

## Analysis of the Management Situation

### Alaska Railroad

The State of Alaska operates the Alaska Railroad between Anchorage and Seward, including a short spur line to Whittier. The railroad is an alternative form of transportation to the Seward Highway between Anchorage and Seward. However, the single track to Whittier is currently the only land route connecting that community with other communities on the Kenai Peninsula. Most travelers, vehicles, small boats, and tour buses depend upon the railroad for their access to Prince William Sound. In 1995, it was estimated that the railroad accommodated over 205,000 recreation visits to the Sound.

### Alaska Marine Highway System

The State of Alaska operates the Alaska Marine Highway System within Prince William Sound. Ferries variously connect the key Prince William Sound access communities of Seward, Whittier and Valdez. There is an opportunity to nominate additional roads for Scenic Byway status. There is a need to provide clear direction on how Forest development roads and trails will be managed and maintained for public access.

In 1996, the State proposed that the Seward Highway be nominated as an “All-American Road,” one of the most prestigious recognition’s that can be given to a public highway. Status as an All-American Road could place restrictions on management of adjacent Forest land.

### *Revision Decision Space*

While demand for access to and within the Forest can be expected to increase from many different sources and locations, special concerns should be given to the potential effects on Prince William Sound through Whittier.

Management actions to respond to projected increases in, and possible impacts of, demand for access will be limited primarily by the following:

- Jurisdictional limitations of the Forest to manage road and corridor development that may affect Forest settings and attractions, if not management plans.
- Marketing operations of state and private interests that increase demand (or traffic).
- Cruise ship operations that may redirect highway traffic from Seward to Whittier and introduce additional traffic to Valdez and Cordova.

The Revised Forest Plan can develop guidelines for determining when and where roads and trails would be open to motorized access. It can also allocate certain areas to non-motorized use, including use by aircraft. The Forest will want to maintain the flexibility to quickly respond to changing uses and resource concerns through the use of special regulations. By not specifically allocating areas to be open to any type of overland recreational vehicle or motorized use the Forest can manage these uses without having to amend the Forest Plan every time a situation arises that requires a change in use patterns.

## *D. Natural Resource Production*

### **1. Forest Products**

Under the Forest Plan, the Forest operates a sustained-yield timber program to meet public demand for a range of forest products including sawtimber, poles, cabin logs, firewood, pulp logs, chip logs, Christmas trees, wildlings, seedlings, tree cones, fungi, shrubs and other plants. Forest product raw materials are conveyed to the public via commercial timber sales, personal use permits, and Alaska free use permits.

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Timber volume harvested from lands classified as suitable for timber production is chargeable to the Forest Plan allowable sale quantity (ASQ). Volume harvested from unsuitable lands for other resource management objectives or forest products harvested under personal use or Alaska free use permits are not chargeable to the ASQ.

### *Current Management Situation*

#### Forest Plan Goals and Objectives

Vegetation management and timber production are not explicitly stated as management goals, however the Forest Plan provides consistent direction for vegetative management across the Forest as a primary management practice to meet primary management goals for increasing recreation opportunities, maintaining landscape character, and maintaining and enhancing wildlife and fish habitat. This direction is contained in the description broad forest goals, the desired future condition for timber stand age class distribution, forest-wide activities, standards, and guidelines for the plan's management area prescriptions, and in each specific management area's standards and guidelines.

#### Forest Plan Suitable Land Base and Allowable Sale Quantity

In the 1984 Forest Plan, the Chugach National Forest contained 1,104,856 acres of forested land. Thirty-one percent or 347,489 acres were classified as commercial timberlands (lands capable of producing 20 or more cubic feet per acre per year of wood fiber. A total of 56,581 acres of these commercial timberlands were in the Forest's Wilderness Study area and are currently withdrawn from timber production. An additional 196,855 acres were classified as unsuitable for timber production due to excessive development cost, low product values, resource protection constraints, or isolated location. The remaining 94,053 acres became the suitable land base for timber production.

The suitable land base contained an estimated inventory volume of 1.585 billion board feet (Scribner) from which an allowable sale quantity (ASQ) averaging 16.9 million board feet per year (169 MMBF/decade) was programmed for timber harvest in 7 of the Forest's 9 management areas during the life of the plan as displayed in Figure IV-18.

Figure IV-18: Expected Timber Production Outputs by Management Area

| 1984 Forest Plan Management Area     | Timberland Suitable Acres | Percent of Total Suitable Acres | AVERAGE ANNUAL OUTPUTS 1986-1990 (Millions of Bd. Ft.) | Percent of Annual MMBF Volume Output | ANNUAL VALUE (1978 Dollars) | Percent of Annual Value (1978 Dollars) |
|--------------------------------------|---------------------------|---------------------------------|--|--------------------------------------|-----------------------------|--|
| 1 - Road Corridor                    | 22,900                    | 24%                             | 4.5  | 27%                                  | \$879,000                   | 25%                                    |
| 2 - East Side                        | 0                         | 0%                              | 0.0  | 0%                                   |                             | 0%                                     |
| 3 - Resurrection Pass                | 0                         | 0%                              | 0.0  | 0%                                   |                             | 0%                                     |
| 4 - Crescent Lake                    | 3,639                     | 4%                              | 0.7  | 4%                                   | \$118,000                   | 3%                                     |
| <b>Subtotal Kenai Peninsula</b>      | <b>26,539</b>             | <b>28%</b>                      | <b>5.2</b>   | <b>31%</b>                           | <b>\$997,000</b>            | <b>28%</b>                             |
| 5 - Nellie Juan                      | 4,065                     | 4%                              | 0.1  | 1%                                   | \$34,000                    | 1%                                     |
| 6 - College Fiord                    | 22,321                    | 24%                             | 4.2  | 25%                                  | \$777,000                   | 22%                                    |
| 7 - Gravina                          | 15,394                    | 16%                             | 2.7  | 16%                                  | \$557,000                   | 16%                                    |
| 8 - Big Islands                      | 19,157                    | 20%                             | 2.1  | 12%                                  | \$675,000                   | 19%                                    |
| <b>Subtotal Prince William Sound</b> | <b>60,937</b>             | <b>65%</b>                      | <b>9.1</b>   | <b>54%</b>                           | <b>\$2,043,000</b>          | <b>58%</b>                             |
| 9 - Copper River                     | 7,187                     | 8%                              | 2.6  | 15%                                  | \$506,000                   | 14%                                    |
| <b>Subtotal Copper River</b>         | <b>7,187</b>              | <b>8%</b>                       | <b>2.6</b>   | <b>15%</b>                           | <b>\$506,000</b>            | <b>14%</b>                             |
| <b>Total Forestwide</b>              | <b>94,053</b>             | <b>100%</b>                     | <b>16.9</b>  | <b>100%</b>                          | <b>\$3,546,000</b>          | <b>100%</b>                            |

Source: Exhibits III-4, III-6, III-12 Chugach National Forest Plan

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Figure IV-29: Forest Plan Monitoring Vegetation & Timber Management Monitoring Items

| Item Number and MIH Code | Effect to be Measured  | Monitoring Objective  | Monitoring Technique  | Minimum Monitoring Frequency | Reporting Period |
|--------------------------|--|---|---|------------------------------|------------------|
| 5<br>C09                 | Change in vegetation.  | Determine changes in diversity and habitat conditions.  | Audit annual reports on fuel management, individual fires, and timber management accomplishment reports.      | Annually                     | 5 Years          |
| 7<br>E00                 | Inventory non-suitable lands for possible additions to suitable timber land base.    | Insure that all suitable lands are used in timber scheduling.                                   | Sample unsuitable areas following the stand examination procedures and the national timber inventory process. | Annually                     | 5 Years          |
| 8<br>E04                 | Measure stocking levels on all areas requiring reforestation (natural & artificial). | Insure that all suitable timber land becomes adequately stocked in a timely manner.             | Review stocking survey results based on FSM 2460 stocking requirements.                                       | Annually                     | 5 Years          |
| 9<br>E06                 | Measure the size of openings created by timber harvesting objectives.                | Insure that opening size does not exceed that established in the Forest Plan or Regional Guide. | Review individual sale reports and timber sale contracts for opening size.                                    | Annually                     | 5 Years          |
| 10<br>E06                | Harvest area of timber type classes produced by FORPLAN schedule will be measured.   | Insure the area of timber type classes treated does not fluctuate from the FORPLAN schedule.    | Review timber type map data, stand exam data, and timber sale reports.  | Annually                     | 5 Years          |
| 14<br>P39                | Change in condition of vegetative cover as a result of insects or disease.           | Determine when effected vegetation will warrant prevention or suppression activities.           | Aerial Survey   | Annually                     | 2 Years          |

Source: Forest Plan, pages IV-12 - IV-15

54 percent of the original annual ASQ was scheduled to come from Prince William Sound Management Areas 5, 6, 7 and 8; 31 percent was scheduled for the Kenai Peninsula Management Areas 1 and 4, and 15 percent was scheduled to come from the Copper River Management Area 9. Management Areas 2 and 3 on the Kenai Peninsula had no scheduled timber outputs that were chargeable to the ASQ.

Forest Plan amendment #1 limited the above timber sale offerings to an average of 6.3 million board feet per year for the first five years of the Plan's life and 10.6 million board feet per year during the second five years; which effectively halved the Plan's 169 MMBF/decade ASQ to 84.5 MMBF/decade.

### Standards And Guidelines For Vegetation/Timber Management

Forest-wide standards and guidelines applicable to vegetation/timber management activities have been adequate for all projects when supplemented with new guidelines for sensitive plant species and wildlife species such as goshawk and brown bear.

### Monitoring And Evaluation

The Plan's monitoring requirement specified 15 items or effects that were to be monitored and evaluated during implementation of the Plan. Of the 15 items, the six in Figure IV-29 pertain directly to vegetation and timber management activities.

Five of the above six items has been evaluated annually to determine how well the planned objectives were met and how closely management standards and guidelines had been applied. Item 10 has not been monitored due to the unavailability of the original Forest Plan schedules in the planning record.

Monitoring and evaluation results were published in annual Forest Plan implementation reports.

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Figure IV-30: Chugach National Forest Timber Program Revenues & Costs for Fiscal Years 1987-1997

| Time Period       | FY           | Timber program Revenues | Timber program Expenses | Net Timber Program Gain/Loss |
|-------------------|--------------|-------------------------|-------------------------|------------------------------|
| 4                 | 1987         | \$29,000                | \$477,000               | -\$448,000                   |
| 5                 | 1988         | \$12,714                | \$519,768               | -\$507,054                   |
| 6                 | 1989         | \$29,933                | \$694,629               | -\$664,696                   |
| 7                 | 1990         | \$15,257                | \$325,939               | -\$310,682                   |
| 8                 | 1991         | \$19,459                | \$284,991               | -\$265,532                   |
| 9                 | 1992         | \$39,863                | \$655,906               | -\$616,043                   |
| 10                | 1993         | \$223,680               | \$925,178               | -\$701,498                   |
| 11                | 1994         | \$28,380                | \$1,153,269             | -\$1,124,889                 |
| 12                | 1995         | \$24,697                | \$621,072               | -\$596,375                   |
| 13                | 1996         | \$96,471                | \$1,682,594             | -\$1,586,123                 |
| 14                | 1997         |                         | \$843,242               | -\$843,242                   |
| <b>87-97</b>      | <b>87-97</b> | <b>\$519,454</b>        | <b>\$8,183,588</b>      | <b>-\$7,664,134</b>          |
| <b>87-97 Avg.</b> | <b>87-97</b> | <b>\$47,223</b>         | <b>\$743,963</b>        | <b>-\$696,739</b>            |

Source: TSPIRS Reports 1987-1997

### Summary Of Timber Program Outputs And Activities

#### Timber Program Outputs 1985-1997

Since 1985, approximately 3,400 acres of suitable lands have been harvested and are in various stages of regeneration. With the exception of one sale on Montague Island for road right-of-way volume, all commercial timber sales and most personal use and Alaska free use permit areas have been on the Kenai Peninsula.

Actual timber program outputs are displayed in Figure I-1 and compared to the projected outputs in the Forest Plan in Figure I-2. Over the past 13 years, the Forest has offered 58 percent and harvested 24 percent of the ASQ timber volume under the amended Forest Plan.

#### Timber Program Revenues and Cost

Figure IV-30 displays the revenues and costs associated with the Chugach National Forest timber program between 1987 and 1997 as reported in the Timber Sale Preparation Information Reporting System (TSPIRS). TSPiRS revenue and cost data was not available for the years of 1985 and 1986 because TSPiRS reporting did not start until fiscal year 1987.

Between 1987 and 1997, the Forest spent \$7,664,134 more on the timber program than revenues received for the sale of timber, and thus is classified as a below-cost timber program.

#### Projected Outputs and Activities

Projected timber program outputs and activities under the existing Forest Plan are displayed in Figure I-2. Projected outputs are based on the average timber program outputs over the past thirteen years.

### Timber Supply and Demand for Revision

#### Tentatively Suitable Timberlands

As part of the forest plan revision process, the forested lands on the Chugach have been reassessed to determine what lands if any are tentatively suitable for timber production during the next plan period.

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Figure IV-31: Revision Timberland Suitability Classification

| Timberland Suitability Classification            | Kenai            | PWS              | CR               | AMS Total        | Current Forest Plan | AMS Acreage Change |
|--|------------------|------------------|------------------|------------------|---------------------|--------------------|
| Water  | 33,350           | 39,140           | 63,970           | 136,460          | 66,768              | 69,692             |
| Non-Forest Land                                  | 922,580          | 1,787,560        | 1,395,170        | 4,105,310        | 4,764,376           | -659,066           |
| Forest Land                                      | 218,390          | 764,650          | 225,780          | 1,208,820        | 1,104,856           | 103,964            |
| <b>Total Area</b>                                | <b>1,174,320</b> | <b>2,591,350</b> | <b>1,684,920</b> | <b>5,450,590</b> | <b>5,936,000</b>    | <b>-485,410</b>    |
| <b>Forest Land</b>                               | <b>218,390</b>   | <b>764,650</b>   | <b>225,780</b>   | <b>1,208,820</b> | <b>1,104,856</b>    | <b>103,964</b>     |
| Unproductive/Inadequate Response Info            | 155,880          | 499,970          | 97,440           | 753,290          | 757,367             | -4,077             |
| Productive Timberland Unsuitable due to:         |                  |                  |                  |                  |                     |                    |
| Withdrawn  | 20               | 2,410            |                  | 2,430            | 56,581              | -54,151            |
| Not Capable                                      | 29,570           | 10,480           | 15,910           | 55,960           | 0                   | 55,960             |
| Physically Not Suitable                          | 6,330            | 66,480           | 9,880            | 82,690           | 42,668              | 40,022             |
| Can't Insure Restocking                          |                  |                  |                  |                  | 25,699              | -25,699            |
| <b>Subtotal Unsuitable Productive Timberland</b> | <b>35,920</b>    | <b>79,370</b>    | <b>25,790</b>    | <b>141,080</b>   | <b>124,948</b>      | <b>16,132</b>      |
| <b>Tentatively Suitable Forest Land</b>          | <b>26,590</b>    | <b>185,310</b>   | <b>102,550</b>   | <b>314,450</b>   | <b>222,541</b>      | <b>91,909</b>      |

Figure IV-31 displays a new estimate of acres that are tentatively suitable for timber production by geographic landscape area. Tentatively suitable lands total 314,450 acres for the Forest which is an increase of 91,909 acres over the 1984 Forest Plan.

### Timber Inventory & Existing Condition

One of the primary uses of the forest-level timber inventory, required for each National Forest, is to provide current information for land management planning. Although a more recent forest-wide timber resource inventory had been scheduled to be completed by 1990, a new forest-wide inventory of the Chugach National Forest has been postponed until 1999 or later.

The most current timber inventory available for revision of the Chugach National Forest Land and Resource Management Plan (Forest Plan) include a 1978 forest-wide inventory and a 1987 inventory of the Kenai Peninsula. The revision inventory is the combination of the 1978 inventory and the 1987 inventory of the Kenai Peninsula updated in 1988 for ownership changes. Key statistics for the revision inventory are displayed in Figures IV-32, IV-33 and IV-34. ANILCA additions and EVOS purchases are not reflected in this inventory, but are accounted for in the Forest GIS and the tentatively suitable land base see **Map 9 - Tentatively Suitable Lands**.

Based on the revision inventory, it is estimated the Forest has 420,623 acres of commercial timberlands containing a net growing stock volume of 1.755 billion cubic feet and 7.998 billion board feet (Scribner) in sawtimber. The inventory also estimates that there is another 0.465 billion cubic feet of growing stock and 1.762 billion board feet (Scribner) of sawtimber on 819,102 acres of other forest lands.

Forest-wide estimates of net annual growth on available timberlands are 9.3 million cubic feet per year for growing stock and 29.4 million board feet (Scribner) per year for sawtimber, even though net annual growth for the Kenai Peninsula was -245,020 cubic feet per year for growing stock and a -735,627 board feet per year for sawtimber primarily due to SBB mortality. Net annual growth in Prince William Sound and Copper River combined was 9.557 million cubic feet for growing stock and 30.1 million board feet for sawtimber.

The current Forest Plan estimated that 80% of the standing volume was past rotation age with 75 percent of the acres suitable for timber production classified as mature and over-mature sawtimber and

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Figure IV-32: Revision Forest Inventory Data

| <b>87 Forest Inventory Kenai Peninsula Inventory block</b>                         | <b>National Forest T-001</b>                        | <b>Net Volume of Growing Stock Cubic Feet T-018</b> | <b>Net Volume of Sawtimber Board Feet T-019</b>       | <b>Net Volume of Sawtimber Board Feet (converted)</b> |
|--|---|---|---|---|
| Land Classification  | Acres   | CF  | BF (11/4)   | BF (Scribner)   |
| Timberland Available (Unreserved)  | 78,773  | 196,462,159   | 833,704,299   | 640,657,067   |
| Timberland, Reserved   | 0   | 0   | 0   | 0   |
| <b>Total Timberland</b>  | <b>78,773</b>                                       | <b>196,462,159</b>                                  | <b>833,704,299</b>                                    | <b>640,657,067</b>                                    |
| Other Forest Land, Unreserved  | 114,972   | 36,443,920  | 137,279,913   | 105,492,255   |
| Other Forest Land, Reserved  | 0   | 0   | 0   | 0   |
| <b>Total Other Forest Land</b>   | <b>114,972</b>                                      | <b>36,443,920</b>                                   | <b>137,279,913</b>                                    | <b>105,492,255</b>                                    |
| Total Forest, Unreserved   | 193,745   | 232,906,080   | 970,984,212   | 746,149,322   |
| Total Forest, Reserved   | 0   | 0   | 0   | 0   |
| <b>Total Forest</b>  | <b>193,745</b>                                      | <b>232,906,080</b>                                  | <b>970,984,212</b>                                    | <b>746,149,322</b>                                    |
| Nonforest Land   | 946,650   | 0   | 0   | 0   |
| Noncensus Water  | 3,727   | 0   | 0   | 0   |
| <b>Total Non-Forest</b>  | <b>950,377</b>                                      | <b>0</b>  | <b>0</b>  | <b>0</b>  |
| <b>TOTAL ALL CLASSES</b>   | <b>1,144,121</b>                                    | <b>232,906,080</b>                                  | <b>970,984,212</b>                                    | <b>746,149,322</b>                                    |
| <b>78 Forest Inventory PWS &amp; CR Inventory Block with 1998 Ownership Update</b> |   |   |   |   |
| <b>National Forest T-001</b>   | <b>Net Volume of Growing Stock Cubic Feet T-011</b> | <b>Net Volume of Sawtimber Board Feet T-012</b>     | <b>Net Volume of Sawtimber Board Feet (converted)</b> |   |
| Land Classification  | Acres   | CF  | BF (11/4)   | BF (Scribner)   |
| Timberland Available (Unreserved)  | 296,613   | 1,347,886,460                                       | 6,554,459,745   | 6,328,442,310   |
| Timberland, Reserved   | 45,238  | 211,073,740   | 1,065,259,167   | 1,028,525,835   |
| <b>Total Timberland</b>  | <b>341,851</b>                                      | <b>1,558,960,200</b>                                | <b>7,619,718,912</b>                                  | <b>7,356,968,145</b>                                  |
| Other Forest Land, Unreserved  | 565,957   | 351,588,045   | 1,402,594,341   | 1,354,228,680   |
| Other Forest Land, Reserved  | 138,173   | 76,522,516  | 313,337,990   | 302,533,156   |
| <b>Total Other Forest Land</b>   | <b>704,130</b>                                      | <b>428,110,562</b>                                  | <b>1,715,932,331</b>                                  | <b>1,656,761,836</b>                                  |
| Total Forest, Unreserved   | 862,569   | 1,699,474,505                                       | 7,957,054,086   | 7,682,670,990   |
| Total Forest, Reserved   | 183,411   | 287,596,257   | 1,378,597,157   | 1,331,058,991   |
| <b>Total Forest</b>  | <b>1,045,980</b>                                    | <b>1,987,070,762</b>                                | <b>9,335,651,243</b>                                  | <b>9,013,729,981</b>                                  |
| Nonforest Land   | 1,648,720   | 60,855  | 0   | 0   |
| Noncensus Water  | 34,466  | 0   | 0   | 0   |
| <b>Total Non-Forest</b>  | <b>1,683,187</b>                                    | <b>60,855</b>                                       | <b>0</b>  | <b>0</b>  |
| <b>TOTAL ALL CLASSES</b>   | <b>2,729,167</b>                                    | <b>1,987,131,617</b>                                | <b>9,335,651,243</b>                                  | <b>9,013,729,981</b>                                  |
| <b>Revision Forest Inventory All Inventory Blocks Combined</b>                     |   |   |   |   |
| <b>National Forest Sum</b>   | <b>Net Volume of Growing Stock Cubic Feet Sum</b>   | <b>Net Volume of Sawtimber Board Feet Sum</b>       | <b>Net Volume of Sawtimber Board Feet (converted)</b> |   |
| Land Classification  | Acres   | CF  | BF (11/4)   | BF (Scribner)   |
| Timberland Available (Unreserved)  | 375,385   | 1,544,348,619                                       | 7,388,164,044   | 6,969,099,377   |
| Timberland, Reserved   | 45,238  | 211,073,740   | 1,065,259,167   | 1,028,525,835   |
| <b>Total Timberland</b>  | <b>420,623</b>                                      | <b>1,755,422,359</b>                                | <b>8,453,423,211</b>                                  | <b>7,997,625,212</b>                                  |
| Other Forest Land, Unreserved  | 680,929   | 388,031,966   | 1,539,874,254   | 1,459,720,935   |
| Other Forest Land, Reserved  | 138,173   | 76,522,516  | 313,337,990   | 302,533,156   |
| <b>Total Other Forest Land</b>   | <b>819,102</b>                                      | <b>464,554,482</b>                                  | <b>1,853,212,244</b>                                  | <b>1,762,254,091</b>                                  |
| Total Forest, Unreserved   | 1,056,314   | 1,932,380,585                                       | 8,928,038,298   | 8,428,820,312   |
| Total Forest, Reserved   | 183,411   | 287,596,257   | 1,378,597,157   | 1,331,058,991   |
| <b>Total Forest</b>  | <b>1,239,725</b>                                    | <b>2,219,976,841</b>                                | <b>10,306,635,455</b>                                 | <b>9,759,879,303</b>                                  |
| Nonforest Land   | 2,595,370   | 60,855  | 0   | 0   |
| Noncensus Water  | 38,193  | 0   | 0   | 0   |
| <b>Total Non-Forest</b>  | <b>2,633,563</b>                                    | <b>60,855</b>                                       | <b>0</b>  | <b>0</b>  |
| <b>TOTAL ALL CLASSES</b>   | <b>3,873,288</b>                                    | <b>2,220,037,696</b>                                | <b>10,306,635,455</b>                                 | <b>9,759,879,303</b>                                  |

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Figure IV-33: Acres of Forested Lands by Forest Type and Productivity Class

| Kenai Peninsula<br>87 Inventory Forest Type | CF/<br>AC/YR<br>225+ | CF/<br>AC/YR<br>165-224 | CF/<br>AC/YR<br>120-164 | CF/<br>AC/YR 85-<br>119 | CF/ AC/YR<br>50-84 | CF/ AC/YR<br>20-49 | CF/ AC/YR 15<br>19 | CF/<br>AC/YR 10<br>14 | CF/<br>AC/YR 1-<br>9 | CF/ AC/YR<br><20 | Acres Total    |
|---|----------------------|-------------------------|-------------------------|-------------------------|--------------------|--------------------|--------------------|-----------------------|----------------------|------------------|----------------|
| Unclassified Other Forest                   |                      |                         |                         |                         |                    |                    | 93,562             |                       |                      | 93,562           | 93,562         |
| Black Spruce                                |                      |                         |                         |                         |                    |                    | 1,752              |                       |                      | 1,752            | 1,752          |
| White Spruce                                |                      |                         |                         |                         |                    | 31,750             | 5,898              | 1,861                 | 588                  | 8,347            | 40,097         |
| Hemlock-Spruce                              |                      |                         |                         |                         |                    |                    |                    |                       |                      |                  |                |
| Sitka Spruce                                |                      |                         |                         |                         | 96                 | 48                 |                    |                       |                      |                  | 143            |
| Mountain Hemlock                            |                      |                         |                         |                         | 2,634              | 28,589             | 6,973              | 2,634                 | 1,656                | 11,264           | 42,187         |
| Western Hemlock                             |                      |                         |                         |                         |                    |                    |                    |                       |                      |                  |                |
| Alaska Cedar                                |                      |                         |                         |                         |                    |                    |                    |                       |                      |                  |                |
| Other Nonstocked                            |                      |                         |                         |                         | 48                 |                    |                    |                       |                      |                  | 48             |
| Black Cottonwood                            |                      |                         |                         |                         | 2,634              | 12,974             |                    |                       |                      |                  | 15,608         |
| Birch                                       |                      |                         |                         |                         |                    |                    |                    |                       |                      |                  |                |
| <b>Total All Types</b>                      |                      |                         |                         |                         | <b>5,412</b>       | <b>73,360</b>      | <b>108,232</b>     | <b>4,495</b>          | <b>2,245</b>         | <b>114,972</b>   | <b>193,745</b> |
| <b>Percent of all Classes</b>               | <b>0%</b>            | <b>0%</b>               | <b>0%</b>               | <b>0%</b>               | <b>3%</b>          | <b>38%</b>         | <b>56%</b>         | <b>2%</b>             | <b>1%</b>            | <b>59%</b>       | <b>100%</b>    |

| PWS & CR<br>78 Forest Inventory<br>Forest Type | CF/<br>AC/YR<br>225+ | CF/<br>AC/YR<br>165-224 | CF/<br>AC/YR<br>120-164 | CF/<br>AC/YR 85-<br>119 | CF/ AC/YR<br>50-84 | CF/ AC/YR<br>20-49 | CF/ AC/YR 15<br>19 | CF/<br>AC/YR 10<br>14 | CF/<br>AC/YR 1-<br>9 | CF/ AC/YR<br><20 | Acres Total      |
|--|----------------------|-------------------------|-------------------------|-------------------------|--------------------|--------------------|--------------------|-----------------------|----------------------|------------------|------------------|
| Unclassified Other Forest                      |                      |                         |                         |                         |                    |                    |                    |                       |                      |                  |                  |
| Black Spruce                                   |                      |                         |                         |                         |                    |                    |                    |                       |                      |                  |                  |
| White Spruce                                   |                      |                         |                         |                         |                    |                    |                    |                       |                      |                  |                  |
| Hemlock-Spruce                                 |                      |                         |                         |                         | 37,818             | 41,760             | 54,697             |                       |                      | 54,697           | 134,275          |
| Sitka Spruce                                   |                      |                         |                         | 8,118                   | 20,299             | 65,659             | 160,387            |                       |                      | 160,387          | 254,463          |
| Mountain Hemlock                               |                      |                         |                         |                         |                    | 41,296             | 448,846            |                       |                      | 448,846          | 490,142          |
| Western Hemlock                                |                      |                         |                         |                         | 13,920             | 97,440             | 4,640              |                       |                      | 4,640            | 116,000          |
| Alaska Cedar                                   |                      |                         |                         |                         |                    |                    | 19,258             |                       |                      | 19,258           | 19,258           |
| Other Nonstocked                               |                      |                         |                         |                         |                    |                    | 19,258             |                       |                      | 19,258           | 19,258           |
| Black Cottonwood                               |                      |                         |                         |                         |                    | 10,902             | 1,684              |                       |                      | 1,684            | 12,586           |
| Birch  |                      |                         |                         |                         |                    |                    |                    |                       |                      |                  |                  |
| <b>Total All Types</b>                         |                      |                         |                         | <b>8,118</b>            | <b>72,037</b>      | <b>257,056</b>     |                    |                       |                      | <b>708,770</b>   | <b>1,045,981</b> |
| <b>Percent of all Classes</b>                  | <b>0%</b>            | <b>0%</b>               | <b>0%</b>               | <b>1%</b>               | <b>7%</b>          | <b>25%</b>         |                    |                       |                      | <b>68%</b>       | <b>100%</b>      |

| Forest Total<br>Revision Inventory<br>Forest Type | CF/<br>AC/YR<br>225+ | CF/<br>AC/YR<br>165-224 | CF/<br>AC/YR<br>120-164 | CF/<br>AC/YR 85-<br>119 | CF/ AC/YR<br>50-84 | CF/ AC/YR<br>20-49 | CF/ AC/YR 15<br>19 | CF/<br>AC/YR 10<br>14 | CF/<br>AC/YR 1-<br>9 | CF/ AC/YR<br><20 | Acres Total      |
|---|----------------------|-------------------------|-------------------------|-------------------------|--------------------|--------------------|--------------------|-----------------------|----------------------|------------------|------------------|
| Unclassified Other Forest                         |                      |                         |                         |                         |                    |                    | 93,561.8           |                       |                      | 93,562           | 93,562           |
| Black Spruce                                      |                      |                         |                         |                         |                    |                    | 1,751.9            |                       |                      | 1,752            | 1,752            |
| White Spruce                                      |                      |                         |                         |                         |                    | 31,749.5           | 5,897.7            | 1,860.9               | 588.4                | 8,347            | 40,097           |
| Hemlock-Spruce                                    |                      |                         |                         |                         | 37,817.9           | 41,759.9           | 54,697.0           |                       |                      | 54,697           | 134,275          |
| Sitka Spruce                                      |                      |                         |                         | 8,118.2                 | 20,394.3           | 65,706.4           | 160,387.0          |                       |                      | 160,387          | 254,606          |
| Mountain Hemlock                                  |                      |                         |                         |                         | 2,634.4            | 69,885.4           | 455,819.0          | 2,634.4               | 1,656.3              | 460,110          | 532,630          |
| Western Hemlock                                   |                      |                         |                         |                         | 13,920.0           | 97,439.8           | 4,640.0            |                       |                      | 4,640            | 116,000          |
| Alaska Cedar                                      |                      |                         |                         |                         |                    |                    | 19,258.0           |                       |                      | 19,258           | 19,258           |
| Other Nonstocked                                  |                      |                         |                         |                         | 47.8               |                    | 19,258.0           |                       |                      | 19,258           | 19,306           |
| Black Cottonwood                                  |                      |                         |                         |                         | 2,634.4            | 23,875.3           | 1,684.0            |                       |                      | 1,684            | 28,194           |
| Birch   |                      |                         |                         |                         |                    |                    | 47.8               |                       |                      | 48               | 48               |
| <b>Total All Types</b>                            |                      |                         |                         | <b>8,118</b>            | <b>77,449</b>      | <b>330,416</b>     | <b>817,002</b>     | <b>4,495</b>          | <b>2,245</b>         | <b>823,742</b>   | <b>1,239,726</b> |
| <b>Percent of all Classes</b>                     | <b>0%</b>            | <b>0%</b>               | <b>0%</b>               | <b>1%</b>               | <b>6%</b>          | <b>27%</b>         |                    |                       |                      | <b>66%</b>       | <b>100%</b>      |

## Analysis of the Management Situation

Figure IV-34: Acres of Available Timberland by Forest Type and Stand Structure Class

| Kenai Peninsula<br>87 Inventory Forest Type | Nonstocked | Seedling/<br>Sapling | Poletimber   | Young<br>Sawtimber | Old<br>Sawtimber | Total<br>Sawtimber | Total All<br>Classes |
|---|------------|----------------------|--------------|--------------------|------------------|--------------------|----------------------|
| Black Spruce                                |            |                      |              |                    |                  |                    |                      |
| White Spruce                                |            | 2,634                | 4,879        | 14,676             | 9,560            | 24,236             | 31,749               |
| Hemlock-Spruce                              |            |                      |              |                    |                  |                    |                      |
| Sitka Spruce                                |            |                      |              | 143                |                  |                    | 143                  |
| Mountain Hemlock                            |            |                      | 2,634        | 11,126             | 17,463           | 28,589             | 31,224               |
| Western Hemlock                             |            |                      |              |                    |                  |                    |                      |
| Alaska Cedar                                |            |                      |              |                    |                  |                    |                      |
| Other Nonstocked                            | 48         |                      |              |                    |                  |                    | 48                   |
| Black Cottonwood                            |            |                      |              |                    | 2,634            | 2,634              | 2,634                |
| Birch                                       |            |                      |              | 10,196             | 2,778            | 12,974             | 12,974               |
| <b>Total All Types</b>                      | <b>48</b>  | <b>2,634</b>         | <b>7,514</b> | <b>36,142</b>      | <b>32,435</b>    | <b>68,433</b>      | <b>78,772</b>        |
| <b>Percent of all Classes</b>               | <b>0%</b>  | <b>3%</b>            | <b>10%</b>   | <b>46%</b>         | <b>41%</b>       | <b>87%</b>         | <b>100%</b>          |

| PWS & CR<br>78 Inventory Forest Type | Nonstocked   | Seedling/<br>Sapling | Poletimber   | Young<br>Sawtimber | Old<br>Sawtimber | Total<br>Sawtimber | Total All<br>Classes |
|--------------------------------------|--------------|----------------------|--------------|--------------------|------------------|--------------------|----------------------|
| Black Spruce                         |              |                      |              |                    |                  |                    |                      |
| White Spruce                         |              |                      |              |                    |                  |                    |                      |
| Hemlock-Spruce                       |              |                      |              | 23,898             | 32,480           | 56,378             | 56,378               |
| Sitka Spruce                         | 1,217        | 8,757                | 2,901        | 27,900             | 48,661           | 76,561             | 89,436               |
| Mountain Hemlock                     | 1,217        |                      |              |                    | 33,178           | 33,178             | 34,395               |
| Western Hemlock                      |              |                      |              | 4,640              | 102,080          | 106,720            | 106,720              |
| Alaska Cedar                         |              |                      |              |                    |                  |                    |                      |
| Other Nonstocked                     |              |                      |              |                    |                  |                    |                      |
| Black Cottonwood                     |              | 3,478                | 3,945        | 2,261              |                  | 2,261              | 9,685                |
| Birch                                |              |                      |              |                    |                  |                    |                      |
| <b>Total All Types</b>               | <b>2,434</b> | <b>12,236</b>        | <b>6,846</b> | <b>58,699</b>      | <b>216,399</b>   | <b>275,098</b>     | <b>296,613</b>       |
| <b>Percent of all Classes</b>        | <b>1%</b>    | <b>4%</b>            | <b>2%</b>    | <b>20%</b>         | <b>73%</b>       | <b>93%</b>         | <b>100%</b>          |

| Forest Total<br>Revision Inventory<br>Forest Type | Nonstocked   | Seedling/<br>Sapling | Poletimber    | Young<br>Sawtimber | Old<br>Sawtimber | Total<br>Sawtimber | Total All<br>Classes |
|---|--------------|----------------------|---------------|--------------------|------------------|--------------------|----------------------|
| Black Spruce                                      |              |                      |               |                    |                  |                    |                      |
| White Spruce                                      |              | 2,634                | 4,879         | 14,676             | 9,560            | 24,236             | 31,749               |
| Hemlock-Spruce                                    |              |                      |               | 23,898             | 32,480           | 56,378             | 56,378               |
| Sitka Spruce                                      | 1,217        | 8,757                | 2,901         | 28,043             | 48,661           | 76,704             | 89,579               |
| Mountain Hemlock                                  | 1,217        |                      | 2,634         | 11,126             | 50,641           | 61,767             | 65,618               |
| Western Hemlock                                   |              |                      |               | 4,640              | 102,080          | 106,720            | 106,720              |
| Alaska Cedar                                      |              |                      |               |                    |                  |                    |                      |
| Other Nonstocked                                  | 48           |                      |               |                    |                  |                    | 48                   |
| Black Cottonwood                                  |              | 3,478                | 3,945         | 2,261              | 2,634            | 4,895              | 12,319               |
| Birch   |              |                      |               | 10,196             | 2,778            | 12,974             | 12,974               |
| <b>Total All Types</b>                            | <b>2,481</b> | <b>14,870</b>        | <b>14,359</b> | <b>94,840</b>      | <b>248,833</b>   | <b>343,674</b>     | <b>375,384</b>       |
| <b>Percent of all Classes</b>                     | <b>1%</b>    | <b>4%</b>            | <b>4%</b>     | <b>25%</b>         | <b>66%</b>       | <b>92%</b>         | <b>100%</b>          |