

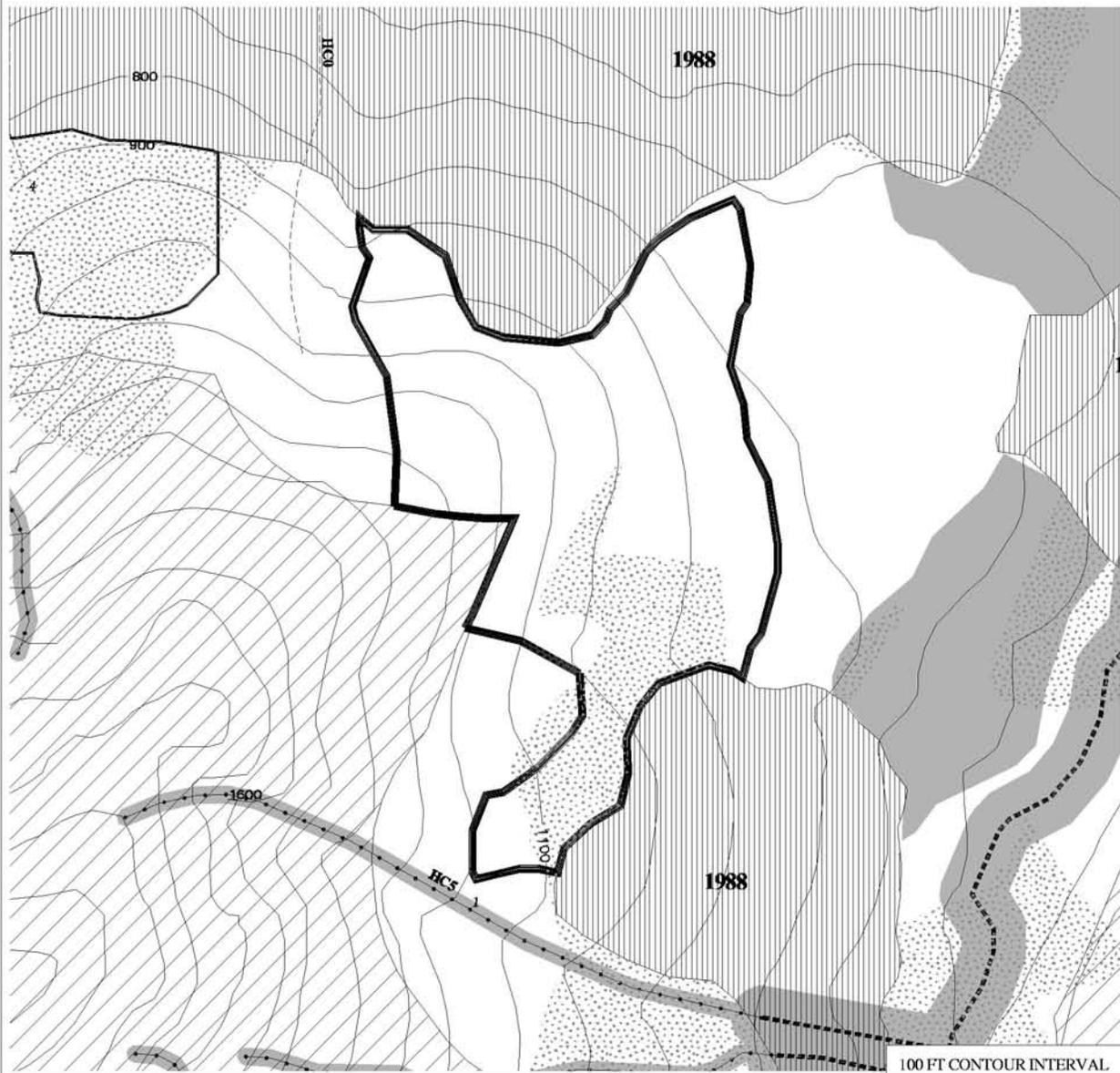
### IYOUKTUG TIMBER SALE UNIT CARD PLANNED HARVEST UNIT MAP

UNIT NUMBER: 937      VCU: 2090      HARVEST SYSTEM: Helicopter

UNIT 937 OCCURS IN ALTERNATIVE(S): 4



MAPSCALE 1:7200



- Existing Harvest Unit with Year Harvested Unit Boundary
- Adjacent Proposed Unit
- Proposed NFS Road
- Temporary Road
- Existing NFS Road
- NFS Road Reconstruction
- Class I Stream
- Class II Stream
- Class III Stream

- Class IV Stream
- Stream Channel Type
- Stream Number – See Narrative
- High Value Marten Habitat
- Areas Dropped From Alternative(s)
- Inventoried Roadless
- Old Growth Reserve
- Moderate Vulnerability Karst
- Slopes > 72%
- Existing Rock Pit

- HC6
- 1



August 20, 2007

<b>Unit Data Card – Iyouktug Timber Sale Draft EIS</b>
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<b>Unit Number:</b>	937	<b>In Alternatives:</b>	4	<b>Total Unit Acres:</b>	39.8	<b>Vol Strata Acres:</b>	High: 8.9 Med: 27.8 Low: 3.1
<b>VCU Number:</b>	2090	<b>Harvest System:</b>	HE	<b>Net Estimated Harvest Volume (MBF):</b>	482	<b>Prescription /Retention:</b>	ST40

<b>Summary of Concerns, Responses, BMPs and Mitigation</b>
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<b>SILVICULTURE:</b>
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<p><b>Existing Stand Condition/Vegetation:</b> Stand is comprised primarily of 16-36" DBH western hemlock (45% BA), 12-44" DBH spruce (50% BA) and a minor component of small diameter mountain hemlock (5% BA). Wind risk is low.</p>
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<p><b>Silvicultural Objective/Desired Future Condition:</b> Maintain or create a stand with three or more distinct age (size) classes of trees that maintains species diversity, provides for a high degree of structural diversity and meets Forest Plan scenery and high value marten habitat requirements.</p>
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<p><b>Silvicultural Prescription:</b> Uneven-aged management – Single tree selection. Designate up to 40 percent of existing basal (314 sq.ft.per acre) area singly and/or in small clumps or corridors to facilitate helicopter yarding. Refer to the intro to unit cards, marking guidelines and detailed RX for more information.</p>
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<p><b>TIMBER/LOGGING:</b> Refer to Silvicultural RX and marking guides for single tree selection guidelines to facilitate helicopter yarding.</p>
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<p><b>ENGINEERING/ROADS:</b> N/A</p>
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<p><b>BOTANY RESOURCES:</b> No concerns</p>
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<p><b>FISH/WATERSHED:</b> No GIS mapped streams.</p>
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<p><b>GEOLOGY/KARST:</b> No carbonate bedrock found within unit. No karst resource concerns identified.</p>
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<p><b>HERITAGE RESOURCES:</b> No concerns</p>
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<p><b>SCENERY/RECREATION:</b> No concerns</p>
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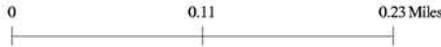
<p><b>SOILS/WETLANDS:</b> Slopes range from 40-70% in Unit 937. <b>Concern:</b> a small amount of wetland is scattered through out the unit. <b>Response:</b> Helicopter logging will protect wetlands and meet resource objectives. (BMP 12.5) <b>Concern:</b> A minimum of partial suspension is required to meet soil quality standards (BMP 13.9). <b>Response:</b> Unit is proposed as full suspension, which exceeds partial suspension requirements. Area to the west of Unit 937 dropped for stability concerns (BMP 13.5).</p>
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<p><b>WILDLIFE:</b> <b>Concern:</b> Unit contains high value marten habitat. <b>Response:</b> Proposed timber management will not create openings greater than 2 acres in size within this habitat. Retention of 60% of the basal area will meet marten standards and guidelines.</p>
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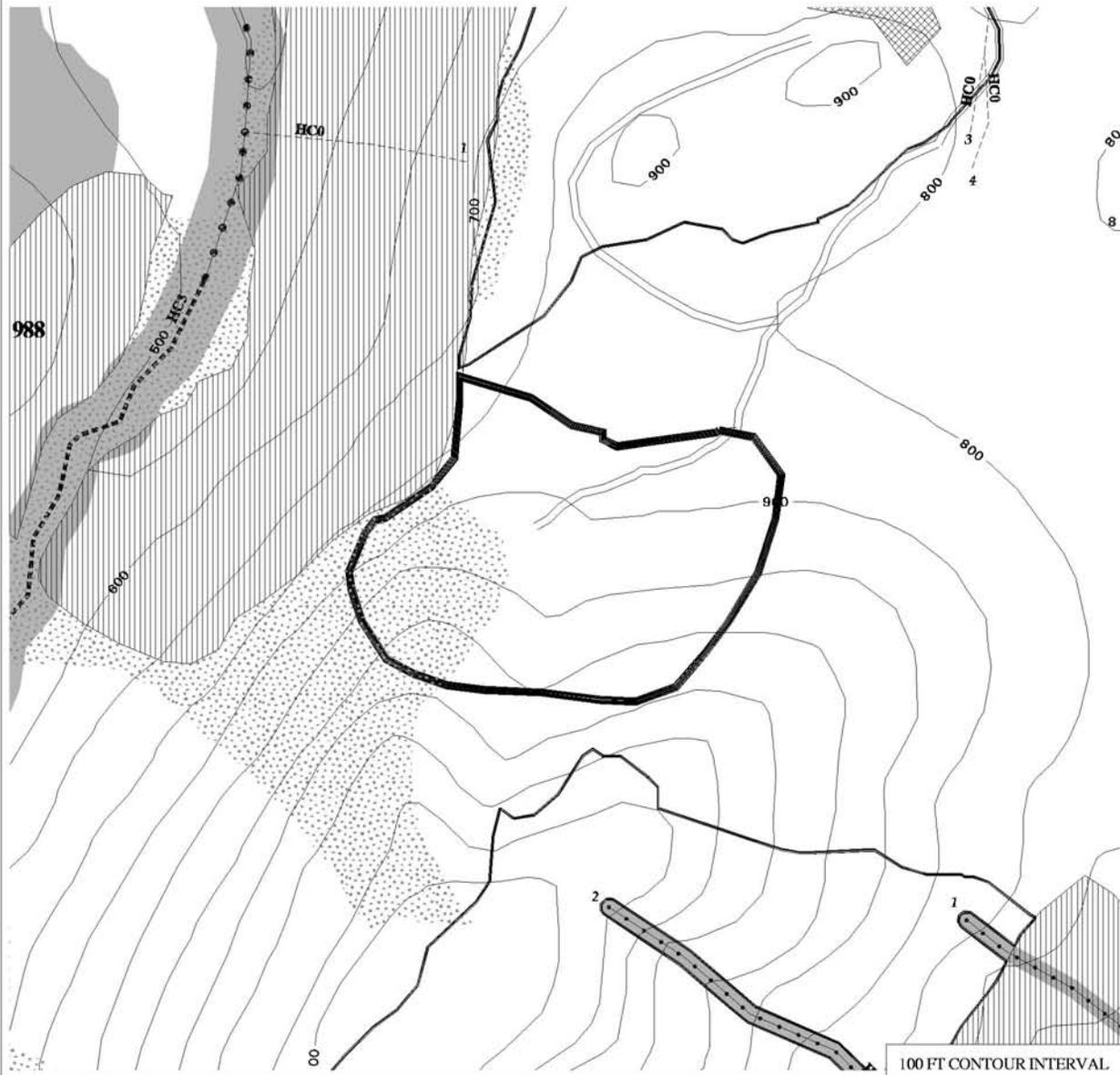
### IYOUKTUG TIMBER SALE UNIT CARD PLANNED HARVEST UNIT MAP

UNIT NUMBER: 941      VCU: 2090      HARVEST SYSTEM: Cable

UNIT 941 OCCURS IN ALTERNATIVE(S): 2 4



MAPSCALE 1:7200



- Existing Harvest Unit with Year Harvested
- Unit Boundary
- Adjacent Proposed Unit
- Proposed NFS Road 85343
- Temporary Road
- Existing NFS Road 8530
- NFS Road Reconstruction 8534
- Class I Stream
- Class II Stream

- Class III Stream
- Class IV Stream
- Stream Channel Type
- Stream Number – See Narrative 1
- High Value Marten Habitat
- Areas Dropped From Alternative(s)
- Old Growth Reserve
- Moderate Vulnerability Karst
- Slopes Greater Than 72%
- Existing Rock Pit

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August 20, 2007

<b>Unit Data Card – Iyouktug Timber Sale Draft EIS</b>
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<b>Unit Number:</b>	941	<b>In Alternatives:</b>	2, 4	<b>Total Unit Acres:</b>	25.9	<b>Vol Strata Acres:</b>	High: 5.8 Med: 15.1 Low: 5.0
<b>VCU Number:</b>	2090	<b>Harvest System:</b>	C	<b>Net Estimated Harvest Volume (MBF):</b>	561	<b>Prescription /Percent Retention:</b>	CC

<b>Summary of Concerns, Responses, BMPs and Mitigation</b>
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**SILVICULTURE:**

**Existing Stand Condition/Vegetation:** Stand consists primarily of 20-36" DBH western hemlock (45% BA) and 16-24" DBH mountain hemlock (45 % BA), with some 20-24" DBH spruce (10% BA). Wind risk is moderate. Mistletoe infection is moderate to heavy.

**Silvicultural Objective/Desired Future Condition:** Create an even-aged managed stand of the same species composition as the original stand that meets Forest Plan scenery and high value marten habitat requirements, uses an economical regeneration method, and is windfirm, free of mistletoe infection and growing at full site potential.

**Silvicultural Prescription:** Even-aged management – clearcut: Unit contains 6 acres of high value marten habitat in the SW corner. Designate reserve trees (including of sufficient size and condition within high value marten habitat to meet marten standards and guidelines. Clump trees if possible as specified under wildlife section.

**TIMBER/LOGGING:** This unit is comprised of two cable settings that are defined by a logical setting break based on topography and lateral yarding capabilities.

**ENGINEERING/ROADS:** Temporary road 9041B accesses unit from existing Road 85313 via planned temporary road 853132. Road location has been flagged. Deviations to flagged route must be approved by USFS prior to harvest.

**BOTANY RESOURCES:** No concerns

**FISH/WATERSHED:** No streams found in unit.

**GEOLOGY/KARST:** No carbonate bedrock found within unit. No karst resource concerns identified.

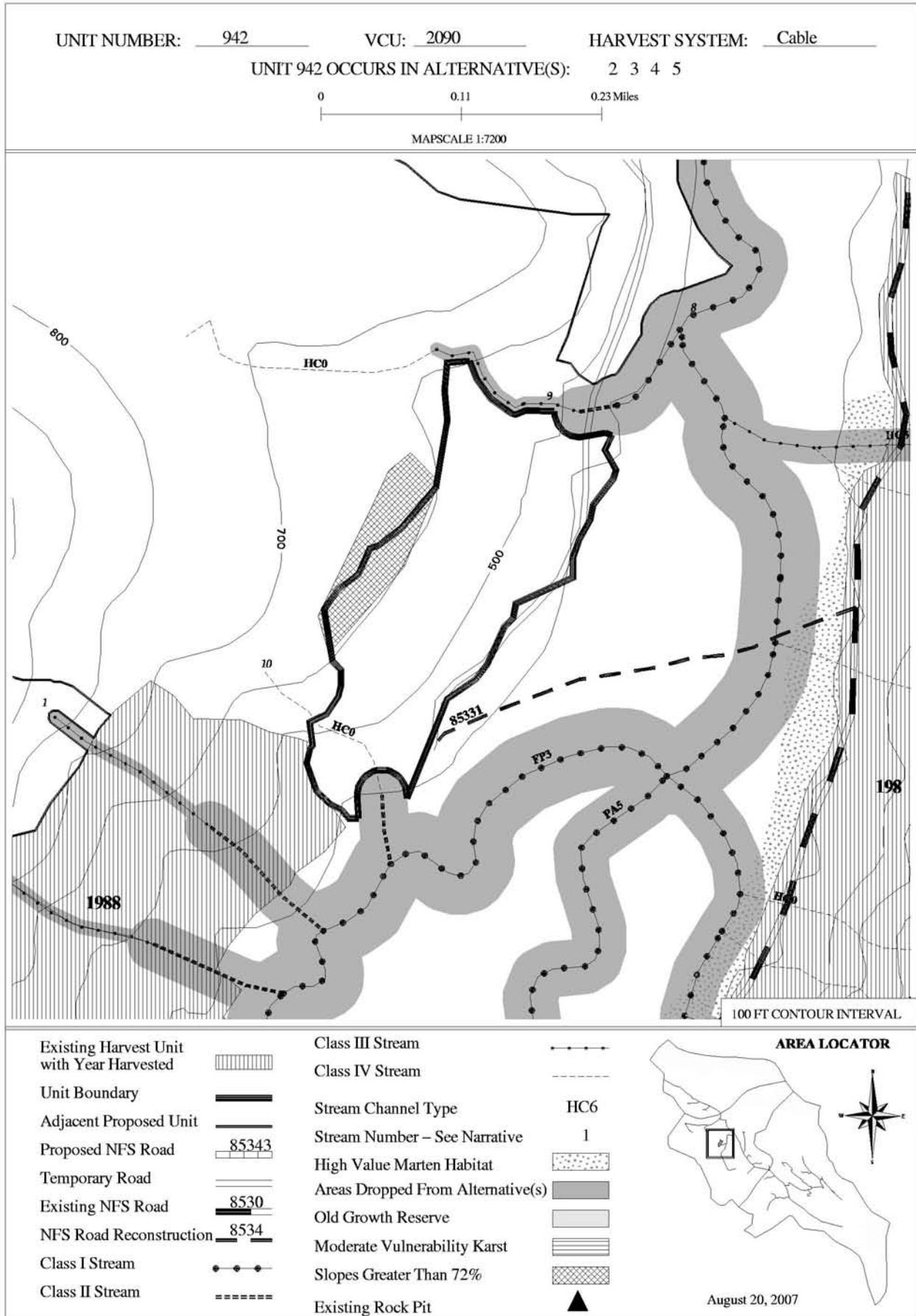
**HERITAGE RESOURCES:** No concerns

**SCENERY/RECREATION:** No concerns

**SOILS/WETLANDS:** Slopes range from 30-50% in Unit 941. The western boundary borders slopes greater than 72%, any layout should avoid this steep, unstable area. (BMP 13.5) **Concern:** the lower third of Unit 941 is forested wetland. **Response:** A minimum of partial suspension is required to meet soil and wetland standards. (BMP 12.5, 13.9) **Concern:** Half the proposed temporary road is located on forested wetland or muskeg. The road needs to maintain grade so the wetland cannot be avoided. **Response:** Provide adequate cross drainage to maintain groundwater flow. Remove all structures and close the road after the unit has been harvested. (BMP 14.9) (33 CFR BMPs 4, 5, 6)

**WILDLIFE: Concern:** Unit contains high value marten habitat. **Response:** Retain 10-20% of original stand structure as measured by basal area or trees per acre in high value marten habitat. Maintain an average of 4 large live trees/acre (20-30" DBH or larger), 3 snags or decadent trees/acre (20-30" DBH or larger), and 3 large, downed trees/acre (20-30" DBH or larger and 10 feet long). Where trees this large are not available, substitute next largest trees. Retained trees can be clumped to maintain a reasonable assurance of windfirmness and to minimize operational difficulties. **Concern:** High deer use was observed in the southeast portion of the unit. **Response:** No design elements or mitigation required to meet Forest Plan standards and guidelines.

### IYOUKTUG TIMBER SALE UNIT CARD PLANNED HARVEST UNIT MAP



### Unit Data Card – Iyouktug Timber Sale Draft EIS

<b>Unit Number:</b>	942	<b>In Alternatives:</b>	2, 3, 4, 5	<b>Total Unit Acres:</b>	25.5	<b>Vol Strata Acres:</b>	High: 0 Med: 22.8 Low: 2.7
<b>VCU Number:</b>	2090	<b>Harvest System:</b>	C	<b>Net Estimated Harvest Volume (MBF):</b>	546	<b>Prescription /Percent Retention:</b>	CC

#### Summary of Concerns, Responses, BMPs and Mitigation

##### **SILVICULTURE:**

**Existing Stand Condition/Vegetation:** Stand consists primarily of 12-36" DBH western hemlock (77% BA) and 16-24" DBH mountain hemlock (16% BA) and 28-32" DBH spruce (8%). Hemlock and spruce advanced regeneration is moderately abundant. Wind risk is moderate. Mistletoe infection is moderate to heavy.

**Silvicultural Objective/Desired Future Condition:** Create an even-aged managed stand of the same species composition as the original stand that meets Forest Plan scenery and high value marten habitat requirements, uses an economical regeneration method, and is windfirm, free of mistletoe infection and growing at full site potential.

**Silvicultural Prescription:** Even-aged management – clearcut: This unit contains stream buffers (refer to fish/watershed section). The unit does not contain high value marten habitat.

**TIMBER/LOGGING:** This unit is comprised of three cable settings that are defined by logical setting breaks based on topography and lateral yarding capabilities.

**ENGINEERING/ROADS:** Temporary road 42 accesses unit from existing Road 85331. Road location has been flagged. Deviations to flagged route must be approved by USFS prior to harvest.

**BOTANY RESOURCES:** No concerns

**FISH/WATERSHED: Concern:** Stream 9 (upper) is Class III HC channel. **Response:** Category B protection (BMP 12.6, 13.14). No harvest within v-notch (RIP III). **Concern:** Stream 9 (lower) is Class II HC. **Response:** Category A protection (BMP 12.6, 13.14). No harvest within 100 feet and side-slope break (RIP III). **Concern:** Stream 10 is Class IV HC channel. **Response:** Category C protection (BMP 12.6, 13.14). Remove logging debris from channel (BMP 13.16).

**GEOLOGY/KARST:** No carbonate bedrock found within unit. No karst resource concerns identified.

**HERITAGE RESOURCES:** No concerns

**SCENERY/RECREATION:** No concerns

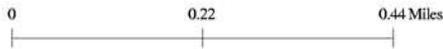
**SOILS/WETLANDS:** The slopes range from 35-90% in Unit 942. **Concern:** There are about 2 acres of slopes greater than 72% located along the northeastern boundary. Timber harvest may accelerate landsliding on slopes over 72% gradient. **Response:** Avoid the steep area during layout by locating the backline below this area over 72% (BMP 13.5). The rest of 942 is suitable for the proposed cable harvest with partial suspension (BMP 13.9). An onsite analysis for suitability on slopes over 72% was conducted on this unit as per Forest Plan Standards (soil resource report). **Concern:** The first part of the proposed temporary road is located on forested wetland and no alternative route exists. **Response:** Provide adequate cross drainage to maintain groundwater flow. Remove all structures and close the road after the unit has been harvested. (BMP 14.9) (33 CFR BMPs 4, 5, 6)

**WILDLIFE: Concern:** Pluck post identified in the unit. Surveys did not identify a goshawk or sharp-shinned hawk nest site. **Response:** If a goshawk nest is identified in or adjacent to the unit, contact the project biologist; follow Forest Plan direction for the development of the nest buffer. Maintain a 600-foot no-harvest buffer that is windfirm around other active raptor nests if identified and restrict harvest and road building activities from March 1 to July 31 within the buffer.

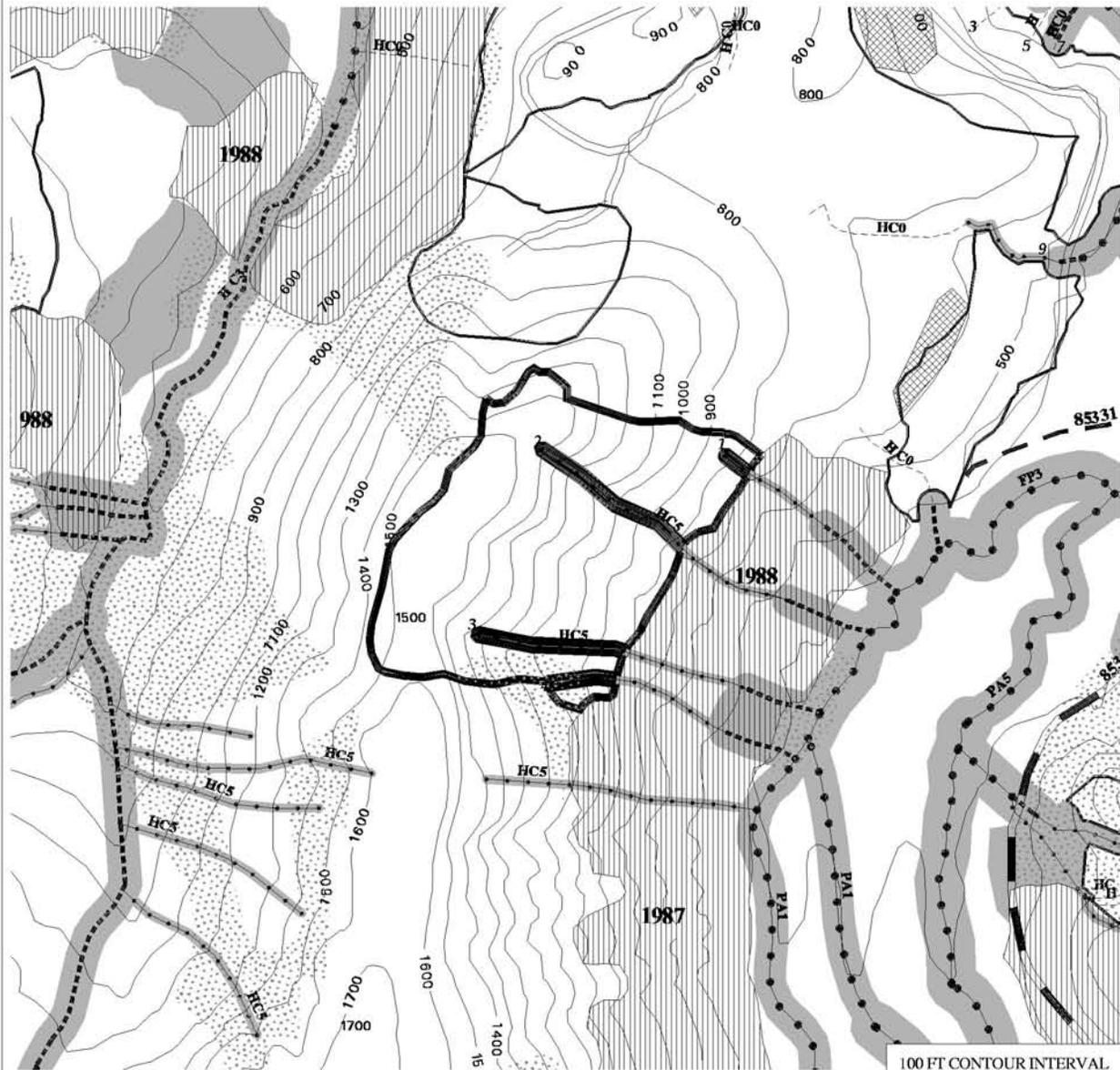
### IYOUKTUG TIMBER SALE UNIT CARD PLANNED HARVEST UNIT MAP

UNIT NUMBER: 948      VCU: 2090      HARVEST SYSTEM: Helicopter

UNIT 948 OCCURS IN ALTERNATIVE(S): 2 3



MAPSCALE 1:14000



100 FT CONTOUR INTERVAL

Existing Harvest Unit with Year Harvested		Class III Stream		<b>AREA LOCATOR</b>
Unit Boundary		Class IV Stream		
Adjacent Proposed Unit		Stream Channel Type	HC6	
Proposed NFS Road		Stream Number – See Narrative	1	
Temporary Road		High Value Marten Habitat		
Existing NFS Road		Areas Dropped From Alternative(s)		
NFS Road Reconstruction		Old Growth Reserve		
Class I Stream		Moderate Vulnerability Karst		
Class II Stream		Slopes Greater Than 72%		
		Existing Rock Pit		

August 20, 2007

<b>Unit Data Card – Iyouktug Timber Sale Draft EIS</b>
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<b>Unit Number:</b>	948	<b>In Alternatives:</b>	2, 3	<b>Total Unit Acres:</b>	74.9	<b>Vol Strata Acres:</b>	High: 3.5 Med: 67.1 Low: 4.3
<b>VCU Number:</b>	2090	<b>Harvest System:</b>	HE	<b>Net Estimated Harvest Volume (MBF):</b>	865	<b>Prescription /Percent Retention:</b>	ST40

<b>Summary of Concerns, Responses, BMPs and Mitigation</b>
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<b>SILVICULTURE:</b>
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<p><b>Existing Stand Condition/Vegetation:</b> Stand consists primarily of 12-36" DBH western and mountain hemlock (80% BA) and 12-40" DBH spruce (20%). Hemlock and spruce advanced regeneration is present but not abundant. Wind risk is low.</p>
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<p><b>Silvicultural Objective/Desired Future Condition:</b> Maintain or create a stand with three or more distinct age (size) classes of trees that maintains species diversity, provides for a high degree of structural diversity and meets Forest Plan scenery and high value marten habitat requirements.</p>
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<p><b>Silvicultural Prescription:</b> Uneven-aged management – Single tree selection. Designate up to 40 percent of existing basal (255 sq.ft.per acre) area singly and/or in small clumps or corridors to facilitate helicopter yarding. Refer to the intro to unit cards, marking guidelines and detailed RX for more information.</p>
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<p><b>TIMBER/LOGGING:</b> Refer to Silvicultural RX and marking guides for single tree selection guidelines to facilitate helicopter yarding.</p>
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<p><b>ENGINEERING/ROADS:</b> N/A</p>
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<p><b>BOTANY RESOURCES:</b> No concerns</p>
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<p><b>FISH/WATERSHED:</b> <b>Concern:</b> GIS-mapped streams 1-4 are Class III HC. <b>Response:</b> Category B protection (BMP 12.6, 13.14). No harvest within v-notch (RIP III).</p>
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<p><b>GEOLOGY/KARST:</b> No carbonate bedrock found within unit. No karst resource concerns identified.</p>
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<p><b>HERITAGE RESOURCES:</b> No concerns</p>
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<p><b>SCENERY/RECREATION:</b> No concerns</p>
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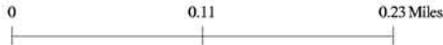
<p><b>SOILS/WETLANDS:</b> Slopes range from 55-75% in Unit 948. There are about 11 acres of slopes greater than 72%. <b>Concern:</b> Areas greater than 72% slope are along the northern boundary. <b>Response:</b> Involve a soil scientist during layout to verify small inclusions where slopes over 72% are suitable for timber harvest. <b>Concern:</b> The western quarter of the unit is ridge top subalpine forest and muskeg. <b>Response:</b> Helicopter logging will protect wetlands and meet resource objectives. (BMP 12.5 and 13.5) Area to the west and south of Unit 948 dropped for stability concerns.</p>
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<p><b>WILDLIFE:</b> <b>Concern:</b> Unit contains high value marten habitat. High deer use was observed in the north east portion of the unit. <b>Response:</b> Proposed timber management will not create openings greater than 2 acres in size within this habitat. Retention of 60% of the basal area will meet marten standards and guidelines and help to maintain deer habitat. <b>Concern:</b> Bear den located in unit. <b>Response:</b> Maintain a 200-foot forested buffer around den sites.</p>
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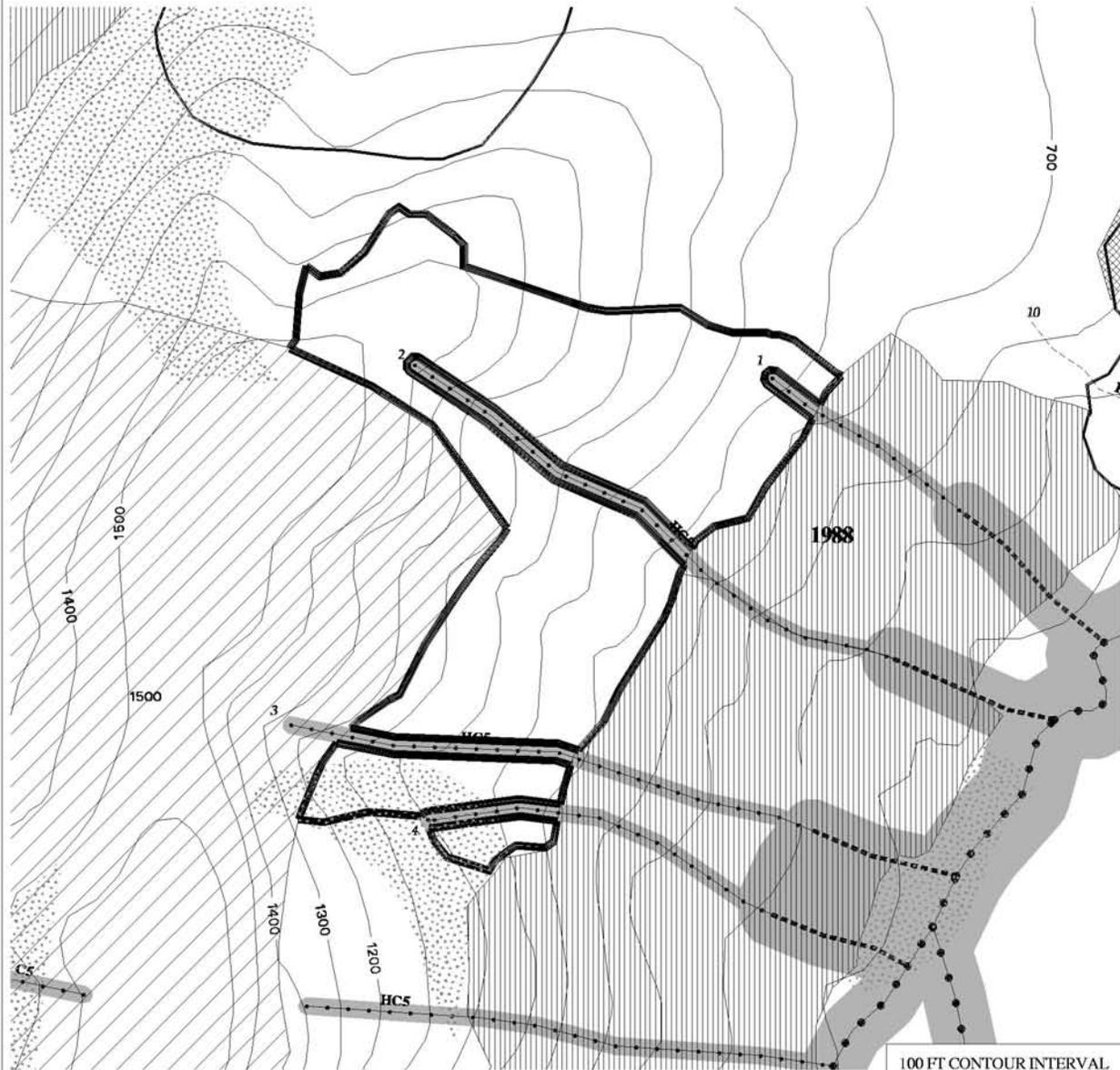
### IYOUKTUG TIMBER SALE UNIT CARD PLANNED HARVEST UNIT MAP

UNIT NUMBER: 948      VCU: 2090      HARVEST SYSTEM: Helicopter

UNIT 948 OCCURS IN ALTERNATIVE(S): 4



MAPSCALE 1:7200



100 FT CONTOUR INTERVAL

- Existing Harvest Unit with Year Harvested Unit Boundary
- Adjacent Proposed Unit
- Proposed NFS Road
- Temporary Road
- Existing NFS Road
- NFS Road Reconstruction
- Class I Stream
- Class II Stream
- Class III Stream

- Class IV Stream
- Stream Channel Type
- Stream Number – See Narrative
- High Value Marten Habitat
- Areas Dropped From Alternative(s)
- Inventoried Roadless
- Old Growth Reserve
- Moderate Vulnerability Karst
- Slopes > 72%
- Existing Rock Pit

- HC6
- 1



August 20, 2007

<b>Unit Data Card – Iyouktug Timber Sale Draft EIS</b>
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<b>Unit Number:</b>	948	<b>In Alternatives:</b>	4	<b>Total Unit Acres:</b>	41.9	<b>Vol Strata Acres:</b>	High: 2.8 Med: 34.8 Low: 4.3
<b>VCU Number:</b>	2090	<b>Harvest System:</b>	HE	<b>Net Estimated Harvest Volume (MBF):</b>	478	<b>Prescription /Percent Retention:</b>	ST40

<b>Summary of Concerns, Responses, BMPs and Mitigation</b>
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<b>SILVICULTURE:</b>
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<p><b>Existing Stand Condition/Vegetation:</b> Stand consists primarily of 12-36" DBH western and mountain hemlock (80% BA) and 12-40" DBH spruce (20%). Hemlock and spruce advanced regeneration is present but not abundant. Wind risk is low.</p>
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<p><b>Silvicultural Objective/Desired Future Condition:</b> Maintain or create a stand with three or more distinct age (size) classes of trees that maintains species diversity, provides for a high degree of structural diversity and meets Forest Plan scenery and high value marten habitat requirements.</p>
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<p><b>Silvicultural Prescription:</b> Uneven-aged management – Single tree selection. Designate up to 40 percent of existing basal (255 sq.ft.per acre) area singly and/or in small clumps or corridors to facilitate helicopter yarding. Refer to the intro to unit cards, marking guidelines and detailed RX for more information.</p>
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<p><b>TIMBER/LOGGING:</b> Refer to Silvicultural RX and marking guides for single tree selection guidelines to facilitate helicopter yarding.</p>
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<p><b>ENGINEERING/ROADS:</b> N/A</p>
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<p><b>BOTANY RESOURCES:</b> No concerns</p>
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<p><b>FISH/WATERSHED:</b> <b>Concern:</b> Stream 1-4 are Class III HC. <b>Response:</b> Category B protection (BMP 12.6, 13.14). No harvest within v-notch (RIP III).</p>
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<p><b>GEOLOGY/KARST:</b> No carbonate bedrock found within unit. No karst resource concerns identified.</p>
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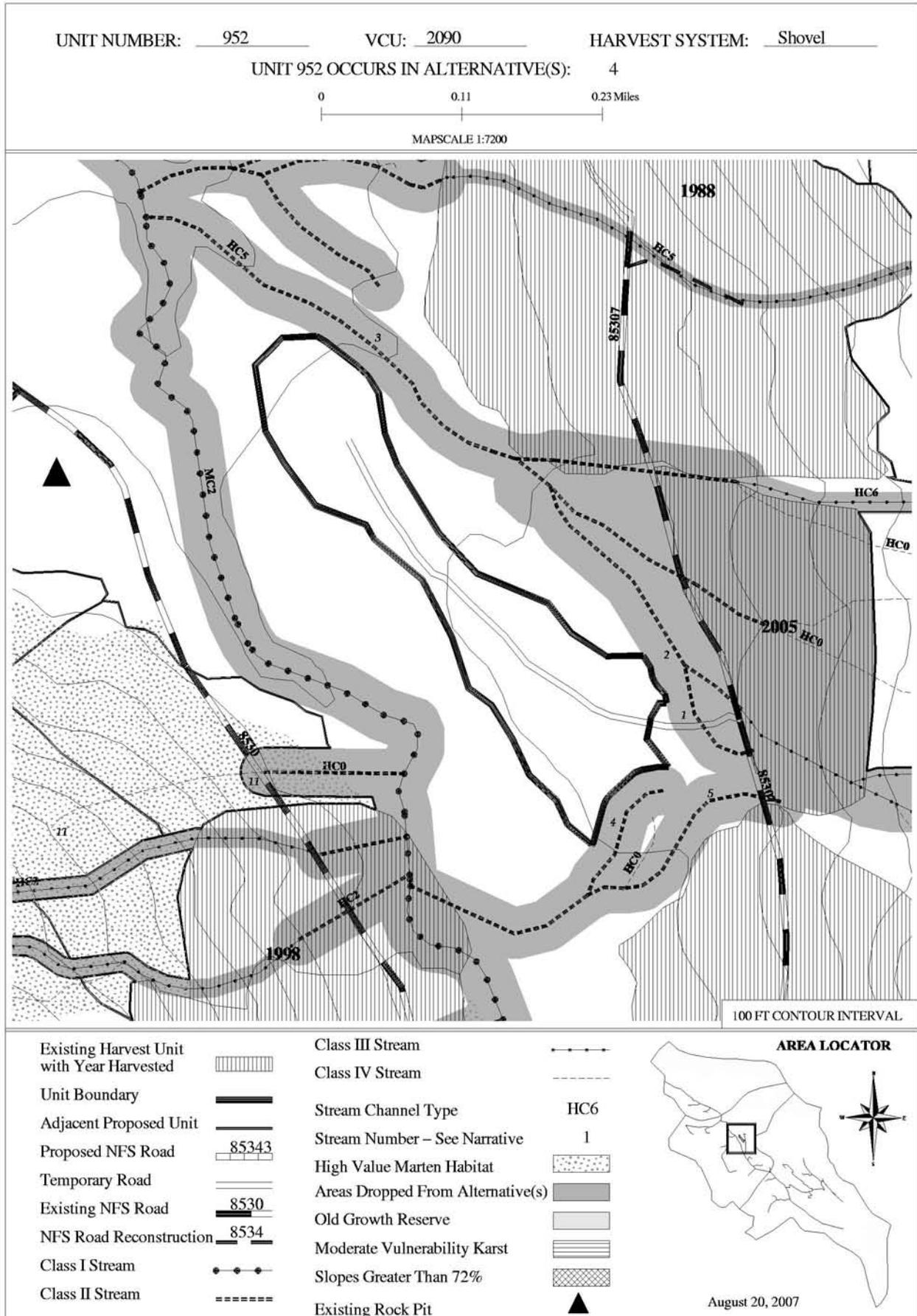
<p><b>HERITAGE RESOURCES:</b> No concerns</p>
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<p><b>SCENERY/RECREATION:</b> No concerns</p>
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<p><b>SOILS/WETLANDS:</b> Slopes range from 55-75% in Unit 948. There are about 11 acres of slopes greater than 72%. <b>Concern:</b> Areas greater than 72% slope are along the northern boundary. <b>Response:</b> Involve a soil scientist during layout to verify small inclusions where slopes over 72% are suitable for timber harvest. <b>Concern:</b> The western quarter of the unit is ridge top subalpine forest and muskeg. <b>Response:</b> Helicopter logging will protect wetlands and meet resource objectives. (BMP 12.5 and 13.5) Area to the south of Unit 948 dropped for stability concerns. (This unit requires field verification).</p>
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<p><b>WILDLIFE:</b> <b>Concern:</b> Unit contains high value marten habitat. High deer use was observed in the northeast portion of the unit. <b>Response:</b> Proposed timber management will not create openings greater than 2 acres in size within this habitat. Retention of 60% of the basal area will meet marten standards and guidelines and help to maintain deer habitat. <b>Concern:</b> Bear den located in unit. <b>Response:</b> Maintain a 200-foot forested buffer around den sites.</p>
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### IYOUKTUG TIMBER SALE UNIT CARD PLANNED HARVEST UNIT MAP



<b>Unit Data Card – Iyouktug Timber Sale Draft EIS</b>
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<b>Unit Number:</b>	952	<b>In Alternatives:</b>	4	<b>Total Unit Acres:</b>	22.4	<b>Vol Strata Acres:</b>	High: 0 Med: 0 Low: 22.4
<b>VCU Number:</b>	2090	<b>Harvest System:</b>	SH	<b>Net Estimated Harvest Volume (MBF):</b>	197	<b>Prescription /Percent Retention:</b>	ST50

<b>Summary of Concerns, Responses, BMPs and Mitigation</b>
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<b>SILVICULTURE:</b>
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<p><b>Silvicultural Objective/Desired Future Condition:</b> Maintain or create a stand with three or more distinct age (size) classes of trees that maintains species diversity, provides for a high degree of structural diversity and meets Forest Plan scenery requirements.</p>
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<p><b>Silvicultural Prescription:</b> Uneven-aged management – Single tree selection. Designate up to 50 percent of existing basal area singly and/or in small clumps or corridors to facilitate shovel yarding. Refer to the intro to unit cards, marking guidelines and detailed RX for more information.</p>
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<p><b>TIMBER/LOGGING:</b> Refer to Silvicultural RX and marking guides for single tree selection guidelines to facilitate shovel yarding.</p>
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<p><b>ENGINEERING/ROADS:</b> Temporary road 9052 accesses unit from existing Road 85307. Road location has been flagged. Deviations to flagged route must be approved by USFS prior to harvest.</p>
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<p><b>BOTANY RESOURCES:</b> No concerns</p>
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<p><b>FISH/WATERSHED: Concern:</b> Stream 1 is a Class II PA channel. <b>Response:</b> Category A protection (BMP 12.6, 13.14). No harvest within 100 feet of channel (RIP III). <b>Concern:</b> Stream 2 is a Class II MM channel. <b>Response:</b> Category A protection (BMP 12.6, 13.14). No harvest within 120 feet of channel (RIP III). <b>Concern:</b> Streams 3 and 4 are Class II HC channels. <b>Response:</b> No harvest within 100 feet and side-slope break (RIP III). Equipment will not operate in stream courses and will not cross streams without a temporary structure (BMP 13.9, 13.14). <b>Concern:</b> Temporary road – stream crossings <b>Response:</b> Log stringer bridge designated for Stream 1 (BMP 14.17). Other crossing structures and locations will be approved by USFS prior to construction. Upon completion of unit harvest, restore natural drainage patterns by removing road fill from channels and installing water bars as necessary (BMP 13.16). Seed and fertilize disturbed soil adjacent to streams (BMP 12.17).</p>
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<p><b>GEOLOGY/KARST:</b> No carbonate bedrock found within unit. No karst resource concerns identified.</p>
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<p><b>HERITAGE RESOURCES:</b> No concerns</p>
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<p><b>SCENERY/RECREATION:</b> No concerns</p>
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<p><b>SOILS/WETLANDS:</b> The slopes range from 10-25% in Unit 952. The unit is entirely a forested wetland with a 1 acre muskeg in the southern end (BMP 12.5). The soils are poorly drained organic soils. <b>Concern:</b> Shovel yarding may cause rutting due to lack of bearing strength on poorly drained organic soils. <b>Response:</b> Operate shovel on a puncheon or a slash mattress to provide adequate bearing strength on the higher areas of the unit [this means areas with less skunk cabbage and more tree roots]. (BMP 13.2 and 13.9). <b>Concern:</b> The road is entirely on wetlands. There is a large, open muskeg at the start that should be avoided. <b>Response:</b> Reroute the road through the forested wetland and out of the muskeg. Provide adequate cross drainage to maintain groundwater flow. Remove all structures and close the road once the unit is harvested. (BMP 14.9) (33 CFR BMPs 4, 5, 6)</p>
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<p><b>WILDLIFE:</b> No concerns</p>
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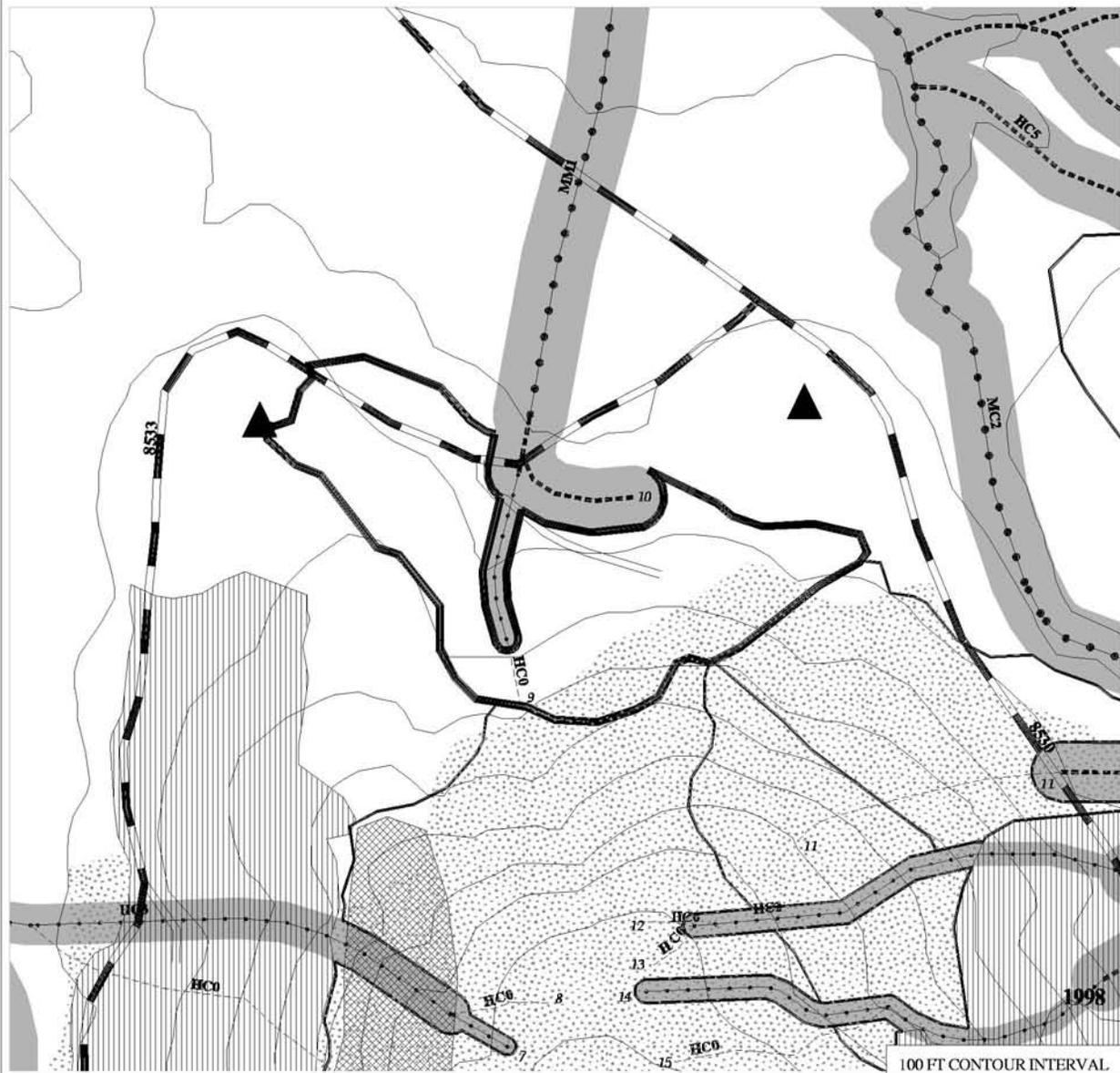
### IYOUKTUG TIMBER SALE UNIT CARD PLANNED HARVEST UNIT MAP

UNIT NUMBER: 953 VCU: 2090 HARVEST SYSTEM: Cable

UNIT 953 OCCURS IN ALTERNATIVE(S): 3 4 5



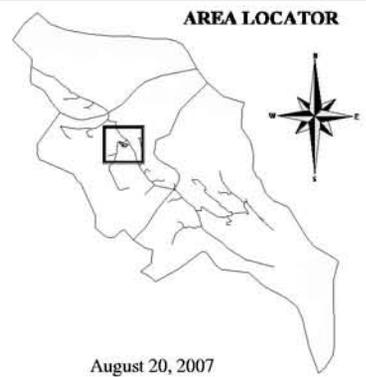
MAPSCALE 1:7200



- Existing Harvest Unit with Year Harvested
- Unit Boundary
- Adjacent Proposed Unit
- Proposed NFS Road 85343
- Temporary Road
- Existing NFS Road 8530
- NFS Road Reconstruction 8534
- Class I Stream
- Class II Stream

- Class III Stream
- Class IV Stream
- Stream Channel Type
- Stream Number – See Narrative
- High Value Marten Habitat
- Areas Dropped From Alternative(s)
- Old Growth Reserve
- Moderate Vulnerability Karst
- Slopes Greater Than 72%
- Existing Rock Pit

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August 20, 2007

<b>Unit Data Card – Iyouktug Timber Sale Draft EIS</b>
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<b>Unit Number:</b>	953	<b>In Alternatives:</b>	3, 4, 5	<b>Total Unit Acres:</b>	24.1	<b>Vol Strata Acres:</b>	High: 4.2 Med: 9.0 Low: 10.9
<b>VCU Number:</b>	2090	<b>Harvest System:</b>	C	<b>Net Estimated Harvest Volume (MBF):</b>	470	<b>Prescription /Percent Retention:</b>	CC

<b>Summary of Concerns, Responses, BMPs and Mitigation</b>
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<b>SILVICULTURE:</b>
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<p><b>Existing Stand Condition/Vegetation:</b> Stand consists primarily of 16-24" DBH western hemlock (70% BA), 16-20" spruce (20% BA) and 20-24" DBH mountain hemlock (10% BA). Wind risk is moderate to high.</p>
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<p><b>Silvicultural Objective/Desired Future Condition:</b> Create an even-aged managed stand of the same species composition as the original stand that meets Forest Plan scenery and high value marten habitat requirements, uses an economical regeneration method, and is windfirm, free of mistletoe infection and growing at full site potential.</p>
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<p><b>Silvicultural Prescription:</b> Even-aged management – clearcut: This unit includes stream buffers with RAW zones and contains 4 acres of high value marten habitat. For RAW zone retain trees less than 16" DBH within specified distance (refer to fish/watershed section) from windward (southeasterly) edge of stream buffers to minimize windthrow in buffer. Designate reserve trees of sufficient size and condition within high value marten habitat to meet marten standards and guidelines. Clump trees as specified under wildlife section.</p>
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<p><b>TIMBER/LOGGING:</b> This unit is comprised of two cable settings. The western-most setting accesses the area west of stream #9, a class III stream that requires split yarding. The eastern-most setting accesses the area east of stream #9.</p>
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<p><b>ENGINEERING/ROADS:</b> Temporary road 53 accesses unit from existing Road 8533. Road location has been flagged. Deviations to flagged route must be approved by USFS prior to harvest.</p>
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<p><b>BOTANY RESOURCES:</b> No concerns</p>
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<p><b>FISH/WATERSHED:</b> <b>Concern:</b> Stream 9 (upper) is a Class IV HC channel. <b>Response:</b> Category C protection (BMP 12.6, 13.14). <b>Concern:</b> Stream 9 (lower) is a Class III HC channel. <b>Response:</b> Category B protection (BMP 12.6, 13.14). No harvest within v-notch (RIP III). <b>Concern:</b> Stream 10 is a Class II PA channel. <b>Response:</b> Category A protection (BMP 12.6, 13.14). No harvest within 100 feet of channel (RIP III). <b>Concern:</b> Windthrow risk is high. <b>Response:</b> Manage for windfirmness 120 feet beyond no-cut buffers. <b>Concern:</b> Temporary road – stream crossings <b>Response:</b> Crossing structures and locations will be approved by USFS prior to construction. Upon completion of unit harvest, restore natural drainage patterns by removing road fill from channels and installing water bars as necessary (BMP 13.16). Seed and fertilize disturbed soil adjacent to streams (BMP 12.17)</p>
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<p><b>GEOLOGY/KARST:</b> No carbonate bedrock found within unit. No karst resource concerns identified.</p>
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<p><b>HERITAGE RESOURCES:</b> No concerns</p>
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<p><b>SCENERY/RECREATION:</b> No concerns</p>
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<p><b>SOILS/WETLANDS:</b> Slopes range from 25-55% in Unit 953. Nearly all the unit is forested wetland (BMP 12.5). Partial suspension is required to meet soil and wetland quality standards (BMP 13.9). <b>Concern:</b> The proposed temporary road is located on forested wetland and no alternative route exists. <b>Response:</b> Provide adequate cross drainage to maintain groundwater flow. Remove all structures and close the road after the unit has been harvested. (BMP 14.9) (33 CFR BMPs 4, 5, 6)</p>
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**Summary of Concerns, Responses, BMPs and Mitigation**

**WILDLIFE: Concern:** Unit contains high value marten habitat. Unit located in a potential travel corridor that may maintain connectivity from low to high elevation habitat. **Response:** Retain 10-20% of original stand structure as measured by basal area or trees per acre in high value marten habitat. Maintain an average of 4 large live trees/acre (20-30" DBH or larger), 3 snags or decadent trees/acre (20-30" DBH or larger), and 3 large, downed trees/acre (20-30" DBH or larger and 10 feet long). Where trees this large are not available, substitute next largest trees. Retained trees can be clumped to maintain a reasonable assurance of windfirmness and to minimize operational difficulties. Retain trees along west edge of the unit to maintain a wider leave strip/corridor between the unit and the previously managed stand.

**Concern:** Red-tailed hawk was observed around unit. **Response:** Maintain a 600-foot no-harvest buffer that is windfirm around active raptor nest if identified and restrict harvest and road building activities from March 1 to July 31 within the buffer.

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### IYOUKTUG TIMBER SALE UNIT CARD PLANNED HARVEST UNIT MAP

UNIT NUMBER: 954 VCU: 2090 HARVEST SYSTEM: Cable

UNIT 954 OCCURS IN ALTERNATIVE(S): 2 3 4 5



MAPSCALE 1:7200

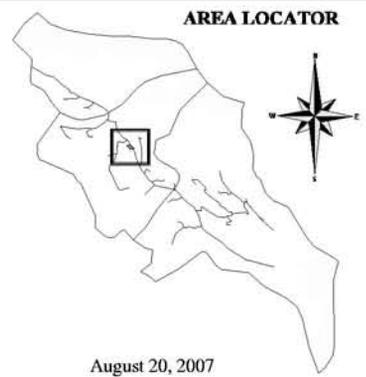


100 FT CONTOUR INTERVAL

- Existing Harvest Unit with Year Harvested
- Unit Boundary
- Adjacent Proposed Unit
- Proposed NFS Road 85343
- Temporary Road
- Existing NFS Road 8530
- NFS Road Reconstruction 8534
- Class I Stream
- Class II Stream

- Class III Stream
- Class IV Stream
- Stream Channel Type
- Stream Number – See Narrative
- High Value Marten Habitat
- Areas Dropped From Alternative(s)
- Old Growth Reserve
- Moderate Vulnerability Karst
- Slopes Greater Than 72%
- Existing Rock Pit

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- HC6
- 1
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<b>Unit Data Card – Iyouktug Timber Sale Draft EIS</b>
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<b>Unit Number:</b>	954	<b>In Alternatives:</b>	2, 3, 4, 5	<b>Total Unit Acres:</b>	16.4	<b>Vol Strata Acres:</b>	High: 13.9 Med: 2.5 Low: 0
<b>VCU Number:</b>	2090	<b>Harvest System:</b>	C	<b>Net Estimated Harvest Volume (MBF):</b>	360	<b>Prescription /Percent Retention:</b>	CC

<b>Summary of Concerns, Responses, BMPs and Mitigation</b>
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<b>SILVICULTURE:</b>
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<p><b>Existing Stand Condition/Vegetation:</b> Stand consists primarily of 12-40" DBH western hemlock (86% BA) and 24-44" DBH spruce (14% BA). There is an area of moderate windthrow in the center of the unit. Advanced hemlock regeneration is moderate with a minor amount of spruce. Wind risk is moderate to high.</p>
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<p><b>Silvicultural Objective/Desired Future Condition:</b> Create an even-aged managed stand of the same species composition as the original stand that meets Forest Plan scenery and high value marten habitat requirements, uses an economical regeneration method, and is windfirm, free of mistletoe infection and growing at full site potential.</p>
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<p><b>Silvicultural Prescription:</b> Even-aged management – clearcut: This unit includes stream buffers with RAW zones and is mostly within high value marten habitat. For RAW zone retain trees less than 16" DBH within specified distance (refer to fish/watershed section) from windward (southeasterly) edge of stream buffers to minimize windthrow in buffer.</p>
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<p>Designate reserve trees of sufficient size and condition within high value marten habitat to meet marten standards and guidelines. Clump trees as specified under wildlife section.</p>
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<p><b>TIMBER/LOGGING:</b> This unit is comprised of one cable setting.</p>
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<p><b>ENGINEERING/ROADS:</b> N/A</p>
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<p><b>BOTANY RESOURCES:</b> No concerns</p>
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<p><b>FISH/WATERSHED:</b> The upper part of Stream 11 is a Class IV HC channel. <b>Response:</b> Category C protection (BMP 12.6, 13.14). Remove logging debris from channel (BMP 13.16). <b>Concern:</b> The lower part of stream 11 is a Class II HC channel. <b>Response:</b> Category A protection (BMP 12.6, 13.14). No harvest within 100 feet and side-slope break (RIP III). <b>Concern:</b> Northeast boundary stream is a Class I MC channel. <b>Response:</b> Category A protection (BMP 12.6, 13.14). No harvest within 100 feet of channel and side-slope break (RIP III). <b>Concern:</b> Windthrow risk is high. <b>Response:</b> Manage for windfirmness 120 feet beyond no-cut buffers.</p>
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<p><b>GEOLOGY/KARST:</b> No carbonate bedrock found within unit. No karst resource concerns identified.</p>
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<p><b>HERITAGE RESOURCES:</b> No concerns</p>
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<p><b>SCENERY/RECREATION:</b> <b>Concern:</b> Unit crosses a VPR <b>Response:</b> Incorporate landscape architect input during layout to meet VQO of Maximum Modification</p>
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<p><b>SOILS/WETLANDS:</b> slopes range from 35-60% in Unit 954. A minimum of partial suspension is required to meet soil quality standards. (BMP 13.9)</p>
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<p><b>WILDLIFE:</b> <b>Concern:</b> Unit contains high value marten habitat. <b>Response:</b> Retain 10-20% of original stand structure as measured by basal area or trees per acre in high value marten habitat. Maintain an average of 4 large live trees/acre (20-30" DBH or larger), 3 snags or decadent trees/acre (20-30" DBH or larger), and 3 large, downed trees/acre (20-30" DBH or larger and 10 feet long). Where trees this large are not available, substitute next largest trees. Retained trees can be clumped to maintain a reasonable assurance of windfirmness and to minimize operational difficulties.</p>
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