

APPENDICES

APPENDIX A

LAND USE AND NATURAL RESOURCE INVENTORY CATEGORIES AND DEFINITIONS

Agriculture

Mainly dairy farms and some beef cattle and field crop production; also includes successional fields with up to 10% shrub cover.

Forests

Well-drained Mature Forests - Stands of trees over 30 feet in height and 50 years in age, usually representing natural second growth stands. Hardwood species are predominant. Forest composition resembles that of the lower elevation forests of the Adirondacks.

Forest Plantations - All ages and size classes are presented together within this single cover type. They have been most frequently established on abandoned agricultural lands. Plantations are composed predominantly of coniferous species.

Brushlands and Successional Forests - A highly variable category that generally represents older agricultural abandonments which have undergone 30 or more years of successional development. Such areas appear quite similar to heavily logged forests in the process of reverting back to forest cover. Lands which have experienced either kind of activity are included in this type. Successional forest composed of trees up to 40 to 50 years of age with diameters less than 6 inches and heights less than 30 feet are also included in this type.

Wetlands

Wetlands - Marshes, shrubby marshes, and bogs greater than 10 acres in size. Habitat variability is extremely high, ranging from depressional sites with waterlogged soils to floating aquatic systems rooted in 3' to 5' of water at the perimeter of ponds and lakes. Marsh meadows and shrubby marshes are present throughout the area, while bogs are limited in occurrence to elevations above 1,500 feet.

Wetwoods - Forest cover that occurs in slight depressional areas or areas of low total relief where standing water is present for extended periods of time. The species composition of these forested wetlands varies greatly with elevation. Below 1,450 feet, hardwoods and dense shrubs characterize the areas, and above 1,450, coniferous species become more abundant.

Water - Open water bodies greater than 10 acres in size.

Developed Lands - All classes of developed lands such as residential, public, commercial, industrial, outdoor recreation, extractive mining, and transportation are grouped in this category.

1. What community are you a resident of or live closest to? 19.5% return
2. How long have you lived here? 28% - 25 - 50 years
3. What features does your community have that make it a good place to live? 39% - small quiet
11% clean air, 7% wilderness natural beauty

4. How has your community CHANGED in the past two years? (Please check all that apply) (check % given)
- | | | | | | |
|-------------------|--------------------|---------------------------|-------------|------------------------|--------------------|
| a. No Change | <u>14.8</u> | e. New Business | <u>15.7</u> | i. More Trailers | <u>57.6</u> |
| b. New Camps | <u>43.7</u> | f. More People | <u>39.1</u> | j. Abandoned Housing | <u>7.</u> |
| c. Improved Roads | <u>50.</u> | g. More People (weekends) | <u>50.</u> | k. Recreation Develop. | <u>17.8</u> |
| d. More Junk | <u>21.5</u> | h. More Crime | <u>19.6</u> | l. Other | |
| m. Logging | (more) <u>15.2</u> | (less) <u>16.5</u> | n. Farming, | (more) <u>7.6</u> | (less) <u>29.8</u> |

5. How do you feel about the following for your community?

	FOR	AGAINST	DON'T KNOW
a. Controlled Community Growth	<u>44.6</u>	<u>28.7</u>	<u>15.4</u>
b. Recreational Development	<u>55.2</u>	<u>22.6</u>	<u>10.</u>
c. Health Codes	<u>61.1</u>	<u>17.8</u>	<u>19.3</u>
d. Sharing of Highway & Emergency Equip. by Towns	<u>63.9</u>	<u>16.1</u>	<u>11.3</u>
e. Building Codes/Minimum Construction Standards	<u>45.</u>	<u>35.7</u>	<u>9.1</u>
f. Merging of Governments of your Town with Others	<u>17.8</u>	<u>59.6</u>	<u>12.</u>
g. Garbage and Litter Regulations	<u>20.1</u>	<u>8.9</u>	<u>3.9</u>
h. Zoning	<u>40.4</u>	<u>37.2</u>	<u>11.7</u>
i. Trailer Ordinance	<u>51.7</u>	<u>29.6</u>	<u>8.9</u>
j. New Roads	<u>51.5</u>	<u>26.5</u>	<u>10.2</u>
k. Subdivision Regulations	<u>27.</u>	<u>26.3</u>	<u>30.2</u>
l. More Housing	<u>35.2</u>	<u>29.6</u>	<u>20.2</u>
m. Establishment of Planning Board	<u>54.8</u>	<u>16.3</u>	<u>16.7</u>
n. Community Participation in Planning Process	<u>75.</u>	<u>8.3</u>	<u>6.7</u>

6. What are the two biggest community problems directly facing you?
- a. Taxes Why? _____
- b. Roads Why? _____
- Dogs

7. Are you concerned about:

	YES	NO	NO COMMENT
a. Property Taxes	<u>87.8</u>	<u>5.7</u>	<u>3.7</u>
b. Road Maintenance	<u>73.5</u>	<u>15.9</u>	<u>3.5</u>
c. Uncontrolled Dogs	<u>73.7</u>	<u>19.8</u>	<u>3.</u>
d. Stream Quality	<u>69.8</u>	<u>17.8</u>	<u>4.9</u>
e. Tourist Business	<u>34.8</u>	<u>45.</u>	<u>9.6</u>
f. Fire & Police Service	<u>68.</u>	<u>21.5</u>	<u>7.7</u>
g. Hunting & Fishing	<u>62.6</u>	<u>22.4</u>	<u>6.1</u>
h. Trail Bikes	<u>48.7</u>	<u>36.6</u>	<u>6.3</u>
i. Pollution Problems	<u>68.9</u>	<u>19.6</u>	<u>3.9</u>
j. Jobs	<u>68.9</u>	<u>18.7</u>	<u>3.7</u>
k. Medical Service	<u>72.6</u>	<u>18.0</u>	<u>1.7</u>
l. Minimum Lot Size	<u>39.1</u>	<u>39.1</u>	<u>9.3</u>
m. Other			

8. I would like to see growth in the following areas:

	MORE	LESS	NO CHANGE
a. Tourist Attractions	<u>26.1</u>	<u>21.3</u>	<u>40.</u>
b. Second Homes/Camps	<u>25.9</u>	<u>26.1</u>	<u>35</u>
c. Trail Bike Trails	<u>29.6</u>	<u>28.9</u>	<u>28.5</u>
d. Farms	<u>65.7</u>	<u>3.3</u>	<u>20.</u>
e. Small Industry	<u>67.6</u>	<u>4.6</u>	<u>19.1</u>
f. Snowmobile Trails	<u>46.7</u>	<u>19.3</u>	<u>23.9</u>
g. Hiking and Skiing Trails	<u>49.3</u>	<u>11.5</u>	<u>25.</u>
h. Hunting & Fishing	<u>49.3</u>	<u>10.2</u>	<u>29.3</u>
i. State-owned Land	<u>13.5</u>	<u>49.3</u>	<u>25.4</u>
j. Roads	<u>31.7</u>	<u>14.3</u>	<u>40.2</u>
k. Other			

9. Are these areas worthy of special protection for the future:

	YES	NO	DON'T KNOW
a. Streams	<u>82.8</u>	<u>7.2</u>	<u>4.1</u>
b. Wetlands	<u>63.3</u>	<u>14.8</u>	<u>12.8</u>
c. Good Farm Land	<u>87.</u>	<u>4.6</u>	<u>3.0</u>
d. Forests	<u>87.6</u>	<u>5.7</u>	<u>1.7</u>
e. Gorges and Waterfalls	<u>74.8</u>	<u>8.9</u>	<u>7.2</u>
f. Other			

10. A. Many residents have expressed concern about the increased traffic of snowmobiles in the area. Do you feel they should be:

	YES	NO	DON'T KNOW
1. Restricted to Trails	92.9	27.6	5.2
2. Regulated by Codes and Enforced	70.9	17.7	6.7
3. Encouraged by Promotional Activities	30.9	42.2	14.1
4. Limited to Private Land	17.4	56.3	11.7
5. Limited to Public Land	22.4	52.6	11.7
6. Used only for Emergencies	9.6	70.4	6.1
7. Unrestricted	13.9	61.1	9.1

10. B. In your community does snowmobiling:

	YES	NO	DON'T KNOW
1. Help the Economy	54.8	27.2	11.7
2. Cause Parking Problems	25.4	57.2	8
3. Destroy Wildlife	35.4	39.8	17.4
4. Destroy Property	32.4	27.2	12.6
5. Offer Winter Recreation	84.3	5.4	2.8
6. Cause Noise & Litter	64.4	23.0	5.9

11. Do you favor:

	YES	NO	DON'T KNOW
a. Protecting Unique Areas (such as Roaring Brook Gorge, Inman Gulf, etc.?)	75.7	7.4	9.6
b. Building a new road thru the core area (east and west?)	19.1	56.1	18.3
c. Encouraging more year-round recreational uses?	45	35.4	10.0
d. Promoting "Tug Hill Core Area" to outsiders?	20.4	57.4	12.6
e. Using the Wild, Scenic, & Recreational Rivers Law to protect streams?	55.7	20.7	14.8
f. Land Use Regulations?	47.0	28.0	15.2

12. A concern that has been expressed at some Planning Board Public Meetings is that not enough citizens want to participate in planning for their future.

a. Did you attend your Public Planning Meeting?	Yes 30.7	No 76.3
b. Were you contacted or made aware of such a meeting?	Yes 38.3	No 56.3
c. Would you attend future meetings?	Yes 64.1	No 20.4
d. Would you like more information about your planning board?	Yes 75.9	No 12.6

13. A. What kind of community projects have you been involved in?

37% said they weren't involved - (1) Fire Department, (2) Church

13. B. Are you interested in becoming involved? Yes 40.0 No 33.5 - 26.5 didn't

13. C. What kinds of activities would you like to be involved in? (please list)

Land Use Planning 14% None

Recreational Activities 8%

14. Please check any statements below which coincide with our sentiments.

a. We should plan and control the future of Tug Hill land ourselves.	70.2
b. Why bother to plan, the State's going to do it all anyway.	6.3
c. It makes sense for towns to work together to plan since forests and rivers know no boundaries.	66.3
d. There's no need to plan, Tug Hill will stay the same for the next twenty years anyway.	4.3

15. The following space is for any special comments you would like to make.

(ACTUAL COUNT)

- 34 - No more rules and regulations. Don't infringe on rights.
- 33 - Keep state out.
- 29 - Keep Tug Hill as is.
- 25 - Retain local control/public involvement.

APPENDIX C - LAND USE CONTROL OPTION

RELATIONSHIP
TO CTHPB PLAN

- Opportunity to regulate projects affecting regional resources, especially wetlands, streams and water quality.
- Opportunity to upgrade resource management functions.
- Opportunity to establish local direction of resource management programs.

SUMMARY

DEC may delegate any of its review and permit-issuing functions under the Conservation Law to qualified municipal agencies. Delegation of power is intended to expedite reviews, provide better coordination among different levels of government, enhance environmental protection, and free DEC to concentrate on statewide concerns, leaving local matters to local governments.

TYPE OF CONTROL

Delegation of DEC's
Regulatory Functions

DEC's Regulatory
Functions

1. Freshwater Wetlands.

Permit required from DEC for activities affecting wetlands of 12.4 acres or more or surrounding areas to a distance of 100 feet. Wetlands will be mapped, classified by type and value. Minimum land use regulations will be adopted. Farm and forest uses are exempt.

- Protection of water quality, quantity, runoff.

- Protection of related natural systems, including wildlife and vegetation.

- Extensive opportunity to control development, especially in R-7 areas.

2. Stream Protection

Permit required from DEC to disturb the bank or bed of streams classified C(T) or higher or of navigable waters. "N" classification, reserved for remote headwaters, requires that no waste be discharged without filtration through at least 200 feet of earth.

- Protection of water quality and quantity.

- Protection of scenic values.

- Protection of water-based recreation.

Farmers exempt so far as crossing streams by livestock or wheeled equipment or for withdrawal for irrigation. Permit activity increasing as more streams are reclassified.

TYPE OF CONTROL

SUMMARY

3. Wastewater Discharge

Permit required for DEC for all subdivisions and other land uses that would discharge more than 1,000 gpd of pollutants. Standards of stream quality established by DEC.

4. Mined Land Reclamation

Operating permits required from DEC for mines producing 1,000 tons per year or more. Plan for excavation and reclamation must be submitted with \$100 permit fee. Bond must be posted by operator (local governments exempt from bond).

5. Subdivision Approval

Permit required from DOH for subdivisions of five or more lots, from DEC for subdivisions of 50 or more lots. Applies only to wastewater and water supply arrangements. Insufficient personnel for adequate enforcement.

6. Flood Insurance Program

Unless a town has instituted its own permit system, a building permit is required from DEC for development in flood plains in order to qualify for Federal flood insurance. Most Tug Hill towns have instituted their own permit systems. However, more detailed regulations will be required when HUD completes mapping degree of hazard within flood plains. If a town fails to qualify, DEC may impose regulations.

7. Wild, Scenic and Recreational Rivers

DEC has authority to designate qualifying streams as Wild, Scenic or Recreational Rivers and to regulate use if such streams and adjoining land areas within one-half mile.

RELATIONSHIP TO CTHPB PLAN

- Protection of water quality and quantity.

- Protection of water-based recreation.

- Would limit development if and where required treatment were prohibitively expensive.

- Opportunity to regulate impact of mining and related activities on the environment and other uses.

- Opportunity to carry on town sand and gravel operations cooperatively.

- Protection of water quality.

- Would limit development if and where required treatment were prohibitively expensive.

- Protection of water quality and runoff.

- Protection of natural stream course.

- Protection of property and life.

- Protection of water quality, quantity, and runoff.

- Protection of scenic areas.

- Protection of water-based recreation.

RELATIONSHIP
TO CTHPB PLAN

- Opportunity to review and comment on development proposals.
- Opportunity to serve as "Lead Agency," coordinating reviews of all reviewing agencies.
- Opportunity for technical assistance to towns in preparation of review procedures and impact statements.

- Provides comprehensive control over land use, including existing uses.
- Opportunity to protect natural resources, to avoid hazardous or difficult locations, to promote growth in accordance with plan, to upgrade quality of new development.

- Preservation techniques include large lot zones, open space zones, agricultural zones, flood plain zones, slope zones, scenic zones, cluster provisions, performance standards and special permits.

- Opportunity to protect natural resource areas and promote growth in accordance with plan.
- Principally restricts location and amount of new development.
- Consistent with plan's emphasis on development intensity rather than use.

- A means of protecting natural production uses, esp. forestry, which requires large lots for economic operation.

SUMMARY

All local governments, state departments and all public agencies must prepare environmental impact statements on projects which they undertake directly (including adoption of plans and land use controls affecting future growth) and on private projects for which permits are issued. Effective June 1, 1977 for local governments which must adopt and publish procedures on preparation of statements by April 1, 1977.

Zoning
Regulates the use and development of land by dividing the entire municipality into districts within which permitted uses and dimensional requirements (eg. lot size) can be stipulated. The zoning ordinance may specify permitted uses and dimensional requirements or may establish performance standards instead. "Problems" uses may be subject to review and approval by the Board of Appeals.

Intensity Guidelines
Regulate intensity of development by establishing density standards (eg. allowable number of buildings per square mile and/or average lot size in different land use area) to which local land use controls must conform. If this option were implemented, it would require the existence of complementary local land use controls. Lacking local controls, the state or region would enforce similar controls.

TYPE OF CONTROL

State Environmental
Quality Review "SEQR"

RELATIONSHIP
TO CTHPB PLAN

- Only regulates new development.
- Opportunity to limit development in problem locations: hillsides, flood plains, wetlands.
- Opportunity to protect significant natural features.
- Opportunity to upgrade the quality of new development and keep local government costs down.

- Protection of water quality and quantity.

- Protection of scenic and other significant natural areas.

- Protection of recreational values.

- Protection of forest environment and relationship to stream quality.

- Protection of recreation values.

- Preservation of timber industry by upgrading timber resource.

- Opportunity to upgrade the quality of new development and prevent health hazards

- Would limit development if and where required improvements were prohibitively expensive.

- Important that standards be consistent between towns in order to prevent concentrations of marginal development.

SUMMARY

Regulate subdividing of land as to (1) location, (2) site design, including size and shape of lots, and (3) improvements provided by the developer, including roads, water supply facilities, sanitary sewerage facilities and drainage facilities. Under Town Law, a subdivision may be defined for purposes of regulation as the division of land into two or more lots.

Establishes a buffer area a specified distance inland from the stream bank within which land use is regulated to protect the stream's channel and the quality of its water. Uses are permitted that will not disturb the buffer area's topography and will not pollute the stream. Such ordinances may be supplemented by erosion and runoff control ordinances involving an entire watershed.

Regulates commercial timber operations so as to minimize adverse environmental impacts and protect the forest as an economic resource. Regulations include measures to preserve soil stability, natural drainage and stream quality; controls on roads, trails, and landings; selective cutting requirements and limits on harvesting frequency.

These are special purpose regulations directed at a particular use, such as mobile homes, or a particular function, such as septic tank installation.

TYPE OF CONTROL

Subdivision
Regulations

Stream Protection
Ordinance

Timber Harvesting
Ordinance

Other Regulations

Building code,
trailer ordinance,
sanitary code.

APPENDIX D

FOREST POLICY AND STANDARDS

FOREST POLICY STATEMENT

The preservation of the unique qualities of Tug Hill are of great concern to the residents of the area and there is extensive interest in the perpetuation of all of these unique resources. To maintain, protect, and keep these resources (the important wetlands, all streams, the pure water supply, the unique streams and gorges, wildlife habitats, etc.) it is imperative that the forest resources of the Region be protected and wisely used so they will maintain the complex ecological systems now in existence.

Therefore, the policy of the Cooperative Tug Hill Planning Board will be to promote sound forestry practices for the conservation of soil, watersheds, recreation, aesthetics, and wildlife habitats, and to avoid the damage caused by unplanned overcutting, and perpetuate the forest industries, and employment. Therefore, minimum forest management standards will be required for all commercial harvestings. Individuals who are cutting forest products for home use also will be encouraged to follow the minimum standards. However, clearcutting will not be permitted except where necessary in special situations (for example, salvage operations following blow downs).

GENERAL STANDARDS FOR ALL WOODLAND OWNERS

1. To cut any timber in such a manner as to cause a minimum of damage to reproduction, remaining trees, and site.
2. To report and prevent forest fires by notifying the nearest fire warden or forest ranger.
3. To report outbreaks of forest insects and disease by notifying the nearest forest insect disease control office (i.e., Dadville, Watertown, Cortland, Herkimer).

MINIMUM STANDARDS FOR COMMERCIAL HARVESTING

The Northern hardwood type is the principal forest type over much of Tug Hill. The composition of this type is 50% or more of Beech, Birch, Maple, with associate species of White Ash, Basswood, Black Cherry, Hemlock, White Pine and Spruce. Swamp hardwood types found on Tug Hill are comprised of 50% or more of Elm, Red Maple, Black Ash, and associated species of White Ash, Yellow Birch and Hemlock.

Partial cutting is allowable in all hardwood types. No hardwood under 14" DBH* or softwood under 10" DBH* to be cut unless deformed, defective or unless removal is necessary for thinning or to eliminate less desirable species, or in special situations.

*DBH - Diameter Breast High, 4-1/2' from ground.

Softwood types found on Tug Hill are composed of 50% or more of White Pine, or Spruce, and Balsam Fir, with associated species of Red Maple, Beech, Sugar Maple, White Ash, Aspen, Yellow Birch, Hemlock and Tamarack.

Plantations

Most reforested areas found here are also composed of softwood species. The pure softwood and mixed hardwood and softwood stands should be partially cut.

Cut heavily in merchantable hardwood and deadened unmerchantable hardwood. Cut no Spruce or Pine under 10" DBH* unless deformed, defective or unless removal is necessary for thinning or to eliminate less desirable species. Cut all merchantable Balsam Fir.

All seedling and sapling Spruce reproduction is to be rigidly protected from cutting or injury during logging.

APPENDIX E

STANDARDS FOR STREAM PROTECTION

(For the 50' strip each side of the stream not to exceed 100' total width at stream junctions.)

Standards

1. Forest. The forest adjacent to streams shall have a minimum required forest management program. However, if an individual wishes to carry out no activity whatsoever in the area, that wish will be respected. The following are minimum standards for streams other than those considered unique areas:
 - a. Keep roads back from streams, ponds and marshes. Set roads back 100 feet on slopes less than 30%, and 150 feet for steeper ones, unless it is necessary to bridge the stream for access to a cutting area. No regulation on existing roads and bridges. Special exceptions may be allowed where a road must pass between a stream and a hill.
 - b. Use temporary culverts, bridges or runways where stream bottoms or banks would be otherwise damaged, and remove them after use.
 - c. Winch logs off steep slopes, where possible and minimize the number of skid trails and the amount of skidder traffic.
 - d. Log steep slopes during dry weather when soils are dry, or log when the ground is frozen and snow covered.
 - e. After logging, regrade roads and primary skid trails and install diversion devices as needed.
 - f. In no event will more than 50% of the basal area be cut in any 10-year cutting cycle unless there is a serious infestation or disease prevalent, or unless a storm damages in excess of 50% basal area.
 - g. Remove any logging debris that gets into the water so stream flow is not affected.
 - h. No landings are permitted within this area.
 - i. Provide ways to divert running water off roads and primary skid trails when slopes exceed 10%.
 - j. Skidding in any stream channel is prohibited.
 - k. Use of chemicals for releasing, thinning, or culling trees is prohibited in the 50 foot strip.

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TYPED: 6/25/76

2. Agriculture. Normal agricultural practices shall continue as present in this designated area except for the following, which are considered to be detrimental to stream environments:

a. Feedlots* within a 100 foot strip.

3. Development Standards. The designated use areas should have the following minimum kinds of protection relative to the future development of the area:

a. Mining operations (i.e., sand and gravel excavations) are prohibited inside the 50 foot strip.

b. With respect to development along these streams, all buildings must be set back 100 feet from the stream bank.

c. Utility corridors must be set back 100 feet from the stream bank.

d. New public and private roads will be set back 100 feet from this stream bank, except private driveways to each principal building.

e. These regulations should not apply to structures in place prior to the adoption of laws or regulations establishing these standards.

4. Recommended Minimum Forest Program Practices Within the 50 Foot Strip Each Side of the Streams:

Forests along streams should be managed under sound forestry principles of uneven-aged management. Management plans should include harvesting commercially valuable products, plus forest improvement measures through releasing, thinning, and cull removal. The goal is to maintain cover of healthy, vigorous forest stands in these streamside areas.

All operations, whether commercial or non-commercial, should be aimed at the improvement of the area. Proper forest management will provide more room for the residual trees. This will result in better growth, and create healthy, thrifty trees which will increase the multiple use values. An occasional over-mature cull tree should be left for wildlife use, as well as to improve the aesthetic and scenic beauty to which large, majestic trees contribute. There are many instances where large cull trees are used as dens for wildlife, and for living areas for bees. The establishment in logging practice of leaving these trees alone can contribute greatly to better workings for the forest wildlife system.

In general, the following guidelines are recommended as woodland improvement practices:

*The Environmental Protection Agency has defined feedlot as 1,000 head of livestock confined within two acres.

- a. **Releasing.** The competing growth must be removed in such a manner as to permit the free growth of an average of 400 more desirable trees per acre.

Definition: The elimination of overtopping and competing trees in young, natural or planted, seedling/sapling sized stands of conifers or hardwoods to stimulate the growth and development of the forest stand is desirable.

- b. **Thinning.** Thinning to be done is dependent upon the age and condition of the stand to be thinned; however, an average of 200 or more desirable and well-distributed trees per acre should be left for future harvest.

Definition: The elimination of sufficient trees in crowding, pole-sized stands of conifers or hardwoods so that growth of well-spaced, desired trees will be more rapid, is a desirable practice.

- c. **Cull Removal.** The elimination of trees, usually of sawlog size and unmerchantable because of inferior quality, is recommended to improve the composition and vigor of the stand as well as to establish conditions for desired reproduction (except for occasional den trees). Felling may be used, or complete single saw cut girdle at least 1" deep.

- d. **Stabilizing Forest Roads.** Install erosion control measures on existing logging roads and trails where the terrain and soils are of a character conducive to serious erosion and gullyng.

These control measures provide for the placement of structures in or adjacent to roads or trails to divert surface water from the existing channels and spread it in the woods before it gains sufficient velocity and volume to carry much sediment with it, thus reducing soil loss and the silting of streambeds. The control measures used may consist of water bars, check dams, diversion ditches, closed or open top culverts and such other measures as are determined to be necessary to provide adequate control.

- e. **Other Provisions.**

1. Fencing of domestic stock should be required in all cases where it is necessary for the protection of the woodland which is to be improved.
2. Improvement measures should be carried out in such a manner as to preserve the quality of the environment, especially wildlife habitat and the appearance of the area.

- f. **Wildlife.** The forest management programs mentioned above should fully compliment wildlife management. There is need to address directly positive and negative effects for beaver. Until more is known about the effects of beaver activity, it is recommended that destruction of active beaver habitats be discouraged.

APPENDIX F

PROPOSED STANDARDS AND REGULATIONS FOR "UNIQUE STREAM AREAS" (RECOMMENDED FOR THE 250-FOOT STRIP EITHER SIDE OF THE STREAM AREAS)

Standards

1. Forest. The designated unique areas mentioned above should have a required forest management program. However, if an individual wishes to carry out no activity whatsoever in the area, that wish should be respected. The following minimum standards are proposed:
 - a. Keep roads back from streams, ponds and marshes. Set roads back 100 feet on slopes less than 30%, and 150 feet for steeper ones unless it is necessary to bridge the stream for access to a cutting area. No regulation of existing roads and bridges is recommended.
 - b. Use temporary culverts, bridges or runways where stream bottoms or banks would be otherwise damaged, and remove them after use.
 - c. On steep slopes set back roads and skid trails at least 150 feet from streams, ponds and marshes. Foot trails may be permitted following good landscape practice.
 - d. Winch logs off steep slopes where possible and minimize the number of skid trails and the amount of skidder traffic.
 - e. Log steep slopes during dry weather when soils are dry, or log when the ground is frozen and snow covered.
 - f. After logging, regrade roads and primary skid trails and install diversion devices as needed.
 - g. In no event will more than 50% of the basal area be cut in any 10-year cutting cycle unless there is a serious infestation or disease prevalent, or unless a storm damages in excess of 50% basal area.
 - h. Remove any logging debris that gets into the water so stream flow is not affected.
 - i. If landings are necessary within this area, put landings behind a hill, bank or land form that hides them from the stream, or set landings back into the woods as far as practical (use a setback of at least 200 feet whenever possible).
 - j. Clear landings after use. Where needed, seed landings, ditches and any road built for the operation.
 - k. Provide ways to divert running water off roads and primary skid trails when slopes exceed 10% (figure out where streams of water will run off during a rain or snow melt, and put in diversion devices to channel surface water off the road or trail).

1. Do not skid along any stream channel (a good rule for intermittent streams, too).
- m. Do not use chemicals for releasing, thinning or culling trees.
2. Agriculture. Normal agricultural practices should continue as present in designated areas except for the following, which are considered to be detrimental to stream environments:
 - a. Feedlots* within the 250-foot strip.
 - b. Application of fertilizer and pesticides within 100 feet of the river bank or gorge edge.
3. Development Standards. The designated use areas should have the following minimum kinds of protection relative to the future development of the area:
 - a. Mining operations (i.e., sand and gravel excavations) are to be prohibited inside the 250-foot strip.
 - b. With respect to development along these "unique" streams,
 - (1) No more than five principal buildings** will be permitted per linear mile of river, except in incorporated villages where less restriction may be needed.
 - (2) All buildings must be set back 200 feet from the river bank or edge of the gorge (whichever is greater).
 - (3) No multiple family dwellings, commercial structures, hotels, motels or tourist accommodations will be permitted inside the 250-foot strip.
 - c. Utility corridors must be located outside the 250-foot strip.
 - d. No new public or private roads will be permitted inside the 250-foot strip, except private driveways to each principal building.
 - e. Public open space recreation, such as hiking and snowmobiling, is not encouraged on private lands along these "unique" streams.
 - f. These regulations should not apply to structures in place prior to the adoption of laws or regulations establishing these standards.

Minimum Forest Program Practices

Forests in the 250-foot strip along unique stream areas should be managed under sound forestry principles of uneven-aged management. Management plans should include harvesting commercially valuable products, plus forest improvement measures through releasing, thinning and cull removal. The goal should be to maintain cover of healthy, vigorous forest stands in these riverside areas.

* The Environmental Protection Agency has defined feedlot as 1,000 head of livestock confined within two acres.

** Definition - principal building includes single family dwellings or mobile homes for permanent or seasonal use.

All operations, whether commercial or non-commercial, should be aimed at the improvement of the aesthetics of the unique area. Proper forest management will enhance these values by providing more room for the residual trees. This will result in better growth, and create healthy, thrifty trees which will increase the multiple-use values desired and required on unique sites. An occasional over-mature cull tree should be left for wildlife use, as well as to improve the aesthetic and scenic beauty of which large, majestic trees contribute. There are many instances where large cull trees are used as dens for wildlife, and for living areas for bees. The establishment in logging practice of leaving these trees alone can contribute greatly to better workings of the forest wildlife system.

In general, the following guidelines are recommended as woodland improvement practices:

1. **Releasing.** The competing growth must be removed in accordance with a qualified forester's recommendation and in such a manner as to permit the free growth of an average of 400 or more desirable trees per acre.

The elimination of overtopping and competing trees in young, natural or planted, seedling/sapling sized stands of conifers or hardwoods to stimulate the growth and development of the forest stand is desirable.

2. **Thinning.** Thinning must be done in accordance with a forester's recommendations - which will be dependent upon the age and condition of the stand to be thinned; however, an average of 200 or more desirable and well-distributed trees per acre must be left for future harvest.

The elimination of sufficient trees in crowded, pole-sized stands of conifers or hardwoods so that growth of well-spaced, desired trees will be more rapid, is a desirable practice.

3. **Cull Removal.** The elimination of trees, usually of sawlog size and unmerchantable because of inferior quality, is recommended to improve the composition and vigor of the stand as well as to establish conditions for desired reproduction.

The trees to be eliminated will be designated by the forester. Felling may be used, or a double saw cut girdling four inches between cuts.

4. **Stabilizing Forest Roads.** Install erosion control measures on existing logging roads and trails where the terrain and soils are of a character conducive to serious erosion and gullyng.

These control measures provide for the placement of structures in or adjacent to roads or trails to divert surface water from the existing channels and spread it in the woods before it gains sufficient velocity and volume to carry much sediment with it, thus reducing soil loss and the silting of streambeds.

The installation of erosion control measures on existing logging roads and trails must be in accordance with the specifications and plans which will be developed by the forester for each project. The control measures used may consist of water bars, check dams, diversion ditches, closed or open top culverts and such other measures as are determined to be necessary to provide adequate control.

5. Other Provisions.

- a. Fencing will be required in all cases where, in the opinion of the consulting forester, it is necessary for the protection of the woodland which is to be improved.
- b. Improvement measures should be carried out in such a manner as to preserve the quality of the environment, especially wildlife habitat and the appearance of the area.

6. **Wildlife.** The forest management programs mentioned above should fully comprehend wildlife management. There is need to address directly positive and negative effects of beaver. Until more is known about the effects of beaver activity, it is recommended that destruction of active beaver habitats be discouraged.

APPENDIX G

BIBLIOGRAPHY AND SUGGESTED READING

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