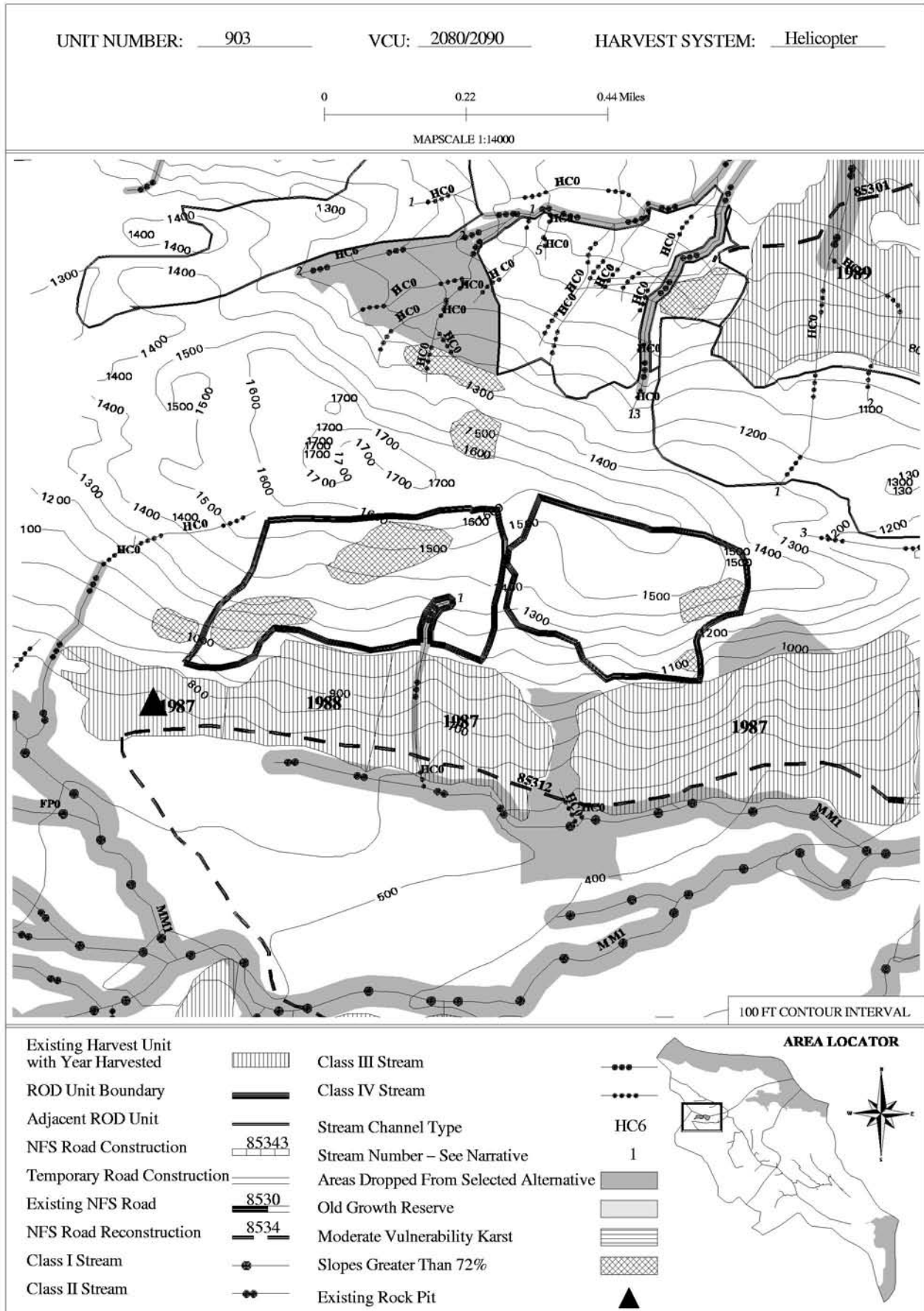


IYOUKTUG TIMBER SALES RECORD OF DECISION
HARVEST UNIT MAP



Unit Data Card – Iyouktug Timber Sales ROD - Selected Alternative
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Unit Number:	903	Selected Alternative		Total Unit Acres:	99.4	Vol Strata Acres:	High: 97.6 Med: 0 Low: 1.8
VCU Number:	2090	Harvest System:	HE	Net Estimated Harvest Volume (MBF):	1,454	Prescription /Percent Retention:	ST40

Summary of Concerns, Responses, BMPs and Mitigation
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SILVICULTURE:

<p>Existing Stand Condition/Vegetation: Stand contains a good mix of 12-39" DBH mountain hemlock (44% BA), 16-48" DBH spruce (34% BA), and 12-36" DBH western hemlock (22% BA). Wind risk is low.</p>
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<p>Silvicultural Objective/Desired Future Condition: Maintain or create a stand with three or more distinct age (size) classes of trees that maintains species diversity and provides for a high degree of structural diversity.</p>

<p>Silvicultural Prescription: Uneven-aged management – Single tree selection. Designate up to 40 percent of existing basal (236 sq. ft. per acre) area singly and/or in small clumps to facilitate helicopter yarding. Refer to the intro to unit cards, marking guidelines and detailed RX for more information.</p>

<p>TIMBER/LOGGING: Refer to Silvicultural RX and marking guides for single tree selection guidelines to facilitate helicopter yarding.</p>

<p>ENGINEERING/ROADS: N/A</p>

<p>BOTANY RESOURCES: No concerns</p>

<p>FISH/WATERSHED: Concern: Stream 1 is a Class III HC channel with unstable side-slopes.</p>
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<p>Response: Category B protection (BMP 12.6, 13.14). No harvest within v-notch (RIP III).</p>

<p>No-harvest buffer will encompass all unstable ground surrounding channel.</p>
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<p>GEOLOGY/KARST: No carbonate bedrock found within unit. No karst resource concerns identified.</p>

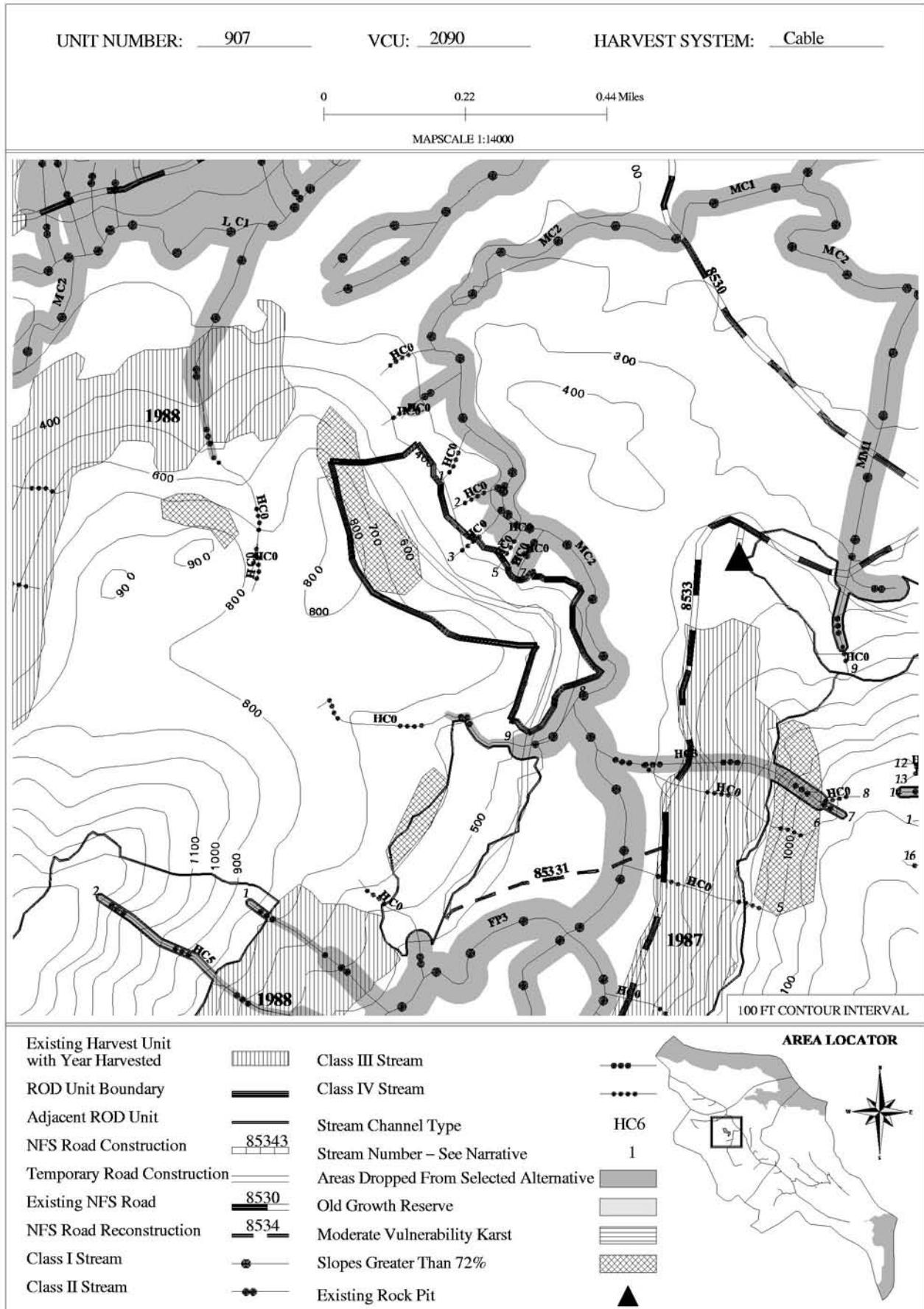
<p>HERITAGE RESOURCES: No concerns</p>

<p>SCENERY/RECREATION: No concerns</p>

<p>SOILS/WETLANDS: Slopes range greatly from 5-90% in Unit 903. The soils are generally well-drained and formed over bedrock. Concern: There are about 16 acres of slopes over 72% scattered throughout the unit. The largest continuous area is 7 acres located in the middle. The soils are generally well-drained over bedrock. There are no signs of instability, hollow topography or past landslides in this area. Concern: Some landslides may initiate on the slopes greater than 72% and enter streams. Response: Do not harvest any slopes greater than 72% within 120 feet of any stream. Slopes up to 80% may be harvested with the proposed helicopter prescription. Avoid slopes greater than 80% in Unit 903. (BMP 13.5, 13.9). An onsite analysis for suitability on slopes over 72% was conducted on this unit as per Forest Plan Standards (soil resource report).</p>
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<p>WILDLIFE: Concern: Vancouver Canada geese observed in ponds north of units. Response: No design elements or mitigation required to meet Forest Plan standards and guidelines.</p>
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IYOUKTUG TIMBER SALES RECORD OF DECISION
HARVEST UNIT MAP



Unit Data Card – Iyouktug Timber Sales ROD - Selected Alternative					
Unit Number:	907	Selected Alternative	Total Unit Acres:	44.9	Vol Strata Acres: High: 29.6 Med: 15.3 Low: 0
VCU Number:	2090	Harvest System:	Net Estimated Harvest Volume (MBF):	881	Prescription /Percent Retention: CC

Summary of Concerns, Responses, BMPs and Mitigation	
<p>SILVICULTURE: Existing Stand Condition/Vegetation: Stand consists primarily of 12-30" DBH western hemlock (70% BA) with some scattered 16-36" DBH spruce (17% BA) and 24-28" DBH mountain hemlock (13% BA). The eastern edge of the unit is the most productive. The western edge is less productive and contains some areas of windthrow. 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, 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 is bounded on the SE by a Class I stream buffer.</p>	
<p>TIMBER/LOGGING: This unit is comprised of three cable settings that are defined by logical setting breaks based on topography and lateral yarding capabilities. There are some limited shovel yarding opportunities near the road.</p>	
<p>ENGINEERING/ROADS: Temporary road 42 accesses unit from existing Road 85331. Road location will be flagged by USFS prior to harvest.</p>	
<p>BOTANY RESOURCES: No concerns</p>	
<p>FISH/WATERSHED: Concern: Streams 1, 5 and upper segments of streams 2, 3, 4, 6, 7 are Class IV HC0. Response: Category C protection (BMP 12.6, 13.14). Remove logging debris from channel (BMP 13.16). Concern: Lower segments of streams 2, 3, 4, 6, and 7 and Class II HC0. Response: Category A protection. No harvest within 100 feet of channel or within v-notch. Concern: Stream 8 is a Class I MC2 along SE unit boundary. Response: Category A protection. Locate unit boundary beyond v-notch and 100 foot no-harvest buffer. Concern: Stream 9 is a Class I HC channel along S unit boundary. Response: Category A protection. Locate unit boundary north of v-notch and 100-foot no-harvest buffer (BMP 12.6, 13.9, RIP-III). Concern: Temporary road – stream crossings. Response: Log stringer bridge designated for Stream 9 (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>	
<p>GEOLOGY/KARST: No carbonate bedrock found within unit. No karst resource concerns identified.</p>	
<p>HERITAGE RESOURCES: No concerns</p>	
<p>SCENERY/RECREATION: No concerns</p>	
<p>SOILS/WETLANDS: The slopes range from 20 to 120% in Unit 907. There are about 10 acres of slopes greater than 72% in cliffs along the southeastern backline. This portion of the unit has a history of landslides. Northern boundary of the unit is a landslide. Concern: Timber harvest may accelerate landsliding on slopes over 72% gradient. Response: Avoid the steep area during layout by locating the backline below the slopes over 72% (BMP 13.5). The rest of 907 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 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)</p>	

Summary of Concerns, Responses, BMPs and Mitigation

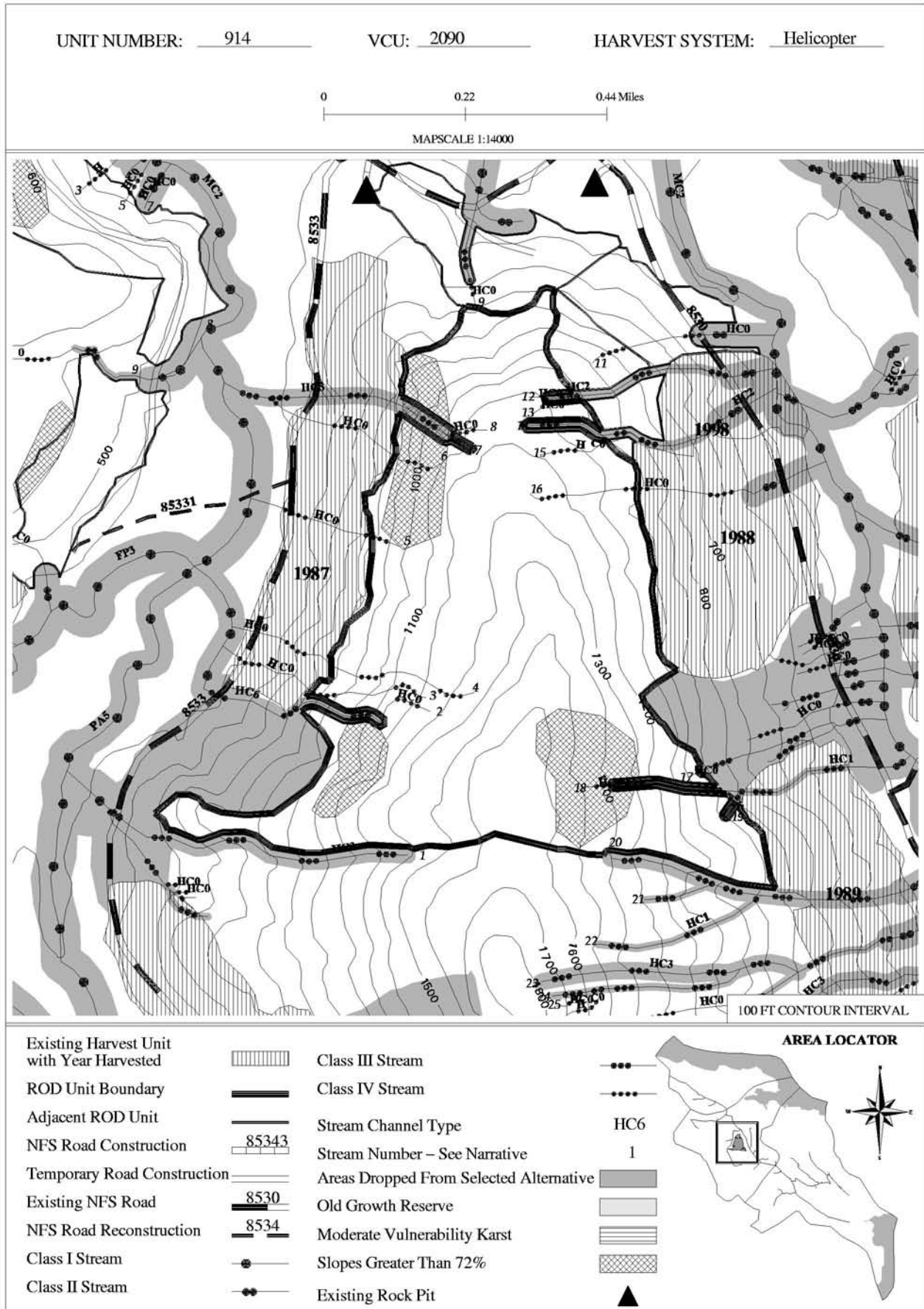
WILDLIFE: Concern: Unit is located east of a travel corridor that maintains connectivity from low to high elevation habitat. High deer use observed in west and southwest portion of the unit. **Response:** Do not extend unit to the southwest or west boundary. **Concern:** Red-tailed hawk observed in unit. Suspect that there is a nest in the northeast portion of the 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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Unit Data Card – Iyouktug Timber Sales ROD - Selected Alternative							
Unit Number:	909	Selected Alternative		Total Unit Acres:	31.2	Vol Strata Acres:	High: 0 Med: 29.6 Low: 1.6
VCU Number:	2090	Harvest System:	HE	Net Estimated Harvest Volume (MBF):	247	Prescription /Percent Retention:	ST25

Summary of Concerns, Responses, BMPs and Mitigation	
<p>SILVICULTURE: Existing Stand Condition/Vegetation: Stand consists of primarily of 12-36" DBH western hemlock (44% BA), 12-48" DBH mountain hemlock (42% BA), and 24-44" DBH spruce (15% BA). There are windthrown trees scattered throughout the stand. Wind risk is moderate to high. Silvicultural Objective/Desired Future Condition: 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. Silvicultural Prescription: Uneven-aged management – Single tree selection. Designate up to 25 percent of existing basal (260 sq.ft.per acre) area singly and/or in small clumps to facilitate helicopter yarding. Refer to the intro to unit cards, marking guidelines and detailed RX for more information.</p>	
<p>TIMBER/LOGGING: Refer to Silvicultural RX and marking guides for single tree selection guidelines to facilitate helicopter yarding.</p>	
<p>ENGINEERING/ROADS: N/A</p>	
<p>BOTANY RESOURCES: No concerns</p>	
<p>FISH/WATERSHED: Concern: Stream 7 is Class III HC channel. Response: Category B protection. Locate unit boundary south of v-notch. Maintain 120-foot RAW zone south of no-harvest buffer. Concern: Streams 8, 9, 10, 11 are Class IV HC channels. Response: Category C protection. Fell away from stream if feasible and remove logging debris from channel. Concern: Stream 12 is Class III HC5. Response: Category B protection. Locate unit boundary north of v-notch boundary. Maintain 120-foot RAW zone north of v-notch (BMP 12.6, RIPII).</p>	
<p>GEOLOGY/KARST: No carbonate bedrock found within unit. No karst resource concerns identified.</p>	
<p>HERITAGE RESOURCES: No concerns</p>	
<p>SCENERY/RECREATION: No concerns</p>	
<p>SOILS/WETLANDS: Slopes range from 30-65% in Unit 909. Unit suitable for proposed helicopter harvest. (BMP 13.9) Area to the south of Unit 909 dropped for stability concerns (BMP 13.5)</p>	
<p>WILDLIFE: No concerns</p>	

IYOUKTUG TIMBER SALES RECORD OF DECISION
HARVEST UNIT MAP



Unit Data Card – Iyouktug Timber Sales ROD - Selected Alternative
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Unit Number:	914	Selected Alternative		Total Unit Acres:	243.4	Vol Strata Acres:	High: 200 Med: 20.7 Low: 22.7
VCU Number:	2090	Harvest System:	HE	Net Estimated Harvest Volume (MBF):	2,302	Prescription /Percent Retention:	ST25

Summary of Concerns, Responses, BMPs and Mitigation
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SILVICULTURE:

<p>Existing Stand Condition/Vegetation: Stand is comprised predominantly of 12-24" DBH mountain hemlock (51%), 12-36" DBH western hemlock (21% BA) and 12-40" DBH spruce (27% BA). This unit is situated on a hilltop and its flanks. The most productive areas are in the eastern portion where the slopes are moderate and well drained and in the western portion of the unit, where the slopes are steeper. There are several avalanche chutes in this area. The central portion of the unit is a hilltop with considerable small diameter mountain hemlock and less well drained soils including some muskeg areas. Windthrow risk is moderate.</p>

<p>Silvicultural Objective/Desired Future Condition: Maintain or create a stand with three or more distinct age (size) classes of trees that maintains species diversity and provides for a high degree of structural diversity.</p>

<p>Silvicultural Prescription: Uneven-aged management – Single tree selection. Designate up to 25 percent of existing basal (257 sq.ft.per acre) area singly and/or in small clumps to facilitate helicopter yarding. Refer to the intro to unit cards, marking guidelines and detailed RX for more information.</p>

<p>TIMBER/LOGGING: Refer to Silvicultural RX and marking guides for single tree selection guidelines to facilitate helicopter yarding.</p>

<p>ENGINEERING/ROADS: N/A</p>

<p>BOTANY RESOURCES: No concerns</p>

<p>FISH/WATERSHED: Concern: Streams 1 (upper), 6, 7, 8, 9, 11, 14, and 15 are Class III HC channels. Response: Category B protection. No harvest within the v-notch (BMP 12.6). Concern: Lower portion of Stream 1 is a Class II HC on SE edge of the unit. Response: No harvest within 100 feet of the stream and within the v-notch (BMP 12.6, RIP). Concern: Streams 2, 3, 4, 5, 12, 13, and 17 are Class IV HC channels. Response: Category C protection. Directional felling if feasible. Remove logging debris from stream (BMP 13.9, 13.16)</p>
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<p>GEOLOGY/KARST: No carbonate bedrock found within unit. No karst resource concerns identified.</p>

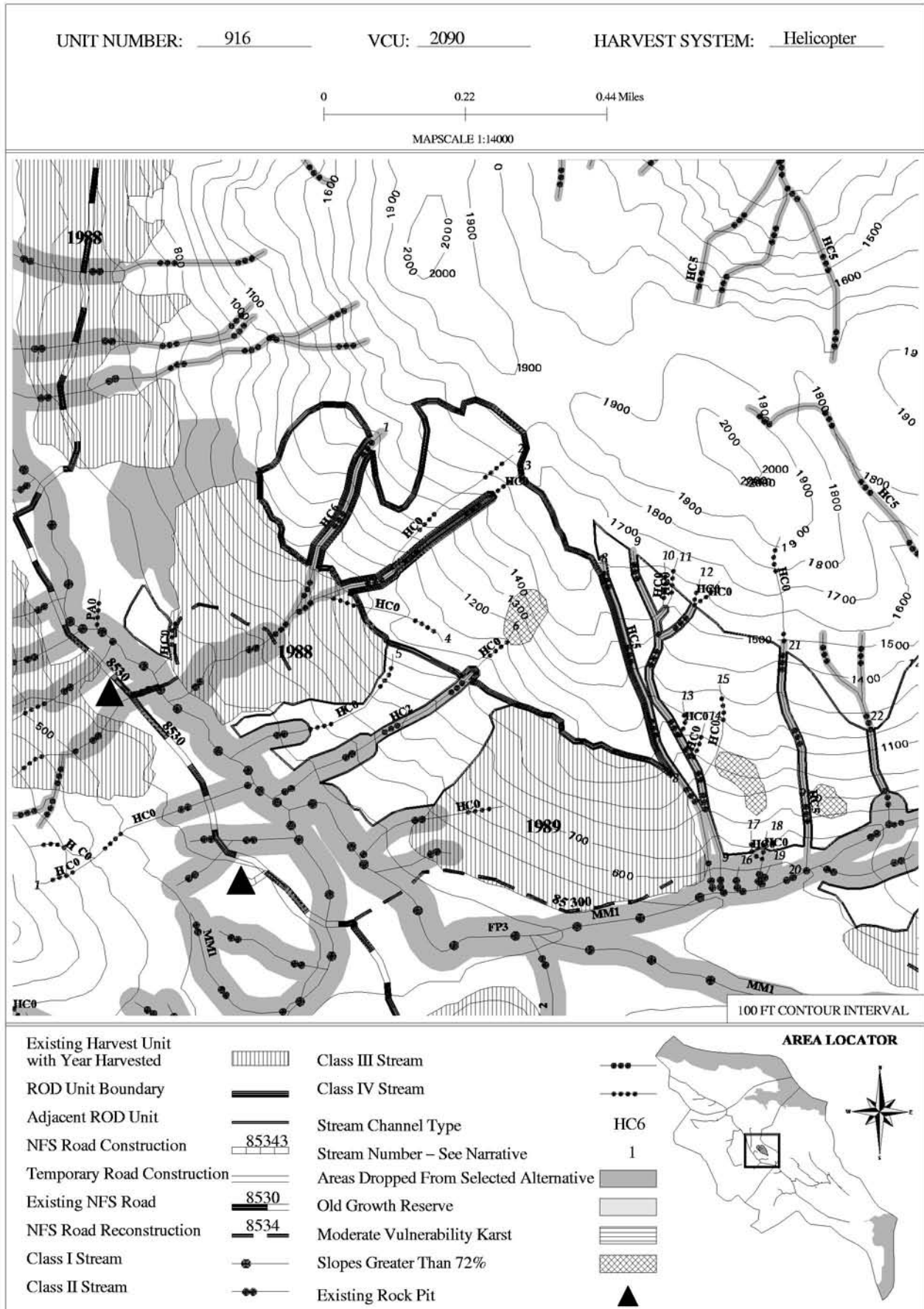
<p>HERITAGE RESOURCES: No concerns</p>

<p>SCENERY/RECREATION: No concerns</p>

<p>SOILS/WETLANDS: The slopes range from 35 to 85% in Unit 914. There are about 22 acres of slopes greater than 72% in Unit 914. The soils are generally well-drained over bedrock. There are no signs of instability, hollow topography or past landslides in this area. Concern: Some landslides may initiate on the slopes greater than 72% and enter streams. Response: Do not harvest any slopes greater than 72% within 120 feet of any stream. Slopes up to 80% may be harvested with the proposed helicopter prescription. Avoid slopes greater than 80% in Unit 914. (BMP 13.5, 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 eastern quarter of the unit is subalpine forest and muskeg. Response: Helicopter logging will protect wetlands and meet resource objectives. (BMP 12.5). The rest of the unit is suitable for proposed helicopter harvest.</p>
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<p>WILDLIFE: Concern: High deer use was observed along the ridge in the unit. Response: Proposed timber management will not create openings greater than 2 acres in size within this habitat. Retention of 75% of the basal area will help to maintain habitat for deer.</p>
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IYOUKTUG TIMBER SALES RECORD OF DECISION
HARVEST UNIT MAP



Unit Data Card – Iyouktug Timber Sales ROD - Selected Alternative
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Unit Number:	916	Selected Alternative		Total Unit Acres:	106.6	Vol Strata Acres:	High: 55.7 Med: 35.9 Low: 15.0
VCU Number:	2090	Harvest System:	HE	Net Estimated Harvest Volume (MBF):	1,363	Prescription /Percent Retention:	ST40

Summary of Concerns, Responses, BMPs and Mitigation
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SILVICULTURE:

Existing Stand Condition/Vegetation: Stand is comprised predominantly of 12-36" DBH western hemlock (43% BA), 16-39" DBH mountain hemlock (33% BA) and 12-40" DBH spruce (24% BA). The most productive area is in the southeastern portion where the slopes are moderate and well drained. There are several v-notches throughout the unit. Wind risk is low; however, the unit is on a side slope with SW aspect except for eastern edge of unit that has a SE aspect.

Silvicultural Objective/Desired Future Condition: 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.

Silvicultural Prescription: Uneven-aged management – Single tree selection. Designate up to 40 percent of existing basal (283 sq.ft.per acre) area singly and/or in small clumps to facilitate helicopter yarding except percent basal area removed should not exceed 30 percent for eastern third of unit due to potential for windthrow. Refer to the intro to unit cards, marking guidelines and detailed RX for more information.

TIMBER/LOGGING: Refer to Silvicultural RX and marking guides for single tree selection guidelines to facilitate helicopter yarding.

ENGINEERING/ROADS: N/A

BOTANY RESOURCES: No concerns

FISH/WATERSHED: Concern: Streams 1, 3 (lower), 6 (lower), 8 are Class III HC channels. **Response:** Category B protection (BMP 12.6, 13.14). No harvest within v-notch (RIP III). **Concern:** Streams 2, 3 (upper), 4, 6 (upper) are Class IV HC channels. **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.

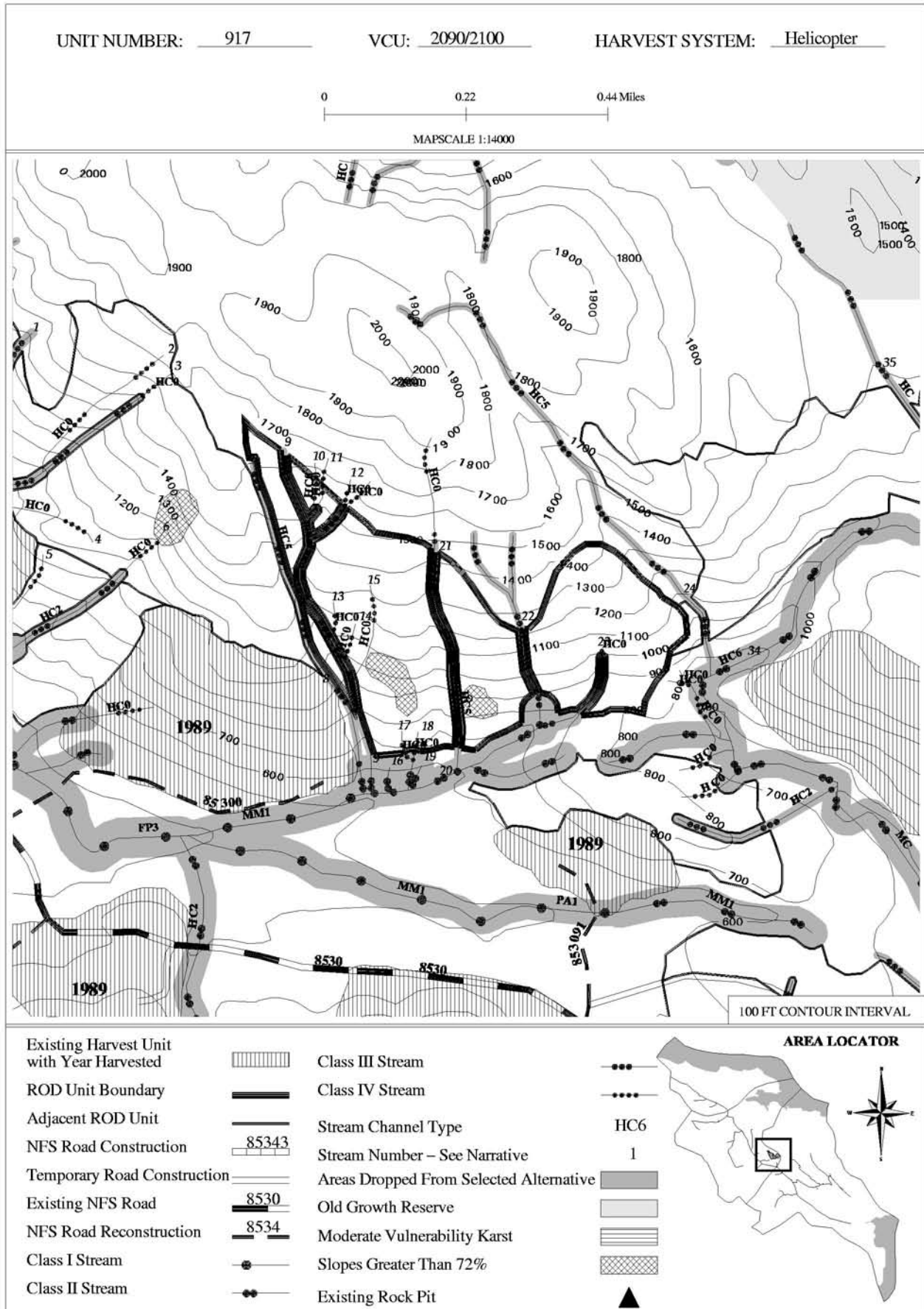
HERITAGE RESOURCES: No concerns

SCENERY/RECREATION: No concerns

SOILS/WETLANDS: Slopes range from 40-75% in Unit 916. **Concern:** There are about 3 acres of slopes greater than 72% in the unit. Timber harvest on slopes over 72% gradient may result in a loss of soil productivity (BMP 13.5). **Response:** Full suspension is required in these areas (BMP 13.9). The rest of 916 is suitable for the proposed helicopter harvest. Area to the northwest of Unit 916 dropped for stability concerns. An onsite analysis for suitability on slopes over 72% was conducted on this unit as per Forest Plan Standards (soil resource report).

WILDLIFE: Concern: High deer use was observed in southwest portion of the unit. Unit is located in a travel corridor that maintains connectivity from low to high elevation habitat. **Response:** Proposed timber management will not create openings greater than 2 acres in size within this habitat. Retention of 60% of the basal area will help to maintain connectivity and deer habitat. **Concern:** Sharp-shinned hawk was observed in unit. **Response:** Maintain a 600-foot no-harvest buffer that is windfirm around active raptor nests if identified and restrict harvest and road building activities from March 1 to July 31 within the buffer.

IYOUKTUG TIMBER SALES RECORD OF DECISION
HARVEST UNIT MAP



Unit Data Card – Iyouktug Timber Sales ROD - Selected Alternative

Unit Number:	917	Selected Alternative		Total Unit Acres:	90.4	Vol Strata Acres:	High: 0 Med: 90.4 Low: 0
VCU Number:	2090	Harvest System:	HE	Net Estimated Harvest Volume (MBF):	1,099	Prescription /Percent Retention:	ST40

Summary of Concerns, Responses, BMPs and Mitigation

SILVICULTURE:

Existing Stand Condition/Vegetation: Stand is comprised predominantly of 12-40" DBH western hemlock (53% BA), 24-40" DBH spruce (24% BA) and 12-38" DBH mountain hemlock (24% BA) . The most productive area is in the central and eastern portion where the slopes are moderate and well drained. Wind risk is low; however, this unit is on a side slope with S to E aspects.

Silvicultural Objective/Desired Future Condition: 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.

Silvicultural Prescription: Uneven-aged management – Single tree selection. Designate up to 40 percent of existing basal (277 sq.ft.per acre) area singly and/or in small clumps to facilitate helicopter yarding except percent basal area removed should not exceed 30 percent if evaluation during layout warrants a higher wind risk rating. Refer to the intro to unit cards, marking guidelines and detailed RX for more information.

TIMBER/LOGGING: Refer to Silvicultural RX and marking guides for single tree selection guidelines to facilitate helicopter yarding.

ENGINEERING/ROADS: N/A

BOTANY RESOURCES: No concerns

FISH/WATERSHED: Concern: Streams 8, 9, 10 (lower), 12 (lower), 21, 22 (upper), 23 are Class III HC channels. **Response:** Category B protection (BMP 12.6, 13.14). No harvest in v-notch (RIP III).

Concern: Streams 10 (upper), 11, 12, 13, 15, 17, 18, 23 (upper) are Class IV HC channels. **Response:** Category C protection (BMP 12.6, 13.14). Remove logging debris from channel (BMP 13.16). **Concern:** Stream 22 (lower) is a Class II AF channel. **Response:** Category B protection and no harvest within 140 feet of channel or on active portion of fan. Harvest no more than 10% across inactive part of fan (RIP II).

Concern: Streams 8 (lower), 9 (lower), 16, 17 (lower) 19, and southern boundary stream are Class II HC channels. **Response:** Category A protection. No harvest within 100 feet of channel or within v-notch (RIP III).

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

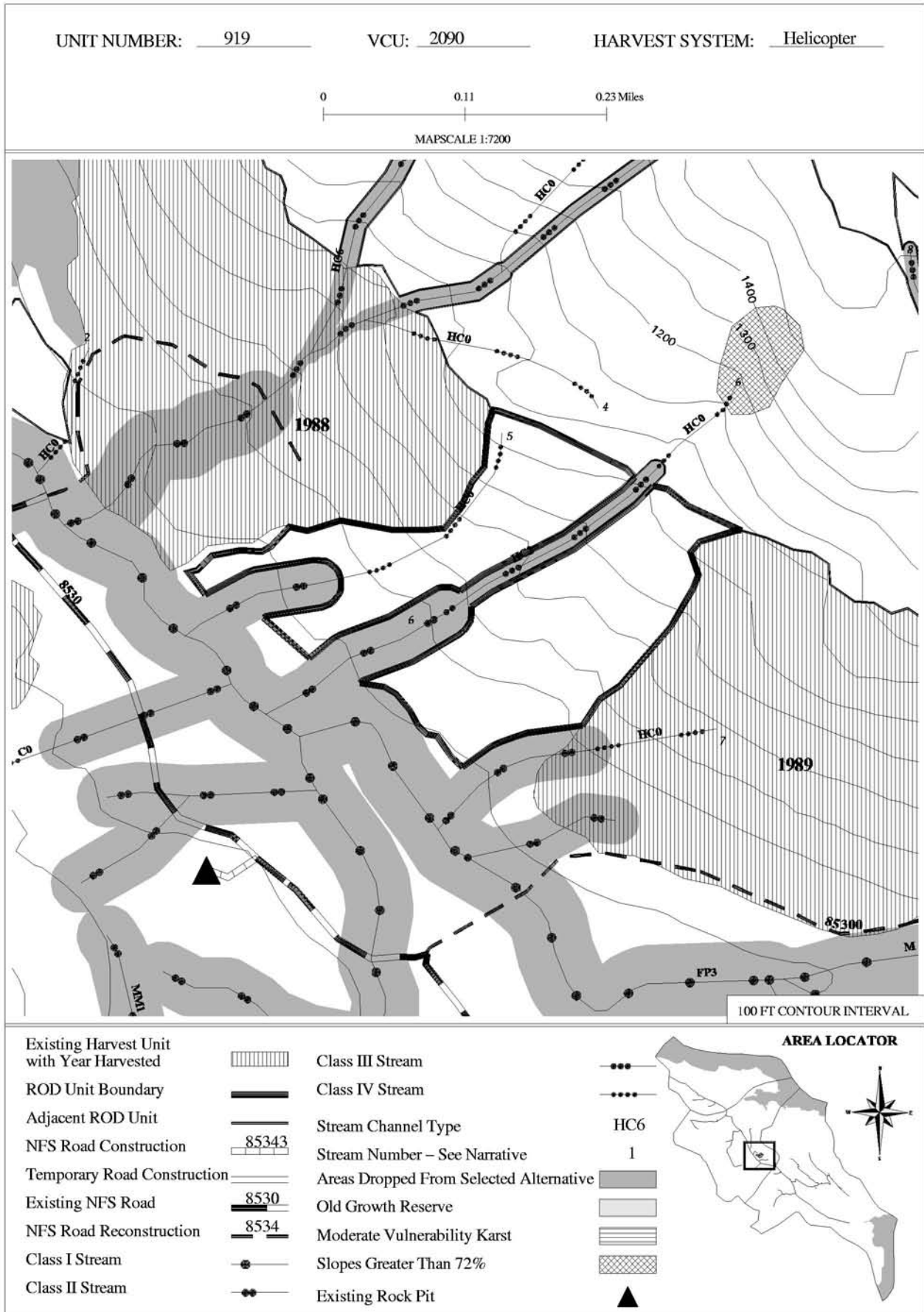
HERITAGE RESOURCES: No concerns

SCENERY/RECREATION: No concerns

SOILS/WETLANDS: Slopes range from 30-80% in Unit 917. Soils are generally well drained forming in bedrock. **Concern:** There are about 4 acres of slope greater than 72% in the unit. These areas have an observed landslide history and timber harvest may accelerate landsliding on slopes over 72%. **Response:** Do not harvest timber in these areas greater than 72% (BMP 13.5). The rest of 917 is suitable for the proposed helicopter harvest (BMP 13.9). Areas to the north and southeast of Unit 917 are dropped for stability concerns. An onsite analysis for suitability on slopes over 72% was conducted on this unit as per Forest Plan Standards (soil resource report).

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

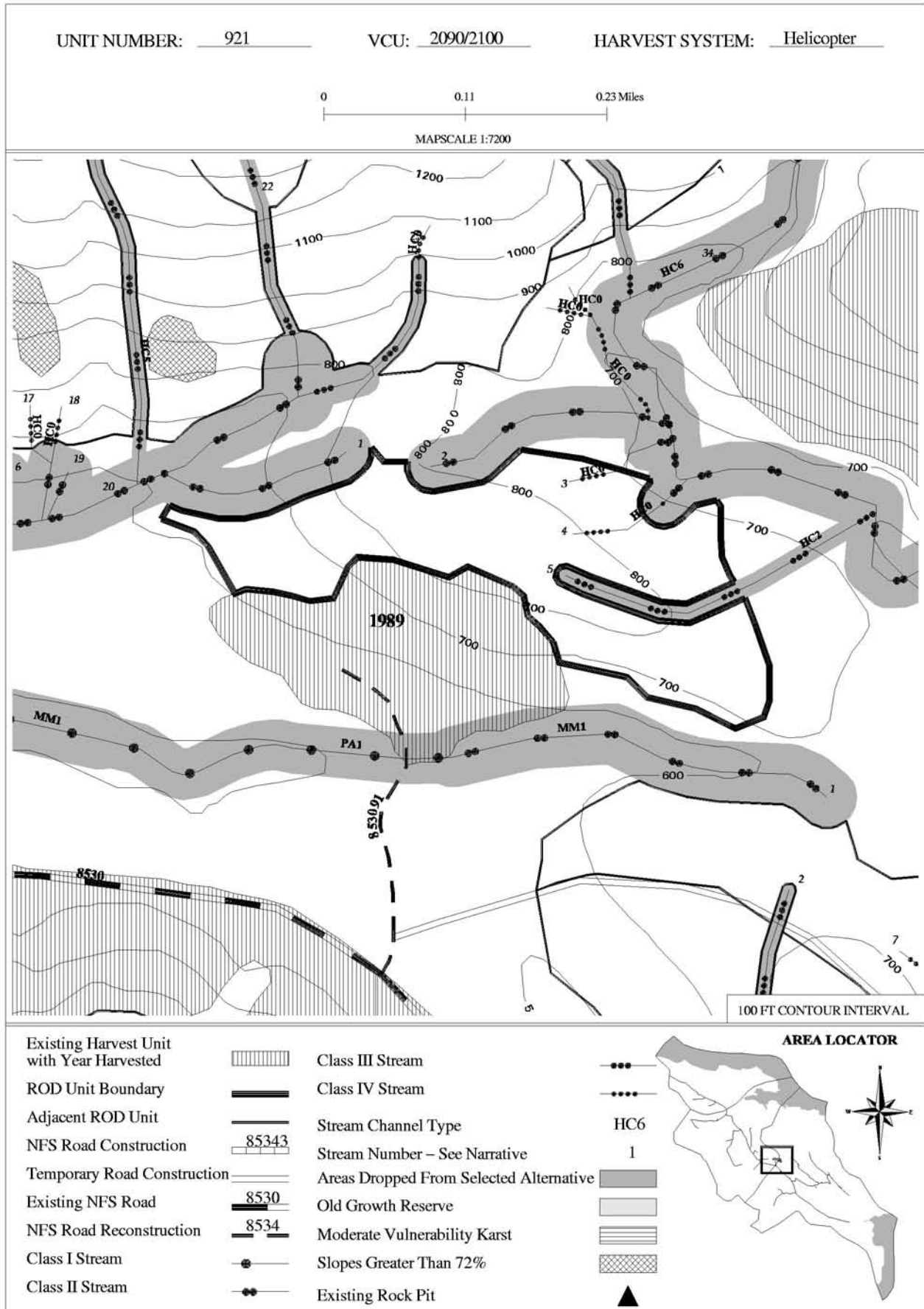
IYOUKTUG TIMBER SALES RECORD OF DECISION
HARVEST UNIT MAP



Unit Data Card – Iyouktug Timber Sales ROD - Selected Alternative							
Unit Number:	919	Selected Alternative		Total Unit Acres:	31.3	Vol Strata Acres:	High: 0.2 Med: 27.9 Low: 3.2
VCU Number:	2090	Harvest System:	HE	Net Estimated Harvest Volume (MBF):	242	Prescription /Percent Retention:	ST25

Summary of Concerns, Responses, BMPs and Mitigation
<p>SILVICULTURE:</p> <p>Existing Stand Condition/Vegetation: Stand is comprised primarily of 12-20" DBH western hemlock, with some larger spruce (15% BA) and yellow-cedar (20% BA) . This unit is situated on a hilltop and along its eastern flank. Slopes are moderate and soil is mostly well drained although the southern portion is next to a muskeg. Western hemlock, spruce and yellow-cedar advanced regeneration is present but not abundant. Wind risk is low.</p> <p>Silvicultural Objective/Desired Future Condition: 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> <p>Silvicultural Prescription: Uneven-aged management – Single tree selection. Designate up to 25 percent of existing basal (227 sq.ft.per acre) area singly and/or in small clumps to facilitate helicopter yarding. Refer to the intro to unit cards, marking guidelines and detailed RX for more information.</p>
<p>TIMBER/LOGGING: Refer to Silvicultural RX and marking guides for single tree selection guidelines to facilitate helicopter yarding.</p>
<p>ENGINEERING/ROADS: N/A</p>
<p>BOTANY RESOURCES: No concerns</p>
<p>FISH/WATERSHED: Concern: Stream 5 (upper) is a Class IV HC channel. Response: Category C protection (BMP 12.6, 13.14). Concern: Stream 6 (upper) is Class III HC channel. Response: Category B protection (BMP 12.6, 13.14). No harvest within v-notch (RIP III). Concern: Stream 5 (lower) is Class II MM channel. Response: Category A protection (BMP 12.6, 13.14). No harvest within 120 feet of channel (RIP III). Concern: streams 6 (lower), 7 (lower) are Class II HC channels. Response: Category A protection (BMP 12.6, 13.14). No harvest within 100 feet and side-slope break (RIP III). Concern: Southern boundary stream is Class I FP channel. Response: Category A protection (BMP 12.6, 13.14). No harvest within 130 feet of channel or floodplain (RIP III).</p>
<p>GEOLOGY/KARST: No carbonate bedrock found within unit. No karst resource concerns identified.</p>
<p>HERITAGE RESOURCES: No concerns</p>
<p>SCENERY/RECREATION: No concerns</p>
<p>SOILS/WETLANDS: slopes range from 25-55% in Unit 919. Adjacent clearcuts have a lot of landslides in them. What are the soils like? No harvest should occur on slopes greater than 72% slope. Full suspension is required to meet soil quality standards. (BMP 13.9) (This unit requires field work)</p>
<p>WILDLIFE: Concern: Unit is located in a travel corridor that maintains connectivity from low to high elevation habitat. High deer use was observed in most of the unit. Response: Proposed timber management will not create openings greater than 2 acres in size within this habitat. Retention of 75% of the basal area will help to maintain travel corridor and habitat for deer.</p>

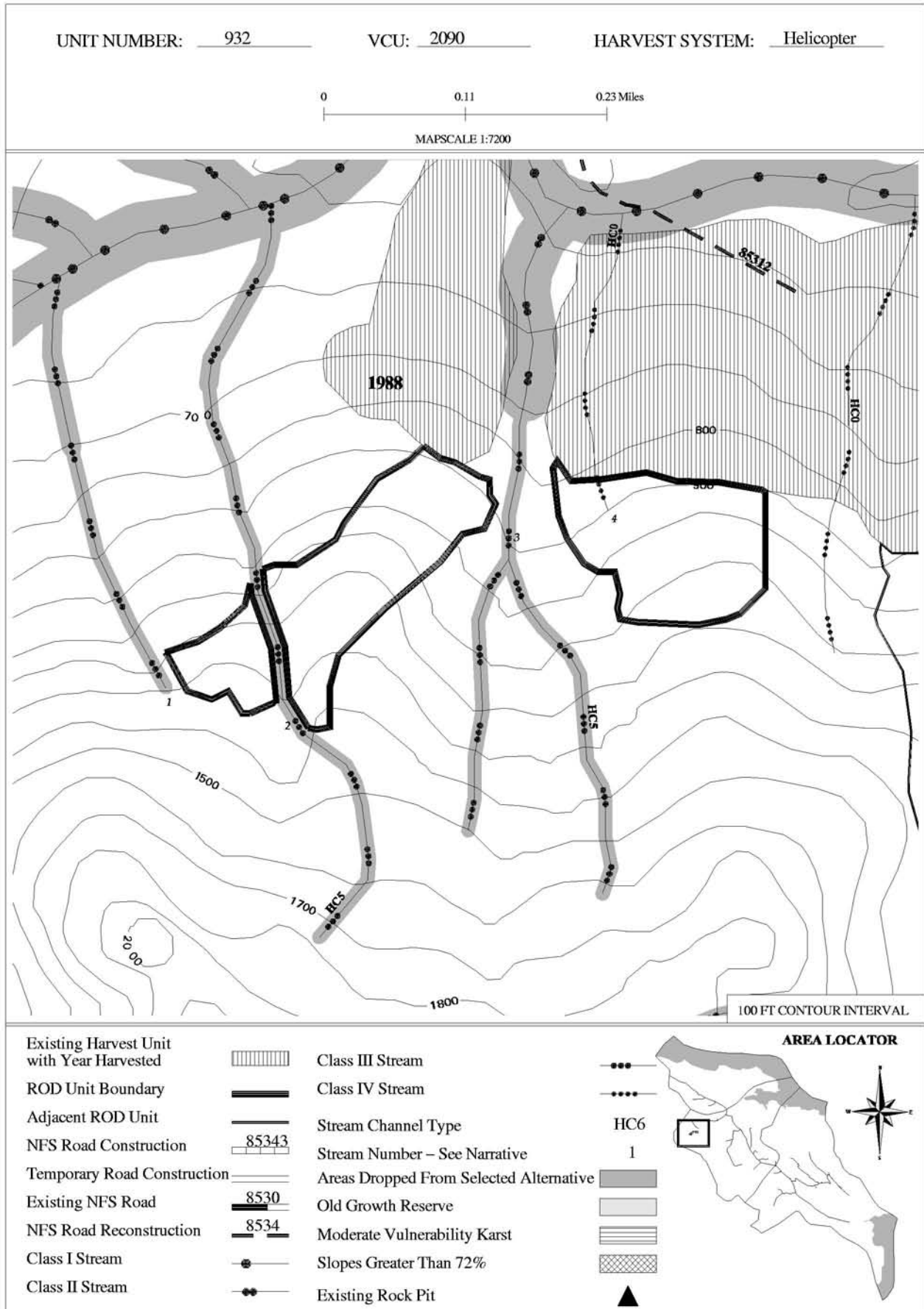
IYOUKTUG TIMBER SALES RECORD OF DECISION
HARVEST UNIT MAP



Unit Data Card – Iyouktug Timber Sales ROD - Selected Alternative					
Unit Number:	921	Selected Alternative	Total Unit Acres:	28.8	Vol Strata Acres: High: 0 Med: 12.0 Low: 16.8
VCU Number:	2090	Harvest System:	HE	Net Estimated Harvest Volume (MBF):	280 Prescription /Percent Retention: ST40

Summary of Concerns, Responses, BMPs and Mitigation
<p>SILVICULTURE: Existing Stand Condition/Vegetation: Stand is comprised primarily of 12-30" DBH western hemlock (60% BA), spruce (25% BA) and mountain hemlock (15% BA). The central to northern portion of the unit is the most productive and more well drained. Larger spruce and mountain hemlock 30-50" DBH are scattered throughout unit. Wind risk is low. Silvicultural Objective/Desired Future Condition: 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. Silvicultural Prescription: Uneven-aged management – Single tree selection. Designate up to 40 percent of existing basal (200 sq.ft.per acre) area singly and/or in small clumps to facilitate helicopter yarding. Refer to the intro to unit cards, marking guidelines and detailed RX for more information.</p>
<p>TIMBER/LOGGING: Refer to Silvicultural RX and marking guides for single tree selection guidelines to facilitate helicopter yarding.</p>
<p>ENGINEERING/ROADS: N/A</p>
<p>BOTANY RESOURCES: No concerns</p>
<p>FISH/WATERSHED: Concern: Streams 1, 2, 3 (lower), 4 (lower) are Class II HC channels. Response: Category A protection (BMP 12.6, 13.14). No harvest within 100 feet and side-slope break (RIP III). Concern: Streams 3 (upper and 4 (upper) are Class IV HC channels. Response: Category C protection (BMP 12.6, 13.14). Remove logging debris from channel (BMP 13.16). Concern: Stream 5 is a Class III HC channel. Response: Category B protection (BMP 12.6, 13.14). No harvest within v-notch (RIP III).</p>
<p>GEOLOGY/KARST: No carbonate bedrock found within unit. No karst resource concerns identified.</p>
<p>HERITAGE RESOURCES: No concerns</p>
<p>SCENERY/RECREATION: No concerns</p>
<p>SOILS/WETLANDS: Slopes range from 10-70% in Unit 921. Concern: There about 6 acres of forested wetland and about 1 acre of muskeg in the unit Response: Helicopter logging will protect wetlands and meet resource objectives. (BMP 12.5). Unit is suitable for proposed helicopter harvest. (BMP 13.9)</p>
<p>WILDLIFE: Concern: High deer use was observed in the east portion of the unit. Response: Proposed timber management will not create openings greater than 2 acres in size within this habitat. Retention of 60% of the basal area will help to maintain deer habitat. Concern: Red-tailed hawk was observed in 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.</p>

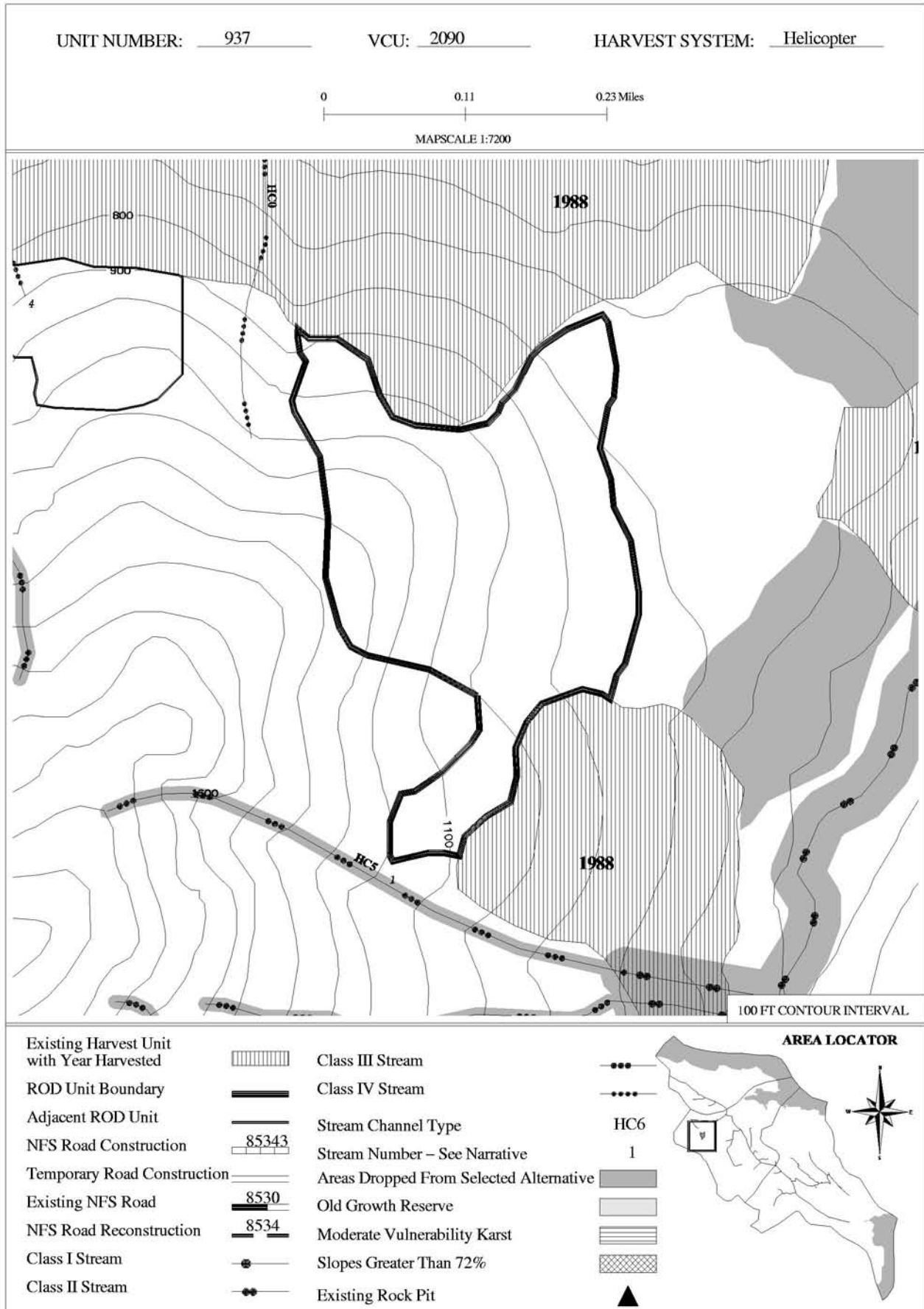
IYOUKTUG TIMBER SALES RECORD OF DECISION
HARVEST UNIT MAP



Unit Data Card – Iyouktug Timber Sales ROD - Selected Alternative							
Unit Number:	932	Selected Alternative		Total Unit Acres:	24.1	Vol Strata Acres:	High: 23.6 Med: 0 Low: 0.5
VCU Number:	2090	Harvest System:	HE	Net Estimated Harvest Volume (MBF):	352	Prescription /Percent Retention:	ST40

Summary of Concerns, Responses, BMPs and Mitigation
<p>SILVICULTURE: Existing Stand Condition/Vegetation: Stand is comprised primarily of 12-36" DBH western hemlock (55% BA), 24-40" DBH spruce (23% BA) and 12-40" DBH mountain hemlock (23%). Wind risk is low. Silvicultural Objective/Desired Future Condition: 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. Silvicultural Prescription: Uneven-aged management – Single tree selection. Designate up to 40 percent of existing basal (313 sq.ft.per acre) area singly and/or in small clumps to facilitate helicopter yarding. Refer to the intro to unit cards, marking guidelines and detailed RX for more information.</p>
<p>TIMBER/LOGGING: Refer to Silvicultural RX and marking guides for single tree selection guidelines to facilitate helicopter yarding.</p>
<p>ENGINEERING/ROADS: N/A</p>
<p>BOTANY RESOURCES: No concerns</p>
<p>FISH/WATERSHED: Concern: GIS mapped streams 1,2,3 are Class III HC channels. Response: Category B protection (BMP 12.6, 13.14). No harvest within v-notch (RIP III).</p>
<p>GEOLOGY/KARST: No carbonate bedrock found within unit. No karst resource concerns identified.</p>
<p>HERITAGE RESOURCES: No concerns</p>
<p>SCENERY/RECREATION: No concerns</p>
<p>SOILS/WETLANDS: Slopes range from 30-50% in Unit 932. Concern: A minimum of partial suspension is required to meet soil quality standards (BMP 13.9). Response: Unit is proposed as full suspension, which exceeds partial suspension requirements. Area to the south and east of Unit 932 dropped for stability concerns (BMP 13.5)</p>
<p>WILDLIFE: No concerns</p>

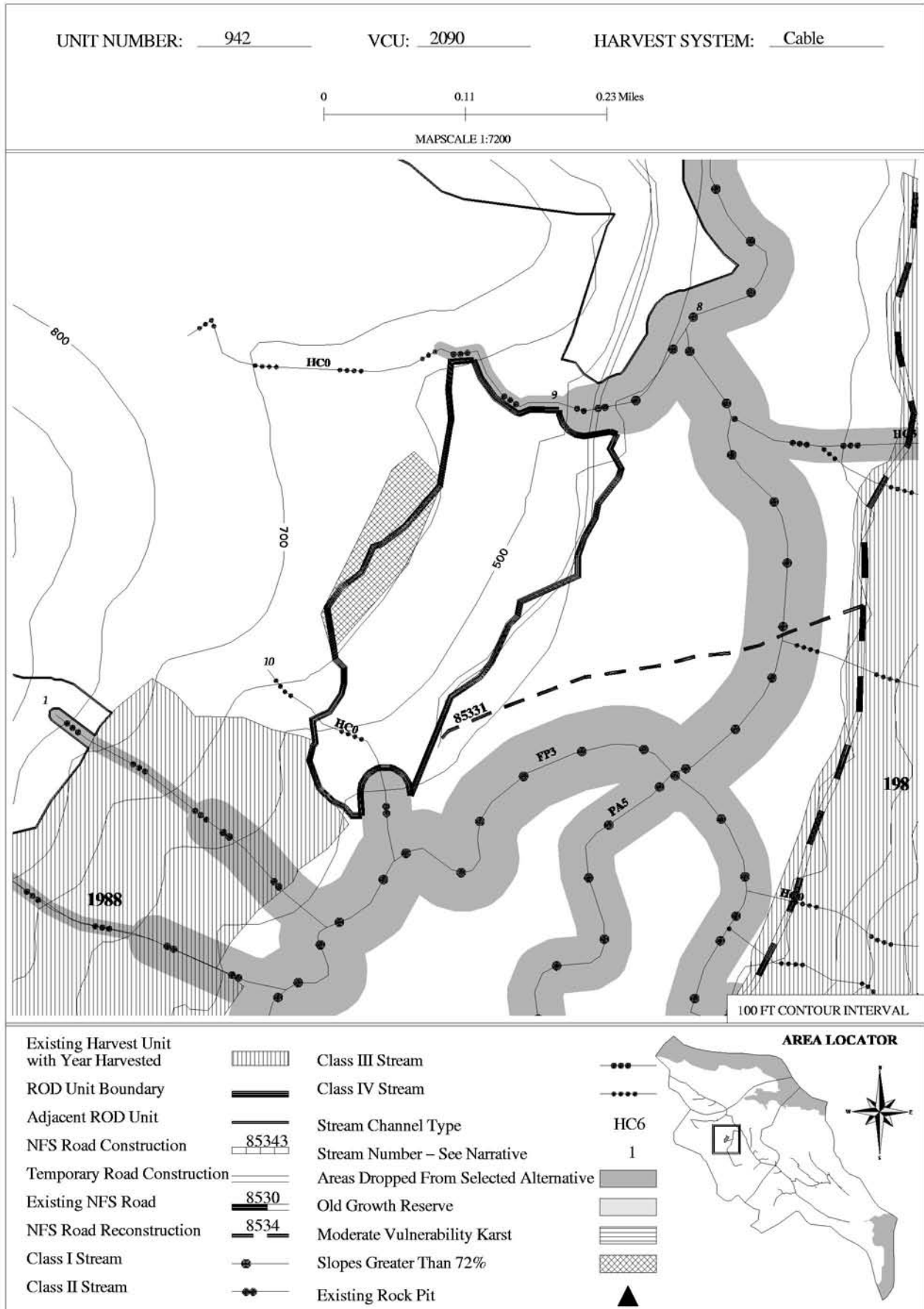
IYOUKTUG TIMBER SALES RECORD OF DECISION
HARVEST UNIT MAP



Unit Data Card – Iyouktug Timber Sales ROD - Selected Alternative							
Unit Number:	937	Selected Alternative		Total Unit Acres:	42.3	Vol Strata Acres:	High: 8.9 Med: 30.0 Low: 3.4
VCU Number:	2090	Harvest System:	HE	Net Estimated Harvest Volume (MBF):	528	Prescription /Percent Retention:	ST40

Summary of Concerns, Responses, BMPs and Mitigation
<p>SILVICULTURE: Existing Stand Condition/Vegetation: 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. Silvicultural Objective/Desired Future Condition: 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. Silvicultural Prescription: 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 to facilitate helicopter yarding. Refer to the intro to unit cards, marking guidelines and detailed RX for more information.</p>
<p>TIMBER/LOGGING: Refer to Silvicultural RX and marking guides for single tree selection guidelines to facilitate helicopter yarding.</p>
<p>ENGINEERING/ROADS: N/A</p>
<p>BOTANY RESOURCES: No concerns</p>
<p>FISH/WATERSHED: No GIS mapped streams.</p>
<p>GEOLOGY/KARST: No carbonate bedrock found within unit. No karst resource concerns identified.</p>
<p>HERITAGE RESOURCES: No concerns</p>
<p>SCENERY/RECREATION: No concerns</p>
<p>SOILS/WETLANDS: Slopes range from 40-70% in Unit 937. Concern: a small amount of wetland is scattered through out the unit. Response: Helicopter logging will protect wetlands and meet resource objectives. (BMP 12.5) Concern: A minimum of partial suspension is required to meet soil quality standards (BMP 13.9). Response: 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>
<p>WILDLIFE: No concerns</p>

IYOUKTUG TIMBER SALES RECORD OF DECISION
HARVEST UNIT MAP



Unit Data Card – Iyouktug Timber Sales ROD - Selected Alternative

Unit Number:	942	Selected Alternative		Total Unit Acres:	25.5	Vol Strata Acres:	High: 0 Med: 22.8 Low: 2.7
VCU Number:	2090	Harvest System:	C	Net Estimated Harvest Volume (MBF):	546	Prescription /Percent Retention:	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 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).

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.