

---

# Port Alberni Community Forest

## Viability Assessment

May 3, 2007, revised Aug 10, 2007

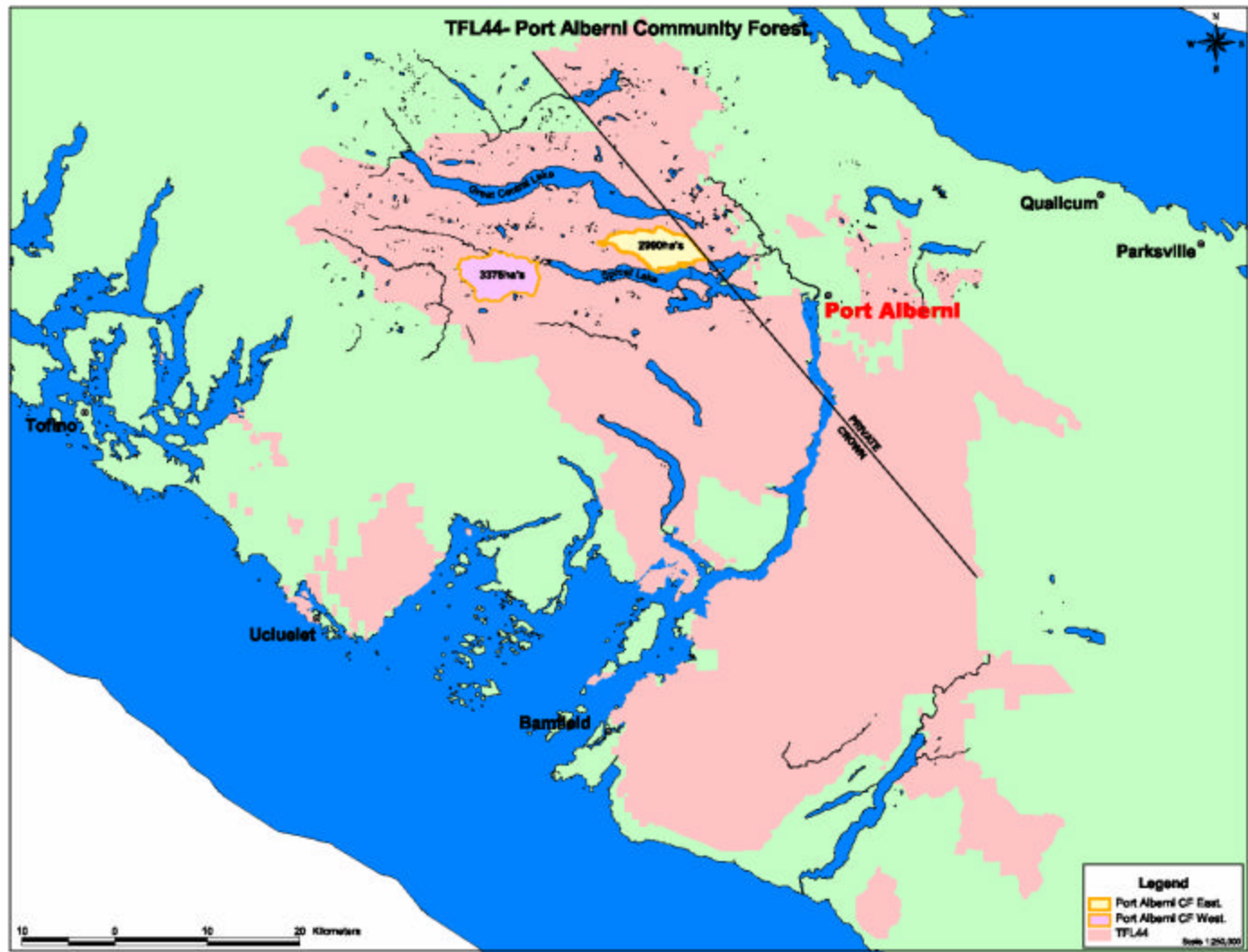


# Methodology

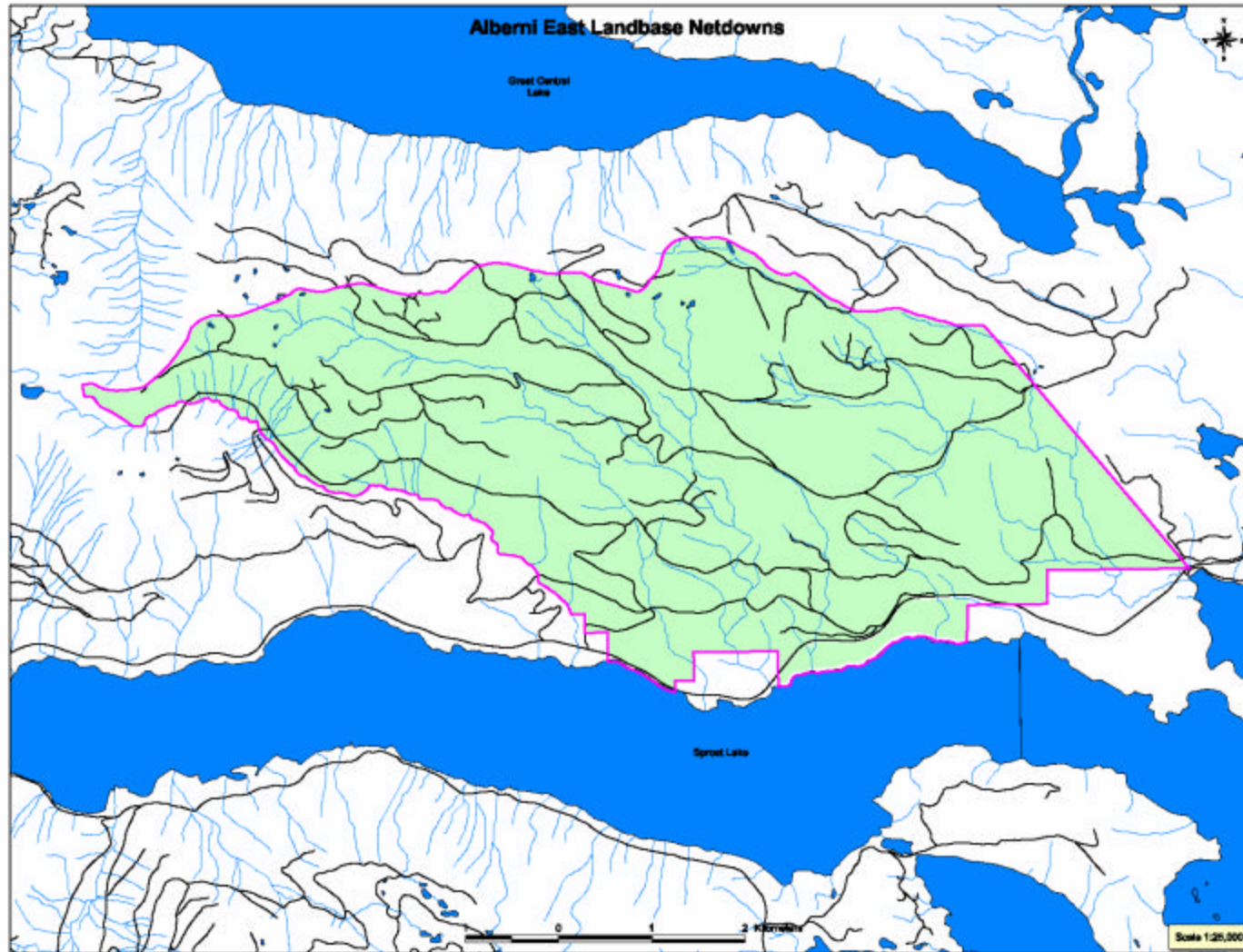
---

- acquire available data for the area
- create projections of potential cutblocks for short term planning of +/- 10 years
- field review cutblock projections
- identify timber species mix
- identify likely harvest systems
- identify potential road routes
- identify existing infrastructure issues
- fly snowed in areas
- edit projections to reflect overview information
- summarize potential harvest data
- analyze values and costs

# Maps

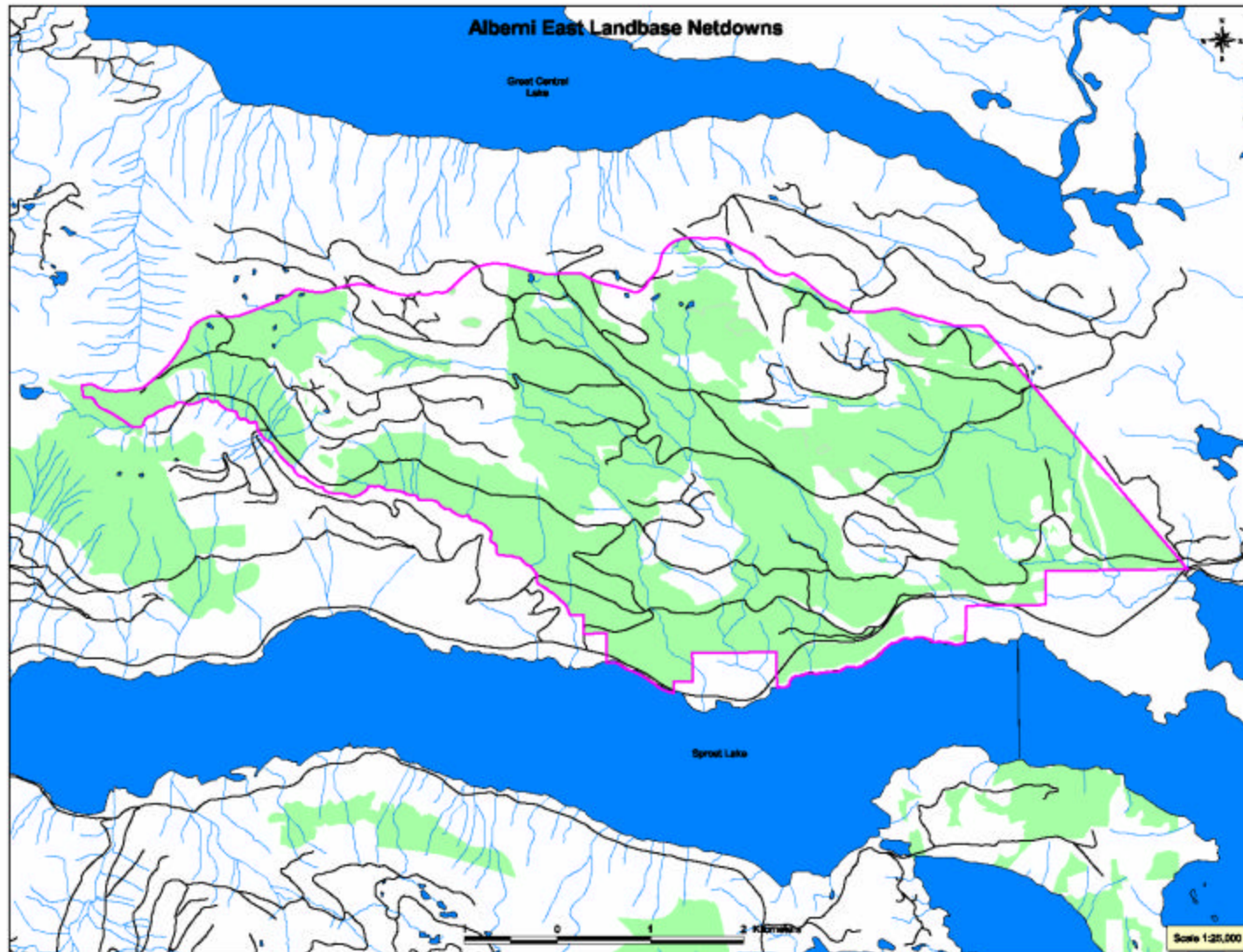


# Maps

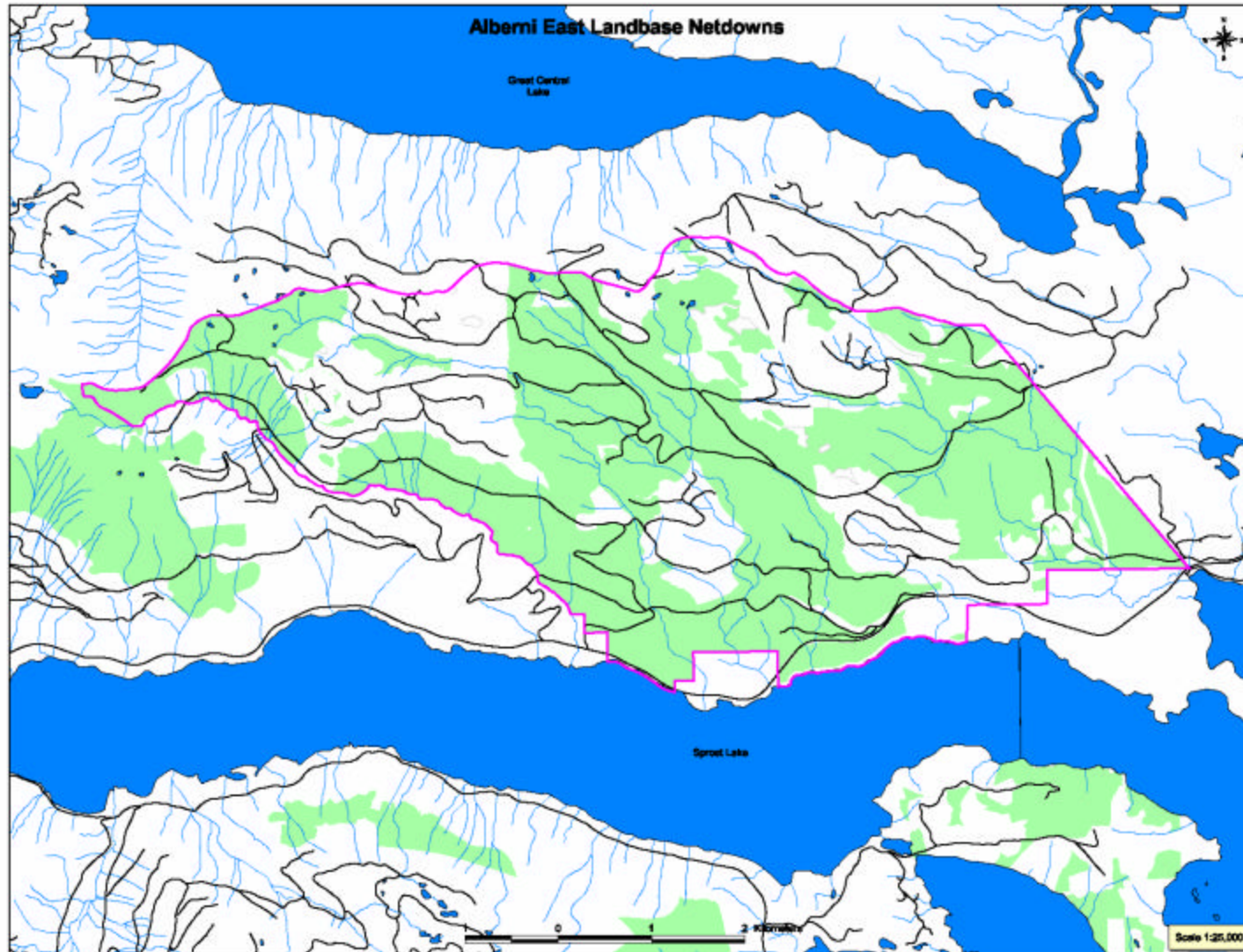




# Maps

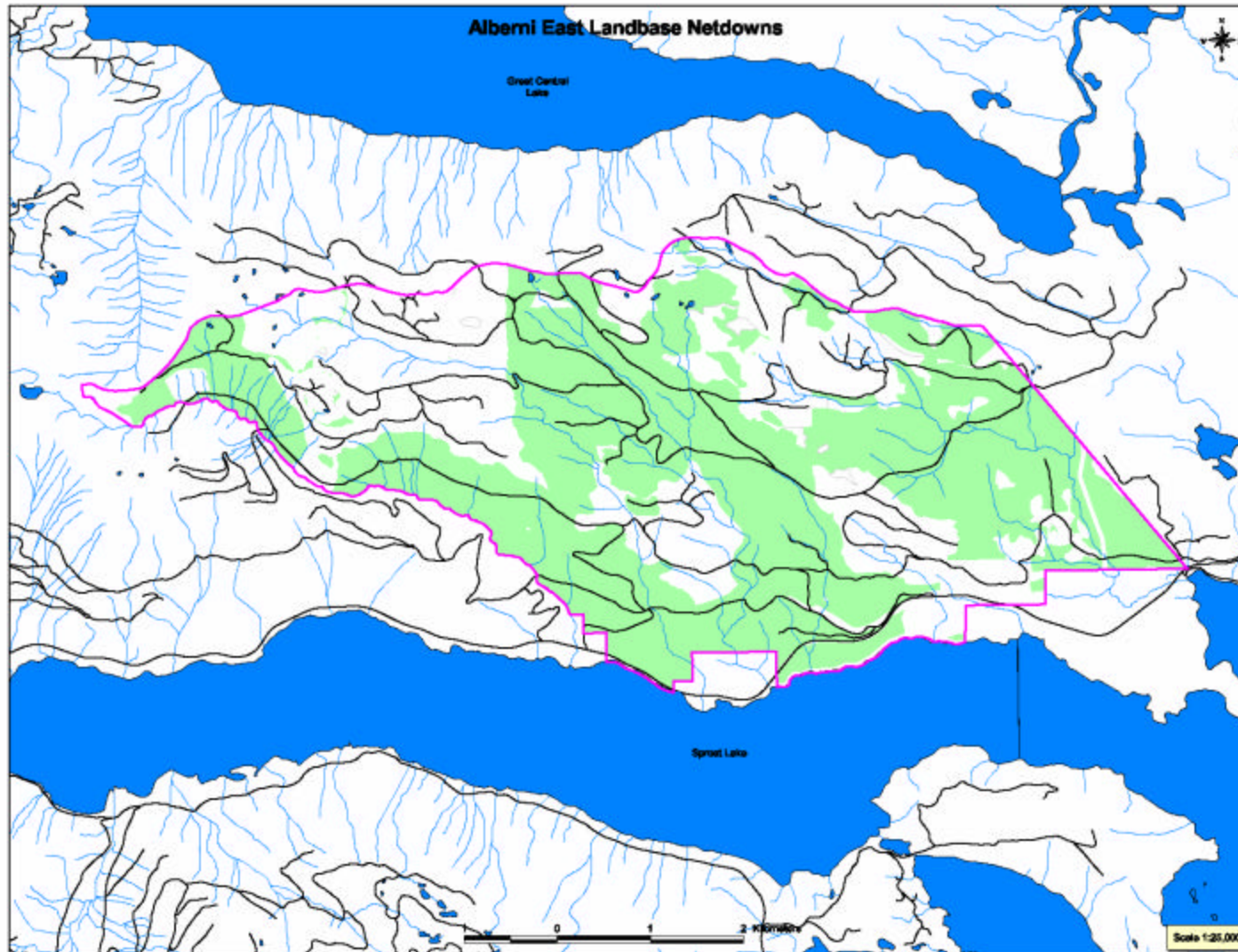


# Maps

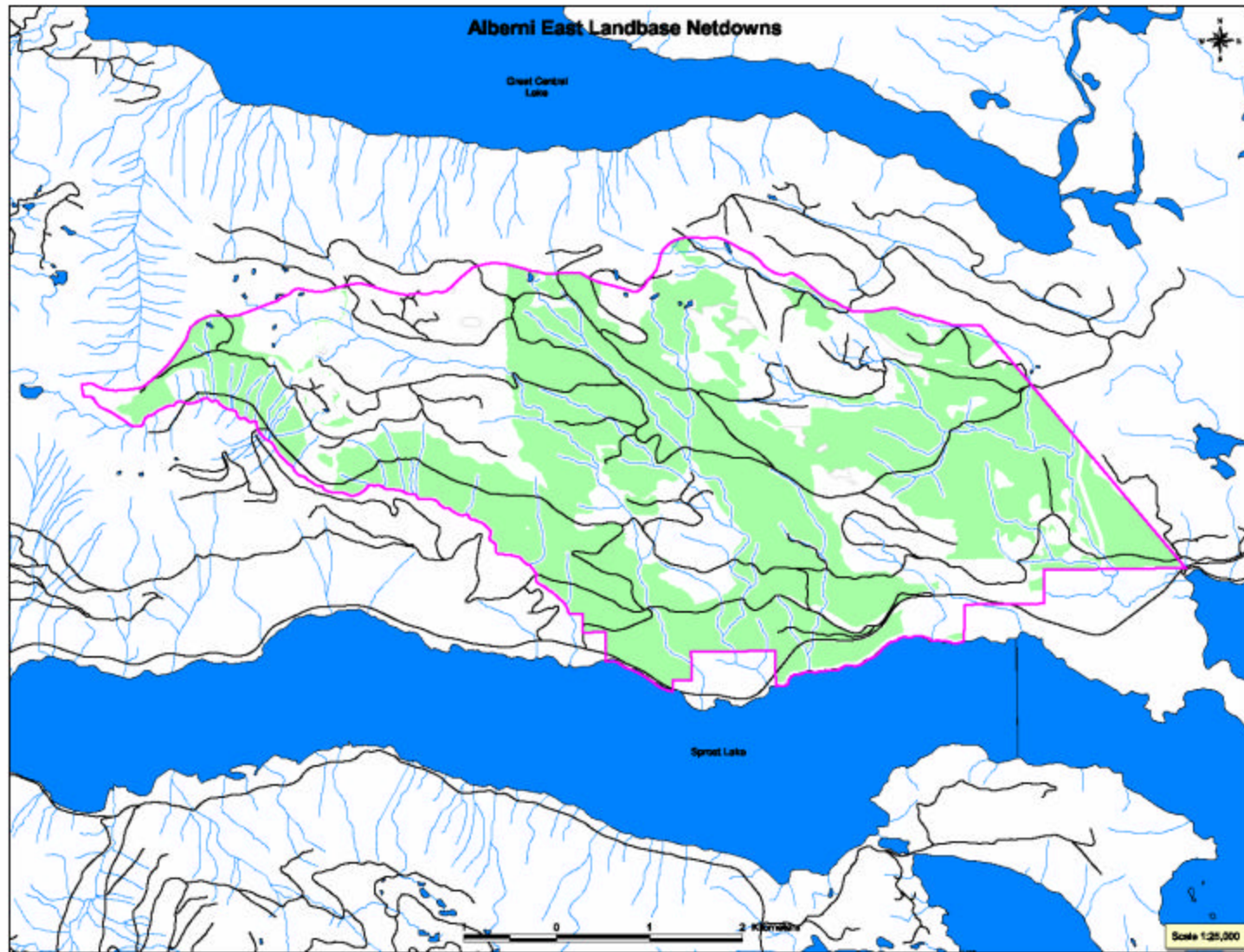




# Maps

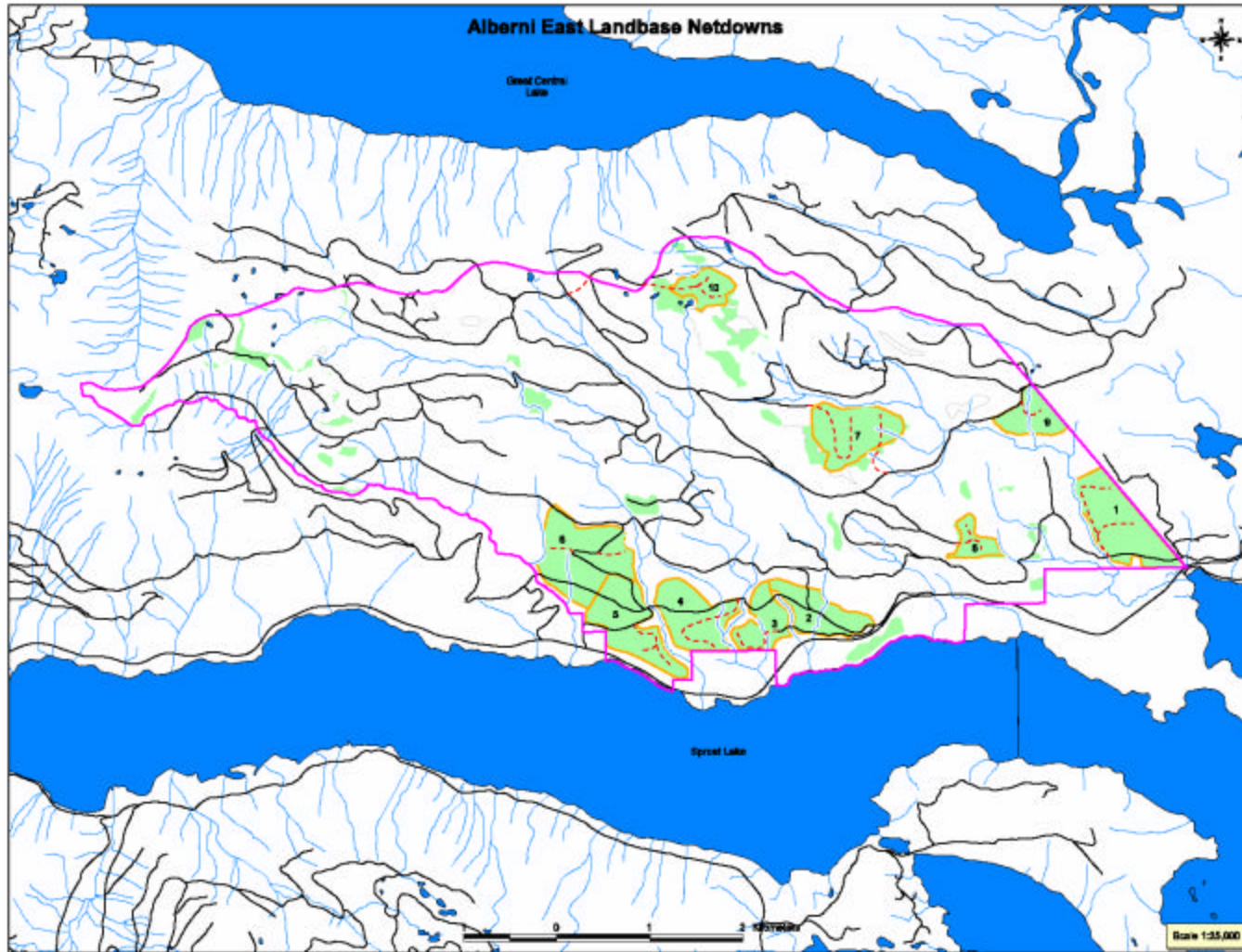


# Maps

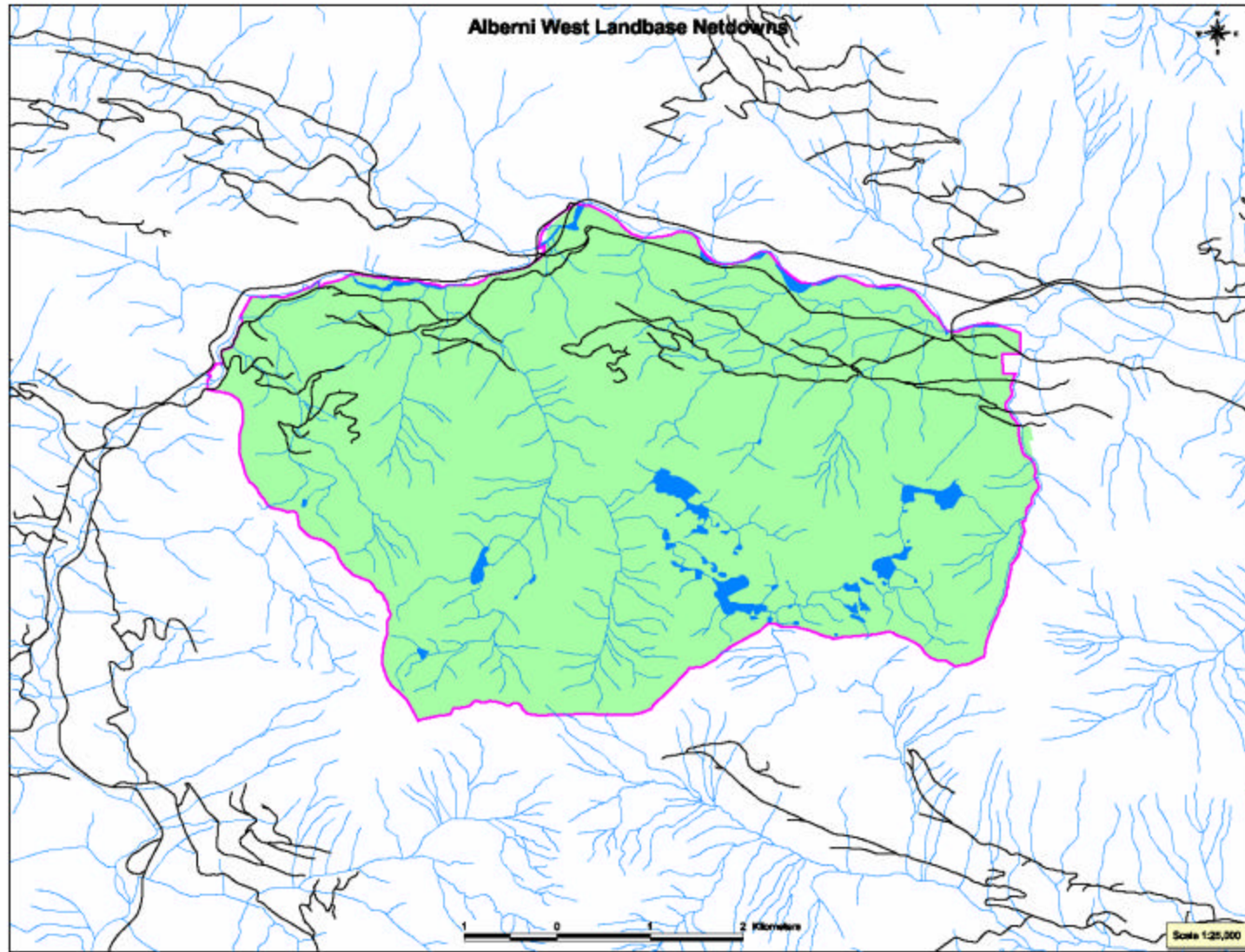




# Maps

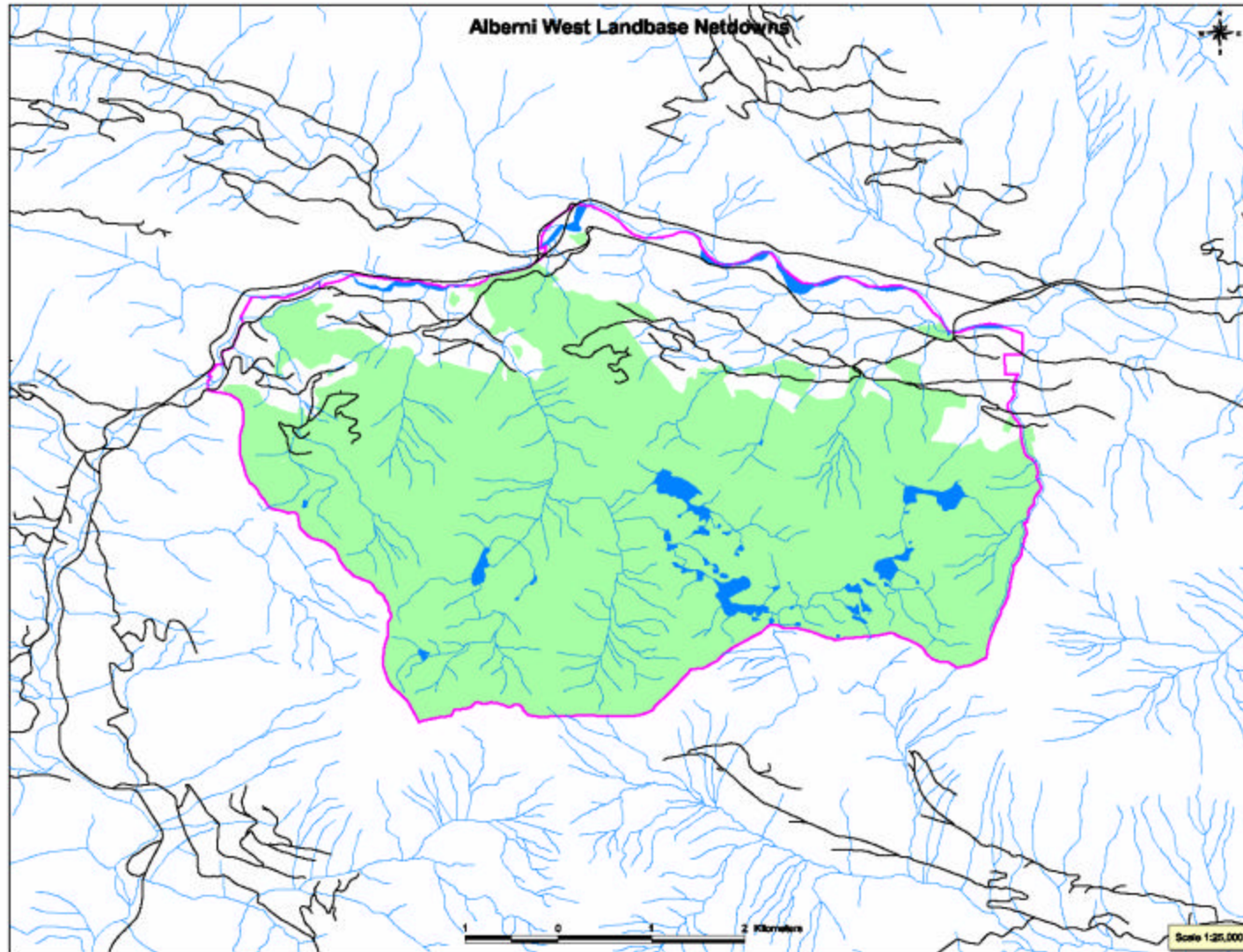


# Maps



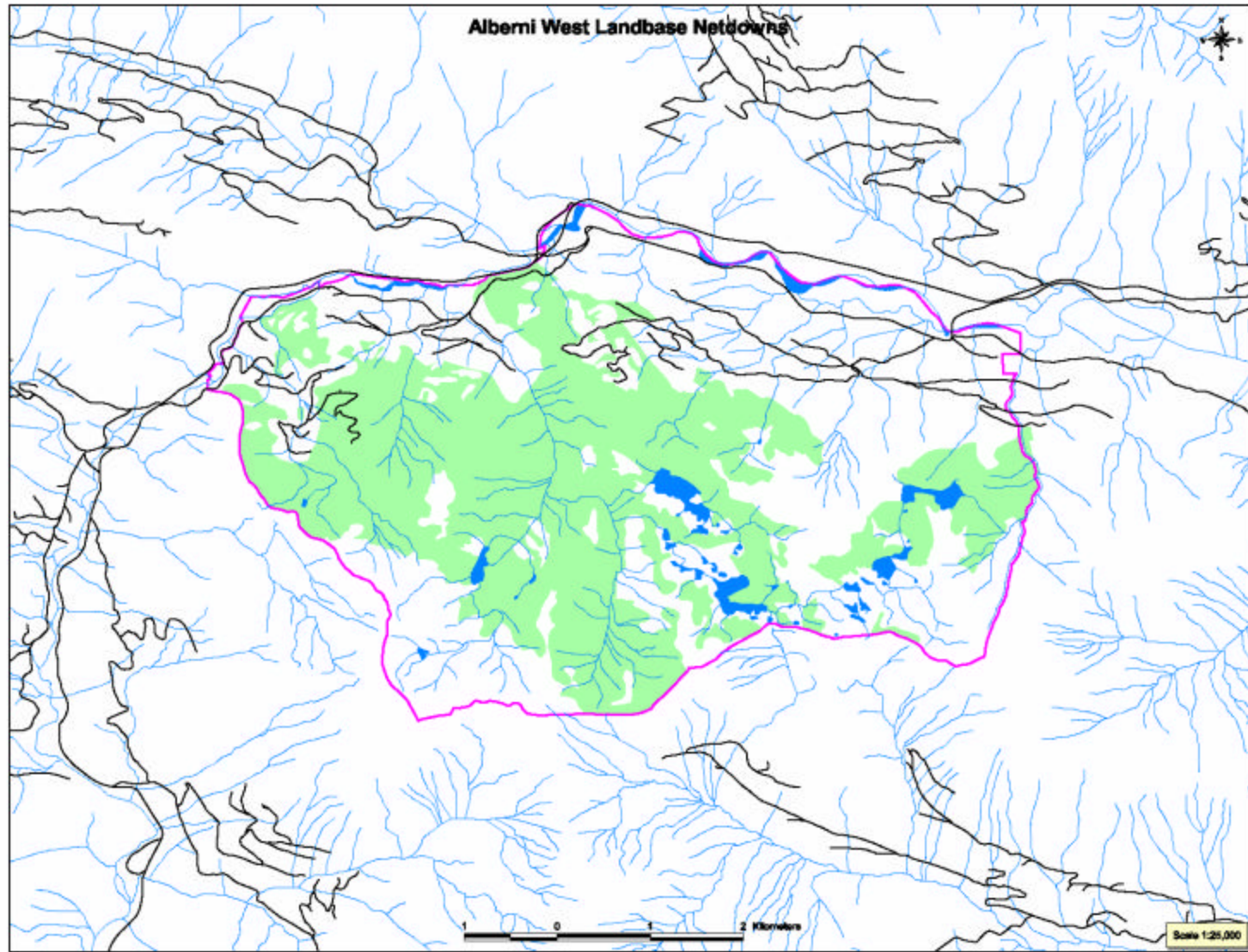


# Maps

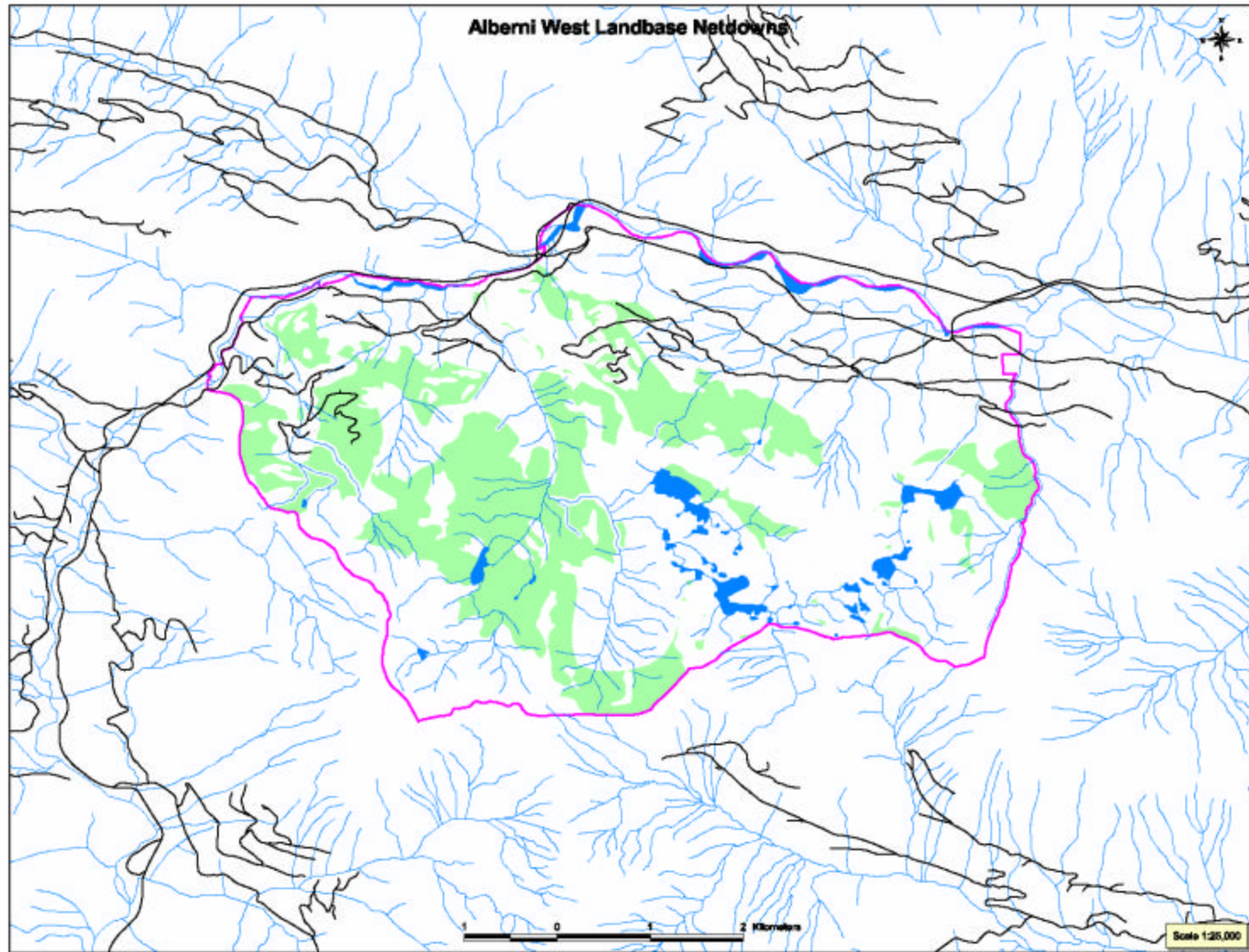




# Maps

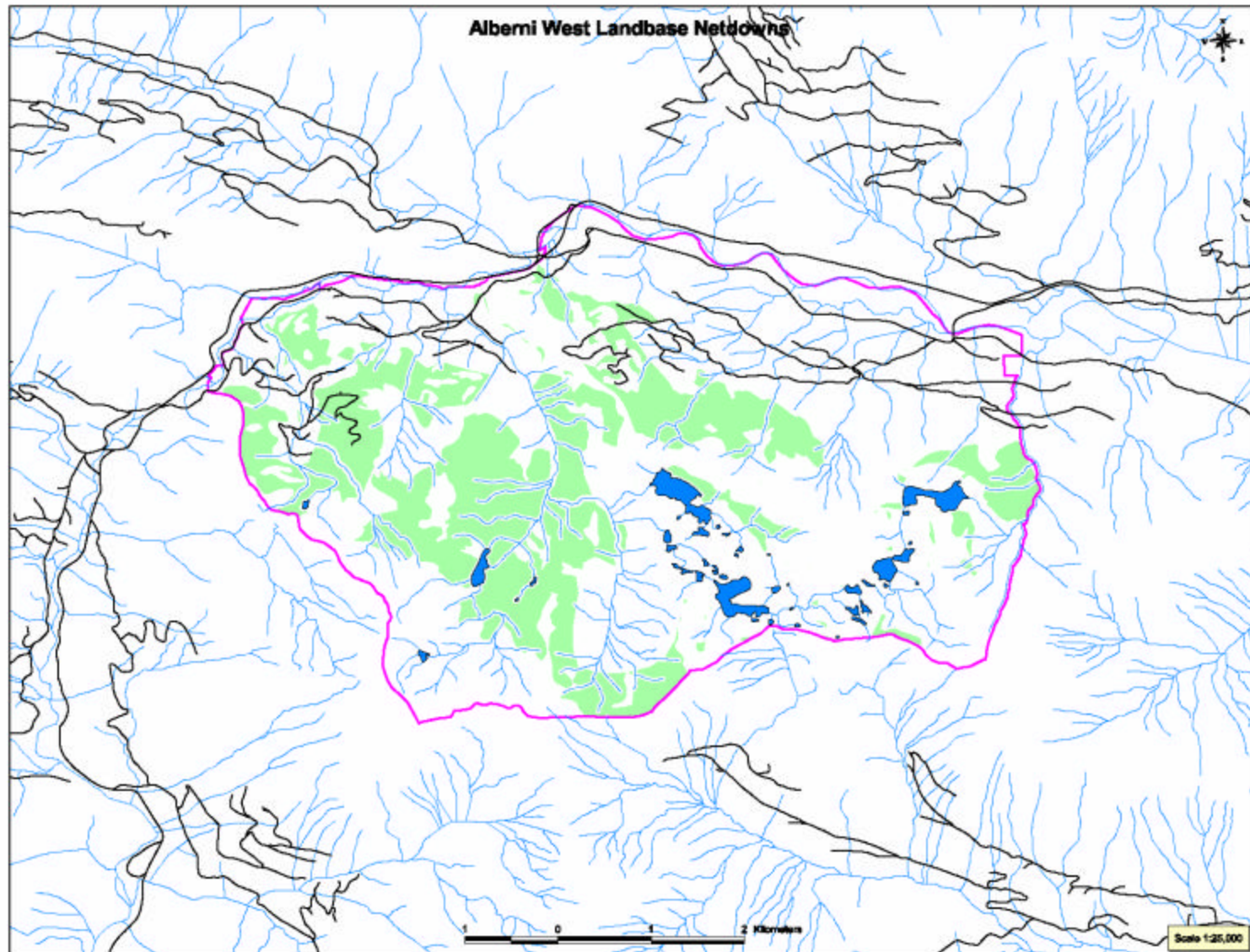


# Maps



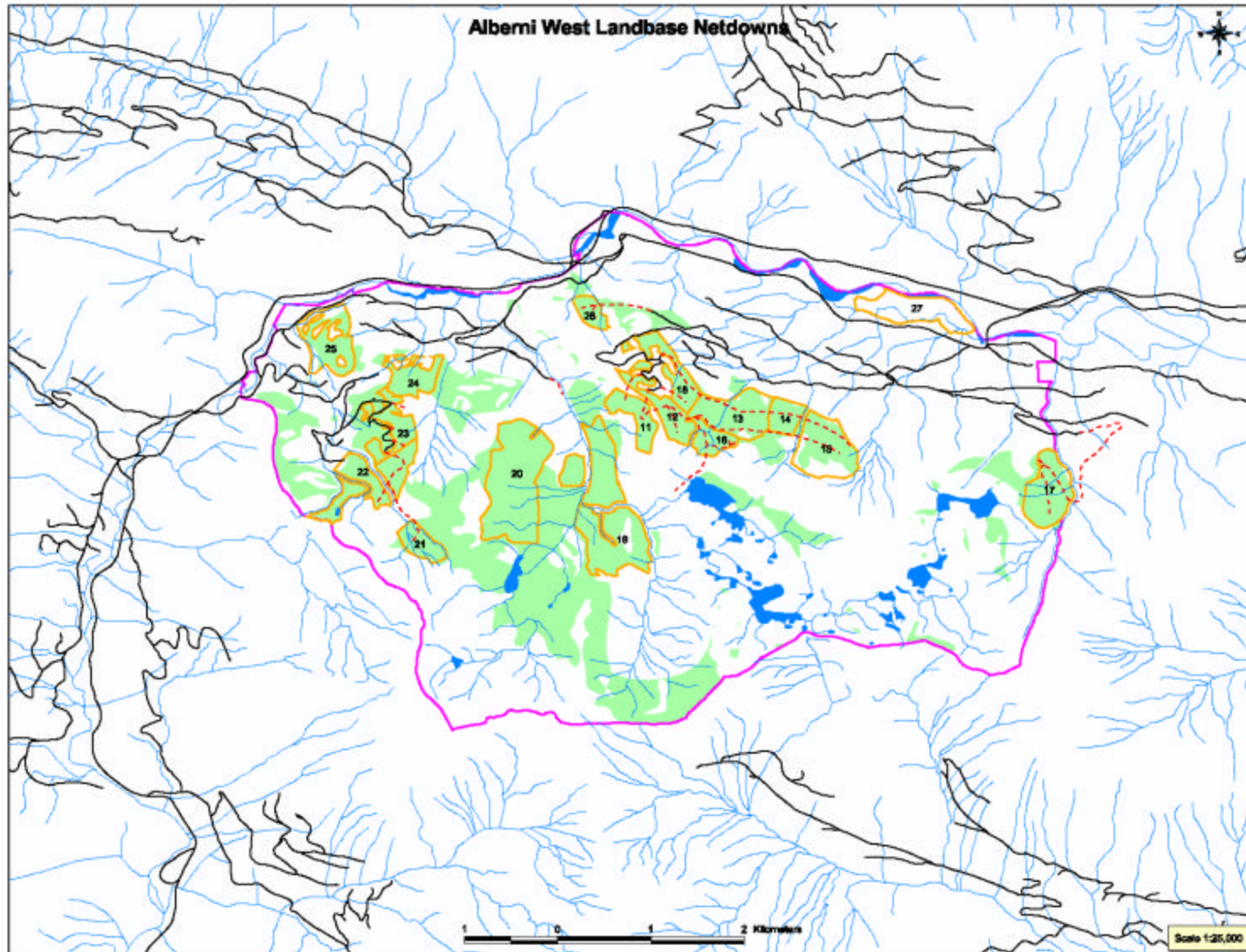


# Maps

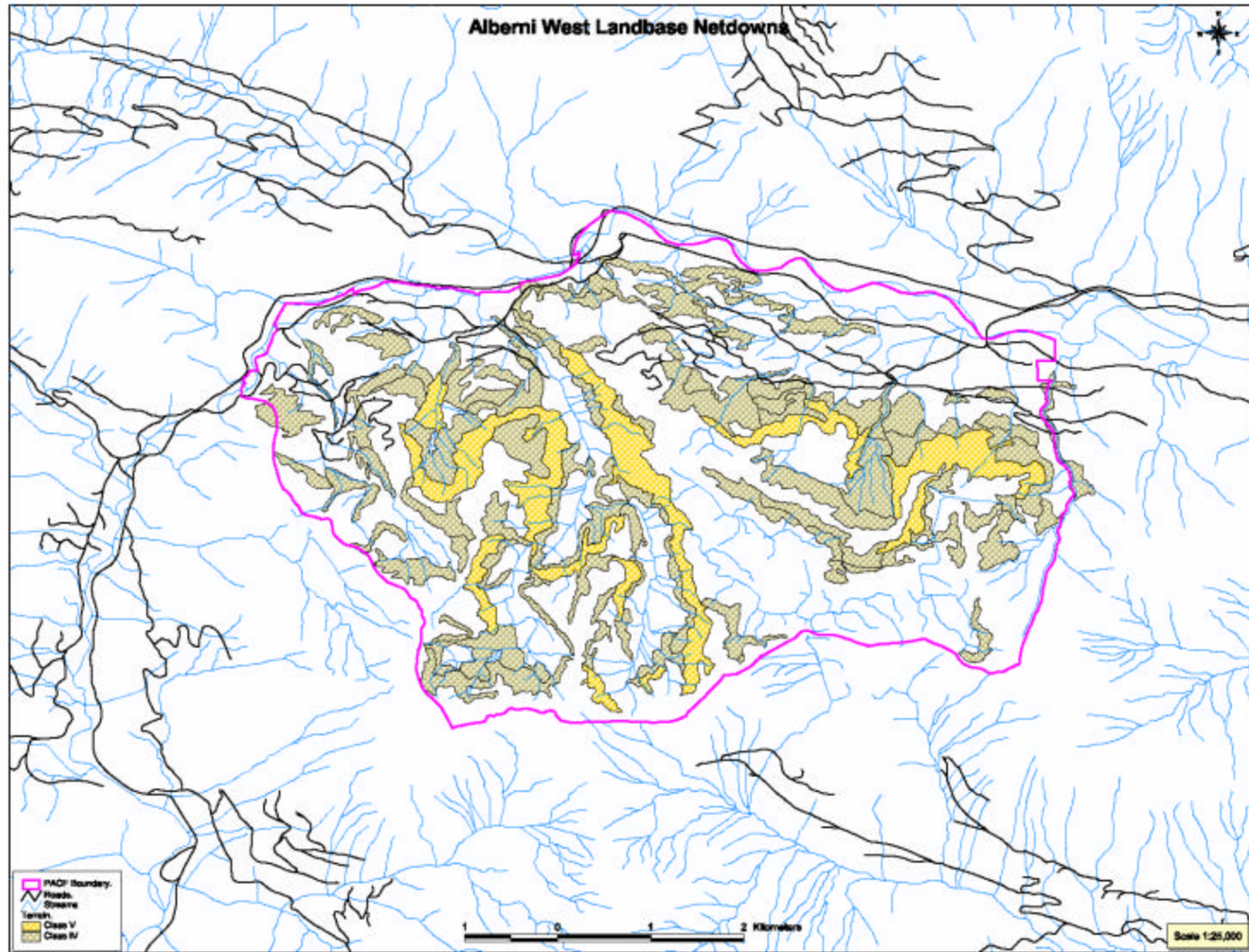




# Maps



# Maps

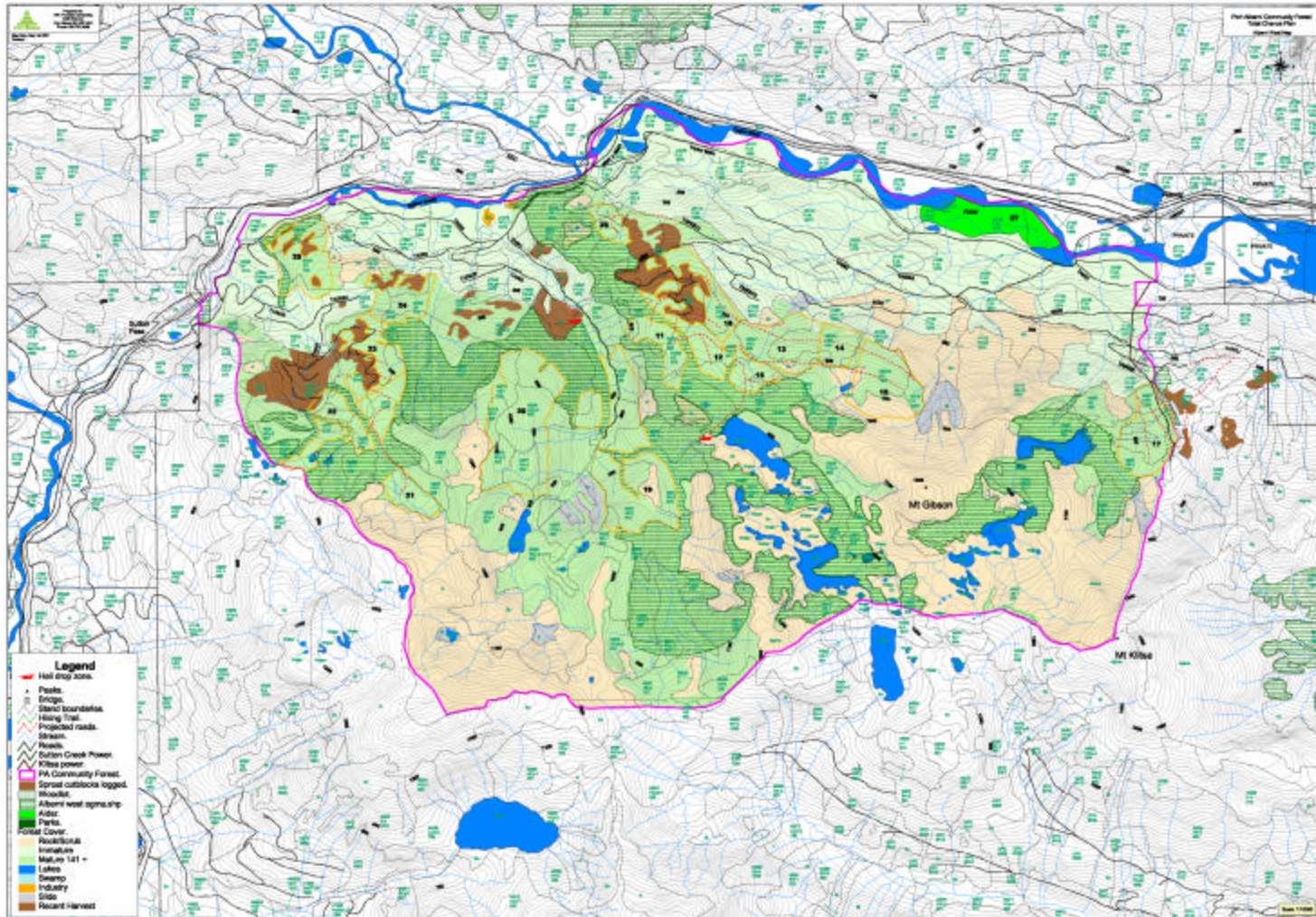








# Maps



# Sales Values

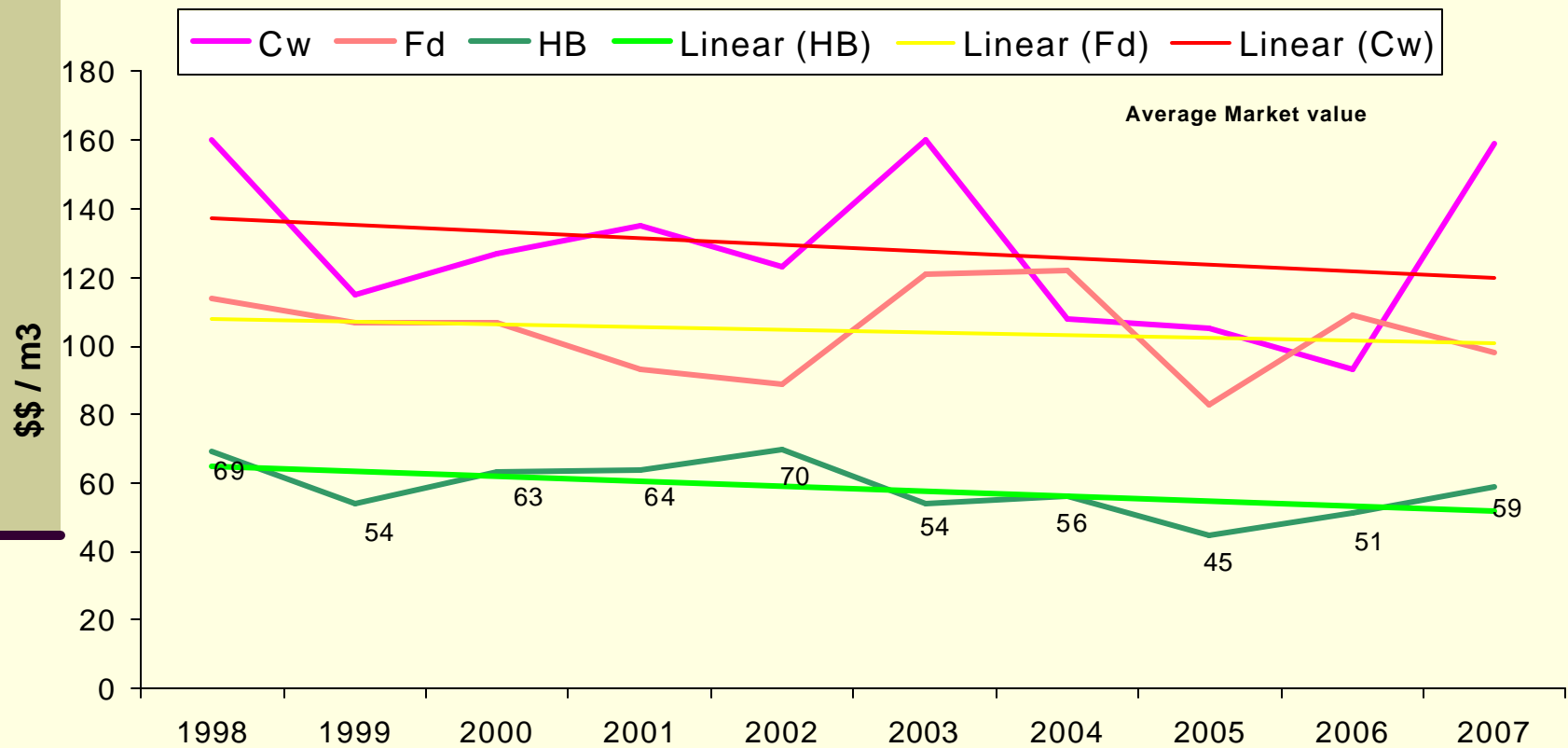
---

- timber species mix was identified in each projected block
- where available, we used scale data from adjacent logged cutblocks as a surrogate to estimate log grade distribution
- we used February 2007 sales values to estimate stand value, but discounted Cedar prices as they are at a cyclical high



# Sales Values

## Ten Year Average Log Prices for the Vancouver Log Market for February



# Stumpage & Licence Costs

---

- stumpage rates for Community Forests are fixed rates by species, revised each March.

|          |      |
|----------|------|
| Balsam   | 6.97 |
| Hemlock  | 6.14 |
| Cedar    | 8.51 |
| Cypress  | 8.00 |
| Fir      | 4.37 |
| Spruce   | 4.07 |
| All Pine | 6.47 |



# Stumpage & Licence Costs

---

- fixed rates do not change for harvest areas with high development costs of difficult logging
- stumpage for all Hemlock and Balsam “U” grades is currently \$0.25 /m<sup>3</sup>
- stumpage for “X” & “Y” grades for all species is currently \$0.25 /m<sup>3</sup>
- we used harvest summary averages for roads, species mix, and harvest systems
- annual allowable cut rental and fire preparedness levy of \$0.37 or \$6660 annually is payable whether licence is harvesting or not

# Forestry Costs

---

- includes all costs to get the block to “free growing”
- costs are expected to be higher in the low elevation 2<sup>nd</sup> growth due to root rot, and brush competition
- most of the cost is in the first few years with stumping, hazard abatement, planting & maple control
- forestry liabilities can continue for 10 -14 years, sometimes even longer on slow growing sites
- costs were projected on a block by block basis to be between \$2.47 & \$6.86/m<sup>3</sup> based on the harvested volume



# Planning & Management Costs

---

- costs for field engineering with all required assessments and application preparation, with variances by timber and terrain were estimated
- design costs were projected at \$2.70/m<sup>3</sup> for second growth
- design costs were projected at \$3.20/m<sup>3</sup> for conventional old growth harvest
- costs are estimated for management of the licence which includes harvest planning, forestry, stumpage & contract management, log sales and accounting
- management services are projected at \$2.50/m<sup>3</sup>
- the cost of licence acquisition and preparation of the first Forest Stewardship Plan are projected at \$1.00/m<sup>3</sup>

# Harvest Cost Assumptions

---

- Fall and process second growth: \$ 8.00
- Handfall old growth \$ 6.00
- Hoechuck \$ 4.75
- Grapple yarding \$12.50
- Loading \$ 3.50
- Hauling (est 60/km/hr average)  $\$0.05 \times \text{km} \times 2 + \$2.20$  load & dump
- Helicopter logging with falling support \$58.50
- Landing Bucker \$ 1.25
- Dryland sort/scale and boom \$ 9.00
- Sproat roads \$50000 to \$60000/km
- Taylor roads \$95000 to \$110000/km

# Harvesting Assumptions

---

- most old growth species and grades sold within Alberni Valley
- much of the 2<sup>nd</sup> growth Hemlock and Balsam and a portion of the old growth direct hauled to Catalyst Paper Corporation
- 2<sup>nd</sup> growth Fir direct hauled to markets on the east coast.
- competitive pricing for harvesting contracts



# Harvesting Scheduling

---

Harvest scheduling will consider numerous external and internal factors to assure the viability of the operation

- market timing
- stumpage cost timing
- weather based opportunities
- stumpage system changes
- neighboring operations
- drysort capacity
- cash flow management

# Key Findings

---

- the viability assessment identified 204,000m<sup>3</sup> or 11.3 years of currently harvestable potential volume
- identified 123,000m<sup>3</sup> of potential second pass volume
- all of the projected cutblocks have the potential to be harvested at some point in the business cycle
- sales values and stumpage are very sensitive to changes in the data, so the estimates have room to be improved upon

# Key Findings

---

- higher potential profit margins are skewed towards the Sproat Lake (east) openings due to the lower development costs in this area
- the potential annual harvest volume is attractive for competitive bidding for both small and large operators
- changes to the stumpage system such as a change from fixed rates to appraised rates, significantly impacts the potential profitability of the operation



# Sample Margin Analysis

## Cutblock - Margin Analysis Form

CP #: \_\_\_\_\_ Planner: DRH Forestry Consulting  
 Opening #'s: Cutblock 4 Net Scaled Vol. (m<sup>3</sup>): 13,530 Date: 2-May-07

|                            | <u>Data Source</u> | <u>Initial</u>                                    |                   |       |                            |
|----------------------------|--------------------|---|-------------------|-------|----------------------------|
| Estimated Sales Value:     | \$ 91.21           | used 2625 grades less OG                          |                   |       |                            |
| Log Cost Model:            | \$ 35.05           |   | fall              | 13530 | 8.00 108240                |
| Licence Management         | \$ 2.50            |   | load              | 13530 | 3.50 47355                 |
| AAC Rental:                | \$ 0.35            |   | 23 haul sproat    | 2700  | 4.50 12150 0.05xkmx2+2.2   |
| Insurance Rate:            | \$ 0.16            |   | 22 haul CPC       | 2700  | 4.40 11880                 |
| Forestry Expenses:         | \$ 5.22            |   | 55 haul Long      | 2000  | 7.70 15400                 |
| Planning Expenses:         | \$ 2.70            |   | 98 haul Coast     | 6130  | 12.00 73560                |
| Licence & FSP              | \$ 1.00            |   | ratio 0.4 hoe     | 4600  | 4.75 21850.95              |
|                            |                    |   | ratio 0.6 grapple | 6900  | 12.50 86253.75             |
|                            |                    |   | heli              |       | 58.50 0                    |
|                            |                    |   | sort              | 10830 | 9.00 97470                 |
| Road Construction:         | \$ 4.43            | Road km 1.200 Road cost \$/km \$ 50,000 Estimated |                   |       | 474159.7                   |
| Heli Drop/Service Bridges: | \$ 4.80            | Drop/Service/Bridge cost \$ 65,000                |                   |       | Log Cost 35.05             |
| Calculated MPS Stumpage:   | \$ 5.43            |   |                   |       | assume 15% direct load R/W |
| less u x y discount        |                    |   |                   |       |                            |
| <b>MARGIN:</b>             | <b>\$ 29.57</b>    |   |                   |       |                            |

**Block specific Comments**

assumed all C to sproat, all H to CPC, used February prices less exuberance discount for Cedar

| Sales values   | Feb         | May 1st-07 Fixed Stumpage Rates |      |      |                      |
|----------------|-------------|---------------------------------|------|------|----------------------|
| <b>Fir</b>     | <b>60</b>   |                                 |      |      |                      |
| j              | 80%         | 92                              | 4416 | 4.37 | 6494.4 \$ 28,380.53  |
| u              | 15%         | 62                              | 558  | 4.37 | 1217.7 \$ 5,321.35   |
| x              | 3%          | 37                              | 67   | 0.25 | 243.54 \$ 60.89      |
| y              | 2%          | 34                              | 41   | 0.25 | 162.36 \$ 40.59      |
| <b>hemlock</b> | <b>100%</b> | <b>20</b>                       |      |      |                      |
| j              | 50%         | 58                              | 580  | 6.14 | 1353 \$ 8,307.42     |
| u              | 50%         | 48                              | 480  | 6.14 | 1353 \$ 8,307.42     |
| x              |             | 50                              | 0    | 0.25 | 0 \$ -               |
| y              |             | 50                              | 0    | 0.25 | 0 \$ -               |
| <b>Cedar</b>   | <b>20</b>   |                                 |      |      |                      |
| gang           | 70%         | 170                             | 2380 | 8.51 | 1894.2 \$ 16,119.64  |
| C&S            | 30%         | 100                             | 600  | 8.51 | 811.8 \$ 6,908.42    |
|                |             | 100                             | 9121 |      | \$ 73,446.25 \$ 5.43 |
|                |             |                                 |      |      | <b>\$ 91.21</b>      |

# Potential Margin Analysis Summary

*(Calculated with May 1 Community Forest Rates)*

| Block                             | Margin          | Volume         | Profit/Loss         | Type |
|-----------------------------------|-----------------|----------------|---------------------|------|
| Cutblock 1                        | \$23.49         | 18,270         | \$ 429,162          | 2nd  |
| Cutblock 2                        | \$24.46         | 10,140         | \$ 248,024          | 2nd  |
| Cutblock 3                        | \$39.52         | 7,980          | \$ 315,370          | 2nd  |
| Cutblock 4                        | \$29.57         | 13,530         | \$ 400,082          | 2nd  |
| Cutblock 5                        | \$18.42         | 15,690         | \$ 289,010          | 2nd  |
| Cutblock 6                        | \$24.96         | 18,000         | \$ 449,280          | 2nd  |
| Cutblock 7                        | \$43.80         | 24,000         | \$ 1,051,200        | OG   |
| Cutblock 8                        | \$47.22         | 10,800         | \$ 509,976          | OG   |
| Cutblock 9                        | \$23.57         | 10,500         | \$ 247,485          | 2nd  |
| Cutblock 10                       | \$42.69         | 6,440          | \$ 274,924          | OG   |
| Cutblock 11                       | \$14.78         | 7,250          | \$ 107,155          | OG   |
| Cutblock 13                       | \$8.06          | 13,750         | \$ 110,825          | OG   |
| Cutblock 15                       | (\$2.75)        | 13,500         | \$ (37,125)         | OG   |
| Cutblock 17                       | (\$2.45)        | 13,050         | \$ (31,973)         | OG   |
| Cutblock 22                       | \$14.80         | 21,000         | \$ 310,800          | OG   |
| Total Volume                      |                 | <b>203,900</b> |                     |      |
| Average Margin (\$/m3)            | <b>\$ 22.92</b> |                |                     |      |
| Total Margin based on fixed rates |                 |                | <b>\$ 4,674,195</b> |      |

# Recommendations

---

1. commence the community forest application process
2. establish the business structure for the Port Alberni Community Forest and establish the working capital sources
3. determine if the Forest Stewardship Plan can be developed at the same time as the Community Forest Application to lessen duplication of the public review processes
4. work with the Ministry of Forest and Range to acquire the map and engineering data that has been sold to BC Timber Sales
5. provide comments to Crown Lands so that potential harvesting near Klitsa Creek isn't impacted by the proposed power project



# Reflections on the business of forestry

---

- ***“There is money to be made in the industry, but there’s a lot of money to be lost, and it can be lost very fast.”***
- ***“The biggest surprise to many people – though not to anyone who has spent any time in the industry- is how complicated it can be. The amount of regulation, planning and development required, and the money it takes to make it happen.”***
- **Bob Clarke, GM, Revelstoke Community Forest Corporation**