Crystal Falls Forest Management Unit
Compartment Review Presentation
Compartment \# 7 Entry Year: 2012
Compartment Acreage: 3284 County: Dickinson

Revision Date: July 19, 2010
Stand Examiner: Scott Sebero

Legal Description: T44N, R29W, Sections 9, 15, 16, 17, 19, 20, 21, 29 \& 30.

## Identified Planning Goals ('Management Area’ or ‘RMU’,if applicable):

Management Goals: Our management goals in this compartment are to develop age class distribution in aspen types, maintain health of conifer types and increase acreage where possible, and to develop the quality while maintaining diversity in hardwood types.

Soil and Topography: Land is nearly level to hilly with a mix of Pemene and Emmet soils that are welldrained loamy and sandy soils on ground moraines, end moraines and outwash plains. Some areas contain rock outcrops up to 50 feet in height. Some narrow depressions contain Cathro soils that are poorly drained black muck.

Ownership Patterns, Development, and Land Use in and Around the Compartment: Ownership patterns in and around this compartment consist mostly of State lands with a few private parcels and camps. These lands are used mainly for hunting and managed for forest products.

Unique, Natural Features: Two Mile Creek.

Archeological, Historical, and Cultural Features: None.

Special Management Designations or Considerations: None.

## Watershed and Fisheries Considerations:

Wildlife Habitat Considerations: Compartment 7 is located in the heart of the Floodwood Deeryard in northwest Dickinson County. Almost $3 / 4$ of the compartment is a combination of aspen and swamp conifer types. Many of the swamp conifer types are high quality cedar that should be protected. Care should be taken to assure the stands remain intact, if harvesting takes place in adjacent stands. Adequate buffers to
protect drainages and guard against blow down should be provided in all upland sales. Travel corridors should be maintained between Q-types.

Mineral Resource and Development Concerns and/or Restrictions: Surface sediments consist of medium-textured till and glacial outwash sand and gravel and postglacial alluvium. The glacial drift thickness varies between 0 and 100 feet in the west. Precambrian granite/gneiss and the Michigamme Formation subcrop below the glacial drift. There is not an economic use for these rocks, although some of the granite might have dimension stone potential. Iron mines are located approximately fourteen miles to the south. A gravel pit is indicated two miles to the west. There appears to be good gravel potential in the compartment. Part of this area was previously leased for metallic exploration and potential may still exist. The Compartment to the north has been nominated for metallic leasing. There is no economic oil and gas production in the UP.

Vehicle Access: Vehicle access is from Two Mile Creek Road and associated trail roads.

Survey Needs: None.

Recreational Facilities and Opportunities: This area is used heavily by both deer and grouse hunters. Two Mile Creek is a good quality trout stream.

Fire Protection: None.

Additional Compartment Information: None.
$>$ The following reports from the Inventory are attached:

- Total Acres by Cover Type and Age Class
- Proposed Treatment Summary
- Proposed Treatments - No Limiting Factors
- Proposed Treatments - With Limiting Factors
- Stand Details (Forested and Nonforested)
- Dedicated and Proposed Special Conservation Areas
> The following information is displayed, where pertinent, on the attached compartment maps:
- Base feature information, stand boundaries, cover types, and numbers
- Proposed treatments
- Details on the road access system




|  | Age Class |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |
| :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: |
|  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |
| Aspen | 0 | 221 | 171 | 287 | 357 | 97 | 0 | 0 | 109 | 6 | 0 | 0 | 0 | 0 | 0 | 1248 |
| Cedar | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 902 | 0 | 0 | 0 | 0 | 0 | 902 |
| Jack Pine | 0 | 10 | 0 | 0 | 0 | 0 | 30 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 40 |
| Lowland Conifers | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 35 | 0 | 0 | 0 | 0 | 0 | 35 |
| Lowland Shrub | 160 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 160 |
| Lowland Spruce/Fir | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 267 | 0 | 0 | 0 | 0 | 0 | 267 |
| Northern Hardwood | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 6 | 220 | 0 | 0 | 0 | 0 | 227 |
| Red Pine | 0 | 0 | 0 | 0 | 0 | 0 | 30 | 0 | 0 | 108 | 0 | 0 | 0 | 0 | 0 | 138 |
| Upland Conifers | 0 | 0 | 0 | 0 | 40 | 0 | 0 | 0 | 0 | 26 | 0 | 0 | 0 | 0 | 0 | 67 |
| Upland Mixed Forest | 0 | 0 | 0 | 107 | 0 | 0 | 0 | 0 | 39 | 0 | 0 | 0 | 0 | 0 | 0 | 146 |
| Upland Shrub | 46 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 46 |
| Upland Spruce/Fir | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 11 | 0 | 0 | 0 | 0 | 0 | 11 |
| Total | 205 | 231 | 171 | 394 | 397 | 97 | 60 | 0 | 147 | 1361 | 220 | 0 | 0 | 0 | 0 | 3284 |

Table 2 - Proposed Treatment Summaries
Crystal Falls Mgt. Unit
Compartment 007

|  |  | Acres by Treatment Type |  |  |
| :--- | :--- | :--- | :--- | :--- |
| Commercial Harvest - 350 | Site Prep - 0 | Tree Planting -0 | Prescribed Burn -0 | Other -0 |
| Habitat Cut -0 | Opening Maintenance - 0 | Tree Seeding -0 | Pesticide -0 |  |

Cover Type by Harvest Method

|  |  |  |  |  |  |  |  |
| :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: |
| Aspen |  |  |  | 0 | 0 | 0 | 115 |
| Jack Pine | 30 | 0 | 0 | 0 | 0 | 0 | 30 |
| Northern Hardwood | 0 | 0 | 0 | 0 | 6 | 0 | 6 |
| Red Pine | 0 | 108 | 0 | 0 | 15 | 0 | 123 |
| Upland Conifers | 26 | 0 | 0 | 0 | 0 | 0 | 26 |
| Upland Mixed Forest | 39 | 0 | 0 | 0 | 0 | 0 | 39 |
| Upland Spruce/Fir | 11 | 0 | 0 | 0 | 0 | 0 | 11 |
| Total | 220 | 108 | 0 | 0 | 22 | 0 | 350 |


| a <br> $\mathbf{n}$ <br> d | Treatment <br> Name | Acres | Stage1 <br> CoverType | Size <br> Density | Stand <br> Age | Treatment <br> Type | Treatment <br> Method | Cover Type <br> Objective |
| :--- | :--- | :--- | :--- | :--- | :--- | :---: | :--- | :--- |
| $\mathbf{5}$ | 12007005-Cut | 38.9 | 4319-Mixed <br> Upland Forest | High Density Log | 70 | Harvest | Clearcut with <br> Reserves | Aspen, Spruce/Fir <br> Status |
| Cmpt. Review |  |  |  |  |  |  |  |  |
| Proposal |  |  |  |  |  |  |  |  |




Prescription Cut every third row of red pine. Cut all aspen and mixed hardwood 2 " or greater DBH. Cut all balsam and spruce with a stump diameter of six Specs: inches or more. No oak, cedar or hemlock will be cut.

Other
Comments:
Next
Steps:

| 34 | 12007034-Cut | 2.2 | 42210 - Natural Red Pine | High Density Log | 85 | Harvest | Single Tree Selection | Natural Red Pine | Cmpt. Review Proposal |
| :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: |
| PrescriptionSpecs:Cut all aspen and mixed hardwood 2 " or greater DBH. Cut all spruce, balsam and jackpine with a stump diameter greater than 5 ". Red andwhite be marked to remove trees within all size classes. Some small regeneration gaps will be marked out. BA will be reduced to |  |  |  |  |  |  |  |  |  |
| Specs: white pine will be marked to remove trees within all size classes. Some small regeneration gaps will be marked out. BA will be reduced to |  |  |  |  |  |  |  |  |  |
| Other |  |  |  |  |  |  |  |  |  |
| Comments: |  |  |  |  |  |  |  |  |  |
| Next Regen survey per work constructions. |  |  |  |  |  |  |  |  |  |
| Steps: |  |  |  |  |  |  |  |  |  |
|  | 12007039-Cut |  | 4117 - Mixed N. Hardwood - Pine | High Density Pole |  | Harvest | Crown Thinning | Mixed N. Hardwood Pine | Cmpt. Review Proposal |
|  |  |  |  |  |  |  |  |  |  |
| Specs: |  |  |  |  |  |  |  |  |  |
| Other |  |  |  |  |  |  |  |  |  |
| Comments: |  |  |  |  |  |  |  |  |  |
| Next |  |  |  |  |  |  |  |  |  |
| Steps: |  |  |  |  |  |  |  |  |  |


| a <br> n <br> d | Treatment <br> Name | Acres | Stage1 <br> CoverType | Size <br> Density | Stand <br> Age | Treatment <br> Type | Treatment <br> Method | Cover Type <br> Objective | Approval <br> Status |
| :--- | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: |
| $\mathbf{4 0}$ | 12007040-Cut | 84.4 | 42210 - Natural <br> Red Pine | High Density Log | 85 | Harvest | Single Tree Selection | Natural Red Pine | Cmpt. Review <br> Proposal |





Prescription Cut all aspen and mixed hardwood 2" and greater DBH. Cut all spruce and balsam with a stump diameter of six inches or more. No cedar, Specs: hemlock, oak or red and white pine will be cut.

Other
Comments:
Next Regen survey as per work constructions.
Steps:

| 12007052-Cut | 48.7 | 4130 -Aspen | High Density Pole 76 | Harvest | Clearcut with <br> Reserves | Aspen | Cmpt. Review <br> Proposal |
| :--- | :--- | :--- | :--- | :--- | :--- | :--- | :--- |

Prescription Cut all aspen and mixed hardwood greater than 2" DBH. Cut all spruce and balsam with a stump diameter of six inches or greater. No cedar, Specs: hemlock, oak or red and white pine will be cut.

Other
Comments:
Next Regen survey per work constructions.
Steps:


Total Treatment
Acreage Proposed:

Other
Comment:
Next
Steps:
Limiting Factor and No
Treatment Reason

Total Treatment Acreage Proposed: 0

| S | Crystal Falls | Mgt. Unit | 5 - Forested Stands <br> Inventory Method: IFMAP |  |  | Compartment: 007 <br> Year of Entry: 2012 |  |
| :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: |
| a n d | Level 4 Cover Type | Size Density | Acres | Stand Age | BA Range | General Comments: |  |
| 3 | 6122 - Black Spruce | High Density Pole | 6.1 | 85 | 81-110 |  |  |
| 4 | 4136 - Aspen, Mixed Conifer | High Density Pole | 16.9 | 40 | 1-50 |  |  |
| 5 | 4319 - Mixed Upland Forest | High Density Log | 38.9 | 70 | 81-110 |  |  |
| 6 | 4130 - Aspen | High Density Pole | 60.7 | 37 | 51-80 |  |  |
| 8 | 6120 - Lowland Cedar | High Density Pole | 201.4 | 85 | 111-140 |  |  |
| 11 | 4136 - Aspen, Mixed Conifer | High Density Sapling | 46.7 | 13 |  |  |  |
| 12 | 42221 - Natural Jack Pine, Mixed Deciduous | Low Density Sapling | 9.8 | 7 |  |  |  |
| 14 | 42380 - Non Pine Upland Conifer, Mixed Deciduous | High Density Pole | 26.4 | 85 | 81-110 |  |  |
| 15 | 4110 - Sugar Maple Association | High Density Pole | 22.7 | 90 | 81-110 |  |  |
| 16 | 4130 - Aspen | High Density Pole | 44.4 | 35 | 51-80 |  |  |
| 17 | 4130 - Aspen | High Density Sapling | 77.2 | 7 |  |  |  |
| 20 | 4134 - Aspen, Spruce/Fir | High Density Pole | 55.8 | 26 | 1-50 |  |  |
| 21 | 4130 - Aspen | High Density Sapling | 83.3 | 6 |  |  |  |
| 22 | 4119 - Mixed Northern Hardwoods | High Density Pole | 27.7 | 90 | 81-110 |  |  |
| 23 | 4130 - Aspen | High Density Pole | 13.8 | 40 | 51-80 |  |  |
| 24 | 42110 - Planted Red Pine | High Density Pole | 15.4 | 54 | 111-140 |  |  |
| 26 | 6120 - Lowland Cedar | High Density Pole | 78.1 | 85 | 111-140 |  |  |
| 27 | 6122 - Black Spruce | High Density Pole | 55.4 | 85 | 111-140 |  |  |


| S | Crystal Falls | Mgt. Unit |  |  | sted Stands <br> Method: IFMAP | Compartment: 007 <br> Year of Entry: 2012 |  |
| :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: |
| a n d | Level 4 Cover Type | Size Density | Acres | Stand Age | BA Range | General Comments: |  |
| 28 | 4130 - Aspen | High Density Pole | 45.7 | 41 | 51-80 |  |  |
| 29 | 4134 - Aspen, Spruce/Fir | High Density Sapling | 25.5 | 13 |  |  |  |
| 30 | 4319 - Mixed Upland Forest | High Density Pole | 21.9 | 29 | 1-50 |  |  |
| 31 | 4134 - Aspen, Spruce/Fir | High Density Pole | 69.4 | 37 | 51-80 |  |  |
| 33 | 4110 - Sugar Maple Association | High Density Pole | 48.4 | 90 | 81-110 |  |  |
| 34 | 42210 - Natural Red Pine | High Density Log | 2.2 | 85 | 141-170 |  |  |
| 35 | 4110 - Sugar Maple Association | High Density Pole | 32.4 | 90 | 81-110 |  |  |
| 37 | 4134 - Aspen, Spruce/Fir | High Density Pole | 58.2 | 37 | 51-80 |  |  |
| 38 | 6120 - Lowland Cedar | High Density Pole | 51.3 | 85 | 111-140 |  |  |
| 39 | 4117 - Mixed N Hardwood - Pine | High Density Pole | 6.4 | 85 | 111-140 |  |  |
| 40 | 42210 - Natural Red Pine | High Density Log | 84.4 | 85 | 141-170 |  |  |
| 41 | 4134 - Aspen, Spruce/Fir | High Density Pole | 69.3 | 30 | 1-50 |  |  |
| 42 | 42320 - Upland Spruce | High Density Pole | 10.6 | 85 | 81-110 |  |  |
| 43 | 4110 - Sugar Maple Association | $\begin{aligned} & \text { High Density } \\ & \text { Log } \end{aligned}$ | 55.1 | 90 | 81-110 |  |  |
| 44 | 6122 - Black Spruce | High Density Pole | 53.3 | 85 | 1-50 |  |  |
| 45 | 42110 - Planted Red Pine | High Density Pole | 14.7 | 54 | 81-110 |  |  |
| 46 | 4130 - Aspen | High Density Sapling | 160.8 | 20 |  |  |  |
| 47 | 6120 - Lowland Cedar | High Density Pole | 306.6 | 85 | 111-140 |  |  |


| S | Crystal Falls | Mgt. Unit | 5 - Forested Stands <br> Inventory Method: IFMAP |  |  | Compartment: 007 <br> Year of Entry: 2012 |  |
| :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: |
| a d | Level 4 Cover Type | Size Density | Acres | Stand Age | BA Range | General Comments: |  |
| 48 | 4134 - Aspen, Spruce/Fir | $\begin{gathered} \text { High Density } \\ \text { Log } \end{gathered}$ | 6.2 | 85 | 81-110 |  |  |
| 49 | 4134 - Aspen, Spruce/Fir | High Density Pole | 59.8 | 76 | 81-110 |  |  |
| 50 | 4130 - Aspen | High Density Sapling | 59.8 | 13 |  |  |  |
| 52 | 4130 - Aspen | High Density Pole | 48.7 | 76 | 81-110 |  |  |
| 53 | 6122 - Black Spruce | High Density Pole | 59.8 | 85 | 81-110 |  |  |
| 55 | 42210 - Natural Red Pine | $\begin{gathered} \text { High Density } \\ \text { Log } \end{gathered}$ | 21.2 | 85 | 141-170 |  |  |
| 58 | 6120 - Lowland Cedar | High Density Pole | 246.6 | 85 | 111-140 |  |  |
| 61 | 6122 - Black Spruce | High Density Pole | 36.0 | 85 | 81-110 |  |  |
| 62 | 4134 - Aspen, Spruce/Fir | High Density Pole | 20.7 | 46 | 51-80 |  |  |
| 63 | 429 - Mixed Upland Conifers | High Density Pole | 40.2 | 37 | 51-80 |  |  |
| 64 | 4136 - Aspen, Mixed Conifer | Medium Density | 39.2 | 15 | 1-50 |  |  |
| 65 | 6124 - Lowland Spruce- | High Density Pole | 35.1 | 85 | 81-110 |  |  |
| 66 | 4134 - Aspen, Spruce/Fir | High Density Pole | 70.2 | 28 | 1-50 |  |  |
| 67 | 4319 - Mixed Upland Forest | Medium Density Pole | 85.0 | 25 | 1-50 |  |  |
| 68 | 6122 - Black Spruce | High Density Pole | 45.1 | 85 | 81-110 |  |  |
| 69 | 42120 - Planted Jack Pine | High Density Pole | 29.8 | 55 | 141-170 |  |  |
| 73 | 4130 - Aspen | High Density Sapling | 60.9 | 6 |  |  |  |
| 74 | 6120 - Lowland Cedar | Medium Density Pole | 18.0 | 85 | 1-50 |  |  |


| S | Crystal Falls | Mgt. Unit | 5 - Forested Stands <br> Inventory Method: IFMAP |  |  | Compartment: 007 <br> Year of Entry: 2012 |  |
| :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: |
| $\begin{aligned} & \mathrm{a} \\ & \mathrm{n} \\ & \mathrm{~d} \end{aligned}$ | Level 4 Cover Type | Size Density | Acres | Stand Age | BA Range | General Comments: |  |
| 75 | 4110 - Sugar Maple Association | High Density Pole | 34.1 | 90 | 81-110 |  |  |
| 76 | 4130 - Aspen | High Density Pole | 54.5 | 37 | 51-80 |  |  |
| 77 | 6122 - Black Spruce | High Density Pole | 10.8 | 85 | 81-110 |  |  |


| Stand | Cover Type | Acres | Gen Cmts: |
| :---: | :---: | :---: | :---: |
| 1 | 622 - Lowland Shrub | 13.2 |  |
| 2 | 622 - Lowland Shrub | 6.8 |  |
| 7 | 622 - Lowland Shrub | 9.2 |  |
| 9 | 622 - Lowland Shrub | 15.5 |  |
| 10 | 320 - Upland Shrub | 5.0 |  |
| 13 | 622 - Lowland Shrub | 3.8 |  |
| 18 | 320 - Upland Shrub | 11.1 |  |
| 19 | 622 - Lowland Shrub | 13.4 |  |
| 25 | 622 - Lowland Shrub | 3.7 |  |
| 32 | 320 - Upland Shrub | 3.3 |  |
| 36 | 622 - Lowland Shrub | 29.1 |  |
| 51 | 622 - Lowland Shrub | 1.5 |  |
| 54 | 320 - Upland Shrub | 2.2 |  |
| 56 | 320 - Upland Shrub | 7.6 |  |
| 57 | 320 - Upland Shrub | 4.7 |  |
| 59 | 320 - Upland Shrub | 7.3 |  |
| 60 | 320 - Upland Shrub | 1.3 |  |
| 70 | 320 - Upland Shrub | 3.0 |  |


| Stand | Cover Type | Acres |
| :---: | :---: | :---: |
| $\mathbf{7 1}$ | 622 - Lowland Shrub Cmts: |  |
| $\mathbf{7 2}$ | 622 - Lowland Shrub | 17.0 |
| $\mathbf{7 7}$ | 622 - Lowland Shrub | 9.2 |
| $\mathbf{7 8}$ | 622 - Lowland Shrub | 4.9 |
| $\mathbf{7 9}$ | 622 - Lowland Shrub | 14.5 |

## 7 - PROPOSED SPECIAL CONSERVATION AREA* (SCA) DETAILS

* This is a partial list of SCAs for this compartment. Not included are those areas identified under other Department initiatlves (Natural Rivers, Deer Wintering Areas, etc.). Those will be identified in separate, future map and report products.

Inventory Method: IFMAP
Stand $\quad$ SCA Type $\quad$ SCA Name $\quad$ Acres $\quad$ Comments

## 8 - DEDICATED CONSERVATION AREA DETAILS

* This is a list of Dedicated Biodiversity Areas for this compartment along with a $1 / 4$ mile buffer surrounding the compartment. Refer to Dedicated Conservation Area Map for areas that the below listed Conservation Areas are located.

| Conservation <br> Area | Type | Description |
| :---: | :---: | :--- |
| SCA | Cold Water <br> Stream | A coldwater stream has temperature and dissolved oxygen conditions that allow naturally-reproduced or <br> stocked trout populations and those of other coldwater fish species (e.g., slimy sculpin) to persist from <br> year to year. Coldwater streams in Michigan typically provide these conditions due to substantial <br> contributions of groundwater to their stream flows. Such streams are established by Director's action and <br> designated as trout resources by Fisheries Order 210. |
| HCVA = High Conservation Value Area |  |  |
| SCA = Special Conservation Area |  |  |

