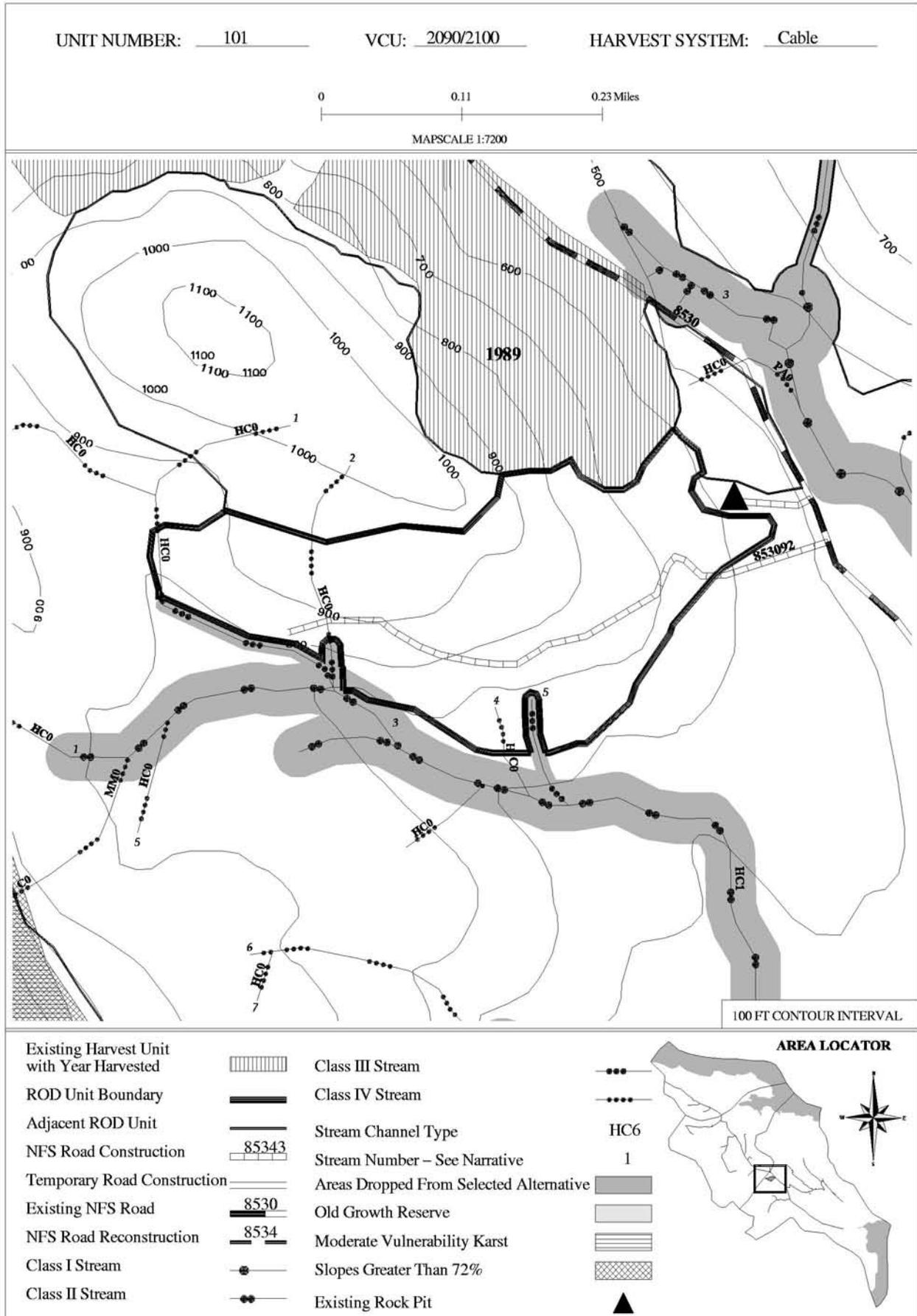


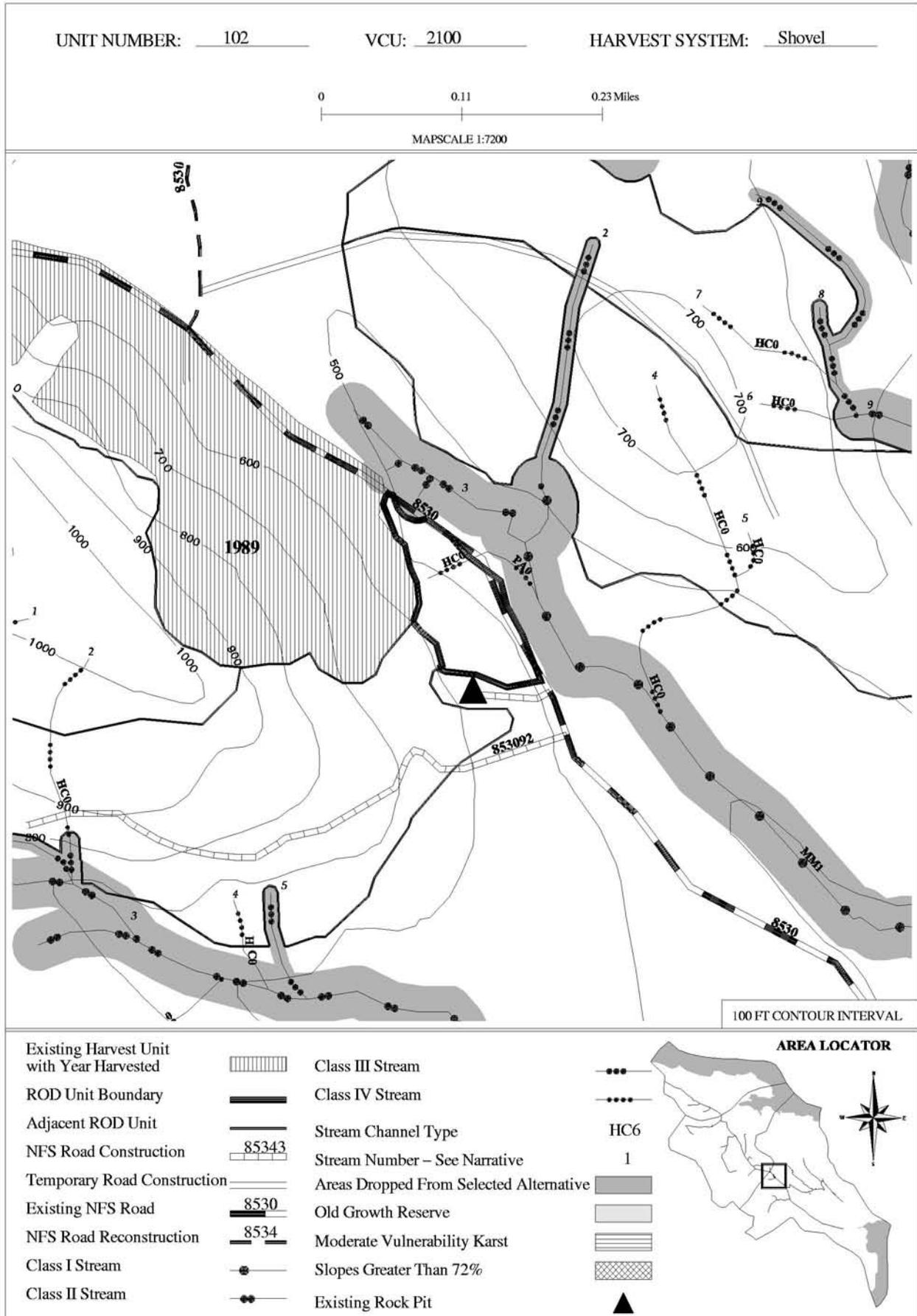
IYOUKTUG TIMBER SALES RECORD OF DECISION  
HARVEST UNIT MAP



Unit Data Card – Iyouktug Timber Sales ROD - Selected Alternative					
<b>Unit Number:</b>	101	<b>Selected Alternative</b>	<b>Total Unit Acres:</b>	41.3	<b>Vol Strata Acres:</b> High: 0.6 Med: 35.0 Low: 5.7
<b>VCU Number:</b>	2100	<b>Harvest System:</b>	<b>Net Estimated Harvest Volume (MBF):</b>	879	<b>Prescription /Percent Retention:</b> CC

Summary of Concerns, Responses, BMPs and Mitigation
<p><b>SILVICULTURE:</b></p> <p><b>Existing Stand Condition/Vegetation:</b> Stand consists of 9-30+” DBH yellow-cedar (52% BA), 24-40” DBH western hemlock (24% BA), 20-50” DBH spruce (14% BA) and 20-36” mountain hemlock (10%). This unit contains some large yellow-cedar; Sitka Conservation Society identified two (approx 60” DBH) in particular, and would like to see them retained if possible (refer to detailed Rx for specific location). There is significant advanced regeneration of western hemlock, yellow-cedar and spruce. Wind risk is moderate to high.</p> <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 requirements, uses an economical regeneration method and is windfirm, free of mistletoe infection and growing at full site potential.</p> <p><b>Silvicultural Prescription:</b> Even-aged management – clearcut: This unit contains stream buffers that require RAW zones (refer to fish/watershed section). 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. Retain component of largest yellow-cedar adjacent to proposed road within shovel portion of unit. Yellow-cedar identified by SCS are below the proposed road.</p>
<p><b>TIMBER/LOGGING:</b> This unit is comprised of four cable settings. The western-most setting accesses the area west of stream #2, a class IV stream that requires split yarding. The other three settings access the remaining area and 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><b>ENGINEERING/ROADS:</b> NFSR 853092 accesses unit from existing Road 8530. Road location has been flagged. Deviations to flagged route must be approved by USFS prior to construction.</p>
<p><b>BOTANY RESOURCES:</b> No concerns</p>
<p><b>FISH/WATERSHED: Concern:</b> The upper parts of streams 1 and 2 and stream number 4 are Class IV HC channels. <b>Response:</b> Category C protection (BMP 12.6, 13.14). Remove logging debris from channel (BMP 13.16). <b>Concern:</b> The lower parts of streams 1 and 2 and stream 5 are Class III HC channels. <b>Response:</b> Category B protection (BMP 12.6, 13.14). No harvest within v-notch (RIP III). Manage for windfirmness 120 feet beyond no-cut buffers. <b>Concern:</b> Stream 3 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). Manage for windfirmness 120 feet beyond no-cut buffers.</p>
<p><b>GEOLOGY/KARST:</b> No carbonate bedrock found within unit. No karst resource concerns identified.</p>
<p><b>HERITAGE RESOURCES:</b> No concerns</p>
<p><b>SCENERY/RECREATION: Concern:</b> Unit located adjacent to VPR. <b>Response:</b> Incorporate landscape architect input during layout.</p>
<p><b>SOILS/WETLANDS:</b> Slopes range from 35-55% in Unit 101. A minimum of partial suspension is required to meet soil quality standards. (BMP 13.9)</p>
<p><b>WILDLIFE: Concern:</b> Vancouver Canada geese observed in unit. <b>Response:</b> No design elements or mitigation required to meet Forest Plan standards and guidelines.</p>

IYOUKTUG TIMBER SALES RECORD OF DECISION  
HARVEST UNIT MAP



<b>Unit Data Card – Iyouktug Timber Sales ROD - Selected Alternative</b>
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<b>Unit Number:</b>	102	<b>Selected Alternative</b>		<b>Total Unit Acres:</b>	5.4	<b>Vol Strata Acres:</b>	High: 0.7 Med: 3.9 Low: 0.9
<b>VCU Number:</b>	2100	<b>Harvest System:</b>	SH	<b>Net Estimated Harvest Volume (MBF):</b>	77	<b>Prescription /Percent Retention:</b>	ST50

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

**Existing Stand Condition/Vegetation:** Stand is comprised of 12-24" DBH western hemlock (42% BA), 9-36" DBH spruce (33% BA), and 12-28" DBH mountain hemlock (25% BA). Wind risk is estimated to be moderate.

**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 50 percent of existing basal (133 sq.ft.per acre) 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.

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

**ENGINEERING/ROADS:** N/A

**BOTANY RESOURCES:** No concerns

**FISH/WATERSHED: Concern:** The stream is a Class IV HC channels. **Response:** Category C protection (BMP 12.6, 13.14). Remove logging debris from channel (BMP 13.16). Equipment will not operate in streamcourses and will not cross streams without a temporary structure (BMP 13.9, 13.14)

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

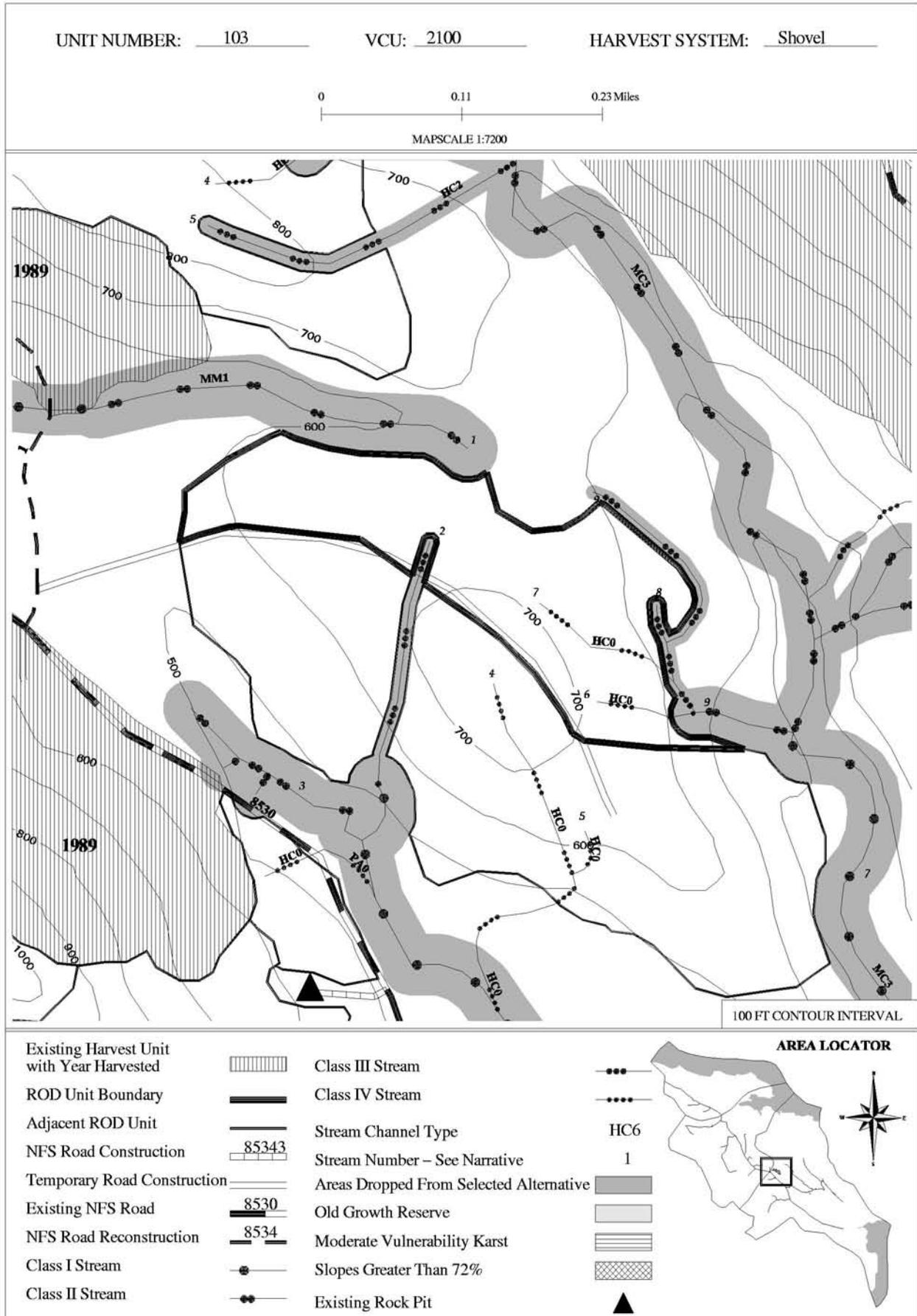
**HERITAGE RESOURCES:** No concerns

**SCENERY/RECREATION: Concern:** Unit will meet the required VQO of Modification. **Response:** Design shovel corridors to meet Modification, obtain landscape architect review during layout.

**SOILS/WETLANDS:** Slopes range from 12-25% in Unit 102. **Concern:** Shovel yarding may cause rutting due to lack of bearing strength on poorly drained organic soils. **Response:** 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).

**WILDLIFE:** No concerns

IYOUKTUG TIMBER SALES RECORD OF DECISION  
HARVEST UNIT MAP



**Unit Data Card – Iyouktug Timber Sales ROD - Selected Alternative**

<b>Unit Number:</b>	103	<b>Selected Alternative</b>		<b>Total Unit Acres:</b>	26.5	<b>Vol Strata Acres:</b>	High: 0 Med: 20.0 Low: 6.5
<b>VCU Number:</b>	2100	<b>Harvest System:</b>	SH	<b>Net Estimated Harvest Volume (MBF):</b>	349	<b>Prescription /Percent Retention:</b>	ST50

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

**SILVICULTURE:**

**Existing Stand Condition/Vegetation:** Stand is comprised of 9-30" DBH western hemlock (27% BA), 9-24" DBH yellow-cedar (50% BA), 9-30" DBH mountain hemlock (20% BA), and a minor component of spruce (3% BA). Many of the trees are in the 9-16" diameter classes. There is significant advanced regeneration of western hemlock and yellow-cedar. Wind risk is estimated to be 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 50 percent of existing basal (280 sq.ft.per acre) 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. This unit contains stream buffers that require RAW zones. 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.

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

**ENGINEERING/ROADS:** Temporary road 103A accesses unit from existing Road 853091. Road location will be flagged by USFS prior to harvest.

**BOTANY RESOURCES:** No concerns

**FISH/WATERSHED: Concern:** Stream 1 is Class II MM channel type. **Response:** Category A protection (BMP 12.6, 13.14). No harvest within 120 feet of channel (RIP III). **Concern:** Streams 2, 8 and the upper portion of 9 are Class II HC channel type. **Response:** Category B protection (BMP 12.6, 13.14). No harvest within v-notch (RIP III). **Concern:** Stream 3 is a Class II PA and HC channel types. **Response:** Category A protection for both (BMP 12.6, 13.14). For the PA channel type, No harvest within 100 feet of channel (RIP III). For the HC channel type, No harvest within 100 feet and side-slope break (RIP III). **Concern:** Streams 4, 5, 6 and 7 are class IV HC channel types. **Response:** Category C protection (BMP 12.6, 13.14). Equipment will not operate in stream courses and will not cross streams without a temporary structure (BMP 13.9). Remove logging debris from channel (BMP 13.16). **Concern:** The lower portion of stream 9 is Class II HC channel type. **Response:** Category A protection (BMP 12.6, 13.14). No harvest within 100 feet and side-slope break (RIP III). **Concern:** Wind risk is moderate to high over the entire unit. **Response:** Manage for windfirmness 120 feet beyond the windward side of all no-harvest buffers. **Concern:** Temporary road – stream crossings **Response:** 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)

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

**HERITAGE RESOURCES:** No concerns

**SCENERY/RECREATION:** No concerns

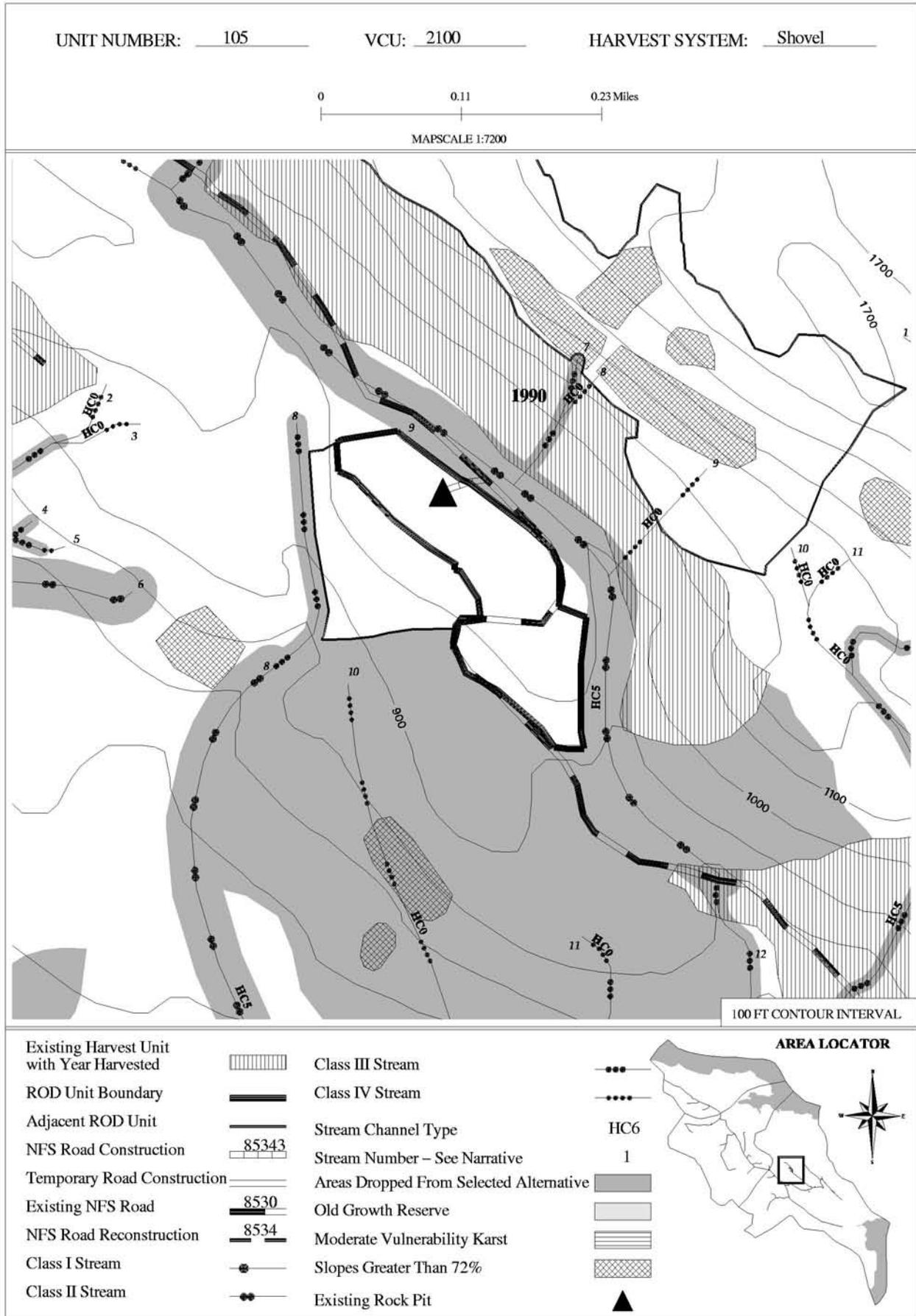
**Summary of Concerns, Responses, BMPs and Mitigation**

**SOILS/WETLANDS:** Slopes range from 12-25% in Unit 103. A 1-acre muskeg exists along the border between units 103 and 1031. **Concern:** Shovel yarding may cause rutting due to lack of bearing strength on poorly drained organic soils. **Response:** Operate shovel on a puncheon or a slash mattress to provide adequate bearing strength (BMP 12.5, 13.9). Do not operate the shovel on the muskeg or any other non-forested area. **Concern:** The proposed temporary road crosses open muskeg between the intersection with 853091 and the unit. Avoiding these wetland is not practicable. There are no high value wetlands in the area. **Response:** Provide adequate cross drainage to allow hillslope flow. Remove all structures after the unit is harvested. (BMP 14.9) (33 CFR BMPs 4, 5, 6)

**WILDLIFE:** **Concern:** Vancouver Canada geese observed adjacent to unit. **Response:** No design elements or mitigation required to meet Forest Plan standards and guidelines.

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IYOUKTUG TIMBER SALES RECORD OF DECISION  
HARVEST UNIT MAP



Unit Data Card – Iyouktug Timber Sales ROD - Selected Alternative					
<b>Unit Number:</b>	105	<b>Selected Alternative</b>	<b>Total Unit Acres:</b>	12.7	<b>Vol Strata Acres:</b> High: 3.5 Med: 9.2 Low: 0
<b>VCU Number:</b>	2100	<b>Harvest System:</b>	SH	<b>Net Estimated Harvest Volume (MBF):</b>	194 <b>Prescription /Percent Retention:</b> ST50

Summary of Concerns, Responses, BMPs and Mitigation
<p><b>SILVICULTURE:</b></p> <p><b>Existing Stand Condition/Vegetation:</b> Stand is comprised of 20-28" DBH mountain hemlock (46% BA), 16-36" DBH western hemlock (30% BA), 28-40" DBH spruce (16% BA) and 12-16" DBH Yellow-cedar (8% BA). Advanced regeneration is moderately abundant throughout the stand. Wind risk is estimated to be moderate to high.</p> <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> <p><b>Silvicultural Prescription:</b> Uneven-aged management – Single tree selection. Designate up to 50 percent of existing basal (173 sq.ft.per acre) area singly and/or in small clumps or corridors to facilitate shovel yarding. This unit contains stream buffers with RAW zones. 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. To accelerate yellow-cedar establishment, provide a competitive advantage and to increase overall composition, inter-planting of yellow-cedar is prescribed following harvest. Planting density will be 222 TPA (14x14 spacing) and should occur as soon as possible (within two growing seasons) following harvest in created openings where clumps of trees have been harvested. Refer to the intro to unit cards, marking guidelines and detailed RX for more information.</p>
<p><b>TIMBER/LOGGING:</b> Refer to Silvicultural RX and marking guides for single tree selection guidelines to facilitate shovel yarding.</p>
<p><b>ENGINEERING/ROADS:</b> No concerns</p>
<p><b>BOTANY RESOURCES:</b> No concerns</p>
<p><b>FISH/WATERSHED: Concern:</b> The upper part of stream 9 is Class II HC channel type. <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> The lower part of stream 9 is class II PA channel Type. <b>Response:</b> Category A protection (BMP 12.6, 13.14). No harvest within 100 feet of channel (RIP III). <b>Concern:</b> Stream 10 is Class IV HC Channel Type. <b>Response:</b> Category C protection (BMP 12.6, 13.14). Equipment will not operate in stream.courses and will not cross streams without a temporary structure (BMP 13.9). Remove logging debris from channel (BMP 13.16) <b>Concern:</b> Windthrow risk is moderate to high. <b>Response:</b> Manage for windfirmness 120 feet beyond no-cut buffers.</p>
<p><b>GEOLOGY/KARST:</b> No carbonate bedrock found within unit. No karst resource concerns identified.</p>
<p><b>HERITAGE RESOURCES:</b> No concerns</p>
<p><b>SCENERY/RECREATION:</b> No concerns</p>

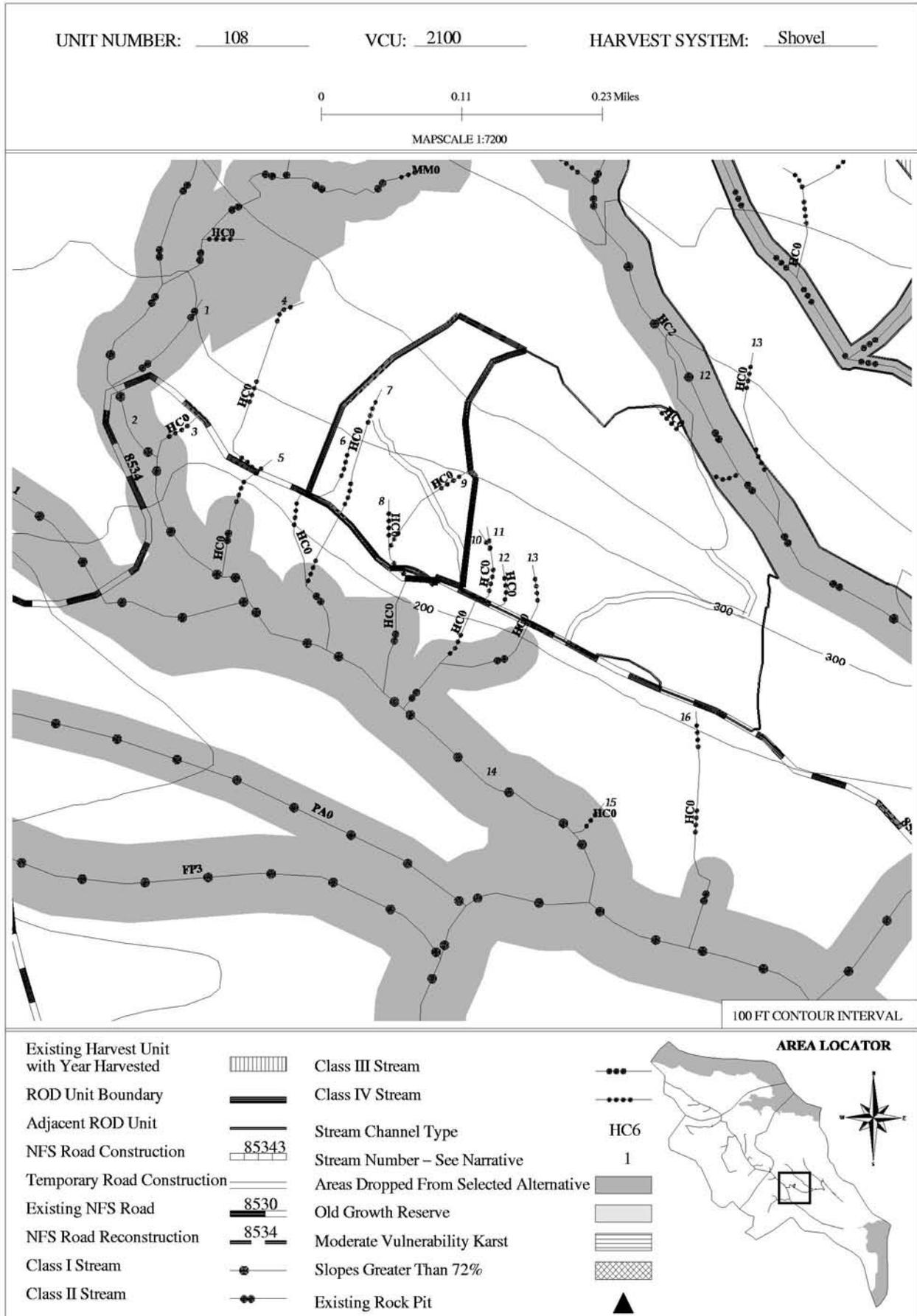
**Summary of Concerns, Responses, BMPs and Mitigation**

**SOILS/WETLANDS:** Slopes range from 15-55% in Unit 105. Soils range from poorly drained, deep organics on the gentle slopes to well drained deep mineral soils on slopes greater than 25%. There are about 8 acres of forested wetland scattered throughout the unit (BMP 12.5). **Concern:** Shovel yarding may cause rutting due to lack of bearing strength on poorly drained organic soils in Unit 105. **Response:** Operate on a puncheon or a slash mattress to provide adequate bearing strength. (BMP 13.2 and 13.9) **Concern:** Shovel yarding may cause rutting due to slopes greater than 25%. **Response:** Do not operate shovel on slopes greater than 25%. Utilize the boom, a short choker or cable to remove logs from steeper slopes or directionally fall the trees instead. **Concern:** Proposed temporary road crosses forested wetlands. No high-value wetlands exist in this unit. **Response:** Avoid placing the road in non-forested areas. Provide adequate cross drainage, remove structures and close the road after harvest. (BMP 14.9) (33 CFR BMPs 4, 5, 6)

**WILDLIFE: Concern:** Southwest boundary (FR 85341) is the goshawk nest buffer boundary. **Response:** Ensure unit boundary does not enter nest buffer. 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.

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IYOUKTUG TIMBER SALES RECORD OF DECISION  
HARVEST UNIT MAP



Unit Data Card – Iyouktug Timber Sales ROD - Selected Alternative					
<b>Unit Number:</b>	108	<b>Selected Alternative</b>	<b>Total Unit Acres:</b>	12.5	<b>Vol Strata Acres:</b> High: 0 Med: 0 Low: 12.5
<b>VCU Number:</b>	2100	<b>Harvest System:</b>	SH	<b>Net Estimated Harvest Volume (MBF):</b>	57
				<b>Prescription /Percent Retention:</b>	ST25

Summary of Concerns, Responses, BMPs and Mitigation
<p><b>SILVICULTURE:</b></p> <p><b>Existing Stand Condition/Vegetation:</b> Stand is comprised of 12-24" DBH western hemlock (57% BA), 12-30" DBH mountain hemlock (24% BA) and scattered 20-40" DBH spruce (19% BA) with a minor component of yellow-cedar primarily in the northern portion of the unit. Wind risk is estimated to be high.</p> <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> <p><b>Silvicultural Prescription:</b> Uneven-aged management – Single tree selection. Designate up to 25 percent of existing basal (127 sq.ft.per acre) area singly and/or in small clumps or corridors to facilitate shovel yarding. This unit contains stream buffers with RAW zones. 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. To accelerate yellow-cedar establishment, provide a competitive advantage and to increase overall composition, inter-planting of yellow-cedar is prescribed following harvest. Planting density will be 222 TPA (14x14 spacing) and should occur as soon as possible (within two growing seasons) following harvest in created openings where clumps of trees have been harvested. Refer to the intro to unit cards, marking guidelines and detailed RX for more information.</p>
<p><b>TIMBER/LOGGING:</b> Refer to Silvicultural RX and marking guides for single tree selection guidelines to facilitate shovel yarding.</p>
<p><b>ENGINEERING/ROADS:</b> Temporary road 85342 accesses unit from existing Road 8534. Road location will be flagged by USFS prior to harvest.</p>
<p><b>BOTANY RESOURCES:</b> Numerous rare plant populations; largely open-forested wetland habitat.</p> <p><b>Response:</b> stay out of wetland corridor in Unit 108 above road 85342 and leave a buffer around the large muskeg to N of this road. This will leave a 5-10 acre area of low volume forested wetland (if combined with a leave zone in Unit 1081)</p>
<p><b>FISH/WATERSHED: Concern:</b> Stream 1 is a Class II HC. <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> 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> Lower segments of streams 4, 6, 8, 10, 13, and 16 are Class II HC channels. <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> Upper segments of streams 4, 6, 8, 10, 13, and 16, and all of streams 3, 5, 7, 9, 11, 12, and 15 are Class IV HC channels. <b>Response:</b> Category C protection (BMP 12.6, 13.14). Equipment will not operate in streamcourses and will not cross streams without a temporary structure (BMP 13.9, 13.14). Remove logging debris from channel (BMP 13.16). <b>Concern:</b> Windthrow risk is moderate to 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>
<p><b>GEOLOGY/KARST:</b> No carbonate bedrock found within unit. No karst resource concerns identified.</p>
<p><b>HERITAGE RESOURCES:</b> No concerns</p>
<p><b>SCENERY/RECREATION:</b> No concerns</p>

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

**SOILS/WETLANDS:** Slopes range from 5-25% in Unit 108. About half of this unit is wetland, both forested and non forested. **Concern:** Shovel yarding may cause rutting due to lack of bearing strength on poorly drained organic soils in Unit 108. **Response:** Operate on a puncheon or a slash mattress to provide adequate bearing strength. Do not operate the shovel in non-forested areas. (BMP 13.2 and 13.9)

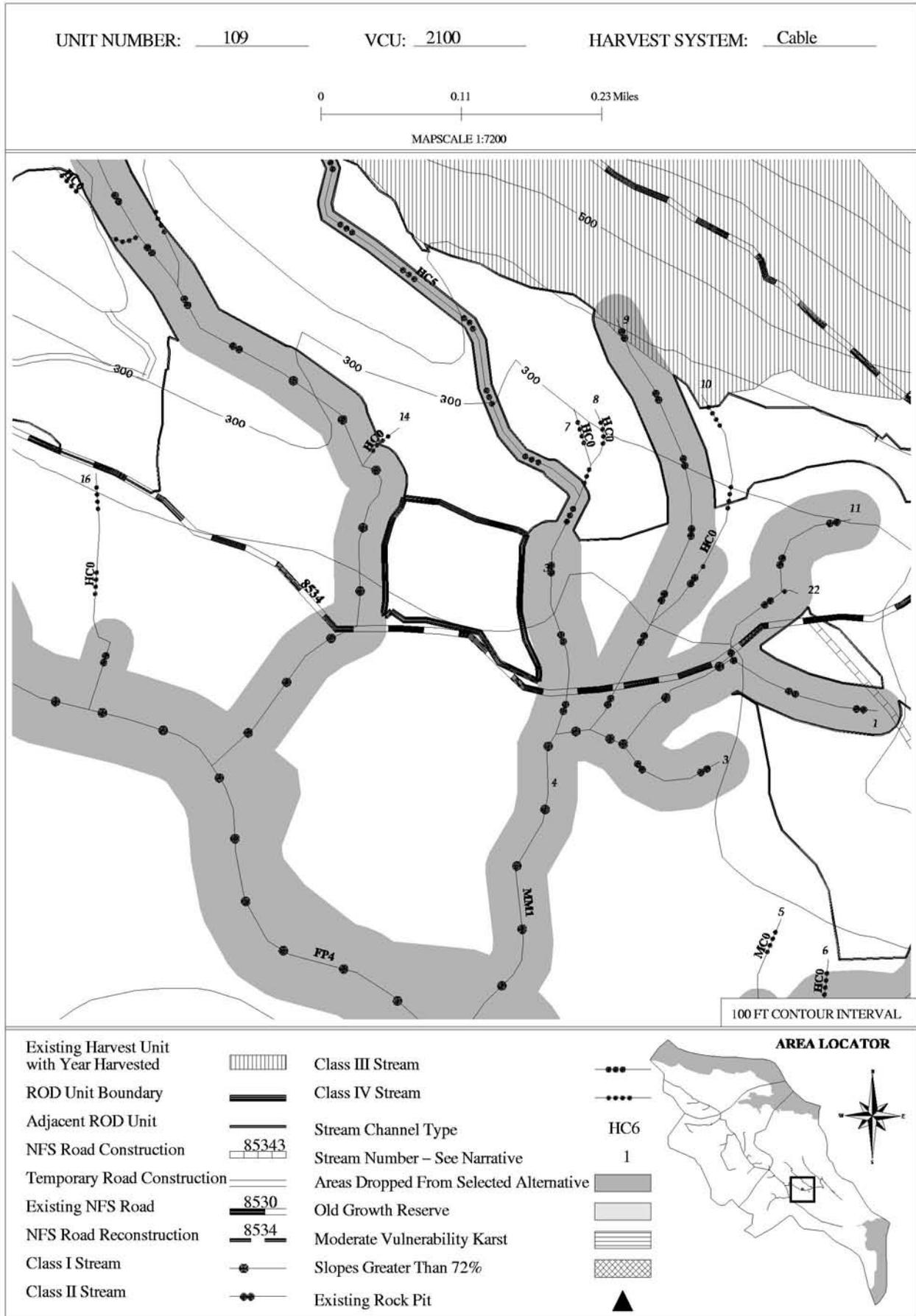
**Concern:** Proposed temporary road is entirely located on wetlands in the southern portion of the unit. **Response:** Provide adequate cross drainage, remove structures and close the road after harvest. (BMP 14.9) (33 CFR BMPs 4, 5, 6)

**WILDLIFE: Concern:** Unit is located in a potential travel corridor that may maintain connectivity to the OG LUD. **Response:** Proposed harvest system will retain 50% of the basal area. Retention will help to maintain connectivity. Western portion of the unit was deferred to maintain connectivity. Do not extend unit boundary to the north or west. **Concern:** West boundary is adjacent to goshawk nest buffer.

**Response:** Ensure that unit boundary does not enter nest buffer. 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. **Concern:** High bear use was observed south of the unit along Iyouktug Creek. **Response:** Unit south of FR 8534 was deferred to maintain bear habitat. Ensure that unit boundary does not extend south of FR 8534. **Concern:** What is likely a marbled murrelet egg was located in this unit. **Response:** Maintain a 600-foot no-harvest buffer that is windfirm around active nest sites if identified and restrict harvest and road building activities from May 1 to August 15 within the buffer.

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IYOUKTUG TIMBER SALES RECORD OF DECISION  
HARVEST UNIT MAP



**Unit Data Card – Iyouktug Timber Sales ROD - Selected Alternative**

<b>Unit Number:</b>	109	<b>Selected Alternative</b>		<b>Total Unit Acres:</b>	7.0	<b>Vol Strata Acres:</b>	High: 0 Med: 0 Low: 7.0
<b>VCU Number:</b>	2100	<b>Harvest System:</b>	C	<b>Net Estimated Harvest Volume (MBF):</b>	101	<b>Prescription /Percent Retention:</b>	CC

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

**SILVICULTURE:**

**Existing Stand Condition/Vegetation:** Stand is comprised of 9-30" DBH western hemlock (70% BA) and scattered 24-40" DBH spruce (30% BA). There is an area of older windthrow in the southeast corner with dense regeneration. Wind risk is estimated to be high.

**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: The unit is bounded on the east and west by buffered streams that require RAW zones (refer to fish/watershed section). This unit contains stream buffers with RAW zones. 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.

**TIMBER/LOGGING:** This unit is comprised of one cable setting.

**ENGINEERING/ROADS:** N/A

**BOTANY RESOURCES:** No concerns

**FISH/WATERSHED:** The western portion of the unit is bounded by a Class II, HC channel type stream. The unit begins at the edge of the required 100-foot no-cut buffer and side-slope break. **Concern:** Stream 3 is Class II MM channel type. **Response:** Category A protection (BMP 12.6, 13.14). No harvest within 120 feet of channel (RIP III).

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

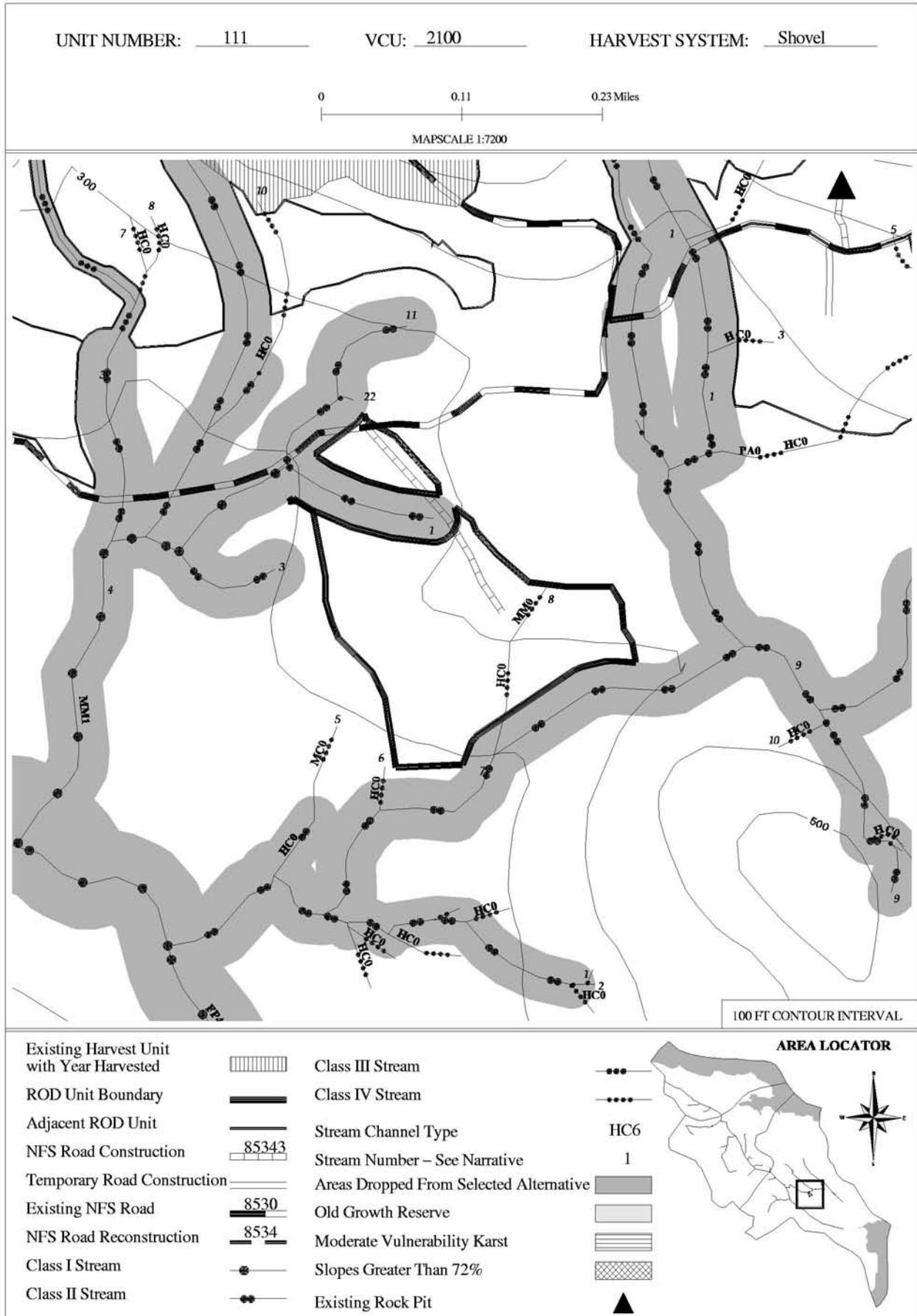
**HERITAGE RESOURCES:** No concerns

**SCENERY/RECREATION:** No concerns

**SOILS/WETLANDS:** Slopes range from 25-45% in Unit 109. Most of the unit is forested wetland. A minimum of partial suspension is required to meet soil and wetland standards. (BMPs 12.5, 13.9)

**WILDLIFE:** No concerns

IYOUKTUG TIMBER SALES RECORD OF DECISION  
HARVEST UNIT MAP



<b>Unit Data Card – Iyouktug Timber Sales ROD - Selected Alternative</b>
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<b>Unit Number:</b>	111	<b>Selected Alternative</b>		<b>Total Unit Acres:</b>	20.8	<b>Vol Strata Acres:</b>	High: 0 Med: 0 Low: 20.8
<b>VCU Number:</b>	2100	<b>Harvest System:</b>	SH	<b>Net Estimated Harvest Volume (MBF):</b>	95	<b>Prescription /Percent Retention:</b>	ST25

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

**Existing Stand Condition/Vegetation:** Stand is comprised of 9-35" DBH western hemlock (47% BA), 9-20" DBH mountain hemlock (24% BA) and 9-20" DBH yellow-cedar (30% BA). Hemlock advanced regeneration is abundant. Yellow-cedar regeneration is less abundant but common. The stand is flat and relatively wet. Wind risk is estimated to be high over the entire unit.

**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 (213 sq.ft.per acre) area singly and/or in small clumps or corridors to facilitate shovel yarding. This unit contains stream buffers with RAW zones. 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. To accelerate yellow-cedar establishment, provide a competitive advantage and to increase overall composition, inter-planting of yellow-cedar is prescribed following harvest. Planting density will be 222 TPA (14x14 spacing) and should occur as soon as possible (within two growing seasons) following harvest in created openings where clumps of trees have been harvested. 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 shovel yarding.

**ENGINEERING/ROADS:** NFSR 85345 accesses unit from existing Road 8534. Road location has been flagged. Deviations to flagged route must be approved by USFS prior to construction.

**BOTANY RESOURCES:** No concerns

**FISH/WATERSHED: Concern:** Streams 1 and 7 are Class II HC channel types. **Response:** Category A protection (BMP 12.6, 13.14). No harvest within 100 feet and side-slope break (RIP III). **Concern:** Streams 2, 6 and the lower portion of stream 8 are Class IV HC channel types. **Response:** Category C protection (BMP 12.6, 13.14). Equipment will not operate in streamcourses and will not cross streams without a temporary structure (BMP 13.9, 13.14) Remove logging debris from channel (BMP 13.16). Stream 3 is a Class II MM channel type. **Response:** Category A protection (BMP 12.6, 13.14). No harvest within 120 feet of channel (RIP III). **Concern:** Stream 7 is class II HC and MM channel types. **Response:** Category A protection (BMP 12.6, 13.14). For HC: No harvest within 100 feet and side-slope break (RIP III). For MM: No harvest within 120 feet of channel (RIP III). **Concern:** Windthrow risk is high over entire unit. **Response:** Manage for windfirmness 120 feet beyond all no-cut buffers on the windward side.

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

**HERITAGE RESOURCES:** No concerns

**SCENERY/RECREATION:** No concerns

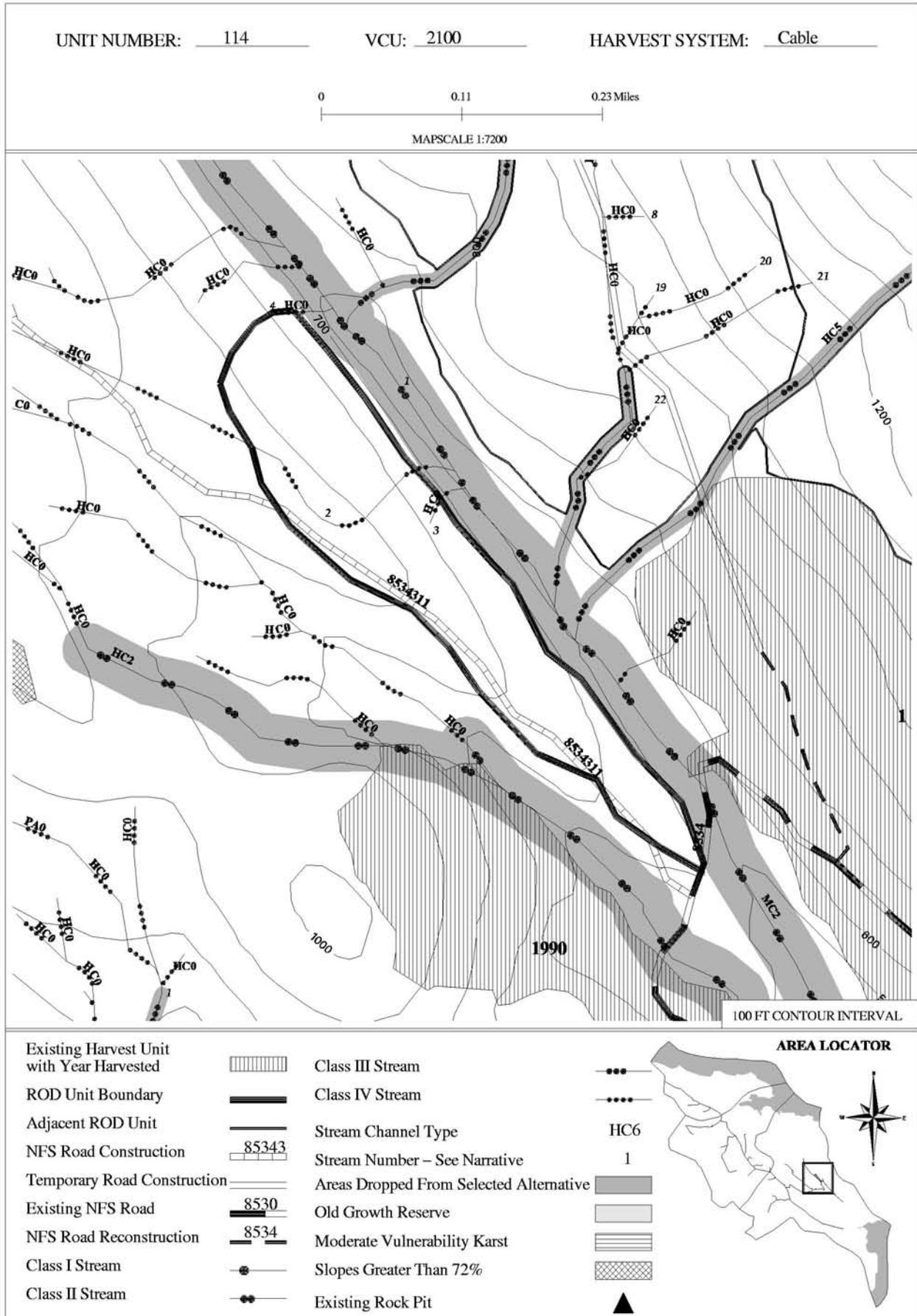
**Summary of Concerns, Responses, BMPs and Mitigation**

**SOILS/WETLANDS:** Slopes range from 10-35% in Unit 111. There are about 4 acres of wetland in the unit. (BMP 12.5) There are about 2 acres of slopes greater than 25% along the eastern boundary of Unit 111. **Concern:** Shovel yarding may cause rutting due to lack of bearing strength on poorly drained organic soils in Unit 111. **Response:** Operate on a puncheon or a slash mattress to provide adequate bearing strength. Do not operate the shovel in non-forested areas. (BMP 13.2 and 13.9) **Concern:** Shovel yarding may cause rutting due to slopes greater than 25%. **Response:** Do not operate shovel on slopes greater than 25%. Utilize the boom, a short choker or cable to remove logs from steeper slopes or directionally fall the trees instead.

**WILDLIFE:** No concerns

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IYOUKTUG TIMBER SALES RECORD OF DECISION  
HARVEST UNIT MAP



<b>Unit Data Card – Iyouktug Timber Sales ROD - Selected Alternative</b>
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<b>Unit Number:</b>	114	<b>Selected Alternative</b>		<b>Total Unit Acres:</b>	25.9	<b>Vol Strata Acres:</b>	High: 4.8 Med: 21.1 Low: 0
<b>VCU Number:</b>	2100	<b>Harvest System:</b>	C	<b>Net Estimated Harvest Volume (MBF):</b>	598	<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 is comprised of primarily even-aged 14-28" DBH spruce (48% BA) and hemlock (48% BA). This is a wind generated stand with a high stem count and low defect. Devil's club dominates understory. Wind risk is high throughout unit.

**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 contains a class 4 stream with a RAW zone. 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. A high wind risk boundary may be created in the NW corner using the RAW zone criteria above. Review during layout to determine if windfirming is warranted. In an effort to increase yellow cedar composition and establish yellow-cedar in areas judged to be suitable for long-term yellow-cedar survival, experimental planting of yellow-cedar is prescribed for this unit following harvest. Planting density will be 222 TPA (14x14 spacing) and should occur as soon as possible (within two growing seasons) following harvest.

**TIMBER/LOGGING:** This unit is comprised of three cable settings. The northern-most setting accesses the area north of stream #2, a class IV stream that requires split yarding. The other two settings access the remaining area and are defined by a logical setting break based on topography and lateral yarding capabilities. There are some limited shovel yarding opportunities near the road.

**ENGINEERING/ROADS:** NFSR 8534311 accesses unit from existing Road 8534. Road location has been flagged. Deviations to flagged route must be approved by USFS prior to construction.

**BOTANY RESOURCES:** No concerns

**FISH/WATERSHED:** **Concern:** Stream 1 is Class II HC and MC channel types. **Response:** Category A protection (BMP 12.6, 13.14). For MC: No harvest within 100 feet of channel and side-slope break. (RIP III). For HC: No harvest within 100 feet and side-slope break (RIP III). **Concern:** Streams 2, 3, and 4 are Class IV HC channel types. **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.

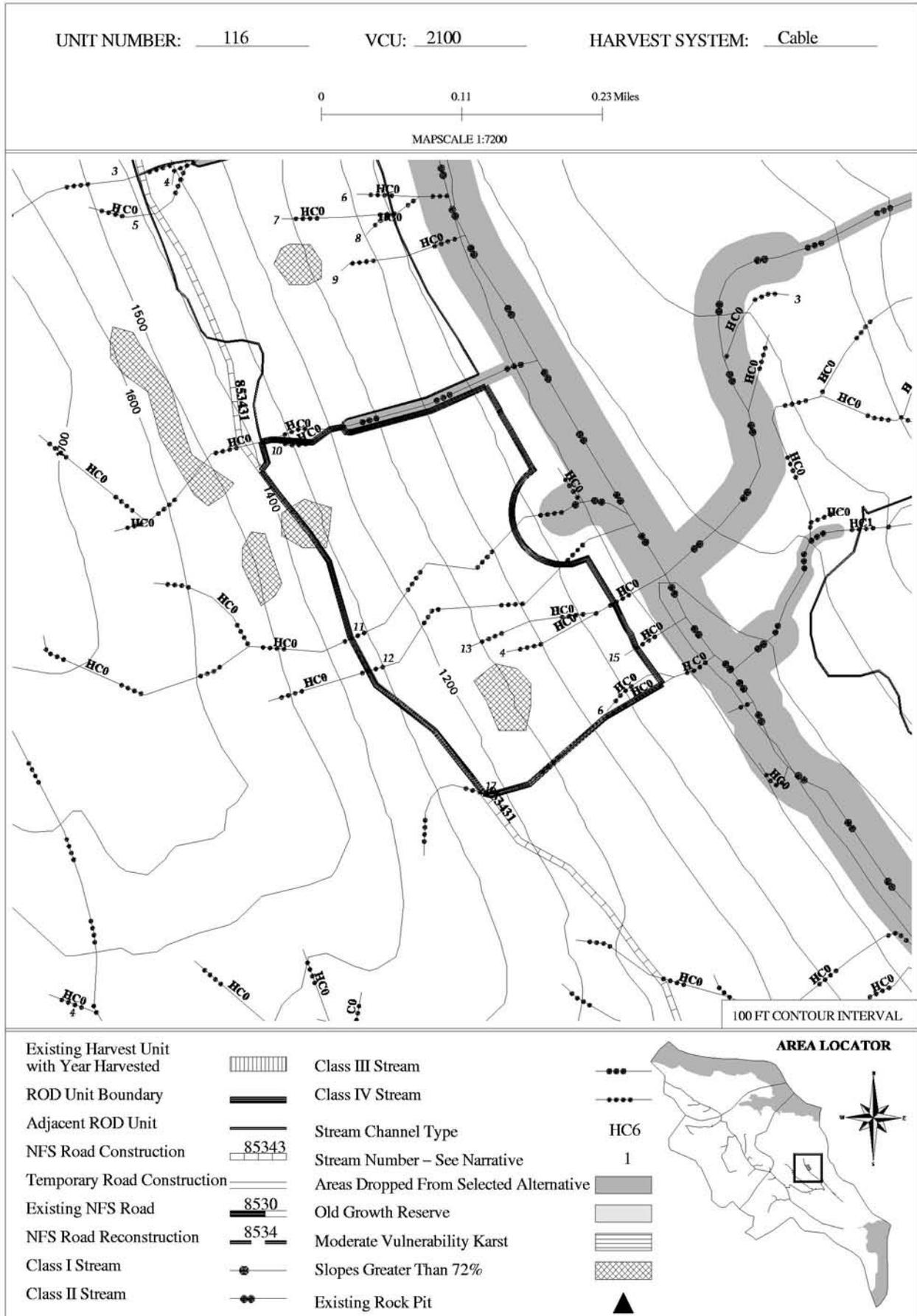
**HERITAGE RESOURCES:** No concerns

**SCENERY/RECREATION:** No concerns

**SOILS/WETLANDS:** Slopes range from 40-61% in Unit 114. A minimum of partial suspension is required to meet soil quality standards. (BMP 13.9)

**WILDLIFE:** No concerns

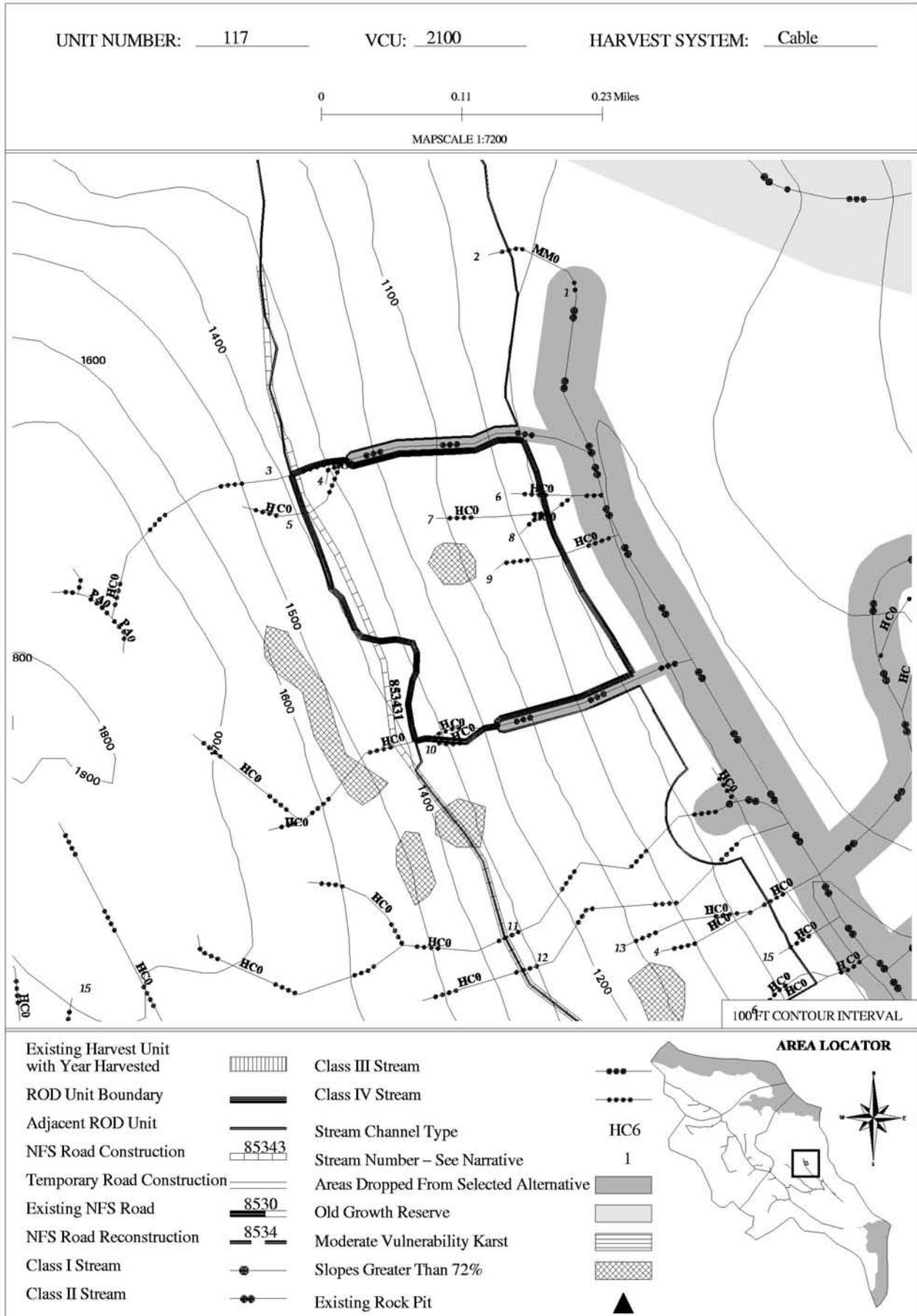
IYOUKTUG TIMBER SALES RECORD OF DECISION  
HARVEST UNIT MAP



Unit Data Card – Iyouktug Timber Sales ROD - Selected Alternative					
<b>Unit Number:</b>	116	<b>Selected Alternative</b>	<b>Total Unit Acres:</b>	34.3	<b>Vol Strata Acres:</b> High: 34.3 Med: 0 Low: 0
<b>VCU Number:</b>	2100	<b>Harvest System:</b>	C	<b>Net Estimated Harvest Volume (MBF):</b>	906 <b>Prescription /Percent Retention:</b> CC

Summary of Concerns, Responses, BMPs and Mitigation	
<p><b>SILVICULTURE:</b>  <b>Existing Stand Condition/Vegetation:</b> Stand is comprised of primarily even-aged 12-43" DBH spruce (49% BA), 12-43" DBH western hemlock (36% BA) and 20-40" DBH mountain hemlock (36% BA). This is a wind generated stand with a high stem count and low defect. Devil's club dominates understory. Wind risk is high throughout unit.  <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, uses an economical regeneration method, and is windfirm, free of mistletoe infection and growing at full site potential.  <b>Silvicultural Prescription:</b> Even-aged management – clearcut: This unit contains stream buffers and RAW zones. For RAW zones 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 buffers.</p>	
<p><b>TIMBER/LOGGING:</b> This unit is comprised of two cable settings that are defined by a logical setting break based on topography and lateral yarding capabilities.</p>	
<p><b>ENGINEERING/ROADS:</b> NFSR 853431 accesses unit from existing Road 8534 via planned NFSR 8534311. Road location has been flagged. Deviations to flagged route must be approved by USFS prior to construction.</p>	
<p><b>BOTANY RESOURCES:</b> No concerns</p>	
<p><b>FISH/WATERSHED:</b> <b>Concern:</b> Streams 11, 12, 13, 14, 15, 16, 17 and the upper portion of stream 10 are Class IV HC channel types. <b>Response:</b> Category C protection (BMP 12.6, 13.14). Remove logging debris from channel (BMP 13.16). <b>Concern:</b> The lower portion of stream 10 is Class III HC channel type. <b>Response:</b> Category B protection (BMP 12.6, 13.14). No harvest within v-notch (RIP III).</p>	
<p><b>GEOLOGY/KARST:</b> No carbonate bedrock found within unit. No karst resource concerns identified.</p>	
<p><b>HERITAGE RESOURCES:</b> No concerns</p>	
<p><b>SCENERY/RECREATION:</b> No concerns</p>	
<p><b>SOILS/WETLANDS:</b> Slopes range from 45-75% in Unit 116. There is less than 2 acres of slopes over 72% in the unit. The soils are shallow to bedrock and well-drained. The areas greater than 72% are small rock-outcrops that are very stable. There is no evidence of past landslides in this area. These small areas are suitable for the proposed cable harvest using full suspension (BMP 13.9). A minimum of partial suspension is required to meet soil quality standards in the rest of unit 116.</p>	
<p><b>WILDLIFE:</b> No concerns</p>	

IYOUKTUG TIMBER SALES RECORD OF DECISION  
HARVEST UNIT MAP



<b>Unit Data Card – Iyouktug Timber Sales ROD - Selected Alternative</b>
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<b>Unit Number:</b>	117	<b>Selected Alternative</b>		<b>Total Unit Acres:</b>	25.3	<b>Vol Strata Acres:</b>	High: 25.3 Med: 0 Low: 0
<b>VCU Number:</b>	2100	<b>Harvest System:</b>	C	<b>Net Estimated Harvest Volume (MBF):</b>	669	<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 is comprised of primarily even-aged 9-40" DBH spruce (25% BA), 9-40" DBH western hemlock (53% BA) and 12-30" DBH mountain hemlock (21% BA). This is a wind generated stand with a high stem count and low defect. Devil's club dominates understory. Wind risk is high throughout unit.

**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, 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 and RAW zones. For RAW zones 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 buffers.

**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:** NFSR 853431 accesses unit from existing Road 8534 via planned NFSR 8534311. Road location has been flagged. Deviations to flagged route must be approved by USFS prior to construction.

**BOTANY RESOURCES:** No concerns

**FISH/WATERSHED: Concern:** Streams 3, 5, 6, 7, 8, 9 and the upper portions of 4 and 10 are class IV HC channel types. **Response:** Category C protection (BMP 12.6, 13.14). Remove logging debris from channel (BMP 13.16). **Concern:** The lower portions of streams 4 and 10 is Class III HC channel type. **Response:** Category B protection (BMP 12.6, 13.14). No harvest within v-notch (RIP III). Manage 120 feet beyond v-notch for windfirmness on Class III portions of streams 4 and 10.

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

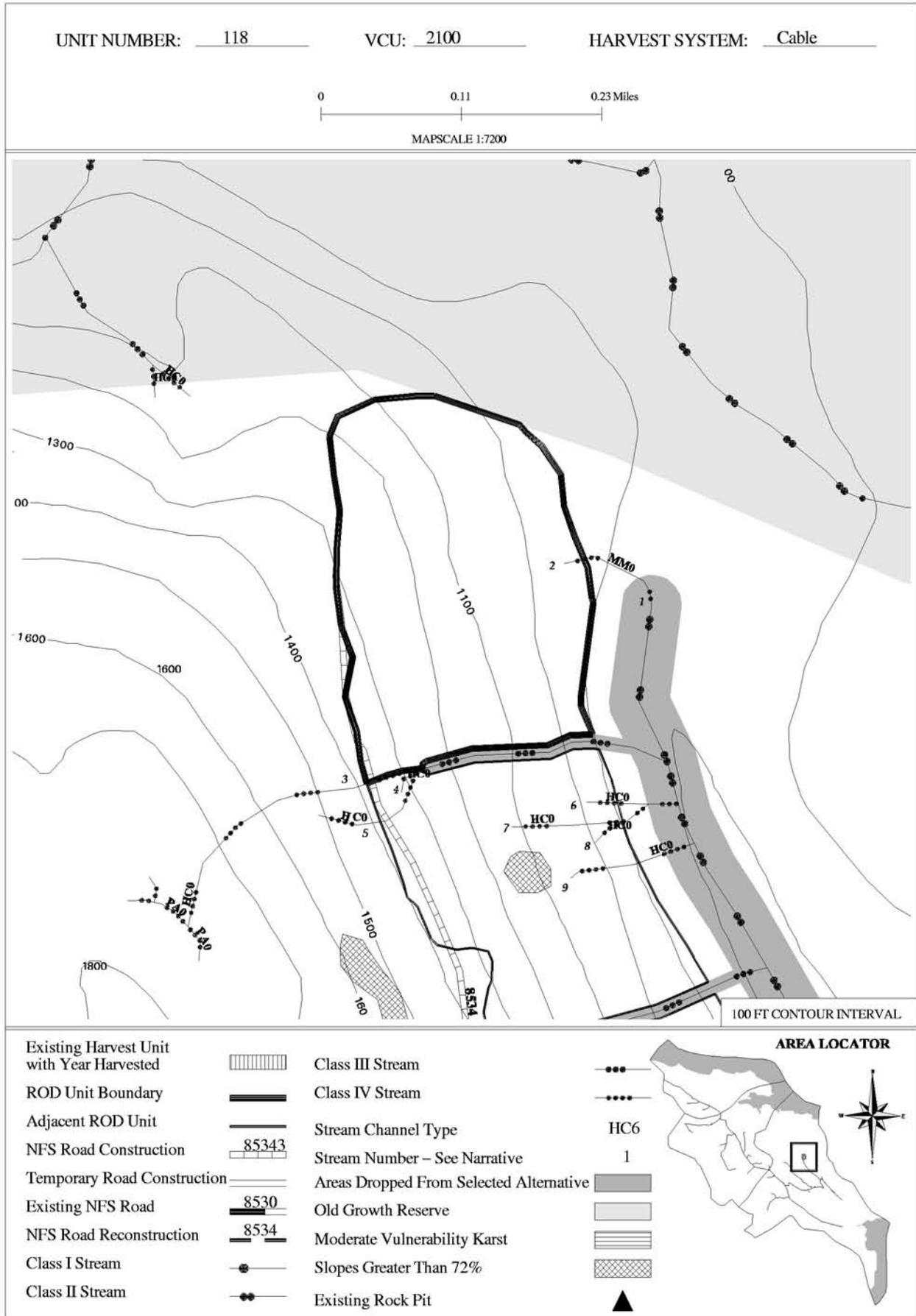
**HERITAGE RESOURCES:** No concerns

**SCENERY/RECREATION:** No concerns

**SOILS/WETLANDS:** Slopes range from 45-80% in Unit 117. There is less than 1/2 acre of slopes greater than 72% in a small rock outcrop. Full suspension is required in this area. A minimum of partial suspension is required in the rest of Unit 117 to meet soil quality standards (BMP 13.9).

**WILDLIFE:** No concerns

IYOUKTUG TIMBER SALES RECORD OF DECISION  
HARVEST UNIT MAP



Unit Data Card – Iyouktug Timber Sales ROD - Selected Alternative					
<b>Unit Number:</b>	118	<b>Selected Alternative</b>	<b>Total Unit Acres:</b>	33.5	<b>Vol Strata Acres:</b> High:32.6 Med: 0.9 Low: 0
<b>VCU Number:</b>	2100	<b>Harvest System:</b>	<b>Net Estimated Harvest Volume (MBF):</b>	881	<b>Prescription /Percent Retention:</b> CC

Summary of Concerns, Responses, BMPs and Mitigation	
<p><b>SILVICULTURE:</b>  <b>Existing Stand Condition/Vegetation:</b> Stand is comprised of primarily even-aged 9-40" DBH spruce (25% BA), 9-40" DBH western hemlock (53% BA) and 12-30" DBH mountain hemlock (21% BA). This is a wind generated stand with a high stem count and low defect. Devil's club dominates understory. Wind risk is high throughout unit.  <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, uses an economical regeneration method, and is windfirm, free of mistletoe infection and growing at full site potential.  <b>Silvicultural Prescription:</b> Even-aged management – clearcut: This unit contains stream buffers and RAW zones. For RAW zones 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 buffers.</p>	
<p><b>TIMBER/LOGGING:</b> This unit is comprised of two cable settings that are defined by a logical setting break based on topography and lateral yarding capabilities.</p>	
<p><b>ENGINEERING/ROADS:</b> NFSR 853431 accesses unit from existing Road 8534 via planned NFSR 8534311. Road location has been flagged. Deviations to flagged route must be approved by USFS prior to construction.</p>	
<p><b>BOTANY RESOURCES:</b> No concerns</p>	
<p><b>FISH/WATERSHED:</b> <b>Concern:</b> Stream 1 is Class II MM channel type. <b>Response:</b> Category A protection (BMP 12.6, 13.14). No harvest within 120 feet of channel (RIP III). Manage 120 feet beyond RMA buffer for windfirmness. <b>Concern:</b> stream 2 is class IV HC channel type. <b>Response:</b> Category C protection (BMP 12.6, 13.14). Remove logging debris from channel (BMP 13.16).</p>	
<p><b>GEOLOGY/KARST:</b> No carbonate bedrock found within unit. No karst resource concerns identified.</p>	
<p><b>HERITAGE RESOURCES:</b> No concerns</p>	
<p><b>SCENERY/RECREATION:</b> No concerns</p>	
<p><b>SOILS/WETLANDS:</b> Slopes range from 35-60% in Unit 118. A minimum of partial suspension is required to meet soil quality standards. (BMP 13.9)</p>	
<p><b>WILDLIFE:</b> No concerns</p>	