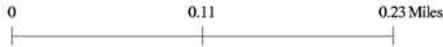


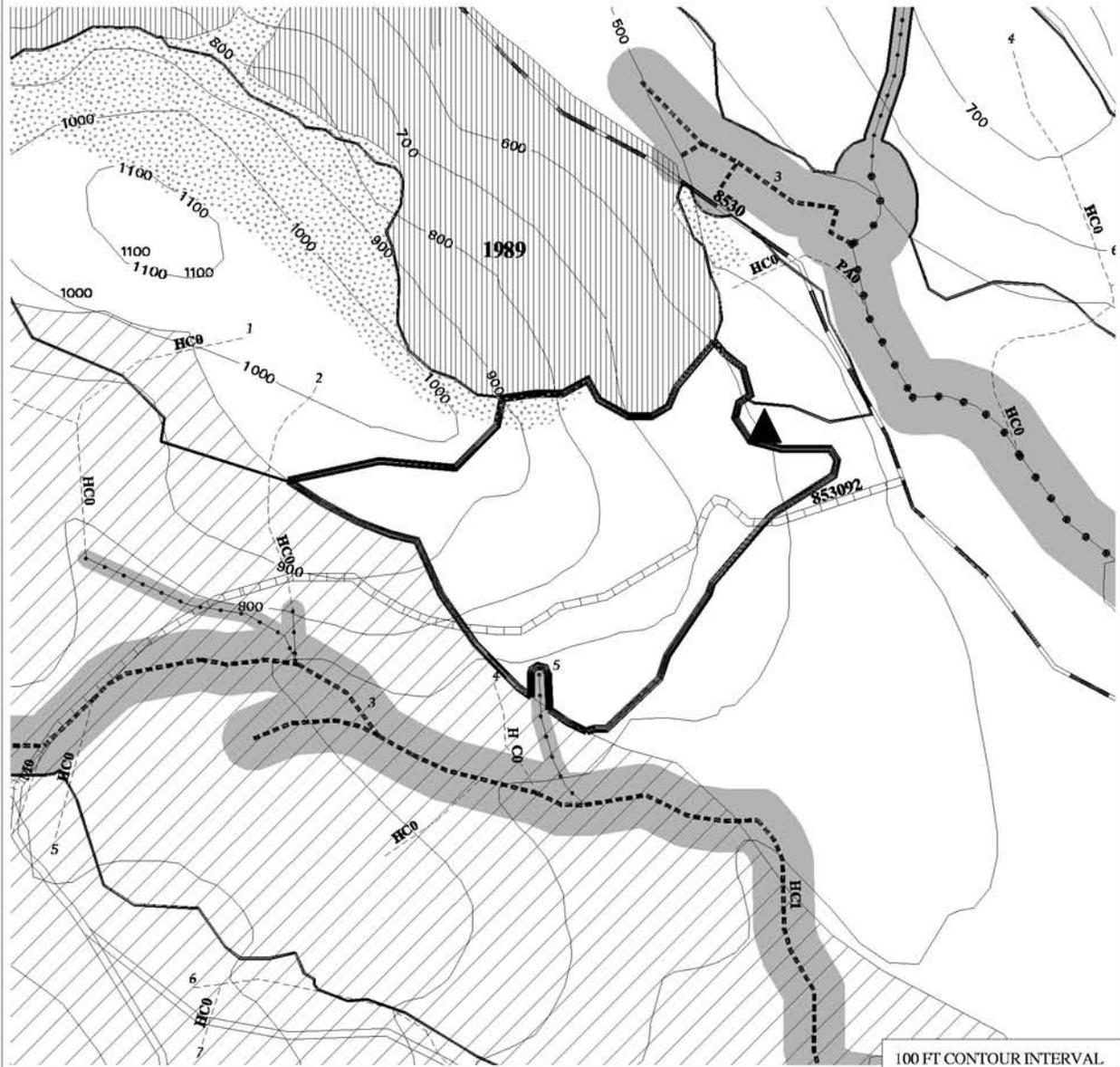
IYOUKTUG TIMBER SALE UNIT CARD PLANNED HARVEST UNIT MAP

UNIT NUMBER: 101 VCU: 2090/2100 HARVEST SYSTEM: Cable

UNIT 101 OCCURS IN ALTERNATIVE(S): 4



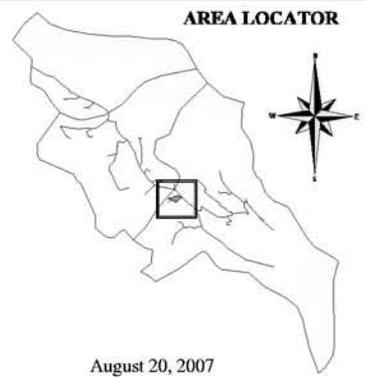
MAPSCALE 1:7200



- 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
- High Value Marten Habitat
- Areas Dropped From Alternative(s)
- Inventoried Roadless
- Old Growth Reserve
- Moderate Vulnerability Karst
- Slopes > 72%
- Existing Rock Pit

- HC6
- 1



Unit Data Card – Iyouktug Timber Sale Draft EIS					
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Unit Number:	101	In Alternatives:	4	Total Unit Acres:	25.5	Vol Strata Acres:	High: 0.6 Med: 22.9 Low: 2.0
VCU Number:	2100	Harvest System:	C	Net Estimated Harvest Volume (MBF):	556	Prescription /Percent Retention:	CC

Summary of Concerns, Responses, BMPs and Mitigation
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SILVICULTURE:

<p>Existing Stand Condition/Vegetation: 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%). There is significant advanced regeneration of western hemlock, yellow-cedar and spruce. 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. Wind risk is moderate to high.</p>

<p>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.</p>
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<p>Silvicultural Prescription: Even-aged management – clearcut: This unit contains stream buffers with 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>
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<p>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. There are some limited shovel yarding opportunities near the road.</p>

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

<p>FISH/WATERSHED: Concern: The upper parts of streams 1 and 2 and stream number 4 are Class IV HC channels. Response: Category C protection (BMP 12.6, 13.14). Remove logging debris from channel (BMP 13.16). Concern: The lower parts of streams 1 and 2 and stream 5 are Class III HC channels. Response: Category B protection (BMP 12.6, 13.14). No harvest within v-notch (RIP III). Manage for windfirmness 120 feet beyond no-cut buffers. Concern: Stream 3 is a Class II HC channel. Response: 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>
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<p>GEOLOGY/KARST: No carbonate bedrock found within unit. No karst resource concerns identified.</p>

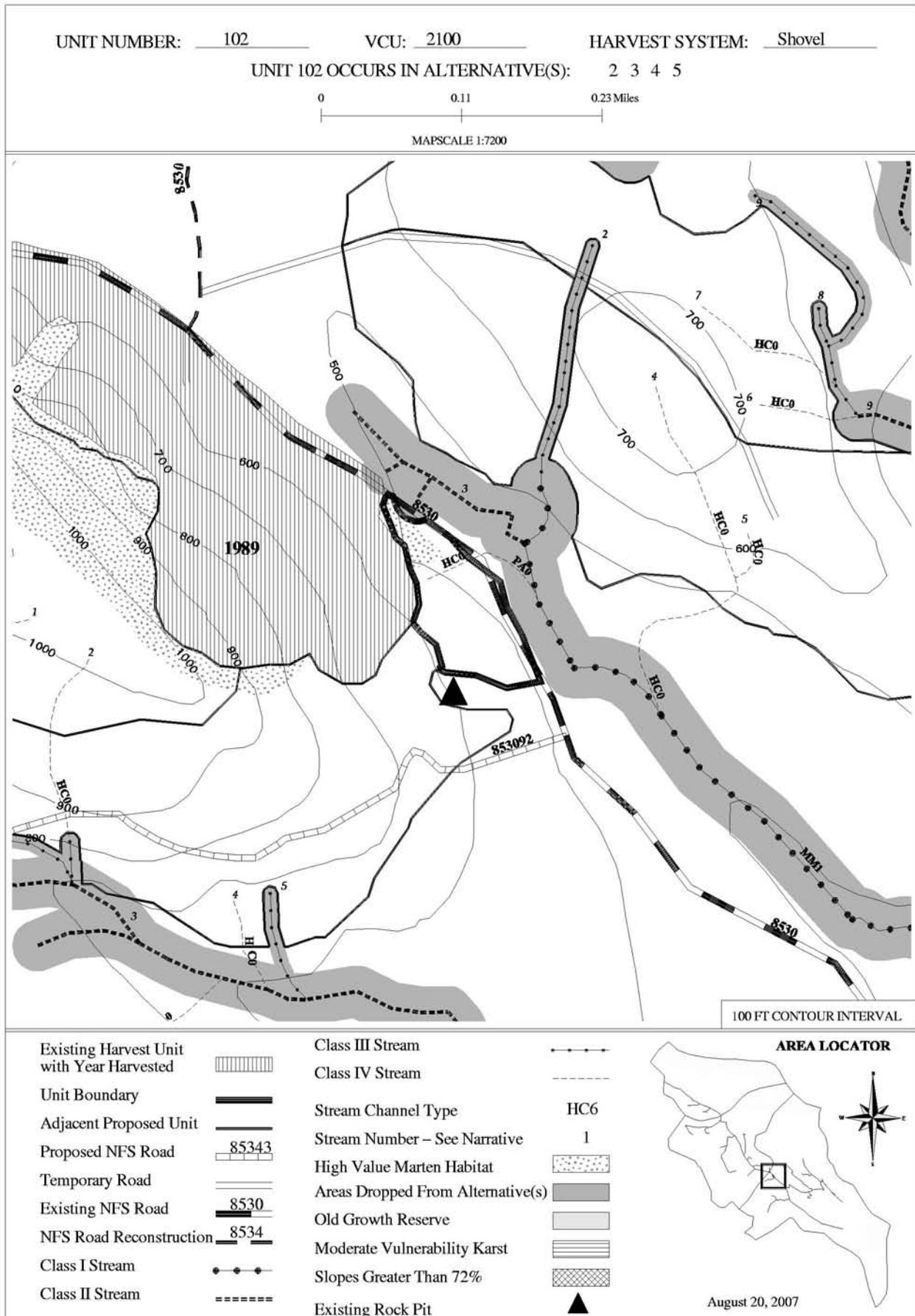
<p>HERITAGE RESOURCES: No concerns</p>

<p>SCENERY/RECREATION: Concern: Unit located adjacent to VPR. Response: Incorporate landscape architect input during layout.</p>

<p>SOILS/WETLANDS: Slopes range from 35-55% in Unit 101. A minimum of partial suspension is required to meet soil quality standards. (BMP 13.9)</p>
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<p>WILDLIFE: Concern: Unit contains less than 2 acres high value marten habitat. Response: No design elements or mitigation required to meet Forest Plan standards and guidelines. Concern: Vancouver Canada geese observed in unit. Response: No design elements or mitigation required to meet Forest Plan standards and guidelines.</p>

IYOUKTUG TIMBER SALE UNIT CARD PLANNED HARVEST UNIT MAP



Unit Data Card – Iyouktug Timber Sale Draft EIS
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Unit Number:	102	In Alternatives:	2, 3, 4, 5	Total Unit Acres:	5.4	Vol Strata Acres:	High: 0.7 Med: 3.9 Low: 0.9
VCU Number:	2100	Harvest System:	SH	Net Estimated Harvest Volume (MBF):	76	Prescription /Percent Retention:	ST50

Summary of Concerns, Responses, BMPs and Mitigation
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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.

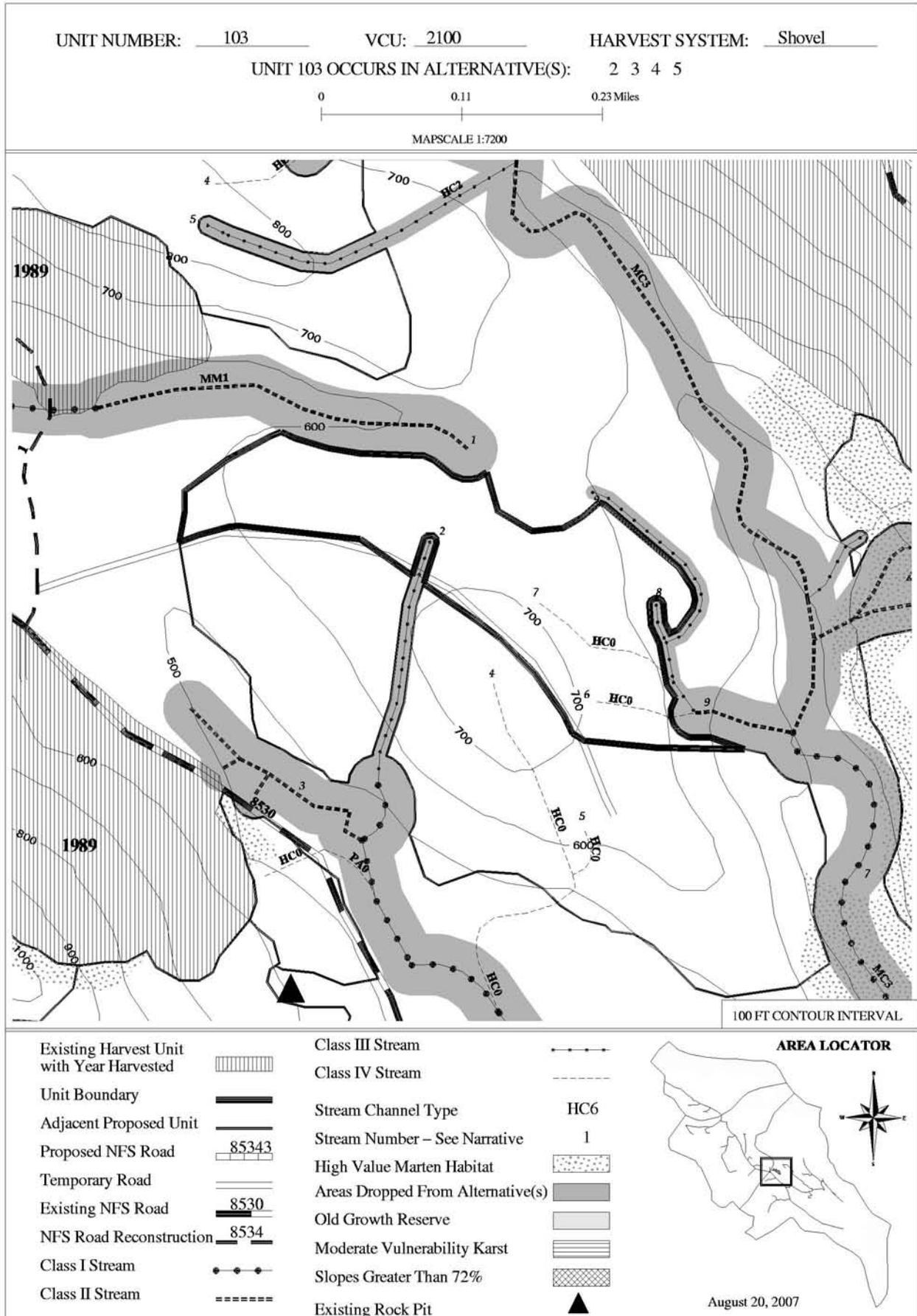
HERITAGE RESOURCES: No concerns

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: Concern: Unit contains less than 2 acres high value marten habitat. **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
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Unit Number:	103	In Alternatives:	2, 3, 4, 5	Total Unit Acres:	26.5	Vol Strata Acres:	High: 0 Med: 20.0 Low: 6.5
VCU Number:	2100	Harvest System:	SH	Net Estimated Harvest Volume (MBF):	341	Prescription /Percent Retention:	ST50

Summary of Concerns, Responses, BMPs and Mitigation
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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)

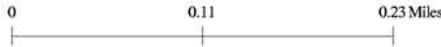
WILDLIFE: **Concern:** Vancouver Canada geese observed adjacent to unit. **Response:** No design elements or mitigation required to meet Forest Plan standards and guidelines.

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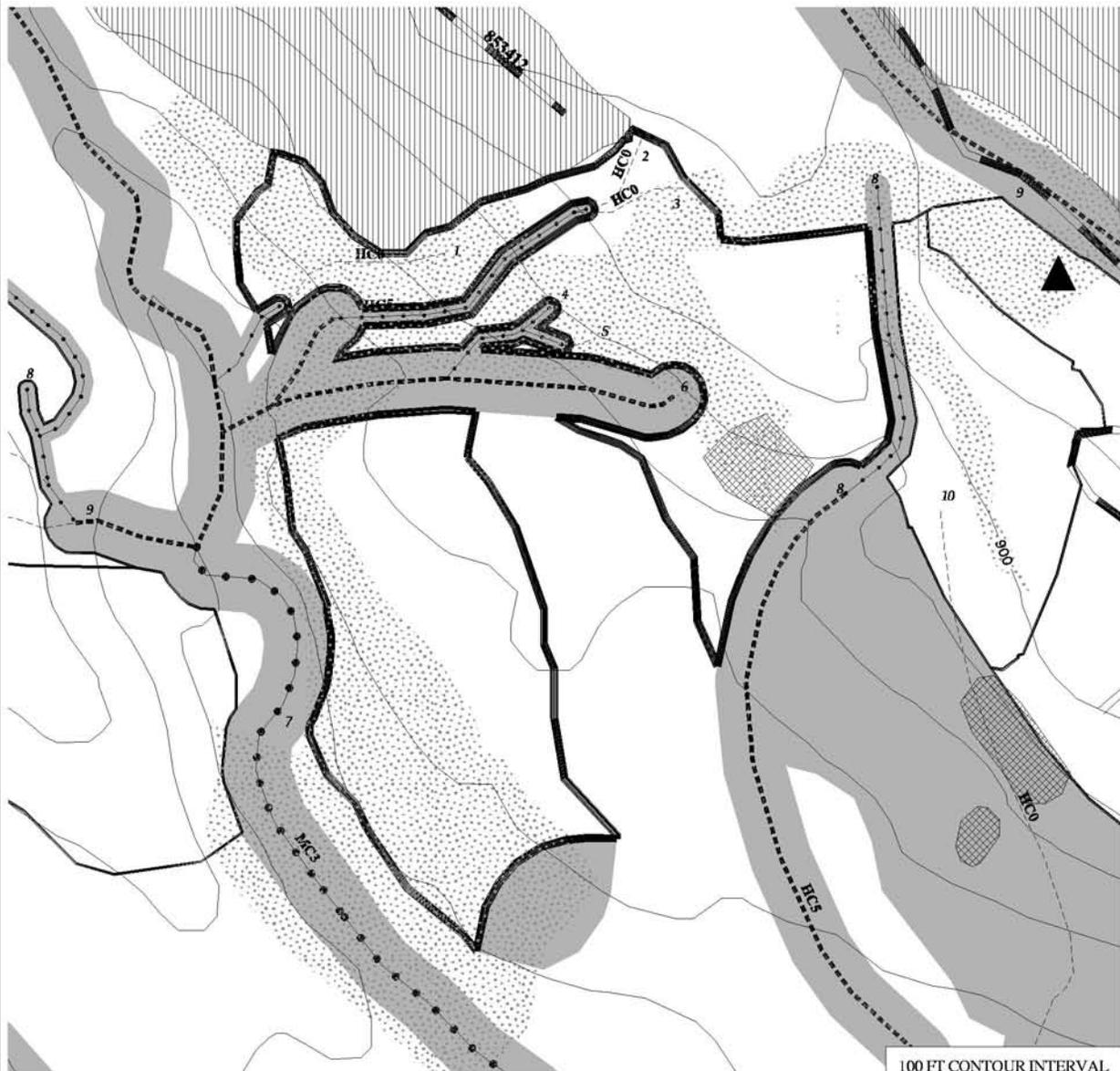
IYOUKTUG TIMBER SALE UNIT CARD PLANNED HARVEST UNIT MAP

UNIT NUMBER: 104 VCU: 2100 HARVEST SYSTEM: Helicopter

UNIT 104 OCCURS IN ALTERNATIVE(S): 2 4



MAPSCALE 1:7200

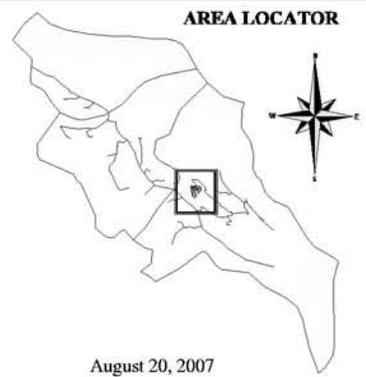


100 FT CONTOUR INTERVAL

- 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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Unit Data Card – Iyouktug Timber Sale Draft EIS
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Unit Number:	104	In Alternatives:	2, 4	Total Unit Acres:	60.1	Vol Strata Acres:	High: 31.0 Med: 16.4 Low: 12.7
VCU Number:	2100	Harvest System:	HE	Net Estimated Harvest Volume (MBF):	750	Prescription /Percent Retention:	ST40

Summary of Concerns, Responses, BMPs and Mitigation
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SILVICULTURE:

<p>Existing Stand Condition/Vegetation: Stand is comprised of 12-36" DBH western hemlock (27% BA), 9-16" DBH mountain hemlock (5% BA), 16-30" DBH spruce (12% BA) and 9-40" DBH yellow-cedar (56% BA). The yellow-cedar is in pockets and has experienced considerable mortality. Yellow-cedar advanced regeneration is abundant in portions of the stand. Wind risk is estimated to be moderate to high.</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, provides for a high degree of structural diversity and meets Forest Plan scenery and high value marten habitat requirements.</p>

<p>Silvicultural Prescription: Uneven-aged management – Single tree selection. Designate up to 40 percent of existing basal (194 sq.ft.per acre) area singly and/or in small clumps or corridors to facilitate helicopter 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. Refer to the intro to unit cards, marking guidelines and detailed RX for more information.</p>
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<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: The upper parts of streams 1, 2, 3 and 5 are Class IV HC channel types.</p>
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<p>Response: Category C protection (BMP 12.6, 13.14). Remove logging debris from channel (BMP 13.16).</p>
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<p>Concern: The lower parts of streams 1, 2, 3, 5 and stream 4 and the upper part of stream 8 are Class III HC channel types. Response: Category B protection (BMP 12.6, 13.14). No harvest within v-notch (RIP III).</p>

<p>Concern: Stream 6 and the lower portion of stream 8 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).</p>

<p>Concern: Stream 7 is a Class I MC channel type. Response: Category A protection (BMP 12.6, 13.14).</p>

<p>No harvest within 100 feet of channel and side-slope break. (RIP III). Concern: Windthrow risk is moderate to high. Response: Manage for windfirmness 120 feet beyond no-cut buffers.</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 from 35-75% in Unit 104. There is about 2 acres of slopes greater than 72% along the southeastern boundary, the soils in the area are poorly drained and the slope is concave. Concern: Timber harvest may accelerate landsliding on slopes over 72% gradient. Response: Avoid the slopes over 72% during layout (BMP 13.5). Concern: A minimum of partial suspension is required to meet soil quality standards in the rest of the unit (BMP 13.9). Response: Unit is proposed as full suspension, which exceeds partial suspension requirements. An onsite analysis for suitability on slopes over 72% was conducted on this unit as per Forest Plan Standards (soil resource report).</p>

Summary of Concerns, Responses, BMPs and Mitigation

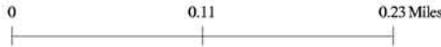
WILDLIFE: Concern: Unit contains high value marten habitat. Unit is located in a potential travel corridor that may maintain connectivity to the OG LUD. **Response:** Proposed harvest system will not create openings greater than 2 acres in size within this habitat. Retention of 60% of the basal area will meet marten standards and guidelines and help to maintain connectivity. **Concern:** Southeast and southwest boundaries are adjacent to goshawk nest buffer. **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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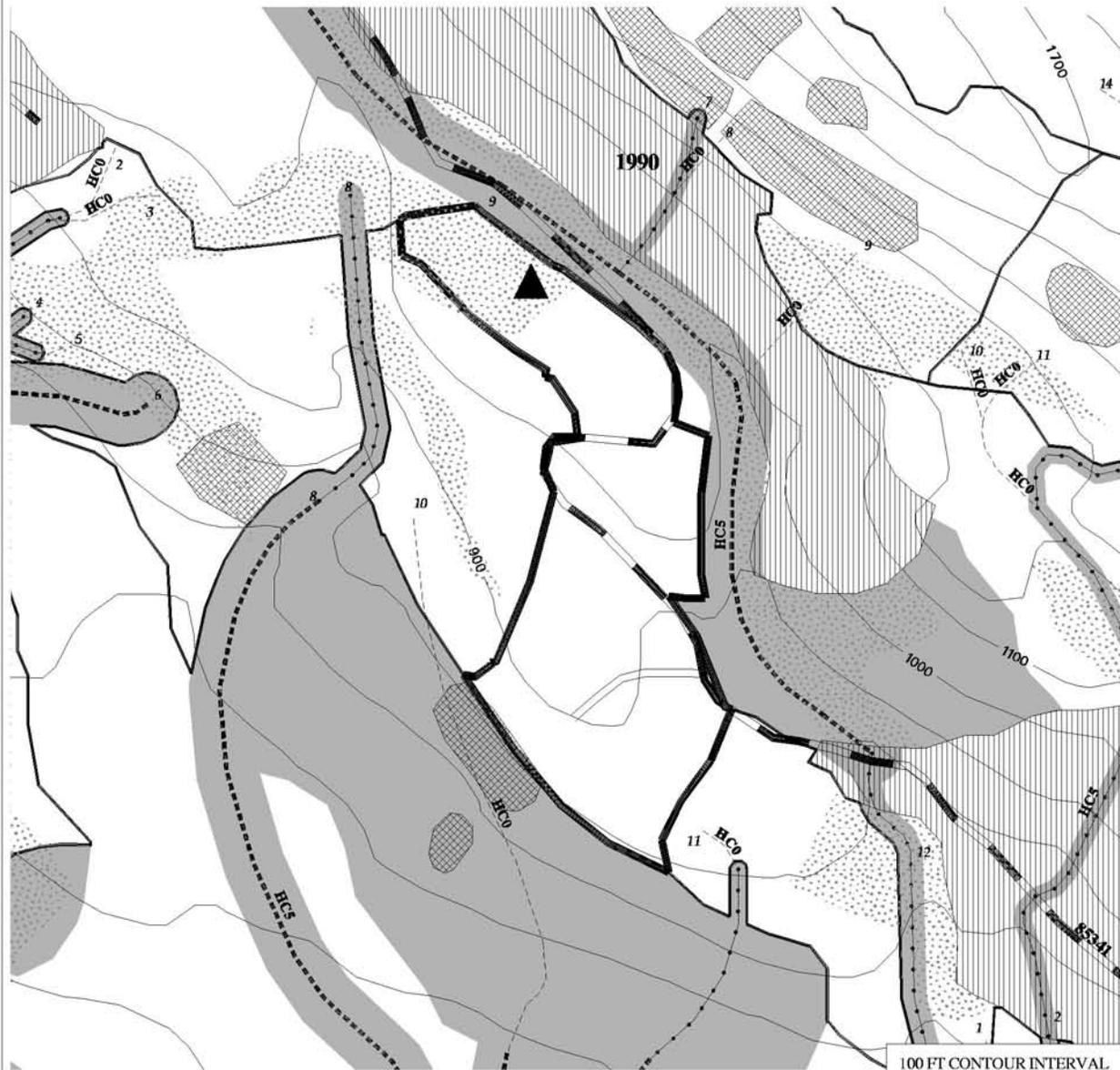
IYOUKTUG TIMBER SALE UNIT CARD PLANNED HARVEST UNIT MAP

UNIT NUMBER: 105 VCU: 2100 HARVEST SYSTEM: Shovel

UNIT 105 OCCURS IN ALTERNATIVE(S): 2 3 4 5



MAPSCALE 1:7200

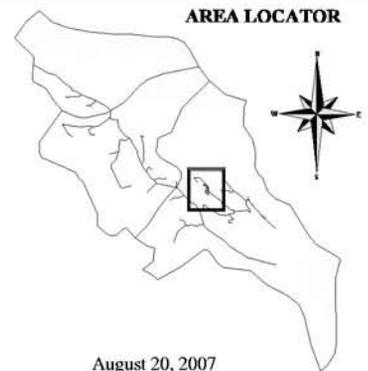


100 FT CONTOUR INTERVAL

- 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
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Unit Data Card – Iyouktug Timber Sale Draft EIS
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Unit Number:	105	In Alternatives:	2, 3, 4, 5	Total Unit Acres:	27.1	Vol Strata Acres:	High: 3.5 Med: 21.1 Low: 2.5
VCU Number:	2100	Harvest System:	SH	Net Estimated Harvest Volume (MBF):	382	Prescription /Percent Retention:	ST50

Summary of Concerns, Responses, BMPs and Mitigation
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SILVICULTURE:

Existing Stand Condition/Vegetation: 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.

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 (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. 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: Temporary road 5 accesses unit from existing Road 85341. Road location has been flagged. Deviations to flagged route must be approved by USFS prior to construction. The temp road is located outside and north of a 600 foot goshawk nest activity buffer. Road construction activities will be restricted between March 15 and August 15 if the road is relocated to within 600 feet of the active goshawk nest site.

BOTANY RESOURCES: No concerns

FISH/WATERSHED: Concern: The upper part 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:** The lower part of stream 9 is class II PA channel Type. **Response:** Category A protection (BMP 12.6, 13.14). No harvest within 100 feet of channel (RIP III). **Concern:** Stream 10 is Class IV HC Channel Type. **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:** Windthrow risk is moderate to high. **Response:** Manage for windfirmness 120 feet beyond no-cut buffers.

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

HERITAGE RESOURCES: No concerns

SCENERY/RECREATION: No concerns

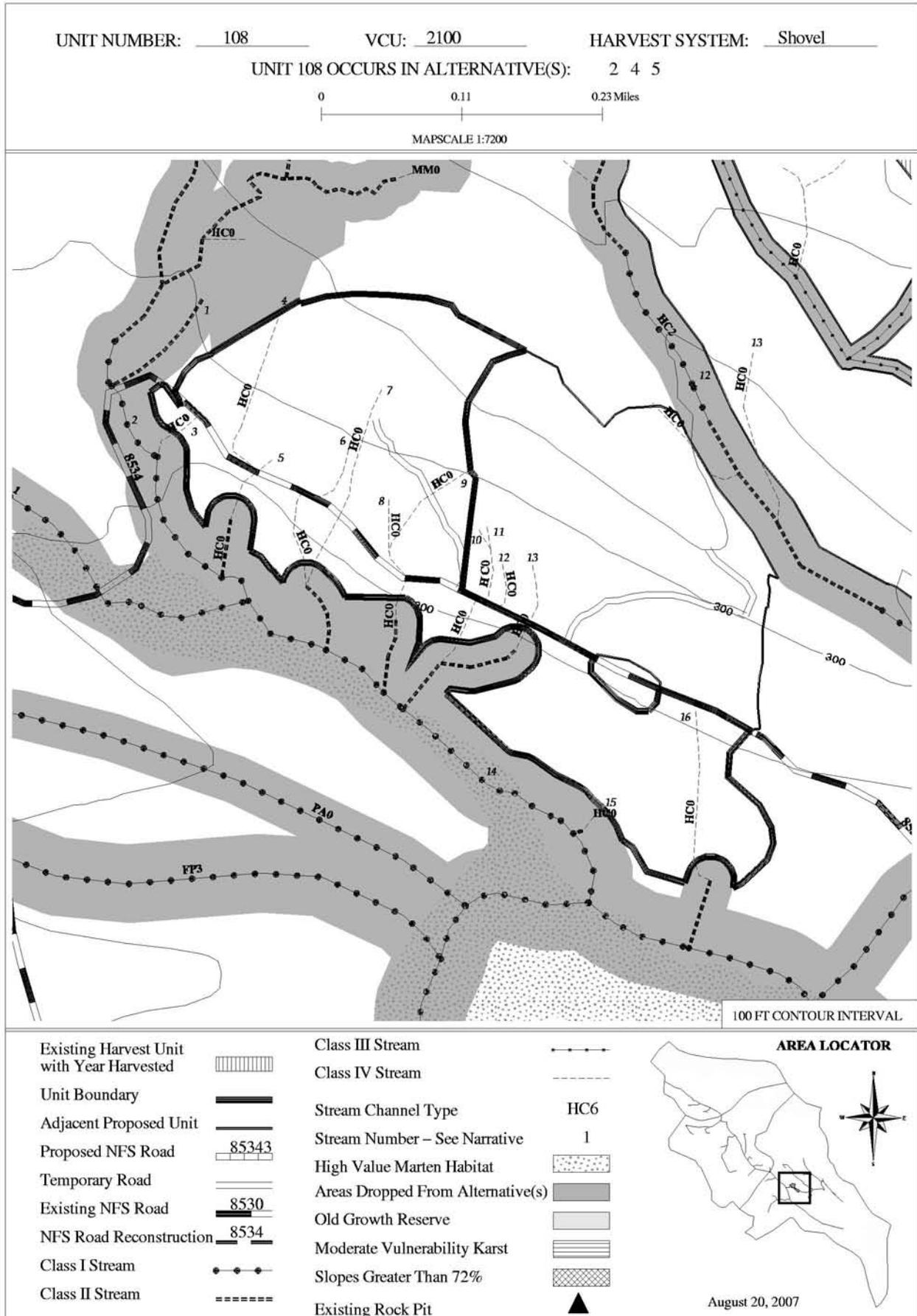
Summary of Concerns, Responses, BMPs and Mitigation

SOILS/WETLANDS: Slopes range from 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:** 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:** Southwest boundary is adjacent to goshawk nest buffer. **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. **Concern:** Southeast portion of the unit lies within 600 feet of a goshawk nest. **Response:** Road construction and harvest activities are restricted between March 15 and August 15 within 600 feet of active goshawk nest sites.

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IYOUKTUG TIMBER SALE UNIT CARD PLANNED HARVEST UNIT MAP



Unit Data Card – Iyouktug Timber Sale Draft EIS
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Unit Number:	108	In Alternatives:	2, 4, 5	Total Unit Acres:	47.5	Vol Strata Acres:	High: 0 Med: 4.1 Low: 43.4
VCU Number:	2100	Harvest System:	SH	Net Estimated Harvest Volume (MBF):	440	Prescription /Percent Retention:	ST50

Summary of Concerns, Responses, BMPs and Mitigation
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SILVICULTURE:

<p>Existing Stand Condition/Vegetation: 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>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>
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<p>Silvicultural Prescription: Uneven-aged management – Single tree selection. Designate up to 50 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. Refer to the intro to unit cards, marking guidelines and detailed RX for more information.</p>
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<p>TIMBER/LOGGING: Refer to Silvicultural RX and marking guides for single tree selection guidelines to facilitate shovel yarding.</p>

<p>ENGINEERING/ROADS: Temporary road 85342 accesses unit from existing Road 8534. Road location will be flagged by USFS prior to harvest.</p>
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<p>BOTANY RESOURCES: Numerous rare plant populations; largely open-forested wetland habitat.</p>

<p>Response: 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>
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<p>FISH/WATERSHED: Concern: Stream 1 is a 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 2 is a Class II MM channel. Response: Category A protection (BMP 12.6, 13.14). No harvest within 120 feet of channel (RIP III). Concern: Lower segments of streams 4, 6, 8, 10, 13, and 16 are Class II HC channels.</p>
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<p>Response: Category A protection (BMP 12.6, 13.14). No harvest within 100 feet and side-slope break (RIP III). Concern: 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. 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). Concern: Windthrow risk is moderate to high. Response: Manage for windfirmness 120 feet beyond no-cut buffers.</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>

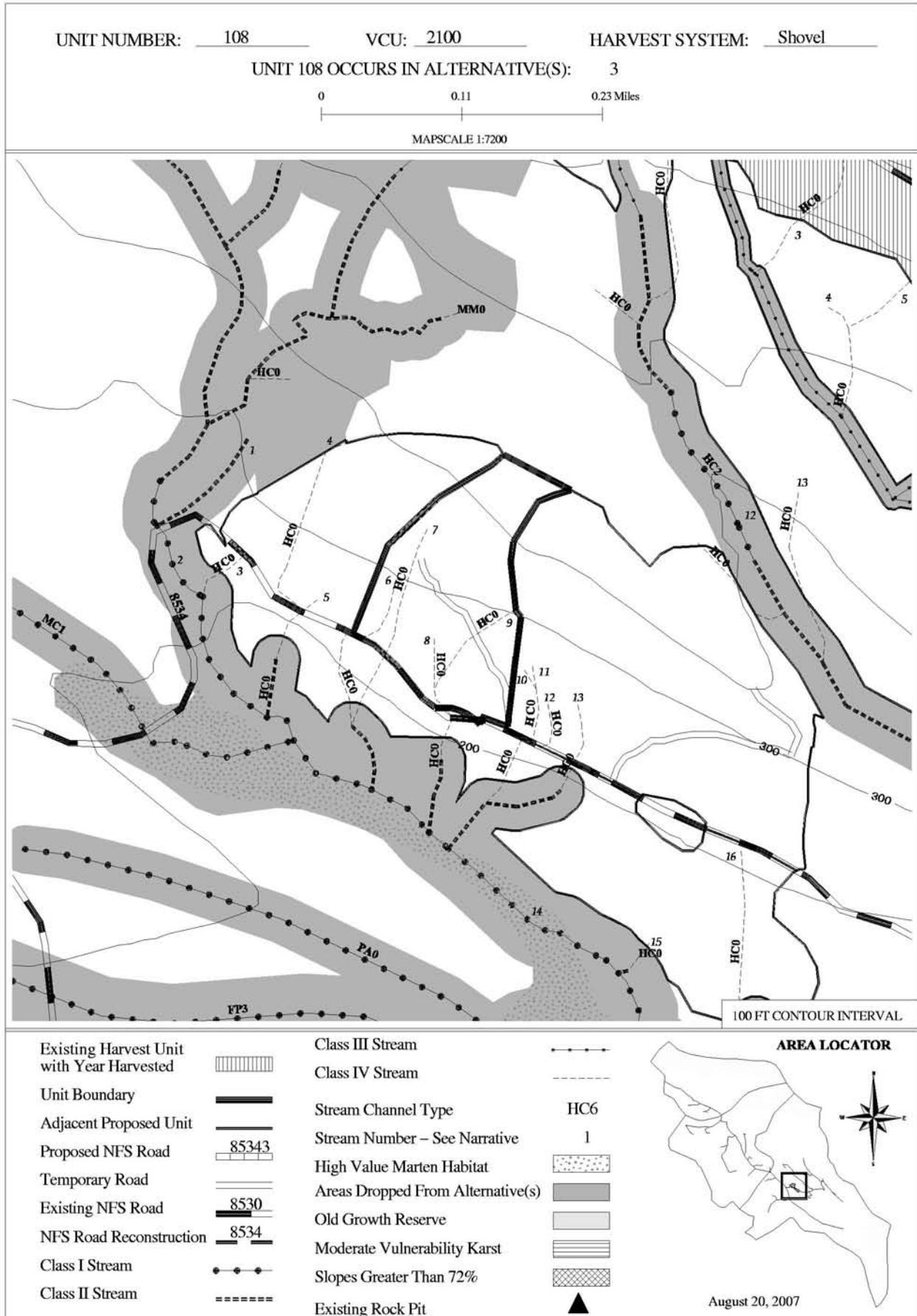
<p>SOILS/WETLANDS: Slopes range from 5-25% in Unit 108. The southern half of this unit is wetland, both forested and non forested (BMP 12.5). Concern: Shovel yarding may cause rutting due to lack of bearing strength on poorly drained organic soils in Unit 108. Response: Operate on a puncheon or a slash 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)</p>
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Summary of Concerns, Responses, BMPs and Mitigation

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. **Concern:** Northwest boundary is close to goshawk nest buffer. **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. **Concern:** Northwest portion of the unit lies within 600 feet of a goshawk nest. **Response:** Road construction and harvest activities are restricted between March 15 and August 15 within 600 feet of active goshawk nest sites. **Concern:** Red-tailed hawk was observed around unit. **Response:** Maintain a 600-foot no-harvest buffer that is windfirm around active raptor nest sites if identified and restrict harvest and road building activities from March 1 to July 31 within the buffer. **Concern:** High bear use was observed south of the unit along Iyouktug Creek. **Response:** Retention and stream buffers will help to maintain bear habitat. Recommend retention be located adjacent to Iyouktug Creek stream buffer.

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IYOUKTUG TIMBER SALE UNIT CARD PLANNED HARVEST UNIT MAP



Unit Data Card – Iyouktug Timber Sale Draft EIS
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Unit Number:	108	In Alternatives:	3	Total Unit Acres:	12.5	Vol Strata Acres:	High: 0 Med: 0 Low: 12.5
VCU Number:	2100	Harvest System:	SH	Net Estimated Harvest Volume (MBF):	110	Prescription /Percent Retention:	ST50

Summary of Concerns, Responses, BMPs and Mitigation
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SILVICULTURE:

Existing Stand Condition/Vegetation: 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.

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 (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. 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: Temporary road 85342 accesses unit from existing Road 8534. Road location will be flagged by USFS prior to harvest.

BOTANY RESOURCES: Numerous rare plant populations; largely open-forested wetland habitat.

Response: 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)

FISH/WATERSHED: Concern: Stream 1 is a 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 2 is a Class II MM channel. **Response:** Category A protection (BMP 12.6, 13.14). No harvest within 120 feet of channel (RIP III). **Concern:** Lower segments of streams 4, 6, 8, 10, 13, and 16 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:** 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. **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). **Concern:** Windthrow risk is moderate to high. **Response:** Manage for windfirmness 120 feet beyond no-cut 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 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:** Northwest boundary is close 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. Road construction and harvest activities are restricted between March 15 and August 15 within 600 feet of active goshawk nest sites. **Concern:** High bear use was observed south of the unit along Iyoutug Creek. **Response:** Unit south of FR 8534 was deferred to maintain bear habitat. Ensure that unit boundary does not extend south of FR 8534.