Appendix L

Resource Schedules

The direction set forth by the Forest Plan is implemented through specific activities and projects. This appendix displays those projects planned for approximately 10 years of plan implementation. These schedules are dynamic and may be updated frequently. Environmental analysis will be conducted on most of these projects as they become ripe for implementation. Some projects, like inventories and scenery management planning, do not generally require environmental analysis.

Following environmental analysis, where performed, projects may be scheduled for implementation. The final implementation schedule will be dependent upon a variety of factors including demand (for instance for timber sales), budget availability, cost/benefit ratios, and partnership opportunities. An additional factor for consideration is the timing and location of other forest management activities. For example, activities, such as road construction for timber harvest purposes, are important for the successful implementation of some fish, wildlife or recreation projects. Environmental analysis of projects will be tiered to the Forest Plan FEIS.

Fish Habitat Enhancement

There are 158 potential projects identified for implementation during the next ten years. Most of the potential projects have not been through environmental analyses nor the on-site review required to determine project feasibility. Total costs including project planning and implementation, maintenance and monitoring of these projects are estimated to be $30.7 Million (1994 dollars).

Many of these projects are identified as project opportunities but have not yet received on site reconnaissance. Project feasibility will be determined at the time of the on site reconnaissance. All projects which are determined to be feasible, following environmental analysis and on-site review, may be scheduled for implementation. Priorities for project completion are coordinated through the cooperative salmon enhancement planning process (see Appendix H).

Implementation of all potential fisheries enhancement projects on the Tongass during the next decade is estimated to result in a total of 864.7 million pounds of salmon through the first five decades. Fish would be available to subsistence, sport and commercial harvesters. The aggregated value of this harvest is projected to be 661.1 million dollars during this same period.

Some projects, such as installing small instream structures or riparian rehabilitation, overlap with projects listed under watershed restoration. These projects are usually part of a comprehensive planning effort and are separated from watershed projects only for reporting purposes.

Number of Potential Enhancement Projects by Type

Project Type	Chatham Area single yr/multi yr	Stikine Area single yr/multi yr	Ketchikan Area single yr / multi yr	Total
Small Instream Structures	10 / 5	5 / 0	7 / 4	31
Fishways	8 / 2	11 / 0	5 / 0	26
Barrier Modification	4 / 0	2 / 1	5 / 2	14
Spawning Channels	1 / 0	0 / 0	1 / 0	2
Rearing Ponds/off channel rearing	3 / 0	0 / 0	0 / 0	3
Barren Lake Stocking	0 / 1	1 / 0	0 / 3	5
Cooperative Fish Stocking	1 / 3	0 / 3	1 / 3	11
Incubation Boxes	2 / 1	0 / 2	0	5
Lake Fertilization	0 / 3	0 / 0	0 / 2	5
Debris Removal	0	0	0	0
Weir/stock Assessment	7 / 2	0 / 6	0 / 2	17
Riparian Rehabilitation	22 / 2	4 / 1	4 / 6	39
Total Projects	**77**	**36**	**45**	**158**

Multi-year projects are usually implemented in successive years but only counted as one activity. Fertilization of a particular lake is an example of a single project which may be repeated for several years in order to achieve the desired objective of restoring a natural run of salmon to the lake.

The majority of the small instream structural projects, including projects such as large woody debris and gabion placement, mitigate past logging activities. These projects may be considered as rehabilitation rather than enhancement and often may be part of watershed restoration.

Recreation Capital Investment

The capital investment schedules for recreation facilities and trails generally emphasize reconstruction of existing facilities to meet current standards and demands. Schedules are updated annually by the Forest/Areas. These updates normally involve changes in cost, minor changes in scope, incorporation of partnership funding opportunities, filling in an additional year of future projects, and other new information. Occasionally projects may change in priority. This is generally due to unforeseen circumstances which may delay implementation, emergency needs which may result in new projects or changes in priorities, or opportunities to combine with other funding sources. Since the costs of the projects on the schedule exceed available funding for many years to come, new projects are not added every year. Thus while the general order of the schedule is adhered to, a certain degree of flexibility is required.

Recreation Facility Construction and Reconstruction Capital Investments

Project	Capacity (Persons At One Time)	Year Tentatively Funded	Area	District
Mendenhall Glacier Campground Rehab		1997-1998	Chatham	Juneau
Mendenhall Visitor Center		1997	Chatham	Juneau
Heckman Lake Cabin Rehab	6	1997	Ketchikan	Ketchikan
Eagles Nest Picnic Area		1997	Ketchikan	Thorne Bay
Eagles Nest Picnic Area	20	1997	Ketchikan	Thorne Bay
Red Bay Cabin Rehab	6	1997	Ketchikan	Thorne Bay
Bay Of Pillars Shelter		1997	Stikine	Petersburg
Mendenhall Visitor Center		1998	Chatham	Juneau
Yakutat Dunes Pavilion	60	1998	Chatham	Yakutat
Harris River Campground	75	1998	Ketchikan	Craig
Starrigavin Campground Rehab, Phase 2		2000-2005	Chatham	Sitka
Barlow Cove Cabin	12	2000-2005	Chatham	Juneau
Auke Village Campground Rehab	85	2000-2005	Chatham	Juneau
Skaters Cabin Rehab	30	2000-2005	Chatham	Juneau
Harbor Mountain Recreation Area		2000-2005	Chatham	Sitka
Salmon Lake Cabin	6	2000-2005	Chatham	Sitka
Starrigavin Campground Rehab Phase 1	375	2000-2005	Chatham	Sitka
Harbor Mountain Recreation Area		2000-2005	Chatham	Sitka
Southeast Alaska Visitor Center, Phase 6		2000-2005	Ketchikan	
Luck Lake Day Use	30	2000-2005	Ketchikan	Thorne Bay
Little Ratz Harbor)	54	2000-2005	Ketchikan	Thorne Bay
Hamilton Bay Picnic Area		2000-2005	Stikine	Petersburg
Towers Lake Cabin Rehab	6	2000-2005	Stikine	Petersburg
Nemo Road Campsites, Phase 2		2000-2005	Stikine	Wrangell
North Wrangell High country Shelters		2000-2005	Stikine	Wrangell

Trail Construction and Reconstruction Capital Investments

Trail	Miles	Year Tentatively Funded	Area	District
East Glacier Loop Trail	3.0	1997	Chatham	Juneau
Steep Creek, Phase 1	0.2	1997	Chatham	Juneau
Mendenhall Glacier Campground Trails	2.6	1997	Chatham	Juneau
Ketchikan Trail & Site Easements	5.0	1997	Ketchikan	
Ketchikan Trail & Site Easements		1997	Ketchikan	
Connell Lake Trail, Phase 2	1.1	1997	Ketchikan	Ketchikan
Eagles Nest Trail, Phase 1	3.0	1997	Ketchikan	Thorne Bay
Blind River, Phase 2		1997	Stikine	Petersburg
Harris River Campground	0.5	1998	Ketchikan	Craig
Eagles Nest Trail, Phase 2		1998	Ketchikan	Thorne Bay
Ketchikan Trail & Site Easements		1999	Ketchikan	
Suntaheen Trail	0.1	2000-2005	Chatham	Hoonah
Steep Creek, Phase 2	0.3	2000-2005	Chatham	Juneau
Trail Of Time	0.5	2000-2005	Chatham	Juneau
Auke Campground Trails		2000-2005	Chatham	Juneau
Skaters Cabin Trails	0.2	2000-2005	Chatham	Juneau
Gavin Hill Access	0.2	2000-2005	Chatham	Sitka
Harbor Mt. Recreation Area		2000-2005	Chatham	Sitka
Mt. Edgecumbe	6.2	2000-2005	Chatham	Sitka
Starrigavan Campground Trails		2000-2005	Chatham	Sitka
Ketchikan Trail & Site Easements		2000-2005	Ketchikan	
Castle River Trail	1.1	2000-2005	Stikine	Petersburg
Harvey Lake	0.5	2000-2005	Stikine	Petersburg
North Wrangell High Country	2.5	2000-2005	Stikine	Wrangell

Road Management Planning

The Revised Forest Plan incorporates substantial change in management direction from the 1979 (as amended) Tongass Land Management Plan. Major change includes the allocation of new Land Use Designations (LUD's) and the implementation of new standards and guidelines. Numerous areas previously available for timber harvest and often unrestricted vehicular access now have revised management direction.

Standards and guidelines throughout the Plan address the need for road management planning (e.g., the Transportation and Wildlife Forest-wide Standards & Guidelines, and the Old-growth Habitat Land Use Designation). Road management planning is executed through the development and implementation of Road Management Objectives. (Consult FSM 7710 and FSH 7709.55.) Road Management Objectives are used to address the design, use, and maintenance of individual roads, as well as the overall road network.

Travel and Access Management Planning (Consult FSH 7709.55, 7709.58, and 7709.59), which addresses human uses of roads activities such as hunting, fishing, and recreation, as well as resource concerns such as for the protection of wolves or brown bear, is an important process to facilitate the developing or updating of the Road Management Objectives. This schedule addresses the need to develop or update Road Management Objectives across the roaded area of the Tongass as a result of implementation of the Revised Forest Plan.

Road Management Objective Schedule

Develop or update Road Management Objectives across the roaded area of the Forest. The priority for accomplishing updated objectives will be set by each of the Forest Supervisors for his or her Administrative Area. Generally, those geographic areas with recognized road conflicts or specific concerns related to implementation of the revised Forest Plan should be addressed first. Conflict areas may include, but not be limited to, Northeast Chichagof Island (road accessible from Hoonah), Prince of Wales Island, and Mitkof Island.

Planning should address logical road management areas (e.g., an island, a part of an island, a grouping of islands, parts of the mainland, etc.). If feasible, develop or update Road Management Objectives as part of a proposed project within a vicinity.

Road management planning should be consistent with Forest Service Manual 7710 and Forest Service Handbook 7709.55.

Scenery Management

The Tongass National Forest is in the process of changing from the previous Visual Management System to the new National Scenery Management System. Manual direction, titled "Landscape Aesthetics: A Handbook for Scenery Management" should be available during the first year of Forest Plan implementation. The new system has been developed to: 1) incorporate into one manual the analysis tools that have evolved over the past two decades since the inception of the basic system, 2) redefine and clarify some terms; 3) revise some of the inventory processes; 4) provide a stronger link with ecosystem management; and 5) provide more graphic examples of all the systems concepts. The following schedule will implement the new system.

New "Scenery Management System" Schedule

Within five years after distribution of the new Scenery Management System handbook complete a refinement of the scenery data base that will be based on the direction and guidelines outlined in this handbook. This scenery inventory refinement will include updates of several elements of the data base. These new and/or refined inventories may then be used in the next revision of the Forest Plan. The time frames for completion are as follows: 1) Ecological land unit delineation's and landscape character descriptions and inventory of inherent scenic attractiveness. Complete by the first year after plan implementation. 2) Refine concern level ratings (sensitivity level ratings in VMS) utilizing a constituent analysis as outlined in new handbook. Complete by the second year after plan implementation. 3) Viewshed mapping and delineation of Scenic Classes. Complete by the third year after plan implementation. 4) Visual Absorption Capability inventory refinement. Complete by the fifth year after plan implementation.

Timber Harvest

About 700 thousand acres of commercial forest land are classified as suitable for timber production (see Appendix A). Most of these acres have been scheduled for eventual timber harvest over a rotation age ranging from 70 to 160 years. Of the total acreage, 247,000 acres are scheduled for harvest on the Stikine Area; 140,000 acres are scheduled on the Chatham Area; and 289,000 acres are scheduled on the Ketchikan Area.

The Allowable Sale Quantity (ASQ) for this plan for the next ten years is 65.3 MMCF (267.2 MMBF) on an average annual basis. As shown in the following timber schedule the ASQ is divided into two non-interchangeable components (NIC). The standard component (NIC I) volume is scheduled from suitable lands using existing logging systems (normal operability). Most of theses lands are expected to be economic under projected market conditions for the plan. The non-standard component (NIC II) volume (difficult and isolated operability) is scheduled from suitable lands that are available for harvest using systems not commonly used in Southeast Alaska. Most of these lands are considered economically or technologically marginal for the life of the plan. As much as 52.3 MMCF (219 MMBF) could be make available from the NIC I component, and as much as 13 MMCF (48 MMBF) could be made available from the NIC II component, during the life of this plan from the Forest as a whole. How the projected annual average sale schedules used to calculate these totals are divided among the three administrative areas, on an average annual basis, is shown in the following sale schedules. (Note: The ASQ is measured in cubic feet; board foot volumes are only given for comparison purposes.)

Sale Schedule in Millions of Cubic Feet

1st Decade Sale Schedule – Average Annual Sell (MMCF, sawlog and utility)

	Noninterchangable Components		
	Standard	**Non-Standard**	**Total**
Chatham	9	4	13
Stikine	18	5	23
Ketchikan	25	4	29
Tongass Avg. Annual Allowable Sale Quantity	52	13	65

(Totals may be off due to rounding errors.)

1st Decade Sale Schedule – Average Annual Sell (MMCF, sawlog only)

	Noninterchangable Components		
	Standard	**Non-Standard**	**Total**
Chatham	7	3	10
Stikine	15	4	19
Ketchikan	21	3	25
Tongass Avg. Annual Allowable Sale Quantity	43	11	54

(Totals may be off due to rounding errors.)

Sale Schedule in Millions of Board Feet

1st Decade Sale Schedule – Average Annual Sell (MMBF, sawlog and utility)

	Noninterchangable Components		
	Standard	**Non-Standard**	**Total**
Chatham	35	16	51
Stikine	77	18	95
Ketchikan	107	14	121
Tongass Avg. Annual Allowable Sale Quantity	219	48	267

(Totals may be off due to rounding errors.)

1st Decade Sale Schedule – Average Annual Sell (MMBF, sawlog only)

	Noninterchangable Components		
	Standard	**Non-Standard**	**Total**
Chatham	27	13	40
Stikine	63	15	78
Ketchikan	88	13	101
Tongass Avg. Annual Allowable Sale Quantity	178	41	219

(Totals may be off due to rounding errors.)

Watershed Restoration

Watershed restoration involves accelerating the return of a watershed to a condition which is within a natural range of variation for water yield, stream flow, sediment movement, large wood recruitment and transport, water chemistry, and soil mass movement. Because of the magnitude of some watershed restoration needs, projects are often multi-year projects and require significant time for planning prior to implementation. These watershed restoration efforts are expected to involve partners from outside the Forest Service.

Projects may also be implemented which have narrower objectives than large -scale watershed restoration, such as stabilizing a landslide through revegetation, releasing riparian conifers in dense alder stands or correcting drainage problems. These types of projects are usually not located in watersheds with apparent large scale restoration needs and will not require as intensive analysis and planning as the watershed wide restoration projects.

The 10-year restoration schedule identifies both large-scale watershed restoration projects as well as single-year type projects. Some projects, such as re-establishing stream bank vegetation, controlling erosion at a stream crossing, or placing large wood in a stream, may overlap with projects listed under fish habitat improvement . These projects are usually part of a comprehensive planning effort and are separated from fish habitat projects only for reporting purposes. Also included in the 10-year restoration schedule are projects which are needed to support watershed restoration planning. Although these projects do not produce direct on the ground accomplishments, they are necessary to either gather information about the watershed on which project designs are based; or to enable out year budgets to be developed and priorities set. Both the watershed analysis protocol development and the update of the watershed restoration strategy will be coordinated with other agencies and landowners.

Watershed Restoration Planning Schedule

Type of activity or project	Chatham	Stikine	Ketchikan
Watershed Analysis protocol development (within one year of plan implementation)	Forest-wide	Forest-wide	Forest-wide
Update Area projects list in Watershed Restoration Strategy (within one year of plan implementation)	Forest-wide	Forest-wide	Forest-wide

Watershed Project Schedule

Type of activity or project	Chatham	Stikine	Ketchikan
Maybeso watershed restoration (planning, implementation and monitoring phases may span 8 to 10 years)			X
Nakwasina watershed restoration (planning, implementation and monitoring phases may span 8 to 10 years)	X		
Number of single year type projects, per year	1	1	1

Wildlife Management

Extensive inventories and monitoring projects are planned during the next 10 years of Forest Plan implementation. These inventories and monitoring projects will contribute to the understanding of the habitat requirements of the Forest's wildlife, including Threaten, Endangered and Sensitive Species. The types of projects implemented during plan implementation may shift depending on new information gained.

Habitat enhancement activities are either vegetative habitat improvements or structural improvements. Vegetative habitat Improvement projects (measured in acres) include activities such as precommercial thinning, cutting canopy gaps into young-growth stands, shrub plantings, and seeding of forage plants. Structural improvements, listed in the schedule as "structures constructed", include: structures which regulate road access; provide waterfowl and osprey nesting platforms; signing for eagle nests; and songbird and bat nest boxes.

Watchable wildlife projects are generally implemented to facilitate the forest visitor's understanding and enjoyment of wildlife. Projects are often designed, funded and implemented in cooperation with other agencies and organizations. These projects may be planned to complement other recreation management projects and programs.

Wildlife Schedule (annual)

Type of activity or project	Chatham	Stikine	Ketchikan
Acres of habitat improved	1,500	1,300	5,200
Number of structures constructed	10	15	50
Acres inventoried, monitored, or studied to benefit:			
Amphibians [3]	1,500	3,000	5,000
Birds			
bald eagles [5]	6,200	1,500	5,000
marbled murrelet	4,200	5,000	1,000
waterfowl and shorebirds [1,2,3,4,5]	38,500	18,000	19,000
forest birds [4,5]	27,000	7,000	35,000
Upland species			
deer [3,4]	25,000	92,700	85,000
Alexander Archipelago wolf	1,000	5,000	30,000
bear [3,4]	15,000	5,000	15,000
furbearers [3,4]	5,600	5,000	5,000
other species [1,3,4](especially moose, elk, goats and small mammals)	15,300	10,500	45,000

[1] Includes aerial surveys over acres of good habitat (for shorebirds and waterfowl includes concentration areas used for nesting, wintering or loafing; for sea birds includes acres of previously known haulouts or rookeries surveyed for population trend; for mountain goats includes acres where animals are commonly spotted during aerial surveys.)
[2] Counts 500 acres for each "MAPA" study site and each fall migration count site.
[3] Except where otherwise specified, assumes 40 acres per day of level 4 field survey by each biologist, botanist or biological technician.
[4] Assumes 10 acres per telemetry relocation of each radioed animal under study.
[5] Assumes 80 acres per mile of shoreline surveyed for eagle nests or eagle productivity, or 80 acres per mile of sea transact for sea birds or sea mammals.

Threatened, Endangered and Sensitive Species Schedule (annual)

Type of activity or project	Chatham	Stikine	Ketchikan
Acres of habitat improved	0	200	1,100
Number of structures constructed	0	5	170
Acres inventoried, monitored, or studied to benefit:			
Fish (miles of streams, acres of lakes)	6 mi. 150 ac.	0	4 mi.
Birds			
goshawk [3,4]	75,000	10,000	100,000
Plants [3]	16,800	8,400	14,000
Marine Mammals [1,3,4] (including both listed and non-listed marine mammals)	4,500	1,500	6,000

[1] Includes aerial surveys over acres of good habitat (for shorebirds and waterfowl includes concentration areas used for nesting, wintering or loafing; for sea birds includes acres of previously known haulouts or rookeries surveyed for population trend; for mountain goats includes acres where animals are commonly spotted during aerial surveys.)
[2] Counts 500 acres for each "MAPA" study site and each fall migration count site.
[3] Except where otherwise specified, assumes 40 acres per day of level 4 field survey by each biologist, botanist or biological technician.
[4] Assumes 10 acres per telemetry relocation of each radioed animal under study.

Nature-watch Program

Type of activity or project	Chatham	Stikine	Ketchikan
Number of viewing sites developed	1	4	7
Number of presentations	20	20	60
Number of multimedia products	10	100	50