomplishing the objectives of these standards and guidelines, such as protection or enhancement of riparian habitat and provision for well-distributed late-successional forest habitat. Detailed prescriptions for achieving such objectives are *not* provided, however, in order to permit managers to develop and test alternative approaches applicable to their areas and in a manner consistent with existing environmental and other laws.

Unlike tables elsewhere in these standards and guidelines that show only Federal Acres outside of Late-Successional Reserves and Congressional Reserves, the area listed below includes all acres within the Adaptive Management Area boundaries, including all land allocations and ownerships.

Table 7-2 Cispus Adaptive Management Area.

Name:	Cispus Adaptive Management Area, Washington
Size:	144,000 acres
Ownership:	Gifford Pinchot National Forest; potentially state and private lands.
Associated Communities:	Randle, Morton, and Packwood, Washington; Lewis and Skamania Counties, Washington.
Emphasis:	Development and testing of innovative approaches at stand, landscape, and watershed level to integration of timber production with maintenance of late-successional forests, healthy riparian zones, and high quality recreational values.