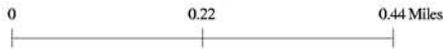


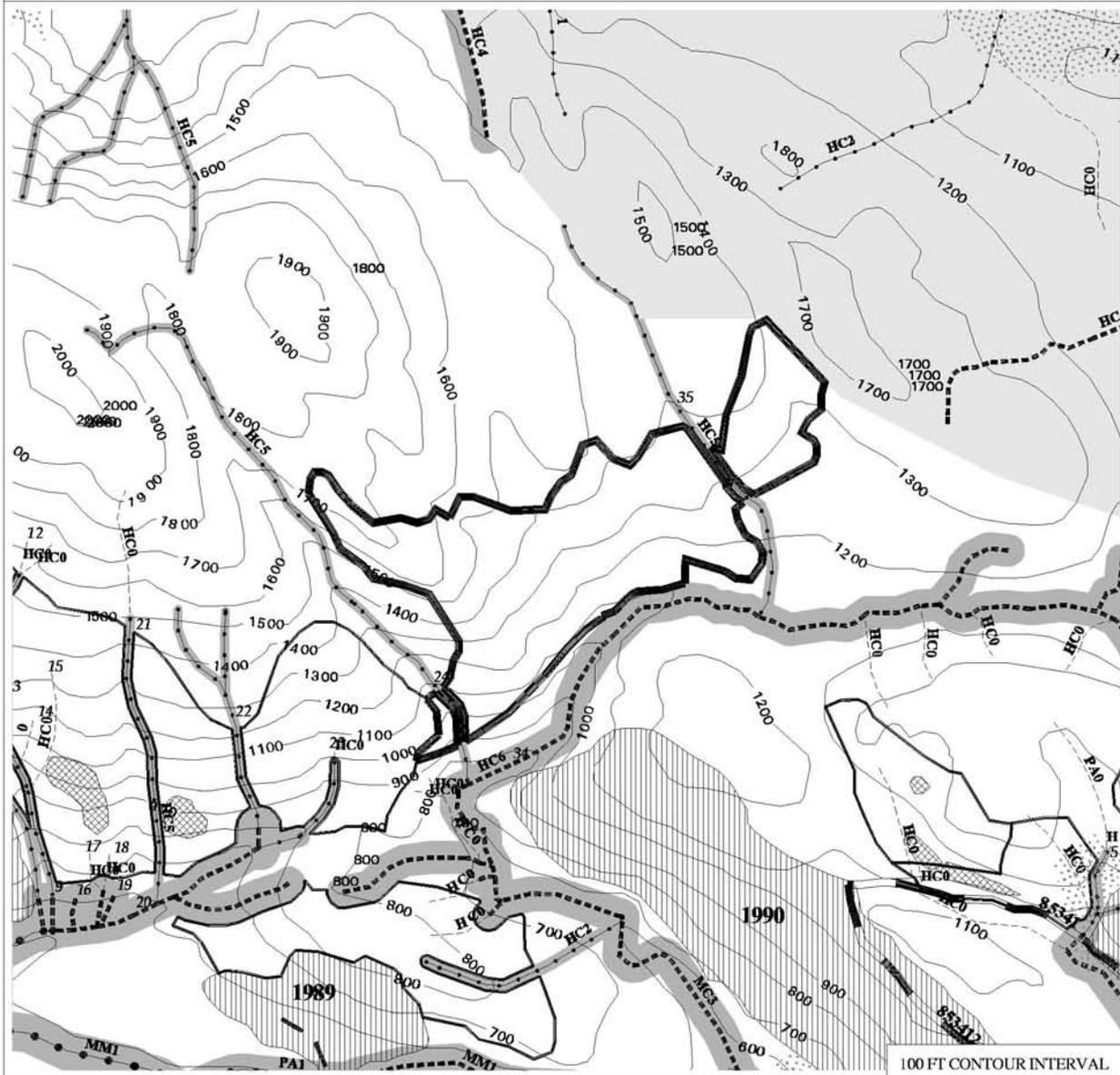
IYOUKTUG TIMBER SALE UNIT CARD PLANNED HARVEST UNIT MAP

UNIT NUMBER: 168 VCU: 2100/2090 HARVEST SYSTEM: Helicopter

UNIT 168 OCCURS IN ALTERNATIVE(S): 2 3



MAPSCALE 1:14000



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

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

-
-
- HC6
- 1



Unit Data Card – Iyouktug Timber Sale Draft EIS
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Unit Number:	168	In Alternatives:	2, 3	Total Unit Acres:	72.0	Vol Strata Acres:	High: 0 Med: 66.4 Low: 5.6
VCU Number:	2100	Harvest System:	HE	Net Estimated Harvest Volume (MBF):	796	Prescription /Percent Retention:	ST40

Summary of Concerns, Responses, BMPs and Mitigation
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SILVICULTURE:

<p>Existing Stand Condition/Vegetation: Stand consists of 9-35" DBH mountain hemlock (39% BA), 9-35" DBH western hemlock (31% BA) and 9-42" DBH spruce (29% BA). The western and upper slopes of the eastern portion of the unit are the most productive. The lower slopes are scrubby with poorly drained hydric soils. Much of the hemlock throughout the unit is uniform in diameter and relatively even-aged. Western hemlock advanced regeneration is abundant with some spruce also present. 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 and high value marten habitat requirements.</p>

<p>Silvicultural Prescription: Uneven-aged management – Single tree selection. Designate up to 40 percent of existing basal (250 sq.ft.per acre) area singly and/or in small clumps or corridors to facilitate helicopter yarding. Refer to the intro to unit cards, marking guidelines and detailed RX for more information.</p>
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<p>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 24 and 35 are Class III HC channels. Response: Category B protection (BMP 12.6, 13.14). No harvest within v-notch (RIP III). Concern: GIS-mapped stream 34 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).</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>

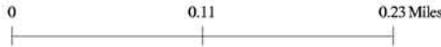
<p>SOILS/WETLANDS: Slopes range from 35-55% in Unit 168. Concern: A minimum of partial suspension is required to meet soil quality standards (BMP 13.9). Response: Unit is proposed as full suspension, which exceeds partial suspension requirements. Areas to the southwest and southeast of unit 168 dropped for stability concerns (BMP 13.5).</p>

<p>WILDLIFE: No concerns</p>

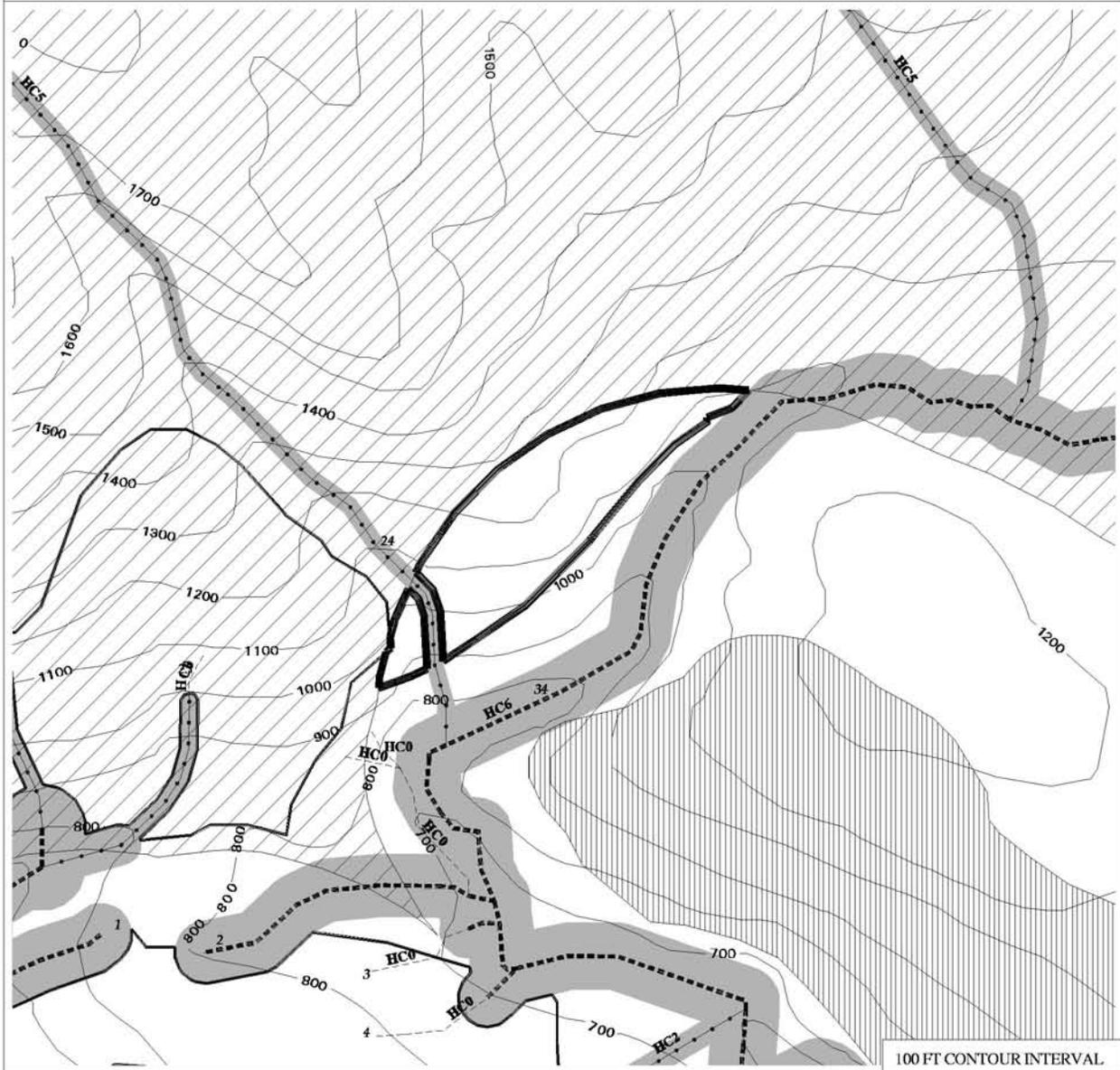
IYOUKTUG TIMBER SALE UNIT CARD PLANNED HARVEST UNIT MAP

UNIT NUMBER: 168 VCU: 2100/2090 HARVEST SYSTEM: Helicopter

UNIT 168 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



August 20, 2007

Unit Data Card – Iyouktug Timber Sale Draft EIS
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Unit Number:	168	In Alternatives:	4	Total Unit Acres:	9.6	Vol Strata Acres:	High: 0 Med: 9.6 Low: 0
VCU Number:	2100	Harvest System:	HE	Net Estimated Harvest Volume (MBF):	101	Prescription /Percent Retention:	ST40

Summary of Concerns, Responses, BMPs and Mitigation
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SILVICULTURE:

<p>Existing Stand Condition/Vegetation: Stand consists of 9-35" DBH mountain hemlock (39% BA), 9-35" DBH western hemlock (31% BA) and 9-42" DBH spruce (29% BA). The western and upper slopes of the eastern portion of the unit are the most productive. The lower slopes are scrubby with poorly drained hydric soils. Much of the hemlock throughout the unit is uniform in diameter and relatively even-aged. Western hemlock advanced regeneration is abundant with some spruce also present. 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 and high value marten habitat requirements.</p>

<p>Silvicultural Prescription: Uneven-aged management – Single tree selection. Designate up to 40 percent of existing basal (250 sq.ft.per acre) area singly and/or in small clumps or corridors to facilitate helicopter yarding. Refer to the intro to unit cards, marking guidelines and detailed RX for more information.</p>
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<p>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 24 and 35 are Class III HC channels. Response: Category B protection (BMP 12.6, 13.14). No harvest within v-notch (RIP III). Concern: GIS-mapped stream 34 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).</p>

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

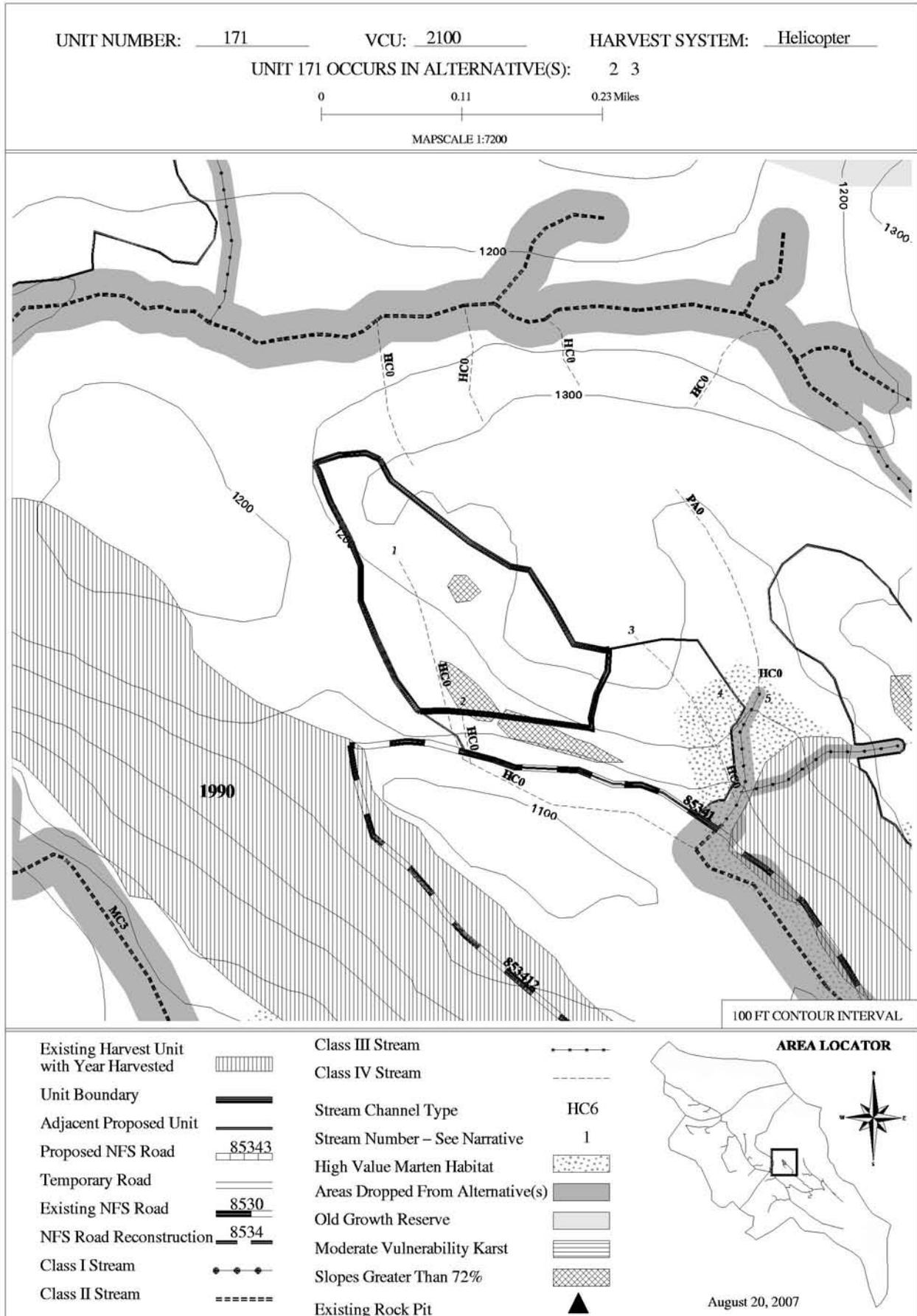
<p>HERITAGE RESOURCES: No concerns</p>

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

<p>SOILS/WETLANDS: Slopes range from 35-55% in Unit 168. 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 southwest of Unit 168 dropped for stability concerns (BMP 13.5).</p>
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<p>WILDLIFE: No concerns</p>

IYOUKTUG TIMBER SALE UNIT CARD PLANNED HARVEST UNIT MAP



Unit Data Card – Iyouktug Timber Sale Draft EIS
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Unit Number:	171	In Alternatives:	2, 3	Total Unit Acres:	16.5	Vol Strata Acres:	High: 0 Med: 13.1 Low: 3.4
VCU Number:	2100	Harvest System:	HE	Net Estimated Harvest Volume (MBF):	120	Prescription /Percent Retention:	ST25

Summary of Concerns, Responses, BMPs and Mitigation
--

SILVICULTURE:

<p>Existing Stand Condition/Vegetation: Stand consists of 9-35" DBH mountain hemlock (39% BA), 9-35" DBH western hemlock (31% BA) and 9-42" DBH spruce (29% BA). The western and upper slopes of the eastern portion of the unit are the most productive. The lower slopes are scrubby with poorly drained hydric soils. Much of the hemlock throughout the unit is uniform in diameter and relatively even-aged. Western hemlock advanced regeneration is abundant with some spruce also present. Wind risk is moderate.</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 requirements.</p>

<p>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 or corridors to facilitate helicopter yarding. Refer to the intro to unit cards, marking guidelines and detailed RX for more information.</p>
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<p>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 and 2 are Class IV HC channels. Response: Category C protection (BMP 12.6, 13.14). Remove logging debris from channel (BMP 13.16)</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>

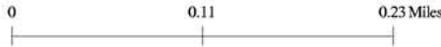
<p>SOILS/WETLANDS: Slopes range from 35-75% in Unit 171. There is less than 1 acre of slopes over 72%. The soils are well drained in dense till. Concern: Timber harvest may accelerate landsliding on slopes over 72% gradient. Response: Avoid the steep area during layout (BMP 13.5). Concern: A minimum 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>
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<p>WILDLIFE: Concern: Unit is located in a potential travel corridor that may maintain connectivity to the OG LUD. Response: Proposed harvest system will retain 75% of the basal area. Retention will help to maintain connectivity. Concern: Goshawk observed around the unit. Surveys did not identify a nest site. Response: Goshawk is likely associated with identified nest site. 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: Red-tailed hawk observed adjacent to 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.</p>

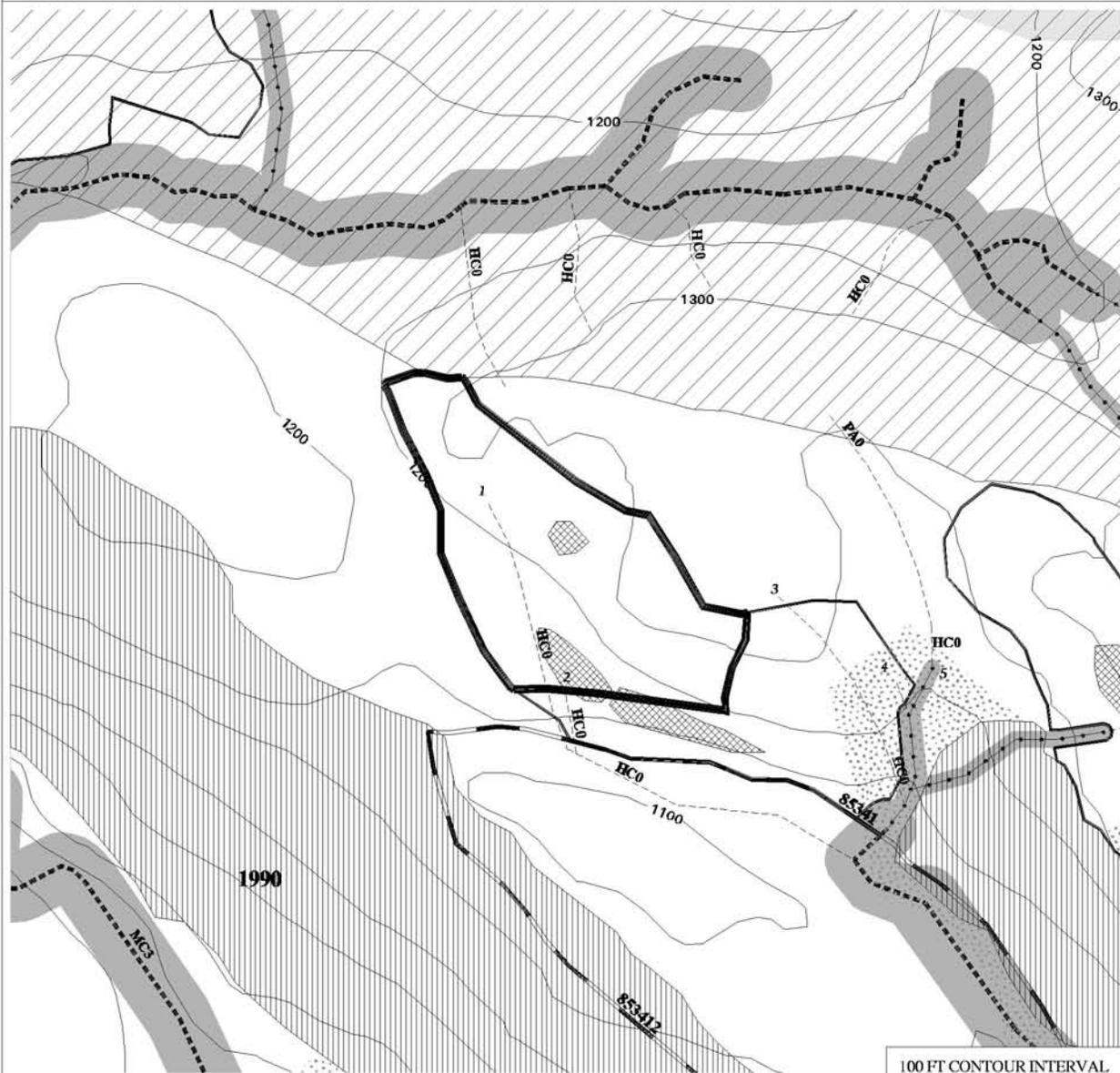
IYOUKTUG TIMBER SALE UNIT CARD PLANNED HARVEST UNIT MAP

UNIT NUMBER: 171 VCU: 2100 HARVEST SYSTEM: Helicopter

UNIT 171 OCCURS IN ALTERNATIVE(S): 4



MAPSCALE 1:7200



100 FT CONTOUR INTERVAL

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

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

- HC6
- 1



August 20, 2007

Unit Data Card – Iyouktug Timber Sale Draft EIS
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Unit Number:	171	In Alternatives:	4	Total Unit Acres:	16.4	Vol Strata Acres:	High: 0 Med: 13.0 Low: 3.4
VCU Number:	2100	Harvest System:	HE	Net Estimated Harvest Volume (MBF):	120	Prescription /Percent Retention:	ST25

Summary of Concerns, Responses, BMPs and Mitigation
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SILVICULTURE:

<p>Existing Stand Condition/Vegetation: Stand consists of 20-38" DBH western hemlock (43% BA), 12-28" DBH mountain hemlock (36% BA) and 20-38" DBH spruce (21% BA). The southern portion of the unit contains most of the larger diameter trees and the northern portion is almost pure mountain hemlock. Western hemlock advanced regeneration is abundant with some spruce also present. Wind risk is moderate.</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 requirements.</p>

<p>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 or corridors to facilitate helicopter yarding. Refer to the intro to unit cards, marking guidelines and detailed RX for more information.</p>
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<p>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 and 2 are Class IV HC channels. Response:Category C protection (BMP 12.6, 13.14). Remove logging debris from channel (BMP 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>

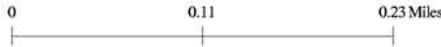
<p>SOILS/WETLANDS: Slopes range from 35-75% in Unit 171. There is less than 1 acre of slopes over 72%. The soils are well drained in dense till. Concern: Timber harvest may accelerate landsliding on slopes over 72% gradient. Response: Avoid the steep area during layout (BMP 13.5). Concern: A minimum 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>
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<p>WILDLIFE: Concern: Unit is located in a potential travel corridor that may maintain connectivity to the OG LUD. Response: Proposed harvest system will retain 75% of the basal area. Retention will help to maintain connectivity. Concern: Goshawk observed around the unit. Surveys did not identify a nest site. Response: Goshawk is likely associated with identified nest site. 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: Red-tailed hawk observed adjacent to 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.</p>

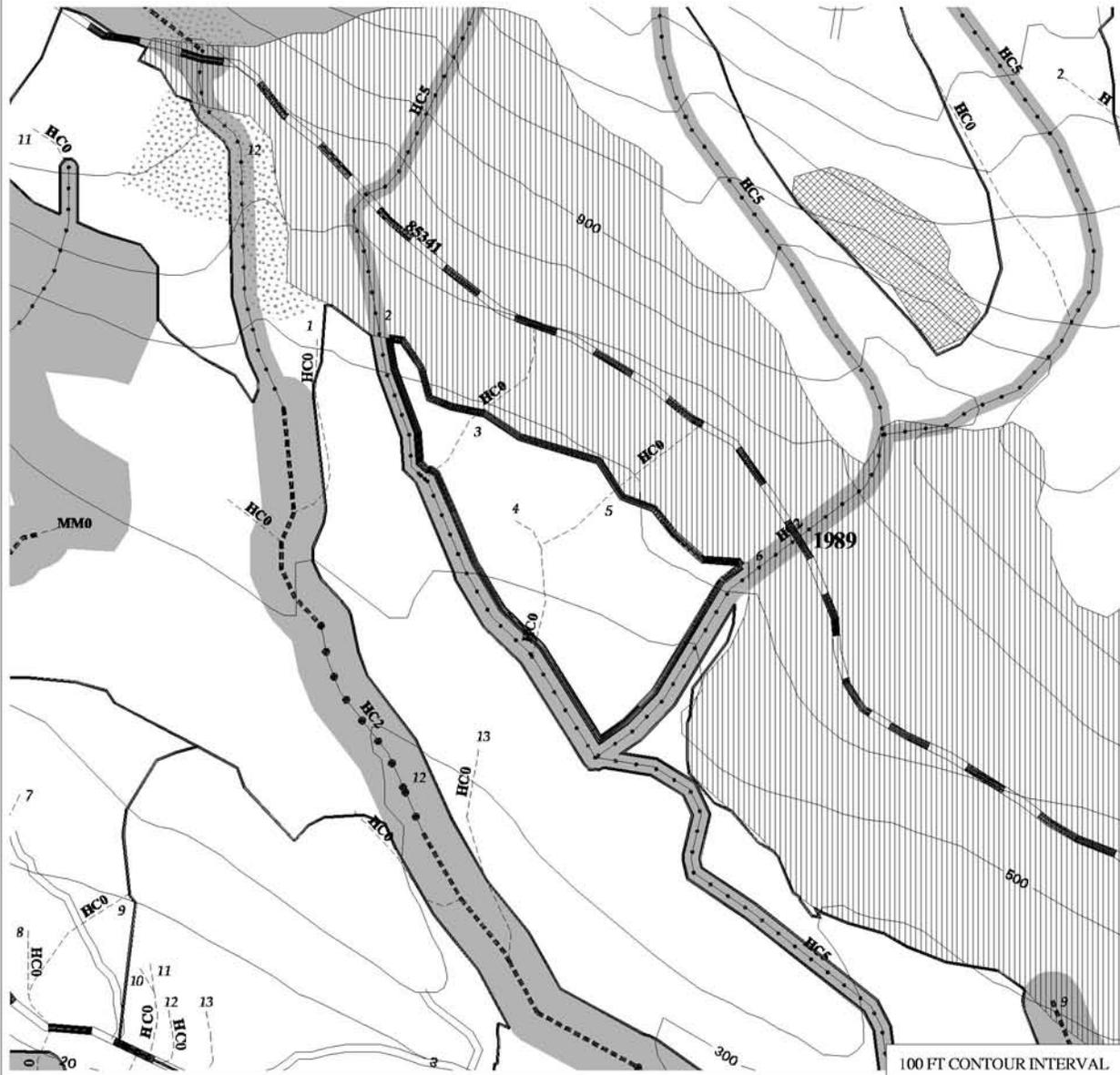
IYOUKTUG TIMBER SALE UNIT CARD PLANNED HARVEST UNIT MAP

UNIT NUMBER: 174 VCU: 2100 HARVEST SYSTEM: Helicopter

UNIT 174 OCCURS IN ALTERNATIVE(S): 2 3 4



MAPSCALE 1:7200

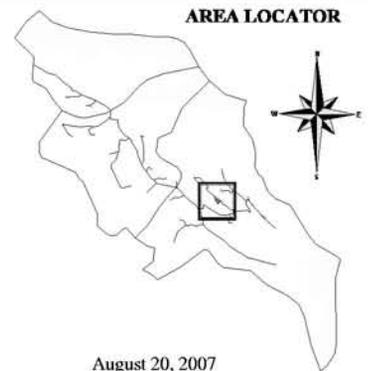


100 FT CONTOUR INTERVAL

- 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

-
-
- HC6
- 1



Unit Data Card – Iyouktug Timber Sale Draft EIS
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Unit Number:	174	In Alternatives:	2, 3, 4	Total Unit Acres:	14.1	Vol Strata Acres:	High: 0 Med: 14.1 Low: 0
VCU Number:	2100	Harvest System:	HE	Net Estimated Harvest Volume (MBF):	164	Prescription /Percent Retention:	ST40

Summary of Concerns, Responses, BMPs and Mitigation
--

SILVICULTURE:

<p>Existing Stand Condition/Vegetation: Stand consists of 20-38" DBH western hemlock (43% BA), 12-28" DBH mountain hemlock (36% BA) and 20-38" DBH spruce (21% BA). The southern portion of the unit contains most of the larger diameter trees and the northern portion is almost pure mountain hemlock. Western hemlock advanced regeneration is abundant with some spruce also present. 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 and high value marten habitat requirements.</p>

<p>Silvicultural Prescription: Uneven-aged management – Single tree selection. Designate up to 40 percent of existing basal (120 sq.ft.per acre) area singly and/or in small clumps or corridors to facilitate helicopter yarding. Refer to the intro to unit cards, marking guidelines and detailed RX for more information.</p>
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<p>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 2 and 6 are Class III HC/MC channels along unit boundaries. Response: Category B protection (BMP 12.6, 13.14). No harvest within v-notch (RIP III). Concern: Stream 3 is a Class IV HC channel with steep, unstable side-slopes. Response: Category B protection (BMP 12.6, 13.14). Concern: Streams 4 and 5 are Class IV HC channels. Response: Category C protection (BMP 12.6, 13.14). Remove logging debris from channel (BMP 13.16).</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>

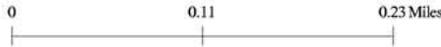
<p>SOILS/WETLANDS: Slopes range from 35-55% in Unit 174. Concern: A minimum of partial suspension is required to meet soil quality standards (BMP 13.9). Response: Unit is proposed as full suspension, which exceeds partial suspension requirements.</p>

<p>WILDLIFE: No concerns</p>

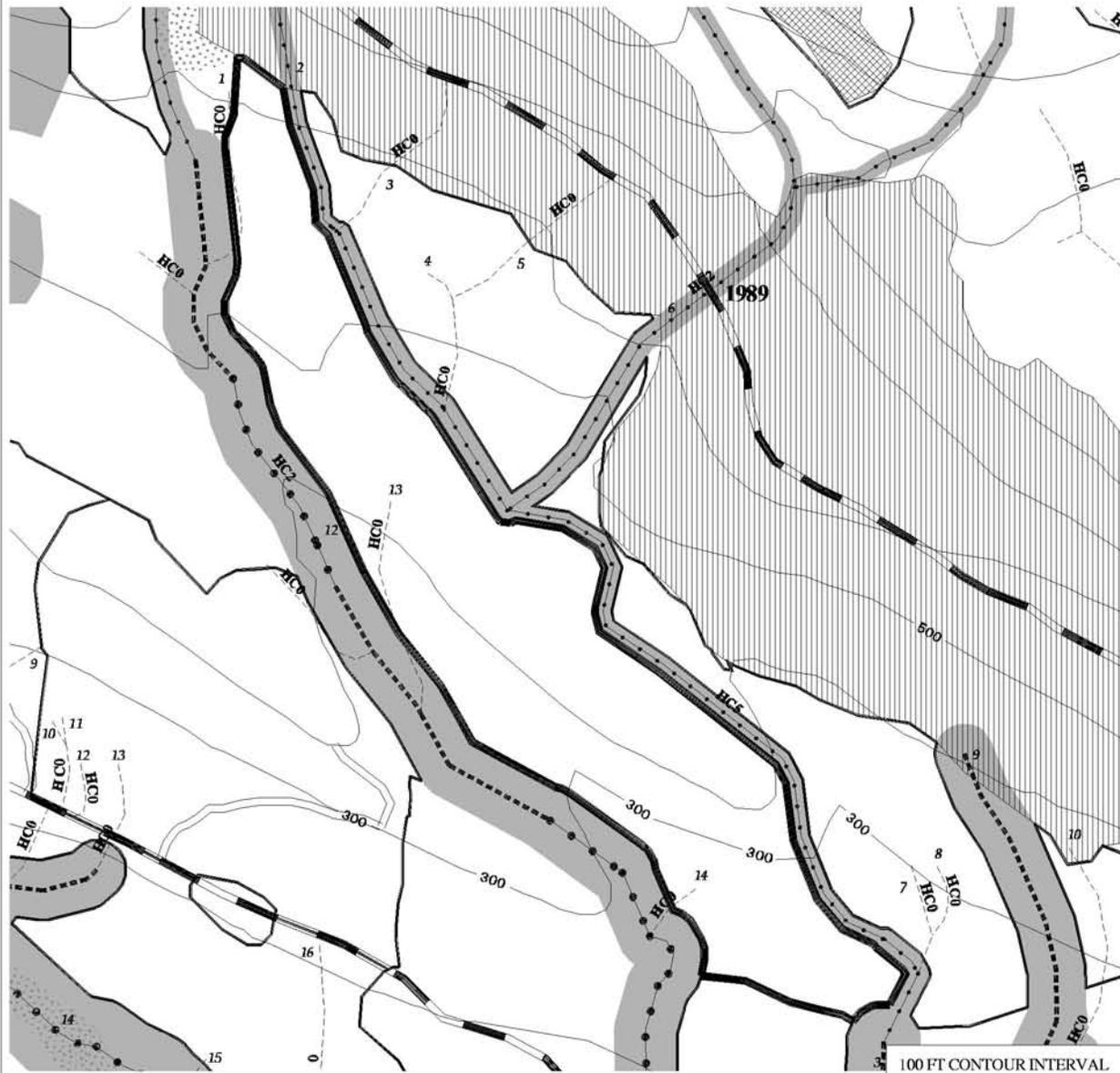
IYOUKTUG TIMBER SALE UNIT CARD PLANNED HARVEST UNIT MAP

UNIT NUMBER: 175 VCU: 2100 HARVEST SYSTEM: Helicopter

UNIT 175 OCCURS IN ALTERNATIVE(S): 2 3 4



MAPSCALE 1:7200

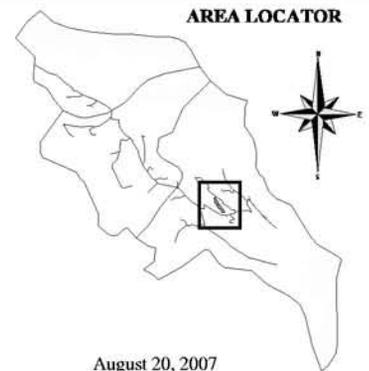


100 FT CONTOUR INTERVAL

- 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

-
-
- HC6
- 1
-
-
-
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-
-



Unit Data Card – Iyouktug Timber Sale Draft EIS
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Unit Number:	175	In Alternatives:	2, 3, 4	Total Unit Acres:	40.4	Vol Strata Acres:	High: 0 Med: 5.9 Low: 34.5
VCU Number:	2100	Harvest System:	HE	Net Estimated Harvest Volume (MBF):	326	Prescription /Percent Retention:	ST40

Summary of Concerns, Responses, BMPs and Mitigation
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SILVICULTURE:

<p>Existing Stand Condition/Vegetation: This stand consists of many smaller defective 9-19" DBH western hemlock (52% BA), some larger diameter 20-35" DBH spruce (24% BA), 9-23" DBH yellow-cedar (19% BA) and 20-24" DBH mountain hemlock (5% 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, 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 (160 sq.ft.per acre) area singly and/or in small clumps or corridors to facilitate helicopter yarding. Refer to the intro to unit cards, marking guidelines and detailed RX for more information.</p>
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<p>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 IV HC channel with unstable side-slopes that runs into a fish stream. Response: Category B protection (BMP 13.16). Remove logging debris from channel (BMP 13.16). Concern: Stream 2 is Class III HC/MC channel along unit boundary. Response: Category B protection (BMP 12.6, 13.14). No harvest within v-notch (RIP III). Concern: Stream 12 is a Class II HC/MC channel along unit boundary. Response: Category A protection (BMP 12.6, 13.14). No harvest within 100 feet of channel and side-slope break. (RIP III). Concern: Streams 13 and 14 are Class IV HC channels. Response: Category C protection (BMP 12.6, 13.14). Remove logging debris from channel (BMP 13.16).</p>
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<p>GEOLOGY/KARST: No carbonate bedrock found within unit. No karst resource concerns identified.</p>

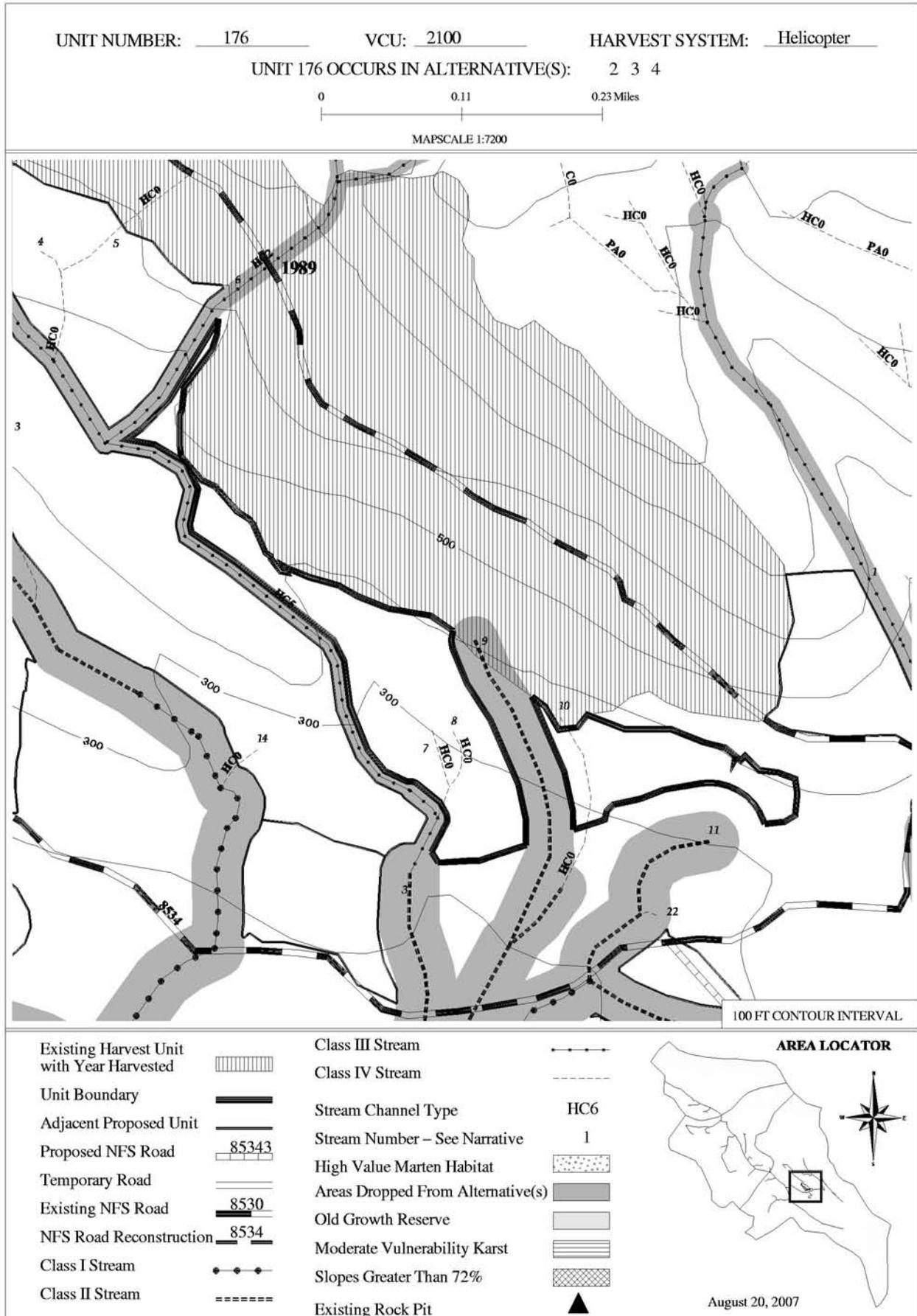
<p>HERITAGE RESOURCES: No concerns</p>

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

<p>SOILS/WETLANDS: Slopes range from 35-55% in Unit 175. Concern: wetlands exist in the northern quarter of Unit 175. Response: Helicopter logging will protect wetlands and meet resource objectives. (BMP 12.5) Rest of unit is suitable for proposed helicopter harvest. (BMP 13.9)</p>

<p>WILDLIFE: Concern: Goshawk observed around the unit. Surveys did not identify a nest site. Response: Goshawk is likely associated with identified nest site. 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.</p>

IYOUKTUG TIMBER SALE UNIT CARD PLANNED HARVEST UNIT MAP



Unit Data Card – Iyouktug Timber Sale Draft EIS
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Unit Number:	176	In Alternatives:	2, 3, 4	Total Unit Acres:	21.4	Vol Strata Acres:	High: 0 Med: 6.6 Low: 14.8
VCU Number:	2100	Harvest System:	HE	Net Estimated Harvest Volume (MBF):	121	Prescription /Percent Retention:	ST25

Summary of Concerns, Responses, BMPs and Mitigation
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SILVICULTURE:

<p>Existing Stand Condition/Vegetation: This stand consists primarily of smaller diameter, defective 9-20" DBH western hemlock (63% BA), 12-23" DBH yellow-cedar (19% BA), 20-23" DBH mountain hemlock (13% BA) and a minor component of larger diameter 32-35" DBH spruce (6% BA). Western hemlock advanced regeneration is abundant with some spruce and yellow-cedar also present. The slopes are relatively flat and hydric. 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 (140 sq.ft.per acre) area singly and/or in small clumps or corridors to facilitate helicopter yarding. Refer to the intro to unit cards, marking guidelines and detailed RX for more information.</p>
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<p>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 6 is a Class III HC channel that runs along the north and west unit boundaries. Response: Category B protection (BMP 12.6, 13.14). No harvest within v-notch (RIP III). Concern: Streams 7 and 8 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 part of stream 7 is a Class IV HC channel with unstable side-slopes that runs into a fish stream. Response: Category B protection (BMP 13.16). Remove logging debris from channel (BMP 13.16). Concern: Stream 9 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). Concern: Stream 10 is a Class IV HC channel. Response: Category C protection (BMP 12.6, 13.14). Remove logging debris from channel (BMP 13.16).</p>
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<p>GEOLOGY/KARST: No carbonate bedrock found within unit. No karst resource concerns identified.</p>

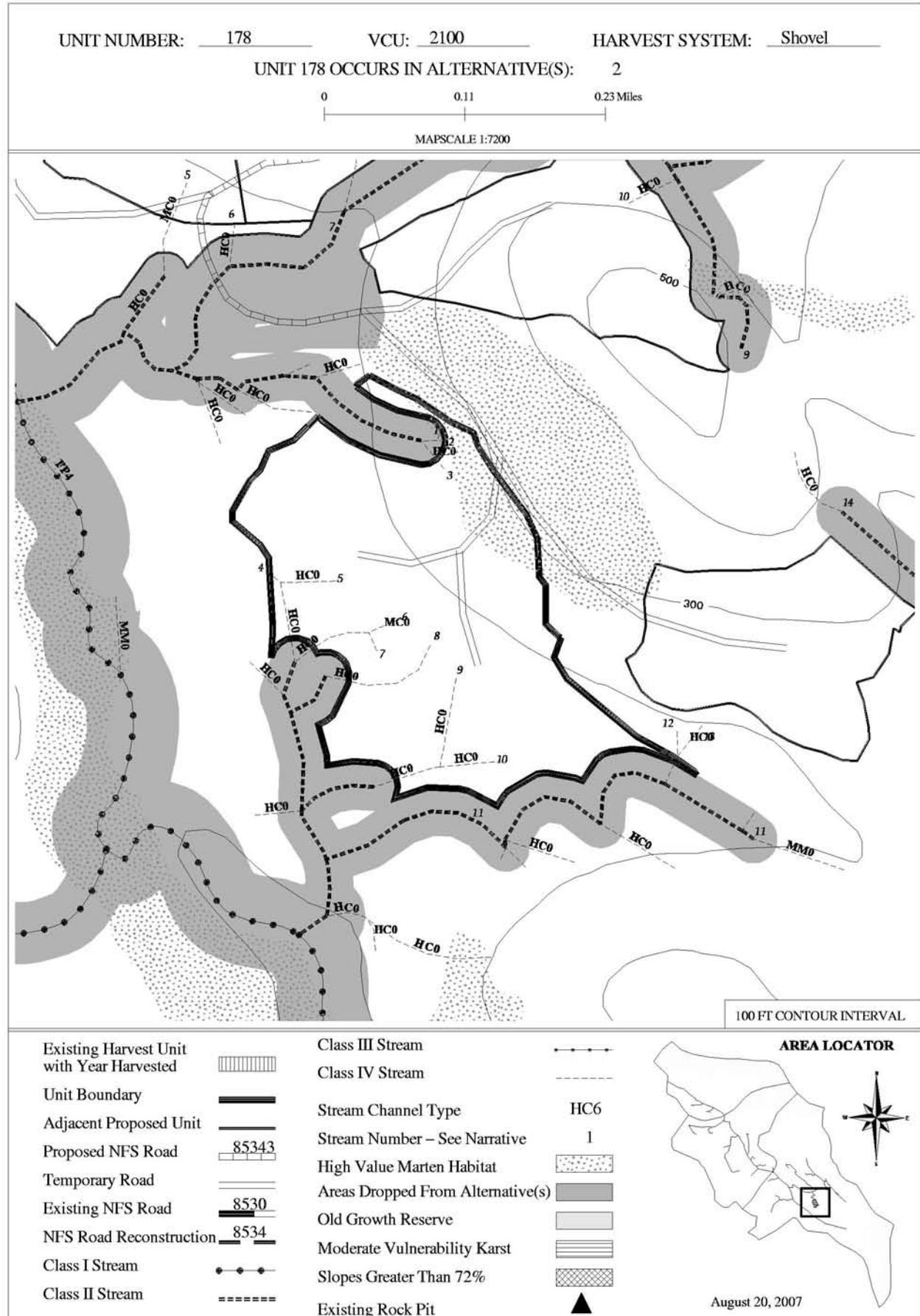
<p>HERITAGE RESOURCES: No concerns</p>

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

<p>SOILS/WETLANDS: Slopes range from 35-55% in Unit 176. 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.</p>

<p>WILDLIFE: No concerns</p>

IYOUKTUG TIMBER SALE UNIT CARD PLANNED HARVEST UNIT MAP



Unit Data Card – Iyouktug Timber Sale Draft EIS
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Unit Number:	178	In Alternatives:	2	Total Unit Acres:	37.6	Vol Strata Acres:	High: 2.9 Med: 3.5 Low: 31.2
VCU Number:	2100	Harvest System:	SH	Net Estimated Harvest Volume (MBF):	385	Prescription /Retention:	ST50

Summary of Concerns, Responses, BMPs and Mitigation
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SILVICULTURE:

<p>Existing Stand Condition/Vegetation: Stand is comprised primarily of smaller 9-20" DBH western hemlock (70% BA) with some scattered spruce (10% BA), small diameter yellow-cedar (10% BA), and mountain hemlock (10% BA). Western hemlock advanced regeneration is abundant with some spruce and yellow-cedar also present. Slopes are relatively flat (10%) and hydric. Wind 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, 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 50 percent of existing basal (120 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.</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 roads 77A, 178B, and 178C access unit from existing Road 8534 via planned NFSR 85345. Road location has been flagged. Deviations to flagged route must be approved by USFS prior to construction.</p>
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<p>BOTANY RESOURCES: No concerns</p>

<p>FISH/WATERSHED: Concern: Streams 1 (upper), 2, 3, 4 (upper) 5, 6, 7, 8 (upper), 9 (upper), 10, 12, and 13 are Class IV HC channels. 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, 13.14). Remove logging debris from channel (BMP 13.16). Concern: Stream 1 (lower), 4 (lower), 8 (lower), and 9 (lower) are Class II HC/MC channels. Response: Category A protection (BMP 12.6, 13.14). No harvest within 100 feet and side-slope break (RIP III). Concern: Stream 11 is a Class II MM channel. Response: Locate unit north of stream buffer is feasible. Category A protection (BMP 12.6, 13.14). No harvest within 120 feet of channel (RIP III). 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).</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 10-25% in Unit 178. Nearly all of the unit is forested wetland. (BMP 12.5) Concern: Shovel yarding may cause rutting due to lack of bearing strength on poorly drained organic soils in Unit 178. Response: Operate on a puncheon or a slash mattress to provide adequate bearing strength. (BMP 13.9) Concern: Proposed temporary road crosses about 500' of wetlands while trying to maintain grade. 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

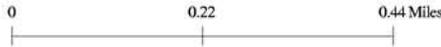
WILDLIFE: Concern: Unit contains high value marten habitat. **Response:** Retain 10-20% of original stand structure as measured by basal area or trees per acre in high value marten habitat. Maintain an average of 4 large live trees/acre (20-30" DBH or larger), 3 snags or decadent trees/acre (20-30" DBH 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.

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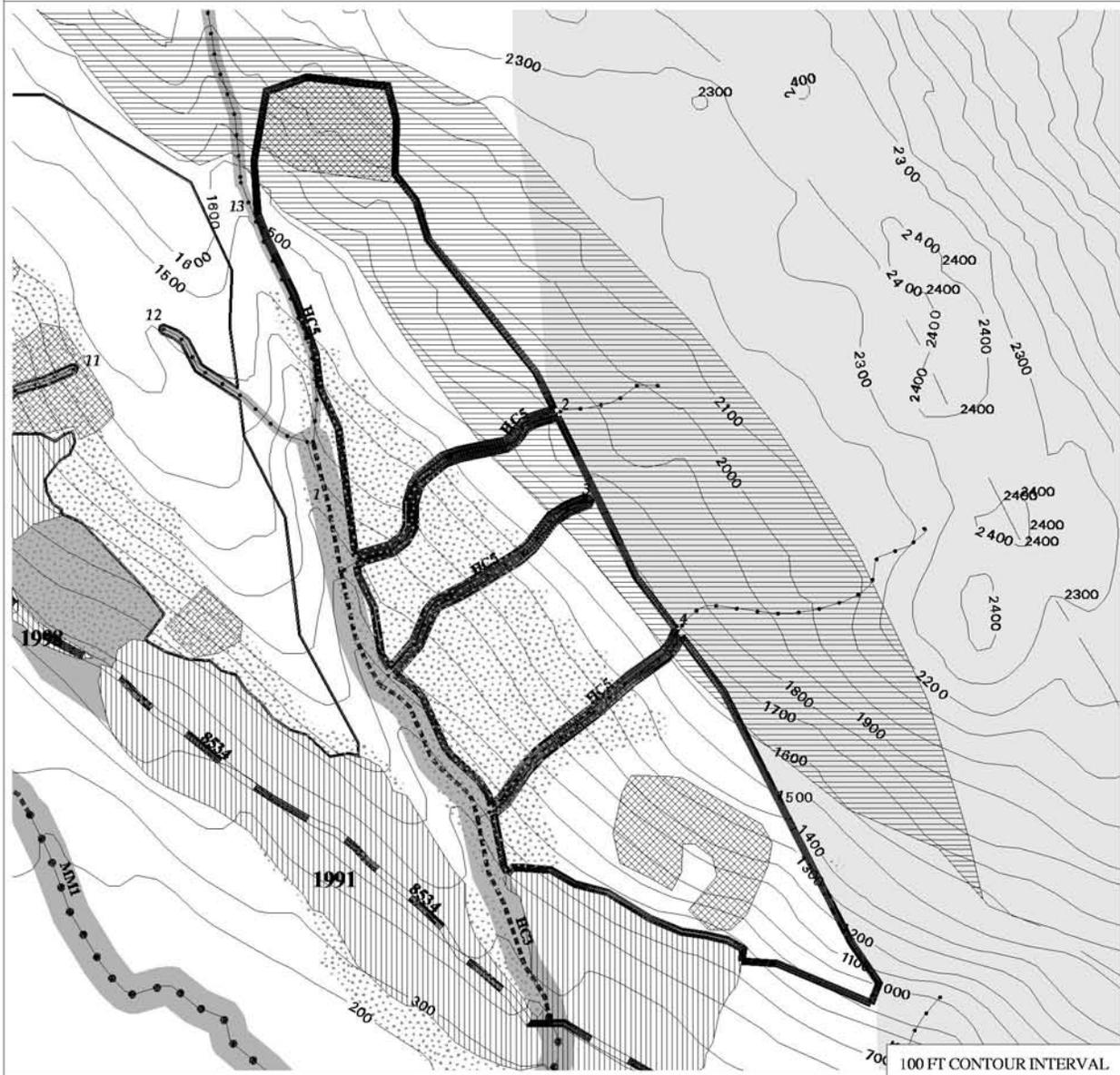
IYOUKTUG TIMBER SALE UNIT CARD PLANNED HARVEST UNIT MAP

UNIT NUMBER: 184 VCU: 2100 HARVEST SYSTEM: Helicopter

UNIT 184 OCCURS IN ALTERNATIVE(S): 2 3



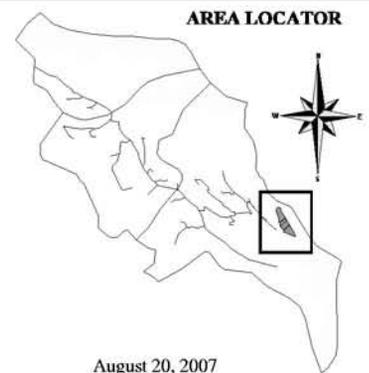
MAPSCALE 1:14000



- 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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August 20, 2007

Unit Data Card – Iyouktug Timber Sale Draft EIS
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Unit Number:	184	In Alternatives:	2, 3	Total Unit Acres:	202.4	Vol Strata Acres:	High: 151.2 Med: 50.1 Low: 1.1
VCU Number:	2100	Harvest System:	HE	Net Estimated Harvest Volume (MBF):	1,997	Prescription /Percent Retention:	ST25

Summary of Concerns, Responses, BMPs and Mitigation
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SILVICULTURE:

<p>Existing Stand Condition/Vegetation: The northern third of stand is comprised predominantly of mountain hemlock and a few scattered spruce. The middle third of unit consists of a mix of mountain hemlock, western hemlock, and tall spruce with little defect. The southern third consists of western hemlock and larger diameter spruce with little defect. Slopes average 60%. Wind risk is moderate to 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 and high value marten habitat requirements.</p>

<p>Silvicultural Prescription: Uneven-aged management – Single tree selection. Designate up to 25 percent of existing basal (322 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: GIS-mapped stream 1 is a Class II HC3 channel. Response: Category A protection (BMP 12.6, 13.14). No harvest within 100 feet and side-slope break (RIP III). Concern: GIS-mapped streams 13, 2, 3, and 4 are Class III HC channels. Response: Category B protection (BMP 12.6, 13.14). No harvest within v-notch (RIP III). Concern: Windthrow risk is high. Response: Manage for windfirmness 120 feet beyond no-cut buffers.</p>
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<p>GEOLOGY/KARST: Concern: There are about 56 acres of moderate vulnerability karst along the northern and eastern boundaries of Unit 184. Response: A minimum of partial suspension is required to meet karst resource objectives (BMP 13.9).</p>
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<p>HERITAGE RESOURCES: No concerns</p>

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

<p>SOILS/WETLANDS: Slopes are generally greater than 55% in Unit 184. There are two large areas of slopes greater than 72% for a total of 27 acres. 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 the RAW zone. Slopes up to 80% may be harvested with the proposed helicopter prescription and full suspension. Avoid slopes greater than 80% in Unit 185. (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>

<p>WILDLIFE: Concern: Unit contains high value marten habitat. Response: Proposed harvest system will not create openings greater than 2 acres in size within this habitat. Retention of 75% of the basal area will meet marten standards and guidelines.</p>

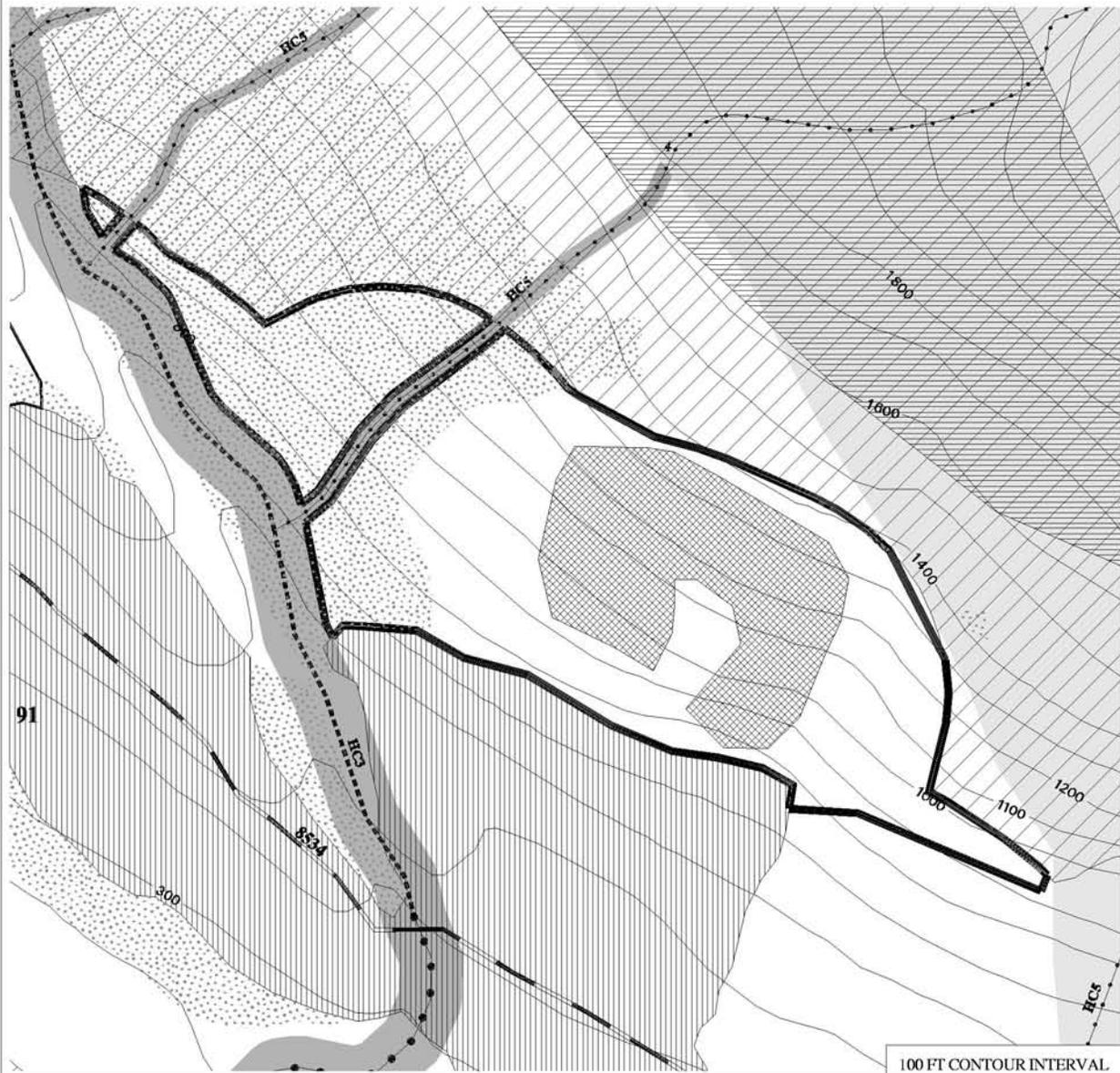
IYOUKTUG TIMBER SALE UNIT CARD PLANNED HARVEST UNIT MAP

UNIT NUMBER: 184 VCU: 2100 HARVEST SYSTEM: Helicopter

UNIT 184 OCCURS IN ALTERNATIVE(S): 4



MAPSCALE 1:7200



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

AREA LOCATOR

August 20, 2007

Unit Data Card – Iyouktug Timber Sale Draft EIS					
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Unit Number:	184	In Alternatives:	4	Total Unit Acres:	58.3	Vol Strata Acres:	High: 17.2 Med: 41.0 Low: 0
VCU Number:	2100	Harvest System:	HE	Net Estimated Harvest Volume (MBF):	512	Prescription /Percent Retention:	ST25

Summary of Concerns, Responses, BMPs and Mitigation
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SILVICULTURE:

<p>Existing Stand Condition/Vegetation: The northern third of stand is comprised predominantly of mountain hemlock and a few scattered spruce. The middle third of unit consists of a mix of mountain hemlock, western hemlock, and tall spruce with little defect. The southern third consists of western hemlock and larger diameter spruce with little defect. Slopes average 60%. Wind risk is moderate to 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 and high value marten habitat requirements.</p>

<p>Silvicultural Prescription: Uneven-aged management – Single tree selection. Designate up to 25 percent of existing basal (322 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: GIS-mapped stream 1 is a Class II HC3 channel. Response: Category A protection (BMP 12.6, 13.14). No harvest within 100 feet and side-slope break (RIP III). Concern: GIS-mapped streams 13, 2, 3, and 4 are Class III HC channels. Response: Category B protection (BMP 12.6, 13.14). No harvest within v-notch (RIP III). Concern: Windthrow risk is 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 are generally greater than 55% in Unit 184. There are about 15 acres of slopes greater than 72%. 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 the RAW zone. Slopes up to 80% may be harvested with the proposed helicopter prescription and full suspension. Avoid slopes greater than 80% in Unit 185. (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: Unit contains high value marten habitat. Response: Proposed harvest system will not create openings greater than 2 acres in size within this habitat. Retention of 75% of the basal area will meet marten standards and guidelines.</p>
