Detailed Data Model
Foothills Forest

Prepared For

Foothill Forest,
Hinton, Alberta

January 31, 1994

THE FORESTRY CORP

The Forestry Corp.

Detailed Data Model

FOR THE FOOTHILLS FOREST

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Introduction

The development of a Decision Support System for integrated resource management is one of the primary goals of the Foothills Forest. This will require a clear understanding of data requirements for resource management decision making. In addition, a flexible, adaptable and efficient data base design must be implemented to ensure that all necessary data is available to whatever DSS module requires it.

The detailed design is one of the last steps in the data modeling process. The Data Scope was completed in mid-1993, and the logical model was completed in early 1994. The Data Scope and Logical Model were developed for all data needs of the Foothills Forest. However, the detail design only addresses the priority entities determined by the Foothills Forest. The other entities, as they become necessary, and as they become better defined, can be added at a later date.

It is at the detailed design stage that several issues needed to be addressed. The first is to determine a system of identifying stands and cutblocks both inside and outside the FMA using a consistent and logical key. The second issue is the integration of the model with the overall framework of ArcForest. This is most critical in defining forest cover, where the two data models (Foothills Forest and ArcForest) overlap.

The balance of this report describes the methodology used to document the detailed model, a brief description of rationale used to determine keys in specific entities, as well as the design diagrams and full tabular descriptions of the entities, attributes and domains.

Methodology

The detailed model was developed using the ER/win software. This software is PC based and is strictly a data modeling tool. The Foothills Forest model includes both spatial and attribute entities. Unfortunately, the ER/win tool sometimes doesn't like the relationships between spatial entities and tends to try and force the entity keys to hold all the spatial key information. A further discussion of this is under the section Relationships.

The Foothills Forest model will make extensive use of dynamic segmentation and regions to track specific spatial features. The use of these Arc/Info features has significantly reduced the number of spatial entities required. The use of regions has also compartmentalized the attribute data base and this has lead to an overall better design.

Keys

The issue of how to uniquely identify forest stands and cutblocks for features both outside and inside the FMA was addressed during this phase. The Data Model Team started by defining the managing units of both the Province and Weldwood for different levels of management and timber allocation. We determined that the spatial layer GEOADMIN, will have many regions to identify the management units of different agencies. For example, there will eventually be a region for LFS Forest Management Unit, Weldwood Working Circles, Weldwood Compartments, etc. A generic scheme to integrate the planning units and operating units has been developed. The field names, definitions and interpretations by different agencies are shown in the table below:

Attribute Name	Attribute Definition	Inside FMA	Outside FMA
aac_unit	A sustained yield unit for which an annual allowable cut is calculated	working circle	forest management unit
allocation_unit	Unit from which wood is allocated. Currently this level only applies to the areas outside the FMA.	not used presently	quota number
operating_unit	Unit for which operating plans are developed and approved.	compartment	license number

A further discussion of how these units are used for both forest cover and the cutblock layers are detailed below.

Forest Cover Key

The ArcForest data model uses a prid (primary identifier) to track the smallest polygon unit in the forest cover layer. Many prids can make up one stand. In the Foothills Forest, the smallest polygon unit is a stand. Therefore the ArcForest prid is a single stand. The prid identifier that is consistent throughout the Foothills forest is based on the Alberta Township Survey (ATS) System. The unique identifier will be a combination of the following attributes:

Meridian + Township + Range + StandNo. + SubStand

This schema will work for the entire Foothills Forest. In order for individual agencies to recall information based on their own administrative boundaries, two additional attributes will be attached to the FOREST_STAND attribute table: They will have different meanings to different agencies as the table below illustrates:

Attribute	Inside Weldwood FMA	Outside FMA
primary_unit	working circle	forest
secondary_unit	compartment number	management unit number

The attribute records for stands outside the FMA will have the ATS attributes attached. For stands within the FMA, those attributes can be filled from an overlay with the GEOADMIN spatial layer.

Cut Block Key

Similar to the forest stands, the cutblocks in the Foothills Forest must use a consistent key throughout the Forest. The current SRMS (Silviculture Records Management System) adopted by LFS and being used by Weldwood utilizes an *opening number* as a unique key. This key is the combination of the following attribute fields:

Meridian + Range + Township + SectionNumber + GridCoordinate + DummyCharacter.

The meridian, range, township and section number are all derived from the ATS. A grid coordinate is determined manually by overlaying a grid on the section and picking X and Y coordinates that are closest to the polygon center. A dummy character (A, B, or C) can be used to identify sub units within the opening. This system was devised to satisfy several needs:

1. The system must be usable by both GIS and non-GIS based companies,
2. The system must result in a unique number over the entire province, and,
3. The system must allow for identification of smaller units within the block.

Since the entire Foothills Forest will be GIS based, we can use an automated system for generating opening numbers and can do away with the manual coordinate grid. Smaller units within each block are now identified spatially and tracked through region subclasses. The only remaining condition to meet is that of the opening number being unique over the entire province. Again, the Data Model Team examined the way in which each managing agency identified blocks and determined that the GEOADMIN regions were the most appropriate.

Therefore the opening number for an individual block within the Foothills Forest will be identified as:

Attribute	Inside FMA	Outside FMA
aac_unit	working circle	forest management unit
allocation_unit		quota number
operating_unit	compartment	license number
block_number	block number	block number
block_sub	sub block	sub block
treatment_unit	(tracked spatially)	(tracked spatially)

Silviculture Data

The silviculture component of the data model is fairly stable with the exception of survey information. The SRMS model of dealing with survey information is not very efficient, but does compartmentalize the survey data very well. The Silviculture Team is presently determining more detailed needs regarding the survey data. In particular, we need to determine if surveys apply to whole blocks, treatments, specific sub-units, or some other criteria. In addition, the survey information in a specific table must apply to a consistent feature i.e.: some information cannot be plot based, and other information be block based. The link to spatial features cannot be made until this is determined. Also, an efficient data design cannot be completed for this entity until the relationship between surveys and other data layers is determined.

Surveys satisfy many needs and the data collection specifications will depend on the purpose of the survey. Currently, surveys are indicated on the model as a single entity related only to the ACTUAL_ACTIVITY table. No linkages to spatial features have been determined.

Surveys could be dealt with in the same manner as research plots as described in the Logical Data Model document. Research plot data would be held in separate data bases that were specific

to the individual study. This is because the attributes collected for an individual research study will likely be different among studies. Similarly with survey plots - the information collected from different kinds of surveys may result in more efficient design if separate tables are maintained for the different kinds of surveys.

Data Model

The following diagrams show the detailed model for the priority entities only. A summary of the spatial entities appears in Table 1 (next page). A list of priority attribute tables is listed in Table 2.

The diagrams to follow have 2 formats:

1. All priority entities are displayed with their definitions.
2. All priority entities are displayed with their attribute lists.

The model is too large to display on one page. There are six pages for each of the two sets of diagrams described above. Each page on the diagram is numbered. In order to view the entire diagram, place the numbered pages into the following pattern:

Page 1 Base Data	Page 2 Lands	Page 3 Roads	Page 4 Hydrology
Page 5 Silviculture	Page 6 Forest Cover		

Details regarding the entities can be found in Appendix 1 - Entity List, where each entity is listed with its definition and parent and child relationships. At this point, cardinality should be view

with some skepticism due to the problems the modeling tool ER/win has with the linkage of spatial and attribute tables.

Details regarding the attributes can be found in Appendix 2 - Attribute List. Each attribute is listed with its definition, database schema and its domain.

Details regarding domains and user identified data types in Appendix 3 - Domains. Each domain is listed along with the relevant domain values and definitions. Some user data types were created to ensure that there was proper matching of data types across tables. These few types are included at the end of the domains.

Table 1: Priority Spatial Entities included in the Detailed Model

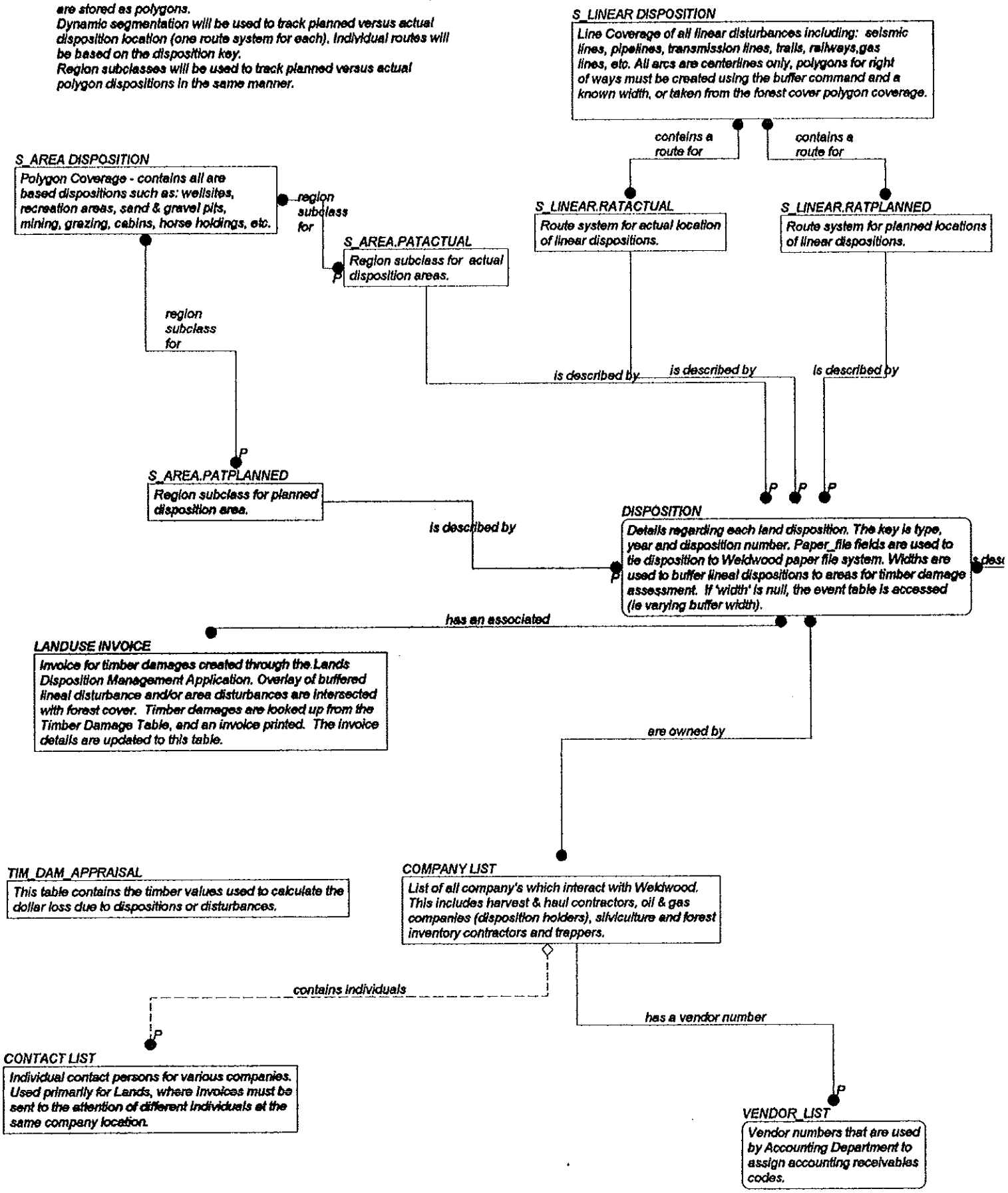
	Spatial Entities	(P)oly (L)ine	Region / Route Entities
1	GEOADMIN	P	AAC_UNIT ALLOCATION_UNIT OPERATING_UNIT
2	TWP_GRID	P	TOWNSHIP SECTION QUARTER
3	CONTOUR	L	
4	UTM	P	
5	CULTURAL	P	
6	LINEAR_DISPOSITION	L	ACTUAL PLANNED
7	AREA_DISPOSITION	P	ACTUAL PLANNED
8	ROADS	L	NAME NUMBER LOC
9	CROSSINGS	Point	
10	HYDROLOGY	L	NAME
11	BLOCK_PLAN	P	
12	CUTBLOCKS	P	BLOCK PREP PLANT
13	FOREST_COVER		

Table 2: List of Priority Attribute Tables included in the Detailed Model

	Attribute Tables
1	CULTURAL_LABEL
2	DISPOSITION
3	LANDUSE_INVOICE
4	TIM_DAM_APPRAISAL
5	COMPANY_LIST
6	CONTACT_LIST
7	VENDOR_LIST
8	CULVERT
9	CROSSINGS
10	CROSSING_SPECIES
11	VELOCITY
12	DAMS
13	CREEKCLASS
14	BLOCK_ADMIN
15	PLANNED_ACTIVITIES
16	PLAN_SITE_PREP
17	PLAN_HARVEST
18	PLAN_PLANT
19	ACTUAL_ACTIVITES
20	SURVEY
21	ACT_HARVEST_DATA
22	ACT_SITE_PREP
23	ACT_PLANTING
24	ACT_PLANTING_SPP
25	ACT_SEEDING
26	FOREST_STAND
27	FOREST_CANOPY
28	FOREST_SPECIES
29	FOREST_WORKING_GROUP

Page 2:

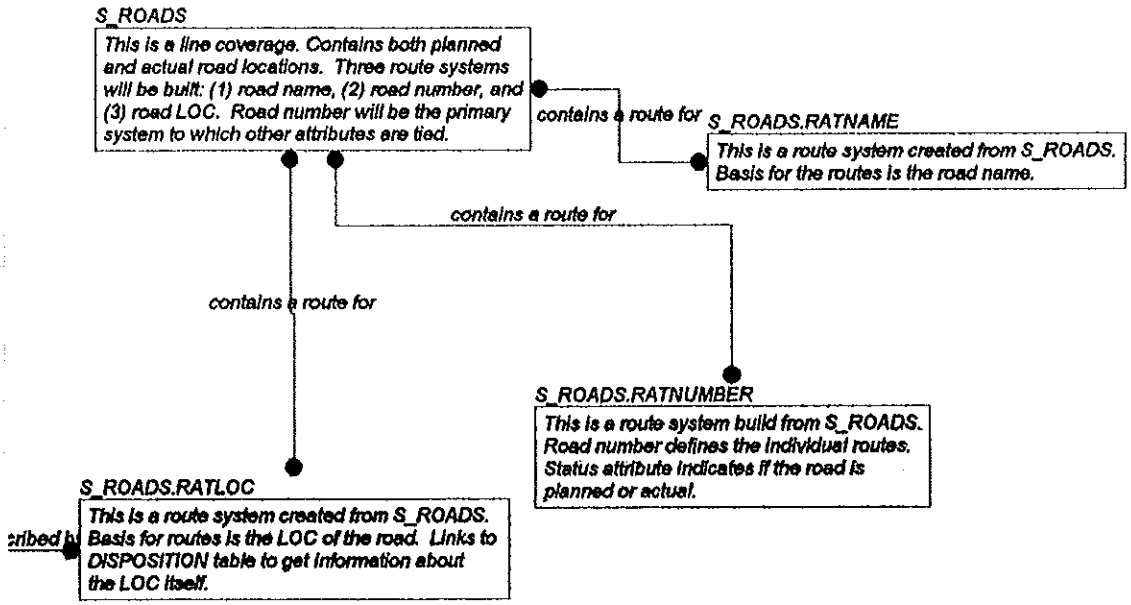
Describes the Arc/Info and related tables for the Land Dispositions.
Linear features are stored as center line features. Area based dispositions are stored as polygons.
Dynamic segmentation will be used to track planned versus actual disposition location (one route system for each). Individual routes will be based on the disposition key.
Region subclasses will be used to track planned versus actual polygon dispositions in the same manner.

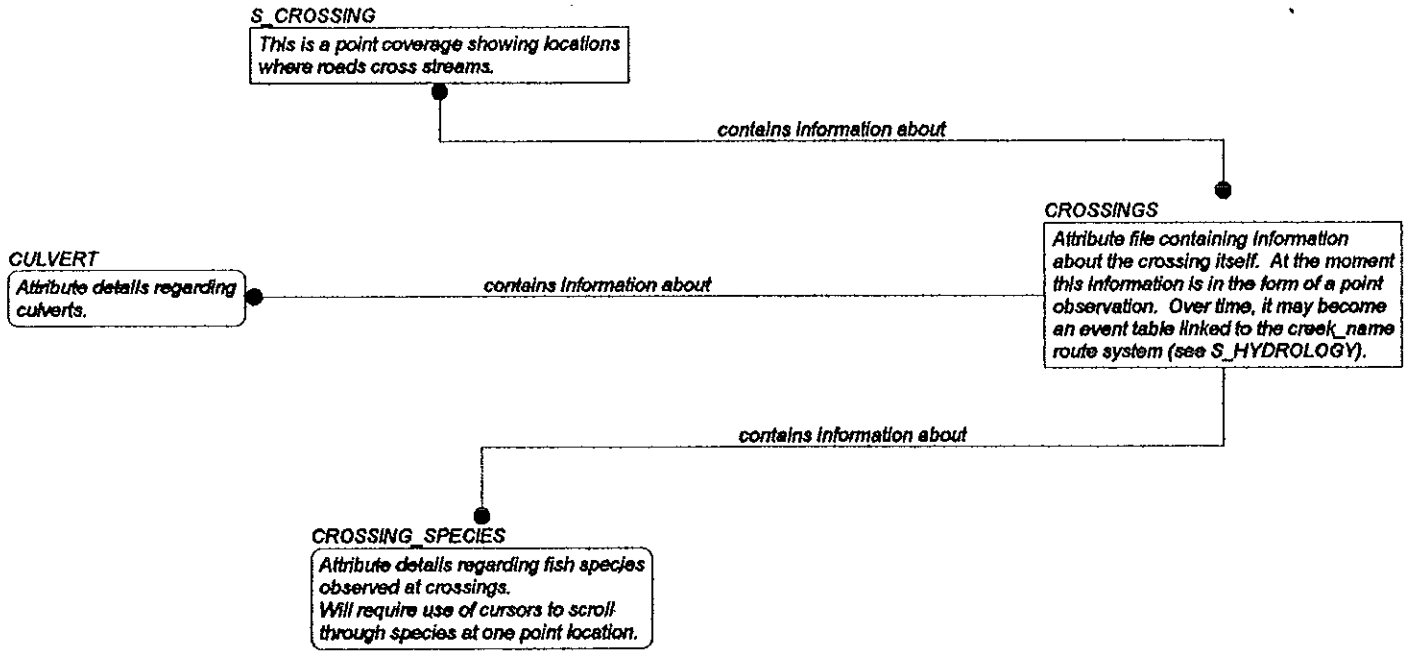


Page 3:

Describes the linear road features and crossing point features. Dynamic segmentation will be used to create route systems based on road name, road number and road LOC. The primary road system will be road number.

Crossings are point features with many attributes.

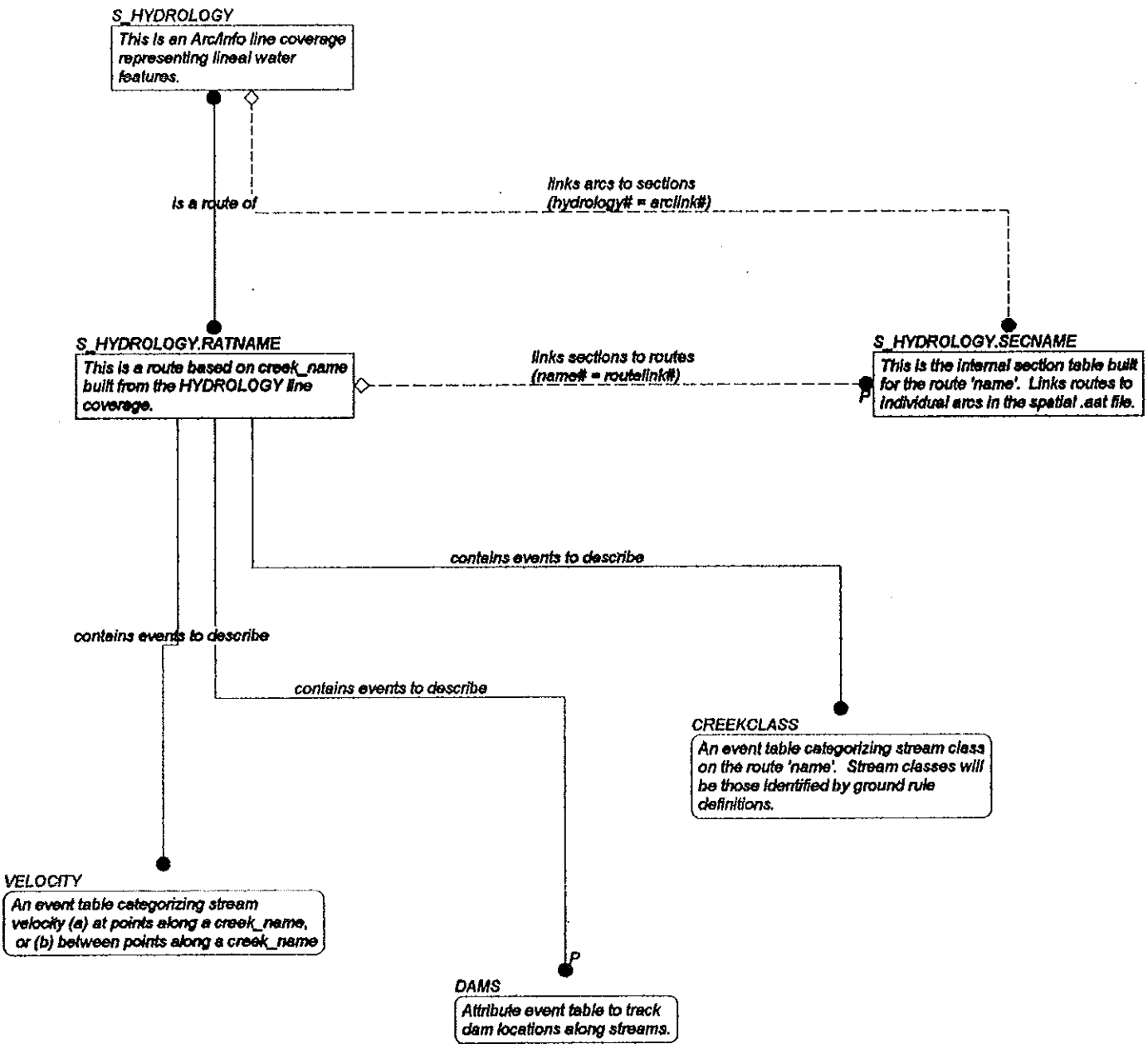




Page 4:

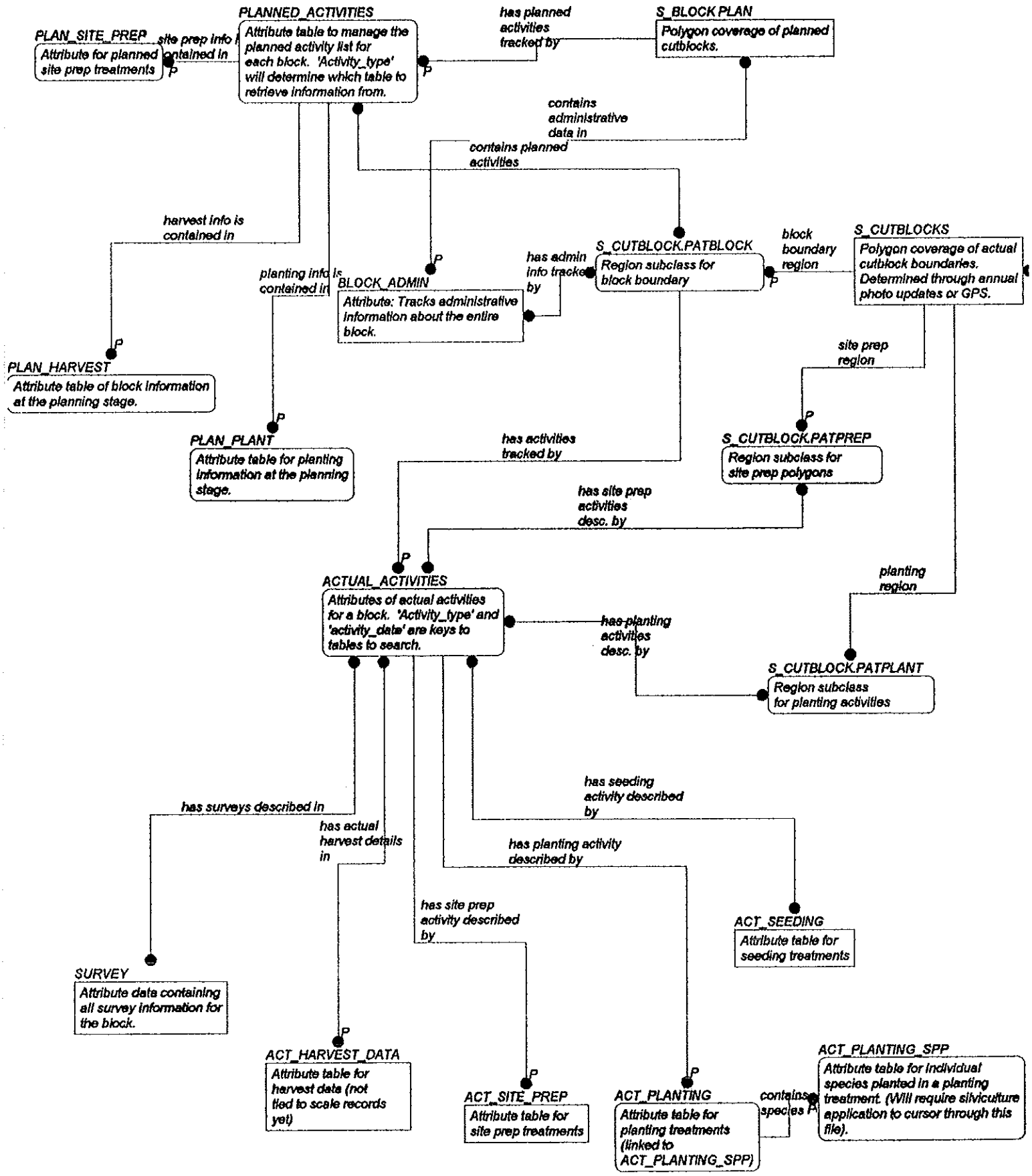
Describes the ArcInfo tables and related attribute files for the linear hydrologic features. Hydrology will use dynamic segmentation to build a route system based on creek_name. Unnamed creeks will be given an arbitrary name.

Event tables determined so far are for: stream class, stream velocity and location of dams. Others are possible (bottom type, pool locations, etc).

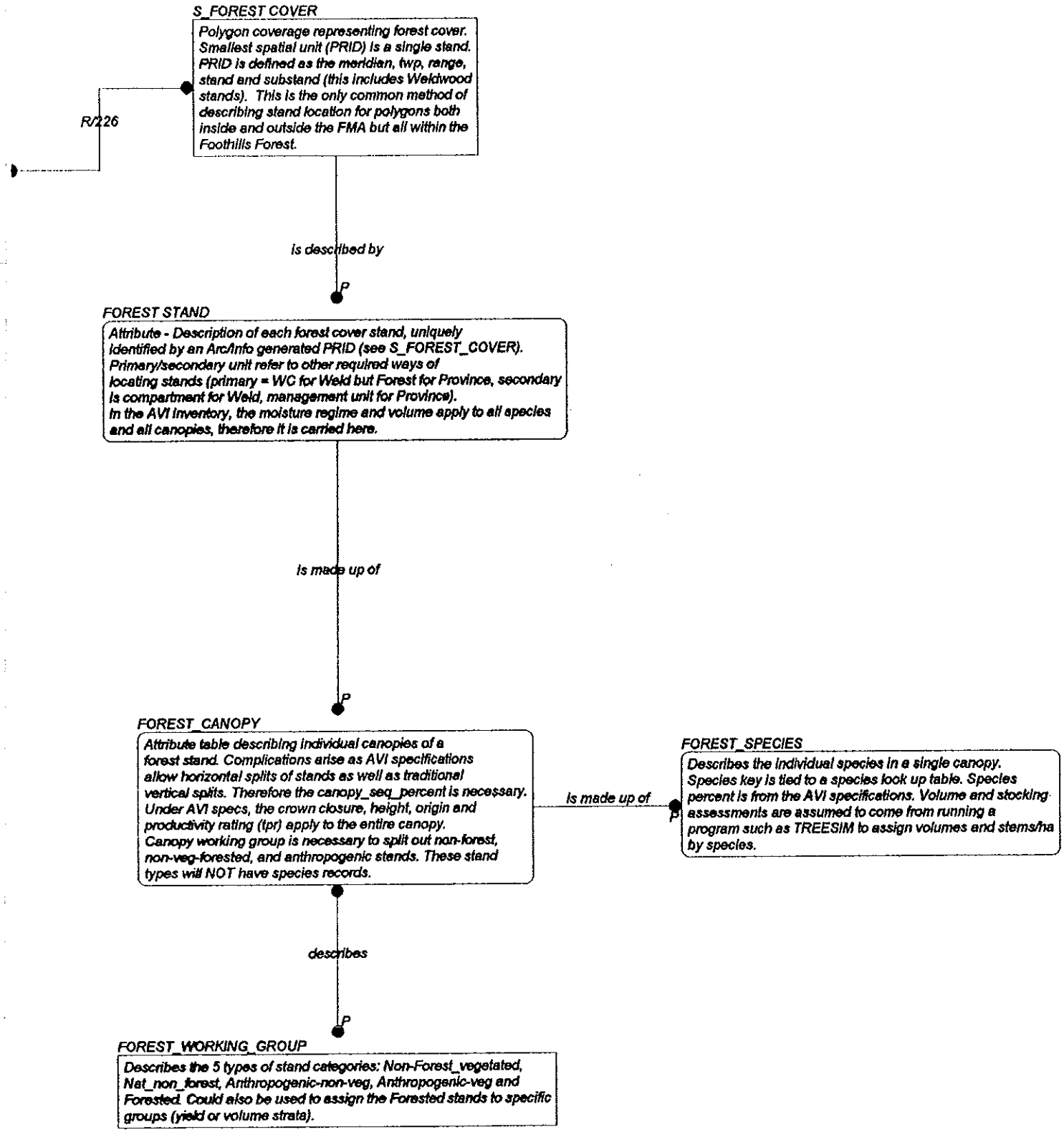


Page 5:

Silviculture system.

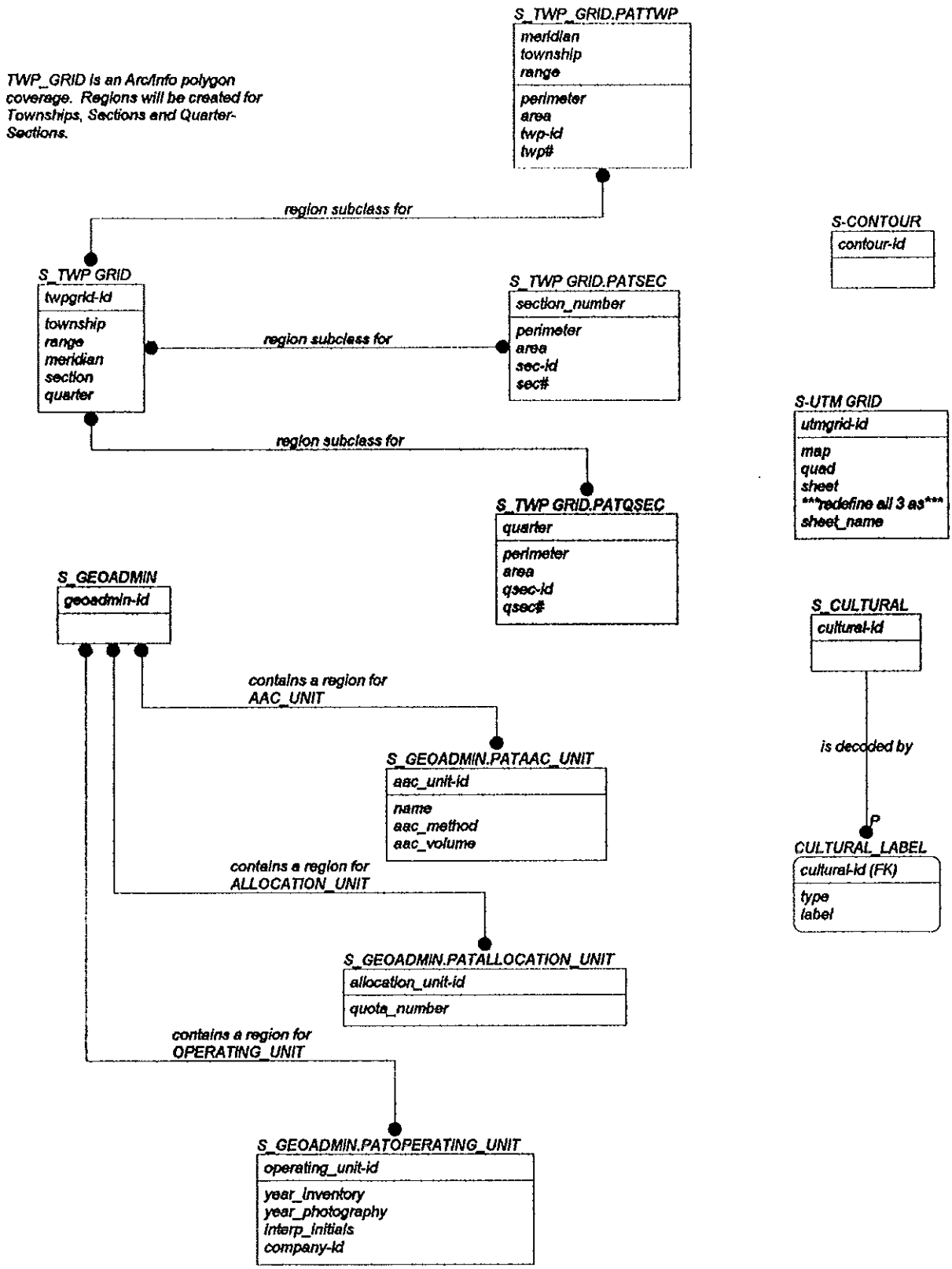


Forest Cover polygon and attributes. The AVI inventory system fits fairly well with the ArcForest model. Where polygons are non-vegetated, the working group labels are used for mapping. Where polygons are vegetated, but non-forested, only a single canopy record exists, but no species records. Where polygons are forested, at least one canopy and one species record will exist.



Page 1:

Legal and other base coverages are described here



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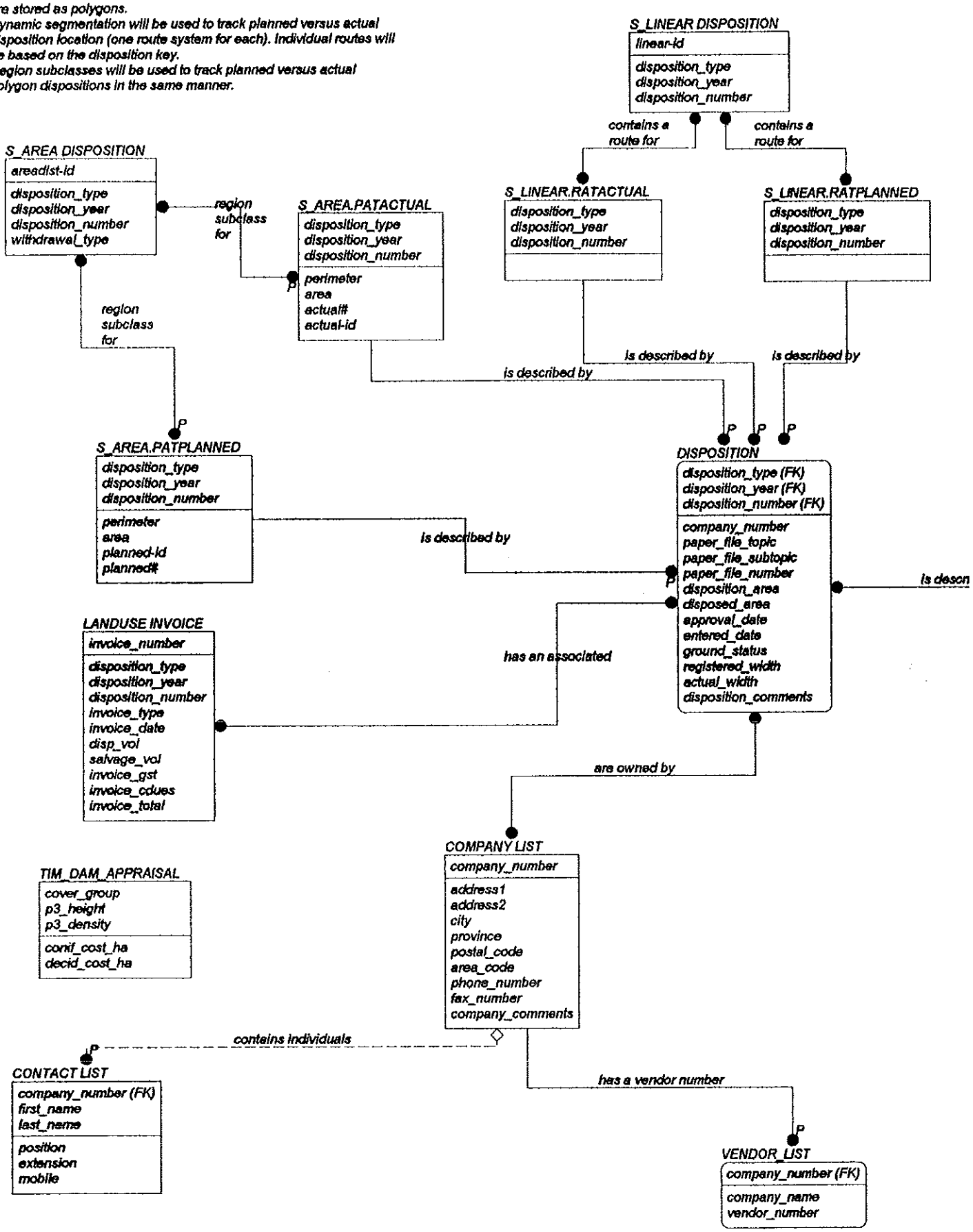

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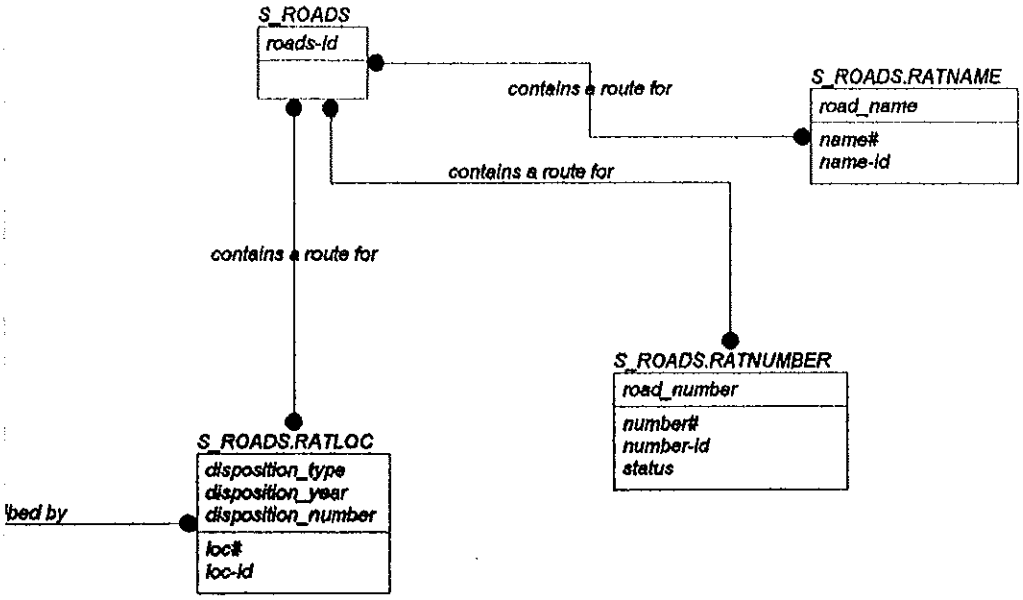

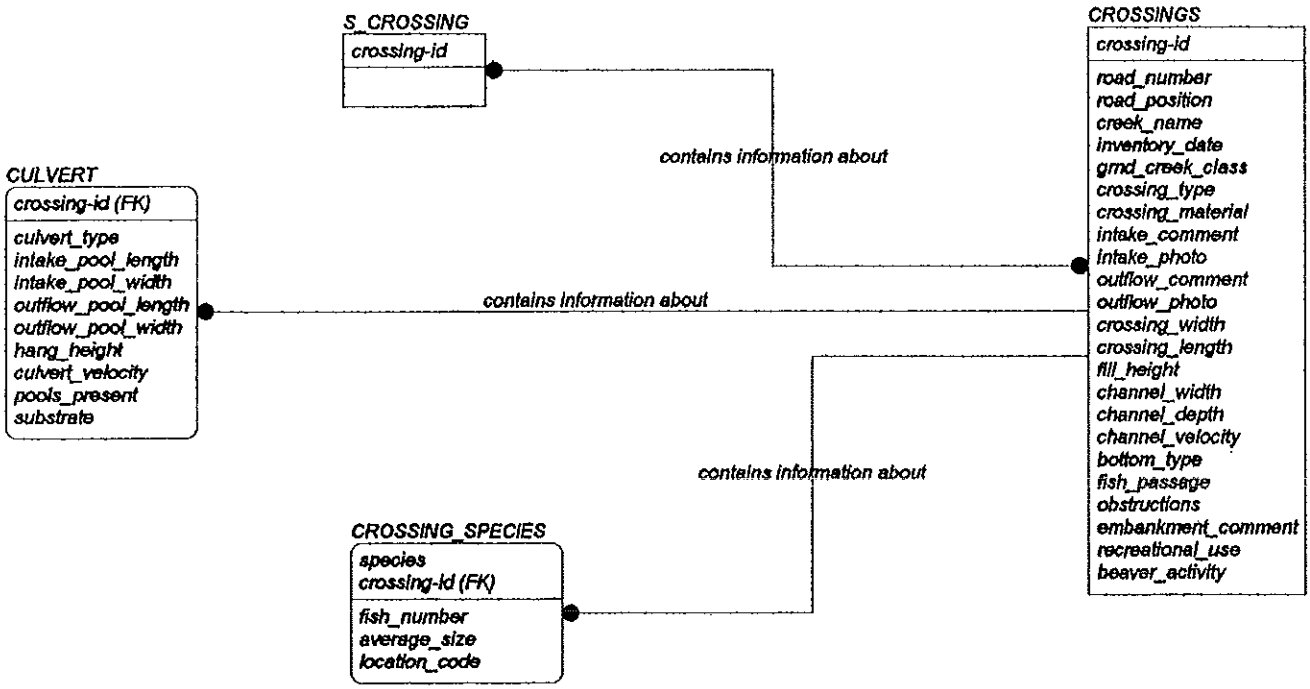

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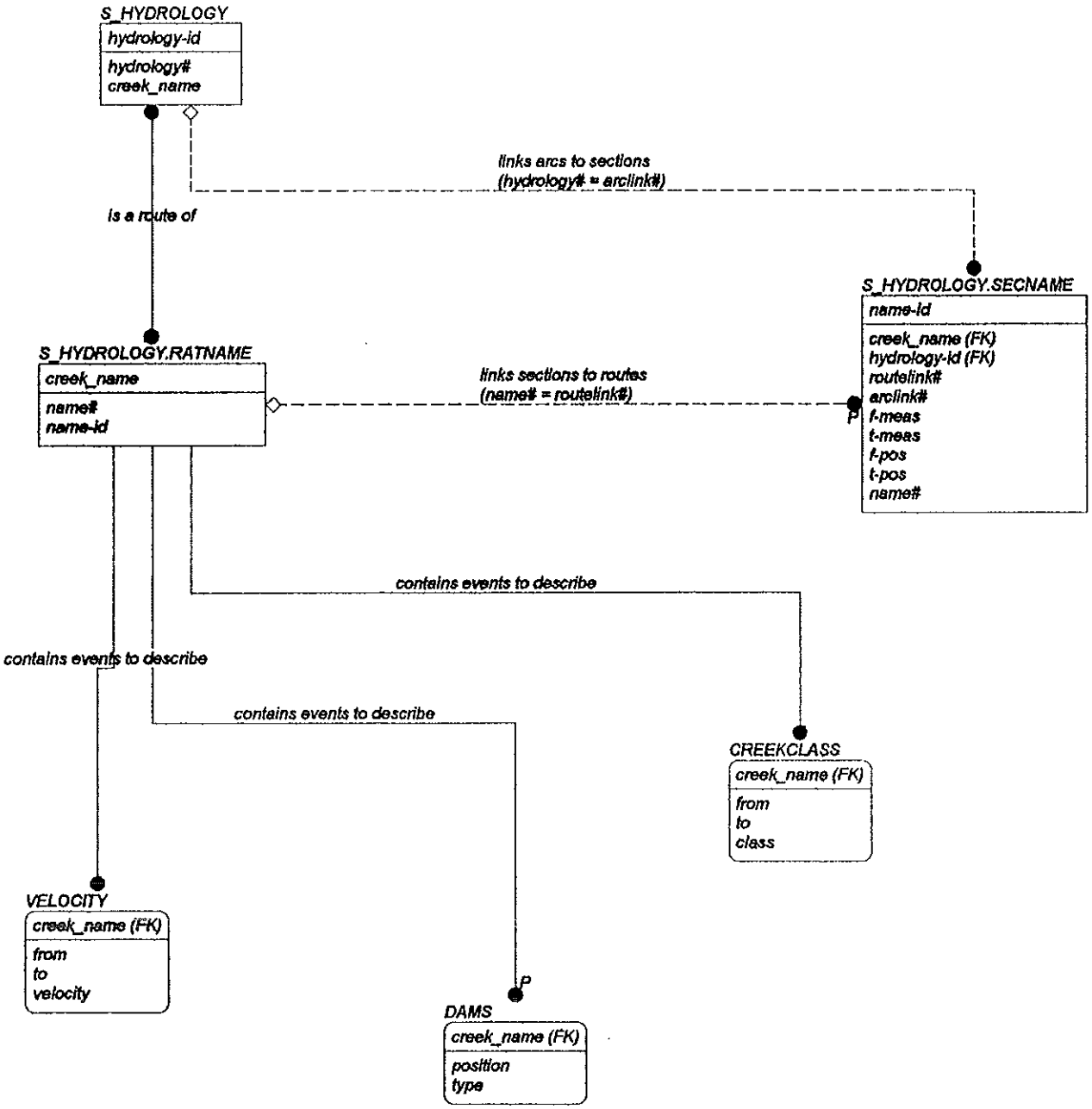

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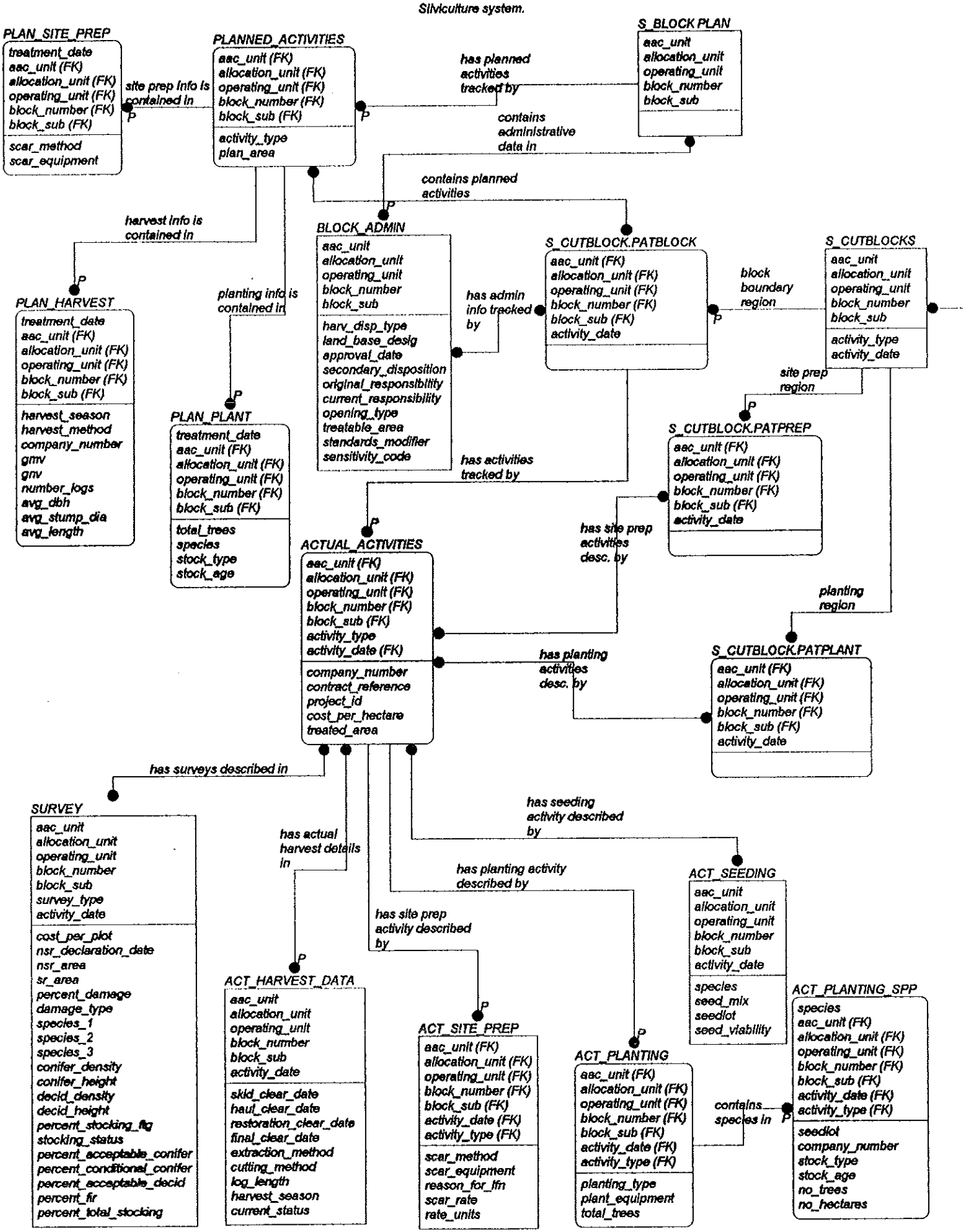

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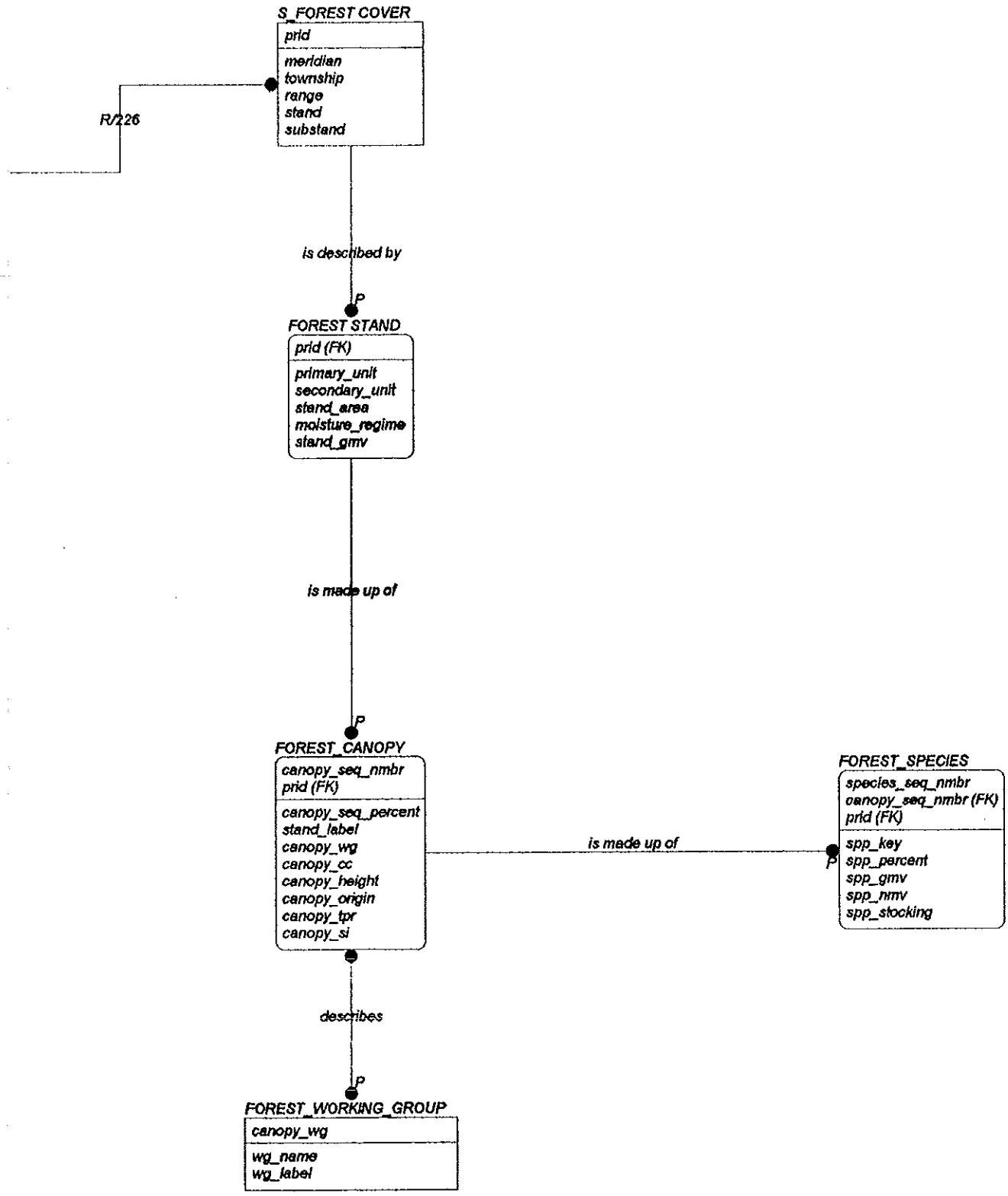

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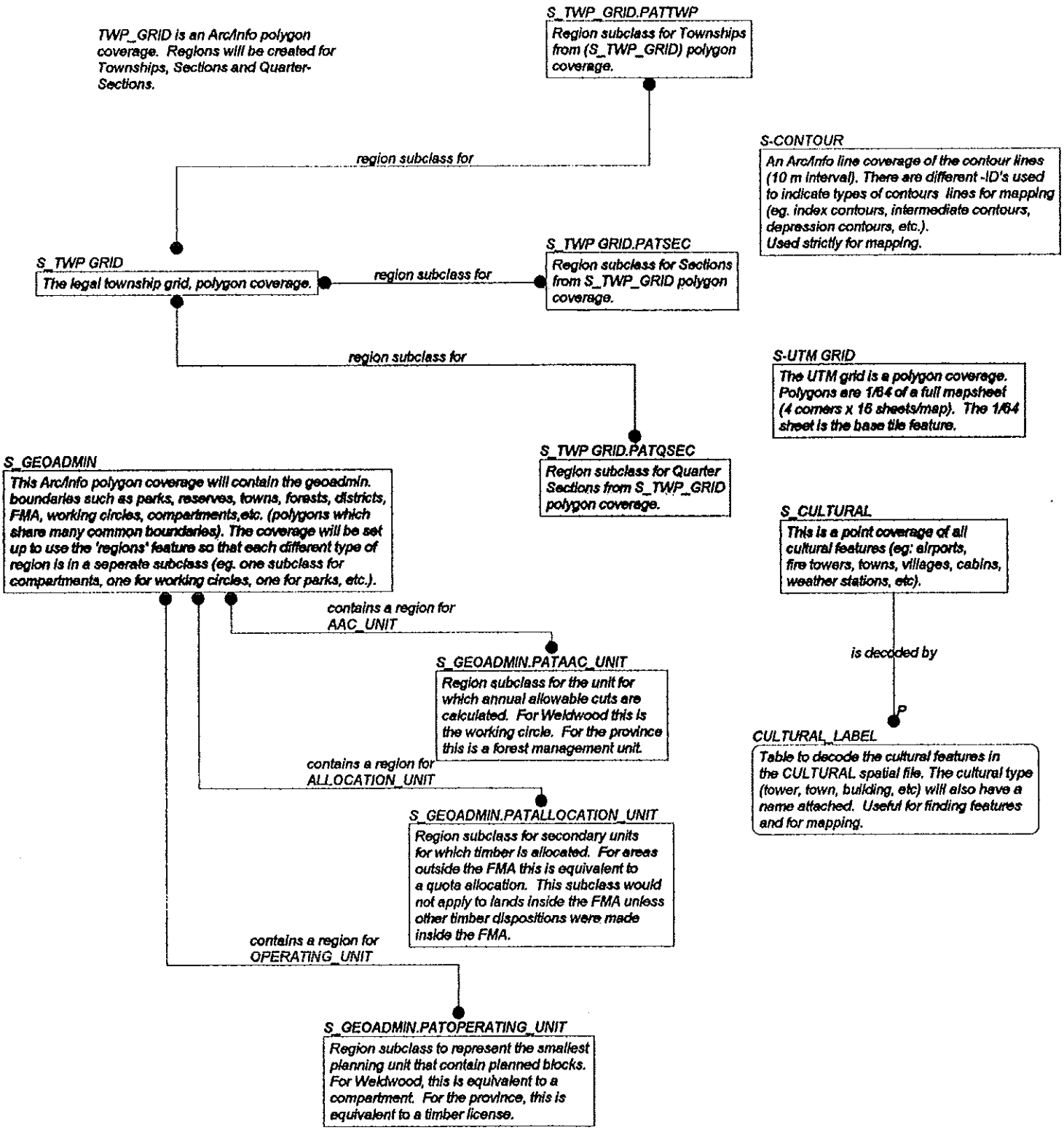

Appendix 1 - Entity Lists

ENTITY NAME	DEFINITION	CHILD IN RELATIONSHIP	PARENT IN RELATIONSHIP
ACTUAL_ACTIVITIES	Attributes of actual activities for a block. 'Activity_type' and 'activity_date' are keys to tables to search.	S_CUTBLOCK.PATBLOCK has activities tracked by ACTUAL_ACTIVITIES Cardinality: One-to-One-or-More (P)	ACTUAL_ACTIVITIES has planting activity described by ACT_PLANTING Cardinality: One-to-One-or-More (P) ACTUAL_ACTIVITIES has site prep activity described by ACT_SITE_PREP Cardinality: One-to-One-or-More (P)
ACT_HARVEST_DATA	Attribute table for harvest data (not tied to scale records yet)		
ACT_PLANTING	Attribute table for planting treatments (linked to ACT_PLANTING_SPP)	ACTUAL_ACTIVITIES has planting activity described by ACT_PLANTING Cardinality: One-to-One-or-More (P)	ACT_PLANTING contains species in ACT_PLANTING_SPP Cardinality: One-to-One-or-More (P)
ACT_PLANTING_SPP	Attribute table for individual species planted in a planting treatment. (Will require silviculture application to cursor through this file).	ACT_PLANTING contains species in ACT_PLANTING_SPP Cardinality: One-to-One-or-More (P)	

ENTITY NAME	DEFINITION	CHILD IN RELATIONSHIP	PARENT IN RELATIONSHIP
ACT_SEEDING	Attribute table for seeding treatments		
ACT_SITE_PREP	Attribute table for site prep treatments	ACTUAL_ACTIVITIES has site prep activity described by ACT_SITE_PREP Cardinality: One-to-One-or-More (P)	
BLOCK_ADMIN	Attribute: Tracks administrative information about the entire block.		
COMPANY LIST	List of all company's which interact with Weldwood. This includes harvest & haul contractors, oil & gas companies (disposition holders), silviculture and forest inventory contractors and trappers.		COMPANY LIST has a vendor number VENDOR_LIST Cardinality: One-to-One-or-More (P)
			COMPANY LIST contains individuals CONTACT LIST Cardinality: Zero-or-One-to-One-or-More (P)

ENTITY NAME	DEFINITION	CHILD IN RELATIONSHIP	PARENT IN RELATIONSHIP
CONTACT LIST	Individual contact persons for various companies. Used primarily for Lands, where invoices must be sent to the attention of different individuals at the same company location.	COMPANY LIST contains individuals CONTACT LIST Cardinality: Zero-or-One-to-One-or-More {P}	
CREEKCLASS	An event table categorizing stream class on the route 'name'. Stream classes will be those identified by ground rule definitions.	S_HYDROLOGY.RATNAME contains events to describe CREEKCLASS Cardinality: One-to-Zero-One-or-More	
CROSSINGS	Attribute file containing information about the crossing itself. At the moment this information is in the form of a point observation. Over time, it may become an event table linked to the creek_name route system (see S_HYDROLOGY).		CROSSINGS contains information about CROSSING_SPECIES Cardinality: One-to-Zero-One-or-More
			CROSSINGS contains information about CULVERT Cardinality:

ENTITY NAME	DEFINITION	CHILD IN RELATIONSHIP	PARENT IN RELATIONSHIP
			One-to-Zero-One-or-More
CROSSING_SPECIES	Attribute details regarding fish species observed at crossings. Will require use of cursors to scroll through species at one point location.	CROSSINGS contains information about CROSSING_SPECIES Cardinality: One-to-Zero-One-or-More	
CULTURAL_LABEL	Table to decode the cultural features in the CULTURAL spatial file. The cultural type (tower, town, building, etc) will also have a name attached. Useful for finding features and for mapping.	S_CULTURAL is decoded by CULTURAL_LABEL Cardinality: One-to-One-or-More (P)	
CULVERT	Attribute details regarding culverts.	CROSSINGS contains information about CULVERT Cardinality: One-to-Zero-One-or-More	
DAMS	Attribute event table to track dam locations along streams.	S_HYDROLOGY.RATNAME contains events to describe DAMS Cardinality: One-to-One-or-More (P)	

ENTITY NAME	DEFINITION	CHILD IN RELATIONSHIP	PARENT IN RELATIONSHIP
DISPOSITION	Details regarding each land disposition. The key is type, year and disposition number. Paper_file fields are used to tie disposition to Weldwood paper file system. Widths are used to buffer lineal dispositions to areas for timber damage assessment. If 'width' is null, the event table is accessed (ie varying buffer width).	S_AREA.PATACTUAL is described by DISPOSITION Cardinality: One-to-One-or-More (P)	
		S_AREA.PATPLANNED is described by DISPOSITION Cardinality: One-to-One-or-More (P)	
		S_LINEAR.RATPLANNED is described by DISPOSITION Cardinality: One-to-One-or-More (P)	
		S_LINEAR.RATACTUAL is described by DISPOSITION Cardinality: One-to-One-or-More (P)	

ENTITY NAME	DEFINITION	CHILD IN RELATIONSHIP	PARENT IN RELATIONSHIP
REST STAND	Attribute - Description of each forest cover stand, uniquely identified by an Arc/Info generated PRID (see S_FOREST_COVER). Primary/secondary unit refer to other required ways of locating stands (primary = WC for Weld but Forest for Province, secondary is compartment for Weld, management unit for Province). In the AVI inventory, the moisture regime and volume apply to all species and all canopies, therefore it is carried here.	S_FOREST COVER is described by FOREST STAND Cardinality: One-to-One-or-More (P)	FOREST STAND is made up of FOREST_CANOPY Cardinality: One-to-One-or-More (P)
FOREST_CANOPY	Attribute table describing individual canopies of a forest stand. Complications arise as AVI specifications allow horizontal splits of stands as well as traditional vertical splits. Therefore the canopy_seq_percent is necessary. Under AVI specs, the crown	FOREST STAND is made up of FOREST_CANOPY Cardinality: One-to-One-or-More (P)	FOREST_CANOPY is made up of FOREST_SPECIES Cardinality: One-to-One-or-More (P)

ENTITY NAME	DEFINITION	CHILD IN RELATIONSHIP	PARENT IN RELATIONSHIP
	closure, height, origin and productivity rating (tpr) apply to the entire canopy. Canopy working group is necessary to split out non-forest, non-veg-forested, and anthropogenic stands. These stand types will NOT have species records.		
FOREST_SPECIES	Describes the individual species in a single canopy. Species key is tied to a species look up table. Species percent is from the AVI specifications. Volume and stocking assessments are assumed to come from running a program such as TREESIM to assign volumes and stems/ha by species.	FOREST_CANOPY is made up of FOREST_SPECIES Cardinality: One-to-One-or-More (P)	
FOREST_WORKING_GROUP	Describes the 5 types of stand categories: Non-Forest_vegetated, Nat_non_forest,		

ENTITY NAME	DEFINITION	CHILD IN RELATIONSHIP	PARENT IN RELATIONSHIP
	Anthropogenic-non-veg, Anthropogenic-veg and Forested. Could also be used to assign the Forested stands to specific groups (yield or volume strata).		
LANDUSE INVOICE	Invoice for timber damages created through the Lands Disposition Management Application. Overlay of buffered lineal disturbance and/or area disturbances are intersected with forest cover. Timber damages are looked up from the Timber Damage Table, and an invoice printed. The invoice details are updated to this table.		
PLANNED_ACTIVITIES	Attribute table to manage the planned activity list for each block. 'Activity_type' will determine which table to retrieve information from.	S_BLOCK PLAN has planned activities tracked by PLANNED_ACTIVITIES Cardinality: One-to-One-or-More (P)	PLANNED_ACTIVITIES harvest info is contained in PLAN_HARVEST Cardinality: One-to-One-or-More (P) PLANNED_ACTIVITIES planting info

ENTITY NAME	DEFINITION	CHILD IN RELATIONSHIP	PARENT IN RELATIONSHIP
			is contained in PLAN_PLANT Cardinality: One-to-One-or-More (P) PLANNED_ACTIVITIES site prep info is contained in PLAN_SITE_PREP Cardinality: One-to-One-or-More (P)
PLAN_HARVEST	Attribute table of block information at the planning stage.	PLANNED_ACTIVITIES harvest info is contained in PLAN_HARVEST Cardinality: One-to-One-or-More	
PLAN_PLANT	Attribute table for planting information at the planning stage.	PLANNED_ACTIVITIES planting info is contained in PLAN_PLANT Cardinality: One-to-One-or-More (P)	
PLAN_SITE_PREP	Attribute for planned site prep treatments	PLANNED_ACTIVITIES site prep info is contained in PLAN_SITE_PREP Cardinality: One-to-One-or-More (P)	
SURVEY	Attribute data containing all survey information for the block.		

ENTITY NAME	DEFINITION	CHILD IN RELATIONSHIP	PARENT IN RELATIONSHIP
TIM_DAM_APPRAISAL	This table contains the timber values used to calculate the dollar loss due to dispositions or disturbances.		
VELOCITY	An event table categorizing stream velocity (a) at points along a creek_name, or (b) between points along a creek_name	S_HYDROLOGY.RATNAME contains events to describe VELOCITY Cardinality: One-to-Zero-One-or-More	
VENDOR_LIST	Vendor numbers that are used by Accounting Department to assign accounting receivables codes.	COMPANY LIST has a vendor number VENDOR_LIST Cardinality: One-to-One-or-More (P)	

Appendix 2 - Attribute Lists

ENTITY/ATTRIBUTE NAME	ATTRIBUTE DEFINITION	SCHEMA DATA TYPE	DOMAIN
ACTUAL_ACTIVITIES			
aac_unit		AAC_UNIT:CHAR(4)	
allocation_unit		ALLOCATION_UNIT:CHAR(4)	
operating_unit		OPERATING_UNIT:NUMBER	
block_number		BLOCK_NUMBER:NUMBER	
block_sub		BLOCK_SUB:CHAR(1)	
activity_type		CHAR(4)	ACTIVITY_TYPE
activity_date		DATE	
company_number	Company performing the activity	COMPANY_NUMBER:NUMBER	
contract_reference	Reference to a contract file	CHAR(8)	
project_id	Reference to a specific project	CHAR(18)	
cost_per_hectare	Total cost per hectare for this activity	NUMBER(8,2)	
treated_area	Area (ha) for this activity on this date	NUMBER(8,2)	
ACT_HARVEST_DATA			
aac_unit		AAC_UNIT:CHAR(4)	
allocation_unit		ALLOCATION_UNIT:CHAR(4)	
operating_unit		OPERATING_UNIT:NUMBER	
block_number		BLOCK_NUMBER:NUMBER	
block_sub		BLOCK_SUB:CHAR(1)	
activity_date		DATE	
skid_clear_date	Skid clearance date (starts reforestation clock)	DATE	

ENTITY/ATTRIBUTE NAME	ATTRIBUTE DEFINITION	SCHEMA DATA TYPE	DOMAIN
haul_clear_date	Haul clearance date	DATE	
restoration_clear_date	Restoration clearance date	DATE	
final_clear_date	Final clearance date	DATE	
extraction_method	Wood extraction method (see domain EXTRACT_METHOD)	CHAR(4)	EXTRACT_METHOD
cutting_method	Timber harvest method (see CUTTING_METHOD)	CHAR(1)	CUTTING_METHOD
log_length	Size of timber harvested (see LENGTH_METHOD)	CHAR(1)	LENGTH_METHOD
harvest_season	Actual harvest season (see domain HARV_SEASON)	CHAR(1)	HARV_SEASON
current_status	Current reforestation status (see domain REFOR_STATUS)	CHAR(2)	REFOR_STATUS
ACT_PLANTING			
aac_unit		AAC_UNIT:CHAR(4)	
allocation_unit		ALLOCATION_UNIT:CHAR(4)	
operating_unit		OPERATING_UNIT:NUMBER	
block_number		BLOCK_NUMBER:NUMBER	
block_sub		BLOCK_SUB:CHAR(1)	
activity_date		DATE	
activity_type		CHAR(4)	ACTIVITY_TYPE
planting_type	Type of planting to occur here (see domain PLANT_TYPE)	CHAR(7)	PLANT_TYPE
plant_equipment	Equipment used for planting (see domain PLANT_TOOL)	CHAR(4)	PLANT_TOOL

ENTITY/ATTRIBUTE NAME	ATTRIBUTE DEFINITION	SCHEMA DATA TYPE	DOMAIN
total_trees	Total number of trees planted per ha	NUMBER	
ACT_PLANTING_SPP			
species	see domain (SPECIES)	CHAR(2)	SPECIES
aac_unit		AAC_UNIT:CHAR(4)	
allocation_unit		ALLOCATION_UNIT:CHAR(4)	
operating_unit		OPERATING_UNIT:NUMBER	
block_number		BLOCK_NUMBER:NUMBER	
block_sub		BLOCK_SUB:CHAR(1)	
activity_date		DATE	
activity_type		CHAR(4)	ACTIVITY_TYPE
seedlot	Seedlot for production of these seedlings	CHAR(25)	
company_number	Nursery where seedlings were grown	COMPANY_NUMBER:NUMBER	
stock_type	Container or other seedling type (see domain PLANT_STKTYPE)	CHAR(6)	PLANT_STKTYPE
stock_age	Stock age (eg 1.5+1.5)	CHAR(7)	
no_trees	Number of trees planted of this species	NUMBER	
no_hectares	No. of hectares planted of this species	NUMBER(8,2)	

ENTITY/ATTRIBUTE NAME	ATTRIBUTE DEFINITION	SCHEMA DATA TYPE	DOMAIN
ACT_SEEDING			
aac_unit		AAC_UNIT:CHAR(4)	
allocation_unit		ALLOCATION_UNIT:CHAR(4)	
operating_unit		OPERATING_UNIT:NUMBER	
block_number		BLOCK_NUMBER:NUMBER	
block_sub		BLOCK_SUB:CHAR(1)	
activity_date		DATE	
species	Species (see domain SPECIES)	CHAR(2)	SPECIES
seed_mix	Percent of seed mix of this species	NUMBER	
seedlot	Code to record seedlot	CHAR(25)	
seed_viability	Viability of seedlot (percent)	NUMBER	
ACT_SITE_PREP			
aac_unit		AAC_UNIT:CHAR(4)	
allocation_unit		ALLOCATION_UNIT:CHAR(4)	
operating_unit		OPERATING_UNIT:NUMBER	
block_number		BLOCK_NUMBER:NUMBER	
block_sub		BLOCK_SUB:CHAR(1)	
activity_date		DATE	
activity_type		CHAR(4)	ACTIVITY_TYPE
scar_method	Actual method for site prep (see domain PREP_METHOD)	CHAR(4)	PREP_METHOD
scar_equipment	Actual equipment used for site prep (see domain PREP_TOOL)	CHAR(4)	PREP_TOOL
reason_for_lfn	Reason for leaving for natural	CHAR(1)	PREP_LFN_REASON

ENTITY/ATTRIBUTE NAME	ATTRIBUTE DEFINITION	SCHEMA DATA TYPE	DOMAIN
	(see domain PREP_LFN_REASON)		
scar_rate	Treatment rate for site prep	NUMBER	
rate_units	Unit of measure for scarification rate (see domain RATES_UNIT)	CHAR(4)	RATE_UNITS
BLOCK_ADMIN			
aac_unit		AAC_UNIT:CHAR(4)	
allocation_unit		ALLOCATION_UNIT:CHAR(4)	
operating_unit		OPERATING_UNIT:NUMBER	
block_number		BLOCK_NUMBER:NUMBER	
block_sub		BLOCK_SUB:CHAR(1)	
harv_disp_type	Harvest Disposition Type	CHAR(1)	
land_base_desig	Landbase designation	CHAR(2)	LB_DESIG
approval_date	Date of approval (AOP date unless block is amended)	DATE	
secondary_disposition	Secondary disposition attached to this block	CHAR(20)	
original_responsibility	Who was originally responsible (see domain REFOR_RESP)	CHAR(2)	REFOR_RESP
current_responsibility	Who is currently responsible (see domain REFOR_RESP)	CHAR(2)	REFOR_RESP
opening_type	see domain OPENING_TYPE	CHAR(2)	OPENING_TYPE
treatable_area	Total treatable area (ha) of this block	NUMBER(8,3)	
standards_modifier	Reforestation standards modifier	CHAR(1)	STAND_MOD

ENTITY/ATTRIBUTE NAME	ATTRIBUTE DEFINITION	SCHEMA DATA TYPE	DOMAIN
	(see domain STAND_MOD)		
sensitivity_code	Code for sensitive blocks.	CHAR(1)	
COMPANY LIST			
company_number	Unique company number	COMPANY_NUMBER:NUMBER	
address1	Line 1 of the company address	CHAR(25)	
address2	Line 2 of the company address	CHAR(25)	
city	City/town of company	CHAR(12)	
province	Province as a 2 character code	CHAR(2)	
postal_code	Postal code	CHAR(7)	
area_code	Area Code of the office	CHAR(3)	
phone_number	Phone number	CHAR(8)	
fax_number	Fax number	CHAR(8)	
company_comments	Open comment section	CHAR(25)	
CONTACT LIST			
company_number	Unique company number	COMPANY_NUMBER:NUMBER	
first_name	First name of contact in company	CHAR(10)	
last_name	Last name of current contact	CHAR(15)	
position	Position or title of contact person	CHAR(20)	
extension	Telephone extension number	CHAR(5)	
mobile	Mobile number of contact person	CHAR(10)	
CREEKCLASS			
creek_name	link to spatial creek_name route	CREEK_NAME:CHAR(20)	

ENTITY/ATTRIBUTE NAME	ATTRIBUTE DEFINITION	SCHEMA DATA TYPE	DOMAIN
from	From position for this class	NUMBER	
to	To position for this class	NUMBER	
class	Class of stream as defined by the current Ground Rules	NUMBER	HYDRO_CLASS
CROSSINGS			
crossing-id	Link to spatial point coverage S_CROSSING	NUMBER	
road_number	Road number where crossing is located	NUMBER	
road_position	Position along road_number where crossing is located (km)	NUMBER	
creek_name	Name of creek being crossed.	CREEK_NAME:CHAR(20)	
inventory_date	Date this record was collected	DATE	
grnd_creek_class	Creek class according to ground rules	NUMBER	HYDRO_CLASS
crossing_type	Type of crossing	CHAR(1)	CROSSING_TYPE
crossing_material	Material crossing is made of	CHAR(1)	CROSSING_MATERIAL
intake_comment	Comments re: intake	CHAR(20)	
intake_photo	Reference of intake photo	CHAR(5)	
outflow_comment	Comment re outflow	CHAR(20)	
outflow_photo	Reference to outflow photograph	CHAR(5)	
crossing_width	Width of crossing (meters)	NUMBER(5,2)	
crossing_length	Length of crossing (meters)	NUMBER(5,2)	
fill_height	Height of fill (meters)	5,2	
channel_width	Width of stream channel (meters)	NUMBER(5,2)	

ENTITY/ATTRIBUTE NAME	ATTRIBUTE DEFINITION	SCHEMA DATA TYPE	DOMAIN
channel_depth	Depth of stream channel (meters)	NUMBER(5,2)	
channel_velocity	Velocity in channel (m/sec)	NUMBER(5,2)	
bottom_type	see domain BOTTOM_TYPE	CHAR(1)	BOTTOM_TYPE
fish_passage	Code for possibility of fish passage	CHAR(1)	
obstructions	Code for stream obstructions	CHAR(1)	
embankment_comment	Comment for embankment condition	CHAR(40)	
recreational_use	Code for recreational use	CHAR(1)	
beaver_activity	Code for beaver activity	CHAR(1)	
CROSSING_SPECIES			
species	Species code of fish observed at crossing	CHAR(8)	
crossing-id	Link to CROSSING attribute table	NUMBER	
fish_number	Number of fish sighted	NUMBER	
average_size	Average fish size at this sighting (cm)	NUMBER(5,2)	
location_code		CHAR(3)	
CULTURAL_LABEL			
cultural-id	link to spatial file	CHAR(1)	
type	feature type (see domain CULTURAL_TYPE)	CHAR(1)	CULTURAL_TYPE
label	text label for feature (mapping uses)	CHAR(20)	

ENTITY/ATTRIBUTE NAME	ATTRIBUTE DEFINITION	SCHEMA DATA TYPE	DOMAIN
CULVERT			
crossing-id	link to CROSSING attribute table	NUMBER	
culvert_type	see domain CULVERT_TYPE	CHAR(1)	CULVERT_TYPE
intake_pool_length	Length of intake pool above culvert (meters)	NUMBER(5,2)	
intake_pool_width	Width of intake pool above culvert (meters)	NUMBER(5,2)	
outflow_pool_length	Length of pool below culvert (meters)	NUMBER(5,2)	
outflow_pool_width	Width of pool below culvert (meters)	NUMBER(5,2)	
hang_height	Height of culvert above water course	NUMBER(5,2)	
culvert_velocity		NUMBER(5,2)	
pools_present	Speed of water through culvert (m/second)	CHAR(1)	
substrate	Bottom type of culvert (see domain BOTTOM_TYPE)	CHAR(1)	BOTTOM_TYPE
DAMS			
creek_name	link to spatial creek_name route	CREEK_NAME:CHAR(20)	
position	Position along creek where dam occurs	NUMBER	
type	Type of dam (beaver, manmade, etc)	CHAR(1)	

ENTITY/ATTRIBUTE NAME	ATTRIBUTE DEFINITION	SCHEMA DATA TYPE	DOMAIN
DISPOSITION			
disposition_type	see domain LU_DISP_TYPE	CHAR(3)	
disposition_year	Year of disposition issuance	NUMBER	
disposition_number	Disposition number assigned by LFS	CHAR(6)	
company_number	Company owning this disposition	COMPANY_NUMBER:NUMBER	
paper_file_topic	Topic of LU paper files	CHAR(3)	
paper_file_subtopic	Subtopic of LU paper files	CHAR(4)	
paper_file_number	FIle number of this disposition	CHAR(4)	
disposition_area	Actual area impacted by this disposition	NUMBER(8,3)	
disposed_area	Area of the disposition that is included on the disposition	NUMBER(8,3)	
approval_date	Approval date assigned by LFS. If no date on the documets received, assign the entry date as the approval date	DATE	
entered_date	Date entered into the Lands GIS Disposition system	DATE	
ground_status	see domain LU_GRND_STATUS	CHAR(1)	
registered_width	Width of disposition as applied for	NUMBER	
actual_width	Width of disposition on the ground.	NUMBER	
disposition_comments		CHAR(25)	

ENTITY/ATTRIBUTE NAME	ATTRIBUTE DEFINITION	SCHEMA DATA TYPE	DOMAIN
FOREST STAND			
prid	Unique identifier for every stand in the Foothills Forest	NUMBER	
primary_unit	Equivalent to the AAC unit for block definition	AAC_UNIT:CHAR(4)	
secondary_unit	Equivalent to the Operating_unit for block identification	OPERATING_UNIT:NUMBER	
stand_area	Actual area of the stand	NUMBER(8,2)	
moisture_regime	Moisture regime as defined by the AVI specifications.	CHAR(1)	
stand_gmv	Gross merchantable volume for the stand.	NUMBER(8,2)	
FOREST_CANOPY			
canopy_seq_nmbr	Current canopy number of this stand	NUMBER	
prid		NUMBER	
canopy_seq_percent	Percent of the stand that is covered by this canopy.	NUMBER	
stand_label	Stand label for this canopy, used for mapping and queries	CHAR(18)	
canopy_wg	Working group of this canopy	NUMBER	
canopy_cc	Crown closure - AVI specifications	CHAR(1)	FOREST_CC
canopy_height	Height to nearest meter	NUMBER	
canopy_origin	Origin class of this canopy	NUMBER	

ENTITY/ATTRIBUTE NAME	ATTRIBUTE DEFINITION	SCHEMA DATA TYPE	DOMAIN
	layer		
canopy_tpr	Timber productivity rating - AVI specifications	CHAR(1)	FOREST_TPR
canopy_si	Site index of canopy (total ht at 50 bh age)	NUMBER	
FOREST_SPECIES			
species_seq_nmbr	sequence number of species in this canopy layer	NUMBER	
canopy_seq_nmbr		NUMBER	
prid		NUMBER	
spp_key	see domain SPECIES	CHAR(2)	SPECIES
spp_percent	Percent of this species	NUMBER	
spp_gmv	gross merchantable volume of this species	NUMBER(8,2)	
spp_nmv	Net merchantable volume of this species	NUMBER(8,2)	
spp_stocking	Stocking of this species (stems/ha)	NUMBER(8,2)	
FOREST_WORKING_GROUP			
canopy_wg		NUMBER	
wg_name		CHAR(3)	
wg_label		CHAR(18)	
LANDUSE INVOICE			

ENTITY/ATTRIBUTE NAME	ATTRIBUTE DEFINITION	SCHEMA DATA TYPE	DOMAIN
invoice_number	Invoice number assigned by Accounting	NUMBER	
disposition_type	see domain LU_DISP_TYPE	LU_DISP_TYPE:CHAR(3)	LU_DISP_TYPE
disposition_year	Year of disposition issuance	NUMBER	
disposition_number	Disposition number assigned by LFS	CHAR(6)	
invoice_type	see domain LU_INVOICE_TYPE	CHAR(3)	INVOICE_TYPE
invoice_date	date of invoice	DATE	
disp_vol	volume of wood in current disposition	NUMBER(8,2)	
salvage_vol	volume of wood salvaged in dispositioin	NUMBER(8,2)	
invoice_gst	GST collected on timber damages	NUMBER(7,2)	
invoice_cdues	Crown dues owing	NUMBER(7,2)	
invoice_total	Total invoice (summed for quick queries)	NUMBER(8,2)	
PLANNED_ACTIVITIES			
aac_unit		AAC_UNIT:CHAR(4)	
allocation_unit		ALLOCATION_UNIT:CHAR(4)	
operating_unit		OPERATING_UNIT:NUMBER	
block_number		BLOCK_NUMBER:NUMBER	
block_sub		BLOCK_SUB:CHAR(1)	
activity_type	see domain ACTIVITY_TYPE	CHAR(4)	ACTIVITY_TYPE
plan_area	Planned area for this activity.	NUMBER(8,2)	

ENTITY/ATTRIBUTE NAME	ATTRIBUTE DEFINITION	SCHEMA DATA TYPE	DOMAIN
PLAN_HARVEST			
treatment_date		DATE	
aac_unit		AAC_UNIT:CHAR(4)	
allocation_unit		ALLOCATION_UNIT:CHAR(4)	
operating_unit		OPERATING_UNIT:NUMBER	
block_number		BLOCK_NUMBER:NUMBER	
block_sub		BLOCK_SUB:CHAR(1)	
harvest_season	Planned harvest season	CHAR(1)	HARV_SEASON
harvest_method	Planned harvest method	CHAR(2)	EXTRACT_METHOD
company_number	Company doing the harvesting	COMPANY_NUMBER:NUMBER	
gmv	Gross merch volume planned to retrieve from this block	NUMBER(8,2)	
gnv	Gross net volume calculated to come from this block	NUMBER(8,2)	
number_logs	Number of 2.5 meter logs	NUMBER(8,2)	
avg_dbh	Average dbh for the block (all species)	NUMBER(5,2)	
avg_stump_dia	Avg. stump diameter (all species)	NUMBER(5,2)	
avg_length	Ave. merch length (all species)	NUMBER(5,2)	
PLAN_PLANT			
treatment_date		DATE	
aac_unit		AAC_UNIT:CHAR(4)	
allocation_unit		ALLOCATION_UNIT:CHAR(4)	
operating_unit		OPERATING_UNIT:NUMBER	

ENTITY/ATTRIBUTE NAME	ATTRIBUTE DEFINITION	SCHEMA DATA TYPE	DOMAIN
block_number		BLOCK_NUMBER:NUMBER	
block_sub		BLOCK_SUB:CHAR(1)	
total_trees		NUMBER	
species	Species planned for planting	CHAR(2)	SPECIES
stock_type	Planned stock type for this block	CHAR(6)	PLANT_STKTYPE
stock_age	Planned stock age for this block	CHAR(7)	
PLAN_SITE_PREP			
treatment_date		DATE	
aac_unit		AAC_UNIT:CHAR(4)	
allocation_unit		ALLOCATION_UNIT:CHAR(4)	
operating_unit		OPERATING_UNIT:NUMBER	
block_number		BLOCK_NUMBER:NUMBER	
block_sub		BLOCK_SUB:CHAR(1)	
scar_method	Method of scarification. see domain (PREP_METHOD)	CHAR(4)	PREP_METHOD
scar_equipment	Planned equipment for site prep (see domain PREP_TOOL)	CHAR(4)	PREP_TOOL
SURVEY			
aac_unit		CHAR(18)	
allocation_unit		CHAR(18)	
operating_unit		CHAR(18)	
block_number		CHAR(18)	
block_sub		CHAR(18)	

ENTITY/ATTRIBUTE NAME	ATTRIBUTE DEFINITION	SCHEMA DATA TYPE	DOMAIN
survey_type		CHAR(18)	
activity_date		CHAR(18)	
cost_per_plot		CHAR(18)	
nsr_declaration_date		CHAR(18)	
nsr_area		CHAR(18)	
sr_area		CHAR(18)	
percent_damage		CHAR(18)	
damage_type		CHAR(18)	
species_1		CHAR(18)	
species_2		CHAR(18)	
species_3		CHAR(18)	
conifer_density		CHAR(18)	
conifer_height		CHAR(18)	
decid_density		CHAR(18)	
decid_height		CHAR(18)	
percent_stocking_ftg		CHAR(18)	
stocking_status		CHAR(18)	
percent_acceptable_conifer		CHAR(18)	
percent_conditional_conifer		CHAR(18)	
percent_acceptable_decid		CHAR(18)	
percent_fir		CHAR(18)	
percent_total_stocking		CHAR(18)	
TIM_DAM_APPRAISAL			
cover_group	The cover group category based on Phase 3 specifications (C,	CHAR(2)	

ENTITY/ATTRIBUTE NAME	ATTRIBUTE DEFINITION	SCHEMA DATA TYPE	DOMAIN
	CD, D, or DC).		
p3_height	Phase 3 inventory height class	NUMBER	
p3_density	Phase 3 inventory crown closure classes	CHAR(1)	
conif_cost_ha	Coniferous timber - damages in $/ha	NUMBER	
decid_cost_ha	Deciduous timber - damages in $/ha	NUMBER	
VELOCITY			
creek_name	link to spatial route system	CREEK_NAME:CHAR(20)	
from	From position along this route	NUMBER	
to	To position along this route	NUMBER	
velocity	Water velocity (m/sec) in this 'from-to' section	NUMBER(5,2)	
VENDOR_LIST			
company_number	Unique company number	COMPANY_NUMBER:NUMBER	
company_name	Full name of company	CHAR(20)	
vendor_number	Number assigned to company by accounting.	NUMBER	

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Appendix 3 - Domain List

Domain Name	Domain Values	Domain Value Defs
ACTIVITY_TYPE	HARV	Harvesting
	PLNT	Planting
	PREP	Site Preparation
	SEED	Seeding
	SURV	Survey
	TEND	Tending
BOTTOM_TYPE	G	Gravel
	I	Silt
	O	Other
	R	Rubble
	S	Sand
	V	Vegetation
CROSSING_MATERIAL	M	Metal
	W	Wood
	P	Plastic
	O	Other
CROSSING_TYPE	C	Culvert
	B	Bridge
	O	Other

Domain Name	Domain Values	Domain Value Defs
CULTURAL_TYPE	A	Airports, airstrips
	B	Miscellaneous Buildings
	C	Trapper Cabins
	F	Fire Tower
	M	Microwave/Radio Towers
	P	Industrial Plant Site
	R	Recreation/Camp Sites
	T	Towns/villages
	W	Weather Stations
CULVERT_TYPE	R	Round
	D	D-shape
	S	Square
	C	C-shape
CUTTING_METHOD	F	Feller Buncher
	H	Hand
	S	Shear
EXTRACT_METHOD	CABL	Skyline, High Lead, Jammer, Grapple Yarding
	FRWD	Short wood processing/forwarding
	GRAP	Grapple
	LTRK	Light Track Skid Methods
	TRCK	Track Skidders
	WHEL	Wheeled Skidders

Domain Name	Domain Values	Domain Value Defs
FOREST_CC	1	10% CC for shrub species
	2	20% CC for shrub species
	3	30% CC for shrub species
	4	40% CC for shrub species
	5	50% CC for shrub species
	6	60% CC for shrub species
	7	70% CC for shrub species
	8	80% CC for shrub species
	9	90+% CC for shrub species
	A	6 - 30 % crown closure for tree canopies
	B	30-50% crown closure for tree canopies
	C	50-70% crown closure for tree canopies
	D	70+% crown closure for tree canopies
	S	Scattered Timber
FOREST_TPR	F	Fair
	G	Good
	M	Medium
	U	Non-productive
HARV_SEASON	M	Marginal (unknown or depends on

Domain Name	Domain Values	Domain Value Defs
		ground conditions)
	S	Summer (May 31 - Oct 31)
	W	Winter (Nov 1 to April 30)
HYDRO_CLASS	1	Large Permanent
	2	Small Permanent
	3	Small Permanent - no fish
	4	Intermittent
	5	Ephemeral
INVOICE_TYPE	TAF	Timber Damage - Final invoice on final amended area
	TAP	Timber Damage -Preliminary invoice on planned amended area
	TDF	Timber Damage -Final invoice on actual disposition area
	TDP	Timber Damage -Preliminary invoice on planned disposition area
LB_DESIG	HH	Hardwood Reforested to Hardwood
	HS	Hardwood Reforested to Softwood
	MH	Mixedwood Reforested to Hardwood
	MS	Mixedwood Reforested to Softwood
	SH	Softwood Reforested to Hardwood
	SS	Softwood Reforested to Softwood

Domain Name	Domain Values	Domain Value Defs
LENGTH_METHOD	F	Full tree skidded to landing
	L	Log length (Bucked then skidded to landing)
	T	Tree length (Topped then skidded to landing)
LU_DISP_TYPE	AAG	Ancillary Agreement
	AHM	Alberta Housing Metis Lease
	CUL	Cultivation Lease
	CUP	Cultivation Permit
	DRS	Disposition Reservation
	ECA	Ecological Corridor Agreement
	EZE	Easement
	FDL	Farm Development Lease
	FRD	Forestry Road
	FWD	Final Water Development License
	GEO	Geophysical Exploration
	GRL	Grazing Lease
	LOC	License of Occupation
	MLL	Miscellaneous License
	MLP	Miscellaneous Permit
	MSL	Mineral Surface Lease
	MTS	Miscellaneous Townsite Lease
	PIL	Pipeline Installation Lease
	PLA	Pipeline Agreement

Domain Name	Domain Values	Domain Value Defs
	PLS	Private/Public Land Sale
	PPL	Public Pit License
	PSA	Private Surface Agreement
	RDS	Provisional Roadway - iof ROW has been cleared
	REA	Rural Electric Association Easement
	REC	Recreational Lease
	RIA	Range Improvement Agreement
	ROE	Right of Entry Agreement
	ROW	Right of Way Lease
	RRD	Registered Roadway
	SCL	Seed Crop Lease
	SGL	Sand and Gravel Lease
	SHL	Staff Housing Land License
	SML	Surface Mineral Lease
	TRS	Tax Recovery Sale
	VSP	Vertical Seismic Program
	WDL	Water Development License
LU_GRND_STAT	A	Active
	C	Cancelled
	D	Dropped
	P	Proposed
	R	Reclaimed

Domain Name	Domain Values	Domain Value Defs
LU_WITHDRAWAL_TYPE	A	Actual - area occupied by legal disposition
	B	Borrow Pit
	D	Deck Location
	M	Amendment (additions to the disposition)
	O	Other
	S	Sump Site
	W	Amendment (withdrawals from the disposition)
OPENING_TYPE	BD	Blow Down
	BU	Burn
	CC	Clearcut
	CL	Clearing
	DK	Disease Kill
	IK	Insect Kill
	LC	Liquidation Cut
	NS	Natural Stand
	ON	Old NSR Areas
	PC	Partial Cut
	PL	Plantation
	RD	Road
	RP	Research Project
	SC	Stand Conversion
	SP	Seed Production

Domain Name	Domain Values	Domain Value Defs
	TH	Thinning Project
	WF	Wildfire
PLANT_STKTYPE	BR	Bareroot
	BRT	Bareroot transplant
	C40cc	Spencer Lemaire 40 cc container
	C65cc	Spencer Lemaire 65 cc container
	C90cc	Spencer Lemaire 90 cc container
	CARC	ARC Sausage
	CKH	King Horns
	CONTT	Ontario Tubes
	CPNTH	Panth's container
	CPP	Paper Pots
	CPl+1	Plug +1 container
	CS211	Styroblock 211
	CS211A	Styroblock 211A
	CS312	Styroblock 312
	CS313	Styroblock 313
	CS313A	Styroblock 313A
	CS315	Styroblock 315
	CS323	Styroblock 323
	CS415	Styroblock 415
	CS415B	Styroblock 415B
	CS615	Styroblock 615
	CS615B	Styroblock 615B
	OTHER	Miscellaneous Stock Types

Domain Name	Domain Values	Domain Value Defs
PLANT_TOOL	DIBB	Dibble
	MACH	Machine Planted
	MATT	Mattock
	PBAR	Planting Bar
	POTI	Pottiputki
	SHOV	Shovel
	SPEA	Spear
PLANT_TYPE	FILLIN	Fill in planting
	NORMAL	Normal Planting
	REPLANT	Replant
PREP_LFN_REASON		
	0	Other
	1	Very light slash
	2	Wet area
	3	Advance growth
	4	Gully/creek
	5	Erosion work
	6	Steep slope
	7	Culverts removed
	8	Culverts untouched
	9	Inaccessible
PREP_METHOD	BURN	Burning

Domain Name	Domain Values	Domain Value Defs
	CHEM	Chemical
	HAND	Hand Scalping
	LFN	Leave for Natural
	MECH	Mechanical
PREP_TOOL	UNK	Unknown
	BRAC	Bracke
	BRSM	Bracke Shovel Mounder
	BRTM	Bracke Tine Mounder
	SINK	Sinkilla Mounder
	LANN	Lannen Mounder
	BCBL	BC Mounder with Blade
	BCMN	BC Mounder without Blade
	DONM	Donaren Mounder
	OJHO	Oje Hogen Mounder
	LENO	Leno Patch Scarifier
	DTPA	Passive Disk Trencher
	DTPO	Powered Disk Trencher
	DODF	Double Offset Disks Forestry Style
	DODA	Double Offset Disks Agriculture Style
	DODH	Double Offset Heavy Disks
	SRBP	Single Row Bedding Plow
	CABL	Cabling
	RPCS	C & S Ripper Plow

Domain Name	Domain Values	Domain Value Defs
	RPMC	Modified C & S Ripper Plow
	C&HP	C & H Ripper Plow
	C&HM	Modified C & H Ripper Plow
	MART	Martiini Plow
	SBPL	Single Bottom Plow
	VPBL	V-Slash Blade
	BRVF	Brush Rake V-Style Fixed Tooth
	BRVK	Brush Rake V-Style Kickout Tooth
	BRFT	Brush Rake Fixed Tooth
	BRKT	Brush Rake Kickout Tooth
	BLST	Straight Blade
	BLMO	Modified Blade
	DRLT	Drag - Light
	DRSF	Drag - Shark Fin Barrels
	SSPL	Winged Sub Soiling Plows
	MCSD	Marsden Chopper Single Drum
	MCDD	Marsden Chopper Double Drum
	MMHM	Motor Manual Hand Method
RATE_UNITS	FURR	No. of furrows per 100m.
	SPOT	No. of spots or mounds per hectare
REFOR_RESP	AN	LFS Non-Quota
	AQ	LFS Quota
	IF	Industry FMA

Domain Name	Domain Values	Domain Value Defs
	IQ	Industry Quota
REFOR_STATUS	FTG	Free To Grow
	NSR	Not Satisfactorily Restocked
	SR	Satisfactorily Restocked
SEED_METHOD	A	Aerial
	H	Hand
	M	Mechanical
SEED_TOOL	ATS	All Terrain Seeder
	BART	Bart Seeder
	BRAC	Bracke Seeder
	CYCL	Cyclone
	NONE	No equipment used
SPECIES	AW	Trembling aspen
	BW	LT
	FA	Subalpine fir
	FB	Balsam fir
	FD	Douglas fir
	LT	Larch (all species)
	PB	Balsam Poplar
	PF	Limber pine
	PJ	Jack pine
	PL	Lodgepole pine

Domain Name	Domain Values	Domain Value Defs
	PW	Whitebark pine
	SB	Black spruce
	SE	Engelmann spruce
	SW	White spruce
STAND_MOD	CONF	Coniferous (No modifiers)
	DECD	Deciduous
	HIGH	High Elevation
	LOWL	Lowland Spruce
	MIXD	Mixedwood

User Defined Data Names	Data Type
AAC_UNIT	CHAR(4)
ALLOCATION_UNIT	CHAR(4)
BLOCK_NUMBER	NUMBER
BLOCK_SUB	CHAR(1)
COMPANY_NUMBER	NUMBER
CREEK_NAME	CHAR(20)
LU_DISP_NUM	CHAR(6)
LU_DISP_TYPE	CHAR(3)
MERID	NUMBER(1)
OPERATING_UNIT	NUMBER
PRID	NUMBER
RGE	NUMBER(2)
STAND	NUMBER(4)
SUBSTAND	CHAR(1)
TWP	NUMBER(3)