

## **B. Integrated Prescriptive Management and Monitoring**

### **B1. Integrated Prescriptive Management**

#### **B.1.I. Introduction**

Integrated prescriptive management is a process of incorporating objective and verifiable data and information into a unified course of action to achieve a desired outcome.

Integrated prescriptive management employed by Itasca County Land Department also includes performance standards for staff and standards for evaluating results of prescriptive management projects. Monitoring and evaluation of individual performance and results of prescriptive management is a program instituted by the Department with the goal being to further improve quality land stewardship. An overriding objective is to monitor routine Department activities for increasing efficiency of staff's time, increasing the staff's understanding of the forest environment comprising County Forests, improving definition of the capacity of forestland for supporting sustained yield of quality non-consumptive and consumptive resources and increasing financial returns from investments in new crops of quality forest products.

Integrated prescriptive management is a forest management approach employed by the Itasca County Land Department based on incorporating the professional resource manager's understanding of the land and resource into developing forest management prescriptions, and effectively communicating that prescription to the public for implementation of the proposed activities. The foundation for understanding the land comes from a variety of standard professional sources including information generated from the biophysical/ ecological classification systems and from the application of silvicultural principles and practices. The process utilized by prescriptive management is defining the management activity, assembling information pertinent to the project, followed by analysis and evaluation of the information into the Uniform Forest Management Prescription (UFMP). The planned management activity can then proceed when appropriate administrative quality control standards are applied and when coordinated with other organizations if needed. Integrated prescriptive management emphasizes maintaining site quality by minimizing environmental and cultural impacts while also supporting a sustainable supply of quality wood. Monitoring of performance standards for permit holders during management activities and for the results of prescriptive activities will further assure quality resource stewardship of the natural environment. Management of the tax forfeited trust will be accomplished in the context of and in accordance with MN Stat. 282.

#### **B.1.II. Uniform Forest Management Prescription (UFMP)**

The Uniform Forest Management Prescription (UFMP) format is a tool for the professional natural resource managers of the Land Department. Secondary audience is the general public with interpretation from a resource manager. The UFMP will help give insight into decision making for a management activity. It does not tell the user how to do the job. The user is not a form "filler-outer", professional analysis requires an opinion of the elements of discovery incorporated into the writing of the prescription. The following items are documented in the prescription writing process.

- 1) **a) Legal Description:** Standard legal description (Twnshp-Rnge-Sect- $\frac{1}{4}$  - $\frac{1}{4}$ )



- b) Permit number:** Added after permit is sold.
- 2) Biophysical:** Record the biophysical region and BLEU(s) for project area.
- 3) Forest Management Guidelines and Specifications:** Foresters shall the consult MN Voluntary Site Level Guidelines (see section IV. C. of Land Management Plan) when determining forest management options during the development of site level prescriptions.
- 4) Historical events:** Based on field observations, record all historical activities and events that are supported by evidence observed during on-site cruise of project area. Recordings could include cradle-knolls, charred stumps, homesteads and etc.
- 5) Cultural & Natural Heritage:** Give site description by forty and map to certification forester, who will then send periodically for review and professional consultation: UFMP Attachment A at the end of this document gives more detailed information on this process.
- a) SHPO=** State Historic Preservation Office; submit site legal description, searched by section. Identify cultural resources and prescribe appropriate protective measures. If ICLD staff encounters undocumented cultural resource it shall be reported to State Historic Preservation office.
- b) OSA=** Office of the State Archaeologist; hand in site legal description and map. Identify cultural resources and prescribe appropriate protective measures. If ICLD staff encounters undocumented cultural resource it shall be reported to State Archaeologist office.
- c) THPO=** Leech Lake or Bois Forte Tribal Historic Preservation Office; submit site legal descriptions and map if within THPO search area (sites within reservation or 1 mile of reservation boundaries). Identify cultural resources and prescribe appropriate protective measures. If ICLD staff encounters an undocumented or suspected cultural resource, it shall be reported to Tribal Office for verification.
- d) DNR Natural Heritage Data=**found in ArcMap database layer and related references; report features within ¼ m. Identify all elemental occurrences (rare, threatened and endangered (RT&E) and “none” species and communities) and prescribe appropriate management practices for their protection. Consult with certification forester and appropriate MN DNR ecologists for special management options when appropriate. If ICLD staff identify a RT&E species that is not listed in the DNR database, it shall be reported to MN DNR.
- 6) Visual Quality:** Use visual quality sensitivity maps combined with personal observations to make any determinations for visual quality issues on the site.
- 7) Biological Legacies & Wildlife:** Record prescriptive activities in support of game and non-game wildlife including biological legacies where appropriate: Attachment B at the end of this document gives more information. Activities that support game and non-game species at the landscape level or any other scale (i.e. snags, leave trees, mast, coarse woody debris, travel corridors, conifer retention, or den trees).
- 8) Insect & Disease:** During the cruise of the project area, record evidence for current or pending problems for adverse impacts to vegetation from insect or disease pests (i.e. *Phellinus*, *Sphaeropsis*, blister rust, mistletoe, tent caterpillars, bark beetles, etc.).
- 9) Water Resources:** Record and document pertinent water resource elements during the field cruise of the project area (i.e. such as riparian zone issues, wetlands, ephemeral



ponds and creeks). UFMP Attachment C at the end of this document gives more guidelines and information for ephemeral ponds and wetlands.

**10) Slash & Nutrient management:** Record prescriptive action for processing slash. Where appropriate, record prescriptive measures necessary for conservation of nutrients and sustaining quality of site (i.e. scatter slash on site, plant nutrient conserving tree species). Record whether or not biomass removal is appropriate on site and/ or any specific biomass guidelines.

**11) Forest roads and trails:** Opportunity to add more information regarding access, roads and skid trails not covered by timber report. (i.e.. new roads, existing road, access-permission required, gates or berms, road seeded and mulched, water bars and strikeouts, wetland crossings).

**12) Root zone:** Refer to pertinent root zone information sources and integrate into prescription development. Record favorable or unfavorable properties in the root zone for growth and yield of trees selected for regeneration for new stand.

**13) Recreation:** Record the integrated effect of prescriptive management for maintenance or improvement of recreation elements in project area.

**14) DNR Native Plant Community:** Record the ECS Subsection and major Native Plant Community(s) for the project area.

**15) Narrative:** What are the objectives and goals for the proposed project or management activity? What is the current stand age and condition? What are the desired outcomes or projected results of prescriptive action? The narrative will incorporate biophysical, silviculture, and forest management reference material into the prescription.

**16) Name & Date:**

## **UFMP-Attachment A. Cultural and Natural Heritage Review Process**

*General Procedures:* While developing ICLD timber sales, the district forester and the certification forester will carry out the review process to identify any potential cultural or natural heritage features in need of protection on timber sale locations. The goal of the review process is to protect rare cultural and natural heritage features from any potential damage during harvest and related activities on ICLD timber permits. It is also a departmental goal to streamline the review process so that it is efficient and effective. It is important to complete the review process before timber permits are sold so that no untended impacts occur on any cultural or natural features, and also so that there are no untended impacts or untimely delays for the timber permit holders. Staff should also read instructions within UFMP categories for further details on procedures.

After database review, if a cultural or natural feature occurs within ¼ mile of the timber sale boundaries, the occurrence is to be noted in the appropriate section of the timber sale UFMP. It should also be noted in the UFMP whether or not any special management guidelines or protection strategies are used in developing the sale prescription. In such cases, a copy of the UFMP should be then given to the certification forester for departmental documentation of the potential cultural or natural feature occurrence and whether or not any resulting special management was prescribed. ICLD works with the appropriate state or tribal office to avoid any damage to potential cultural or natural features identified in the review process, or to conduct a survey on sites likely to contain features. After database review, if no features are known to



occur within ¼ mile of the timber sale boundaries, the district forester should note “No Known Features” in the appropriate UFMP section. The departmental GIS specialist and certification forester are available for assistance if the district forester has any questions or problems with the procedures.

A. Natural Heritage Review- The district forester is responsible for reviewing the timber sale site in ArcGIS using the most current licensed version of the MN DNR Natural Heritage GIS database. The database is updated annually and is stored with viewer rights only at L:\GIS\Data\Geodatabase\_mdb\ GeoWildlife.mdb\Endangered\_Species, where there is a GIS layer for polygons (nhis\_mneopy3) and one for points (nhis\_mneopt3). Information on the database license contract rules and an informational memo on the database can be found at L:\ADMIN\GENERAL\ wildlife\Endangered\Natural Heritage Contract.pdf and at L:\ADMIN\GENERAL\wildlife\ Endangered\Data Release Memo.pdf.

B. Cultural Heritage Reviews- The district forester is responsible for submission of all timber sales to the certification forester for cultural database reviews prior to sale of the permit. A map of the general sale location and the sale legal description is required to perform the reviews.

1) Office of the State Archaeologist (OSA)- This review is performed online by the certification forester on the MN OSA website. The Unplatted Earthworks and Burial Sites database is searched by site legal description and results reported back to the district forester.

2) State Historical Preservation Office (SHPO)- This review is performed by the MN SHPO for archaeological sites and historic properties. The search is conducted by site legal description using a spreadsheet with fields containing township, range, and section. An excel file with the site information is attached and emailed to SHPO, and results of the search are emailed back as an attachment to the certification forester and results reported back to the district forester.

3) Tribal Historic Preservation Offices (THPO)- This review is performed on any timber sale site that occurs within the Leech Lake or Bois Forte Reservation boundaries or within a one mile buffer around the reservation. A site map and legal description is mailed to THPO office. When their review is completed, the results are mailed back to ICLD and reported back to the district forester. This review process can take up to 1-3 months. The GIS layer for the reservation can be found at M:\county\boundaries\reservtn.

## **UFMP-Attachment B. Biological Legacy Guidelines**

*General Policy: Timber sales should incorporate biological legacies as patches or scattered in harvest unit blocks  $\geq 15$  acres when suitable within the silvicultural prescription. When possible, biological legacies should specifically consider the retention of large live and declining trees; snags, and den trees; downed logs and coarse dead wood; native vegetation; and soil organic matter.*

### **General guidelines for retention of these elements are as follows:**

- Large live and declining (den/cavity) trees: A minimum goal of approximately 5% of the harvest unit acreage is recommended for patches or retention of 6 trees per acre for scattered trees, including both live and declining trees >10” where possible.



- Snags (standing dead trees): Leave all snags possible when silviculturally appropriate, and when meets individual site conditions (e.g. not a safety hazard or forest pest problem). When possible, a broad goal of retaining 5 snags >8” per acre is recommended.
- Large downed logs and coarse dead wood: A minimum goal of 2-4 large down logs >12” per acre is recommended, as well as the retention and scattering of approximately 20 % of harvested tops and limbs (not including those broken during logging) should be targeted within the sale area.
- Other native vegetation and soil organic matter: When left as a patch, there should be minimal forest floor and root zone disturbance within the patch. When left scattered across the site, low-impact harvesting equipment or frozen ground harvest can help minimize disturbance across the site.

As a general guideline, smaller distributed patches provide more broad ecological benefits, and retention of larger long-lived, wind-firm or mast-producing tree species is preferred. When possible, general consideration should be given to including a range of sizes and species for retained trees, snags, downed logs, and native vegetation. Consideration should also be given to specific vegetation, trees, snags and logs for wildlife habitat and to existing natural regeneration of desired species when they occur. When possible, biological legacies should be incorporated into areas surrounding unique species or site features, ephemeral ponds or drainages, wetlands, and into riparian zones in the harvest unit.

The harvest unit area is defined as all harvestable acres that are scheduled, available and considered for harvest in association with an individual timber sale. The prescribed biological legacies may include any portions (patches or scattered trees) of the harvest unit area that are either not included in the timber sale area or reserved within it. The legacy prescription should be recorded in the Biological Legacies and Wildlife section (#7) of the site’s UFMP. On certain clearcut sites, the retention of patches or scattered legacies may depend on local conditions or specific silvicultural objectives, but the majority of these sites should incorporate legacies in some form. An annual target for incorporating legacies is for approximately 80% of sites (harvest units) within a Management District (planning units). Reasons for any major exceptions to the biological legacy guidelines should be recorded in the site’s UFMP. Such examples are for safety (e.g. hazards to loggers, public, site prep. operators), silvicultural (e.g. black spruce, jack pine, oak management), landscape (e.g. management objectives or extent in adjacent lands), forest pest (e.g. mistletoe, bark beetles) or aesthetic reasons.

## **UFMP-Attachment C. Ephemeral Ponds and Small Wetland Guidelines**

*General Policy:* Ephemeral ponds and small wetlands found or identified within the timber sale boundaries are to be located on the timber sale map. Whenever possible, equipment traffic, upland slash and soil disturbance within these areas and on adjacent upland transition zones and slopes should be avoided or minimized.

In northern hardwood cover types, retention in the range of 50-60 sq.ft./acre BA (or 80% original stand BA) within a minimally disturbed buffer of approximately 35-50 feet is recommended for the protection of potential RT&E species (i.e. *Botrychium* spp., four-toed salamanders).



### **B.1.III. Uniform Forest Management Prescription for Forest Development (UFMP-FD)**

The Uniform Forest Management Prescription for Forest Development (UFMP-FD) format is a tool for the professional natural resource managers of the Land Department. Secondary audience is the general public with interpretation from a resource manager. The UFMP (FD) will help give insight into decision making for a management activity. The following items are documented in the prescription writing process.

- 1) Plantation number:** Unique identification number for plantation.
- 2) Legal Description:** Standard legal description, (Twnshp-Rnge-Sect- $\frac{1}{4}$  - $\frac{1}{4}$ ).
- 3) Ecological Classification:** Record both Biophysical and state ESC NPC codes.
- 4) Species; stock type; Trees per acre:** Summary of what is to be planted on site.
- 5) Chemical Site prep:** Vegetation assessment prior to application, type of herbicide, application method & issues or concerns and potential for release.
- 6) Mechanical Site prep:** Type of prep, season of operation and issues or concerns.
- 7) Cultural & Natural Heritage databases:** Review sites in coordination with or from standard UFMP process and record accordingly.
- 8) Water Resources:** Assessment of water resources on or adjacent to site and any mitigating strategies needed.
- 9) Legacies & Wildlife:** Known wildlife habitats, snags, reserves, mast, corridors, etc. to be considered
- 10) Visual Quality:** Visual impact issues.

## **B.2) Monitoring**

### **B.2.I. Monitoring and Planning**

Monitoring activities can be separated into that occurring for long term or short term effects of management activities. Long term monitoring occurs for both assessing changes in landscape level forest composition and habitat elements over time and for assessing changes in permanent plots located throughout the landscape. The department's long term management components will be revised and updated in at least ten year intervals, at which time progress toward attaining management goals and desired future environmental and social-economic conditions can be assessed and evaluated. The current management planning documents evaluate long term landscape level changes of forest composition and habitat elements in section E. ("Ecological and Landscape Information"). See [www.co.itasca.mn.us](http://www.co.itasca.mn.us) go to: county offices, then to: Land, then to: Land Management Plan, then to: section E. ("Ecological and Landscape Information"). The goals for forest measurements of long term permanent plots are listed below in part VIII of this section.

A majority of the monitoring described below is generally related to short term and operational projects but the management systems and information used in monitoring these elements can be analyzed for long term and landscape level changes. The operational components of the management plan will be reviewed and updated as necessary, but not to exceed every five years. Monitoring and evaluating compliance with performance standards and results of short term operational projects is an integral part of the department's integrated



prescriptive forest management program. All Department staff will participate in monitoring and evaluation as routine tasks for each position. The following is a listing of priority topics associated with that monitoring and evaluation.

### **B.2.II. Personnel Management**

1. Attainment of assigned project targets.
  - A. Job description review and accomplishment reporting and feedback are handled through annual performance appraisals (PA). The completed original PA is submitted to Human Resource Department and placed in an individual's personnel file. See [www.co.itasca.mn.us](http://www.co.itasca.mn.us) go to: county offices, administrative services, Itasca County policy book, performance appraisals.
2. Compliance with Department standards for safety.
  - A. Safety meetings are held once a month and are in the staff meeting record. Attendance record is sent to County Risk Manager. Defensive driving course completed for each employee.
3. Completion of educational requirements for individual's position.
  - A. Minimum educational requirements are met in the initial hiring process.
4. Completion of training required for individual's position.
  - A. Required training is as follows:
    - a. Non-commercial pesticide applicator license renewal is required every two years for all forestry staff by attending a one-day workshop – LC, ALC, CPSM, CPST, FWC/GIS, FRS, F, and 7 DF.
    - b. Real Estate license requires 30 hours of certified continuing education every two years – 2008 LC and RES.
    - c. Agricultural Inspector certification is completed by annual attendance to Ag Inspector short course – 2008 LC and FRS.
    - d. Defensive driving certificate renewal is required every three years for each employee.
  - B. ICLD training and education policy provides a process for determining additional training needs and is part of PA. See [www.co.itasca.mn.us](http://www.co.itasca.mn.us) go to: county offices, Land, Land Management Plan, training and education policy.
5. Maintaining open communication with public.
  - A. All employees are responsible to maintain open and professional communication with the public. The public consultation policy provides a framework for appeals and complaints. See [www.co.itasca.mn.us](http://www.co.itasca.mn.us) go to: county offices, Land, Land Management Plan, public consultation policy.

### **B.2.III. Prescriptive Management**

Itasca County Land Department (ICLD) documents listed in the following categories of prescriptive management activities can be found in the following locations:

- a) UFMP and UFMP-FD are found above in this document;



b) Timber Report, Timber Permit, Timber Sale Note-sheet, and Timber Sale Checklist are found below in appendix of this section, and the Forest Inventory Manual web link is found in Appendix of the Plan;

c) Timber Sale Specifications and Guidelines, Site Preparation Specifications, Aerial and Ground Application of Herbicide Specifications, Pesticide Use Policy, Tree Planting Specifications, and Timber Stand Improvement Specifications are found in the section C of the Land Management Plan; see [www.co.itasca.mn.us](http://www.co.itasca.mn.us) go to: county offices, then to: Land, then to: Land Management Plan, then to: section C. (“Forest Management Specifications and Guidelines”);

d) Land Department non-timber permitting (i.e. fuelwood permits, special use permits, balsam bough permits, pit run permits, etc.), see [www.co.itasca.mn.us](http://www.co.itasca.mn.us) go to: county offices, then to: Land, then to: Land Management Plan, then to: section D. (“Non-Timber Resources”);

e) County agricultural inspector description, state noxious weed laws, and listing of noxious weeds Itasca County, see [www.co.itasca.mn.us](http://www.co.itasca.mn.us) go to: county offices, then to: Land, then to: Land Management Plan, then to: section III. Appendices, then to: Agriculture Inspector and Weed Laws.

## 1. Timber Sales - General

Monitoring and appropriate quality controls for general timber sale management are handled through the department’s Timber Sale Specifications and Guidelines, Timber Report, UFMP and Timber Permit; those include but are not limited to addressing:

- A. Timber species, volumes, products, descriptions and prices.
- B. Reserve species, optional species, or products of a given species.
- C. Timber sale type (regular, intermediate, informal) and expiration date.
- D. Mapped and identifiable cutting boundaries and area.
- E. Marked forest management property boundary lines.
- F. Public land survey monument location and protection.
- G. Timber harvest type.
- H. Harvest season timing.
- I. Harvest system or equipment restrictions.
- J. Silvicultural prescription conformance.
- K. Residual tree and regeneration damage protections.
- L. Public, private or system roads and/ or timber access routes.
- M. Gates or berms at accesses to roads and trails.
- N. Major skid trail locations in timber sales.
- O. Landing areas in timber sales.
- P. Visual quality impacts.
- Q. Biological legacy patches.
- R. Wildlife habitat elements.
- S. Snags, live tree, slash and CWD retention.
- T. Water quality and natural water flow impacts.
- U. Riparian management zones for adjacent lakes and streams.
- V. Wetland and vernal pool protections.
- W. Rutting and erosion, and soil compaction protections.



- X. Cultural resource protections.
- Y. R, T & E species or communities protections.
- Z. Insect and disease impacts.

## **2. Timber Sale Development**

Monitoring and appropriate quality controls for timber sale development are handled through the department's Timber Report, UFMP, Timber Permit; and Timber Sale Checklist, those include but are not limited to addressing:

- A. Tax-forfeited, direct county, or undivided interest land status.
- B. Sale area legal description and inventory designation.
- C. Timber of harvestable species, age, and condition.
- D. Special management areas or corridors.
- E. Mapping and recording of BLEU and NPC.
- F. Boundary notification of adjacent landowners.
- G. Identification of timber trespass in area (in accordance with MS 282).
- H. Auction bid, lump sum or non-bid timber species.
- I. Regeneration prescription.
- J. Gaining permission for crossing other ownerships.
- K. Notification and sign posting of roads or recreational trails.

## **3. Timber Sale Administration**

Monitoring and appropriate quality controls for timber sale administration are handled through the department's Timber Sale Specifications and Guidelines, Timber Report, UFMP, Timber Permit, Timber Sale Checklist and Timber Sale Note-sheet; those include but are not limited to addressing:

- A. Pre-sale meeting with operator.
- B. Equipment, oil, lubricant, and litter controls.
- C. Safety issues associated with timber sale activities.
- D. Timber trespass and theft compliance (in context of MS 282).
- E. Forest product utilization specifications.
- F. Consumer scale and chain of custody compliance.
- G. Forest product scale procedures.
- H. Site inspection during/ after harvest.

## **4. Non-timber Forest Resources**

Monitoring and appropriate quality controls for the extraction/ harvest and condition of non-timber forest products or resources are handled through the department's permitting process (i.e. fuelwood permits, special use permits, balsam bough permits, pit run permits, etc.) which includes but is not limited to addressing:

- A. Permittee.
- B. Products/ resources permitted to be extracted.
- C. Product quantities permitted if appropriate or necessary.
- D. Trespass and theft compliance (in context of MS 282).
- E. Permit location or area.
- F. Permit duration.
- G. Permit costs.
- H. Permit restrictions.



## 5. Mechanical Site Preparation

Monitoring and appropriate quality controls for mechanical site preparation are handled through the department's Site Preparation Specifications and UFMP-FD; those include but are not limited to addressing:

- A. Identifying objectives for treatment area.
- B. Pre-treatment site and field evaluations.
- C. Appropriate for site and root zone treatments.
- D. Wetland and vernal pool protections.
- E. Water quality protections.
- F. Cultural resource protections.
- G. R, T & E species or communities protections.
- H. Treatment timing for maximum benefits.
- I. Treatment timing for reduced erosion or compaction potential.
- J. Public land survey monument protections.
- K. Site compliance checks during/ after treatment.

## 6. Chemical Application

Monitoring and appropriate quality controls for chemical applications are handled through the department's Specifications for Aerial and Ground Application of Herbicides, UFMP-FD, and Pesticide Use Policy; those include but are not limited to addressing:

- A. Identifying objectives for treatment area.
- B. Identifying potential risks.
- C. Pre-treatment site and field evaluations.
- D. Identifying chemical treatments appropriate for vegetation.
- E. Identifying chemical treatments appropriate for root zones.
- F. Use of registered herbicides (U.S. E.P.A. & MN Dept. of Ag.)
- G. Use of licensed applicators who are employed for treatments.
- H. Use of licensed applicators that follow all labels.
- I. Wetland and vernal pool protections.
- J. Water quality protections.
- K. Cultural resource protections.
- L. R, T & E species or communities protections.
- M. Maintenance of mandatory application records for all treated sites (weather conditions, rates, time of applications).
- N. Identifying weather appropriate for applications.
- O. Posting all treated sites after application.
- P. Approval of herbicide mixing areas.
- Q. Proper disposal of herbicide containers.
- R. Site compliance inspections during/ after application (for 4 – 6 weeks).
- S. Agricultural weed inspectors.

## 7. Reforestation

Monitoring and appropriate quality control standards for reforestation are handled through the department's Seedling Specifications, Tree Planting Specifications and Timber Stand Improvement Specifications, Plantation Records, and field assessment sheets; those include but are not limited to addressing:

- A. Site evaluation for appropriate stock type and native species.



- B. Seed source evaluations.
- C. Stock quality specifications.
- D. Stock condition assessment when planting.
- E. Planting quality assessment when planting.
- F. Weather condition assessment when planting.
- G. Site and tree assessments after 1<sup>st</sup>, 2<sup>nd</sup>, 5<sup>th</sup> years post-planting.
- H. Commercial tree stocking specifications.
- I. Vegetation competition assessment for potential release.
- J. Timber stand improvement assessment and specifications.

#### **8. Forest Inventory**

Monitoring and appropriate quality control standards for forest inventory are handled through the department's Forest Inventory Manual, field maintenance sheets and ArcGIS software system; those include but are not limited to addressing:

- A. Stand type map delineation.
- B. Unique stand identification code.
- C. Stand appraisal year and grow year.
- D. Type, size and density classes for overstory and understory.
- E. Regeneration stocking density assessment.
- F. Stand area, age and DBH.
- G. Stand basal area, trees/ acre and topography.
- H. Stand condition and damage.
- I. Stand management recommendations and year.
- J. Stand special or miscellaneous descriptions.
- K. Stand management history and year.
- L. Stand biophysical landscape ecological unit.
- M. Stand species volumes.

#### **B.2.IV. Forest Recreation**

Monitoring and appropriate quality controls for forest recreation are handled through state and county statutes, state Grant in Aid guidelines, and cooperative projects with other local and state government bodies; those include but are not limited to addressing:

1. Snowmobile, OHV, hunter-walking and horse trail management and use.
2. Statewide multi-agency OHV trail inventory and classification.
3. Cross country ski trail management.
4. Public water access management.

#### **B.2.V. Invasive and Noxious Weed Management**

Monitoring and appropriate quality control standards for implementing state weed and seed laws are handled through the County Agricultural Inspector program, which includes but is not limited to addressing:

1. Local weed inspectors training.
2. Implementation of state weed and seed laws within the county.
3. Coordination with state and local authorities for monitoring and control.
4. Monitoring for new outbreaks and new occurrences.



### **B.2.VI. Managerial Accounting**

Monitoring and appropriate quality controls for managerial accounting are handled through the department's Timber Guardian timber accounting and management software, Timber Report, and Timber Permit; those include but are not limited to addressing:

1. Permit status.
2. Permit purchaser/ operator status.
3. Permit product consumer (mill) status.
4. Auction results.
5. Allowable cut acres.
6. Sale administrator.
7. Valid species.
8. Valid consumer tickets.
9. Valid consumers.
10. Forest product scales and volumes.
11. Expiration dates or extensions.
12. Letters of credit.
13. Product scale weight loss on permits.
14. Delinquent accounts.
15. Accounts receivable.
16. Receipts.
17. Refunds.
18. Expenditures.
19. Timber, road, and recreation development.
20. Noxious weed and invasive plant control.

### **B.2.VII. Financial Accounting**

Monitoring and appropriate quality controls for financial accounting are handled through the County Auditor Office Integrated Financial System and include but are not limited to:

1. Revenue guideline.
2. Expenditure guideline.
3. Apportionment of Net Proceeds.
4. Itasca County special apportionment law.
5. State payment in lieu of taxes.

### **B.2.VIII. Monitoring of Long Term Permanent Plots**

1. Monitoring and appropriate quality controls for permanent forest measurement plots were established during the biophysical data collection phase of the Itasca County Biophysical Project that began in 1995. Quality control of data collection was integrated into the process and overviewed by a soil scientist specializing in forestland classification and forest inventory.
2. Monitoring and appropriate quality controls for the measurement of long term permanent plots will be handled through the development and implementation of a



forest measurement sampling system will be designed by a qualified scientist in the field of forest biometrics.

Goals include but are not limited to:

- A. Developing growth and yield models for gross and net volume of merchantable timber species.
- B. Characterizing plant community structure dynamics in response to prescriptive forest management across the landscape.
- C. Characterizing plant community structure dynamics in representative natural areas across the landscape.
- D. Other goals as directed by the County Board.

### **B.2.IX. Annual Report**

Monitoring and appropriate quality controls for ICLD summarization of annual activities and financial reports from the previous year into an Annual Report. This is presented to the Itasca County Board and made available to the public.

1. Financial Report includes the following:
  - A. Forfeited Tax Sale Fund.
  - B. Apportionment of Net Proceeds.
  - C. Forest Resources Fund – By account.
    - a. State Payment in Lieu of Taxes.
    - b. County Forest Access Roads.
    - c. Memorial Forests.
    - d. Mesabi Bike Trail.
    - e. County Park System.
    - f. 1965 Special Law – 30% of net proceeds.
    - g. Land Reclamation.
    - h. Weed Control.
2. Special Reports include the following:
  - A. Integrated Resource Information System.
  - B. Biophysical Forestland System.
  - C. GIS Information System, GPS positioning system.
  - D. Wildlife Management.
  - E. Forest Improvement.
  - F. Timber Sale Program.
  - G. Forest Certification.
  - H. Park and Recreation.
  - I. Forest Access Roads.
  - J. Real Estate Management.
  - K. Agriculture Inspector Program.
  - L. Department Staff Meetings.
  - M. Public Education.
  - N. Other items.

### **B.2.X. Procedures for Forest Stewardship (FSC) Chain of Custody**

Procedures for monitoring and appropriate quality controls for maintaining the chain of custody for forest products harvested from FSC certified forestlands are as follows:



1. All timber sale advertisements shall contain the ICLD FSC certification number and product claim.
2. Upon sale of a timber permit, all timber permits are given a unique permit number for access to all permit information. All applicable timber permit files and records are kept in centrally located files in the ICLD main office for a minimum of five years.
3. All Timber Reports (appraisal of Itasca County timber with map and sale specifications) shall contain the ICLD FSC certification number and product claim, and pertinent information entered into the Timber Guardian software accounting program.
4. All Itasca County Timber Permits shall contain the ICLD FSC certification number and product claim; they are signed by both the purchaser and ICLD.
5. ICLD uses the consumer scale system on nearly all timber sales except in a few circumstances (i.e. small wood volumes, marked thins). On consumer scale timber sales, permit holders and consumers must have a signed consumer scale agreement with ICLD; and the consumer must be on the State Consumer List.
6. On timber permits sold as lump sum or where wood is scaled at the landing, ICLD will provide all timber permit documentation with ICLD FSC certification number and product claim (including load tickets) upon request by permit holder or consumer.
7. Harvesting may begin when timber permit and scale agreement is signed, when stumpage is paid for or letter of credit received, after a presale meeting with ICLD, and when permission is granted by ICLD.
8. All stumpage payments are entered into and accounted for in the Timber Guardian program by ICLD and by the Itasca County Auditors Office Integrated Financial System.
9. The ICLD forest gate for chain of custody is the consumer yard.
10. Nearly all ICLD timber sale landings are used exclusively for a timber permit. In any circumstances where the landing must be used concurrently with wood from other harvest activities, all FSC certified wood products from each timber permit shall be clearly identified and stored/ hauled separately with the permit number clearly marked on all piles as described in section 4.1.2 of FSC document STD 40-004-V2 2008.
11. A load ticket lock box will be provided by ICLD at the exit to each timber sale for consumer scale (or upon request with lump sum sales).
12. ICLD will supply permit holder with serially labeled load tickets containing lock box and consumer stubs, the ICLD FSC certification number, product claim and required procedures for their use.
13. The timber permit number shall be painted on each side of the load, or on the butt end of the logs for tree length.
14. All loads must contain only wood from the designated timber permit unless given prior approval by ICLD.
15. The lock box stub will be filled out by the permit holder with date, time, permit number and consumer before the truck is moved, and the stub deposited in the lock box before driving past it.



16. The consumer stub must be with the load of wood or accompany the Bill of Lading to its destination with the permit number and consumer listed.
17. All loads must be hauled only to the consumer labeled on the load tickets.
18. The consumer stub is presented to consumer scaling representative at the scaling point.
19. The consumer stub is attached to the consumer scale slip and sent to ICLD.
20. All wood scales from consumers are entered into the Timber Guardian program as they are received by ICLD.
21. Scheduled and requested information (i.e. billings, notices, reports, scales or refunds) are summarized through the Timber Guardian program and sent by ICLD to appropriate destinations in a timely manner.
22. ICLD must be notified when hauling has ceased, all booklets must be returned and tickets accounted for.
23. ICLD reconciles all load tickets with scales as harvesting is completed and sale progress is inspected until complete.
24. Timber permit may be closed upon ICLD approval when all scaled products are accounted for, all outstanding balances have been received or refunds sent out, and when sale specifications met.
25. On timber permits which harvest timber on non-certified county lands or in situations not following our normal FSC forest management objectives: a) sale notices will reflect non-certified status, b) the ICLD certification number will be removed from all documentation associated with the timber permit and c) the permit holder and consumers will be notified.



**B.2) APPENDIX 1.**

“FSC Pure”

TIMBER REPORT - APPRAISAL OF ITASCA COUNTY TIMBER							SW-FM/COC-1709	
<b>PART 1</b>		<b>OPERATOR</b>			<b>#</b>		Multiple Townships _____	
Tract No. _____		Photo No. ITA- _____ - _____		Permit No. _____ - _____ - _____		Twp. Name _____		
% Bid-up _____		Sale Type: _____		Appraised by: 90 _____		Date _____		
Subd _____	Lot _____	Sec _____	Twp _____	Rge _____	Acres _____	Tax F. _____	Dir Co. _____	Undiv. Int. _____
Subd _____	Lot _____	Sec _____	Twp _____	Rge _____	Acres _____	Tax F. _____	Dir Co. _____	Undiv. Int. _____
Subd _____	Lot _____	Sec _____	Twp _____	Rge _____	Acres _____	Tax F. _____	Dir Co. _____	Undiv. Int. _____
Subd _____	Lot _____	Sec _____	Twp _____	Rge _____	Acres _____	Tax F. _____	Dir Co. _____	Undiv. Int. _____
Subd _____	Lot _____	Sec _____	Twp _____	Rge _____	Acres _____	Tax F. _____	Dir Co. _____	Undiv. Int. _____
Subd _____	Lot _____	Sec _____	Twp _____	Rge _____	Acres _____	Tax F. _____	Dir Co. _____	Undiv. Int. _____
Subd _____	Lot _____	Sec _____	Twp _____	Rge _____	Acres _____	Tax F. _____	Dir Co. _____	Undiv. Int. _____
Subd _____	Lot _____	Sec _____	Twp _____	Rge _____	Acres _____	Tax F. _____	Dir Co. _____	Undiv. Int. _____
Map Scale: _____ inches = 1 mile					<b>PART 2</b>			
					<b>DESCRIPTIVE FEATURES:</b>			
					Topography _____ Permit Area: _____ Acres			
					Regeneration: <input type="checkbox"/> Artificial: Species _____			
					<input type="checkbox"/> Natural: Species _____			
					<b>STANDARDS and GUIDELINES:</b>			
					Applicable standards and guidelines are stated in the County Forest Management Guidelines & Specifications document. Copies are available upon request from the Land Department.			
					<b>SALE SPECIFIC REQUIREMENTS:</b>			
					Sale area is cross-hatched on map.			
					Type of harvest _____			
					Reserve _____			
					<input type="checkbox"/> Summer chance (if dry) Blocks _____			
					Normal logging season is ____/____ through ____/____			
					<input type="checkbox"/> Winter chance (frozen ground) Blocks _____			
					Normal logging season is ____/____ through ____/____			
					Expiration date ____/____/____ extensions possible			
					Sale boundary painted _____			
					Property boundary painted _____			
					Sale contains _____ cutting blocks (See page 2)			
<b>PART 3</b>		<b>APPRAISAL OF MERCHANTABLE TIMBER</b>						
Species	Product **	Volume	Unit	Appraised Price	Value	Comments: (Sticks, Dbh, Condition, etc.)	% Bolts	# + *
Revised 5-18-06				<b>TOTAL</b>				Down Pmt \$ _____
**WR = Woodsrun		*Sold Area Estimate and Non-Bid Species			# Non-Bid Species		Perf. Bond \$ _____	
BFS Unit(s) _____					+ Sold Area Estimate		TOTAL PAID \$ _____	



**PART 4 CHECKED ITEMS APPLY**

- A. \_\_\_\_\_ miles to a public road. (\_\_\_\_\_)
- B. Additional road specifications stated in Forest Management Guidelines & Specifications; Item III \_\_\_\_\_ apply.
- C. Federal / State / Private land must be crossed to access sale. Logger must obtain permits / permission from landowner / land managers. NO RUTTING!
- D. Private / easement road must be used to access site. Road must be kept in good condition at all times.
- E. Snowmobile trail regulations in Itasca County Forest Management Guidelines & Specifications apply.
- F. Gates must be locked at all times, except during days when 3 or more loads are hauled.
- G. Gates must remain locked during hunting season.
- H. A \_\_\_\_\_ foot wide slash free zone must be maintained along the road / trail.
- I. Roads and skid trails on hills must be stabilized. May involve installing water bars, strikeouts, and / or mulching and seeding.
- J. Logging slash (tops and limbs) must remain scattered on sale area.
- K. Full tree logging required. Tops and limbs must be piled at approved locations.
- L. Conifer slash piles must be kept at least 50 feet from standing timber to facilitate burning.
- M. Logging season may be restricted to August through February during high bark beetle risk (e.g. during drought). All cut pine must be hauled within 3 weeks during May through September.
- N. Do not damage unmarked trees / regeneration / reserve trees.
- O. Logging season shall be restricted to September through February if damage to residual timber is excessive.
- P. All merchantable wood must be yarded out to the landing if not utilized.
- Q. Do not disturb survey markers, including witness trees.
- R. Loads with mixed species will be scaled as the highest value species unless the consumer scales species separately using County approved methods.

Additional Items: \_\_\_\_\_  
 \_\_\_\_\_  
 \_\_\_\_\_  
 \_\_\_\_\_  
 \_\_\_\_\_  
 \_\_\_\_\_  
 \_\_\_\_\_  
 \_\_\_\_\_

CUTTING BLOCK INFORMATION:											PART 5			
Block	Acres									Value	Inventory Drain			
											O Type	Sale Acres	Drain Acres	Sale Type

The above appraisal has been examined by me and approved.

\_\_\_\_\_  
 District Forester                      Date                      Assist. Land Commissioner                      Date                      Land Commissioner                      Date

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**B.2) APPENDIX 2.**

SW-FM/CoC-1709 "FSC Pure" **ITASCA COUNTY TIMBER PERMIT**  
**For Cutting Timber on Tax-Forfeited Lands in Itasca County**  
**Pursuant Chapter 355, Laws of 1941, As Amended.**

-----Purchaser-----

which has forfeited to the State for non-payment of taxes. Whereby payment of bond and stumpage down payment allows purchaser to perform road construction activities, and full payment is required prior to harvest of timber.

Cut and remove therefrom only such timber as estimated in list below, subject to final adjustment as to the total price and volume thereof on the basis of a scale of cut products, computed at the bid price set forth after each species:

Timber sold subject to scale shall not be removed from the land covered by this Permit until a scaling agreement has been approved by the Land Commissioner.

The County shall have the power to order suspension of all operations under this permit or cancel this permit when, in its judgment, the conditions or requirements thereof have not been complied with, and also in this event, the County shall have the right to seize and take title to all products cut from this permit area wherever these products are located.

This permit is issued subject to all the terms and conditions of this agreement and the contract documents consisting of the Timber Report, Itasca County Forest Management Guidelines & Specifications, Special Conditions stipulated in the Notice of Sale, and in addition thereto is subject to the following special terms and conditions:

The permit holder or its contractor(s) shall comply with all federal, state, county or other government regulations or laws, including but not limited to, the Fair Labor Standards Act, the Wage and Hour Laws, the Occupational Safety and Health Act and the Equal Opportunity laws. The permit holder or its contractor(s) must carry worker's compensation insurance on all employees working on the permit for the duration of the contract. The permit holder or its contractor(s) must also carry general liability insurance in the amount of statutory limits currently at \$300,000 per person and \$1,000,000 per occurrence.

Violation of any terms and conditions of this Timber Permit shall be grounds for cancellation of the permit and/or prosecution for trespass at triple stumpage price, or loss of privilege to purchase timber on tax-forfeited land in Itasca County.

<b>COUNTY LAND COMMISSIONER</b>	<b>I hereby acknowledge receipt of a copy of this permit and agree to comply with the terms thereon.</b>
By: _____ (Date)	By: _____ (Purchaser) (Date)

**B.2) APPENDIX 3.**



# TIMBER SALE FIELD NOTE SHEET

1<sup>st</sup> Extension: Billed \_\_\_\_\_ Paid \_\_\_\_\_  
 2<sup>nd</sup> Extension: Billed \_\_\_\_\_ Paid \_\_\_\_\_

Pre-Sale Meeting \_\_\_\_\_  
 Post-Sale Inspection \_\_\_\_\_

To be scaled: Appraised Volume, Species, Price, Product

--

Consumer	Date	Species/Product

Tickets Issued	Date Book Issued	Date Book Returned	Unused Tickets	Box Stubs Collected	All In	Consumer Stubs Returned	All In

Lock Box Installed (Date): \_\_\_\_\_ Lock Box Removed (Date): \_\_\_\_\_

Other data:

## B.2) APPENDIX 4.



